

Chiller / Close control / Water terminals

## WQL/WQH/WQRC 524 to 1204

Water Cooled Water Chillers  
Cooling Only, Heat Pump  
and Condenserless Versions  
Engineering Data Manual



155 to 380 kW

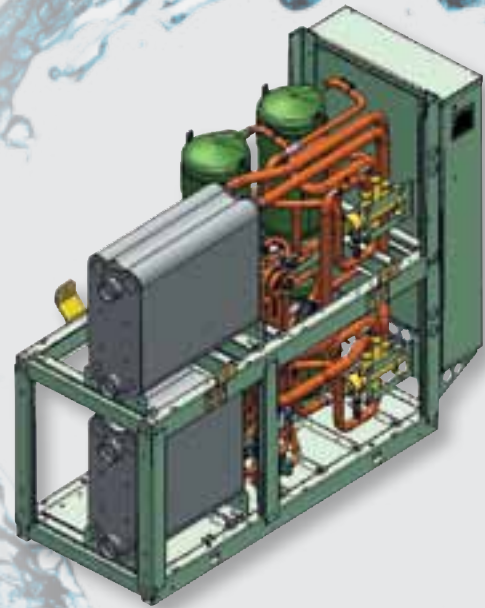


170 to 370 kW

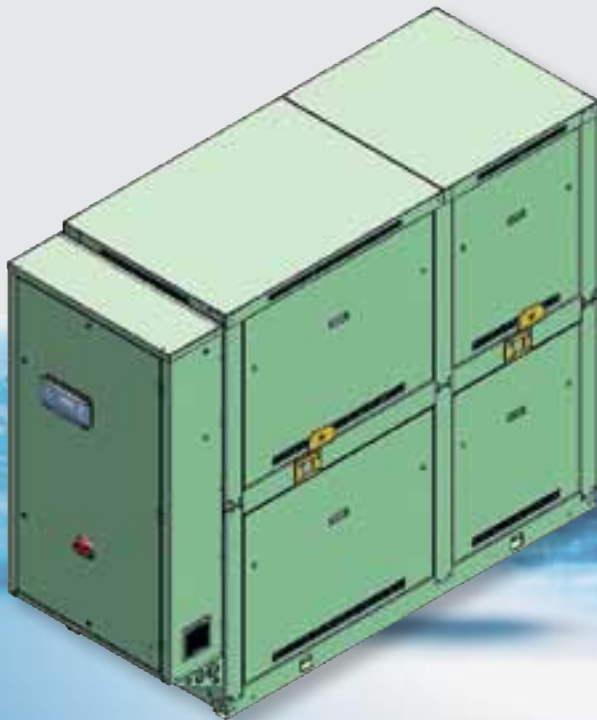


# Features & Strength Points

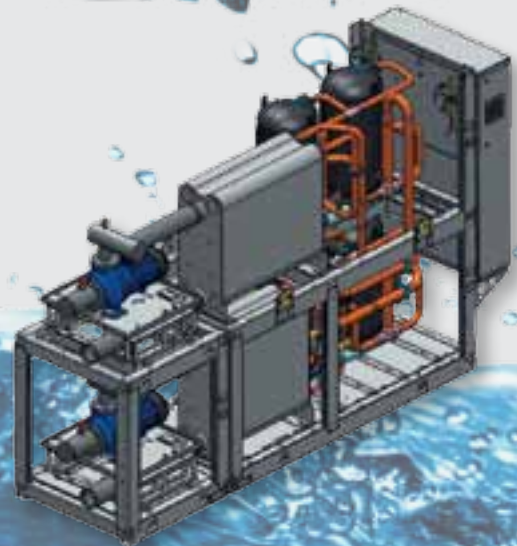
- 8 sizes:  
cooling from 155 kW up to 380 kW  
heating from 170 kW up to 417 kW
- R410A 2 refrigerant circuits with tandem Scroll compressors
- High EER and COP to reach Eurovent B Class (Gross data)
- 1 compact frame/configuration
- 2 different acoustic options are available: BLN - ELN
- New electronic controller with auto-adaptive function to reduce water content in the piping system
- Condensing pressure control available as option for well application
- Wide range of hydrokit for "Plug and Play" units
- Victaulic joints for all internal water piping connections
- Desuperheater heat exchanger available as option



BLN Version



ELN Version



Unit with factory mounted  
hydrokit

# Specifications

## General

**WQL/WQH/WQRC** are new water to water units equipped with Scroll compressors, optimized to work with **R410A** refrigerant.

**3 different versions are available:**

- Cooling only units **WQL**
- Heating only units **WQL (Factory set)**
- Heat pump units **WQH**
- Remote condenser units **WQRC**

**2 different acoustic options are available:**

- **Base Low Noise (BLN):** units are supplied without compressors box
- **Extra Low Noise (ELN):** units are supplied with compressors box and additional insulation panels on the cabinet in order to furtherly reduce noise impact

**WQL/WQH/WQRC** units are available in totally **8 sizes**, ranging from **155 to 380 kW** in cooling operation and from **170 to 417 kW** in heating operation.

**WQL/WQH/WQRC** units are available on **one compact structural frame**. Each unit is equipped with two refrigerant circuits and hermetic scroll compressors (tandem).

Evaporators and condensers are brazed plate heat exchanger type.

Heat pump units (**WQH**) are equipped with reversible valve, thus allowing to reverse cycle on refrigerant side and not on water side.

Remote condenser units (**WQRC**) are not equipped with condenser heat exchangers, but equipped with stop valves on discharge and liquid lines in order to allow connection to remote condensers.

## Cabinet and structure

Cabinet and structure are made of galvanized steel. All galvanized steel components are individually painted by a special painting process before assembling of the unit. This painting system performs a homogeneous protection to the corrosion. The painting is a polyester powder based type, coloured in **RAL 7040**. The units are suitable for indoor installation.

## Refrigerant circuit

Refrigerant circuit is equipped with four hermetic scroll compressors, sight glass, filter-drier and mechanical expansion valve (electronic expansion valve is available as an option).

Heat pump units (**WQH**) refrigerant circuit is also provided with 4-way reversing valve and check valves system in order to always run liquid line in the same direction (both in cooling and in heating mode).

Remote condenser units (**WQRC**) refrigerant circuit is supplied without condenser and it is provided with liquid receiver, stop valves both on discharge and liquid lines, solenoid valve on liquid line.

The functional diagram of each circuit is shown in section "Refrigerant flow diagram".

## Compressors

Compressors are hermetic scroll type fitted with an electronic control device ensuring protection of compressors against:

- Overheating
- Overloading
- Reversal rotation
- Phase loss

All compressors have direct-on-line starting and are mounted on rubber vibration isolators in order to minimize noise and vibration transmission.

## Evaporators and condensers

Evaporator and condenser heat exchangers are brazed stainless steel plate type. They are insulated with a 10 mm thick closed cell polyethylene foam material and provide with Victaulic connections.

## Electrical board

Electric equipment is built in compliance with CE standards. Easy accessible in front of the unit - through an access panel fixed with screws - the equipment is complete with:

- Door lock main isolating switch
- Compressor contactors and fuses
- Compressor overload protection (optional)
- Automatic circuit breaker switches (optional)
- Phase sequence control
- Clamps for remote start/stop switch
- Clamps for remote summer/winter switch
- Clamps for external flow switches (both exchangers)
- Clamps for remote double set-point
- Clamps for external interlock
- Clamps for remote general alarm
- Connection clamps to remote keyboard (optional)
- Clamps for evaporator/condenser pump relay control (optional)
- Clamps for boiler relay control (optional)
- Clamps for dynamic set-point compensation (4-20 mA, 0-1 V, 0-5 V, 0-10 V)
- Clamps for outdoor air temperature probe (accessory)
- Electronic control SC655
- Soft-starter (optional)
- Power factor correction capacitors (optional)
- 0-10 V clamps for condensing control (optional)

## Control

A new optimized control is supplied on all the units with a simple user interface (possibility to customize keys functions and to set menus visibility).

In addition to standard features as water temperature control (with possibility to choose LWT/EWT probe), the control can also manage following functions:

- Dynamic set point (4-20 mA, 0-1V, 0-5V, 0-10V)
- Double set point
- OAT compensation
- Boiler integration
- Condensing control
- Auto adaptative function to reduce the water content of the plant
- Advanced pump management (both primary circuit and source side)
- Remote keyboard (accessory) with possibility to connect (up to 100 m distance) without any serial interface

## Specifications (continued)

### Safety

Each unit is equipped with following electrical / refrigerant / hydraulic safety devices:

- Door lock main isolating switch
- Phase monitor control
- High pressure switch with manual reset
- Discharge safety valve
- Low pressure switch with automatic / manual reset
- Anti-freeze probe (leaving water temperature)
- Differential pressure switch (source / plant side)

### Standards

**WQL/WQH/WQRC** are built in compliance with following standards:

- 3 Machinery Directive: 2006/42/EC
- 3 Low Voltage Directive: 2006/95/EC
- 3 Electromagnetic Compatibility Directive: 2004/108/EC
- 3 Pressure Equipment Directive: 97/23/EC

And following harmonized European standards:

- 3 Safety of machinery - Basic concepts, general principles for design: UNI EN ISO 12100-1 / 2
- 3 Safety of machinery - Safety Distances To Prevent Hazard Zones Being Reached By Upper And Lower Limbs: EN ISO 13857
- 3 Safety of machinery - Electrical equipment of machines: EN 60204-1
- 3 Low-voltage switchgear and controlgear assemblies: EN 60439-1
- 3 Electromagnetic compatibility (EMC) - Immunity for industrial environments: IEC EN 61000-6-2
- 3 Electromagnetic compatibility (EMC) - Emission standard for residential, commercial and light-industrial environments: IEC EN 61000-6-3
- 3 Refrigerating systems and heat pumps. Safety and environmental requirements: EN 378-1 / 2
- 3 Metallic products - Types of inspection documents: EN 10204
- 3 Copper and copper alloys. Seamless, round copper tubes for air conditioning and refrigeration: BS EN 12735-1 / 2
- 3 Pressure equipment for refrigerating systems and heat pumps. General requirements: BS EN 14276-1 / 2
- 3 Refrigerating systems and heat pumps - Pressure relief devices and their associated piping - Methods for calculation: BS EN 13136
- 3 Metallic industrial piping: BS EN 13480-3

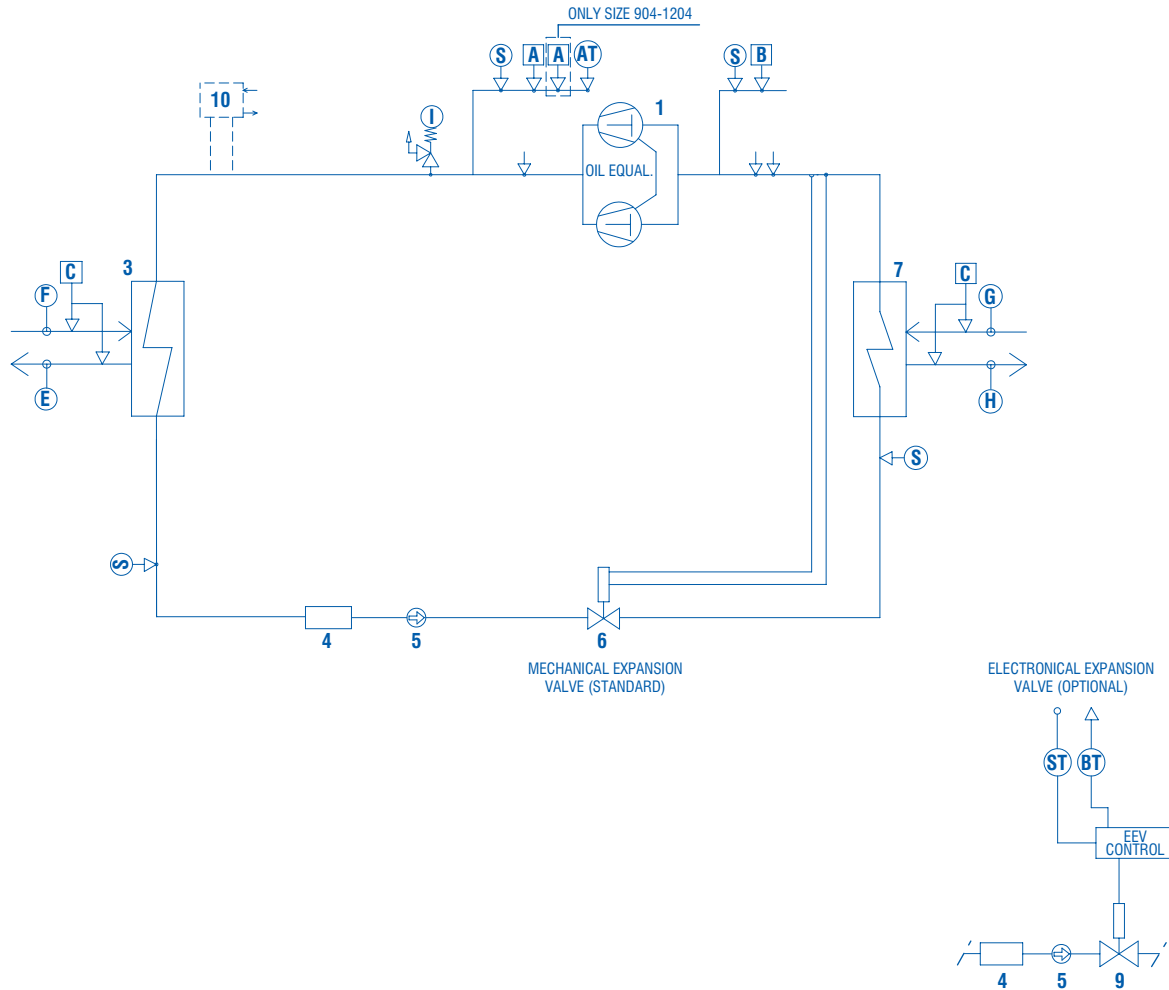
### Factory installed options

- 3 ModBus protocol kit for BMS
- 3 Compressor soft starter
- 3 Power factor correction capacitors
- 3 Electronic expansion valve
- 3 Compressor overload protection
- 3 Automatic circuit breaker
- 3 Condensing control kit
- 3 Additional heating device wiring kit
- 3 Mechanical gauges kit
- 3 Compressor jacket
- 3 On board hydrokit (1P/2P/both exchangers/SP-HP)
- 3 Desuperheater

### Field installed accessories

- 3 Remote ON-OFF
- 3 Remote keyboard panel
- 3 Sequencer up to 4 units
- 3 Condensing control kit
- 3 Outdoor air sensor for climatic compensation
- 3 Additional heating device wiring kit
- 3 Compressor jacket
- 3 Flow switch
- 3 Pressure switch
- 3 Victaulic to threaded pipe connection
- 3 Spring type anti-vibration mounts
- 3 Water filter

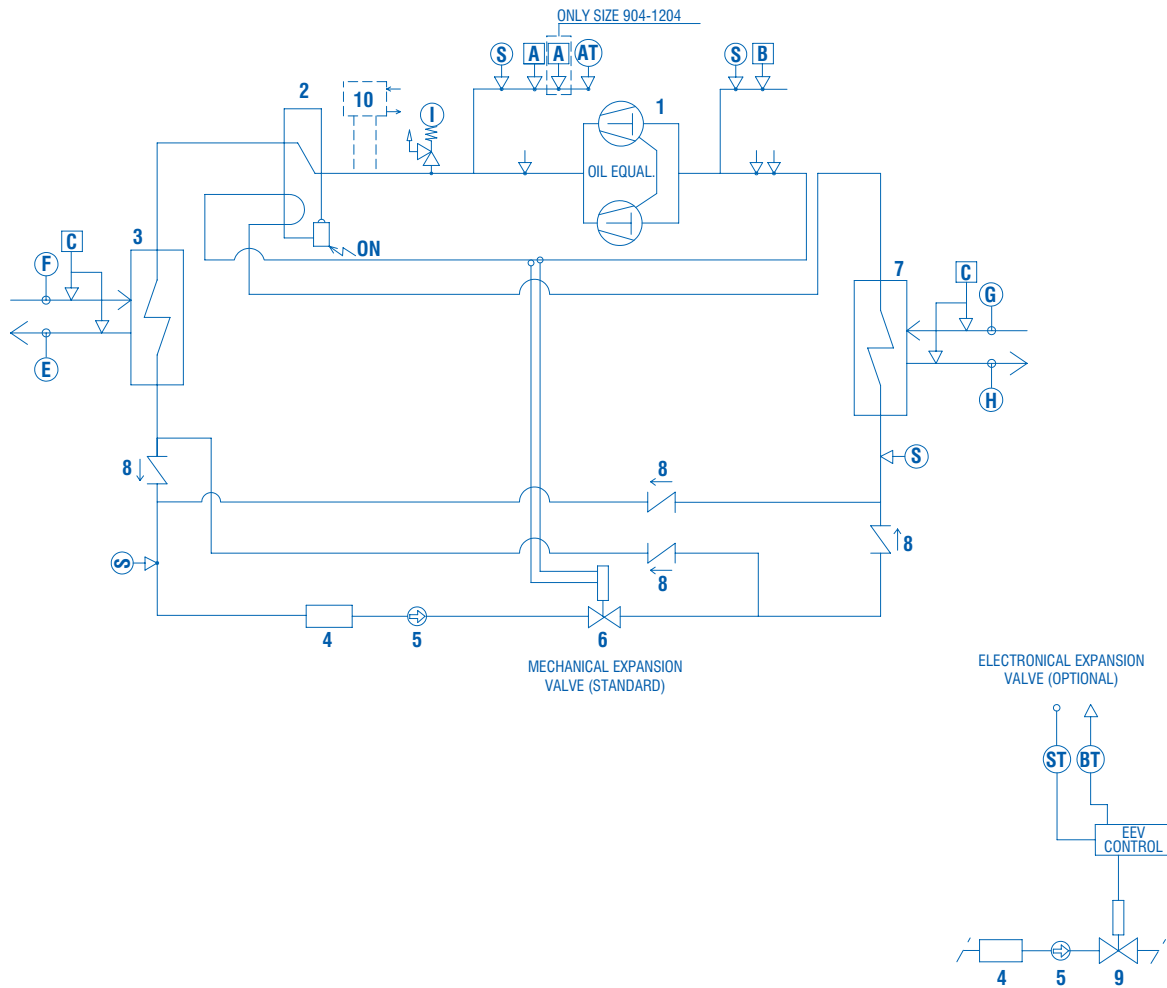
# Refrigerant Flow Diagram - WQL 524 to 1204 - R410A



COMPONENTS	
1	Compressor
3	Outdoor heat exchanger
4	Drier filter
5	Sight glass
6	Mechanical expansion valve
7	Indoor heat exchanger
9	Electronic expansion valve
10	Desuperheater

SAFETY / CONTROL DEVICES	
A	High pressure switch (40,5 bar)
B	Low pressure switch (1,5 bar)
AT	High pressure transducer
BT	Low pressure transducer
C	Water differential pressure switch (50 mbar)
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	Inlet water temperature sensor
H	Outlet water temperature sensor
I	Ped pressure relief valve (45 bar)
S	5/16" Shrader connection (service only)
	Pipe connection with Shrader valve

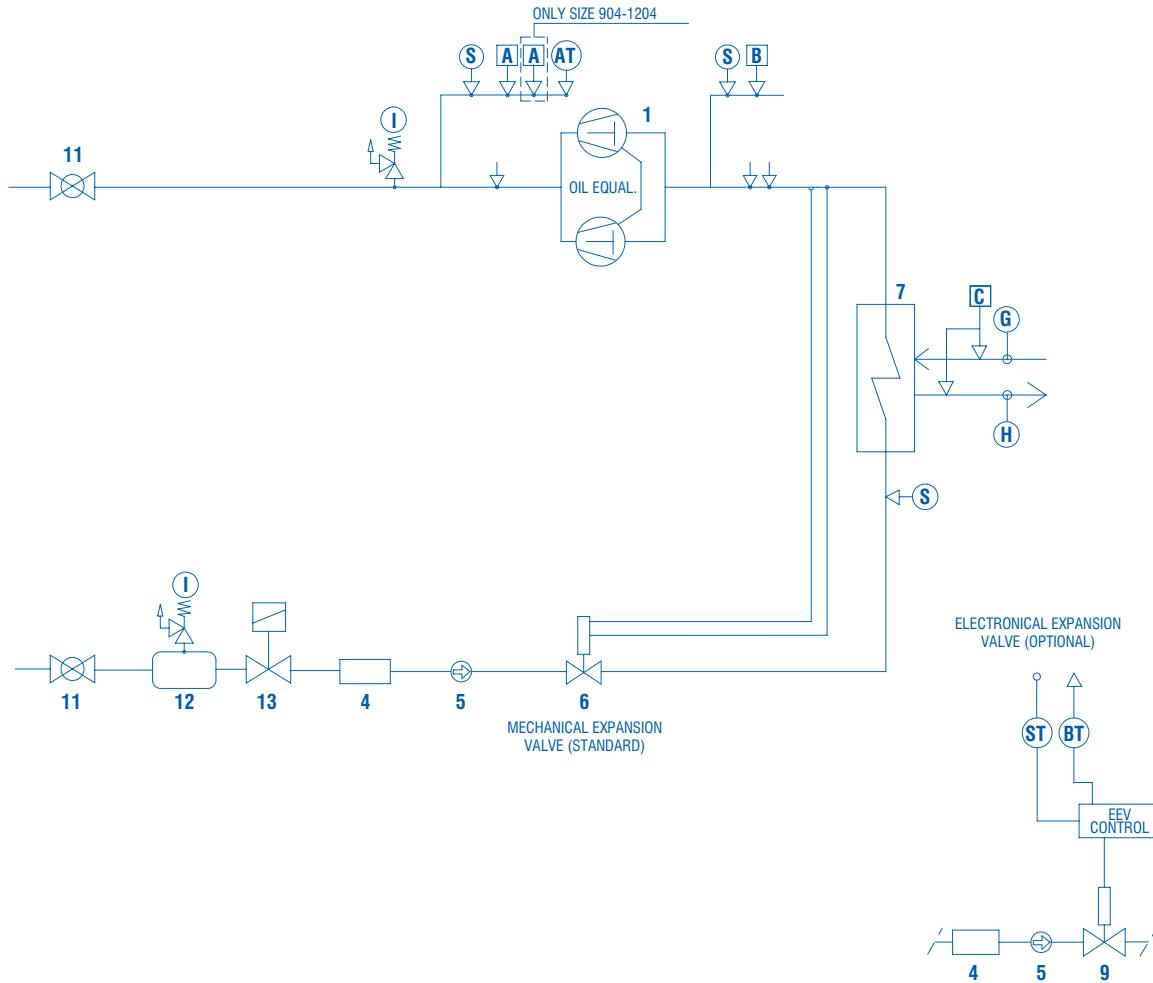
# Refrigerant Flow Diagram - WQH 524 to 1204 - R410A



COMPONENTS	
1	Compressor
2	4-way valve
3	Outdoor heat exchanger
4	Drier filter
5	Sight glass
6	Mechanical expansion valve
7	Indoor heat exchanger
8	Check valve
9	Electronic expansion valve
10	Desuperheater

SAFETY / CONTROL DEVICES	
A	High pressure switch (40,5 bar)
B	Low pressure switch (1,5 bar)
AT	High pressure transducer
BT	Low pressure transducer
C	Water differential pressure switch (50 mbar)
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	Inlet water temperature sensor
H	Outlet water temperature sensor
I	Ped pressure relief valve (45 bar)
S	5/16" Shrader connection (service only)
↓	Pipe connection with Shrader valve

# Refrigerant Flow Diagram - WQRC 524 to 1204 - R410A



## COMPONENTS

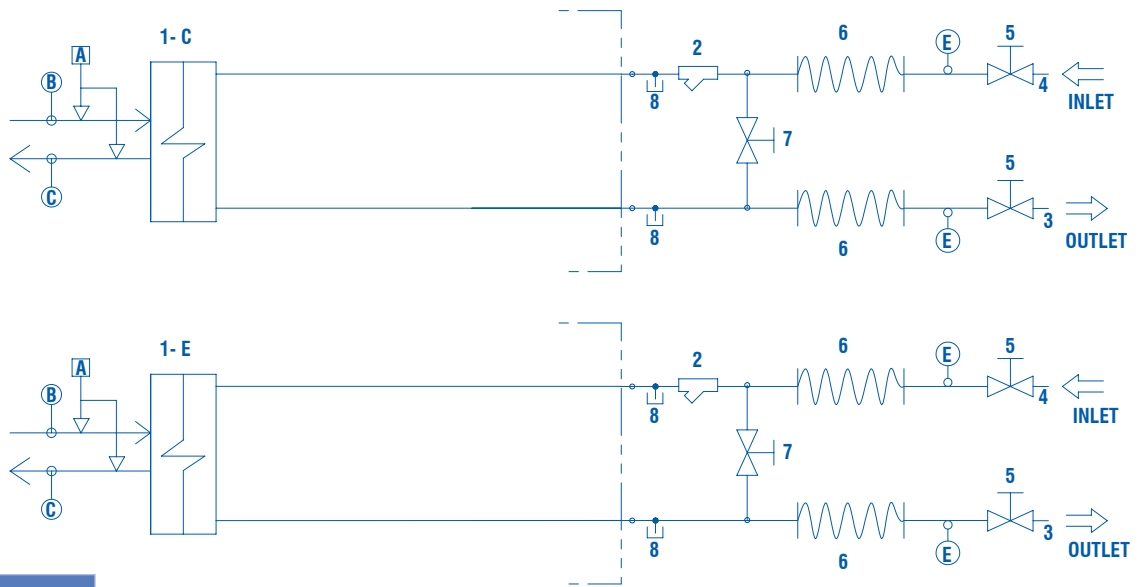
1	Compressor
4	Drier filter
5	Sight glass
6	Mechanical expansion valve
7	Indoor heat exchanger
9	Electronic expansion valve
11	Globe valve
12	Liquid receiver
13	Electronic expansion valve

## SAFETY / CONTROL DEVICES

A	High pressure switch (40,5 bar)
B	Low pressure switch (1,5 bar)
AT	High pressure transducer
BT	Low pressure transducer
C	Water differential pressure switch (50 mbar)
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	Inlet water temperature sensor
H	Outlet water temperature sensor
I	Ped pressure relief valve (45 bar)
S	5/16" Shrader connection (service only)
	Pipe connection with Shrader valve

# Hydraulic Circuit Diagram - WQL/WQH 524 to 1204 - R410A

## Hydraulic system basic



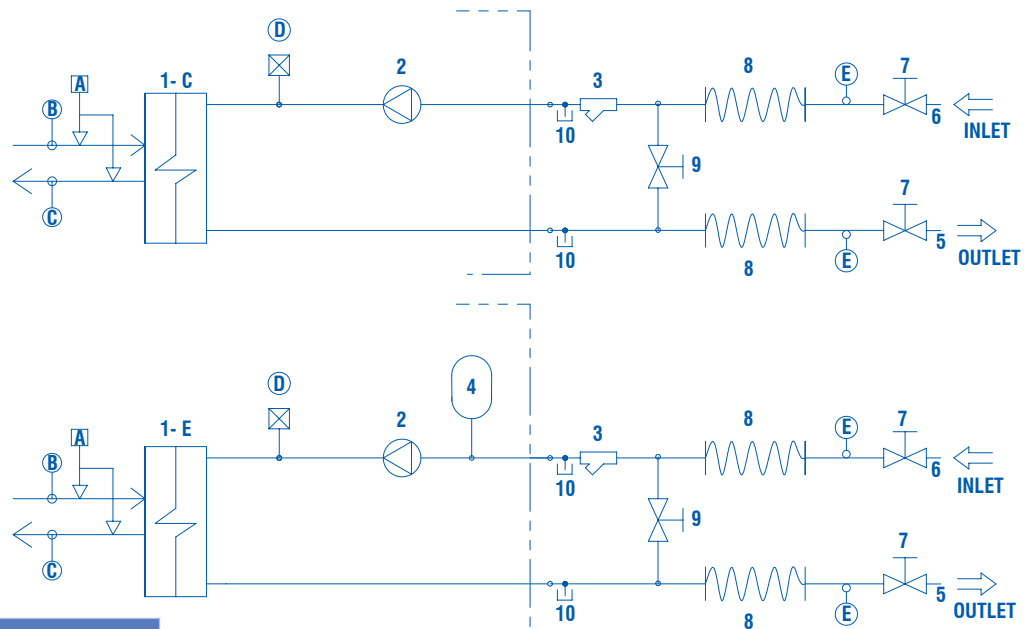
### COMPONENTS

1C	Outdoor heat exchanger
1E	Indoor heat exchanger
2	Water filter
3	Water outlet
4	Water inlet
5	Globe valve
6	Flexible pipes
7	By-pass valve
8	Pressure point/drainage

### SAFETY/CONTROL DEVICES

A	Water differential pressure switch (50 mbar)
B	Inlet water temperature sensor
C	Outlet water temperature sensor
D	Vent valve
E	Thermometer
---	Unit side
○	Probes

## Hydraulic system 1P condenser and 1P evaporator



### COMPONENTS

1C	Outdoor heat exchanger
1E	Indoor heat exchanger
2	Pump
3	Water filter
4	Pressure expansion tank
5	Water outlet
6	Water inlet
7	Globe valve
8	Flexible pipes
9	By-pass valve
10	Pressure point/drainage

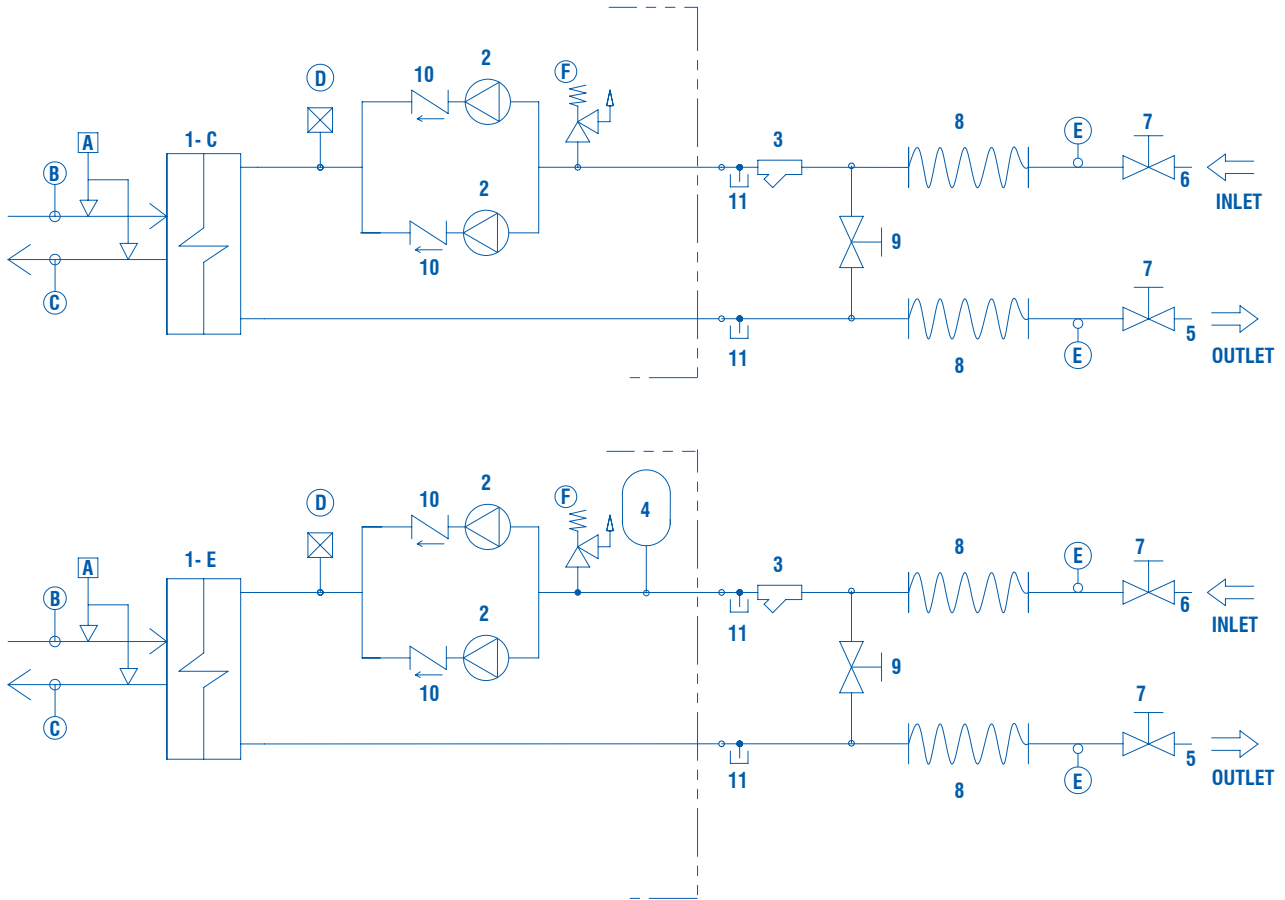
### SAFETY/CONTROL DEVICES

A	Water differential pressure switch (50 mbar)
B	Inlet water temperature sensor
C	Outlet water temperature sensor
D	Vent valve
E	Thermometer
F	Water safety valve (6 bar)
---	Unit side
○	Probes



# Hydraulic Circuit Diagram - WQL/WQH 524 to 1204 - R410A (continued)

## Hydraulic system 2P condenser and 2P evaporator



COMPONENTS	
1C	Outdoor heat exchanger
1E	Indoor heat exchanger
2	Pump
3	Water filter
4	Pressure expansion tank
5	Water outlet
6	Water inlet
7	Globe valve
8	Flexible pipes
9	By-pass valve
10	Non-return valve
11	Pressure point/drainage

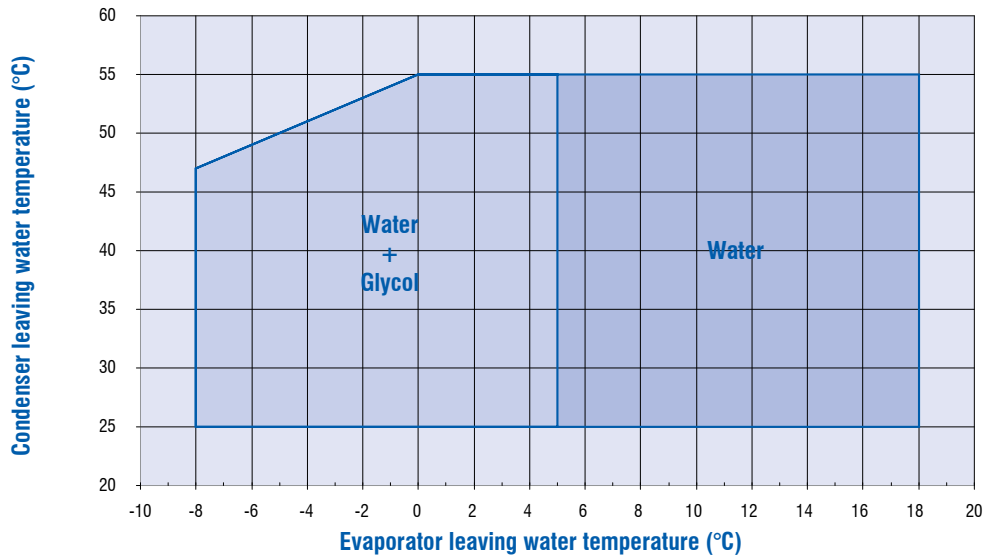
SAFETY/CONTROL DEVICES	
A	Water differential pressure switch (50 mbar)
B	Inlet water temperature sensor
C	Outlet water temperature sensor
D	Vent valve
E	Thermometer
F	Water safety valve (6 bar)
---	Unit side
○	Probes

# Operating Limits

## WQL/WQH 524 to 1204 - R410A

Chilled liquid	Leaving water temperature	Water	°C	+5 to +18
		Brine	°C	-8 / +5 (with glycol and electronic expansion valve); +5/+18 (standard application)
		Temperature spread	°K	3 to 8
	Maximum operating pressure	bar	6	
Heated liquid	Leaving water temperature	Water	°C	+25 to +55
		Temperature spread	°K	3 to 15
	Maximum operating pressure	bar	6	
Power supply voltage				400 V, 3 ph, 50 Hz (+/- 10%)

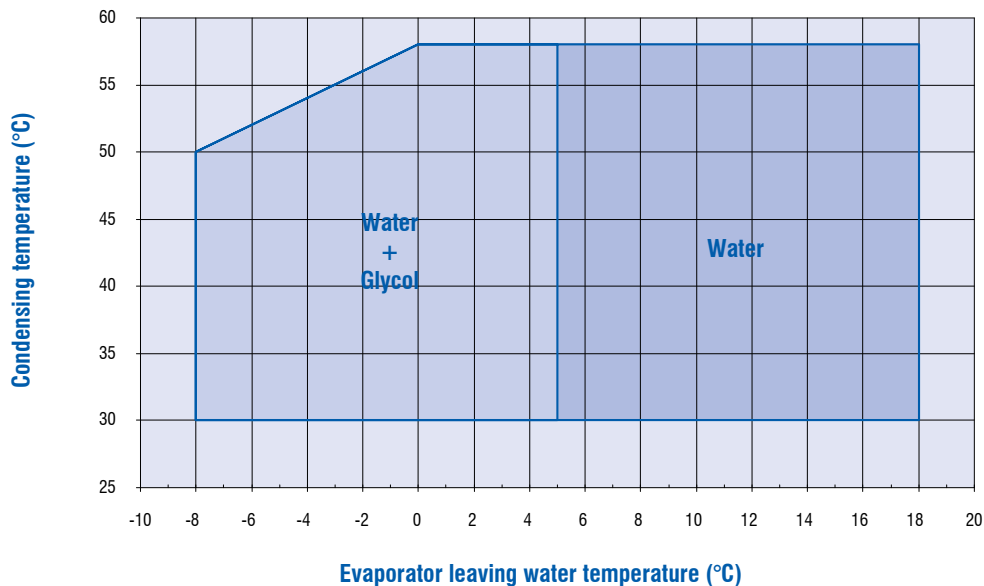
**Note:** Maximum % glycol (ethylene or propylene): 40%.



## WQRC 524 to 1204 - R410A

Chilled liquid	Leaving water temperature	Water	°C	+5 to +18
		Brine	°C	-8 / +5 (with glycol and electronic expansion valve); +5/+18 (standard application)
		Temperature spread	°K	3 to 8
	Maximum operating pressure	bar	6	
Condensing temperature				+30 to +58
Power supply voltage				400 V, 3 ph, 50 Hz (+/- 10%)

**Note:** Maximum % glycol (ethylene or propylene): 40%.



# Correction Factors

Unit capacity, absorbed power, brine flow rate, brine pressure drop, have to be corrected according to following formula:

## Corrected unit capacity

$$Q_{\text{CORRECTED/GLYCOL}} = Q_{\text{NOMINAL}} \times K_c \times K_c^{E,P}$$

where:

$K_c$  = capacity corrective factor according to LWT ( $\Delta T = 5$  [K]) → refer to Table 1

$K_c^E$  = capacity corrective factor according to glycol percentage (ETHYLENE GLYCOL) → refer to Table 2

$K_c^P$  = capacity corrective factor according to glycol percentage (PROPYLENE GLYCOL) → refer to Table 4

## Corrected unit absorbed power

$$P_{\text{CORRECTED/GLYCOL}} = P_{\text{NOMINAL}} \times K_i \times K_i^{E,P}$$

where:

$K_i$  = absorbed power corrective factor according to LWT ( $\Delta T = 5$  [K]) → refer to Table 1

$K_i^E$  = absorbed power corrective factor according to glycol percentage (ETHYLENE GLYCOL) → refer to Table 2

$K_i^P$  = absorbed power corrective factor according to glycol percentage (PROPYLENE GLYCOL) → refer to Table 4

## Corrected brine flow rate

$$G_{\text{CORRECTED/GLYCOL}} = G_{\text{RE-CALCULATED}} \times K_f^{E,P}$$

where:

$G_{\text{RE-CALCULATED}}$  = flow rate according to  $P_{\text{CORRECTED/GLYCOL}}$  ( $P_{\text{CORRECTED/GLYCOL}} \times 860 / \Delta T / 3600$ )

$K_f^E$  = flow rate corrective factor according to glycol percentage (ETHYLENE GLYCOL) → refer to Table 2

$K_f^P$  = flow rate corrective factor according to glycol percentage (PROPYLENE GLYCOL) → refer to Table 4

## Corrected brine pressure drop

$$\Delta P_{\text{CORRECTED/GLYCOL}} = \Delta P_{\text{RE-CALCULATED}} \times K_p^{E,P}$$

where:

$\Delta P_{\text{RE-CALCULATED}}$  = pressure drop according to  $G_{\text{CORRECTED/GLYCOL}}$  ( $K_{\text{BPHE}} \times (G_{\text{CORRECTED/GLYCOL}})^2$ )

$K_p^E$  = pressure drop corrective factor according to glycol percentage (ETHYLENE GLYCOL) → refer to Table 2

$K_p^P$  = pressure drop corrective factor according to glycol percentage (PROPYLENE GLYCOL) → refer to Table 5

		$K_c$	$K_i$
Leaving water temperature [LWT] (°C) ( $\Delta T=5$ [K])	7	1.000	1.000
	4	0.887	0.940
	2	0.816	0.900
	0	0.748	0.865
	-2	0.685	0.826
	-4	0.624	0.788
	-6	0.568	0.753
	-8	0.513	0.718
	-10	0.461	0.683

		%	0	10	20	30	35	40
Ethylene Glycol Percentage	%		0	10	20	30	35	40
Freezing point (1)	°C		0	-4	-10	-17	-21	-25
Minimum leaving water temperature allowed	°C		6	2	-2	-6	-8	-8
Capacity corrective factor (2)	$K_c^E$	1	0.995	0.985	0.970	0.963	0.955	
Absorbed power corrective factor (2)	$K_i^E$	1	0.998	0.995	0.985	0.983	0.980	
Flow rate corrective factor	$K_f^E$	1	1.015	1.050	1.085	1.123	1.160	
Pressure drop corrective factor (3)	$K_p^E$	1	1.070	1.160	1.235	1.283	1.330	

(1) ASHRAE Handbook Fundamentals.

(2) Valid for LWT=7 °C. If LWT < 7°C consider  $K_c \times K_c^E$  and  $K_i \times K_i^E$ .

(3) Valid for LWT > 5 °C. If LWT < 5 °C then refer to Table 3.

## Correction Factors (continued)

Table 3

Ethylene Glycol Percentage	LWT (°C)	Corrective factor $K_f^E$	Corrective factor $K_p^E$
10%	5	1.0154	1.0710
	4	1.0154	1.0760
	3	1.0154	1.0810
	2	1.0154	1.0850
20%	1	1.0417	1.1930
	0	1.0423	1.2000
	-1	1.0428	1.2080
	-2	1.0434	1.2150
30%	-3	1.0927	1.2990
	-4	1.0936	1.3060
	-5	1.0945	1.3200
	-6	1.0954	1.3330

Table 4

Propylene Glycol Percentage	%	0	10	20	30	40
Freezing point (1)	°C	0	-3	-7	-13	-22
Capacity corrective factor (2)	$K_c^P$	1	0.991	0.977	0.945	0.911
Absorbed power corrective factor (2)	$K_i^P$	1	0.994	0.991	0.975	0.966
Flow rate corrective factor	$K_f^P$	1	1.005	1.030	1.067	1.130

(1) ASHRAE Handbook Fundamentals.

(2) Valid for LWT=7 °C. If LWT < 7°C consider  $K_c \times K_c^P$  and  $K_i \times K_i^P$ .

Table 5

Ethylene Glycol Percentage	LWT (°C)	Corrective factor $K_p^P$
10%	5	1.112
	4	1.134
20%	5	1.175
	4	1.196
	3	1.206
30%	5	1.290
	4	1.300
	3	1.310
	0	1.362
	-2	1.393
40%	-4	1.414
	5	1.433
	4	1.435
	3	1.456
	0	1.497
	-2	1.549
	-4	1.580
-6	1.612	
-8	1.653	

# Physical Data - WQL 524 to 1204 - R410A

WQL		524	604	704	804	904	1004	1104	1204
Data @ Eurovent LCP/W/P/C AC conditions (1)									
Cooling Capacity (2)	kW	154.8	182.4	209.6	233.4	266.4	296.0	338.7	379.9
Cooling Capacity (3)	kW	154.3	181.8	208.9	232.6	265.8	295.6	338.0	379.2
Input Power (2)	kW	33.0	40.2	45.8	51.2	57.9	64.1	73.4	81.6
Input Power (3)	kW	34.2	41.6	47.5	53.3	59.3	65.5	74.9	83.3
Total EER (2)	kW/kW	4.69	4.54	4.58	4.56	4.60	4.62	4.61	4.66
Total EER (3)	kW/kW	4.51	4.37	4.40	4.36	4.48	4.51	4.51	4.55
ESEER (2)	kW/kW	6.07	6.38	6.62	6.00	6.21	5.92	6.10	6.05
ESEER (3)	kW/kW	5.40	5.68	5.81	5.29	5.74	5.52	5.70	5.67
Number of Refrigerant Circuits		2	2	2	2	2	2	2	2
Part Load Steps	%	0-25-50-75-100	0-25-50-75-100	0-21-50-71-100	0-25-50-75-100	0-22-50-72-100	0-25-50-75-100	0-23-50-73-100	0-25-50-75-100
Power Supply		400V/3/50Hz							
Startup Type		Direct							
Maximum Absorbed Power	kW	59	68	79	100	111	122	137	152
Maximum Current (FLA)	A	124	136	148	176	194	212	238	264
Startup Current (LRA)	A	233	276	333	342	351	369	459	485
<b>REFRIGERANT</b>									
Type		R410A							
Charge (7)	kg	8.7	11.1	12.6	13.4	17.2	21.3	23.8	27.4
<b>COMPRESSOR</b>									
Number/Type (7)		2 / Scroll							
Crankcase Heater (7)	W	90-90	90-90	90-120	140-140	140-140	140-140	140-140	140-140
<b>INTERNAL HEAT EXCHANGER</b>									
Number/Type		1 / Plate							
Water Flow Rate	l/s	7.40	8.71	10.01	11.2	12.7	14.1	16.2	18.2
Water Pressure Drop	kPa	26.7	26.6	31.5	36.3	18.7	22.8	17.8	18.4
<b>INTERNAL HEAT EXCHANGER WATER CONNECTIONS</b>									
Type		Victaulic							
Inlet diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
Outlet diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
<b>INTERNAL HEAT EXCHANGER PUMP</b>									
Number		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Input Power/SP	kW	2.20	2.20	2.20	3.00	3.00	3.00	4.00	4.00
Available Static Pressure/SP	kPa	Refer to "4B - Pump Av. Static Pressure"							
Input Power/HP	kW	3.00	3.00	4.00	4.00	5.50	5.50	5.50	7.50
Available Static Pressure/HP	kPa	Refer to "4B - Pump Av. Static Pressure"							
<b>EXTERNAL HEAT EXCHANGER</b>									
Number/Type		1 / Plate							
Water Flow Rate	l/s	8.97	10.6	12.2	13.6	15.5	17.2	19.7	22.0
Water Pressure Drop	kPa	38.1	38.6	45.8	53.0	23.6	18.6	21.5	21.5
<b>EXTERNAL HEAT EXCHANGER WATER CONNECTIONS</b>									
Type		Victaulic							
Inlet diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
Outlet diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
<b>EXTERNAL HEAT EXCHANGER PUMP</b>									
Number		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Input Power/SP	kW	2.20	3.00	3.00	4.00	4.00	5.50	5.50	5.50
Available Static Pressure/SP	kPa	Refer to "4B - Pump Av. Static Pressure"							
Input Power/HP	kW	3.00	4.00	5.50	5.50	5.50	5.50	7.50	7.50
Available Static Pressure/HP	kPa	Refer to "4B - Pump Av. Static Pressure"							
<b>DESUPERHEATER</b>									
Number/Type		2 / Plate							
Heat recovery	kW	22.1	28.4	36.1	42.0	50.4	68.3	78.1	81.9
Water flow rate	l/s	1.05	1.35	1.73	2.01	2.41	3.26	3.73	3.91
Water pressure drop	kPa	8.3	4.5	5.1	5.7	5.0	8.7	10.3	7.5
<b>WEIGHT</b>									
Shipping Weight (4) / (5)	kg	858/961	929/1032	1110/1213	1279/1382	1266/1369	1363/1466	1449/1552	1541/1644
Operating Weight (4) / (5)	kg	890/993	971/1074	1156/1259	1329/1432	1340/1443	1453/1556	1552/1655	1660/1763
<b>DIMENSIONS</b>									
Length	mm	2250							
Width	mm	850 (4) / 854 (5) / 885 (4)/(6) - 1005 (5)/(6)							
Height	mm	1845 (4) / 1850 (5)							
<b>ACOUSTIC DATA</b>									
Sound Power Level (4) / (5)	dB(A)	81/75	82/76	85/79	87/81	89/83	90/84	90/84	90/84
Sound Pressure Level (4)* / (5)*	dB(A)	49/43	50/44	53/47	55/49	57/51	58/52	58/52	58/52

(1) Standard Eurovent LCP/W/P/C AC conditions in cooling mode: evaporator EWT/LWT 12 °C/7 °C, condenser EWT/LWT 30 °C/35 °C.

(2) GROSS value (no pump included).

(3) NET value, according to EN 14511 Standard (all data refers to standard unit without water pump).

(4) BLN version.

(5) ELN version.

(6) Only for movimentation.

(7) Data for each refrigerant circuit.

(\*) Sound pressure level at 10 m. Values refers to ISO Standard 3744 with parallepiped shape.

# Physical Data - WQH 524 to 1204 - R410A

WQH		524	604	704	804	904	1004	1104	1204
<b>Data @ Eurovent LCP/W/P/C AC conditions (1)</b>									
Cooling Capacity (2)	kW	151.2	176.7	205.2	226.2	263.7	292.0	332.6	371.2
Cooling Capacity (3)	kW	150.7	176.2	204.5	225.4	263.1	291.3	332.0	370.5
Input Power (2)	kW	33.7	41.4	46.6	52.3	58.5	65.0	74.7	83.6
Input Power (3)	kW	34.9	42.7	48.3	54.3	59.8	66.4	76.2	85.2
Total EER (2)	kW/kW	4.49	4.27	4.40	4.33	4.51	4.49	4.45	4.44
Total EER (3)	kW/kW	4.32	4.13	4.23	4.15	4.40	4.39	4.36	4.35
ESEER (2)	kW/kW	5.99	6.26	6.50	5.92	6.10	5.84	6.02	5.95
ESEER (3)	kW/kW	5.35	5.59	5.71	5.25	5.66	5.46	5.63	5.59
Heating Capacity (2)	kW	169.6	200.4	231.0	255.5	294.9	330.1	375.8	417.6
Heating Capacity (3)	kW	170.2	201.1	231.8	256.5	295.6	331.0	376.6	418.5
Input Power (2)	kW	40.8	49.6	56.2	63.2	71.2	79.4	90.7	101.2
Input Power (3)	kW	42.4	51.4	58.5	65.9	72.9	81.2	92.7	103.2
Total COP (2)	kW/kW	4.16	4.04	4.11	4.04	4.14	4.16	4.14	4.13
Total COP (3)	kW/kW	4.00	3.90	4.00	3.90	4.10	4.10	4.10	4.10
Number of Refrigerant Circuits		2	2	2	2	2	2	2	2
Part Load Steps	%	0-25-50-75-100	0-25-50-75-100	0-21-50-71-100	0-21-50-75-100	0-22-50-72-100	0-25-50-75-100	0-23-50-73-100	0-25-50-75-100
Power Supply		400V/3/50Hz							
Startup Type		Direct							
Maximum Absorbed Power	kW	59	68	79	100	111	122	137	152
Maximum Current (FLA)	A	124	136	148	176	194	212	238	264
Startup Current (LRA)	A	233	276	333	342	351	369	459	485
<b>REFRIGERANT</b>									
Type		R410A							
Charge (7)	kg	9.0	11.4	13.1	13.9	17.3	21.8	24.4	27.9
<b>COMPRESSOR</b>									
Number/Type (7)		2 / Scroll							
Crankcase Heater (7)	W	90-90	90-90	90-120	140-140	140-140	140-140	140-140	140-140
<b>INTERNAL HEAT EXCHANGER</b>									
Number/Type		1 / Plate							
Water Flow Rate - Cooling operation	l/s	7.22	8.44	9.80	10.8	12.6	14.0	15.9	17.7
Water Pressure Drop - Cooling operation	kPa	25.5	25.0	30.3	34.2	18.3	22.2	17.2	17.7
Water Flow Rate - Heating operation	l/s	8.10	9.57	11.0	12.2	14.1	15.8	18.0	20.0
Water Pressure Drop - Heating operation	kPa	31.6	31.7	37.9	43.2	22.6	28.0	21.6	22.1
<b>INTERNAL HEAT EXCHANGER WATER CONNECTIONS</b>									
Type		Victaulic							
Inlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
Outlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
<b>INTERNAL HEAT EXCHANGER PUMP</b>									
Number		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Input Power/SP	kW	2.20	2.20	2.20	3.00	3.00	3.00	4.00	4.00
Available Static Pressure/SP	kPa	Refer to "4B - Pump Av. Static Pressure"							
Input Power/HP	kW	3.00	3.00	4.00	4.00	5.50	5.50	5.50	7.50
Available Static Pressure/HP	kPa	Refer to "4B - Pump Av. Static Pressure"							
<b>EXTERNAL HEAT EXCHANGER</b>									
Number/Type		1 / Plate							
Water Flow Rate - Cooling operation	l/s	8.83	10.4	12.0	13.3	15.4	17.1	19.5	21.7
Water Pressure Drop - Cooling operation	kPa	37.1	37.2	44.6	50.9	23.3	18.3	21.0	20.9
Water Flow Rate - Heating operation	l/s	10.3	12.0	13.9	15.3	17.8	20.0	22.7	25.2
Water Pressure Drop - Heating operation	kPa	48.9	48.5	58.8	66.5	30.7	24.6	28.1	27.6
<b>EXTERNAL HEAT EXCHANGER WATER CONNECTIONS</b>									
Type		Victaulic							
Inlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
Outlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
<b>EXTERNAL HEAT EXCHANGER PUMP</b>									
Number		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Input Power/SP	kW	2.20	2.20	2.20	3.00	3.00	3.00	4.00	4.00
Available Static Pressure/SP	kPa	Refer to "4B - Pump Av. Static Pressure"							
Input Power/HP	kW	3.00	3.00	4.00	4.00	5.50	5.50	5.50	7.50
Available Static Pressure/HP	kPa	Refer to "4B - Pump Av. Static Pressure"							
<b>DESUPERHEATER</b>									
Number/Type		2 / Plate							
Heat recovery	kW	22.1	28.4	36.1	42.0	50.4	68.3	78.1	81.9
Water flow rate	l/s	1.05	1.35	1.73	2.01	2.41	3.26	3.73	3.91
Water pressure drop	kPa	8.3	4.5	5.1	5.7	5.0	8.7	10.3	7.5
<b>WEIGHT</b>									
Shipping Weight (4) / (5)	kg	876/979	947/1050	1141/1244	1311/1414	1302/1405	1410/1513	1494/1597	1585/1688
Operating Weight (4) / (5)	kg	909/1012	989/1092	1187/1290	1360/1463	1376/1479	1500/1603	1598/1701	1704/1807
<b>DIMENSIONS</b>									
Length	mm	2250							
Width	mm	850 (4) / 854 (5) / 885 (4)/(6) - 1005 (5)/(6)							
Height	mm	1845 (4) / 1850 (5)							
<b>ACOUSTIC DATA</b>									
Sound Power Level (4) / (5)	dB(A)	81/75	82/76	85/79	87/81	89/83	90/84	90/84	90/84
Sound Pressure Level (4)* / (5)*	dB(A)	49/43	50/44	53/47	55/49	57/51	58/52	58/52	58/52

(1) Standard Eurovent LCP/W/P/C AC conditions in cooling mode: evaporator EWT/LWT 12 °C/7 °C, condenser EWT/LWT 30 °C/35 °C.

Standard Eurovent LCP/W/P/C AC conditions in heating mode: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 40 °C/45 °C.

(2)(3)(4)(5)(6)(7)(\*) View WQL notes.

## Physical Data - WQRC 524 to 1204 - R410A

WQRC		524	604	704	804	904	1004	1104	1204
Cooling Capacity (1)	kW	130.0	155.3	177.6	196.5	224.2	247.2	285.9	316.1
Input Power (1)	kW	42.9	51.1	59.0	65.8	74.4	82.5	94.6	105.8
Number of Refrigerant Circuits		2	2	2	2	2	2	2	2
Part Load Steps	%	0-25-50-75-100	0-25-50-75-100	0-21-50-71-100	0-25-50-75-100	0-22-50-72-100	0-25-50-75-100	0-23-50-73-100	0-25-50-75-100
Power Supply		400V/3/50Hz							
Startup Type		Direct							
Maximum Absorbed Power	kW	59	68	79	100	111	122	137	152
Maximum Current (FLA)	A	124	136	148	176	194	212	238	264
Startup Current (LRA)	A	233	276	333	342	351	369	459	485
<b>REFRIGERANT</b>									
Type		R410A							
<b>COMPRESSOR</b>									
Number/Type (7)		2 / Scroll							
Crankcase Heater (7)	W	90-90	90-90	90-120	140-140	140-140	140-140	140-140	140-140
<b>INTERNAL HEAT EXCHANGER</b>									
Number/Type		1 / Plate							
Water Flow Rate	l/s	6.21	7.42	8.49	9.39	10.7	11.8	13.7	15.1
Water Pressure Drop	kPa	19.3	19.6	23.0	26.2	13.5	16.2	12.9	13.0
<b>INTERNAL HEAT EXCHANGER WATER CONNECTIONS</b>									
Type		Victaulic							
Inlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
Outlet Diameter	inch	2"1/2	2"1/2	2"1/2	2"1/2	4"	4"	4"	4"
<b>INTERNAL HEAT EXCHANGER PUMP</b>									
Number		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Input Power/SP	kW	2.20	2.20	2.20	3.00	3.00	3.00	4.00	4.00
Available Static Pressure/SP	kPa	Refer to "4B - Pump Av. Static Pressure"							
Input Power/HP	kW	3.00							
Available Static Pressure/HP	kPa	Refer to "4B - Pump Av. Static Pressure"							
<b>REMOTE CONDENSER REFRIGERANT CONNECTIONS</b>									
Type		To be brazed							
Inlet Diameter	inch	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Outlet Diameter	inch	1 1/8"	1 1/8"	1 3/8"	1 3/8"	1 5/8"	1 5/8"	1 5/8"	1 5/8"
<b>WEIGHT</b>									
Shipping Weight (2) / (3)	kg	754/857	791/894	965/1068	1138/1241	1153/1256	1203/1306	1279/1382	1333/1436
Operating Weight (2) / (3)	kg	770/873	812/915	988/1091	1163/1266	1188/1291	1241/1344	1328/1431	1388/1491
<b>DIMENSIONS</b>									
Length	mm	2250							
Width	mm	850 (2) / 854 (3) / 885 (2)/(4) - 1005 (3)/(4)							
Height	mm	1845 (2) / 1850 (3)							
<b>ACOUSTIC DATA</b>									
Sound Power Level (2)	dB(A)	81	82	85	87	89	90	90	90
Sound Pressure Level (2)*	dB(A)	49	50	53	55	57	58	58	58
Sound Power Level (3)	dB(A)	75	76	79	81	83	84	84	84
Sound Pressure Level (3)*	dB(A)	43	44	47	49	51	52	52	52

(1) Evaporator EWT/LWT 12 °C/7 °C, condensing temperature 50 °C.

(2) BLN version.

(3) ELN version.

(4) Only for movimentation.

(7) Data for each refrigerant circuit.

(\*) Sound pressure level at 10 m. Values refers to ISO Standard 3744 with parallepiped shape.

# Electrical Data - WQL/WQH/WQRC 524 to 1204 - R410A

## Compressors - 400 V/3 Ph/50 Hz

Sizes	Nominal P <sub>NOM-CPS</sub> (kW)	Nominal I <sub>NOM-CPS</sub> (A)	Maximum P <sub>MAX-CPS</sub> (kW)	Maximum I <sub>MAX-CPS</sub> (A)	I <sub>START-CPS</sub> LRA (A)	PF (NOM)	PFC*
524	8.3	16.0	14.8	31	140	0.75	> 0.90
	8.3	16.0	14.8	31	140	0.75	> 0.90
	8.3	16.0	14.8	31	140	0.75	> 0.90
	8.3	16.0	14.8	31	140	0.75	> 0.90
604	10.1	20.7	17.1	34	174	0.70	> 0.90
	10.1	20.7	17.1	34	174	0.70	> 0.90
	10.1	20.7	17.1	34	174	0.70	> 0.90
	10.1	20.7	17.1	34	174	0.70	> 0.90
704	10.1	20.7	17.1	34	174	0.70	> 0.90
	13.0	23.9	22.6	40	225	0.79	> 0.90
	10.1	20.7	17.1	34	174	0.70	> 0.90
	13.0	23.9	22.6	40	225	0.79	> 0.90
804	13.8	23.2	25.0	44	210	0.86	> 0.90
	13.8	23.2	25.0	44	210	0.86	> 0.90
	13.8	23.2	25.0	44	210	0.86	> 0.90
	13.8	23.2	25.0	44	210	0.86	> 0.90
904	13.8	23.2	25.0	44	210	0.86	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
	13.8	23.2	25.0	44	210	0.86	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
1004	16.6	27.1	30.5	53	210	0.88	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
1104	16.6	27.1	30.5	53	210	0.88	> 0.90
	21.1	35.1	38.0	66	287	0.87	> 0.90
	16.6	27.1	30.5	53	210	0.88	> 0.90
	21.1	35.1	38.0	66	287	0.87	> 0.90
1204	21.1	35.1	38.0	66	287	0.87	> 0.90
	21.1	35.1	38.0	66	287	0.87	> 0.90
	21.1	35.1	38.0	66	287	0.87	> 0.90
	21.1	35.1	38.0	66	287	0.87	> 0.90

400V/3/50Hz		STD unit without pump option							
		524	604	704	804	904	1004	1104	1204
Power input (kW)	Nominal	33	40	46	55	61	66	75	84
	Maximum	59	68	79	100	111	122	137	152
Current input (A)	Nominal	64	83	89	93	101	108	124	140
	Maximum	124	136	148	176	194	212	238	164
Start-up current (A)		233	276	333	342	351	369	459	485
Start-up current (A)**		191	224	266	279	288	306	373	399

Pumps data 400V/3/50Hz	1-2P/SP/E		1-2P/SP/C		1-2P/HP/E		1-2P/HP/C	
	P <sub>MAX-PUMP</sub> (kW)	I <sub>MAX-PUMP FLA</sub> (A)	P <sub>MAX-PUMP</sub> (kW)	I <sub>MAX-PUMP FLA</sub> (A)	P <sub>MAX-PUMP</sub> (kW)	I <sub>MAX-PUMP FLA</sub> (A)	P <sub>MAX-PUMP</sub> (kW)	I <sub>MAX-PUMP FLA</sub> (A)
524	2.20	5.03	2.20	5.03	3.00	6.25	3.00	6.25
604	2.20	5.03	3.00	6.25	3.00	6.25	4.00	7.71
704	2.20	5.03	3.00	6.25	4.00	7.71	5.50	10.4
804	3.00	6.25	4.00	7.71	4.00	7.71	5.50	10.4
904	3.00	6.25	4.00	7.71	5.50	10.4	5.50	10.4
1004	3.00	6.25	5.50	10.4	5.50	10.4	5.50	10.4
1104	4.00	7.71	5.50	10.4	5.50	10.4	7.50	13.9
1204	4.00	7.71	5.50	10.4	7.50	13.9	7.50	13.9

(\*) Power factor correction capacitor option installed.

(\*\*) Soft-starter option installed.



## Sound Data - WQL/WQH/WQRC 524 to 1204 - R410A

### BLN models

Sizes	Octave Band (Hz)								Sound Power Level dB(A)	Sound Pressure Level dB(A)*
	63	125	250	500	1000	2000	4000	8000		
	Sound Power Level dB									
524	69	74	79	79	77	71	69	57	<b>81</b>	<b>49</b>
604	70	75	80	80	78	72	70	57	<b>82</b>	<b>50</b>
704	72	78	83	83	81	75	73	60	<b>85</b>	<b>53</b>
804	74	80	85	85	83	77	75	62	<b>87</b>	<b>55</b>
904	77	82	87	87	85	79	77	65	<b>89</b>	<b>57</b>
1004	79	84	88	88	86	80	78	66	<b>90</b>	<b>58</b>
1104	79	84	88	88	86	80	78	66	<b>90</b>	<b>58</b>
1204	79	84	88	88	86	80	78	66	<b>90</b>	<b>58</b>

(\*) Sound pressure levels are given at 10 m. Value refers to ISO Standard 3744 with parallepiped shape.

### ELN models

Sizes	Octave Band (Hz)								Sound Power Level dB(A)	Sound Pressure Level dB(A)*
	63	125	250	500	1000	2000	4000	8000		
	Sound Power Level dB									
524	65	69	73	73	71	65	63	52	<b>75</b>	<b>43</b>
604	65	70	74	74	72	66	64	52	<b>76</b>	<b>44</b>
704	68	73	77	77	75	69	67	55	<b>79</b>	<b>47</b>
804	69	74	79	79	77	71	69	57	<b>81</b>	<b>49</b>
904	73	77	81	81	79	73	71	60	<b>83</b>	<b>51</b>
1004	75	79	82	82	80	74	72	61	<b>84</b>	<b>52</b>
1104	75	79	82	82	80	74	72	61	<b>84</b>	<b>52</b>
1204	75	79	82	82	80	74	72	61	<b>84</b>	<b>52</b>

(\*) Sound pressure levels are given at 10 m. Value refers to ISO Standard 3744 with parallepiped shape.

# Performance Data - WQL 524 to 1204 - R410A

## Cooling Capacities - CO Mode

WQL models	Evap. LWT (°C)	Condenser LWT (°C)													
		25		30		35		40		45		50		55	
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)
WQL 524	5	157.8	26.7	151.2	29.3	142.9	32.7	132.5	37.0	120.4	42.3	107.1	48.7	101.6	51.3
	6	162.9	26.8	157.0	29.5	149.0	32.9	138.4	37.1	125.6	42.5	111.4	48.8	105.3	51.4
	7	167.9	27.1	162.5	29.7	<b>154.8</b>	<b>33.0</b>	143.9	37.3	130.6	42.6	115.7	48.9	109.2	51.5
	8	172.8	27.4	167.5	29.9	159.8	33.1	148.8	37.3	135.2	42.6	119.9	48.9	113.3	51.4
	9	177.5	27.8	172.1	30.1	164.2	33.1	153.0	37.3	139.3	42.5	123.9	48.9	117.6	51.4
	10	182.3	28.2	176.5	30.3	168.3	33.2	157.0	37.2	143.3	42.4	127.9	48.8	121.9	51.3
	11	187.1	28.7	180.9	30.6	172.4	33.3	161.1	37.2	147.3	42.3	131.9	48.8	126.2	51.2
	12	192.1	29.1	185.5	30.8	176.8	33.4	165.2	37.2	151.3	42.3	135.8	48.7	130.3	51.2
	13	197.4	29.5	190.4	31.1	181.2	33.6	169.3	37.3	155.2	42.3	139.5	48.7	134.1	51.1
	14	203.1	29.8	195.5	31.3	185.8	33.7	173.4	37.4	159.0	42.4	143.1	48.7	137.7	51.0
	15	209.5	30.0	200.9	31.5	190.4	33.9	177.5	37.6	162.5	42.5	146.3	48.7	140.8	50.9
	16	216.6	30.0	206.7	31.6	195.1	34.2	181.3	37.8	165.8	42.6	149.1	48.7	143.5	50.7
	17	224.7	29.7	213.0	31.6	199.9	34.3	185.0	38.0	168.8	42.8	151.6	48.7	145.7	50.4
	18	234.0	29.3	219.8	31.5	204.7	34.5	188.5	38.4	171.4	43.1	153.8	48.7	147.8	50.1
WQL 604	5	186.5	31.6	178.2	35.5	168.5	39.8	156.8	44.8	143.5	50.6	129.2	57.0	123.5	59.6
	6	192.4	31.6	185.0	35.6	175.6	40.0	163.6	45.1	149.6	50.9	134.3	57.2	127.8	59.7
	7	198.2	31.6	191.5	35.7	<b>182.4</b>	<b>40.2</b>	170.2	45.3	155.5	51.0	139.3	57.4	132.3	59.8
	8	203.8	31.6	197.3	35.8	188.2	40.2	175.8	45.4	160.8	51.1	144.2	57.4	137.0	59.8
	9	209.3	31.8	202.5	35.8	193.3	40.3	180.7	45.3	165.6	51.0	148.9	57.4	141.9	59.8
	10	214.8	31.9	207.6	35.9	198.1	40.2	185.4	45.2	170.2	51.0	153.5	57.3	146.9	59.8
	11	220.3	32.1	212.7	36.0	202.9	40.2	190.0	45.2	174.8	50.9	158.0	57.4	151.7	59.9
	12	226.0	32.2	218.1	36.1	207.9	40.3	194.8	45.2	179.2	51.0	162.3	57.5	156.3	60.0
	13	232.1	32.2	223.6	36.1	213.0	40.3	199.5	45.3	183.7	51.0	166.5	57.6	160.6	60.1
	14	238.7	32.1	229.6	36.0	218.2	40.3	204.2	45.4	187.9	51.2	170.3	57.8	164.4	60.2
	15	246.1	31.8	235.8	35.9	223.5	40.4	208.7	45.5	191.8	51.4	173.7	58.1	167.8	60.4
	16	254.3	31.3	242.5	35.7	228.9	40.4	213.1	45.7	195.4	51.7	176.7	58.4	170.5	60.5
	17	263.6	30.6	249.7	35.4	234.3	40.4	217.1	46.0	198.6	52.1	179.2	58.8	172.7	60.6
	18	274.3	29.6	257.5	34.8	239.8	40.4	220.9	46.3	201.4	52.6	181.5	59.1	174.4	60.9
WQL 704	5	215.3	37.5	205.2	41.0	193.4	45.5	179.6	51.2	164.1	58.4	147.4	67.0	141.1	70.1
	6	221.7	37.7	212.8	41.2	201.7	45.7	187.7	51.4	171.3	58.6	153.3	67.2	146.2	70.2
	7	228.2	37.9	220.2	41.3	<b>209.6</b>	<b>45.8</b>	195.3	51.6	178.2	58.7	159.2	67.3	151.5	70.2
	8	234.6	38.2	226.9	41.5	216.4	45.9	201.9	51.6	184.3	58.7	165.0	67.3	157.1	70.1
	9	240.9	38.7	233.1	41.8	222.3	45.9	207.7	51.5	190.0	58.5	170.5	67.2	163.0	70.0
	10	247.3	39.2	239.0	42.0	227.9	45.9	213.1	51.4	195.4	58.4	176.0	67.1	168.9	69.9
	11	254.1	39.7	245.2	42.3	233.6	46.0	218.5	51.3	200.8	58.3	181.4	67.1	174.7	69.9
	12	261.2	40.2	251.6	42.6	239.5	46.2	224.0	51.4	206.0	58.4	186.6	67.2	180.2	70.0
	13	269.0	40.5	258.4	42.9	245.5	46.4	229.5	51.5	211.2	58.5	191.6	67.3	185.4	70.0
	14	277.6	40.8	265.7	43.1	251.7	46.6	234.8	51.8	216.0	58.7	196.3	67.5	190.1	70.1
	15	287.3	40.8	273.5	43.3	257.9	46.9	240.0	52.1	220.6	59.1	200.6	67.8	194.2	70.2
	16	298.2	40.6	282.0	43.4	264.3	47.2	244.9	52.5	224.5	59.5	204.5	68.0	197.3	70.5
	17	310.8	40.1	291.1	43.3	270.7	47.5	249.5	53.1	228.1	60.1	207.9	68.3	199.8	70.8
	18	325.2	39.3	301.0	43.1	277.1	47.9	253.7	53.8	231.1	60.9	210.9	68.7	201.9	71.2
WQL 804	5	240.9	41.7	228.5	45.8	214.7	50.7	199.2	56.9	182.0	64.6	163.8	74.1	156.2	78.1
	6	248.9	41.9	237.6	46.0	224.3	51.0	208.3	57.2	190.1	64.9	170.5	74.4	161.9	78.2
	7	256.9	42.1	246.3	46.2	<b>233.4</b>	<b>51.2</b>	216.9	57.4	197.9	65.1	177.1	74.6	167.8	78.3
	8	264.6	42.4	254.2	46.5	241.3	51.3	224.5	57.5	204.9	65.1	183.6	74.6	174.1	78.2
	9	272.1	42.9	261.4	46.7	248.2	51.4	231.2	57.4	211.4	65.0	189.8	74.6	180.6	78.2
	10	279.7	43.4	268.4	47.0	254.7	51.5	237.5	57.3	217.5	64.9	195.9	74.5	187.2	78.1
	11	287.3	43.9	275.5	47.3	261.4	51.6	243.9	57.3	223.7	64.9	201.9	74.5	193.6	78.1
	12	295.1	44.4	282.8	47.6	268.2	51.7	250.3	57.4	229.8	65.0	207.7	74.6	199.7	78.2
	13	303.5	44.7	290.5	47.9	275.2	51.9	256.7	57.5	235.9	65.1	213.4	74.7	205.5	78.3
	14	312.6	45.0	298.5	48.1	282.4	52.1	263.2	57.7	241.6	65.3	218.6	74.9	210.7	78.3
	15	322.5	45.0	307.1	48.2	289.6	52.3	269.4	58.0	247.0	65.6	223.3	75.1	215.2	78.4
	16	333.7	44.7	316.2	48.2	297.0	52.6	275.4	58.4	251.9	65.9	227.3	75.4	219.0	78.4
	17	346.4	44.2	325.9	48.1	304.3	52.8	281.0	58.8	256.3	66.4	230.9	75.8	222.2	78.3
	18	360.8	43.2	336.6	47.7	311.8	53.0	286.3	59.4	260.2	67.0	233.8	76.2	224.9	78.3

# Performance Data - WQL 524 to 1204 - R410A (continued)

## Cooling Capacities - CO Mode

WQL models	Evap. LWT (°C)	Condenser LWT (°C)														
		25		30		35		40		45		50		55		
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	
WQL 904	5	273.0	47.7	260.3	51.9	245.4	57.3	227.8	64.3	208.0	72.8	186.8	83.0	176.8	88.0	
	6	281.7	47.8	270.4	52.2	256.2	57.7	238.1	64.6	217.1	73.2	194.3	83.4	183.2	88.1	
	7	290.3	48.1	280.2	52.4	<b>266.4</b>	<b>57.9</b>	247.9	64.9	225.9	73.5	201.8	83.6	189.9	88.2	
	8	298.8	48.4	288.9	52.6	275.2	58.0	256.5	64.9	233.8	73.5	208.9	83.6	197.0	88.1	
	9	307.0	48.9	296.9	52.9	282.9	58.1	263.9	64.9	241.0	73.4	215.9	83.6	204.3	88.0	
	10	315.3	49.5	304.6	53.2	290.1	58.1	270.9	64.8	247.9	73.2	222.6	83.5	211.7	87.9	
	11	323.8	50.0	312.4	53.5	297.4	58.2	277.8	64.8	254.6	73.2	229.3	83.5	218.9	87.9	
	12	332.6	50.5	320.5	53.8	304.9	58.4	284.8	64.8	261.4	73.3	235.8	83.6	225.8	88.0	
	13	342.0	50.8	329.0	54.0	312.5	58.6	291.8	65.0	267.8	73.4	242.0	83.8	232.3	88.1	
	14	352.3	51.0	337.9	54.3	320.3	58.8	298.6	65.2	274.0	73.7	247.8	84.1	238.2	88.1	
	15	363.6	50.9	347.3	54.3	328.0	59.1	305.1	65.6	279.7	74.0	252.9	84.4	243.3	88.2	
	16	376.3	50.5	357.3	54.3	335.8	59.3	311.3	66.0	284.8	74.5	257.4	84.7	247.5	88.2	
	17	390.7	49.7	368.1	54.1	343.5	59.6	316.9	66.5	289.2	75.1	261.2	85.1	251.0	88.2	
	18	407.2	48.5	379.7	53.6	351.2	59.8	322.1	67.2	293.0	75.8	264.5	85.7	254.0	88.2	
	WQL 1004	5	306.1	53.3	290.6	57.7	273.2	63.4	253.2	70.9	231.4	80.2	208.8	91.5	196.4	98.1
		6	316.4	53.6	302.0	58.0	284.9	63.8	264.3	71.2	241.2	80.6	217.0	91.8	203.3	98.2
		7	326.4	54.0	312.8	58.3	<b>296.0</b>	<b>64.1</b>	274.8	71.5	250.7	80.8	225.1	92.1	210.6	98.2
		8	336.1	54.6	322.5	58.7	305.5	64.2	284.0	71.6	259.3	80.8	233.0	92.1	218.3	98.2
9		345.3	55.3	331.2	59.1	313.9	64.3	292.1	71.5	267.2	80.7	240.7	92.0	226.3	98.0	
10		354.2	56.0	339.6	59.4	321.8	64.4	299.9	71.4	274.7	80.6	248.1	91.9	234.3	97.9	
11		363.1	56.7	348.0	59.8	329.9	64.6	307.6	71.4	282.4	80.5	255.5	91.9	242.1	97.8	
12		372.2	57.2	356.7	60.2	338.2	64.8	315.6	71.5	290.0	80.6	262.7	91.9	249.6	97.8	
13		381.6	57.6	365.6	60.5	346.7	65.0	323.7	71.8	297.5	80.8	269.6	92.1	256.3	97.8	
14		393.0	57.7	375.1	60.8	355.5	65.4	331.8	72.1	304.9	81.1	275.9	92.2	262.7	97.8	
15		402.7	57.4	385.1	60.8	364.5	65.7	339.8	72.6	311.8	81.6	281.5	92.5	268.1	97.7	
16		415.1	56.8	395.7	60.7	373.6	66.0	347.5	73.2	318.1	82.1	286.4	92.8	272.4	97.6	
17		428.6	55.6	407.2	60.4	382.8	66.4	354.9	73.9	323.8	82.9	290.4	93.1	276.0	97.4	
18		444.8	53.9	419.7	59.8	392.2	66.7	362.0	74.7	329.0	83.7	293.8	93.5	279.0	97.2	
WQL 1104		5	346.9	59.7	330.9	65.5	312.2	72.7	290.3	81.6	265.9	92.4	240.0	105.1	226.6	111.8
		6	358.2	59.9	343.7	65.8	325.9	73.1	303.4	82.1	277.4	92.8	249.5	105.5	234.6	112.0
		7	369.2	60.2	356.1	66.2	<b>338.7</b>	<b>73.4</b>	315.7	82.4	288.4	93.1	258.8	105.8	242.9	112.0
		8	380.1	60.7	367.2	66.5	349.8	73.6	326.4	82.5	298.4	93.2	267.9	105.8	251.8	112.0
	9	390.5	61.4	377.3	66.8	359.5	73.7	335.8	82.4	307.5	93.1	276.6	105.8	261.0	111.9	
	10	401.0	62.1	387.1	67.2	368.7	73.8	344.6	82.3	316.2	92.9	285.2	105.7	270.3	111.8	
	11	411.6	62.9	396.9	67.7	378.0	73.9	353.5	82.3	324.9	92.9	293.7	105.7	279.4	111.8	
	12	422.5	63.6	407.1	68.1	387.5	74.2	362.5	82.4	333.5	93.0	302.0	105.9	288.2	111.9	
	13	434.1	64.1	417.7	68.6	397.2	74.5	371.6	82.6	342.0	93.2	310.0	106.1	296.4	112.1	
	14	448.2	64.5	428.9	68.9	407.2	74.8	380.6	83.0	350.1	93.6	317.5	106.4	304.0	112.2	
	15	460.6	64.5	440.8	69.2	417.3	75.2	389.3	83.5	357.8	94.0	324.3	106.9	310.6	112.3	
	16	476.1	64.2	453.5	69.2	427.5	75.7	397.6	84.1	364.7	94.7	330.2	107.3	316.2	112.4	
	17	493.3	63.4	467.0	69.1	437.7	76.1	405.4	84.8	371.0	95.4	335.3	107.9	320.9	112.4	
	18	513.7	62.1	481.6	68.7	448.0	76.5	412.7	85.7	376.4	96.4	339.9	108.6	325.1	112.4	
	WQL 1204	5	391.6	68.0	372.3	73.5	350.1	80.9	324.4	90.5	296.1	102.4	266.5	116.9	248.9	126.1
		6	405.5	68.1	387.3	73.8	365.5	81.3	338.8	90.9	308.8	103.0	277.2	117.4	258.1	126.3
		7	419.1	68.3	401.7	74.1	<b>379.9</b>	<b>81.6</b>	352.5	91.3	321.1	103.3	287.8	117.8	267.6	126.5
		8	432.0	68.8	414.5	74.4	392.4	81.8	364.4	91.4	332.3	103.4	298.0	117.9	277.6	126.5
9		444.4	69.5	426.1	74.8	403.4	81.9	375.0	91.3	342.5	103.3	307.9	117.9	287.9	126.4	
10		456.2	70.2	437.0	75.2	413.7	82.0	385.0	91.2	352.3	103.2	317.6	117.8	298.2	126.3	
11		467.8	71.1	447.9	75.7	424.2	82.2	395.1	91.3	362.2	103.2	327.1	117.8	308.2	126.3	
12		479.4	71.8	459.1	76.2	434.9	82.5	405.5	91.4	372.1	103.3	336.2	118.0	317.5	126.3	
13		491.3	72.4	470.6	76.7	446.0	82.9	416.1	91.8	381.8	103.6	344.8	118.2	326.0	126.4	
14		503.7	72.8	482.5	77.2	457.3	83.4	426.6	92.3	391.2	104.0	352.7	118.4	333.5	126.4	
15		517.1	72.9	495.1	77.6	468.9	84.0	437.0	92.9	400.1	104.5	359.5	118.7	339.7	126.2	
16		531.7	72.6	508.4	77.8	480.7	84.6	447.1	93.7	408.3	105.2	365.1	119.0	344.5	126.0	
17		548.0	71.8	522.6	77.8	492.7	85.3	456.9	94.7	415.6	106.0	369.7	119.2	348.0	125.6	
18		566.5	70.5	537.9	77.6	504.8	86.0	466.1	95.8	422.2	107.0	373.2	119.6	350.6	125.1	

# Performance Data - WQL 524 to 1204 - R410A (continued)

## Heating Capacities - HO Mode

WQL models	Evap. LWT (°C)	Condenser LWT (°C)														
		25		30		35		40		45		50		55		
		P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	
WQL 524	5	182.6	26.7	178.7	29.3	173.8	32.7	167.8	37.0	161.1	42.3	154.2	48.7	151.4	51.3	
	6	187.8	26.8	184.6	29.5	180.0	32.9	173.8	37.1	166.4	42.5	158.7	48.8	155.2	51.4	
	7	193.0	27.1	190.3	29.7	185.9	33.0	179.4	37.3	171.5	42.6	163.0	48.9	159.1	51.5	
	8	198.2	27.4	195.4	29.9	190.9	33.1	184.2	37.3	176.0	42.6	167.2	48.9	163.1	51.4	
	9	203.3	27.8	200.1	30.1	195.3	33.1	188.4	37.3	180.0	42.5	171.1	48.9	167.3	51.4	
	10	208.4	28.2	204.7	30.3	199.5	33.2	192.3	37.2	183.8	42.4	175.0	48.8	171.5	51.3	
	11	213.6	28.7	209.4	30.6	203.7	33.3	196.3	37.2	187.7	42.3	178.8	48.8	175.6	51.2	
	12	219.0	29.1	214.2	30.8	208.1	33.4	200.3	37.2	191.6	42.3	182.7	48.7	179.6	51.2	
	13	224.6	29.5	219.2	31.1	212.6	33.6	204.5	37.3	195.5	42.3	186.4	48.7	183.4	51.1	
	14	230.6	29.8	224.5	31.3	217.3	33.7	208.7	37.4	199.3	42.4	189.9	48.7	186.8	51.0	
	15	237.1	30.0	230.1	31.5	222.1	33.9	212.9	37.6	203.0	42.5	193.1	48.7	189.8	50.9	
	16	244.1	30.0	236.0	31.6	227.0	34.2	216.9	37.8	206.4	42.6	195.8	48.7	192.2	50.7	
	17	251.9	29.7	242.2	31.6	231.9	34.3	220.9	38.0	209.5	42.8	198.3	48.7	194.2	50.4	
	18	260.7	29.3	248.9	31.5	236.9	34.5	224.6	38.4	212.3	43.1	200.4	48.7	195.8	50.1	
	WQL 604	5	215.9	31.6	211.6	35.5	206.2	39.8	199.6	44.8	192.1	50.6	184.4	57.0	181.2	59.6
		6	221.7	31.6	218.4	35.6	213.5	40.0	206.7	45.1	198.5	50.9	189.6	57.2	185.6	59.7
		7	227.5	31.6	224.9	35.7	220.4	40.2	213.3	45.3	204.5	51.0	194.7	57.4	190.1	59.8
		8	233.1	31.6	230.7	35.8	226.2	40.2	218.9	45.4	209.8	51.1	199.6	57.4	194.9	59.8
9		238.7	31.8	236.0	35.8	231.2	40.3	223.8	45.3	214.5	51.0	204.2	57.4	199.7	59.8	
10		244.2	31.9	241.1	35.9	235.9	40.2	228.3	45.2	218.9	51.0	208.7	57.3	204.6	59.8	
11		249.8	32.1	246.3	36.0	240.7	40.2	232.9	45.2	223.4	50.9	213.2	57.4	209.5	59.9	
12		255.6	32.2	251.6	36.1	245.7	40.3	237.5	45.2	227.9	51.0	217.6	57.5	214.1	60.0	
13		261.7	32.2	257.2	36.1	250.7	40.3	242.3	45.3	232.4	51.0	221.8	57.6	218.5	60.1	
14		268.1	32.1	262.9	36.0	256.0	40.3	247.0	45.4	236.8	51.2	225.8	57.8	222.4	60.2	
15		275.1	31.8	269.0	35.9	261.2	40.4	251.7	45.5	240.8	51.4	229.5	58.1	225.9	60.4	
16		282.7	31.3	275.4	35.7	266.6	40.4	256.2	45.7	244.7	51.7	232.7	58.4	228.7	60.5	
17		291.3	30.6	282.2	35.4	271.9	40.4	260.5	46.0	248.2	52.1	235.6	58.8	231.0	60.6	
18		300.9	29.6	289.4	34.8	277.3	40.4	264.5	46.3	251.4	52.6	238.3	59.1	232.9	60.9	
WQL 704		5	250.2	37.5	243.7	41.0	236.5	45.5	228.5	51.2	220.2	58.4	212.3	67.0	209.2	70.1
		6	256.8	37.7	251.5	41.2	244.9	45.7	236.7	51.4	227.5	58.6	218.3	67.2	214.2	70.2
		7	263.4	37.9	259.0	41.3	252.8	45.8	244.4	51.6	234.5	58.7	224.3	67.3	219.5	70.2
		8	270.1	38.2	265.8	41.5	259.7	45.9	250.9	51.6	240.6	58.7	229.9	67.3	225.0	70.1
	9	276.8	38.7	272.1	41.8	265.5	45.9	256.6	51.5	246.1	58.5	235.4	67.2	230.7	70.0	
	10	283.7	39.2	278.2	42.0	271.1	45.9	261.8	51.4	251.3	58.4	240.7	67.1	236.4	69.9	
	11	290.8	39.7	284.6	42.3	276.8	46.0	267.2	51.3	256.5	58.3	245.9	67.1	242.1	69.9	
	12	298.4	40.2	291.3	42.6	282.8	46.2	272.6	51.4	261.7	58.4	251.2	67.2	247.7	70.0	
	13	306.4	40.5	298.3	42.9	288.9	46.4	278.2	51.5	267.0	58.5	256.3	67.3	252.9	70.0	
	14	315.2	40.8	305.7	43.1	295.3	46.6	283.7	51.8	272.0	58.7	261.2	67.5	257.6	70.1	
	15	324.8	40.8	313.6	43.3	301.8	46.9	289.2	52.1	276.8	59.1	265.7	67.8	261.8	70.2	
	16	335.5	40.6	322.1	43.4	308.4	47.2	294.5	52.5	281.2	59.5	269.8	68.0	265.1	70.5	
	17	347.4	40.1	331.1	43.3	315.1	47.5	299.6	53.1	285.3	60.1	273.4	68.3	267.9	70.8	
	18	360.8	39.3	340.7	43.1	321.8	47.9	304.4	53.8	289.1	60.9	276.8	68.7	270.4	71.2	
	WQL 804	5	279.8	41.7	271.6	45.8	262.8	50.7	253.4	56.9	244.1	64.6	235.5	74.1	231.9	78.1
		6	287.9	41.9	280.8	46.0	272.6	51.0	262.8	57.2	252.4	64.9	242.4	74.4	237.7	78.2
		7	296.0	42.1	289.6	46.2	281.8	51.2	271.6	57.4	260.3	65.1	249.2	74.6	243.6	78.3
		8	304.0	42.4	297.7	46.5	289.7	51.3	279.2	57.5	267.3	65.1	255.6	74.6	249.8	78.2
9		311.9	42.9	305.1	46.7	296.6	51.4	285.8	57.4	273.6	65.0	261.7	74.6	256.2	78.2	
10		319.8	43.4	312.3	47.0	303.1	51.5	291.9	57.3	279.7	64.9	267.7	74.5	262.6	78.1	
11		327.8	43.9	319.5	47.3	309.8	51.6	298.2	57.3	285.7	64.9	273.6	74.5	269.0	78.1	
12		336.1	44.4	327.1	47.6	316.7	51.7	304.6	57.4	291.8	65.0	279.5	74.6	275.1	78.2	
13		344.8	44.7	335.0	47.9	323.8	51.9	311.1	57.5	297.9	65.1	285.2	74.7	280.9	78.3	
14		354.0	45.0	343.1	48.1	331.1	52.1	317.7	57.7	303.8	65.3	290.6	74.9	286.1	78.3	
15		363.9	45.0	351.7	48.2	338.5	52.3	324.1	58.0	309.4	65.6	295.5	75.1	290.7	78.4	
16		374.7	44.7	360.8	48.2	346.1	52.6	330.4	58.4	314.7	65.9	299.7	75.4	294.4	78.4	
17		386.7	44.2	370.3	48.1	353.5	52.8	336.4	58.8	319.5	66.4	303.5	75.8	297.5	78.3	
18		400.0	43.2	380.5	47.7	361.2	53.0	342.2	59.4	323.9	67.0	306.9	76.2	300.2	78.3	

# Performance Data - WQL 524 to 1204 - R410A (continued)

## Heating Capacities - HO Mode

WQL models	Evap. LWT (°C)	Condenser LWT (°C)														
		25		30		35		40		45		50		55		
		P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	
WQL 904	5	317.5	47.7	309.1	51.9	299.7	57.3	289.1	64.3	278.0	72.8	267.2	83.0	262.2	88.0	
	6	326.2	47.8	319.3	52.2	310.7	57.7	299.7	64.6	287.4	73.2	274.9	83.4	268.6	88.1	
	7	335.0	48.1	329.2	52.4	<b>321.0</b>	<b>57.9</b>	309.7	64.9	296.3	73.5	282.5	83.6	275.3	88.2	
	8	343.8	48.4	338.1	52.6	329.9	58.0	318.2	64.9	304.2	73.5	289.6	83.6	282.2	88.1	
	9	352.4	48.9	346.3	52.9	337.6	58.1	325.5	64.9	311.2	73.4	296.4	83.6	289.4	88.0	
	10	361.1	49.5	354.2	53.2	344.8	58.1	332.3	64.8	317.9	73.2	303.1	83.5	296.6	87.9	
	11	370.0	50.0	362.3	53.5	352.1	58.2	339.2	64.8	324.6	73.2	309.7	83.5	303.8	87.9	
	12	379.2	50.5	370.6	53.8	359.7	58.4	346.2	64.8	331.3	73.3	316.3	83.6	310.7	88.0	
	13	388.9	50.8	379.2	54.0	367.4	58.6	353.2	65.0	337.8	73.4	322.6	83.8	317.1	88.1	
	14	399.2	51.0	388.2	54.3	375.3	58.8	360.2	65.2	344.2	73.7	328.5	84.1	323.0	88.1	
	15	410.3	50.9	397.6	54.3	383.2	59.1	367.0	65.6	350.1	74.0	333.9	84.4	328.1	88.2	
	16	422.5	50.5	407.5	54.3	391.2	59.3	373.5	66.0	355.6	74.5	338.7	84.7	332.3	88.2	
	17	436.0	49.7	418.0	54.1	399.1	59.6	379.6	66.5	360.6	75.1	342.9	85.1	335.8	88.2	
	18	451.1	48.5	429.0	53.6	406.9	59.8	385.4	67.2	365.1	75.8	346.6	85.7	338.8	88.2	
	WQL 1004	5	355.8	53.3	344.8	57.7	333.2	63.4	320.8	70.9	308.5	80.2	297.2	91.5	291.5	98.1
		6	366.3	53.6	356.4	58.0	345.2	63.8	332.2	71.2	318.5	80.6	305.7	91.8	298.5	98.2
		7	376.7	54.0	367.5	58.3	<b>356.4</b>	<b>64.1</b>	342.9	71.5	328.2	80.8	314.0	92.1	305.8	98.2
		8	386.7	54.6	377.4	58.7	366.1	64.2	352.0	71.6	336.7	80.8	321.9	92.1	313.3	98.2
9		396.5	55.3	386.4	59.1	374.5	64.3	360.0	71.5	344.4	80.7	329.3	92.0	321.1	98.0	
10		406.1	56.0	395.0	59.4	382.4	64.4	367.5	71.4	351.8	80.6	336.6	91.9	328.9	97.9	
11		415.5	56.7	403.7	59.8	390.5	64.6	375.3	71.4	359.3	80.5	343.9	91.9	336.5	97.8	
12		425.1	57.2	412.7	60.2	398.9	64.8	383.3	71.5	366.9	80.6	351.1	91.9	343.9	97.8	
13		434.8	57.6	421.9	60.5	407.6	65.0	391.5	71.8	374.6	80.8	358.0	92.1	350.5	97.8	
14		446.2	57.7	431.4	60.8	416.6	65.4	399.9	72.1	382.1	81.1	364.4	92.2	356.9	97.8	
15		455.6	57.4	441.5	60.8	425.9	65.7	408.2	72.6	389.4	81.6	370.3	92.5	362.1	97.7	
16		467.1	56.8	451.9	60.7	435.3	66.0	416.5	73.2	396.2	82.1	375.3	92.8	366.3	97.6	
17		479.4	55.6	463.0	60.4	444.8	66.4	424.5	73.9	402.6	82.9	379.6	93.1	369.6	97.4	
18		493.7	53.9	474.7	59.8	454.4	66.7	432.3	74.7	408.6	83.7	383.5	93.5	372.4	97.2	
WQL 1104		5	402.5	59.7	392.4	65.5	381.1	72.7	368.2	81.6	354.7	92.4	341.7	105.1	335.0	111.8
		6	413.9	59.9	405.5	65.8	395.0	73.1	381.6	82.1	366.5	92.8	351.4	105.5	343.1	112.0
		7	425.2	60.2	418.0	66.2	<b>408.0</b>	<b>73.4</b>	394.1	82.4	377.8	93.1	360.9	105.8	351.4	112.0
		8	436.4	60.7	429.3	66.5	419.1	73.6	404.7	82.5	387.7	93.2	370.0	105.8	360.1	112.0
	9	447.4	61.4	439.7	66.8	428.9	73.7	414.0	82.4	396.6	93.1	378.5	105.8	369.2	111.9	
	10	458.5	62.1	449.7	67.2	438.0	73.8	422.6	82.3	405.0	92.9	387.0	105.7	378.3	111.8	
	11	469.7	62.9	459.9	67.7	447.4	73.9	431.4	82.3	413.6	92.9	395.5	105.7	387.3	111.8	
	12	481.2	63.6	470.5	68.1	457.1	74.2	440.5	82.4	422.2	93.0	403.8	105.9	396.1	111.9	
	13	493.3	64.1	481.4	68.6	467.0	74.5	449.7	82.6	430.8	93.2	412.0	106.1	404.4	112.1	
	14	507.6	64.5	492.8	68.9	477.2	74.8	458.9	83.0	439.3	93.6	419.7	106.4	412.0	112.2	
	15	519.8	64.5	504.8	69.2	487.6	75.2	468.0	83.5	447.3	94.0	426.8	106.9	418.7	112.3	
	16	534.9	64.2	517.5	69.2	498.1	75.7	476.9	84.1	454.8	94.7	433.2	107.3	424.2	112.4	
	17	551.1	63.4	530.8	69.1	508.7	76.1	485.4	84.8	461.7	95.4	438.8	107.9	428.9	112.4	
	18	570.0	62.1	544.8	68.7	519.2	76.5	493.5	85.7	468.1	96.4	444.0	108.6	433.1	112.4	
	WQL 1204	5	455.0	68.0	441.4	73.5	426.7	80.9	410.7	90.5	394.5	102.4	379.5	116.9	371.3	126.1
		6	468.8	68.1	456.5	73.8	442.3	81.3	425.5	90.9	407.6	103.0	390.6	117.4	380.6	126.3
		7	482.5	68.3	471.0	74.1	<b>456.9</b>	<b>81.6</b>	439.3	91.3	420.1	103.3	401.5	117.8	390.2	126.5
		8	495.8	68.8	484.0	74.4	469.5	81.8	451.2	91.4	431.3	103.4	411.8	117.9	400.1	126.5
9		508.7	69.5	495.8	74.8	480.4	81.9	461.6	91.3	441.3	103.3	421.5	117.9	410.2	126.4	
10		521.2	70.2	507.1	75.2	490.7	82.0	471.4	91.2	450.9	103.2	431.1	117.8	420.3	126.3	
11		533.5	71.1	518.3	75.7	501.3	82.2	481.5	91.3	460.7	103.2	440.5	117.8	430.1	126.3	
12		545.7	71.8	530.0	76.2	512.2	82.5	492.0	91.4	470.6	103.3	449.6	118.0	439.4	126.3	
13		558.1	72.4	541.8	76.7	523.6	82.9	502.8	91.8	480.5	103.6	458.3	118.2	447.9	126.4	
14		570.8	72.8	554.1	77.2	535.3	83.4	513.7	92.3	490.2	104.0	466.4	118.4	455.3	126.4	
15		584.1	72.9	566.9	77.6	547.4	84.0	524.6	92.9	499.6	104.5	473.4	118.7	461.3	126.2	
16		598.3	72.6	580.3	77.8	559.7	84.6	535.4	93.7	508.3	105.2	479.2	119.0	465.8	126.0	
17		613.7	71.8	594.4	77.8	572.2	85.3	546.0	94.7	516.4	106.0	484.0	119.2	468.9	125.6	
18		630.6	70.5	609.3	77.6	584.8	86.0	556.3	95.8	523.9	107.0	487.8	119.6	471.0	125.1	

# Performance Data - WQH 524 to 1204 - R410A

## Cooling capacities

WQH models	Evap. LWT (°C)	Condenser LWT (°C)													
		25		30		35		40		45		50		55	
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)
WQH 524	5	154.2	27.4	147.8	30.0	139.7	33.3	129.7	37.6	117.9	42.8	104.9	49.2	99.6	51.8
	6	159.1	27.5	153.3	30.2	145.6	33.6	135.3	37.8	122.9	43.0	109.1	49.3	103.2	51.9
	7	163.9	27.8	158.7	30.4	151.2	33.7	140.7	38.0	127.8	43.2	113.2	49.5	106.9	52.0
	8	168.5	28.1	163.5	30.6	156.0	33.8	145.3	38.0	132.2	43.2	117.3	49.5	110.8	52.0
	9	173.1	28.5	167.8	30.8	160.2	33.9	149.4	38.0	136.1	43.2	121.2	49.5	115.0	52.0
	10	177.5	29.0	172.0	31.1	164.1	34.0	153.2	38.0	139.9	43.1	125.0	49.5	119.1	51.9
	11	182.1	29.5	176.2	31.4	168.1	34.1	157.1	37.9	143.8	43.1	128.8	49.5	123.2	51.9
	12	186.8	29.9	180.6	31.7	172.2	34.3	161.0	38.0	147.6	43.1	132.5	49.5	127.1	51.9
	13	191.8	30.3	185.1	32.0	176.4	34.4	165.0	38.1	151.3	43.1	136.2	49.5	130.8	51.9
	14	197.3	30.6	190.0	32.2	180.7	34.6	168.9	38.3	154.9	43.2	139.5	49.5	134.2	51.9
	15	203.3	30.8	195.1	32.4	185.1	34.8	172.7	38.5	158.3	43.4	142.6	49.6	137.2	51.8
	16	210.1	30.8	200.7	32.5	189.6	35.1	176.4	38.7	161.4	43.5	145.3	49.6	139.7	51.6
	17	217.8	30.6	206.6	32.6	194.1	35.3	179.9	39.0	164.2	43.8	147.6	49.6	141.8	51.4
	18	226.6	30.1	213.1	32.4	198.6	35.5	183.1	39.3	166.7	44.0	149.6	49.6	143.7	51.1
WQH 604	5	180.4	33.2	172.6	36.8	163.4	40.9	152.3	45.7	139.5	51.3	125.8	57.5	120.2	60.2
	6	185.9	33.3	179.0	37.0	170.2	41.2	158.9	46.0	145.4	51.6	130.6	57.8	124.3	60.3
	7	191.4	33.4	185.2	37.2	176.7	41.4	165.0	46.3	151.0	51.8	135.5	58.0	128.6	60.4
	8	196.7	33.6	190.6	37.4	182.2	41.5	170.4	46.4	156.1	51.9	140.1	58.0	133.1	60.5
	9	201.8	33.9	195.6	37.5	187.0	41.6	175.1	46.4	160.6	51.9	144.6	58.0	137.8	60.5
	10	206.9	34.2	200.3	37.8	191.4	41.7	179.4	46.4	165.0	51.8	149.0	58.0	142.5	60.5
	11	212.0	34.6	205.1	38.0	196.0	41.8	183.8	46.4	169.3	51.9	153.2	58.1	147.1	60.6
	12	217.3	34.9	210.1	38.2	200.6	41.9	188.2	46.5	173.5	52.0	157.3	58.2	151.5	60.8
	13	223.0	35.1	215.3	38.3	205.4	42.0	192.7	46.6	177.7	52.1	161.3	58.4	155.5	60.9
	14	229.2	35.1	220.8	38.5	210.3	42.2	197.0	46.8	181.6	52.3	164.9	58.7	159.2	61.1
	15	236.0	35.0	226.6	38.5	215.2	42.4	201.3	47.1	185.3	52.6	168.1	59.0	162.3	61.3
	16	243.6	34.7	232.8	38.4	220.2	42.5	205.3	47.4	188.6	53.0	170.8	59.3	164.8	61.5
	17	252.4	34.1	239.5	38.2	225.2	42.6	209.1	47.7	191.5	53.5	173.1	59.8	166.8	61.7
	18	262.4	33.2	246.8	37.8	230.2	42.8	212.5	48.2	194.0	54.0	175.1	60.3	168.4	61.9
WQH 704	5	210.5	38.2	200.8	41.7	189.5	46.2	176.1	51.9	161.0	59.0	144.7	67.5	138.6	70.6
	6	216.7	38.4	208.2	41.9	197.6	46.4	184.0	52.1	168.0	59.2	150.5	67.8	143.5	70.7
	7	223.0	38.7	215.4	42.1	205.2	46.6	191.4	52.3	174.7	59.4	156.2	67.9	148.7	70.8
	8	229.1	39.0	221.9	42.4	211.8	46.7	197.8	52.3	180.8	59.3	161.8	67.9	154.1	70.7
	9	235.1	39.5	227.8	42.6	217.5	46.7	203.3	52.2	186.2	59.3	167.2	67.8	159.8	70.7
	10	241.3	40.0	233.4	42.9	222.8	46.8	208.6	52.2	191.4	59.1	172.4	67.8	165.5	70.6
	11	247.6	40.6	239.3	43.2	228.2	46.9	213.7	52.2	196.6	59.1	177.7	67.7	171.1	70.6
	12	254.2	41.1	245.3	43.5	233.8	47.1	219.1	52.2	201.6	59.2	182.7	67.9	176.5	70.7
	13	261.5	41.5	251.7	43.9	239.5	47.3	224.3	52.4	206.7	59.3	187.6	68.0	181.5	70.8
	14	269.4	41.8	258.5	44.1	245.4	47.6	229.4	52.7	211.4	59.6	192.2	68.3	186.1	71.0
	15	278.2	41.9	265.7	44.4	251.3	47.9	234.3	53.1	215.7	60.0	196.3	68.6	190.1	71.1
	16	288.2	41.8	273.5	44.5	257.3	48.3	239.0	53.5	219.6	60.4	200.1	68.9	193.0	71.4
	17	299.6	41.4	281.9	44.5	263.2	48.7	243.3	54.2	223.0	61.1	203.4	69.2	195.5	71.7
	18	312.7	40.6	291.0	44.4	269.1	49.1	247.3	54.9	226.0	61.8	206.4	69.6	197.7	72.1
WQH 804	5	232.5	43.1	221.2	47.0	208.4	51.7	193.7	57.8	177.2	65.4	159.7	74.9	152.3	78.9
	6	240.0	43.2	229.8	47.2	217.5	52.1	202.4	58.2	185.0	65.8	166.1	75.3	157.8	79.1
	7	247.4	43.5	238.1	47.5	226.2	52.3	210.7	58.5	192.4	66.1	172.5	75.5	163.5	79.2
	8	254.7	43.9	245.5	47.8	233.6	52.6	217.9	58.6	199.1	66.2	178.7	75.6	169.5	79.3
	9	261.7	44.5	252.3	48.1	240.1	52.7	224.2	58.6	205.3	66.2	184.6	75.6	175.7	79.2
	10	268.7	45.1	258.8	48.5	246.2	52.8	230.1	58.6	211.2	66.1	190.4	75.6	181.9	79.3
	11	275.7	45.7	265.3	48.8	252.5	53.0	236.1	58.6	217.0	66.1	196.1	75.7	188.0	79.3
	12	283.0	46.3	272.1	49.2	258.8	53.2	242.1	58.7	222.8	66.2	201.7	75.8	193.9	79.4
	13	290.7	46.7	279.3	49.6	265.4	53.4	248.2	58.9	228.5	66.4	207.0	76.0	199.3	79.6
	14	299.1	47.0	286.7	49.9	272.0	53.7	254.2	59.2	233.8	66.7	211.9	76.2	204.2	79.7
	15	308.4	47.1	294.6	50.1	278.7	54.0	260.0	59.6	238.9	67.0	216.3	76.6	208.4	79.8
	16	318.7	47.0	303.1	50.2	285.6	54.3	265.5	60.0	243.4	67.5	220.1	76.9	211.9	79.9
	17	330.4	46.5	312.2	50.1	292.4	54.7	270.8	60.5	247.5	68.0	223.3	77.3	214.8	80.0
	18	343.9	45.5	322.0	49.8	299.3	54.9	275.6	61.2	251.0	68.7	226.0	77.8	217.3	80.0

# Performance Data - WQH 524 to 1204 - R410A (continued)

## Cooling capacities

WQH models	Evap. LWT (°C)	Condenser LWT (°C)													
		25		30		35		40		45		50		55	
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)
WQH 904	5	270.1	48.3	257.7	52.5	243.1	57.9	225.8	64.8	206.3	73.3	185.4	83.5	175.5	88.5
	6	278.6	48.5	267.7	52.8	253.7	58.3	236.0	65.2	215.3	73.7	192.8	83.8	181.7	88.6
	7	287.1	48.7	277.2	53.0	<b>263.7</b>	<b>58.5</b>	245.7	65.5	223.9	74.0	200.1	84.1	188.3	88.7
	8	295.4	49.1	285.8	53.3	272.5	58.7	254.0	65.5	231.7	74.0	207.1	84.1	195.3	88.6
	9	303.5	49.6	293.6	53.6	280.0	58.8	261.3	65.5	238.8	73.9	214.0	84.1	202.5	88.6
	10	311.6	50.2	301.2	53.9	287.1	58.8	268.2	65.4	245.5	73.9	220.7	84.1	209.8	88.5
	11	319.8	50.8	308.8	54.3	294.2	59.0	275.0	65.4	252.2	73.8	227.3	84.1	216.9	88.5
	12	328.4	51.3	316.7	54.6	301.5	59.2	281.8	65.5	258.7	73.9	233.6	84.2	223.7	88.6
	13	337.5	51.7	324.9	54.9	308.9	59.4	288.6	65.7	265.2	74.1	239.3	84.4	230.1	88.7
	14	347.4	52.0	333.5	55.2	316.4	59.7	295.3	66.0	271.2	74.4	245.4	84.7	235.8	88.8
	15	358.3	51.9	342.6	55.3	324.0	59.9	301.7	66.4	276.8	74.7	250.5	85.0	240.8	88.9
	16	370.6	51.6	352.3	55.3	331.5	60.2	307.7	66.9	281.7	75.3	254.8	85.4	245.0	89.0
	17	384.5	50.9	362.7	55.2	339.0	60.6	313.2	67.4	286.1	75.9	258.6	85.9	248.4	89.0
	18	400.4	49.7	373.9	54.8	346.5	60.8	318.2	68.1	289.8	76.6	261.8	86.4	251.4	89.0
WQH 1004	5	301.5	54.1	286.6	58.5	269.7	64.3	250.2	71.8	228.9	81.1	206.6	92.4	194.8	98.6
	6	311.4	54.4	297.7	58.9	281.2	64.7	261.1	72.2	238.5	81.5	214.6	92.8	201.7	98.8
	7	321.2	54.9	308.2	59.3	<b>292.0</b>	<b>65.0</b>	271.4	72.5	247.8	81.8	222.7	93.0	208.9	98.9
	8	330.4	55.5	317.6	59.6	301.4	65.2	280.4	72.6	256.2	81.8	230.4	93.1	216.5	98.8
	9	339.3	56.2	326.1	60.0	309.5	65.3	288.4	72.5	264.0	81.7	237.9	93.0	224.3	98.7
	10	348.0	56.9	334.2	60.5	317.2	65.5	295.8	72.5	271.3	81.6	245.2	92.9	232.2	98.6
	11	356.7	57.7	342.4	60.9	325.0	65.7	303.4	72.5	278.7	81.6	252.4	92.9	239.8	98.6
	12	365.5	58.3	350.8	61.3	333.1	65.9	311.2	72.6	286.2	81.7	259.4	93.0	247.1	98.6
	13	374.8	58.8	359.6	61.7	341.4	66.2	319.0	72.9	293.5	81.9	266.0	93.2	253.9	98.6
	14	384.7	59.0	368.9	62.0	350.0	66.6	326.9	73.3	300.5	82.3	272.1	93.4	259.9	98.6
	15	395.7	58.9	378.7	62.2	358.7	67.0	334.6	73.8	307.2	82.7	277.6	93.6	265.1	98.6
	16	408.0	58.3	389.3	62.2	367.6	67.4	342.1	74.4	313.2	83.3	282.1	93.9	269.2	98.5
	17	422.0	57.3	400.6	62.0	376.7	67.9	349.2	75.2	318.7	84.1	285.9	94.3	272.5	98.3
	18	437.9	55.8	413.0	61.6	385.8	68.4	356.0	76.2	323.5	85.0	289.0	94.6	275.3	98.1
WQH 1104	5	340.1	61.1	324.8	66.8	306.9	73.9	285.7	82.7	261.9	93.3	236.6	105.9	223.3	112.6
	6	351.0	61.3	337.3	67.2	320.1	74.3	298.4	83.2	273.1	93.8	245.8	106.3	231.1	112.8
	7	361.7	61.7	349.2	67.5	<b>332.6</b>	<b>74.7</b>	310.4	83.5	283.9	94.1	254.9	106.6	239.2	113.0
	8	372.0	62.3	360.0	67.9	343.3	74.9	320.7	83.6	293.6	94.2	263.7	106.8	247.8	113.0
	9	382.1	63.0	369.7	68.4	352.7	75.1	329.8	83.6	302.4	94.2	272.2	106.7	256.8	112.9
	10	392.2	63.8	379.0	68.8	361.5	75.2	338.3	83.6	310.8	94.1	280.6	106.7	265.8	112.9
	11	402.3	64.7	388.5	69.4	370.4	75.4	346.9	83.6	319.2	94.1	288.8	106.8	274.7	113.0
	12	412.8	65.5	398.2	69.9	379.6	75.7	355.6	83.8	327.5	94.2	296.9	107.0	283.1	113.1
	13	423.9	66.1	408.4	70.4	389.0	76.1	364.3	84.1	335.7	94.5	304.6	107.3	291.1	113.3
	14	435.9	66.6	419.6	70.9	398.5	76.5	372.9	84.5	343.6	94.9	311.8	107.7	298.4	113.5
	15	449.2	66.7	430.6	71.1	408.2	77.0	381.3	85.1	350.8	95.5	318.3	108.1	304.7	113.7
	16	464.0	66.5	442.6	71.3	418.0	77.5	389.2	85.8	357.5	96.2	324.0	108.7	310.1	113.8
	17	480.9	65.8	455.6	71.3	427.7	78.1	396.7	86.6	363.4	97.0	328.9	109.3	314.6	113.9
	18	500.1	64.5	469.6	71.0	437.6	78.6	403.7	87.6	368.7	98.1	333.2	110.1	318.6	114.0
WQH 1204	5	381.7	69.8	363.6	75.4	342.6	82.7	318.0	92.2	290.6	104.2	261.8	118.5	244.9	127.5
	6	394.7	70.0	378.0	75.7	357.4	83.2	331.9	92.8	303.0	104.7	272.2	119.1	253.8	127.8
	7	407.4	70.3	391.6	76.1	<b>371.2</b>	<b>83.6</b>	345.1	93.2	314.8	105.2	282.5	119.6	263.1	128.0
	8	419.5	70.9	403.6	76.5	383.2	83.9	356.6	93.4	325.6	105.3	292.4	119.7	272.9	128.1
	9	431.1	71.7	414.6	77.0	393.6	84.0	366.6	93.4	335.4	105.3	302.0	119.8	282.9	128.1
	10	442.3	72.6	425.0	77.5	403.4	84.2	376.2	93.4	344.8	105.3	311.3	119.8	292.8	128.1
	11	453.4	73.5	435.3	78.1	413.3	84.5	385.9	93.5	354.3	105.3	320.4	119.9	302.4	128.2
	12	464.6	74.4	446.1	78.8	423.6	84.9	395.7	93.8	363.7	105.5	329.2	120.1	311.4	128.3
	13	476.3	75.2	457.2	79.4	434.2	85.4	405.8	94.2	372.9	105.9	337.4	120.4	319.5	128.4
	14	488.6	75.7	468.9	80.0	445.1	86.0	415.7	94.7	381.8	106.3	344.7	120.7	326.6	128.5
	15	502.2	76.0	481.3	80.5	456.3	86.7	425.5	95.5	390.1	106.9	351.0	121.0	332.3	128.4
	16	517.3	75.8	494.5	80.8	467.6	87.4	435.1	96.3	397.5	107.7	356.0	121.3	336.5	128.2
	17	534.4	75.2	508.8	81.0	479.2	88.2	444.2	97.4	404.1	108.6	359.8	121.6	339.4	127.9
	18	553.9	73.9	524.4	80.8	491.0	89.0	452.7	98.6	409.8	109.6	362.6	121.9	341.3	127.4

# Performance Data - WQH 524 to 1204 - R410A (continued)

## Heating capacities

WQH models	Evap. LWT (°C)	Condenser LWT (°C)														
		25		30		35		40		45		50		55		
		P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	
WQH 524	5	179.8	26.8	175.3	29.5	171.4	32.6	168.2	36.2	163.1	40.8	155.0	47.3	149.5	51.5	
	6	184.7	27.0	181.1	29.7	177.5	32.9	173.6	36.3	167.6	40.9	158.8	47.4	153.1	51.6	
	7	189.7	27.2	186.7	29.9	183.2	33.0	178.9	36.4	<b>172.1</b>	<b>40.9</b>	162.8	47.5	156.9	51.7	
	8	194.7	27.6	191.6	30.1	188.1	33.1	183.6	36.5	176.6	40.9	166.9	47.5	160.8	51.7	
	9	199.6	28.0	196.1	30.4	192.3	33.2	187.9	36.4	181.0	40.9	171.1	47.5	164.8	51.6	
	10	204.5	28.4	200.4	30.6	196.3	33.3	192.0	36.5	185.4	40.9	175.3	47.5	168.9	51.6	
	11	209.4	28.9	204.7	30.9	200.3	33.4	196.3	36.5	189.8	40.9	179.5	47.5	172.9	51.6	
	12	214.6	29.3	209.2	31.2	204.6	33.5	200.6	36.5	194.2	40.9	183.6	47.5	176.7	51.6	
	13	219.9	29.7	213.9	31.4	208.9	33.7	205.0	36.6	198.5	40.9	187.6	47.5	180.4	51.6	
	14	225.6	30.0	218.9	31.7	213.4	33.9	209.3	36.7	202.7	40.9	191.3	47.5	183.7	51.6	
	15	231.7	30.2	224.1	31.9	218.0	34.1	213.6	36.8	206.7	40.9	194.7	47.4	186.5	51.4	
	16	238.4	30.2	229.6	32.1	222.6	34.3	217.8	37.0	210.4	40.9	197.8	47.3	188.8	51.2	
	17	245.8	30.0	235.4	32.1	227.3	34.5	221.9	37.1	214.0	40.8	200.5	47.0	190.8	50.9	
	18	253.9	29.6	241.5	32.1	232.0	34.7	225.9	37.2	217.4	40.8	203.0	46.7	192.5	50.5	
	WQH 604	5	210.6	33.0	205.8	36.7	201.6	40.6	198.3	44.6	192.9	49.5	183.9	56.2	178.0	60.2
		6	216.1	33.0	212.4	36.9	208.6	40.8	204.6	44.8	198.1	49.6	188.3	56.3	182.2	60.3
		7	221.6	33.2	218.7	37.1	215.2	41.1	210.7	45.0	<b>203.4</b>	<b>49.7</b>	192.9	56.4	186.5	60.4
		8	227.1	33.4	224.2	37.3	220.8	41.2	216.1	45.1	208.5	49.8	197.6	56.4	191.0	60.5
9		232.4	33.7	229.2	37.4	225.5	41.3	221.1	45.1	213.5	49.8	202.4	56.4	195.6	60.5	
10		237.7	34.0	233.9	37.6	230.0	41.3	225.8	45.1	218.6	49.9	207.2	56.5	200.3	60.5	
11		243.1	34.3	238.7	37.8	234.6	41.4	230.6	45.2	223.6	49.9	212.0	56.6	204.8	60.6	
12		248.7	34.6	243.7	38.0	239.3	41.6	235.5	45.3	228.6	50.0	216.6	56.7	209.2	60.8	
13		254.4	34.8	248.8	38.2	244.1	41.7	240.4	45.4	233.5	50.1	221.1	56.9	213.3	61.0	
14		260.5	34.8	254.2	38.3	249.0	41.8	245.2	45.5	238.2	50.2	225.3	57.1	217.1	61.2	
15		267.1	34.7	259.8	38.4	254.1	42.0	250.0	45.6	242.7	50.3	229.2	57.2	220.3	61.3	
16		274.2	34.4	265.8	38.3	259.1	42.1	254.6	45.8	246.8	50.4	232.5	57.3	223.0	61.4	
17		282.2	33.9	272.0	38.2	264.2	42.3	259.1	46.0	250.7	50.5	235.6	57.4	225.3	61.4	
18		291.1	33.1	278.6	37.9	269.2	42.4	263.4	46.2	254.5	50.6	238.5	57.5	227.3	61.5	
WQH 704		5	245.6	37.5	238.4	41.1	232.6	45.2	228.3	50.0	222.1	56.2	212.4	65.1	206.0	69.8
		6	251.9	37.7	246.1	41.3	240.9	45.4	235.8	50.1	228.3	56.2	217.7	65.1	211.0	69.9
		7	258.4	37.9	253.5	41.5	248.6	45.6	242.9	50.2	<b>234.6</b>	<b>56.3</b>	223.1	65.2	216.1	69.9
		8	264.8	38.3	260.1	41.7	255.2	45.7	249.4	50.2	240.6	56.2	228.7	65.2	221.4	69.9
	9	271.2	38.7	266.0	42.0	260.9	45.8	255.2	50.2	246.6	56.2	234.4	65.1	226.9	69.8	
	10	277.7	39.2	271.7	42.2	266.2	45.8	260.8	50.1	252.5	56.2	240.2	65.1	232.5	69.8	
	11	284.5	39.7	277.7	42.5	271.7	45.9	266.5	50.2	258.5	56.2	245.9	65.2	238.0	69.8	
	12	291.5	40.2	283.8	42.8	277.4	46.1	272.3	50.2	264.5	56.2	251.6	65.3	243.4	69.9	
	13	299.1	40.6	290.3	43.1	283.3	46.3	278.2	50.4	270.3	56.3	257.1	65.4	248.4	70.0	
	14	307.1	40.9	297.1	43.4	289.3	46.6	284.0	50.6	276.0	56.5	262.3	65.5	253.0	70.1	
	15	316.0	41.0	304.4	43.7	295.4	46.9	289.6	50.8	281.3	56.6	267.2	65.7	257.1	70.2	
	16	325.6	40.9	312.1	43.8	301.7	47.2	295.1	51.1	286.2	56.8	271.5	65.8	260.6	70.2	
	17	336.3	40.6	320.2	43.9	308.0	47.6	300.4	51.5	290.9	57.0	275.5	65.8	263.5	70.3	
	18	348.4	39.9	328.9	43.9	314.3	48.0	305.5	51.9	295.4	57.2	279.5	65.7	266.0	70.5	
	WQH 804	5	272.5	42.7	264.1	46.7	257.3	51.3	252.3	56.3	245.6	63.1	235.5	73.0	228.5	78.7
		6	280.1	42.9	273.0	47.0	266.7	51.6	260.7	56.6	252.6	63.2	241.4	73.2	234.0	78.9
		7	287.7	43.2	281.6	47.3	275.5	51.9	268.8	56.8	<b>259.6</b>	<b>63.4</b>	247.5	73.3	239.7	79.0
		8	295.3	43.5	289.2	47.6	283.0	52.1	276.1	56.9	266.4	63.4	253.7	73.4	245.7	79.0
9		302.8	44.1	296.1	47.9	289.6	52.2	282.8	56.9	273.2	63.5	260.1	73.4	251.8	79.0	
10		310.3	44.6	302.7	48.2	295.7	52.3	289.3	56.9	280.0	63.5	266.6	73.5	258.0	79.0	
11		317.9	45.2	309.4	48.6	302.1	52.4	295.8	57.0	286.7	63.6	272.9	73.6	264.1	79.1	
12		325.6	45.8	316.3	49.0	308.6	52.7	302.5	57.1	293.5	63.7	279.2	73.7	269.9	79.3	
13		333.7	46.3	323.6	49.3	315.3	52.9	309.3	57.3	300.2	63.8	285.2	73.9	275.4	79.4	
14		342.3	46.6	331.1	49.6	322.5	53.2	315.9	57.5	306.6	63.9	290.9	74.0	280.4	79.6	
15		351.6	46.7	339.0	49.9	329.2	53.5	322.5	57.7	312.7	64.0	296.0	74.2	284.7	79.6	
16		361.6	46.5	347.3	50.0	336.3	53.8	328.9	58.0	318.3	64.2	300.5	74.2	288.3	79.6	
17		372.7	46.1	356.1	50.0	343.3	54.1	335.1	58.3	323.7	64.2	304.6	74.2	291.4	79.4	
18		384.9	45.3	365.3	49.8	350.5	54.4	341.1	58.6	328.8	64.4	308.5	74.1	294.0	79.3	



# Performance Data - WQH 524 to 1204 - R410A (continued)

## Heating capacities

WQH models	Evap. LWT (°C)	Condenser LWT (°C)														
		25		30		35		40		45		50		55		
		P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>HEAT</sub> (kW)	P <sub>ABS</sub> (kW)	
WQH 904	5	313.8	48.0	304.5	52.5	296.8	57.7	290.7	63.5	282.2	71.1	269.1	81.9	260.5	88.0	
	6	322.4	48.2	314.7	52.8	307.5	58.0	300.4	63.8	290.2	71.3	275.8	82.0	266.8	88.2	
	7	331.0	48.5	324.5	53.1	317.7	58.3	309.7	64.0	<b>298.2</b>	<b>71.4</b>	282.7	82.1	273.4	88.2	
	8	339.5	48.9	333.2	53.4	326.3	58.5	318.1	64.0	306.1	71.4	289.8	82.2	280.2	88.2	
	9	347.9	49.4	341.0	53.6	333.8	58.5	325.8	64.0	313.8	71.4	297.0	82.2	287.3	88.1	
	10	356.4	50.0	348.5	53.9	340.8	58.6	333.1	64.0	321.4	71.4	304.3	82.3	294.4	88.1	
	11	365.1	50.5	356.1	54.3	347.9	58.7	340.5	64.1	329.1	71.4	311.5	82.4	301.4	88.1	
	12	374.0	51.0	364.0	54.6	355.3	58.9	348.0	64.2	336.7	71.5	318.6	82.5	308.1	88.2	
	13	383.3	51.4	372.2	54.9	362.8	59.2	355.4	64.3	344.1	71.6	325.5	82.7	314.4	88.4	
	14	393.2	51.7	380.6	55.2	370.4	59.4	362.8	64.5	351.2	71.8	331.9	82.8	320.2	88.4	
	15	403.7	51.7	389.5	55.4	378.0	59.7	370.0	64.7	357.9	71.9	337.8	82.9	325.3	88.5	
	16	415.3	51.4	398.9	55.4	385.8	60.0	376.8	65.0	364.1	72.0	343.2	82.8	329.2	88.6	
	17	428.0	50.7	408.6	55.4	393.4	60.3	383.4	65.3	369.8	72.1	348.2	82.6	332.4	88.7	
	18	442.2	49.7	418.8	55.1	401.0	60.6	389.7	65.7	375.4	72.2	353.0	82.4	335.3	88.8	
	WQH 1004	5	360.0	53.7	347.5	58.4	337.3	63.9	329.6	70.2	319.6	78.5	305.1	90.4	295.2	97.6
		6	370.4	54.1	359.3	58.8	349.4	64.3	340.3	70.5	328.4	78.7	312.8	90.6	302.4	97.7
		7	380.7	54.5	370.6	59.2	360.7	64.6	350.6	70.7	<b>333.3</b>	<b>79.5</b>	320.6	90.7	309.8	97.8
		8	390.8	55.1	380.5	59.6	370.4	64.8	359.9	70.7	346.1	78.8	328.6	90.8	317.5	97.8
9		400.5	55.7	389.4	59.9	378.9	65.0	368.5	70.7	354.9	78.8	336.8	90.8	325.4	97.7	
10		410.2	56.5	397.8	60.3	386.9	65.1	376.9	70.8	363.6	78.8	345.1	90.8	333.4	97.6	
11		419.8	57.2	406.4	60.8	395.1	65.3	385.5	70.9	372.5	78.8	353.3	90.9	341.2	97.6	
12		429.5	57.8	415.4	61.2	403.6	65.5	394.4	71.0	381.3	79.0	361.2	91.0	348.6	97.6	
13		439.6	58.3	424.6	61.6	412.5	65.9	403.4	71.2	390.2	79.1	368.8	91.1	355.5	97.7	
14		450.1	58.5	434.3	61.9	421.7	66.3	412.5	71.6	398.8	79.3	375.8	91.1	361.8	97.7	
15		461.3	58.4	444.5	62.2	431.1	66.7	421.5	71.9	406.9	79.5	382.1	91.1	367.1	97.5	
16		473.4	58.0	455.2	62.3	440.8	67.1	430.5	72.3	414.7	79.6	387.6	91.0	371.3	97.3	
17		486.8	57.1	466.6	62.2	450.7	67.6	439.3	72.8	422.0	79.8	392.3	90.7	374.7	96.9	
18		501.6	55.7	478.7	61.9	460.6	68.1	448.1	73.4	429.1	80.0	396.9	90.3	377.2	96.7	
WQH 1104		5	397.2	60.8	385.9	66.9	376.7	73.6	369.7	81.0	359.5	90.5	343.5	103.8	332.3	112.0
		6	408.2	61.1	398.9	67.2	390.2	74.1	381.8	81.4	369.5	90.7	351.9	104.0	340.2	112.2
		7	419.2	61.5	411.3	67.7	403.0	74.4	393.4	81.6	<b>379.5</b>	<b>90.8</b>	360.6	104.1	348.4	112.3
		8	430.1	62.0	422.3	68.0	413.8	74.7	403.9	81.7	389.4	90.9	369.5	104.2	357.0	112.3
	9	440.9	62.8	432.2	68.5	423.3	74.8	413.6	81.8	399.1	90.9	378.7	104.3	365.8	112.3	
	10	451.7	63.6	441.7	68.9	432.2	75.0	422.9	81.8	408.8	90.9	387.9	104.4	374.8	112.3	
	11	462.6	64.4	451.3	69.4	441.2	75.2	432.3	81.9	418.5	91.1	397.1	104.6	383.6	112.4	
	12	473.8	65.2	461.3	70.0	450.6	75.5	441.9	82.0	428.3	91.2	406.2	104.8	392.2	112.6	
	13	485.5	65.9	471.7	70.5	460.3	75.9	451.7	82.3	438.0	91.4	415.0	105.0	400.3	112.8	
	14	497.9	66.3	482.6	71.0	470.2	76.3	461.3	82.6	447.3	91.6	423.3	105.3	407.7	112.9	
	15	511.2	66.5	494.0	71.3	480.3	76.8	470.9	83.0	456.2	91.8	430.9	105.5	414.3	113.0	
	16	525.7	66.3	506.0	71.6	490.5	77.3	480.1	83.5	464.6	92.0	437.8	105.5	419.8	113.0	
	17	541.5	65.7	518.6	71.6	500.8	77.8	489.1	84.0	472.5	92.3	444.1	105.6	424.6	112.8	
	18	559.2	64.6	531.9	71.5	511.1	78.3	498.0	84.5	480.2	92.5	450.3	105.5	428.7	112.8	
	WQH 1204	5	446.7	69.3	432.5	75.3	420.7	82.3	411.6	90.3	399.4	100.9	381.5	116.1	368.4	126.6
		6	459.7	69.5	447.2	75.7	435.7	82.8	425.0	90.7	410.6	101.2	391.1	116.4	377.6	126.9
		7	472.6	69.9	461.2	76.1	449.8	83.2	437.8	91.0	<b>421.7</b>	<b>101.4</b>	401.0	116.7	387.0	127.2
		8	485.2	70.5	473.5	76.5	461.9	83.5	449.4	91.1	432.7	101.5	411.2	116.9	396.8	127.2
9		497.4	71.2	484.6	77.0	472.4	83.6	460.1	91.2	443.5	101.6	421.6	117.0	406.7	127.2	
10		509.4	72.1	495.1	77.5	482.2	83.8	470.5	91.3	454.4	101.6	431.9	117.1	416.6	127.3	
11		521.4	73.0	505.8	78.0	492.4	84.1	481.2	91.4	465.4	101.8	442.0	117.3	426.2	127.4	
12		533.4	73.9	516.8	78.7	503.0	84.5	492.1	91.7	476.4	102.0	451.8	117.6	435.2	127.5	
13		545.8	74.6	528.2	79.3	514.0	85.0	503.2	92.1	487.2	102.2	461.0	117.7	443.3	127.7	
14		558.7	75.2	540.2	79.9	525.4	85.6	514.5	92.5	497.6	102.5	469.2	117.8	450.4	127.7	
15		572.4	75.5	552.8	80.5	537.1	86.3	525.7	93.0	507.5	102.7	476.4	117.8	456.1	127.6	
16		587.3	75.4	566.1	80.9	549.1	87.0	536.6	93.6	516.7	102.9	482.2	117.6	460.1	127.2	
17		603.6	74.8	580.2	81.1	561.4	87.7	547.5	94.2	525.3	103.0	486.8	117.2	462.9	126.6	
18		621.8	73.7	595.2	81.2	573.8	88.5	558.1	94.9	533.4	103.2	490.6	116.7	464.6	125.8	

# Performance Data - WQRC 524 to 1204 - R410A

## Cooling capacities

WQRC models	Evap. LWT (°C)	Condensing Temperature (°C)													
		30		35		40		45		50		55		60	
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)
WQRC 524	5	157.0	26.9	150.5	29.6	142.2	32.9	131.9	37.3	119.9	42.6	106.6	49.1	101.2	51.8
	6	162.1	27.1	156.2	29.7	148.3	33.1	137.7	37.5	125.0	42.8	110.9	49.2	104.8	51.8
	7	167.1	27.3	161.8	29.9	154.0	33.3	143.3	37.6	<b>130.0</b>	<b>42.9</b>	115.2	49.3	108.7	51.9
	8	172.0	27.6	166.7	30.1	159.0	33.4	148.1	37.6	134.6	42.9	119.3	49.4	112.8	51.9
	9	176.7	28.0	171.3	30.3	163.4	33.4	152.3	37.6	138.6	42.8	123.4	49.3	117.0	51.8
	10	181.4	28.5	175.6	30.6	167.5	33.5	156.3	37.5	142.6	42.7	127.3	49.2	121.3	51.7
	11	186.2	28.9	180.0	30.8	171.6	33.6	160.3	37.5	146.6	42.7	131.3	49.2	125.6	51.6
	12	191.1	29.4	184.7	31.1	175.9	33.7	164.4	37.5	150.5	42.6	135.1	49.1	129.6	51.6
	13	196.4	29.8	189.4	31.4	180.3	33.8	168.5	37.6	154.4	42.7	138.9	49.1	133.5	51.5
	14	202.1	30.1	194.5	31.6	184.9	34.0	172.6	37.7	158.2	42.7	142.4	49.1	137.0	51.4
	15	208.5	30.2	200.0	31.8	189.5	34.2	176.6	37.9	161.8	42.8	145.6	49.1	140.1	51.3
	16	215.6	30.2	205.7	31.9	194.2	34.4	180.5	38.1	165.0	43.0	148.4	49.1	142.8	51.1
	17	223.6	30.0	212.0	31.9	199.0	34.6	184.2	38.4	168.0	43.2	150.9	49.1	145.0	50.8
	18	232.9	29.5	218.8	31.8	203.7	34.8	187.6	38.7	170.6	43.4	153.1	49.1	147.0	50.5
WQRC 604	5	186.3	31.7	178.1	35.6	168.3	39.9	156.6	44.9	143.4	50.7	129.1	57.1	123.3	59.7
	6	192.2	31.6	184.8	35.7	175.5	40.1	163.5	45.2	149.5	51.0	134.2	57.3	127.6	59.8
	7	198.0	31.6	191.3	35.8	182.2	40.3	170.0	45.4	<b>155.3</b>	<b>51.1</b>	139.2	57.5	132.1	59.9
	8	203.6	31.7	197.1	35.8	188.1	40.3	175.6	45.5	160.6	51.2	144.1	57.5	136.9	59.9
	9	209.1	31.8	202.3	35.9	193.1	40.3	180.6	45.4	165.4	51.1	148.8	57.5	141.8	59.9
	10	214.6	32.0	207.4	36.0	197.9	40.3	185.2	45.3	170.0	51.1	153.3	57.4	146.8	59.9
	11	220.1	32.2	212.5	36.1	202.7	40.3	189.8	45.3	174.6	51.0	157.8	57.5	151.6	60.0
	12	225.8	32.3	217.9	36.1	207.7	40.3	194.6	45.3	179.1	51.1	162.2	57.6	156.2	60.1
	13	231.9	32.3	223.4	36.2	212.8	40.4	199.3	45.4	183.5	51.2	166.3	57.7	160.4	60.2
	14	238.5	32.1	229.3	36.1	218.0	40.4	204.0	45.4	187.8	51.3	170.1	57.9	164.3	60.4
	15	245.8	31.9	235.5	36.0	223.3	40.5	208.5	45.6	191.7	51.5	173.5	58.2	167.6	60.5
	16	254.1	31.4	242.2	35.8	228.7	40.5	212.9	45.8	195.3	51.8	176.5	58.5	170.4	60.6
	17	263.4	30.6	249.4	35.4	234.1	40.5	216.9	46.1	198.4	52.2	179.0	58.9	172.6	60.7
	18	274.1	29.6	257.2	34.9	239.5	40.4	220.7	46.4	201.2	52.7	181.4	59.3	174.2	61.0
WQRC 704	5	214.6	37.7	204.5	41.2	192.9	45.7	179.1	51.5	163.6	58.7	146.9	67.4	140.7	70.5
	6	221.0	37.9	212.2	41.4	201.1	45.9	187.1	51.7	170.7	58.9	152.9	67.6	145.8	70.6
	7	227.5	38.1	219.6	41.6	209.0	46.1	194.7	51.9	<b>177.6</b>	<b>59.0</b>	158.8	67.7	151.1	70.6
	8	233.9	38.4	226.2	41.8	215.8	46.1	201.3	51.9	183.8	59.0	164.5	67.7	156.7	70.5
	9	240.2	38.9	232.4	42.0	221.6	46.2	207.1	51.8	189.5	58.9	170.0	67.6	162.5	70.4
	10	246.6	39.4	238.3	42.2	227.2	46.2	212.5	51.6	194.8	58.7	175.5	67.5	168.4	70.3
	11	253.3	39.9	244.4	42.5	232.9	46.3	217.9	51.6	200.2	58.6	180.8	67.4	174.1	70.3
	12	260.4	40.4	250.9	42.8	238.8	46.4	223.4	51.7	205.4	58.7	186.0	67.5	179.7	70.3
	13	268.2	40.8	257.7	43.1	244.7	46.6	228.8	51.8	210.6	58.8	191.0	67.7	184.8	70.4
	14	276.8	41.0	264.9	43.3	250.9	46.9	234.1	52.1	215.4	59.1	195.8	67.9	189.5	70.5
	15	286.4	41.0	272.7	43.5	257.2	47.2	239.3	52.4	219.9	59.4	200.0	68.1	193.6	70.6
	16	297.3	40.8	281.1	43.6	263.5	47.5	244.2	52.8	223.9	59.9	203.9	68.4	196.7	70.9
	17	309.9	40.3	290.3	43.5	269.9	47.8	248.7	53.4	227.4	60.5	207.3	68.7	199.2	71.2
	18	324.2	39.5	300.1	43.4	276.3	48.2	252.9	54.1	230.4	61.2	210.3	69.1	201.3	71.6
WQRC 804	5	239.3	42.2	226.9	46.4	213.2	51.3	197.8	57.5	180.7	65.3	162.7	74.9	155.1	79.0
	6	247.2	42.4	235.9	46.6	222.8	51.6	206.8	57.8	188.7	65.6	169.3	75.2	160.7	79.1
	7	255.1	42.6	244.6	46.8	231.8	51.8	215.4	58.1	<b>196.5</b>	<b>65.8</b>	175.9	75.4	166.6	79.2
	8	262.8	42.9	252.5	47.0	239.6	51.9	223.0	58.1	203.4	65.9	182.3	75.5	172.9	79.2
	9	270.3	43.4	259.6	47.3	246.5	52.0	229.6	58.1	209.9	65.8	188.5	75.4	179.3	79.1
	10	277.7	43.9	266.6	47.5	252.9	52.1	235.8	58.0	216.0	65.7	194.6	75.3	185.9	79.0
	11	285.3	44.4	273.6	47.8	259.6	52.2	242.2	58.0	222.1	65.7	200.5	75.4	192.2	79.0
	12	293.1	44.9	280.9	48.1	266.3	52.3	248.6	58.1	228.2	65.7	206.3	75.4	198.3	79.1
	13	301.4	45.3	288.5	48.4	273.3	52.5	254.9	58.2	234.2	65.8	211.9	75.6	204.0	79.2
	14	310.4	45.5	296.4	48.7	280.4	52.7	261.4	58.4	239.9	66.0	217.1	75.8	209.2	79.2
	15	320.3	45.5	304.9	48.8	287.6	52.9	267.5	58.7	245.3	66.3	221.8	76.0	213.7	79.3
	16	331.4	45.3	314.0	48.8	294.9	53.2	273.5	59.1	250.2	66.7	225.8	76.3	217.5	79.3
	17	344.0	44.7	323.7	48.6	302.2	53.4	279.1	59.5	254.5	67.2	229.3	76.6	220.6	79.2
	18	358.3	43.7	334.2	48.3	309.6	53.6	284.3	60.0	258.4	67.8	232.2	77.1	223.4	79.2

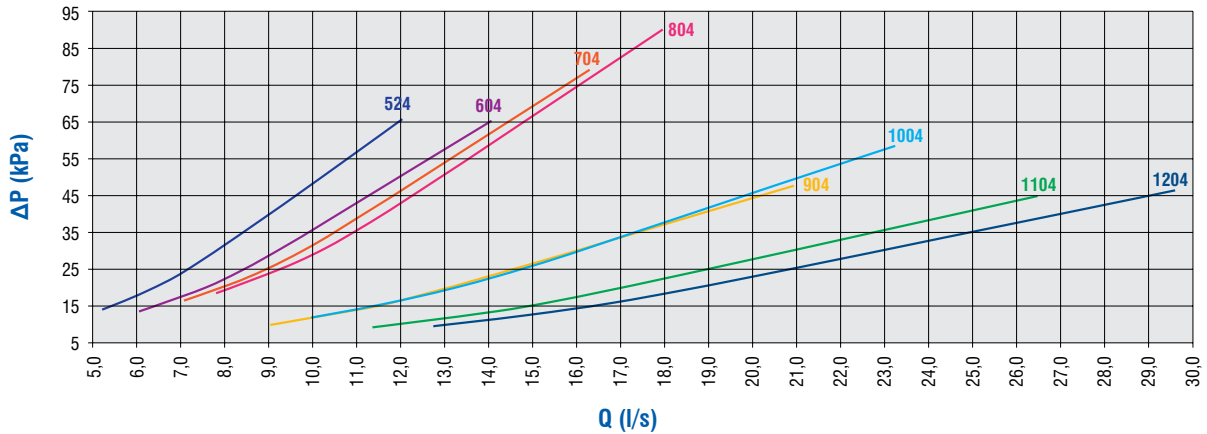
# Performance Data - WQRC 524 to 1204 - R410A (continued)

## Cooling capacities

WQRC models	Evap. LWT (°C)	Condensing Temperature (°C)													
		30		35		40		45		50		55		60	
		P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)	P <sub>COOL</sub> (kW)	P <sub>ABS</sub> (kW)
WQRC 904	5	271.0	48.3	258.4	52.6	243.6	58.1	226.1	65.1	206.5	73.8	185.5	84.1	175.5	89.2
	6	279.6	48.5	268.4	52.8	254.3	58.4	236.4	65.5	215.5	74.2	192.9	84.4	181.9	89.3
	7	288.2	48.7	278.1	53.1	264.4	58.7	246.1	65.7	<b>224.2</b>	<b>74.4</b>	200.3	84.7	188.5	89.3
	8	296.6	49.1	286.8	53.3	273.2	58.8	254.6	65.8	232.1	74.4	207.4	84.7	195.5	89.3
	9	304.8	49.6	294.7	53.6	280.8	58.8	262.0	65.7	239.2	74.3	214.3	84.7	202.8	89.2
	10	313.0	50.1	302.4	53.9	288.0	58.9	268.9	65.6	246.0	74.2	221.0	84.6	210.1	89.1
	11	321.4	50.6	310.1	54.2	295.2	59.0	275.8	65.6	252.7	74.2	227.6	84.6	217.3	89.1
	12	330.2	51.1	318.2	54.5	302.7	59.1	282.7	65.7	259.4	74.2	234.1	84.7	224.1	89.1
	13	339.5	51.5	326.6	54.7	310.2	59.3	289.7	65.8	265.9	74.4	240.2	84.9	230.6	89.2
	14	349.7	51.6	335.4	55.0	317.9	59.6	296.4	66.1	272.0	74.6	246.0	85.1	236.4	89.3
	15	360.9	51.6	344.7	55.1	325.6	59.8	302.9	66.4	277.6	75.0	251.1	85.5	241.5	89.3
	16	373.5	51.2	354.7	55.0	333.3	60.1	309.0	66.9	282.7	75.4	255.5	85.8	245.7	89.4
	17	387.8	50.4	365.4	54.8	341.0	60.3	314.6	67.4	287.0	76.0	259.3	86.2	249.1	89.3
	18	404.2	49.1	376.9	54.3	348.6	60.6	319.8	68.0	290.8	76.8	262.5	86.8	252.1	89.3
WQRC 1004	5	301.8	54.4	286.6	58.9	269.3	64.7	249.6	72.4	228.2	81.9	205.8	93.4	193.6	100.2
	6	312.0	54.7	297.7	59.2	280.9	65.1	260.6	72.8	237.8	82.3	214.0	93.8	200.5	100.3
	7	321.9	55.2	308.4	59.6	291.8	65.4	271.0	73.0	<b>247.2</b>	<b>82.5</b>	222.0	94.0	207.7	100.3
	8	331.4	55.7	318.0	59.9	301.3	65.6	280.1	73.1	255.7	82.5	229.8	94.0	215.3	100.2
	9	340.4	56.4	326.6	60.3	309.5	65.7	288.1	73.0	263.4	82.4	237.3	93.9	223.1	100.1
	10	349.3	57.2	334.8	60.7	317.3	65.8	295.7	72.9	270.9	82.3	244.7	93.8	231.0	100.0
	11	358.0	57.9	343.1	61.1	325.2	65.9	303.3	72.9	278.4	82.2	251.9	93.8	238.7	99.9
	12	367.0	58.4	351.7	61.5	333.4	66.2	311.2	73.1	286.0	82.3	259.0	93.9	246.1	99.9
	13	376.3	58.8	360.5	61.8	341.9	66.4	319.2	73.3	293.4	82.5	265.8	94.0	252.7	99.9
	14	387.5	58.9	369.8	62.0	350.5	66.7	327.2	73.6	300.6	82.8	272.0	94.2	259.0	99.9
	15	397.1	58.7	379.7	62.1	359.4	67.1	335.0	74.1	307.4	83.3	277.6	94.5	264.3	99.8
	16	409.3	58.0	390.2	62.0	368.4	67.4	342.7	74.7	313.7	83.9	282.4	94.7	268.6	99.7
	17	422.6	56.8	401.5	61.7	377.5	67.8	350.0	75.4	319.3	84.6	286.3	95.1	272.1	99.5
	18	438.6	55.0	413.8	61.1	386.7	68.2	356.9	76.3	324.4	85.5	289.7	95.5	275.1	99.3
WQRC 1104	5	343.9	60.6	327.9	66.5	309.5	73.8	287.8	82.9	263.6	93.8	237.9	106.7	224.6	113.5
	6	355.0	60.8	340.7	66.9	323.0	74.2	300.7	83.3	274.9	94.3	247.3	107.1	232.5	113.7
	7	366.0	61.1	352.9	67.2	335.7	74.5	312.9	83.6	<b>285.9</b>	<b>94.6</b>	256.5	107.4	240.8	113.8
	8	376.7	61.6	364.0	67.5	346.7	74.7	323.5	83.7	295.8	94.6	265.5	107.5	249.6	113.7
	9	387.1	62.3	374.0	67.9	356.4	74.8	332.9	83.6	304.8	94.5	274.2	107.4	258.7	113.6
	10	397.5	63.1	383.6	68.3	365.4	74.9	341.6	83.6	313.4	94.3	282.7	107.3	267.9	113.5
	11	407.9	63.8	393.4	68.7	374.7	75.1	350.4	83.5	322.0	94.3	291.2	107.3	276.9	113.6
	12	418.8	64.6	403.5	69.2	384.1	75.3	359.3	83.7	330.6	94.4	299.4	107.5	285.6	113.7
	13	430.3	65.1	414.1	69.6	393.7	75.6	368.3	83.9	339.0	94.6	307.3	107.8	293.8	113.8
	14	444.2	65.5	425.1	70.0	403.6	76.0	377.2	84.3	347.1	95.0	314.7	108.1	301.3	113.9
	15	456.5	65.5	436.9	70.2	413.7	76.4	385.8	84.8	354.6	95.5	321.4	108.5	307.8	114.0
	16	471.9	65.2	449.5	70.3	423.7	76.8	394.1	85.4	361.5	96.1	327.3	109.0	313.4	114.1
	17	488.9	64.4	462.9	70.2	433.9	77.3	401.9	86.1	367.7	96.9	332.4	109.6	318.1	114.1
	18	509.2	63.0	477.4	69.8	444.0	77.7	409.1	87.1	373.1	97.9	336.9	110.3	322.3	114.1
WQRC 1204	5	385.6	69.6	366.6	75.3	344.8	82.8	319.4	92.6	291.5	104.9	262.4	119.6	245.1	129.1
	6	399.3	69.7	381.4	75.5	359.9	83.2	333.6	93.1	304.1	105.4	272.9	120.2	254.1	129.3
	7	412.7	69.9	395.5	75.8	374.1	83.5	347.1	93.5	<b>316.1</b>	<b>105.8</b>	283.4	120.5	263.5	129.5
	8	425.4	70.4	408.1	76.2	386.4	83.7	358.8	93.6	327.2	105.8	293.4	120.7	273.4	129.5
	9	437.5	71.1	419.5	76.5	397.2	83.8	369.2	93.5	337.2	105.7	303.2	120.6	283.5	129.4
	10	449.2	71.9	430.3	77.0	407.4	83.9	379.1	93.4	346.9	105.6	312.7	120.6	293.7	129.3
	11	460.6	72.7	441.0	77.5	417.6	84.1	389.1	93.4	356.6	105.6	322.1	120.6	303.4	129.3
	12	472.0	73.5	452.1	78.0	428.3	84.5	399.3	93.6	366.4	105.7	331.1	120.8	312.6	129.3
	13	483.8	74.1	463.3	78.6	439.2	84.9	409.7	94.0	375.9	106.0	339.5	121.0	321.0	129.4
	14	496.0	74.6	475.1	79.0	450.3	85.4	420.1	94.5	385.2	106.4	347.3	121.2	328.4	129.3
	15	509.1	74.7	487.5	79.4	461.7	86.0	430.3	95.1	394.0	107.0	354.0	121.5	334.5	129.2
	16	523.6	74.4	500.6	79.6	473.3	86.6	440.3	95.9	402.0	107.7	359.5	121.8	339.2	129.0
	17	539.6	73.5	514.5	79.7	485.1	87.3	449.8	96.9	409.2	108.6	364.0	122.1	342.6	128.6
	18	557.8	72.1	529.6	79.4	497.0	88.0	458.9	98.1	415.7	109.6	367.5	122.4	345.3	128.1

# WQH - Internal heat exchanger pressure drop

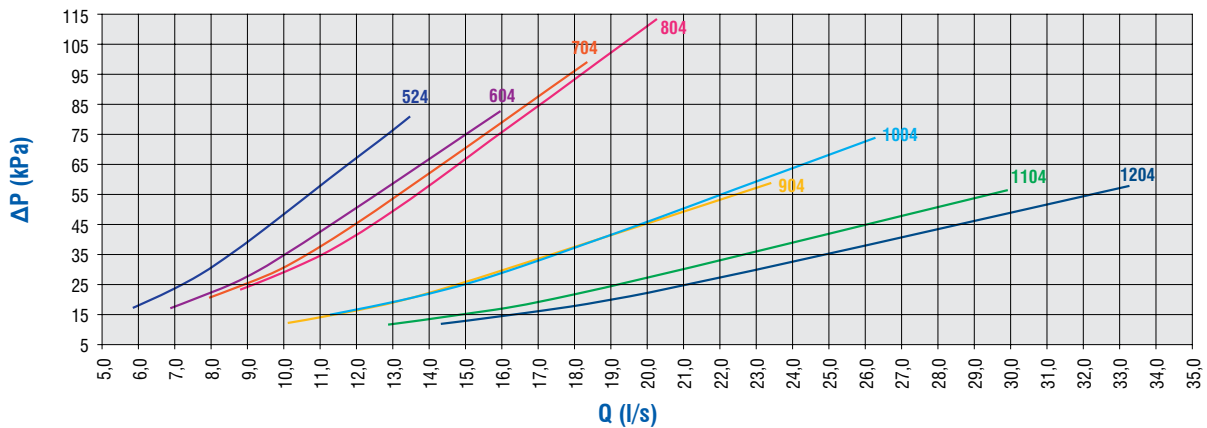
## Internal heat exchanger pressure drop / Summer operation



Size	P <sub>COOL</sub> (*) (kW)	G <sub>MIN</sub> (l/s)	G <sub>NOM</sub> (l/s)	G <sub>MAX</sub> (l/s)	ΔP <sub>MIN</sub> (kPa)	ΔP <sub>NOM</sub> (kPa)	ΔP <sub>MAX</sub> (kPa)
524	151.2	5.16	7.22	12.0	13.7	25.5	65.7
604	176.7	6.03	8.44	14.1	13.3	25.0	65.4
704	205.2	7.00	9.80	16.3	16.0	30.3	79.6
804	226.2	7.72	10.8	18.0	18.0	34.2	90.6
904	263.7	9.00	12.6	21.0	9.74	18.3	47.9
1004	292.0	9.97	14.0	23.3	11.7	22.2	58.5
1104	332.6	11.4	15.9	26.5	9.12	17.2	44.8
1204	371.2	12.7	17.7	29.6	9.36	17.7	46.3

(\*) Data refers to WQH units.

## Internal heat exchanger pressure drop / Winter operation

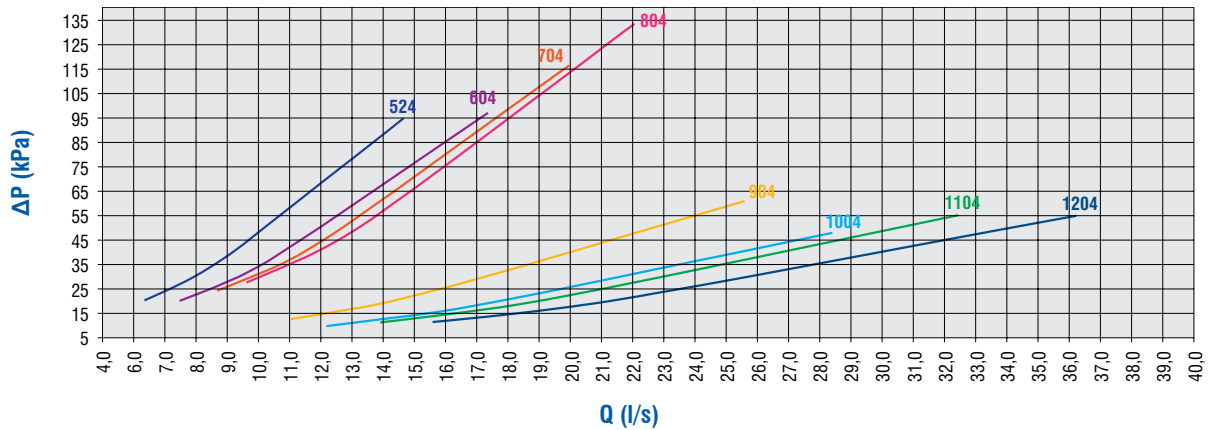


Size	P <sub>HEAT</sub> (*) (kW)	G <sub>MIN</sub> (l/s)	G <sub>NOM</sub> (l/s)	G <sub>MAX</sub> (l/s)	ΔP <sub>MIN</sub> (kPa)	ΔP <sub>NOM</sub> (kPa)	ΔP <sub>MAX</sub> (kPa)
524	169.6	5.79	8.10	13.5	16.9	31.6	81.3
604	200.4	6.84	9.57	16.0	16.8	31.7	82.8
704	231.0	7.88	11.0	18.4	20.0	37.9	99.6
804	255.5	8.72	12.2	20.3	22.7	43.2	114.2
904	294.9	10.1	14.1	23.5	12.0	22.6	59.1
1004	330.1	11.3	15.8	26.3	14.8	28.0	73.8
1104	375.8	12.8	18.0	29.9	11.5	21.6	56.4
1204	417.6	14.3	20.0	33.3	11.7	22.1	57.8

(\*) Data refers to WQH units.

# WQH - External heat exchanger pressure drop

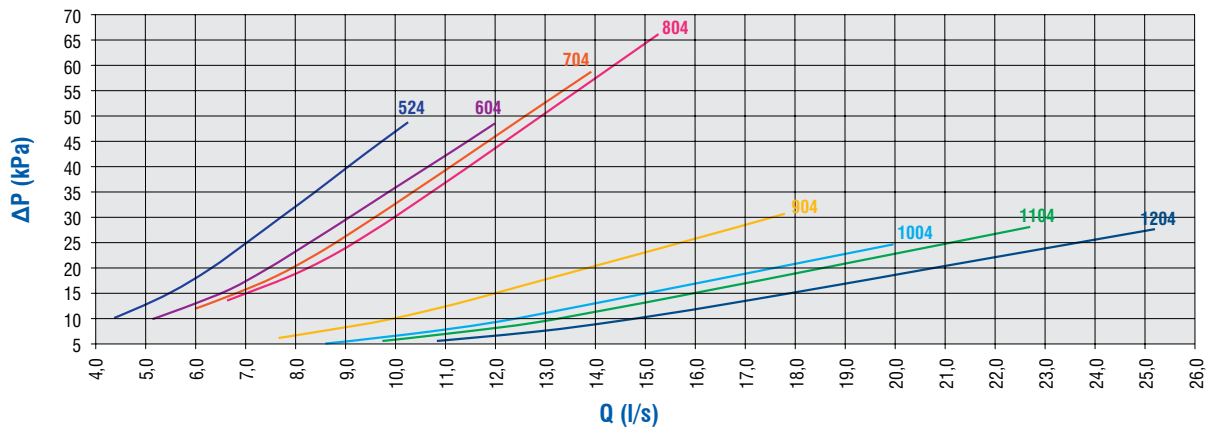
## External heat exchanger pressure drop / Summer operation



Size	P <sub>REJ</sub> (*) (kW)	G <sub>MIN</sub> (l/s)	G <sub>NOM</sub> (l/s)	G <sub>MAX</sub> (l/s)	ΔP <sub>MIN</sub> (kPa)	ΔP <sub>NOM</sub> (kPa)	ΔP <sub>MAX</sub> (kPa)
524	184.9	6.31	8.83	14.7	19.9	37.1	95.4
604	218.1	7.44	10.4	17.4	19.7	37.2	97.1
704	251.8	8.59	12.0	20.1	23.6	44.6	117.2
804	278.5	9.50	13.3	22.2	26.8	50.9	134.6
904	322.2	11.0	15.4	25.7	12.3	23.3	61.2
1004	357.0	12.2	17.1	28.4	9.72	18.3	47.9
1104	407.3	13.9	19.5	32.4	11.2	21.0	55.0
1204	454.8	15.5	21.7	36.2	11.1	20.9	54.8

(\*) Data refers to WQH units.

## External heat exchanger pressure drop / Winter operation

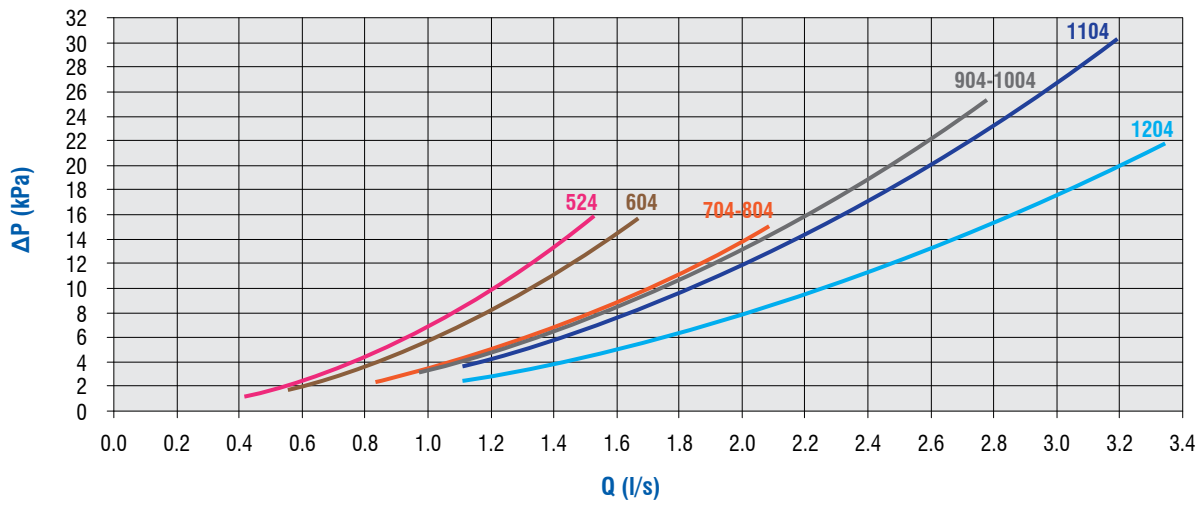


Size	P <sub>REJ</sub> (*) (kW)	G <sub>MIN</sub> (l/s)	G <sub>NOM</sub> (l/s)	G <sub>MAX</sub> (l/s)	ΔP <sub>MIN</sub> (kPa)	ΔP <sub>NOM</sub> (kPa)	ΔP <sub>MAX</sub> (kPa)
524	128.8	4.40	6.15	10.3	10.2	19.0	48.9
604	150.8	5.15	7.20	12.0	9.87	18.6	48.5
704	174.8	5.97	8.35	13.9	11.8	22.3	58.8
804	192.3	6.56	9.19	15.3	13.2	25.1	66.5
904	223.7	7.63	10.7	17.8	6.20	11.7	30.7
1004	250.7	8.56	12.0	20.0	5.00	9.41	24.6
1104	285.1	9.73	13.6	22.7	5.70	10.7	28.1
1204	316.4	10.8	15.1	25.2	5.59	10.5	27.6

(\*) Data refers to WQH units.

# Desuperheater Water Pressure Drop Curves

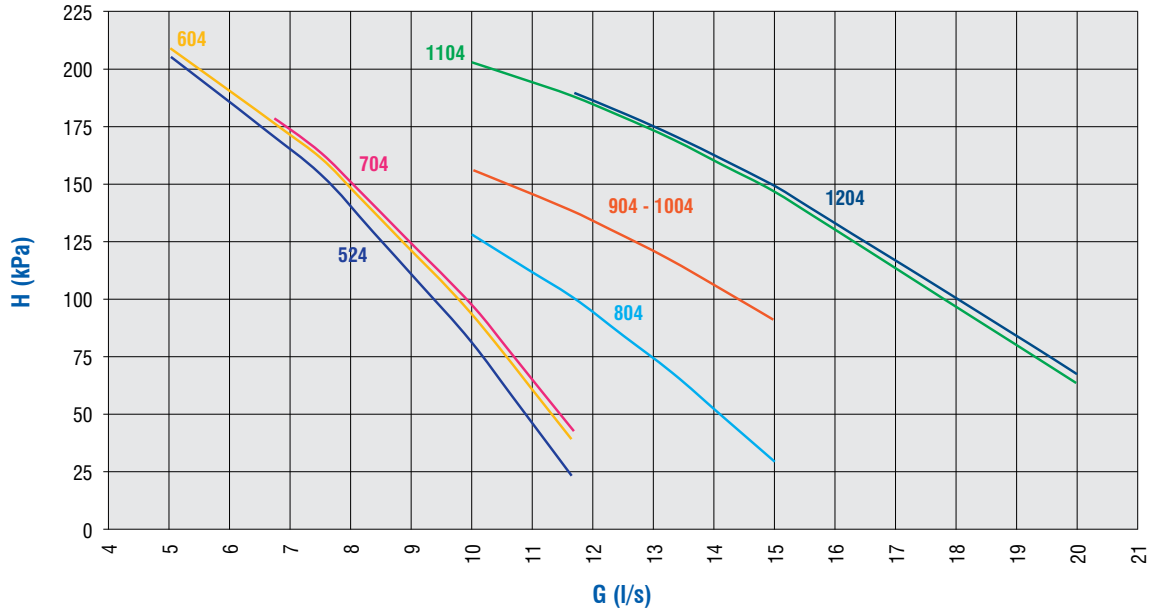
## Sizes 524 to 1204



Unit size	Qnom (l/s)	Qmax (l/s)	Qmin (l/s)	ΔPnom (kPa)	ΔPmax (kPa)	ΔPmin (kPa)
524	0.86	1.44	0.54	5.1	14.0	2.0
604	1.00	1.67	0.63	5.7	15.8	2.2
704-804	1.20	2.01	0.75	5.0	14.0	2.0
904-1004	1.63	2.72	1.02	8.7	24.2	3.4
1104	1.87	3.11	1.17	10.3	28.7	4.0
1204	1.96	3.26	1.22	7.5	20.8	2.9

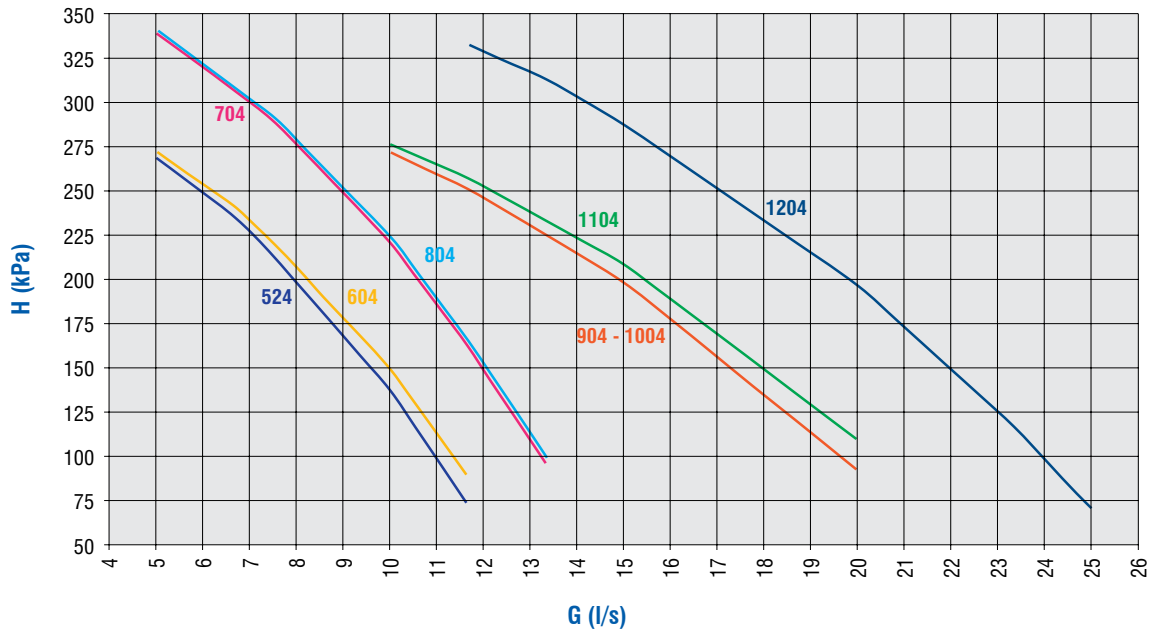
# Hydraulic Data

## WQL/H/RC 524 to 1204 available static pressure - Indoor heat exchanger (1/2P SP\*/E)



(\*) SP = Standard Pressure → Available static pressure ≤ 150 kPa

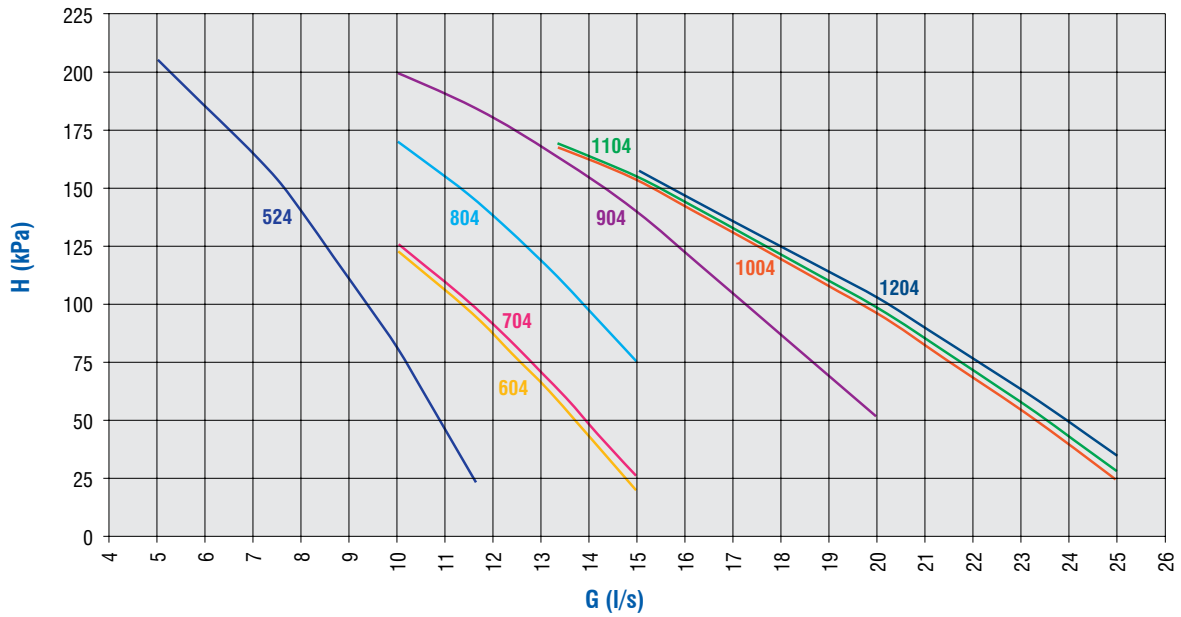
## WQL/H/RC 524 to 1204 available static pressure - Indoor heat exchanger (1/2P HP\*/E)



(\*) HP = High Pressure → Available static pressure ≤ 250 kPa

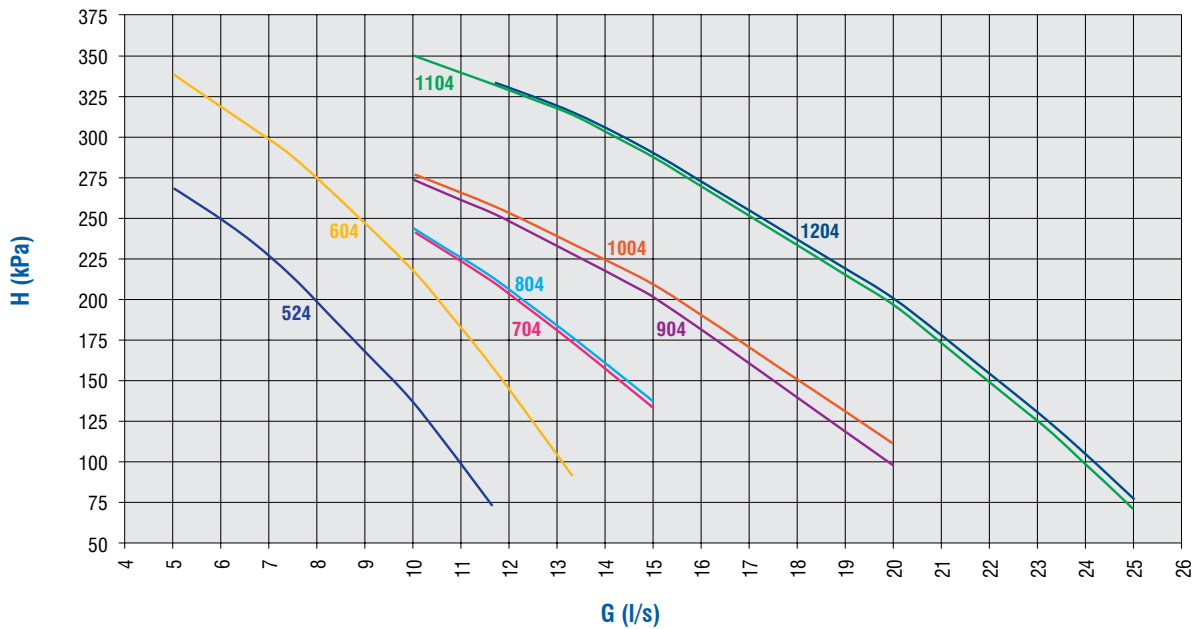
## Hydraulic Data (continued)

### WQL 524 to 1204 available static pressure - Outdoor heat exchanger (1/2P SP\*/C)



(\*) SP = Standard Pressure → Available static pressure ≤ 150 kPa

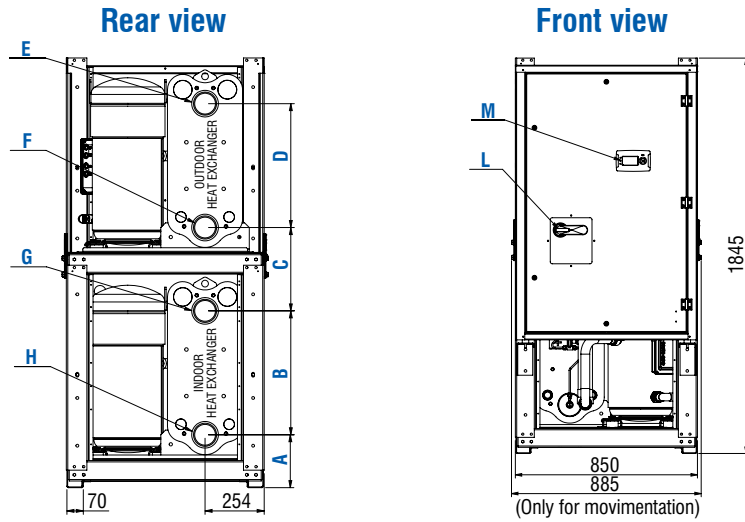
### WQL 524 to 1204 available static pressure - Outdoor heat exchanger (1/2P HP\*/C)



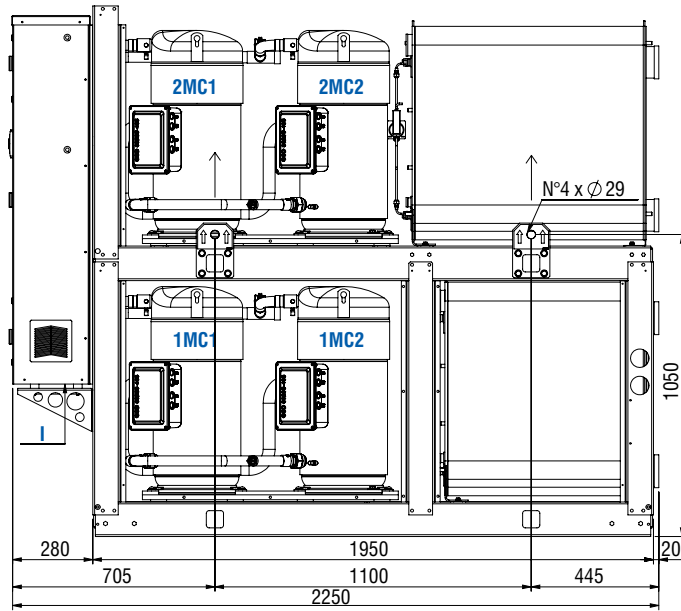
(\*) HP = High Pressure → Available static pressure ≤ 250 kPa



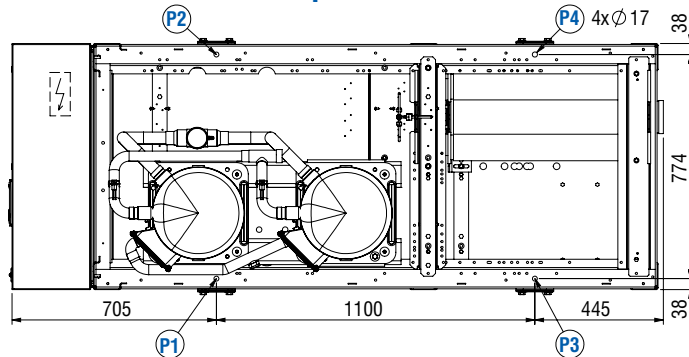
# Dimensions (mm) - WQL/WQH 524 to 1204 STD - R410A



Side view



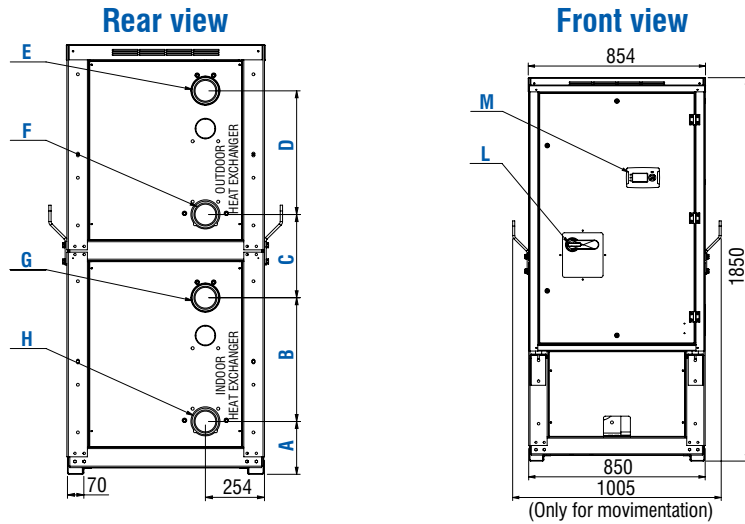
Top view



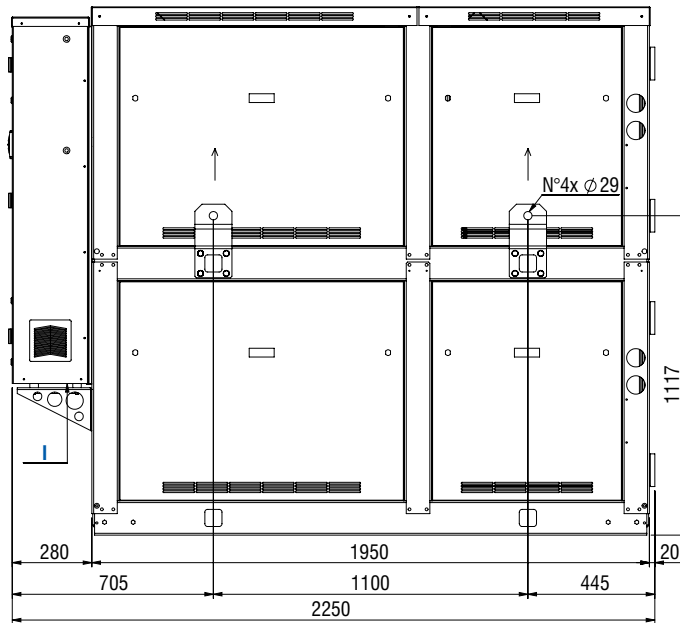
G, H, E, F	Water connection
I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4	AVM position

	INDOOR HEAT EXCHANGER		OUTDOOR HEAT EXCHANGER	
	In G	Out H	In E	Out F
Size 524-804	A= 227 mm	B= 369 mm	C= 521 mm	D= 369 mm
	2 1/2" VICT -76,1 mm			
Size 904-1204	A= 227 mm	B= 532 mm	C= 358 mm	D= 532 mm
	4" VICT -114,3 mm			

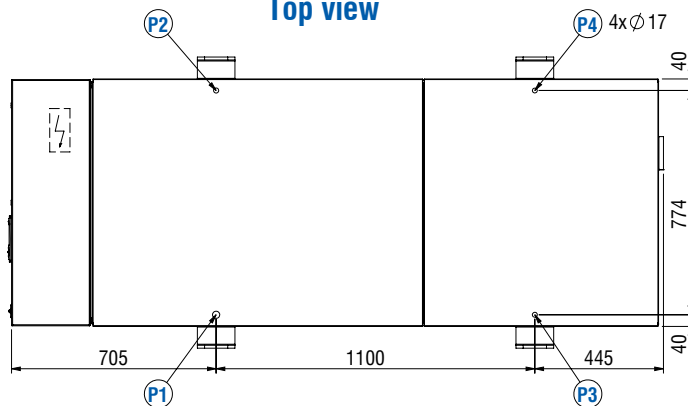
# Dimensions (mm) - WQL/WQH 524 to 1204 ELN - R410A



Side view



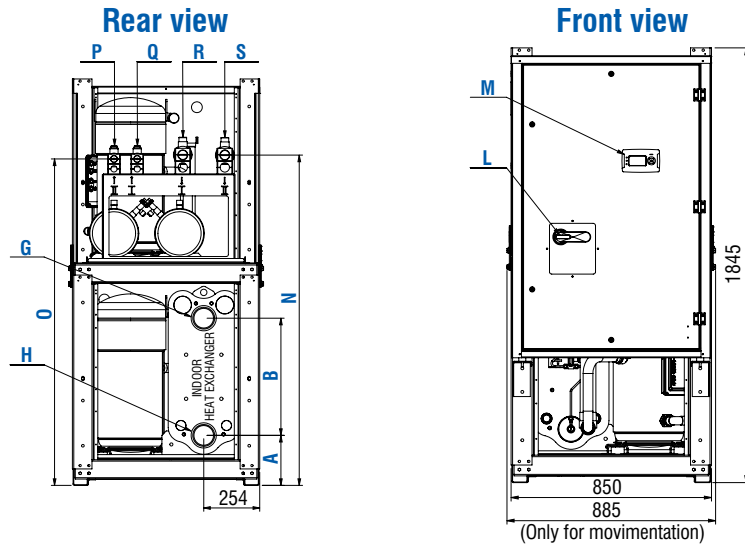
Top view



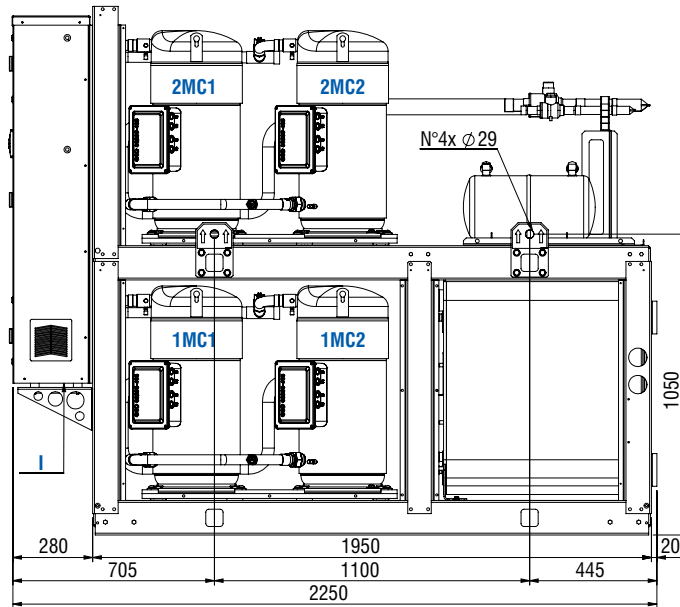
G, H, E, F	Water connection
I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4	AVM position

	INDOOR HEAT EXCHANGER		OUTDOOR HEAT EXCHANGER	
	In G	Out H	In E	Out F
Size 524-804	A= 227 mm	B= 369 mm	C= 521 mm	D= 369 mm
	2 1/2" VICT -76,1 mm			
Size 904-1204	A= 227 mm	B= 532 mm	C= 358 mm	D= 532 mm
	4" VICT -114,3 mm			

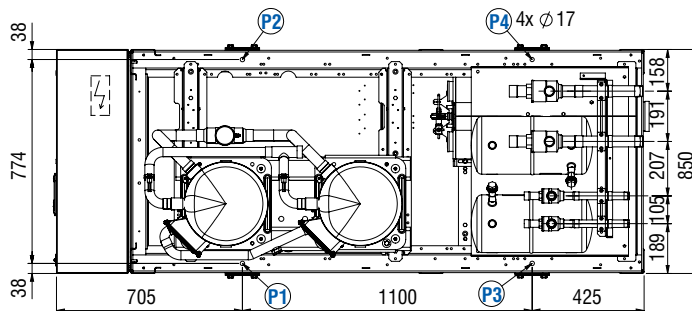
# Dimensions (mm) - WQRC 524 to 1204 - R410A



Side view



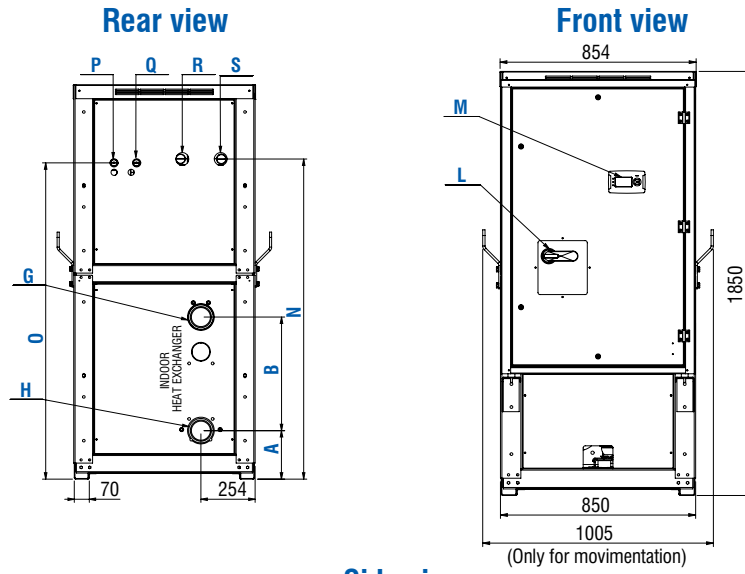
Top view



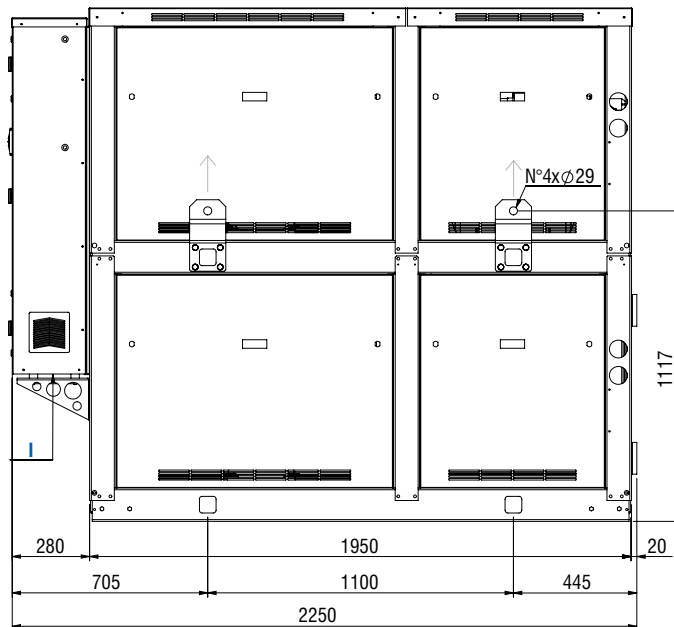
G, H	Water connection
I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4	AVM position

	INDOOR HEAT EXCHANGER		OUTDOOR HEAT EXCHANGER	
	In G	Out H	In E	Out F
Size 524-804	A= 227 mm	B= 369 mm	C= 521 mm	D= 369 mm
	2 1/2" VICT -76,1 mm			
Size 904-1204	A= 227 mm	B= 532 mm	C= 358 mm	D= 532 mm
	4" VICT -114,3 mm			

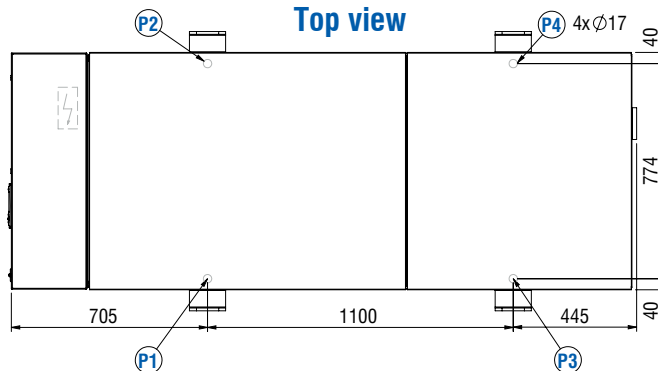
# Dimensions (mm) - WQRC ELN 524 to 1204 - R410A



Side view



Top view

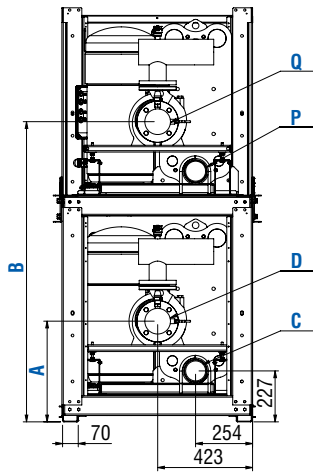


G, H	Water connection
I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4	AVM position

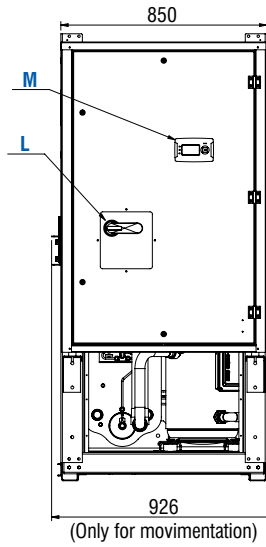
	INDOOR HEAT EXCHANGER	
	In	Out
Size 524-804	A = 227 mm 2 1/2" VICT -76,1 mm	B = 369 mm
Size 904-1204	A = 227 mm 4" VICT -114,3 mm	B = 532 mm

# Dimensions (mm) - WQ + IDRO 524 to 1204 - R410A

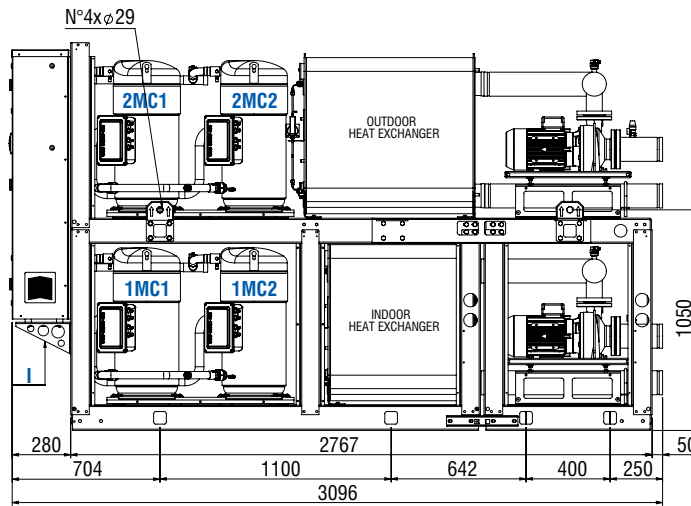
Rear view



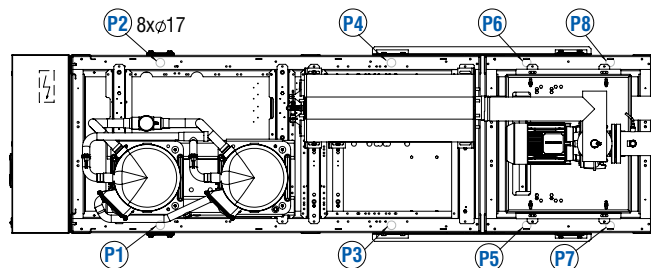
Front view



Side view



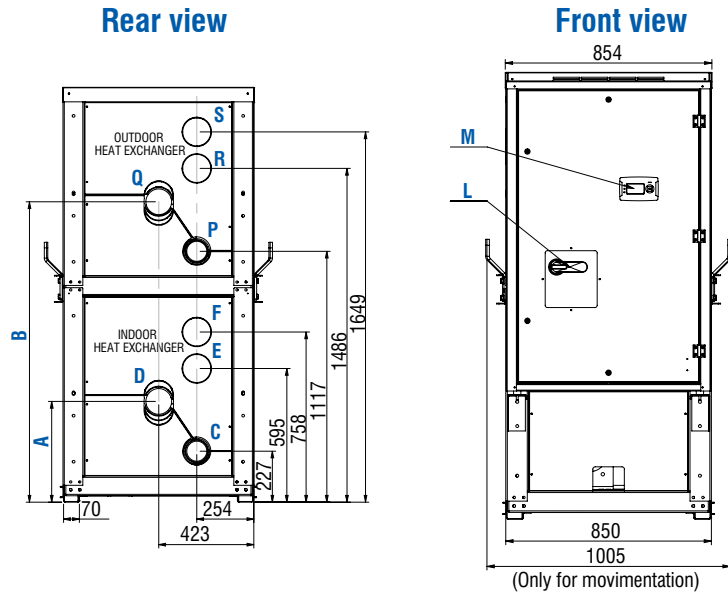
Top view



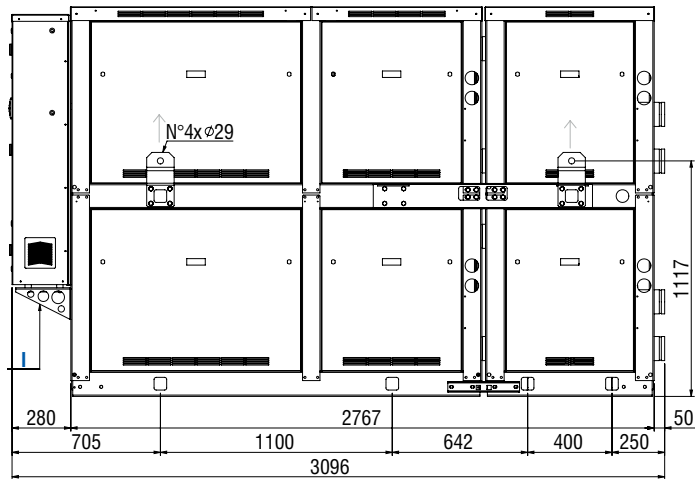
I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4, P5, P6, P7, P8	AVM position

		WATER CONNECTIONS				SIZE WATER CONNECTIONS
		INDOOR HEAT EXCHANGER		OUTDOOR HEAT EXCHANGER		
		In	Out	In	Out	
Size 524-804	STD	E	C	R	P	2 1/2" VICT
	1P-2P	D	C	Q	P	76,1 mm
Size 904-1204	STD	F	C	S	P	4" VICT
	1P-2P	D	C	Q	P	114,3 mm

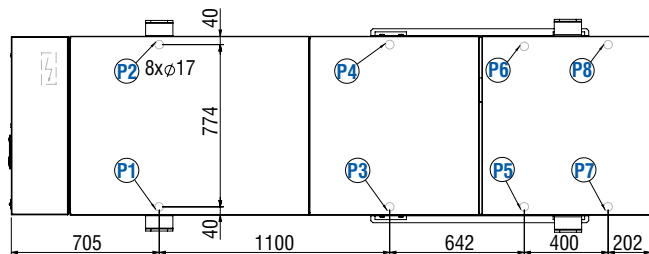
# Dimensions (mm) - WQ + IDRO 524 to 1204 - R410A



Side view



Top view

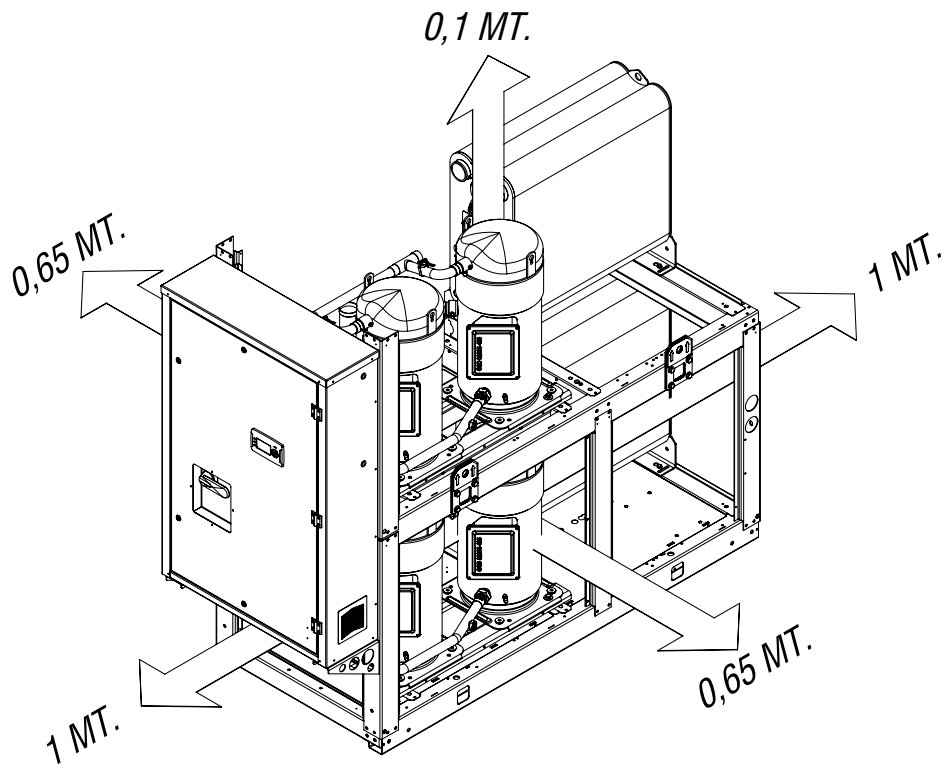


I	Electrical power supply
L	Main switch
M	Control keypad/display
P1, P2, P3, P4, P5, P6, P7, P8	AVM position

		WATER CONNECTIONS				SIZE WATER CONNECTIONS
		INDOOR HEAT EXCHANGER		OUTDOOR HEAT EXCHANGER		
		In	Out	In	Out	
Size 524-804	STD	E	C	R	P	2 1/2" VICT
	1P-2P	D	C	Q	P	76,1 mm
Size 904-1204	STD	F	C	S	P	4" VICT
	1P-2P	D	C	Q	P	114,3 mm

## Clearances Around the Unit

### Clearances WQL/WQH 524 to 1204 - R410A





Systemair AC srl  
Via XXV Aprile, 29  
20825 Barlassina (MB)  
Italy

Tel. +39 0362 680 1  
Fax +39 0362 680 693

infoAC@systemair.it  
**www.systemair.com**