

Chiller

AQL/AQH 40 to 75

Air Cooled Water Chillers
Cooling Only and Heat Pump
Engineering Data Manual



R410A

40.0 to 75.8 kW



39.9 to 77.2 kW



Outstanding Strength Points

- R410A Refrigerant.
- New simpler refrigerant circuit layout.
- Efficiency class B and C.
- Low sound level for BLN unit, very low sound level for ELN unit.
- Great accessibility to internal components for service operations.
- New display on external panel allows the complete control of the unit.
- More assembling quality.
- Construction easier.
- Operating limit of the unit stored in the flash memory of the control logic.
- Wide operating limits.
- High temperature operating limits.
- Less noisy compared to the unit with R407C.
- Less number of screws and piece of sheet metal.
- Component standardization (symmetric sheet metal, only 2 kinds of screws ...).
- New gauge kit can be fitted directly inside the units and not outside. This gauge kit is cheaper than R407C one and it is common for the whole range.
- Fan speed control for low ambient operation in cooling mode down to -18 °C.
- Units are suitable for low water temperature applications with leaving water temperature of -8 °C (min).
- ModBus interface.
- Phase sequence monitor supplied as standard.
- User-friendly microprocessor control.
- ILTC (Intelligent Liquid Temperature Control) controller that allows to reduce the need of an external water tank.
- Leaving water temperature control logic now available.
- For safety during service operations, special valves dedicated to R410A are available on the refrigerant system. These valves, of 5/16" flare SAE type, are mounted on the liquid line inside and on the lateral panel of the unit. This facilitates the access to the high and low side of the refrigerant circuit in order to do pressure measurement.
- Double water set point.
- Rubber pad supplied as standard.
- Water filter and flow switch supplied as standard.
- Optional plug and play hydraulic kit for last minute configuration equipped with 1 or 2 pump(s). Pumps can be supplied with or without buffer tank.
- Optional electric heaters fitted inside buffer tank to ensure extra heating.
- Double automatic air vent (only for unit with pumps).
- Victaulic connection and Victaulic valves that allow fast connection.
- Double 3/8" valve on water pipes for pressure measurement and water charge/discharge.
- New anti-vibration kit, easier to be installed (same spring for every corner).
- Special Inverter Fan (SIF) version suitable for a widening of operating conditions, like ducted installation where high static pressure is needed or high ambient air temperature installation. Fan speed will be regulated by condensing pressure.
- Smaller footprint. The units are 100 mm thinner in order to simplify the transport operation.
- Extra low noise version now available.
- Desuperheater now available as option.
- Smart hook in the electrical panel that keeps in position the closing panel while the operator is working on the electrical box.
- Refrigerant circuit completely enclosed in a separated box in order to reduce the noise, not only of the compressors but also of the whole circuit.

Specifications

General

The new **Aqu@Logic** air cooled water chillers have been designed and optimized to operate with **R410A** refrigerant fluid. They are available in **cooling only (AQL)** and **heat pump (AQH)** versions.

Each version consists of **6 sizes (40, 45, 50, 60, 65 & 75)** and covers a nominal cooling capacity range from **40.0 to 75.8 kW** and a nominal heating capacity range from **39.9 to 77.2 kW**.

All units are equipped **two scroll compressors fitted in tandem** for adapting to partial system loads.

The general operation status of the machine is continuously under the control of an **ITLC microprocessor based controller**.

The AQL and AQH units can operate **without water tank**, thanks to the ILTC microprocessor that implements an **auto-adaptive control logic** ensuring a total protection of the compressors at different load or water volume conditions. The minimum water volume requested is **2.5 l/kW**.

However, an **on board water tank with one or two pumps** can be supplied as option. Pumps (1 or 2) can also be supplied without water tank.

A **fan speed controller** can be supplied loose as field-installed accessory to authorize the unit to operate in cooling mode at low ambient temperature.

Both AQL and AQH units can be supplied in **3 versions** :

- **Base Low Noise (BLN)** : This version is equipped with delta connected fan motors.
- **Extra Low Noise (ELN)** : This version is equipped with star connected fan motors which allow the unit to operate with a very low rpm. Compressor sound proof jackets are also supplied as standard on this version.
- **Special Inverter Fan (SIF)** : This version is equipped with inverter fan that allows the unit to be used as ducted or high ambient temperature unit thanks to the high static pressure and the high air flow provided by inverter fan.

In addition, all the units can be delivered with an **optional desuperheater** which allows to recover the 20% of the heat rejection.

Cabinet and structure

The cabinet and structure are made of heavy gauge galvanized steel. **All galvanized steel components are individually painted** by a special painting process before the assembly of the unit. This painting system performs a homogeneous protection to the corrosion.

The painting is a polyester powder based type, coloured in **RAL 9001**.

The units are suitable for outdoor installation, directly on the building roof or at the ground level.

Specifications (continued)

Compressors

Each unit is equipped with **two scroll** compressors fitted on a rail and assembled together to form **tandem** compressors. The compressors are then mounted on rubber pads in order to eliminate noise and vibration transmissions.

The compressor motors have a direct start-up. Each motor is cooled by the refrigerant gas and is equipped with an overload protection.

A soft start system can be supplied as optional, whereas a **phase sequence monitor** is supplied as standard.

Evaporator

The evaporator is a stainless steel plate heat exchanger insulated with closed cell synthetic foam. It is protected by a **35 W anti-freeze electric heater** to ensure a good protection against freezing at low ambient temperature (-10 °C min.) when the unit is switched off.

Maximum working pressure is 10 bar at water side and 45 bar at refrigerant side.

Condenser

The condenser is a finned coil constructed with seamless copper tubes mechanically expanded into aluminium fins. According to the unit version, tubes and fins have different design.

The condenser coil of cooling only version (AQL units) is composed of **internally smooth tubes with louvered** fins to improve the heat transfer. That of heat pump version (AQH units) consists of **internally grooved tubes with corrugated fins** to allow the water flowing during de-icing cycles.

The air cooled condenser is supplied with a protective grille as standard.

Condenser fans and motors

Each unit has one axial fan, of fixed speed type with diameter of 800 mm. According to the version, the fan is cabled in order to have **high speed** (700 to 900 rpm) for BLN version and **low speed** (530 to 680 rpm) to reduce the sound level for ELN version.

The fan motor has IP54 grade and is equipped with a thermal overload protection.

A pressure actuated fan speed controller can be supplied as field-installed accessory or factory-fitted option. It allows the unit to operate in cooling mode at ambient temperature down to -18 °C because it regulates the fan speed in order to maintain constant the condensing temperature.

On the SIF version, the fan is controlled by a 0-10 V DC signal that regulates the speed from 0 to 1110 rpm. This special fan allows the unit to be used in two applications :

- **High ambient temperature** : The fan provides high air flow at maximum speed in order to keep a low condensing temperature while operating at high air temperature.
- **Ducted installation** : The fan provides high static pressure in order to allow the unit to be ducted.

The SIF fan can also be evolved in order to avoid the use of a fan speed controller.

All types of fans are fitted with a protective grille on top.

Refrigerant circuit

All units have one refrigerant circuit consisting of scroll tandem compressors, plate heat exchanger, thermostatic expansion valve, 4-way reverse cycle valve (heat pump version only), condenser coil, as well as safety and control devices, such as : high pressure switch, high/low pressure transducers and PED safety valve.

Inspection on refrigerant via a sight glass can be done during service operations, by removing a panel from the side, without disturbing the unit operating conditions.

A gauge kit can be supplied as a common accessory for all sizes to be installed inside the unit in order to read the high and low pressure values.

All refrigerant components are shown in the functional diagrams illustrated in the next pages, section "Refrigerant flow diagrams".

Hydraulic circuit

Thanks to the design flexibility on the hydraulic circuit, all the units can be configured in several ways :

- **BASIC** unit : Unit is **without pump and tank**. The hydraulic circuit contains the following components : water filter, flow switch, 3/8" in/out water valves, water safety valve, automatic air vent, hydrometer and Victaulic connections (allowing quick connections in order to update the circuit with buffer tank and pumps). All water piping is covered with **19 mm thick insulation**.
- **1P : 1-Pump** unit having same equipment as BASIC one + **a pump** with available static pressure of 150 kPa. Two air vents are supplied for this configuration.
- **1PT : 1-Pump + Tank** unit having same equipment as 1P one + **a buffer tank** to be installed inside the unit. The tank is covered with 10 mm thick polyethylene insulation and is fitted with a **200 W antifreeze heater**.
- **2P : 2-Pump** unit having same equipment as BASIC one + **2 pumps** with available static pressure of 150 kPa. Each pump can be isolated and replaced with the help of two Victaulic valves. A non-return valve is provided to protect each pump from pumping water in the discharge pipe of the other pump. Two air vents are also supplied for this configuration.
- **2PT : 2-Pump + Tank** unit having same equipment as 2P one + **a buffer tank** to be installed inside the unit. The tank is covered with 10 mm thick polyethylene insulation and is fitted with a **200 W antifreeze heater**.

In pump equipped unit, the head of the pump is insulated with a **19 mm thick insulation** to avoid condensation on it.

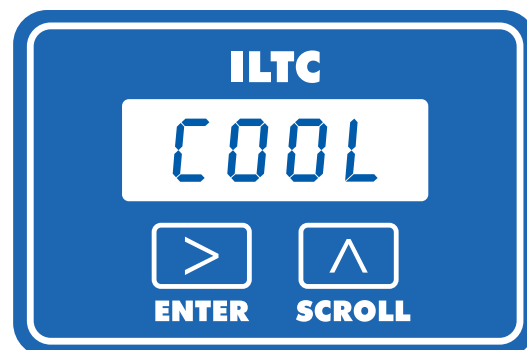
Water connections are 2" male gas threaded type.

Control panel

The units are fitted with an external control panel that displays the operating parameters and alarms. This control panel is **accessible from outside** without removing any parts because it is placed on an external panel. A Plexiglas cover protects the control from external agent.

The AQL/AQH chillers are equipped with a microprocessor based control with ILTC logic that implements an intelligent control on either **entering water temperature** or **leaving water temperature**.

ILTC user interface



Specifications (continued)

The main features of this control system are :

- User-friendly : with only 3 buttons and a tree logic, it is possible to control the unit easily,
- Reliable : all indications on the display are visible in every weather conditions,
- Test procedure,
- Alarm visualization with a logging of the last 10 alarms,
- Remote ON/OFF switching,
- Compressor and pump working hour counter,
- Pressure transducers to control discharge and suction temperatures,
- Maximum discharge temperature control,
- Part load operating mode,
- Remote Cooling /Heating mode switching,
- Compatibility with BMS (RS485 ModBus protocol),
- Compressor operating limits stored in a flash memory.

Control and safety devices

Each unit is complete with the following safety and control devices :

Safety :

- Fan motor overload protection,
- Compressor motor overload protection,
- Flow switch,
- High pressure switch,
- High and low pressure transducers,
- Evaporator antifreeze electric heater,
- Crankcase oil electric heater,
- 45 bar refrigerant safety valve,
- 3 bar water safety valve.

Control :

- Entering water temperature sensor,
- Leaving water temperature sensor,
- Coil temperature sensor,
- Discharge temperature sensor,
- Air temperature sensor,
- Suction and discharge pressure transducers.

Conformity with standards

All AQL/AQH units are in compliance with the following standards :

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

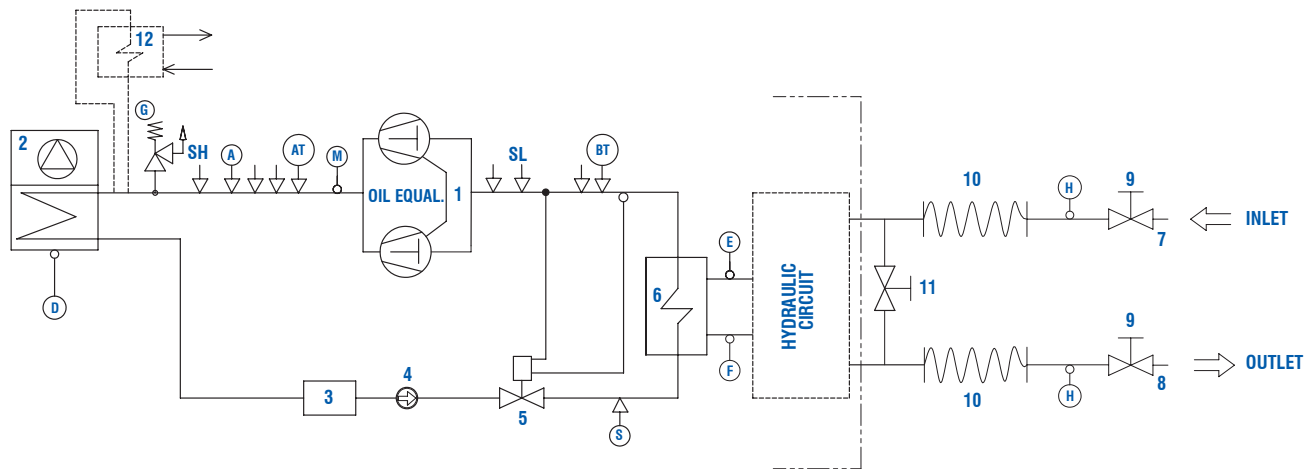
Factory-installed options

- Blue fin coil,
- Coil with "Fin Guard Silver" treatment,
- Coil with black epoxy treatment,
- Desuperheater,
- Soft starter,
- Power supply without neutral kit,
- Automatic circuit breaker,
- Compressor overload protection,
- Hydraulic options (1P, 2P, 1PT, 2PT),
- Electric heaters (12, 24 or 36 kW) inside buffer tank to ensure extra heating,
- Fan speed control kit (this kit is standard on desuperheater version).

Field-installed accessories

- Antivibration kit,
- Fan speed control kit (this kit is standard on desuperheater version),
- Gauge kit,
- Remote On/Off control,
- ModBus protocol kit for BMS,
- Power factor correction capacitors,
- Sequencer for up to 4 chiller installation,
- In/Out valve kit,
- Compressor soundproof jackets (this option is standard on ELN version).

Refrigerant Flow Diagram - AQL 40 to 75 - R410A



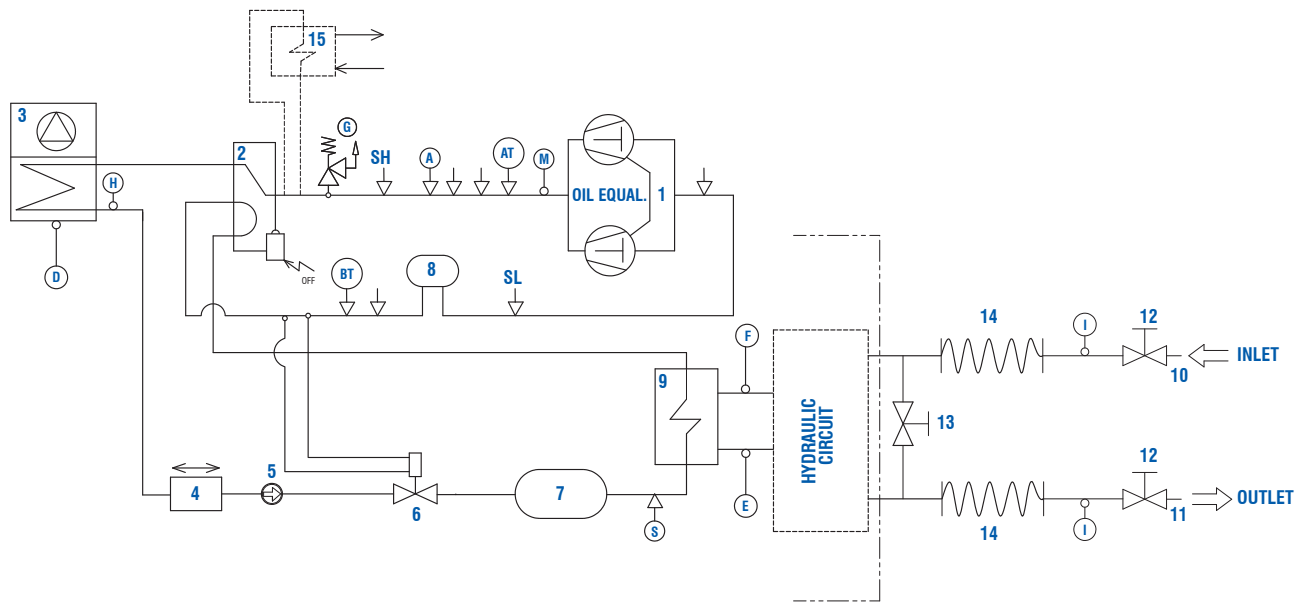
COMPONENTS

1	Compressor tandem scroll type
2	Air cooled condenser
3	Filter drier
4	Sight glass
5	Thermostatic expansion valve
6	Plate heat exchanger
7	Water inlet
8	Water outlet
9	In/Out valve
10	Flexible pipes
11	By-pass valve
12	Desuperheater (optional)

SAFETY/CONTROL DEVICES

A	High pressure switch (40.5 bar)	M	Discharge temperature sensor
AT	High pressure transducer	S	5/16" SAE Schrader valve (charging point)
BT	Low pressure transducer	SH	5/16" SAE high pressure Schrader valve
D	Air temperature sensor	SL	5/16" SAE low pressure Schrader valve
E	Inlet water temperature sensor	H	Thermometer
F	Outlet water temperature sensor	↓	Pipe connection with Schrader valve 1/4" SAE
G	Safety valve (45 bar)	○	Probes
		---	Unit side
		----	Optional parts

Refrigerant Flow Diagram - AQH 40 to 75 - R410A



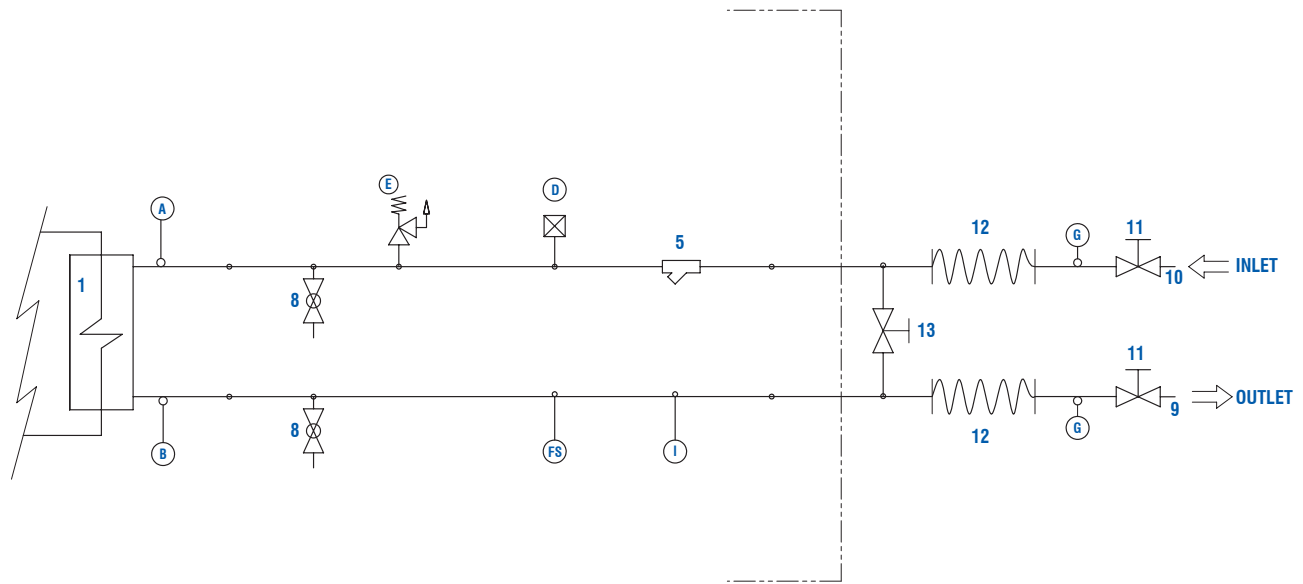
COMPONENTS

1	Compressor tandem scroll type
2	4-way valve
3	Air cooled condenser
4	Biflow filter drier
5	Sight glass
6	Biflow thermostatic expansion valve
7	Liquid receiver
8	Suction accumulator
9	Plate heat exchanger
10	Water inlet
11	Water outlet
12	In/Out valve
13	By-pass valve
14	Flexible pipes
15	Desuperheater (optional)

SAFETY/CONTROL DEVICES

A	High pressure switch (40.5 bar)	M	Discharge temperature sensor
AT	High pressure transducer	S	5/16" SAE Schrader valve (charging point)
BT	Low pressure transducer	SH	5/16" SAE high pressure Schrader valve
D	Air temperature sensor	SL	5/16" SAE low pressure Schrader valve
E	Outlet water temperature sensor	I	Thermometer
F	Inlet water temperature sensor	↓	Pipe connection with Schrader valve 1/4" SAE
G	PED safety valve (45 bar)	○	Probes
H	Defrost temperature sensor	- - - - -	Unit side
		-----	Optional parts

Hydraulic Circuit Diagram - AQL/AQH 40 to 75 - R410A - Basic Unit



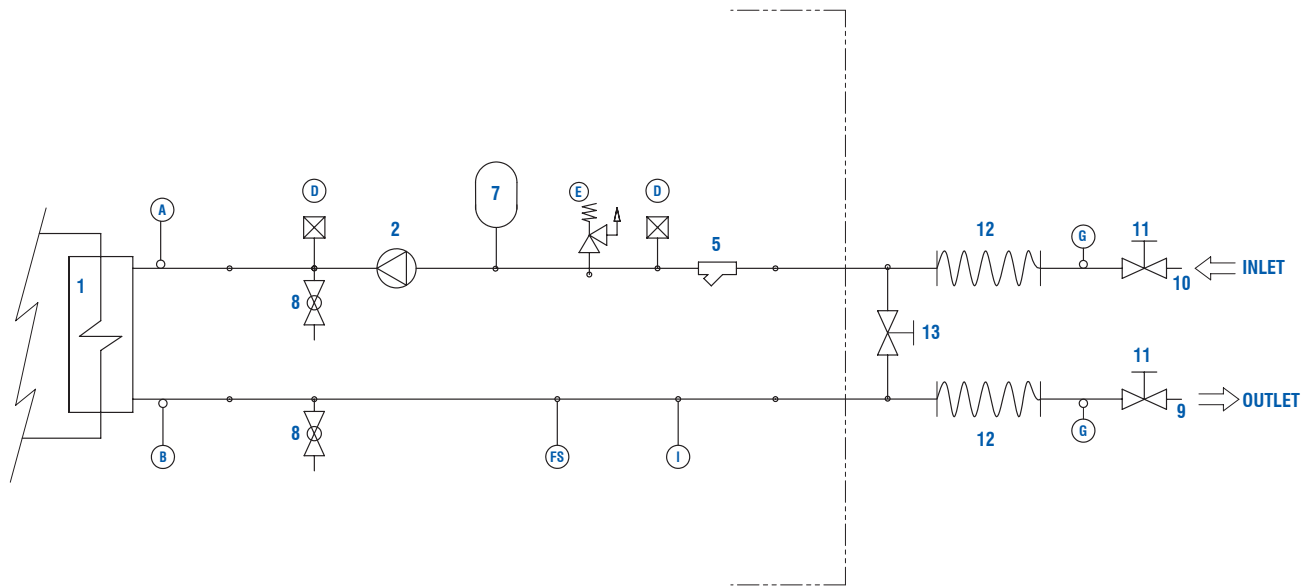
COMPONENTS

1	Plate heat exchanger
5	Water filter
8	Pressure point/drain valve
9	Water outlet
10	Water inlet
11	Globe valve
12	Flexible pipes
13	By-pass valve

SAFETY/CONTROL DEVICES

A	Inlet water temperature sensor
B	Outlet water temperature sensor
D	Vent valve
E	Water safety valve (3 bar)
FS	Flow switch
G	Thermometer
I	Hydrometer
---	Unit side

Hydraulic Circuit Diagram - AQL/AQH 40 to 75 - R410A - 1P Unit



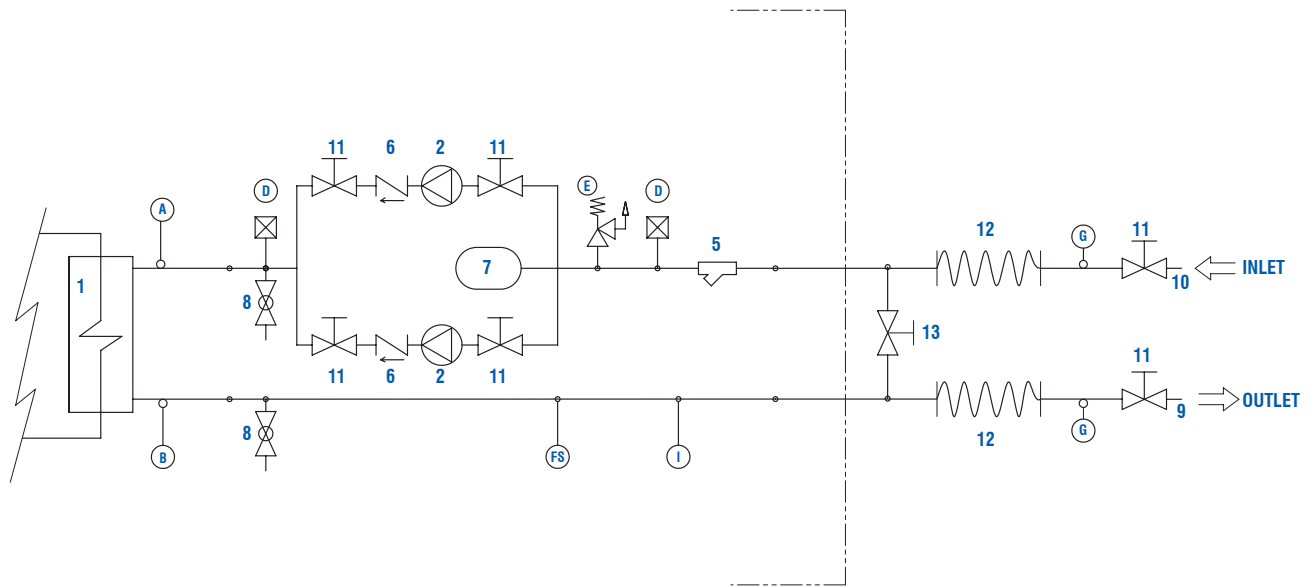
COMPONENTS

1	Plate heat exchanger
2	Pump
5	Water filter
7	Pressure expansion tank
8	Pressure point/drain valve
9	Water outlet
10	Water inlet
11	Globe valve
12	Flexible pipes
13	By-pass valve

SAFETY/CONTROL DEVICES

A	Inlet water temperature sensor
B	Outlet water temperature sensor
D	Vent valve
E	Water safety valve (3 bar)
FS	Flow switch
G	Thermometer
I	Hydrometer
---	Unit side

Hydraulic Circuit Diagram - AQL/AQH 40 to 75 - R410A - 2P Unit



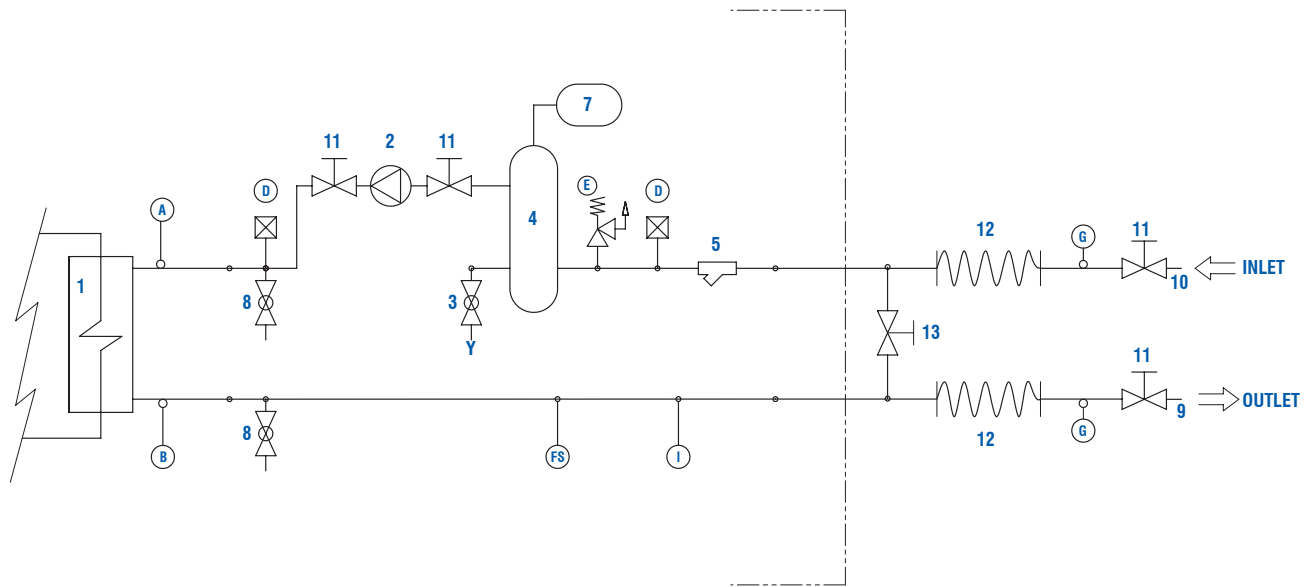
COMPONENTS

1	Plate heat exchanger
2	Pump
5	Water filter
6	Non-return valve
7	Pressure expansion tank
8	Pressure point/drain valve
9	Water outlet
10	Water inlet
11	Globe valve
12	Flexible pipes
13	By-pass valve

SAFETY/CONTROL DEVICES

A	Inlet water temperature sensor
B	Outlet water temperature sensor
D	Vent valve
E	Water safety valve (3 bar)
FS	Flow switch
G	Thermometer
I	Hydrometer
---	Unit side

Hydraulic Circuit Diagram - AQL/AQH 40 to 75 - R410A - 1P+T Unit



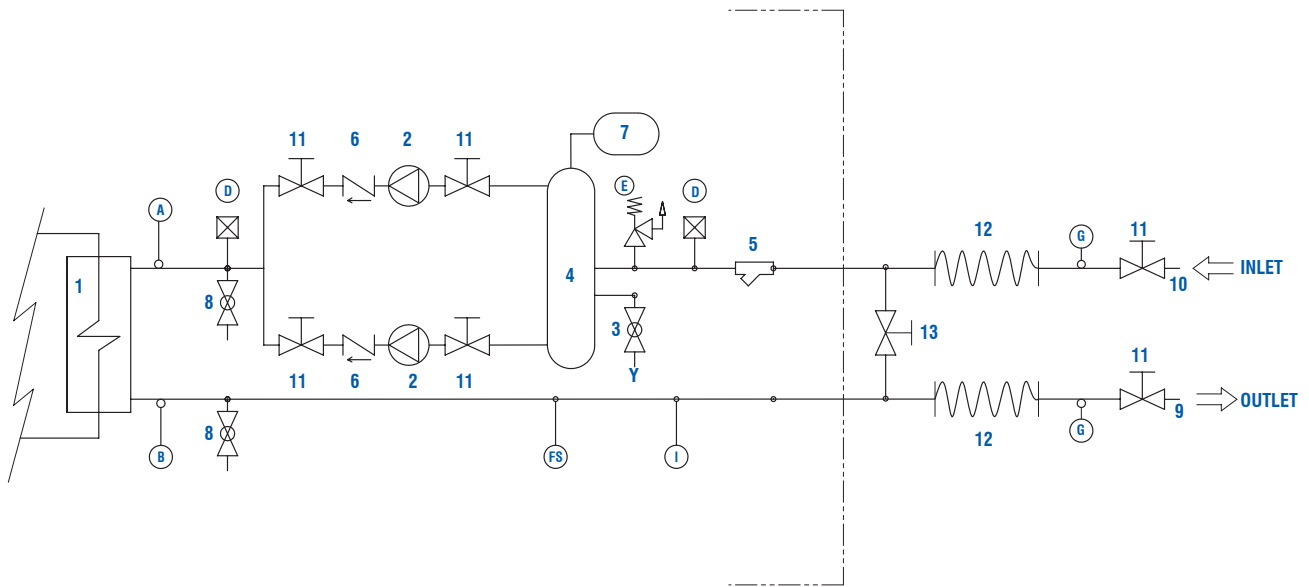
COMPONENTS

1	Plate heat exchanger
2	Pump
3	Draining valve
4	Water buffer tank
5	Water filter
7	Pressure expansion tank
8	Pressure point/drain valve
9	Water outlet
10	Water inlet
11	Globe valve
12	Flexible pipes
13	By-pass valve

SAFETY/CONTROL DEVICES

A	Inlet water temperature sensor
B	Outlet water temperature sensor
D	Vent valve
E	Water safety valve (3 bar)
FS	Flow switch
G	Thermometer
I	Hydrometer
----	Unit side
Y	Drainage water

Hydraulic Circuit Diagram - AQL/AQH 40 to 75 - R410A - 2P+T Unit



COMPONENTS

1	Plate heat exchanger
2	Pump
3	Draining valve
4	Water buffer tank
5	Water filter
6	Non-return valve
7	Pressure expansion tank
8	Pressure point/drain valve
9	Water outlet
10	Water inlet
11	Globe valve
12	Flexible pipes
13	By-pass valve

SAFETY/CONTROL DEVICES

A	Inlet water temperature sensor
B	Outlet water temperature sensor
D	Vent valve
E	Water safety valve (3 bar)
FS	Flow switch
G	Thermometer
I	Hydrometer
---	Unit side
Y	Drainage water

Water volumes

Sizes	Frame	Unit Length (mm)	Buffer tank Water Volume (litres)	Expansion Tank Volume (litres)
40	1	1750	98	12
45	1	1750	98	12
50	1	1750	98	12
60	2	2200	152	12
65	2	2200	152	12
75	2	2200	152	12

Total Water Volumes* (litres)					
Sizes	BASIC	1 Pump	2 Pumps	1 Pump + Buffer Tank	2 Pumps + Buffer Tank
40	10	16	18	111	112
45	10	16	18	111	112
50	10	16	19	112	113
60	13	19	21	169	170
65	13	19	21	169	170
75	13	19	21	169	170

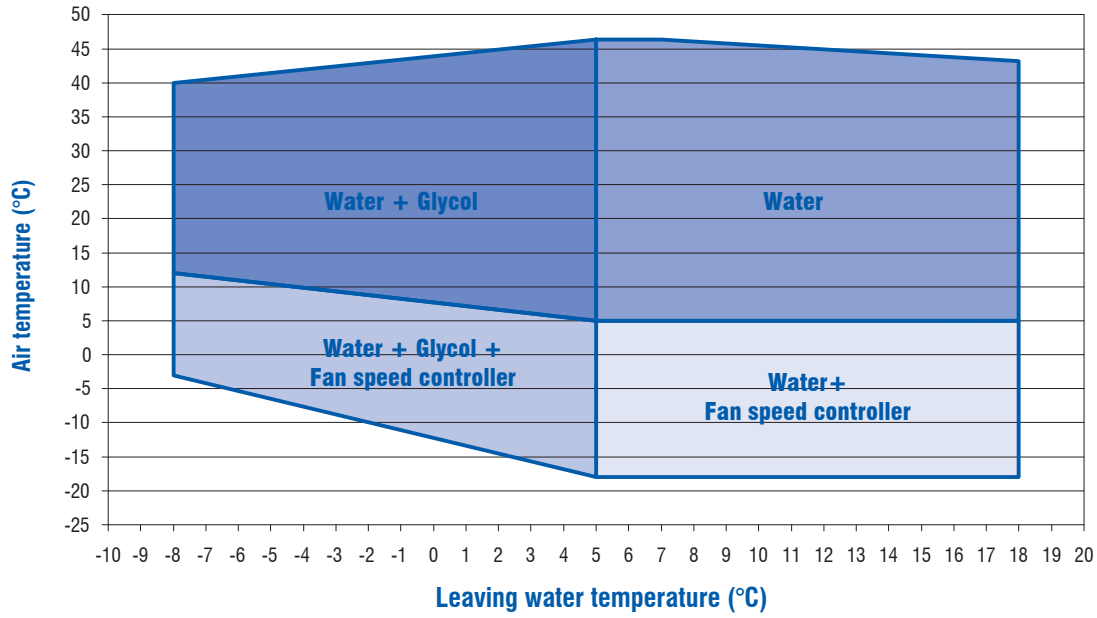
(* Piping, plate heat exchanger, buffer tank (where present).

Note : Optimal water content = 2.5 litres x kW.

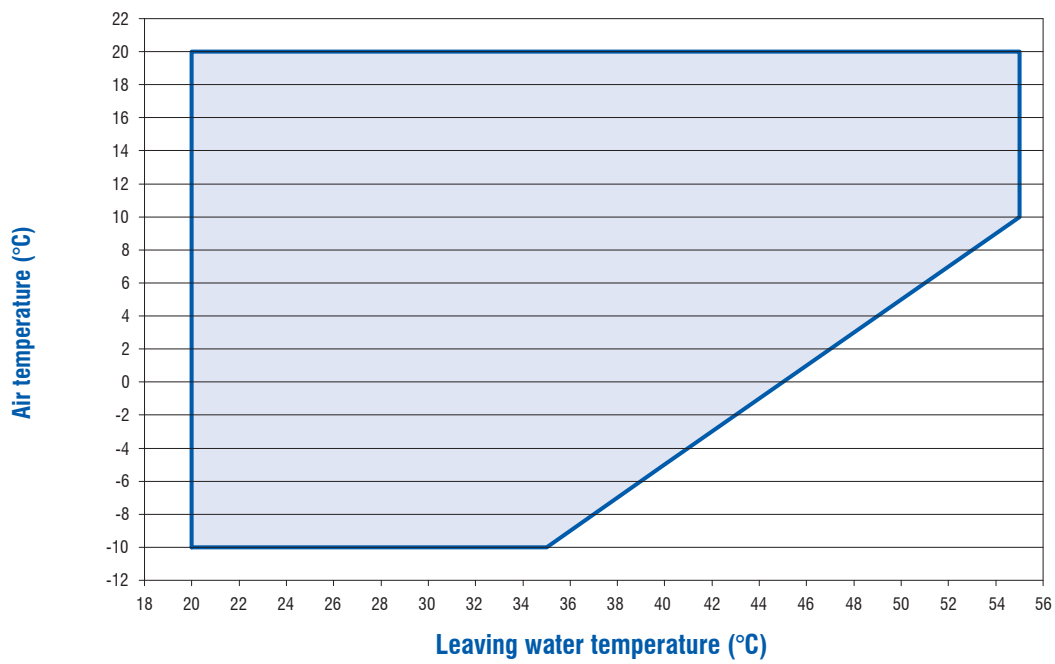
Operating Limits

Operating limits - AQL/AQH 40 to 75 - R410A - BLN Version

Cooling mode



Heating mode



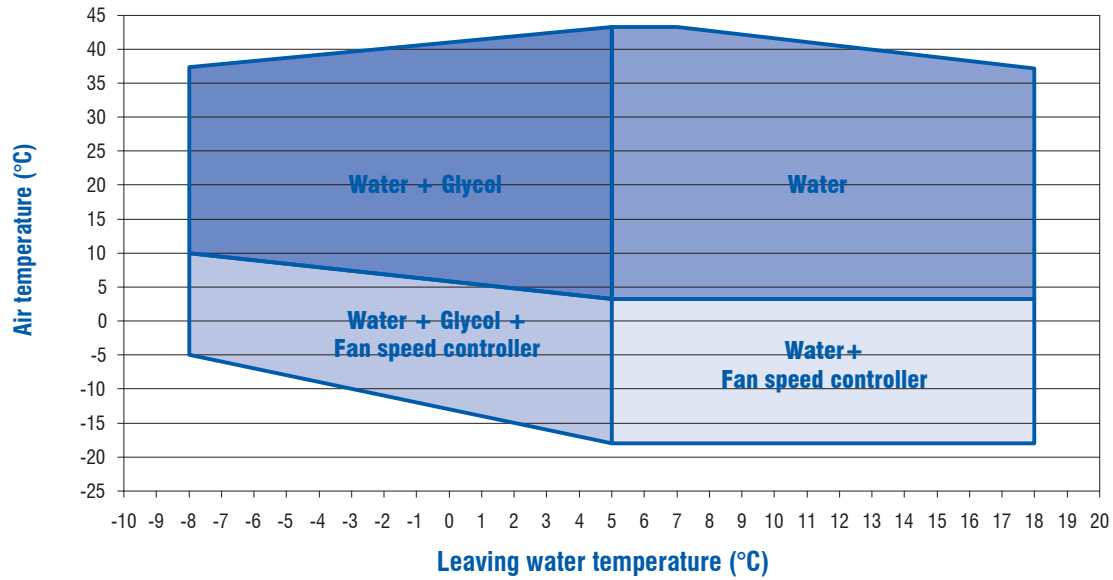
Note :

Operating limits are referred to full load (2 compressors running).
 Maximum glycol% (ethylenic or propilenic) = 40%.

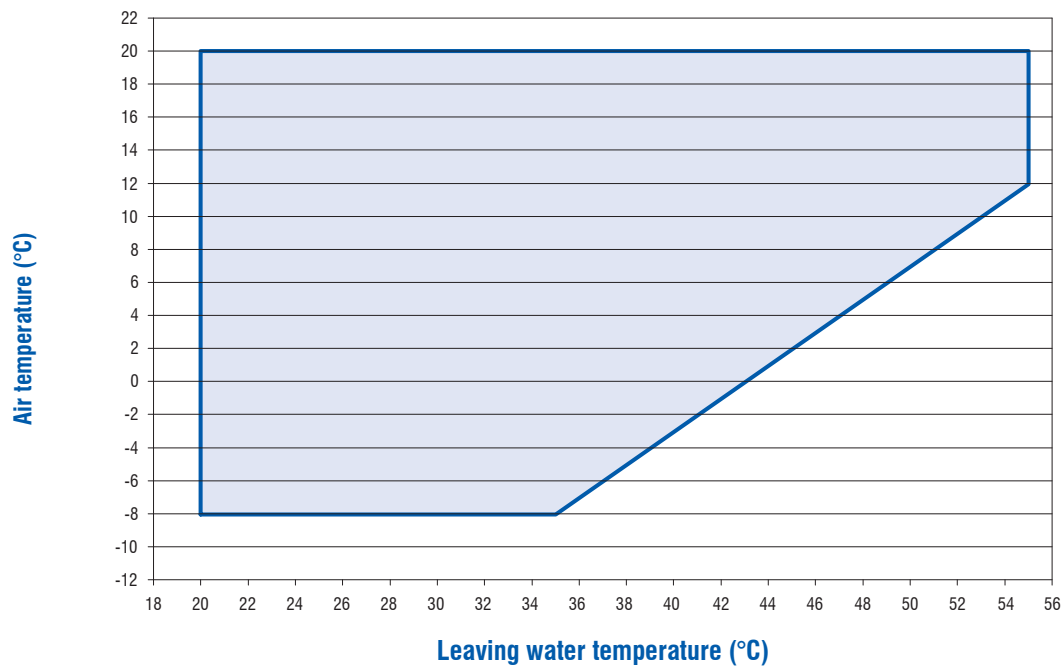
Operating Limits (continued)

Operating limits - AQL/AQH 40 to 75 - R410A - ELN Version

Cooling mode



Heating mode



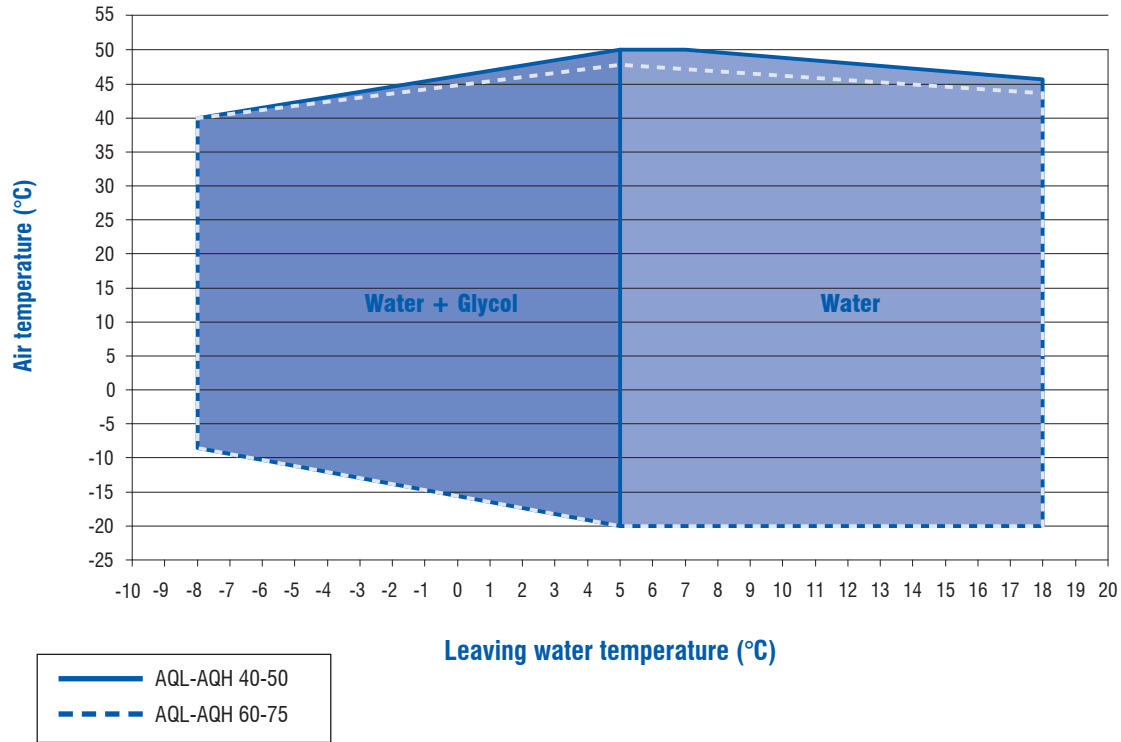
Note :

Operating limits are referred to full load (2 compressors running).
Maximum glycol% (ethylenic or propylenic) = 40%.

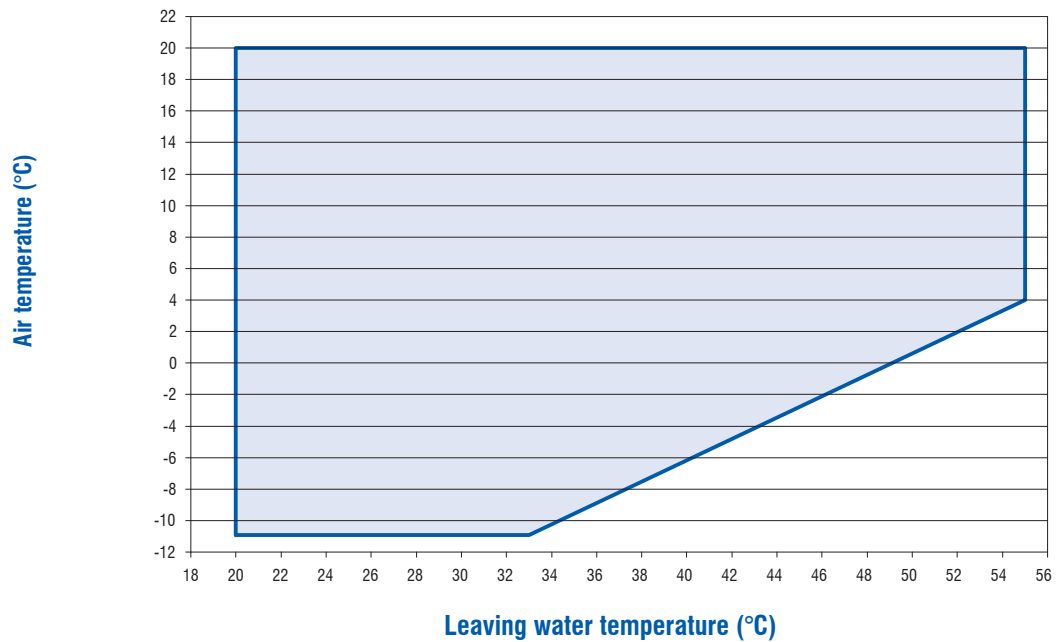
Operating Limits (continued)

Operating limits - AQL/AQH 40 to 75 - R410A - SIF Version

Cooling mode



Heating mode



Note :
Operating limits are referred to full load (2 compressors running).

Correction factors

Fouling factors - Evaporator

Fouling factor (m ² ·°C/kW)	Cooling capacity factor	Power input factor
0.044	1.000	1.000
0.088	0.987	0.995
0.176	0.964	0.985
0.352	0.915	0.962

Fouling factors - Condenser

Fouling factor (m ² ·°C/kW)	Cooling capacity factor	Power input factor
0.044	1.000	1.000
0.088	0.987	1.023
0.176	0.955	1.068
0.352	0.910	1.135

Correction factors for water ΔT different from 5 K

Models	Water temperature in/out	Cooling capacity (kW)	Power input (kW)
AQL - AQH	17/7(10)	95%	98%
	14/7(7)	97%	99%
	12/7(5)	100%	100%
	10/7 (3)	103%	101%

Altitude factors

Altitude (m)	Cooling capacity factor	Power input factor
0	1.000	1.000
600	0.987	1.010
1200	0.973	1.020
1800	0.958	1.030
2400	0.943	1.040

Physical Data - AQL 40 to 75 - R410A - BLN Version

AQL BLN SIZES		40	45	50	60	65	75
Cooling Capacity	kW	40.0	44.0	51.0	60.0	67.9	75.8
Input Power (Compressor)	kW	12.7	14.8	17.2	18.1	21.0	25.4
Total E.E.R. *		2.92	2.79	2.81	2.99	2.95	2.77
Energy Class		B	C	C	B	B	C
E.S.E.E.R.		4.32	4.11	4.14	4.27	4.34	3.99
Heating Capacity	kW	-	-	-	-	-	-
HP Input Power (Compressor)	kW	-	-	-	-	-	-
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	8.2	9.5	10.6	11.6	13.5	14.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	6880.0	7568.0	8772.0	10320.0	11678.8	13037.6
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		11	12	14	16	18	20
Water flow Rate	l/h	1813	2023	2346	2687	3058	3481
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	14000	14000	13200	21100	21100	21100
Speed	rpm	680	680	680	900	900	900
Input Power	kW	0.98	0.98	0.98	2.00	2.00	2.00
PUMP							
Number		0 - 1 - 2					
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to weight table					
Operating Weight	kg	Refer to weight table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	80.5	81.0	81.0	85.5	85.6	85.8
Sound Pressure Level (1)	dB(A)	48.9	49.4	49.4	53.8	53.9	54.1

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) Gross values.

(**) Without buffer tank + pumps.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Physical Data - AQL 40 to 75 - R410A - ELN Version

AQL ELN SIZES		40	45	50	60	65	75
Cooling Capacity	kW	38.7	42.4	48.7	58.0	63.1	72.8
Input Power (Compressor)	kW	13.4	15.7	18.4	19.0	21.9	26.9
Total E.E.R. *		2.77	2.61	2.57	2.86	2.72	2.58
Energy Class		C	D	D	C	C	D
E.S.E.E.R.		4.09	3.84	3.79	4.09	4.00	3.73
Heating Capacity	kW	-	-	-	-	-	-
HP Input Power (Compressor)	kW	-	-	-	-	-	-
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	8.2	9.5	10.6	11.6	13.5	14.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	6656.4	7292.8	8376.4	9976.0	10853.2	12521.6
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		10	12	13	15	17	20
Water flow Rate	l/h	1792	1999	2308	2649	2924	3430
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	11000	11000	10300	16000	16000	16000
Speed	rpm	530	530	530	720	720	720
Input Power	kW	0.57	0.57	0.57	1.27	1.27	1.27
PUMP							
Number		0 - 1 - 2					
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to weight table					
Operating Weight	kg	Refer to weight table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	74.0	75.3	75.3	78.0	78.5	79.0
Sound Pressure Level (1)	dB(A)	42.4	43.7	43.7	46.3	46.8	47.3

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) Gross values.

(**) Without buffer tank + pumps.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Physical Data - AQL 40 to 75 - R410A - SIF Version

AQL SIF SIZES		40	45	50	60	65	75
Cooling Capacity	kW	42.1	46.6	54.3	60.8	66.4	77.0
Input Power (Compressor)	kW	11.7	13.5	15.5	17.7	20.3	24.7
Total E.E.R. *		2.93	2.89	2.99	2.98	2.89	2.81
Energy Class		B	C	B	B	C	C
E.S.E.E.R.		4.33	4.24	4.39	4.27	4.13	3.99
Heating Capacity	kW	-	-	-	-	-	-
HP Input Power (Compressor)	kW	-	-	-	-	-	-
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	8.2	9.5	10.6	11.6	13.5	14.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	7243.7	8012.5	9346.0	10451.7	11426.8	13242.6
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		11	12	14	16	17	20
Water flow Rate	l/h	1852	2066	2403	2701	2985	3499
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	25284	25284	24300	25284	25284	25284
Speed	rpm	1110	1110	1110	1110	1110	1110
Input Power	kW	2.67	2.67	2.67	2.67	2.67	2.67
PUMP							
Number		0 - 1 - 2					
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to Weight Table					
Operating Weight	kg	Refer to Weight Table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	Refer to Fan data - SIF version					
Sound Pressure Level (1)	dB(A)	Refer to Fan data - SIF version					

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) Gross values.

(**) Without buffer tank + pumps. In high temp. application, it is referred to 1100 rpm fan speed. In high pressure application, it is the same as that of BLN unit because the fan speed is in charge of generating external static pressure.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Physical Data - AQH 40 to 75 - R410A - BLN Version

AQH BLN SIZES		40	45	50	60	65	75
Cooling Capacity	kW	36.1	41.0	47.5	55.9	63.3	70.7
Input Power (Compressor)	kW	12.3	14.3	16.7	17.5	20.4	24.6
Total E.E.R. *		2.72	2.68	2.69	2.87	2.83	2.66
Energy Class		C	D	D	C	C	D
E.S.E.E.R.		3.96	3.89	3.92	4.04	4.11	3.77
Heating Capacity	kW	39.9	44.4	52.6	59.0	70.0	77.2
HP Input Power (Compressor)	kW	12.0	13.1	14.9	18.9	20.5	24.3
COP *		3.07	3.15	3.31	2.82	3.11	2.94
Energy class		B	B	A	C	B	C
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	9.5	10.8	11.6	12.9	14.0	15.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	6209.2	7052.0	8170.0	9614.8	10887.6	12160.4
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		10	11	13	15	17	19
Water flow Rate	l/h	1665	1902	2208	2525	2879	3278
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	14800	14800	14800	22250	22250	22250
Speed	rpm	680	680	680	900	900	900
Input Power	kW	0.98	0.98	0.98	2	2	2
PUMP							
Number		1	1	1	1	1	1
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to weight table					
Operating Weight	kg	Refer to weight table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	80.5	81.0	81.0	85.5	85.6	85.8
Sound Pressure Level (1)	dB(A)	48.9	49.4	49.4	53.8	53.8	54.1

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) According to EN 14511 1-2-3-4 (with compressors, fans, with or without pump).

(**) Without buffer tank + pumps.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Physical Data - AQH 40 to 75 - R410A - ELN Version

AQH ELN SIZES		40	45	50	60	65	75
Cooling Capacity	kW	36.1	39.5	45.4	54.1	58.8	67.9
Input Power (Compressor)	kW	13.0	15.2	17.9	18.4	21.2	26.2
Total E.E.R. *		2.66	2.50	2.46	2.75	2.62	2.47
Energy Class		D	D	E	C	D	E
E.S.E.E.R.		3.87	3.63	3.59	3.87	3.78	3.53
Heating Capacity	kW	40.5	43.5	51.0	57.7	68.2	75.0
HP Input Power (Compressor)	kW	11.9	12.7	15.0	18.8	20.5	24.2
COP *		3.25	3.28	3.28	2.87	3.13	2.94
Energy Class		A	A	A	C	B	C
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	9.5	10.8	11.6	12.9	14.0	15.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	6209.2	6794.0	7808.8	9305.2	10113.6	11678.8
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		10	11	13	15	16	19
Water flow Rate	l/h	1689	1882	2178	2494	2752	3237
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	11500	11500	10800	17000	17000	17000
Speed	rpm	530	530	530	720	720	720
Input Power	kW	0.57	0.57	0.57	1.27	1.27	1.27
PUMP							
Number		1	1	1	1	1	1
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to weight table					
Operating Weight	kg	Refer to weight table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	74.0	75.3	75.3	78.0	78.5	79.0
Sound Pressure Level (1)	dB(A)	42.4	43.7	43.7	46.3	46.8	47.3

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) According to EN 14511 1-2-3-4 (with compressors, fans, with or without pump).

(**) Without buffer tank + pumps.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Physical Data - AQH 40 to 75 - R410A - SIF Version

AQH SIF SIZES		40	45	50	60	65	75
Cooling Capacity	kW	42.1	46.6	54.3	60.8	66.4	77.0
Input Power (Compressor)	kW	11.7	13.5	15.5	17.7	20.3	24.7
Total E.E.R. *		2.93	2.89	2.99	2.98	2.89	2.81
Energy Class		B	C	B	B	C	C
E.S.E.E.R.		4.33	4.24	4.39	4.27	4.13	3.99
Heating Capacity	kW	46.3	50.4	58.7	65.5	77.8	85.9
HP Input Power (Compressor)	kW	13.9	14.8	17.4	19.5	21.3	25.1
COP *		2.80	2.89	2.92	2.96	3.25	3.09
Energy Class		C	C	C	C	A	B
Number of Refrigerant Circuits		1	1	1	1	1	1
Part Load Steps	%	0-50-100	0-50-100	0-50-100	0-44-56-100	0-50-100	0-50-100
Power Supply		400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz
Startup Type		Direct	Direct	Direct	Direct	Direct	Direct
Maximum Current (FLA)	A	Refer to electrical data					
Startup Current (LRA)	A	Refer to electrical data					
REFRIGERANT							
Type		R410A					
Charge	kg	9.5	10.8	11.6	12.9	14.0	15.0
COMPRESSOR							
Number		2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Crankcase Heater	W	90	90	90	90	90	90
EVAPORATOR							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Water flow Rate	l/h	7243.7	8012.5	9346.0	10451.7	11426.8	13242.6
Water Pressure Drop	kPa	Refer to pressure drop curves					
Antifreeze Heater	W	35	35	35	35	35	35
DESUPERHEATER (OPTIONAL)							
Number		1	1	1	1	1	1
Type		Plate	Plate	Plate	Plate	Plate	Plate
Heat Recovery ***		11	12	14	16	17	20
Water flow Rate	l/h	1852	2066	2403	2701	2985	3499
Water Pressure Drop	kPa	Refer to pressure drop curves					
COIL							
Number		1	1	1	1	1	1
Frontal Surface	l x a	2160 x 1200	2160 x 1200	2160 x 1200	2650 x 1200	2650 x 1200	2650 x 1200
Row		2	2	3	3	3	3
FANS							
Number		1	1	1	1	1	1
Air Flow Rate **	m ³ /h	25284	25284	24300	25284	25284	25284
Speed	rpm	1110	1110	1110	1110	1110	1110
Input Power	kW	2.67	2.67	2.67	2.67	2.67	2.67
PUMP							
Number		1	1	1	1	1	1
Input Power	kW	Refer to pump curves					
Static Head Pressure	kPa	Refer to pump curves					
WATER CONNECTIONS (EVAPORATOR)							
Type		Male GAS threaded					
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
WATER DRAIN CONNECTION							
Diameter	inch	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
WATER CONNECTIONS (DESUPERHEATER)							
Type		Male GAS threaded					
Inlet Diameter	inch	1"	1"	1"	1"	1"	1"
Outlet Diameter	inch	1"	1"	1"	1"	1"	1"
WEIGHT							
Shipping Weight	kg	Refer to weight table					
Operating Weight	kg	Refer to weight table					
DIMENSIONS							
Length	mm	1750	1750	1750	2200	2200	2200
Width	mm	1100	1100	1100	1100	1100	1100
Height	mm	1580	1580	1580	1580	1580	1580
ACOUSTICAL DATA (NORMAL MODE)							
Sound Power Level	dB(A)	Refer to Fan data - SIF version					
Sound Pressure Level (1)	dB(A)	Refer to Fan data - SIF version					

(1) Sound pressure calculated at 10 m. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

(*) According to EN 14511 1-2-3-4 (with compressors, fans, with or without pump).

(**) Without buffer tank + pumps. In high temperature application, it is referred to 1110 rpm fan speed. In high pressure application it is the same as that of BLN unit because the fan speed is in charge of generating external static pressure.

(***) 20% of heat rejection with water inlet 40 °C and water outlet 45 °C.

Weight Data - AQL/AQH 40 to 75 - R410A

	AQL Basic						AQH Basic					
	40	45	50	60	65	75	40	45	50	60	65	75
Shipping Weight - Basic [Kg]	403	411	436	476	483	488	422	430	457	504	511	517
Operating Weight - Basic [Kg]	413	421	446	489	496	502	431	440	467	517	524	530

	AQL 1 Pump						AQH 1 Pump					
	40	45	50	60	65	75	40	45	50	60	65	75
Shipping Weight - 1P [Kg]	434	442	470	516	523	529	453	461	490	545	552	557
Operating Weight - 1P [Kg]	450	458	486	535	542	548	468	476	507	563	570	576

	AQL 2 Pumps						AQH 2 Pumps					
	40	45	50	60	65	75	40	45	50	60	65	75
Shipping Weight - 2P [Kg]	460	468	499	544	551	556	479	487	520	572	579	585
Operating Weight - 2P [Kg]	478	487	518	565	572	578	497	505	538	593	600	606

	AQL 1 Pump + Tank						AQH 1 Pump + Tank					
	40	45	50	60	65	75	40	45	50	60	65	75
Shipping Weight - 1P+T [Kg]	476	484	512	572	579	585	494	503	532	600	607	613
Operating Weight - 1P+T [Kg]	587	595	623	740	748	753	606	614	644	769	776	781

	AQL 2 Pumps + Tank						AQH 2 Pumps + Tank					
	40	45	50	60	65	75	40	45	50	60	65	75
Shipping Weight - 2P+T [Kg]	495	503	534	595	602	608	513	522	554	623	631	636
Operating Weight - 2P+T [Kg]	607	615	646	765	772	778	625	633	667	793	800	806

Fan Data - AQL/AQH 40 to 75 - R410A - SIF Version

Sizes	Fan static pressure (Pa)	Fan RPM	Sound power level - dB(A)
40	145	900	90
	195	1000	92
	220	1050	94
	245	1100	95
45	145	900	90
	195	1000	92
	220	1050	94
	245	1100	95
50	145	900	90
	195	1000	92
	220	1050	94
	245	1100	95
60	45	1000	93
	68	1050	94
	120	1100	95
65	45	1000	93
	68	1050	94
	120	1100	95
75	45	1000	93
	68	1050	94
	120	1100	95

Electrical Data - AQL/AQH 40 to 75 - R410A - BLN Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	BLN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	19	21	25	29	32	36
Current input [A] max.	34	44	46	57	66	84
Start-up current (A)	113	134	142	166	175	217
Sizes	BLN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	21	23	27	31	33	38
Current input [A] max.	37	47	50	61	70	88
Start-up current (A)	116	137	146	170	179	221

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.98	2.4	8p - Δ
45	1	0.98	2.4	8p - Δ
50	1	0.98	2.4	8p - Δ
60	1	2.00	4.3	6p - Δ
65	1	2.00	4.3	6p - Δ
75	1	2.00	4.3	6p - Δ

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Electrical Data - AQL/AQH 40 to 75 - R410A - ELN Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	ELN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	19	21	24	28	31	35
Current input [A] max.	33	43	45	56	65	83
Start-up current (A)	112	133	141	165	174	216
Sizes	ELN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	20	22	26	30	33	37
Current input [A] max.	36	46	49	59	68	86
Start-up current (A)	115	136	145	168	177	219

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.57	1.2	8p - Y
45	1	0.57	1.2	8p - Y
50	1	0.57	1.2	8p - Y
60	1	1.27	2.5	6p - Y
65	1	1.27	2.5	6p - Y
75	1	1.27	2.5	6p - Y

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Electrical Data - AQL/AQH 40 to 75 - R410A - SIF Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	SIF Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	21	23	27	29	32	37
Current input [A] max.	16	46	48	57	66	84
Start-up current (A)	115	136	144	166	175	217
Sizes	SIF Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	22	24	28	31	34	39
Current input [A] max.	39	49	52	61	70	88
Start-up current (A)	118	139	148	170	179	221

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	number	Standard fan Nominal power (kW)	Standard fan Max. running current(A)
40	1	2.67	4.1
45	1	2.67	4.1
50	1	2.67	4.1
60	1	2.67	4.1
65	1	2.67	4.1
75	1	2.67	4.1

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Electrical Data - AQL/AQH 40 to 75 - R410A - BLN EHO Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	BLN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	31	33	37	41	44	48
Current input [A] max.	52	62	64	75	84	102
Start-up current (A)	131	152	160	184	193	235
Sizes	BLN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	33	35	39	43	45	50
Current input [A] max.	54	64	67	78	87	105
Start-up current (A)	133	154	163	187	196	238

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.98	2.4	8p - Δ
45	1	0.98	2.4	8p - Δ
50	1	0.98	2.4	8p - Δ
60	1	2.00	4.3	6p - Δ
65	1	2.00	4.3	6p - Δ
75	1	2.00	4.3	6p - Δ

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EHO option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	3	3	3	3	12	17.3
45	3	3	3	3	12	17.3
50	3	3	3	3	12	17.3
60	3	3	3	3	12	17.3
65	3	3	3	3	12	17.3
75	3	3	3	3	12	17.3

Electrical Data - AQL/AQH 40 to 75 - R410A - BLN EH1 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	BLN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	43	45	49	53	56	60
Current input [A] max.	69	79	81	92	101	119
Start-up current (A)	148	169	177	201	210	252
Sizes	BLN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	45	47	51	55	57	62
Current input [A] max.	72	82	85	95	104	122
Start-up current (A)	151	172	181	204	213	255

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.98	2.4	8p - Δ
45	1	0.98	2.4	8p - Δ
50	1	0.98	2.4	8p - Δ
60	1	2.00	4.3	6p - Δ
65	1	2.00	4.3	6p - Δ
75	1	2.00	4.3	6p - Δ

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH1 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	6	6	6	6	24	34.6
45	6	6	6	6	24	34.6
50	6	6	6	6	24	34.6
60	6	6	6	6	24	34.6
65	6	6	6	6	24	34.6
75	6	6	6	6	24	34.6

Electrical Data - AQL/AQH 40 to 75 - R410A - BLN EH2 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
45	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
50	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	BLN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	65	68	72
Current input [A] max.	-	-	-	109	118	136
Start-up current (A)	-	-	-	218	227	269
Sizes	BLN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	67	69	74
Current input [A] max.	-	-	-	113	122	140
Start-up current (A)	-	-	-	222	231	273

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	-	-	-	-
45	-	-	-	-
50	-	-	-	-
60	1	2.00	4.3	6p - Δ
65	1	2.00	4.3	6p - Δ
75	1	2.00	4.3	6p - Δ

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	-	-	-	-
45	-	-	-	-
50	-	-	-	-
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH2 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	-	-	-	-	-	-
45	-	-	-	-	-	-
50	-	-	-	-	-	-
60	9	9	9	9	36	52.0
65	9	9	9	9	36	52.0
75	9	9	9	9	36	52.0

Electrical Data - AQL/AQH 40 to 75 - R410A - ELN EHO Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	ELN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	31	33	36	40	43	47
Current input [A] max.	51	61	63	73	82	100
Start-up current (A)	130	151	159	182	191	233
Sizes	ELN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	32	34	38	42	45	49
Current input [A] max.	53	63	66	76	85	103
Start-up current (A)	132	153	162	185	194	236

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.57	1.2	8p - Y
45	1	0.57	1.2	8p - Y
50	1	0.57	1.2	8p - Y
60	1	1.27	2.5	6p - Y
65	1	1.27	2.5	6p - Y
75	1	1.27	2.5	6p - Y

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EHO option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	3	3	3	3	12	17.3
45	3	3	3	3	12	17.3
50	3	3	3	3	12	17.3
60	3	3	3	3	12	17.3
65	3	3	3	3	12	17.3
75	3	3	3	3	12	17.3

Electrical Data - AQL/AQH 40 to 75 - R410A - ELN EH1 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	ELN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	43	45	48	52	55	59
Current input [A] max.	68	78	80	90	99	117
Start-up current (A)	147	168	176	199	208	250
Sizes	ELN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	44	46	50	54	57	61
Current input [A] max.	70	80	83	94	103	121
Start-up current (A)	149	170	179	203	212	254

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	1	0.57	1.2	8p - Y
45	1	0.57	1.2	8p - Y
50	1	0.57	1.2	8p - Y
60	1	1.27	2.5	6p - Y
65	1	1.27	2.5	6p - Y
75	1	1.27	2.5	6p - Y

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH1 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	6	6	6	6	24	34.6
45	6	6	6	6	24	34.6
50	6	6	6	6	24	34.6
60	6	6	6	6	24	34.6
65	6	6	6	6	24	34.6
75	6	6	6	6	24	34.6

Electrical Data - AQL/AQH 40 to 75 - R410A - ELN EH2 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
45	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
50	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	ELN Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	64	67	71
Current input [A] max.	-	-	-	107	116	134
Start-up current (A)	-	-	-	216	225	267
Sizes	ELN Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	66	69	73
Current input [A] max.	-	-	-	111	120	138
Start-up current (A)	-	-	-	220	229	271

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)	
40	-	-	-	-
45	-	-	-	-
50	-	-	-	-
60	1	1.27	2.5	6p - Y
65	1	1.27	2.5	6p - Y
75	1	1.27	2.5	6p - Y

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	-	-	-	-
45	-	-	-	-
50	-	-	-	-
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH2 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	-	-	-	-	-	-
45	-	-	-	-	-	-
50	-	-	-	-	-	-
60	9	9	9	9	36	52.0
65	9	9	9	9	36	52.0
75	9	9	9	9	36	52.0

Electrical Data - AQL/AQH 40 to 75 - R410A - SIF EHO Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	SIF Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	33	35	39	51	44	49
Current input [A] max.	53	63	65	74	83	101
Start-up current (A)	132	153	161	183	192	234
Sizes	SIF Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	34	36	40	43	46	51
Current input [A] max.	56	66	69	78	87	105
Start-up current (A)	135	156	165	187	196	238

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)
40	1	2.67	4.1
45	1	2.67	4.1
50	1	2.67	4.1
60	1	2.67	4.1
65	1	2.67	4.1
75	1	2.67	4.1

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EHO option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	3	3	3	3	12	17.3
45	3	3	3	3	12	17.3
50	3	3	3	3	12	17.3
60	3	3	3	3	12	17.3
65	3	3	3	3	12	17.3
75	3	3	3	3	12	17.3

Electrical Data - AQL/AQH 40 to 75 - R410A - SIF EH1 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor maximum condition
40	COMP 1	6.3	11.3	9.1	16	95	0.8	0.8
	COMP 2	6.3	11.3	9.1	16	95	0.8	0.8
45	COMP 1	7.1	12.7	10.2	21	111	0.8	0.7
	COMP 2	7.1	12.7	10.2	21	111	0.8	0.7
50	COMP 1	8.3	15.3	12.0	22	118	0.8	0.8
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	SIF Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	45	47	51	53	56	61
Current input [A] max.	71	81	83	92	101	119
Start-up current (A)	150	171	179	201	210	252
Sizes	SIF Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	46	48	52	55	58	63
Current input [A] max.	73	83	86	95	104	122
Start-up current (A)	152	173	182	204	213	255

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)
40	1	2.67	4.1
45	1	2.67	4.1
50	1	2.67	4.1
60	1	2.67	4.1
65	1	2.67	4.1
75	1	2.67	4.1

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	1.32	2.61	1.32	2.61
45	1.32	2.61	1.32	2.61
50	1.84	3.49	1.84	3.49
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH1 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	6	6	6	6	24	34.6
45	6	6	6	6	24	34.6
50	6	6	6	6	24	34.6
60	6	6	6	6	24	34.6
65	6	6	6	6	24	34.6
75	6	6	6	6	24	34.6

Electrical Data - AQL/AQH 40 to 75 - R410A - SIF EH2 Version

Compressor data - 400 V/3 Ph/50 Hz

		Power input at nominal cond. per comp. [kW]	Nom.Cond. current per compressor [A]	Power input at max cond. per comp. [kW]	Current at max cond. per comp. FLA [A]	Start up current LRA [A]	Power factor @ nominal condition	Power factor @ maximum condition
40	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
45	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
50	COMP 1	-	-	-	-	-	-	-
	COMP 2	-	-	-	-	-	-	-
60	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	8.3	15.3	12.0	22	118	0.8	0.8
65	COMP 1	10.5	19.1	14.8	31	140	0.8	0.7
	COMP 2	10.5	19.1	14.8	31	140	0.8	0.7
75	COMP 1	12.2	23.3	17.1	40	173	0.8	0.6
	COMP 2	12.2	23.3	17.1	40	173	0.8	0.6

Units - 400 V/3 Ph/50 Hz

Sizes	SIF Unit Data Without Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	65	68	73
Current input [A] max.	-	-	-	109	118	136
Start-up current (A)	-	-	-	218	227	269
Sizes	SIF Unit Data With Pumps					
	40	45	50	60	65	75
Power input [kW] max.	-	-	-	67	70	75
Current input [A] max.	-	-	-	113	122	140
Start-up current (A)	-	-	-	222	231	273

Fan electrical data - 400 V/3 Ph/50 Hz

Sizes	Number	Standard fan Nominal power (kW)	Standard fan Max. running current (A)
40	-	-	-
45	-	-	-
50	-	-	-
60	1	2.67	4.1
65	1	2.67	4.1
75	1	2.67	4.1

Pump electrical data - 400 V/3 Ph/50 Hz

Sizes	1 P Unit		2 P Unit	
	Nominal power (kW)	Max. running current (A)	Nominal power (kW)	Max. running current (A)
40	-	-	-	-
45	-	-	-	-
50	-	-	-	-
60	1.84	3.49	1.84	3.49
65	1.84	3.49	1.84	3.49
75	1.84	3.49	1.84	3.49

Tank electrical heaters - 400 V/3 Ph/50 Hz

Sizes	EH2 option					
	Step 1 (kW)	Step 2 (kW)	Step 3 (kW)	Step 4 (kW)	Total (kW)	Total (A)
40	-	-	-	-	-	-
45	-	-	-	-	-	-
50	-	-	-	-	-	-
60	9	9	9	9	36	52.0
65	9	9	9	9	36	52.0
75	9	9	9	9	36	52.0

Sound Data - AQL/AQH 40 to 75 - R410A

Sound power levels - Lw in dB(A) - BLN version

Sizes	Frequencies (Hz)								Lw(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	74.7	91.2	76.6	76.9	74.8	71.0	62.0	55.2	80.5
AQL / AQH 45	74.9	91.5	76.7	77.5	76.0	71.1	62.1	55.4	81.0
AQL / AQH 50	74.9	91.5	76.7	77.5	76.0	71.1	62.1	55.4	81.0
AQL / AQH 60	77.2	94.6	80.7	82.0	81.1	76.2	66.5	59.2	85.5
AQL / AQH 65	77.1	94.4	80.9	82.5	81.2	76.3	66.7	59.3	85.6
AQL / AQH 75	77.5	95.0	81.0	82.7	81.1	76.4	66.9	59.5	85.8

Sound power levels - Lw in dB(A) - ELN version

Sizes	Frequencies (Hz)								Lw(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	69.5	72.4	70.4	71.3	70.5	65.6	57.0	51.0	74.0
AQL / AQH 45	73.1	76.4	74.7	73.4	70.9	65.5	58.6	48.3	75.3
AQL / AQH 50	73.1	76.4	74.7	73.4	70.9	65.5	58.6	48.3	75.3
AQL / AQH 60	72.3	88.5	75.1	74.0	72.8	68.5	59.1	52.1	78.0
AQL / AQH 65	73.3	89.6	75.2	74.1	73.0	68.7	59.0	52.0	78.5
AQL / AQH 75	73.5	89.9	75.5	75.0	73.7	69.2	60.5	53.4	79.0

Sound power levels - Lw in dB(A) - SIF* version

Sizes	Frequencies (Hz)								Lw(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	82.8	99.1	90.3	93.5	91.4	85.3	75.0	68.5	95.2
AQL / AQH 45	82.8	99.1	90.3	93.5	91.4	85.3	75.0	68.5	95.2
AQL / AQH 50	82.8	99.1	90.3	93.5	91.4	85.3	75.0	68.5	95.2
AQL / AQH 60	83.1	99.9	90.4	93.6	91.5	85.4	75.1	68.7	95.3
AQL / AQH 65	83.1	99.9	90.4	93.6	91.5	85.4	75.1	68.7	95.3
AQL / AQH 75	83.1	99.9	90.4	93.6	91.5	85.4	75.1	68.7	95.3

* Sound data referred to a fan speed of 1110 rpm.

Compressor jacket (standard on ELN) can be ordered as accessory. Compressor jacket impact = -2 dB(A).

Sound Data (continued) - AQL/AQH 40 to 75 - R410A

Sound pressure levels - Lp in dB(A) - BLN version

Sizes	Frequencies (Hz)								Lp(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	43.1	59.6	45.0	45.3	43.2	39.4	30.4	23.6	48.9
AQL / AQH 45	43.3	59.9	45.1	45.9	44.4	39.5	30.5	23.8	49.4
AQL / AQH 50	43.3	59.9	45.1	45.9	44.4	39.5	30.5	23.8	49.4
AQL / AQH 60	45.5	62.9	49.0	50.3	49.4	44.5	34.8	27.5	53.8
AQL / AQH 65	45.4	62.7	49.2	50.8	49.5	44.6	35.0	27.6	53.9
AQL / AQH 75	45.8	63.3	49.3	51.0	49.4	44.7	35.2	27.8	54.1

Sound pressure levels - Lp in dB(A) - ELN version

Sizes	Frequencies (Hz)								Lp(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	37.9	40.8	38.8	39.7	38.9	34.0	25.4	19.4	42.4
AQL / AQH 45	41.5	44.8	43.1	41.8	39.3	33.9	27.0	16.7	43.7
AQL / AQH 50	41.5	44.8	43.1	41.8	39.3	33.9	27.0	16.7	43.7
AQL / AQH 60	40.6	56.8	43.4	42.3	41.1	36.8	27.4	20.4	46.3
AQL / AQH 65	41.6	57.9	43.5	42.4	41.3	37.0	27.3	20.3	46.8
AQL / AQH 75	41.8	58.2	43.8	43.3	42.0	37.5	28.8	21.7	47.3

Sound pressure levels - Lp in dB(A) - SIF* version

Sizes	Frequencies (Hz)								Lp(A) Global dB
	63	125	250	500	1000	2000	4000	8000	
AQL / AQH 40	51.2	67.5	58.7	61.9	59.8	53.7	43.4	36.9	63.6
AQL / AQH 45	51.2	67.5	58.7	61.9	59.8	53.7	43.4	36.9	63.6
AQL / AQH 50	51.2	67.5	58.7	61.9	59.8	53.7	43.4	36.9	63.6
AQL / AQH 60	51.4	68.2	58.7	61.9	59.8	53.7	43.4	37.0	63.6
AQL / AQH 65	51.4	68.2	58.7	61.9	59.8	53.7	43.4	37.0	63.6
AQL / AQH 75	51.4	68.2	58.7	61.9	59.8	53.7	43.4	37.0	63.6

Sound pressure level calculated at a distance of 10 metre. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

* Sound data referred to a fan speed of 1110 rpm.

Compressor jacket (standard on ELN) can be ordered as accessory. Compressor jacket impact = -2 dB(A).

Performance Data - AQL 40 to 75 R410A - BLN Version

AQL BLN sizes	LWT (°C)	Ambient air temperature (°C)													
		25		30		32		35		40		43		46	
		Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)	Cooling cap. (kW)	Input power* (kW)
AQL 40 BLN	5	42.2	10.5	40.1	11.4	39.2	11.9	37.9	12.5	35.5	13.7	34.0	14.4	32.4	15.2
	7	44.5	10.7	42.4	11.6	41.4	12.0	40.0	12.7	37.5	13.9	35.9	14.6	34.3	15.4
	9	47.0	10.8	44.7	11.8	43.7	12.2	42.2	12.9	39.5	14.0	37.8	14.8		
	11	49.4	11.0	46.9	11.9	45.9	12.4	44.3	13.0	41.4	14.1	39.7	14.8		
	13	51.8	11.2	49.3	12.1	48.2	12.4	46.4	13.0	43.4	14.0	41.5	37.7		
	15	54.3	11.3	51.5	12.2	50.3	12.5	48.5	13.0	45.3	13.9				
	17	56.6	11.4	53.7	12.2	52.4	12.4	50.5	12.8	47.1	13.5				
	18	57.8	11.6	54.9	12.3	53.6	12.6	51.6	13.1	48.2	13.8				
AQL 45 BLN	5	46.4	12.2	44.2	13.3	43.1	13.8	41.7	14.5	39.0	15.9	37.4	16.7	35.7	17.6
	7	49.0	12.4	46.6	13.5	45.6	14.0	44.0	14.8	41.3	16.2	39.5	17.0	37.7	17.9
	9	51.7	12.6	49.1	13.8	48.1	14.2	46.4	15.0	43.4	16.3	41.6	17.2		
	11	54.3	12.8	51.6	13.9	50.5	14.4	48.7	15.1	45.6	16.4	43.6	17.2		
	13	57.0	13.1	54.2	14.1	53.0	14.5	51.0	15.2	47.7	16.3	45.6	43.9		
	15	59.7	13.2	56.6	14.2	55.3	14.5	53.3	15.1	49.8	16.2				
	17	62.3	13.3	59.1	14.2	57.7	14.5	55.5	14.9	51.8	15.7				
	18	63.6	13.5	60.3	14.4	58.9	14.7	56.7	15.2	53.0	16.1				
AQL 50 BLN	5	53.8	14.2	51.2	15.5	50.0	16.1	48.3	16.9	45.2	18.5	43.4	19.4	41.4	20.5
	7	56.8	14.4	54.1	15.7	52.8	16.3	51.0	17.2	47.8	18.8	45.8	19.7	43.7	20.8
	9	59.9	14.6	56.9	16.0	55.7	16.5	53.7	17.4	50.3	18.9	48.2	20.0		
	11	62.9	14.9	59.8	16.1	58.5	16.7	56.5	17.6	52.8	19.1	50.5	20.0		
	13	66.0	15.2	62.8	16.4	61.4	16.8	59.1	17.6	55.3	19.0	52.9	51.0		
	15	69.2	15.3	65.6	16.4	64.1	16.9	61.8	17.6	57.7	18.8				
	17	72.2	15.5	68.5	16.4	66.8	16.8	64.3	17.3	60.0	18.2				
	18	73.7	15.6	69.9	16.7	68.3	17.1	65.8	17.7	61.4	18.7				
AQL 60 BLN	5	63.3	15.0	60.2	16.3	58.8	16.9	56.8	17.8	53.2	19.5	51.0	20.5	48.6	21.6
	7	66.8	15.2	63.6	16.5	62.1	17.2	60.0	18.1	56.2	19.8	53.8	20.8	51.4	21.9
	9	70.4	15.4	66.9	16.9	65.5	17.4	63.2	18.4	59.2	19.9	56.7	21.0		
	11	74.0	15.7	70.3	17.0	68.8	17.6	66.4	18.5	62.1	20.1	59.4	21.0		
	13	77.7	16.0	73.8	17.2	72.2	17.7	69.5	18.6	65.0	20.0	62.2	53.7		
	15	81.3	16.1	77.1	17.3	75.4	17.8	72.6	18.5	67.9	19.8				
	17	84.9	16.3	80.5	17.3	78.6	17.7	75.6	18.3	70.6	19.2				
	18	86.7	16.5	82.2	17.6	80.3	18.0	77.3	18.6	72.2	19.7				
AQL 65 BLN	5	71.6	17.3	68.1	18.9	66.6	19.6	64.3	20.6	60.2	22.6	57.7	23.8	55.1	25.0
	7	75.6	17.6	71.9	19.2	70.3	19.9	67.9	21.0	63.7	22.9	61.0	24.1	58.2	25.4
	9	79.7	17.9	75.8	19.5	74.1	20.2	71.5	21.3	67.0	23.1	64.2	24.4		
	11	83.8	18.2	79.6	19.7	77.9	20.5	75.2	21.5	70.3	23.3	67.3	24.4		
	13	87.9	18.5	83.6	20.0	81.7	20.5	78.7	21.6	73.6	23.2	70.4	62.3		
	15	92.1	18.7	87.3	20.1	85.3	20.6	82.2	21.5	76.8	22.9				
	17	96.1	18.9	91.1	20.1	89.0	20.5	85.6	21.2	79.9	22.3				
	18	98.1	19.1	93.1	20.4	90.9	20.8	87.5	21.6	81.7	22.8				
AQL 75 BLN	5	79.9	20.9	76.0	22.8	74.3	23.7	71.7	24.9	67.2	27.2	64.4	28.7	61.4	30.2
	7	84.3	21.3	80.3	23.1	78.4	24.0	75.8	25.4	71.0	27.7	68.0	29.1	64.9	30.7
	9	89.0	21.6	84.6	23.6	82.7	24.4	79.8	25.7	74.7	27.9	71.6	29.4		
	11	93.5	21.9	88.8	23.8	86.9	24.7	83.9	25.9	78.4	28.1	75.1	29.4		
	13	98.1	22.4	93.2	24.1	91.2	24.8	87.8	26.0	82.1	28.0	78.5	75.2		
	15	102.7	22.6	97.4	24.2	95.2	24.9	91.7	25.9	85.7	27.7				
	17	107.2	22.8	101.7	24.2	99.3	24.8	95.6	25.6	89.2	26.9				
	18	109.5	23.1	103.9	24.6	101.5	25.2	97.7	26.0	91.2	27.5				

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQL 40 to 75 R410A - ELN Version

AQL ELN sizes	LWT (°C)	Ambient air temperature (°C)											
		25		30		32		35		40		43	
		Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)
AQL 40 ELN	5	40.8	11.0	38.8	12.0	37.9	12.5	36.6	13.1	34.3	14.4	32.9	15.1
	7	43.1	11.2	41.0	12.2	40.1	12.7	38.7	13.4	36.3	14.6	34.7	15.3
	9	45.4	11.4	43.2	12.4	42.2	12.8	40.8	13.5	38.2	14.7		
	11	47.7	11.6	45.4	12.5	44.4	13.0	42.8	13.7	40.1	14.8		
	13	50.1	11.8	47.6	12.7	46.6	13.1	44.8	13.7	42.0	14.8		
	15	52.5	11.9	49.8	12.8	48.6	13.1	46.9	13.7				
	17	54.8	12.0	51.9	12.8	50.7	13.1	48.8	13.5				
	18	55.9	12.2	53.0	13.0	51.8	13.3	49.9	13.7				
AQL 45 ELN	5	44.7	12.9	42.5	14.1	41.5	14.6	40.1	15.4	37.6	16.8	36.0	17.7
	7	47.2	13.1	44.9	14.3	43.9	14.8	42.4	15.7	39.7	17.1	38.1	18.0
	9	49.8	13.3	47.3	14.6	46.3	15.0	44.7	15.9	41.8	17.2		
	11	52.3	13.5	49.7	14.7	48.6	15.3	46.9	16.0	43.9	17.4		
	13	54.9	13.8	52.2	14.9	51.0	15.3	49.1	16.1	45.9	17.3		
	15	57.5	14.0	54.5	15.0	53.3	15.4	51.3	16.0				
	17	60.0	14.1	56.9	15.0	55.5	15.3	53.5	15.8				
	18	61.3	14.2	58.1	15.2	56.8	15.5	54.6	16.1				
AQL 50 ELN	5	51.4	15.2	48.8	16.5	47.7	17.2	46.1	18.1	43.2	19.7	41.4	20.8
	7	54.2	15.4	51.6	16.8	50.4	17.4	48.7	18.4	45.6	20.1	43.7	21.1
	9	57.2	15.6	54.3	17.1	53.1	17.7	51.3	18.6	48.0	20.2		
	11	60.1	15.9	57.1	17.3	55.8	17.9	53.9	18.8	50.4	20.4		
	13	63.0	16.2	59.9	17.5	58.6	18.0	56.4	18.9	52.8	20.3		
	15	66.0	16.4	62.6	17.6	61.2	18.1	58.9	18.8				
	17	68.9	16.5	65.3	17.6	63.8	18.0	61.4	18.5				
	18	70.4	16.7	66.7	17.8	65.2	18.2	62.8	18.9				
AQL 60 ELN	5	61.2	15.7	58.2	17.1	56.9	17.8	54.9	18.7	51.5	20.5	49.4	21.5
	7	64.6	16.0	61.5	17.4	60.1	18.0	58.0	19.0	54.4	20.8	52.1	21.9
	9	68.1	16.2	64.8	17.7	63.4	18.3	61.1	19.3	57.2	21.0		
	11	71.6	16.5	68.1	17.9	66.6	18.5	64.2	19.5	60.1	21.1		
	13	75.1	16.8	71.4	18.1	69.8	18.6	67.3	19.5	62.9	21.0		
	15	78.7	17.0	74.6	18.2	72.9	18.7	70.3	19.5				
	17	82.1	17.1	77.9	18.2	76.0	18.6	73.2	19.2				
	18	83.9	17.3	79.6	18.5	77.7	18.9	74.8	19.6				
AQL 65 ELN	5	66.6	18.1	63.3	19.7	61.9	20.5	59.8	21.5	56.0	23.5	53.7	24.8
	7	70.3	18.3	66.9	20.0	65.4	20.7	63.1	21.9	59.2	23.9	56.7	25.1
	9	74.1	18.6	70.5	20.4	68.9	21.0	66.5	22.2	62.3	24.1		
	11	77.9	18.9	74.0	20.5	72.4	21.3	69.9	22.4	65.4	24.3		
	13	81.7	19.3	77.7	20.8	76.0	21.4	73.2	22.5	68.4	24.2		
	15	85.6	19.5	81.2	20.9	79.3	21.5	76.4	22.4				
	17	89.4	19.7	84.7	20.9	82.7	21.4	79.6	22.1				
	18	91.3	19.9	86.5	21.2	84.5	21.7	81.4	22.5				
AQL 75 ELN	5	76.8	22.2	73.0	24.2	71.3	25.2	68.9	26.5	64.6	28.9	61.9	30.5
	7	81.0	22.6	77.1	24.6	75.3	25.5	72.8	26.9	68.2	29.4	65.3	30.9
	9	85.4	22.9	81.2	25.0	79.4	25.9	76.7	27.3	71.8	29.6		
	11	89.8	23.3	85.3	25.3	83.4	26.2	80.6	27.5	75.3	29.9		
	13	94.2	23.8	89.6	25.6	87.6	26.3	84.3	27.6	78.9	29.7		
	15	98.7	24.0	93.6	25.7	91.4	26.5	88.1	27.5				
	17	103.0	24.2	97.7	25.7	95.3	26.3	91.8	27.2				
	18	105.2	24.5	99.8	26.1	97.5	26.7	93.8	27.7				

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQL 40 to 75 R410A - SIF Version

AQL SIF sizes	LWT (°C)	Ambient air temperature (°C)																	
		25		30		32		35		40		43		46		48		50	
		Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)	Cool. cap. (kW)	Input power* (kW)
AQL 40 SIF	5	44.4	9.7	42.2	10.5	41.3	10.9	39.9	11.5	37.4	12.6	35.8	13.2	34.1	14.0	33.0	14.5	32.0	14.9
	7	46.9	9.8	44.6	10.7	43.6	11.1	42.1	11.7	39.5	12.8	37.8	13.5	36.1	14.2	34.9	14.6	33.8	15.1
	9	49.4	10.0	47.0	10.9	46.0	11.3	44.4	11.9	41.5	12.9	39.8	13.6	37.9	14.3	36.6	14.7		
	11	52.0	10.1	49.4	11.0	48.3	11.4	46.6	12.0	43.6	13.0	41.7	13.6	39.8	14.3	38.5	14.7		
	13	54.5	10.3	51.8	11.1	50.7	11.5	48.8	12.0	45.7	12.9	43.7	13.6	41.6	14.1	40.2	14.5		
	15	57.1	10.4	54.1	11.2	52.9	11.5	51.0	12.0	47.6	12.8	45.5	13.6	43.3	13.7				
	17	59.6	10.5	56.5	11.2	55.2	11.5	53.1	11.8	49.6	12.4	47.3	13.6	44.9	13.1				
	18	60.9	10.7	57.7	11.4	56.4	11.6	54.3	12.0	50.7	12.7	48.4	13.6	46.0	13.5				
AQL 45 SIF	5	49.1	11.1	46.7	12.1	45.7	12.6	44.1	13.2	41.3	14.5	39.6	15.2	37.8	16.1	36.6	16.7	35.3	17.2
	7	51.8	11.3	49.4	12.3	48.2	12.8	46.6	13.5	43.7	14.7	41.8	15.5	39.9	16.3	38.6	16.8	37.3	17.4
	9	54.7	11.5	52.0	12.5	50.9	12.9	49.1	13.7	45.9	14.8	44.0	15.7	42.0	16.4	40.5	16.9		
	11	57.5	11.7	54.6	12.7	53.4	13.1	51.6	13.8	48.2	14.9	46.2	15.7	44.0	16.4	42.6	16.9		
	13	60.3	11.9	57.3	12.8	56.0	13.2	54.0	13.8	50.5	14.9	48.3	15.7	46.0	16.2	44.5	16.7		
	15	63.2	12.0	59.9	12.9	58.5	13.2	56.4	13.8	52.7	14.7	50.4	15.7	47.9	15.8				
	17	65.9	12.1	62.5	12.9	61.0	13.2	58.7	13.6	54.8	14.3	52.3	15.7	49.7	15.1				
	18	67.3	12.3	63.9	13.1	62.4	13.4	60.1	13.8	56.1	14.6	53.5	15.7	50.9	15.5				
AQL 50 SIF	5	57.3	12.8	54.5	14.0	53.3	14.5	51.4	15.2	48.2	16.7	46.2	17.6	44.1	18.5	42.6	19.2	41.2	19.8
	7	60.5	13.0	57.6	14.2	56.2	14.7	54.3	15.5	50.9	16.9	48.8	17.8	46.5	18.8	45.0	19.4	43.6	20.0
	9	63.8	13.2	60.6	14.4	59.3	14.9	57.2	15.7	53.6	17.1	51.4	18.0	48.9	18.9	47.3	19.5		
	11	67.0	13.4	63.7	14.6	62.3	15.1	60.1	15.9	56.2	17.2	53.8	18.0	51.4	18.9	49.7	19.4		
	13	70.3	13.7	66.9	14.8	65.4	15.2	63.0	15.9	58.9	17.1	56.3	18.0	53.7	18.7	51.8	19.2		
	15	73.7	13.8	69.9	14.8	68.3	15.2	65.8	15.9	61.5	16.9	58.7	18.0	55.9	18.2				
	17	76.9	14.0	72.9	14.8	71.2	15.2	68.5	15.7	64.0	16.5	61.0	18.0	58.0	17.4				
	18	78.5	14.1	74.5	15.1	72.8	15.4	70.0	15.9	65.4	16.9	62.4	18.0	59.4	17.9				
AQL 60 SIF	5	64.1	14.6	61.0	16.0	59.6	16.6	57.5	17.4	53.9	19.1	51.7	20.1	49.3	21.2	47.7	21.9		
	7	67.6	14.9	64.4	16.2	62.9	16.8	60.8	17.7	57.0	19.4	54.5	20.4	52.0	21.5				
	9	71.3	15.1	67.8	16.5	66.3	17.0	64.0	18.0	59.9	19.5	57.4	20.6	54.7	21.6				
	11	75.0	15.3	71.2	16.7	69.7	17.3	67.3	18.1	62.9	19.7	60.2	20.6	57.4	21.6				
	13	78.7	15.7	74.8	16.9	73.1	17.4	70.4	18.2	65.9	19.6	63.0	20.6						
	15	82.4	15.8	78.1	17.0	76.4	17.4	73.6	18.1	68.7	19.4	65.7	20.6						
	17	86.0	16.0	81.5	17.0	79.6	17.4	76.6	17.9	71.5	18.8	68.2	20.6						
	18	87.8	16.1	83.3	17.2	81.4	17.6	78.3	18.2	73.1	19.3	69.8	20.6						
AQL 65 SIF	5	70.1	16.8	66.6	18.3	65.1	19.0	62.9	20.0	58.9	21.8	56.5	23.0	53.9	24.2	52.1	25.1		
	7	73.9	17.0	70.4	18.5	68.8	19.3	66.4	20.3	62.3	22.2	59.6	23.3	56.9	24.6				
	9	78.0	17.3	74.1	18.9	72.5	19.5	70.0	20.6	65.5	22.4	62.8	23.6	59.8	24.8				
	11	82.0	17.6	77.9	19.1	76.2	19.8	73.5	20.8	68.8	22.5	65.8	23.6	62.8	24.8				
	13	86.0	17.9	81.8	19.3	79.9	19.9	77.0	20.9	72.0	22.5	68.9	23.6						
	15	90.1	18.1	85.4	19.4	83.5	20.0	80.4	20.8	75.2	22.2	71.8	23.6						
	17	94.0	18.3	89.2	19.4	87.0	19.9	83.8	20.5	78.2	21.6	74.5	23.6						
	18	96.0	18.5	91.1	19.7	89.0	20.2	85.6	20.9	80.0	22.1	76.3	23.6						
AQL 75 SIF	5	81.2	20.4	77.2	22.2	75.5	23.1	72.9	24.3	68.3	26.5	65.5	28.0	62.4	29.5	60.4	30.5		
	7	85.7	20.7	81.6	22.6	79.7	23.4	77.0	24.7	72.2	27.0	69.1	28.4	65.9	29.9				
	9	90.4	21.0	85.9	23.0	84.0	23.7	81.1	25.0	75.9	27.2	72.8	28.7	69.4	30.1				
	11	95.0	21.4	90.3	23.2	88.3	24.1	85.2	25.3	79.7	27.4	76.3	28.7	72.8	30.1				
	13	99.7	21.8	94.7	23.5	92.6	24.2	89.2	25.4	83.5	27.3	79.8	28.7						
	15	104.4	22.0	99.0	23.6	96.7	24.3	93.2	25.3	87.1	27.0	83.2	28.7						
	17	109.0	22.2	103.3	23.6	100.9	24.2	97.1	24.9	90.6	26.2	86.4	28.7						
	18	111.3	22.5	105.5	24.0	103.1	24.5	99.3	25.4	92.7	26.8	88.4	28.7						

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQH 40 to 75 R410A - BLN Version

Cooling mode

AQH BLN sizes	LWT (°C)	Ambient air temperature (°C)													
		25		30		32		35		40		43		46	
		Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)
AQH 40 BLN	5	38.1	10.2	36.2	11.1	35.4	11.5	34.2	12.1	32.0	13.2	30.7	13.9	29.3	14.7
	7	40.2	10.3	38.2	11.2	37.4	11.7	36.1	12.3	33.8	13.4	32.4	14.1	30.9	14.9
	9	42.4	10.5	40.3	11.5	39.4	11.8	38.0	12.5	35.6	13.6	34.1	14.3		
	11	44.5	10.7	42.3	11.6	41.4	12.0	40.0	12.6	37.4	13.7	35.8	14.3		
	13	46.7	10.9	44.4	11.7	43.4	12.1	41.8	12.6	39.1	13.6	37.4	14.2		
	15	48.9	11.0	46.4	11.8	45.4	12.1	43.7	12.6	40.8	13.4				
	17	51.1	11.1	48.4	11.8	47.3	12.1	45.5	12.4	42.5	13.1				
	18	52.2	11.2	49.5	12.0	48.3	12.2	46.5	12.7	43.4	13.4				
AQH 45 BLN	5	43.3	11.8	41.1	12.9	40.2	13.4	38.8	14.1	36.4	15.4	34.9	16.2	33.2	17.1
	7	45.6	12.0	43.4	13.1	42.4	13.6	41.0	14.3	38.4	15.6	36.8	16.4	35.1	17.3
	9	48.1	12.2	45.8	13.3	44.8	13.8	43.2	14.5	40.4	15.8	38.7	16.6		
	11	50.6	12.4	48.1	13.4	47.0	13.9	45.4	14.6	42.4	15.9	40.6	16.6		
	13	53.1	12.6	50.5	13.6	49.3	14.0	47.5	14.7	44.4	15.8	42.5	16.5		
	15	55.6	12.8	52.7	13.7	51.5	14.1	49.6	14.6	46.4	15.6				
	17	58.0	12.9	55.0	13.7	53.7	14.0	51.7	14.4	48.3	15.2				
	18	59.3	13.0	56.2	13.9	54.9	14.2	52.9	14.7	49.3	15.6				
AQH 50 BLN	5	50.1	13.8	47.6	15.0	46.6	15.6	45.0	16.4	42.1	18.0	40.4	18.9	38.5	19.9
	7	52.9	14.0	50.3	15.3	49.2	15.8	47.5	16.7	44.5	18.3	42.6	19.2	40.7	20.2
	9	55.8	14.2	53.0	15.6	51.9	16.1	50.0	16.9	46.8	18.4	44.9	19.4		
	11	58.6	14.5	55.7	15.7	54.5	16.3	52.6	17.1	49.2	18.5	47.1	19.4		
	13	61.5	14.7	58.5	15.9	57.1	16.4	55.0	17.2	51.5	18.5	49.2	19.3		
	15	64.4	14.9	61.1	16.0	59.7	16.4	57.5	17.1	53.7	18.3				
	17	67.2	15.0	63.7	16.0	62.2	16.4	59.9	16.9	55.9	17.7				
	18	68.7	15.2	65.1	16.2	63.6	16.6	61.2	17.2	57.2	18.2				
AQH 60 BLN	5	59.0	14.4	56.1	15.7	54.8	16.4	52.9	17.2	49.6	18.8	47.5	19.8	45.3	20.9
	7	62.2	14.7	59.2	16.0	57.9	16.6	55.9	17.5	52.4	19.1	50.2	20.1	47.9	21.2
	9	65.6	14.9	62.4	16.3	61.0	16.8	58.9	17.7	55.1	19.3	52.8	20.3		
	11	69.0	15.1	65.5	16.4	64.1	17.0	61.9	17.9	57.9	19.4	55.4	20.3		
	13	72.4	15.4	68.8	16.7	67.3	17.1	64.8	18.0	60.6	19.3	57.9	20.2		
	15	75.8	15.6	71.9	16.7	70.2	17.2	67.7	17.9	63.2	19.1				
	17	79.1	15.7	75.0	16.7	73.2	17.1	70.5	17.7	65.8	18.6				
	18	80.8	15.9	76.6	17.0	74.9	17.4	72.1	18.0	67.3	19.0				
AQH 65 BLN	5	66.8	16.8	63.5	18.4	62.0	19.1	59.9	20.0	56.1	21.9	53.8	23.1	51.3	24.3
	7	70.5	17.1	67.1	18.6	65.5	19.3	63.3	20.4	59.3	22.3	56.8	23.4	54.2	24.7
	9	74.3	17.4	70.6	19.0	69.1	19.6	66.7	20.7	62.4	22.4	59.8	23.7		
	11	78.1	17.6	74.2	19.2	72.6	19.9	70.1	20.8	65.5	22.6	62.7	23.7		
	13	82.0	18.0	77.9	19.4	76.2	20.0	73.4	20.9	68.6	22.5	65.6	23.5		
	15	85.8	18.2	81.4	19.5	79.5	20.0	76.6	20.8	71.6	22.3				
	17	89.6	18.4	84.9	19.5	82.9	20.0	79.8	20.6	74.5	21.6				
	18	91.5	18.6	86.8	19.8	84.8	20.2	81.6	21.0	76.2	22.2				
AQH 75 BLN	5	74.6	20.3	70.9	22.1	69.3	23.0	66.9	24.2	62.7	26.4	60.1	27.8	57.3	29.3
	7	78.7	20.6	74.9	22.5	73.2	23.3	70.7	24.6	66.3	26.9	63.5	28.3	60.6	29.8
	9	83.0	20.9	78.9	22.9	77.2	23.6	74.5	24.9	69.7	27.1	66.8	28.6		
	11	87.2	21.3	82.9	23.1	81.1	24.0	78.3	25.1	73.2	27.3	70.1	28.6		
	13	91.5	21.7	87.0	23.4	85.1	24.1	81.9	25.2	76.6	27.2	73.3	28.4		
	15	95.8	21.9	90.9	23.5	88.8	24.2	85.6	25.1	80.0	26.9				
	17	100.1	22.1	94.9	23.5	92.6	24.1	89.2	24.8	83.2	26.1				
	18	102.2	22.4	96.9	23.9	94.7	24.4	91.1	25.3	85.1	26.7				

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQH 40 to 75 R410A - BLN Version

Heating mode

AQH BLN sizes	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)
AQH 40 BLN	30	30.4	8.63	32.0	8.63	34.7	8.69	39.6	8.69	41.7	8.69	45.2	8.69	51.9	8.75
	35	30.2	9.66	31.8	9.66	34.4	9.71	39.0	9.74	41.1	9.76	44.5	9.77	50.8	9.80
	40	30.0	10.7	31.5	10.7	34.0	10.7	38.5	10.7	40.5	10.8	43.8	10.8	49.8	10.8
	45					33.6	11.9	37.9	12.0	39.9	12.0	43.1	12.1	48.7	12.1
	50							37.3	13.4	39.2	13.5	42.2	13.5	47.3	13.4
AQH 45 BLN	30	33.8	9.35	35.6	9.35	38.7	9.41	44.0	9.41	46.4	9.41	50.3	9.41	57.7	9.47
	35	33.6	10.46	35.3	10.46	38.2	10.51	43.4	10.55	45.8	10.57	49.5	10.58	56.6	10.62
	40	33.4	11.6	35.0	11.6	37.8	11.6	42.9	11.6	45.1	11.7	48.8	11.7	55.4	11.7
	45					37.4	12.8	42.2	13.0	44.4	13.0	47.9	13.1	54.1	13.1
	50							41.5	14.5	43.6	14.6	46.9	14.7	52.7	14.5
AQH 50 BLN	30	40.0	10.72	42.2	10.72	45.8	10.79	52.2	10.79	55.0	10.79	59.6	10.79	68.4	10.86
	35	39.8	11.99	41.9	11.99	45.3	12.05	51.5	12.09	54.2	12.12	58.7	12.13	67.0	12.17
	40	39.5	13.2	41.5	13.2	44.8	13.2	50.8	13.3	53.4	13.4	57.8	13.4	65.7	13.4
	45					44.3	14.7	50.0	14.8	52.6	14.9	56.8	15.0	64.1	15.0
	50							49.2	16.6	51.7	16.7	55.6	16.8	62.4	16.7
AQH 60 BLN	30	44.9	13.50	47.4	13.50	51.4	13.59	58.5	13.59	61.7	13.59	66.9	13.59	76.7	13.68
	35	44.6	15.11	47.0	15.11	50.8	15.18	57.7	15.23	60.8	15.27	65.8	15.28	75.2	15.33
	40	44.3	16.7	46.5	16.7	50.2	16.7	57.0	16.8	59.9	16.9	64.8	16.9	73.7	16.9
	45					49.7	18.5	56.1	18.7	59.0	18.8	63.7	18.9	71.9	18.9
	50							55.1	20.9	57.9	21.1	62.4	21.2	70.0	21.0
AQH 65 BLN	30	53.3	14.73	56.2	14.73	61.0	14.82	69.4	14.82	73.2	14.82	79.3	14.82	91.0	14.92
	35	52.9	16.47	55.7	16.47	60.3	16.55	68.5	16.61	72.1	16.65	78.1	16.66	89.2	16.72
	40	52.6	18.2	55.2	18.2	59.6	18.2	67.6	18.3	71.1	18.4	76.9	18.4	87.4	18.4
	45					58.9	20.2	66.5	20.4	70.0	20.5	75.5	20.6	85.4	20.6
	50							65.4	22.8	68.7	23.0	74.0	23.1	83.0	22.9
AQH 75 BLN	30	58.8	17.45	62.0	17.45	67.2	17.57	76.6	17.57	80.7	17.57	87.5	17.57	100.4	17.68
	35	58.4	19.52	61.4	19.52	66.5	19.62	75.5	19.69	79.6	19.74	86.1	19.75	98.3	19.82
	40	58.0	21.6	60.9	21.6	65.7	21.6	74.5	21.7	78.4	21.8	84.8	21.8	96.4	21.8
	45					65.0	24.0	73.3	24.2	77.2	24.3	83.3	24.4	94.1	24.4
	50							72.2	27.0	75.8	27.3	81.6	27.4	91.6	27.2

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQH 40 to 75 R410A - ELN Version

Cooling mode

AQH ELN sizes	LWT (°C)	Ambient air temperature (°C)											
		25		30		32		35		40		43	
		Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)	Cooling capacity (kW)	Input power* (kW)
AQH 40 ELN	5	38.1	10.8	36.2	11.7	35.4	12.2	34.2	12.8	32.0	14.0	30.7	14.7
	7	40.2	10.9	38.2	11.9	37.4	12.3	36.1	13.0	33.8	14.2	32.4	15.0
	9	42.4	11.1	40.3	12.1	39.4	12.5	38.0	13.2	35.6	14.3		
	11	44.5	11.3	42.3	12.2	41.4	12.7	40.0	13.3	37.4	14.5		
	13	46.7	11.5	44.4	12.4	43.4	12.7	41.8	13.4	39.1	14.4		
	15	48.9	11.6	46.4	12.5	45.4	12.8	43.7	13.3				
	17	51.1	11.7	48.4	12.5	47.3	12.7	45.5	13.1				
	18	52.2	11.8	49.5	12.6	48.3	12.9	46.5	13.4				
AQH 45 ELN	5	41.7	12.6	39.6	13.7	38.7	14.2	37.4	15.0	35.0	16.4	33.6	17.2
	7	44.0	12.8	41.9	13.9	40.9	14.4	39.5	15.2	37.0	16.6	35.5	17.5
	9	46.4	13.0	44.1	14.2	43.1	14.6	41.6	15.4	39.0	16.8		
	11	48.7	13.2	46.3	14.3	45.3	14.8	43.7	15.6	40.9	16.9		
	13	51.1	13.4	48.6	14.5	47.5	14.9	45.8	15.6	42.8	16.8		
	15	53.6	13.6	50.8	14.6	49.6	15.0	47.8	15.6				
	17	55.9	13.7	53.0	14.6	51.7	14.9	49.8	15.4				
	18	57.1	13.8	54.1	14.8	52.9	15.1	50.9	15.6				
AQH 50 ELN	5	47.9	14.8	45.5	16.1	44.5	16.8	43.0	17.6	40.3	19.3	38.6	20.3
	7	50.5	15.0	48.1	16.4	47.0	17.0	45.4	17.9	42.6	19.6	40.8	20.6
	9	53.3	15.3	50.7	16.7	49.6	17.2	47.8	18.2	44.8	19.7		
	11	56.0	15.5	53.2	16.8	52.1	17.5	50.3	18.3	47.0	19.9		
	13	58.8	15.8	55.9	17.1	54.6	17.5	52.6	18.4	49.2	19.8		
	15	61.5	16.0	58.4	17.1	57.0	17.6	55.0	18.3				
	17	64.3	16.1	60.9	17.1	59.5	17.5	57.3	18.1				
	18	65.6	16.3	62.2	17.4	60.8	17.8	58.5	18.4				
AQH 60 ELN	5	57.1	15.2	54.3	16.6	53.0	17.2	51.2	18.1	48.0	19.8	46.0	20.8
	7	60.2	15.5	57.3	16.8	56.0	17.5	54.1	18.4	50.7	20.1	48.6	21.2
	9	63.5	15.7	60.4	17.1	59.1	17.7	57.0	18.7	53.4	20.3		
	11	66.7	15.9	63.4	17.3	62.0	17.9	59.9	18.8	56.0	20.4		
	13	70.0	16.3	66.6	17.5	65.1	18.0	62.7	18.9	58.6	20.4		
	15	73.3	16.4	69.5	17.6	68.0	18.1	65.5	18.8				
	17	76.6	16.6	72.6	17.6	70.9	18.0	68.2	18.6				
	18	78.2	16.8	74.2	17.9	72.4	18.3	69.7	18.9				
AQH 65 ELN	5	62.0	17.5	59.0	19.1	57.6	19.8	55.7	20.9	52.2	22.8	50.0	24.0
	7	65.4	17.8	62.3	19.4	60.9	20.1	58.8	21.2	55.1	23.2	52.8	24.4
	9	69.0	18.1	65.6	19.7	64.2	20.4	61.9	21.5	58.0	23.4		
	11	72.5	18.4	68.9	19.9	67.4	20.7	65.1	21.7	60.9	23.5		
	13	76.1	18.7	72.4	20.2	70.7	20.8	68.1	21.8	63.7	23.5		
	15	79.7	18.9	75.6	20.3	73.9	20.9	71.2	21.7				
	17	83.2	19.1	78.9	20.3	77.0	20.8	74.2	21.4				
	18	85.0	19.3	80.6	20.6	78.7	21.1	75.8	21.8				
AQH 75 ELN	5	71.6	21.6	68.1	23.6	66.6	24.5	64.3	25.8	60.2	28.2	57.7	29.7
	7	75.6	22.0	71.9	23.9	70.3	24.9	67.9	26.2	63.6	28.6	61.0	30.1
	9	79.7	22.3	75.8	24.4	74.1	25.2	71.5	26.6	67.0	28.9		
	11	83.8	22.7	79.6	24.6	77.9	25.5	75.2	26.8	70.3	29.1		
	13	87.9	23.1	83.6	25.0	81.7	25.7	78.7	26.9	73.6	29.0		
	15	92.1	23.4	87.3	25.1	85.3	25.8	82.2	26.8				
	17	96.1	23.6	91.1	25.1	88.9	25.7	85.6	26.5				
	18	98.1	23.9	93.1	25.4	90.9	26.0	87.5	27.0				

* Compressors only.
LWT : Leaving water temperature.

Performance Data - AQH 40 to 75 R410A - ELN Version

Heating mode

AQH ELN sizes	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)
AQH 40 ELN	30	30.8	8.57	32.5	8.57	35.3	8.63	40.2	8.63	42.4	8.63	45.9	8.63	52.7	8.68
	35	30.6	9.59	32.2	9.59	34.9	9.63	39.6	9.67	41.7	9.69	45.2	9.70	51.6	9.73
	40			32.0	10.6	34.5	10.6	39.1	10.6	41.1	10.7	44.5	10.7	50.6	10.7
	45							38.5	11.9	40.5	11.9	43.7	12.0	49.4	12.0
	50							37.9	13.3	39.8	13.4	42.8	13.4	48.0	13.3
AQH 45 ELN	30	33.1	9.14	34.9	9.14	37.9	9.20	43.1	9.20	45.5	9.20	49.3	9.20	56.6	9.26
	35	32.9	10.23	34.6	10.23	37.5	10.28	42.6	10.31	44.8	10.34	48.5	10.35	55.4	10.38
	40			34.3	11.3	37.0	11.3	42.0	11.4	44.2	11.4	47.8	11.4	54.3	11.4
	45							41.3	12.7	43.5	12.7	46.9	12.8	53.0	12.8
	50							40.7	14.2	42.7	14.3	46.0	14.3	51.6	14.2
AQH 50 ELN	30	38.8	10.80	40.9	10.80	44.4	10.87	50.6	10.87	53.3	10.87	57.8	10.87	66.3	10.94
	35	38.6	12.08	40.6	12.08	43.9	12.14	49.9	12.18	52.6	12.21	56.9	12.22	65.0	12.26
	40			40.2	13.3	43.4	13.3	49.2	13.4	51.8	13.5	56.0	13.5	63.7	13.5
	45							48.5	15.0	51.0	15.0	55.0	15.1	62.2	15.1
	50							47.7	16.7	50.1	16.9	53.9	16.9	60.5	16.8
AQH 60 ELN	30	43.9	13.5	46.3	13.5	50.2	13.6	57.2	13.6	60.3	13.6	65.4	13.6	75.0	13.7
	35	43.6	15.1	45.9	15.1	49.7	15.2	56.4	15.3	59.5	15.3	64.4	15.3	73.5	15.4
	40			45.5	16.7	49.1	16.7	55.7	16.8	58.6	16.9	63.4	16.9	72.0	16.9
	45							54.8	18.7	57.7	18.8	62.3	18.9	70.4	18.9
	50									56.7	21.1	61.0	21.2	68.4	21.0
AQH 65 ELN	30	51.9	14.7	54.7	14.7	59.4	14.8	67.6	14.8	71.3	14.8	77.3	14.8	88.7	14.9
	35	51.6	16.5	54.3	16.5	58.7	16.6	66.7	16.6	70.3	16.7	76.1	16.7	86.9	16.7
	40			53.8	18.2	58.1	18.2	65.8	18.3	69.2	18.4	74.9	18.4	85.2	18.4
	45							64.8	20.4	68.2	20.5	73.6	20.6	83.2	20.6
	50									67.0	23.0	72.1	23.1	80.9	22.9
AQH 75 ELN	30	57.1	17.4	60.2	17.4	65.3	17.5	74.4	17.5	78.4	17.5	85.0	17.5	97.5	17.6
	35	56.7	19.5	59.7	19.5	64.6	19.6	73.4	19.6	77.3	19.7	83.7	19.7	95.5	19.8
	40			59.2	21.5	63.9	21.5	72.4	21.6	76.1	21.7	82.4	21.7	93.6	21.7
	45							71.3	24.1	75.0	24.2	80.9	24.3	91.5	24.3
	50									73.6	27.2	79.3	27.3	89.0	27.1

* Compressors only.
LWT : Leaving water temperature.

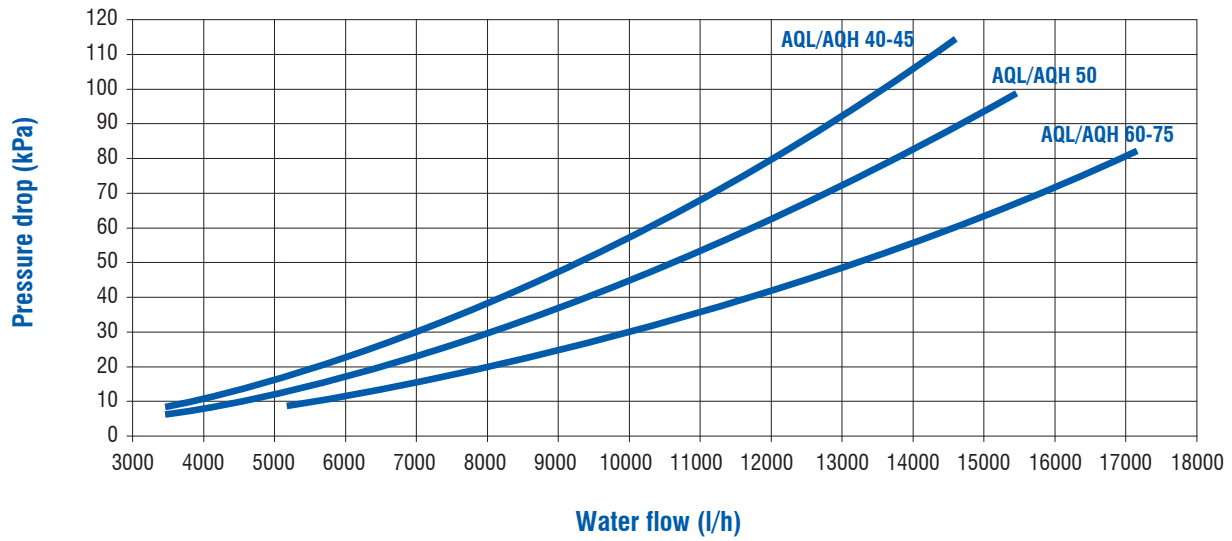
Performance Data - AQH 40 to 75 R410A - SIF Version

Heating mode

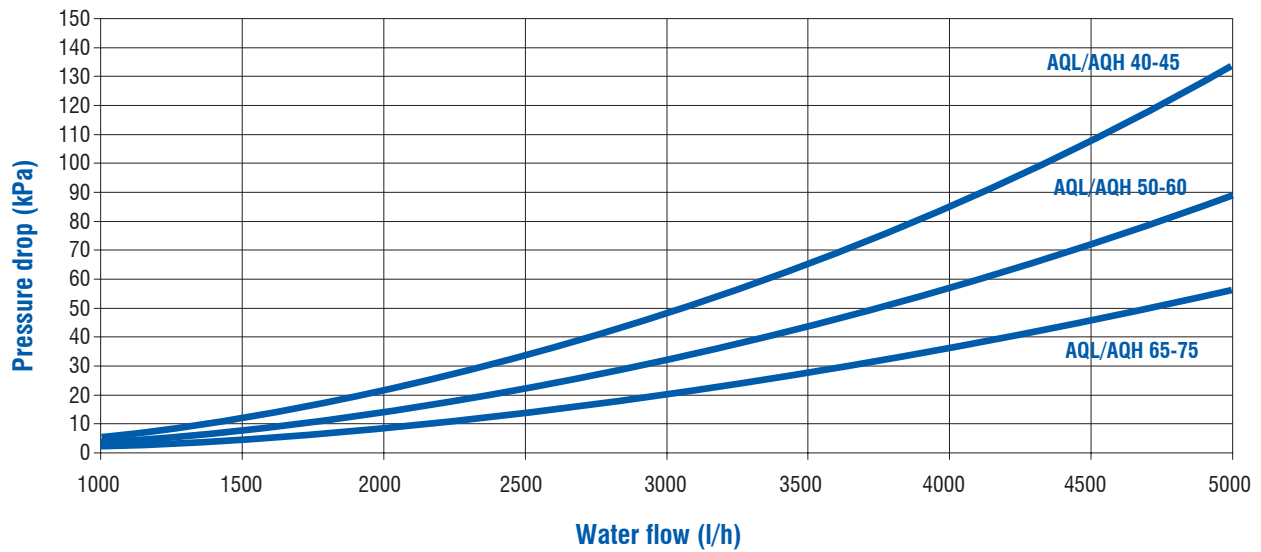
AQH SIF sizes	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)	Heating capacity (kW)	Input power* (kW)
AQH 40 SIF	30	35.2	10.0	37.1	10.0	40.3	10.0	45.9	10.0	48.4	10.0	52.4	10.0	60.1	10.1
	35	35.0	11.1	36.8	11.1	39.8	11.2	45.3	11.2	47.7	11.3	51.6	11.3	58.9	11.3
	40	34.8	12.3	36.5	12.3	39.4	12.3	44.7	12.4	47.0	12.4	50.8	12.4	57.8	12.4
	45					38.9	13.7	44.0	13.8	46.3	13.9	49.9	13.9	56.4	13.9
	50							43.2	15.4	45.4	15.6	48.9	15.6	54.9	15.5
AQH 45 SIF	30	38.4	10.6	40.5	10.6	43.9	10.7	50.0	10.7	52.7	10.7	57.2	10.7	65.6	10.7
	35	38.1	11.9	40.1	11.9	43.4	11.9	49.3	12.0	52.0	12.0	56.3	12.0	64.2	12.0
	40	37.9	13.1	39.8	13.1	42.9	13.1	48.7	13.2	51.2	13.2	55.4	13.2	63.0	13.2
	45					42.4	14.6	47.9	14.7	50.4	14.8	54.4	14.8	61.5	14.8
	50							47.1	16.4	49.5	16.6	53.3	16.6	59.8	16.5
AQH 50 SIF	30	44.7	12.5	47.1	12.5	51.1	12.6	58.2	12.6	61.4	12.6	66.5	12.6	76.3	12.7
	35	44.4	14.0	46.7	14.0	50.5	14.0	57.4	14.1	60.5	14.1	65.5	14.1	74.7	14.2
	40	44.1	15.4	46.3	15.4	50.0	15.4	56.6	15.5	59.6	15.6	64.5	15.6	73.3	15.6
	45					49.4	17.2	55.7	17.3	58.7	17.4	63.3	17.5	71.6	17.5
	50							54.8	19.4	57.6	19.5	62.0	19.6	69.6	19.4
AQH 60 SIF	30	49.8	14.0	52.6	14.0	57.0	14.1	64.9	14.1	68.5	14.1	74.2	14.1	85.1	14.2
	35	49.5	15.6	52.1	15.6	56.4	15.7	64.0	15.8	67.5	15.8	73.0	15.8	83.4	15.9
	40	49.2	17.3	51.6	17.3	55.7	17.3	63.2	17.4	66.5	17.5	71.9	17.5	81.7	17.5
	45					55.1	19.2	62.2	19.4	65.5	19.5	70.7	19.6	79.8	19.6
	50							61.2	21.7	64.3	21.8	69.2	21.9	77.7	21.8
AQH 65 SIF	30	59.2	15.3	62.5	15.3	67.8	15.4	77.2	15.4	81.4	15.4	88.2	15.4	101.2	15.5
	35	58.9	17.1	61.9	17.1	67.0	17.2	76.1	17.2	80.2	17.3	86.8	17.3	99.1	17.3
	40	58.5	18.9	61.4	18.9	66.3	18.9	75.1	19.0	79.0	19.1	85.5	19.1	97.2	19.1
	45					65.5	21.0	73.9	21.2	77.8	21.3	84.0	21.3	94.9	21.3
	50							72.7	23.6	76.4	23.8	82.3	23.9	92.3	23.7
AQH 75 SIF	30	65.3	18.1	68.9	18.1	74.8	18.2	85.1	18.2	89.8	18.2	97.3	18.2	111.6	18.3
	35	64.9	20.2	68.3	20.2	73.9	20.3	84.0	20.4	88.5	20.4	95.8	20.4	109.4	20.5
	40	64.5	22.3	67.7	22.3	73.1	22.3	82.9	22.4	87.2	22.5	94.3	22.5	107.2	22.5
	45					72.3	24.8	81.6	25.0	85.9	25.1	92.7	25.3	104.7	25.3
	50							80.3	28.0	84.3	28.2	90.7	28.3	101.8	28.1

* Compressors only.
LWT : Leaving water temperature.

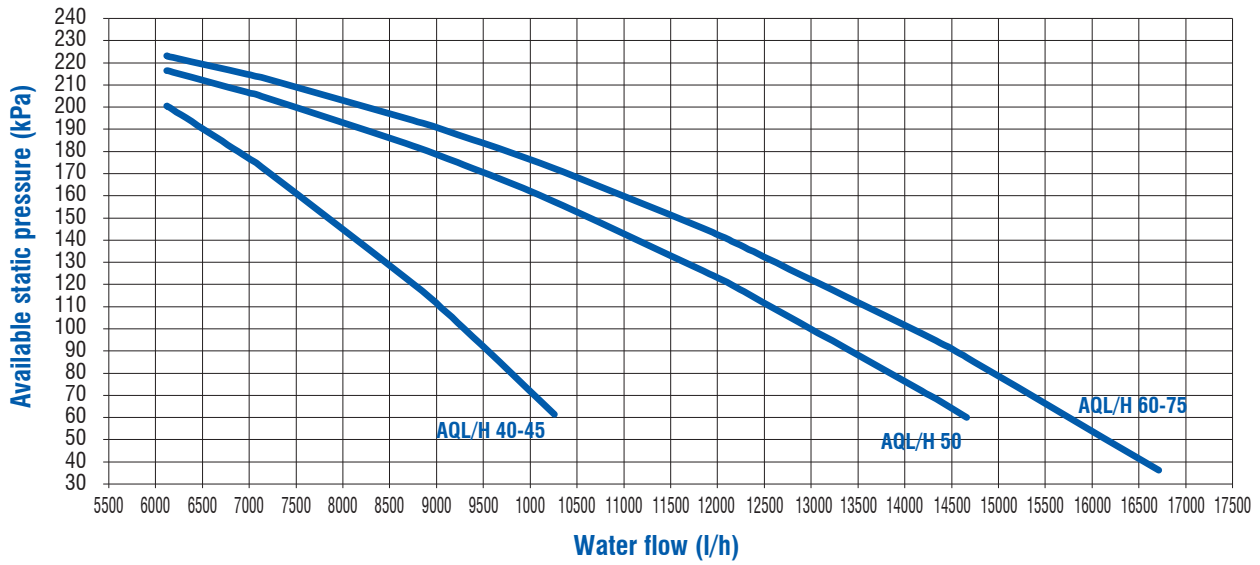
Evaporator Water Pressure Drop - AQL/AQH 40 to 75 - R410A



Desuperheater Water Pressure Drop - AQL/AQH 40 to 75 - R410A

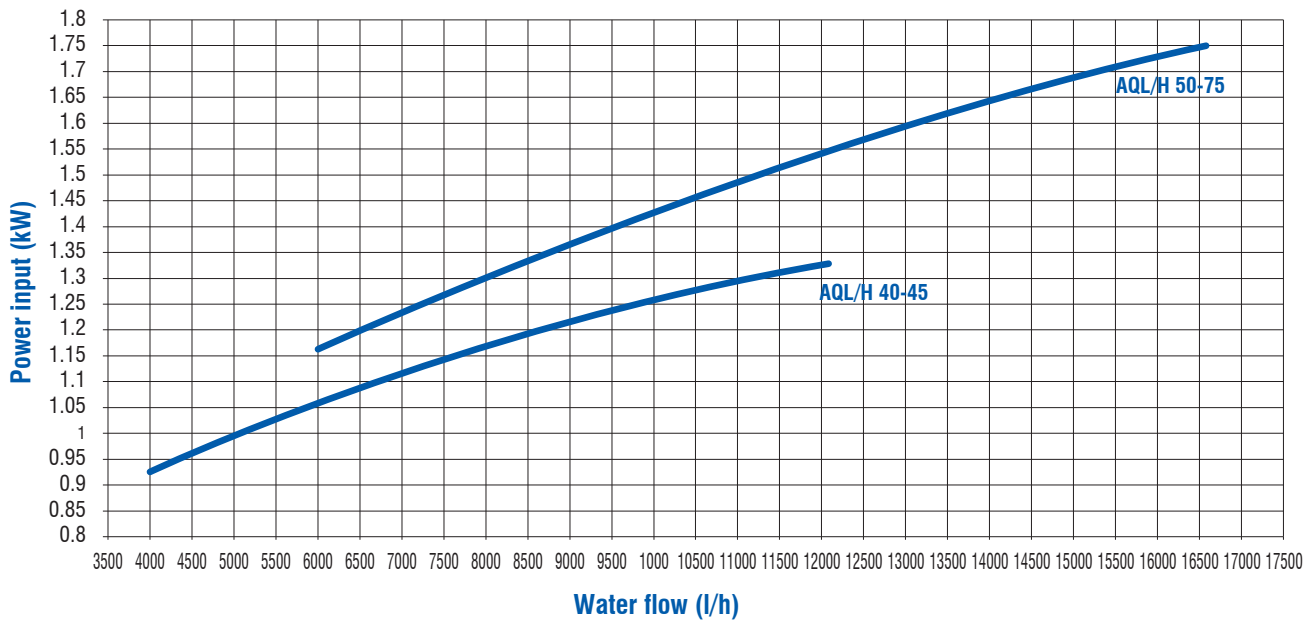


Pump Available Static Pressure - AQL/AQH 40 to 75 - R410A



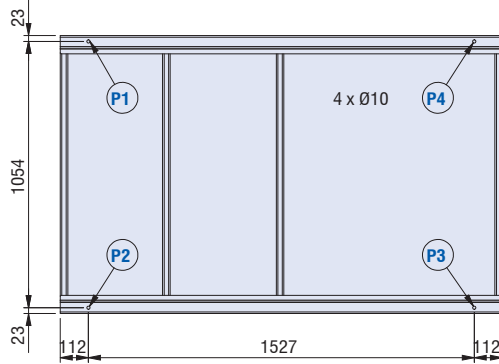
Note : The curves are referred to 2P+T unit. Unit without tank could have higher performance.

Pump Power Input - AQL/AQH 40 to 75 - R410A

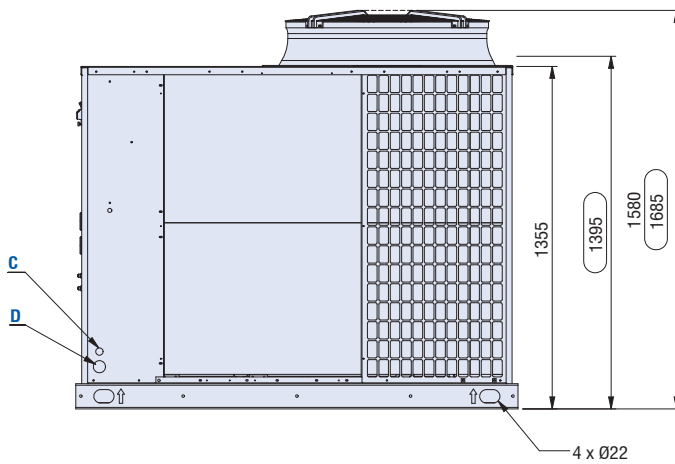
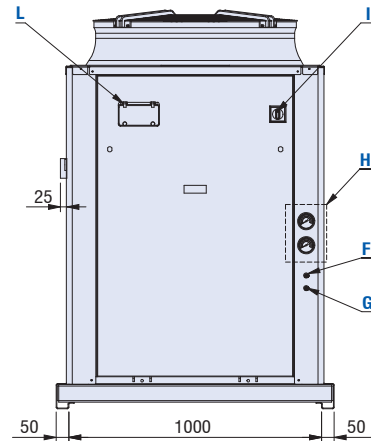


Dimensions (mm) - AQL/AQH 40 to 50 - R410A

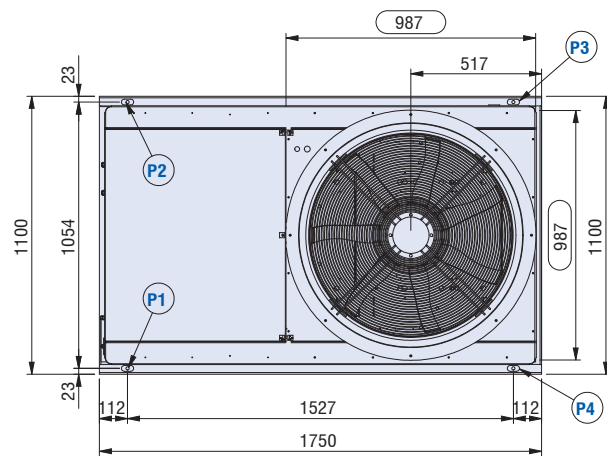
Bottom view



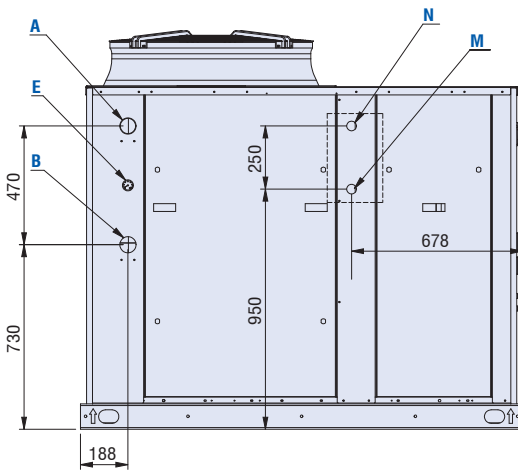
Front view



Top view



Side view

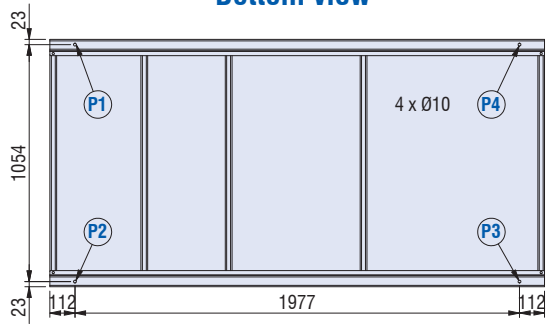


A	Water inlet Ø2" gas male
B	Water outlet Ø2" gas male
C	Electrical auxiliary lines
D	Electrical power supply
E	Hydrometer
F	High pressure tap
G	Low pressure tap
H	Gauge kit (accessory)
I	Main switch
L	Control keypad/display

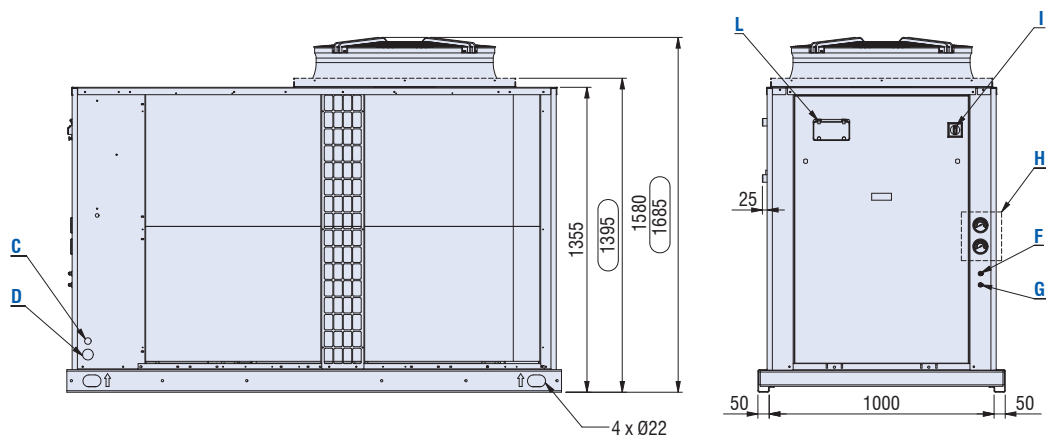
M	Desuperheater water inlet Ø1" gas male (optional)
N	Desuperheater water outlet Ø1" gas male (optional)
XXX	Only for SIF fan model
P1, P2, P3, P4	AVM position

Dimensions (mm) - AQL/AQH 60 to 75 - R410A

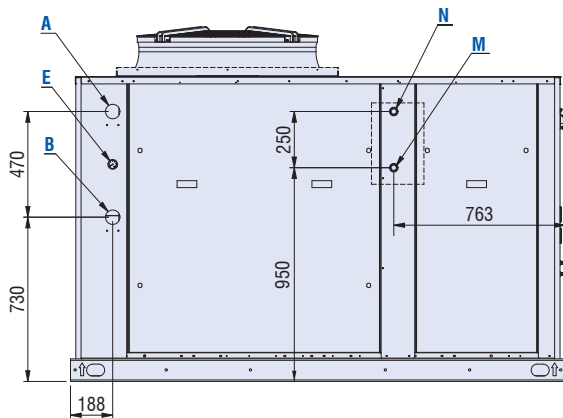
Bottom view



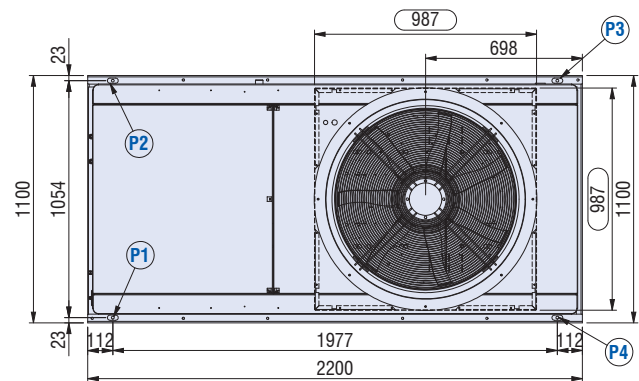
Front view



Side view



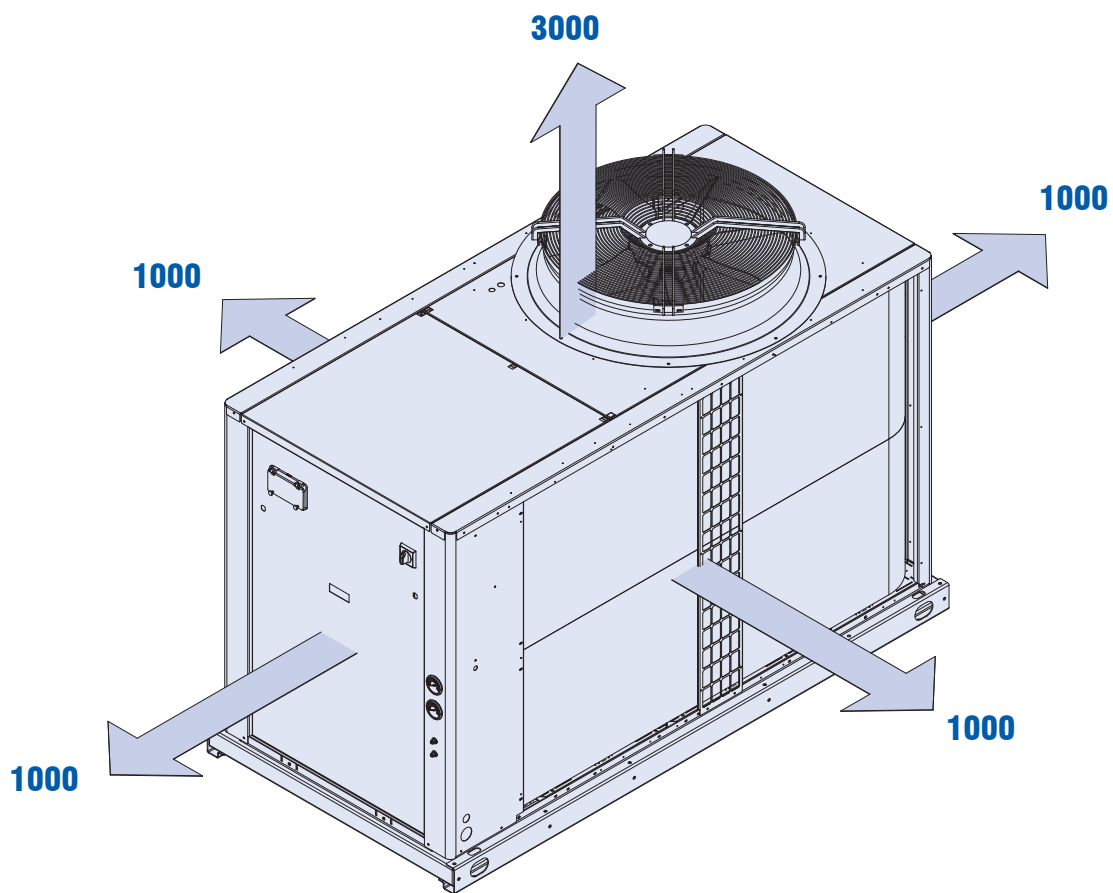
Top view



A	Water inlet Ø2" gas male
B	Water outlet Ø2" gas male
C	Electrical auxiliary lines
D	Electrical power supply
E	Hydrometer
F	High pressure tap
G	Low pressure tap
H	Gauge kit (accessory)
I	Main switch
L	Control keypad/display

M	Desuperheater water inlet Ø1" gas male (optional)
N	Desuperheater water outlet Ø1" gas male (optional)
XXX	Only for SIF fan model
P1, P2, P3, P4	AVM position

Unit Clearances (mm) - AQL/AQH 40 to 75 - R410A





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