Wesper

General Catalogue 2015

Wesper

Experts in air conditioning
Experts in air handling

Since 1948

Founded in 1948, Wesper is a French manufacturer setting the standards in the design, development and production of air conditioning and air handling systems for residential, commercial, industrial and service sector applications.
The company has the largest capacity production site in all of Europe, covering 55.000 m^2 and located in Pons, France, where the company manufactures water chillers, terminal units, air handling units and rooftop units.

July 2014

Wesper enters a new stage after its acquisition by the Hitecsa Group, a European leader in the design, manufacture and instruction of air conditioning equipment. The Hitecsa Group's offices and 10.000 m^2 production site are located in Vilanova i la Geltrù, Barcelona (Spain) for the manufacture of air conditioning units. It also has another production site at Arenys de Mar, Barcelona, where it manufactures high-efficiency boilers.

A global service

- Integrated department of engineers and specialists for a personalised service of technical and project advice
- Integrated R&D department
- Own production facilities
- Customer service
- Aftersales service

CUSTOMER SERVICE
+33 (0)1 82 88 94 47
france@wesper.com

AFTERSALES
+33 (0)5 46 92 33 52
sav@wesper.com

Production site
at **Pons** (France)

Production site
at **Arenys de Mar** (Spain)

Production site
at **Vilanova i la Geltrú** (Spain)

Values

Effective services for lasting quality

In order to respond to the questions that our clients might ask us, from how to install our equipment to commissioning and aftersales servicing, Wesper has set up quality services.
User satisfaction and being able to meet all of their expectations with regard to our products is our top priority. With this in mind, Wesper is committed to continuously improving our service to professional customers, an approach which is structured around three fundamental priorities: training, spare parts and technical support.

Expertise

More than 60 years of experience in the design, development and production of residential, commercial and industrial applications make Wesper a major European player in this market. There are numerous job references from both French and international customers from all sectors, including several hospitals (operating theatres, cleanrooms), industrial sites, high energy performance office buildings, hotels and also onboard naval applications. Our sales department will gladly present our job references according to your specific needs.

Innovation and Quality

Innovation and Quality are the most important elements of the Wesper philosophy. The Group dedicates all of its energy to the continuous development of innovative products intended for our customers, to guarantee our position in the market.
Every day more than 130 people devote themselves to researching products, concentrating in particular on improving energy efficiency and reducing noise levels.

Certifications

The Group's factories are ISO 9001 certified, awarded by well known certification bodies. Furthermore, Wesper participates in the Eurovent certification programme, which uses independent laboratories to ensure verification of technical specifications in accordance with international standards.
View the certified products and models on the Eurovent website.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Technology and environment

Innovation only makes sense when it respects the environment. The women and men of Wesper make a point of designing, industrialising and selling products that are ever closer to users' aspirations all while respecting our environment. We research the balance between technology and ecology for each of our products while complying with the maximum demands in terms of quality and environmental friendliness. In accordance with this principle and European directives, Wesper uses environmentally friendly HFC (hydrofluorocarbon) type refrigerants that do not harm the ozone layer in all of its equipment. Moreover, Wesper designs and sells energy efficient equipment, thereby limiting CO_2 emissions into the atmosphere.

Versatility
Speed
Support
Flexibility
Quality
Industrial capacity

GENERAL SUMMARY

Wesper

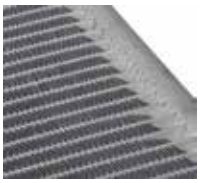
MODERN AND HIGH PERFORMANCE PERFORMANCE TECHNOLOGY

SCROLL

VIS / SCREW

CONTROLS

MICROCHANNEL CONDENSERS



ELECTRONIC EXPANSION DEVICES

PLUG FAN AND EC MOTOR

HIGH EFFICIENCY EXCHANGERS

EUROVENT

View the certified products and models on the Eurovent website.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

ENGAGEMENT - EFFICIENCY - ENERGY

Our company is committed to a voluntary approach to seeking energy efficiencies in and around our products. This logo represents the translation of this route in terms of:

S3E
SAVING ENGAGEMENT EFFICIENCY ENERGY

TESTING

All of our units systematically undergo full-scale testing at the end of the production line.
Our refrigerants are environmentally friendly.

R410A R407C R-134a

INVERTER

INVERTER TECHNOLOGY: energy efficiency and maximum comfort.

inverter

DESCRIPTION OF SYMBOLS

Cooling only

Reversible

Free cooling

Plug fan

Hydrofan system

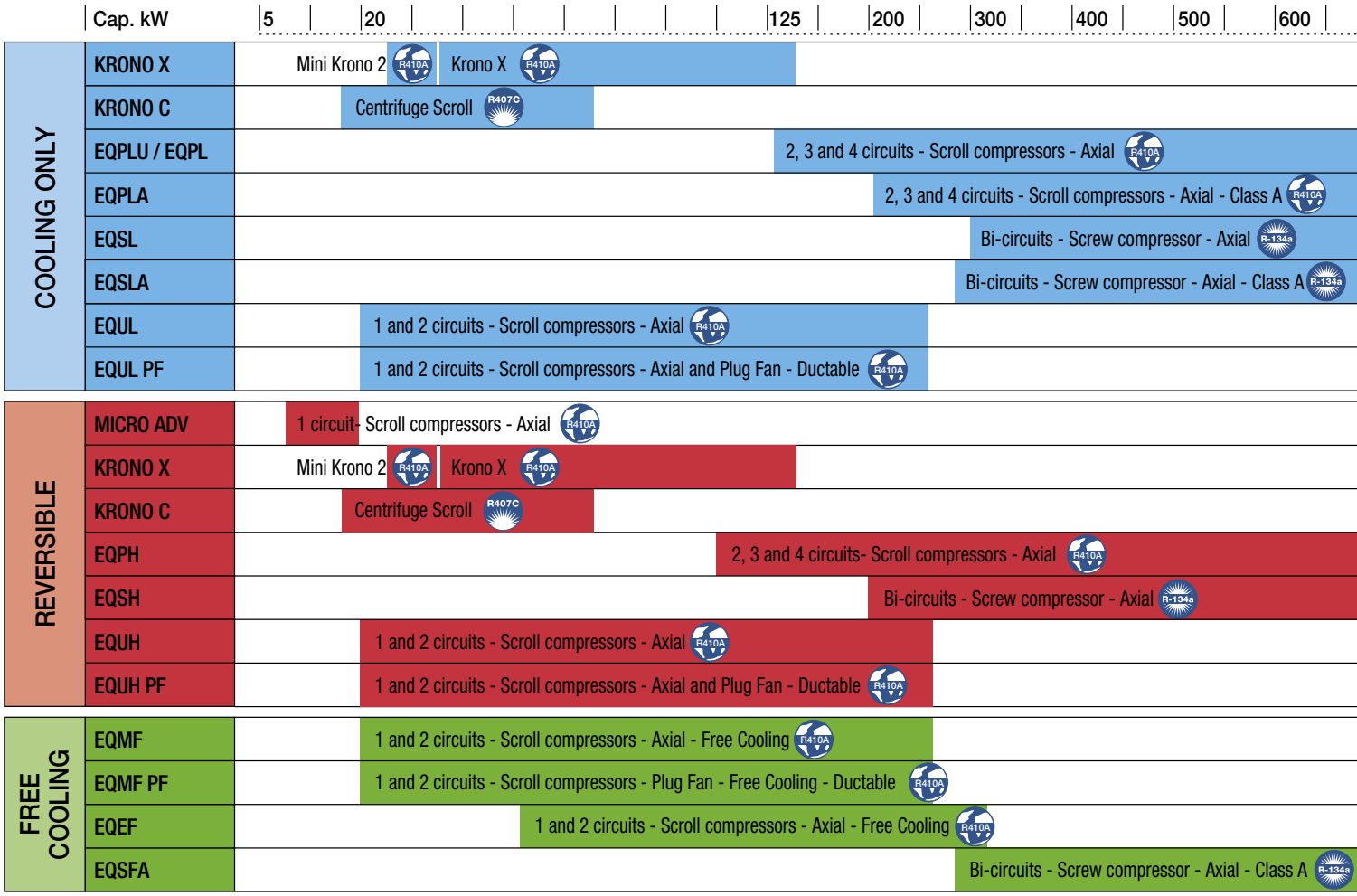
WinClim

LIQUID CHILLERS

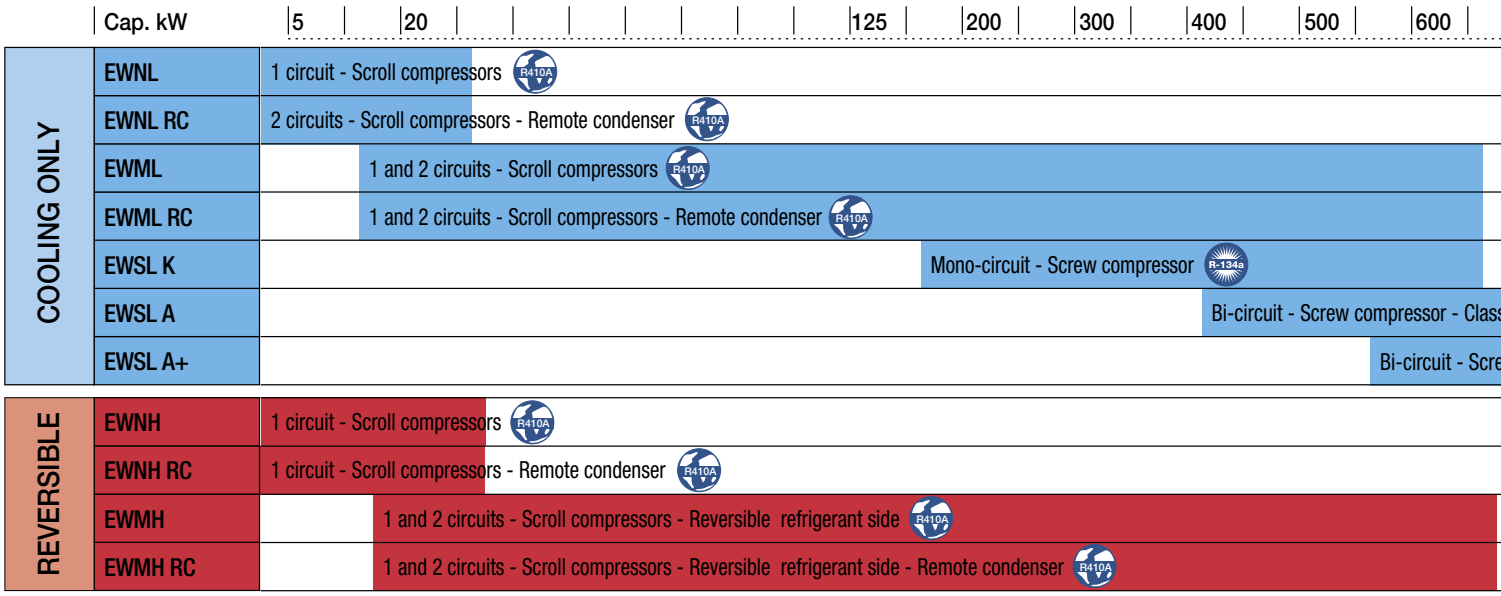
Wesper

The liquid chillers range - large - complete - flexible

AIR-COOLED CHILLERS



WATER-COOLED CHILLERS



MICRO ADVANCE

Small unit
Cooling only
and reversible
SCROLL

R410A

MAIN FEATURES

- Capacities from 4.5 to 20 kW
- 13 models available
- EER up to 2.75
- ESEER up to 3.40
- Scroll compressor
- One air circuit
- Brazed-plate evaporator
- AC axial fan
- For outdoor installation

Operating limits in Cooling mode
- Water leaving temperature: -8 to +18°C
- Outdoor air temperature: -10 to +46°C

Operating limits in Heating mode
- Water leaving temperature: +25 to +50°C
- Outdoor air temperature: -7 to +20°C

Options

- Water filter
- Additional water pump (see models)
- Water tank (30 or 60 litres depending on model)
- Water valves
- Low temperature kit
- Rubber anti-vibration kit
- Remote control kit

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EWMA Cooling only EWMBA Reversible TECHNICAL SPECIFICATIONS

MODEL		M5	M6	T6	M7	T7	M9	T9
Summer mode - nominal cooling capacity (1)	kW	4.5	5.5	5.7	6.8	6.7	8.4	8.7
Cooling absorbed power	kW	2.3	2.1	2.1	2.6	2.6	3.3	3.3
Water flow	m^3/h	0.8	0.9	1.0	1.2	1.1	1.4	1.5
Water pressure drop	kPa	25	26	26	38	38	35	35
Winter mode - nominal heating capacity (2)	kW	5.9	7.0	6.9	8.5	8.4	10.7	10.5
Heating absorbed power	kW	2.4	2.1	2.1	2.6	2.6	3.4	3.2
Compressors	scroll							
Quantity	n.	1	1	1	1	1	1	1
Number of circuits	n.	1	1	1	1	1	1	1
AC axial fans	n.	1	1	1	1	1	1	1
Air flow	m^3/h	2400	3500	3500	3500	3500	4200	4200
Other								
Air circuits	n.	1	1	1	1	1	1	1
Gas circuits	n.	1	1	1	1	1	1	1
Power supply	V/Ph/Hz	230/1/50	230/1/50	400/3/50+N	230/1/50	400/3/50+N	230/1/50	400/3/50+N
EER (1)	kW/kW	1.97	2.56	2.63	2.62	2.57	2.56	2.65
COP (2)	kW/kW	2.79	3.06	3.01	3.14	3.13	3.31	3.23
ESEER		2.43	3.25	3.33	3.32	3.25	3.17	3.27
Sound power level [Lw] (3)	dB(A)	64.0	68.9	68.9	69.5	69.5	69.5	69.5
Average sound pressure level [Lpm] (4)	dB(A)	50.1	55.1	55.1	55.1	55.1	55.1	55.1
Net weight	kg	90	95	95	110	110	115	115
Hydraulic connections								
Evaporator IN/OUT – ISO 228/1 – G	Ø	3/4"	3/4"	1 1/4"	3/4"	1 1/4"	3/4"	1 1/4"

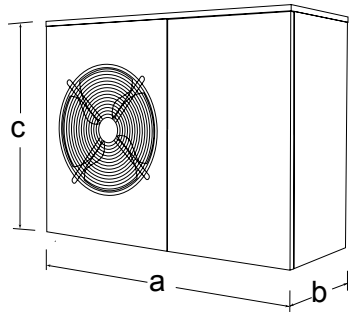
EWMA Cooling only EWMBA Reversible TECHNICAL SPECIFICATIONS

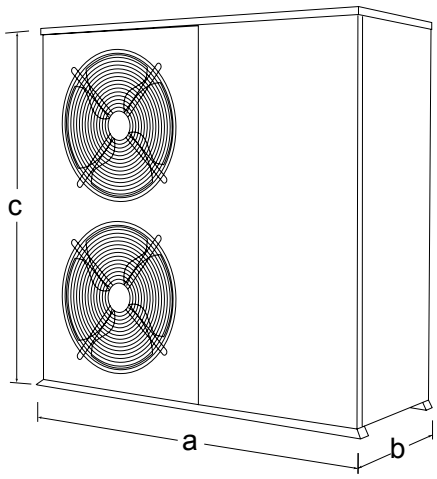
MODEL		M11	T11	T13	T15	T19	T22
Summer mode - nominal cooling capacity (1)	kW	10.9	11.1	12.9	14.9	18.7	20.1
Cooling absorbed power	kW	4.6	4.4	4.8	5.7	7.1	8.4
Water flow	m³/h	1.9	1.9	2.2	2.6	3.2	3.5
Water pressure drop	kPa	32	31	35	34	40	40
Winter mode - nominal heating capacity (2)	kW	13.3	13.8	15.6	18.1	23.0	24.8
Heating absorbed power	kW	4.6	4.3	4.7	5.6	7.1	8.3
Compressors	scroll						
Quantity	n.	1	1	1	1	1	1
Number of circuits	n.	1	1	1	1	1	1
AC axial fans	n.	2	2	2	2	2	2
Air flow	m³/h	6800	6800	6800	6400	7000	7000
Other							
Air circuits	n.	1	1	1	1	1	1
Gas circuits	n.	1	1	1	1	1	1
Power supply	V/Ph/Hz	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
EER (1)	kW/kW	2.36	2.51	2.70	2.61	2.62	2.38
COP (2)	kW/kW	3.04	3.56	3.26	3.35	3.47	3.32
ESEER		2.88	3.18	3.31	3.24	3.22	2.98
Sound power level [Lw] (3)	dB(A)	72.8	72.8	72.8	73.3	78.5	78.6
Average sound pressure level [Lpm] (4)	dB(A)	58.0	58.0	58.0	58.2	63.0	63.1
Net weight	kg	140	140	160	170	265	270
Hydraulic connections							
Evaporator IN/OUT – ISO 228/1 – G	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"

(1) Values calculated according to chilled water temperature 12/7°C; outdoor air temperature 35°C (in accordance with Eurovent certification).
(2) Values calculated according to hot water temperature 40/45°C; outdoor air temperature 7°C (in accordance with Eurovent certification).
(3) Sound power level [Lw] according to ISO EN 9614-2.
(4) Average sound pressure level [Lpm] 1m to ISO EN 3744.

DIMENSIONS

		M5	M6	T6	M7	T7	M9	T9	M11	T11	T13	T15	T19	T22
a	mm	900	900	900	900	900	900	900	900	900	900	900	1450	1450
b	mm	370	370	370	370	370	370	370	370	370	370	420	550	550
c	mm	640	640	640	940	940	940	940	1240	1240	1240	1390	1200	1200





MINI KRONO 2

Small unit
Cooling only
and reversible

MAIN FEATURES

- Cooling capacity between 25 and 40 kW.
- Refrigerant circuit with 1 scroll compressor and 1 fan.
- Condensation in cooling mode controlled by 2-speed fan.
- High energy efficiency.
- LCX control included.
- Remote start/stop.
- Remote winter/summer.
- Second setpoint.
- Alarm signal.

Advantages

Solid design and energy efficiency for chilled water installations.

Options

ENERGY EFFICIENCY

- Compressor soft start.
- Condensation controlled by variable voltage controller.
- EC fan.

SOUND LEVEL

- Acoustic insulation on compressor.

INSTALLATION

- Magneto-thermal circuit breakers in the electrical board.
- Stand-alone electrical board.
- Operation option for power supply without neutral.
- Power supply 60 Hz at 230 V and 208 V.
- Aluminium-zinc treated coil.
- Protection grille on outdoor heat exchanger.
- Modbus connection.
- Remote control.

HYDRONIC KIT

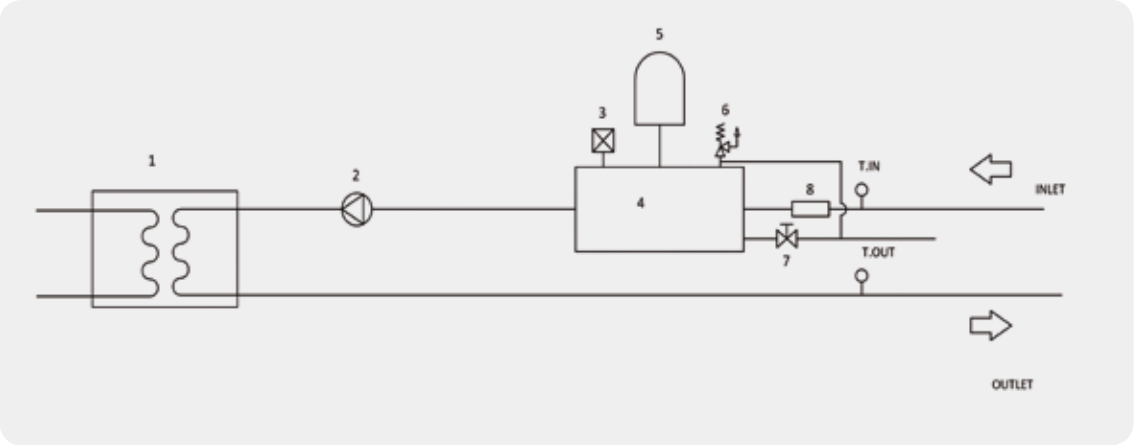
- Water pump.
- Water pump, expansion vessel and buffer tank.
- Extra electric heater.

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EWXA Cooling only EWXBA Reversible TECHNICAL SPECIFICATIONS

MODEL		801.1	1001.1	1201.1	1501.1
Cooling capacity	kW	25.9	30.2	33.5	39.8
Cooling absorbed power	kW	8.3	9.7	10.8	13.7
Heating capacity	kW	27.7	31.1	35.0	41.2
Heating absorbed power	kW	8.6	9.7	10.9	13.8
Electrical power supply	Volts	400/3/50			
Water connections		1 1/2			
Water flow	m^3/h	4.5	5.2	5.8	6.8
Water-side pressure drop	kPa	31	42	34	44
Dimensions (length x width x height)	mm	1200 x 1050 x 1470			
Net weight	kg	312	340	348	354

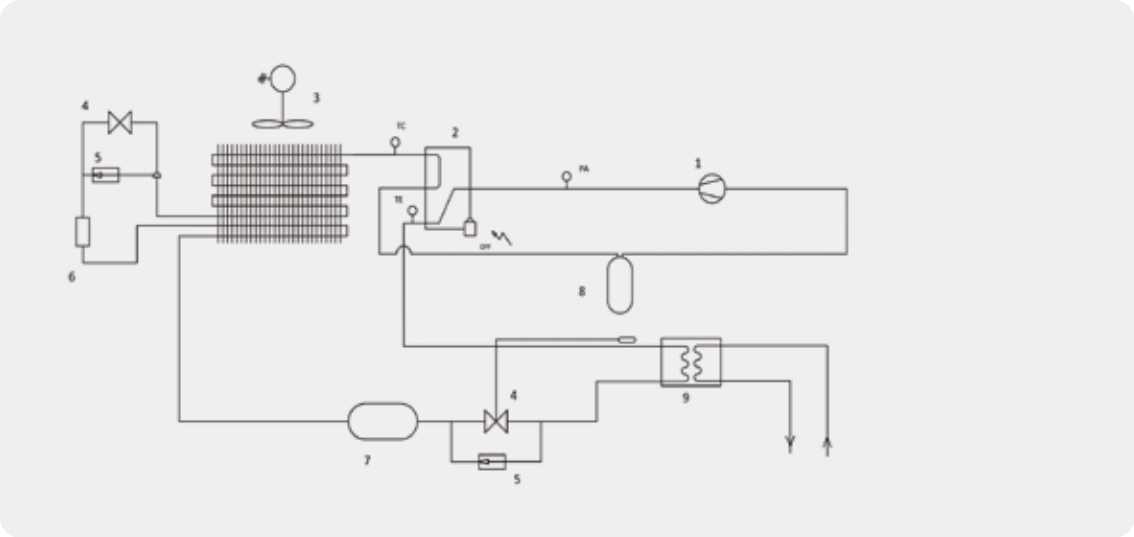
HYDRAULIC DIAGRAM



COMPONENTS

1. Plate heat exchanger
2. Water pump
3. Air vent
4. Water tank
5. Expansion vessel
6. Safety valve
7. Drain valve
8. Water filter / flow switch (optional)

REFRIGERANT FLOW DIAGRAM



COMPONENTS

1. Compressor
2. 4-way cycle reversal valve
3. Condenser coil
4. Expansion valve
5. Non-return valve
6. Filter dryer
7. Liquid receiver
8. Suction accumulator
9. Plate heat exchanger

TC Condensing pressure transducer
TE Evaporating pressure transducer
PA High pressure switch

KRONO XA
Cooling only

KRONO XBA
Reversible

MAIN FEATURES

- Cooling capacities between 45.3 and 136.0 kW
- One refrigerant circuit with tandem scroll compressors
- High energy efficiency
- LCX control included
- Step control on condensation in cooling mode and on evaporation in heating mode
- Water differential pressure switch
- Remote start/stop
- Remote winter/summer
- Timer programming capability

Advantages

Integrated units for air conditioning solutions. Flexibility and reliability all in one. The EWXA/EWXBA chillers are compact units designed for outdoor installation, whether on flat roofs, patios or on the ground.

Options

ENERGY EFFICIENCY
- Compressor soft start
- Partial heat recovery exchanger (DHW)
- EC fans
- Condensation controlled by frequency inverter or variable voltage controller

SOUND LEVEL
- Acoustic insulation on compressor
- Silent
- Super silent

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Upgraded fans
- Upgraded pumps
- Integrated hydronic kit (with tank, etc.)
- Integrated hydronic kit (without tank)
- Integrated pump
- Double or twin pump
- Operation option for antifreeze electric heater in condensate tray
- Anti-corrosion pre-treated coils
- Suitable for disassembly
- Option for shell and tube evaporator (only without hydronic kit)
- Protection grilles on outdoor heat exchangers
- Victaulic outside couplings

MAINTENANCE
- Service valves
- External pressure tapping points
- Refrigerant manometers
- Water manometers
- Water filter

CONTROLS
- Second setpoint
- Alarm signals
- Stand-alone electrical board
- Option for master/slave operation
- Operation option for power supply without neutral
- Modbus connection, etc.
  See Thermostats chapter

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

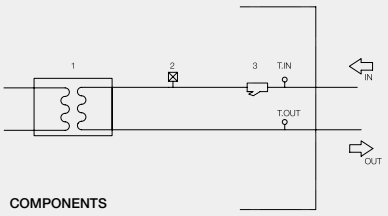
EWXA Cooling only EWXBA Reversible TECHNICAL SPECIFICATIONS

MODEL		1601.2	2001.2	2401.2	2501.2	3001.2
Nominal cooling capacity	kW	45.3	52.6	61.5	67.8	77.3
Nominal cooling capacity	T.R.	12.9	14.9	17.5	19.3	22.0
Nominal heating capacity	kW	53.1	62.0	73.8	79.3	84.9
EER	kW/kW	2.8	2.8	2.8	2.8	3.0
COP	kW/kW	3.3	3.3	3.4	3.2	3.1
Power supply (50 Hz ~) (1)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Water connections	Ø (")	2	2	2	2	2
Water flow	m³/h	7.8	9.0	10.6	11.7	13.3
Water pressure drop	kPa	22	24	26	26	32
Dimensions (length x width x height)	mm	2450x1220x1640	2450x1220x1640	2450x1220x1640	2860x1220x1630	2860x1220x1630
Net weight	kg	730	740	770	870	880
MODEL		**3201.2**	**3501.2**	**4001.2**	**4501.2**	**5001.2**
Nominal cooling capacity	kW	81.3	94.9	112.5	125.1	136.0
Nominal cooling capacity	T.R.	23.1	27.0	32.0	35.6	38.7
Nominal heating capacity	kW	88.6	103.4	123.0	136.0	146.3
EER	kW/kW	2.8	2.8	2.8	2.9	3.0
COP	kW/kW	2.9	3.0	3.2	3.2	3.3
Power supply (50 Hz ~)**	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Water connections	Ø (")	2	2	2	2	2
Water flow	m³/h	14.0	16.3	19.4	21.5	23.4
Water pressure drop	kPa	30	35	41	43	46
Dimensions (length x width x height)	mm	2860x1220x1630	3400x1220x1640	3400x1220x1640	3400x1220x1640	3400x1220x1640
Net weight	kg	900	1040	1120	1200	1250

Information about the operating conditions in accordance with EUROVENT
(1) Availability of other voltages and frequencies in the electric power supply

EWXA/EWXBA HYDRAULIC DIAGRAMS

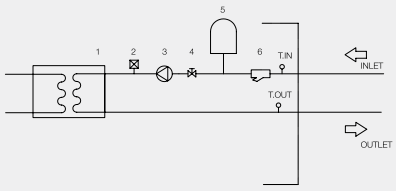
Standard diagram



COMPONENTS

1. Plate heat exchanger
2. Air vent
3. Water filter (optional)

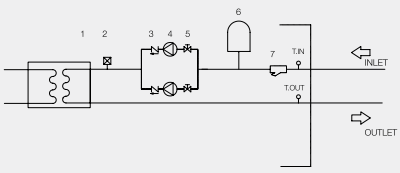
1-pump hydronic kit (without tank)



COMPONENTS

1. Plate heat exchanger
2. Air vent
3. Water pump
4. Service valve
5. Expansion vessel
6. Water filter (optional)

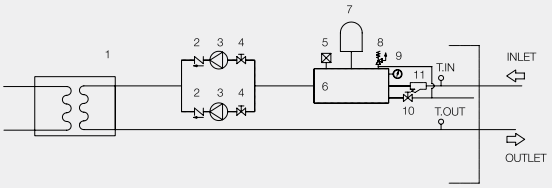
2-pump hydronic kit (without tank)



COMPONENTS

1. Plate heat exchanger
2. Air vent
3. Non-return valve
4. Water pump
5. Service valve
6. Expansion vessel
7. Water filter (optional)

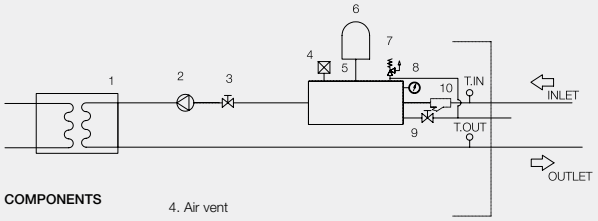
2-pump hydronic kit (with tank)



COMPONENTS

1. Plate heat exchanger
2. Non-return valve
3. Water pump
4. Service valve
5. Air vent
6. Water tank
7. Expansion vessel
8. Safety valve
9. Manometer
10. Drain valve
11. Water filter (optional)

1-pump hydronic kit (with tank)



COMPONENTS

1. Plate heat exchanger
2. Water pump
3. Service valve
4. Air vent
5. Water tank
6. Expansion vessel
7. Safety valve
8. Manometer
9. Drain valve
10. Water filter (optional)

KRONO CZ
Cooling only

KRONO CBZ
Reversible

CENTRIFUGAL FANS

MAIN FEATURES

- Cooling capacities between 15.9 and 78.5 kW
- Independent refrigerant circuits
- Scroll compressors
- Thermostats and controllers included for units with electromechanical controls Microchiller2 (all models)

Advantages

Liquid chillers with centrifugal fan: solutions for small spaces.
The EWCZ/EWCBZ chillers are compact air/water units, primarily intended for indoor installation.
Suitable for medical centres, hotels, offices, industrial facilities, hospitals...

Options

ENERGY EFFICIENCY
- Compressor soft start (depending on model)
- Fan soft start (depending on model)
- Condensation control by frequency inverter for low ambient temperature operation

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Kit for bad weather installation
- Upgraded motors
- Operation option for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Base frame
- Anti-corrosion pre-treated coils
- Suitable for disassembly
- Pressure reading external manometers
- Option on request for shell and tube evaporator
- External hydronic module MWI
- Leaving water temperature less than 7°C
- Water differential pressure switch
- Vertical condenser air outlet

MAINTENANCE
- Service valves
- External pressure tapping points
- Filter on condenser

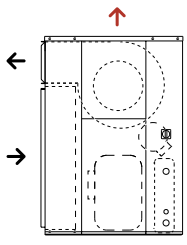
CONTROLS
- Suitable for Hydrofan
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Operation option for redundant machine
- Operation option for centralized integrated management
- Operation option for power supply without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

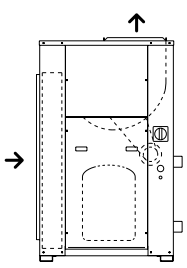
Air inlet/outlet configuration options

→ standard → optional

701, 3002



3502



EWCZ Cooling only TECHNICAL SPECIFICATIONS

MODEL		701	801	1001	1201	1602
Nominal cooling capacity	kW	16.2	19.8	24.5	30.3	39.6
Nominal cooling capacity	T.R.	4.6	5.6	7.0	8.6	11.3
Cooling absorbed power	kW	5.4	6.3	8.2	9.5	13.0
Power supply (50 Hz ~)	V	400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Water connections	Ø (")	1 1/2	1 1/2	1 1/2	1 1/2	2
Water flow	l/s	0.8	0.9	1.2	1.4	1.9
Water pressure drop	kPa	40	45	40	35	45
Air flow	m^3/h	7000	7800	11000	12500	16000
External static pressure	Pa	70	95	50	50	90
Dimensions (length x width x height)	mm	1130x800x1250	1130x800x1250	1700x870x1250	1700x870x1250	2000x939x1250
Net weight	kg	277	282	376	416	567
MODEL		**2002**	**2402**	**3002**	**3502**	
Nominal cooling capacity	kW	49.0	60.6	71.2	80.4	
Nominal cooling capacity	T.R.	13.9	17.2	20.2	22.9	
Cooling absorbed power	kW	16.7	19.4	22.3	25.8	
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	400.3+N	
Water connections	Ø (")	2	2	2	2	
Water flow	l/s	2.3	2.9	3.4	3.8	
Water pressure drop	kPa	40	35	30	30	
Air flow	m^3/h	18000	18500	27000	32000	
External static pressure	Pa	60	78	140	160	
Dimensions (length x width x height)	mm	2150x980x1362	2150x980x1362	2800x1050x1722	2800x1050x1722	
Net weight	kg	651	687	1038	1120	

Wesper recommends applying antifreeze electric heater in the drain pipe of condensate tray where ambient temperature conditions are less than 5°C.

EWCBZ Reversible TECHNICAL SPECIFICATIONS

MODEL		701	801	1001	1201	1602
Nominal cooling capacity	kW	15.9	19.4	24.0	29.7	38.9
Nominal cooling capacity	T.R.	4.5	5.5	6.8	8.4	11.1
Nominal heating capacity	kW	17.4	21.3	26.4	32.6	42.5
Cooling absorbed power	kW	5.5	7.4	9.8	12.3	14.7
Heating absorbed power	kW	5.0	5.8	7.5	8.8	11.7
Power supply (50 Hz ~)	V	400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Water connections	Ø (")	1 1/2	1 1/2	1 1/2	1 1/2	2
Water flow	l/s	0.8	0.9	1.1	1.4	1.9
Water pressure drop	kPa	40.0	45.0	40.0	35.0	45.0
Air flow	m^3/h	7000	7800	11000	12500	16000
External static pressure	Pa	70	95	50	50	90
Dimensions (length x width x height)	mm	1130x800x1250	1130x800x1250	1700x870x1250	1700x870x1250	2000x939x1250
Net weight	kg	277	282	376	416	567
MODEL		**2002**	**2402**	**3002**	**3502**	
Nominal cooling capacity	kW	48.0	59.4	69.8	78.5	
Nominal cooling capacity	T.R.	13.6	16.9	19.8	22.3	
Nominal heating capacity	kW	52.8	65.2	76.0	85.2	
Cooling absorbed power	kW	19.6	24.4	26.1	30.3	
Heating absorbed power	kW	14.8	17.7	20.2	22.0	
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	400.3+N	
Water connections	Ø (")	2	2	2	2	
Water flow	l/s	2.3	2.8	3.3	3.8	
Water pressure drop	kPa	40	35	30	30	
Air flow	m^3/h	22000	23000	27000	32000	
External static pressure	Pa	120	135	140	160	
Dimensions (length x width x height)	mm	2600x980x1422	2600x980x1422	2800x1050x1722	2800x1050x1722	
Net weight	kg	807	863	1038	1120	

Wesper recommends applying antifreeze electric heater in the drain pipe of condensate tray where ambient temperature conditions are less than 5°C.

Please contact the Sales Department for hydronic modules for these units.

EQPLU 128.1 / 204.2

Cooling only

SCROLL COMPRESSOR(S)

R410A

- Cooling capacities from 128 to 200 kW
- 10 sizes
- Refrigerant: R410A
- EER up to 2.98
- ESEER up to 3.99

MAIN FEATURES

- Available with single or double refrigeration circuit(s)
- 2 SCROLL compressors mounted on antivibration mounts
- All aluminium microchannel condenser

AVAILABLE VERSIONS

- Partial heat recovery version
- Total heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature version
- All-year-round operation as standard feature (-12°C)

Advantages

- 2 Scroll compressors per circuit for greater efficiency
- Single or twin circuit units
- Increased ESEER
- Refrigerant load reduced thanks to microchannel technology
- Different acoustic levels available
- Partial or total heat recovery
- EC fans for external static pressure
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

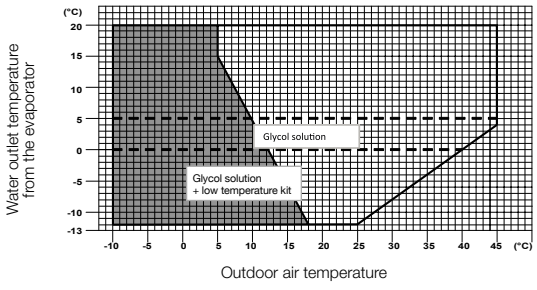
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Main accessories and options

Code	
79	Electrical panel heating resistance
83	Compressor operation indicator
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
250	Coil protection kit
350	Coil coating for agressive environment
449	Partial heat recovery dry contact for activation of circulation pump
450	Desuperheater
451	Total heat recovery
454	Total heat recovery dry contact for activation of circulation pump
720	Medium pressure single pump kit
721	Medium pressure double pump kit
722	Low pressure single pump kit
723	Low pressure double pump kit
725	Water tank + 1 medium pressure pump
726	Water tank + 2 medium pressure pumps
727	Water tank + 1 low pressure pump
728	Water tank + 2 low pressure pumps
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
943	Data logger

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQPLU 128.1 / 204.2 Cooling only TECHNICAL SPECIFICATIONS

SIZE		128.1	128.2	146.1	146.2	164.1	164.2	186.1	186.2	204.1	204.2
COOLING ONLY (1)											
Cooling capacity	kW	123	125	138	138	163	163	181	182	199	200
Compressor absorbed power	kW	40.6	40.8	48	48	50	50	59.1	59.1	68.5	68.5
Nominal operating current Compressors	A	70.7	70.8	82.4	82.4	86.8	86.8	101	101	116	116
Evaporator water flow	m³/h	21.2	21.5	23.7	23.8	28	28	31.2	31.2	34.3	34.3
Evaporator pressure loss	kPa	49	46	50	56	51	55	52	51	50	48
COOLING ONLY + HEAT RECOVERY 100% (2)											
Cooling capacity	kW	113	113	128	128	143	144	162	163	181	182
Heating capacity	kW	159	160	182	182	204	205	232	232	259	259
Compressors absorbed power	kW	46.7	46.7	53.9	53.9	61.1	61	69.4	69.3	78	77.9
Nominal operating current Compressors	A	78.3	78.4	90.4	90.4	103	102	116	116	130	130
Heat recovery exchanger water flow	m³/h	27.7	27.7	31.6	31.6	35.5	35.6	40.3	40.3	45	45.1
Heat recovery pressure loss	kPa	9	9	12	13	13	14	15	15	16	15
PARTIAL HEAT RECOVERY (3)											
Heating capacity	kW	45.3	--	50.6	--	59.8	--	66.5	--	73.1	--
Heat recovery exchanger water flow	m³/h	7.8	--	8.7	--	10.3	--	11.5	--	12.6	--
Heat recovery pressure loss	kPa	25	--	31.3	--	31	--	32.2	--	35.6	--
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2	2	2	2	2	2
Maximum operating current	A	97	97	113.9	113.9	131	131	148	148	165.2	165.2
Starting current	A	321	321	359	359	321	321	473	473	491	491
Number of capacity steps	n.	2	2	2	2	2	2	2	2	2	2
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Type (6)		PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
Water volume	l	8	8.8	9	8.8	11	8.6	12	9.8	14	11.7
Maximum water flow	m³/h	40.6	40.7	45.4	45.5	53.7	53.8	59.8	59.9	65.7	65.8
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	8	8.8	9	8.8	11	8.6	12	9.8	14	11.7
Maximum water flow	m³/h	29.9	30	33.5	33.5	39.7	39.7	44.1	44.2	48.5	48.5
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**--**	**1**	**--**	**1**	**--**	**1**	**--**	**1**	**--**
Water volume	l	1.7	--	1.7	--	2.3	--	2.8	--	3.1	--
Maximum water flow	m³/h	11	--	12.3	--	14.6	--	16.2	--	17.8	--
AXIAL FANS (AC)	**N.**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**3**	**3**	**3**
Total air flow	m³/h	42360	42360	42360	42360	63540	63540	63540	63540	63540	63540
Absorbed power	kW	3.2	3.2	3.2	3.2	4.7	4.7	4.7	4.7	4.7	4.7
Nominal operating current Compressors	A	7.8	7.8	7.8	7.8	11.7	11.7	11.7	11.7	11.7	11.7
Maximum external static pressure	Pa	0	0	0	0	0	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**3**	**3**	**3**
Total air flow	m³/h	42360	42360	42360	42360	63540	63540	63540	63540	63540	63540
Absorbed power	kW	2.6	2.6	2.6	2.6	3.8	3.8	3.8	3.8	3.8	3.8
Nominal operating current Compressors	A	7.8	7.8	7.8	7.8	11.7	11.7	11.7	11.7	11.7	11.7
Maximum external static pressure	Pa	0	0	0	0	0	0	0	0	0	0
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	12.3	12.3	12.3	12.5	12	13.7	20.9	23.5	21.4	24.3
Number of refrigerant circuits	n.	1	2	1	2	1	2	1	2	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**
ENERGY EFFICIENCY RATIOS (1)											
EER	kW/kW	2.81	2.84	2.7	2.7	2.98	2.98	2.84	2.85	2.72	2.73
ESEER = Eurovent standard		3.77	3.26	3.61	3.11	3.99	3.45	3.81	3.29	3.64	3.14
SOUND LEVELS											
Average sound pressure level [Lpm] (4)	dB(A)	62.1	62.1	62.1	62.1	62.5	62.5	64.1	64.1	65.2	65.2
Sound power level (Lw)	dB(A)	80.3	80.3	80.3	80.3	81.3	81.3	82.8	82.8	84	84
HYDRAULIC KIT											
Medium pressure single pump		HYG 360/1	HYG 360/1	HYG 360/1	HYG 360/1	GPUM2/1	GPUM2/1	GPUM2/1	GPUM2/1	GPUM2/1	GPUM2/1
Low pressure single pump		-	-	-	-	GPUB2/1	GPUB2/1	GPUB2/1	GPUB2/1	GPUB2/1	GPUB2/1
Medium pressure double pump		HYG 360/2	HYG 360/2	HYG 360/2	HYG 360/2	GPUM2/2	GPUM2/2	GPUM2/2	GPUM2/2	GPUM2/2	GPUM2/2
Low pressure double pump		-	-	-	-	GPUB2/2	GPUB2/2	GPUB2/2	GPUB2/2	GPUB2/2	GPUB2/2
Water tank volume	l	360	360	360	360	200	200	200	200	200	200
DIMENSIONS											
Length	mm	2960	2960	2960	2960	4000	4000	4000	4000	4000	4000
Width	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Height	mm	1950	1950	1950	1950	1970	1970	1970	1970	1970	1970
NET WEIGHT	**KG**	**910**	**910**	**930**	**930**	**990**	**1020**	**1030**	**1040**	**1060**	**1070**
HYDRAULIC CONNECTIONS											
EVAPORATOR											
Inlet outlet diameter	Ø	-	-	-	-	-	-	-	-	-	-
PARTIAL HEAT RECOVERY EXCHANGER	Ø mm	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1
Inlet outlet diameter – ISO 7/1 – R											
Inlet outlet diameter – ISO 228/1-GM	Ø	1+1/2"	-	1+1/2"	-	1+1/2"	-	1+1/2"	-	1+1/2"	-
TOTAL HEAT RECOVERY EXCHANGER											
Inlet outlet diameter	Ø mm	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1

(1) Gross value - chilled water temperature 12/7°C; external air temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; external air temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.
(6) PHE = Brazed-plate heat exchanger; S&T = Shell and tube heat exchanger

EQPL 215 / 830

Cooling only

SCROLL COMPRESSORS

R410A

- Cooling capacities from 210 to 808 kW
- 20 sizes
- Refrigerant: R410A
- EER up to 3.11
- ESEER up to 4.18

MAIN FEATURES

- Available with 2, 3 or 4 refrigeration circuits
- 2 SCROLL compressors per circuit, fitted on antivibration mounts
- All aluminium microchannel condenser
- Modern and modular design
- Shell and tube evaporator from size 430

AVAILABLE VERSIONS

- Partial heat recovery version
- Total heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature versions
- All-year-round operation as standard feature (-12°C)

Advantages

- Wide power range covered by scroll technology with maximum reliability (multiple circuits)
- 2 Scroll compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- Increased ESEER
- Dialogue interface with screen and graphical icons for easier reading
- Refrigerant load reduced thanks to microchannel technology
- Large choice of acoustic levels
- Partial or total heat recovery
- EC fans for available pressure
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

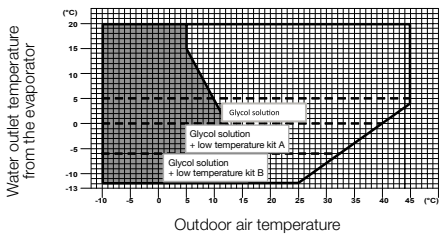
Main accessories and options

Code	
79	Electrical panel heating resistance
83	Compressor operation indicator
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
180	Power factor capacitor for compressor motor
183	Full Victaulic connection
251	Coil protection kit
350	Coil coating for agressive environment
449	Partial heat recovery dry contact for activation of circulation pump
450	Desuperheater
451	Total heat recovery
454	Total heat recovery dry contact for activation of circulation pump
459	Shell and tube evaporator
720	Medium pressure single pump kit
721	Medium pressure double pump kit
722	Low pressure single pump kit
723	Low pressure double pump kit
725	Water tank + 1 medium pressure pump
726	Water tank + 2 medium pressure pumps
727	Water tank + 1 low pressure pump
728	Water tank + 2 low pressure pumps
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
934	MP.COM extension card
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQPL 215 / 830 Cooling only TECHNICAL SPECIFICATIONS

SIZE		215.2	235.2	255.2	285.2	305.2
COOLING ONLY (1)						
Cooling capacity	kW	210	229	250	282	302
Compressors absorbed power	kW	62.8	71.1	81.5	96.6	87.5
Nominal operating current Compressors	A	115	125	142	166	153
Evaporator water flow	m³/h	36	39.3	43	48.4	51.9
Evaporator pressure loss	kPa	54	54	54	53	52
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	203	224	251	290	294
Heating capacity	kW	269	298	332	383	385
Compressors absorbed power	kW	66.4	73.7	80.9	92.3	91.9
Nominal operating current Compressors	A	120	128	141	160	159
Heat recovery exchanger water flow	m³/h	46.8	51.7	57.7	66.5	67
Heat recovery pressure loss	kPa	89	97	73	78	71
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	77	84	91.8	103	111
Heat recovery exchanger water flow	m³/h	13.3	14.5	15.8	17.8	19.1
Heat recovery pressure loss	kPa	18.1	21.5	25.7	26.5	26.7
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	4	4	4	4	4
Maximum operating current	A	165	177	194	228	228
Starting current	A	389	401	418	472	472
Number of capacity steps	n.	4	4	4	4	4
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Type (6)		PHE	PHE	PHE	PHE	PHE
Water volume	l	11.7	13.3	15.1	18.6	22.8
Maximum water flow	m³/h	68.2	74.4	81.5	91.9	98.4
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	11.7	13.3	15.1	18.6	22.8
Maximum water flow	m³/h	65.5	72.4	80.8	93.1	93.8
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	3.5	3.5	3.5	4.1	4.6
Maximum water flow	m³/h	18.5	20.2	22.1	24.9	26.7
AXIAL FANS (AC)	**N.**	**4**	**4**	**4**	**4**	**6**
Total air flow	m³/h	84720	84720	84720	84720	127080
Absorbed power	kW	6.3	6.3	6.3	6.3	9.5
Nominal operating current Compressors	A	15.6	15.6	15.6	15.6	23.4
Maximum external static pressure	Pa	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**4**	**4**	**4**	**4**	**6**
Total air flow	m³/h	84720	84720	84720	84720	127080
Absorbed power	kW	5.1	5.1	5.1	5.1	7.7
Nominal operating current Compressors	A	15.6	15.6	15.6	15.6	23.4
Maximum external static pressure	Pa	80	80	80	80	80
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	19.3	19.6	19.9	19.9	27.6
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.04	2.96	2.85	2.74	3.11
ESEER = Eurovent standard		4.07	3.96	3.82	3.67	4.18
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	68.9	70	71.2	71.2	71.2
Sound power level (Lw)	dB(A)	87.7	88.8	90	90	90.6
HYDRAULIC KIT						
Medium pressure single pump		GPVM1/1	GPVM1/1	GPVM1/1	GPVM1/1	GPVM1/1
Low pressure single pump		GPVB1/1	GPVB1/1	GPVB1/1	GPVB1/1	GPVB1/1
Medium pressure double pump		GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2
Low pressure double pump		GPVB1/2	GPVB1/2	GPVB1/2	GPVB1/2	GPVB1/2
Water tank volume	l	130	130	130	130	190
DIMENSIONS						
Length	mm	2410	2410	2410	2410	3530
Width	mm	2260	2260	2260	2260	2260
Height	mm	2304	2304	2304	2304	2304
NET WEIGHT	**KG**	**1730**	**1920**	**1970**	**2010**	**2280**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	88.9	88.9	88.9	88.9	88.9
PARTIAL HEAT RECOVERY EXCHANGER 100%						
Inlet outlet diameter – ISO 7/1 – R	Ø	--	--	--	--	--
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter	Ø mm	88.9	88.9	88.9	88.9	88.9

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.
(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQPL 215 / 830 Cooling only TECHNICAL SPECIFICATIONS

SIZE		340.2	380.2	410.2	430.3	470.3
COOLING ONLY (1)						
Cooling capacity	kW	333	370	405	423	456
Compressors absorbed power	kW	101	119	138	145	141
Nominal operating current Compressors	A	174	203	233	248	245
Evaporator water flow	m³/h	57.2	63.6	69.5	72.7	78.4
Evaporator pressure loss	kPa	53	51	52	31	36
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	329	371	413	--	--
Heating capacity	kW	431	489	547	--	--
Compressors absorbed power	kW	103	118	134	--	--
Nominal operating current Compressors	A	178	202	227	--	--
Heat recovery exchanger water flow	m³/h	75	85	95	--	--
Heat recovery pressure loss	kPa	73	77	88	--	--
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	122	136	148	155	167
Heat recovery exchanger water flow	m³/h	21.1	23.4	25.6	26.7	28.8
Heat recovery pressure loss	kPa	32.4	33.5	36.7	26.5	27
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	4	4	4	6	6
Maximum operating current	A	262	296	330	342	359
Starting current	A	506	621	656	586	603
Number of capacity steps	n.	4	4	4	6	6
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Type (6)		PHE	PHE	PHE	S&T	S&T
Water volume	l	22.8	26	29.2	133.4	133.4
Maximum water flow	m³/h	108.7	120.8	132.3	138	148.4
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**--**	**--**
Water volume	l	22.8	26	29.2	--	--
Maximum water flow	m³/h	105	119	133	--	--
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**3**	**3**
Water volume	l	4.6	5.6	6.4	6.2	7
Maximum water flow	m³/h	29.4	32.7	35.8	37.4	40.3
AXIAL FANS (AC)	**N.**	**6**	**6**	**6**	**6**	**8**
Total air flow	m³/h	127080	127080	127080	127080	169440
Absorbed power	kW	9.5	9.5	9.5	9.5	12.6
Nominal operating current Compressors	A	23.4	23.4	23.4	23.4	31.2
Maximum external static pressure	Pa	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**6**	**6**	**6**	**6**	**8**
Total air flow	m³/h	127080	127080	127080	127080	169440
Absorbed power	kW	7.7	7.7	7.7	7.7	10.2
Nominal operating current Compressors	A	23.4	23.4	23.4	23.4	31.2
Maximum external static pressure	Pa	80	80	80	80	80
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	28.1	28.3	28.3	29.9	38.6
Number of refrigerant circuits	n.	2	2	2	3	3
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.01	2.88	2.75	2.74	2.97
ESEER = Eurovent standard		4.06	3.87	3.69	3.67	3.98
SOUND LEVELS						
Mean sound pressure level [Lpm] (4)	dB(A)	71.2	73.6	75.1	72.9	72.9
Sound power level (Lw)	dB(A)	90.7	93	94.6	92.4	93
HYDRAULIC KIT						
Medium pressure single pump		GPVM1/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1
Low pressure single pump		GPVB1/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1
Medium pressure double pump		GPVM1/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2
Low pressure double pump		GPVB1/2	GPVB2/2	GPVB2/2	GPVB2/2	GPVB2/2
Water tank volume	l	190	190	190	-	-
DIMENSIONS						
Length	mm	3530	3530	3530	3530	4650
Width	mm	2260	2260	2260	2260	2260
Height	mm	2304	2304	2304	2304	2304
NET WEIGHT	**KG**	**2310**	**2360**	**2410**	**2980**	**3270**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	88.9	88.9	88.9	168.3	168.3
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	--	--	--	--	--
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 1"	2 x 1"	2 x 1"	3 x 1"	3 x 1"
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter	Ø mm	88.9	88.9	88.9	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	500.3	540.3	560.3	610.3	630.3	680.4	720.4	750.4	800.4	830.4
	497	526	547	602	615	666	701	729	775	808
	160	178	177	207	202	201	220	238	256	276
	274	303	303	350	342	349	378	406	435	467
	85.4	90.5	94.1	104	106	114	120	125	133	139
	43	48	51	58	60	67	74	81	87	55
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	182	193	201	221	226	244	257	267	284	296
	31.4	33.3	34.6	38.1	38.9	42.1	44.3	46.1	49	51
	32	30.2	32.6	36.2	37.7	32.4	30.1	32.5	33.7	36.6
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	6	6	6	6	6	8	8	8	8	8
	393	427	444	496	496	523	558	592	626	661
	718	753	769	821	821	866	883	917	952	986
	6	6	6	6	6	8	8	8	8	8
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T	S&T
	124.7	124.7	124.7	221.7	221.7	221.7	206.5	206.5	206.5	184.4
	161	170.2	177.1	195.5	200.1	215.1	226.6	235.8	250.7	262.2
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	3	**3**	**3**	**3**	**3**	**4**	**4**	**4**	**4**	**4**
	7	8.4	9.6	9.6	9.6	9.3	11.2	11.2	12.7	12.7
	43.4	46.3	48.4	53.1	54.3	58.5	61.6	64.6	68.8	71.4
	8	**8**	**9**	**9**	**10**	**12**	**12**	**12**	**12**	**12**
	169440	169440	190620	190620	211800	254160	254160	254160	254160	254160
	12.6	12.6	14.2	14.2	15.8	19	19	19	19	19
	31.2	31.2	35.1	35.1	39	46.8	46.8	46.8	46.8	46.8
	0	0	0	0	0	0	0	0	0	0
	8	**8**	**9**	**9**	**10**	**12**	**12**	**12**	**12**	**12**
	169440	169440	190620	190620	211800	254160	254160	254160	254160	254160
	10.2	10.2	11.5	11.5	12.8	15.4	15.4	15.4	15.4	15.4
	31.2	31.2	35.1	35.1	39	46.8	46.8	46.8	46.8	46.8
	80	80	80	80	80	80	80	80	80	80
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	38.6	38.6	42.4	42.6	46.4	56.3	56.6	56.6	56.6	56.7
	3	3	3	3	3	4	4	4	4	4
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	2.88	2.76	2.86	2.72	2.82	3.03	2.93	2.84	2.82	2.74
	3.83	3.69	3.83	3.66	3.8	4.11	4.01	3.9	3.86	3.75
	74.3	75.9	75.3	76.9	76.9	74.2	75.5	76.6	77.4	78.1
	94.3	95.9	95.8	97.4	97.4	95.1	96.5	97.5	98.3	99
	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM3/1	GPVM3/1	GPVM3/1	GPVM3/1
	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB3/1	GPVB3/1	GPVB3/1	GPVB3/1
	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM3/2	GPVM3/2	GPVM3/2	GPVM3/2
	GPVB2/2	GPVB2/2	GPVB2/2	GPVB2/2	GPVB2/2	GPVB2/2	GPVB3/2	GPVB3/2	GPVB3/2	GPVB3/2
	-	-	-	-	-	-	-	-	-	-
	4650	4650	5770	5770	5770	6890	6890	6890	6890	6890
	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
	2304	2304	2304	2304	2304	2304	2304	2304	2304	2304
	3330	**3360**	**3700**	**3940**	**3940**	**4530**	**4600**	**4630**	**4670**	**4750**
	168.3	168.3	168.3	219.1	219.1	219.1	219.1	219.1	219.1	219.1
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	3 x 1"	3 x 1"	3 x 1"	3 x 1"	3 x 1"	4 x 1"	4 x 1"	4 x 1"	4 x 1"	4 x 1"
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(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQPH 128 / 830

Reversible

SCROLL COMPRESSORS

R410A

- Cooling capacities from 117 to 772 kW
- Heating capacities from 132 to 932 kW
- 26 sizes
- Refrigerant: R410A
- EER up to 2.74
- ESEER up to 3.65
- COP up to 3.18

MAIN FEATURES

- Available with 1, 2, 3 or 4 refrigeration circuits
- 2 SCROLL compressors per circuit, fitted on antivibration mounts
- Modern and modular design
- Shell and tube evaporator from size 430

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-10°C)

Advantages

- Wide power range covered by scroll technology with maximum reliability (multiple circuits)
- 2 Scroll compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- High COP
- Dialogue interface with screen and graphical icons for easier reading
- Large choice of sound levels
- EC fan motors for available pressure
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

Operating limits (standard model)

COOLING OPERATION	
Water leaving temperature (no glycol)	5 / 20°C
Water leaving temperature (with glycol max 40%)	-12 / 5°C
Max outdoor air temperature	45°C
Min outdoor air temperature	-10°C
HEATING OPERATION	
Max water leaving temperature	55°C
Max outdoor air temperature	20°C
Min outdoor air temperature	-10°C

Main accessories and options

Code	
79	Electrical panel heating resistance
83	Compressor operation indicator
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
180	Power factor capacitor for compressor motor
183	Full Victaulic connection
251	Coil protection kit
350	Coil protection against agressive environment
449	Partial heat recovery dry contact for activation of circulation pump
450	Desuperheater
459	Shell and tube evaporator
720	Medium pressure single pump kit
721	Medium pressure double pump kit
722	Low pressure single pump kit
723	Low pressure double pump kit
725	Water tank + 1 medium pressure pump
726	Water tank + 2 medium pressure pumps
727	Water tank + 1 low pressure pump
728	Water tank + 2 low pressure pumps
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
934	MP.COM extension card
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EQPH 128 / 830 Reversible TECHNICAL SPECIFICATIONS

SIZE		128.1	128.2	146.1	146.2	164.1	164.2	186.1
SUMMER OPERATION (1)								
Cooling capacity	kW	117	117	138	138	155	155	175
Compressors absorbed power	kW	42.6	42.6	46.3	46.3	52.3	52.3	60.1
Nominal operating current Compressors	A	72.6	72.6	79.6	79.6	89.5	89.6	102
Entering water temperature	°C	12	12	12	12	12	12	12
Leaving water temperature	°C	7	7	7	7	7	7	7
Evaporator water flow	m³/h	20.1	20.1	23.7	23.7	26.7	26.7	30.1
Evaporator pressure loss	kPa	45	41	50	55	47	51	49
Outdoor air temperature	°C	35	35	35	35	35	35	35
WINTER OPERATION (2)								
Heating capacity	kW	132	132	153	153	173	177	197
Compressors absorbed power	kW	41.1	41	47.8	47.7	53.6	53.2	61.2
Nominal operating current Compressors	A	70.8	70.8	81.7	81.7	91.6	90.8	104
Entering water temperature	°C	39.3	39.3	39.4	39.4	39.4	39.2	39.3
Leaving water temperature	°C	45	45	45	45	45	45	45
Outdoor air temperature	°C	7	7	7	7	7	7	7
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2	2	2
Maximum operating current	A	97	97	114	113.9	97	131	148
Starting current	A	321	320.5	359	358.5	321	320.5	473
Number of capacity steps	n.	2	2	2	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	8	8.8	9	8.8	11	8.6	12
Maximum water flow	m³/h	28.1	28.1	33.1	33.1	37.3	37.4	42.1
Antifreeze	%	0	0	0	0	0	0	0
Fouling factor	m²°K/kW	0.043	0.043	0.043	0.043	0.043	0.043	0.043
AXIAL FANS (AC)	**N.**	**2**	**2**	**3**	**3**	**3**	**3**	**3**
Total air flow	m³/h	36900	36900	56700	56700	56700	56700	55350
Absorbed power	kW	2.8	2.8	4.3	4.3	4.3	4.3	4.3
Fans maximum operating current	A	7.8	7.8	11.7	11.7	11.7	11.7	11.7
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load	kg	44.6	47.7	52.1	55.7	53	56.7	65.6
Number of refrigerant circuits	n.	1	2	1	2	1	2	1
SUPPLY VOLTAGE	**V/ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER EUROVENT	kW/kW	2.53	2.53	2.67	2.67	2.69	2.69	2.67
COP EUROVENT	kW/kW	2.98	2.99	2.91	2.91	2.96	3.05	2.98
ESEER = Eurovent Standard		3.41	3.42	3.61	3.62	3.64	3.65	3.61
SOUND LEVELS								
Sound pressure level at 1 m in free field conditions (Lpm) (ISO3744)	dB(A)	63.9	63.8	64.1	64.1	64.1	64.1	66.1
Sound power level (Lw) (ISO EN 9614-2)	dB(A)	81.9	81.9	83	83	83	83	85
DIMENSIONS								
Length	mm	2960	2960	4000	4000	4000	4000	4000
Width	mm	1200	1200	1200	1200	1200	1200	1200
Height	mm	1950	1950	1970	1970	1970	1970	1970
NET WEIGHT	**KG**	**1065**	**1097**	**1160**	**1194**	**1182**	**1217**	**1277**

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - hot water outlet temperature 45°C and outdoor temperature 7°C.

EQPH 128 / 830 Reversible TECHNICAL SPECIFICATIONS

SIZE		186.2	204.1	204.2	215.2	235.2	255.2	305.2
SUMMER OPERATION (1)								
Cooling capacity	kW	175	194	195	194	210	242	274
Compressors absorbed power	kW	60.2	68.6	68.6	66.9	76.9	81.1	96.7
Nominal operating current Compressors	A	102	115	116	120	132	140	165
Entering water temperature	°C	12	12	12	12	12	12	12
Leaving water temperature	°C	7	7	7	7	7	7	7
Evaporator water flow	m³/h	30.1	33.4	33.5	33.4	36.2	41.5	47
Evaporator pressure loss	kPa	48	47	46	47	46	51	43
Outdoor air temperature	°C	35	35	35	35	35	35	35
WINTER OPERATION (2)								
Heating capacity	kW	201	218	222	220	240	281	315
Compressors absorbed power	kW	60.8	68.7	68.2	67	74.5	83.4	94.9
Nominal operating current Compressors	A	103	116	115	120	129	143	162
Entering water temperature	°C	39.2	39.3	39.2	39.3	39.2	39.1	39.2
Leaving water temperature	°C	45	45	45	45	45	45	45
Outdoor air temperature	°C	7	7	7	7	7	7	7
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	4	4	4	4
Maximum operating current	A	148	165	165.2	165	177	194	228
Starting current	A	473.4	491	490.6	389	401	418	472
Number of capacity steps	n.	2	2	2	4	4	4	4
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	9.8	14	11.7	11.7	13.3	15.1	22.8
Maximum water flow	m³/h	42.1	46.7	46.8	46.7	50.5	58.1	65.7
Antifreeze	%	0	0	0	0	0	0	0
Fouling factor	m²°K/kW	0.043	0.043	0.043	0.043	0.043	0.043	0.043
AXIAL FANS (AC)	**N.**	**3**	**3**	**3**	**4**	**4**	**6**	**6**
Total air flow	m³/h	55350	55350	55350	68400	68400	106920	106920
Absorbed power	kW	4.3	4.3	4.3	5.7	5.7	8.5	8.5
Fans maximum operating current	A	11.7	11.7	11.7	15.6	15.6	23.4	23.4
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load	kg	70.2	66	70.6	67.2	69.2	76.2	77.4
Number of refrigerant circuits	n.	2	1	2	2	2	2	2
SUPPLY VOLTAGE	**V/ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER EUROVENT	kW/kW	2.67	2.62	2.63	2.63	2.5	2.66	2.57
COP EUROVENT	kW/kW	3.06	2.96	3.04	3	2.97	3.04	3.03
ESEER = Eurovent Standard		3.61	3.54	3.55	3.59	3.42	3.62	3.49
SOUND LEVELS								
Sound pressure level at 1 m in free field conditions (Lpm) (ISO3744)	dB(A)	66.1	67.5	67.5	68.9	70	71.2	71.2
Sound power level (Lw) (ISO EN 9614-2)	dB(A)	85	86.4	86.4	87.7	88.8	90.7	90.7
DIMENSIONS								
Length	mm	4000	4000	4000	2410	2410	3530	3530
Width	mm	1200	1200	1200	2260	2260	2260	2260
Height	mm	1970	1970	1970	2304	2304	2304	2304
NET WEIGHT	**KG**	**1316**	**1296**	**1335**	**1957**	**2114**	**2458**	**2507**

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - hot water outlet temperature 45°C and outdoor temperature 7°C.

	340.2	380.2	410.2	430.3	470.3	500.3	560.3	610.3	680.4	750.4	800.4	830.4
	306	340	380	408	430	469	506	542	615	666	729	772
	108	127	142	145	147	165	190	221	217	254	265	274
	184	213	238	247	251	279	320	369	368	427	445	461
	12	12	12	12	12	12	12	12	12	12	12	12
	7	7	7	7	7	7	7	7	7	7	7	7
	52.7	58.5	65.4	70.3	74	80.8	87.1	92.9	106	114	126	133
	45	43	46	31	34	40	44	50	59	70	80	57
	35	35	35	35	35	35	35	35	35	35	35	35
	359	402	456	482	512	558	617	678	728	823	873	932
	104	122	137	142	148	163	179	201	213	238	258	274
	178	206	230	243	253	278	304	339	364	404	436	461
	39.1	39	38.9	39	39	39	38.8	38.7	39	38.7	39	38.9
	45	45	45	45	45	45	45	45	45	45	45	45
	7	7	7	7	7	7	7	7	7	7	7	7
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	4	4	4	6	6	6	6	6	8	8	8	8
	262	296	330	342	359	393	444	496	523	592	626.4	660.8
	506	621	656	586	603	718	769	821	866	917	951.8	986.2
	4	4	4	6	6	6	6	6	8	8	8	8
	1	1	1	1	1	1	1	1	1	1	1	1
	22.8	26	29.2	133.4	124.7	124.7	221.7	221.7	221.7	206.5	184.4	184.4
	73.6	81.7	91.4	107	110	110	135	135	135	160	190	190
	0	0	0	0	0	0	0	0	0	0	0	0
	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
	6	6	8	9	9	9	9	9	12	12	14	16
	102600	102600	142560	160380	153900	153900	153900	153900	205200	205200	239400	273600
	8.5	8.5	11.4	12.8	12.8	12.8	12.8	12.8	17.1	17.1	19.9	22.8
	23.4	23.4	31.2	35.1	35.1	35.1	35.1	35.1	46.8	46.8	54.6	62.4
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	100.9	101.9	102.9	141.9	162.5	164	182.5	182.5	233.3	237.8	269.4	294.8
	2	2	2	3	3	3	3	3	4	4	4	4
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	2.59	2.48	2.45	2.56	2.66	2.61	2.47	2.29	2.59	2.42	2.51	2.56
	3.17	3.06	3.05	3.1	3.17	3.16	3.2	3.15	3.14	3.2	3.11	3.12
	3.52	3.37	3.33	3.48	3.62	3.55	3.36	3.11	3.53	3.3	3.44	3.5
	71.2	73.6	75.1	72.9	72.9	74.3	75.3	76.8	74.2	76.6	77.4	78.1
	90.7	93	95.1	93.4	93.4	94.8	95.8	97.3	95.1	97.5	98.8	99.8
	3530	3530	4650	5770	5770	5770	5770	5770	6890	6890	8010	9130
	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
	2304	2304	2304	2304	2304	2304	2304	2304	2304	2304	2304	2304
	2681	2739	3015	3876	4029	4087	4422	4461	5213	5358	5600	5789

EQPLA 106 / 860

Cooling only

SCROLL COMPRESSORS
CLASS A

R410A

Class A

- Cooling capacities from 210 to 808 kW
- 31 sizes
- Refrigerant: R410A
- EER up to 3.25
- ESEER up to 4.35
- Class A

MAIN FEATURES

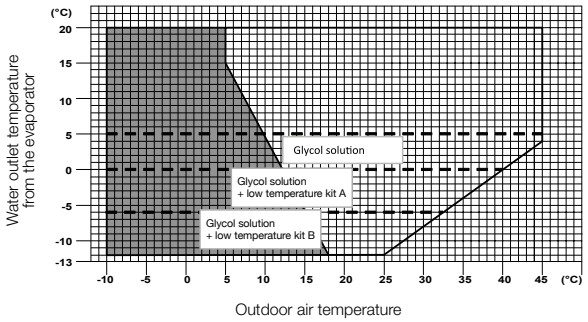
- Available with 2, 3 or 4 refrigeration circuits
- 2 SCROLL compressors per circuit, fitted on antivibration mounts
- All aluminium microchannel condenser
- Modern and modular design
- Shell and tube evaporator from size 430

AVAILABLE VERSIONS

- Partial heat recovery version
- Full heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-12°C)

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



Main accessories and options

Code	
79	Electrical panel heating resistance
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
183	Full Victaulic connection
350	Coil protection against agressive environment
449	Partial heat recovery dry contact for activation of circulation pump
450	Desuperheater
451	Total heat recovery
454	Total heat recovery dry contact for activation of circulation pump
720	Medium pressure single pump kit
721	Medium pressure double pump kit
722	Low pressure single pump kit
723	Low pressure double pump kit
725	Water tank + 1 medium pressure pump
726	Water tank + 2 medium pressure pumps
727	Water tank + 1 low pressure pump
728	Water tank + 2 low pressure pumps
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
934	MP.COM extension card
943	Data logger

Advantages

- Class A
- Wide power range covered by scroll technology with maximum reliability (multiple circuits)
- 2 Scroll compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- High ESEER
- Dialogue interface with screen and graphical icons for easier reading
- Refrigerant load reduced thanks to microchannel technology
- Large choice of sound levels
- Partial or total heat recovery
- EC fans for available pressure
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EQPLA 106 / 860 Cooling only TECHNICAL SPECIFICATIONS

SIZE		106.1	128.2	132.1	140.2	153.2
COOLING ONLY (1)						
Cooling capacity	kW	108	124	134	139	152
Compressors absorbed power	kW	31.8	35.2	38.9	40.4	43.6
Nominal operating current Compressors	A	58.2	64	68.5	74.6	83.4
Evaporator water flow	m³/h	18.6	21.4	23	23.9	26.1
Evaporator pressure loss	kPa	33	46	34	39	46
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	105	119	129	136	147
Heating capacity	kW	138	157	170	178	193
Compressors absorbed power	kW	33.1	37.9	41	41.9	46.2
Nominal operating current Compressors	A	59.9	68	71.1	76.7	87.1
Heat recovery exchanger water flow	m³/h	24.1	27.3	29.6	30.9	33.5
Heat recovery pressure loss	kPa	38	58	36	55	64
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	39.7	45.7	49.1	51.1	55.7
Heat recovery exchanger water flow	m³/h	6.8	7.9	8.5	8.8	9.6
Heat recovery pressure loss	kPa	27.2	18.7	29.4	23.4	19
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	4	2	4	4
Maximum operating current	A	83	100	97	124	130
Starting current	A	306	193	321	233	270
Number of capacity steps	n.	2	4	2	4	4
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Type (6)		PHE	PHE	PHE	PHE	PHE
Water volume	l	11	8.6	11	9.8	9.8
Maximum water flow	m³/h	35.1	40.5	43.5	45.3	49.5
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	11	8.6	11	9.8	9.8
Maximum water flow	m³/h	33.7	38.2	41.4	43.3	46.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**2**	**1**	**2**	**2**
Water volume	l	1.4	1.7	1.7	1.7	2.2
Maximum water flow	m³/h	9.5	11	11.8	12.3	13.4
AXIAL FANS (AC)	**N.**	**4**	**6**	**6**	**6**	**6**
Total air flow	m³/h	38940	53340	53340	53340	59300
Absorbed power	kW	2.2	3.2	3.2	3.2	3.2
Nominal operating current Compressors	A	7.9	7.9	7.9	7.9	7.9
Maximum external static pressure	Pa	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**4**	**6**	**6**	**6**	**6**
Total air flow	m³/h	38940	53340	53340	53340	59300
Absorbed power	kW	1.6	2.3	2.3	2.3	2.3
Nominal operating current Compressors	A	6.4	9.6	9.6	9.6	9.6
Maximum external static pressure	Pa	0	0	0	0	0
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	12	12	12.4	12.1	23.3
Number of refrigerant circuits	n.	1	2	1	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.18	3.23	3.18	3.19	3.25
ESEER = Eurovent standard		4.2	4.34	4.22	4.27	4.35
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	57.3	55.5	59.4	55.9	56.1
Sound power level (Lw)	dB(A)	75.5	73.7	77.5	74.1	74.7
HYDRAULIC KIT						
Medium pressure single pump		GPWM1/1	GPWM1/1	GPWM1/1	GPWM1/1	GPWM1/1
Low pressure single pump		GPWB1/1	GPWB1/1	GPWB1/1	GPWB1/1	GPWB1/1
Medium pressure double pump		GPWM1/2	GPWM1/2	GPWM1/2	GPWM1/2	GPWM1/2
Low pressure double pump		GPWB1/2	GPWB1/2	GPWB1/2	GPWB1/2	GPWB1/2
Water tank volume	l	200	200	200	200	200
DIMENSIONS						
Length	mm	2455	2455	2455	2455	2455
Width	mm	1750	1750	1750	1750	1750
Height	mm	2110	2110	2110	2110	2410
NET WEIGHT	**KG**	**1250**	**1310**	**1390**	**1330**	**1300**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	73.1	73.1	73.1	73.1	73.1
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1"
Inlet outlet diameter – ISO 228/1-GM	n x Ø	--	--	--	--	--
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter	Ø mm	73.1	73.1	73.1	73.1	73.1

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.
(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQPLA 106 / 860 Cooling only TECHNICAL SPECIFICATIONS

SIZE		164.2	168.1	168.2	184.2	190.2
COOLING ONLY (1)						
Cooling capacity	kW	164	170	171	185	189
Compressors absorbed power	kW	48.4	50.6	50.6	55.2	53.3
Nominal operating current Compressors	A	94.5	87.6	87.7	101	99.7
Evaporator water flow	m³/h	28.2	29.2	29.4	31.8	32.4
Evaporator pressure loss	kPa	42	25	34	35	43
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	161	166	164	186	181
Heating capacity	kW	211	218	218	241	238
Compressors absorbed power	kW	50.2	52.4	54	54.8	57.1
Nominal operating current Compressors	A	97	90.2	92.4	101	105
Heat recovery exchanger water flow	m³/h	36.6	38	37.9	41.9	41.4
Heat recovery pressure loss	kPa	64	20	52	65	69
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	60.4	62.3	62.7	68	69.2
Heat recovery exchanger water flow	m³/h	10.4	10.7	10.8	11.7	11.9
Heat recovery pressure loss	kPa	22.3	33.7	24.1	20	14.6
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	4	2	2	4	4
Maximum operating current	A	136	131	131	148	148
Starting current	A	276	375	375	259	333
Number of capacity steps	n.	4	2	2	4	4
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Type (6)		PHE	PHE	PHE	PHE	PHE
Water volume	l	11.7	14	11.7	13.3	13.3
Maximum water flow	m³/h	53.5	55.2	55.5	60.3	61.3
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	11.7	14	11.7	13.3	13.3
Maximum water flow	m³/h	51.2	53.2	53.1	58.7	58
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**1**	**2**	**2**	**2**
Water volume	l	2.2	2.3	2.2	2.7	3.5
Maximum water flow	m³/h	14.5	15	15.1	16.4	16.7
AXIAL FANS (AC)	**N.**	**6**	**6**	**6**	**6**	**4**
Total air flow	m³/h	59300	59300	59300	59300	84720
Absorbed power	kW	3.2	3.2	3.2	3.2	6.3
Nominal operating current Compressors	A	7.9	7.9	7.9	7.9	15.6
Maximum external static pressure	Pa	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**6**	**6**	**6**	**6**	**4**
Total air flow	m³/h	59300	59300	59300	59300	84720
Absorbed power	kW	2.3	2.3	2.3	2.3	5.1
Nominal operating current Compressors	A	9.6	9.6	9.6	9.6	15.6
Maximum external static pressure	Pa	0	0	0	0	80
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	24.1	21.3	24.3	25	19
Number of refrigerant circuits	n.	2	1	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50+N**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.18	3.16	3.18	3.17	3.17
ESEER = Eurovent standard		4.27	4.19	3.63	4.25	4.24
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	56.3	59.4	59.4	58.1	66.7
Sound power level (Lw)	dB(A)	74.9	77.9	77.9	76.7	85.5
HYDRAULIC KIT						
Medium pressure single pump		GPWM1/1	GPWM1/1	GPWM1/1	GPWM1/1	GPVM1/1
Low pressure single pump		GPWB1/1	GPWB1/1	GPWB1/1	GPWB1/1	GPVB1/1
Medium pressure double pump		GPWM1/2	GPWM1/2	GPWM1/2	GPWM1/2	GPVM1/2
Low pressure double pump		GPWB1/2	GPWB1/2	GPWB1/2	GPWB1/2	GPVM1/2
Water tank volume	l	200	200	200	200	130
DIMENSIONS						
Length	mm	2455	2455	2455	2455	2410
Width	mm	1750	1750	1750	1750	2260
Height	mm	2410	2410	2410	2410	2304
NET WEIGHT	**KG**	**1440**	**1540**	**1530**	**1390**	**1700**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	73.1	73.1	73.1	73.1	88.9
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	--
Inlet outlet diameter – ISO 228/1-GM	n x Ø	--	--	--	--	2 x 1"
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter	Ø mm	73.1	73.1	73.1	73.1	88.9

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	214.2	236.2	270.2	304.2	340.2	374.2	390.2	410.2	430.2	455.3
	218	235	271	308	344	372	394	413	438	471
	62.5	68.8	75.1	87.7	99.2	104	112	118	126	130
	115	121	134	154	172	180	194	203	215	228
	37.5	40.3	46.6	52.9	59	63.9	67.6	70.9	75.2	80.9
	38	38	33	43	35	41	35	39	38	38
	214	234	260	299	340	357	382	402	430	--
	278	303	341	391	441	468	499	525	559	--
	64.5	69.1	80.6	92.2	101	111	118	123	129	--
	117	121	141	160	174	190	202	210	219	--
	48.4	52.7	59.2	67.9	76.6	81.2	86.8	91.3	97.2	--
	73	69	46	60	52	58	33	61	62	--
	80	86.1	99.6	113	126	137	145	152	161	173
	13.8	14.8	17.2	19.5	21.7	23.5	24.9	26.1	27.7	29.8
	19.5	22.6	24.6	27.7	34.5	33.9	38	38.3	43	22.2
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	4	4	4	4	4	4	4	4	4	6
	165	177	194	228	262	279	296	313	330	342
	389	401	418	472	506	604	621	639	656	586
	4	4	4	4	4	4	4	4	4	6
	1	1	1	1	1	1	1	1	1	1
	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE	S&T
	15.1	15.1	18.6	26	30	31.6	133.4	133.4	124.7	113.5
	71	76.4	88.3	100.3	111.9	120.8	127.7	134.6	142.6	153
	1	1	1	1	1	1	1	1	1	--
	15.1	15.1	18.6	26	30	31.6	133.4	133.4	124.7	--
	67.8	73.8	82.9	95.1	107.2	113.7	121.5	127.8	136.1	--
	2	2	2	2	2	2	2	2	2	3
	3.5	3.5	4.1	4.6	4.6	5.6	6.4	6.4	6.4	7
	27	20.7	24	27.2	30.4	32.9	34.8	36.5	38.7	41.2
	4	4	6	6	6	8	8	8	8	10
	84720	84720	127080	127080	127080	169440	169440	169440	169440	211800
	6.3	6.3	9.5	9.5	9.5	12.6	12.6	12.6	12.6	15.8
	15.6	15.6	23.4	23.4	23.4	31.2	31.2	31.2	31.2	39
	0	0	0	0	0	0	0	0	0	0
	4	4	6	6	6	8	8	8	8	10
	84720	84720	127080	127080	127080	169440	169440	169440	169440	211800
	5.1	5.1	7.7	7.7	7.7	10.2	10.2	10.2	10.2	12.8
	15.6	15.6	23.4	23.4	23.4	31.2	31.2	31.2	31.2	39
	80	80	80	80	80	80	80	80	80	80
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	19.4	20.2	27.8	27.8	28.3	36.2	36.2	36.3	36.3	41.7
	2	2	2	2	2	2	2	2	2	3
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	3.17	3.13	3.2	3.17	3.16	3.19	3.16	3.16	3.16	3.23
	4.25	4.23	4.31	4.25	4.25	4.29	4.23	4.23	4.24	4.23
	68.9	70	71.2	71.2	71.2	72.6	73.6	74.4	75.1	73
	87.7	88.8	90.7	90.7	90.7	92.6	93.6	94.4	95.1	93.5
	GPVM1/1	GPVM1/1	GPVM1/1	GPVM1/1	GPVM1/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1
	GPVB1/1	GPVB1/1	GPVB1/1	GPVB1/1	GPVB1/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1
	GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2
	GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2	GPVM1/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2
	130	130	190	190	190	330	330	330	330	--
	2410	2410	3530	3530	3530	4650	4650	4650	4650	5770
	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
	2304	2304	2304	2304	2304	2304	2304	2304	2304	2304
	1740	1930	2250	2300	2340	2640	2690	2710	2730	3620
	88.9	88.9	88.9	88.9	88.9	114.3	114.3	114.3	114.3	168.3
	--	--	--	--	--	--	--	--	--	--
	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"	2 x 1"	3 x 1"
	88.9	88.9	88.9	88.9	88.9	114.3	114.3	114.3	114.3	--

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQPLA 106 / 860 Cooling only TECHNICAL SPECIFICATIONS

SIZE		504.3	530.3	550.3	584.3	604.3
COOLING ONLY (1)						
Cooling capacity	kW	523	539	563	593	614
Compressors absorbed power	kW	145	156	163	169	175
Nominal operating current Compressors	A	253	269	280	291	301
Evaporator water flow	m³/h	89.8	92.6	96.7	102	105
Evaporator pressure loss	kPa	36	38	41	44	47
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	--	--	--	--	--
Heating capacity	kW	--	--	--	--	--
Compressors absorbed power	kW	--	--	--	--	--
Nominal operating current Compressors	A	--	--	--	--	--
Heat recovery exchanger water flow	m³/h	--	--	--	--	--
Heat recovery pressure loss	kPa	--	--	--	--	--
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	192	198	207	218	225
Heat recovery exchanger water flow	m³/h	33	34.1	35.6	37.5	38.8
Heat recovery pressure loss	kPa	35.4	37.8	34.5	38.2	37.6
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	6	6	6	6	6
Maximum operating current	A	392	410	427	444	461
Starting current	A	637	735	752	769	787
Number of capacity steps	n.	6	6	6	6	6
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Type (6)		S&T	S&T	S&T	S&T	S&T
Water volume	l	221.7	221.7	221.7	206.5	206.5
Maximum water flow	m³/h	170.2	176	182.9	193.2	200.1
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**--**	**--**	**--**	**--**	**--**
Water volume	l	--	--	--	--	--
Maximum water flow	m³/h	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**3**	**3**	**3**	**3**	**3**
Water volume	l	7	9.6	9.6	9.6	9.6
Maximum water flow	m³/h	45.7	47.7	49.8	52.4	54.3
AXIAL FANS (AC)	**N.**	**10**	**10**	**10**	**12**	**12**
Total air flow	m³/h	211800	211800	211800	254160	254160
Absorbed power	kW	15.8	15.8	15.8	19	19
Nominal operating current Compressors	A	39	39	39	46.8	46.8
Maximum external static pressure	Pa	0	0	0	0	0
AXIAL FANS (EC)	**N.**	**10**	**10**	**10**	**12**	**12**
Total air flow	m³/h	211800	211800	211800	254160	254160
Absorbed power	kW	12.8	12.8	12.8	15.4	15.4
Nominal operating current Compressors	A	39	39	39	46.8	46.8
Maximum external static pressure	Pa	80	80	80	80	80
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	42.4	46.6	46.6	54.4	54.4
Number of refrigerant circuits	n.	3	3	3	3	3
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.25	3.14	3.15	3.15	3.16
ESEER = Eurovent standard		4.22	4.22	4.23	4.23	4.23
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	73	73.9	74.7	75.3	75.9
Sound power level (Lw)	dB(A)	93.5	94.4	95.2	96.3	96.9
HYDRAULIC KIT						
Medium pressure single pump		GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1	GPVM2/1
Low pressure single pump		GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1	GPVB2/1
Medium pressure double pump		GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2
Low pressure double pump		GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2	GPVM2/2
Water tank volume	l	--	--	--	--	--
DIMENSIONS						
Length	mm	5770	5770	5770	6890	6890
Width	mm	2260	2260	2260	2260	2260
Height	mm	2304	2304	2304	2304	2304
NET WEIGHT	**KG**	**3820**	**3840**	**3860**	**4180**	**4,200**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	219.1	219.1	219.1	219.1	219.1
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	--	--	--	--	--
Inlet outlet diameter – ISO 228/1-GM	n x Ø	3 x 1"	3 x 1"	3 x 1"	3 x 1"	3 x 1"
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter	Ø mm	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	646.3	670.3	726.4	780.4	820.4	860.4
	655	691	743	769	832	876
	188	200	213	224	237	252
	320	346	368	385	407	429
	112	119	128	132	143	150
	52	32	40	42	37	39
	--	--	--	--	--	--
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	240	253	273	282	305	321
	41.4	43.7	47	48.6	52.6	55.4
	42.8	47.6	40.3	36.2	42.3	43
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	6	8	8	8	8	8
	496	523	558	592	626	661
	821	768	883	917	952	986
	6	8	8	8	8	8
	1	**1**	**1**	**1**	**1**	**1**
	S&T	S&T	S&T	S&T	S&T	S&T
	206.5	184.4	184.4	184.4	225	225
	212.8	224.3	241.5	250.7	270.3	285.2
	--	**--**	**--**	**--**	**--**	**--**
	--	--	--	--	--	--
	--	--	--	--	--	--
	3	**3**	**4**	**4**	**4**	**4**
	9.6	9.3	11.2	12.7	12.7	12.7
	57.9	61	65.7	68	73.5	77.4
	12	**12**	**14**	**14**	**16**	**16**
	254160	254160	296520	296520	338880	338880
	19	19	22.1	22.1	25.3	25.3
	46.8	46.8	54.6	54.6	62.4	62.4
	0	0	0	0	0	0
	12	**12**	**14**	**14**	**16**	**16**
	254160	254160	296520	296520	338880	338880
	15.4	15.4	17.9	17.9	20.5	20.5
	46.8	46.8	54.6	54.6	62.4	62.4
	80	80	80	80	80	80
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	54.4	56.6	64.6	64.7	72.5	72.6
	3	4	4	4	4	4
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	3.16	3.16	3.16	3.12	3.17	3.16
	4.25	4.31	4.31	4.26	4.32	4.32
	76.9	74.2	77.4	76.6	77.4	78.1
	97.8	95.5	98.8	97.9	99.1	99.8
	GPVM2/1	GPVM2/1	GPVM3/1	GPVM3/1	GPVM3/1	GPVM3/1
	GPVB2/1	GPVB2/1	GPVB3/1	GPVB3/1	GPVB3/1	GPVB3/1
	GPVM2/2	GPVM2/2	GPVM3/2	GPVM3/2	GPVM3/2	GPVM3/2
	GPVM2/2	GPVM2/2	GPVM3/2	GPVM3/2	GPVM3/2	GPVM3/2
	--	--	--	--	--	--
	6890	6890	8010	8010	9130	9130
	2260	2260	2260	2260	2260	2260
	2304	2304	2304	2304	2304	2304
	4240	**4860**	**4900**	**4940**	**5300**	**5340**
	219.1	219.1	219.1	219.1	219.1	219.1
	--	--	--	--	--	--
	3 x 1"	3 x 1"	4 x 1"	4 x 1"	4 x 1"	4 x 1"
	--	--	--	--	--	--

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.
(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQSL 300 / 1310

Cooling only

SCREW COMPRESSORS

R-134a

- Cooling capacities from 299 to 808 kW
- 20 sizes
- Refrigerant: R-134a
- EER up to 2.79
- ESEER up to 3.34

MAIN FEATURES

- Available with 2 refrigeration circuits
- 2 SCREW compressors mounted on rubber antivibration mounts
- Modern and modular design
- Shell and tube evaporator

AVAILABLE VERSIONS

- Partial heat recovery version
- Total heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-10°C)

Advantages

- Wide power range covered by SCREW technology
- Screw compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- Linear step capacity control
- Dialogue interface with screen and graphical icons for easier reading
- Large choice of sound levels
- Partial or total heat recovery
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

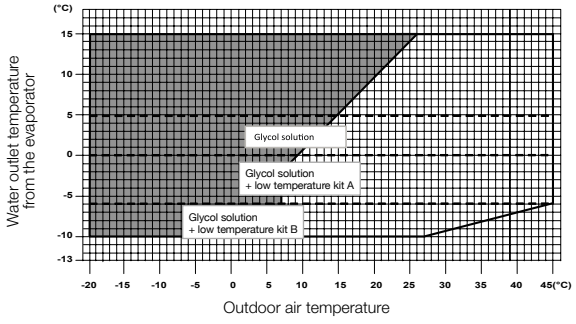
Main accessories and options

Code	
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
143	Without glycol
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
351	Coils with pre-painted fins
450	Desuperheater
451	Total heat recovery
550	Stop valve on compressor suction line
605	Power factor capacitor for cos phi 0.9 on compressor motor
650	Compressor thermal relays
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
769	1 pump + 1 standby pump hydraulic kit
770	2 pump + 1 standby pump hydraulic kit
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQSL 300 / 1310 Cooling only TECHNICAL SPECIFICATIONS

SIZE		300	320	360	390	430	480
COOLING ONLY (1)							
Cooling capacity	kW	299	315	335	391	430	476
Compressors absorbed power	kW	96	102	116	125	140	157
Nominal operating current Compressors	A	162	163	200	208	237	261
Evaporator water flow	m³/h	51.3	54.1	57.5	67.1	73.9	81.8
Evaporator pressure loss	kPa	47	52	48	59	54	38
COOLING ONLY + HEAT RECOVERY 100% (2)							
Cooling capacity	kW	294	311	333	386	429	476
Heating capacity	kW	394	417	451	515	570	633
Compressors absorbed power	kW	100	105	118	129	140	157
Nominal operating current Compressors	A	168	167	202	213	238	262
Heat recovery exchanger water flow	m³/h	68.5	72.4	78.4	89.5	99	108
Heat recovery pressure loss	kPa	62	50	61	63	92	94
PARTIAL HEAT RECOVERY (3)							
Heating capacity	kW	59.5	62.7	66.7	77.8	85.6	94.7
Heat recovery exchanger water flow	m³/h	10.2	10.8	11.5	13.4	14.7	16.3
Heat recovery pressure loss	kPa	6.6	7.3	8.2	8.9	4.4	4.1
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2	2
Maximum operating current	A	201.8	205	235.6	269.6	288.2	309.3
Starting current	A	403.9	382.5	468.8	629.8	639.1	790.1
Number of capacity steps		25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (SHELL AND TUBE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	113	113	113	160	160	150
Maximum water flow	m³/h	63	63	63	90	90	95
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	28	32	32	38	38	38
Maximum water flow	m³/h	78	90	90	108	108	108
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	5	5	5	5	6.8	6.8
Maximum water flow	m³/h	20	20	20	20	30	30
AXIAL FANS (AC)	**N.**	**6**	**6**	**6**	**8**	**8**	**8**
Total air flow	m³/h	135498	135498	135498	180664	180664	180664
Absorbed power	kW	11.6	11.7	11.7	15.4	15.4	15.4
Nominal operating current Compressors	A	23.4	23.4	23.4	31.2	31.2	31.2
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	110	146	146	145	145	145
Number of refrigerant circuits	n.	2	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)							
EER	kW/kW	2.78	2.77	2.62	2.78	2.77	2.76
ESEER = Eurovent standard		3.06	3.03	3.2	3.18	3.1	3.13
SOUND LEVELS							
Average sound pressure level [Lpm] (4)	dB(A)	73.1	71.7	72	71.6	76	76.2
Sound power level (Lw) (5)	dB(A)	92.9	91.4	91.8	91.9	96.2	96.4
HYDRAULIC KIT							
1 pump	GE	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1
2 pumps	GE	--	--	--	--	--	--
1 operational pump + 1 reserve pump	GE	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2
2 operational pumps + 1 reserve pump	GE	--	--	--	--	--	--
DIMENSIONS							
Length	mm	3520	3520	3520	4490	4490	4490
Width	mm	2260	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**3992**	**4258**	**4411**	**4544**	**4753**	**4890**
HYDRAULIC CONNECTIONS							
EVAPORATOR							
Inlet outlet diameter	Ø mm	141.3	141.3	141.3	168.3	168.3	168.3
PARTIAL HEAT RECOVERY EXCHANGER							
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
TOTAL HEAT RECOVERY EXCHANGER							
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2 1/2"	2 x 2 1/2"	2 x 2 1/2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.
(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQSL 300 / 1310 Cooling only TECHNICAL SPECIFICATIONS

SIZE		530	540	560	610	650
COOLING ONLY (1)						
Cooling capacity	kW	523	543	563	611	645
Compressors absorbed power	kW	174	180	186	204	217
Nominal operating current Compressors	A	286	297	309	332	354
Evaporator water flow	m³/h	89.8	93.3	96.7	105	111
Evaporator pressure loss	kPa	38	41	45	51	56
COOLING ONLY + HEAT RECOVERY 100% (2)						
Cooling capacity	kW	527	551	568	620	668
Heating capacity	kW	699	726	750	818	870
Compressors absorbed power	kW	171	175	183	198	203
Nominal operating current Compressors	A	281	290	305	323	333
Heat recovery exchanger water flow	m³/h	118	126	130	132	151
Heat recovery pressure loss	kPa	81	63	69	71	69
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	104	108	112	121	128
Heat recovery exchanger water flow	m³/h	17.9	18.6	19.2	20.9	22.1
Heat recovery pressure loss	kPa	3.8	3.5	2.6	3.1	2.8
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	330.4	348.6	366.8	390.4	414
Starting current	A	811.2	526.2	544.4	544.4	568
Number of capacity steps		25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (MULTI-TUBE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	150	143	143	256	256
Maximum water flow	m³/h	95	100	100	127	127
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	42	46	46	46	58
Maximum water flow	m³/h	118	132	132	132	156
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	6.8	6.8	6.8	8.6	10.4
Maximum water flow	m³/h	30	30	30	35	40
AXIAL FANS (AC)	**N.**	**8**	**8**	**8**	**8**	**8**
Total air flow	m³/h	180664	177924	175184	175184	175184
Absorbed power	kW	15.4	15.5	15.6	15.6	15.6
Nominal operating current Compressors	A	31.2	31.2	31.2	31.2	31.2
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	145	170	194	194	194
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.76	2.78	2.79	2.78	2.77
ESEER = Eurovent standard		3.17	3.23	3.21	3.17	3.24
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	76.4	76.4	76.4	78	79.2
Sound power level (Lw) (5)	dB(A)	96.7	96.7	96.7	98.2	99.4
HYDRAULIC KIT						
1 pump	GE	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1
2 pumps	GE	--	--	--	--	--
1 operational pump + 1 reserve pump	GE	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2
2 operational pumps + 1 reserve pump	GE	--	--	--	--	--
DIMENSIONS						
Length	mm	4490	4490	4490	4490	4490
Width	mm	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**5012**	**5117**	**5221**	**5321**	**5241**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	168.3	168.3	168.3	168.3	168.3
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
TOTAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2 1/2"	2 x 2 1/2"	2 x 2 1/2"	2 x 2 1/2"	2 x 3"
Inlet outlet diameter	Ø mm	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	710	770	850	910	950	1060	1120	1180	1310
	707	768	853	905	949	1063	1121	1181	1310
	237	258	289	303	320	355	375	396	443
	377	400	456	479	515	597	634	680	742
	121	132	147	156	163	183	193	203	225
	63	73	55	63	71	41	45	49	59
	718	783	878	924	979	1081	1159	1227	1357
	948	1031	1151	1214	1277	1425	1511	1595	1770
	230	248	273	290	298	344	353	368	414
	366	385	432	459	482	579	599	638	697
	156	179	200	211	222	248	263	277	308
	78	81	86	86	82	105	74	81	86
	141	153	170	180	189	212	223	235	261
	24.2	26.3	29.2	31	32.5	36.4	38.4	40.5	44.9
	2.7	3.2	2.6	2.5	3.3	4.1	4.6	5.1	6.2
	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW
	2	2	2	2	2	2	2	2	2
	444.1	474.2	535.8	567.4	615.4	709.6	753.6	797.6	896
	581	611.1	720.9	826.7	902.7	1057.8	1137.8	1181.8	1324
	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
	1	1	1	1	1	1	1	1	1
	256	247	238	223	223	382	382	370	359
	127	143	154	172	172	208	208	220	241
	2	2	2	2	2	2	2	2	2
	58	64	72	80	88	88	100	100	114
	156	180	204	228	252	252	284	284	326
	2	2	2	2	2	2	2	2	2
	10.4	10.4	15.8	15.8	19.4	23	25.7	28.4	35.6
	40	40	50	50	50	50	60	60	60
	9	10	10	12	12	16	16	16	16
	197082	218980	212690	262776	262776	361328	361328	361328	350368
	17.6	19.5	20.1	23.4	23.4	30.9	30.9	30.9	31.2
	35.1	39	39	46.8	46.8	62.4	62.4	62.4	62.4
	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A
	241	241	302	289	289	290	290	290	389
	2	2	2	2	2	2	2	2	2
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	2.78	2.77	2.76	2.77	2.76	2.75	2.76	2.77	2.76
	3.18	3.18	3.19	3.26	3.32	3.29	3.34	3.32	3.3
	79.4	80	79.7	78.8	78.8	81.1	81.1	81.1	81.4
	100.1	100.7	100.4	99.8	99.8	102.9	102.9	102.9	103.2
	--	--	--	--	--	--	--	--	--
	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11
	--	--	--	--	--	--	--	--	--
	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21
	5460	5460	5460	6430	6430	8720	8720	8720	8720
	2260	2260	2260	2260	2260	2260	2260	2260	2260
	2550	2550	2550	2550	2550	2550	2550	2550	2550
	6232	6517	7032	7354	7414	9491	9975	9995	10075
	168.3	219.1	219.1	219.1	219.1	219.1	219.1	219.1	273
	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	--
	--	--	--	--	--	--	--	--	2 x 114.3

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQSLA 290 / 1510

Cooling only

SCREW COMPRESSORS
CLASS A

R-134a

Class A

- Cooling capacities from 283 to 1510 kW
- 26 sizes
- Refrigerant: R134a
- EER up to 3.38
- ESEER up to 3.95
- Class A

MAIN FEATURES

- Available with 2 refrigeration circuits
- 2 SCREW compressors mounted on rubber anitvibration mounts
- Modern and modular design
- Shell and tube evaporator

AVAILABLE VERSIONS

- Partial heat recovery version
- Total heat recovery version
- ELN extra low sound level version
- EC motor for external static pressure version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-10°C)

Main characteristics

- Energy efficiency Class A
- Wide power range covered by SCREW technology
- Screw compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- Linear step capacity control
- Dialogue interface with screen and graphical icons for easier reading
- Large choice of sound levels
- Partial or total heat recovery
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

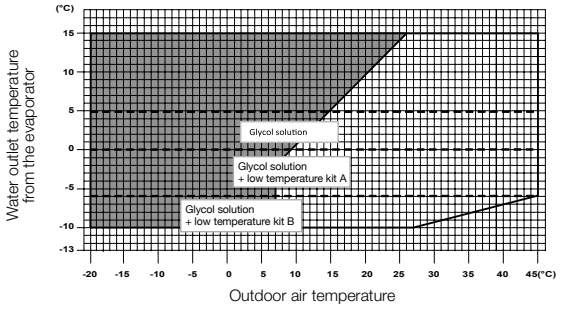
Main accessories and options

Code	
101	EC fan motors
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
143	Without glycol
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
351	Coils with pre-painted fins
450	Desuperheater
451	Total heat recovery
550	Stop valve on compressor suction line
605	Power factor capacitor for cos phi 0.9 on compressor motor
650	Compressor thermal relays
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
769	1 pump + 1 standby pump hydraulic kit
770	2 pump + 1 standby pump hydraulic kit
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQSLA 290 / 1510 Cooling only TECHNICAL SPECIFICATIONS

SIZE		290	300	320	340	360	400	450
COOLING ONLY (1)								
Cooling capacity	kW	283	300	319	340	358	399	446
Compressors absorbed power	kW	76.8	83	87.1	92	97	110	122
Nominal operating current Compressors	A	133	140	148	157	157	192	212
Evaporator water flow	m³/h	48.7	51.5	54.8	58.4	61.4	68.5	76.6
Evaporator pressure loss	kPa	12	17	19	21	17	13	17
COOLING ONLY + HEAT RECOVERY 100% (2)								
Cooling capacity	kW	264	289	310	326	345	388	433
Heating capacity	kW	348	380	404	428	453	507	565
Compressors absorbed power	kW	83.8	91.1	94.2	102	107	119	132
Nominal operating current Compressors	A	142	151	158	170	168	204	227
Heat recovery exchanger water flow	m³/h	60.4	66	70.3	74.4	78.7	88.1	98.2
Heat recovery pressure loss	kPa	48	58	39	42	55	57	42
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	56.4	59.7	63.6	67.7	71.2	79.4	88.8
Heat recovery exchanger water flow	m³/h	9.7	10.3	10.9	11.7	12.3	13.7	15.3
Heat recovery pressure loss	kPa	5.9	6.6	7.5	6.7	3	2.9	2.8
COMPRESSORS		TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW
Quantity	n.	2	2	2	2	2	2	2
Maximum operating current	A	163	179	190	201	205	235	269
Starting current	A	350	356	392	403	382	468	629
Number of capacity steps		25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (SHELL AND TUBE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	113	107	107	107	160	157	150
Maximum water flow	m³/h	63	72	72	72	90	90	95
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	24	28	32	32	32	38	46
Maximum water flow	m³/h	66	78	90	90	90	108	132
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	3.2	3.2	4.1	5	5	5	5
Maximum water flow	m³/h	20	20	20	20	20	20	20
AXIAL FANS (AC)	**N.**	**6**	**6**	**7**	**8**	**8**	**8**	**10**
Total air flow	m³/h	131388	127614	153286	175184	170152	170152	212690
Absorbed power	kW	11.7	12.1	13.7	15.6	16.1	16.1	20.1
Nominal operating current Compressors	A	23.4	23.4	27.3	31.2	31.2	31.2	39
REFRIGERANT								
Total refrigerant load (excluding options)	kg	74	74	96	96	96	145	120
Number of refrigerant circuits	n.	2	2	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	3.2	3.16	3.17	3.16	3.17	3.16	3.14
ESEER = Eurovent standard		3.55	3.52	3.53	3.53	3.51	3.52	3.51
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	72.3	72.8	72.5	72.7	71.3	71.7	71.4
Sound power level (Lw) (5)	dB(A)	92	92.5	92.7	92.9	91.5	91.9	92.1
HYDRAULIC KIT								
1 pump	GE	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1
2 pumps	GE	--	--	--	--	--	--	--
1 operational pump + 1 reserve pump	GE	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2
2 operational pumps + 1 reserve pump	GE	--	--	--	--	--	--	--
DIMENSIONS								
Length	mm	3520	3520	4490	4490	4490	4490	5460
Width	mm	2260	2260	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**3738**	**4109**	**4515**	**4520**	**4697**	**4902**	**5428**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter	Ø mm	141.3	141.3	141.3	141.3	168.3	168.3	168.3
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
TOTAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2 1/2"	2 x 2 1/2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water inlet temperature 40°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQSLA 290 / 1510 Cooling only TECHNICAL SPECIFICATIONS

SIZE		480	520	570	620	660	700	760
COOLING ONLY (1)								
Cooling capacity	kW	472	518	565	614	654	695	761
Compressors absorbed power	kW	129	144	159	172	184	196	215
Nominal operating current Compressors	A	222	243	264	289	306	323	328
Evaporator water flow	m³/h	81	88.9	97	105	112	119	131
Evaporator pressure loss	kPa	17	17	24	49	33	38	44
COOLING ONLY + HEAT RECOVERY 100% (2)								
Cooling capacity	kW	458	503	554	604	647	684	749
Heating capacity	kW	598	659	720	782	836	887	971
Compressors absorbed power	kW	140	156	166	178	189	203	222
Nominal operating current Compressors	A	238	260	274	298	313	334	339
Heat recovery exchanger water flow	m³/h	104	115	125	136	145	154	169
Heat recovery pressure loss	kPa	42	42	50	56	61	60	63
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	93.9	103	112	122	130	138	151
Heat recovery exchanger water flow	m³/h	16.2	17.8	19.4	21	22.4	23.8	26.1
Heat recovery pressure loss	kPa	2.6	2.2	2.6	2.5	2.3	2.6	2.1
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2	2	2
Maximum operating current	A	288	309	330	366	390	414	444
Starting current	A	639	790	811	544	568	568	598
Number of capacity steps		25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (SHELL AND TUBE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	143	256	256	256	247	247	223
Maximum water flow	m³/h	100	127	127	127	143	143	172
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	46	46	58	58	64	64	72
Maximum water flow	m³/h	132	132	156	156	180	180	204
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	6.8	6.8	6.8	6.8	8.6	10.4	10.4
Maximum water flow	m³/h	30	30	30	30	35	40	40
AXIAL FANS (AC)	**N.**	**10**	**10**	**10**	**10**	**11**	**12**	**13**
Total air flow	m³/h	212690	212690	212690	212690	244303	262776	284674
Absorbed power	kW	20.1	20.1	20.1	20.1	21.3	23.4	25.4
Nominal operating current Compressors	A	39	39	39	39	42.9	46.8	50.7
REFRIGERANT								
Total refrigerant load (excluding options)	kg	181	181	181	181	217	217	252
Number of refrigerant circuits	n.	2	2	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	3.17	3.16	3.15	3.2	3.18	3.17	3.17
ESEER = Eurovent standard		3.51	3.55	3.52	3.62	3.55	3.56	3.52
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	75.5	75.8	76	76	78.2	79.4	79.7
Sound power level (Lw) (5)	dB(A)	96.2	96.4	96.7	96.7	99.3	100.4	101.1
HYDRAULIC KIT								
1 pump	GE	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1	GE80/1	--
2 pumps	GE	--	--	--	--	--	--	GE80/11
1 operational pump + 1 reserve pump	GE	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2	GE80/2	--
2 operational pumps + 1 reserve pump	GE	--	--	--	--	--	--	GE80/21
DIMENSIONS								
Length	mm	5460	5460	5460	5460	6430	6430	7400
Width	mm	2260	2260	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**5662**	**5999**	**6121**	**6112**	**6733**	**6743**	**7404**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter	Ø mm	168.3	168.3	168.3	168.3	219.1	219.1	219.1
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
TOTAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 228/1-GM	Ø	2 x 2 1/2"	2 x 2 1/2"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	830	870	920	980	1020	1090	1150	1280	1350	1430	1470	1510
	826	871	916	974	1020	1084	1148	1276	1352	1430	1474	1510
	233	248	262	274	287	305	322	359	385	411	406	398
	333	375	418	435	464	504	544	611	652	693	685	672
	142	150	157	167	175	186	197	219	232	246	253	259
	51	56	61	68	76	71	79	54	41	44	35	35
	811	860	910	962	1018	1078	1138	1265	1348	1435	1458	1483
	1053	1115	1176	1244	1306	1386	1466	1630	1735	1843	1869	1896
	242	255	266	281	288	308	327	365	388	408	411	413
	346	385	423	446	466	508	552	620	656	688	692	696
	183	194	204	216	227	241	255	283	302	320	325	329
	72	71	69	76	53	60	66	72	77	55	57	57
	164	173	182	194	203	216	228	254	269	285	293	301
	28.3	29.8	31.4	33.4	35	37.1	39.3	43.7	46.4	49	50.5	51.8
	2	2.8	3	3.4	3.8	4.3	4.6	5.7	6.3	7	7.5	7.7
	TWIN-SCREW	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
	2	2	2	2	2	2	2	2	2	2	2	2
	474	505	535	567	615	662	709	797	846	896	896	896
	611	690	720	826	902	1010	1057	1181	1274	1324	1324	1324
	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	382	382	382	382	348	348	348	348	620	620	620	620
	208	208	208	208	265	265	265	265	407	407	407	407
	2	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	72	80	88	88	100	100	100	114	126	132	132	132
	204	228	252	252	284	284	284	326	362	386	386	386
	2	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	10.4	13.1	15.8	15.8	19.4	21.2	23	28.4	32	35.6	35.6	35.6
	40	45	50	50	50	50	50	60	60	60	60	60
	14	**14**	**14**	**16**	**16**	**18**	**20**	**20**	**20**	**20**	**22**	**24**
	306572	302169	297766	350368	350368	401014	451660	437960	431670	425380	467918	510456
	27.3	27.7	28.1	31.2	31.2	34.9	38.6	39	39.6	40.2	44.2	48.2
	54.6	54.6	54.6	62.4	62.4	70.2	78	78	78	78	85.8	93.6
	252	295	337	290	290	326	362	362	412	462	530	578
	2	2	2	2	2	2	2	2	2	2	2	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	3.17	3.16	3.16	3.19	3.21	3.19	3.18	3.21	3.18	3.17	3.27	3.38
	3.5	3.49	3.51	3.55	3.68	3.69	3.68	3.69	3.68	3.72	3.83	3.95
	80.3	80.1	80	78.1	78.1	79.5	81.5	81.5	81.7	81.8	81.6	81.3
	101.7	101.6	101.4	99.9	99.9	101.7	103.9	103.9	104.1	104.2	104.2	104.2
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	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE80/11	GE100/11	GE100/11	GE100/11
	--	--	--	--	--	--	--	--	--	--	--	--
	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE80/21	GE100/21	GE100/21	GE100/21
	7400	7400	7400	8720	8720	9690	10660	10660	10660	10660	11630	12600
	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
	2550	2550	2550	2550	2550	2550	2550	2550	2550	2550	2550	2550
	8139	**8341.5**	**8544**	**9195**	**9318**	**10274**	**11180**	**11362**	**11972**	**12292**	**12931**	**13090**
	219.1	219.1	219.1	219.1	273	273	273	273	323.9	323.9	323.9	323.9
	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"
	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	--	--	--	--	--
	--	--	--	--	--	--	--	2 x 114.3	2 x 114.3	2 x 114.3	2 x 114.3	2 x 114.3

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

(6) PHE = Brazed-plate heat EXCHANGER; S&T = Shell and tube heat EXCHANGER

EQSH 200 / 1090

Reversible

SCREW COMPRESSORS

R-134a

- Cooling capacities from 201 to 1098 kW
- Heating capacities from 233 to 1307 kW
- 15 sizes
- Refrigerant: R134a
- EER up to 3.02
- ESEER up to 3.46
- COP up to 3.75

MAIN FEATURES

- Available with 2 refrigeration circuits
- 2 SCREW compressors mounted on a rubber antivibration mounts
- Hot water leaving temperature up to 60°C
- Shell and tube evaporator

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version

Main charasteristics

- Wide power range covered by SCREW technology
- Screw compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- Linear step capacity control
- Dialogue interface with screen and graphical icons for easier reading
- Large choice of sound levels
- Partial or total heat recovery
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance

Main accessories and options

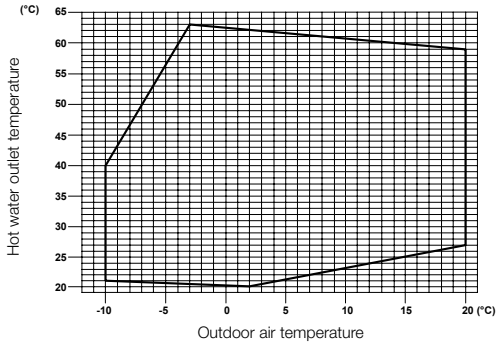
Code

- 150 Kit LNO low sound level
- 151 Kit ELN extra low sound level
- 170 Antivibration mounts - spring - supplied loose
- 172 Antivibration mounts - rubber -supplied loose
- 175 Victaulic connections
- 351 Coils with pre-painted fins
- 450 Desuperheater
- 452 Sanitary hot water production (up to 20% of nominal capacity)
- 550 Stop valve on compressor suction line
- 605 Power factor capacitor for cos phi 0.9 on compressor motor
- 650 Compressor thermal relays
- 731 Water flow switch
- 739 1 pump hydraulic kit
- 740 2 pump hydraulic kit
- 756 1 LN pump hydraulic kit
- 757 2 LN pump hydraulic kit
- 919 Clock card
- 923 COM MBUS/JBUS serial card
- 926 LON serial card
- 931 BACnet Ethernet - SNMP - TCP/IP serial card
- 932 BACnet MS/TP serial card
- 934 MP.COM extension card
- 942 Serial card for GSM modem
- 943 Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQSH 200 / 1090 Reversible TECHNICAL SPECIFICATIONS

SIZE		200	250	280	340	370
SUMMER MODE (1)						
Cooling capacity	kW	201	244	281	340	373
Compressors absorbed power	kW	59.5	70.3	83.1	99	109
Nominal operating current Compressors	A	97.3	113	142	142	191
Evaporator water flow	m³/h	34.5	41.9	48.2	58.4	63.9
Evaporator pressure loss	kPa	10	8	11	9	18
WINTER MODE (2)						
Heating capacity	kW	233	277	321	379	417
Compressors absorbed power	kW	65.4	78	92.3	96.4	109
Nominal operating current Compressors	A	106	124	154	110	167
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	40	48.5	55.9	67.7	74.1
Heat recovery exchanger water flow	m³/h	6.9	8.4	9.6	11.7	12.8
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	145	165	203	205	236
Starting current	A	350	386	474	383	469
Number of capacity steps		4	4	4	25...100%	25...100%
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	20	20	32	225	225
Maximum water flow	m³/h	55	70	70	165	165
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	18	18	18	18	28
Maximum water flow	m³/h	12	12	12	18	18
AXIAL FANS (AC)	**N.**	**4**	**6**	**6**	**8**	**8**
Total air flow	m³/h	89644	144498	139686	193536	187992
Absorbed power	kW	7.7	10.9	11.2	14.6	15
Nominal operating current Fans	A	15.6	23.4	23.4	31.2	31.2
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	116	103	138	143	191
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.99	3	2.98	2.99	3.01
COP	kW/kW	3.19	3.12	3.1	3.41	3.36
ESEER = Eurovent standard		3.46	3.42	3.29	3.37	3.38
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	72.3	72.2	72.3	71.7	72.1
Sound power level (Lw) (5)	dB(A)	91.6	92.2	92.3	92.5	92.9
HYDRAULIC KIT						
1 pump 2 poles	GP	R10/1	R20/1	R20/1	R30/1	R30/1
2 pumps 2 poles	GP	R10/2	R20/2	R20/2	R30/2	R30/2
1 pump 4 poles	GP	R10/1 LN	R20/1 LN	R20/1 LN	R30/1 LN	R30/1 LN
2 pumps 4 poles	GP	R10/2 LN	R20/2 LN	R20/2 LN	R30/2 LN	R30/2 LN
DIMENSIONS						
Length	mm	3815	5215	5215	6045	6045
Width	mm	2206	2206	2206	2206	2206
Height	mm	2015	2015	2015	2525	2525
NET WEIGHT	**KG**	**3181**	**3773**	**3783**	**5714**	**5730**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter – ISO 7/1 – R	Ø mm	88.9	88.9	88.9	219.1	219.1
HEATING PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - hot water outlet temperature 45°C and outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQSH 200 / 1090 Reversible TECHNICAL SPECIFICATIONS

SIZE		410	440	520	570
SUMMER MODE (1)					
Cooling capacity	kW	412	448	520	575
Compressors absorbed power	kW	123	130	153	169
Nominal operating current Compressors	A	211	224	253	284
Evaporator water flow	m³/h	70.7	76.9	89.3	98.9
Evaporator pressure loss	kPa	30	14	32	27
WINTER MODE (2)					
Heating capacity	kW	468	496	599	657
Compressors absorbed power	kW	124	125	157	166
Nominal operating current Compressors	A	186	186	259	280
PARTIAL HEAT RECOVERY (3)					
Heating capacity	kW	81.9	89.1	104	114
Heat recovery exchanger water flow	m³/h	14.1	15.4	17.8	19.7
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2
Maximum operating current	A	270	288	330	367
Starting current	A	630	639	811	544
Number of capacity steps		25...100%	25...100%	25...100%	25...100%
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**
Water volume	l	207	310	185	225
Maximum water flow	m³/h	120	190	148	165
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**
Water volume	l	28	36	36	48
Maximum water flow	m³/h	18	26	26	38
AXIAL FANS (AC)	**N.**	**8**	**10**	**10**	**10**
Total air flow	m³/h	181216	241920	234990	234990
Absorbed power	kW	15.6	18.3	18.8	18.8
Nominal operating current Fans	A	31.2	39	39	39
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	239	179	238	238
Number of refrigerant circuits	n.	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)					
EER	kW/kW	2.97	3.02	3.03	3.06
COP	kW/kW	3.35	3.46	3.41	3.56
ESEER = Eurovent standard		3.31	3.37	3.34	3.45
SOUND LEVELS					
Average sound pressure level [Lpm] (4)	dB(A)	76.4	76	76.5	76.5
Sound power level (Lw) (5)	dB(A)	97.2	97.2	97.7	97.7
HYDRAULIC KIT					
1 pump 2 poles	GP	R40/1	R50/1	R50/1	R50/1
2 pumps 2 poles	GP	R40/2	R50/2	R50/2	R50/2
1 pump 4 poles	GP	R40/1 LN	R50/1 LN	R50/1 LN	R50/1 LN
2 pumps 4 poles	GP	R40/2 LN	R50/2 LN	R50/2 LN	R50/2 LN
DIMENSIONS					
Length	mm	6045	7175	7175	7175
Width	mm	2206	2206	2206	2206
Height	mm	2525	2525	2525	2525
NET WEIGHT	**KG**	**5782**	**6475**	**6642**	**6739**
HYDRAULIC CONNECTIONS					
EVAPORATOR					
Inlet outlet diameter – ISO 7/1 – R	Ø mm	219.1	219.1	219.1	219.1
PARTIAL HEAT RECOVERY EXCHANGER					
Inlet outlet diameter – ISO 7/1 – R	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - hot water outlet temperature 45°C and outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

	670	790	880	930	980	1090
	668	796	884	937	980	1098
	201	242	272	284	298	336
	327	372	427	447	479	563
	115	137	152	161	168	189
	47	41	39	41	44	52
	782	945	1030	1092	1160	1307
	208	245	261	273	286	321
	336	375	412	431	461	540
	133	158	176	186	195	219
	22.9	27.3	30.3	32.1	33.6	37.6
	TWIN-SCREW	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
	2	2	2	2	2	2
	414	474	536	567	615	710
	568	611	721	827	903	1058
	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
	1	**1**	**1**	**1**	**1**	**1**
	185	225	303	378	378	348
	148	165	205	218	218	236
	2	**2**	**2**	**2**	**2**	**2**
	48	58	58	68	76	86
	38	52	52	76	96	118
	12	**12**	**12**	**14**	**14**	**14**
	290304	281988	271824	328986	328986	317128
	22	22.6	23.4	26.3	26.3	27.3
	46.8	46.8	46.8	54.6	54.6	54.6
	R134A	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
	214	284	355	331	331	414
	2	2	2	2	2	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	3	3.01	2.99	3.02	3.02	3.02
	3.4	3.53	3.62	3.65	3.71	3.75
	3.38	3.38	3.37	3.41	3.49	3.49
	78.8	80.1	79.8	77.7	77.7	80.9
	100.4	101.7	101.4	99.9	99.9	102.9
	R60/1	R60/1	R70/1	R80/1	R80/1	R80/1
	R60/2	R60/2	R70/2	R80/2	R80/2	R80/2
	R60/1 LN	R60/1 LN	R60/1 LN	R70/1 LN	R70/1 LN	R70/1 LN
	R60/2 LN	R60/2 LN	R60/2 LN	R70/2 LN	R70/2 LN	R70/2 LN
	8305	8305	8305	9435	9435	9435
	2206	2206	2206	2206	2206	2206
	2525	2525	2525	2525	2525	2525
	7118	**7695**	**8170**	**8507**	**8567**	**9563**
	219.1	219.1	219.1	219.1	219.1	219.1
	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUL 21 / 260

Cooling only

SCROLL COMPRESSORS

R410A

- Cooling capacities from 20 to 260 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.26
- ESEER up to 4.67

MAIN FEATURES

- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on antivibration mounts
- Condenser on one face only
- Possible installation in difficult locations

AVAILABLE VERSIONS

- Partial heat recovery version
- Full heat recovery version
- ELN extra low sound level version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-12°C)

For external static pressure see PF version

Main Characteristics

- Possible installation in a corner, or against walls
- Mono or twin circuit units
- High ESEER
- Water tank under the unit for improved mass gravity and reduced footprint (optional)
- Easy access to components
- Large choice of sound levels
- Partial or total heat recovery
- EC fan motor as standard
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines

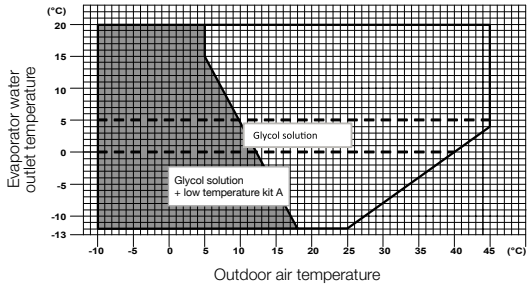
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber -supplied loose
175	Victaulic connections
251	Coil protection kit
351	Coils with pre-painted fins
450	Desuperheater
451	Total heat recovery
605	Power factor capacitor for cos phi 0.9 on compressor motor
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
756	1 LN pump hydraulic kit
757	2 LN pump hydraulic kit
768	Water tank
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQUL 21 / 260 Cooling only TECHNICAL SPECIFICATIONS

SIZE		21.1	24.1	28.1	30.1	34.1	40.1	50.1
COOLING ONLY (1)								
Cooling capacity	kW	19.8	22.4	26.5	29.2	34	39	49.6
Compressors absorbed power	kW	6.1	7.1	8.2	9.7	10.2	12.4	15.9
Nominal operating current Compressors	A	11.1	13.3	15.3	17.2	18.6	23.9	28
Evaporator water flow	m³/h	3.4	3.9	4.6	5	5.8	6.7	8.5
Evaporator pressure loss	kPa	28	36	38	29	38	39	35
COOLING ONLY + HEAT RECOVERY 100% (2)								
Cooling capacity	kW	21.1	24.6	28.9	30.9	39.5	40	50.5
Heating capacity	kW	27.1	31.4	36.8	39.9	51.6	52	66.3
Compressors absorbed power	kW	6	6.9	7.9	9	12.2	12	15.8
Nominal operating current Compressors	A	11	12.9	14.9	16.2	18.6	23.3	27.7
Heat recovery exchanger water flow	m³/h	4.7	5.5	6.4	6.9	9	9	11.5
Heat recovery pressure loss	kPa	44	57	55	45	75	56	47
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	7.3	8.2	9.7	10.7	12.5	14.3	18.2
Heat recovery exchanger water flow	m³/h	1.3	1.4	1.7	1.9	2.2	2.5	3.1
Heat recovery pressure loss	kPa	18.7	23.9	33.3	13.7	18.5	24.3	39.3
COMPRESSORS		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Quantity	n.	1	1	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31	34	40
Starting current	A	95	111	118	118	140	174	225
Number of capacity steps	n.	1	1	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	N.	1	1	1	1	1	1	1
Water volume	l	1.9	1.9	2.1	2.8	2.9	3.3	4.2
Maximum water flow	m³/h	5.1	5.8	6.8	7.1	8.2	9.5	12.1
TOTAL HEAT RECOVERY EXCHANGER	N.	1	1	1	1	1	1	1
Water volume	l	1.9	1.9	1.9	2.5	2.5	2.5	3.1
Maximum water flow	m³/h	6	7.7	9	9.7	10.9	12.7	16.1
PARTIAL HEAT RECOVERY EXCHANGER	N.	1	1	1	1	1	1	1
Water volume	l	0.4	0.4	0.4	0.6	0.6	0.6	0.6
Maximum water flow	m³/h	1.4	1.4	1.4	1.4	1.4	1.4	1.4
AXIAL FANS (AC)	N.	1	1	1	1	2	2	2
Total air flow	m³/h	8,500	8,500	11000	11000	13000	15000	20500
Absorbed power	kW	0.5	0.5	0.8	0.8	0.5	0.8	1.6
Nominal operating current Compressors	A	1.6	1.6	1.6	1.6	3.2	3.2	3.3
REFRIGERANT		R410A	R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant load (excluding options)	kg	5.3	5.3	5.3	5.5	7.7	7.7	9
Number of refrigerant circuits	n.	1	1	1	1	1	1	1
SUPPLY VOLTAGE 400V/3PH/50HZ	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	3.03	2.95	2.96	2.8	3.18	2.96	2.83
ESEER = Eurovent standard		4.67	4.74	4.57	4.21	4.85	4.46	4.02
IPLV - ARI Standard 550/590		5.18	5.25	5.07	4.67	5.38	4.94	4.46
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	64.6	64.9	65.6	64.8	64.9	67.7	71.8
Sound power level (Lw) (5)	dB(A)	81.1	81.5	82.2	81.4	82.2	84.9	89
HYDRAULIC KIT								
1 pump 2 poles	PPF UNI	1/1	1/1	1/1	1/1	2/1	2/1	2/1
2 pumps 2 poles	PPF UNI	--	--	--	--	--	--	--
1 pump 4 poles	PPF UNI	1/1 LN	1/1 LN	1/1 LN	1/1 LN	2/1 LN	2/1 LN	2/1 LN
2 pumps 4 poles	PPF UNI	--	--	--	--	--	--	--
Water tank volume	l	130	130	130	130	210	210	210
DIMENSIONS								
Length	mm	1250	1250	1250	1250	1800	1800	1800
Width	mm	890	890	890	890	1040	1040	1040
Height	mm	2010	2010	2010	2010	2060	2060	2060
NET WEIGHT	KG	350	350	360	360	520	520	610
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"
TOTAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUL 21 / 260 Cooling only TECHNICAL SPECIFICATIONS

SIZE		52.1	52.2	58.1	58.2	62.1	65.1	65.2	76.1
COOLING ONLY (1)									
Cooling capacity	kW	50.5	50.5	57.7	60.8	61.2	64.8	64.7	75.4
Compressors absorbed power	kW	16.7	16.4	18.6	17.5	20	20.9	21	24.9
Nominal operating current Compressors	A	31.1	30.5	33.5	31.4	34.6	38.3	38.2	48
Evaporator water flow	m³/h	8.7	8.7	9.9	10.5	10.5	11.1	11.1	13
Evaporator pressure loss	kPa	36	21	36	19	30	35	21	37
COOLING ONLY + HEAT RECOVERY 100% (2)									
Cooling capacity	kW	51.6	52.5	58.4	59.8	62.6	75.7	76.7	77.5
Heating capacity	kW	68.1	68.5	77	77.9	82.4	101	101	102
Compressors absorbed power	kW	16.4	16.1	18.6	18.1	19.8	24.8	24.4	24.4
Nominal operating current Compressors	A	30.6	30.1	33.3	32.6	34.4	37.7	37.3	47.1
Heat recovery exchanger water flow	m³/h	11.8	11.9	13.4	13.5	14.3	17.5	17.6	17.7
Heat recovery pressure loss	kPa	50	33	48	29	40	70	43	54
PARTIAL HEAT RECOVERY (3)									
Heating capacity	kW	18.5	18.5	21.2	22.3	22.4	23.8	23.7	27.7
Heat recovery exchanger water flow	m³/h	3.2	3.2	3.7	3.8	3.9	4.1	4.1	4.8
Heat recovery pressure loss	kPa	26.6	30.3	34.6	14.8	38.9	43.7	16.7	34.6
COMPRESSORS		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Quantity	n.	2	2	2	2	1	2	2	2
Maximum operating current	A	44	44	50	50	48.5	62	62	68
Starting current	A	140	140	143	143	272	171	171	208
Number of capacity steps	n.	2	2	2	2	1	2	2	2
EVAPORATOR (BRAZED-PLATE)	N.	1	1	1	1	1	1	1	1
Water volume	l	4.2	4.3	4.8	5.3	5.7	5.5	5.6	6.3
Maximum water flow	m³/h	12.3	12.3	14	14.1	14.9	15.8	15.8	18.4
TOTAL HEAT RECOVERY EXCHANGER	N.	1	1	1	1	1	1	1	1
Water volume	l	3.9	3.6	3.9	3.6	3.9	4.7	4.2	5.8
Maximum water flow	m³/h	16.7	18.8	19	20.1	16.6	21.3	21.4	24.8
PARTIAL HEAT RECOVERY EXCHANGER	N.	1	2	1	2	1	1	2	1
Water volume	l	0.8	2 x 0.4	0.8	2 x 0.6	0.8	0.8	2 x 0.6	1
Maximum water flow	m³/h	1.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8
AXIAL FANS (AC)	N.	2	2	3	3	3	3	3	3
Total air flow	m³/h	20500	20500	22000	22000	23000	24000	24000	30000
Absorbed power	kW	1.6	1.6	1.1	1.1	1.3	1.5	1.5	2.4
Nominal operating current Compressors	A	3.3	3.3	4.7	4.7	4.7	4.7	4.7	4.9
REFRIGERANT		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant load (excluding options)	kg	12.9	9.3	9	12.7	12.4	13.1	12.7	13.6
Number of refrigerant circuits	n.	1	2	1	2	1	1	2	1
SUPPLY VOLTAGE	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
ENERGY EFFICIENCY RATIOS (1)									
EER	kW/kW	2.76	2.8	2.92	3.26	2.87	2.9	2.88	2.76
ESEER = Eurovent standard		4.21	3.82	4.76	4.21	4.28	4.51	4.01	4.13
IPLV - ARI Standard 550/590		4.67	4.24	5.28	4.67	4.74	5.01	4.45	4.58
SOUND LEVELS									
Average sound pressure level [Lpm] (4)	dB(A)	68.9	68.9	68	68	73.8	67.8	67.8	68.2
Sound power level (Lw) (5)	dB(A)	86.1	86.1	85.9	85.9	91.6	85.7	85.7	86.1
HYDRAULIC KIT									
1 pump 2 poles	PPF UNI	2/1	2/1	3/1	3/1	3/1	3/1	3/1	3/1
2 pumps 2 poles	PPF UNI	--	--	3/2	3/2	3/2	3/2	3/2	3/2
1 pump 4 poles	PPF UNI	2/1 LN	2/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN
2 pumps 4 poles	PPF UNI	--	--	3/2 LN	3/2 LN	3/2 LN	3/2 LN	3/2 LN	3/2 LN
Water tank volume	l	210	210	360	360	360	360	360	360
DIMENSIONS									
Length	mm	1800	1800	2600	2600	2600	2600	2600	2600
Width	mm	1040	1040	1200	1200	1200	1200	1200	1200
Height	mm	2060	2060	2060	2060	2060	2060	2060	2060
NET WEIGHT	KG	590	590	810	810	850	820	820	840
HYDRAULIC CONNECTIONS									
EVAPORATOR									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	--	--	--	--	--	--
Inlet outlet diameter	Ø mm	--	--	73	73	73	73	73	73
HEATING PARTIAL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
FULL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	--	--	--	--	--	--
Inlet outlet diameter	Ø mm	--	--	73	73	73	73	73	73

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

76.2	98.1	98.2	124.1	124.2	158.1	158.2	180.1	180.2	197.1	197.2	230.1	240.2	260.2
75	97.3	96.1	123	120	155	157	177	178	194	197	227	234	260
24.9	31.5	31.4	40	39.8	53	53.2	59.2	59.2	66.8	67.1	80.8	85.3	102
47.9	55.5	55.3	69.5	69.3	90.8	90.9	102	102	115	115	138	146	172
12.9	16.7	16.5	21.1	20.5	26.6	27	30.3	30.6	33.4	33.9	39	40.3	44.7
23	36	27	38	31	32	28	34	36	41	35	41	40	36
77.8	98.5	98.1	125	122	163	167	185	186	204	210	241	252	290
102	130	129	165	162	213	217	241	243	268	273	316	331	379
24.1	31.5	31.1	39.8	39.4	50	49.6	24.2	24.2	63.6	62.9	75.5	78.3	89
46.7	55.3	54.8	69.1	68.5	86.3	85.7	98.1	97.8	110	109	130	136	154
17.7	22.6	22.5	28.6	28.1	37.1	37.7	41.9	42.2	46.5	47.4	54.9	57.4	65.9
35	45	38	46	44	52	47	54	59	67	57	67	67	63
27.5	35.7	35.3	45	43.9	56.9	57.7	64.8	65.3	71.2	72.3	83.2	85.9	95.3
4.7	6.2	6.1	7.8	7.6	9.8	9.9	11.2	11.2	12.3	12.5	14.3	14.8	16.4
22.5	33.7	36.9	37.3	37.1	45.7	37.2	34.9	28.1	42.1	34.5	40.9	33.7	41.4
SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
2	2	2	2	2	2	2	2	2	2	2	3	4	4
68	80	80	97	97	130.8	130.8	147.4	147.4	164	164	196.2	194	294.8
208	265	265	320.5	320.5	375.4	375.4	439.4	439.4	456	456	440.8	417.5	586.8
2	2	2	2	2	2	2	2	2	2	2	3	4	4
1	1	1	1	1	1	1	1	1	1	1	1	1	1
5.9	8.4	7.5	10.5	8.8	10.5	11	13	17.2	16	19.6	18.8	22	23.6
18.3	23.7	23.5	29.9	29.2	37.9	38.4	43.1	43.4	47.4	48.1	55.3	57.1	63.3
1	1	1	1	1	1	1	1	1	1	1	1	1	1
5.1	5.8	6.7	7.2	6.7	8.7	8.3	11.1	9.5	17.6	15.8	17.6	20.3	20.3
24.8	31.7	31.4	40.1	39.3	52	52.8	58.7	59.1	64.9	66.1	76.9	80.4	92.3
2	1	2	1	2	1	2	1	2	1	2	1	2	2
2 x 0.6	1.7	2 x 0.6	2.1	2 x 0.8	4	2 x 1.0	5.3	2 x 2.1	5.3	2 x 2.1	6.3	2 x 2.1	2 x 2.1
2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.2	5.6	5.6
3	4	4	4	4	4	4	5	5	5	5	5	5	5
30000	40000	40000	46000	46000	55800	55800	60000	60000	66000	66000	69000	69000	69000
2.4	2.5	2.5	3.6	3.6	6.4	6.4	4.6	4.6	6.1	6.1	7	8.1	8.1
4.9	6.5	6.5	11.4	11.4	11.4	11.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3
R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
13.5	18.9	19.3	23.5	24.1	24.6	24.9	47.4	47.8	49.3	49.6	49.9	60.8	60.6
2	1	2	1	2	1	2	1	2	1	2	1	2	2
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
2.75	2.86	2.84	2.82	2.77	2.61	2.63	2.78	2.79	2.66	2.69	2.59	2.51	2.36
3.71	4.39	3.92	4.21	3.74	3.75	3.46	4.26	3.81	4.02	3.64	4.27	3.45	3.37
4.11	4.87	4.35	4.67	4.15	4.16	3.84	4.72	4.23	4.46	4.04	4.73	3.83	3.74
68.2	65.6	65.6	69.5	69.5	72	72	69.3	69.3	71.1	71.1	71.9	73.6	73.8
86.1	84.2	84.2	88.1	88.1	90.6	90.6	88.6	88.6	90.4	90.4	91.2	92.9	93
3/1	4/1	4/1	4/1	4/1	4/1	4/1	5/1	5/1	5/1	5/1	5/1	5/1	5/1
3/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	5/2	5/2	5/2	5/2	5/2	5/2
3/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN
3/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN
360	520	520	520	520	520	520	720	720	720	720	720	720	720
2600	3700	3700	3700	3700	3700	3700	4950	4950	4950	4950	4950	4950	4950
1200	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260
2060	2050	2050	2050	2050	2050	2050	2090	2090	2090	2090	2090	2090	2090
840	1310	1310	1380	1380	1410	1410	1860	1860	1870	1870	2020	2130	2170
--	--	--	--	--	--	--	--	--	--	--	--	--	--
73	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
--	--	--	--	--	--	--	--	--	--	--	--	--	--
73	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUL PF 21 / 290

Cooling only

SCROLL COMPRESSORS
DUCTABLE FAN

R410A

- Cooling capacities from 20 to 260 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.26
- ESEER up to 4.67

MAIN FEATURES

- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on mounted on antivibration mounts
- Condenser on one face only
- Possible installation in difficult locations
- External static pressure from 50 to 700 Pa depending on model
- Plug fan as standard

AVAILABLE VERSIONS

- Partial heat recovery version
- Total heat recovery version
- ELN extra low sound level version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-12°C)

ESPECIALLY FOR SETUP IN DIFFICULT LOCATIONS

Main characteristics

- Ductable unit
- Choice of vertical or horizontal air discharge
- Installation inside buildings
- Mono or twin circuit units
- High performance
- Easy access to components
- Numerous acoustic sound levels possible
- Water tank under the unit for better mass gravity and reduced footprint (cf. option)
- Partial or total heat recovery

EC fan motor as standard:

- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines

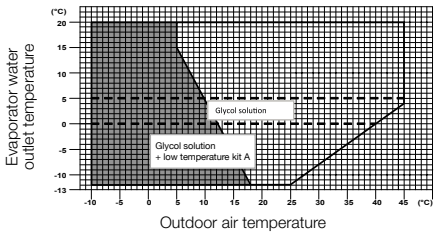
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
151	Kit ELN extra low sound level
160	Discharge air plenum with sound attenuator
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber -supplied loose
175	Victaulic connections
251	Coil protection kit
351	Coils with pre-painted fins
450	Desuperheater
451	Total heat recovery
460	Outdoor installation kit
605	Power factor capacitor for cos phi 0.9 on compressor motor
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
756	1 LN pump hydraulic kit
757	2 LN pump hydraulic kit
768	Water tank
822	Supply air plenum mounting kit
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQUL PF 21 / 290 Cooling only TECHNICAL SPECIFICATIONS

SIZE		22.1	24.1	28.1	32.1	36.1	42.1	53.1
COOLING ONLY (1)								
Cooling capacity	kW	19.6	22.3	26	29.4	32.5	37.3	48.1
Compressors absorbed power	kW	6.5	7.5	8.8	10	11.1	13.5	16.8
Nominal operating current Compressors	A	11.6	13.8	16.1	17.6	20.1	25.4	29.1
Evaporator water flow	m³/h	3.4	3.8	4.5	5.1	5.6	6.4	8.3
Evaporator pressure loss	kPa	27	35	37	29	36	36	33
COOLING ONLY + HEAT RECOVERY 100% (2)								
Cooling capacity	kW	20.6	23.6	27.9	31.6	35.4	41.5	50.5
Heating capacity	kW	26.6	30.5	35.8	40.6	45.6	53.3	66.3
Compressors absorbed power	kW	6	6.9	7.9	9	10.2	11.9	15.8
Nominal operating current Compressors	A	11	12.9	14.9	16.2	18.7	22.8	27.7
Heat recovery exchanger water flow	m³/h	4.6	5.3	6.2	7.1	7.9	9.3	11.5
Heat recovery pressure loss	kPa	45	60	57	47	59	59	47
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	7.2	8.2	9.5	10.8	11.9	13.7	17.6
Heat recovery exchanger water flow	m³/h	1.2	1.4	1.6	1.9	2.1	2.4	3
Heat recovery pressure loss	kPa	18.2	23.5	32.1	13.8	16.9	22.3	36.9
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31	34	40
Starting current	A	95	111	118	118	140	174	225
Number of capacity steps	n.	1	1	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	1.9	1.9	1.9	2.5	2.5	2.5	3.1
Maximum water flow	m³/h	5.2	5.9	6.8	7.8	8.8	10.1	12.8
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	1.9	1.9	1.9	2.5	2.5	2.5	3.1
Maximum water flow	m³/h	6.4	7.4	8.6	9.8	11.1	13	16.1
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6	0.6	0.6
Maximum water flow	m³/h	1.9	2.2	2.5	2.9	3.2	3.7	4.7
PLUG FANS	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**2**
Total air flow	m³/h	6,500	7000	8,500	10000	11000	12000	16000
External static pressure	Pa	50	50	50	50	50	50	50
MAX External static pressure	Pa	737	704	509	480	312	112	568
Absorbed power	kW	0.6	0.7	1.1	1.2	1.6	2.1	2
Nominal operating current Compressors	A	4.3	4.3	4.3	4.9	4.9	4.9	8.6
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	5.3	5.3	5.3	5.5	5.6	5.6	9
Number of refrigerant circuits	n.	1	1	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	2.79	2.73	2.63	2.63	2.56	2.4	2.56
ESEER = Eurovent standard		4.49	4.4	4.05	4.1	3.88	3.57	3.93
IPLV - ARI Standard 550/590		4.98	4.88	4.5	4.55	4.3	3.96	4.36
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	70.6	72.1	76.3	75.6	77.6	79.4	77.6
Sound power level (Lw) (5)	dB(A)	87.1	88.7	92.9	92.1	94.2	96	94.8
HYDRAULIC KIT								
1 pump 2 poles	PPF UNI	1/1	1/1	1/1	1/1	1/1	1/1	2/1
2 pumps 2 poles	PPF UNI	--	--	--	--	--	--	--
1 pump 4 poles	PPF UNI	1/1 LN	1/1 LN	1/1 LN	1/1 LN	1/1 LN	1/1 LN	2/1 LN
2 pumps 4 poles	PPF UNI	--	--	--	--	--	--	--
Water tank volume	l	130	130	130	130	130	130	210
DIMENSIONS								
Length	mm	1250	1250	1250	1250	1250	1250	1800
Width	mm	890	890	890	890	890	890	1040
Height	mm	1950	1950	1950	1950	1950	1950	2000
NET WEIGHT	**KG**	**370**	**370**	**380**	**390**	**390**	**400**	**630**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1"	1"	1 1/4"
TOTAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUL PF 21 / 290 Cooling only TECHNICAL SPECIFICATIONS

SIZE		67.1	55.1	55.2	62.1	62.2	71.1	71.2	85.1
COOLING ONLY (1)									
Cooling capacity	kW	60.3	50.7	50.8	57	56.9	59.1	63.4	75.6
Compressors absorbed power	kW	22.2	17.3	17.3	19.7	19.7	21.5	22	25.7
Nominal operating current Compressors	A	37.9	31.8	31.8	34.9	35	38.9	39.8	49.1
Evaporator water flow	m³/h	10.4	8.7	8.7	9.8	9.8	10.2	10.9	13
Evaporator pressure loss	kPa	29	36	21	35	18	35	20	37
COOLING ONLY + HEAT RECOVERY 100% (2)									
Cooling capacity	kW	64.1	52.9	53.7	59.8	61.3	68.3	68.9	80.3
Heating capacity	kW	84	69.3	69.8	78.4	79.4	89	89.4	104
Compressors absorbed power	kW	19.8	16.5	16.1	18.6	18.1	20.7	20.5	24.1
Nominal operating current Compressors	A	34.4	30.6	30.1	33.3	32.6	37.9	37.5	46.3
Heat recovery exchanger water flow	m³/h	14.6	12.1	12.1	13.6	13.8	15.5	15.5	18.1
Heat recovery pressure loss	kPa	42	52	34	50	30	55	33	57
PARTIAL HEAT RECOVERY (3)									
Heating capacity	kW	22.1	18.6	18.6	20.9	20.9	21.7	23.3	27.7
Heat recovery exchanger water flow	m³/h	3.8	3.2	3.2	3.6	3.6	3.7	4	4.8
Heat recovery pressure loss	kPa	37.8	26.7	30.6	33.8	13	36.3	16.1	34.8
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	2	2	2	2	2	2	2
Maximum operating current	A	48.5	44	44	50	50	62	62	68
Starting current	A	272	140	140	143	143	171	171	208
Number of capacity steps	n.	1	2	2	2	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	3.9	3.9	3.6	3.9	3.6	4.7	4.2	5.8
Maximum water flow	m³/h	16.2	13.3	13.3	15	15.1	17.2	17.1	20.4
TOTAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	3.9	3.9	3.6	3.9	3.6	4.7	4.2	5.8
Maximum water flow	m³/h	20.4	16.6	16.7	19	19.2	21.6	21.8	25.4
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Water volume	l	0.8	0.8	2 x 0.4	0.8	2 x 0.6	0.8	2 x 0.6	1
Maximum water flow	m³/h	5.9	4.9	4.9	5.5	5.5	6.3	6.3	7.5
PLUG FANS	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**
Total air flow	m³/h	21000	18000	18000	20500	20500	23000	23000	25500
External static pressure	Pa	50	50	50	50	50	50	50	50
MAX External static pressure	Pa	363	589	589	421	421	308	308	643
Absorbed power	kW	2.3	2	2	2.2	2.2	2.9	2.9	2.7
Nominal operating current Compressors	A	8.4	9.8	9.8	8.4	8.4	8.4	8.4	14.7
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	9.5	9.3	9	9.3	9	9.7	9.3	13.7
Number of refrigerant circuits	n.	1	1	2	1	2	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)									
EER	kW/kW	2.46	2.62	2.63	2.61	2.6	2.42	2.55	2.67
ESEER = Eurovent standard		3.56	3.92	4.31	3.93	3.73	4.04	3.71	4.41
IPLV - ARI Standard 550/590		4.02	4.35	4.78	4.36	4.14	4.48	4.11	4.89
SOUND LEVELS									
Average sound pressure level [Lpm] (4)	dB(A)	79.5	75.9	75.9	69.6	69.6	72	72	76
Sound power level (Lw) (5)	dB(A)	96.7	93.1	93.1	86.8	86.8	89.2	89.2	93.9
HYDRAULIC KIT									
1 pump 2 poles	PPF UNI	2/1	2/1	2/1	2/1	2/1	2/1	2/1	3/1
2 pumps 2 poles	PPF UNI	--	--	--	--	--	--	--	3/2
1 pump 4 poles	PPF UNI	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	3/1 LN
2 pumps 4 poles	PPF UNI	--	--	--	--	--	--	--	3/2 LN
Water tank volume	l	210	210	210	210	210	210	210	360
DIMENSIONS									
Length	mm	1800	1800	1800	1800	1800	1800	1800	2600
Width	mm	1040	1040	1040	1040	1040	1040	1040	1200
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000
NET WEIGHT	**KG**	**670**	**630**	**630**	**690**	**700**	**700**	**710**	**890**
HYDRAULIC CONNECTIONS									
EVAPORATOR									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	2"	--
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--	76.1
PARTIAL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"
TOTAL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	2"	--
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--	76.1

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

85.2	107.1	107.2	135.1	135.2	170.1	170.2	195.1	195.2	220.1	220.2	250.1	265.2	290.2
75.2	96.8	95.7	120	118	156	154	176	173	202	199	227	239	264
25.8	33	32.8	42.3	42.3	53.5	53.2	62.4	62.9	67.3	67.6	83.7	86.2	102
49.3	57.5	57.2	72.4	72.4	91.3	91	106	107	115	116	142	147	173
12.9	16.7	16.4	20.6	20.3	26.8	26.4	30.3	29.8	34.8	34.2	39	41.1	45.4
23	36	26	37	30	36	33	42	36	43	37	41	41	45
80.6	101	100	126	125	164	161	186	191	208	214	246	258	294
104	132	132	166	165	214	212	243	247	272	277	322	337	383
23.9	31.5	31.1	39.9	39.4	50.7	50.4	57.2	56.6	63.8	63.1	75.5	78.3	89.5
45.9	55.4	54.8	69.1	68.6	87.3	86.8	98.7	97.9	110	110	130	137	155
18.2	23	22.9	28.9	28.6	37.2	36.8	42.2	43	47.2	48.1	55.9	58.5	66.6
37	47	40	47	45	40	45	72	61	69	59	70	69	78
27.6	35.5	35.1	43.9	43.2	57.2	56.3	64.5	63.6	74.2	73.1	83.2	87.7	96.7
4.8	6.1	6.1	7.6	7.5	9.9	9.7	11.1	11	12.8	12.6	14.3	15.1	16.7
22.6	33.4	36.6	35.4	36.1	46.1	35.5	34.6	26.7	45.7	35.3	40.9	35.1	42.7
SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
2	2	2	2	2	2	2	2	2	2	2	3	4	4
68	80	80	97	97	130.8	130.8	147.4	147.4	164	164	196.2	194	294.8
208	265	265	320.5	320.5	375.4	375.4	439.4	439.4	456	456	440.8	417.5	586.8
2	2	2	2	2	2	2	2	2	2	2	3	4	4
1	1	1	1	1	1	1	1	1	1	1	1	1	1
5.1	5.8	6.7	7.2	6.7	8.7	8.3	11.1	9.5	17.6	15.8	17.6	20.3	20.3
20.4	25.8	25.5	32.1	31.6	41.5	40.9	46.1	46.8	53.7	52.8	60.2	63.9	70
1	1	1	1	1	1	1	1	1	1	1	1	1	1
5.1	5.8	6.7	7.2	6.7	8.7	8.3	11.1	9.5	17.6	15.8	17.6	20.3	20.3
25.4	32.2	31.9	40.4	39.9	52.1	51.4	59	60.1	66.1	67.4	78.1	81.7	93
2	1	2	1	2	1	2	1	2	1	2	1	2	2
2 x 0.6	1.7	2 x 0.6	2.1	2 x 0.8	4	2 x 1.0	5.3	2 x 1.7	5.3	2 x 2.1	6.3	2 x 2.1	2 x 2.1
7.5	9.5	9.4	11.8	11.6	15.2	15	16.9	17.2	19.4	19.7	22	23.4	25.7
3	3	3	4	4	4	4	4	4	5	5	5	5	5
25500	32000	32000	40000	40000	52000	52000	54000	54000	62500	62500	64000	66000	66000
50	50	50	50	50	50	50	50	50	50	50	50	50	50
643	324	324	467	467	175	175	120	120	243	243	212	147	147
2.7	5	5	3.6	3.6	7.6	7.6	8.5	8.5	8.2	8.2	8.8	10.1	10.1
14.7	14.7	14.7	16.8	16.8	16.8	16.8	16.8	16.8	21	21	21	21	21
R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
13.5	16.9	17.3	20.1	20.6	24.6	24.6	25.7	26	49.3	49.6	49.9	60.8	60.7
2	1	2	1	2	1	2	1	2	1	2	1	2	2
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
2.64	2.55	2.54	2.61	2.57	2.55	2.53	2.48	2.42	2.68	2.62	2.46	2.48	2.35
3.95	3.89	3.56	4.45	3.94	3.91	3.58	3.79	3.49	4.13	3.81	4.31	3.68	3.55
4.38	4.31	3.95	4.93	4.37	4.33	3.97	4.2	3.87	4.58	4.23	4.78	4.08	3.94
76	80.8	80.8	74	74	77.3	77.3	78	78	77.3	77.3	77.7	78.1	78.1
93.9	98.7	98.7	92.6	92.6	95.9	95.9	96.6	96.6	96.6	96.6	96.9	97.4	97.4
3/1	3/1	3/1	4/1	4/1	4/1	4/1	4/1	4/1	5/1	5/1	5/1	5/1	5/1
3/2	3/2	3/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	5/2	5/2	5/2	5/2
3/1 LN	3/1 LN	3/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN
3/2 LN	3/2 LN	3/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN
360	360	360	520	520	520	520	520	520	720	720	720	720	720
2600	2600	2600	3700	3700	3700	3700	3700	3700	4950	4950	4950	4950	4950
1200	1200	1200	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260
2000	2000	2000	2000	2000	2000	2000	2000	2000	2040	2040	2040	2040	2040
890	1080	1080	1460	1460	1550	1550	1600	1600	1970	1970	2140	2290	2340
--	--	--	--	--	--	--	--	--	--	--	--	--	--
76.1	76.1	76.1	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
--	--	--	--	--	--	--	--	--	--	--	--	--	--
76.1	76.1	76.1	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUH 21 / 260

Reversible

SCROLL COMPRESSORS

R410A

ESPECIALLY FOR SETUP IN DIFFICULT LOCATIONS

- Cooling capacities from 20 to 260 kW
- Heating capacities from 23 to 333 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.08
- ESEER up to 4.67
- COP up to 3.66

MAIN FEATURES

- Reversible operation
- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on antivibration mounts
- Condenser on one face only
- Possible installation in difficult locations

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version

For external static pressure see PF version

Main characteristics

- Possible installation on corners, against walls
- Mono or twin circuit units
- Water tank under the unit for better distribution of mass and reduced footprint (cf. option)
- High performance
- Easy access for maintenance
- Large choice of sound levels
- Partial or total heat recovery
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines

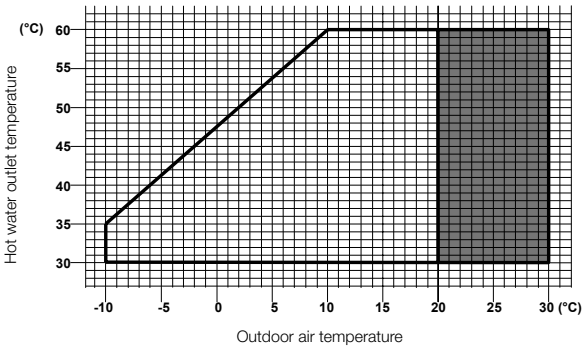
Main accessories and options

Code	
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
251	Coil protection kit
351	Coils with pre-painted fins
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
756	1 LN pump hydraulic kit
757	2 LN pump hydraulic kit
768	Water tank
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQUH 21 / 260 Reversible TECHNICAL SPECIFICATIONS

SIZE		21.1	24.1	28.1	30.1	34.1
SUMMER MODE (1)						
Cooling capacity	kW	19.2	21.6	25.5	27.7	32.7
Compressors absorbed power	kW	6.1	7.1	8.2	10.2	10.1
Nominal operating current Compressors	A	11.1	13.2	15.2	18.2	18.5
Evaporator water flow	m³/h	3.3	3.7	4.4	4.8	5.6
Evaporator pressure loss	kPa	26	33	36	27	35
WINTER MODE (2)						
Heating capacity	kW	23.9	27.2	31.8	32.1	41
Compressors absorbed power	kW	6.2	7.1	8.2	9.4	10.3
Nominal operating current Compressors	A	11.2	13.3	15.2	16.7	19
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	7	7.9	9.4	10.2	12
Heat recovery exchanger water flow	m³/h	1.2	1.4	1.6	1.8	2.1
Heat recovery pressure loss	kPa	17.5	22.2	30.9	12.3	17.1
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31
Starting current	A	95	111	118	118	140
Number of capacity steps	n.	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	1.9	1.9	1.9	2.5	2.5
Maximum water flow	m³/h	4.9	5.6	6.6	7.1	7.8
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6
Maximum water flow	m³/h	1.8	2.1	2.4	2.6	2.9
AXIAL FANS (AC)	**N.**	**1**	**1**	**1**	**1**	**2**
Total air flow	m³/h	8,500	8,500	11000	11000	13000
Absorbed power	kW	0.5	0.5	0.8	0.8	0.5
Nominal operating current Fans	A	1.6	1.6	1.6	1.6	3.2
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	10.5	10.6	10.6	10.8	12.9
Number of refrigerant circuits	n.	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.95	2.87	2.86	2.53	3.08
COP	kW/kW	3.6	3.59	3.57	3.17	3.8
ESEER = Eurovent standard		4.59	4.66	4.48	4.29	4.67
IPLV - ARI Standard 550/590		5.09	5.17	4.97	4.76	5.18
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	64.6	64.9	65.6	64.8	64.9
Sound power level (Lw) (5)	dB(A)	81.1	81.5	82.2	81.4	82.2
HYDRAULIC KIT						
1 pump 2 poles	PPF REV	1/1	1/1	1/1	1/1	2/1
2 pumps 2 poles	PPF REV	--	--	--	--	--
1 pump 4 poles	PPF REV	1/1 LN	1/1 LN	1/1 LN	1/1 LN	2/1 LN
2 pumps 4 poles	PPF REV	--	--	--	--	--
Water tank volume	l	130	130	130	130	210
DIMENSIONS						
Length	mm	1250	1250	1250	1250	1800
Width	mm	890	890	890	890	1040
Height	mm	2010	2010	2010	2010	2060
NET WEIGHT	**KG**	**390**	**390**	**400**	**410**	**410**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1 1/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - leaving hot water temperature 45°C and outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUH 21 / 260 Reversible TECHNICAL SPECIFICATIONS

SIZE		40.1	50.1	52.1	52.2
SUMMER MODE (1)					
Cooling capacity	kW	37.6	46.8	47.7	47.7
Compressors absorbed power	kW	12.2	15.7	16.8	16.8
Nominal operating current Compressors	A	23.6	27.6	31.3	31.3
Evaporator water flow	m³/h	6.5	8.1	8.2	8.2
Evaporator pressure loss	kPa	36	31	32	32
WINTER MODE (2)					
Heating capacity	kW	47.2	60	61.7	61.5
Compressors absorbed power	kW	12.2	15.9	17	16.6
Nominal operating current Compressors	A	23.6	25.6	31.8	30.8
PARTIAL HEAT RECOVERY (3)					
Heating capacity	kW	13.8	17.2	17.5	17.5
Heat recovery exchanger water flow	m³/h	2.4	3	3	3
Heat recovery pressure loss	kPa	22.6	35	23.7	27.1
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	2
Maximum operating current	A	34	40	44	44
Starting current	A	174	225	140	140
Number of capacity steps	n.	1	1	1	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**
Water volume	l	2.5	3.1	3.9	3.6
Maximum water flow	m³/h	9	11.2	11.4	11.3
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**
Water volume	l	0.6	0.6	0.8	0.7
Maximum water flow	m³/h	3.3	4.1	4.2	4.8
AXIAL FANS (AC)	**N.**	**2**	**2**	**2**	**2**
Total air flow	m³/h	15000	20500	20500	20500
Absorbed power	kW	0.8	1.6	1.6	1.6
Nominal operating current Fans	A	3.2	3.3	3.3	3.3
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	12.9	14.3	18.1	14.6
Number of refrigerant circuits	n.	1	1	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)					
EER	kW/kW	2.9	2.7	2.59	2.59
COP	kW/kW	3.64	3.42	3.31	3.38
ESEER = Eurovent standard		4.29	3.83	4.2	3.6
IPLV - ARI Standard 550/590		4.76	4.25	4.66	3.99
SOUND LEVELS					
Average sound pressure level [Lpm] (4)	dB(A)	67.7	71.8	68.9	68.9
Sound power level (Lw) (5)	dB(A)	84.9	89	86.1	86.1
HYDRAULIC KIT					
1 pump 2 poles	PPF REV	2/1	2/1	2/1	2/1
2 pumps 2 poles	PPF REV	--	--	--	--
1 pump 4 poles	PPF REV	2/1 LN	2/1 LN	2/1 LN	2/1 LN
2 pumps 4 poles	PPF REV	--	--	--	--
Water tank volume	l	210	210	210	210
DIMENSIONS					
Length	mm	1800	1800	1800	1800
Width	mm	1040	1040	1040	1040
Height	mm	2060	2060	2060	2060
NET WEIGHT	**KG**	**420**	**650**	**650**	**650**
HYDRAULIC CONNECTIONS					
EVAPORATOR					
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER					
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - leaving hot water temperature 45°C and outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

	58.1	58.2	62.1	65.1	65.2	76.1	76.2	98.1
	54.3	54.6	58	60.6	61.3	70.3	71.4	89.6
	17.9	18.9	19.9	20.5	20.7	24.4	24.4	30.8
	32.1	33.9	34.6	37.6	37.9	47.3	47.3	54.4
	9.3	9.4	10	10.4	10.5	12.1	12.3	15.4
	32	17	27	32	18	33	20	32
	70.7	70.9	74.8	79.1	79.2	91.6	90.8	118
	18.2	18.5	20	20.5	20.9	24.3	24.6	31.8
	32.6	35	35.1	37.8	38.3	47.4	47.6	56.2
	19.9	20	21.3	22.2	22.5	25.8	26.2	32.9
	3.4	3.5	3.7	3.8	3.9	4.4	4.5	5.7
	30.7	11.9	35	38.2	15	30.1	20.3	28.5
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	2	2	2	2	2	2	2	2
	50	50	48.5	62	62	68	68	80
	143	143	272	171	171	208	208	265
	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1
	3.9	3.6	3.9	4.7	4.2	5.8	5.1	5.8
	13	13	13.9	14.6	14.5	17.4	16.9	22
	2	1	2	1	2	1	2	1
	0.8	1.1	0.8	0.8	1.2	1	1.2	1.7
	4.8	5.1	4.2	5.4	5.3	6.4	6.2	8.1
	3	3	3	3	3	3	3	4
	22000	22000	23000	24000	24000	30000	30000	40000
	1.1	1.1	1.3	1.5	1.5	2.4	2.4	2.5
	4.7	4.7	4.7	4.7	4.7	4.9	4.9	6.5
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	19.6	17.9	22.9	18.3	23.3	21.6	24	32.3
	1	2	1	1	2	1	2	1
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	2.85	2.73	2.74	2.76	2.76	2.63	2.67	2.69
	3.66	3.61	3.51	3.6	3.54	3.43	3.37	3.44
	4.11	4.02	4.32	3.84	4.3	4.01	3.52	4.18
	4.56	4.46	4.79	4.26	4.77	4.45	3.9	4.63
	68	68	73.8	67.8	67.8	68.2	68.2	65.6
	85.9	85.9	91.6	85.7	85.7	86.1	86.1	84.2
	3/1	3/1	3/1	3/1	3/1	3/1	3/1	4/1
	3/2	3/2	3/2	3/2	3/2	3/2	3/2	4/2
	3/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN	3/1 LN	4/1 LN
	3/2 LN	3/2 LN	3/2 LN	3/2 LN	3/2 LN	3/2 LN	3/2 LN	4/2 LN
	360	360	360	360	360	360	360	520
	2600	2600	2600	2600	2600	2600	2600	3700
	1200	1200	1200	1200	1200	1200	1200	1260
	2060	2060	2060	2060	2060	2060	2060	2050
	720	730	700	730	730	920	930	1120
	--	--	--	--	--	--	--	--
	76.1	76.1	76.1	76.1	76.1	76.1	76.1	88.9
	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"

EQUH 21 / 260 Reversible TECHNICAL SPECIFICATIONS

SIZE		98.2	124.1	124.2	158.1
SUMMER MODE (1)					
Cooling capacity	kW	91.8	111	116	150
Compressors absorbed power	kW	31	39	39.5	52.5
Nominal operating current Compressors	A	55	68.1	69	89.8
Evaporator water flow	m³/h	15.8	19.2	19.9	25.8
Evaporator pressure loss	kPa	23	34	27	32
WINTER MODE (2)					
Heating capacity	kW	118	149	150	182
Compressors absorbed power	kW	31.9	40.6	40.3	61.3
Nominal operating current Compressors	A	56.2	70.2	69.9	86.2
PARTIAL HEAT RECOVERY (3)					
Heating capacity	kW	33.7	40.9	42.5	55.1
Heat recovery exchanger water flow	m³/h	5.8	7	7.3	9.5
Heat recovery pressure loss	kPa	33.7	30.8	34.9	42.9
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2
Maximum operating current	A	80	97	97	130.8
Starting current	A	265	320.5	320.5	375.4
Number of capacity steps	n.	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**
Water volume	l	6.7	7.2	6.7	8.7
Maximum water flow	m³/h	21.5	27.7	26.7	37.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**1**	**2**	**1**
Water volume	l	1.2	2.1	1.5	4
Maximum water flow	m³/h	7.9	10.2	9.8	13.9
AXIAL FANS (AC)	**N.**	**4**	**4**	**4**	**4**
Total air flow	m³/h	40000	46000	46000	55800
Absorbed power	kW	2.5	3.6	3.6	6.4
Nominal operating current Fans	A	6.5	11.4	11.4	11.4
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	35.4	36.7	39.8	37.7
Number of refrigerant circuits	n.	2	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)					
EER	kW/kW	2.74	2.61	2.69	2.55
COP	kW/kW	3.43	3.37	3.42	2.69
ESEER = Eurovent standard		3.71	4.01	3.55	3.75
IPLV - ARI Standard 550/590		4.11	4.45	3.94	4.16
SOUND LEVELS					
Average sound pressure level [Lpm] (4)	dB(A)	65.6	69.5	69.5	72
Sound power level (Lw) (5)	dB(A)	84.2	88.1	88.1	90.6
HYDRAULIC KIT					
1 pump 2 poles	PPF REV	4/1	4/1	4/1	4/1
2 pumps 2 poles	PPF REV	4/2	4/2	4/2	4/2
1 pump 4 poles	PPF REV	4/1 LN	4/1 LN	4/1 LN	4/1 LN
2 pumps 4 poles	PPF REV	4/2 LN	4/2 LN	4/2 LN	4/2 LN
Water tank volume	l	520	520	520	520
DIMENSIONS					
Length	mm	3700	3700	3700	3700
Width	mm	1260	1260	1260	1260
Height	mm	2050	2050	2050	2050
NET WEIGHT	**KG**	**1120**	**1510**	**1500**	**1600**
HYDRAULIC CONNECTIONS					
EVAPORATOR					
Inlet outlet diameter – ISO 7/1 – R	Ø	--	--	--	--
Inlet outlet diameter	Ø mm	88.9	88.9	88.9	88.9
PARTIAL HEAT RECOVERY EXCHANGER					
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - leaving hot water temperature 45°C and outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

	158.2	180.1	180.2	197.1	197.2	230.1	240.2	260.2
	155	170	176	188	194	227	223	261
	53.1	58.4	59.3	66.1	66.8	79.7	85.2	100
	91	100	102	114	115	136	146	170
	26.6	29.1	30.3	32.4	33.4	39	38.4	45
	26	34	33	41	32	41	36	33
	195	215	215	238	238	280	288	333
	41.3	57.3	57.4	64	64.5	75.4	80.8	90.1
	71.4	98.9	99.4	110	112	130	141	156
	56.9	62.2	64.8	69.1	71.2	83.2	81.9	95.8
	9.8	10.7	11.2	11.9	12.3	14.3	14.1	16.5
	36.1	32.1	27.7	39.6	33.5	40.9	30.6	41.9
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	2	2	2	2	2	3	4	4
	130.8	147.4	147.4	164	164	196.2	194	294.8
	375.4	439.4	439.4	456	456	440.8	417.5	586.8
	2	2	2	2	2	3	4	4
	1	1	1	1	1	1	1	1
	8.3	11.1	9.5	17.6	15.8	17.6	20.3	20.3
	37.7	42.2	40.6	48.3	46.9	55.3	54.5	60.6
	2	1	2	1	2	1	2	2
	2	5.3	3.4	5.3	3.4	6.3	4.2	4.2
	13.8	15.5	14.9	17.7	17.2	20.3	20	22.2
	4	5	5	5	5	5	5	5
	55800	60000	60000	66000	66000	69000	69000	69000
	6.4	4.6	4.6	6.1	6.1	7	8.1	8.1
	11.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	40.4	60.6	63.7	78.8	95.6	79.5	106.8	106.7
	2	1	2	1	2	1	2	2
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	2.6	2.7	2.76	2.6	2.66	2.62	2.39	2.42
	4.09	3.48	3.47	3.4	3.37	3.4	3.24	3.39
	3.45	4.17	3.65	4.1	3.63	4.27	3.35	3.3
	3.83	4.62	4.05	4.55	4.03	4.73	3.72	3.66
	72	69.3	69.3	71.1	71.1	71.9	73.6	73.8
	90.6	88.6	88.6	90.4	90.4	91.2	92.9	93
	4/1	5/1	5/1	5/1	5/1	5/1	5/1	5/1
	4/2	5/2	5/2	5/2	5/2	5/2	5/2	5/2
	4/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN
	4/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN
	520	720	720	720	720	720	720	720
	3700	4950	4950	4950	4950	4950	4950	4950
	1260	1260	1260	1260	1260	1260	1260	1260
	2050	2090	2090	2090	2090	2090	2090	2090
	1590	1650	1640	2050	2040	2220	2380	2430
	--	--	--	--	--	--	--	--
	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
	2"	2"	2"	2"	2"	2"	2"	2"

EQUH PF 22 / 290

Reversible

SCROLL COMPRESSORS
DUCTABLE FAN

R410A

- Cooling capacities from 20 to 260 kW
- Heating capacities from 23 to 333 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.08
- ESEER up to 4.67
- COP up to 3.66

MAIN FEATURES

- Reversible operation
- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on antivibration mounts
- Condenser on one face only
- Possible installation in 'difficult' locations
- Ductable unit with external static pressure from 50 to 700 Pa depending on model

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version

ESPECIALLY FOR SETUP IN DIFFICULT LOCATIONS

Main characteristics

- Plug fan as standard
- Possible installation in corners, against walls
- Mono or twin circuit units
- Water tank under the unit for better mass distribution and reduced footprint (cf. option)
- High performance
- Easy access to components
- Large choice of sound levels
- Partial or total heat recovery
- EC fan motor as standard
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines

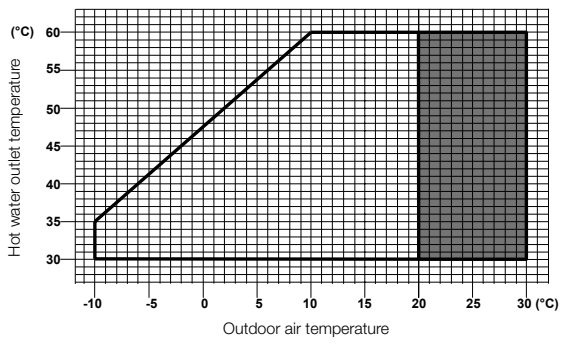
Main accessories and options

Code	
150	Kit LNO low sound level
160	Discharge air plenum with sound attenuator
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
251	Coil protection kit
351	Coils with pre-painted fins
450	Desuperheater
460	Outdoor installation kit
605	Power factor capacitor for cos phi 0.9 on compressor motor
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
756	1 LN pump hydraulic kit
757	2 LN pump hydraulic kit
768	Water tank
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQUH PF 22 / 290 Reversible TECHNICAL SPECIFICATIONS

SIZE		22.1	24.1	28.1	32.1	36.1	42.1	53.1
COOLING ONLY (1)								
Cooling capacity	kW	19.1	20.7	24.2	28.8	32	36.5	46.2
Compressors absorbed power	kW	6.4	7.4	8.7	9.9	11	13.4	16.6
Nominal operating current Compressors	A	11.5	13.7	16	17.4	19.9	25.3	28.7
Evaporator water flow	m³/h	3.3	3.6	4.2	5	5.5	6.3	7.9
Evaporator pressure loss	kPa	27	35	37	29	35	36	32
WINTER HEATING MODE (2)								
Heating capacity	kW	23.7	25.1	29.3	35.5	39.8	45.6	58.2
Compressors absorbed power	kW	6.2	7	8.1	9.3	10.3	12.1	16.1
Nominal operating current	A	11.3	13.3	15.2	16.5	18.8	23.4	28.2
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	7	7.6	8.9	10.6	11.8	13.4	17
Heat recovery exchanger water flow	m³/h	1.2	1.3	1.5	1.8	2	2.3	2.9
Heat recovery pressure loss	kPa	17.3	20.3	27.9	13.2	16.4	21.3	34.1
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31	34	40
Starting current	A	95	111	118	118	140	174	225
Number of capacity steps	n.	1	1	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	1.9	1.9	2.1	2.8	2.9	3.3	4.2
Maximum water flow	m³/h	6.9	7.8	9	10.3	11.6	13.4	16.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6	0.6	0.6
Maximum water flow	m³/h	1.9	2.1	2.4	2.8	3.1	3.6	4.6
PLUG FANS	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**2**
Total air flow	m³/h	6,500	7000	8,500	10000	11000	12000	16000
External static pressure	Pa	50	50	50	50	50	50	50
MAX External static pressure	Pa	737	704	509	480	312	112	568
Absorbed power	kW	0.6	0.7	1.1	1.2	1.6	2.1	2
Nominal operating current Compressors	A	4.3	4.3	4.3	4.9	4.9	4.9	8.6
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	10.5	10.6	10.6	10.8	10.8	10.8	14.3
Number of refrigerant circuits	n.	1	1	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	2.74	2.56	2.46	2.6	2.54	2.36	2.48
COP	kW/kW	3.51	3.26	3.16	3.38	3.34	3.22	3.21
ESEER = Eurovent standard		4.49	4.4	4.05	4.1	3.88	3.57	3.93
IPLV - ARI Standard 550/590		4.98	4.88	4.5	4.55	4.3	3.96	4.36
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	70.6	72.1	76.3	75.6	77.6	79.4	77.6
Sound power level (Lw) (5)	dB(A)	87.1	88.7	92.9	92.1	94.2	96	94.8
HYDRAULIC KIT								
1 pump 2 poles	PPF REV	1/1	1/1	1/1	1/1	1/1	1/1	2/1
2 pumps 2 poles	PPF REV	--	--	--	--	--	--	--
1 pump 4 poles	PPF REV	1/1 LN	1/1 LN	1/1 LN	1/1 LN	1/1 LN	1/1 LN	2/1 LN
2 pumps 4 poles	PPF REV	--	--	--	--	--	--	--
Water tank volume	l	130	130	130	130	130	130	210
DIMENSIONS								
Length	mm	1250	1250	1250	1250	1250	1250	1800
Width	mm	890	890	890	890	890	890	1040
Height	mm	1950	1950	1950	1950	1950	1950	2000
NET WEIGHT	**KG**	**390**	**390**	**400**	**410**	**410**	**420**	**650**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1"	1"	1 1/4"
Condensate evacuation	Ø	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - leaving hot water temperature 45°C; outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQUH PF 22 / 290 Reversible TECHNICAL SPECIFICATIONS

SIZE		67.1	55.1	55.2	62.1	62.2	71.1	71.2	85.1
COOLING ONLY (1)									
Cooling capacity	kW	58.4	48.7	48.4	54.8	54.8	62	61.5	72.8
Compressors absorbed power	kW	21.1	17.1	17.1	19.6	19.6	21.8	21.8	25.4
Nominal operating current Compressors	A	36.1	31.6	31.4	34.7	34.7	39.5	39.3	48.4
Evaporator water flow	m³/h	10	8.4	8.3	9.4	9.4	10.7	10.5	12.5
Evaporator pressure loss	kPa	29	36	21	35	18	34	20	37
WINTER HEATING MODE (2)									
Heating capacity	kW	73.1	61.5	62	69.5	69.3	77.7	77.4	85.7
Compressors absorbed power	kW	20	16.9	16.7	19.1	18.7	20.8	20.6	24.4
Nominal operating current	A	34.7	31.2	30.9	34	33.5	38.1	37.7	47.2
PARTIAL HEAT RECOVERY (3)									
Heating capacity	kW	21.4	17.9	17.7	20.1	20.1	22.8	22.6	26.7
Heat recovery exchanger water flow	m³/h	3.7	3.1	3.1	3.5	3.5	3.9	3.9	4.6
Heat recovery pressure loss	kPa	35.5	24.7	27.8	31.2	12	40	15.1	32.3
COMPRESSORS		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Quantity	n.	1	2	2	2	2	2	2	2
Maximum operating current	A	48.5	44	44	50	50	62	62	68
Starting current	A	272	140	140	143	143	171	171	208
Number of capacity steps	n.	1	2	2	2	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	N.	1	1	1	1	1	1	1	1
Water volume	l	5.7	4.2	4.3	4.8	5.3	5.5	5.6	6.3
Maximum water flow	m³/h	21.4	17.6	17.6	19.9	20	22.7	22.7	27
PARTIAL HEAT RECOVERY EXCHANGER	N.	1	1	2	1	2	1	2	1
Water volume	l	0.8	0.8	0.7	0.8	1.1	0.8	1.2	1
Maximum water flow	m³/h	5.8	4.8	4.8	5.4	5.4	6.2	6.2	7.3
PLUG FANS	N.	2	2	2	2	2	2	2	3
Total air flow	m³/h	21000	18000	18000	20500	20500	23000	23000	25500
External static pressure	Pa	50	50	50	50	50	50	50	50
MAX External static pressure	Pa	363	589	589	421	421	308	308	643
Absorbed power	kW	2.3	2	2	2.2	2.2	2.9	2.9	2.7
Nominal operating current Compressors	A	8.4	9.8	9.8	8.4	8.4	8.4	8.4	14.7
REFRIGERANT		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant load (excluding options)	kg	14.8	14.6	19.6	14.5	19.6	15	19.9	21.6
Number of refrigerant circuits	n.	1	1	2	1	2	1	2	1
SUPPLY VOLTAGE	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
ENERGY EFFICIENCY RATIOS (1)									
EER	kW/kW	2.5	2.55	2.53	2.52	2.52	2.51	2.49	2.59
COP	kW/kW	3.28	3.25	3.31	3.27	3.32	3.28	3.29	3.17
ESEER = Eurovent standard		3.56	3.92	4.31	3.93	3.73	4.04	3.71	4.41
IPLV - ARI Standard 550/590		4.02	4.35	4.78	4.36	4.14	4.48	4.11	4.89
SOUND LEVELS									
Average sound pressure level [Lpm] (4)	dB(A)	79.5	75.9	75.9	69.6	69.6	72	72	76
Sound power level (Lw) (5)	dB(A)	96.7	93.1	93.1	86.8	86.8	89.2	89.2	93.9
HYDRAULIC KIT									
1 pump 2 poles	PPF REV	2/1	2/1	2/1	2/1	2/1	2/1	2/1	3/1
2 pumps 2 poles	PPF REV	--	--	--	--	--	--	--	3/2
1 pump 4 poles	PPF REV	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	2/1 LN	3/1 LN
2 pumps 4 poles	PPF REV	--	--	--	--	--	--	--	3/2 LN
Water tank volume	l	210	210	210	210	210	210	210	360
DIMENSIONS									
Length	mm	1800	1800	1800	1800	1800	1800	1800	2600
Width	mm	1040	1040	1040	1040	1040	1040	1040	1200
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000
NET WEIGHT	KG	700	650	650	720	730	730	740	920
HYDRAULIC CONNECTIONS									
EVAPORATOR									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	2"	--
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--	76.1
PARTIAL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"
Condensate evacuation	Ø	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	2 x 3/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C.
(2) Gross value - leaving hot water temperature 45°C; outdoor temperature 7°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.

85.2	107.1	107.2	135.1	135.2	170.1	170.2	195.1	195.2	220.1	220.2	250.1	265.2	290.2
71.9	93.1	91	115	112	150	146	175	170	201	195	230	231	255
25.3	32.6	32.3	41.9	41.7	52.9	52.6	63.1	62.3	68	67.4	84.7	85.4	102
48.4	56.8	56.2	71.6	71.3	90.3	89.9	107	106	116	115	143	145	173
12.4	16	15.7	19.8	19.3	25.8	25.1	30.2	29.3	34.6	33.6	39.6	39.8	44
23	35	26	36	30	35	33	41	35	42	36	40	41	44
92.4	117	117	147	147	189	189	211	198	241	241	273	291	324
24.4	32	31.6	40.4	40.1	51.4	51.4	57.6	56.7	64.2	63.7	75.9	79.4	90.7
47.1	56.2	55.7	69.9	69.6	88.5	88.3	99.8	98.1	111	110	131	138	157
26.4	34.2	33.4	42.3	41.1	55	53.5	64.4	62.5	73.9	71.7	84.5	84.9	93.6
4.6	5.9	5.8	7.3	7.1	9.5	9.2	11.1	10.8	12.7	12.4	14.6	14.6	16.1
20.7	30.8	33.1	32.8	32.7	42.6	31.9	34.4	25.8	45.3	34	42.2	32.9	40
SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
2	2	2	2	2	2	2	2	2	2	2	3	4	4
68	80	80	97	97	130.8	130.8	147.4	147.4	164	164	196.2	194	294.8
208	265	265	320.5	320.5	375.4	375.4	439.4	439.4	456	456	440.8	417.5	586.8
2	2	2	2	2	2	2	2	2	2	2	3	4	4
1	1	1	1	1	1	1	1	1	1	1	1	1	1
5.9	8.4	7.5	10.5	8.8	14.7	11.4	14	17.2	16	19.6	18.8	22	23.6
27	34.1	33.8	42.4	41.9	55	54.2	60.9	61.9	70	71.1	79.6	84.6	92.6
2	1	2	1	2	1	2	1	2	1	2	1	2	2
1.2	1.7	1.2	2.1	1.5	4	2	5.3	3.4	5.3	3.4	6.3	4.2	4.2
7.3	9.3	9.2	11.5	11.4	14.9	14.7	16.5	16.8	19	19.3	21.6	23	25.1
3	3	3	4	4	4	4	4	4	5	5	5	5	5
25500	32000	32000	40000	40000	52000	52000	54000	54000	62500	62500	64000	66000	66000
50	50	50	50	50	50	50	50	50	50	50	50	50	50
643	324	324	467	467	175	175	120	120	243	243	212	147	147
2.7	5	5	3.6	3.6	7.6	7.6	8.5	8.5	8.2	8.2	8.8	10.1	10.1
14.7	14.7	14.7	16.8	16.8	16.8	16.8	16.8	16.8	21	21	21	21	21
R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
24	30.1	33.1	33.2	36.4	37.7	40.4	38.8	41.8	78.8	95.6	79.5	106.8	106.7
2	1	2	1	2	1	2	1	2	1	2	1	2	2
400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
2.57	2.48	2.44	2.53	2.47	2.48	2.42	2.45	2.4	2.64	2.58	2.46	2.42	2.27
3.41	3.17	3.2	3.34	3.36	3.2	3.2	3.19	3.04	3.33	3.35	3.22	3.25	3.21
3.95	3.89	3.56	4.45	3.94	3.91	3.58	3.79	3.49	4.13	3.81	4.31	3.68	3.55
4.38	4.31	3.95	4.93	4.37	4.33	3.97	4.2	3.87	4.58	4.23	4.78	4.08	3.94
76	80.8	80.8	74	74	77.3	77.3	78	78	77.3	77.3	77.7	78.1	78.1
93.9	98.7	98.7	92.6	92.6	95.9	95.9	96.6	96.6	96.6	96.6	96.9	97.4	97.4
3/1	3/1	3/1	4/1	4/1	4/1	4/1	4/1	4/1	5/1	5/1	5/1	5/1	5/1
3/2	3/2	3/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	5/2	5/2	5/2	5/2
3/1 LN	3/1 LN	3/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	4/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN	5/1 LN
3/2 LN	3/2 LN	3/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	4/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN	5/2 LN
360	360	360	520	520	520	520	520	520	720	720	720	720	720
2600	2600	2600	3700	3700	3700	3700	3700	3700	4950	4950	4950	4950	4950
1200	1200	1200	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260
2000	2000	2000	2000	2000	2000	2000	2000	2000	2040	2040	2040	2040	2040
930	1120	1120	1510	1500	1600	1590	1650	1640	2050	2040	2220	2380	2430
--	--	--	--	--	--	--	--	--	--	--	--	--	--
76.1	76.1	76.1	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"	2 x 3/4"

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQMF 21 / 260

Cooling only
Free cooling

SCROLL COMPRESSORS

R410A

- Cooling capacities from 20 to 260 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.02
- ESEER up to 4.67

MAIN FEATURES

- FREE COOLING
- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on antivibration mounts
- Condenser on one face only
- Possible installation in difficult locations

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version
- Brine low and very low temperature versions
- All-year-round operation as a standard feature (-10°C)

For external static pressure see PF version

Main Characteristics

- Free cooling = 'free' energy recovery
- Possible installation in corners, against walls
- Mono or twin circuit units
- High ESEER
- Easy access to components
- Large choice of sound levels
- Electronic expansion valve from size 98
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines
- Water tank (optional) under the unit, optimised footprint and better mass distribution
- Free cooling coil with 3-way valve and ambient air control. Management by integrated unit control

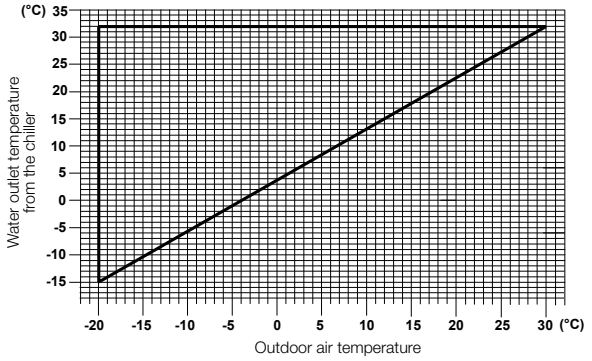
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
251	Coil protection kit
351	Coils with pre-painted fins
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
650	Compressor thermal relays
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
768	Water tank
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Free-cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQMF 21 / 260 Cooling only TECHNICAL SPECIFICATIONS

SIZE		21.1	24.1	28.1	30.1	34.1
COOLING ONLY (1)						
Cooling capacity	kW	18.9	21.3	25.2	27.7	33.3
Compressors absorbed power	kW	6.2	7.3	8.4	9.9	10.4
Nominal operating current Compressors	A	11.3	13.5	15.6	17.6	19
Evaporator water flow	m³/h	3.5	3.9	4.6	5.1	6.1
Evaporator pressure loss	kPa	62	77	92	89	87
FREE COOLING (2)						
Cooling capacity	kW	18.4	19.4	23.5	24.4	31.6
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	7	7.8	9.2	10.2	12.2
Heat recovery exchanger water flow	m³/h	1.2	1.4	1.6	1.8	2.1
Press loss partial heat recovery exchanger	kPa	17	21.6	30.1	12.3	17.7
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31
Starting current	A	95	111	118	118	140
Number of capacity steps	n.	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	18	18	18	18.7	27.1
Maximum water flow	m³/h	4.7	5.3	6.3	6.9	8.3
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6
Maximum water flow	m³/h	1.7	2	2.3	2.6	3.1
AXIAL FANS (AC)	**N.**	**1**	**1**	**1**	**1**	**2**
Total air flow	m³/h	7500	7500	9650	9650	12000
Absorbed power	kW	0.5	0.5	0.8	0.8	0.6
Nominal operating current Fans	A	1.5	1.5	1.6	1.6	3
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	11.3	11.3	11.3	11.5	13.7
Number of refrigerant circuits	n.	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.84	2.75	2.73	2.58	3.02
IPLV - ARI Standard 550/590		4.79	4.76	4.53	4.38	5.18
ESEER = Eurovent standard		4.32	4.29	4.09	3.95	4.67
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	64.2	64.6	66	65.2	66.4
Sound power level (Lw) (5)	dB(A)	80.8	81.2	82.6	81.8	83.6
HYDRAULIC KIT						
1 pump 2 poles	PPF MAX	1/1	1/1	1/1	1/1	2/1
2 pumps 2 poles	PPF MAX	-	-	-	-	-
Water tank volume	l	130	130	130	130	210
DIMENSIONS						
Length	mm	1250	1250	1250	1250	1800
Width	mm	1010	1010	1010	1010	1180
Height	mm	2010	2010	2010	2010	2060
NET WEIGHT	**KG**	**430**	**440**	**440**	**440**	**600**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet – Flexible joint - OD	Ø mm	-	-	-	-	-
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1 1/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQMF 21 / 260 Cooling only TECHNICAL SPECIFICATIONS

SIZE		40.1	50.1	52.1	52.2
COOLING ONLY (1)					
Cooling capacity	kW	37.5	46	47.8	47.7
Compressors absorbed power	kW	12.4	16.3	17.2	17.3
Nominal operating current Compressors	A	23.9	28.5	31.9	31.9
Evaporator water flow	m³/h	6.9	8.5	8.8	8.8
Evaporator pressure loss	kPa	96	94	100	80
FREE COOLING (2)					
Cooling capacity	kW	35.7	42.6	43.1	43.1
PARTIAL HEAT RECOVERY (3)					
Heating capacity	kW	13.8	16.9	17.5	17.5
Heat recovery exchanger water flow	m³/h	2.4	2.9	3	3
Press loss partial heat recovery exchanger	kPa	22.5	33.9	23.8	23.6
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	2	2
Maximum operating current	A	34	40	44	44
Starting current	A	174	225	140	140
Number of capacity steps	n.	1	1	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**
Water volume	l	27.1	27.8	28.8	28.4
Maximum water flow	m³/h	9.4	11.4	11.9	11.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**2**
Water volume	l	0.6	0.6	0.8	0.8
Maximum water flow	m³/h	3.4	4.2	4.4	4.4
AXIAL FANS (AC)	**N.**	**2**	**2**	**2**	**2**
Total air flow	m³/h	14000	17300	17300	17300
Absorbed power	kW	1	1.7	1.7	1.7
Nominal operating current Fans	A	3	3.2	3.2	3.2
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	13.7	15	15.3	16
Number of refrigerant circuits	n.	1	1	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)					
EER	kW/kW	2.8	2.56	2.54	2.52
IPLV - ARI Standard 550/590		4.63	4.16	4.41	3.97
ESEER = Eurovent standard		4.18	3.75	3.98	3.58
SOUND LEVELS					
Average sound pressure level [Lpm] (4)	dB(A)	69.4	72.5	70	70
Sound power level (Lw) (5)	dB(A)	86.6	89.8	87.2	87.2
HYDRAULIC KIT					
1 pump 2 poles	PPF MAX	2/1	2/1	2/1	2/1
2 pumps 2 poles	PPF MAX	-	-	-	-
Water tank volume	l	210	210	210	210
DIMENSIONS					
Length	mm	1800	1800	1800	1800
Width	mm	1180	1180	1180	1180
Height	mm	2060	2060	2060	2060
NET WEIGHT	**KG**	**600**	**740**	**700**	**700**
HYDRAULIC CONNECTIONS					
EVAPORATOR					
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"
Inlet outlet – Flexible joint - OD	Ø mm	-	-	-	-
PARTIAL HEAT RECOVERY EXCHANGER					
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

	58.1	58.2	62.1	65.1	65.2	76.1	76.2	98.1
	55.6	55.8	59.1	62.6	62.4	71.7	71.3	92.7
	18.7	18.7	20.2	21	20.9	25.4	25.4	32.1
	33.6	33.4	35.1	38.2	38.1	48.7	48.6	56.3
	10.2	10.3	10.9	11.5	11.5	13.2	13.1	17
	91	68	89	101	81	99	79	79
	53.9	53.9	56.3	58.8	58.7	65.1	65	82.8
	20.4	20.5	21.7	23	22.9	26.3	26.2	34
	3.5	3.5	3.7	4	3.9	4.5	4.5	5.9
	36.8	32.3	14	40.7	15.5	31.3	20.3	30.6
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	2	2	1	2	2	2	2	2
	50	50	48.5	62	62	68	68	80
	143	143	272	171	171	208	208	265
	2	2	1	2	2	2	2	2
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	42.2	41.9	42	43.2	42.6	44.5	43.7	62
	13.9	14	14.8	15.6	15.6	17.9	17.9	23.2
	1	**2**	**1**	**1**	**2**	**1**	**2**	**1**
	0.8	1.2	0.8	0.8	1.2	1	1.2	1.7
	5.1	5.1	5.4	5.8	5.8	6.6	6.6	8.6
	3	**3**	**3**	**3**	**3**	**3**	**3**	**4**
	21000	21000	22000	23000	23000	25750	25750	35000
	1.5	1.5	1.7	2	2	2.5	2.5	2.7
	4.5	4.5	4.5	4.5	4.5	4.8	4.8	6.4
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	21.7	19.3	18.9	22.1	19.6	28.6	25.5	33.9
	1	2	1	1	2	1	2	1
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	2.75	2.76	2.7	2.73	2.73	2.57	2.56	2.66
	4.91	4.41	4.45	4.62	4.18	4.35	3.88	4.6
	4.42	3.98	4.01	4.17	3.77	3.92	3.5	4.14
	70.3	70.3	75.1	70.2	70.2	69.4	69.4	68.4
	88.2	88.2	93	88.1	88.1	87.3	87.3	87
	3/1	3/1	3/1	3/1	3/1	3/1	3/1	4/1
	3/2	3/2	3/2	3/2	3/2	3/2	3/2	4/2
	360	360	360	360	360	360	360	520
	2600	2600	2600	2600	2600	2600	2600	3700
	1340	1340	1340	1340	1340	1340	1340	1490
	2060	2060	2060	2060	2060	2060	2060	2050
	930	**920**	**970**	**940**	**930**	**1000**	**1000**	**1470**
	-	-	-	-	-	-	-	-
	76.1	76.1	76.1	76.1	76.1	76.1	76.1	88.9
	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"

EQMF 21 / 260 Cooling only TECHNICAL SPECIFICATIONS

SIZE		98.2	124.1	124.2	158.1
COOLING ONLY (1)					
Cooling capacity	kW	91.5	114	112	147
Compressors absorbed power	kW	31.9	41.4	41.4	54.6
Nominal operating current Compressors	A	56	71.3	71.3	92.9
Evaporator water flow	m³/h	16.8	21	20.6	27
Evaporator pressure loss	kPa	66	74	64	80
FREE COOLING (2)					
Cooling capacity	kW	82.3	98.1	97.5	113
PARTIAL HEAT RECOVERY (3)					
Heating capacity	kW	33.6	41.9	41.2	53.9
Heat recovery exchanger water flow	m³/h	5.8	7.2	7.1	9.3
Press loss partial heat recovery exchanger	kPa	33.5	32.2	32.7	41
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2
Maximum operating current	A	80	97	97	130.8
Starting current	A	265	320.5	320.5	375.4
Number of capacity steps	n.	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**
Water volume	l	63.1	63.7	63.1	65.5
Maximum water flow	m³/h	23	28.6	28.2	36.7
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**1**	**2**	**1**
Water volume	l	1.2	2.1	1.6	4
Maximum water flow	m³/h	8.5	10.5	10.4	13.5
AXIAL FANS (AC)	**N.**	**4**	**4**	**4**	**4**
Total air flow	m³/h	35000	42000	42000	46800
Absorbed power	kW	2.7	4.7	4.7	7.1
Nominal operating current Fans	A	6.4	11.4	11.4	11.4
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	31.3	38.6	42.1	50.9
Number of refrigerant circuits	n.	2	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)					
EER	kW/kW	2.64	2.47	2.43	2.38
IPLV - ARI Standard 550/590		4.11	4.07	3.66	3.84
ESEER = Eurovent standard		3.71	3.67	3.3	3.46
SOUND LEVELS					
Average sound pressure level [Lpm] (4)	dB(A)	68.4	72.3	72.3	74.4
Sound power level (Lw) (5)	dB(A)	87	90.9	90.9	93
HYDRAULIC KIT					
1 pump 2 poles	PPF MAX	4/1	4/1	4/1	4/1
2 pumps 2 poles	PPF MAX	4/2	4/2	4/2	4/2
Water tank volume	l	520	520	520	520
DIMENSIONS					
Length	mm	3700	3700	3700	3700
Width	mm	1490	1490	1490	1490
Height	mm	2050	2050	2050	2050
NET WEIGHT	**KG**	**1470**	**1610**	**1610**	**1660**
HYDRAULIC CONNECTIONS					
EVAPORATOR					
Inlet outlet diameter – ISO 7/1 – R	Ø	-	-	-	-
Inlet outlet – Flexible joint - OD	Ø mm	88.9	88.9	88.9	88.9
PARTIAL HEAT RECOVERY EXCHANGER					
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

	158.2	180.1	180.2	197.1	197.2	230.1	240.2	260.2
	149	169	170	186	183	209	231	258
	54.8	60.4	60.5	69.1	69.5	85.6	83.2	99
	93.4	103	104	118	117	145	143	168
	27.3	31	31.1	34.1	33.7	38.5	42.5	47.5
	72	65	68	89	81	97	95	100
	113	131	132	145	145	153	165	190
	54.5	61.9	62.3	68.1	67.2	76.6	84.9	94.6
	9.4	10.7	10.7	11.7	11.6	13.2	14.6	16.3
	33.2	31.8	25.6	38.5	29.8	34.7	32.9	40.9
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	2	2	2	2	2	3	4	4
	130.8	147.4	147.4	164	164	196.2	194	227.8
	375.4	459.4	459.4	476	476	440.8	417.5	472.4
	2	2	2	2	2	3	4	4
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	65	116.2	114.2	124	121.8	104.8	161.2	161.2
	37.2	42.2	42.4	45.6	46.3	51.9	54.5	54.5
	2	**1**	**2**	**1**	**2**	**1**	**2**	**2**
	2	5.3	4.2	5.3	4.2	6.3	4.2	4.2
	13.7	15.5	15.6	16.8	17	19.1	20	20
	4	**5**	**5**	**5**	**5**	**5**	**5**	**5**
	46800	53000	53000	54000	54000	56300	69000	69000
	7.1	6.8	6.8	7.2	7.2	8.2	9.1	9.1
	11.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	42.9	73.7	65.8	83.1	102.2	83.7	127	126.6
	2	1	2	1	2	1	2	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	2.41	2.51	2.53	2.44	2.39	2.23	2.5	2.39
	3.53	4.15	3.75	3.99	3.6	4.15	3.79	3.72
	3.18	3.74	3.38	3.6	3.25	3.74	3.4	3.34
	74.4	74.1	74.1	74.4	74.4	75.4	74.1	74.1
	93	93.3	93.3	93.7	93.7	94.7	93.4	93.4
	5/1	5/1	5/1	5/1	5/1	5/1	5/1	5/1
	5/2	5/2	5/2	5/2	5/2	5/2	5/2	5/2
	520	720	720	720	720	720	720	720
	3700	4950	4950	4950	4950	4950	4950	4950
	1490	1500	1500	1500	1500	1500	1500	1500
	2050	2090	2090	2090	2090	2090	2090	2090
	1640	**2240**	**2210**	**2220**	**2230**	**2370**	**2510**	**2510**
	-	-	-	-	-	-	-	-
	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
	2"	2"	2"	2"	2"	2"	2"	2"

EQMF PF 22 / 290

Cooling only
Free cooling

SCROLL COMPRESSORS
DUCTABLE FAN

- Cooling capacities from 20 to 260 kW
- 29 sizes
- Refrigerant: R410A
- EER up to 3.26
- ESEER up to 4.67

MAIN FEATURES

- FREE COOLING
- Available with single or double refrigeration circuit(s)
- 1 or 2 SCROLL compressors mounted on antivibration mounts
- Condenser on one face only
- Possible installation in difficult locations
- External static pressure from 50 to 700 Pa depending on model
- Plug fan as standard

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version
- Brine low and very low temperature versions

Photo with buffer tank under the unit not included in standard version

Advantages

- Free cooling = 'free' energy recovery
- Ductable unit
- Choice of vertical or horizontal air discharge
- Installation inside buildings
- Mono or twin circuit units
- High performance
- Easy access to components
- Large choice of sound levels
- Electronic expansion valve from size 98
- EC fan motor as standard
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Service valves on liquid and discharge lines
- Water tank under the unit = reduced footprint and distribution of mass (optional)
- Free cooling coil with 3-way valve and ambient air control, Management by integrated unit control

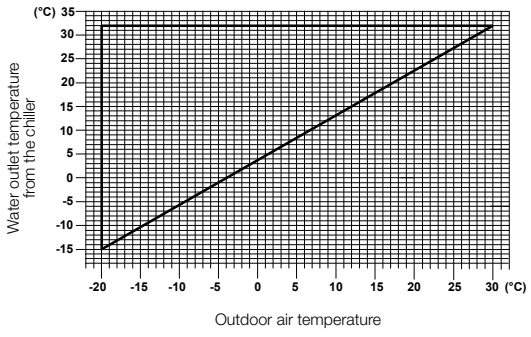
Main accessories and options

Code
118 Kit A leaving chilled water low temperature operation
119 Kit B leaving chilled water low temperature operation
150 Kit LNO low sound level
160 Discharge air plenum with sound attenuator
170 Antivibration mounts - spring - supplied loose
172 Antivibration mounts - rubber - supplied loose
175 Victaulic connections
251 Coil protection kit
351 Coils with pre-painted fins
450 Desuperheater
460 Outdoor installation kit
605 Power factor capacitor for cos phi 0.9 on compressor motor
731 Water flow switch
739 1 pump hydraulic kit
740 2 pump hydraulic kit
756 1 LN pump hydraulic kit
757 2 LN pump hydraulic kit
768 Water tank
822 Supply air plenum mounting kit
919 Clock card
923 COM MBUS/JBUS serial card
926 LON serial card
931 BACnet Ethernet - SNMP - TCP/IP serial card
932 BACnet MS/TP serial card
934 MP.COM extension card
942 Serial card for GSM modem
943 Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Free-cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQMF PF 22 / 290 Cooling only TECHNICAL SPECIFICATIONS

SIZE		22.1	24.1	28.1	32.1	36.1	42.1	53.1
COOLING ONLY (1)								
Cooling capacity	kW	21.4	23.9	27.9	31.6	35.2	39.6	51.4
Compressors absorbed power	kW	6.6	7.7	9	10.2	11.4	14	17.3
Nominal operating current Compressors	A	11.9	14.1	16.4	17.9	20.6	26.1	29.8
Evaporator water flow	m³/h	4	4.4	5.2	5.8	6.5	7.3	9.5
Evaporator pressure loss	kPa	75	95	111	113	109	122	113
FREE COOLING (2)								
Cooling capacity	kW	18.1	19.5	22.9	26	28.2	29.9	42.3
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	7.4	8.2	9.6	10.9	12.1	13.6	17.7
Heat recovery exchanger water flow	m³/h	1.3	1.4	1.7	1.9	2.1	2.4	3.1
Heat recovery pressure loss	kPa	19.1	23.8	32.5	14	17.4	22	37.1
COMPRESSORS								
Quantity	n.	1	1	1	1	1	1	1
Maximum operating current	A	16	21	22	25	31	34	40
Starting current	A	95	111	118	118	140	174	225
Number of capacity steps	n.	1	1	1	1	1	1	1
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume								
Evaporator + free cooling coil	l	15	15	15.2	15.9	16	16.4	24.3
Maximum water flow	m³/h	5.2	5.9	6.8	7.8	8.8	10.1	12.8
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6	0.6	0.6
Maximum water flow	m³/h	1.9	2.2	2.5	2.8	3.2	3.7	4.7
PLUG FANS	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**2**
Total air flow	m³/h	6,500	7000	8,500	10000	11000	11500	16000
External static pressure	Pa	50	50	50	50	50	50	50
MAX External static pressure	Pa	710	673	464	418	237	134	511
Absorbed power	kW	0.6	0.7	1.3	0.7	1.9	2.1	2.3
Nominal operating current Compressors	A	4.3	4.3	4.3	4.9	4.9	4.9	8.6
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	11.3	11.3	11.3	11.5	11.6	11.6	18
Number of refrigerant circuits	n.	1	1	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)								
EER	kW/kW	2.96	2.85	2.74	2.89	2.65	2.45	2.62
ESEER = Eurovent standard		4.39	4.31	3.94	4.63	3.68	3.45	3.77
IPLV - ARI Standard 550/590		4.87	4.78	4.37	5.13	4.09	3.83	4.19
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	70.7	72.3	76.4	75.5	77.9	78.9	77.8
Sound power level (Lw) (5)	dB(A)	87.3	88.9	93	92.1	94.5	95.5	95
HYDRAULIC KIT								
1 pump 2 poles	PPF UNI	1/1	1/1	1/1	1/1	1/1	1/1	2/1
2 pumps 2 poles	PPF UNI	-	-	-	-	-	-	-
Water tank volume	l	130	130	130	130	130	130	210
DIMENSIONS								
Length	mm	1250	1250	1250	1250	1250	1250	1800
Width	mm	1010	1010	1010	1010	1010	1010	1180
Height	mm	1950	1950	1950	1950	1950	1950	2000
NET WEIGHT	**KG**	**450**	**460**	**460**	**470**	**470**	**480**	**750**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO 7/1 – R	Ø	1"	1"	1"	1"	1"	1"	1 1/4"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% glycol.
(2) Gross value - air inlet to chiller temperature 15°C; 20% ethylene glycol, ambient temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQMF PF 22 / 290 Cooling only TECHNICAL SPECIFICATIONS

SIZE		67.1	55.1	55.2	62.1	62.2	71.1	71.2	85.1
COOLING ONLY (1)									
Cooling capacity	kW	54.1	54.2	60.7	60.9	64.4	68.4	68.3	80.5
Compressors absorbed power	kW	18.3	18.2	19.8	19.8	22	22.8	22.7	26.5
Nominal operating current Compressors	A	33.6	33.4	35.1	35.1	37.4	40.9	40.8	50.4
Evaporator water flow	m³/h	10	10	11.2	11.2	11.9	12.6	12.6	14.9
Evaporator pressure loss	kPa	124	100	139	112	139	157	135	120
FREE COOLING (2)									
Cooling capacity	kW	45.7	45.7	50.6	50.6	52.1	55.6	55.5	67.1
PARTIAL HEAT RECOVERY (3)									
Heating capacity	kW	18.6	18.6	20.9	21	22.2	23.5	23.5	27.7
Heat recovery exchanger water flow	m³/h	3.2	3.2	3.6	3.6	3.8	4.1	4	4.8
Heat recovery pressure loss	kPa	26.7	30.6	33.7	13	37.9	42.8	16.4	34.7
COMPRESSORS									
Quantity	n.	2	2	2	2	1	2	2	2
Maximum operating current	A	44	44	50	50	48.5	62	62	68
Starting current	A	140	140	143	143	272	171	171	208
Number of capacity steps	n.	2	2	2	2	1	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume									
Evaporator + free cooling coil	l	24.3	24.4	24.9	25.4	25.8	25.6	25.7	37.6
Maximum water flow	m³/h	13.3	13.3	15	15.1	16.2	17.2	17.1	20.4
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**2**	**1**	**2**	**1**	**1**	**2**	**1**
Water volume	l	0.8	0.7	0.8	1.1	0.8	0.8	1.2	1
Maximum water flow	m³/h	4.9	4.9	5.5	5.5	5.9	6.3	6.3	7.5
PLUG FANS	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**
Total air flow	m³/h	18000	18000	20500	20500	21000	23000	23000	25500
External static pressure	Pa	50	50	50	50	50	50	50	50
MAX External static pressure	Pa	516	516	324	324	263	188	188	580
Absorbed power	kW	2.5	2.5	3	3	2.3	4.1	4.1	3.2
Nominal operating current Compressors	A	9.8	9.8	8.4	8.4	8.4	8.4	8.4	14.7
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	18.3	16	18.3	16	18.5	18.7	16.2	28.7
Number of refrigerant circuits	n.	1	2	1	2	1	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)									
EER	kW/kW	2.6	2.62	2.67	2.67	2.65	2.55	2.55	2.71
ESEER = Eurovent standard		3.73	3.92	3.63	3.51	3.56	3.62	3.38	4.18
IPLV - ARI Standard 550/590		4.14	4.35	4.03	3.89	4.02	4.01	3.75	4.63
SOUND LEVELS									
Average sound pressure level [Lpm] (4)	dB(A)	76.4	76.4	70.3	70.3	80	72.6	72.6	76.5
Sound power level (Lw) (5)	dB(A)	93.6	93.6	87.5	87.5	97.2	89.8	89.8	94.4
HYDRAULIC KIT									
1 pump 2 poles	PPF UNI	2/1	2/1	2/1	2/1	2/1	2/1	2/1	3/1
2 pumps 2 poles	PPF UNI	-	-	-	-	-	-	-	3/2
Water tank volume	l	210	210	210	210	210	210	210	360
DIMENSIONS									
Length	mm	1800	1800	1800	1800	1800	1800	1800	2600
Width	mm	1180	1180	1180	1180	1180	1180	1180	1340
Height	mm	2000	2000	2000	2000	2000	2000	2000	2000
NET WEIGHT	**KG**	**740**	**740**	**810**	**810**	**790**	**820**	**820**	**1050**
HYDRAULIC CONNECTIONS									
EVAPORATOR									
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	2"	--
Inlet outlet diameter	Ø mm	--	--	--	--	--	--	--	76.1
PARTIAL HEAT RECOVERY EXCHANGER									
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% glycol.

(2) Gross value - air inlet to chiller temperature 15°C; 20% ethylene glycol, ambient temperature 3°C.

	85.2	107.1	107.2	135.1	135.2	170.1	170.2	195.1	195.2	220.1	220.2	250.1	265.2	290.2
	80.1	103	102	128	126	166	164	182	185	210	214	240	253	277
	26.5	34	33.9	43.6	43.6	55	55	55.4	65.9	69.8	70.1	87.2	90	108
	50.1	58.9	58.5	74.4	73.7	94.6	93.3	111	111	119	119	147	152	180
	14.8	19.1	18.9	23.5	23.2	30.6	30.2	33.6	34.2	38.8	39.4	44.4	46.7	51.3
	98	155	139	88	77	107	101	123	117	112	106	124	131	148
	67	81.1	80.9	99.5	99	124	123	127	127	163	163	171	173	176
	27.6	35.6	35.2	43.9	43.2	57.2	56.3	62.6	63.7	72.3	73.5	82.7	87	95.4
	4.8	6.1	6.1	7.6	7.4	9.9	9.7	10.8	11	12.5	12.7	14.2	15	16.4
	22.5	33.5	36.7	35.4	36	46.1	35.4	32.6	26.8	43.4	35.7	40.4	34.5	41.6
	2	2	2	2	2	2	2	2	2	2	2	3	4	4
	68	80	80	97	97	130.8	130.8	147.4	147.4	164	164	196.2	194	294.8
	208	265	265	320.5	320.5	375.4	375.4	439.4	439.4	456	456	440.8	417.5	586.8
	2	2	2	2	2	2	2	2	2	2	2	3	4	4
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	37.2	39.7	38.8	56.4	54.7	60.6	57.3	59.9	63.1	81.6	85.2	84.4	87.6	89.2
	20.4	25.8	25.5	32	31.6	41.5	40.9	46	46.8	53.6	52.8	60.2	63.9	70
	2	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**2**
	1.2	1.7	1.2	2.1	1.5	4	2	5.3	3.4	5.3	4.2	6.3	4.2	4.2
	7.5	9.5	9.4	11.8	11.6	15.2	15	16.8	17	19.4	19.7	22	23.3	25.5
	3	**3**	**3**	**4**	**4**	**4**	**4**	**4**	**4**	**5**	**5**	**5**	**5**	**5**
	25500	32000	32000	40000	40000	52000	52000	52000	52000	62500	62500	64000	64000	64000
	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	580	224	224	396	396	55	55	55	55	108	108	71	50	50
	3.2	6	6	4.8	4.8	10.2	10.2	11.3	11.3	11.7	11.7	12.5	13	13
	14.7	14.7	14.7	16.8	16.8	16.8	16.8	16.8	16.8	21	21	21	21	21
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	25.5	32	29.3	35.1	38.6	50.9	42.6	51.9	44	83.1	102.2	83.7	113.3	113.2
	2	1	2	1	2	1	2	1	2	1	2	1	2	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	2.7	2.57	2.55	2.64	2.6	2.55	2.51	2.73	2.4	2.58	2.62	2.41	2.46	2.29
	3.79	3.62	3.36	4.14	3.73	3.54	3.29	3.39	3.18	3.7	3.47	3.85	3.36	3.26
	4.2	4.01	3.73	4.6	4.14	3.92	3.65	3.76	3.53	4.1	3.85	4.27	3.73	3.62
	76.5	81.3	81.3	74.1	74.1	77.6	77.6	77.6	77.6	77.6	77.6	77.9	78	78
	94.4	99.2	99.2	92.7	92.7	96.2	96.2	96.2	96.2	96.8	96.8	97.2	97.3	97.3
	3/1	3/1	3/1	4/1	4/1	4/1	4/1	4/1	4/1	5/1	5/1	5/1	5/1	5/1
	3/2	3/2	3/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	5/2	5/2	5/2	5/2
	360	360	360	520	520	520	520	520	520	720	720	720	720	720
	2600	2600	2600	3700	3700	3700	3700	3700	3700	4950	4950	4950	4950	4950
	1340	1340	1340	1490	1490	1490	1490	1490	1490	1500	1500	1500	1500	1500
	2000	2000	2000	2000	2000	2000	2000	2000	2000	2040	2040	2040	2040	2040
	1050	**1240**	**1240**	**1690**	**1690**	**1800**	**1780**	**1850**	**1820**	**2320**	**2330**	**2490**	**2670**	**2720**
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	76.1	76.1	76.1	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"

(3) Gross value - chilled water temperature 12/7°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQEF 60 / 300

Cooling only
Free cooling

SCROLL COMPRESSORS

- Cooling capacities from 64 to 313 kW
- 17 sizes
- Refrigerant: R410A
- EER up to 2.91
- ESEER up to 4.76

MAIN FEATURES

- FREE COOLING
- Available with single or double refrigeration circuit(s)
- 2 SCROLL compressors mounted on antivibration mounts

AVAILABLE VERSIONS

- Partial heat recovery version
- ELN extra low sound level version
- Brine low and very low temperature version

Advantages

- Free cooling = 'free' energy recovery
- 2 Scroll compressors per circuit for greater efficiency and reliability
- Electronic expansion valve as standard
- Large choice of sound levels
- Partial heat recovery
- Service valves on liquid and discharge lines
- Easy maintenance
- Free cooling coil with 3-way valve and ambient air control, Management by integrated unit control.

Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
150	Kit LNO low sound level
151	Kit ELN extra low sound level
170	Antivibration mounts - spring - supplied loose
172	Antivibration mounts - rubber - supplied loose
251	Coil protection kit
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Operating limits
(to be confirmed following selection conditions)

COOLING MODE	
Water leaving temperature (no glycol)	5 / 15°C
Water leaving temperature (with glycol max 40%)	-10 / 5°C
Max outdoor air temperature	45°C
Min outdoor air temperature	-20°C

EQEF 60 / 300 Cooling only TECHNICAL SPECIFICATIONS

SIZE		60.1	60.2	70.1	70.2	90.1
COOLING ONLY (1)						
Cooling capacity	kW	64	64	73.4	73.2	94.9
Compressors absorbed power	kW	20.5	20.5	24.6	24.6	30.9
Nominal operating current Compressors	A	37.8	37.8	47.8	47.8	55
Evaporator water flow	m³/h	11.7	11.8	13.5	13.4	17.4
Evaporator pressure loss	kPa	112	91	131	111	94
FREE COOLING (2)						
Cooling capacity	kW	46.3	46.3	50.2	50.2	61.9
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	23.5	--	26.9	--	34.8
Heat recovery exchanger water flow	m³/h	4	--	4.6	--	6
Press loss partial heat recovery exchanger	kPa	--	--	--	--	--
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	62	62	68	68	80
Starting current	A	171	171	207	207	265
Number of capacity steps	n.	2	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	22	22	22	22	33
Maximum water flow	m³/h	17.4	17.5	20	20	25.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**--**	**1**	**--**	**1**
Water volume	l	0.8	--	1	--	1.7
Maximum water flow	m³/h	5.6	--	6.4	--	8.4
AXIAL FANS (AC)	**N.**	**6**	**6**	**6**	**6**	**2**
Total air flow	m³/h	30000	30000	33000	33000	44000
Absorbed power	kW	1.5	1.5	1.5	1.5	3.4
Nominal operating current Fans	A	2.4	2.4	2.4	2.4	7.8
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	31.6	34.6	32	35.6	42
Number of refrigerant circuits	n.	1	2	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.91	2.91	2.81	2.8	2.77
ESEER = Eurovent standard		4.76	4.57	4.61	4.27	4.61
IPLV = ARI Standard 550/590		5.26	5.13	5.12	4.89	5.07
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	66.3	66.3	66.4	66.4	74.2
Sound power level (Lw) (5)	dB(A)	83.3	83.3	83.8	83.8	92.3
HYDRAULIC KIT						
1 pump 2 poles		1/1	1/1	2/1	2/1	2/1
2 pumps 2 poles		1/2	1/2	2/2	2/2	2/2
DIMENSIONS						
Length	mm	2580	2580	2580	2580	3020
Width	mm	1200	1200	1200	1200	1200
Height	mm	1630	1630	1630	1630	1950
NET WEIGHT	**KG**	**830**	**810**	**870**	**850**	**1170**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter – ISO 7/1 – R	Ø	2"	2"	2"	2"	--
Inlet outlet – Flexible joint - OD	Ø mm	--	--	--	--	76.1
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	1 1/2"	--	1 1/2"	--	1 1/2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQEF 60 / 300 Cooling only TECHNICAL SPECIFICATIONS

SIZE		90.2	120.1	120.2	135.1	150.1
COOLING ONLY (1)						
Cooling capacity	kW	93.8	116	114	130	154
Compressors absorbed power	kW	30.8	40.7	40.5	47.6	50.9
Nominal operating current Compressors	A	54.9	70.7	70.5	81.8	88
Evaporator water flow	m³/h	17.2	21.3	21	23.9	28.3
Evaporator pressure loss	kPa	78	114	103	133	111
FREE COOLING (2)						
Cooling capacity	kW	61.6	69.3	68.9	71.9	106
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	--	42.6	--	47.7	56.6
Heat recovery exchanger water flow	m³/h	--	7.3	--	8.2	9.8
Press loss partial heat recovery exchanger	kPa	--	--	--	--	--
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	80	97	97	113.9	130.8
Starting current	A	265	320.5	320.5	358.5	375.4
Number of capacity steps	n.	2	2	2	2	2
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	33	33	33	33	54
Maximum water flow	m³/h	25.6	31.1	31.5	45	42.6
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**--**	**1**	**--**	**1**	**1**
Water volume	l	--	2.1	--	2.1	4
Maximum water flow	m³/h	--	10.2	--	11.5	13.6
AXIAL FANS (AC)	**N.**	**2**	**2**	**2**	**2**	**3**
Total air flow	m³/h	44000	48000	48000	50000	66000
Absorbed power	kW	3.4	3.4	3.4	3.4	5.1
Nominal operating current Fans	A	7.8	7.8	7.8	7.8	11.7
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	40.8	42.9	41.4	43.6	62.6
Number of refrigerant circuits	n.	2	1	2	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	2.74	2.63	2.6	2.55	2.75
ESEER = Eurovent standard		4.36	4.3	4.06	4.17	4.45
IPLV = ARI Standard 550/590		4.92	4.73	4.59	4.6	4.95
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	74.2	74.4	74.4	75.4	76
Sound power level (Lw) (5)	dB(A)	92.3	92.5	92.5	93.5	95.4
HYDRAULIC KIT						
1 pump 2 poles		2/1	2/1	2/1	2/1	2/1
2 pumps 2 poles		2/2	2/2	2/2	2/2	2/2
DIMENSIONS						
Length	mm	3020	3020	3020	3020	4400
Width	mm	1200	1200	1200	1200	1800
Height	mm	1950	1950	1950	1950	1990
NET WEIGHT	**KG**	**1150**	**1280**	**1270**	**1350**	**1560**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter – ISO 7/1 – R	Ø	--	--	--	--	--
Inlet outlet – Flexible joint - OD	Ø mm	76.1	76.1	76.1	76.1	88.9
HEATING PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO 7/1 – R	Ø	--	1 1/2"	--	1 1/2"	2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

	150.2	190.2	200.1	200.2	240.2	270.2	300.2
	157	186	187	192	227	269	313
	51.1	66.1	68.3	68	85.2	93.3	106
	88.3	116	116	115	146	161	182
	28.8	34.1	34.3	35.2	41.8	49.4	57.5
	101	89	116	113	120	140	172
	106	115	116	117	129	172	192
	57.4	68.1	68.6	70.4	83.5	98.6	115
	9.9	11.7	11.8	12.1	14.4	17	19.8
	--	--	--	--	--	--	--
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	2	4	2	2	4	4	4
	130.8	160	164	164	194	227.8	261.6
	375.4	345	466	466	417.5	472.4	506.2
	2	4	2	2	4	4	4
	1	**1**	**1**	**1**	**1**	**1**	**1**
	54	68	54	54	68	84	84
	42	50.9	51.6	50.7	61.7	72.8	81.3
	2	**2**	**1**	**2**	**2**	**2**	**2**
	2	3.4	5.3	3.4	4.2	4.2	16
	13.7	16.2	16.4	16.8	20	23.7	27.4
	3	**3**	**3**	**4**	**4**	**6**	**6**
	66000	72000	72000	76000	88000	108000	126000
	5.1	5.1	5.1	6.8	6.8	10.2	10.2
	11.7	11.7	11.7	15.6	15.6	23.4	23.4
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	64.6	68.4	66.4	67	68	94.2	95.8
	2	2	1	2	2	2	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	2.79	2.61	2.55	2.57	2.47	2.6	2.69
	4.28	4.2	4	3.97	4.08	4.51	4.49
	4.83	4.67	4.45	4.47	4.48	4.96	4.96
	76	75.4	75.4	75.4	80.2	81.5	81.5
	95.4	94.8	94.8	94.8	100	101.8	101.8
	3/1	3/1	3/1	3/1	3/1	4/1	5/1
	3/2	3/2	3/2	3/2	3/2	4/2	5/2
	4400	3600	4400	4400	3600	4600	4600
	1800	2290	1800	1800	2290	2290	2290
	1990	2250	1990	1990	2250	2250	2250
	1580	**1840**	**1710**	**1730**	**1850**	**2260**	**2710**
	--	--	--	--	--	--	--
	88.9	88.9	88.9	88.9	88.9	88.9	88.9
	2"	2"	2"	2"	2"	2"	2"

EQSFA 290 / 1450

Cooling only
Free cooling

SCREW COMPRESSORS
CLASS A

Class A

- Cooling capacities from 288 to 1445 kW
- 24 sizes
- Refrigerant: R134a
- EER up to 3.15
- ESEER up to 3.77
- Class A

MAIN FEATURES

- FREE COOLING
- Available in 2 refrigeration circuits
- 2 SCREW compressors mounted on rubber antivibration mounts
- Modern design
- Shell and tube evaporator

AVAILABLE VERSIONS

- XLS very low sound level version
- EC motor version for avail. pressure
- All-year-round free cooling operation down to - 20°C

Advantages

- Class A = energy efficiency
- Free cooling = 'free' energy recovery
- Wide power range covered by SCREW technology
- Electronic expansion valve as standard
- Linear step capacity control
- Dialogue interface with screen and graphical icons for easier reading
- Large choice of sound levels
- Specific free cooling heat exchanger
- Remote demand limit via additional electronic board
- Analog setpoint compensation
- Easy maintenance
- Free cooling coil with 3-way valve and ambient air control, Management by integrated unit control.

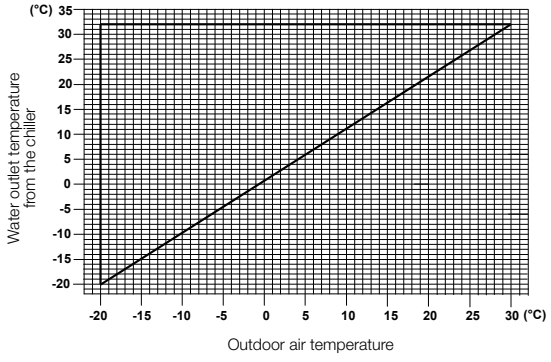
Main accessories and options

Code	
101	EC fan motors
143	Without glycol
170	Antivibration mounts - spring - supplied loose
171	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
351	Coils with pre-painted fins
605	Power factor capacitor for cos phi 0.9 on compressor motor
650	Compressor thermal relays
731	Water flow switch
739	1 pump hydraulic kit
740	2 pump hydraulic kit
769	1 pump + 1 standby pump hydraulic kit
770	2 pump + 1 standby pump hydraulic kit
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
934	MP.COM extension card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Free-cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EQSFA 290 / 1450 Cooling only TECHNICAL SPECIFICATIONS

SIZE		290	310	330	360	380
COOLING ONLY (1)						
Cooling capacity	kW	288	305	329	352	373
Compressors absorbed power	kW	79	85	90.2	96	102
Nominal operating current Compressors	A	135	143	152	160	161
Evaporator water flow	m³/h	51.6	54.6	58.9	63.1	66.8
Evaporator pressure loss	kPa	28	24	26	29	25
FREE COOLING (2)						
Cooling capacity	kW	312	316	386	422	426
Pressure loss free-cooling coil	kPa	16.9	18.9	27	30.5	30.2
Free cooling coil volume	l	244	244	324	332	332
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	57.3	60.7	65.4	70	74.2
Heat recovery exchanger water flow	m³/h	9.9	10.5	11.3	12.1	12.8
Press loss partial heat recovery exchanger	kPa	5	5.2	5.4	5.2	5.6
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	163.4	179.2	190.5	201.8	205
Starting current	A	350.7	356.6	392.6	403.9	382.5
Number of capacity steps	n.	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume		160	143	256	256	256
Maximum water flow	m³/h	90	100	127	127	127
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	3.2	3.2	4.1	5	5
Maximum water flow	m³/h	20	20	20	20	20
AXIAL FANS (AC)	**N.**	**6**	**6**	**7**	**8**	**8**
Total air flow	m³/h	122376	119280	142772	163168	159040
Absorbed power	kW	12.4	12.5	14.4	16.5	16.7
Nominal operating current Fans	A	23.4	23.4	27.3	31.2	31.2
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	110	146	145	145	194
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.15	3.13	3.14	3.13	3.14
ESEER = Eurovent standard		3.59	3.53	3.57	3.56	3.55
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	72.4	72.8	72.5	72.7	71.3
Sound power level (Lw) (5)	dB(A)	92.1	92.5	92.7	92.9	91.5
HYDRAULIC KIT						
1 pump 2 poles	GE	GE65/1	GE65/1	GE65/1	GE65/1	GE65/1
2 pumps 2 poles	GE	--	--	--	--	--
1 operational pumps + 1 emergency pump	GE	GE65/2	GE65/2	GE65/2	GE65/2	GE65/2
2 operational pumps + 1 emergency pump	GE	--	--	--	--	--
DIMENSIONS						
Length	mm	3520	3520	4490	4490	4490
Width	mm	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**5330**	**5923**	**6633**	**6638**	**6857**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	168.3	168.3	168.3	168.3	168.3
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EQSFA 290 / 1450 Cooling only TECHNICAL SPECIFICATIONS

SIZE		420	460	490	540	590
COOLING ONLY (1)						
Cooling capacity	kW	412	457	484	532	581
Compressors absorbed power	kW	115	125	134	150	165
Nominal operating current Compressors	A	196	204	226	247	269
Evaporator water flow	m³/h	73.8	81.9	86.7	95.3	104
Evaporator pressure loss	kPa	31	37	51	51	51
FREE COOLING (2)						
Cooling capacity	kW	441	544	554	571	585
Pressure loss free-cooling coil	kPa	36.1	53.1	58.8	69.6	81.2
Free cooling coil volume	l	332	402	402	402	402
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	82	90.9	96.3	106	116
Heat recovery exchanger water flow	m³/h	14.1	15.7	16.6	18.2	19.9
Press loss partial heat recovery exchanger	kPa	5.3	4.9	5.2	5.6	5.7
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	235.6	269.6	288.2	309.3	330.4
Starting current	A	468.8	629.8	639.1	790.1	811.2
Number of capacity steps	n.	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume		247	247	247	223	223
Maximum water flow	m³/h	143	143	143	172	172
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	5	5	6.8	6.8	6.8
Maximum water flow	m³/h	20	20	30	30	30
AXIAL FANS (AC)	**N.**	**8**	**10**	**10**	**10**	**10**
Total air flow	m³/h	159040	198800	198800	198800	198800
Absorbed power	kW	16.7	20.9	20.9	20.9	20.9
Nominal operating current Fans	A	31.2	39	39	39	39
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	194	241	241	241	241
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.13	3.13	3.13	3.11	3.13
ESEER = Eurovent standard		3.52	3.53	3.52	3.52	3.55
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	71.7	71.4	75.6	75.8	76
Sound power level (Lw) (5)	dB(A)	91.9	92.1	96.2	96.5	96.7
HYDRAULIC KIT						
1 pump 2 poles	GE	GE65/1	GE65/1	GE65/1	GE65/1	GE65/1
2 pumps 2 poles	GE	--	--	--	--	--
1 operational pumps + 1 emergency pump	GE	GE65/2	GE65/2	GE65/2	GE65/2	GE65/2
2 operational pumps + 1 emergency pump	GE	--	--	--	--	--
DIMENSIONS						
Length	mm	4490	5484	5484	5484	5484
Width	mm	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**6895**	**8018**	**8030**	**8182**	**8304**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	219.1	219.1	219.1	219.1	219.1
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

630	680	720	790	860	910	960	1050	1110
629	670	715	786	859	905	951	1048	1108
176	189	200	221	242	257	272	303	318
291	309	324	332	339	383	426	483	500
113	120	128	141	154	162	170	188	199
62	66	70	54	61	66	70	46	51
637	715	754	846	895	909	923	947	1035
19.3	24.6	26.6	33.2	38.8	42.5	46.4	55.1	67.7
482	562	562	648	648	648	648	648	726
125	133	142	156	171	180	189	209	221
21.6	23	24.5	27	29.5	31	32.6	35.9	38
6	6.4	6.5	6.4	6.8	6.6	6.9	7	6.9
TWIN-SCREW	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
2	2	2	2	2	2	2	2	2
366.8	390.4	414	444.1	474.2	505	535.8	615.4	662.5
544.4	544.4	568	581	611.1	690.1	720.9	826.7	1010.7
25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
247	238	238	370	370	359	359	348	348
143	154	154	220	220	241	241	265	265
2	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
6.8	8.6	10.4	10.4	10.4	13.1	15.8	19.4	21.2
30	35	40	40	40	45	50	50	50
12	**13**	**14**	**15**	**16**	**16**	**16**	**16**	**18**
238560	261794	278320	302070	318080	318080	318080	318080	357840
25	27	29.2	31.1	33.4	33.4	33.4	33.4	37.6
46.8	50.7	54.6	58.5	62.4	62.4	62.4	62.4	70.2
R134A	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
289	295	337	340	389	389	389	389	436
2	2	2	2	2	2	2	2	2
400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
3.13	3.1	3.12	3.12	3.12	3.12	3.11	3.12	3.12
3.68	3.58	3.59	3.55	3.57	3.52	3.56	3.76	3.72
76.7	77.9	79	79.3	79.9	79.8	79.6	78.1	79.5
97.7	99.3	100.4	101.1	101.7	101.6	101.4	99.9	101.7
GE65/1	GE65/1	GE65/1	--	--	--	--	--	--
--	--	--	GE65/11	GE65/11	GE65/11	GE65/11	GE65/11	GE65/11
GE65/2	GE65/2	GE65/2	--	--	--	--	--	--
--	--	--	GE65/21	GE65/21	GE65/21	GE65/21	GE65/21	GE65/21
6428	7398	7398	8767	8767	8767	8767	8767	9737
2260	2260	2260	2260	2260	2260	2260	2260	2260
2550	2550	2550	2550	2550	2550	2550	2550	2550
9086	**9669**	**9872**	**11754**	**12233**	**12267**	**12277**	**12376**	**13934**
219.1	219.1	219.1	219.1	219.1	273	273	273	273
2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

EQSFA 290 / 1450 Cooling only TECHNICAL SPECIFICATIONS

SIZE		1170	1240	1310	1380	1450
COOLING ONLY (1)						
Cooling capacity	kW	1170	1239	1311	1377	1445
Compressors absorbed power	kW	334	356	379	396	414
Nominal operating current Compressors	A	517	558	599	644	688
Evaporator water flow	m³/h	210	222	235	247	259
Evaporator pressure loss	kPa	56	61	45	50	54
FREE COOLING (2)						
Cooling capacity	kW	1174	1191	1208	1292	1339
Pressure loss free-cooling coil	kPa	91.8	90.9	100.1	42	23.8
Free cooling coil volume	l	804	804	804	884	964
PARTIAL HEAT RECOVERY (3)						
Heating capacity	kW	233	247	261	274	288
Heat recovery exchanger water flow	m³/h	40.1	42.5	44.9	47.2	49.5
Press loss partial heat recovery exchanger	kPa	6.8	6.5	7	6.9	7.1
COMPRESSORS		**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**	**TWIN-SCREW**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	709.6	753.6	797.6	846.8	896
Starting current	A	1057.8	1137.8	1181.8	1274.8	1324
Number of capacity steps	n.	25...100%	25...100%	25...100%	25...100%	25...100%
EVAPORATOR (BRAZED-PLATE)	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume		348	620	620	620	620
Maximum water flow	m³/h	265	385	385	385	385
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**
Water volume	l	23	25.7	28.4	32	35.6
Maximum water flow	m³/h	50	60	60	60	60
AXIAL FANS (AC)	**N.**	**20**	**20**	**20**	**22**	**24**
Total air flow	m³/h	397600	397600	397600	437360	477120
Absorbed power	kW	41.7	41.7	41.7	45.9	50.1
Nominal operating current Fans	A	78	78	78	85.8	93.6
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	482	482	482	530	578
Number of refrigerant circuits	n.	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	3.11	3.12	3.12	3.12	3.11
ESEER = Eurovent standard		3.72	3.72	3.77	3.72	3.72
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	81.5	81.5	81.5	81.4	81.3
Sound power level (Lw) (5)	dB(A)	103.9	103.9	103.9	104.1	104.2
HYDRAULIC KIT						
1 pump 2 poles	GE	--	--	--	--	--
2 pumps 2 poles	GE	GE65/11	GE65/11	GE65/11	GE65/11	GE65/11
1 operational pumps + 1 emergency pump	GE	--	--	--	--	--
2 operational pumps + 1 emergency pump	GE	GE65/21	GE65/21	GE65/21	GE65/21	GE65/21
DIMENSIONS						
Length	mm	10660	10660	10660	11630	12600
Width	mm	2260	2260	2260	2260	2260
Height	mm	2550	2550	2550	2550	2550
NET WEIGHT	**KG**	**15142**	**15402**	**15422**	**16101**	**16780**
HYDRAULIC CONNECTIONS						
EVAPORATOR						
Inlet outlet diameter	Ø mm	273	323.9	323.9	323.9	323.9
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C; 20% ethylene glycol solution.
(2) Gross value - water inlet temperature 15°C; 20% ethylene glycol solution; outdoor temperature 3°C.
(3) Gross value - chilled water temperature 12/7°C; outdoor temperature 35°C and hot water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EWNL 06 / 30

Cooling only

SCROLL COMPRESSORS

R410A

- Cooling capacities from 5 to 30 kW
- 10 sizes
- Refrigerant: R410A
- EER up to 4.84
- ESEER up to 6.68

MAIN FEATURES

- Solution for domestic and small office installations
- Scroll compressor
- Brazed-plate evaporator
- Brazed-plate condenser

AVAILABLE VERSIONS

- Mono-phase up to 13 kW
- Tri-phase on the full range
- Heat pump version (see EWNH range)
- Remote condenser cooling only (see EWNL RC range)
- Remote condenser heat pump (see EWNH RC range)

Main accessories and options

Code	
450	Desuperheater
610	Compressor sound-insulating jacket
920	Remote control kit
923	COM MBUS/JBUS serial card
1002	Condensation control with 2-way valve

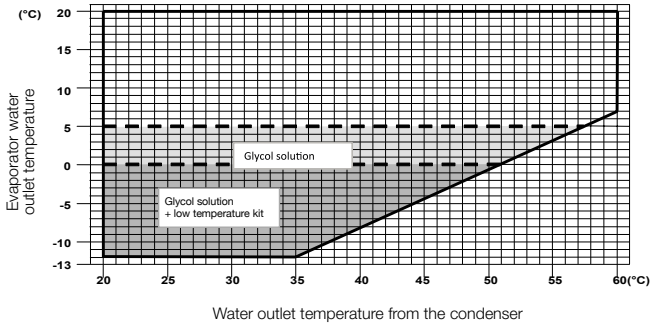
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Advantages

- Simple and reliable
- Plug and play
- Electronic control system
- 3-speed circulation pump (evap) as standard
- 0-10V signal for controlling 2-way valve on condenser
- Service valves on discharge and liquid line

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWNL 06 / 30 Cooling only TECHNICAL SPECIFICATIONS

SIZE		06M	08M	10M	13M	06T
Cooling capacity (1)	kW	5.7	7.4	11.1	14.1	5.7
Compressors absorbed power	kW	1.4	1.8	2.4	3	1.4
Nominal operating current Compressors	A	6.5	8.2	11.9	14.9	2.8
EVAPORATOR NO.					**1**	**1**
Evaporator water flow	m³/h	0.98	1.27	1.91	2.41	0.98
Evaporator pressure loss	kPa	35	33	37	40	35
CONDENSER		**1**	**1**	**1**	**1**	**1**
Evaporator water flow	m³/h	1.23	1.6	2.34	2.95	1.23
Evaporator pressure loss	kPa	54	49	53	58	53
PARTIAL HEAT RECOVERY (2)						
Heating capacity	kW	0.9	1.2	1.7	2.2	0.9
Heat recovery exchanger water flow	m³/h	0.15	0.2	0.3	0.38	0.15
Heat recovery pressure loss	kPa	0.25	0.41	0.93	1.48	0.25
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	1
Maximum operating current	A	12.8	17.1	21	31	4.7
Starting current	A	60	67	98	115.5	28
Number of capacity steps	n.	1	1	1	1	1
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.5	0.7	0.9	1.1	0.5
Maximum water flow	m³/h	1.5	2	2.7	3.5	1.4
CONDENSER	**N.**					
Water volume	l	0.5	0.7	0.9	1.1	0.5
Maximum water flow	m³/h	1.8	2.4	3.2	4.1	1.7
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	0.1	0.1	0.1	0.1	0.1
Maximum water flow	m³/h	0.4	0.5	0.6	0.8	0.3
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	0.7	0.9	1.1	1.4	0.7
Number of refrigerant circuits	n.	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**230/1/50**	**230/1/50**	**230/1/50**	**230/1/50**	**400/3/50+N**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	4.12	4.09	4.63	4.7	4.11
ESEER – Eurovent Standard		6.01	6.23	6.28	6.54	6.26
IPLV – ARI Standard 550/590		6.39	6.62	6.68	6.95	6.65
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	42	42	44	44	42
Sound power level (Lw)	dB(A)	56.2	56.2	58.2	58.2	56.2
DIMENSIONS						
Length	mm	555	555	555	555	555
Width	mm	650	650	650	650	650
Height	mm	900	900	900	900	900
NET WEIGHT	**KG**	**88.7**	**91.4**	**101.5**	**106.3**	**88.7**
HYDRAULIC CONNECTIONS						
EVAPORATOR / CONDENSER						
Inlet outlet diameter – ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	1"	1"	1"	1"	1"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

	08T	10T	13T	15T	17T	20T	25T	30T
	7.3	10.4	13.3	15.1	17.4	20.1	24.8	30.5
	1.8	2.3	2.9	3.4	4	4.5	5.6	6.3
	3.6	4.1	5	6.4	7.4	9.2	11.2	12.7
				1	1	1	1	1
	1.25	1.78	2.29	2.58	2.99	3.45	4.26	5.24
	32	36	40	37	43	40	40	44
	1	1	1	1	1	1	1	1
	1.57	2.2	2.81	3.2	3.7	4.26	5.26	6.38
	48	53	57	53	61	55	53	49
	1.1	1.6	2.1	2.4	2.7	3.1	3.9	4.8
	0.2	0.28	0.36	0.4	0.47	0.54	0.67	0.82
	0.4	0.81	1.33	0.45	0.61	0.81	1.23	1.87
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	1	1	1	1	1	1	1	1
	6.5	8	10.3	11.8	15	15	21	22
	38	43	51.5	64	75	101	111	118
	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1
	0.7	0.9	1.1	1.2	1.3	1.6	2	2.4
	1.9	2.5	3.3	3.8	4.4	5	6.3	7.4
	0.7	0.9	1.1	1.2	1.3	1.6	2	2.4
	2.2	3	3.9	4.5	5.2	5.9	7.4	8.7
	1	1	1	1	1	1	1	1
	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
	0.4	0.6	0.8	0.9	1.1	1.2	1.5	1.7
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	0.9	1.1	1.4	1.5	1.8	1.8	2.5	3.1
	1	1	1	1	1	1	1	1
	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	4.15	4.48	4.55	4.43	4.37	4.48	4.44	4.84
	6.41	6.62	6.49	6.38	6.53	6.4	6.47	6.68
	6.81	7.04	6.9	6.78	6.94	6.8	6.88	7.1
	42	44	44	47	51	48	50	50
	56.2	58.2	58.2	61.2	65.2	62.2	64.2	64.2
	555	555	555	555	555	555	555	555
	650	650	650	650	650	650	650	650
	900	900	900	900	900	900	900	900
	91.4	101.5	106.3	114.5	116	118.5	141.7	147.4
	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	1"	1"	1"	1"	1"	1"	1"	1"

EWNH 06 / 30

Reversible

SCROLL COMPRESSORS

R410A

- Cooling capacities from 5 to 30 kW
- Heating capacities from 7 to 37 kW
- 13 sizes
- Refrigerant: R410A
- EER up to 4.81
- ESEER up to 6.68
- COP up to 4.44

MAIN FEATURES

- Heat pump (reversible refrigerant circuit refrigeration circuit)
- Solution for domestic and small office installations
- Scroll compressor
- Brazed-plate evaporator
- Brazed-plate condenser

AVAILABLE VERSIONS

- Mono-phase up to 13 kW
- Tri-phase on the full range
- Cooling only (see EWNL range)
- Remote condenser cooling only (see EWNL RC range)
- Remote condenser heat pump (see EWNH RC range)

Main accessories and options

Code	
450	Desuperheater
610	Compressor sound-insulating jacket
920	Remote control kit
923	COM MBUS/JBUS serial card
1002	Condensation control with 2-way valve

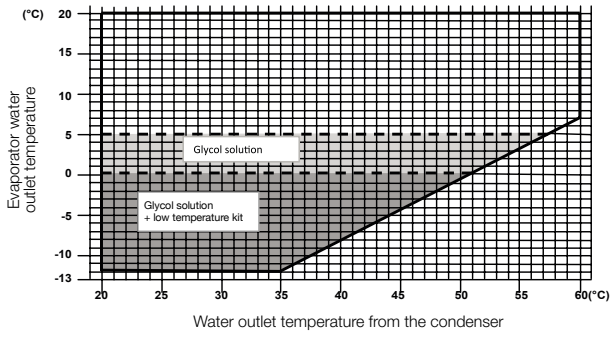
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Advantages

- Simple and reliable
- Plug and play
- Electronic control system
- 3-speed circulation pump (evap) as standard
- 0-10V signal for controlling 2-way valve on condenser
- Service valves on discharge and liquid line

Cooling/heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWNH 06 / 30 Reversible TECHNICAL SPECIFICATIONS

SIZE		06M	08M	10M	13M	06T	08T	10T	13T	15T	17T	20T	25T	30T
SUMMER CONDITIONS (1)														
Cooling capacity (1)	kW	5.6	7.6	10.5	13	5.3	6.8	9.5	12.3	13.9	16.6	18.6	23.4	30
Compressors absorbed power	kW	1.4	1.8	2.3	3	1.4	1.8	2.3	2.9	3.5	4	4.5	5.6	6.2
Nominal operating current Compressors	A	2.8	3.6	4.1	5.1	2.8	3.6	4.1	5.1	6.4	7.4	9.3	11.3	12.5
PLANT SIDE HEAT EXCHANGER														
Water flow	m³/h	0.96	1.3	1.8	2.23	0.91	1.16	1.63	2.12	2.39	2.85	3.19	4.02	5.16
Pressure loss	kPa	37	33	38	42	33	30	34	38	35	40	37	40	41
REJECTION SIDE HEAT EXCHANGER														
Water flow	m³/h	1.2	1.6	2.1	2.76	1.1	1.48	2	2.6	3	3.5	3.9	5	5.8
Pressure loss	kPa	54	48	49	59	45	45	47	53	51	56	50	53	40
WINTER CONDITIONS (2)														
Heating capacity (2)	kW	7.6	9.5	13.1	17.2	7.2	9.2	12.7	16.5	18.5	21.8	24.7	30.8	37.4
Compressors absorbed power	kW	1.9	2.3	3.1	3.9	1.9	2.4	3	3.8	4.3	5.2	5.8	7.1	8.6
Nominal operating current Compressors	A	3.4	4.3	5.2	6.4	3.4	4.3	5.1	6.4	7.8	8.9	10.8	13.1	16
PLANT SIDE HEAT EXCHANGER														
Water flow	m³/h	0.96	1.3	1.8	2.23	0.91	1.16	1.63	2.12	2.39	2.85	3.19	4.02	5.16
Ppressure loss	kPa	29	30	34	33	26	23	27	29	27	32	29	30	34
REJECTION SIDE HEAT EXCHANGER														
Water flow	m³/h	0.98	1.24	1.73	2.3	0.92	1.18	1.66	2.18	2.43	2.87	3.24	4.09	4.95
Pressure loss	kPa	31	28	32	35	27	25	28	31	29	33	31	34	35
PARTIAL HEAT RECOVERY (3)														
Heating capacity	kW	0.9	1.1	1.6	2.1	0.9	1.1	1.5	2	2.2	2.6	3	3.7	4.7
Heat recovery exchanger water flow	m³/h	0.2	0.2	0.3	0.4	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.8
Heat recovery pressure loss	kPa	0.3	0.4	0.8	1.3	0.2	0.4	0.7	1.2	0.4	0.6	0.7	1.1	1.8
COMPRESSORS		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Quantity	n.	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum operating current	A	12.8	17.1	21	31	4.7	6.5	8	10.3	11.8	15	15	21	22
Starting current	A	60	67	98	115.5	28	38	43	51.5	64	75	101	111	118
Number of capacity steps	n.	1	1	1	1	1	1	1	1	1	1	1	1	1
PLANT SIDE HEAT EXCHANGER	N.	1	1	1	1	1	1	1	1	1	1	1	1	1
Water volume	l	0.5	0.7	0.9	1.1	0.5	0.7	0.9	1.1	1.2	1.3	1.6	2	2.4
Maximum water flow	m³/h	1.6	2.2	2.9	3.7	1.6	2.1	2.7	3.6	4	4.7	5.3	6.7	7.8
REJECTION SIDE HEAT EXCHANGER	N.	1	1	1	1	1	1	1	1	1	1	1	1	1
Water volume	l	0.5	0.7	0.9	1.1	0.5	0.7	0.9	1.1	1.2	1.3	1.6	2	2.4
Maximum water flow	m³/h	1.2	1.6	2.1	2.8	1.1	1.6	2	2.6	3	3.5	3.9	5	5.8
PARTIAL HEAT RECOVERY EXCHANGER	N.	1	1	1	1	1	1	1	1	1	1	1	1	1
Water volume	l	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Maximum water flow	m³/h	0.3	0.5	0.6	0.8	0.3	0.4	0.6	0.8	0.9	1	1.2	1.5	1.7
REFRIGERANT		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant load (excluding options)	kg	0.7	0.9	1.1	1.4	0.7	0.9	1.1	1.4	1.5	1.8	1.8	2.5	3.1
Number of refrigerant circuits	n.	1	1	1	1	1	1	1	1	1	1	1	1	1
SUPPLY VOLTAGE	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
ENERGY EFFICIENCY RATIOS														
EER	Kw/Kw	3.95	4.23	4.53	4.41	3.76	3.78	4.08	4.18	4.02	4.15	4.12	4.18	4.81
COP	Kw/Kw	4.09	4.11	4.3	4.44	3.9	3.92	4.19	4.3	4.26	4.23	4.24	4.34	4.37
ESEER – Eurovent Standard		4.78	6.23	5.19	5.46	4.6	4.86	6.62	6.49	5.28	5.38	5.28	6.47	6.68
IPLV – ARI Standard 550/590		6.39	6.62	6.68	6.95	6.65	6.81	7.04	6.9	6.78	6.94	6.8	6.88	7.1
SOUND LEVELS														
Average sound pressure level [Lpm] (4)	dB(A)	42	42	44	44	42	42	44	44	47	51	48	50	50
Sound power level (Lw) (5)	dB(A)	56.2	56.2	58.2	58.2	56.2	56.2	58.2	58.2	61.2	65.2	62.2	64.2	64.2
DIMENSIONS														
Length	mm	555	555	555	555	555	555	555	555	555	555	555	555	555
Width	mm	650	650	650	650	650	650	650	650	650	650	650	650	650
Height	mm	900	900	900	900	900	900	900	900	900	900	900	900	900
NET WEIGHT	KG	90.8	93.5	103.6	108.4	90.8	93.5	103.6	108.4	116.6	118.1	120.6	143.8	149.5
HYDRAULIC CONNECTIONS														
PLANT / REJECTION HEAT EXCHANGERS														
Inlet outlet diameter – ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
PARTIAL HEAT RECOVERY EXCHANGER														
Inlet outlet diameter – ISO228/1-G M	Ø	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°; hot water outlet temperature 45°C.
(3) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EWNL RC 06 / 30

Cooling only

SCROLL COMPRESSORS

REMOTE CONDENSER

R410A

- Cooling capacities from 5 to 30 kW
- 13 sizes
- Refrigerant: R410A
- EER up to 4.84
- ESEER up to 6.68

MAIN FEATURES

- Remote condenser
- Solution for domestic and small office installations
- Scroll compressor
- Brazed-plate evaporator

AVAILABLE VERSIONS

- Mono-phase up to 13 kW
- Tri-phase on the full range
- Heat pump (see EWNH range)
- Cooling only (see EWNL range)
- Remote condenser heat pump (see EWNH RC)

Main accessories and options

Code	
450	Desuperheater
610	Compressor sound-insulating jacket
764	Water tank
920	Remote control kit
923	COM MBUS/JBUS serial card

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Advantages

- Simple and reliable
- Plug and play
- Electronic control system
- 3-speed circulation pump (evap) as standard

FOR THE TECHNICAL SPECIFICATIONS SEE EWNL ON PAGE 84; FOR THE PERFORMANCES SEE SELECTION SOFTWARE

Operating limits
(to be confirmed following selection conditions)

COOLING MODE	
Water leaving temperature evaporator (without glycol)	5 / 20°C
Water leaving temperature evaporator (with glycol max 40%)	-12 / 5°C

EWNH RC 06 / 30

Reversible

SCROLL COMPRESSORS

REMOTE CONDENSER

R410A

- Cooling capacities from 5 to 30 kW
- Heating capacities from 7 to 37 kW
- 13 sizes
- Refrigerant: R410A
- EER up to 4.84
- ESEER up to 6.68
- COP up to 4.44

MAIN FEATURES

- Heat pump (reversible refrigeration circuit refrigeration circuit)
- Remote condenser
- Solution for domestic and small office installations
- Scroll compressor
- Brazed-plate evaporator

AVAILABLE VERSIONS

- Mono-phase up to 13 kW
- Tri-phase on the full range
- Cooling only (see EWNL range)
- Heat pump (see EWNH range)
- Remote condenser cooling only (see EWNL RC range)

Advantages

- Simple and reliable
- Plug and play
- Electronic control system
- 3-speed circulation pump (evap) as standard

Main accessories and options

Code	
450	Desuperheater
610	Compressor sound-insulating jacket
920	Remote control kit
923	COM MBUS/JBUS serial card

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

FOR THE TECHNICAL SPECIFICATIONS SEE EWNH ON PAGE 87; FOR THE PERFORMANCES SEE SELECTION SOFTWARE

EWML 27 / 570

Cooling only

SCROLL COMPRESSORS

R410A

- Cooling capacities from 23 to 670 kW
- 33 sizes
- Refrigerant: R410A
- EER up to 4.40
- ESEER up to 6.51

MAIN FEATURES

- Scroll compressors
- Brazed-plate evaporator
- Brazed-plate condenser

AVAILABLE VERSIONS

- Mono or twin circuit units
- Partial heat recovery
- Heat pump reversible on the refrigeration circuit (see EWMH range)
- Remote condenser cooling only (see range EWML RC)
- Remote condenser heat pump (see range EWMH RC)
- Leaving water low temperature version

Advantages

- Plug and play
- Condenser water outlet up to 60°C
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard from size 175
- 0-10V signal for controlling 2-way valve on condenser
- Service valves on discharge and liquid line

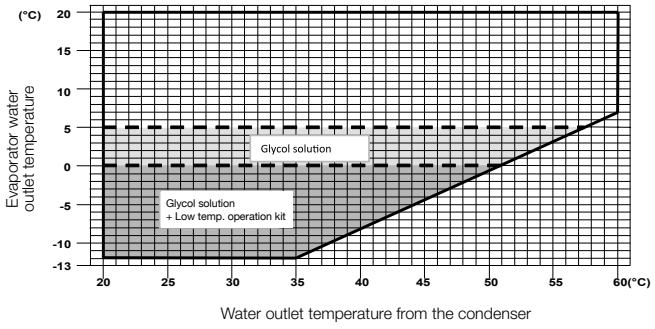
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
220	Electronic expansion valve
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger
1002	Condensation control with 2-way valve

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWML 27 / 570 Cooling only TECHNICAL SPECIFICATIONS

SIZE		T 27 P1	T 30 P1	T 33 P1	T 40 P1	T 40 P2	T 40 P2
Cooling capacity (1)	kW	29.1	32.9	36.6	41.3	47.6	48.5
Compressors absorbed power	kW	6.4	7.2	8.2	10.1	11.4	11.5
Nominal operating current Compressors	A	12.8	13.7	16	21	22.7	22.9
EVAPORATOR							
Evaporator water flow	m³/h	5	5.7	6.3	7.1	8.2	8.3
Evaporator pressure loss	kPa	55	56	50	37	46	28
CONDENSER							
Condenser water flow	m³/h	6.1	7	7.8	8.9	10.2	10.4
Condenser pressure loss	kPa	69	63	64	47	57	38
PARTIAL HEAT RECOVERY (2)							
Heating capacity	kW	4.5	5.1	5.7	6.4	7.4	--
Heat recovery exchanger water flow	m³/h	0.8	0.9	1	1.1	1.3	--
Heat recovery pressure loss	kPa	7.3	9.3	11.5	4.9	6.5	--
COMPRESSORS		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Quantity	n.	1	1	1	1	2	2
Maximum operating current	A	22	25	31	34	42	42
Starting current	A	118	118	140	173	132	132
Number of capacity steps	n.	1	1	1	1	2	2
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	2.8	2.8	2.8	3.1	3.1	3.6
Maximum water flow	m³/h	7	7.9	8.8	9.9	11.4	11.6
CONDENSER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	2.8	2.8	2.8	3.1	3.1	3.6
Maximum water flow	m³/h	8.6	9.7	10.9	12.5	14.3	14.6
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	--
Water volume	l	0.4	0.4	0.4	0.6	0.6	--
Maximum water flow	m³/h	1.1	1.2	1.4	1.6	1.8	--
REFRIGERANT		R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant load (excluding options)	kg	2.9	2.9	3	3.9	4.2	5
Number of capacity steps	n.	1	1	1	1	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)							
EER	kW/kW	4.55	4.56	4.44	4.09	4.18	4.22
ESEER – Eurovent Standard		6.36	6.32	5.97	6.14	5.34	6.27
IPLV – ARI Standard 550/590		6.76	6.72	6.35	6.53	5.68	6.67
SOUND LEVELS							
Average sound pressure level [Lpm] (4)	dB(A)	50	51	52	53	53	53
Sound power level (Lw)	dB(A)	65.4	66.4	67.4	68.8	68.9	68.9
DIMENSIONS							
Length	mm	1000	1000	1000	1000	1200	1200
Width	mm	650	650	650	650	750	750
Height	mm	1400	1400	1400	1400	1700	1700
NET WEIGHT	**KG**	**258**	**260**	**270**	**281**	**440**	**450**
HYDRAULIC CONNECTIONS							
EVAPORATOR / CONDENSER							
Inlet outlet diameter – ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER							
Inlet outlet diameter – ISO228/1-G M	Ø	1"	1"	1"	1"	1"	--

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

EWML 27 / 570 Cooling only TECHNICAL SPECIFICATIONS

SIZE		T 48 P2	T 48 P2	T 54 P2	T 54 P2	T 60 P2
Cooling capacity (1)	kW	56.9	56.7	65.4	64.2	69.8
Compressors absorbed power	kW	13.2	12.9	15.1	14.6	16.8
Nominal operating current Compressors	A	26.2	25.8	28.3	27.7	32.5
EVAPORATOR						
Evaporator water flow	m³/h	9.8	9.7	11.2	11	12
Evaporator pressure loss	kPa	47	29	50	28	43
CONDENSER						
Condenser water flow	m³/h	12.1	12.1	13.9	13.6	15
Condenser pressure loss	kPa	57	38	60	37	51
PARTIAL HEAT RECOVERY (2)						
Heating capacity	kW	8.9	--	10.2	--	10.9
Heat recovery exchanger water flow	m³/h	1.5	--	1.8	--	1.9
Heat recovery pressure loss	kPa	9.3	--	8	--	9.2
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2
Maximum operating current	A	44	44	50	50	62
Starting current	A	140	140	143	143	171
Number of capacity steps	n.	2	2	2	2	2
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	3.1	4.2	3.9	4.2	3.9
Maximum water flow	m³/h	13.7	13.6	15.7	15.4	16.8
CONDENSER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	3.1	4.2	3.9	4.2	3.9
Maximum water flow	m³/h	16.9	16.9	19.5	19	21
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**--**	**1**	**--**	**1**
Water volume	l	0.6	--	0.8	--	0.8
Maximum water flow	m³/h	2.1	--	2.5	--	2.6
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	4.3	5.7	5.7	5.7	5.8
Number of capacity steps	n.	1	2	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	4.31	4.4	4.33	4.4	4.15
ESEER – Eurovent Standard		5.59	6.47	5.54	6.52	5.21
IPLV – ARI Standard 550/590		5.94	6.88	5.88	6.93	5.54
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	53	53	54	54	55
Sound power level (Lw)	dB(A)	68.9	68.9	69.9	69.9	70.9
DIMENSIONS						
Length	mm	1200	1200	1200	1200	1200
Width	mm	750	750	750	750	750
Height	mm	1700	1700	1700	1700	1700
NET WEIGHT	**KG**	**444**	**455**	**455**	**468**	**460**
HYDRAULIC CONNECTIONS						
EVAPORATOR / CONDENSER						
Inlet outlet diameter – ISO228/1-G M	Ø	2"	2"	2"	2"	2"
Inlet outlet diameter	Ø mm	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	1"	--	1"	--	1"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

	T 60 P2	T 70 P2	T 70 P2	T 90 P2	T 90 P2	T 120 P2	T 120 P2	T 150 P2	T 150 P2
	70.4	83.4	83.1	108	107	135	134	175	173
	16.5	20.6	20	26.2	25.7	33.2	32.6	42.3	41.6
	31.9	41.9	41.3	48.3	47.7	61	60.5	75.5	75.1
	12.1	14.3	14.3	18.5	18.4	23.1	23	30	29.7
	28	50	28	46	29	48	38	46	42
	15	18	17.8	23.2	23	29.1	28.8	37.5	37.2
	36	60	37	52	36	53	47	45	47
	--	13	--	16.9	--	21	--	27.2	27
	--	2.2	--	2.9	--	3.6	--	4.7	4.7
	--	7.7	--	7.5	--	8.1	--	10.5	8.3
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	2	2	2	2	2	2	2	2	2
	62	68	68	80	80	97	97	131	131
	171	207	207	265	265	321	321	375	375
	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1
	4.2	4.7	6.4	5.8	6.7	7.2	8.3	8.7	12.3
	16.9	20	20	25.9	25.8	32.3	32.2	42	41.6
	1	1	1	1	1	1	1	1	1
	4.2	4.7	6.4	5.8	6.7	7.2	8.3	8.7	12.3
	21	25.2	24.9	32.5	32.2	40.7	40.3	52.5	52.1
	--	1	--	1	--	1	--	1	2
	--	1	--	1.7	--	2.1	--	4	2 x 1.0
	--	3.1	--	4.1	--	5.1	--	6.6	6.5
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	5.7	6.6	8.1	8.7	10.4	10.7	12.7	12.4	17
	2	1	2	1	2	1	2	1	2
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	4.27	4.05	4.16	4.12	4.16	4.07	4.11	4.14	4.16
	5.93	5.56	6.45	5.18	6.06	5.23	6.1	5.08	6.13
	6.3	5.91	6.86	5.5	6.44	5.56	6.48	5.4	6.52
	55	56	56	61	61	64	64	64	64
	70.9	71.9	71.9	76.9	76.9	80.1	80.1	81	81
	1200	1200	1200	1200	1200	1200	1200	1800	1800
	750	750	750	750	750	750	750	1200	1200
	1700	1700	1700	1700	1700	1700	1700	1740	1740
	485	465	495	715	760	775	788	1022	1030
	2"	2"	2"	--	--	--	--	--	--
	--	--	--	73.1	73.1	73.1	73.1	73.1	73.1
	--	1"	--	1 1/4"	--	1 1/4"	--	2"	2 x 1"

EWML 27 / 570 Cooling only TECHNICAL SPECIFICATIONS

SIZE		T 170 P4	T 175 P3	T 190 P4	T 200 P2	T 200 P2
Cooling capacity (1)	kW	200	199	214	229	227
Compressors absorbed power	kW	45.8	49.8	54.3	53.4	53.3
Nominal operating current Compressors	A	88.9	91.5	95.8	95.2	95.5
EVAPORATOR						
Evaporator water flow	m³/h	34.3	34.2	36.8	39.2	38.9
Evaporator pressure loss	kPa	42	54	34	46	53
CONDENSER						
Condenser water flow	m³/h	42.6	43.1	46.6	48.8	48.5
Condenser pressure loss	kPa	70	51	42	62	71
PARTIAL HEAT RECOVERY (2)						
Heating capacity	kW	31.2	31.1	33.5	35.6	35.3
Heat recovery exchanger water flow	m³/h	5.4	5.4	5.8	6.1	6.1
Heat recovery pressure loss	kPa	11	8	7.4	10.6	8.2
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	4	3	4	2	2
Maximum operating current	A	148	146	160	164	164
Starting current	A	333	369	345	466	466
Number of capacity steps	n.	4	3	4	2	2
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	12.3	11.1	20.3	20.7	20.3
Maximum water flow	m³/h	48	47.9	51.5	54.9	54.5
CONDENSER	**N.**	**1**	**1**	**1**	**1**	**1**
Water volume	l	12.3	11.1	20.3	20.3	21.2
Maximum water flow	m³/h	59.6	60.3	65.2	68.3	67.9
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**1**	**2**	**1**	**2**
Water volume	l	2 x 1.7	5.3	2 x 1.7	5.3	2 x 1.7
Maximum water flow	m³/h	7.5	7.5	8.1	8.6	8.5
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	17.8	16	23.9	22.4	22.8
Number of capacity steps	n.	2	1	2	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)						
EER	kW/kW	4.37	4	3.94	4.29	4.26
ESEER – Eurovent Standard		5.29	6.33	6.02	5.29	6.11
IPLV – ARI Standard 550/590		5.76	6.73	6.8	5.62	6.49
SOUND LEVELS						
Average sound pressure level [Lpm] (4)	dB(A)	64	65.8	64	64	64
Sound power level (Lw)	dB(A)	81	82.8	81	81	81
DIMENSIONS						
Length	mm	1800	1800	1800	1800	1800
Width	mm	1200	1200	1200	1200	1200
Height	mm	1740	1740	1740	1740	1740
NET WEIGHT	**KG**	**1130**	**1152**	**1315**	**1085**	**1115**
HYDRAULIC CONNECTIONS						
EVAPORATOR / CONDENSER						
Inlet outlet diameter – ISO228/1-G M	Ø	--	--	--	--	--
Inlet outlet diameter	Ø mm	73.1	73.1	88.9	88.9	88.9
PARTIAL HEAT RECOVERY EXCHANGER						
Inlet outlet diameter – ISO228/1-G M	Ø	2 x 1 1/4"	2"	2 x 1 1/4"	2"	2 x 1 1/4"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

	T 220 P3	T 240 P4	T 290 P3	T 300 P4	T 340 P4	T 380 P4	T 460 P6	T 570 P6
	270	276	331	347	403	446	534	670
	62.4	65	79.3	83.2	95	107	124	161
	113	121	142	150	170	190	224	287
	46.4	47.3	56.8	59.5	69.1	76.6	91.6	115
	52	61	49	70	70	64	63	85
	57.6	59	71.1	74.5	86.2	95.7	114	144
	68	81	60	89	86	74	64	83
	42.1	43	51.7	54.1	62.8	69.6	83.2	104
	7.3	7.4	8.9	9.3	10.8	12	14.3	18
	10.5	8.4	10	10.3	13.9	10.1	10.3	10.1
	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	3	4	3	4	4	4	6	6
	197	246	194	262	295	328	393	492
	441	584	418	507	597	630	637	794
	3	4	3	4	4	4	6	6
	1	1	1	1	1	1	1	1
	20.7	27	20.3	27.5	33.8	44.6	44.6	57.2
	65	66.2	79.5	83.3	96.7	107.2	128.2	161
	1	1	1	1	1	1	1	1
	22.5	23.9	30.6	29.3	33.8	41	51.8	56.3
	80.6	82.6	99.5	104.3	120.7	134	159.6	201.6
	1	2	1	2	2	2	2	2
	6.3	2 x 2.1	8	2 x 4.0	2 x 4.0	2 x 5.3	2 x 6.3	2 x 8.0
	10.2	10.4	12.5	13	15.1	16.8	20	25.2
	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	23.1	24.7	30.3	31.6	31.1	48.1	49.5	62.4
	1	2	1	2	2	2	2	2
	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	4.33	4.25	4.17	4.17	4.24	4.17	4.31	4.16
	6.51	5.64	6.35	5.76	5.88	5.77	6.14	6.05
	6.92	6	6.75	6.13	6.25	6.14	6.53	6.43
	65.8	67	65.8	67	67	67	68.8	68.8
	82.8	84.1	82.8	84.1	84.5	84.5	86.3	86.3
	1800	1800	1800	1800	1800	1800	1800	1800
	1200	1200	1200	1200	1800	1800	1800	1800
	1740	1740	1740	1740	1740	1740	1740	1740
	1302	1545	1403	1590	1665	1775	2270	2300
	--	--	--	--	--	--	--	--
	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
	2"	2 x 1 1/4"	2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

EWMH 27 / 570

Reversible

SCROLL COMPRESSORS

R410A

- Cooling capacities from 23 to 670 kW
- Heating capacities from 27 to 828 kW
- 33 sizes
- Refrigerant: R410A
- EER up to 4.29
- ESEER up to 6.63
- COP up to 4.35

MAIN FEATURES

- Heat pump (reversible on the refrigeration circuit)
- Scroll compressors
- Brazed-plate evaporator
- Brazed-plate condenser

AVAILABLE VERSIONS

- Mono or twin circuit units
- Partial heat recovery
- Cooling only (see EWML range)
- Remote condenser cooling only (see EWML RC range)
- Remote condenser heat pump (see EWMH RC range)
- Leaving water low temperature version

Advantages

- Plug and play
- Condenser water outlet up to 60°C
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- 0-10V signal for controlling 2-way valve on condenser
- Service valves on discharge and liquid line

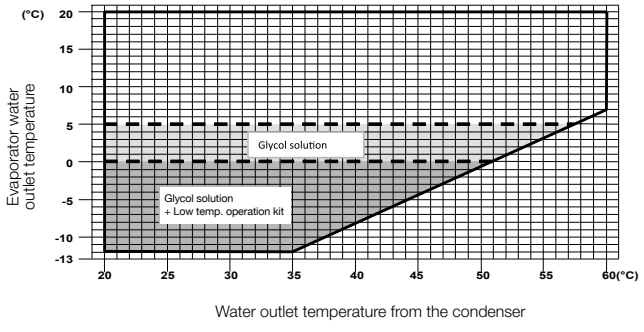
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger
1002	Condensation control with 2-way valve

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling/heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWMH 27 / 570 Reversible TECHNICAL SPECIFICATIONS

SIZE		27.1	30.1	33.1	39.1	40.1	40.2	48.1
SUMMER CONDITIONS (1)								
Cooling capacity (1)	kW	26.8	30.3	33.7	37.4	42.3	43.8	51.7
Compressors absorbed power	kW	6.3	7.1	8.1	10	11.3	11.3	13.1
Nominal operating current Compressors	A	12.6	13.5	15.6	20.5	22.4	22.5	25.9
PLANT SIDE HEAT EXCHANGER								
Water flow	m³/h	4.6	5.2	5.8	6.4	7.3	7.5	8.9
Pressure loss	kPa	55	56	50	37	46	28	47
REJECTION SIDE HEAT EXCHANGER								
Water flow	m³/h	5.7	6.5	7.2	8.2	9.3	9.5	11.2
Pressure loss	kPa	69	63	64	47	57	38	57
WINTER CONDITIONS (2)								
Heating capacity (2)	kW	34.8	39.3	43.8	50.2	57.6	59.2	69.3
Compressors absorbed power	kW	8.1	9	10.3	12.5	14.3	14.4	16.8
Nominal operating current Compressors	A	15	16.1	18.5	23.5	26.4	26.5	30.9
PLANT SIDE HEAT EXCHANGER								
Water flow	m³/h	4.6	5.2	5.8	6.4	7.3	7.5	8.9
Pressure loss	kPa	42	42	37	25	30	20	31
REJECTION SIDE HEAT EXCHANGER								
Water flow	m³/h	4.6	5.2	5.8	6.5	7.5	7.7	9
Pressure loss	kPa	47	48	42	31	38	22	38
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	4.2	4.7	5.2	5.9	6.8	--	8.2
Heat recovery exchanger water flow	m³/h	0.7	0.8	0.9	1	1.2	--	1.4
Heat recovery pressure loss	kPa	6.1	7.9	9.6	4.1	5.4	--	8
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	1	1	1	1	2	2	2
Maximum operating current	A	22	25	31	34	42	42	44
Starting current	A	118	118	140	173	132	132	140
Number of capacity steps	n.	1	1	1	1	2	2	2
PLANT SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	2.8	2.8	2.8	3.1	3.1	3.6	3.1
Maximum water flow	m³/h	6.4	7.3	8.1	9	10.2	10.5	12.4
REJECTION SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	2.8	2.8	2.8	3.1	3.1	3.6	3.1
Maximum water flow	m³/h	8	9.1	10.1	11.5	13	13.4	15.7
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**--**	**1**
Water volume	l	0.4	0.4	0.4	0.6	0.6	--	0.6
Maximum water flow	m³/h	1	1.1	1.3	1.4	1.6	--	2
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	2.9	2.9	3	3.9	4.2	5	4.3
Number of refrigerant circuits	n.	1	1	1	1	1	2	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS								
EER	kW/kW	4.24	4.27	4.17	3.76	3.74	3.88	3.95
COP	kW/kW	4.31	4.35	4.25	4.02	4.03	4.11	4.13
ESEER – Eurovent Standard		5.87	5.84	5.86	6.02	5.2	6.14	5.46
IPLV – ARI Standard 550/590		6.24	6.21	6.23	6.4	5.52	6.53	5.8
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	50	51	52	53	53	53	53
Sound power level (Lw) (5)	dB(A)	65.4	66.4	67.4	68.8	68.9	68.9	68.9
DIMENSIONS								
Length	mm	1000	1000	1000	1000	1200	1200	1200
Width	mm	650	650	650	650	750	750	750
Height	mm	1400	1400	1400	1400	1700	1700	1700
NET WEIGHT	**KG**	**263**	**266**	**275**	**288**	**445**	**455**	**455**
HYDRAULIC CONNECTIONS								
PLANT / REJECTION HEAT EXCHANGER								
Inlet outlet diameter – ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"
PARTIAL HEAT RECOVERY EXCHANGER	Ø mm	--	--	--	--	--	--	--
Inlet outlet diameter – ISO228/1-G M	Ø	1"	1"	1"	1"	1"	--	1"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - hot water outlet temperature 45°C; chilled water outlet temperature 15/10°C.
(3) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EWMH 27 / 570 Reversible TECHNICAL SPECIFICATIONS

SIZE		48.2	54.1	54.2	60.1	60.2	70.1	70.2
SUMMER CONDITIONS (1)								
Cooling capacity (1)	kW	50.5	56.9	57.3	62.5	63.7	84.7	74.8
Compressors absorbed power	kW	12.7	14.9	14.5	16.5	16.2	20.1	19.6
Nominal operating current Compressors	A	25.5	27.8	27.2	31.8	31.2	41.1	40.6
PLANT SIDE HEAT EXCHANGER								
Water flow	m³/h	8.7	9.8	9.8	10.7	10.9	14.5	12.8
Pressure loss	kPa	29	50	28	43	28	50	28
REJECTION SIDE HEAT EXCHANGER								
Water flow	m³/h	11	12.4	12.4	13.7	13.8	18.2	16.4
Pressure loss	kPa	38	60	37	51	36	60	37
WINTER CONDITIONS (2)								
Heating capacity (2)	kW	68	76.4	76.6	84	84.6	101	101
Compressors absorbed power	kW	16.4	19.1	18.6	21.1	20.6	25.1	24.8
Nominal operating current Compressors	A	30.4	33.7	32.9	37.9	37.3	47.1	46.7
PLANT SIDE HEAT EXCHANGER								
Water flow	m³/h	8.7	9.8	9.8	10.7	10.9	14.5	12.8
Pressure loss	kPa	20	32	20	27	20	40	19
REJECTION SIDE HEAT EXCHANGER								
Water flow	m³/h	8.9	9.9	10	10.8	11	13.1	13.1
Pressure loss	kPa	23	40	22	35	22	41	23
PARTIAL HEAT RECOVERY (3)								
Heating capacity	kW	--	8.9	--	9.8	--	11.9	--
Heat recovery exchanger water flow	m³/h	--	1.5	--	1.7	--	2	--
Heat recovery pressure loss	kPa	--	6.2	--	7.4	--	6.4	--
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	2	2	2	2	2	2	2
Maximum operating current	A	44	50	50	62	62	68	68
Starting current	A	140	143	143	171	171	207	207
Number of capacity steps	n.	2	2	2	2	2	2	2
PLANT SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	4.2	3.9	4.2	3.9	4.2	4.7	6.4
Maximum water flow	m³/h	12.1	13.7	13.8	15	15.3	20.3	17.9
REJECTION SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	4.2	3.9	4.2	3.9	4.2	4.7	6.4
Maximum water flow	m³/h	15.4	17.4	17.4	19.2	19.3	25.5	23
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**--**	**1**	**--**	**1**	**--**	**1**	**--**
Water volume	l	--	0.8	--	0.8	--	1	--
Maximum water flow	m³/h	--	2.2	--	2.4	--	2.9	--
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	5.7	5.7	5.7	5.8	5.7	6.6	8.1
Number of refrigerant circuits	n.	2	1	2	1	2	1	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS								
EER	kW/kW	3.98	3.82	3.95	3.79	3.93	4.21	3.82
COP	kW/kW	4.15	4	4.12	3.98	4.11	4.02	4.07
ESEER – Eurovent Standard		6.43	5.38	6.15	5.09	5.79	5.45	6.3
IPLV – ARI Standard 550/590		6.84	5.72	6.54	5.41	6.15	5.79	6.7
SOUND LEVELS								
Average sound pressure level [Lpm] (4)	dB(A)	53	54	54	55	55	56	56
Sound power level (Lw) (5)	dB(A)	68.9	69.9	69.9	70.9	70.9	71.9	71.9
DIMENSIONS								
Length	mm	1200	1200	1200	1200	1200	1200	1200
Width	mm	750	750	750	750	750	750	750
Height	mm	1700	1700	1700	1700	1700	1700	1700
NET WEIGHT	**KG**	**470**	**465**	**480**	**470**	**495**	**475**	**506**
HYDRAULIC CONNECTIONS								
PLANT / REJECTION HEAT EXCHANGER								
Inlet outlet diameter – ISO228/1-G M	Ø	2"	2"	2"	2"	2"	2"	2"
PARTIAL HEAT RECOVERY EXCHANGER	Ø mm	--	--	--	--	--	--	--
Inlet outlet diameter – ISO228/1-G M	Ø	--	1"	--	1"	--	1"	--

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - hot water outlet temperature 45°C; chilled water outlet temperature 15/10°C.
(3) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.

	90.1	90.2	120.1	120.2	150.1	150.2	170.2	190.2	200.1	200.2	220.1	220.2
	96.9	98.2	122	119	158	154	194	206	207	220	262	250
	25.7	25.1	32.6	31.9	41.5	40.8	45.4	53.3	52.4	52.3	61.1	63.9
	47.5	46.7	60	59.3	74.1	73.6	88	94	93.7	93.6	110	119
	16.6	16.8	20.9	20.5	27	26.4	33.3	35.4	35.6	37.7	45	42.9
	46	29	48	38	46	42	43	34	46	53	52	61
	21.2	21.3	26.7	26.2	34.5	33.8	41.5	45	45	47.1	55.9	54.3
	52	36	53	47	45	47	69	42	62	71	68	81
	132	132	165	164	213	211	237	262	275	276	332	335
	32.5	31.7	40.9	40.3	52	51.6	58.1	69.7	64.7	64.2	76.8	80.4
	55.6	54.5	69.3	68.5	87.8	87.3	105	113	110	109	130	137
	16.6	16.8	20.9	20.5	27	26.4	33.3	35.4	35.6	37.7	45	42.9
	27	19	28	24	24	24	58	76	37	43	46	44
	17.1	17.3	21.4	21.2	27.8	27.4	30.9	33.2	36.2	36.4	43.9	43.8
	37	23	39	31	38	33	45	28	43	44	49	50
	15.5	--	19.4	--	25.2	24.9	28	30.1	32.9	33	39.8	39.7
	2.7	--	3.3	--	4.3	4.3	4.8	5.2	5.7	5.7	6.9	6.8
	6.3	--	6.9	--	8.9	7	8.9	6	9	7.2	9.4	7.2
	SCROLL	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
	2	2	2	2	2	2	4	4	2	2	3	4
	80	80	97	97	131	131	148	160	164	164	197	246
	265	265	321	321	375	375	333	345	466	466	441	584
	2	2	2	2	2	2	4	4	2	2	3	4
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	5.8	6.7	7.2	8.3	8.7	12.3	12.3	20.3	20.7	20.3	20.7	20.3
	23.2	23.5	29.3	28.7	37.8	37	46.6	49.6	49.8	52.8	63	60.1
	1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	5.8	6.7	7.2	8.3	8.7	12.3	12.3	20.3	20.7	20.3	20.7	20.3
	29.7	29.8	37.4	36.7	48.3	47.3	58.1	63	63	65.9	78.3	76
	1	**--**	**1**	**--**	**1**	**2**	**2**	**2**	**1**	**2**	**1**	**2**
	1.7	--	2.1	--	4	2	3.4	3.4	5.3	3.4	6.3	4.2
	3.7	--	4.7	--	6.1	6	6.7	7.3	7.9	8	9.6	9.6
	R410A	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
	8.7	10.4	10.7	12.7	12.4	17	17.8	23.9	22.4	22.8	23.1	24.7
	1	2	1	2	1	2	2	2	1	2	1	2
	400/3/50	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
	3.77	3.91	3.74	3.73	3.81	3.77	4.27	3.86	3.95	4.21	4.29	3.91
	4.06	4.16	4.03	4.07	4.1	4.09	4.08	3.76	4.25	4.3	4.32	4.17
	5.2	5.96	5.13	5.99	5.1	6	5.46	6.63	5.17	6.01	6.37	5.53
	5.52	6.34	5.46	6.37	5.42	6.38	5.62	6.43	5.5	6.39	6.77	5.87
	61	61	64	64	64	64	64	64	64	64	65.8	67
	76.9	76.9	80.1	80.1	81	81	81	81	81	81	82.8	84.1
	1200	1200	1200	1200	1800	1800	1800	1800	1800	1800	1800	1800
	750	750	750	750	1200	1200	1200	1200	1200	1200	1200	1200
	1700	1700	1700	1700	1740	1740	1740	1740	1740	1740	1740	1740
	730	**770**	**785**	**800**	**1035**	**1040**	**1140**	**1345**	**1100**	**1135**	**1310**	**1570**
	--	--	--	--	--	--	--	--	--	--	--	--
	73.1	73.1	73.1	73.1	73.1	73.1	73.1	88.9	88.9	88.9	88.9	88.9
	1 1/4"	--	1 1/4"	--	2"	2 x 1"	2 x 1 1/4"	2 x 1 1/4"	2"	2 x 1 1/4"	2"	2 x 1 1/4"

(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744.
(5) Sound power level [Lw] according to ISO EN 9614-2.

EWMH 27 / 570 Reversible TECHNICAL SPECIFICATIONS

SIZE		290.1	300.2	340.2	380.2	460.2	570.2
SUMMER CONDITIONS (1)							
Cooling capacity (1)	kW	328	313	364	405	482	606
Compressors absorbed power	kW	78.3	81.8	93.4	104	121	158
Nominal operating current Compressors	A	140	147	168	187	219	282
PLANT SIDE HEAT EXCHANGER							
Water flow	m³/h	56.3	53.7	62.6	69.5	82.7	104
Pressure loss	kPa	49	70	70	64	63	85
REJECTION SIDE HEAT EXCHANGER							
Water flow	m³/h	70.3	68.4	79.3	88.2	105	132
Pressure loss	kPa	60	89	86	74	64	83
WINTER CONDITIONS (2)							
Heating capacity (2)	kW	413	420	488	539	646	817
Compressors absorbed power	kW	96.4	103	116	129	130	196
Nominal operating current Compressors	A	164	175	197	220	260	333
PLANT SIDE HEAT EXCHANGER							
Water flow	m³/h	56.3	53.7	62.6	69.5	82.7	104
Pressure loss	kPa	40	48	46	40	34	44
REJECTION SIDE HEAT EXCHANGER							
Water flow	m³/h	54.5	54.6	63.9	70.5	88.9	107
Pressure loss	kPa	46	57	57	53	52	69
PARTIAL HEAT RECOVERY (3)							
Heating capacity	kW	49.4	49.5	57.9	63.9	80.6	96.9
Heat recovery exchanger water flow	m³/h	8.5	8.5	10	11	13.9	16.7
Heat recovery pressure loss	kPa	9.1	8.6	11.8	8.5	9.6	8.7
COMPRESSORS		**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**	**SCROLL**
Quantity	n.	3	4	4	4	6	6
Maximum operating current	A	194	262	295	328	393	492
Starting current	A	418	507	597	630	637	794
Number of capacity steps	n.	3	4	4	4	6	6
PLANT SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	27	27.5	33.8	44.6	44.6	57.2
Maximum water flow	m³/h	78.8	75.2	87.6	97.3	115.8	145.6
REJECTION SIDE HEAT EXCHANGER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	27	27.5	33.8	44.6	44.6	57.2
Maximum water flow	m³/h	98.4	95.8	111	123.5	147	184.8
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**1**	**2**	**2**	**2**	**2**	**2**
Water volume	l	8	8	8	10.6	12.6	16
Maximum water flow	m³/h	11.9	11.9	14	15.4	19.5	23.4
REFRIGERANT		**R410A**	**R410A**	**R410A**	**R410A**	**R410A**	**R410A**
Total refrigerant load (excluding options)	kg	30.3	31.6	31.1	48.1	49.5	62.4
Number of refrigerant circuits	n.	1	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS							
EER	kW/kW	4.19	3.83	3.9	3.89	3.98	3.84
COP	kW/kW	4.28	4.08	4.21	4.18	4.97	4.17
ESEER – Eurovent Standard		6.23	5.65	5.75	5.66	6	5.93
IPLV – ARI Standard 550/590		6.62	6.01	6.12	6.02	6.38	6.31
SOUND LEVELS							
Average sound pressure level [Lpm] (4)	dB(A)	65.8	67	67	67	68.8	68.8
Sound power level (Lw) (5)	dB(A)	82.8	84.1	84.5	84.5	86.3	86.3
DIMENSIONS							
Length	mm	1800	1800	1800	1800	1800	1800
Width	mm	1200	1200	1800	1800	1800	1800
Height	mm	1740	1740	1740	1740	1740	1740
NET WEIGHT	**KG**	**1390**	**1615**	**1710**	**1796**	**2270**	**2365**
HYDRAULIC CONNECTIONS							
PLANT / REJECTION HEAT EXCHANGER							
Inlet outlet diameter – ISO228/1-G M	Ø	--	--	--	--	--	--
PARTIAL HEAT RECOVERY EXCHANGER	Ø mm	88.9	88.9	88.9	88.9	88.9	88.9
Inlet outlet diameter – ISO228/1-G M	Ø	2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - hot water outlet temperature 45°C; chilled water outlet temperature 15/10°C.
(3) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(4) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(5) Sound power level [Lw] according to ISO EN 9614-2.

EWML RC 27 / 570

Cooling only

SCROLL COMPRESSORS

REMOTE CONDENSER

R410A

- Cooling capacities from 23 to 670 kW
- 33 sizes
- Refrigerant: R410A
- EER up to 4.40
- ESEER up to 6.51

MAIN FEATURES

- Remote condenser
- Scroll compressors
- Brazed-plate evaporator

AVAILABLE VERSIONS

- Mono or twin circuit units
- Partial heat recovery
- Heat pump reversible on the refrigeration circuit (see EWMH range)
- Remote condenser heat pump (see range EWMH RC)
- Leaving water low temperature version
- Total heat recovery

Advantages

- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- Service valves on discharge and liquid line

Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
172	Antivibration mounts - rubber - supplied loose
175	Victaulic connections
178	HR 100% Victaulic connections
450	Desuperheater
451	Total heat recovery
605	Power factor capacitor for cos phi 0.9 on compressor motor
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

FOR THE TECHNICAL SPECIFICATIONS SEE EWML ON PAGE 91; FOR THE PERFORMANCES SEE SELECTION SOFTWARE

EWMH RC 27 / 380

Reversible

SCROLL COMPRESSORS

REMOTE CONDENSER

R410A

- Cooling capacities from 23 to 670 kW
- Heating capacities from 27 to 828 kW
- 28 sizes
- Refrigerant: R410A
- EER up to 4.29
- ESEER up to 6.63
- COP up to 4.35

MAIN FEATURES

- Heat pump (reversible refrigerant circuit circuit)
- Remote condenser
- Scroll compressors
- Brazed-plate evaporator

AVAILABLE VERSIONS

- Mono or twin circuit units
- Partial heat recovery
- Cooling only (see EWML range)
- Remote condenser cooling only (see EWML RC range)
- Heat pump (see EWMH range)
- Leaving water low temperature version

Main assets

- Remote condenser
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- Service valves on discharge and liquid line

Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
172	Antivibration mounts - rubber - supplied loose
174	EVP Victaulic connections
450	Desuperheater
605	Power factor capacitor for cos phi 0.9 on compressor motor
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

FOR THE TECHNICAL SPECIFICATIONS SEE EWMH ON PAGE 97; FOR THE PERFORMANCES SEE SELECTION SOFTWARE

EWSL K 190 / 660

Cooling only

SCREW COMPRESSORS

R-134a

- Cooling capacities from 186 to 655 kW
- 13 sizes
- Refrigerant: R134a
- EER up to 4.76
- ESEER up to 5.25

MAIN FEATURES

- Class B
- MONO SCREW compressor
- Brazed-plate evaporator
- Brazed-plate condenser
- Linear capacity modulation 25 ...100%

AVAILABLE VERSIONS

- Leaving water low temperature version

Advantages

- Plug and play, reliable and robust
- Evaporator water outlet down to -12°C
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- Input port on additonal control module (optional) for ambient air temperature
- Service valves on discharge and liquid lines
- Wide operating limits

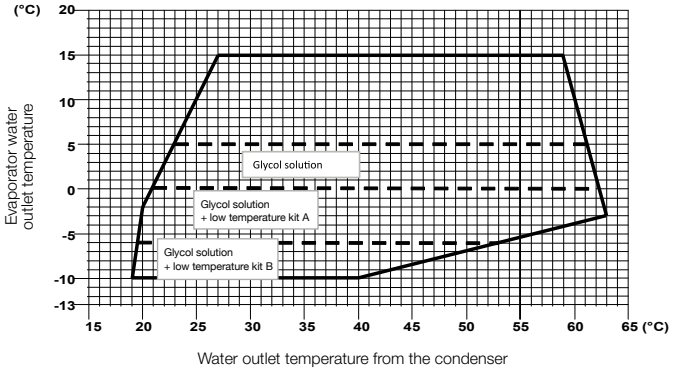
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
171	Antivibration mounts - rubber - supplied loose
550	Stop valve on compressor suction line
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling/heating operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWSL K 190 / 660 Cooling only TECHNICAL SPECIFICATIONS

SIZE		190.1	210.1	240.1	250.1	270.1	310.1	360.1	410.1	470.1	500.1	530.1	580.1	660.1
Cooling capacity (1)	kW	186	207	231	249	263	306	353	410	463	491	525	579	655
Compressors absorbed power	kW	39.1	43.5	48.7	52.3	55.7	65	74.7	86.8	98.7	106	111	123	138
Nominal operating current Compressors	A	66	69.8	80.3	90.4	90.6	109	128	139	159	167	180	201	225
EVAPORATOR														
Evaporator water flow	m³/h	31.9	35.5	39.6	42.7	45.1	52.5	60.6	70.3	79.4	84.2	90.1	99.3	112
Evaporator pressure loss	kPa	18	22	20	18	27	31	32	33	35	32	31	28	19
CONDENSER														
Condenser water flow	m³/h	39	43.4	48.4	52.2	55.2	63	74	84	95	103	110	122	137
Condenser pressure loss	kPa	6	5	5	5	7	7	8	8	10	11	11	9	9
COMPRESSORS		TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW	TWIN SCREW
Quantity	n.	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum operating current	A	102.5	117.8	134.8	144.1	165.2	183.4	207	237.1	267.9	283.7	307.7	354.8	398.8
Starting current	A	280	351	495	495	646	361	361	374	453	543	595	703	783
Number of capacity steps	%	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100	50…100
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	14	16	18	20	23	29	2x31	2x36	2x40	2x40	2x45	2x54	2x67
Maximum water flow	m³/h	32	37	42	47	53	68	74	84	95	95	105	126	158
CONDENSER	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	25	27	29	29	25	27	2x31	2x36	2x40	2x45	2x49	2x54	2x58
Maximum water flow	m³/h	58	63	68	68	58	63	74	84	95	105	116	126	137
REFRIGERANT		R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A
Total refrigerant load (excluding options)	kg	15	16	17	17	15	16	37	42	48	53	58	64	69
Number of refrigerant circuits	n.	1	1	1	1	1	1	1	1	1	1	1	1	1
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS (1)														
EER	kW/kW	4.76	4.76	4.74	4.76	4.72	4.71	4.73	4.72	4.69	4.63	4.73	4.71	4.75
ESEER - Eurovent Standard		5.09	5.25	5.2	5.07	4.99	5.1	5.09	5.07	5	5.04	5.18	5.17	5.19
IPLV - ARI Standard 550/590		5.23	5.4	5.35	5.21	5.28	5.39	5.38	5.36	5.35	5.44	5.56	5.56	5.57
SOUND LEVELS														
Average sound pressure level [Lpm] (2)	dB(A)	71	72	76	76	76	79	80	80	79	81	81	82	82
Sound power level (Lw) (3)	dB(A)	88.1	89.1	93.1	93.1	93.1	96.1	97.4	97.4	96.4	98.4	98.4	99.6	99.6
DIMENSIONS														
Length	mm	2500	2500	2500	2500	2500	2500	2800	2800	2800	2800	2800	3100	3100
Width	mm	600	600	600	600	600	600	700	700	700	700	700	700	700
Height	mm	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
NET WEIGHT	**KG**	**1399**	**1423**	**1465**	**1476**	**1689**	**1733**	**1750**	**2117**	**2151**	**2177**	**2233**	**2616**	**2663**
HYDRAULIC CONNECTIONS														
EVAPORATOR														
Inlet outlet diameter	nxØ mm	88.9	88.9	88.9	88.9	88.9	88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9
CONDENSER														
Inlet outlet diameter	nxØ mm	88.9	88.9	88.9	88.9	88.9	88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9	2x88.9

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser
(2) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(3) Sound power level [Lw] according to ISO EN 9614-2.

EWSL A 410 / 1610

Cooling only

SCREW COMPRESSORS
CLASS A

Class A

- Cooling capacities from 406 to 1604 kW
- 14 sizes
- Refrigerant: R134 A
- EER up to 5.12
- ESEER up to 5.72

MAIN FEATURES

- Class A
- SCREW compressers
- High efficiency shell and tube evaporator
- High efficiency shell and tube condenser
- Linear capacity modulation 25 ...100%
- 2 refrigeration circuits

AVAILABLE VERSIONS

- Leaving water low temperature version
- Partial heat recovery

Advantages

- Class A
- 2 refrigeration circuits
- Plug and play, reliable and robust
- Evaporator water outlet down to -11°C
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- Input port on additonal control module (optional) for ambient air temperature
- Service valves on discharge and liquid line
- Wide operating limits

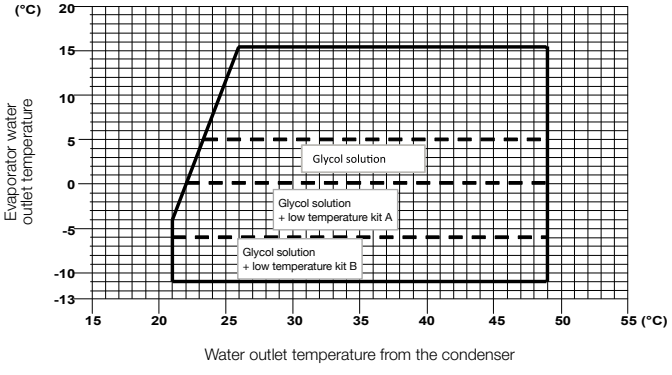
Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
171	Antivibration mounts - rubber - supplied loose
450	Desuperheater
550	Stop valve on compressor suction line
731	Water flow switch
780	Sound-insulating casing
919	Clock card
923	COM MBUS/JBUS serial card
926	LON serial card
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection



EWSL A 410 / 1610 Cooling only TECHNICAL SPECIFICATIONS

SIZE		410	460	510	540	610	700	790	940	1050	1110	1140	1310	1460	1610
COOLING ONLY															
Cooling capacity (1)	kW	408	458	507	540	607	701	790	932	1041	1105	1139	1304	1453	1604
Compressors absorbed power	kW	80.6	90.2	99.9	106	120	137	156	184	206	217	224	256	286	317
Nominal operating current Compressors	A	134	142	162	181	194	230	264	290	326	340	359	415	455	504
EVAPORATOR															
Evaporator water flow	m³/h	70	78.6	87	92.6	104	120	136	160	179	190	195	224	249	275
Evaporator pressure loss	kPa	12	18	19	21	24	16	13	19	26	27	23	28	36	45
CONDENSER															
Condenser water flow	m³/h	84.6	94.9	105	112	126	145	164	193	216	229	236	270	301	333
Condenser pressure loss	kPa	10	13	16	1	22	21	25	19	21	25	23	19	19	22
PARTIAL HEAT RECOVERY (2)															
Heating capacity	kW	53	59.5	65.9	70.2	78.9	91.1	103	121	135	144	148	170	189	209
Heat recovery exchanger water flow	m³/h	9.1	10.3	11.3	12.1	13.6	15.7	17.7	20.9	23.3	24.8	25.5	29.2	32.5	35.9
Heat recovery pressure loss	kPa	4.6	4.2	3.7	3.5	3.3	3.4	3.8	4.6	5.2	7.2	8.3	10.9	13.5	16.5
COMPRESSORS		TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW
Quantity	n.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Maximum operating current	A	185.8	194.4	219.6	238.4	271.8	310.8	347.8	391.4	441.8	466.2	497.2	569.6	640.6	713.6
Starting current	A	354.9	377.2	460.8	614.2	359.9	435.4	453.9	549.7	594.9	686.1	791.6	835.8	1023.3	1147.8
Number of capacity steps		25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100	25...100
EVAPORATOR	N.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water volume	l	149	142	255	255	255	255	237	229	276	276	370	368	357	431
Maximum water flow	m³/h	95	100	127	127	127	127	154	172	172	172	220	245	267	312
CONDENSER	N.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Water volume	l	78	78	99	99	99	99	109	109	135	135	155	171	182	210
Maximum water flow	m³/h	98	98	116	116	116	116	170	186	216	216	240	260	284	320
HEATING PARTIAL HEAT RECOVERY EXCHANGER	N.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Water volume	l	14.4	14.4	19.2	19.2	19.2	27	37	32	34	34	39	39	54	54
Maximum water flow	m³/h	37	37	37	37	37	37	37	67	67	67	67	67	67	67
REFRIGERANT		R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	R134A	
Total refrigerant load (excluding options)	kg	65	65	155	155	155	155	142	136	130	130	121	180	176	172
Number of refrigerant circuits	n.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
SUPPLY VOLTAGE	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
ENERGY EFFICIENCY RATIOS															
EER	kW/kW	5.06	5.08	5.08	5.09	5.06	5.12	5.06	5.07	5.05	5.09	5.08	5.09	5.08	5.06
ESEER – Eurovent Standard		5.41	5.34	5.68	5.72	5.12	5.19	5.16	5.08	5.06	5.16	5.04	5.04	5.1	4.99
IPLV – ARI Standard 550/590		5.72	5.42	5.77	6.04	5.44	5.51	5.49	5.37	5.34	5.46	5.17	5.18	5.24	5.12
SOUND LEVELS															
Average sound pressure level [Lpm] (3)	dB(A)	74	74	74	79	79	79	82	82	82	82	82	84	84	84
Sound power level (Lw) (4)	dB(A)	91.8	91.8	91.8	96.8	96.8	97.6	100.6	100.6	101.2	101.2	101.2	103.6	103.6	103.6
DIMENSIONS															
Length	mm	3359.5	3359.5	3349.5	3349.5	3435	3514	3894	3894	3894	3932.5	3874	4273	4273	4352
Width	mm	975	975	1013	1013	1007	1060	1210	1210	1210	1218	1287	1284	1284	1284
Height	mm	1498	1498	1618	1618	1740	1780	1888	1888	1888	1890	1975	2084	2084	2108
NET WEIGHT	KG	3237	3268	3498	3590	3720	3967	4071	4835	4949	5031	5549	6407	6537	6814
HYDRAULIC CONNECTIONS															
EVAPORATOR															
Inlet outlet diameter	Ømm	168.3	168.3	168.3	168.3	168.3	168.3	219.1	219.1	219.1	219.1	219.1	219.1	273	273
CONDENSER															
Inlet outlet diameter – (ISO228/1)	n x Ø	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	--	--	--	--
Inlet outlet diameter	n x Ømm	--	--	--	--	--	--	--	--	--	--	2 x 114.3	2 x 114.3	2 x 114.3	2 x 141.3
PARTIAL HEAT RECOVERY EXCHANGER															
Inlet outlet diameter – ISO228/ (ISO228/1)	n x Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

EWSL A+ 620 / 1180

Cooling only

SCREW COMPRESSORS
CLASS A+

R-134a

Class A+

- Cooling capacities from 620 to 1160 kW
- 7 sizes
- Refrigerant: R134a
- EER up to 5.61
- ESEER up to 6.55

MAIN FEATURES

- Class A+
- SCREW compressers
- High efficiency shell and tube evaporator
- High efficiency shell and tube condenser
- Linear capacity modulation 25 ...100%
- 2 refrigeration circuits

AVAILABLE VERSIONS

- Leaving water low temperature version
- Partial heat recovery

Advantages

- Class A+
- Very high level of energy efficiency
- 2 refrigeration circuits
- Plug and play, reliable and robust
- Evaporator water outlet down to -11°C
- Universal communication electronic control system, easy to read and easy access to information
- Electronic expansion valve as standard
- Input port on additonal control module (optional) for ambient air temperature
- Service valves on discharge and liquid line
- Wide operating limits

Main accessories and options

Code	
118	Kit A leaving chilled water low temperature operation
119	Kit B leaving chilled water low temperature operation
171	Antivibration mounts - rubber - supplied loose
450	Desuperheater
550	Stop valve on compressor suction line
731	Water flow switch
780	Sound-insulating casing
919	Clock card
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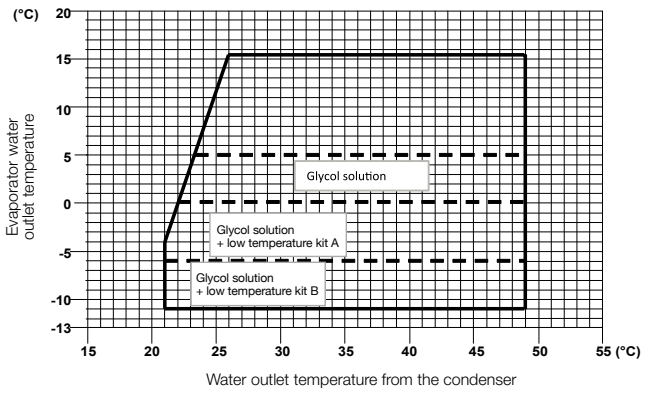
931	BACnet Ethernet - SNMP - TCP/IP serial card
932	BACnet MS/TP serial card
942	Serial card for GSM modem
943	Data logger

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Cooling operating limits

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.



EWSL A+ 620 / 1180 Cooling only TECHNICAL SPECIFICATIONS

SIZE		620	720	820	970	1080	1150	1180
COOLING ONLY (1)								
Cooling capacity	kW	623	717	813	961	1064	1123	1160
Compressors absorbed power	kW	111	131	147	175	197	208	214
Nominal operating current Compressors	A	179	218	251	277	317	328	347
EVAPORATOR								
Evaporator water flow	m³/h	107	123	140	165	183	193	199
Evaporator pressure loss	kPa	11	16	25	15	20	22	25
CONDENSER								
Condenser water flow	m³/h	127	147	166	197	218	230	238
Condenser pressure loss	kPa	22	4	40	55	8	5	4
PARTIAL HEAT RECOVERY (2)								
Heating capacity	kW	81.1	93.2	106	125	138	146	151
Heat recovery exchanger water flow	m³/h	14	16	18.2	21.5	23.8	25.1	26
Heat recovery pressure loss	kPa	3.4	3.5	4	4.9	5.4	7.4	8.6
COMPRESSORS		TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW	TWIN-SCREW
Quantity	n.	2	2	2	2	2	2	2
Maximum operating current	A	272	311	348	391	442	466	497
Starting current	A	360	435	454	550	595	686	792
Number of capacity steps	%	25 ...100	25 ...100	25 ...100	25 ...100	25 ...100	25 ...100	25 ...100
EVAPORATOR	**N.**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Water volume	l	382	359	348	425	625	724	724
Maximum water flow	m³/h	208	241	265	385	407	440	440
CONDENSER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	267	213	297	342	297	342	366
Maximum water flow	m³/h	204	204	252	326	326	362	362
PARTIAL HEAT RECOVERY EXCHANGER	**N.**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Water volume	l	19.2	27	37	32	34	34	39
Maximum water flow	m³/h	37	37	37	67	67	67	67
REFRIGERANT		**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**	**R134A**
Total refrigerant load (excluding options)	kg	171	171	156	216	216	211	211
Number of refrigerant circuits	n.	2	2	2	2	2	2	2
SUPPLY VOLTAGE	**V/Ph/Hz**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
ENERGY EFFICIENCY RATIOS								
EER	kW/kW	5.61	5.47	5.53	5.49	5.4	5.4	5.42
ESEER - Eurovent Standard		6.14	6.18	6.16	6.1	6.13	6.18	5.98
IPLV - ARI Standard 550/590		6.55	6.53	6.54	6.46	6.45	6.52	6.2
SOUND LEVELS								
Average sound pressure level [Lpm] (3)	dB(A)	79	79	82	82	82	82	82
Sound power level (Lw) (4)	dB(A)	96.8	96.8	97.6	97.6	97.6	98.2	98.2
DIMENSIONS								
Length	mm	3514	3514	3982	3818	3818	3818	3818
Width	mm	1060	1060	1057.5	1269	1269	1269	1269
Height	mm	1770	1770	1770	1991	1991	1991	1991
NET WEIGHT	**KG**	**4009**	**4051**	**4325**	**5439**	**5459**	**5565**	**5649**
HYDRAULIC CONNECTIONS								
EVAPORATOR								
Inlet outlet diameter	Ømm	168.3	219.1	219.1	219.1	219.1	219.1	273
CONDENSER								
Inlet outlet diameter – (ISO228/1)	Ø	3"	3"	3"	--	--	--	--
Inlet outlet diameter	Ømm	--	--	--	114.3	114.3	114.3	114.3
PARTIAL HEAT RECOVERY EXCHANGER								
Inlet outlet diameter – ISO228/ (ISO228/1)	n x Ø	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"	2 x 2"

(1) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser.
(2) Gross value - chilled water temperature 12/7°C; 30/35°C on condenser and heat recovery water temperature 40/45°C.
(3) Sound pressure level [Lpm] at 1m far according to ISO EN 3744
(4) Sound power level [Lw] according to ISO EN 9614-2.

CHILLED WATER TERMINAL UNITS

Wesper

FCW
Concealed

FCCW
Cabinet fitted

MAIN FEATURES

- Cooling capacities between 0.9 and 11 kW
- Can be combined with the entire range of KRONO and ADVANCE liquid chillers.
- Horizontal or vertical configuration
- Cabinet fitted or concealed version
- 4 installation options:
  - FCW 3R: concealed with 2 pipes
  - FCCW 3R: cabinet fitted with 2 pipes
  - FCW 3R+1: concealed with 4 pipes
  - FCCW 3R+1: cabinet fitted with 4 pipes
- Different options for air intake or air discharge:
  - FCCW: version V vertical
  - FCCW: version H horizontal
  - FCW: version V vertical
  - FCW: version H horizontal

Advantages

Water terminal units for the hotel and offices sector.
The FCW-FCCW is a terminal unit equipped with centrifugal fan. It features a modern design and can be installed in any environment.

Options

ENERGY EFFICIENCY
- Brushless DC motor

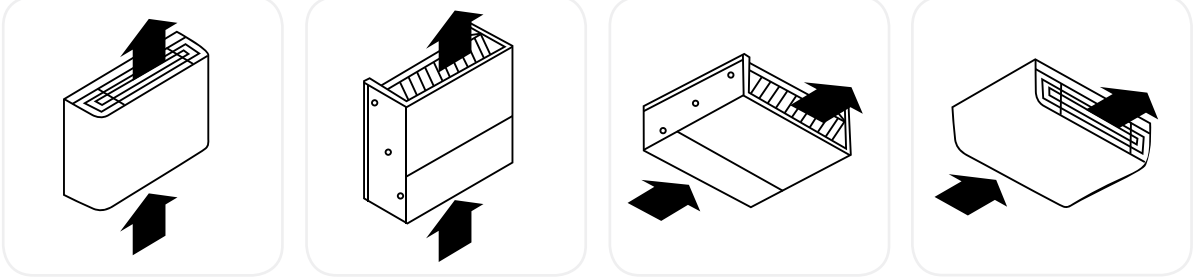
UNIT INSTALLATION
- High pressure motors to 60 Pa
- 3-way valve for 2-pipe model
- Shut-off valve and control valve for 2-pipe model
- 3-way valve for 4-pipe model
- Shut-off valve and control valve for 4-pipe model
- Secondary condensate tray
- Support base

CONTROLS
- Electronic thermostat

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options



FCW 3R / FCCW 3R (2 pipes) TECHNICAL SPECIFICATIONS

MODEL		10	15	20	25	30	40
Water cooling capacity	kW	0.9	1.3	2.2	2.5	3.1	3.5
Water cooling capacity (*)	kW	0.9	1.7	2.5	2.8	3.9	4.4
Water cooling capacity	T.R.	0.2	0.4	0.6	0.7	0.9	1.0
Water heating capacity 50°C	kW	1.3	1.9	2.6	3.3	3.7	4.5
Water heating capacity 50°C (*)	kW	1.6	2.3	3.0	3.6	4.4	4.9
Water heating capacity 70/60°C	kW	2.2	3.2	4.4	5.5	6.2	7.5
Absorbed power	W	30	30	40	50	60	80
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1	230.1
Air flow (1)	m^3/h	227	289	404	453	575	685
Air flow (*)	m^3/h	277	410	533	530	811	815
Water flow	l/h	148	220	373	435	535	662
Water connections	Ø (")	3/4	3/4	3/4	3/4	3/4	3/4
Sound pressure (2)	dB(A)	37	36	35	38	38	43
Sound pressure (2) (*)	dB(A)	50	56	50	52	56	57
Weight	kg	15.6	18.9	23.7	23.9	27.7	27.9
Dimensions (height x length x width) (2)	mm	480x660x225	480x860x225	480x1060x225	480x1060x225	480x1260x225	480x1260x225
MODEL		**50**	**60**	**70**	**80**	**100**	**110**
Water cooling capacity	kW	4.1	5.6	6.9	8.0	10.0	11.0
Water cooling capacity (*)	kW	5.4	7.2	7.5	8.7	-	-
Water cooling capacity	T.R.	1.2	1.6	2.0	2.3	2.8	3.1
Water heating capacity 50°C	kW	5.1	6.7	8.1	10.1	13.1	13.3
Water heating capacity 50°C (*)	kW	5.8	8.2	8.7	10.9	-	-
Water heating capacity 70/60°C	kW	8.6	11.3	13.7	16.9	22.0	23.8
Absorbed power	W	70	160	180	213	277	273
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1	230.1
Air flow (1)	m^3/h	708	1058	1242	1356	2012	2003
Air flow (*)	m^3/h	864	1513	1416	1505	-	-
Water flow	l/h	745	961	1187	1376	1727	1898
Water connections	Ø (")	3/4	3/4	3/4	3/4	3/4	3/4
Sound pressure (2)	dB(A)	43	49	55	54	58	57
Sound pressure (2) (*)	dB(A)	58	68	68	66	-	-
Weight	kg	32.7	38.0	38.5	50.0	58.5	59.0
Dimensions (height x length x width) (2)	mm	585x1260x225	585x1460x225	585x1460x225	602x1660x257	602x1960x257	602x1960x257

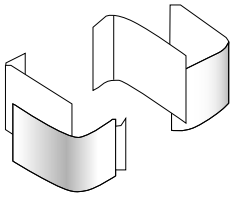
FCW 3R+1/ FCCW 3R+1 (4 pipes) TECHNICAL SPECIFICATIONS

MODEL		10	15	20	25	30	40
Water cooling capacity	kW	0.8	1.2	20.8	2.4	2.8	3.7
Water cooling capacity (*)	kW	0.9	1.6	2.6	2.7	3.7	4.2
Water cooling capacity	T.R.	0.2	0.3	5.9	0.7	0.8	1.0
Water heating capacity 70/60°C	kW	1.3	1.9	2.7	2.9	3.5	4.1
Water heating capacity 70/60°C (*)	kW	1.6	2.3	3.2	3.2	4.2	4.5
Absorbed power	W	30	30	40	56	60	80
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1	230.1
Air flow (1)	m^3/h	216	275	384	430	546	651
Air flow (*)	m^3/h	264	391	507	503	770	775
Water flow	l/h	144	212	358	409	509	635
Water connections	Ø (")	3/4	3/4	3/4	3/4	3/4	3/4
Sound pressure (2)	dB(A)	36	38	35	38	37	44
Sound pressure (2) (*)	dB(A)	50	56	50	52	56	57
Weight	kg	15.6	18.9	23.7	23.9	27.7	27.9
Dimensions (height x length x width) (2)	mm	480x660x225	480x860x225	480x1060x225	480x1060x225	480x1260x225	480x1260x225
MODEL		**50**	**60**	**70**	**80**	**100**	**110**
Water cooling capacity	kW	4.5	2.4	6.6	7.7	9.7	10.7
Water cooling capacity (*)	kW	5.2	6.8	7.2	8.4	-	-
Water cooling capacity	T.R.	1.3	0.7	1.9	2.2	2.8	3.0
Water heating capacity 70/60°C	kW	5.0	6.2	7.7	8.4	10.1	11.4
Water heating capacity 70/60°C (*)	kW	5.7	7.6	8.2	9.1	-	-
Absorbed power	W	78	160	180	182	273	273
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1	230.1
Air flow (1)	m^3/h	673	1005	1180	1291	1916	1908
Air flow (*)	m^3/h	821	1437	1345	1433	-	-
Water flow	l/h	769	920	1130	1330	1673	1837
Water connections	Ø (")	3/4	3/4	3/4	3/4	3/4	3/4
Sound pressure (2)	dB(A)	44	50	56	54	58	58
Sound pressure (2) (*)	dB(A)	58	68	68	66	-	-
Weight	kg	32.7	38.0	38.5	50.0	58.5	59.0
Dimensions (height x length x width) (2)	mm	585x1260x225	585x1460x225	585x1460x225	602x1660x257	602x1960x257	602x1960x257

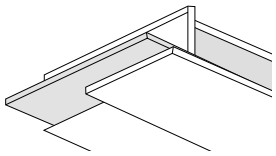
(1) 0 Pa static pressure available
(2) Considered 8.6 dB(A) less in relation to the sound power in an area of 90 m^3 with a reverberation time of 0.5 sec.

Data calculated at full speed
(*) At speed 6: configurable on request

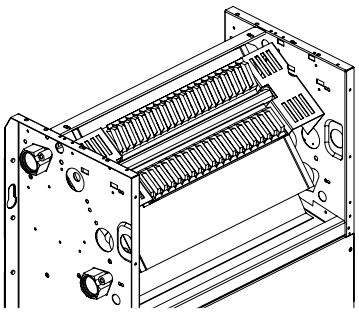
Options



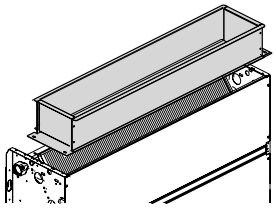
Fancoil supports kit



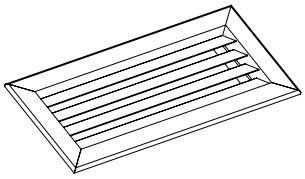
Secondary trays for condensates



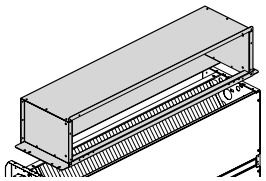
Electric heating coils. Safety thermostat included (230-i)



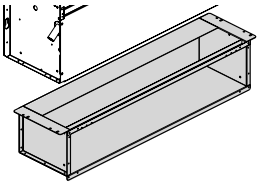
Supply plenum for units without cabinet



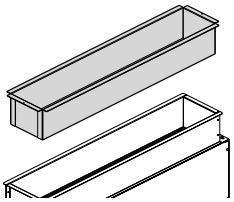
Adjustable air grilles for units without cabinet



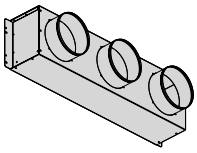
90º supply plenum for unit without cabinet



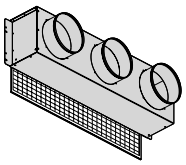
Return air plenum for units without cabinet



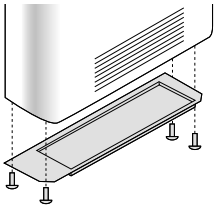
Extension for straight and 90º plenum for units without cabinet



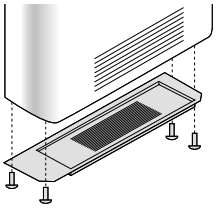
Supply plenum with spigots for unit without cabinet



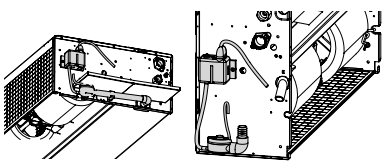
Return air plenum with spigots and filter for units without cabinet



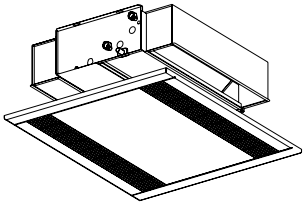
Painted lower panel without grille for units without cabinet



Painted lower panel with filter and grille for units with cabinet

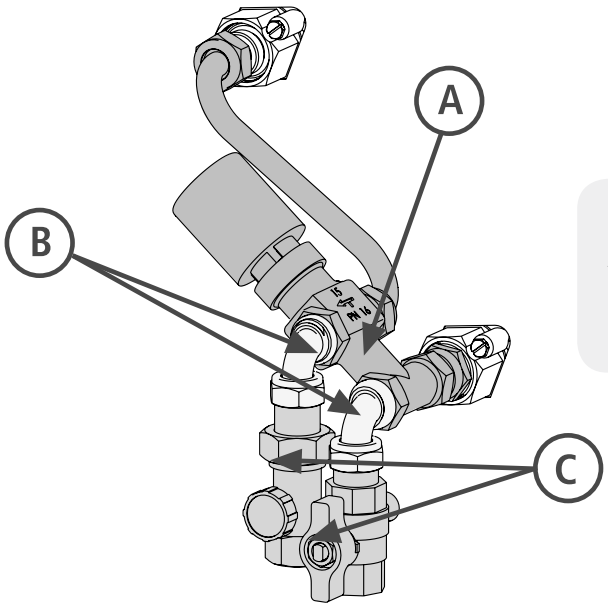


Condensate pumps



Painted ceiling panel plus return air plenum and 90° supply plenum for units without cabinet

Options



COMPONENTS

A. Valve + actuator
B. Elbow connectors
C. Shut-off/control valve

IMPORTANT:

The elbow connectors are not supplied with the valves.
To be ordered separately.

FOR MODELS	DESCRIPTION	Ø "
FCW 1-6	2-pipe, 3-way system	1/2
FCW 1-6	2-pipe, 3-way system floating at 3 points	1/2
FCW 1-6	2-pipe, 3-way system modulating 0-10 V	1/2
FCW 1-6	4-pipe, 3-way system	1/2 - 1/2
FCW 1-6	4-pipe, 3-way system floating at 3 points	1/2 - 1/2
FCW 1-6	4-pipe, 3-way system modulating 0-10 V	1/2 - 1/2
FCW 1-6	2-pipe, 2-way system	1/2
FCW 1-6	2-pipe, 3-way system floating at 3 points	1/2
FCW 1-6	2-pipe, 3-way system modulating 0-10 V	1/2
FCW 1-6	4-pipe, 2-way system	1/2 - 1/2
FCW 1-6	4-pipe, 3-way system floating at 3 points	1/2 - 1/2
FCW 1-6	4-pipe, 3-way system modulating 0-10 V	1/2 - 1/2
FCW 1-6	Shut-off/control valve. 2-pipe system	1/2
FCW 1-6	Shut-off/control valve. 4-pipe system	1/2 - 1/2
FCW 1-6	2 shut-off valves. 2-pipe system	1/2
FCW 1-6	2 shut-off valves. 4-pipe system	1/2 - 1/2
FCW 1-6	Elbow connectors. 2-pipe system	-
FCW 1-6	Elbow connectors. 4-pipe system	-
FCW 70-90	2-pipe, 3-way system	3/4
FCW 70-90	2-pipe, 3-way system floating at 3 points	3/4
FCW 70-90	2-pipe, 3-way system modulating 0-10 V	3/4
FCW 70-90	4-pipe, 3-way system	3/4 - 3/4
FCW 70-90	4-pipe, 3-way system floating at 3 points	3/4 - 3/4
FCW 70-90	4-pipe, 3-way system modulating 0-10 V	3/4 - 3/4
FCW 70-90	2-pipe, 2-way system	3/4
FCW 70-90	2-pipe, 2-way system floating at 3 points	3/4
FCW 70-90	2-pipe, 3-way system modulating 0-10 V	3/4
FCW 70-90	4-pipe, 2-way system	3/4 - 3/4
FCW 70-90	4-pipe, 2-way system floating at 3 points	3/4 - 3/4
FCW 70-90	4-pipe, 3-way system modulating 0-10 V	3/4 - 3/4
FCW 70-90	Shut-off/control valve. 2-pipe system	3/4
FCW 70-90	Shut-off/control valve. 4-pipe system	3/4 - 3/4
FCW 70-90	2 shut-off valves. 2-pipe system	3/4
FCW 70-90	2 shut-off valves. 4-pipe system	3/4 - 3/4
FCW 70-90	Elbow connectors. 2-pipe system	-
FCW 70-90	Elbow connectors. 4-pipe system	-

FOR MODELS	DESCRIPTION	Ø "
FCW 100-120	2-pipe, 3-way system	1
FCW 100-120	2-pipe, 3-way system floating at 3 points	1
FCW 100-120	2-pipe, 3-way system modulating 0-10 V	1 - 3/4
FCW 100-120	4-pipe, 3-way system	1 - 3/4
FCW 100-120	4-pipe, 3-way system floating at 3 points	1 - 3/4
FCW 100-120	4-pipe, 3-way system modulating 0-10 V	1
FCW 100-120	2-pipe, 2-way system	1
FCW 100-120	2-pipe, 2-way system floating at 3 points	1
FCW 100-120	2-pipe, 3-way system modulating 0-10 V	1 - 3/4
FCW 100-120	4-pipe, 2-way system	1 - 3/4
FCW 100-120	4-pipe, 2-way system floating at 3 points	1 - 3/4
FCW 100-120	4-pipe, 3-way system modulating 0-10 V	1
FCW 100-120	Shut-off/control valve. 2-pipe system	1 - 3/4
FCW 100-120	Shut-off/control valve. 4-pipe system	1
FCW 100-120	2 shut-off valves. 2-pipe system	1 - 3/4
FCW 100-120	2 shut-off valves. 4-pipe system	-
FCW 100-120	Elbow connectors. 2-pipe system	-
FCW 100-120	Elbow connectors. 4-pipe system	-

Other accessories

- Fresh air damper kits
- Rear closure panel for units with cabinet
- Supply grilles for units with cabinet
- Other accessories: please contact our Sales Department

FKW
With infrared remote control

FKWS
Without infrared remote control

MAIN FEATURES

- Cooling capacities between 2.4 and 7.6 kW
- 2 versions:
  - FKW (with own infrared remote control)
  - FKWS (without control and ready to be installed with wall-mounted control)
- 2 dimensions: 580x580 and 835x835 mm
- Removable filter. Easy maintenance
- Valves not installed. Supplied separately
- Integrated condensate drain pump
- Connector tubes supplied separately

Advantages

Units can be built into false ceilings for office buildings sector. The cassette fan coil is an ambient air handling terminal unit that works just as well in winter as in summer. Specially designed with standard dimensions for installation in false ceilings.

Options

ENERGY EFFICIENCY

- 3-way valve for 2-pipe model
- Shut-off valve and control valve for 2-pipe model
- Elbow connectors for 2-pipe installation
- 3-way valve for 4-pipe model
- Shut-off valve and control valve for 4-pipe model
- Elbow connectors for 4-pipe installation

CONTROLS

- Wall-mounted electronic thermostat

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

FKW Model with control **FKWS** Model without control. **2-pipe installation.** TECHNICAL SPECIFICATIONS

MODEL		21	22	23	24
Water cooling capacity 7/12ºC	kW	2.4	2.8	3.3	4.5
Water cooling capacity 7/12ºC	T.R.	0.7	0.8	0.9	1.3
Water heating capacity 50ºC	kW	3.4	3.8	4.5	5.3
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Standard water coil connections	Ø (")	3/4	3/4	3/4	3/4
Sound pressure (1)	dB(A)	50	50	53	55
Weight	kg	23.5	24.5	24.5	24.5
Dimensions (length x height x width)	mm	580x580x280+23	580x580x280+23	580x580x280+23	580x580x280+23
MODEL		**31**	**32**	**33**	**34**
Water cooling capacity 7/12ºC	kW	5.6	6.4	7.1	7.6
Water cooling capacity 7/12ºC	T.R.	1.6	1.8	2.0	2.2
Water heating capacity 50ºC	kW	7.3	7.3	8.0	8.3
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Standard water coil connections	Ø (")	3/4	1	1	1
Sound pressure (1)	dB(A)	47	49	52	52
Weight	kg	37	43	43	45
Dimensions (length x height x width)	mm	835x835x240+60	835x835x305+60	835x835x305+60	835x835x305+60

FKW Model with control **FKWS** Model without control. **4-pipe installation.** TECHNICAL SPECIFICATIONS

MODEL		41	42	43	44
Water cooling capacity 7/12ºC	kW	1.9	2.8	3.5	4.4
Water cooling capacity 7/12ºC	T.R.	0.5	0.8	1.0	1.3
Water heating capacity 60/70ºC	kW	1.9	2.8	3.5	4.4
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Standard water coil connections	Ø (")	3/4	3/4	3/4	3/4
Secondary water coil connections	Ø (")	1/2	1/2	1/2	1/2
Sound pressure (1)	dB(A)	50	50	53	55
Weight	kg	23.5	24.5	24.5	24.5
Dimensions (length x height x width)	mm	580x580x280+23	580x580x280+23	580x580x280+23	580x580x280+23
MODEL		**51**	**52**	**53**	**54**
Water cooling capacity 7/12ºC	kW	4.3	5.0	5.5	6.1
Water cooling capacity 7/12ºC	T.R.	1.2	1.4	1.5	1.7
Water heating capacity 70/60ºC	kW	5.9	6.6	7.3	8.6
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Standard water coil connections	Ø (")	3/4	1	1	1
Secondary water coil connections	Ø (")	1/2	3/4	3/4	3/4
Sound pressure (1)	dB(A)	47	49	52	52
Weight	kg	37	43	43	45
Dimensions (length x height x width)	mm	835x835x240+60	835x835x305+60	835x835x305+60	835x835x305+60

(1) Considered 8.6 dB(A) less in relation to the sound power in an area of 90 m^3 with a reverberation time of 0.5 sec.
Data calculated at full speed

FPW

Wall mounted fan coil unit

MAIN FEATURES

- Cooling capacities between 2.0 and 4.0 kW
- Easy maintenance
- Valves built into the unit
- 4 versions:
  - FPW (with own infrared remote control)
  - FPWS (without control and ready to be installed with wall-mounted control)
  - FPW+V3 (with infrared remote control and with 3-way valve)
  - FPWS+V3 (without infrared remote control and with 3-way valve)

Advantages

Solutions for low requirements with difficult installation location. The wall mounted fan coil unit is an ambient air handling terminal unit that works just as well in winter as in summer. It features an attractive design and outstanding comfort, with minimal sound levels.

FPW TECHNICAL SPECIFICATIONS

MODEL		20	25	35	40
Cooling capacity (1)	kW	2.0	2.4	3.3	4.0
Cooling capacity (1)	T.R.	0.6	0.7	0.9	1.1
Heating capacity (2)	kW	2.6	3.0	4.4	4.9
Heating capacity (3)	kW	4.4	5.0	7.5	8.3
Absorbed power	W	29	29	48	51
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Water flow	l/h	336	409	573	686
Water connections	Ø (")	1/2	1/2	1/2	1/2
Sound pressure (4)	db(A)	45	45	45	48
Dimensions (width x length x height)	mm	880x298x205	990x305x210	1172x360x220	1172x360x220
Weight	kg	11.5	12.4	19	20.5

(1) Water inlet 7ºC, water outlet 12ºC. Air temperature 27ºC dry bulb, 19ºC wet bulb.
(2) Water inlet 50ºC. Air temperature 20ºC
(3) Water inlet 60/70ºC. Air temperature 20ºC
(4) Considered 8.6 dB(A) less in relation to the sound power in an area of 90 m^3 with a reverberation time of 0.5 sec.
Data calculated at full speed
0 Pa external static pressure

BHW

Low silhouette ductable fan coil unit

MAIN FEATURES

- Cooling capacities between 4.5 and 25 kW
- Easy maintenance
- Maximum adaptability to the needs of the facility

Advantages

Flexible and versatile applications for water-based installations. The low silhouette ductable fan coil units are fitted with a heat exchanger constructed from copper tubes and aluminium fins. Centrifugal fans operated by three-speed motors.

Options

AIR QUALITY
- G4 gravimetric filter on return

SOUND LEVEL
- Double thermal-acoustic insulation

UNIT INSTALLATION
- 60Hz power supply and voltages of 230, 208 etc.
- Electrical board with fan contact, thermal and magneto-thermal relay
- Potentiated motors (depending on model)
- Opposite side connectors
- Supply plenum with grille
- Supply plenum with spigots (depending on the model)
- Thermal-acoustic insulation class M0
- Flame-proof filter class M0
- Hot water heating coils
- Additional coil for 4-pipe operation
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Filter with bottom outlet
- Adaptable filter
- Main switch
- Suitable for vertical installation

MAINTENANCE
- Dirty filter detector
- Ductable filter

CONTROLS
- Compatible with Hydrofan
- Alarm signals
- Smoke detection
- Remote start/stop

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

BHW TECHNICAL SPECIFICATIONS

MODEL		174	205	358	410
Cooling capacity water temp. 7°C	Speed I-II-III (kW)	3.1 - 4.1 - 4.5	4.4 - 5.0 - 5.3	6.0 - 5.9 - 8.9	7.9 - 9.1 - 10.8
Heating capacity water temp. 50°C	Speed I-II-III (kW)	4.5 - 5.8 - 6.3	6.4 - 7.1 - 7.5	8.6 - 9.7 - 11.9	11.1 - 12.6 - 14.9
Heating capacity water temp. 70°C	Speed I-II-III (kW)	7.6 - 9.8 - 10.7	10.8 - 12.1 - 12.7	14.6 - 16.5 - 20.1	18.8 - 21.4 - 25.2
Total absorbed power	kW	0.2	0.3	0.5	0.6
Voltage (50 Hz~)	V	230.1	230.1	230.1	230.1
Water flow speed I-II-III	l/h	530 - 690 - 760	760 - 850 - 895	1030 - 1180 - 1440	1360 - 1560 - 1850
Air flow speed I-II-III	m^3/h	600 - 900 - 1050	950 - 1130 - 1220	1100 - 1340 - 1850	1400 - 1700 - 2200
External static pressure speed I-II-III	mm WG	2 - 2.5 - 3	2.5 - 3 - 4	6 - 7 - 8	6 - 7.5 - 8
Water connection	Ø (")	3/4	3/4	3/4	3/4
Dimensions (width x length x height)	mm	829x791x219	829x791x258	915x791x285	915x791x315
Net weight	kg	30	34	44	45

MODEL		515	720	724
Cooling capacity water temp. 7°C	Speed I-II-III (kW)	12.2 - 13.9 - 15.3	20.2	25.0
Heating capacity water temp. 50°C	Speed I-II-III (kW)	16.1 - 18.2 - 19.7	26.5	32.7
Heating capacity water temp. 70°C	Speed I-II-III (kW)	27.2 - 30.8 - 33.5	44.8	55.5
Total absorbed power	kW	0.6	0.8	1.6
Voltage (50 Hz~)	V	230.1	230.1	230.1
Water flow speed I-II-III	l/h	2090-2360-2565	3365	4190
Air flow speed I-II-III	m^3/h	2200-2600-2900	3850	5200
External static pressure speed I-II-III	mm WG	3 - 4 - 5.5	5	5
Water connection	Ø (")	1	1 1/4	1 1/4
Dimensions (width x length x height)	mm	1200x826x352	1350x900x412	1350x900x412
Net weight	kg	62	80	80

BSW

High static pressure ductable fan coil unit

MAIN FEATURES

- Cooling capacities between 3.6 and 50.6 kW
- High external static pressure: from 105 Pa
- Standard model without filter. EU3 filter optional
- 2 versions: BSW H (horizontal installation) and BSW V (vertical installation)
- Easy maintenance

Advantages

Flexible and versatile applications for water-based installations. The ductable fan coil units are designed to be installed in false ceilings thanks to their low height.

Options

AIR QUALITY
- Air filter

UNIT INSTALLATION
- 3-way valve for 2-pipe model
- Shut-off valve and control valve for 2-pipe model
- Elbow connectors for 2-pipe installation
- 3-way valve for 4-pipe model
- Shut-off valve and control valve for 4-pipe model
- Elbow connectors for 4-pipe installation
- Hot water coil
- Electric coil
- Condensate tray

CONTROLS
- Wall-mounted electronic thermostat

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

BSW H/BSW V (2 pipes) TECHNICAL SPECIFICATIONS

MODEL		10	20	30	40
Cooling capacity (1)	kW	3.8	7.1	9.2	10.6
Cooling capacity (1)	T.R.	2.8	5.7	8.5	11.4
Heating capacity (2)	kW	5.0	8.6	11.3	12.9
Maximum absorbed power	W	155	195	325	355
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Air flow	m^3/h	895	1423	1951	2131
External static pressure	Pa	105	105	135	135
Water flow	l/h	606.5	1092.2	1489.1	1684.3
Water connections	Ø (")	1/2	1/2	3/4	3/4
Sound pressure (3)	db(A)	59.4	57.4	61.4	60.4
Dimensions (length x height x width) H	mm	650x300x533	1000x300x533	1100x325x533	1340x325x533
Dimensions (length x height x width) V	mm	738x330x603	1088x330x603	1188x355x623	1428x355x623
Weight	kg	28	36	41	46

BSW H/BSW V (2 pipes) TECHNICAL SPECIFICATIONS

MODEL		50	60	70
Cooling capacity (1)	kW	13.1	27.8	50.6
Cooling capacity (1)	T.R.	3.7	7.9	14.4
Heating capacity (2)	kW	17.0	32.9	60.9
Maximum absorbed power	W	525	1300	2400
Power supply (50 Hz ~)	V	230.1	230.1	230.1
Air flow	m^3/h	3002	4678	9250
External static pressure	Pa	205	260	260
Water flow	l/h	1945.0	4234.6	7802.1
Water connections	Ø (")	1	1 1/4	1 1/2
Sound pressure (3)	dB(A)	66.4	69.4	72.4
Dimensions (length x height x width) H	mm	1340x375x533	1341x675x853	2028x675x853
Dimensions (length x height x width) V	mm	1428x405x723	1481x703x1294	2168x703x1294
Weight	kg	57	117	192

(1) Water inlet 7°C, water outlet 12°C. Air temperature 27°C dry bulb, 19°C wet bulb
(2) Water inlet 50°C. Air temperature 20°C
(3) Considered 8.6 dB(A) less in relation to the sound power in an area of 90 m^3 with a reverberation time of 0.5 sec.
Data calculated at full speed

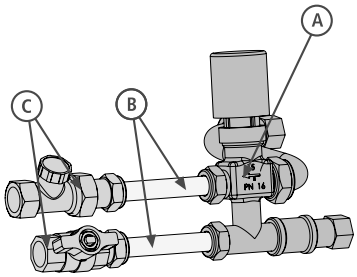
BSW H/BSW V (4 pipes) TECHNICAL SPECIFICATIONS

MODEL		10	20	30	40
Cooling capacity (1)	kW	3.6	7.0	9.0	9.6
Cooling capacity (1)	T.R.	1.0	2.0	2.6	2.7
Heating capacity (2)	kW	4.2	7.0	9.2	10.6
Maximum absorbed power	W	155	195	325	355
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Air flow	m^3/h	795	1353	1850	2025
External static pressure	Pa	95	90	120	120
Water flow	l/h	606.5	1092.2	1489.1	1684.3
Water connections	Ø (")	1/2	1/2	3/4	3/4
Sound pressure (3)	dB(A)	60.4	57.4	61.4	61.4
Dimensions (length x height x width) H	mm	650x300x533	1000x300x533	1100x325x533	1340x325x533
Dimensions (length x height x width) V	mm	738x330x603	1088x330x603	1188x355x623	1428x355x623
Weight	kg	28	36	41	46

MODEL		50	60	70
Cooling capacity (1)	kW	13.6	24.9	45.5
Cooling capacity (1)	T.R.	3.9	7.1	12.9
Heating capacity (2)	kW	12.7	38.8	70.2
Maximum absorbed power	W	525	1300	2400
Power supply (50 Hz ~)	V	230.1	230.1	230.1
Air flow	m^3/h	3036	4445	8788
External static pressure	Pa	180	220	220
Water flow	l/h	1945.0	4234.6	7802.1
Water connections	Ø (")	1	1 1/4	1 1/2
Sound pressure (3)	dB(A)	64.4	69.4	72.4
Dimensions (length x height x width) H	mm	1340x375x533	1341x675x853	2028x675x853
Dimensions (length x height x width) V	mm	1428x405x723	1481x703x1294	2168x703x1294
Weight	kg	57	117	192

(1) Water inlet 7°C, water outlet 12°C. Air temperature 27°C dry bulb, 19°C wet bulb
(2) Water inlet 60/70°C. Air temperature 20°C

Options



COMPONENTS

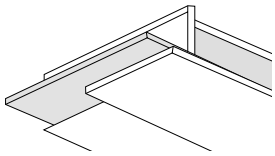
A. Valve + actuator
B. Interconnection tube
C. Shut-off/control valve

IMPORTANT:

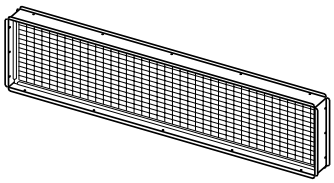
The elbow connectors are not supplied with the valves.
To be ordered separately.

Valves, 2-pipe and 4-pipe installation

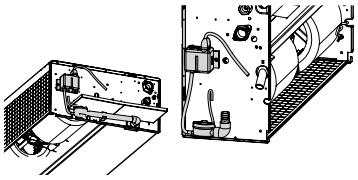
VALVE MODEL	BSW 10 Ø (")	BSW 20 Ø (")	BSW 30 A 50 Ø (")	BSW 60 Ø (")	BSW 70 Ø (")
2-pipe, 3-way system	1/2	3/4	1	1 1/2	2
2-pipe, 3-way system floating at 3 points	1/2	3/4	1	1 1/2	2
2-pipe, 3-way system modulating 0-10 V	1/2	3/4	1	1 1/2	2
4-pipe, 3-way system	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
4-pipe, 3-way system floating at 3 points	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
4-pipe, 3-way system modulating 0-10 V	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
2-pipe, 2-way system	1/2	3/4	1	1 1/2	2
2-pipe, 2-way system floating at 3 points	1/2	3/4	1	1 1/2	2
2-pipe, 2-way system modulating 0-10 V	1/2	3/4	1	1 1/2	2
4-pipe, 2-way system	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
4-pipe, 2-way system floating at 3 points	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
4-pipe, 2-way system modulating 0-10 V	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
Shut-off/control valve. 2-pipe system	1/2	3/4	1	1 1/2	2
Shut-off/control valve. 4-pipe system	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
2 shut-off valves. 2-pipe system	1/2	3/4	1	1 1/2	2
2 shut-off valves. 4-pipe system	1/2 - 1/2	3/4 - 1/2	1 - 3/4	1 1/2 - 1 1/2	2 - 1 1/2
Interconnection tube for 2-pipe system	-	-	-	-	-
Interconnection tube for 4-pipe system	-	-	-	-	-



Secondary trays for condensates



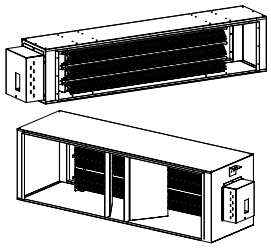
Air filter



Condensate pumps

Secondary hot water coils
1 row for 4-pipe systems

For models	kW
BSW 10	4.2
BSW 20	7
BSW 30	9.2
BSW 40	10.5
BSW 50	14
BSW 60	38.8
BSW 70	70.2



Electric heating coils

Electric heating coils

For models	kW
BSW 10	3
BSW 10	4.5
BSW 20	6
BSW 20	6
BSW 30	9
BSW 30	9
BSW 40	9
BSW 40	9
BSW 50	12
BSW 50	12
BSW 60	12
BSW 60	18
BSW 70	18
BSW 70	24

Other optional accessories

- 4-row coils
- 5-row coils
- 6-row coils
- Fresh air intake damper section
- Supply plenum
- Return air plenum

EHW

Horizontal ductable fan coil unit

MAIN FEATURES

- Cooling capacities between 18 and 110 kW
- Air flows up to 18000 m³/h
- Can be integrated with the Hydrofan system
- Outside installation option

Advantages

Flexible and versatile applications for water-based installations. The EHW series is composed of units designed to supplement and optimise air conditioning with hydronic systems. They are fitted with a heat exchanger constructed with copper tubes and aluminium fins and centrifugal fans operated by belt-driven motors.

Options

ENERGY EFFICIENCY

- Double mixing box with 3 dampers for free cooling
- Radial EC fan

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return, class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL

- Double thermal-acoustic insulation

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc. (depending on model)
- Kit for bad weather installation
- Upgraded motors
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Opposite side connectors
- Base frame
- Horizontal air discharge
- Hot water heating coils
- Heating coils for use on 4-tube system
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Possibility of disassembling

MAINTENANCE

- Dirty filter detector
- Ductable filter

CONTROLS

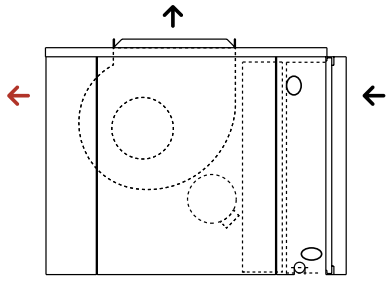
- Compatible with Hydrofan
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options

→ standard → optional



EHW TECHNICAL SPECIFICATIONS

MODEL		518	725	830	1036	1042	1250
Cooling capacity water temp. 7ºC	kW	18.0	25.0	30.0	36.0	42.0	50.0
Cooling capacity water temp. 50ºC	kW	26.7	36.0	32.9	50.0	57.7	69.9
Cooling capacity water temp. 85ºC	kW	59.3	79.2	94.2	110.0	127.0	145.0
Cooling capacity water temp. 7ºC	T.R.	5.1	7.1	8.5	10.2	11.9	14.2
Cooling capacity water temp. 50ºC	T.R.	7.6	10.2	9.4	14.2	16.4	19.9
Cooling capacity water temp. 85ºC	T.R.	16.9	22.5	26.8	31.3	36.1	41.2
Total absorbed power	kW	0.6	0.8	1.1	0.8	1.1	1.5
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3
Water flow	l/s	2978	4637	5381	6028	6841	7753
Air flow	m^3/h	3500	4200	5200	5500	6500	8200
External static pressure	mm WG	8.0	10.5	7.4	10.8	8.0	7.0
Water connections	Ø (")	1 1/4	1 1/2	1 1/2	2	2	2
Dimensions (length x width x height)	mm	1085x750x580	1130x900x650	1130x900x650	1700x870x650	1700x870x650	1700x870x650
Net weight	kg	108	150	150	214	214	217

MODEL		1657	2069	2476	3097	35110
Cooling capacity water temp. 7ºC	kW	57.0	69.0	76.0	97.0	110.0
Cooling capacity water temp. 50ºC	kW	82.8	100.0	110.0	132.0	155.0
Cooling capacity water temp. 85ºC	kW	183.0	220.0	241.0	290.0	342.0
Cooling capacity water temp. 7ºC	T.R.	16.2	19.6	21.6	27.6	31.3
Cooling capacity water temp. 50ºC	T.R.	23.5	28.4	31.3	37.5	44.1
Cooling capacity water temp. 85ºC	T.R.	52.0	62.6	68.5	82.5	97.2
Total absorbed power	kW	2.2	3.0	3.0	4.0	4.0
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Water flow	l/s	9676	11776	12829	15534	17575
Air flow	m^3/h	9500	11200	12500	14800	18000
External static pressure	mm WG	11.3	14.5	15.0	18.0	20.5
Water connections	Ø (")	2	2	2	2 1/2	2 1/2
Dimensions (length x width x height)	mm	2000x937x747	2600x980x752	2600x980x752	2800x1050x915	2800x1050x915
Net weight	kg	291	356	356	452	558

CLW

Vertical ductable fan coil unit

MAIN FEATURES

- Cooling capacities between 7.6 and 47.6 kW
- Air flows up to 8200 m³/h
- Can be integrated with the Hydrofan system
- Outside installation option

Advantages

Flexible and versatile applications for water-based installations. The CLW series is composed of units designed to supplement and optimise air conditioning with hydronic systems. They are fitted with a heat exchanger constructed with copper tubes and aluminium fins and centrifugal fans with external static pressure.

Options

ENERGY EFFICIENCY
- Mixing box with actuators
- Fan soft start
- Radial EC fan

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc. (depending on model)
- Kit for bad weather installation
- Upgraded motors
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Opposite side connectors
- Base frame
- Horizontal air discharge
- Hot water heating coils
- Heating coils for use on 4-pipe system
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Possibility of disassembling
- Air intake grille

MAINTENANCE
- Dirty filter detector
- Ductable filter

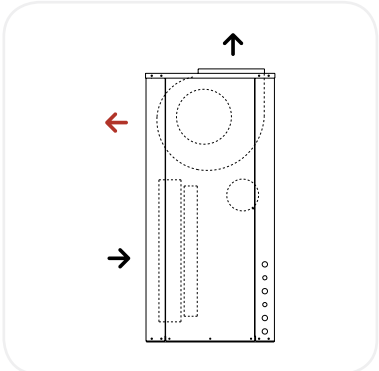
CONTROLS
- Compatible with Hydrofan
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board

For the functions, see the "Controls" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options

→ standard → optional



CLW TECHNICAL SPECIFICATIONS

MODEL		270	412	515	720	824
Cooling capacity water temp. 7°C	kW	7.6	14.0	15.6	18.6	22.4
Heating capacity water temp. 50°C	kW	11.7	20.7	23.5	27.9	29.2
Heating capacity water temp. 85°C	kW	25.8	45.6	51.8	61.4	64.0
Cooling capacity water temp. 7°C	T.R.	2.2	4.0	4.4	5.3	6.4
Heating capacity water temp. 50°C	T.R.	3.3	5.9	6.7	7.9	8.3
Heating capacity water temp. 85°C	T.R.	7.3	13.0	14.7	17.5	18.2
Total absorbed power	kW	0.3	0.5	0.6	0.8	0.4
Power supply (50 Hz ~)	V	230.1	230.1 - 400.3+N	230.3 - 400.3+N	230.3 - 400.3+N	230.3 - 400.3+N
Water flow	L/h	1,314	2,411	2,684	3,193	3,859
Air flow	m^3/h	1,900	2,801	3,500	4,200	3,500
External static pressure	Pa	100	50	150	135	100
Water connections	Ø (")	3/4	1	1	1 1/4	1 1/2
Dimensions (length x width x height)	mm	697x500x1000	697x500x1000	757x500x1100	1152x600x1200	1152x600x1200
Net weight	kg	45	71	94	115	151

MODEL		830	1036	1042	1250
Cooling capacity water temp. 7°C	kW	29.5	36.7	41.0	47.6
Heating capacity water temp. 50°C	kW	40.1	48.6	55.7	66.9
Heating capacity water temp. 85°C	kW	88.0	107.0	122.0	147.0
Cooling capacity water temp. 7°C	T.R.	8.4	10.4	11.7	13.5
Heating capacity water temp. 50°C	T.R.	11.4	13.8	15.8	19.0
Heating capacity water temp. 85°C	T.R.	2.1	3.7	4.2	5.0
Total absorbed power	kW	1.1	0.8	1.1	1.5
Power supply (50 Hz ~)	V	230.3 - 400.3+N	230.3 - 400.3+N	230.3 - 400.3+N	230.3 - 400.3+N
Water flow	L/h	5,079	6,313	7,052	8,191
Air flow	m^3/h	5,200	5,500	6,500	8,200
External static pressure	Pa	100	85	75	85
Water connections	Ø (")	1 1/2	2	2	2
Dimensions (length x width x height)	mm	1152x600x1200	1700x600x1300	1700x600x1300	1700x600x1300
Net weight	kg	151	171	171	182

AIR HANDLING

Wesper

WESPAK | page 128

Mini compact air handling unit, single or double skin, 10 mm.

- 3-speed direct drive motor.
- Horizontal or vertical installation.
- Flow up to 3700 m³/h.
- Made in France.

SLIM@IR | page 130

High-performance compact unit with 25 mm double skin, satisfies RT 2102 and EN 1886.

- Fans: freewheel with high-efficiency IE2 or EC motors.
- Heat recovery devices with high yield of 70 to 80%.
- Flow up to 6000 m³/h.
- On-board Aqu@net control system communicating in Modbus.
- Accessibility: full from the side or below, vertical or horizontal installation.
- Configuration: in series, stacked or side-by-side.
- Finish: pre-painted, galvanised or stainless steel.
- Removable tray as standard to facilitate cleaning.
- Made in France.

EFF@IR | page 132

Compact dual-flow unit with integrated control system, with 40 mm double skin.

- Flow up to 6000 m³/h.

EFF@IR CFI EC

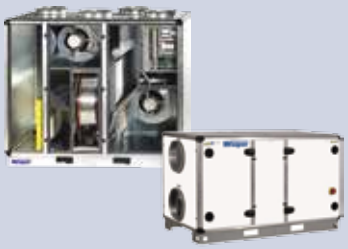
- Counter-flow plate heat exchanger, high yield from 85 to 93%, low consumption EC motor.
- Model: stacked, horizontal or vertical.

EFF@IR HP

- Crossed-flow plate heat exchanger with yield from 50 to 70%.
- Model: stacked or horizontal.

EFF@IR WRI EC

- Rotary heat exchanger with high yield from 75 to 86%. Low consumption EC motor.
- Model: stacked or vertical with air recovery and air delivery on top.



PREMI@IR DOUBLE DECK COMPACT | page 140

Self-supporting, compact, dual-flow air handling unit, 50 mm double skin with integrated touch display control system.

- Rotary or plate heat exchanger greater than 85%.
- Freewheel fan connected to high-efficiency IE2 or EC motors.
- Flow up to 18000 m³/h.
- Smooth interior to facilitate cleaning.
- Made in France.

PREMI@IR | page 142

Self-supporting air handling unit with 50 mm double skin.

- Designed for comfort, hygienic or industrial applications.
- Flow up to 30000 m³/h.
- Eurovent certified.
- Option: control system.
- Made in France.

@IRTWIN | page 144

Air handling unit with 25 and 50 mm double skin.

- Designed for comfort, hygienic or industrial applications.
- Flow up to 100000 m³/h.
- Eurovent certified.
- Option: control system.
- Made in France.

@IRTWIN 020 to 360

@IRTWIN 400 to 1000

WESPAK 1.39 to 3.99

MAIN FEATURES

› Power on chilled water: 4 kW (4 rows at 500 m³/h) to 33 kW (6 rows at 4000 m³/h)
› Power on hot water: 9 kW (at 500 m³/h) to 51 kW (at 4000 m³/h)
› Number of sizes: 3
› Air flow range: 500 to 4400 m³/h (fan only)
› Insulation: 10 mm thick foam

DESCRIPTION

› WESPAK compact direct-transmission air handling units are designed with a modular construction to meet the varying needs of heating and air conditioning for medium-sized facilities.
› Single or double skin construction, made of 1.2 mm thick galvanised sheet steel (paint on the external skin available as an option) with 10 mm thick, open-cell foam thermal insulation (fire protection class M1). Available in horizontal or vertical configuration.

Advantages

› Their 370 mm thickness permits to install it easily into false ceilings.
› Easy maintenance: access on the left or right hand side to the internal components. Access to filters from four sides available as an option. The components are fixed on sliding rails for easy maintenance (except for the cooling coil in the vertical configuration).
› Numerous installation options.

Main features

› Fans: centrifugal with 1 or 2 direct drive turbines powered by a 3-speed motor, 230 V/1 phase/50 Hz, class F insulation with protection against internal overheating with auto reset.
› Two types of filter:
- Synthetic G2 or G4 filter. Fire protection class M1 in good condition.
- Metallic G1 filter. Fire protection class M0 in good condition.
› Coils: 2 rows (heating coils), 4 rows (chilled water coils or direct expansion) or 6 rows (chilled water coils) consisting of copper tubes and aluminium fins. The coils can be fitted with a droplet eliminator as an option to protect against excessive humidities or sizeable air flows.

Main options

› 2-way mixing box with front and top dampers (MD1) or side and underneath dampers (MD2).
› 3-way mixing box (MD3).
› 10 mm thick double skin panels (DP).
› Painted external panel (PT).
› Shut-off damper with parallel blades (AG).
› 10 mm thick metallic G1 filter (FM1) instead of the standard filter.
› External filter function with:
- 10 mm thick metallic G1 filter (FA1)
- 10 mm thick synthetic G2 filter (FA2)
- 50 mm thick synthetic G4 filter (FA3)
› Double reflection air plenum (PLE).
› 90° square air duct (R).
› Air intake mounting frame (CA).
› Flexible sleeve (M) for air duct connection.
› Silencer (PAS).
› Rain hood (AP) and roof (TO).

Main accessories

› 3-position speed switch (CMVM).
› Remote controller with summer/winter + ambiance thermostat + start/stop + 3-position switch. Control box with:
- Action on valve and ventilation (TRM-FA)
- Action on valves only (TRM-VP)
› Droplet eliminator (metallic filter).

- Controller: **CMVM**

- Controller: **TRM-FA**

- Controller: **TRM-VP**

For the functions, see the "Controls" section on page 216.
Besides these options, please contact our Sales Department for any other configuration or function that is not listed as being available.

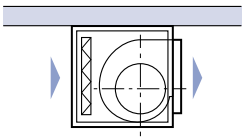
WESPAK WP TECHNICAL SPECIFICATIONS

SIZE		1.39			2.69			3.99		
Air flow	m³/h	1010	1340	1680	1650	2200	2750	2220	2960	3710
Air speed on cooling coil	m/s	1.5	2.0	2.5	1.5	2.0	2.5	1.5	2.0	2.5
Height (in-line)	mm	370			370			370		
Height (stacked)	mm	740			740			740		
Width (in-line or stacked)	mm	762			1150			1500		
COILS										
Number of rows		2 rows for heating - 4 and 6 rows for water coils - 4 rows in direct expansion coil								
Fin spacing	mm	2.1								
Air flow	m³/h	1010	1340	1680	1650	2200	2750	2220	2960	3710
Total cooling capacity (4 rows)	kW	7.4	9.4	11.3	12.0	15.3	18.3	16.3	20.7	24.6
Total sensible cooling capacity (4 rows)	kW	5.3	6.9	8.4	8.7	11.3	13.7	11.7	15.1	18.3
Total cooling capacity (6 rows)	kW	9.1	11.7	14.2	14.8	19.3	23.5	19.9	25.6	30.9
Total sensible cooling capacity (6 rows)	kW	6.1	8.0	9.7	10.0	13.1	16.1	13.4	17.5	21.3
Cooling coil connection (4 rows)	DN	26/34			26/34			26/34		
Heating capacity (2 rows)	kW	15.9	19.7	23.1	26.0	32.2	37.8	33.6	41.6	48.8
Heating coil connection (2 rows)	DN	26/34			26/34			26/34		
Min electric heating capacity	kW	3.0			6.0			12.0		
Max electric heating capacity	kW	9.0			18.0			36.0		
FAN MOTOR UNIT										
Type available		Direct contact centrifugal fan								
Number of fans		1			2			2		
Absorbed power	W	700			960			900		
Motor nominal power	W	250			368			540		
Max current	A	3.30			4.22			5.01		
FILTER										
Available filter		Metallic G1, synthetic G2 filter (10 mm) or flat G4 (50 mm) compliant to EN779								
EXTERNAL STATIC PRESSURE										
Air flow	m³/h	1010	1340	1680	1650	2200	2750	2220	2960	3710
G2 filter + fan (HM6)	Pa	254 (MV)	256 (GV)	192 (GV)	227 (MV)	234 (GV)	162 (GV)	250 (PV)	249 (GV)	169 (GV)
G2 filter + heating coil 2R + fan (HP6)	Pa	243 (MV)	237 (GV)	164 (GV)	216 (MV)	215 (GV)	134 (GV)	239 (PV)	230 (GV)	141 (GV)
G2 filter + cooling coil 4R + fan (HP7)	Pa	216 (MV)	193 (GV)	96 (GV)	189 (MV)	170 (GV)	65 (GV)	213 (PV)	186 (GV)	73 (GV)
G2 filter + heating coil 2R + cooling coil 4R + fan (HP4)	Pa	205 (MV)	174 (GV)	68 (GV)	179 (MV)	151 (GV)	37 (GV)	202 (PV)	167 (GV)	44 (GV)

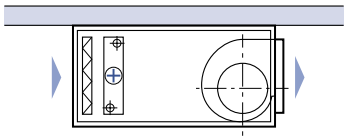
Cooling coil based on an air temperature of 27°C/50% and water temperature of 7/12°C.
Heating coil based on an air temperature of 15°C and water temperature of 90/70°C (coil next to discharge).
PV: Low speed – MV: Medium speed – GV: High speed
Other features and details: please refer to the technical instructions (EDM).

Configurations

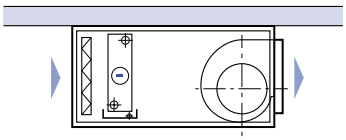
HM8 INSTALLATION



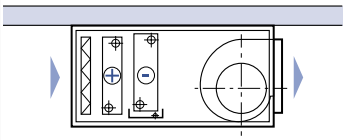
HP6 INSTALLATION



HP7 INSTALLATION



HP4 INSTALLATION



SLIM@IR 0303 to 0318

MAIN FEATURES

- Cooling capacity from: 3 to 38 kW
- Heating capacity from: 8 to 108 kW
- Electric coil power: 1 to 54 kW
- Number of sizes: 6
- Air flow range: 500 (1.5 m/s) to 6000 m^3/h (3.1 m/s on the coil)
- Insulation: glass wool or rock wool

DESCRIPTION

- Free-standing design with double wall panels, Slim@ir is a really compact and ultra-flexible air handling unit, designed to cover all the needs of the market with numerous mounting options: single in-line flow installation, dual in-line flow installation, side-by-side, stacked, vertical and outdoor.
- A concentration of innovation and technology that follows the same rules and constraints as those required for large air handling units, with a classification to EN 1886: T3 – TB3 – L1 – F9 – D1 (tested by the independent laboratory TUV).

Advantages

- With 6 models, from 500 to 6000 m^3/h, fully adapted to all applications thanks to a high-efficiency cabinet with full accessibility to all internal components: side access with hinged doors, access from below with hinged doors or access from below with hatches on rollers; make Slim@ir one of the most powerful air handling units for suspended ceiling applications on the market.
- The Slim@ir is also suitable for hygienic environments thanks to its L1 (EN 1886) classification, an entirely smooth, easy to clean interior tunnel and a removable condensate tray provided as standard.
- Innovative selection software with a user-friendly 3D graphical interface allows all kinds of simulations by providing detailed technical characteristics as well as dimensional drawings.

Operating limits/recommendations

- Total pressure ± 1000 Pa.
- -20°C min and +40°C max.
- Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.

Main options

- 2 types of plate heat exchangers (efficiency - 50% & - 80%).
- Glass wool or rock wool insulation.
- Large choice of filters: flat G4 filter to F9 long pocket filter.
- 1, 2 or 3 row heating coils with a length of fins of 2.1 mm.
- 3, 4 or 6 row cooling coils with a length of fins of 2.5 mm.
- Condensate tray made of inox AISI 304L or 316L for cooling coil.
- Water coils with copper tubes and aluminium, epoxy or copper fins.
- Electric battery with 5 power levels per size, from 1 kW (1 ph) to 54 kW (3 ph).
- Frame of components, sheet metal capping and inox AISI 304L or 316L runners.
- Choice of 3 types dampers: Standard, waterproof class 3 and waterproof class 4 according to EN 1751.
- 1, 2 and 3 way mixing functionality.
- Sound trap cabinets of 300, 600, 900 and 1200 mm length.
- Freewheel fan (3 ph) with epoxy-coated wheel and epoxy fan sheeting.
- End panel with connecting flanges.
- Double reflection air plenum.
- 90° square discharge duct.

Main accessories

- Antifreeze thermostat.
- Galvanised or inox 304L droplet eliminator (25 mm thick metallic filter).
- Standard connection frame (galvanised, 304L or 316L).
- Standard connection with flanges (galvanised, 304L or 316L).
- Pressure ports.
- U-shaped and inclined manometers.
- Differential pressure switch and Magnehelic needle manometer.
- Flexible sleeves with flanges, standard and hygienic EVS-80 Se class C.
- Sand trap.
- Umbrella awning.
- IP 20 or IP 55 frequency inverter.
- Factory-mounted IP 54 safety switch.
- IP 54 servo-motors: 24 V or 230 V on-off and 0-10 V – 24 V AC/DC.
- Aqu@Net controls (A, B, C, D & E systems) with RCL wired remote controller and other accessories.

For the functions, see the "Controls" section on page 216.
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

SLIM@IR SR TECHNICAL SPECIFICATIONS

SIZE		0303	0306	0309	0312	0315	0318
Air flow (at 2.7 m/s on the cooling coil)	m³/h	890	1680	2580	3490	4370	5270
Height (in-line – side access)	mm	400	400	400	400	400	400
Height (in-line - access from the lower doors with hinges)	mm	430	430	430	430	430	430
Height (in-line – access by hatch on body)	mm	480	480	480	480	480	480
Height (stacked – side access)	mm	850	850	850	850	850	850
Height (in-line or stakced – side access)	mm	509	774	1079	1384	1689	1994
Width (side-by-side – side access)	mm	1314	1844	2454	3064	3674	4284
COILS							
Number of rows		1, 2 and 3 rows for heating coils – 3, 4 and 6 rows for cooling coils					
Fin spacing for water-based coils	mm	2.1 mm for heating coils – 2.5 mm for cooling coils					
Total sensible cooling capacity (3 rows)	kW	3.1/3.1	6.2/6.1	9.6/9.4	13/12.7	16/15.8	19.8/19.3
Total sensible cooling capacity (6 rows)	kW	6.8/5.1	13/9.7	19.8/14.8	27/20.1	33.5/25	38.3/29.3
Total heating capacity (1 row)	kW	8.7	16.5	25.6	34.7	43.6	53.4
Total heating capacity (3 rows)	kW	18.4	34.9	53.5	72.0	89.6	108.5
Min electric heating capacity (1 stage/1~230 V)	kW	1.0	2.0	3.0	4.0	5.0	6.0
Max electric heating capacity (3 stages/3~400 V)	kW	9.0	18.0	27.0	36.0	45.0	54.0
FAN							
Type		Plug fans with motors IP55 - F - 400 V/3Ph/50 HZ - 3000 TR/M - IE2 (for motors over 0.75 kW)					
Number of fans		1	1	1	2	2	2
Maximum absorbed power	kW						
Motor nominal power	kW	1.1	1.5	2.2	3.0	3.0	4.4
Max current	A						
Type		EC plug fans					
Number of fans		1	1	2	2	3	3
Maximum absorbed power	kW						
Motor nominal power	kW	0.70	0.70	1.40	1.40	2.10	2.10
Max current	A	3.0	3.0	6.0	6.0	9.0	9.0
FILTER							
Available filter		Flat G4/F5/F7/F9 (50 mm) – Short bag F7/F9 (305 mm) – Long bag F7/F9 (500 mm) – Compact F7/F9 (292 mm)*					
HEAT RECOVERY							
Air flow	m³/h	890	1680	2580	3490	4370	5270
Plate heat exchanger standard efficiency (wet/dry) EN308	%	48.8/52.7	46.1/50.9	46.2/50.9	47.4/52.6	49.1/53.7	48.6/52.9
Available pressure fresh air/air intake	Pa	126/112	169/150	177/158	216/192	112/106	117/110
Length of the module	mm	720	1040	1280	1440	720	720
Plate heat exchanger high efficiency (wet/dry) EN308	m³/h	82.4/91.2	80.8/90	80.1/89.5	79.8/89.3	79.5/89.1	79.4/89.0
Available pressure fresh air/air intake	%	69/84	104/129	127/157	140/173	150/185	156/193
Length of the module	Pa	960	960	960	960	960	960

Cold coil performance for 32°C/40% and 7/12°C.
Hot coil performance for -7°C/90% and 90/70°C.
Outdoor configuration: side access only (height of cabinet without frame = 425 mm)
DN20 on all hot and cold coils.
Thermal efficiency of the plate heat exchangers based on fresh air temperature of -7°C/90% - 22°C/50%.

EFF@IR CFI EC 400 to 4000

MAIN FEATURES

- Air flow range: 250 to 5200 m^3/h
- Number of sizes: 6
- Versions: stacked, horizontal, vertical
- Insulation: 40 mm thick polyurethane foam
- Efficiency from 85 to 93%

DESCRIPTION

- High-efficiency plug-fan connected to EC motors 230-400V / 3 / 50-60Hz (to ErP-2015)
- Dual-flow unit fitted with a high-efficiency, modular counter-current flow plate heat exchanger made of polypropylene in horizontal configuration, efficiency from 85% to 93%, with an extruded aluminium profiled structure and double skin prepainted steel panels, insulated by injected polyurethane foam, 42 kg/m^3 density, 40 mm thick.
- Available in 4 configurations: standard, with electric coil, with water-based reheating/recooling coil or with R410A direct expansion coil (to be connected to a remote heat pump not supplied).

Advantages

- Ideal solution for low energy consumption buildings in residential, commercial and industrial sectors.
- G4 filtration (EN779) for extract air and F7 (EN779) with low pressure loss for fresh air.
- Plug-and-play solutions with an electrical panel and control by pre-wired micro-processor.
- 100% bypass for automatic free-cooling.
- Circular aeraulic connection at intake/exhaust.
- Compliant with ErP-2015.

Operating limits/recommendations

- Indoor or outdoor installation, with temperatures between -15 and +50°C.
- Avoid installing near sources of heat, vapour, inflammable and/or explosive gas, dusty environments.
- Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.
- Units not adapted to specific environments (marine, etc.)

Main options

Control method:

- VAV: variable air flow (available with CO_2 or CO_2/VOC air quality control or humidity control). Controlled independently of air flows (balance/imbalance). Please contact our Technical Department.
- CAV: constant air flow.
- COP: constant pressure.

Accessories for air filtration:

- F9 filter with low pressure drop.

Pre-heating of input air.

Counter-current flow plate heat exchanger for applications requiring non-combustible materials (for establishments open to the public).

Main accessories

Controlled by microprocessor (see accessories manual):

- EVO PH
- EVO D PH

Sensors (for VAV control system only):

- CO_2 sensor EE80
- CO_2/VOC air quality sensor QPA 2002
- Humidity sensor EE16

Safety accessories:

- SKMF-R awning
- Safety roofing T (for the horizontal configuration only)

Controls: besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EFF@IR CFI EC AIR FLOW

	STACKED	HORIZONTAL	VERTICAL
AIR FLOW AND SIZE for 200 Pa available			
Size (air flow in m³/h - Efficiency in %)	0400 (650m³/h - 79%)	0400 (580m³/h - 78%)	0300 (250m³/h - 90%)
Size (air flow in m³/h - Efficiency in %)	0800 (970m³/h - 79%)	0700 (900m³/h - 81%)	0500 (480m³/h - 87%)
Size (air flow in m³/h - Efficiency in %)	1900 (2300m³/h - 80%)	1700 (2100m³/h - 81%)	
Size (air flow in m³/h - Efficiency in %)	2500 (3150m³/h - 80%)	2400 (3100m³/h - 79%)	
Size (air flow in m³/h - Efficiency in %)	3000 (4400m³/h - 79%)		
Size (air flow in m³/h - Efficiency in %)	4000 (5200m³/h - 80%)		

EFF@IR CFI EC STACKED TECHNICAL SPECIFICATIONS

WATER POST HEATING/RECOOLING COIL*

SIZES				Water 70/60°C (T°ext. = -5°C ; T°int. = 20°C)			Water 45/35°C (T°ext. = -5°C ; T°int. = 20°C)			Water 7/12°C (T°ext. = -5°C ; T°int. = 20°C)		
	Rows (No.)	Ø H2O	Length of tubes	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)
CFI-EC SUP 400	4	1/2"	60	7.0	611	7.7	3.1	272	1.8	4.2	722	12.4
CFI-EC SUP 800	4	3/4"	60	11.1	976	4.4	4.8	412	3.1	6.6	1127	5.4
CFI-EC SUP 1900	4	3/4"	60	22.3	1957	5.8	9.4	813	3.3	12.8	2202	7.2
CFI-EC SUP 2500	3	1"	60	29.6	2591	8.7	13.1	1137	4.6	18.0	3096	13.9
CFI-EC SUP 3000	3	1"	60	38.9	3412	16.7	17.7	1528	6.6	23.6	4059	28.5
CFI-EC SUP 4000	3	1" 1/4	60	50.9	4458	7.5	22.5	1951	6.1	31.2	5354	11.3

* For specific conditions, please contact our commercial department.

ELECTRIC COIL

SIZES	Power (kW)	Voltage (V)	Phase (No.)	Stage * (No.)	Abs. current (A)	T° fresh air (°C)	T° air Internal (°C)	T° output air (°C)
CFI-EC SUP 400	2	230V-1-50Hz	1	1	8.70	-10	20	25.24
CFI-EC SUP 800	3	230V-1-50Hz	1	1	13.04	-10	20	24.85
CFI-EC SUP 1900	6	230V-1-50Hz	1	1	26.09	-10	20	24.75
CFI-EC SUP 2500	8	230V-1-50Hz	1	1	34.78	-10	20	23.99
CFI-EC SUP 2500	8	400V-3-50Hz	3	1	11.55	-10	20	23.99
CFI-EC SUP 3000	12	400V-3-50Hz	3	1	17.32	-10	20	25.09
CFI-EC SUP 4000	16	400V-3-50Hz	3	1	23.09	-10	20	25.60

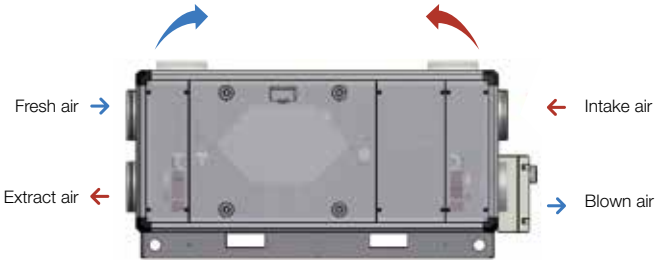
* For electric coils linked to an EVO PH (local) or EVO PH D (Modbus), 0-10 V control voltage

ELECTRICS

SIZES	FANS*				CFI-EC SUP	
	Power (W)	Power supply	Max. current (230V)	Insulation class	Power supply - IP	Max. current
CFI-EC SUP 400	170	230V, 50/60 Hz 1F	1.20 A	IP 44 - B class	230V-50Hz-1F_IP20	2.50 A
CFI-EC SUP 800	170	230V, 50/60 Hz 1F	1.40 A	IP 54 - B class	230V-50Hz-1F_IP20	2.90 A
CFI-EC SUP 1900	448	230V, 50/60 Hz 1F	2.80 A	IP 54 - B class	230V-50Hz-1F_IP20	5.70 A
CFI-EC SUP 2500	715	230V, 50/60 Hz 1F	3.10 A	IP 54 - B class	230V-50Hz-1F_IP20	6.30 A
CFI-EC SUP 3000	1270	400V, 50/60 Hz 1F	5.60 A	IP 54 - B class	230V-50Hz-1F_IP20	11.30 A
CFI-EC SUP 4000	1400	400V, 50/60 Hz 1F	6.00 A	IP 54 - B class	230V-50Hz-1F_IP20	12.1 A

* Values for a single fan

Stacked configuration



EFF@IR CFI EC HORIZONTAL TECHNICAL SPECIFICATIONS

WATER POST HEATING/RECOOLING COIL*

SIZES				Water 70/60°C (T°ext. = -5°C ; T°int. = 20°C)			Water 45/35°C (T°ext. = -5°C ; T°int. = 20°C)			Water 7/12°C (T°ext. = -5°C ; T°int. = 20°C)		
	Rows (No.)	Ø H2O	Length of tubes	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)
CFI-EC HOR 400	4	1/2"	60	5.5	486	4.3	2.4	210	1.0	3.7	632	8.3
CFI-EC HOR 700	4	3/4"	60	10.0	876	6.0	4.5	3931	3.7	7.0	1200	9.6
CFI-EC HOR 1700	4	3/4"	60	19.8	1739	5.8	8.3	714	3.5	10.1	1727	6.2
CFI-EC HOR 2400	2	3/4"	60	28.8	2523	8	12.5	1079	4.6	12.0	2058	9.0

* For specific conditions, please contact our commercial department.

ELECTRIC COIL

SIZES	Power (kW)	Voltage (V)	Phase (No.)	Stage * (No.)	Abs. current (A)	T° fresh air (°C)	T° air Internal (°C)	T° output air (°C)
CFI-EC HOR 400	2	230V-1-50Hz	1	1	8.70	-10	20	25.07
CFI-EC HOR 700	3	230V-1-50Hz	1	1	13.04	-10	20	24.68
CFI-EC HOR 1700	6	230V-1-50Hz	1	1	26.09	-10	20	24.32
CFI-EC HOR 2400	8	230V-1-50Hz	1	1	34.78	-10	20	23.56
CFI-EC HOR 2400	8	400V-3-50Hz	3	1	11.55	-10	20	23.56

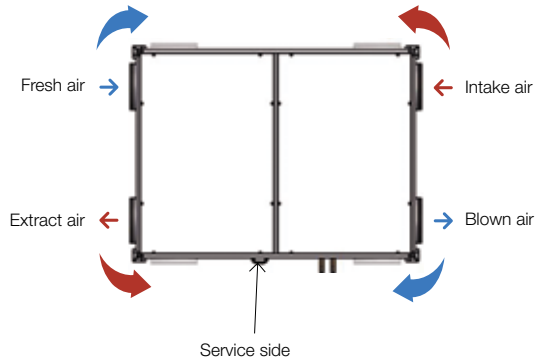
* For electric coils linked to an EVO PH (local) or EVO PH D (Modbus), 0-10 V control voltage

ELECTRICS

SIZES	FANS*				CFI-EC SUP	
	Power (W)	Power supply	Max. current (230V)	Insulation class	Power supply - IP	Max. current
CFI-EC HOR 400	170x2	230V, 50/60 Hz 1F	1.20 A	IP 44 - B class	230V-50Hz-1F_IP20	2.50 A
CFI-EC HOR 700	170x2	230V, 50/60 Hz 1F	1.40 A	IP 54 - B class	230V-50Hz-1F_IP20	2.90 A
CFI-EC HOR 1700	448x2	230V, 50/60 Hz 1F	2.80 A	IP 54 - B class	230V-50Hz-1F_IP20	5.70 A
CFI-EC HOR 2400	715	230V, 50/60 Hz 1F	3.10 A	IP 54 - B class	230V-50Hz-1F_IP20	6.30 A

* Values for a single fan

Horizontal configuration



EFF@IR CFI EC VERTICAL TECHNICAL SPECIFICATIONS

[BA-AC] WATER POST HEATING COIL

SIZES						Water 80/70°C (T°ext. = -5°C ; T°int. = 20°C)			
	Flow (m³/h)	Ø conn. (mm)	Coil dimensions	Rows (No.)	Ø H20	Power (kW)	T° air exhaust (°C)	Δp air (Pa)	Δp air (kPa)
CFI-EC VER 300	400	150	330x260x200	1	1/2"	0.88	23.60*	18	0.9
CFI-EC VER 500	600	150	330x260x200	1	1/2"	1.07	21.95*	34	0.9

* 400 - Winter: Fresh air -5°C / 80% - Internal air 20°C / 50% - Air mand. 17.5°C / 16.8%
* 600 - Winter: Fresh air -5°C / 80% - Internal air 20°C / 50% - Air mand. 16.7°C / 17.8%

[REL-M] ELECTRIC POST HEATING COIL

SIZES	Flow (m³/h)	Power (kW)	Voltage (V)	Phase (No.)	Stage * (No.)	Abs. current (A)	T° output air (°C)	Ø conn. (mm)
CFI-EC VER 300	400	0.5	230V-1-50Hz	1	1	2.2	21*	150x300
CFI-EC VER 500	600	0.5	230V-1-50Hz	1	1	2.2	20*	150x300

* 400 - Winter: Fresh air -5°C / 80% - Internal air 20°C / 50% - Air mand. 17.5°C / 16.8%
* 600 - Winter: Fresh air -5°C / 80% - Internal air 20°C / 50% - Air mand. 16.7°C / 17.8%

[BA-AFC] WATER-BASED POST HEATING/RECOOLING COIL

TYPE	BA-AFC 350-150			BA-AFC 500-150			BA-AFC 500-180		
T° water intake/discharge	70°/60°	45°/35°	7°/12°	70°/60°	45°/35°	7°/12°	70°/60°	45°/35°	7°/12°
Air flow (m³/h)	400	400	400	600	600	600	600	600	600
Ø Air connection (mm)	150	150	150	150	150	150	180	180	180
Ø Water connection (")	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Ø Condensate (mm)	19	19	19	19	19	19	19	19	19
Rows (No.)	4	4	4	5	5	5	5	5	5
Nominal power (kW)	3.3	1.35	1.89	6.8	3.1	4.3	6.8	3.1	4.3
Air pressure loss (Pa)	35	35	36	45	44	45	45	44	45
Water pressure loss (Pa)	1.3	0.9	1.8	8	2.1	15	8	2.1	15
Dimension [AxBxC] (mm)	404x355x210			464x355x270			464x355x270		
T° of ventilation (°C)	41.8*	27.1*	20.9**	50.0*	31.9*	18.0**	50.0*	31.9*	18.0**

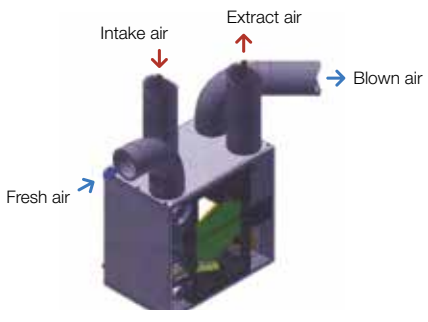
* 400 - Winter: Fresh air -5°C / 80% - Internal air 20°C hr 50% - Air mand. 17.5°C / 16.8% ** -
Summer: Fresh air 34°C / 50% - Internal air 27°C / 45% - Blown air 28.1°C / 70%
* 600 - Winter: Fresh air -5°C / 80% - Internal air 20°C hr 50% - Air mand. 16.7°C / 17.8 ** -
Summer: Fresh air 34°C / 50% - Internal air 27°C / 45% - Blown air 28.1°C / 70%

ELECTRICS

SIZES	FANS*				CFI-EC SUP	
	Power (W)	Power supply	Max. current (230V)	Insulation class	Power supply - IP	Max. current
CFI-EC VER 300	71x2	230V, 50/60 Hz 1F	0.50 A	IP 44 - B class	230V-50Hz-1F	1.20 A
CFI-EC VER 500	170x2	230V, 50/60 Hz 1F	1.10 A	IP 44 - B class	230V-50Hz-1F	2.50 A

* Values for a single fan

Vertical configuration



EFF@IR HP

HP S/HP L 1 to 6
HP LS 400 to 3500

MAIN FEATURES

- Hot water coil capacity: 2.2 to 34.5 kW
- Electric coil power: 2 to 12 kW
- Air flow range: 400 to 5600 m^3/h
- Number of sizes: 6 (HP S/HP L) - 5 (HP LS)

DESCRIPTION

A dual flow heat recovery unit (efficiency 50% to 70%) in horizontal or vertical configuration, available in two versions:

HP S version (coils in duct) / HP L (coils in CTA)

- Extruded aluminium profiled structure with rounded corners.
- Double-skin panels made of white plasticized steel, insulated by 25 mm thick injected polyurethane foam.
- Access from side/below for maintenance and servicing.
- Pressure ports for measuring filter pressure losses.
- Condensate diasposal system.

HP LS version (bypass integrated in the CTA)

- Free-standing structure cabinet made of galvanised steel.
- Low height suitable for false ceilings.
- Side access for maintenance and servicing.
- Condensate disposal system.
- Single skin panels:
  - 10/10 mm thick steel wall.
  - External cladding with adhesive 5 mm thick thermal-acoustic polyethylene insulation.
- Double skin panels:
  - Free-standing galvanised steel structure with 25 mm thick rock wool insulation, 110 kg/m^3 density.

Operating limits/recommendations

- Indoor or outdoor installation, with temperatures between -15 and +50°C.
- Avoid installing near sources of heat, vapour, inflammable and/or explosive gas, dusty environments.
- Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.
- Units not adapted to specific environments (marine, etc.)

Advantages

- Ideal solution for ventilation of buildings in the commercial sector, available:
  - Without controls.
  - Plug-and-play solutions with a pre-wired electrical panel and control by on-board micro-processor.

Main options

Defrosting and/or reheating for installation in ducts:

- RCF-SC: electric coil.
- RCFE-SCT: electric coil with electronic controls.
- RCF-SCTTC: electric coil with thermostatic controls.
- BA-AC: hot water coil (80/70°C) > for the HP S version only.
- BA-AC: warm water coil (45/35°C) > for the HP S and HP LS versions only.

Recooling for installation in ducts:

- BA-AF: cold water coil with insulated plenum.

Air filtration:

- F9 filter with low pressure drop.

Main accessories

Controls (for standard version only):

- CV4: 4-speed switch for motors 230 V/1 ph/50 Hz.
- CV3: 3-speed switch for motors 230 V/1 ph/50 Hz.
- RVT 6A and RVT 9A: speed regulator for motors 400 V/3 ph/50 Hz.

Controlled by microprocessor (see accessories manual):

- EVO PH
- EVO D PH

Sensors:

- EE80: CO_2 sensor
- QPA 2002: CO_2/VOC air quality sensor
- EE16: humidity sensor

Safety accessories:

- SKMF-R: awning
- T: safety roofing

Controls: besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

EFF@IR HP S / HP L TECHNICAL SPECIFICATIONS

SIZE		1	2	3	4		5	6
Nominal air flow	m³/h	400	800	1900	3000		4500	5600
Available static pressure*	Pa	85	100	140	180		100	120
SOUND LEVELS * **								
Lw speed 1 (transmitted noise)	dB(A)	29	42					
Lw speed 2 (transmitted noise)	dB(A)	37	48	65	52			
Lw speed 3 (transmitted noise)	dB(A)	43	53	67	68			
Lw speed 4 (transmitted noise)	dB(A)	48	55	69	79		75	77
DIMENSION ** AND WEIGHT FOR HORIZONTAL UNITS FOR HP S (COILS IN DUCTS WITHOUT BYPASS ON THE PLATE)**								
Height (without bypass)	mm	345	360	535	630		855	855
Height (with bypass)	mm	450	465	640	735		855	855
Width	mm	640	820	1040	1270		1200	1200
Length	mm	960	1230	1560	1905		1550	1550
Weight	kg	40	56	110	155		195	200
Circuit connections – input/outlet diameter	mm	200	250	315	355		450	450
HEAT RECOVERY **								
Yield	%	50.7	53.9	51.6	52.5		54	52.5

EFF@IR HP LS TECHNICAL SPECIFICATIONS

SIZE		400	800	1600	2500	3500		
Nominal air flow	m³/h	485	885	1600	2680	3500		
Available static pressure*	Pa	100	100	100	100	100		
SOUND LEVELS FOR SINGLE SKIN * **								
Lw speed 1 (transmitted noise)	dB(A)	33	45					
Lw speed 2 (transmitted noise)	dB(A)	41	52	57	59	57		
Lw speed 3 (transmitted noise)	dB(A)	47	57	59	61	65		
Lw speed 4 (transmitted noise)	dB(A)	52	59	61	63	71		
DIMENSION ** AND WEIGHT FOR HORIZONTAL UNITS**								
Height (with or without internal bypass)	mm	360	360	500	550	550		
Width	mm	620	730	870	1040	1300		
Length	mm	960	-	1560	1905	1550		
Weight	kg	55	56	110	155	195		
Circuit connections – input/outlet diameter	mm	200	250	315	355	450		
HEAT RECOVERY **								
Yield	%	51.2	51.6	54.2	52.7	52.3		

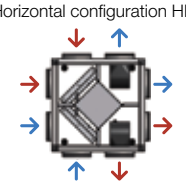
COMMON DATA TECHNICAL SPECIFICATIONS

FAN								
Installed fan power	W	150x2	355x2	373x2	550x2	750x2	750x2	1500x2
Pole	Num.	2	2	4	4	4	4	4
Max absorbed current	A	0.66x2	1.55x2	2.75x2	4x2	8.1x2	3.1x2	5.6x2
Max absorbed current	A	1.32	3.1	5.5	8	16.2	6.2	11.2
Fan speed		4	4	3	3	3	1	1
Protection class/unit insulation		IP20/F					IP55/F	
Electric power supply	V/Ph/Hz	230V-1-50Hz					400V-3-50Hz	
FILTER								
Filtration class for exhaust air/fresh air	EN779	G4/F7						
ELECTRIC DFROST HEATING								
Nominal power	kW	2	4	6	8	8	12	12
Voltage/phase	V/ph	230/1	230/1	230/1	230/1 ou 400/3	230/1 ou 400/3	400/3	400/3

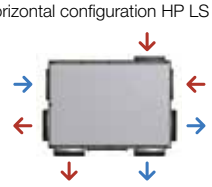
For other features, please refer to the technical instructions or our Technical Department.
*The values refer to the nominal air flow having overcome the pressure losses of the heat recovery device and the filters.
**The values refer to the following conditions: Tbs air ext. = -5°C, Tbs ambiance = 20°C, HR ambiance = 50%, nominal air flow.
***Sound levels compliant with UNI EN ISO 3747 (ΔLfA ≥ 7 dB for each measuring point, accuracy class 2).
****For the bypass add 105 mm to the height for sizes 1 to 4 and 0 mm to the height for sizes 5 and 6.

Configurations

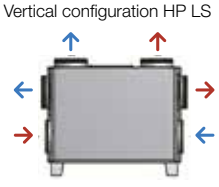
Horizontal configuration HP S / HP L



Horizontal configuration HP LS



Vertical configuration HP LS



EFF@IR WRI EC

MAIN FEATURES

› Dual-flow unit fitted with a high efficiency aluminium thermal wheel
› Version: stacked
› Ideal solution for low energy consumption buildings in the residential, commercial and industrial sector.
› Filtration and preheating at fresh air intake
› Stacked configuration (installation on ground)
› Unit supplied wired from factory (plug-&-play solution). Available controls:
- EVO PH (with remote controller)
- EVO D PH (no remote controller – for control via the GTC/GTB using the ModBus communication protocol)

DESCRIPTION

› Aluminium profiled cabinet structure
› Double skin panel, 36 mm insulation with injected polyurethane foam
› Circular duct connection
› Easy access for maintenance
› Fully automatic bypass
› Fans providing high pressure and low energy consumption.

Other

FAN

› High-efficiency plug-fan connected to EC motors 230-400V / 3 / 50-60Hz (to ErP-2015)

HEAT RECOVERY

› High efficiency aluminium thermal wheel (η= min. 75% ; max >90%)

FILTERS

› G4 on air intake
› F7 low pressure loss on fresh air

RANGE

› 5 sizes from 900 m^3/h to 6,200 m^3/h (@ 100 Pa)

AVAILABLE VERSIONS

› Standard (no coil)
› With electric post-coil
› With water heating/recooling post-coil
› With direct expansion R410a coil

AVAILABLE CONTROL SYSTEM (FACTORY INSTALLED ON REQUEST)

› Thermal wheel with constant rotation speed and variable rotation speed [RR]:
- VAV: Variable air flow
- CAV: Constant air flow
- COP: Variable air flow at constant pressure

ACCESSORIES AVAILABLE ON REQUEST

› Optional sensors (for VAV control system only):
- EE80 CO_2 sensor
- QPA 2002 CO_2/VOC air quality sensor
- EE16 humidity sensor

› Pre-heating:
- RCF-SC: electric pre-heating coil

› Accessories for air filtration:
- F9 in low pressure loss version

› Accessories:
- T safety roofing
- SKMF-R awning
- SIPH siphon

Controls: besides these options, please contact our Sales Department for any other configuration or function not listed.

EFF@IR WRI EC TECHNICAL SPECIFICATIONS

[BA-AF/AC] WATER POST HEATING/RECOOLING COIL*

SIZES				Water 70/60°C (T°ext. = -5°C ; T°int. = 20°C)			Water 45/35°C (T°ext. = -5°C ; T°int. = 20°C)			Water 7/12°C (T°ext. = -5°C ; T°int. = 20°C)		
	Rows (No.)	Ø H2O	Length of tubes	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)	Power (kW)	Water flow (l/h)	Δp water (kPa)
WRI-EC SUP 500	3	3/4"	60	7.3	644	4.0	3.2	276	3.0	4.0	686	4.5
WRI-EC SUP 1500	3	3/4"	60	16.4	1438	12.2	7.7	663	5.0	9.2	1577	17.3
WRI-EC SUP 2400	3	1"	60	24.8	2178	11.8	11.5	997	4.9	14.0	2401	17.2
WRI-EC SUP 4000	3	1" 1/4	60	33.9	2972	9.1	15.9	1376	4.4	18.5	3186	17.2
WRI-EC SUP 5200	3	1" 1/4	60	48.3	4231	21.9	23.5	2033	7.3	26.2	4510	30.4

* For specific conditions, please contact your technical contact person or use the selection software.

[REL-M/T] ELECTRIC COIL

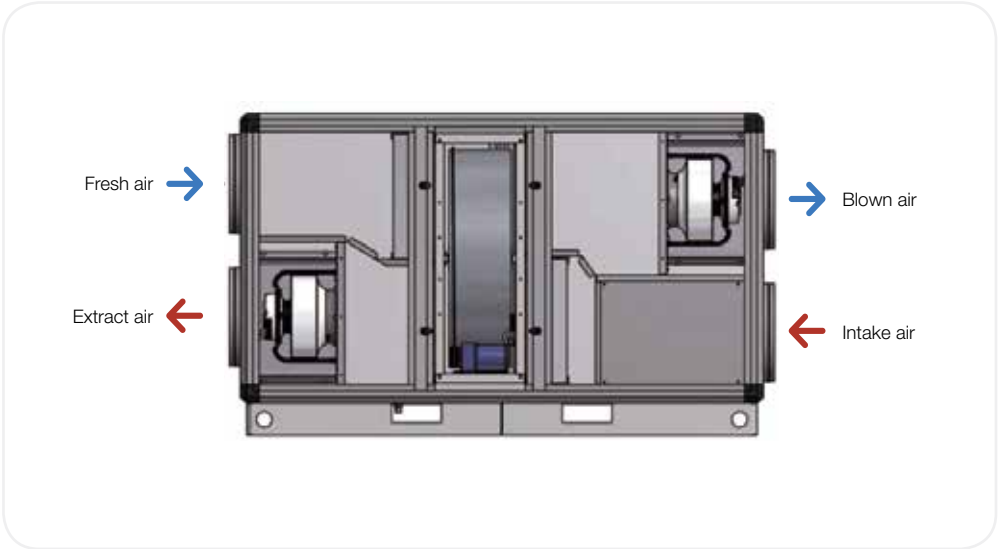
SIZES	Power (kW)	Voltage (V)	Phase (No.)	Stage * (No.)	Abs. current (A)	T° fresh air (°C)	T° air Internal (°C)	T° output air (°C)
WRI-EC SUP 500	4	230V-1-50Hz	1	1	17.4	-10	20	28.0
WRI-EC SUP 1500	6	230V-1-50Hz	1	1	26.1	-10	20	21.9
WRI-EC SUP 2400	8	400V-3-50Hz	3	1	11.6	-10	20	21.3
WRI-EC SUP 4000	12	400V-3-50Hz	3	1	17.4	-10	20	21.2
WRI-EC SUP 5200	16	400V-3-50Hz	3	1	23.2	-10	20	20.3

ELECTRICS

SIZES	FANS*			WRI-EC SUP		
	Power (W)	Power supply		Power (W)	Power supply	
WRI-EC SUP 500	170	230V, 50/60 Hz 1F	1.40 A	IP 54 - B class	230V-50Hz-1F_IP20	3.00 A
WRI-EC SUP 1500	448	230V, 50/60 Hz 1F	2.80 A	IP 54 - B class	230V-50Hz-1F_IP20	6.00 A
WRI-EC SUP 2400	715	230V, 50/60 Hz 1F	3.10 A	IP 54 - B class	230V-50Hz-1F_IP20	7.00 A
WRI-EC SUP 4000	1400	230V, 50/60 Hz 1F	6.00 A	IP 54 - B class	230V-50Hz-1F_IP20	13.4 A
WRI-EC SUP 5200	1850	400V, 50/60 Hz 3F	2.90 A	IP 54 - B class	400V-50Hz-3F_IP20	7.20 A

* Values for a single fan

Stacked configuration



PREMI@IR DOUBLE DECK COMPACT

MAIN FEATURES

- Chilled water coil power: 6,4 to 185 kW
- Hot water coil power: 2 to 185 kW
- Number of sizes: 7
- Air flow range: 800 to 18.000 m³/h
- Insulation: glass wool, rock wool, polyurethane foam

DESCRIPTION

With 7 models, from 800 to 18.000 m³/h, this range is suitable for comfort, hygiene and industrial applications.

An innovative, robust and free-standing structure with perfectly smooth tunnel, including at the junction between modules, avoids any microbial development due to accumulation of dust.

The double-walled panels are covered on 6 sides to avoid any penetration of humidity. They are fitted with fire-rated thermal insulation.

Advantages

Since Premi@ir air handling units are manufactured to order according to the specific needs of each installation, they offer an infinite choice of solutions.

Class T2 – TB2 – L2 – F9 – D1 certified by EUROVENT.

Configurations available: double deck.

Suitable for indoor or outdoor installation.

Access door without thermal bridge thanks to polyamide hinges and external rotor that doesn't transverse the door.

Wide choice of filter classes and types: flat, pocket and rigid from G4 to H14.

Wide choice of coils available as standard from 2 to 8 rows with fin lengths from 2.1 - 2.5 - 3.2 mm. Fins made of aluminium, aluminium epoxy or copper. As an option, the coils can be fully protected by Blygold cladding for harsh environments.

Powerful selection software with user-friendly graphical interface allows you to make all kinds of simulations. To optimise the product ranges, the "execution" quality documents (plans in DXF format) are provided from the prototype phase.

Main options

2 types of thermal wheels (standard efficiency and high efficiency)

2 types of plate heat exchangers (standard, medium and high efficiency).

Removable condensate tray for an ideal hygienic aspect.

A choice of 3 types of damper: standard, class 3 waterproof and class 4 waterproof to EN 1751.

Wide choice of material: galvanised, pre-painted, inox 304L or 316L on the internal and/or external skin.

Direct drive fans, epoxy paint on fan, etc.

Main accessories

Flexible connection M0 class.

Internal lighting 24 V or 230 V with waterproof switch.

Viewing window in access door.

Rain hoods.

U-shaped and inclined manometers.

Operating limits/recommendations

1500 Pa maximum on the positive and negative pressure panels.

-20°C minimum for fresh air.

Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.

Controls: besides these options, please contact our Sales Department for any other configuration or function not listed.

PREMI@IR PR TECHNICAL SPECIFICATIONS

SIZE		0306	0408	0409	0612	0715	0918	1121
Nominal air flow for 82% efficiency (EN308) at the wheel	m^3/h	1400	2300	3400	5600	8700	12600	17200
Air velocity in the tunnel	m/s	1.57	1.62	1.68	1.76	1.81	1.86	1.90
Height with body	mm	1058	1230	1395	1700	2005	2310	2615
Width (without roof)	mm	825	1020	1200	1435	1740	2045	2350
Length main cabinet 'only' with wheel	mm	1630	1690	2026	2296	2672	2744	2944
Length main cabinet 'only' with plates	mm	2230	2440	3032	N/A	N/A	N/A	N/A
FILTER								
Support frame		Class F9 in accordance with standard EN1886						
Available filters		G4 & M5 flat - F7 & F9 pocket to EN 779						
HEAT RECOVERY								
Efficiency (EN 308) of the "very high efficiency" wheel (range of 1.5 mm)	% / PDC	82.2% - 200Pa	82.1% - 202Pa	82.2% - 200Pa	82.1% - 202Pa	82.1% - 201Pa	82.0% - 202Pa	82.0% - 203Pa
Classification EN13053 of the "very high efficiency" wheel	Class	H1	H1	H1	H1	H1	H1	H1
Efficiency (EN 308) of the "high efficiency" wheel (range of 2.0 mm)	% / PDC	73.1% - 117Pa	73.0% - 118Pa	73.1 % - 118Pa	73.0 % - 118Pa	73.1 % - 118Pa	73.0 % - 118Pa	73.0 % - 119Pa
Classification EN13053 of the "high efficiency" wheel	Class	H1	H1	H1	H1	H1	H1	H1
Efficiency (EN 308) of the counter-flow plate	% / PDC	86.6% - 166Pa	87.6% - 172Pa	89.0% - 177Pa	N/A	N/A	N/A	N/A
Classification EN13053 of the counter-flow plate	Class	H1	H1	H1	N/A	N/A	N/A	N/A
COILS								
Rows		Heating: 1 to 3 rows - Cooling: 3 to 6 rows						
Fins spacing	mm	2.1 - 2.5 - 3.2						
Total cooling capacity (4 rows - 2.5 mm)**	kW	6.4	10.8	14.8	24.7	39.0	56.7	98.2
Sensible cooling capacity (4 rows - 2.5 mm)**	kW	4.8	8.0	11.4	18.8	29.2	42.2	72.4
Connection diameter of the 4-row cold coil	DN	25	25	32	40	50	50	60
Heating capacity (1 row - 2.5 mm)	kW	2.0	3.3	4.7	7.8	12.1	17.5	24.3
Connection diameter of the 1-row hot coil	DN	20	20	20	25	32	32	40
ELECTRICAL COIL (option)								
Min. electrical power (3 stages)	kW	3.0	6.0	9.0	12.0	30.0	36.0	54.0
Max. electrical power (3 stages)	kW	12.0	18.0	27.0	48.0	75.0	108.0	144.0
DIMENSIONS AND WEIGHTS - (mm and kg)								
Wheel 82% - Main block alone	Weight	N/A	N/A	567	838	1213	1637	2014
SFPv Global (intake + supply) with inverter loss	W/(m3.s)	N/A	N/A	1734	1636	1662	1658	1696
Wheel 82% - Main cabinet only	Weight	315	440	561	797	1187	1502	1848
SFPv Global (intake + supply)	W/(m3.s)	1712	1859	1931	1594	1807	1617	1774
Wheel 82% - Main cabinet only	Weight	329	407	567	847	1085	1437	1768
SFPv Global (intake + supply)	W/(m3.s)	1928	2002	2164	1673	1749	1723	1944
Hot water coil section (HM0)	Length	450	450	450	450	450	450	450
1 row - without valves	Weight	62	72	76	88	105	122	158
Impact on the SFPv (value to be added)	W/(m3.s)	28	28	23	22	20	21	20
Chilled water coil section (HM1)	Length	500	500	500	500	500	500	500
4 rows - without valves	Weight	72	84	89	112	141	171	184
Impact on the SFPv (value to be added)	W/(m3.s)	180	151	97	95	81	81	80
Electrical coil section (HM0-E)	Length	800	800	800	800	800	800	800
Min. power - 3 stages	Weight	89	103	114	138	174	204	225
Impact on the SFPv (value to be added)	W/(m3.s)	104	90	64	60	55	56	55

Performances of heat recovery devices given for a balanced nominal air flow. -7°C/90% for fresh air and 22°C/50% for the intake in winter; 32°C/40% for fresh air and 25°C/50% for the intake in summer - thermal wheel with the highest efficiency available. Pt = Ptotal = Dynamic pressure of the fan + Static pressure in the ducts + Static pressure in the unit. PDC = pressure loss.

** Performance calculated taking into account the temperature at output of the very high efficiency wheel for a unit output of 21°C in winter (water 80°C/60°C) and 16°C in summer (water: 7°C/12°C).

*** SFPv communicated for a Premi@ir version PR DFC without coils, with on the discharge and intake: F7 bag filters; 200 Pa static pressure, dampers. Indicative values, please refer to the software for the accurate performance at the working point.

PREMI@IR 20 à 360

MAIN FEATURES

- Cooling capacity: from 10 to 175 kW
- Heating capacity: from 20 to 356 kW
- Sizes: 10
- Air flow: from 1,000 to 30,000 m³/h
- Insulation: glass wool, rock wool, polyurethane foam

DESCRIPTION

- With 10 models, from 1000 to 30000 m³/h, this range is suitable for comfort, hygienic and industrial applications.
- Innovative, robust free-standing composition with a perfectly smooth tunnel, including at module junctions, which prevents any microbial development due to the accumulation of dust.
- The double skin panels are covered on six sides to prevent any penetration of humidity. They are fitted with fireproof thermal insulation.

Main options

- 2 types of thermal wheels (standard and high efficiency).
- 3 types of plates (standard, medium and high efficiency).
- Removable condensate tray or dry tray with 3 slopes for hygienic applications.
- A choice of 3 types of damper: standard, class 3 and class 4 to EN 1751.
- Wide choice of material: galvanised, pre-coated, stainless steel 304L (1.4307) or 316L (1.4404) on the internal and/or external skin.
- Wide choice of fans: action, reaction or plug-fans.

Main accessories

- Connection frame and flexible sleeve M0.
- Internal lighting 24 V or 230 V with waterproof switch.
- Viewing window in access doors.
- Rain hood.
- Roof.
- Fresh air intake.
- Bird screen.
- Pressure taping points.
- Inclined and U-shaped manometers.
- Blank sections with different lengths.
- Rigid connection frame.
- 3-point actuators, on-off or 0-10 V.

Advantages

- Since Premi@ir units are manufactured to order, scrupulously complying with the specific needs of each installation, they offer an infinite choice of solutions.
- Eurovent certification T2 - TB2 - L2 - F9 - D1.
- Different combinations available: In-line, stacked or side-by-side.
- Suitable for indoor or outdoor installation.(*)
- Access door without thermal bridge thanks to polyamide hinge and an external rotor that doesn't transverse the door.
- Wide choice of filter: flat, bag or compact from G4 to H14.
- Wide choice of coils supplied as standard from 2 rows to 8 rows with a fins spacing from 2.1, 2.5 or 3.2 mm with fins made of aluminium, aluminium epoxy or copper and/or Blygold(R) if the environmental conditions are harsh.
- Powerful selection software with user-friendly interface enabling all kinds of simulations. To optimise presentation of the product ranges, the "execution" quality documents (plans in DXF format) are provided from the prototype phase.

Operating limits/recommendations

- 1500 Pa maximum on the positive pressure and negative pressure panel.
- 40°C maximum on the motor without under-dimensioning factor of the motor power. 60°C with under-dimensioning factor of 0.82 on the motor power.
- -20°C minimum for the air intake.

(*) Condensation may form on the panels depending on the temperature of the indoor and outdoor air.

Controls: besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

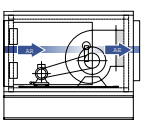
PREMI@IR PR TECHNICAL SPECIFICATIONS

SIZE		20	40	60	90	120	160	200	240	300	360
Air flow (at 2.9 m/s on the cooling coil)	m³/h	1650	3300	5500	7500	9100	12850	16600	20200	24400	2950
Height with body (STD or side-by-side)	mm	685	1045	1045	1045	1225	1555	1555	1555	1845	2145
Height with chassis (double deck)	mm	1220	1940	1940	1940	2300	2960	2960	2960	3540	4140
Width (STD or double deck)	mm	715	715	1020	1325	1325	1325	1630	1935	1935	1935
Width (side-by-side)	mm	1430	1430	2040	2650	2650	2650	3260	3870	3870	3870
COILS											
Number of rows		1 to 8 in heating – 2 to 8 in cooling									
Fin spacing	mm	2.1 - 2.5 - 3.2									
Total cooling capacity (for 4 rows – 2.5 mm)	kW	10.0	19.0	33.4	45.1	54.7	77.3	104.3	123.2	147.0	171.8
Sensible cooling capacity (for 4 rows – 2.5 mm)	kW	9.0	17.5	29.8	40.5	49.2	69.4	91.4	109.8	131.9	157.0
Cooling coil connection (4 rows)	DN	25	25	32	32	32	50	50	65	65	65
Heating capacity (for 2 rows – 2.5 mm)	kW	19.9	40.3	66.9	92.0	110.6	155.4	201.7	246.9	269.9	355.6
Heating coil connection (2 rows)	DN	25	25	25	32	32	32	32	50	50	50
Min electric heating capacity	kW	3.75	9.0	9.0	9.0	10.5	12.0	12.0	12.0	18.0	21.0
Max electric heating capacity	kW	22.5	54.0	90.0	126.0	147.0	168.0	216.0	252.0	396.0	462.0
FANS											
Type available		Action - Reaction – Reinforced reaction – Plug fan									
Min size of centrifugal fan		160	200	250	280	355	400	450	500	560	630
Max size of centrifugal fan		200	250	315	355	450	500	560	630	710	800
Min size of Plug fan		200	315	315	355	400	500	560	630	710	800
Max size of Plug fan		250	400	400	450	500	630	710	800	900	1000
FILTER											
Filter frame		Class F9 (as per EN 1886)									
Available filter		G2 (metal) and flat G4 – bag F5, F7 and F8 – Rigid F7 and F9 - H10 to H14 HEPA									
HEAT RECOVERY											
Run around coil		From 2 to 8 rows									
Efficiency at standard yield of thermal wheel	%	48	46	45	46	45	53	53	51	49	50
Efficiency at increased yield of thermal wheel	%	60	59	59	59	58	59	59	57	58	61
Length of section at STD yield of plate heat exchanger	%	72	72	72	72	70	73	73	71	73	70
Efficiency at medium yield of plate heat exchanger	%	68	34	56	70	59	50	54	50	55	50
Efficiency at increased yield of plate heat exchanger	%	83	73	75	77	74	75	76	73	74	71
DIMENSIONS AND WEIGHT (in mm and kg)		20	40	60	90	120	160	200	240	300	360
Extraction (type A) Single fan, reaction	Length	820	920	1120	1220	1520	1520	1620	1720	1820	2020
	Weight	99	136	189	226	315	371	442	539	723	891
100% fresh air (type D) – Flat G4 filter + F7 bag filter + 2R heating coil + 4R cooling coil + reaction fan	Length	2120	2220	2420	2520	2620	2940	3040	3240	3240	3340
	Weight	261	342	454	525	610	805	949	1184	1321	1647
2-way mixing box (type G) 2-way mixing section + type D	Length	2420	2620	2940	3040	3240	3540	3640	3840	3840	4140
	Weight	293	385	524	598	709	902	1059	1305	1464	1843
Dual flow in-line (type J) Type A + 3-way mixing in-line + type D	Length	3660	4060	4460	4660	5060	5780	5980	6280	6380	7080
	Weight	427	563	749	848	1021	1334	1560	1912	2247	2839
Stacked (type I) – type G on fresh air Type A + flat G4 filter on the return	Length	3440	3840	4060	4160	4560	4860	5160	5480	5680	6280
	Weight	538	692	944	1057	1265	1568	1971	2374	2782	3419

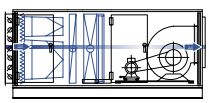
Performances of cooling coils for 32°C/40% - 7-12°C and performances of heating coils for -7°C/90% - 90/70°C.

Configurations

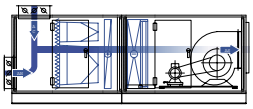
CONFIGURATION A



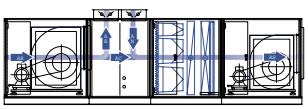
CONFIGURATION D



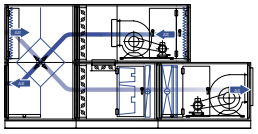
CONFIGURATION G



CONFIGURATION J



CONFIGURATION I



@IRTWIN 20 to 360

MAIN FEATURES

- Cooling capacity: 10 to 175 kW
- Heating capacity: 20 to 356 kW
- Number of sizes: 10
- Air flow range: 1000 to 30000 m^3/h
- Insulation: 25 mm thick glass wool or rock wool

DESCRIPTION

With 10 models, from 1000 to 30000 m^3/h, this range is suitable for comfort and industrial applications.

A skeleton structure compatible with ERP (public buildings) consisting of aluminium profiles and rigid and light polycarbonate corners reinforced with glass fibre.

The 25 mm thick double-skin panels are covered on 6 sides to avoid any penetration of humidity. They are fitted with fire-rated thermal insulation.

Advantages

Since @irtwin air handling units are manufactured to order according to the specific needs of each installation, they offer an infinite choice of solutions.

Classification T4 – TB3 – L2 – F9 – D1 certified by EUROVENT.

Various configurations available: in-line, stacked or side-by-side.

Suitable for indoor or outdoor installation (precaution against risk of condensation on the panels).

Wide choice of filter classes and types: flat, bag and rigid from G4 to F9.

Wide choice of coils available as standard from 2 to 8 rows with fins spacing from 2.1 - 2.5 or 3.2 mm. Fins made of aluminium, aluminium epoxy or copper. As an option, the coils can be fully protected by Blygold cladding against harsh environments.

Powerful selection software with user-friendly graphical interface allows you to make all kinds of simulations. To optimise the product ranges, the "execution" quality documents (plans in DXF format) are provided from the prototype phase.

Main options and accessories

2 types of thermal wheels (standard efficiency and high efficiency)

3 types of plate heat exchangers (standard, medium and high efficiency).

A choice of 3 types of damper: standard, class 3 and class 4 to EN 1751.

2 types of mineral wool available: glass wool and rock wool.

Wide choice of roofing: galvanised, pre-painted, inox 304L or 316L.

Wide choice of belt-drive fans (action or reaction type fan) or direct drive fans (freewheel type fan), inspection hatch, drain hole and epoxy paint on fan, variable pulley, twin speed motors, 60 Hz motors, emergency motors, proximity switch etc.

Flexible connection frame and sleeve M0 class.

Internal lighting 24 V or 230 V with waterproof switch.

Viewing window in access door.

Rain hoods.

Roof.

Pressure taping points.

U-shaped and inclined manometers.

Blank functions with different lengths.

Operating limits/recommendations

1000 Pa maximum on panels in positive and negative pressure.

40°C maximum on motors, beyond this the power of the motor is downgraded (coefficient of 0.82 on the power for a maximum temperature of 60°C).

-20°C minimum on the air intake for internal components.

Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.

Controls: besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

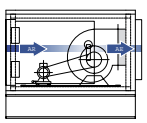
@IRTWIN - TR TECHNICAL SPECIFICATIONS

SIZE		20	40	60	90	120	160	200	240	300	360
Air flow (at 2.9 m/s on the cooling coil)	m³/h	1650	3300	5500	7500	9100	12850	16600	20200	24400	2950
Height with chassis (STD or side-by-side)	mm	685	1045	1045	1045	1225	1555	1555	1555	1845	2145
Height with chassis (double deck)	mm	1220	1940	1940	1940	2300	2960	2960	2960	3540	4140
Width (STD or double deck)	mm	715	715	1020	1325	1325	1325	1630	1935	1935	1935
Width (side-by-side)	mm	1430	1430	2040	2650	2650	2650	3260	3870	3870	3870
COILS											
Number of rows		1 to 8 in heating – 2 to 8 in cooling									
Fin spacing	mm	2.1 - 2.5 - 3.2									
Total cooling capacity (for 4 rows – 2.5 mm)	kW	10	19	33.4	45.1	54.7	77.3	104.3	123.2	147	171.8
Sensible cooling capacity (for 4 rows – 2.5 mm)	kW	9	17.5	29.8	40.5	49.2	69.4	91.4	109.8	131.9	157
Cooling coil connection (4 rows)	DN	25	25	32	32	32	50	50	65	65	65
Heating capacity (for 2 rows – 2.5 mm)	kW	19.9	40.3	66.9	92	110.6	155.4	201.7	246.9	269.9	355.6
Heating coil connection (2 rows)	DN	25	25	25	32	32	32	32	50	50	50
Min electric heating capacity	kW	3.75	9	9	9	10.5	12	12	12	18	21
Max electric heating capacity	kW	22.5	54	90	126	147	168	216	252	396	462
FANS											
Type available		Action - Reaction – Reinforced reaction – Plug fan									
Min size of centrifugal fan		160	200	250	280	355	400	450	500	560	630
Max size of centrifugal fan		200	250	315	355	450	500	560	630	710	800
Min size of Plug fan		200	315	315	355	400	500	560	630	710	800
Max size of Plug fan		250	400	400	450	500	630	710	800	900	1000
FILTER											
Filter frame		Class F9 (as per EN 1886)									
Available filter		G2 (metal) and flat G4 – pocket F5, F7 and F8 – Rigid F7 and F9 - H10 to H14 HEPA									
HEAT RECOVERY											
Run around coil		From 2 to 8 rows									
Efficiency at standard yield of thermal wheel	%	48	46	45	46	45	53	53	51	49	50
Efficiency at increased yield of thermal wheel	%	60	59	59	59	58	59	59	57	58	61
Length of section at STD yield of thermal plate	%	72	72	72	72	70	73	73	71	73	70
Efficiency at medium yield of thermal plate	%	68	34	56	70	59	50	54	50	55	50
Efficiency at increased yield of thermal plate	%	83	73	75	77	74	75	76	73	74	71
DIMENSIONS AND WEIGHTS (in mm and kg)		20	40	60	90	120	160	200	240	300	360
Extraction (type A) Single fan, reaction	Length	784	884	1084	1184	1484	1484	1584	1684	1784	1984
	Weight	99	136	189	226	315	371	442	539	723	891
100% fresh air (type D) – Flat G4 filter + F7 bag filter + 2R heating coil + 4R cooling coil + reaction fan	Length	2084	2184	2384	2484	2584	2868	2968	3168	3168	3268
	Weight	261	342	454	525	610	805	949	1184	1321	1647
2-way air mixing box (type G) 2-way mixing section + type D	Length	2384	2584	2868	2968	3168	3468	3568	3768	3768	4068
	Weight	293	385	524	598	709	902	1059	1305	1464	1843
Dual flow in-line (type J) Type A + 3-way mixing box in-line + type D	Length	3552	3952	4352	4552	4952	5636	5836	6163	6236	6936
	Weight	427	563	749	848	1021	1334	1560	1912	2247	2839
Stacked (type I) – type G on fresh air Type A + flat G4 filter on the intake	Length	3368	3768	3952	4052	4452	4752	5052	5336	5536	6136
	Weight	538	692	944	1057	1265	1568	1971	2374	2782	3419

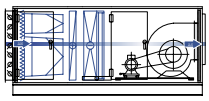
Performance of cooling coils based on: 32°C/40% - 7/12°C & performance of heating coil on: -7°C/90% – 90/70°C.
Performance of the heat recovery device based on: balanced air flow – fresh air -7°C/90% - air intake 22°C/50% - plate heat exchanger without bypass – thermal wheel with the smallest possible fin spacing.

Configurations

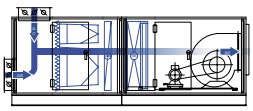
CONFIGURATION A



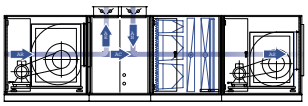
CONFIGURATION D



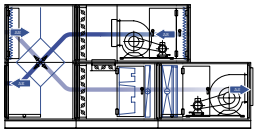
CONFIGURATION G



CONFIGURATION J



CONFIGURATION I



@IRTWIN 400 to 1000

MAIN FEATURES

- Chilled water coil power: 200 to 505 kW
- Hot water coil power: 500 to 1375 kW
- Number of sizes: 5
- Air flow range: 30000 to 100000 m³/h
- Insulation: 50 mm thick glass wool, rockwool or polyurethan foam

DESCRIPTION

- With 5 additional models, from 30000 to 100000 m³/h, the @irtwin range is suitable for comfort, hygienic and industrial applications, in line with the main features offered by the Premi@ir range.
- A skeleton structure compatible with ERP (public buildings) consisting of aluminium profiles and rigid and soft polycarbonate corners protected with glass fibre.
- The 50 mm thick double-skin panels are covered on 6 sides to avoid any penetration of humidity.

Advantages

- As for the Permi@air air handling units, the @irtwin units 400 to 1000 are manufactured to offer a product matching with the specific needs of each installation by offering an infinite choice of solutions.
- Classification T4 – TB3 – L2 – F9 – D1 certified by EUROVENT.
- Various configurations available: in-line, double deck or side-by-side.
- Suitable for indoor or outdoor installation.
- Access door without thermal bridge thanks to polyamide hinges and external rotor that doesn't transverse the door.
- Wide choice of filter: flat, bag and rigid from G4 to H14.
- Wide choice of coils from 2 to 8 rows with fin spacing from 2.0 or 3.0 mm. Fins made of aluminium, aluminium epoxy or copper. As an option, the coils can be fully protected by Blygold cladding against harsh environments.
- Powerful selection software with user-friendly graphical interface allows you to make all kinds of simulations. To optimise the product ranges, the "execution" quality documents (plans in DXF format) are provided from the design phase.

Controls: besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Main options and accessories

- 2 types of thermal wheels (standard efficiency and high efficiency)
- 3 types of plate heat exchangers (standard, medium and high efficiency).
- A choice of 3 types of damper: standard, class 3 waterproof and class 4 waterproof to EN 1751.
- 2 types of mineral wool available: glass wool and rock wool.
- Wide choice of roofing: galvanised, pre-painted, inox 304L or 316L.
- Wide choice of belt-drive fans (action or reaction type fan) or direct drive fans (freewheel type fan), inspection hatch, drain hole and epoxy paint on fan, variable pulley, twin speed motors, 60 Hz motors, emergency motors, proximity switch etc.
- Flexible connection frame and sleeve M0 class.
- Internal lighting 24 V or 230 V with waterproof switch.
- Viewing window in access door.
- Air intake and delivery rain hoods.
- Roof.
- Pressure taping points.
- U-shaped and inclined manometers.
- Blank sections with different lengths.

Operating limits/recommendations

- 1500 Pa maximum on panels, in positive pressure and negative pressure.
- 40°C maximum on motors, beyond this the power of the motor is downgraded (coefficient of 0.82 on the power for a maximum temperature of 60°C).
- -20°C minimum at the air intake.
- Depending on the indoor air temperature and the outdoor air temperature, condensation may appear on the panels.

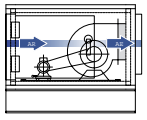
@IRTWIN - TR TECHNICAL SPECIFICATIONS

SIZE		400	500	700	900	1000
Air flow (at 2.8 m/s on the cooling coil)	m³/h	34290	42200	53200	70930	87865
Height with chassis (STD or side-by-side)	mm	2230	2230	2230	2850	2850
Height with chassis (double deck)	mm	4280	4280	4280	N/A	N/A
Width (STD or double deck)	mm	2220	2670	3300	3300	4000
Width (side-by-side)	mm	4440	5340	6600	6600	8000
COILS						
Number of rows		2 to 8				
Fin spacing	mm	2.0 and 3.0				
Total cooling capacity (for 4 rows – 3.0 mm)	kW	199.3	257.9	301.6	415.9	505.3
Sensible cooling capacity (for 4 rows – 3.0 mm)	kW	184.4	231.8	273.7	382.7	470.4
Cooling coil connection (4 rows)	DN	65	65	80	80	80
Heating capacity (for 2 rows – 2.0 mm)	kW	538.0	671.0	819.0	1092.0	1375.0
Heating coil connection (2 rows)	DN	50	65	65	65	80
Min electric heating capacity	kW	21.0	21.0	21.0	24.0	24.0
Max electric heating capacity	kW	252.0	420.0	588.0	624.0	840.0
FANS						
Type available		Action - Reaction – Reinforced reaction – Plug fans				
Min size of centrifugal fan		630	710	800	900	1000
Max size of centrifugal fan		800	900	900	1000	-
Min size of Plug fans		900	900	900	1120	1120
Max size of Plug fans		1120	1120	1120	1400	1400
FILTER						
Filter frame		Class F9 (as per EN 1886)				
Available filter		G2 (metal) and flat G4 – bag F5, F7 and F8 – Rigid F7 and F9 - H10 to H14 HEPA				
HEAT RECOVERY						
Run around coils		From 2 to 8 rows				
Efficiency at standard yield of thermal wheel	%	50	46	46	N/A	N/A
Efficiency at increased yield of thermal wheel	%	55	50	50	N/A	N/A
Length of section at STD yield of thermal plate	%	62	56	56	N/A	N/A
Efficiency at medium yield of thermal plate	%	54	59	56	N/A	N/A
Efficiency at increased yield of thermal plate	%	70	N/A	N/A	N/A	N/A

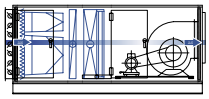
Performance of cooling coils based on: 32°C/40% - 7/12°C & performance of heating coil on: -7°C/90% – 90/70°C.
N/A: Not available
Performance of the heat recovery device based on: balanced air flow – fresh air -7°C/90% - return 22°C/50% - Plate heat exchangers without bypass – thermal wheel with the smallest possible fin spacing.

Configurations

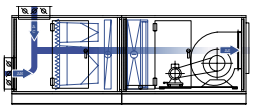
CONFIGURATION A



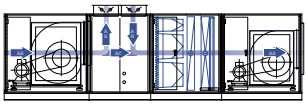
CONFIGURATION D



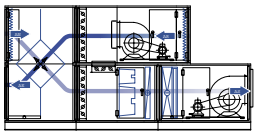
CONFIGURATION G



CONFIGURATION J



CONFIGURATION I



Win Clim

Eurovent certified software

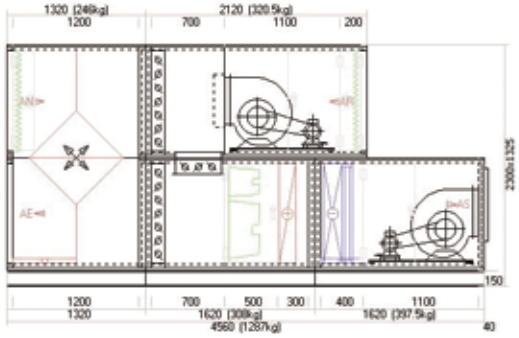
Drawings and documents exported in DXF, RTF (DOC) and PDF

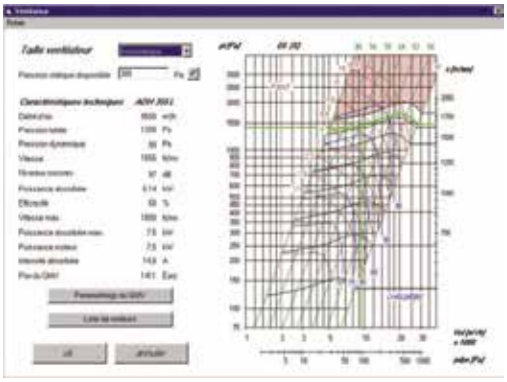
Simple and intuitive user interface

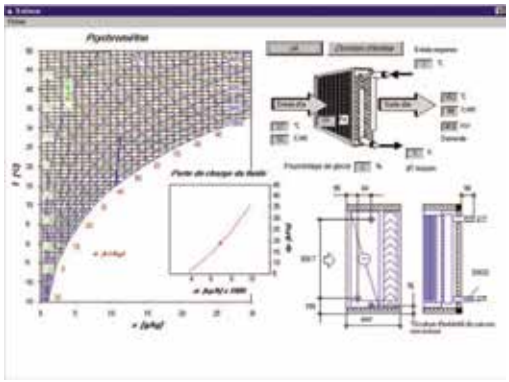
WinClim II

Selection software for Premi@ir and @irtwin

EUROVENT certified, the Premi@ir and @irtwin air handling units can be selected from software that is EUROVENT approved, with a user-friendly graphical interface running on Windows XP and Windows 7 operating systems.
The WinClim II selection software allows all kinds of simulations. To optimise the product ranges, the "execution" quality documents (plans in DXF format) are provided from the design phase. WinClim II also ensures any quotations and customisation requirements are saved.







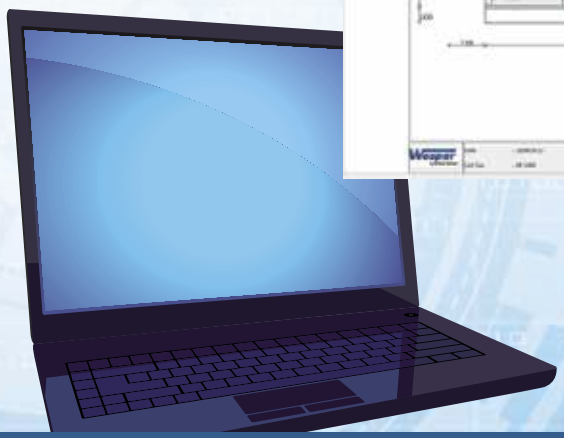
WinClim II and Premi@ir/ @irtwin ensure you have all the details about your selections, where nothing is left to chance, such as fan curves with visualisation of the operating point, development of the air in the psychrometric diagram, from the design stage. What you receive is a quality execution document.

WinClim III

Selection software for Premi@ir Double Deck Compact air handling units

Eurovent certified, the Premi@ir DFC air handling units can be selected from the winCLIM III software, also approved by Eurovent.
With a user-friendly graphical interface, winCLIM III runs on Windows operating systems (XP, 7).
Intuitive, user-friendly, quick and effective, winCLIM III allows users to:

- Select and visualise a unit.
- Represent a unit as a scale 2D model.
- Change and configure the components.
- Automatically generate 2D drawings in DXF format compatible with AutoCAD, selection files comprising the full technical characteristics and the price as well as a production order.



Contact our sales team and take a look at our website to find out more.

RCAH

Heat recovery device

MAIN FEATURES

- Air flows from 500 to 6000 m^3/h
- Aluminium crossed-flow heat exchanger
- Reduced energy consumption with a minimum heat recovery efficiency of 50%
- 3 versions available:
  - RCAH / Efficiency greater than 50%
  - RCAH AE / Efficiency greater than 90%
  - RCAH RCF / With integrated R410A cooling circuit
- Unit available in horizontal or vertical configuration
- Various air intake and air discharge options
- Easy access and easy to maintain components
- Double skin structure with insulation
- G4 filters included

Advantages

Yield optimisation for air-conditioning installations.
The RCAH units are static heat recovery devices that can be complemented with air-air or air-water conditioning systems while achieving considerable energy savings.

Options

ENERGY EFFICIENCY

- Brushless fans
- Adiabatic refrigeration kit

AIR QUALITY

- F6-F7-F8 filters
- Air quality control

UNIT INSTALLATION

- Bypass
- Electric coil
- Hot water coil (internal or external)
- Chilled water cooling coil
- 3-way valve with actuator
- Constant flow rate check
- Dirty filter detector
- Circular inlet
- Flexible joint
- Antifreeze thermostat
- Outdoor installation kit

CONTROLS

- On/off controller and 3-speed switch
- Remote temperature sensor
- Basic electronic controller
- Advanced electronic controller

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

RCAH TECHNICAL SPECIFICATIONS

MODEL		5	10	20	30	40
Maximum air flow	m^3/h	500	1000	2000	3200	4300
Available static pressure	Pa	155	125	130	160	180
Efficiency	%	58.7	56.4	50.0	53.8	54.6
Recovered power	kW	2.4	4.7	8.3	14.3	19.5
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	400.3
Maximum absorbed current	A	1.4	3.0	7.8	11.4	6.6
Sound level at 1 m	dB(A)	51.0	52.0	58.0	59.0	62.0
Dimensions (length x width x height)	mm	750x750x295	900x900x410	1000x1000x470	1300x1300x530	1400x1400x705
Weight	kg	41	68	99	155	235

MODEL		50	60
Maximum air flow	m^3/h	5000	6000
Available static pressure	Pa	99	188
Efficiency	%	53.8	53.1
Recovered power	kW	22.4	26.5
Power supply (50 Hz ~)	V	400.3	400.3
Maximum absorbed current	A	11.2	10.8
Sound level at 1 m	dB(A)	63.7	64.5
Dimensions (length x width x height)	mm	1700x1350x705	1900x1450x755
Weight	kg	235	273

Performance with an air inlet temperature of -5ºC (80% HR) and an outlet air temperature of 20ºC (50% HR)
Maximum ventilation speed

RCAH AE TECHNICAL SPECIFICATIONS

MODEL		5	10	15	20
Maximum air flow	m^3/h	500	1000	1500	2000
Available static pressure	Pa	85	130	150	215
Efficiency	%	90.0	90.1	90.1	90.0
Recovered power	kW	4.1	8.2	12.3	16.3
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1
Maximum absorbed current	A	3.0	6.2	14.2	11.4
Sound level at 1 m	dB(A)	52.0	55.0	60.0	59.0
Dimensions (length x width x height)	mm	1150x860x385	1450x1230x410	1700x1230x490	1700x1230x630
Weight	kg	75	120	175	220

Performance with an air inlet temperature of -7ºC (80% HR) and an outlet air temperature of 20ºC (55% HR)
Maximum ventilation speed

RCAH RCF TECHNICAL SPECIFICATIONS

MODEL		10	15	20	25
Maximum air flow	m^3/h	900	1400	2000	2600
Blow-out static pressure	Pa	225	154	187	179
Return static pressure	Pa	184	122	130	148
Efficiency (1)	%	46.7	44.6	49.2	47.8
Total refrigeration capacity (1)	kW	5.4	8.2	12.2	15.0
EER (1)	W/W	2.8	2.6	2.6	2.9
Efficiency (2)	%	54.0	51.4	56.9	55.2
Total heating capacity (2)	kW	8.8	13.7	21.0	26.5
COP (2)	W/W	6.1	5.6	5.7	5.9
Power supply (50 Hz ~)	V	230.1	230.1	230.1	400.3
Maximum absorbed current	A	14.6	21.6	36.3	22.6
Sound level at 1 m	dB(A)	55.0	52.0	59.0	58.0
Dimensions (length x width x height)	mm	1450x1230x470	1450x1230x470	1700x1560x530	1700x1560x530
Weight	kg	212	225	258	258

MODEL		30	40
Maximum air flow	m^3/h	3300	4000
Blow-out static pressure	Pa	211	159
Return static pressure	Pa	153	133
Efficiency (1)	%	48.8	47.8
Total refrigeration capacity (1)	kW	20.6	23.5
EER (1)	W/W	2.9	2.8
Efficiency (2)	%	56.4	55.2
Total heating capacity (2)	kW	35.1	40.4
COP (2)	W/W	6.0	5.6
Power supply (50 Hz ~)	V	400.3	400.3
Maximum absorbed current	A	26.9	24.8
Sound level at 1 m	dB(A)	58.0	62.0
Dimensions (length x width x height)	mm	1900x1700x705	1900x1700x705
Weight	kg	305	315

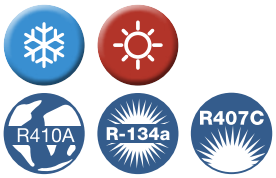
(1) Performance with an air inlet temperature of 32ºC (50% HR) and an outlet air temperature of 26ºC (50% HR)
(2) Performance with an air inlet temperature of -5ºC (80% HR) and an outlet air temperature of 20ºC (50% HR)

AIR-COOLED CONDENSERS

Wesper

ACCL 11 / 280
Cooling only

ACCH 11 / 280
Reversible



- ACCL for Cooling only application
- ACCH for Reversible application
- Capacity from 12 to 300 kW
- Sizes = 19
- Refrigerants:
  - R134a = ACCL only
  - R410A, R407C = ACCL ACCH

MAIN FEATURES

- Axial fans with blades generating low noise levels
- Valves (supplied loose) on gas and liquid line for connection to refrigerant piping system, the condenser is delivered with a nitrogen charge
- Thermostatic expansion valve (only on ACCH)
- Liquid sight glass (only on ACCH)
- Filter dryer (only on ACCH)
- Solenoid valve (only on ACCH)
- Check valve (only on ACCH)
- 0:10 V connection block for the condensation control system (connected to the indoor unit)
- Terminal block for alarm (connected to the indoor unit)
- Fan rotational speed control to regulate condensation (only with axial fans)

AVAILABLE VERSIONS

- ACCL for Cooling only application
- ACCH for Reversible application
- Single phase power supply for sizes up to 140
- STD standard version
- LS low sound level version
- XLS extra low sound level version

Advantages

- Simple and reliable
- Choice of sound level
- Integrated condensation control

Main accessories and options

Code
511 › Feet for vertical air discharge (kit)

ACCL STD Cooling only ACCH STD Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	30	35	45	50	60
CAPACITY (1)											
With R410A refrigerant	kW	12.1	14.7	18.4	20.7	24.2	32.7	37.4	47.6	56.1	62.6
With R407C refrigerant	kW	12	14.7	18.2	20.4	24.2	32.3	37.1	47.1	55.5	62
**With R134a refrigerant	kW	11.7	14.4	17.9	20	23.7	31.7	36.6	46.5	54.8	61.2
AXIAL FANS	N.	1	1	1	1	1	1	1	2	2	2
Air flow	m³/h	4900	4,500	5200	6400	9600	9,500	9100	12000	17000	16000
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.25	0.25	0.25	0.39	0.53	0.53	0.53	0.78	1.08	1.08
Maximum operating current	A	1.2	1.2	1.2	1.8	2.9	2.9	2.9	3.6	5.7	5.7
AVERAGE SOUND LEVELS (2)	dB(A)	63	63	63	65	67	67	67	67.4	69.4	69.4

SIZE		70	95	110	130	140	185	210	250	280
CAPACITY (1)										
With R410A refrigerant	kW	74	99.4	111	133	151	201	232	276	307
With R407C refrigerant	kW	73.3	98.3	110	132	150	198	231	273	304
**With R134a refrigerant	kW	72.4	97	109	130	149	195	228	270	301
AXIAL FANS	N.	2	3	3	4	4	6	6	8	8
Air flow	m³/h	18000	28200	27200	37800	36000	56000	54000	74600	72000
Available static pressure	Pa	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	1.08	1.59	1.59	2.12	2.12	3.18	3.18	4.24	4.24
Maximum operating current	A	5.7	8.5	8.5	11.4	11.4	17.1	17.1	22.8	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	69.4	70.5	70.5	71.1	71.1	71.5	71.5	72.2	72.2

ACCL STD Cooling only ACCH STD Reversible COMMON FEATURES

SIZE		11	14	17	20	25	30	35	45	50	60
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Refrigerant charge (3)	kg	0.8	1.2	1.7	1.7	2	3	4	4.7	4.1	5.5
DIMENSIONS											
Length	mm	875	875	1200	1200	1400	1400	1400	1600	1850	1850
Width	mm	540	540	540	540	665	665	665	665	665	665
Height	mm	727	727	727	727	1027	1027	1027	1027	1027	1027
NET WEIGHT	kg	51	55	66	72	102	111	120	153	175	188

SIZE		70	95	110	130	140	185	210	250	280
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)
Refrigerant charge (3)	kW	7.7	8.7	11.6	11.6	15.4	20.8	27.7	27.7	37
DIMENSIONS										
Length	mm	2320	3490	3490	4540	4540	3490	3490	4540	4540
Width	mm	665	665	665	665	665	665	665	665	665
Height	mm	1140	1150	1150	1150	1150	2200	2200	2200	2200
NET WEIGHT	kg	214	240	270	320	350	470	520	630	690

(1) For a condensation temperature of 50°C and an outdoor temperature of 35°C.
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(3) The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.
(*) also available in 230V / 1PH / 50 Hz, please refer to the electrical diagram for the unit.
**Not available in ACCH.

ACCL LS Cooling only ACCH LS Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	30	35	45	50	60
CAPACITY (1)											
With R410A refrigerant	kW	10.9	13.1	16.4	18.5	21.8	29.1	32.9	42	50.1	55.3
With R407C refrigerant	kW	10.8	13.1	16.2	18.2	21.8	28.7	32.6	41.6	49.6	54.8
**With R134a refrigerant	kW	10.6	12.9	15.9	17.9	21.3	28.3	32.3	41.1	48.9	54.2
AXIAL FANS	N.	1	1	1	1	1	1	1	2	2	2
Air flow	m³/h	4165	3825	4420	5440	8160	8075	7735	10200	14450	13600
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.21	0.21	0.21	0.33	0.45	0.45	0.45	0.66	0.92	0.92
Maximum operating current	A	1.2	1.2	1.2	1.8	2.9	2.9	2.9	3.6	5.7	5.7
AVERAGE SOUND LEVELS (2)	dB(A)	59.1	59.1	59.1	61.1	63.1	63.1	63.1	63.6	65.5	65.5

SIZE		70	95	110	130	140	185	210	250	280
CAPACITY (1)										
With R410A refrigerant	kW	65.1	88.3	97.7	118	133	179	205	245	270
With R407C refrigerant	kW	64.6	87.4	97.3	117	132	176	203	243	268
**With R134a refrigerant	kW	63.8	86.3	96.2	116	131	174	201	240	265
AXIAL FANS	N.	2	3	3	4	4	6	6	8	8
Air flow	m³/h	18000	28200	27200	37800	36000	56000	54000	74600	72000
Available static pressure	Pa	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.92	1.35	1.35	1.8	1.8	2.7	2.7	3.6	3.6
Maximum operating current	A	5.7	8.5	8.5	11.4	11.4	17.1	17.1	22.8	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	65.5	66.6	66.6	67.2	67.2	67.7	67.7	68.3	68.3

ACCL LS Cooling only ACCH LS Reversible COMMON FEATURES

SIZE		11	14	17	20	25	30	35	45	50	60
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Refrigerant charge (3)	kg	0.8	1.2	1.7	1.7	2	3	4	4.7	4.1	5.5
DIMENSIONS											
Length	mm	875	875	1200	1200	1400	1400	1400	1600	1850	1850
Width	mm	540	540	540	540	665	665	665	665	665	665
Height	mm	727	727	727	727	1027	1027	1027	1027	1027	1027
NET WEIGHT	kg	51	55	66	72	102	111	120	153	175	188

SIZE		70	95	110	130	140	185	210	250	280
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)
Refrigerant charge (3)	kW	7.7	8.7	11.6	11.6	15.4	20.8	27.7	27.7	37
DIMENSIONS										
Length	mm	2320	3490	3490	4540	4540	3490	3490	4540	4540
Width	mm	665	665	665	665	665	665	665	665	665
Height	mm	1140	1150	1150	1150	1150	2200	2200	2200	2200
NET WEIGHT	kg	214	240	270	320	350	470	520	630	690

(1) For a condensation temperature of 50°C and an outdoor temperature of 35°C.
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(3) The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.
(*) also available in 230V / 1PH / 50 Hz, please refer to the electrical diagram for the unit.
**Not available in ACCH.

ACCL XLS Cooling only ACCH XLS Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	30	35	45	50	60
CAPACITY (1)											
With R410A refrigerant	kW	9.6	11.4	14.1	16.1	19.2	25.2	28.2	36.1	43.5	47.6
With R407C refrigerant	kW	9.5	11.4	14	15.8	19.2	24.9	27.9	35.7	43.1	47.2
**With R134a refrigerant	kW	9.3	11.2	13.8	15.6	18.8	24.5	27.6	35.3	42.6	46.7
AXIAL FANS	N.	1	1	1	1	1	1	1	2	2	2
Air flow	m³/h	3430	3150	3640	4480	6720	6650	6370	8400	11900	11200
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.18	0.18	0.18	0.27	0.37	0.37	0.37	0.55	0.76	0.76
Maximum operating current	A	1.2	1.2	1.2	1.8	2.9	2.9	2.9	3.6	5.7	5.7
AVERAGE SOUND LEVELS (2)	dB(A)	54.5	54.5	54.5	56.5	58.5	58.5	58.5	58.9	60.8	60.8

SIZE		70	95	110	130	140	185	210	250	280
CAPACITY (1)										
With R410A refrigerant	kW	55.8	76.4	83.7	102	114	155	175	212	231
With R407C refrigerant	kW	55.3	75.7	83.3	101	113	153	173	210	229
**With R134a refrigerant	kW	54.7	74.8	82.5	100	112	151	172	208	227
AXIAL FANS	N.	2	3	3	4	4	6	6	8	8
Air flow	m³/h	12600	19740	19040	26460	25200	39200	37800	52220	50400
Available static pressure	Pa	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.76	1.11	1.11	1.48	1.48	1.48	2.23	2.23	2.97
Maximum operating current	A	5.7	8.5	8.5	11.4	11.4	17.1	17.1	22.8	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	60.8	61.9	61.9	62.5	62.5	63	63	63.7	63.7

ACCL XLS Cooling only ACCH XLS Reversible COMMON FEATURES

SIZE		11	14	17	20	25	30	35	45	50	60
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Refrigerant charge (3)	kg	0.8	1.2	1.7	1.7	2	3	4	4.7	4.1	5.5
DIMENSIONS											
Length	mm	875	875	1200	1200	1400	1400	1400	1600	1850	1850
Width	mm	540	540	540	540	665	665	665	665	665	665
Height	mm	727	727	727	727	1027	1027	1027	1027	1027	1027
NET WEIGHT	kg	51	55	66	72	102	111	120	153	175	188

SIZE		70	95	110	130	140	185	210	250	280
ELECTRICAL POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)	400/3/50 +N(*)
Refrigerant charge (3)	kW	7.7	8.7	11.6	11.6	15.4	20.8	27.7	27.7	37
DIMENSIONS										
Length	mm	2320	3490	3490	4540	4540	3490	3490	4540	4540
Width	mm	665	665	665	665	665	665	665	665	665
Height	mm	1140	1150	1150	1150	1150	2200	2200	2200	2200
NET WEIGHT	kg	214	240	270	320	350	470	520	630	690

(1) For a condensation temperature of 50°C and an outdoor temperature of 35°C.
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(3) The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.
(*) also available in 230V / 1PH / 50 Hz, please refer to the electrical diagram for the unit.
**Not available in ACCH.

ACCL PF 11 / 144
Cooling only

ACCH PF 11 / 144
Reversible

- ACCL for Cooling only application
- ACCH for Reversible application
- Capacity from 12 to 150 kW
- Sizes = 14
- Refrigerants
- R134a = ACCL only
- R410A, R407C = ACCL ACCH
- Available static pressure from 50 to 500 Pa depending on size

MAIN FEATURES

- Plug fans with EC motor
- Valves (supplied loose) on gas and liquid line for connection to refrigerant piping system, the condenser is delivered with a nitrogen charge
- Thermostatic expansion valve (only on ACCH)
- Liquid sight glass (only on ACCH)
- Filter dryer (only on ACCH)
- Solenoid valve (only on ACCH)
- Check valve (only on ACCH)
- 0:10 V connection block for the condensation control system (connected to the indoor unit)
- Terminal block for alarm (connected to the indoor unit)

AVAILABLE VERSIONS

- ACCL for Cooling only application
- ACCH for Reversible application
- STD standard version
- LS low sound level version
- XLS extra low sound level version

Advantages

- Available static pressure
- Simple and reliable
- Choice of sound level
- Integrated condensation control
- EC motor
- Low power consumption

ACCL PF STD Cooling only ACCH PF STD Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	33	38
CAPACITY (1)								
With R410A refrigerant	kW	12.1	15.6	18.2	21.6	25	35.1	39.8
With R407C refrigerant	kW	12	15.6	18.2	21.6	25	35.1	39.8
**With R134a refrigerant	kW	11.7	15.3	17.9	21.3	24.7	34.7	39.3
PLUG FANS	N.	1	1	1	1	1	1	1
Air flow	m³/h	4900	4900	4900	4900	6400	8000	10000
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	375	350	332	290	748	474	298
Nominal absorbed capacity	kW	0.38	0.42	0.45	0.52	0.64	1.3	1.14
Maximum operating current	A	1.6	1.6	1.6	1.6	4.3	4.3	3.6
AVERAGE SOUND LEVELS (2)	dB(A)	61.6	61.6	61.5	61.5	67.1	72	71.1
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
CAPACITY (1)								
With R410A refrigerant	kW	46.5	62	73.1	91	113	122	154
With R407C refrigerant	kW	46.5	62	73.1	91	113	122	154
**With R134a refrigerant	kW	46	61.2	72.4	89.9	111	121	152
PLUG FANS	N.	1	2	2	3	3	3	4
Air flow	m³/h	10000	16000	16000	24000	32000	28000	36000
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	1.24	2.18	2.39	3.34	4.74	5.63	7.4
Maximum operating current	A	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	71.3	77.3	77.4	80.3	81.8	83.7	84.5

ACCL PF STD Cooling only ACCH PF STD Reversible COMMON FEATURES

SIZE		11	14	17	20	25	33	38
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kg	0.8	1.2	1.7	2.6	2.5	3.8	4.3
DIMENSIONS								
Length	mm	890	890	890	890	1190	1190	1390
Width	mm	880	880	880	880	880	880	880
Height	mm	900	900	900	900	900	900	1300
NET WEIGHT	kg	143	148	153	163	210	222	284
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kW	6.4	5.9	8.8	10.2	9.4	10.3	14
DIMENSIONS								
Length	mm	1390	1840	1840	2290	1840	2290	1840
Width	mm	880	880	880	880	880	880	880
Height	mm	1300	1300	1300	1300	1300	1300	1800
NET WEIGHT	kg	310	387	421	515	625	557	673

1. For a condensation temperature of 50°C and an outdoor temperature of 35°C.
2. Sound pressure level Lpm 1 m far according to ISO EN 3744.
3. The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.

**Not available in ACCH

ACCL PF LS Cooling only ACCH PF LS Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	33	38
CAPACITY (1)								
With R410A refrigerant	kW	10.8	13.7	15.9	18.8	21.6	30.2	34.5
With R407C refrigerant	kW	10.5	13.7	15.9	18.8	21.6	30.2	34.5
**With R134a refrigerant	kW	10.2	13.3	15.5	18.4	21	29.4	33.7
PLUG FANS	N.	1	1	1	1	1	1	1
Air flow	m³/h	4165	4165	4165	4165	5440	6800	8,500
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	375	350	332	290	748	474	298
Nominal absorbed capacity	kW	0.26	0.28	0.3	0.34	0.42	0.83	0.74
Maximum operating current	A	1.6	1.6	1.6	1.6	4.3	4.3	3.6
AVERAGE SOUND LEVELS (2)	dB(A)	57.7	57.7	57.6	57.6	63.2	68.1	67.2
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
CAPACITY (1)								
With R410A refrigerant	kW	40.1	53.4	62.7	78.6	98.9	105	131
With R407C refrigerant	kW	40.1	53.4	62.7	78.6	98.9	105	131
**With R134a refrigerant	kW	39.3	51.8	61.3	76.2	96.2	102	127
PLUG FANS	N.	1	2	2	3	3	3	4
Air flow	m³/h	8,500	13600	13600	20400	27200	23800	30600
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	0.8	1.4	1.51	2.15	3.04	3.57	4.69
Maximum operating current	A	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	67.4	73.4	73.5	76.4	77.9	79.8	80.6

ACCL PF LS Cooling only ACCH PF LS Reversible COMMON FEATURES

SIZE		11	14	17	20	25	33	38
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kg	0.8	1.2	1.7	2.6	2.5	3.8	4.3
DIMENSIONS								
Length	mm	890	890	890	890	1190	1190	1390
Width	mm	880	880	880	880	880	880	880
Height	mm	900	900	900	900	900	900	1300
NET WEIGHT	kg	143	148	153	163	210	222	284
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kW	6.4	5.9	8.8	10.2	9.4	10.3	14
DIMENSIONS								
Length	mm	1390	1840	1840	2290	1840	2290	1840
Width	mm	880	880	880	880	880	880	880
Height	mm	1300	1300	1300	1300	1300	1300	1800
NET WEIGHT	kg	310	387	421	515	625	557	673

(1) For a condensation temperature of 50°C and an outdoor temperature of 35°C.
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(3) The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.
**Not available in ACCH

ACCL PF XLS Cooling only ACCH PF XLS Reversible TECHNICAL SPECIFICATIONS

SIZE		11	14	17	20	25	33	38
CAPACITY (1)								
With R410A refrigerant	kW	9.5	11.9	13.7	16	18.7	25.8	29.7
With R407C refrigerant	kW	9.3	11.9	13.7	16	18.7	25.8	29.7
**With R134a refrigerant	kW	9.1	11.6	13.4	15.7	18.2	25.2	29.1
PLUG FANS	N.	1	1	1	1	1	1	1
Air flow	m³/h	3430	3430	3430	3430	4480	5600	7000
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	375	350	332	290	748	474	298
Nominal absorbed capacity	kW	0.16	0.17	0.19	0.21	0.26	0.5	0.49
Maximum operating current	A	1.6	1.6	1.6	1.6	4.3	4.3	3.6
AVERAGE SOUND LEVELS (2)	dB(A)	53.1	53.1	53	53	58.6	63.5	62.6
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
CAPACITY (1)								
With R410A refrigerant	kW	34	46.2	53.4	68.1	85.9	89.8	113
With R407C refrigerant	kW	34	46.2	53.4	68.1	85.9	89.8	113
**With R134a refrigerant	kW	33.5	45	52.4	66.4	83.8	87.9	110
PLUG FANS	N.	1	2	2	3	3	3	4
Air flow	m³/h	7000	11200	11200	16800	22400	19600	25200
Available static pressure	Pa	50	50	50	50	50	50	50
Maximum available static pressure	Pa	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	0.48	0.84	0.92	1.29	1.82	2.1	2.76
Maximum operating current	A	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	62.8	68.8	68.9	71.8	73.3	75.2	76

ACCL PF XLS Cooling only ACCH PF XLS Reversible COMMON FEATURES

SIZE		11	14	17	20	25	33	38
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kg	0.8	1.2	1.7	2.6	2.5	3.8	4.3
DIMENSIONS								
Length	mm	890	890	890	890	1190	1190	1390
Width	mm	880	880	880	880	880	880	880
Height	mm	900	900	900	900	900	900	1300
NET WEIGHT	kg	143	148	153	163	210	222	284
SIZE		**44**	**58**	**69**	**86**	**108**	**114**	**144**
ELECTRICAL POWER SUPPLY	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Refrigerant charge (3)	kW	6.4	5.9	8.8	10.2	9.4	10.3	14
DIMENSIONS								
Length	mm	1390	1840	1840	2290	1840	2290	1840
Width	mm	880	880	880	880	880	880	880
Height	mm	1300	1300	1300	1300	1300	1300	1800
NET WEIGHT	kg	310	387	421	515	625	557	673

(1) For a condensation temperature of 50°C and an outdoor temperature of 35°C.
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(3) The condenser is delivered without refrigerant (nitrogen). For the refrigerant charge, in addition to the values above, add the charge of the piping system and the indoor units; for oil add 10% of the total quantity of refrigerant.
**Not available in ACCH

DRY COOLERS

Wesper

DC 14 / 280
Axial fans

- Capacity from 8 to 172 kW
- Sizes = 10

MAIN FEATURES

- Axial fans with blades generating low noise levels
- 0:10 V connection block for the condensation control system (connected to the indoor unit)
- Terminal block for alarm (connected to the indoor unit)
- Fan rotational speed control to regulate condensation (only with axial fans)
- Copper tube heat exchanger with high efficiency aluminium fins developed for greater thermal transfer and low pressure drops

AVAILABLE VERSIONS

- Single phase for sizes up to 140
- STD standard version
- LS low sound level version 85%
- LS low sound level version 70 %

Advantages

- Simple and reliable
- Choice of sound level
- Integrated condensation control

Main accessories and options

Code
511 › Feet for vertical air discharge (kit)

DC TECHNICAL SPECIFICATIONS

SIZE		14	20	35	45	60	70	110	140	210	280
CAPACITY (1)	kW	8.3	11.7	22.6	26.4	31.8	40.2	62.2	86.1	124	172
Heat exchanger											
Water flow	m³/h	1.5	2.1	4	4.7	5.7	7.2	11.1	15.4	22.1	30.8
Pressure drop	kPa	24	21	26	16	8	12	17	40	17	40
Water volume	l	4	5.7	15.7	15.2	17.9	25.1	37.7	72.8	75.3	100.4
AXIAL FANS	N.	1	1	1	2	2	2	3	4	6	8
Air flow	m³/h	4,500	6400	9100	12000	16000	18000	27200	36000	54000	72000
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.25	0.39	0.53	0.78	1.08	1.08	1.59	2.12	3.18	4.24
Maximum operating current	A	0.7	1.8	2.9	3.6	5.7	5.7	8.5	11.4	17.1	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	63	65	67	67.4	69.4	69.4	70.5	71.1	71.5	72.2

DC COMMON FEATURES

SIZE		14	20	35	45	60	70	110	140	210	280
Electrical power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)
Dimensions Length	mm	875	1200	1400	1600	1850	2320	3490	4540	3490	4540
Dimensions Width	mm	540	540	665	665	665	665	665	665	665	665
Dimensions Height	mm	727	727	1027	1027	1027	1140	1150	1150	2200	2200
Net weight	kg	56	73	122	156	191	219	227	359	533	708

DC LN 85% TECHNICAL SPECIFICATIONS

SIZE		14	20	35	45	60	70	110	140	210	280
CAPACITY (1)	kW	7.3	10.4	19.8	23.3	28	35.3	54.8	75.9	109	152
Heat exchanger											
Water flow	m³/h	1.3	1.9	3.5	4.2	5	6.3	9.8	13.6	19.5	27.1
Pressure drop	kPa	19	17	21	13	6	10	14	32	14	32
Water volume	l	4	5.7	15.7	15.2	17.9	25.1	37.7	72.8	75.3	100.4
AXIAL FANS	N.	1	1	1	2	2	2	3	4	6	8
Air flow	m³/h	3825	5440	7735	10200	13600	15300	23120	30600	45900	61200
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.21	0.33	0.45	0.66	0.92	0.92	1.35	1.8	2.7	3.6
Maximum operating current	A	0.7	1.8	2.9	3.6	5.7	5.7	8.5	11.4	17.1	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	59.1	61.1	63.1	63.6	65.5	65.5	66.6	67.2	67.7	68.3

DC LN 85% COMMON FEATURES

SIZE		14	20	35	45	60	70	110	140	210	280
Electrical power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)
Dimensions Length	mm	875	1200	1400	1600	1850	2320	3490	4540	3490	4540
Dimensions Width	mm	540	540	665	665	665	665	665	665	665	665
Dimensions Height	mm	727	727	1027	1027	1027	1140	1150	1150	2200	2200
Net weight	kg	56	73	122	156	191	219	227	359	533	708

DC LN 70% TECHNICAL SPECIFICATIONS

SIZE		14	20	35	45	60	70	110	140	210	280
CAPACITY (1)	kW	6.4	9	16.9	19.9	23.8	30.2	46.9	65	93.2	130
Heat exchanger											
Water flow	m³/h	1.1	1.6	3	3.6	4.3	5.4	8.4	11.6	16.7	23.3
Pressure drop	kPa	15	13	16	10	5	7	11	25	10	25
Water volume	l	4	5.7	15.7	15.2	17.9	25.1	37.7	72.8	75.3	100.4
AXIAL FANS	N.	1	1	1	2	2	2	3	4	6	8
Air flow	m³/h	3150	4480	6370	8400	11200	12600	19040	25200	37800	50400
Available static pressure	Pa	0	0	0	0	0	0	0	0	0	0
Nominal absorbed capacity	kW	0.18	0.27	0.37	0.55	0.76	0.76	1.11	1.48	2.23	2.97
Maximum operating current	A	0.7	1.8	2.9	3.6	5.7	5.7	8.5	11.4	17.1	22.8
AVERAGE SOUND LEVELS (2)	dB(A)	59.1	61.1	63.1	63.6	65.5	65.5	66.6	67.2	67.7	68.3

DC LN 70% COMMON FEATURES

SIZE		14	20	35	45	60	70	110	140	210	280
Electrical power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50 +N(*)	400/3/50 +N(*)
Dimensions Length	mm	875	1200	1400	1600	1850	2320	3490	4540	3490	4540
Dimensions Width	mm	540	540	665	665	665	665	665	665	665	665
Dimensions Height	mm	727	727	1027	1027	1027	1140	1150	1150	2200	2200
Net weight	kg	56	73	122	156	191	219	227	359	533	708

(1) Gross values - air inlet 35°C with water inlet temperature 45°C - 20% glycol
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.
(*) also available in 230V / 1PH / 50 Hz, please refer to the electrical diagram for the unit.

DC PF 14 / 144

Plug fans

- Capacity from 8 to 89 kW
- Sizes = 13
- Available static pressure from 50 to 500 Pa depending on size

MAIN FEATURES

- Plug fans and EC motor
- 0:10 V connection block for the condensation control system (connected to the indoor unit)
- Terminal block for alarm (connected to the indoor unit)
- Copper tube heat exchanger with high efficiency aluminium fins developed for greater thermal transfer and low pressure drops

AVAILABLE VERSIONS

- STD standard version
- LS low sound level version 85%
- LS low sound level version 70 %

Advantages

- Available static pressure
- Simple and reliable
- Choice of sound level
- Integrated condensation control
- EC motor
- Low power consumption

DC PF TECHNICAL SPECIFICATIONS

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
CAPACITY (1)	kW	8.8	10.5	12.6	13.7	20.6	24.3	28	31.8	41.9	50	60.3	68.8	89
Heat exchanger														
Water flow	m³/h	1.6	1.9	2.3	2.4	3.7	4.3	5	5.7	7.5	9	10.8	12.3	15.9
Pressure drop	kPa	26	24	15	15	26	30	29	8	18	18	10	15	31
Water volume	l	3.9	5.2	7.8	7.4	11.1	12.7	19.1	17.5	26.2	24.5	28	36.7	41.9
PLUG FANS	N.	1	1	1	1	1	1	1	2	2	3	4	3	4
Air flow	m³/h	4900	4900	4900	6400	80000	10000	10000	16000	16000	24000	32000	28000	36000
Available static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50	50	50
Max. available static pressure	Pa	350	332	290	748	474	298	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	0.42	0.45	0.52	0.64	1.3	1.14	1.24	2.18	2.39	3.34	4.74	5.63	7.4
Maximum operating current	A	1.6	1.6	1.6	4.3	4.3	3.6	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	61.6	61.5	61.5	67.1	72	71.1	71.3	77.3	77.4	80.3	81.8	83.7	84.5

DC PF COMMON FEATURES

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
Electrical power supply	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Dimensions Length	mm	890	890	890	1190	1190	1390	1390	1840	1840	2290	1840	2290	1840
Dimensions Width	mm	880	880	880	880	880	880	880	880	880	880	880	880	880
Dimensions Height	mm	900	900	900	900	900	1300	1300	1300	1300	1300	1800	1300	1800
Net weight	kg	149	154	165	209	224	287	314	391	427	520	631	565	682

DC PF LS 85% TECHNICAL SPECIFICATIONS

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
CAPACITY (1)	kW	7.8	9.2	11	12.1	18	21.4	24.5	28	36.7	44.3	53.3	60.4	78.3
Heat exchanger														
Water flow	m³/h	1.4	1.7	2	2.2	3.2	3.8	4.4	5	6.6	7.9	9.5	10.8	14
Pressure drop	kPa	21	19	11	12	21	24	23	6	14	14	8	12	24
Water volume	l	3.9	5.2	7.8	7.4	11.1	12.7	19.1	17.5	26.2	24.5	28	36.7	41.9
PLUG FANS	N.	1	1	1	1	1	1	1	2	2	3	4	3	4
Air flow	m³/h	4165	4165	4165	5440	6800	8,500	8,500	13600	13600	20400	27200	23800	30600
Available static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50	50	50
Max. available static pressure	Pa	350	332	290	748	474	298	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	0.28	0.3	0.34	0.42	0.83	0.74	0.8	1.4	1.51	2.15	3.04	3.57	4.69
Maximum operating current	A	1.6	1.6	1.6	4.3	4.3	3.6	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	57.7	57.6	57.6	63.2	68.1	67.2	67.4	73.4	73.5	76.4	77.9	79.8	80.6

DC PF LS 85% COMMON FEATURES

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
Electrical power supply	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Dimensions Length	mm	890	890	890	1190	1190	1390	1390	1840	1840	2290	1840	2290	1840
Dimensions Width	mm	880	880	880	880	880	880	880	880	880	880	880	880	880
Dimensions Height	mm	900	900	900	900	900	1300	1300	1300	1300	1300	1800	1300	1800
Net weight	kg	149	154	165	209	224	287	314	391	427	520	631	565	682

DC PF LS 70% TECHNICAL SPECIFICATIONS

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
CAPACITY (1)	kW	6.8	8	9.3	10.3	15.4	18.3	20.6	23.8	31.1	38.1	45.8	51.4	67
Heat exchanger														
Water flow	m³/h	1.2	1.4	1.7	1.9	2.8	3.3	3.7	4.3	5.6	6.8	8.2	9.2	12
Pressure drop	kPa	17	15	9	9	16	18	17	5	11	11	6	9	19
Water volume	l	3.9	5.2	7.8	7.4	11.1	12.7	19.1	17.5	26.2	24.5	28	36.7	41.9
PLUG FANS	N.	1	1	1	1	1	1	1	2	2	3	4	3	4
Air flow	m³/h	3430	3430	3430	4480	5600	7000	7000	11200	11200	16800	22400	19600	25200
Available static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50	50	50
Max. available static pressure	Pa	350	332	290	748	474	298	268	552	512	542	515	204	237
Nominal absorbed capacity	kW	0.17	0.19	0.21	0.26	0.5	0.49	0.48	0.84	0.92	1.29	1.82	2.1	2.76
Maximum operating current	A	1.6	1.6	1.6	4.3	4.3	3.6	3.6	8.6	8.6	12.9	17.2	12.9	17.2
AVERAGE SOUND LEVELS (2)	dB(A)	53.1	53	53	58.6	63.5	62.6	62.8	68.8	68.9	71.8	73.3	75.2	76

DC PF LS 70% COMMON FEATURES

SIZE		14	17	21	24	33	38	44	58	69	86	108	114	144
Electrical power supply	V/ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
Dimensions Length	mm	890	890	890	1190	1190	1390	1390	1840	1840	2290	1840	2290	1840
Dimensions Width	mm	880	880	880	880	880	880	880	880	880	880	880	880	880
Dimensions Height	mm	900	900	900	900	900	1300	1300	1300	1300	1300	1800	1300	1800
Net weight	kg	149	154	165	209	224	287	314	391	427	520	631	565	682

(1) Gross values - air inlet 35°C with water inlet temperature 45°C - 20% glycol
(2) Sound pressure level Lpm 1 m far according to ISO EN 3744.

UNIT HEATERS

Wesper

WESTHERM

Unit heater

FEATURES

- Chilled water coil capacity: 3 to 33 kW
- Hot water coil capacity: 4 to 143 kW
- Steam coil capacity: 15 to 302 kW
- Number of sizes: 6
- Air flow range: 284 to 13780 m^3/h

DESCRIPTION

The WESTHERM propeller fan type unit heaters are intended for air heating, cooling or blowing applications in the office building, commercial and industrial sectors. The WESTHERM range consists of 6 sizes.

- It is available in 3 versions:
  - Hot water/steam.
  - Chilled water (PHM series only).
  - Air blower.
- And in 2 series depending on the type of motor used and the size:
  - PHM series equipped with 5-speed mono-phase motor,
  - PHT series equipped with tri-phase, 1 or 2-speed motor (as an option).

Thanks to a wide choice of air diffusers, special arrangements, options and accessories, the WESTHERM range makes it possible to respond to any application encountered.

Advantages

PHT series unit heaters:

- Ventilation is ensured by an aluminium wide blade propeller fan whose special profile ensures excellent air flow/pressure characteristics and a low sound level.
- The fan is balanced statically and dynamically.
- A Venturi obtained by stamping the panel on the air intake side helps to reduce pressure drops and the sound level.

PHM series unit heaters:

- The units in this series are equipped with mono-phase propeller fans (asynchronous motor, internal rotor, ball bearing design, aluminium motor housing). An autotransformer is supplied as standard, making it possible to ensure 5 speeds of ventilation.
- The propellers (5 or 7 blades depending on sizes) are made of 30% glass fibre reinforced composite material. The PHM series unit heaters have a fan guard supplied as standard, made of black polyester coated steel wire.
- High acoustic performance, low energy consumption, compact design and stability of the air flow despite the coil clogging make up the main features of these new fans.

Operating limits/recommendations

Indicative values. The operating T° are influenced by a series of settings such as: operating conditions, thermal load, adjustments, etc... Data to be confirmed upon selection.

Main options

Air blowers:

- Two-speed motor for PHT unit heaters only.
- Maintenance and repair switch for PHM and PHT unit heaters (single-speed and two-speed).
- Aluminium propellers for PHM unit heaters.
- Epoxy paint on casing.

Chilled water version:

- Maintenance and repair switch.
- Aluminium propellers for PHM series unit heaters.

Hot water/steam version:

- Cupro-nickel coils for high temperature water or steam applications.
- Room thermostat.
- Two-speed motors (except size 35) for PHT unit heaters only.
- Air filter inside or outside the cubic air intake casing.
- Special installation kit (VAL, VAF, VAK, VAJF, VAGK, VAGJF, VAGZ, VABGZ, VABF, HABGZ).
- Maintenance and repair switch for PHM and PHT unit heaters (single-speed and two-speed).
- Aluminium propellers for PHM unit heaters.
- Epoxy paint on casing.

Main accessories

- Wall-mounted support kit.
- Maintenance and repair switch.
- Anti-radiation screen (for PHM unit heaters with composite propellers).
- Air blowers:
  - Air diffusers: HN, HP (except for size 70) and HO (except for sizes 35 & 70).
  - Fan guard for PHT unit heaters only (standard on PHM unit heaters).
- Chilled water version:
  - Double deflection N diffuser.
  - Fan guard for PHT unit heaters only (standard on PHM unit heaters).
- Hot water/steam version:
  - Double deflection N diffuser.
  - HP, HO, VR diffusers.
  - Fan guard for PHT unit heaters only (standard on PHM unit heaters).
  - Room thermostat.
  - Special installation kit (VAL, VAF, VAK, VAJF, VAGK, VAGJF, VAGZ, VABGZ, VABF, HABGZ).

WESTHERM TECHNICAL SPECIFICATIONS

SIZE		35	45	50	55	65	70
PHM 230V – 1PH – 50 HZ – 5 SPEEDS							
Min air flow (1 speed with 3-row coil)	m³/h	284	608	1063	1299	1653	2320
Max air flow (5 speed with 1-row coil)	m³/h	2048	3748	6010	7623	9985	13538
Nominal speed	rpm	1370	1280	1400	1390	1300	860
Power supply	kW	0.16	0.37	0.7	0.96	1.36	1.14
Current	A	0.8	1.9	3.2	4.6	6.6	5.3
Class/IP		Class F/IP 55					
PHT 230/400V – 3PH – 50 HZ – 900 RPM							
Min air flow (900 rpm with 3-row coil)	m³/h	1030	2620	3820	4950	6980	13780
Sound pressure at 5 m	dB(A)	46	53	57	61	63	N/A
Power supply	kW	0.037	0.25	0.25	0.25	0.37	0.75
Current	A	0.46/0.27	1.44/0.83	1.44/0.83	1.44/0.83	2.08/1.19	3.65/2.1
Class/IP		F/54	F/55				
PHT 230/400V – 3PH – 50 HZ – 1400 RPM							
Max air flow (1400 rpm with 1-row coil)	m³/h	1840	4820	6750	8940	11960	N/A
Sound pressure at 5 m	dB(A)	46	53	57	61	63	N/A
Power supply	kW	0.038	0.25	0.55	0.55	0.75	N/A
Current	A	0.46/0.23	1.41/0.81	2.46/1.42	2.46/1.42	3.22/1.86	N/A
Class/IP		F/54	F/55				N/A
CHILLED WATER VERSION – PERFORMANCE WITH 3-ROW COOLING COIL – VERSION PHM (230V – 1PH – 50 HZ) ONLY							
Air flow speed 1	m³/h	N/A	608	N/A	1299	1653	N/A
Sound pressure at 5 m (to NF-S 31-021) for speed 1	dB(A)	N/A	19	N/A	33	42	N/A
Cooling capacity speed 1 (Air: 25°C/50% - water 7/12°C)	kW	N/A	2.88	N/A	5.65	7.22	N/A
Cooling capacity speed 1 (Air: 35°C/50% - water 7/12°C)	kW	N/A	7.36	N/A	16.09	19.16	N/A
Air flow speed 2	m³/h	N/A	1149	N/A	2452	3123	N/A
Sound pressure at 5 m (to NF-S 31-021) for speed 2	dB(A)	N/A	33	N/A	42	50	N/A
Cooling capacity speed 2 (Air: 25°C/50% - water 7/12°C)	kW	N/A	3.82	N/A	7.47	9.48	N/A
Cooling capacity speed 2 (Air: 35°C/50% - water 7/12°C)	kW	N/A	10.53	N/A	23.49	27.7	N/A
Air flow speed 3 (max. permitted speed)	m³/h	N/A	1726	N/A	3684	4691	N/A
Sound pressure at 5 m (to NF-S 31-021) for speed 3	dB(A)	N/A	42	N/A	45	53	N/A
Cooling capacity speed 3 (Air: 25°C/50% - water 7/12°C)	kW	N/A	4.68	N/A	3.82	11.92	N/A
Cooling capacity speed 3 (Air: 35°C/50% - water 7/12°C)	kW	N/A	12.71	N/A	28.01	32.88	N/A
HOT WATER VERSION – PHM OR PHT MODEL							
Min air flow (speed 1 with 3-row coil)	m³/h	1440	3090	5400	6600	8398	11780
Heating capacity for air 12°C/90% - water: 90/70%	kW	23.01	43.08	67.92	86.21	110.59	143.7
Heating capacity for air 12°C/90% - water: 80/60%	kW	19.23	35.31	55.93	71.53	90.87	116.65
Heating capacity for air 12°C/90% - water: 60/40%	kW	11.47	19.41	31.5	41.59	50.61	61.56
Max air flow (speed 5 with 1-row coil)	m³/h	2048	3748	6010	7623	9985	13538
Heating capacity for air 12°C/90% - water: 90/70%	kW	14.18	29.83	44.05	N/A	74.8	96.34
Heating capacity for air 12°C/90% - water: 80/60%	kW	10.99	24.1	35.9	N/A	60.7	77.53
Heating capacity for air 12°C/90% - water: 60/40%	kW	4.82	15.54	19.4	26.45	32.21	39.74
WATER VAPOUR VERSION – PHM OR PHT MODEL							
Min air flow (speed 1 with 3-row coil)	m³/h	1440	3090	5400	6600	8398	11780
Heating capacity for air 12°C/90% - steam: 2 bar	kW	N/A	64.05	N/A	N/A	N/A	N/A
Heating capacity for air 12°C/90% - steam: 4 bar	kW	N/A	78.59	N/A	N/A	197.59	N/A
Heating capacity for air 12°C/90% - steam: 6 bar	kW	23.01	43.08	67.92	86.21	110.59	143.7
Max air flow (speed 5 with 1-row coil)	m³/h	2048	3748	6010	7623	9985	13538
Heating capacity for air 12°C/90% - steam: 2 bar	kW	16.58	29.84	N/A	N/A	N/A	N/A
Heating capacity for air 12°C/90% - steam: 4 bar	kW	20.47	36.86	N/A	N/A	N/A	118.05
Heating capacity for air 12°C/90% - steam: 6 bar	kW	14.18	29.83	44.05	N/A	74.8	96.34

The sound data are subject to variations due to the position of the unit, the type of coil, accessories, the environment of the room and background noise.

Diffuser VN

Horizontal discharge

Diffuser HO

Horizontal discharge

Diffuser VM

Horizontal discharge

Diffuser HN

Vertical discharge

Diffuser VR

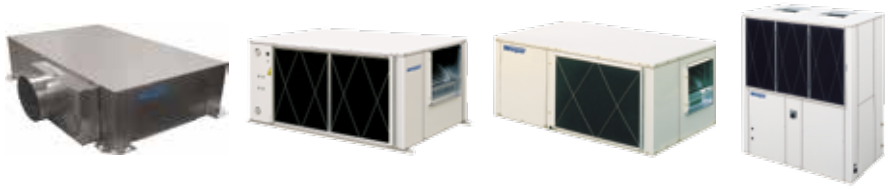
Air curtain discharge

Diffuser HP

Vertical discharge

WATER SOURCE HEAT PUMPS

Wesper



Mini WCBZ

Reversible on water loop system

LOW CAPACITY
ULTRA-COMPACT

MAIN FEATURES

- Cooling capacity: from 1.9 to 3.0 kW
- Heating capacity: from 2.7 to 3.6 kW
- Sizes: 3 models, 1 casing
- Refrigerant: R407C
- Versions: - Cooling and heating mode
  - Cooling only
  - Cooling and heating mode or cooling and electric heating mode
  - Cooling and electric heating mode
- Configurations: Horizontal recessed type
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller: **th TUNE**

- Optional controller: **pGD**

For the functions, see the "Controls" section on page 216

Main options

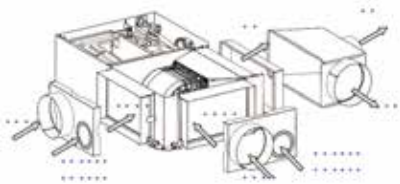
- Two-stage electric heating coil
- G2/M1 filter
- Quick connector
- General alarm dry contact
- Circuit breaker
- Front or side discharge plenum
- Fresh air intake

Main accessories

- Room sensor
- Water flow switch
- Motorised water valve
- pGD mini-supervision station

Advantages

- Robust coaxial water heat exchanger
- Operating range from +9° to +48°
- High energy efficiency with EC motor and high COP/EER values
- Coil at discharge side to avoid installation of oversized siphon
- Electronic controller with ModBus communication
- Easy access to components by large removable panels
- Flexibility of aeraulic and hydraulic configuration to easily replace the R22 units installed on site
- Acoustic insulation and compressor isolated and mounted on spring type anti-vibration mounts to provide an optimum acoustic comfort
- Condensate tray with anti-corrosion treatment
- Low height for recessed installation: 250 mm



Flexibility of configuration

Coaxial heat exchanger

Horizontal compressor

Operating limits (standard model)

Entering water temperature	Cooling	Min	18°C
		Max	45°C
	Heating	Min	9°C
		Max	32°C
Air intake temperature	Cooling	Min	21°C BS / 15°C BH
		Max	32°C BS / 23°C BH
	Heating	Min	15°C
		Max	25°C
Maximum operating water pressure			31 bar

Mini WCBZ Reversible TECHNICAL SPECIFICATIONS

SIZE		2000	2500	3000
CAPACITIES				
Total cooling capacity (1)	W	2057	2405	2983
Sensible cooling capacity	W	1686	1983	2346
Heating capacity (1)	W	2706	2997	3558
PERFORMANCE				
COP (1)		4.12	4.17	4.3
EER (1)		3.88	4.13	3.85
VENTILATION				
Nominal air flow	m³/h	452	503	605
Number of air filter / Efficiency		1 / G2	1 / G2	1 / G2
Air filter dimensions / thickness	mm	225 x 365 x 10	225 x 365 x 10	225 x 365 x 10
HYDRAULIC CIRCUIT				
Nominal water flow	l/s	0.116	0.127	0.173
Cutoff water flow vs Nominal water flow (2)	%	43	39	29
WPD at nominal water flow	kPa	11	13	23
WPD at nominal water flow with valve	kPa	27	30	44
Water connection	inch	Male type ISO 1/2' INT		
Condensate outlet - External Ø	mm	16	16	16
ELECTRICAL DATA				
Power supply	V/Ph/Hz	230 / 1 / 50	230 / 1 / 50	230 / 1 / 50
Asborbed power - Cooling mode (3)	W	595	648	879
Absorbed power - Heating mode (3)	W	722	785	932
Electric heating capacity (4)	W	1200	1600	2000
Fan maximum current (ESP=0 Pa)	A	0.85	0.85	1.4
Compressor nominal current	A	2.8	3.0	4.0
Compressor start-up current	A	16	16	18.9
SOUND LEVELS				
Sound power, Return+Radiated (5)	dB(A)	55/57/59	56/58/60	56/58/62
Sound power, Discharge (5)	dB(A)	53/55/56	54/56/58	58/61/65
Sound pressure (6)	dB(A)	34/36/38	35/37/39	37/40/44
NR (6)	dB(A)	30/32/34	31/34/36	34/37/42
DIMENSIONS				
L x D x H	mm	900 x 530 x 250	900 x 530 x 250	900 x 530 x 250
WEIGHT				
Unit weight	kg	51	51	51

(1) Performance is based on nominal conditions: Cooling: Tair=27 °C, Twater=30 °C & Heating: Tair=20 °C, Twater=20 °C
(2) Protection by flow switch (optional)
(3) Absorbed electric power at nominal conditions (compressor + fan at high speed)
(4) Heating by electric heating coil available
(5) Sound power with 50 Pa external static pressure at high speed, in line unit with filter
(6) Sound pressure considering a sound attenuation of 21 dB in the room

WPHZ
Cooling only

WPHBZ
Reversible

MAIN FEATURES

- Cooling capacities between 2.7 and 40.5 kW
- Plate type condenser
- Air flow up to 8000 m³/h
- Easy access to the inside of the unit for maintenance
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Robust and adaptable solutions for ENERGY LOOPING installations.
The WPHZ/WPHBZ series are horizontal packaged units fitted with a water-cooled plate condenser, adapted to operation connected to a network of air distribution conduits.

Options

ENERGY EFFICIENCY
- Option for double mixing box with 3 dampers for free cooling
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start (depending on model)
- Fan soft start (depending on model)
- Internal EC radial fan (depending on model)

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

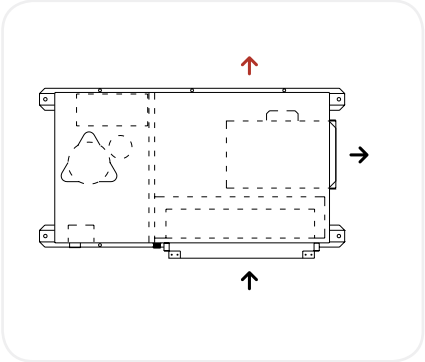
UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Rear air discharge
- Water differential pressure switch
- Water shut-off solenoid valves
- Kit for bad weather installation
- Upgraded motors
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Hot gas bypass
- Water regulator pressure switch valve
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Without water condenser

MAINTENANCE
- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter

CONTROLS
- ARIA thermostat
- pGD thermostat
- SUPER SI thermostat (man. 24 V)
- HoneyWell T8376B thermostat (man. 24 V)
- Eberle 7007 thermostat (man. 24 V)
- DSX@ thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional



WPHZ Cooling only WPHBZ Reversible TECHNICAL SPECIFICATIONS

MODEL		091	121	141	171	201
Nominal cooling capacity	kW	2.7	3.5	4.1	5.2	6.4
Nominal cooling capacity	T.R.	0.8	1.0	1.2	1.5	1.8
Nominal heating capacity	kW	3.2	4.1	4.8	6.1	7.6
Total absorbed power for cooling	kW	1.0	1.2	1.3	1.6	1.8
Total absorbed power for heating	kW	1.2	1.5	1.6	1.8	2.0
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1
Air flow - static pressure	m³/h - Pa	500 - 13	550 - 26	900 - 17	1200 - 110	1500 - 58
Water connections	Ø (")	1/2	1/2	1/2	3/4	3/4
Dimensions (length x width x height)	mm	1055x560x385	1055x560x385	1055x560x385	1055x560x470	1055x560x470
Net weight	kg	79	80	82	85	87
MODEL		**251**	**351**	**401**	**501**	**701**
Nominal cooling capacity	kW	8.1	11.9	13.4	16.6	20.6
Nominal cooling capacity	T.R.	2.3	3.4	3.8	4.7	5.9
Nominal heating capacity	kW	9.6	14.0	15.8	19.6	24.8
Total absorbed power for cooling	kW	2.4	3.7	4.3	4.8	6.4
Total absorbed power for heating	kW	2.5	3.8	4.4	5.0	6.6
Power supply (50 Hz ~)	V	230.1	230.1-400.3+N	400.3+N	400.3+N	400.3+N
Air flow - static pressure	m³/h - Pa	2000 - 55	2300 - 86	2400 - 94	3500 - 70	4300 - 80
Water connections	Ø (")	3/4	3/4	1	1 1/4	1 1/4
Dimensions (length x width x height)	mm	1135x670x530	1135x670x530	1135x670x530	1385x940x620	1385x940x620
Net weight	kg	104	115	120	160	200
MODEL		**751**	**1001**	**1201**		
Nominal cooling capacity	kW	25.1	35.4	40.5		
Nominal cooling capacity	T.R.	7.1	10.1	11.5		
Nominal heating capacity	kW	30.1	41.8	49.6		
Total absorbed power for cooling	kW	8.3	11.0	13.4		
Total absorbed power for heating	kW	8.6	11.3	13.8		
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N		
Air flow - static pressure	m³/h - Pa	4800 - 100	5800 - 86	8000 - 85		
Water connections	Ø (")	1 1/2	1 1/2	1 1/2		
Dimensions (length x width x height)	mm	1385x940x620	1600x1040x690	1600x1040x690		
Net weight	kg	225	275	290		

WCHZ
Cooling only

WCHBZ
Reversible

MAIN FEATURES

- Cooling capacities between 6.4 and 25.1 kW
- Coaxial condenser
- Air flows up to 4600 m³/h
- Easy access to the inside of the unit for maintenance
- Reduced dimensions
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Robust and adaptable solutions for ENERGY LOOPING installations.
The WCHZ/WCHBZ series are compact horizontal packaged units fitted with a water-cooled coaxial condenser, adapted to operation connected to a system of distribution conduits.
Wesper recommends installing units with coaxial condensers for the highest robustness to counter possible impurities in the circuit.

Options

ENERGY EFFICIENCY
- Option for double mixing box with 3 dampers for free cooling (depending on model)
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start (depending on model)
- Fan soft start (depending on model)
- Internal EC radial fan (depending on model)

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

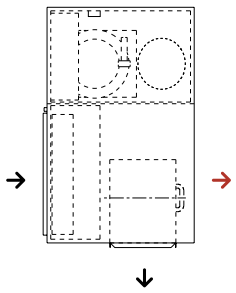
UNIT INSTALLATION
- Water differential pressure switch
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot gas bypass
- Pressure switch valve
- Inverse air intake or air discharge
- Base frame
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Sea water condenser
- Without water condenser

MAINTENANCE
- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter
- Manometers

CONTROLS
- ETN thermostat
- ARIA thermostat
- pGD thermostat
- Thermostat DSX@
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional



WCHZ Cooling only TECHNICAL SPECIFICATIONS

MODEL		201	251	271	351	401
Nominal cooling capacity	kW	6.4	8.1	9.0	11.3	13.4
Nominal cooling capacity	T.R.	1.8	2.3	2.6	3.2	3.8
Total absorbed power	kW	2.1	2.7	2.7	3.3	4.4
Power supply (50 Hz ~)	V	230.1	230.1	230.1 or 400.3+N	230.1- 230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m^3/h - Pa	1500 - 58	1600 - 55	2000 - 77	2300 - 86	2400 - 94
Water connections	Ø (")	1/2	1/2	1/2	1/2	3/4
Dimensions (length x width x height)	mm	990x520x425	1080x657x484	1200x750x484	1200x750x484	1280x850x542
Net weight	kg	87	104	123	130	147

MODEL		501	701	721	751
Nominal cooling capacity	kW	16.6	20.6	22.2	25.1
Nominal cooling capacity	T.R.	4.7	5.9	6.3	7.1
Total absorbed power	kW	5.2	6.6	6.2	7.7
Power supply (50 Hz ~)	V	230.3 or 400.3+N	400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m^3/h - Pa	3500 - 70	4300 - 80	4500 - 75	4600 - 120
Water connections	Ø (")	3/4	1	1	1
Dimensions (length x width x height)	mm	1400x900x542	1600x1030x630	1600x1030x630	1600x1030x630
Net weight	kg	160	240	259	259

WCHBZ Reversible TECHNICAL SPECIFICATIONS

MODEL		201	251	351	401	501
Nominal cooling capacity	kW	6.0	8.1	11.1	13.0	16.5
Nominal cooling capacity	T.R.	1.7	2.3	3.2	3.7	4.7
Nominal heating capacity	kW	6.9	9.1	12.6	16.0	19.6
Total absorbed power for cooling	kW	1.9	2.6	3.4	4.3	5.1
Total absorbed power for heating	kW	1.8	2.5	3.2	4.2	5.0
Power supply (50 Hz ~)	V	230.1	230.1 or 400.3+N	230.1-230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m^3/h - Pa	1500 - 58	2000 - 55	2300 - 86	2400 - 94	3500 - 70
Water connections	Ø (")	1/2	1/2	1/2	3/4	3/4
Dimensions (length x width x height)	mm	1080x675x484	1200x750x484	1200x750x484	1280x850x542	1400x900x542
Net weight	kg	104	130	130	160	185

WPVZ
Cooling only

WPVBZ
Reversible

MAIN FEATURES

- Cooling capacities between 8.1 and 132 kW
- Plate type condenser
- Air flow up to 21500 m³/h
- Easy access to the inside of the unit for maintenance
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller: **SUPER SI 24V**

- Optional controller: **DSX@**

For the functions, see the "Controls" section on page 216

Advantages

Robust and adaptable solutions for ENERGY LOOPING installations.
The WPVZ/WPVBZ series are compact vertical packaged units fitted with a water-cooled plate type condenser, adapted to operation connected to a system of distribution conduits.

Options

ENERGY EFFICIENCY
- Option for double mixing box with 3 dampers for free cooling
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start (depending on model)
- Fan soft start (depending on model)
- Radial EC fan (depending on model)

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Kit for bad weather installation
- Upgraded motors
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Adaptable return filter
- Water differential pressure switch
- Air intake grille
- Without water condenser
- Water regulator pressure switch valve
- Rear air discharge (mod. 1001-4002)
- Front air discharge (mod. 201-751)
- Discharge plenum
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly

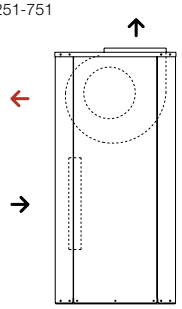
MAINTENANCE
- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter

CONTROLS
- ARIA thermostat
- pGD thermostat
- SUPER SI thermostat (man. 24 V)
- HoneyWell T8376B thermostat (man. 24 V)
- Eberle 7007 thermostat (man. 24 V)
- DSX@ thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section.

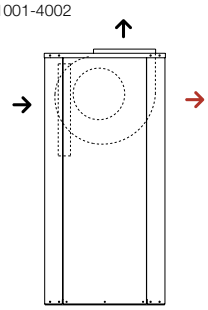
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional

WPVZ/BZ 251-751



WPVZ/BZ 1001-4002



WPVZ Cooling only WPVBZ Reversible TECHNICAL SPECIFICATIONS

MODEL		251	351	401	501	701
Nominal cooling capacity	kW	8.1	11.9	13.4	16.6	21.0
Nominal cooling capacity	T.R.	2.3	3.4	3.8	4.7	6.0
Nominal heating capacity	kW	9.6	14.0	15.8	19.6	24.8
Total absorbed power for cooling	kW	2.4	3.7	4.2	4.8	6.4
Total absorbed power for heating	kW	2.5	3.8	4.4	4.9	6.6
Power supply (50 Hz ~)	V	230.1	230.1 or 400.3+N	400.3+N	400.3+N	400.3+N
Air flow - static pressure	m^3/h - Pa	2000 - 55	2300 - 86	2400 - 94	3500 - 70	4300 - 80
Water connections	Ø (")	3/4	1	1	1 1/4	1 1/4
Dimensions (length x width x height)	mm	720x650x1230	720x650x1230	780x650x1380	1140x700x1730	1140x700x1730
Net weight	kg	139	146	166	251	258
MODEL		**751**	**1001**	**1201**	**1501**	**2002**
Nominal cooling capacity	kW	25.5	35.4	42.0	54.0	70.8
Nominal cooling capacity	T.R.	7.3	10.1	11.9	15.4	20.1
Nominal heating capacity	kW	30.1	41.8	49.6	63.7	83.5
Total absorbed power for cooling	kW	8.3	11.0	13.4	15.9	22.6
Total absorbed power for heating	kW	8.6	11.3	13.8	16.4	23.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Air flow - static pressure	m^3/h - Pa	4800 - 100	7400 - 70	8200 - 80	9000 - 110	11000 - 190
Water connections	Ø (")	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Dimensions (length x width x height)	mm	1140x700x1730	1790x870x1630	1790x870x1630	1790x870x1630	1790x980x1980
Net weight	kg	265	450	478	515	650

MODEL		2402	3002	4002
Nominal cooling capacity	kW	84.0	108.0	132.0
Nominal cooling capacity	T.R.	23.9	30.7	37.5
Nominal heating capacity	kW	99.1	127.4	155.8
Total absorbed power for cooling	kW	26.5	35.0	43.0
Total absorbed power for heating	kW	27.3	36.0	44.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N
Air flow - static pressure	m^3/h - Pa	12000 - 190	18000 - 270	21500 - 190
Water connections	Ø (")	1 1/2	2	2
Dimensions (length x width x height)	mm	1790x980x1980	2404x1157x2092	2404x1157x2092
Net weight	kg	711	973	1065

WCVZ
Cooling only

WCVBZ
Reversible

R407C

MAIN FEATURES

- Cooling capacities between 6.0 and 120 kW
- Coaxial condenser
- Air flows up to 21500 m³/h
- Easy access to the inside of the unit for maintenance
- Reduced dimensions
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Robust and adaptable solutions for energy looping installations.
The WCVZ/WCVBZ series are compact vertical packaged units fitted with a water-cooled coaxial condenser, adapted to operation connected to a system of distribution conduits.
Wesper recommends installing units with coaxial condensers for the highest robustness to counter possible impurities in the circuit.

Options

ENERGY EFFICIENCY
- Option for double mixing box with 3 dampers for free cooling
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start (depending on model)
- Fan soft start (depending on model)
- Internal EC radial fan (depending on model)

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot gas bypass
- Pressure switch valve
- More compact WCVSZ units
- WCVCZ units for air conditioning in swimming pools
- Hot water heating coils (only models WCVZ – cooling only)
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Front air discharge (mod. 201/751)
- Rear air discharge (mod. 1001/3603)
- Without water condenser
- Sea water condenser
- Without compressor
- Discharge plenum
- Air intake grille
- Adaptable return filter
- Base frame
- Manometers
- Water differential pressure switch
- Suitable for disassembly

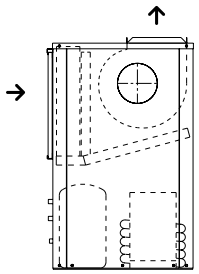
MAINTENANCE
- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter

CONTROLS
- ETN thermostat
- ARIA thermostat
- pGD thermostat
- Thermostat DSX@
- SUPER SI thermostat
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

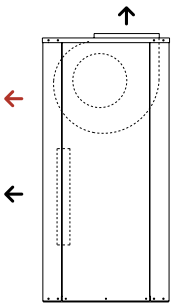
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional

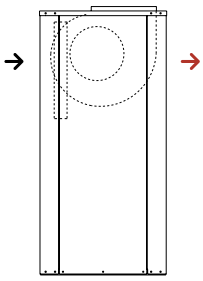
WCVBZ 201-351



WCVZ 201-751
WCVBZ 401



WCVZ 1001-3603



WCVZ Cooling only TECHNICAL SPECIFICATIONS

MODEL		201	251	271	351	401	501
Nominal cooling capacity	kW	6.4	8.1	9.0	11.9	13.4	16.6
Nominal cooling capacity	T.R.	1.8	2.3	2.6	3.4	3.8	4.7
Total absorbed power	kW	1.7	2.1	2.3	3.3	3.5	4.5
Power supply (50 Hz ~)	V	230.1	230.1	230.1 or 400.3+N	230.1-230.3 o 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m³/h - Pa	1500 - 58	2000 - 55	2000 - 77	2300 - 86	2400 - 94	3500 - 70
Water connections	Ø (")	1/2	1/2	1/2	1/2	1/2	3/4
Dimensions (length x width x height)	mm	628x440x1060	720x550x1200	720x550x1200	720x550x1200	780x550x1350	1140x600x1700
Net weight	kg	105	134	134	141	160	245
MODEL		**701**	**721**	**751**	**1001**	**1201**	**1002**
Nominal cooling capacity	kW	20.6	23.0	25.1	35.4	40.5	35.6
Nominal cooling capacity	T.R.	5.9	6.5	7.1	10.1	11.5	10.1
Total absorbed power	kW	5.4	5.9	6.3	9.8	11.2	9.7
Power supply (50 Hz ~)	V	400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m³/h - Pa	4300 - 80	4500 - 75	4800 - 100	7400 - 70	8200 - 80	7300 - 87
Water connections	Ø (")	1	1	1	2	2	2
Dimensions (length x width x height)	mm	1140x600x1700	1140x600x1700	1140x600x1700	1700x870x1600	1700x870x1600	1700x870x1600
Net weight	kg	252	252	258	445	472	470
MODEL		**1402**	**1502**	**2002**	**2402**	**3003**	**3603**
Nominal cooling capacity	kW	41.2	50.2	70.8	81.0	105.0	120.0
Nominal cooling capacity	T.R.	11.7	14.3	20.1	23.0	29.9	34.1
Total absorbed power	kW	11.3	13.7	19.7	22.4	28.9	33.3
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m³/h - Pa	8200 - 80	9000 - 110	11000 - 190	12000 - 190	18000 - 270	21500 - 190
Water connections	Ø (")	2	2	2	2	2	2
Dimensions (length x width x height)	mm	1700x870x1600	1700x870x1600	1700x980x1950	1700x980x1950	2307x1157x2062	2307x1157x2062
Net weight	kg	515	525	645	706	968	1060

WCBVZ Reversible TECHNICAL SPECIFICATIONS

MODEL		201	251	351	401
Nominal cooling capacity	kW	6.0	8.1	11.0	13.0
Nominal cooling capacity	T.R.	1.7	2.3	3.1	3.7
Nominal heating capacity	kW	6.9	9.1	12.6	16.0
Total absorbed power for cooling	kW	1.8	2.5	3.3	3.8
Total absorbed power for heating	kW	1.8	2.4	3.2	3.8
Power supply (50 Hz ~)	V	230.1	230.1 or 400.3+N	230.1-230.3 or 400.3+N	230.3 or 400.3+N
Air flow - static pressure	m³/h - Pa	1500 - 58	2000 - 55	2300 - 86	2400 - 94
Water connections	Ø (")	1/2	1/2	1/2	1/2
Dimensions (length x width x height)	mm	601x625x1000	601x625x1000	601x625x1000	780x550x1350
Net weight	kg	105	134	141	165

DIRECT EXPANSION SYSTEMS

Wesper

ACHIBA
Reversible

PACKAGED configuration

ECHIBA/CCHIBA
Reversible

SPLIT configuration

R410A inverter

ACHIBA

ECHIBA/CCHIBA

MAIN FEATURES

- Variable air flow for external fan
- Three air speeds in the internal fan
- Cooling capacities between 4 and 29 kW
- EER/COP coefficient up to 3.2 under nominal temperature conditions
- Scroll compressors with soft start
- R410A refrigerant
- Can be combined with the RCAH range of high energy efficiency heat recovery exchangers and filtration group to class F
- DC inverter technology: maximum savings and comfort
- Low sound level
- High efficiency in heat pump mode for low external temperatures down to -15°C
- Operating limit in cooling mode with an external temperature of 48°C
- Fan soft start, internal and/or external
- Oil separator (only for ductable units)
- Remote start/stop
- Remote cooling/heating
- Timer programming and Modbus connection
- TH Tune controls supplied as standard

Advantages

High energy efficiency inverter for energy efficiency conversions in the commercial sector.
This range of packaged and split units uses a horizontal design. It is suitable for operation connected to a network of air distribution conduits, in both the internal and external section.
Designed to be installed inside the area to be air conditioned, they are characterised by installation versatility.

Options

ENERGY EFFICIENCY
- Option for mixing module for semi-enthalpic free cooling with two dampers

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Option to manufacture symmetrical configuration units
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot water heating coils
- Electric heating coils for defrost aid
- Pre-treated anti-corrosion coils
- Ready for disassembly
- Quick connection valves with refrigerant gas pre-charge (for SPLIT configuration only)

MAINTENANCE
- Service valves
- External pressure tapping points (in series on model 901)
- Dirty filter detector
- Filter on condenser
- Separate filter

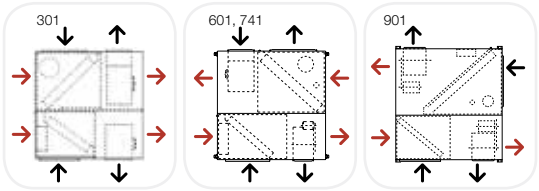
CONTROLS
- Alarm signals
- Smoke detection
- Stand-alone electrical board
- Wall-mounted or room temperature sensor
- Discharge temperature sensor
- Centralised integrated management operation
- Operation without neutral

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

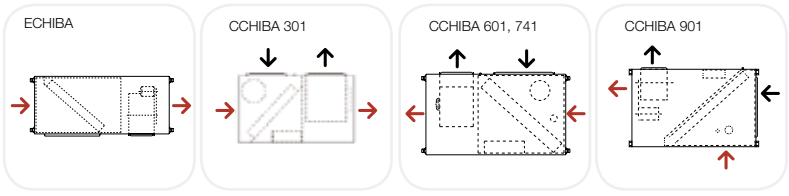
Air inlet/outlet configuration options

→ standard → optional

ACHIBA



ECHIBA/CCHIBA



ACHIBA Reversible TECHNICAL SPECIFICATIONS

MODEL		301	601	741	901
Maximum cooling capacity (110 Hz)	kW	8.1	17.3	22.4	28.9
Maximum cooling capacity (110 Hz)	T.R.	2.3	4.9	6.4	8.2
Maximum heating capacity (110 Hz)	kW	8.3	18.6	24.2	28.9
Nominal cooling capacity (80 Hz)	kW	7.4	12.9	16.6	20.6
Nominal cooling capacity (80 Hz)	T.R.	2.1	3.7	4.7	5.9
Nominal heating capacity (80 Hz)	kW	8.3	13.0	15.7	20.4
Maximum EER coefficient	kW/kW	> 8	3.16	2.95	2.90
Maximum COP coefficient	kW/kW	-	3.21	3.03	2.93
SCOP coefficient (hot zone)	kW/kW	4.1	-	-	-
Power supply (50 Hz ~)	V	220-240 / 1 / 50	400.3+N	400.3+N	400.3+N
Nominal internal air flow for cooling	m^3/h	1000/1400/1800	2300	3000	3700
Nominal internal air flow for heating	m^3/h	1100/1400/1600	2800	3600	4400
Max. int. air flow - static pressure	m^3/h - Pa	1800 - 50	3600 - 70	4600 - 80	5600 - 90
Max. ext. air flow - static pressure	m^3/h - Pa	3000 - 50	5600 - 50	6200 - 50	7,500 - 50
Dimensions (length x width x height)	mm	1445x1339x504	1755x1697x640	1755x 1697x 640	1998x 1755x672
Net weight	kg	220	375	420	495

CCHIBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		301	601	741	901
Maximum cooling capacity (110 Hz)	kW	8.1	17.3	22.4	26.5
Maximum cooling capacity (110 Hz)	T.R.	2.3	4.9	6.4	7.5
Maximum cooling capacity (110 Hz)	kW	8.3	18.6	24.2	28.9
Nominal cooling capacity (80 Hz)	kW	7.4	12.9	16.6	20.6
Nominal cooling capacity (80 Hz)	T.R.	2.1	3.7	4.7	5.9
Nominal cooling capacity (80 Hz)	kW	8.3	13.0	15.7	20.4
Maximum EER coefficient	kW/kW	-	3.16	2.95	2.90
Maximum COP coefficient	kW/kW	-	3.21	3.03	2.93
SCOP coefficient (hot zone)	kW/kW	4.1	-	-	-
Power supply (50 Hz ~)	V	220-240 / 1 / 50	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	3/4	7/8	1 1/8	1 1/8
Max. ext. air flow - static pressure	m^3/h - Pa	3000 - 50	5600 - 50	6200 - 50	7500 - 50
Dimensions (length x width x height)	mm	1445x825x504	1755x1004x640	1755x1004x640	1750x1057x662
Net weight	kg	148	240	295	312

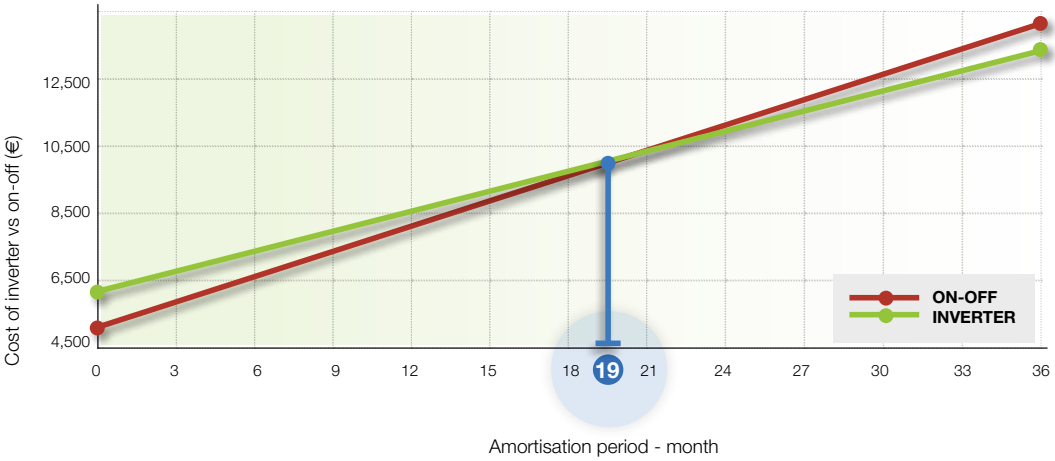
ECHIBA Reversible - INDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		301	601	741	901
Maximum cooling capacity (110 Hz)	kW	8.1	17.3	22.4	28.9
Maximum cooling capacity (110 Hz)	T.R.	2.3	4.9	6.4	8.2
Maximum cooling capacity (110 Hz)	kW	8.3	18.6	24.2	28.9
Nominal cooling capacity (80 Hz)	kW	7.4	12.9	16.6	20.6
Nominal cooling capacity (80 Hz)	T.R.	2.1	170.9	210.7	256.2
Nominal cooling capacity (80 Hz)	kW	8.3	13.0	15.7	20.4
Maximum EER coefficient	kW/kW	-	3.16	2.95	2.90
Maximum COP coefficient	kW/kW	-	3.21	3.03	2.93
SCOP coefficient (hot zone)	kW/kW	4.1	-	-	-
Power supply (50 Hz ~)	V	220-240 / 1 / 50	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	3/4	7/8	1 1/8	1 1/8
Nominal internal air flow for cooling	m^3/h	1000/1400/1800	2300	3000	3700
Nominal internal air flow for heating	m^3/h	1100/1400/1600	2800	3600	4400
Max. int. air flow - static pressure	m^3/h - Pa	1800 - 50	3600 - 70	4600 - 80	5500 - 90
Dimensions (length x width x height)	mm	1445x600x504	1755x752x640	1755x752x640	1750x900x662
Net weight	kg	83	145	150	180

Amortisation study

Comparative study and calculation of the period of amortisation for replacing the existing unit with a fixed-speed unit or an inverter unit in the banking sector. This is the equivalent of a standard branch in the climate region of Madrid. Calculation estimated according to data supplied by the client.

WESPER's Technical Department is at your disposal to calculate cost estimates for replacing units.

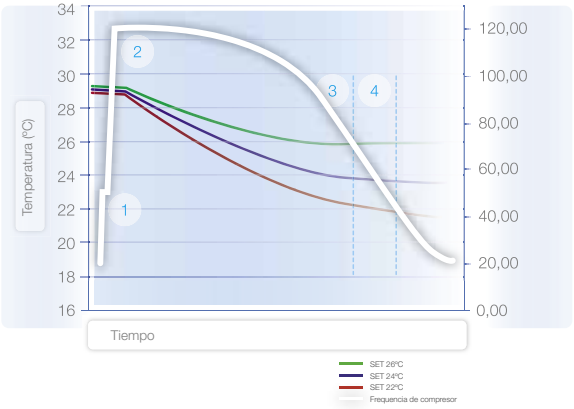


RECOMMENDED PRODUCT FOR ENERGY REHABILITATION

Standard controller TH TUNE

Functions: Selection of 3 speeds. Automatic MODE, 1 stage electrical resistance (only active in defrost). 3 access levels: USER, MAINTENANCE, MANUFACTURER. Option of ModBus protocol with RS 485 card

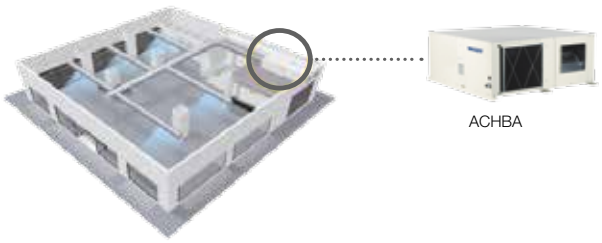
Performance comparison



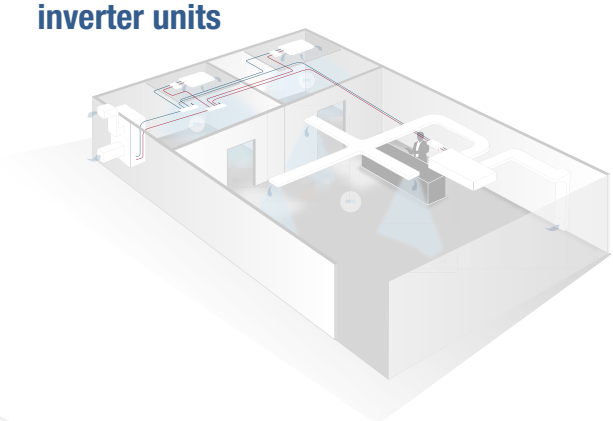
INVERTER TECHNOLOGY. MAXIMUM YIELD

Example of packaged installation

Air-air installation by ducts



Example of installation for inverter units



ACVIBA
Reversible

PACKAGED configuration

ECVIBA/CCVIBA
Reversible

SPLIT configuration

R410A inverter

ACVIBA

ECVIBA/CCVIBA

MAIN FEATURES

- Cooling capacities up to 30 kW
- EER/COP coefficient up to 2.9 under nominal temperature conditions
- Scroll compressors with soft start
- R410A refrigerant
- DC inverter technology: maximum savings and comfort
- Low sound level
- High efficiency in heat pump mode for low external temperatures up to -15°C
- Operating limit in cooling mode with an external temperature of 48°C
- Fan soft start, internal and/or external
- Oil separator (only for ductable units)
- Remote start/stop
- Remote cooling/heating
- Timer programming and Modbus connection
- TH Tune controls supplied as standard

Advantages

High energy efficiency inverter for energy efficiency conversions in the commercial sector.
This range of packaged and split units uses a vertical design. It is suitable for operation connected to a network of air distribution conduits, in both the internal and external section. Designed to be installed inside the area to be air conditioned, they are characterised by installation versatility.

Options

ENERGY EFFICIENCY
- Option for mixing module for free cooling with three dampers

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Option to manufacture symmetrical configuration units
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot water heating coils
- Electric heating coils for defrost aid
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Only for SPLIT configuration:
  - Quick connection valves with pre-load of refrigerant gas

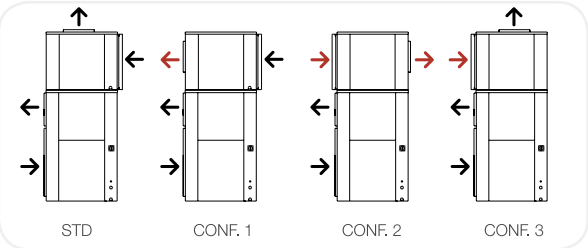
MAINTENANCE
- Service valves
- Dirty filter detector
- Filter on condenser
- Separate filter

CONTROLS
- Alarm signals
- Smoke detection
- Stand-alone electrical board
- Wall-mounted or room temperature sensor
- Discharge temperature sensor
- Centralised integrated management operation
- Operation without neutral

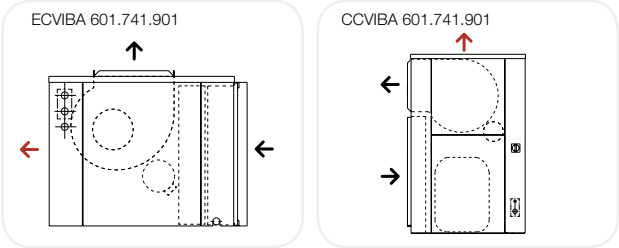
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional

ACVIBA



ECVIBA/CCVIBA



ACVIBA Reversible TECHNICAL SPECIFICATIONS

MODEL		601	741	901
Maximum cooling capacity (120 Hz)	kW	18.5	23.9	28.3
Maximum cooling capacity (120 Hz)	T.R.	5.3	6.8	8.1
Maximum heating capacity (120 Hz)	kW	20.0	26.1	30.6
Nominal cooling capacity (80 Hz)	kW	13.8	17.7	22.0
Nominal cooling capacity (80 Hz)	T.R.	3.9	5.0	6.3
Nominal heating capacity (80 Hz)	kW	14.0	18.0	22.5
Maximum EER coefficient	kW/kW	2.90	2.86	2.96
Maximum COP coefficient	kW/kW	2.95	2.94	2.99
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N
Internal air flow	m³/h	2700/3200/4000	3200/3800/4800	3900/4650/5900
Max. int. air flow - static pressure	m³/h - Pa	4000 - 70	4800 - 75	5900 - 90
Max. ext. air flow - static pressure	m³/h - Pa	6800 - 50	7300 - 50	10,000 - 50
Dimensions (length x width x height)	mm	1130x800x1900	1130x800x1900	1700x870x1900
Net weight	kg	400	470	600

CCVIBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		601	741	901
Maximum cooling capacity (120 Hz)	kW	18.5	23.9	28.3
Maximum cooling capacity (120 Hz)	T.R.	5.3	6.8	8.1
Maximum heating capacity (120 Hz)	kW	20.0	26.1	30.6
Nominal cooling capacity (80 Hz)	kW	13.8	17.7	22.0
Nominal cooling capacity (80 Hz)	T.R.	3.9	5.0	6.3
Nominal heating capacity (80 Hz)	kW	14.0	18.0	22.5
Maximum EER coefficient	kW/kW	2.90	2.86	2.96
Maximum COP coefficient	kW/kW	2.95	2.94	2.99
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	7/8	1 1/8	1 1/8
Max. ext. air flow - static pressure	m³/h - Pa	6800 - 50	7300 - 50	10,000 - 50
Dimensions (length x width x height)	mm	1130x800x1250	1130x800x1250	1700x870x1250
Net weight	kg	260	320	390

ECVIBA Reversible - INDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		601	741	901
Maximum cooling capacity (120 Hz)	kW	18.5	23.9	28.3
Maximum cooling capacity (120 Hz)	T.R.	5.3	6.8	8.1
Maximum heating capacity (120 Hz)	kW	20.0	26.1	30.6
Nominal cooling capacity (80 Hz)	kW	13.8	17.7	22.0
Nominal cooling capacity (80 Hz)	T.R.	3.9	5.0	6.3
Nominal heating capacity (80 Hz)	kW	14.0	18.0	22.5
Maximum EER coefficient	kW/kW	2.90	2.86	2.96
Maximum COP coefficient	kW/kW	2.95	2.94	2.99
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	7/8	1 1/8	1 1/8
Internal air flow	m³/h	2700/3200/4000	3200/3800/4800	3900/4650/5900
Max. int. air flow - static pressure	m³/h - Pa	4000 - 70	4800 - 75	5900 - 90
Dimensions (length x width x height)	mm	1130x800x650	1130x800x650	1700x870x650
Net weight	kg	140	150	210

ACHA
Cooling only

ACHBA
Reversible

PACKAGED configuration

ECHA/CCHA
Cooling only

ECHBA/CCHBA
Reversible

SPLIT configuration

ACHA/ACHBA

ECHA/CCHA - ECHBA/CCHBA

MAIN FEATURES

- Cooling capacities between 5.6 and 33.5 kW
- Scroll compressors
- R410A refrigerant
- Can be combined with the RCAH range of high energy efficiency heat recovery exchangers and filtration group to class F.
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

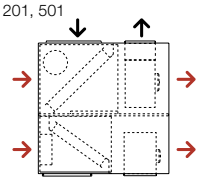
Maximum versatility for air conditioning via the conduits of commercial buildings.
This range of packaged and split units uses a horizontal design. It is suitable for operation connected to a network of air distribution conduits, in both the internal and external section.
Designed to be installed inside the area to be air conditioned, they are characterised by offering a wide installation versatility.

Air inlet/outlet configuration options

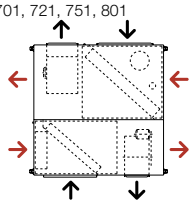
→ standard → optional

ACHA/ACHBA

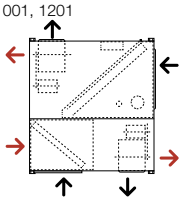
201, 501



701, 721, 751, 801

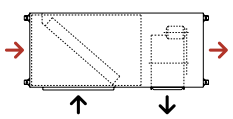


1001, 1201

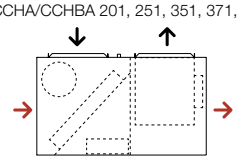


ECHA/CCHA - ECHBA/CCHBA

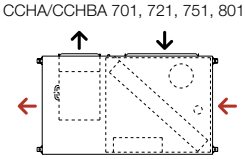
ECHA/ECHBA 251, 1201



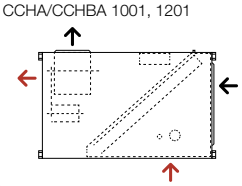
CCHA/CCHBA 201, 251, 351, 371, 501



CCHA/CCHBA 701, 721, 751, 801



CCHA/CCHBA 1001, 1201



Options

ENERGY EFFICIENCY

- Option for mixing module for free cooling with two and three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Condensation controlled by frequency inverter or variable voltage controller
- Compressor soft start (depending on model)
- Fan soft start, internal and/or external (depending on model)

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Availability of models with R407C refrigerant to be consulted
- Suitable for disassembly
- Only for SPLIT configuration:
  - Oil separator
  - Service valves
  - Quick connection valves with pre-load of refrigerant gas

MAINTENANCE

- Service valves
- External pressure tapping points
- Dirty filter detector
- Filter on condenser
- Separate filter

CONTROLS

- ETN thermostat
- ARIA thermostat
- SUPER SI thermostat (man. 24 V)
- pGD thermostat
- DSX@ thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

ACHA Cooling only ACHBA Reversible TECHNICAL SPECIFICATIONS

MODEL		201	251	351	371	401	501
Nominal cooling capacity	kW	5.6	7.4	9.7	11.6	12.4	14.1
Nominal cooling capacity	T.R.	1.6	2.1	2.8	3.3	3.5	4.0
Nominal heating capacity	kW	6.1	8.2	9.8	12	13.8	16.4
Total absorbed power for cooling	kW	2.8	3.3	4.3	4.9	5.1	6.5
Total absorbed power for heating	kW	2.6	3.1	3.8	4.4	4.6	5.9
Power supply (50 Hz ~)	V	230.1	230.1-400.3+N	230.1-400.3+N	400.3+N	400.3+N	400.3+N
Int. air flow static pressure	m^3/h - Pa	1500 - 37	1600 - 47	2000 - 37	2700 - 32	2700 - 32	3200 - 48
Ext. air flow static pressure	m^3/h - Pa	2100 - 50	2450 - 50	3180 - 50	3800 - 50	3800 - 50	4150 - 50
Dimensions (length x width x height)	mm	1175x1109x452	1325x1259x504	1445x1339x504	1505x1389x562	1505x1389x562	1505x1389x562
Net weight	kg	159	197	219	253	253	260
MODEL		**701**	**721**	**751**	**801**	**1001**	**1201**
Nominal cooling capacity	kW	17.2	18.5	20.8	21.9	28.4	33.5
Nominal cooling capacity	T.R.	4.9	5.3	5.9	6.2	8.1	9.5
Nominal heating capacity	kW	18.9	20.4	21.9	24.6	29.8	37.2
Total absorbed power for cooling	kW	7.8	8.5	9.5	9.7	12.4	15.7
Total absorbed power for heating	kW	6.9	7.9	8.1	8.8	11.8	15.1
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Int. air flow static pressure	m^3/h - Pa	4300 - 50	4300 - 50	4300 - 50	4300 - 50	5900 - 50	7550 - 82
Ext. air flow static pressure	m^3/h - Pa	5600 - 50	5600 - 50	5700 - 50	6200 - 50	7600 - 50	9900 - 90
Dimensions (length x width x height)	mm	1755x1697x640	1755x1697x640	1755x1697x640	1755x1697x640	1998x1755x672	2400x2201x782
Net weight	kg	354	354	395	404	476	633

CCHA Cooling only CCHBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		201	251	351	371	401	501
Nominal cooling capacity	kW	5.6	7.4	9.7	11.6	12.4	14.1
Nominal cooling capacity	T.R.	1.6	2.1	2.8	3.3	3.5	4.0
Nominal heating capacity	kW	6.1	8.2	9.8	12	13.8	16.4
Total absorbed power for cooling	kW	2.5	3.0	3.9	4.3	4.5	5.6
Total absorbed power for heating	kW	2.3	2.9	3.4	3.8	4.0	4.9
Power supply (50 Hz ~)	V	230.1	230.1 - 400.3+N	230.1 - 400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
Refrigerant connection. Gas line	Ø (")	1/2"	5/8"	3/4"	7/8"	7/8"	7/8"
Air flow - ext. static pressure	m³/h - Pa	2100 - 50	2450 - 50	3180 - 50	3800 - 50	3800 - 50	4150 - 50
Dimensions (length x width x height)	mm	1175x619x452	1325x706x504	1405x825x504	1455x843x562	1455x843x562	1455x843x562
Net weight	kg	106	133	146	172	172	172
MODEL		**701**	**721**	**751**	**801**	**1001**	**1201**
Nominal cooling capacity	kW	17.2	18.5	20.8	21.9	28.4	33.5
Nominal cooling capacity	T.R.	4.9	5.3	5.9	6.2	8.1	9.5
Nominal heating capacity	kW	18.9	20.4	21.9	24.6	29.8	37.2
Total absorbed power for cooling	kW	6.7	7.4	8.3	8.5	11.1	13.6
Total absorbed power for heating	kW	5.7	6.7	7	7.4	10.2	12.2
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"
Refrigerant connection. Gas line	Ø (")	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"
Air flow - ext. static pressure	m³/h - Pa	5600 - 50	5600 - 50	5700 - 50	6200 - 50	7600 - 50	9900 - 90
Dimensions (length x width x height)	mm	1755x1004x640	1755x1004x640	1755x1004x640	1755x1004x640	1750x1057x662	2300x1382x782
Net weight	kg	223	223	263	272	292	410

ECHA Cooling only ECHBA Reversible - INDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		201	251	351	371	401	501
Nominal cooling capacity	kW	5.6	7.4	9.7	11.6	12.4	14.1
Nominal cooling capacity	T.R.	1.6	2.1	2.8	3.3	3.5	4.0
Nominal heating capacity	kW	6.1	8.2	9.8	12	13.8	16.4
Total absorbed power for cooling	kW	0.15	0.23	0.3	0.4	0.4	0.7
Total absorbed power for heating	kW	0.15	0.23	0.3	0.4	0.4	0.7
Air flow - static pressure	m³/h - Pa	1500 - 37	1600 - 47	2000 - 37	2700 - 32	2700 - 32	3200 - 48
Power supply (50 Hz ~)	V	230.1 - 400.3+N	230.1	230.1	230.1	230.1 - 400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2"	3/8"	3/8"	1/2"	1/2"	1/2"
Refrigerant connection. Gas line	Ø (")	3/8"	5/8"	3/4"	7/8"	7/8"	7/8"
Dimensions (length x width x height)	mm	1175x562x452	1325x600x504	1405x600x504	1455x642x562	1455x642x562	1455x642x562
Net weight	kg	61	72	81	89	89	96
MODEL		**701**	**721**	**751**	**801**	**1001**	**1201**
Nominal cooling capacity	kW	17.2	18.5	20.8	21.9	28.4	33.5
Nominal cooling capacity	T.R.	4.9	5.3	5.9	6.2	8.1	9.5
Nominal heating capacity	kW	18.9	20.4	21.9	24.6	29.8	37.2
Total absorbed power for cooling	kW	0.9	0.9	0.9	1.3	1.6	2.7
Total absorbed power for heating	kW	0.8	0.9	0.9	1.1	1.3	2.1
Air flow - static pressure	m³/h - Pa	4300 - 50	4300 - 50	4300 - 50	4300 - 50	5900 - 50	7550 - 82
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"
Refrigerant connection. Gas line	Ø (")	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"
Dimensions (length x width x height)	mm	1775x752x640	1755x752x640	1755x752x640	1755x752x640	1750x900x662	2300x925x782
Net weight	kg	136	136	137	137	172	209

For the dimensions of the refrigeration lines, depending on the route and total distance of the installation, please contact our Sales Department

CCHA/FTA
Cooling only

CCHBA/FTBA
Reversible

SPLIT configuration, low profile centrifugal condenser

CCHA/CCHBA

FTA/FTBA

MAIN FEATURES

- Cooling capacity between 5.2 and 19.3 kW
- Outdoor units with coils pre-treated with blue fins supplied as standard
- Internal 3-speed fan
- Maximum connection distance between internal and external unit 50 metres
- Thermostats and controllers provided for units with electromechanical control system:

- Standard controller: **SUPER SI 24V**

- Optional controller: **DSX@**

For the functions, see the "Controls" section on page 216

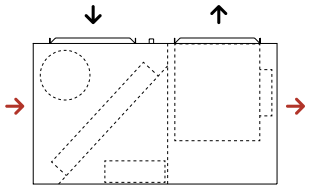
Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
Units of the CCHA/FTA and CCHBA/FTBA series are sets composed of a centrifugal condenser unit and a direct expansion fancoil evaporator unit.
The reduced height of the internal unit allows quick installation in false ceilings with the unit suspended or supported.

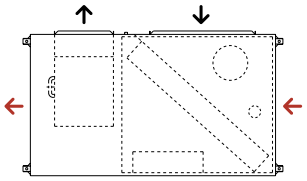
Air inlet/outlet configuration options

→ standard → optional

CCHA/CCHBA 201, 251, 351, 371, 501



CCHA/CCHBA 701, 721



Options

ENERGY EFFICIENCY

- Compressor soft start (depending on model)
- Condensation controlled by frequency inverter or variable voltage controller

AIR QUALITY

- G4 gravimetric filter on return

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Magnto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Side air intake and air discharge (outdoor unit)
- Option to manufacture symmetrical configuration units (outdoor unit)
- Rear connections. (outdoor unit)
- Indoor unit and accessories painted with polyester powder RAL 1013
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Availability of models with R407C refrigerant to be consulted
- Ready for disassembly
- Only for SPLIT configuration:
  - Oil separator
  - Service valves
  - Quick connection valves with pre-load of refrigerant gas
- Discharge and return air plenum
- Discharge and return air plenum grille
- Plenum with 3 and 5 spigots
- Condensate drain pump

MAINTENANCE

- Service valves
- External pressure tapping points
- Dirty filter detector
- Filter on condenser
- Separate filter

CONTROLS

- Pressure switches
- Electromechanical control system
- Infrared remote controller
- ARIA thermostat
- pGD thermostat
- ETN thermostat
- DSX@ thermostat (man. 24 V)
- SUPER SI thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Evaporator fan stop during defrost
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

CCHA/FTA Cooling only CCHBA/FTBA Reversible TECHNICAL SPECIFICATIONS

OUTDOOR MODEL / INDOOR MODEL		201	251	351	371
Nominal cooling capacity	kW	5.2	7.4	9.6	10.4
Nominal cooling capacity	T.R.	1.5	2.1	2.7	3.0
Nominal heating capacity	kW	5.8	7.8	10.2	11.0
Total absorbed power for cooling	kW	2.7	3.2	4.24	4.68
Total absorbed power for heating	kW	2.5	3.1	3.74	4.18
Power supply (50 Hz ~)	V	230.1	230.1 or 400.3+N	230.1-230.3 or 400.3+N	230.1-230.3 or 400.3+N
Air flow - static pressure indoor unit	m^3/h - Pa	1100 - 44	1150 - 72	1500 - 80	2200 - 96
Air flow - static pressure outdoor unit	m^3/h - Pa	2100 - 50	2450 - 50	3180 - 50	3800 - 50
Diameter liq. tube	Ø (")	3/8	3/8	3/8	1/2
Diameter gas tube	Ø (")	1/2	5/8	3/4	3/4 (int.)- 7/8 (ext.)
Outdoor unit dimensions (length x width x height)	mm	1175x619x452	1325x706x504	1405x825x504	1455x843x562
Indoor unit dimensions (length x width x height)	mm	925x660x280	925x660x280	925x660x280	1250x750x315
Total dist. indoor/outdoor unit	m	50	50	50	50
Vertical dist. indoor/outdoor unit	m	25	25	25	25
Net weight outdoor unit	kg	106	133	146	172
Net weight indoor unit	kg	37	39	44	59
OUTDOOR MODEL / INDOOR MODEL		**401**	**501**	**701**	**721**
Nominal cooling capacity	kW	11.8	14.5	18.0	19.3
Nominal cooling capacity	T.R.	3.4	4.1	5.1	5.5
Nominal heating capacity	kW	12.5	15.3	19.8	20.6
Total absorbed power for cooling	kW	4.94	6.13	7.9	8.6
Total absorbed power for heating	kW	4.44	5.43	6.9	7.9
Power supply (50 Hz ~)	V	230.3 or 400.3+N	230.3 or 400.3+N	400.3+N	230.3 or 400.3+N
Air flow - static pressure indoor unit	m^3/h - Pa	2300 - 80	2500 - 76	3000 - 140	3000 - 140
Air flow - static pressure outdoor unit	m^3/h - Pa	3800 - 50	4150 - 50	5600 - 50	5600 - 50
Diameter liq. tube	Ø (")	1/2	1/2	1/2	1/2
Diameter gas tube	Ø (")	3/4 (int.)- 7/8 (ext.)	7/8	7/8	7/8
Outdoor unit dimensions (length x width x height)	mm	1455x843x562	1455x843x562	1755x1004x640	1755x1004x640
Indoor unit dimensions (length x width x height)	mm	1250x750x315	1250x750x315	1250x805x369	1250x805x369
Total dist. indoor/outdoor unit	m	50	50	50	50
Vertical dist. indoor/outdoor unit	m	25	25	25	25
Net weight outdoor unit	kg	172	172	223	223
Net weight indoor unit	kg	59	61	71	71

Voltage indoor unit 230.1 50 Hz ~
For the sizing of the refrigeration lines, depending on the layout and total distance of the installation, please contact our Sales Department

ACVA
Cooling only

ACVBA
Reversible

PACKAGED configuration

ECVA/CCVA
Cooling only

ECVBA/CCVBA
Reversible

SPLIT configuration

ACVA/ACVBA

ECVA/CCVA - ECVBA/CCVBA

MAIN FEATURES

- Cooling capacities between 9.8 and 114.3 kW
- Scroll compressors
- R410a refrigerant
- 2 independent refrigerant circuits (models from 1402 to 3502)
- Option to operate as a multi split 2x1 group (models from 1402 to 3002)
- Two internal units connected to one external unit (operation with one or two thermostats)
- One internal unit connected to two external units (operation with a single thermostat)
- Refrigerant line distance between the internal and external unit (split configuration) up to 50 m total
- Can be combined with the RCAH range of high energy efficiency heat recovery exchangers and filtration group to class F.
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

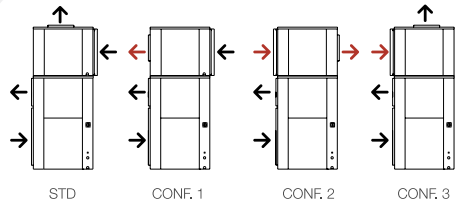
Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
This range of packaged and split units uses a vertical design. It is suitable for operation connected to a network of air distribution conduits, in both the internal and external section.
Designed to be installed inside the area to be air conditioned, they are characterised by offering a wide installation versatility.

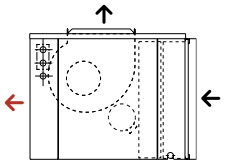
Air inlet/outlet configuration options

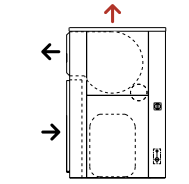
→ standard → optional

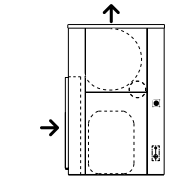
ACVA/ACVBA



ECVA/CCVA - ECVBA/CCVBA







Options

ENERGY EFFICIENCY

- Option for mixing module for free cooling with three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start (depending on model)
- Fan soft start, internal and/or external (depending on model)
- Condensation controlled by frequency inverter or variable voltage controller
- Internal radial EC fan (depending on model)

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Kit for bad weather installation
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Availability of models with R407C refrigerant to be consulted
- Suitable for disassembly
- Only for SPLIT configuration:
  - Oil separator
  - Service valves
  - Quick connection valves with pre-load of refrigerant gas
- Multi split 2x1 operation (1402 to 2402)

MAINTENANCE

- Service valves
- External pressure tapping points
- Dirty filter detector
- Filter on condenser
- Separate filter

CONTROLS

- ETN thermostat (mod. 1 circuit)
- ARIA thermostat
- SUPER SI thermostat (man. 24 V)
- pGD thermostat
- DSX@ thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section.

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

ACVA Cooling only ACVBA Reversible TECHNICAL SPECIFICATIONS

MODEL		351	401	501	701	721	751
Nominal cooling capacity	kW	9.8	12.5	14.4	18.9	19.6	22.7
Nominal cooling capacity	T.R.	2.8	3.6	4.1	5.4	5.6	6.5
Nominal heating capacity	kW	10.4	13.7	15.0	20.0	21.0	23.9
Total absorbed power for cooling	kW	4.6	5.6	7.2	8.4	9.3	10.9
Total absorbed power for heating	kW	4.2	5.1	6.5	7.9	8.2	10.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Int. air flow static pressure	m³/h - Pa	2315-43	2600-50	3540-60	4720-55	4720-55	5133-53
Ext. air flow static pressure	m³/h - Pa	4300-50	3950-50	4900-50	6800-50	6800-50	7400-50
Dimensions (length x width x height)	mm	937x750x1604	937x750x1604	1087x750x1604	1130x800x1900	1130x800x1900	1130x800x1900
Net weight	kg	251	276	290	367	392	423
MODEL		**801**	**1001**	**1201**	**1402**	**1502**	**1602**
Nominal cooling capacity	kW	24.2	30.1	34.9	37.8	43.4	50.2
Nominal cooling capacity	T.R.	6.9	8.6	9.9	10.7	12.3	14.3
Nominal heating capacity	kW	25.3	31.7	38.2	39.5	44.2	51.9
Total absorbed power for cooling	kW	10.9	13.4	14.4	16.2	17.6	20.1
Total absorbed power for heating	kW	9.6	12.4	13.2	15.5	16.5	18.0
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Int. air flow static pressure	m³/h - Pa	5150-83	6200-73	8000-91	8000-130	10000-145	10000-145
Ext. air flow static pressure	m³/h - Pa	7714-57	10000-50	12500-50	13600-88	15600-110	16000-110
Dimensions (length x width x height)	mm	1130x800x1900	1700x870x1900	1700x870x1900	2000x939x1997	2000x939x1997	2000x939x1997
Net weight	kg	440	553	558	730	810	820
MODEL		**2002**	**2302**	**2402**			
Nominal cooling capacity	kW	63.1	73.6	78.5			
Nominal cooling capacity	T.R.	17.9	20.9	22.3			
Nominal heating capacity	kW	65.5	81.9	81.9			
Total absorbed power for cooling	kW	26.0	28.7	34.3			
Total absorbed power for heating	kW	22.8	27.5	29.0			
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N			
Int. air flow static pressure	m³/h - Pa	11000-175	12000-160	12000-160			
Ext. air flow static pressure	m³/h - Pa	22000-123	23000-142	23000-142			
Dimensions (length x width x height)	mm	2600x980x2174	2600x980x2174	2600x980x2174			
Net weight	kg	1080	1115	1135			

CCVA Cooling only CCVBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		351	401	501	701	721	751
Nominal cooling capacity	kW	9.8	12.5	14.4	18.9	19.6	22.7
Nominal cooling capacity	T.R.	2.8	3.6	4.1	5.4	5.6	6.5
Nominal heating capacity	kW	10.4	13.7	15.0	20.0	21.0	23.9
Total absorbed power for cooling	kW	4.0	5.1	6.4	7.3	8.0	9.4
Total absorbed power for heating	kW	3.7	4.5	5.5	6.8	7.0	9.0
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	3/8	1/2	1/2	1/2	1/2	5/8
Refrigerant connection. Gas line	Ø (")	3/4	3/4	7/8	7/8	7/8	7/8
Air flow - static pressure	m³/h - Pa	4300-50	3950-50	4900-50	6800-50	6800-50	7400-50
Dimensions (length x width x height)	mm	937x750x1022	937x750x1022	1087x750x1022	1130x800x1250	1130x800x1250	1130x800x1250
Net weight	kg	172	189	200	253	272	297
MODEL		**801**	**1001**	**1201**	**1402**	**1502**	**1602**
Nominal cooling capacity	kW	24.2	30.1	34.9	37.8	43.4	50.2
Nominal cooling capacity	T.R.	6.9	8.6	9.9	10.7	12.3	14.3
Nominal heating capacity	kW	25.3	31.7	38.2	39.5	44.2	51.9
Total absorbed power for cooling	kW	9.4	12.0	12.5	13.9	15.2	14.4
Total absorbed power for heating	kW	8.3	11.0	11.5	14.9	14.6	16.5
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8
Air flow - static pressure	m³/h - Pa	7714-57	10000-50	12500-50	13600-88	15600-110	16000-110
Dimensions (length x width x height)	mm	1130x800x1250	1700x870x1250	1700x870x1250	2000x939x1250	2000x939x1250	2000x939x1250
Net weight	kg	304	373	397	477	538	548

CCVA Cooling only CCVBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		2002	2302	2402	3002	3502
Nominal cooling capacity	kW	63.1	73.6	78.5	86.6	114.3
Nominal cooling capacity	T.R.	17.9	20.9	22.3	24.6	32.5
Nominal heating capacity	kW	65.5	81.9	81.9	88.8	119.6
Total absorbed power for cooling	kW	21.6	23.4	24.2	31.1	39.8
Total absorbed power for heating	kW	21.7	25.7	25.5	27.4	32.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	5/8	7/8
Refrigerant connection. Gas line	Ø (")	1 1/8	1 1/8	1 1/8	1 3/8	1 5/8
Air flow - static pressure	m^3/h - Pa	22000-123	23000-142	23000-142	27000-140	32000-160
Dimensions (length x width x height)	mm	2600x980x1422	2600x980x1422	2600x980x1422	2800x1050x1722	2800x1050x1722
Net weight	kg	747	782	802	978	1058

ECVA Cooling only ECVBA Reversible - INDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		351	401	501	701	721	751
Nominal cooling capacity	kW	9.8	12.5	14.4	18.9	19.6	22.7
Nominal cooling capacity	T.R.	2.8	3.6	4.1	5.4	5.6	6.5
Nominal heating capacity	kW	10.4	13.7	15.0	20.0	21.0	23.9
Total absorbed power for cooling	kW	0.3	0.4	0.9	1.0	0.9	1.1
Total absorbed power for heating	kW	0.3	0.4	0.8	0.9	0.9	1.0
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	3/8	1/2	1/2	1/2	1/2	5/8
Refrigerant connection. Gas line	Ø (")	3/4	3/4	7/8	7/8	7/8	7/8
Air flow - static pressure	m^3/h - Pa	2315-43	2600-50	3540-60	4720-55	4720-55	5133-53
Dimensions (length x width x height)	mm	937x750x582	937x750x582	1087x750x582	1130x800x650	1130x800x650	1130x800x650
Net weight	kg	92	95	99	126	126	136
MODEL		**801**	**1001**	**1201**	**1402**	**1502**	**1602**
Nominal cooling capacity	kW	24.2	30.1	34.9	37.8	43.4	50.2
Nominal cooling capacity	T.R.	6.9	8.6	9.9	10.7	12.3	14.3
Nominal heating capacity	kW	25.3	31.7	38.2	39.5	44.2	51.9
Total absorbed power for cooling	kW	1.0	1.0	1.3	2.2	2.2	2.3
Total absorbed power for heating	kW	1.0	0.9	1.2	1.7	1.7	1.9
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	1/2	5/8	5/8
Refrigerant connection. Gas line	Ø (")	7/8	1 1/8	1 1/8	7/8	7/8	1 1/8
Air flow - static pressure	m^3/h - Pa	5125-83	6277-73	8000-91	8000-130	10000-145	10000-145
Dimensions (length x width x height)	mm	1130x800x650	1700x870x650	1700x870x650	2000x939x747	2000x939x747	2000x939x747
Net weight	kg	136	197	199	253	272	272
MODEL		**2002**	**2302**	**2402**	**3002**	**3502**	
Nominal cooling capacity	kW	63.1	73.6	78.5	86.6	114.3	
Nominal cooling capacity	T.R.	17.9	20.9	22.3	24.6	32.5	
Nominal heating capacity	kW	65.5	81.9	81.9	88.8	119.6	
Total absorbed power for cooling	kW	3.1	3.3	3.6	3.9	3.9	
Total absorbed power for heating	kW	2.7	2.4	2.9	2.3	2.3	
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	5/8	7/8	
Refrigerant connection. Gas line	Ø (")	1 1/8	1 1/8	1 1/8	1 3/8	1 5/8	
Air flow - static pressure	m^3/h - Pa	11000-175	12000-160	12000-160	14000-200	18000-250	
Dimensions (length x width x height)	mm	2600x980x752	2600x980x752	2600x980x752	2800x1050x915	2800x1050x915	
Net weight	kg	333	333	333	418	524	

For the sizing of the refrigeration lines, depending on the layout and total distance of the installation, please contact our Sales Department

UXCA/ECVA
Cooling only

UXCBA/ECVBA
Reversible

UXCA/UXCBA

ECVA/ECVBA

MAIN FEATURES

- Cooling capacities between 23.6 and 139.7 kW
- Scroll compressors
- 2 cooling circuits (models 1602 to 4502)
- Can be combined with the RCAH range of high energy efficiency heat recovery exchangers and filtration group to class F.
- 3 versions available:
  - Standard (STD)
  - Low sound level (SIL)
  - High ambient temperatures (HTA)
- Refrigerant distance between the internal and external unit up to 50 m in total
- Option to operate as a multi split 2x1 group (models 1602 to 3002)
- Two internal units connected to one external unit (operation with one or two thermostats)
- One internal unit connected to two external units (operation with a single thermostat)
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

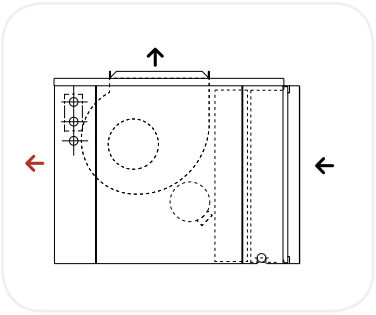
- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216.
Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
The units that make up the UXCA/ECVA - UXCBA/ECVBA series are ductable units, specially designed to be installed on roofs, terraces or any other outdoor space.
Their design makes it possible to cover large distances in the installation between the indoor and outdoor unit.

Air inlet/outlet configuration options → standard → optional



UXCA Cooling only UXCBA Reversible - OUTDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		801	1001	1201	1501	1602
Nominal cooling capacity	kW	23.6	29.7	34.5	40.3	49.6
Nominal cooling capacity	T.R.	6.7	8.4	9.8	11.5	14.1
Nominal heating capacity	kW	24.9	30.6	39.6	41.6	52.4
Total absorbed power for cooling	kW	10.1	12.0	14.0	15.5	19.5
Total absorbed power for heating	kW	9.9	11.1	14.2	14.7	18.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Dimensions (length x width x height)	mm	1430x1008x325	1430x1008x1325	1400x1320x1500	1400x1320x1500	2035x1030x1325
Net weight	kg	251	316	382	392	495
MODEL		**2002**	**2402**	**3002**	**4002**	**4502**
Nominal cooling capacity	kW	65.3	73.1	89.4	122.9	139.7
Nominal cooling capacity	T.R.	18.6	20.8	25.4	34.9	39.7
Nominal heating capacity	kW	67.6	78.3	86.0	124.8	144.2
Total absorbed power for cooling	kW	23.0	24.4	29.6	40.7	46.3
Total absorbed power for heating	kW	21.3	24.7	30.7	38.4	42.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Dimensions (length x width x height)	mm	2035x1030x1325	2280x1320x1500	2720x1320x1500	2200x2250x1725	2200x2250x1725
Net weight	kg	545	567	894	950	992

ECVA Cooling only ECVBA Reversible - INDOOR UNIT TECHNICAL SPECIFICATIONS

MODEL		801	1001	1201	1501	1602
Nominal cooling capacity	kW	23.6	29.7	34.5	40.3	49.6
Nominal cooling capacity	T.R.	6.7	8.4	9.8	11.5	14.1
Nominal heating capacity	kW	24.9	30.6	39.6	41.6	52.4
Total absorbed power for cooling	kW	1.5	1.4	1.9	2.6	2.4
Total absorbed power for heating	kW	1.5	1.3	1.7	2.4	2.3
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	5/8	5/8
Refrigerant connection. Gas line	Ø (")	7/8	1 1/8	1 1/8	1 1/8	1 1/8
Air flow - static pressure	m^3/h - Pa	5150-83	6200-73	8000-91	9000-130	10000-145
Dimensions (length x width x height)	mm	1130x800x650	1700x870x650	1700x870x650	2000x939x747	2000x939x747
Net weight	kg	136	197	199	272	272

MODEL		2002	2402	3002	4002	4502
Nominal cooling capacity	kW	65.3	73.1	89.4	122.9	139.7
Nominal cooling capacity	T.R.	18.6	20.8	25.4	34.9	39.7
Nominal heating capacity	kW	67.6	78.3	86	124.8	144.2
Total absorbed power for cooling	kW	2.6	2.6	3.3	5.6	6.2
Total absorbed power for heating	kW	2.5	2.5	3.6	5.5	5.4
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Refrigerant connection. Liquid line	Ø (")	5/8	5/8	5/8	7/8	7/8
Refrigerant connection. Gas line	Ø (")	1 1/8	1 1/8	1 3/8	1 5/8	1 5/8
Air flow - static pressure	m^3/h - Pa	11000-175	12000-160	14000-200	20500-210	22000-200
Dimensions (length x width x height)	mm	2600x980x752	2600x980x752	2800x1050x915	2900x1200x1115	2900x1200x1115
Net weight	kg	333	333	418	550	570

For the sizing of the refrigeration lines, depending on the layout and total distance of the installation, please contact our Sales Department

CLVA
Cooling only

CLVBA
Reversible

R410A

MAIN FEATURES

- Air flows up to 10,200 m³/h
- Various installation options
- Can be connected to any Wesper condensing unit
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
The units of the CLVA/CLVBA series are units with direct expansion evaporators suitable to operate connected to a system of air distribution conduits. The units are designed to work with any outdoor Wesper units with equivalent cooling capacities.
Free discharge can be used on all models via an optional air plenum that ends in an anodised aluminium grille for direct air discharge.

Options

ENERGY EFFICIENCY
- Option for mixing module for free cooling with three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Internal EC radial fan (depending on model)
- Fan soft start (depending on model)

AIR QUALITY
- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)

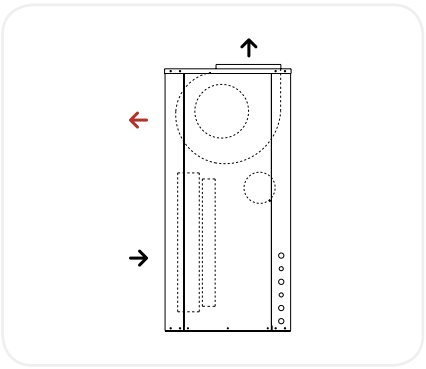
SOUND LEVEL
- Double thermal-acoustic insulation

UNIT INSTALLATION
- Front air discharge
- 60Hz power supply and voltages of 230, 208 etc.
- Kit for bad weather installation
- Upgraded motors
- Flame-proof filter class M0
- Hot gas bypass
- Hot water heating coils (cooling only)
- Auxiliary electric heating coils
- Return with circular connection
- Opposite side connectors
- Discharge plenum
- Air intake grille
- Pre-treated anti-corrosion coils
- Availability of models with R407C refrigerant to be consulted
- Suitable for disassembly
- Base frame

MAINTENANCE
- Service valves
- Dirty filter detector
- Separate filter

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional



CLVA Cooling only CLVBA Reversible TECHNICAL SPECIFICATIONS

MODEL		251	351	401	501	701
Nominal cooling capacity	kW	7.4	9.8	12.0	14.4	18.2
Nominal cooling capacity	T.R.	2.1	2.8	3.4	4.1	5.2
Nominal heating capacity	kW	7.4	10.4	12.7	15.5	19.3
Total absorbed power	kW	0.3	0.4	0.6	0.6	0.9
Power supply (50 Hz ~)	V	230.1	230.1	230 or 400.3+N	230 or 400.3+N	230 or 400.3+N
Air flow - static pressure	m^3/h - Pa	1900-38	2500-68	3000-56	3400-100	4200-115
Diameter liquid tube	Ø (")	3/8	3/8	1/2	1/2	1/2
Diameter gas tube	Ø (")	5/8	3/4	3/4	7/8	7/8
Dimensions (length x width x height)	mm	697x500x1000	697x500x1000	697x500x1000	757x500x1100	1152x600x1200
Net weight	kg	45	69	73	94	118
MODEL		**721**	**751**	**801**	**1001**	**1201**
Nominal cooling capacity	kW	22.1	22.1	23.2	29.7	35.0
Nominal cooling capacity	T.R.	6.3	6.3	6.6	8.4	10.0
Nominal heating capacity	kW	23.5	23.5	24.4	31.7	37.0
Total absorbed power	kW	0.9	1.3	1.3	1.3	1.8
Power supply (50 Hz ~)	V	230 or 400.3+N	230 or 400.3+N	230 or 400.3+N	230 or 400.3+N	230 or 400.3+N
Air flow static pressure	m^3/h - Pa	4400-109	4800-120	5200-84	7200-78	8000-85
Diameter liquid tube	Ø (")	1/2	5/8	5/8	5/8	5/8
Diameter gas tube	Ø (")	7/8	1 1/8	1 1/8	1 1/8	1 1/8
Dimensions (length x width x height)	mm	1152x600x1200	1152x600x1200	1152x600x1200	1700x600x1300	1700x600x1300
Net weight	kg	118	119	125	175	175
MODEL		**1402**	**1502**	**1602**		
Nominal cooling capacity	kW	36.4	44.2	45.4		
Nominal cooling capacity	T.R.	10.3	12.6	12.9		
Nominal heating capacity	kW	38.6	46.6	48.8		
Total absorbed power	kW	1.8	2.6	2.6		
Power supply (50 Hz ~)	V	230 or 400.3+N	230 or 400.3+N	230 or 400.3+N		
Air flow static pressure	m^3/h - Pa	8400-72	9600-129	10200-123		
Diameter liquid tube	Ø (")	2x1/2	2x5/8	2x5/8		
Diameter gas tube	Ø (")	2x7/8	2x7/8	2x1 1/8		
Dimensions (length x width x height)	mm	1800x675x1400	1800x675x1400	1800x675x1400		
Net weight	kg	187	187	197		

For the sizing of the refrigeration lines, depending on the layout and total distance of the installation, please contact our Sales Department

DXCZ
Cooling only

DXCBZ
Reversible

FTZ
Cooling only

FTBZ
Reversible

SPLIT configuration

DXCZ/DXCBZ

FTZ/FTBZ

MAIN FEATURES

- Cooling capacities between 4.7 and 19 kW
- Rotary compressors (models 171-351) and Scroll (371-721)
- Outdoor units with coils pretreated with blue fins supplied as standard
- Internal 3-speed fan
- Maximum connection distance between internal and external unit 50 metres
- Quick connection valves with refrigerant gas pre-charge for 5 metres
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
Units of the DXCZ/FTZ and DXCBZ/FTBZ series are sets composed of an axial condenser unit and a direct expansion fancoil evaporator unit. The reduced height of the internal unit allows quick installation in false ceilings with the unit suspended or supported.

Options

ENERGY EFFICIENCY

- Condensation controlled by frequency inverter or variable voltage controller

AIR QUALITY

- G4 gravimetric filter on return

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Indoor unit and accessories painted with polyester powder RAL 1013
- Rear connections, outdoor unit
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc. (depending on model)
- Option to manufacture symmetrical configuration units
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Hot gas bypass
- Discharge and return air plenum
- Discharge and return air plenum grille
- Plenum with 3 and 5 spigots
- Condensate drain pump
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Anticorrosion treatment on piping with galval coating
- Suitable for disassembly
  - Oil separator
  - Without refrigerant or flare valves

MAINTENANCE

- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter

CONTROLS

- Pressure switches
- Option for tri-phase evaporator
- ARIA thermostat
- pGD thermostat
- Infrared remote controller
- SUPER SI thermostat (man 24 V)
- DSX@ thermostat (man 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Detection pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

DXCZ/FTZ Cooling only TECHNICAL SPECIFICATIONS

OUTDOOR MODEL / INDOOR MODEL		171	201	221	251	271	351
Nominal cooling capacity	kW	4.7	5.3	6.3	7.0	7.7	9.8
Nominal cooling capacity	T.R.	1.3	1.5	1.8	2.0	2.2	2.8
Total absorbed power	kW	1.9	2.1	2.7	3.0	3.0	3.9
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1 or 400.3	230.1 or 400.3
Air flow - static pressure	m^3/h - Pa	700 - 32	1100 - 44	1100 - 44	1150 - 72	1400 - 96	1500 - 80
Diameter liq. tube	Ø (")	3/8	3/8	3/8	3/8	3/8	3/8
Diameter gas tube	Ø (")	1/2	1/2	1/2	5/8	3/4	3/4
Outdoor unit dimensions (length x width x height)	mm	870x394x630	870x394x630	870x394x630	870x394x630	920x394x730	920x394x730
Indoor unit dimensions (length x width x height)	mm	726x555x218	925x660x280	925x660x280	925x660x280	925x660x280	925x660x280
Total dist. indoor/outdoor unit	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit (1)	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	50	53	53	54	58	63
Net weight indoor unit	Kg	31	37	37	39	43	44

1) For greater distances we recommend installing an oil separator
Voltage indoor unit 230.1 50 Hz ~

DXCZ/FTZ Cooling only TECHNICAL SPECIFICATIONS

OUTDOOR MODEL / INDOOR MODEL		371	401	451	501	701	721
Nominal cooling capacity	kW	11.0	11.8	13.5	14.8	17.2	19.0
Nominal cooling capacity	T.R.	3.1	3.4	3.8	4.2	4.9	5.4
Total absorbed power	kW	4.3	4.6	5.4	5.7	7.3	7.8
Power supply (50 Hz ~)	V	400.3	400.3	400.3	400.3	400.3	400.3
Air flow - static pressure	m^3/h - Pa	2200 - 96	2300 - 80	2400 - 94	2500 - 76	3000 - 140	3000 - 140
Diameter liq. tube	Ø (")	1/2	1/2	1/2	1/2	1/2	1/2
Diameter gas tube	Ø (")	3/4	3/4	7/8	7/8	7/8	7/8
Outdoor unit dimensions (length x width x height)	mm	950x374x1143	950x374x1143	950x374x1143	950x374x1143	950x374x1143	950x374x1143
Indoor unit dimensions (length x width x height)	mm	1250x750x315	1250x750x315	1250x750x315	1250x750x315	1250x805x369	1250x805x369
Total dist. indoor/outdoor unit (1)	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit (1)	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	82	82	101	101	115	120
Net weight indoor unit	Kg	59	59	61	61	71	71

1) For greater distances we recommend installing an oil separator
Voltage indoor unit 230.1 50 Hz ~

DXCBZ/FTBZ Reversible TECHNICAL SPECIFICATIONS

OUTDOOR MODEL / INDOOR MODEL		171	201	221	251	271	351
Nominal cooling capacity	kW	4.7	5.3	6.3	7.0	7.7	9.8
Nominal cooling capacity	T.R.	1.3	1.5	1.8	2.0	2.2	2.8
Nominal heating capacity	kW	4.8	5.8	6.5	7.8	8.3	10.4
Total absorbed power for cooling	kW	1.9	2.1	2.7	3.0	3.0	3.9
Total absorbed power for heating	kW	1.9	2.0	2.3	2.6	2.6	3.7
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1 or 400.3+N	230.1 or 400.3+N
Air flow - static pressure	m^3/h - Pa	700 - 32	1100 - 44	1100 - 44	1150 - 72	1400 - 96	1500 - 80
Diameter liq. tube	Ø (")	3/8	3/8	3/8	3/8	3/8	3/8
Diameter gas tube	Ø (")	1/2	1/2	1/2	5/8	3/4	3/4
Outdoor unit dimensions (length x width x height)	mm	870x394x630	870x394x630	870x394x630	870x394x630	920x394x730	920x394x730
Indoor unit dimensions (length x width x height)	mm	726x555x218	925x660x280	925x660x280	925x660x280	925x660x280	925x660x280
Total dist. indoor/outdoor unit (1)	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit (1)	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	53	56	56	58	62	68
Net weight indoor unit	Kg	31	37	37	39	43	44
OUTDOOR MODEL / INDOOR MODEL		**371**	**401**	**451**	**501**	**701**	**721**
Nominal cooling capacity	kW	11.0	11.8	13.5	14.8	16.8	18.6
Nominal cooling capacity	T.R.	3.1	3.4	3.8	4.2	4.8	5.3
Nominal heating capacity	kW	12.0	12.8	14.0	15.3	19.8	20.7
Total absorbed power for cooling	kW	4.3	4.6	5.4	5.7	7.3	7.8
Total absorbed power for heating	kW	3.7	4.1	4.9	5.0	6.7	7.5
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
Air flow - static pressure	m^3/h - Pa	2200 - 96	2300 - 80	2400 - 94	2500 - 76	3000 - 140	3000 - 140
Diameter liq. tube	Ø (")	1/2	1/2	1/2	1/2	1/2	1/2
Diameter gas tube	Ø (")	3/4	3/4	7/8	7/8	7/8	7/8
Outdoor unit dimensions (length x width x height)	mm	950x374x1143	950x374x1143	950x374x1143	950x374x1143	950x374x1143	1035x424x1335
Indoor unit dimensions (length x width x height)	mm	1250x750x315	1250x750x315	1250x750x315	1250x750x315	1250x805x369	1250x805x369
Total dist. indoor/outdoor unit	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit (1)	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	89	89	109	109	130	135
Net weight indoor unit	Kg	59	59	61	61	71	71

(1) For distances greater than 25 m we recommend installing an oil separator
Voltage indoor unit 230.1 50 Hz ~

AXCZ "Dual"
Cooling only

AXCBZ "Dual"
Reversible

FTZ
Cooling only

FTBZ
Reversible

AXCZ/AXCBZ "Dual"

FTZ/FTBZ

MAIN FEATURES

- Cooling capacities between 10.8 and 15.8 kW
- Outdoor units with coils pretreated with blue fins supplied as standard
- Internal 3-speed fan
- Maximum connection distance between internal and external unit 50 metres
- Thermostats and controllers included for units with electromechanical controls:

- Standard controller:
SUPER SI 24V

- Optional controller:
DSX@

For the functions, see the "Controls" section on page 216

Advantages

Maximum versatility for air conditioning via the conduits of commercial buildings.
The units of the AXCZ/FTZ and AXCBZ/FTBZ DUAL series are groups consisting of a dual circuit axial condenser, usually non-identical, and two direct expansion fancoil evaporator units. The reduced height of the internal unit allows quick installation in false ceilings with the unit suspended or supported.

AXCZ "Dual"/FTZ Cooling only TECHNICAL SPECIFICATIONS

OUTDOOR MODEL		AXCZ 402	AXCZ 442	AXCZ 452	AXCZ 472	AXCZ 502	AXCZ 542
INDOOR MODEL		FTZ 201+201	FTZ 221+221	FTZ 201+251	FTZ 221+251	FTZ 251+251	FTZ 271+271
Nominal cooling capacity	kW	5.4 + 5.4	6.0 + 6.0	5.4 + 7.4	6.0 + 7.4	7.4 + 7.4	7.9 + 7.9
Nominal cooling capacity	T.R.	1.5 + 1.5	1.7 + 1.7	1.5 + 2.1	1.7 + 2.1	2.1 + 2.1	2.2 + 2.2
Total absorbed power	kW	4.2	4.4	4.7	4.8	5.14 - 5.06	5.38 - 5.46
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1 or 400.3+N	230.1 or 400.3+N
Air flow	m^3/h -m^3/h	1100 - 1100	1100 - 1100	1100 - 1150	1100 - 1150	1150 - 1150	1400 - 1400
Static pressure	Pa	44	44	44 - 72	44 - 72	72 - 72	96 - 96
Diameter liq. tube	Ø (")	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8
Diameter gas tube	Ø (")	1/2 - 1/2	1/2 - 1/2	1/2 - 5/8	1/2 - 5/8	5/8 - 5/8	3/4 - 3/4
Outdoor unit dimensions (length x width x height)	mm	950x407x1349	950x407x1349	950x407x1349	950x407x1349	950x407x1349	950x407x1349
Indoor unit dimensions (length x width x height)	mm	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ
Total dist. indoor/outdoor unit	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	131	135	138	139	141	176
Net weight indoor unit	Kg	37 + 37	37 + 37	37 + 39	37 + 39	39 + 39	43 + 43

AXCBZ "Dual"/FTBZ Reversible TECHNICAL SPECIFICATIONS

OUTDOOR MODEL		AXCBZ 402	AXCBZ 442	AXCBZ 452	AXCBZ 472	AXCBZ 502	AXCBZ 542
INDOOR MODEL		FTBZ 201+201	FTBZ 221+221	FTBZ 201+251	FTBZ 221+251	FTBZ 251+251	FTBZ 271+271
Nominal cooling capacity	kW	5.2 + 5.2	6.0 + 6.0	5.2 + 7.0	6.0 + 7.0	7.0 + 7.0	7.5 + 7.5
Nominal cooling capacity	T.R.	1.5 + 1.5	1.7 + 1.7	1.5 + 2.0	1.7 + 2.0	2.0 + 2.0	2.1 + 2.1
Nominal heating capacity	kW	6.2 + 6.2	6.6 + 6.6	6.2 + 8.1	6.6 + 8.1	8.1 + 8.1	8.3 + 8.3
Total absorbed power for cooling	kW	4.2	4.4	4.7	4.8	5.14 - 5.06	5.38 - 5.46
Total absorbed power for heating	kW	3.6	3.7	4.0	4.0	4.40 - 4.32	4.60 - 4.64
Power supply (50 Hz ~)	V	230.1	230.1	230.1	230.1	230.1 - 400.3+N	230.1 - 400.3+N
Air flow	m^3/h-m^3/h	1100 - 1100	1100 - 1100	1100 - 1150	1100 - 1150	1150 - 1150	1400 - 1400
Static pressure	Pa	44	44	44 - 72	44 - 72	72 - 72	96 - 96
Diameter liq. tube	Ø (")	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8	3/8 - 3/8
Diameter gas tube	Ø (")	1/2 - 1/2	1/2 - 1/2	1/2 - 5/8	1/2 - 5/8	5/8 - 5/8	3/4 - 3/4
Outdoor unit dimensions (length x width x height)	mm	950x407x1349	950x407x1349	950x407x1349	950x407x1349	950x407x1349	950x407x1349
Indoor unit dimensions (length x width x height)	mm	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ	See models FTBZ
Total dist. indoor/outdoor unit	m	50	50	50	50	50	50
Vertical dist. indoor/outdoor unit	m	25	25	25	25	25	25
Net weight outdoor unit	Kg	137	141	143	145	148	182
Net weight indoor unit	Kg	37 + 37	37 + 37	37 + 39	37 + 39	39 + 39	43 + 43

Voltage indoor unit 230.1 50 Hz ~

Options

ENERGY EFFICIENCY

- Compressor soft start (depending on model)
- Condensation controlled by frequency inverter or variable voltage controller

AIR QUALITY

- G4 gravimetric filter on return

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Indoor unit and accessories painted with polyester powder RAL 1013
- Rear connections, outdoor unit
- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc. (depending on model)
- Operation for antifreeze electric heater in condensate tray
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Anticorrosion treatment on piping with galval coating
- Without refrigerant or flare valves
- Discharge and return air plenum
- Discharge and return air plenum grille
- Plenum with 3 and 5 spigots
- Condensate drain pump

MAINTENANCE

- Service valves
- External pressure tapping points
- Dirty filter detector
- Separate filter

CONTROLS

- Pressure switches
- Automatic reset of the high pressure switch
- Option for tri-phase evaporator
- ETN thermostat
- ARIA thermostat
- pGD thermostat
- Infrared remote controller
- SUPER SI thermostat (man 24 V)
- DSX@ thermostat (man 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

ROOFTOP

Wesper

RXCZ
Cooling only

RXCBZ
Reversible

MAIN FEATURES

- Cooling capacity from 29 to 137 kW
- Alternative hermetic compressors or Scroll compressors depending on model
- Maximum capacity reduction up to 2 stages depending on model
- Thermostats and controllers included for standard units with electromechanical controls:

- Standard controller:
ARIA

For the functions, see the "Controls" section on page 216

Advantages

High flow solutions for rooftops, versatile and adaptable to every project.
The units of the RXCZ-RXCBZ series are rooftop type compact packaged units, especially designed for installation on terraces, roofs or any other outdoor space, with air distribution via conduits.

Options

ENERGY EFFICIENCY
- Option for mixing module for free cooling with two and three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Condensation controlled by variable voltage controller

AIR QUALITY
- G4 gravimetric filter on return
- Fresh air inlet damper

SOUND LEVEL
- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION
- Magneto-thermal circuit breakers in the electrical board
- 60 Hz power supply and voltages of 230, 208 etc.
- Upgraded motors
- Operation for antifreeze electric heater in condensate tray
- Lateral indoor air discharge
- Upper indoor air discharge
- Lateral indoor air return
- Inverse lateral indoor air return
- Flame-proof filter class M0
- Hot gas bypass
- Condensation controlled by double speed
- Condensation control
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Mounting base
- Internal droplet separator

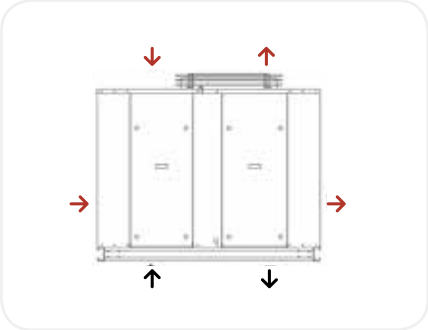
MAINTENANCE
- Service valves
- External manometers for reading pressure
- External pressure tapping points
- Dirty filter detector

CONTROLS
- pGD thermostat
- Alarm signals
- Smoke detection
- Option for master/slave operation
- Unit without thermostat
- Wall-mounted or room temperature sensor
- Return temperature sensor (ARIA)
- Wall-mounted air quality sensor
- Operation without neutral

For the functions, please refer to the "Control" section on page 216

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

Air inlet/outlet configuration options → standard → optional



RXCZ Cooling only TECHNICAL SPECIFICATIONS

MODEL		1001	1201	1501
Nominal cooling capacity	kW	29.0	35.0	43.0
Nominal cooling capacity	T.R.	8.3	9.9	12.2
Nominal heating capacity	kW	-	-	-
Power supply (50 Hz ~)	V	400.3	400.3	400.3
Air flow - static pressure	m^3/h - Pa	7000 - 140	8000 - 218	9000 - 205
Dimensions (length x width x height)	mm	2686x1707x1460	2686x1707x1530	2686x1707x1530
Net weight	Kg	730	780	820

RXCBZ Reversible TECHNICAL SPECIFICATIONS

MODEL		1001	1201	1501
Nominal cooling capacity	kW	28.0	35.0	42.0
Nominal cooling capacity	T.R.	8.0	9.9	11.9
Nominal heating capacity	kW	30.0	36.0	44.0
Power supply (50 Hz ~)	V	230.3 / 400.3	230.3 / 400.3	230.3 / 400.3
Air flow - static pressure	m^3/h - Pa	7000 - 140	8000 - 218	9000 - 205
Dimensions (length x width x height)	mm	2686x1707x1460	2686x1707x1580	2686x1707x1580
Net weight	Kg	730	780	820

RXCA
Cooling only

RXCBA
Reversible

R410A

MAIN FEATURES

- Cooling capacities between 40.7 and 192.3 kW
- Scroll compressors
- Maximum capacity reduction up to 9 stages depending on model
- Maximum air quality and comfort. Option to install high efficiency F type filters (F6 to F9)
- 3 versions available: standard (STD), with gas burner module (GAZ) and high ambient temperatures (HTA)
- Thermostats and controllers included for standard units with electromechanical controls:

ARIA
Models 1602 to 4502

pGD
Models 5002 to 6002

For the functions, see the "Controls" section on page 216

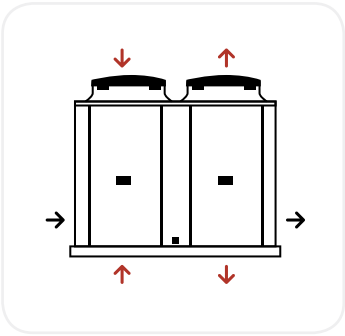
Advantages

High flow solutions for rooftops, versatile and adaptable to every project. The units of the RXCA-RXCBA series are rooftop type compact packaged units, especially designed for installation on terraces, roofs or any other outdoor space, with air distribution via conduits.

RXCA Cooling only RXCBA Reversible TECHNICAL SPECIFICATIONS

MODEL		1402	1602	2002	2402	3002
Nominal cooling capacity	kW	40.7	46.2	61.2	71.5	84.5
Nominal cooling capacity	T.R.	11.6	13.1	17.4	20.3	24.0
Nominal heating capacity	kW	42.2	48.6	63.4	74.6	87.5
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER	kW/kW	2.7	2.7	2.7	2.8	3.0
COP	kW/kW	3.0	3.0	3.0	3.1	3.3
Cooling energy rating (1)		C	C	C	C	B
Heating energy rating (1)		D	D	D	C	B
Air flow - static pressure	m^3/h - Pa	7800-100	9500 - 100	12318 - 135	14075 - 115	14980 - 115
Dimensions (length x width x height)	mm	2702x2300x1647	2702x2300x1647	2702x2300x1647	2702x2300x1832	2702x2300x2010
Net weight	Kg	1200	1200	1236	1250	1300
MODEL		**3502**	**4002**	**4502**	**5002**	**6002**
Nominal cooling capacity	kW	105.2	115.0	142.6	162.0	192.3
Nominal cooling capacity	T.R.	29.9	32.7	40.5	46.1	54.7
Nominal heating capacity	kW	109.8	120.0	148.7	167.8	199.4
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER	kW/kW	2.9	3.1	2.9	3.0	2.9
COP	kW/kW	3.6	3.5	3.2	3.3	3.3
Cooling energy rating (1)		B	A	B	B	B
Heating energy rating (1)		A	A	C	B	B
Air flow - static pressure	m^3/h - Pa	17901 - 125	20258-125	25083 - 125	28100 - 150	32800 - 175
Dimensions (length x width x height)	mm	4800x2100x1872	4800x2100x1872	4800x2100x1872	4800x2100x2222	4800x2100x2222
Net weight	Kg	2200	2210	2240	2600	2710

Air inlet/outlet configuration options → standard → optional



Options

ENERGY EFFICIENCY

- Option for mixing module for free cooling with three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start
- Fan soft start, internal and/or external
- Thermodynamic heat recovery (R-404A, etc.)
- **Internal EC plugfan**
- Axial EC fans
- Condensation controlled by variable voltage controller

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)
- External module for F filters on rail
- Fresh air inlet damper

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor
- Low noise outdoor fan

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Upgraded motors
- Internal flow control if filters clogged (with internal EC plugfan)
- Operation for antifreeze electric heater in condensate tray
- Lower internal air discharge
- Upper internal air discharge
- Rear internal air discharge (with EC plugfan)
- Lower internal air return
- Upper internal air return
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Gas burner
- Hot gas bypass
- Condensation controlled by double speed fan, models 1402/3502
- Condensation controlled by On/Off fan, models 4002/4502
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Mounting base
- Condensation fan with available pressure
- RCCBA with centrifugal condensation fan
- Condensate tray on external section
- Safety grille on outside heat exchanger section
- Droplet separator

MAINTENANCE

- Service valves
- External manometers for reading pressure
- External pressure tapping points
- Dirty filter detector

CONTROLS

- pGD thermostat
- DSX@ thermostat (requires 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor (ARIA)
- Temperature sensor in conduit
- Air quality sensor
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section
- Option to personalise the software with specific functions for the client

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

RXCA RCF
Cooling only

RXCBA RCF
Reversible

R410A

MAIN FEATURES

- Cooling capacities between 53.1 and 233.4 kW
- Scroll compressors
- Maximum capacity reduction up to 9 stages depending on model
- Maximum air quality and comfort. Option to install high efficiency F type filters (F6 to F9)
- 3 versions available: with thermodynamic heat recovery (RCF), with gas burner module (GAZ) and high ambient temperatures (HTA)
- Thermostat:

pGD

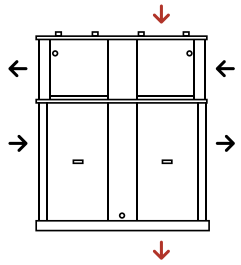
For the functions, see the "Controls" section on page 216

Advantages

Rooftop solution with thermodynamic heat recovery. Maximum efficiency in minimum space.
The units of the RXCA/RXCBA RCF series are rooftop type compact packaged units, especially designed for installation on terraces, roofs or any other outdoor space, with air distribution via conduits. The thermodynamic heat recovery system uses an additional refrigerant circuit as a heat exchanger. The purpose of this additional circuit is to transfer the energy of the exhaust air to the fresh air of ventilation. This system is an alternative to the conventional heat recovery system.

Air inlet/outlet configuration options

→ standard → optional



RXCA RCF Cooling only RXCBA RCF Reversible TECHNICAL SPECIFICATIONS

MODEL		1402	1602	2002	2402	3002
Total cooling capacity	kW	53.1	60.6	75.4	92.3	101.9
Cooling capacity main circuits	kW	40.2	46.6	58.9	71.1	80.2
Cooling capacity recovery circuit	kW	12.9	14.0	16.5	21.2	21.7
Total cooling capacity	T.R.	15.1	17.2	21.4	26.2	29.0
Cooling capacity main circuits	T.R.	11.4	13.2	16.7	20.2	22.8
Cooling capacity recovery circuit	T.R.	3.7	4.0	4.7	6.0	6.2
Total heating capacity	kW	55.7	60.1	76.9	93.1	105.5
Heating capacity main circuits	kW	43.8	47.2	61.7	72.5	85.1
Heating capacity recovery circuit	kW	11.9	12.9	15.2	20.6	20.4
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER		2.9	2.9	2.8	2.9	3.0
COP		3.4	3.4	3.2	3.2	3.3
Cooling energy rating (1)		B	B	C	B	B
Heating energy rating (1)		B	B	C	C	B
Air flow	m^3/h	7,800	9,500	12,318	14,075	14,980
Supply side available pressure	Pa	100	100	135	115	115
Return side available pressure	Pa	75	85	85	85	85
Dimensions (length x width x height)	mm	2702x2300x2175	2702x2300x2175	2702x2300x2175	2702x2300x2360	2702x2300x2540
Net weight	Kg	1420	1425	1475	1540	1604

RXCA RCF Cooling only RXCBA RCF Reversible TECHNICAL SPECIFICATIONS

MODEL		3502	4002	4502	5002	6002
Total cooling capacity	kW	125.1	141.4	178.9	202.9	233.4
Cooling capacity main circuits	kW	100.5	110.4	141.3	160.9	190.9
Cooling capacity recovery circuit	kW	24.6	31.0	37.6	42.0	42.5
Total cooling capacity	T.R.	35.6	40.2	50.9	57.7	66.4
Cooling capacity main circuits	T.R.	28.6	31.4	40.2	45.7	54.3
Cooling capacity recovery circuit	T.R.	7.0	8.8	10.7	11.9	12.1
Total heating capacity	kW	130.6	146.9	179.8	202.9	233.9
Heating capacity main circuits	kW	106.7	116.7	144.5	163.1	193.8
Heating capacity recovery circuit	kW	23.9	30.2	35.3	39.8	40.1
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER		3.3	3.1	3.0	3.1	3.0
COP		3.7	3.5	3.3	3.4	3.3
Cooling energy rating (1)		A	A	B	A	B
Heating energy rating (1)		A	A	B	B	B
Air flow	m^3/h	17,901	20,258	25,083	28,100	32,800
Supply side available pressure	Pa	125	125	125	150	175
Return side available pressure	Pa	70	85	85	85	100
Dimensions (length x width x height)	mm	4800x2100x2410	4800x2100x2410	4800x2100x2410	4800x2100x2760	4800x2100x2760
Net weight	Kg	2650	2780	2820	3450	3480

Options

ENERGY EFFICIENCY

- Thermal or enthalpic control system for the integrated free-cooling with PCO controller card and pGD controller
- Compressor soft start
- Soft start internal and/or external fan
- Condensation control by variable voltage controller
- Thermodynamic heat recovery (R-404A, etc.)
- **Internal EC plugfan**
- Axial EC fans

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)
- External module for F filters on rail

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor
- Low noise outdoor fan

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Upgraded motors
- Internal flow control if filters are clogged
- Operation for antifreeze electric heater in condensate tray
- Lower internal air discharge
- Rear internal air discharge (with EC plugfan)
- Upper internal air return
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Gas burner
- Hot gas bypass
- Condensation controlled by double speed fan, models 1402/3502
- Condensation controlled by On/Off fan, models 4002/4502
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Mounting base
- Condensation fan with available pressure
- RCCBA with centrifugal condensation fan
- Condensate tray on external section
- Safety grille on outside heat exchanger section
- Droplet separator

MAINTENANCE

- Service valves
- External manometers for reading pressure
- External pressure tapping points
- Dirty filter detector

CONTROLS

- pGD thermostat
- Thermostat DSX@
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted or room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Air quality sensor
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming and Modbus connection etc. please refer to the section on Thermostats

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

RCCA
Cooling only

RCCBA
Reversible

R410A

ESPECIALLY FOR SETUP IN DIFFICULT LOCATIONS

MAIN FEATURES

- Cooling capacities between 40.7 and 84.5 kW
- Scroll compressors
- Maximum capacity reduction up to 4 stages depending on model
- Maximum air quality and comfort. Option to install high efficiency F type filters (F6 to F9)
- 3 versions available: standard (STD), with gas burner module (GAZ) and high ambient temperatures (HTA)
- Thermostats and controllers included for standard units with electromechanical controls:

ARIA
Models 1402 to 3002

For the functions, see the "Controls" section on page 216

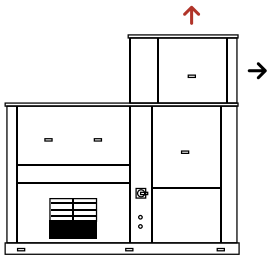
Advantages

Shopping centres, multiplex cinemas, large supermarkets, etc. The units of the RCCA/RCCBA series are rooftop type compact packaged units with centrifugal fans on both sections enabling installation indoors; air is distributed via conduits.

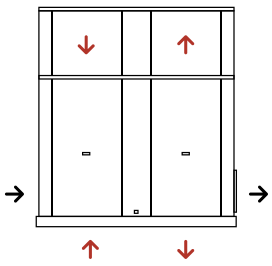
Air inlet/outlet configuration options

→ standard → optional

OUTDOOR SECTION



INDOOR SECTION



RCCA Cooling only RCCBA Reversible TECHNICAL SPECIFICATIONS

MODEL		1402	1602	2002	2402	3002
Nominal cooling capacity	kW	40.7	46.2	61.2	71.5	84.5
Nominal cooling capacity	T.R.	11.6	13.1	17.4	20.3	24.0
Nominal heating capacity	kW	42.2	48.6	63.4	74.6	87.5
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER	kW/kW	2.7	2.6	2.6	2.7	2.8
COP	kW/kW	2.9	2.8	2.9	3.0	3.2
Cooling energy rating		C	D	D	C	C
Heating energy rating		D	D	D	D	C
Air flow - static pressure	m^3/h - Pa	7800-100	9500 - 100	12318 - 135	14075 - 115	14980 - 115
Dimensions (length x width x height)	mm	2702x2300x2185	2702x2300x2185	2702x2300x2185	2702x2300x2390	2702x2300x2550
Net weight	Kg	1500	1500	1536	1550	1600

Options

ENERGY EFFICIENCY

- Option for mixing module for free cooling with three dampers
- Thermal or enthalpic control system with PCO controller card and pGD controller
- Compressor soft start
- Fan soft start, internal and/or external
- Thermodynamic heat recovery (R-404A, etc.)
- Condensation controlled by frequency inverter
- **Internal EC plugfan**

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)
- External module for F filters on rail
- Fresh air inlet damper

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Upgraded motors
- Internal flow control if filters are clogged
- Operation for antifreeze electric heater in condensate tray
- Lower internal air discharge
- Upper internal air discharge
- Rear internal air discharge (with plugfan EC fans)
- Lower internal air return
- Upper internal air return
- Flame-proof filter class M0
- Gas burner (pGD thermostat is required)
- Thermal-acoustic insulation class M0
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Mounting base
- Condensation fan with greater available pressure
- Safety grille on outside heat exchanger section
- Droplet separator

MAINTENANCE

- Service valves
- External manometers for reading pressure
- External pressure tapping points
- Dirty filter detector

CONTROLS

- pGD thermostat
- Thermostat DSX@ (with man. 24 V)
- SUPER SI thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- High-pressure switch for resetting from thermostat
- Unit without thermostat
- Wall-mounted room temperature sensor
- Return temperature sensor
- Temperature sensor in conduit
- Air quality sensor
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

RCCA RCF
Cooling only

RCCBA RCF
Reversible

R410A

ESPECIALLY FOR SETUP IN DIFFICULT LOCATIONS

MAIN FEATURES

- Cooling capacities between 53.1 and 101.9 kW
- Scroll compressors
- Maximum capacity reduction up to 4 stages depending on model
- Maximum air quality and comfort. Option to install high efficiency F type filters (F6 to F9)
- 3 versions available: with thermodynamic heat recovery (RCF), with gas burner module (GAZ) and high ambient temperatures (HTA)
- Thermostat – pGD (all models)

pGD

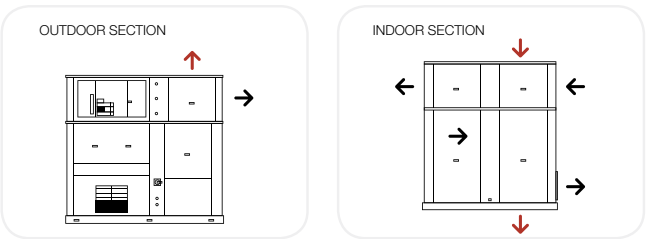
For the functions, please refer to the "Control" section on page 216

Advantages

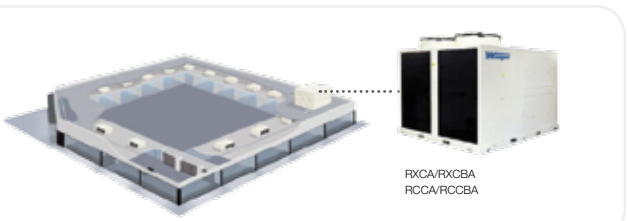
Shopping centres, multiplex cinemas, large supermarkets, etc.
The units of the RCCA/RCCBA RCF series are rooftop type compact packaged units with centrifugal fans on both sections enabling installation indoors; air is distributed via conduits. The thermodynamic recovery system uses an additional refrigerant circuit as a heat exchanger. The purpose of this additional circuit is to transfer the energy of the exhaust air to the fresh air of ventilation. This system is an alternative to the conventional heat recovery system.

Air inlet/outlet configuration options

→ standard → optional



Example of installation with packaged units



RCCA RCF Cooling only RCCBA RCF Reversible TECHNICAL SPECIFICATIONS

MODEL		1402	1602	2002	2402	3002
Total cooling capacity	kW	53.1	60.6	75.4	92.3	101.9
Cooling capacity main circuits	kW	40.2	46.6	58.9	71.1	80.2
Cooling capacity recovery circuit	kW	12.9	14.0	16.5	21.2	21.7
Total cooling capacity	T.R.	15.1	17.2	21.4	26.2	29.0
Cooling capacity main circuits	T.R.	11.4	13.2	16.7	20.2	22.8
Cooling capacity recovery circuit	T.R.	3.7	4.0	4.7	6.0	6.2
Total heating capacity	kW	55.7	60.1	76.9	93.1	105.5
Heating capacity main circuits	kW	43.8	47.2	61.7	72.5	85.1
Heating capacity recovery circuit	kW	11.9	12.9	15.2	20.6	20.4
Power supply (50 Hz ~)	V	400.3+N	400.3+N	400.3+N	400.3+N	400.3+N
EER	kW/kW	2.9	2.9	2.8	2.9	3.0
COP	kW/kW	3.3	3.3	3.1	3.1	3.2
Cooling energy rating		B	B	C	B	B
Heating energy rating		B	B	C	C	C
Air flow	m^3/h	7,800	9,500	12,318	14,075	14,980
Supply side available pressure	Pa	100	100	135	115	115
Return side available pressure	Pa	75	85	85	85	85
Dimensions (length x width x height)	mm	2702x2300x2185	2702x2300x2185	2702x2300x2185	2702x2300x2390	2702x2300x2550
Net weight	Kg	1720	1725	1775	1840	1904

Options

ENERGY EFFICIENCY

- Thermal or enthalpic control system for the integrated free-cooling with PCO controller card and pGD controller
- Compressor soft start
- Internal fan soft start and/or external
- Thermodynamic heat recovery (R-404A, etc.)
- Condensation controlled by frequency inverter
- **Internal EC plugfan**

AIR QUALITY

- G4 gravimetric filter on return
- Opacimetric filter on return class F6 to F9 (can be combined with a G4 or Fx+Fy)
- External module for F filters on rail

SOUND LEVEL

- Double thermal-acoustic insulation
- Acoustic insulation on compressor

UNIT INSTALLATION

- Magneto-thermal circuit breakers in the electrical board
- 60Hz power supply and voltages of 230, 208 etc.
- Option to manufacture symmetrical configuration units
- Upgraded motors
- Internal flow control if filters are clogged
- Operation for antifreeze electric heater in condensate tray
- Lower internal air discharge
- Rear internal air discharge (with plugfan EC fans)
- Upper internal air return
- Flame-proof filter class M0
- Thermal-acoustic insulation class M0
- Gas burner (pGD thermostat is required)
- Hot gas bypass
- Hot water heating coils
- Auxiliary electric heating coils
- Pre-treated anti-corrosion coils
- Suitable for disassembly
- Mounting base
- Condensation fan with available pressure
- Safety grille on outside heat exchanger section
- Droplet separator

MAINTENANCE

- Service valves
- External manometers for reading pressure
- External pressure tapping points
- Dirty filter detector

CONTROLS

- pGD thermostat
- Thermostat DSX@ (with man. 24 V)
- SUPER SI thermostat (man. 24 V)
- Alarm signals
- Smoke detection
- Remote start/stop
- Stand-alone electrical board
- Option for master/slave operation
- Wall-mounted or room temperature sensor
- Temperature sensor in conduit
- Air quality sensor
- Operation for redundant machine
- Centralised integrated management operation
- Operation without neutral
- Timer programming function and Modbus connection etc. please refer to the Thermostats section

Besides these options, please speak to our Sales Department for any other configuration or function that is not listed as being available.

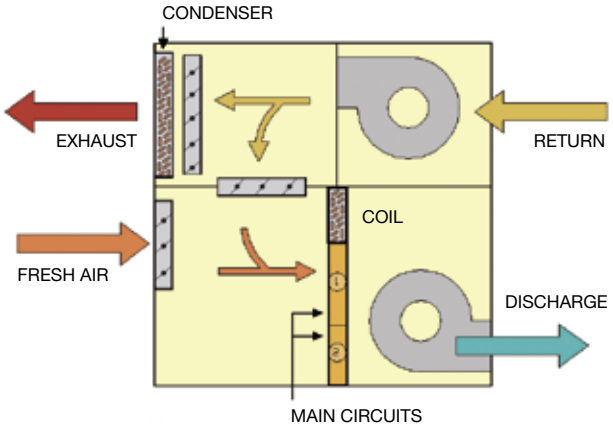
THE BENEFITS OF THERMODYNAMIC RECOVERY

1. The extra recovery circuit operates at very high efficiency and continuously and does not depend on changes of external temperature like the main circuits > Very high efficiency with moderated temperatures (whereas conventional static heat recuperators have very low efficiencies).

2. Very compact profile of the equipment > Easier and quicker installation.

3. By adding an extra circuit, we get greater capacity reduction and therefore higher efficiencies on partial load > Significant reduction of energy consumed.

GREATER ENERGY EFFICIENCY



CONTROLS

Wesper

FOR AIR-AIR AND AIR-WATER PACKAGED RANGE

SUPER-SI CONTROLLER

- Digital thermostat with LCD screen
- Operation at 24 V supply
- Cool/Heat/automatic control
- Fan speed selection
- For 1 or 2 compressor machines
- Cooling only or heat pump
- 1 or 2 electric capacity steps
- Window contact / economy function
- Internal/external sensor (remote)

STANDARD ON-OFF RANGE

DSX@

- Digital thermostat with LCD screen
- Operation at 24 V supply
- Cool/Heat/automatic selection
- Fan speed selection
- For 1 or 2 compressor machines
- Cooling only or heat pump
- 1 or 2 electric capacity steps
- Timer
- Internal/external sensor (remote)
- Integrated MODBUS protocol

OPTIONAL ON-OFF RANGE

FOR INVERTER AND AIR-AIR PACKAGED RANGE

th TUNE

- Thermostat consisting of a user interface terminal installed in the room and an input/output electronic board (uPC), located in outdoor unit (electrical panel). For INVERTER AIR-AIR R410A units
- For inverter units with 1 compressor
- Cooling only or heat pump
- 220 V power supply
- 3-speed or automatic speed selection of indoor fan
- 1 step electric heater used during defrosting only
- Return air temperature sensor
- 3 access level thermostat for Users, Maintenance and Manufacturer
- Modbus option with RS-485 connection

STANDARD INVERTER RANGE

FOR AIR-WATER PACKAGED AND ROOFTOP UNITS RANGE

ARIA

- Thermostat consisting of a user interface terminal installed in the room and an input/output electronic board, located in outdoor unit (electrical panel). For AIR-AIR or AIR-WATER units
- For units with 1 or 2 compressors
- Cooling only or heat pump
- 2 step electric heater
- Return air or room temperature sensor selection
- 3 access level thermostat for Users, Maintenance and Manufacturer
- Timer programming system (only for ARIA PROGRAMMABLE)
- Option for ARIA pLAN model network connection (see Centralised management systems)
- Output signal compatible with Modbus, BacNet, Lonworks communication protocols via super node gateway plus protocol card used

FOR AIR-AIR PACKAGED AND ROOFTOP UNITS RANGE

pGD (with PCOC, PCOC3 control cards)

- Thermostat consisting of a user interface terminal installed in the room and an input/output electronic board (PCOC, PCO3), located in outdoor unit (electrical panel). Only for AIR-AIR units
- For units with 1 or 2 compressors
- Cooling only or heat pump
- Control of 2 or 3 step electric heater, heating valve and gas burner module
- Option to adapt and modify the internal software to meet the specific needs of the client
- Option to interconnect units in network (see Centralised management systems)
- Several options available: clock card for timer programming, cards available for Modbus, BacNet, Lonworks, TCP-IP communication protocols...

FOR LIQUID CHILLERS

LCX06C

- Configurable thermostat used mainly for AIR to WATER or WATER to WATER chillers with R410A refrigerant. Formed by a single set that is composed of electronic board and user interface.
- For units with up to 2 compressors.
- Cooling only or heat pump.
- Management of water pump and hydraulic module.
- Timer programming system.
- 3 access level themostat for Users, Maintenance and Manufacturer.
- Communication screen for the user via a LED display.
- Option for Modbus protocol output signal by a communication card.
- Standard for: Krono XA / XBA 801.1 -1001.1 - 1201.1 - 1501.1

MCX08

- Configurable thermostat used mainly for AIR to WATER or WATER to WATER chillers with R410A refrigerant. Consisting of a single set that is composed of electronic board and user interface.
- For machines with up to 4 compressors.
- Cooling only or heat pump.
- Management of water pump and hydraulic module.
- Timer programming system
- 3 access level themostat for Users, Maintenance and Manufacturer
- Option to interconnect units in network (see Centralised management systems)
- Option for Modbus protocol output signal by a communication card.
- Standard for: Krono XA / XBA 1601.2 to 5001.2
  Optional for: Krono XA / XBA 801.1 -1001.1 - 1201.1 - 1501.1

FOR FCW/FCCW, FPWS, FKW, FKWS, BSW RANGE FANCOIL UNITS

FW BASIC CONTROLLER

Features:
› On/Off switching, Winter/Summer selection
› 3 speeds
› Without thermostat
› Built-in type
› Only for vertical FCCW units with cabinet.

Accessories:
› Room thermostat (mounted or non-mounted)
› Water low temperature thermostat (mounted or non-mounted)

CT CONTROLLER + THERMOSTAT

Features:
› Electronic thermostat for 2 or 4 pipe units
› Temperature control
› On/Off switching, Winter/Summer selection
› 3 speeds
› External sensor
› 230 V
› Built-in type

MI INFRARED CONTROLLER

Features:
› For 2 or 4 pipe units
› Remote controller with LCD screen and temperature setting, manual or automatic change of fan speed, manual heating/cooling change, clock, start/stop timer.
› Room temperature and minimum water temperature sensor
› Output signal for on-off valve and condensate pump
› 230 V
› Built-in type
› Option supplied loose

RC-1 WALL-MOUNTED BASIC CONTROLLER

Features:
› On/Off switching, Winter/Summer selection
› 3 speeds
› Without thermostat
› Wall mounted type

MP2 WALL-MOUNTED ELECTRONIC THERMOSTAT

Features:
› For 2 or 4 pipe units
› Temperature control
› On/Off switching, Winter/Summer selection
› 3 speeds
› Input signal for room temperature and minimum water temperature sensor
› Output signal for on-off valve and condensate pump
› 230 V
› Wall mounted type
› Option supplied loose

REMOTE CONTROL WITH CABLE RCTZ/X7

Features:
› Accessories for units with remote controller
› For 2 or 4 pipe units
› LCD screen with temperature control, automatic or manual fan speed change
› Manual heating/cooling change
› Clock and start/stop timer
› Air diffuser control
› Economy function
› Wall mounted type
› Only for FKW cassette fan coil units

WALL-MOUNTED RC-2/X6 ELECTRONIC THERMOSTAT

Features:
› Programmable for 2 or 4 pipe units
› LCD screen
› Temperature control
› Automatic, manual or centralised heating/cooling change
› Filter clogging control
› Economy mode
› Antifreeze mode
› Input signals for window contact, low temperature and air intake
› Output signals for on-off valve 230 V or 24 V supply and electric heater
› 3 speeds
› 230 V or 24 V supply
› Wall mounted type
› Option supplied loose
› Please contact us for models with modulating valves

Accessories:
› Transformer 230/24V
› NTC type sensor for air intake (includes 1 m cable)
› Minimum water level sensor (includes 1 m cable)

MODEL	FCW/FCCW	FKW	FKWS	BSW
FW BASIC CONTROLLER	●			
CT CONTROLLER + THERMOSTAT	●			
MI INFRARED CONTROLLER	●			●
RC-1 WALL-MOUNTED BASIC CONTROLLER	●		●	●
MP2 WALL-MOUNTED ELECTRONIC THERMOSTAT	●		●	●
RC-2/X6 WALL-MOUNTED ELECTRONIC THERMOSTAT			●	●
RCTZ/X7 WIRED REMOTE CONTROL		●		

HYDROFAN SYSTEM

System designed to control water-based installations in a centralised, simple and efficient manner. Consisting of a set of components, including a touchscreen display, for controlling liquid chillers, fancoils and AHU.

SYSTEM COMPONENTS

Cards

Fcc base card

4 relay card

2 x (0-10 V) + 2 relay card

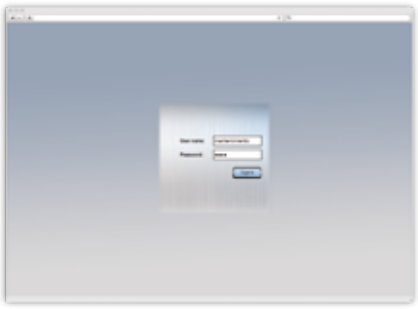
RS-485 serial card

Thermostat

ACQUA ENVIRONMENT

pGD TOUCH touchscreen display

The touchscreen display functions as a central control panel. Access is controlled by username and password and the panel is used to control the components.



The touchscreen display can control installations up to 30 fan coil units with 1 chiller.
For installations with more elements, please refer to the possible configurations.

Screen showing all elements of the network (in this installation, there are 14 FCU, 1 AHU and 1 chiller).

This screen allows access to every fancoil in order to turn units on or off, to change the setpoint, to select automatic speed or manual low, medium or high speed and to view unit status, cooling or heating mode.

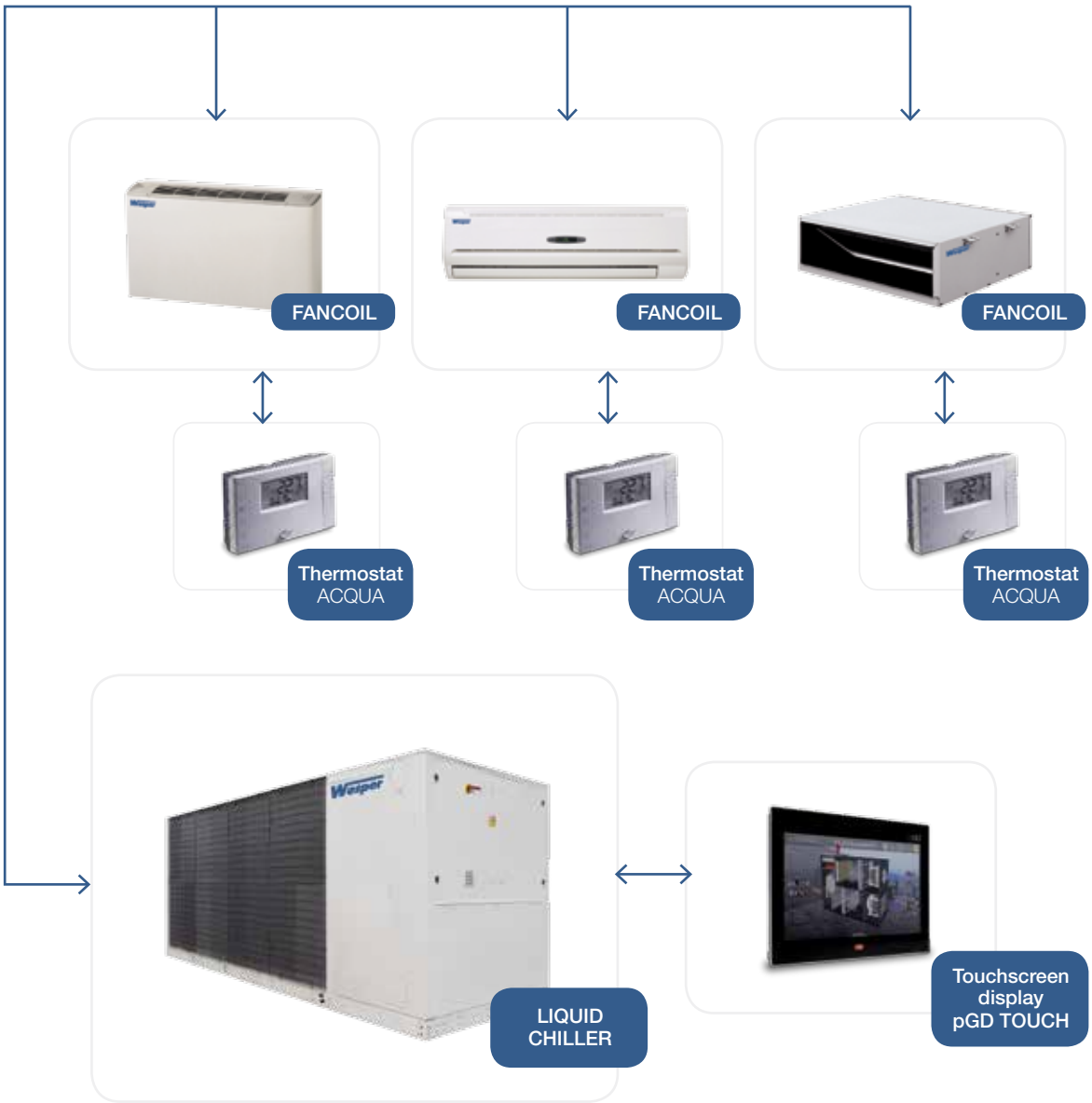
From this screen, user can turn AHU on or off, change the setpoint, view the opening of the control valve and view unit status, cooling or heating mode.

The chiller screen allows user to turn the unit on or off, to select cooling or heating mode, to view the leaving and the return temperatures and to check if the chiller has an alarm.

From this screen, user can configure a timer programme for startup and for all other elements.

Our Hydrofan control system makes it possible to optimise the control and operation of the system and to adapt the capacity of the liquid chiller to the needs at the time of installation.
The individual control of the different types of fancoil is integrated into a collective control system that enables simple and effective interaction for users and several options for remote control via our pGD touchscreen.

CENTRALISED CONTROL SYSTEM TO MAXIMISE THE ENERGY EFFICIENCY OF THE INSTALLATION



PL@NT VISOR MONITORING SYSTEM (BMS)

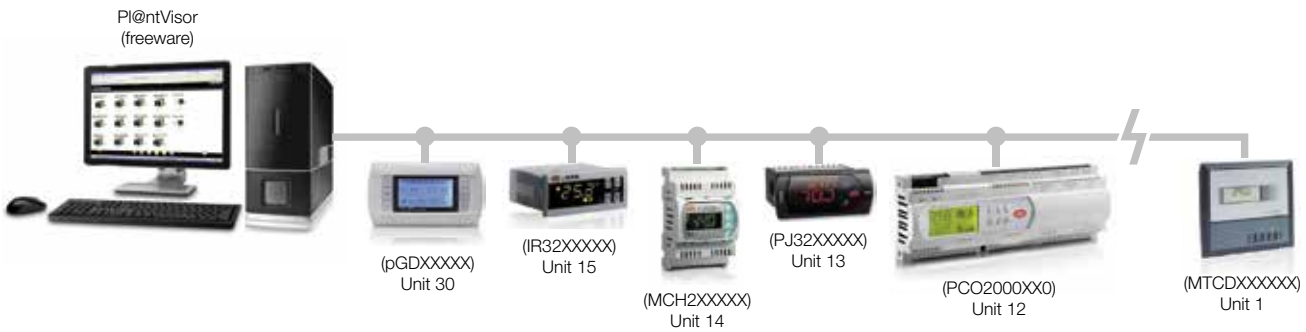
Carel monitoring system designed for controlling installations.
All thermostats with a MODBUS output can be connected and integrated via RS-485.

The Pl@nt Visor technology allows integration and control of the system via ModBus by means of the RS485 card installed in the units. This system allows control via the internet of the whole group and on-line monitoring to verify correct operation remotely.

MAIN FEATURES

- Monitoring features with visual and graphical elements
- User management for access control and logging operations
- Configurable report management
- Alarm management
- Local and remote connectivity
- Timer programming system
- Energy saving management
- Option for customisation of screens by emulating installation (SCADA)
- Activity planning and controls for tools or groups of tools

PL@NT VISOR: MAXIMUM LEVEL OF CONTROL FOR CONSTANT MONITORING OF THE INSTALLATION



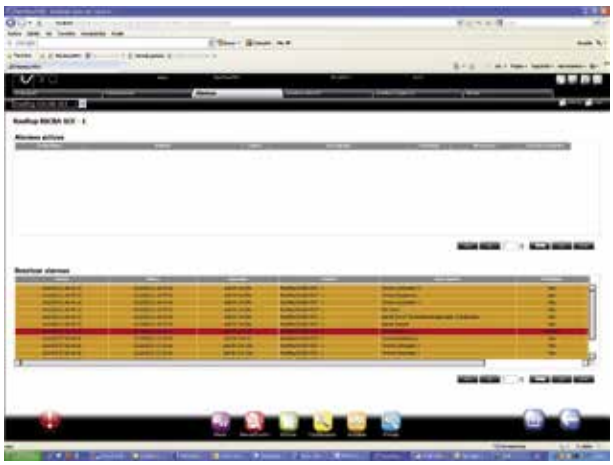
Maximum number of connected units to be confirmed, according to the Pl@nt Visor model.

Installation screen layout (example):
a customised installation is possible.

Customised screen for rooftop, basic controller of the unit: makes it possible to carry out basic operations: ON-OFF, change cooling/heating mode, change temperature setpoints and visualise the status of the main components.

Rooftop detail screen: makes it possible to visualise and change all parameters via the Pl@nt Visor.

Screen with full list of settings (access according to user level): allows reading/modification of values as well as saving them (backup copy).



Screen with full list of alarms (access according to user level): enables visualisation of alarms and allows you to reset them.

Report management screen (access according to user level): allows configuration and creation of reports, depending on date intervals and the variables selected.

CENTRALISED MANAGEMENT SYSTEM AND BMS

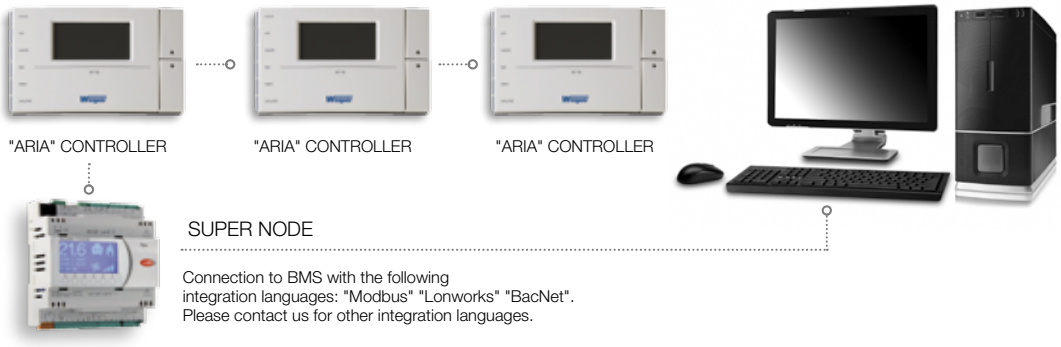
Centralised control for units with ARIA pLAN thermostat

Network up to 15 units

Centralised management for a network of ARIA pLAN units, via a pGD controller

Network from 15 to 40 units

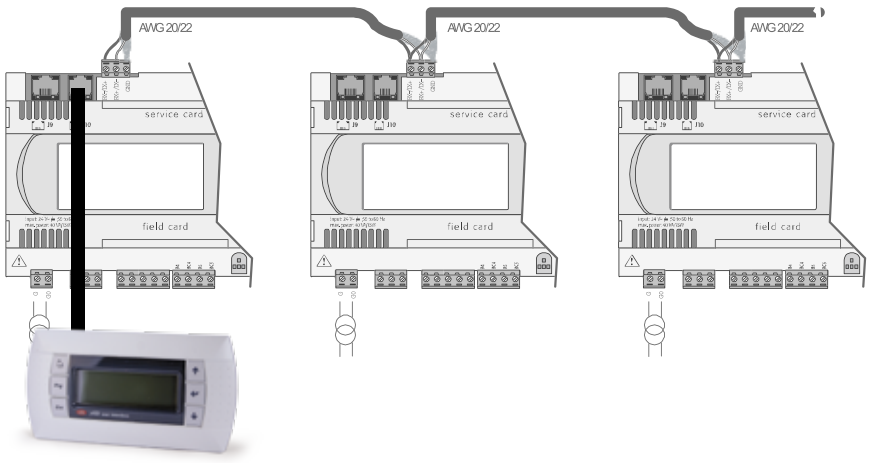
Centralised management for a network of ARIA pLAN units, via a pGD controller



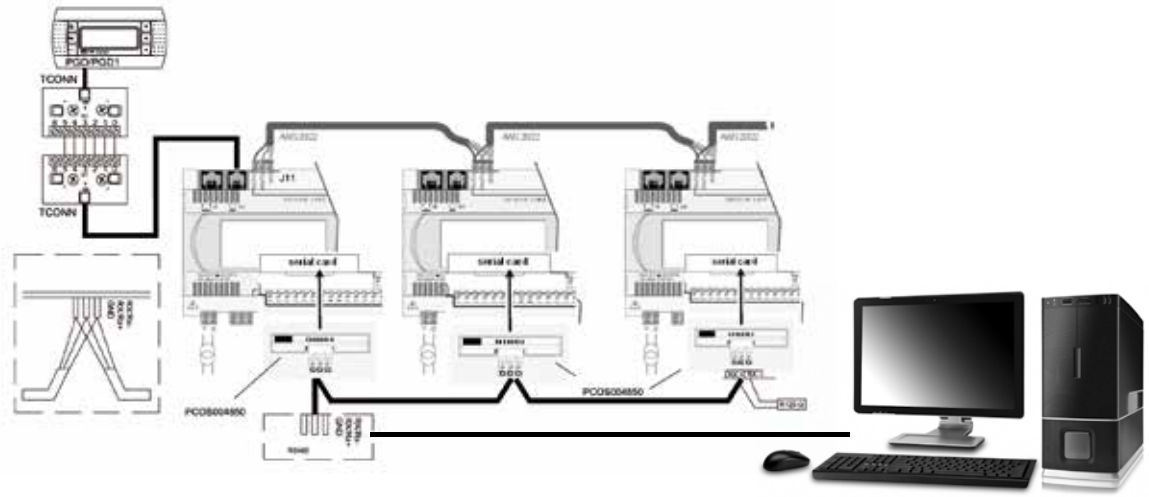
Connection to BMS with the following integration languages: "Modbus" "Lonworks" "BacNet". Please contact us for other integration languages.

Centralised control system for units with pGD thermostat and PCOC, PCO3 boards

Connection of several units via a pLAN network, suitable for the PCOC, PCO3 board. From s single pGD thermostat it is possible to access to each of the machines connected to the network. Maximum 15 units connected.



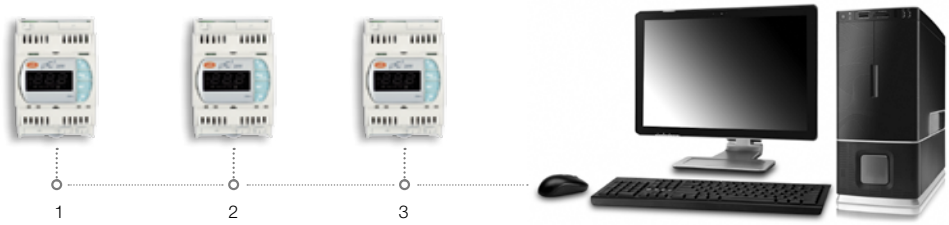
Connection of several units using POOC, PCO3 cards via the RS-458 cards towards a monitoring system.



BMS connection with the following integration languages:
Modbus - Lonworks - BacNet. Please contact us for other integration languages.

Centralised control for units with MICROCHILLER 2 thermostat

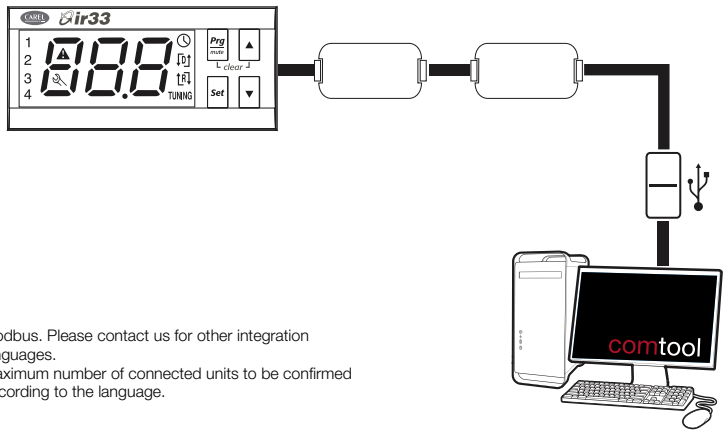
Output to BMS monitoring system via FCSER cards.



BMS connection with the following integration languages: Modbus. Please contact us for other integration languages.
Maximum number of connected units to be confirmed according to the language.

Centralised control for units with DN33 thermostat

Output to BMS monitoring system via RS-485 cards for DN33.



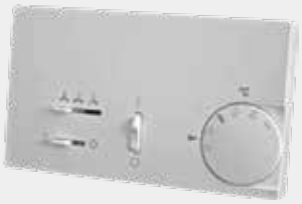
Modbus. Please contact us for other integration languages.
Maximum number of connected units to be confirmed according to the language.

OTHER CONTROLS

CMVM

Manual speed selector:
- With 4 positions : Off – Low speed – Medium speed – High speed
- For installation on the unit

Suitable for units of type:
- FCW
- FCCW
- WESPAK



TRM-FA

Wall type thermostat supplied in kit:
- On/Off switch, Summer/Winter manual changeover, manual speed selector :
  - Low speed
  - Medium speed
  - High speed

Suitable for units of type:
- FPW in **2-pipe system** without valve, with action on **ventilation only**
- FCW, FCCW in **2-pipe or 4-pipe system** with action on **ventilation and valves**
- BSW, BHW ductable type

TRM-VP

Wall type thermostat supplied in kit:
- On/Off switch, Summer/Winter manual changeover, manual speed selector:
  - Low speed
  - Medium speed
  - High speed

Suitable for units of type:
- FCW, FCCW, BSW and BHW in **2-pipe or 4-pipe system** with action on valves only

TAE 20

Wall type thermostat supplied in kit:
- Comprises adjustable dead zone with Summer/Winter automatic changeover
- With manual switch to set the operating mode (heating or cooling) in standby and to select fan speeds (LS – MS – HS), normally open or normally closed window contact, antifreeze mode, unoccupied mode and adjustable differentials for heating and cooling modes

Suitable for units of type:
- FCW, FCCW, BSW and BHW in **2-pipe and 4-pipe system** with action on valves only or on valve and electric heater
- FPW in **2-pipe system** with action on valves only

TAE 20 + SEH

Wall type thermostat supplied in kit:
- Comprises adjustable dead zone with Summer/Winter automatic changeover
- With manual switch to set the operating mode (heating or cooling) in standby and to select fan speeds (LS – MS – HS), normally open or normally closed window contact, antifreeze mode, unoccupied mode and adjustable differentials for heating and cooling modes
- Supplied with piping sensor for changeover on water
- Installation of 4-way valve is mandatory

Suitable for units of type:
- FCW, FCCW, BSW and BHW in reversible **2-pipe system** with action on valves only or on valve and electric heater
- FPW in reversible **2-pipe system** with action on valves only

AQU@NET

› The Aqu@Net electronic control has been specifically developed for the console, ceiling or cassette type fan coil units working with 100% recycled air, suitable for cooling only 2-pipe, heating only 2-pipe, 2-pipe/2-wire, reversible 2-pipe with or without extra electric heating and 4-pipe applications.
› It is composed of a FCC controller mounted on the unit and a RCL control that can be mounted as optional on the console type fan coil unit range.
› Aqu@Net is a new generation of communicating control working under proprietary bus thanks to an additional PC board very easy to install and a supervision station called µBMS (please refer to the manual of this latter).
› This control allows also, for the small installations, to realize easily a master/slaves network by wire in order to control up to 15 units with one RCL control only.

Aqu@Net electronic system:

› The Aqu@Net electronic control has been designed to provide a good compromise between cost (thermal valve for integral proportional control), ergonomy and performance.
› It is compatible with the supervision station µBMS and is communicating under proprietary bus, but it can also work without supervision station.
› The Aqu@Net control ensures the following models of air conditioning system:

- Model A: For heating only 2-pipe or cooling only 2-pipe fan coil units with manual changeover.
- Model B: For reversible 2-pipe fan coil units with automatic changeover (piping sensor).
- Model C: For 2-pipe/2-wire fan coil units.
- Model D: For reversible 2-pipe fan coil units with automatic changeover (piping sensor) and extra electric heating.
- Model E: For 4-pipe fan coil units.

Description of RCL control:

› The RCL control has been specifically designed to be used with fan coil units equipped with Aqu@Net system.
› It operates independently on the units having FCC controller whatever its configuration (A, B, C, D, E).
› Once electrical connections adequately carried out, the digital display shows set point temperature, operating mode and fan speeds.
› Remark : If a µBMS supervision station or a BMS (Building Management System) is used, the settings displayed are not necessarily the settings used at the instant by the Aqu@Net controller.
› The RCL control displays only the settings changed on it and is not capable of displaying the settings changed on a µBMS supervision station or a BMS.

NOTE: When the RCL control is installed on a cabinet type unit, its blue connector is not plugged into the FCC controller.

Control suitable for the units:

› WESPAK and SLIM@IR

GENERAL TERMS AND CONDITIONS OF SALE FOR PRODUCTS AND SERVICES

Wesper

TERMS AND CONSIDERATIONS AND ENFORCEABILITY

1. These Terms and Conditions apply to all sales made by WESPER FRANCE (hereinafter WESPER), whose registered office is at 42, Cours Jean Jaurès, 17800 Pons, France.
2. These Terms and Conditions govern the sales and technical assistance services for air conditioning units concluded in metropolitan France by WESPER and are deemed known and accepted by the buyer at the time of ordering, being fully applicable unless stipulated otherwise in writing by WESPER.
3. The term CLIENT refers to the individual or legal entity with which WESPER signs a sales contract for air conditioning units or for the provision of technical assistance services. In addition, PRODUCTS refers to the air-conditioning units being sold by WESPER to the Client.
4. These Terms and Conditions of Sale and Service replace those previously published in various sales catalogues under the WESPER brand.
5. Placing an order with WESPER causes the unconditional acceptance by the Client of these Terms and Conditions of Sale. These Terms and Conditions of Sale shall be communicated by WESPER to any Client who requests them for the exercise of their professional activity. These Terms and Conditions of Sale supersede any purchasing conditions issued by the Client, whatever the medium (including Terms and Conditions of Purchase, purchase orders, ...), which are entirely unenforceable against WESPER. Unless specifically stipulated otherwise in these Terms and Conditions of Sale, any modification of the Terms is automatically enforceable on the Client within a period of one (1) month following notification by any means (mail, email, fax, ...).

ORDERS AND QUOTATIONS

1. Commercial quotations are valid for two months from the date of sending to the Client.
2. Orders must be in writing, be signed by the Client and marked with the seal of the Company (if a legal entity) and refer to the WESPER quotation. By sending the order proposal, these Terms and Conditions of Sale are deemed as accepted, the acceptance of the order by WESPER being necessary to carry out its execution.

AMENDMENTS, RETURNS AND CANCELLATIONS

1. Product exchanges or returns will not be accepted after shipment, unless expressly authorised in writing by WESPER. If approved, the shipping costs incurred will be charged to the Client, the products being deemed in perfect condition and packaging. WESPER reserves the right to charge fees in respect of depreciation of thirty (30)% of the value of the equipment and costs for receiving, inspecting and repairing the returned products.
2. Once orders are accepted by WESPER, order cancellations will not be accepted unless expressly authorised by WESPER. If approved, WESPER reserves the right to charge fees in respect of expenses incurred.
3. Any amendments to the order must be made in writing and with the acceptance of both parties in order to be valid.

DELVIERY TIMES

1. The delivery times shown on quotations are indicative. No damage, penalties or compensation will be recognised to the Client in case of delay on the part of WESPER, whatever the reason.
2. The delivery time refers to the date the products leave the factory.
3. Delays can in no way justify cancellation of the order.
4. If special arrangements stipulate penalties, these cannot in any case exceed 5% of the ex-factory value of equipment not delivered within the deadlines provided.
5. WESPER is exempted of any commitment relating to delivery in cases of force majeure such as strikes, fire, war, requisition, epidemic or delay in transportation.
6. In case of damage during transport, it is the responsibility of the recipient of the product to confirm specific reservations to the carrier in accordance with Article 133(3) of the French Commercial Code.

DELIVERY CONDITIONS

1. Delivery is free of ports, metropolitan France, with trucking excluding tailgate, provided there are no unforeseen accessibility issues. Permits and licenses required for this purpose are the responsibility of the Client.
2. Deliveries will be made in business hours and on business days.
3. Products will be delivered in a standard package, the price being included in the sale price.
4. The Client is responsible for the correct environmental waste management of packaging supplied with the products.

PRICE

1. The prices indicated in the quotations may vary by notification to the buyer. If the buyer does not accept the new price, they must send notification in writing within 5 days, consecutive to the date of receipt of such notification.
2. Prices are free of ports, metropolitan France, with truck tailgate not included. For deliveries outside of this area, the ports will be charged to the Client by default.
3. The prices indicated in the quotations are excluding VAT. All taxes that may be applicable to the sale or service, at the date of their delivery, will be charged to the Client.

PAYMENT TERMS

1. Billing will be done when the units leave WESPER facilities.
2. The quotation will show in detail the time and manner of payment, in accordance with the French Law on the Modernisation of the Economy (LME).
Payment for any account opening or for an amount less than five hundred (500) euros, payment in full (100%) on request by endorsed bill, by bank draft or by bank transfer.
Payment beyond the outstanding granted, payment of a deposit (30%) on request and the balance fifteen (15) days before the date of shipment of equipment, by endorsed bill, by bank draft or bank transfer.
Payments under the LME to the level of the outstanding granted, invoices payable 45 days end of month of delivery or up to 60 days net maximum by endorsed bill or bank transfer.
3. Any non-payment implies the immediate cancellation of the guarantee on the products supplied and the provision of services.
4. The products remain the property of WESPER until the finalisation of payment in full. Fir the purposes of retention of title, payment is deemed to have been made when it is irrevocable. Without prejudice to the retention of title, WESPER transfer to the Client the right to use the Product, provided that they meet the General Terms and Conditions of Sale and are up to date with payment for the Products in accordance with agreed terms.
5. The Client does not have the right to sell the Products to a third party without having paid all invoices due to WESPER.
6. A discount of 2% is applicable to any early payment.
7. Our invoices are payable at our registered office.

LIABILITY

1. WESPER shall not be liable for damages caused, directly or indirectly, because of improper installation of the units, provided that installation was not carried out directly by WESPER or any other company subcontracted by WESPER.

GUARANTEE

1. In this respect, WESPER publishes the General Terms and Conditions of Service Guarantee, which constitute the only framework for this purpose. The Client confirms being aware of these conditions by accepting the quotation.
2. The equipment is guaranteed for a period of two (2) years from the date of invoice.
3. Spare parts are guaranteed for a period of six (6) months from the date of invoice, unless the current guarantee period of the equipment is lower.
4. No claim for compensation or damages may be asserted under the guarantee.

JURISDICTION

1. For all issues arising from the interpretation and application of these General Terms and Conditions of Sale, WESPER and the Client submit to the jurisdiction and
competence of the Courts and Tribunals of Pons (France), expressly waiving any other jurisdiction that may apply to them.
All information contained in this catalogue may be changed without notice.

LIMITATION

1. Any action or claim on the part of the Client arising from the purchase relationship between WESPER and the Client in a given year will be prescribed after a period of two (2) years from the last day of that year.

Wesper

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