

Chiller

AQWL/AQWH/AQWR 1404 to 2406

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



380 to 634 kW



418 to 702 kW



Features & Strength Points

- A more **"slim and light"** structure, while keeping the features of sturdiness (successfully performed at CESI laboratory, vibration tests in accordance with ASTM standards).
- **Rivets** as joints of the structural elements.
- **Optimization of overall dimensions** for container transport.
- **Symmetric refrigerant circuit** configuration to reduce the length of pipes and consequently the pressure drop in the circuit.
- Standard coils in Al/Cu, arranged in **V configurations** to get a better air distribution and then optimize its performance.
- **Increasing the fin spacing** to reduce fouling problems in cooling mode and increase the drainage-ability in heat pump mode (defrost).
- Units with EER (AQWL complete unit) values higher than 2.9 (Energy efficiency class B) and COP values higher than 3.2 (class A) in heat pump versions.
- All the versions keep the **same configuration of the base units** (same structure, electrical board, compressors and coils). Easy upgrade of the units in stock or on the field.
- **Bi-flow electronic expansion devices** on all units : superheating value controlled by microprocessor, simple and accessible refrigeration system especially for heat pump versions with reduction of brazing points and then possible leakage.
- Optimized coils design (30% refrigerant charge reduction).
- **Compressors box STD on all units** - additional compressor jackets for ELN version (**Easy upgrade of the units in stock**).
- Special version (HSE) for high seasonal efficiency : ESEER higher than 4.5 (15% more than the STD version); and special version (HT) for high operating limits. Both versions are equipped with axial inverter fans of large diameter (electronic brushless type motor).
- Special version (HPF) for high available static pressure (max. 120 Pa) with inverter fans (electronic brushless type motor). Axial fan of large diameter.
- **Hydro kits** with or without buffer tank (750 and 1000 litres) fitted on board of the chiller to perform outstandingly the package solution and the plug & play concept.
One or two water pumps are available : standard pressure (150 kPa) or high pressure (250 kPa). The water pump has a sound proof box for ELN version.
- For safety purpose when performing service operation, special valves dedicated to R410A are supplied on the refrigerant system. These valves, of 5/16" flare SAE type, are mounted on the liquid line and on the gauges manifold of the unit.
- Range available in **STD** (BLN, LN, ELN), **HSE** (BLN, LN, ELN), **HT** (BLN) and **HPF** (BLN) version.
- **High power hermetic scroll compressors** arranged in tandem and trio configuration.
- **New "dual circuit"** plate heat exchangers at higher efficiency that replace the previous versions.

Specifications

General

The new **AQWL/AQWH** units have been designed to operate with **HFC 410A** refrigerant. Both compressors and heat exchangers (plate heat exchanger and coils) have been optimized for this refrigerant.

All the units are available either in **cooling only** or **heat pump** version. Each unit consists of **two independent refrigerant circuits** and is complete with high efficient and high technology components :

- Hermetic **Scroll** compressors with high efficiency and low vibration emissions,
- **Electronic expansion valves**,
- **"True dual"** circuit plate heat exchanger,
- Quiet fans located in externally mounted **nozzle profile housing** generating low sound levels,
- Controller using a **state-of-the-art microprocessor**.

The AQWL units are available in **5 sizes**, from size 1404 to 2406, with a nominal capacity range from **380 to 634 kW**.

The AQWH units are available in **5 sizes**, from size 1404 to 2406, with a nominal capacity range from **360 to 602 kW** in cooling mode and from **418 to 702 kW** in heating mode.

The **STD (Standard) version of AQWL/AQWH units** can be supplied with **3 acoustic options** :

- **Base Low Noise (BLN)** : The units are equipped with **delta connected fan motors**. The chillers are not supplied with fan speed controller, but fitted with **compressors box** to reduce the noise emissions.
- **Low Noise (LN)** : The units are equipped with **star connected fan motors**. The chillers are not supplied with fan speed controller, but fitted with **compressors box** to reduce the noise emissions.

- **Extra Low Noise (ELN)** : The units are equipped with **star connected fan motors**, fitted with a speed controller which allows the units to operate with a very low rpm. The chillers are supplied with **compressors box** and **soundproof jackets** on compressors reducing significantly the noise emissions.

In addition to the STD version, the AQWL/AQWH ranges offer **3 more versions** :

- **HSE (High Seasonal Efficiency) version** : It has same equipment as that of the STD version, except that the units are equipped with **special inverter fans**, of large diameter, driven by **EC (electronic brushless type)** motors with **integrated electronic inverter**, to ensure low energy consumption. This version can be supplied with BLN, LN or ELN acoustic options.
- **HT (High Temperature) version** : It has same equipment as HSE units, but the **special inverter fans and motors** have a different regulation. The HT version can be supplied with BLN acoustic option only.
- **HPF (High Pressure Fan) version** : It has same equipment as STD units, except that the units are equipped with **special inverter fans** (same as those used on HSE version, but with a different regulation) driven by **EC motors** with **integrated electronic inverter**. The HPF version provides external static pressure up to **120 Pa**. This version can be supplied with BLN acoustic option only.

Also, **2 heat recovery options** are available :

- **Desuperheater** : All the versions can be supplied with plate type heat exchangers fitted, one on each refrigerant circuit, on the compressor discharge line to recover about **20 % of the total heat** rejected to the condensers.
- **AQWR units** : All the versions of the **cooling only** units can be supplied with a double circuit plate type heat exchanger to recover **100 % of heat rejection** by the condensers. 4-way valves and a field installed control sensor are also provided to ensure the cooling/heat recovery mode changeover.

Specifications (continued)

Cabinet and structure

The unit cabinet and structure are made of heavy gauge galvanized steel. All the galvanized steel components are individually painted, with a polyester powder based painting (**RAL 9001**), under a special painting process before the assembly of the unit. This painting system performs and stands a homogeneous protection of the corrosion.

All parts of the structure are totally fastened with non-corrosive screws and bolts.

Refrigerant circuits

All the units are composed of two independent and separate refrigerant circuits, complete with 4 or 6 hermetic scroll compressors in tandem or trio configuration for each circuit.

Each refrigerant circuit is equipped with liquid line and discharge line shut-off valves, filter-drier with solid core, sight glass and **electronic expansion valve (EXV)**.

The heat pump units (AQWH) are provided with 4-way reversing valves, suction accumulators and liquid receivers on the liquid lines.

The AQWL and AQWH units are both provided with double-circuit plate heat exchangers, of "true dual" type.

The total heat recovery units (AQWR) are supplied with double-circuit water condenser (of plate heat exchanger type), 4-way reversing valves and liquid receivers downstream of the heat recovery condenser.

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

Compressors

Each unit is equipped with 4 or 6 hermetic scroll compressors arranged in tandem or trio configuration per refrigerant circuit.

The compressors are fitted with an electronic control device which ensures protection of compressors against :

- overheating and overloading,
- reversal rotation and phase loss.

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

Evaporator

Evaporator is of a "Dual Circuit" brazed stainless steel plate type heat exchanger. It is insulated with a 19 mm thick closed cell polyethylene foam material and is fitted with a film type electric heater on the external surface to prevent the unit from freezing at a low temperature (down to -18 °C) when the unit is off.

Water connections of heat exchanger are of a 3" Victaulic type for all units. Each unit is provided with additional 4" fittings for hydraulic connections between plate heat exchanger and plant.

Condenser coils

The condenser coils are made of seamless copper tubes, arranged in staggered rows, mechanically expanded into corrugated aluminum fins.

Condenser fans

For each size, all versions keep the same number of fans.

Large diameter, direct drive axial type fans with asynchronous three-phase motors are used in all acoustic versions (BLN, LN & ELN) of AQWL/AQWH/AQWR 1404-2406 STD units.

Special inverter fans with electronic brushless type motors are used in AQWL/AQWH/AQWR HSE, HPF and HT units.

On high pressure fans of HPF units, the external static pressure (≤ 120 Pa) can be adjusted on site to match the customer demand directly from the electronic control panel of the unit.

Fans are equipped with externally mounted nozzle profile housing which generates low sound levels.

Fan speed control

The airflow is controlled in order to operate at a low ambient temperature.

On standard unit equipped with axial fans, the air flow control is :

- step type for BLN and LN versions without fan speed controls, achieved by switching off some fans of each circuit in function of condensing pressure corrected by external temperature.
- stepless type for ELN version, achieved by an electronic fan speed control, supplied as standard, in function of condensing pressure.

The pressure actuated stepless type fan speed controller can be supplied as optional on BLN and LN versions. It allows the units to operate in cooling mode at ambient temperature down to -18 °C.

On HSE and HPF units with electronic axial fans, the pressure actuated stepless type fan speed control is supplied as standard, because these electronic fans are already equipped with an integrated fan speed control (fan speed range : 50 to 1200 rpm; ambient temperature limit : -18 °C (in cooling mode only)).

Electrical board

The electrical board is located in a metal case arranged inside the unit and protected by an external horizontally pivoted panel. The metal case has an IP54 protection rating and is complete with grilles for natural air ventilation.

Electronic control

The units are supplied with the new microprocessor-based electronic control and management system ensuring the following functions :

- Management of the operation of compressors :
 - a) Power on/off
 - b) Anticyclone management
 - c) Tandem or trio unloading for high pressure or high compressor pressure ratio (integrated inside the curves of compressor operating limits).
- Chilled and hot water temperature regulation (control option on inlet water temperature RWT (P+I type) or outlet water temperature LWT (neutral band type) of the evaporator.
- Control of superheating on suction line.
- Evaporator antifreeze protection.
- Heat pump defrost control for automatic operation.
- Management of high and low pressure alarms.
- Management of the asymmetric compressors on the two circuits (tandem and trio).
- Management of the electronic expansion valves by means of EXV controller allowing optimized functions : cooling, heating, start-up and defrost.
- Management of external interlocks.
- Management of the remote control :
 - d) Unit power on/off
 - e) Summary alarm signals

Specifications (continued)

- Remote signalling, by dry contacts :
 - f) Voltage presence
 - g) Compressors in operation
 - h) Circuit alarm unit
- Management of the hydro kit : start-up of pump, antifreeze heater of external tank.
- Management of the heat recovery mode by means of inlet water temperature sensor at the heat recovery condenser.

The unit controller can also clearly show all control parameters of the machine on the liquid crystal display, such as :

- Display of superheating value.
- Display of the temperature at the evaporator inlet and outlet.
- Display of the ambient air temperature.
- Display of the circuit 1 and circuit 2 discharge pressure and suction pressure.
- Display of the set point.
- Display of opening steps of EEV.
- Display of speed control signal (voltage) of fans.
- Display of the various alarm and operation status :
 - i) Compressor start-up alarm (discharge pressure check)
 - j) Low / High pressure
 - k) Low / High super-heating
 - l) Evaporator antifreeze
 - m) Flow switch signal for lack of water
 - n) Control of the compressor operating hours
 - o) Compressors in operation
 - p) Pump in operation and operating hours
 - q) Thermal protection of compressors
 - r) Thermal protection of fans
 - s) Faulty sensors

Control and safety devices

Each unit is fitted with the following devices :

Safety :

- Power disconnect switch with an emergency stop function.
- HP switches (double on each circuit), set to 40.5 bar, automatic reset and manual reset from the control panel.
- Water differential pressure switch on the evaporator, set to 105 mbar (corresponding to about 50 % of the nominal capacity) (AQWL/AQWH only).
- Antifreeze temperature sensor (set to +4 °C) on the evaporator (AQWL/AQWH only).
- Safety valve on the discharge line and the liquide receiver (on AQWH), set to 45 bar.

- Discharge gas temperature protection set to 135 °C, on the discharge line of each Scroll compressor (Danfoss compressors only).

Control :

- HP and LP transducers (two for each circuit).
- Evaporator water inlet temperature sensor.
- Evaporator water outlet temperature sensor (with an antifreeze function).
- Suction temperature sensor for EXV control.
- Ambient air temperature sensor.
- Coil temperature sensors (AQWL/AQWH only).
- Heat recovery condenser temperature sensor (AQWR only).

Conformity with standards

The following applies to all the sizes and versions of AQWL/AQWH/AQWR units :

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

Standard equipment

- ✓ Set point timer/clock card.
- ✓ Back light display.
- ✓ Digital pressure and temperature reading kit.
- ✓ High ambient pressure control.
- ✓ Double set point (AQWL/AQWH only).
- ✓ Sequence phase control.
- ✓ Electronic expansion valves.
- ✓ Control circuit transformer 400 V/230 V.
- ✓ Data logger.
- ✓ Power supply single point box.
- ✓ Power supply without neutral.
- ✓ Hour meter.
- ✓ Main switch.
- ✓ Refrigerant R410A.
- ✓ PED approval.
- ✓ Evaporator antifreeze electric heater.
- ✓ Compressor jacket (ELN version only).
- ✓ Compressor box.
- ✓ Water pump acoustic box (ELN version only).
- ✓ Rubber anti-vibration pad.
- ✓ Water differential pressure switch (AQWL/AQWH only).

Specifications (continued)

Optional hydro kits

On board hydro kits and **remote hydro kits** are available.

On board hydro kits can be supplied with or without buffer tank, while remote hydro kits are always supplied with internal tank and pump(s). The HPT models can be used as remote hydro kits for field installation.

The on board hydro kit, located inside the unit, with or without buffer tank, has the following components :

- Single or double pump with low static pressure (150 kPa) or high static pressure (250 kPa),
- Expansion tank,
- Water filter,
- Shut-off valves,
- Safety valve,
- Automatic air vent valve,
- Thermal insulation for pipes and water pump(s),
- Antifreeze electric heater for hydraulic pipes (available on request),
- 750 or 1000-litre buffer tank (if required) with external thermal insulation,
- The water pump(s) is supplied with sound proof box for AQWL/AQWH units in ELN version.

This hydro kit is provided for AQWL/AQWH only.

Factory-installed options

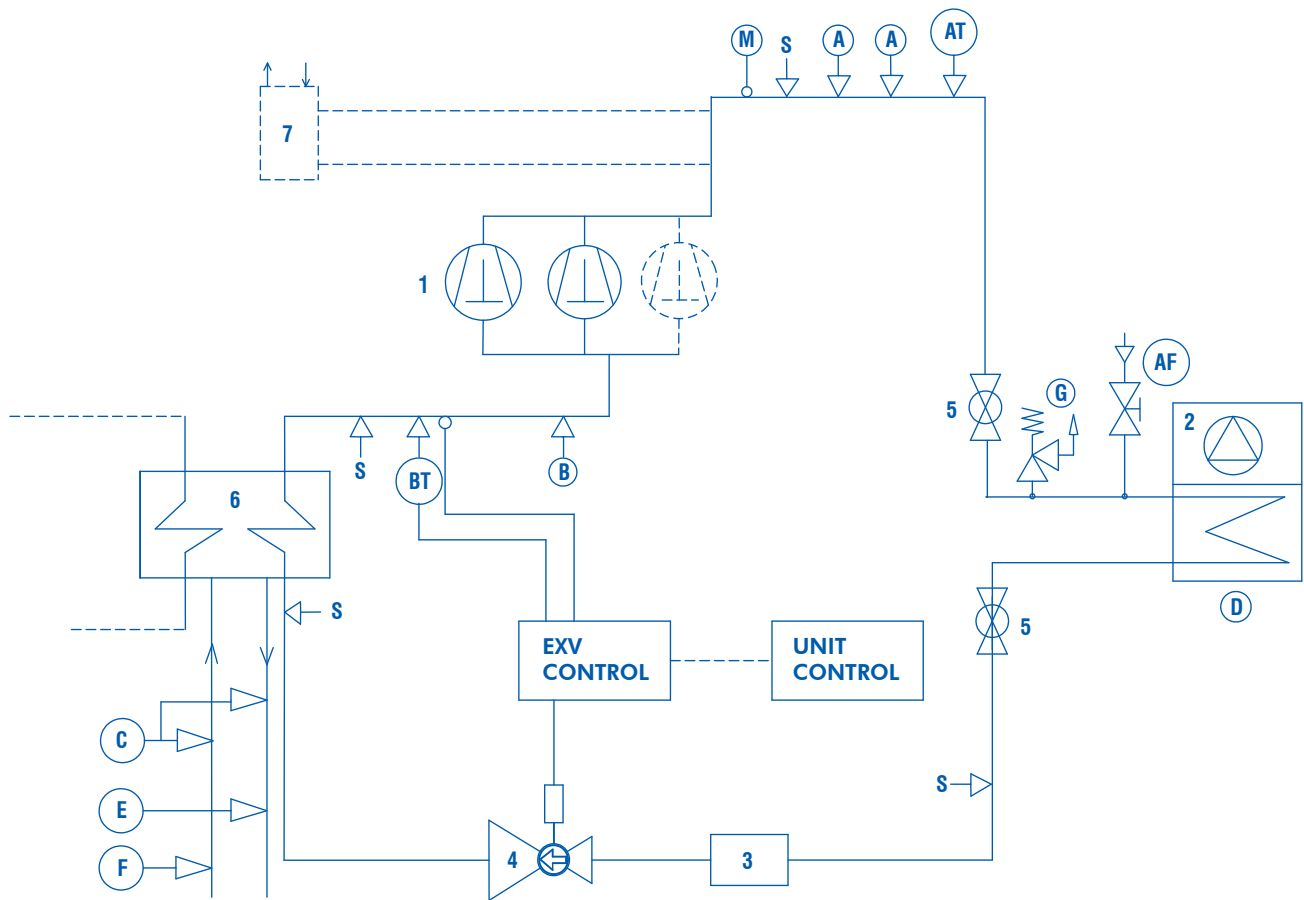
- ✓ ModBus protocol kit for BMS.
- ✓ Lonwork protocol kit for BMS.
- ✓ Bacnet protocol kit for BMS.
- ✓ WEBctrl.
- ✓ Ethernet TCP/IP interface board.
- ✓ Compressors soft starter.
- ✓ Pressure actuated stepless fan speed controller for low ambient operation (-18 °C) (BLN & LN versions).
- ✓ Power factor correction capacitors.
- ✓ Compressors overload protection.
- ✓ GSM.

- ✓ HP & LP manometers.
- ✓ Condenser coils with blue fins treatment.
- ✓ Condenser coils with "Fin Guard Silver" (polyurethane) treatment.
- ✓ Condenser coils with copper fins.
- ✓ High static pressure fans (ESP < 120 Pa) for HPF version.
- ✓ Coil guards.
- ✓ Chiller grilles.
- ✓ Compressor jacket.
- ✓ Water pump acoustic box.
- ✓ Total heat recovery (AQWR).
- ✓ Desuperheater.
- ✓ On board hydro kits with or without buffer tank (750 or 1000 litres), 1 or 2 low or high pressure pump(s) and relevant accessories.
- ✓ On board hydro kits with buffer tank (750 or 1000 litres) alone, without pumps.

Field-installed accessories

- ✓ Remote ON/OFF control.
- ✓ Remote keyboard panel.
- ✓ Master and slaves control, up to 4 units max.
- ✓ Chiller grilles.
- ✓ Spring anti-vibration mounts for basic unit.
- ✓ Spring anti-vibration mounts for unit with copper fins.
- ✓ Spring anti-vibration mounts for internal hydro kit with tank (750 or 1000 litres).
- ✓ Spring anti-vibration mounts for external hydro kit.
- ✓ Flow switch.
- ✓ Pressure switch.
- ✓ Water filter.
- ✓ Remote hydro kits with buffer tank, 1 or 2 low or high pressure pump(s), relevant accessories and with or without tank antifreeze heater.

Refrigerant Flow Diagram - AQWL Units



COMPONENTS

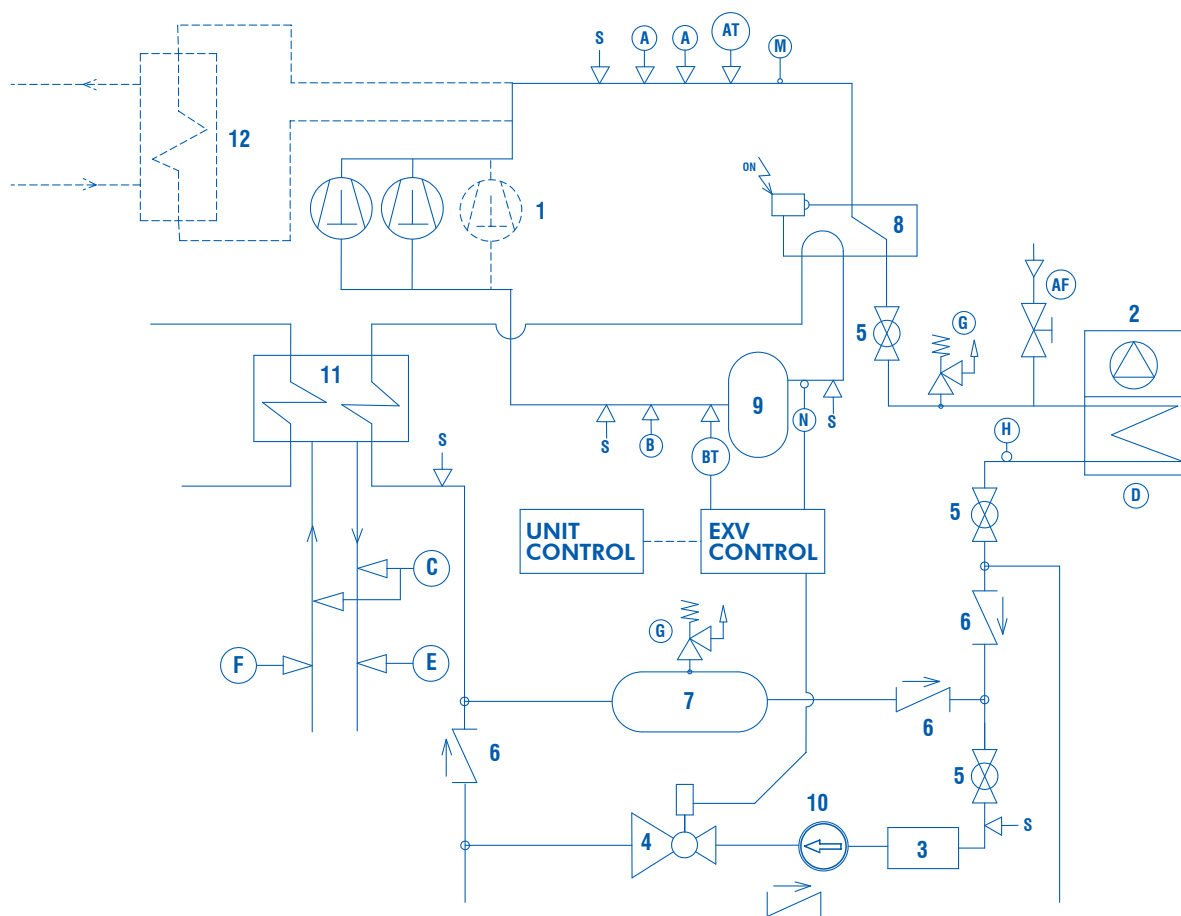
1	Tandem or trio Scroll type compressors
2	Air cooled condenser
3	Filter drier
4	Electronic expansion valve
5	Globe valve
6	Plate heat exchanger (Dual type)
7	Desuperheater (optional)

SAFETY / CONTROL DEVICES

A	High pressure switch (40.5 bar)
AT	High pressure transducer
AF	Access fitting sae flare 1/4"
B	Low pressure switch (1.5 bar)
BT	Low pressure transducer
C	Water differential pressure switch (105 mbar)
D	Air temperature sensor
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	PED pressure relief valve (45 bar)
M	Discharge temperature sensor
N	Suction temperature sensor
S	5/16" Shrader connection (service only)
↓	Pipe connection with Shrader valve

Note : For reasons of readability, one circuit only is shown. The second circuit is identical.

Refrigerant Flow Diagram - AQWH Units

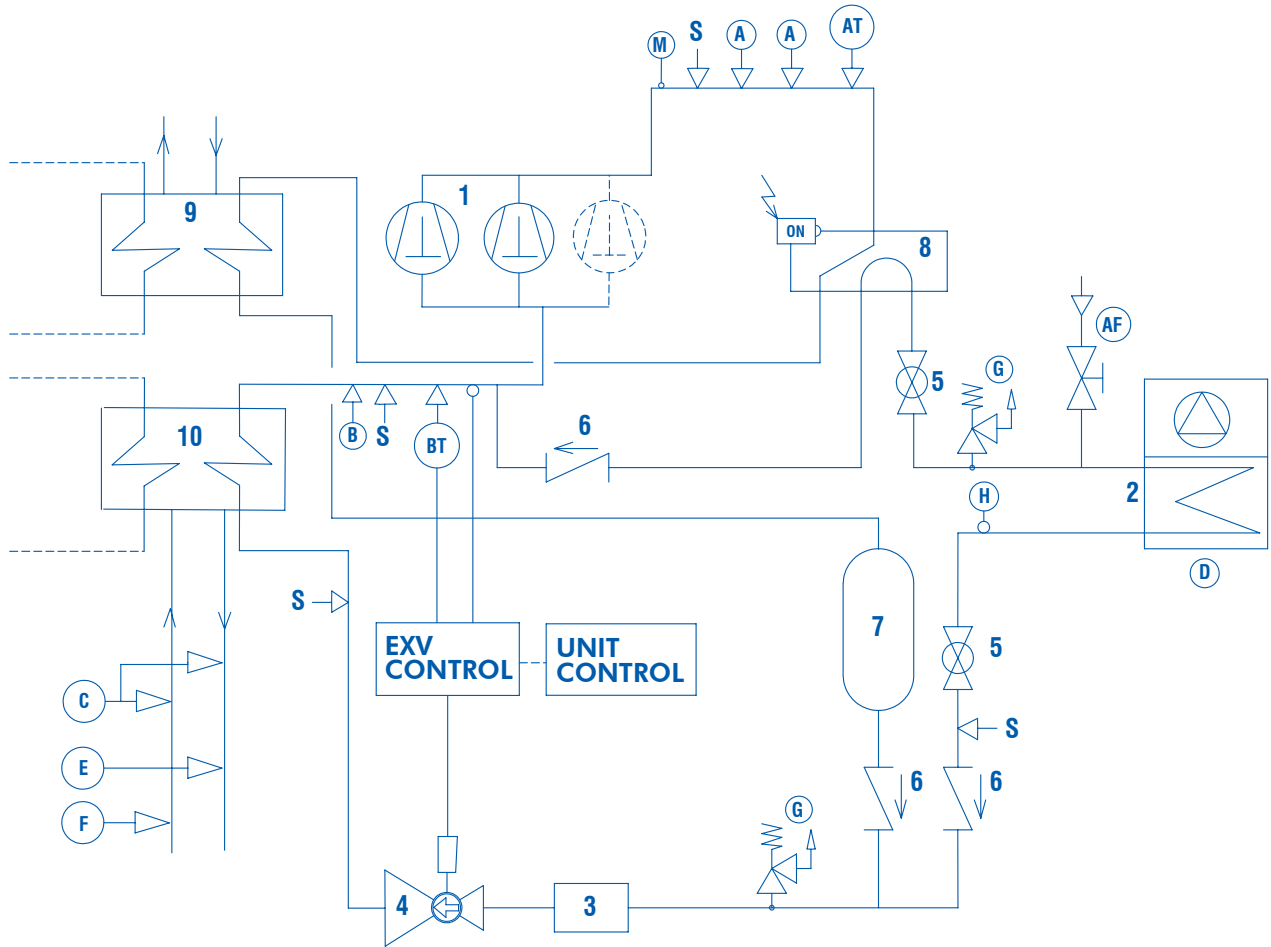


COMPONENTS	
1	Tandem or trio Scroll type compressors
2	Air cooled condenser
3	Filter drier
4	Electronic expansion valve
5	Globe valve
6	Check valve
7	Liquid receiver
8	Four-way valve
9	Suction accumulator
10	Sight glass
11	Plate heat exchanger (Dual type)
12	Desuperheater (optional)

SAFETY / CONTROL DEVICES	
A	High pressure switch (40.5 bar)
AT	High pressure transducer
AF	Access fitting sae flare 1/4"
B	Low pressure switch (1.5 bar)
BT	Low pressure transducer
C	Water differential pressure switch (105 mbar)
D	Air temperature sensor
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	PED pressure relief valve (45 bar)
H	Defrost temperature sensor
M	Discharge temperature sensor
N	Suction temperature sensor
S	5/16" Schrader connection (service only)
	Pipe connection with Schrader valve

Note : For reasons of readability, one circuit only is shown. The second circuit is identical.

Refrigerant Flow Diagram - AQWR Units



COMPONENTS

1	Tandem or trio Scroll type compressors
2	Air cooled condenser
3	Filter drier
4	Electronic expansion valve
5	Globe valve
6	Check valve
7	Liquid receiver
8	Four-way valve
9	Heat recover (Dual type)
10	Heat exchange (Dual type)

SAFETY / CONTROL DEVICES

A	High pressure switch (40.5 bar)
AT	High pressure transducer
AF	Access fitting sae flare 1/4"
B	Low pressure switch (1.5 bar)
BT	Low pressure transducer
C	Water differential pressure switch (105 mbar)
D	Air temperature sensor
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	PED pressure relief valve (45 bar)
H	Defrost temperature sensor
M	Discharge temperature sensor
N	Suction temperature sensor
S	5/16" Schrader connection (service only)
	Pipe connection with Schrader valve

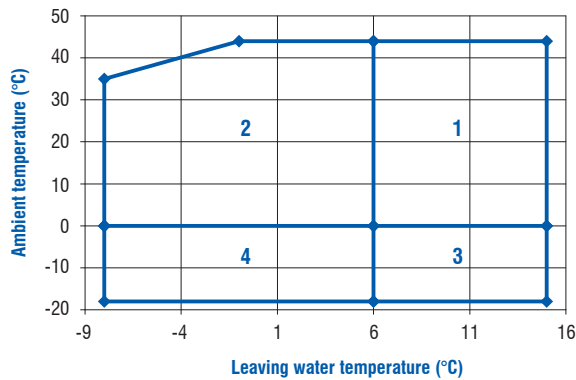
Note : For reasons of readability, one circuit only is shown. The second circuit is identical.

Operating Limits - AQWL 1404 to 2406

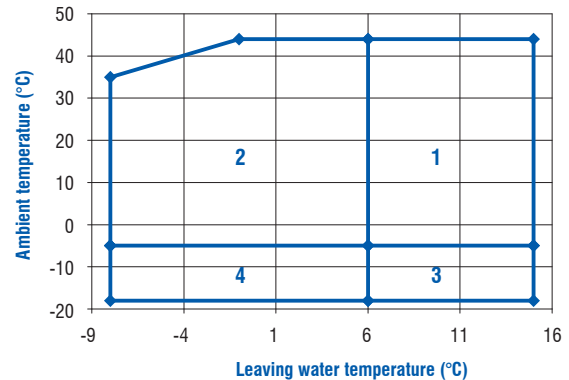
AQWL			1404		1604		1806		2106		2406	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Chilled Liquid	Liquid outlet temperature	Water outlet °C	+6 to +15									
		Brine outlet °C	-8 to +15									
		ΔT K	3 to 8									
	Flow rate (1) l/h	40850	108933	45462	121231	53320	142187	60415	161107	68198	181861	
	Pressure drop (1) kPa	19.7	140.0	19.7	139.8	21.5	152.8	27.6	196.2	29.9	212.3	
	Maximum operating pressure bar	10										
Ambient Air	Air entering temperature	BLN °C	-5 to +44		+0 to +44		+0 to +44		+0 to +44		+0 to +44	
		LN °C	-5 to +42		+0 to +42		+0 to +42		+0 to +42		+0 to +42	
		ELN °C	-18 to +40		-18 to +40		-18 to +40		-18 to +40		-18 to +40	
		HT (3) °C	-18 to +45		-18 to +45		-18 to +45		-18 to +45		-18 to +45	
	External static pressure	Standard fans Pa	0									
		High pressure fans Pa	< 120									
Recommended system chilled water volume (2) l			1200		1300		1500		1700		2000	
Minimum capacity step %			21		25		17		15		17	
Power supply voltage (4) V			400 V, 3 Ph, 50 Hz (nominal)									

- (1) Total unit flow rate and pressure are given for STD units.
Caution : Minimum flow rates may only be used with brine solutions after reprogramming the unit parameters.
- (2) Minimum water/brine volume of system (about 3 litres/kW).
- (3) Max. ambient air temperature of +48 °C in part loaded conditions.
- (4) Voltage : 400 V ± 10 %.

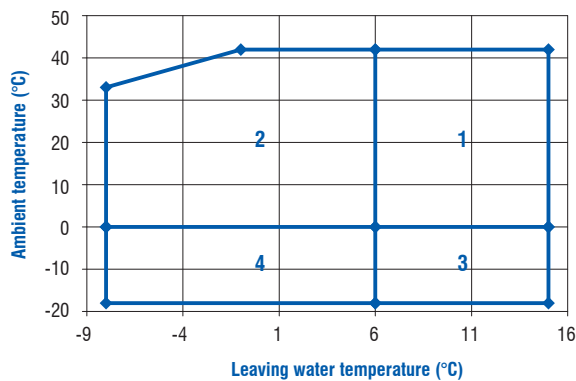
1404 - 1604 - 2106 BLN



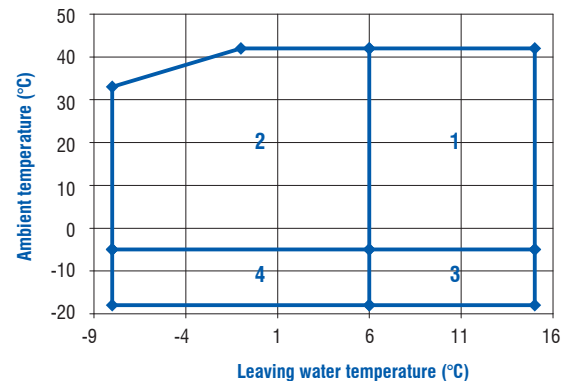
1806 - 2406 BLN



1404 - 1604 - 2106 LN



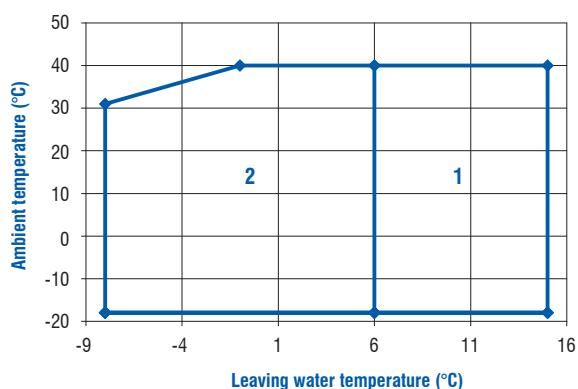
1806 - 2406 LN



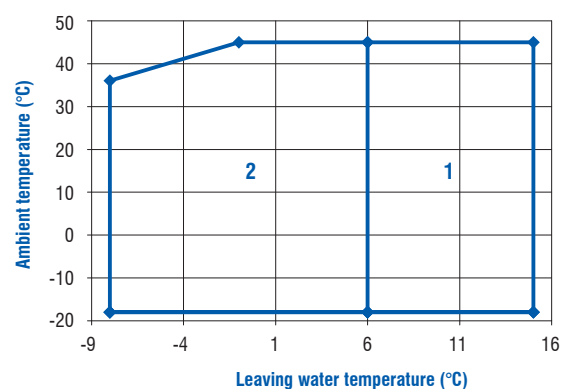
- (1) Water (2) Water and glycol (3) Water and FSC (4) Water, glycol and FSC (5) Reachable only with partialization.

Operating Limits - AQWL 1404 to 2406 (continued)

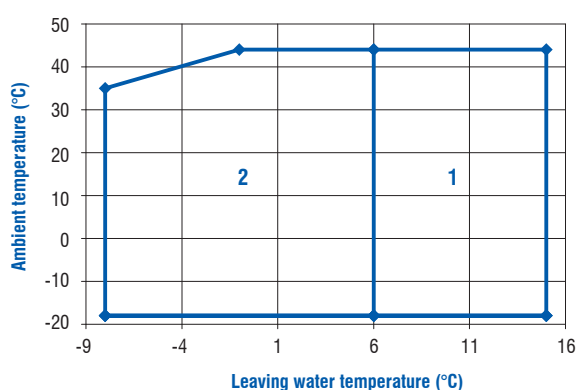
1404 - 1604 - 1806 - 2106 - 2406 ELN/HSE ELN



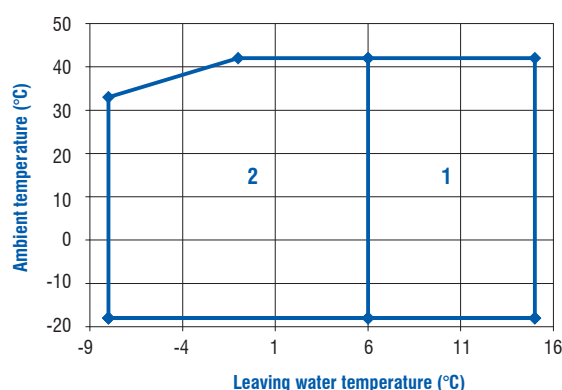
1404 - 1604 - 1806 - 2106 - 2406 HT



1404 - 1604 - 1804 - 2106 - 2406 HSE BLN/HPF



1404 - 1604 - 1804 - 2106 - 2406 HSE LN



(1) Water (2) Water and glycol (3) Water and FSC (4) Water, glycol and FSC (5) Reachable only with partialization.

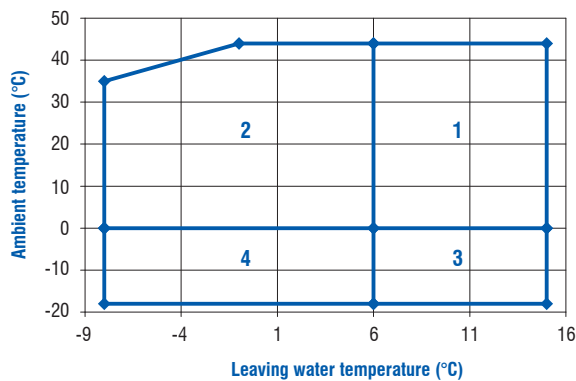
Operating Limits - AQWH 1404 to 2406

AQWH				1404		1604		1806		2106		2406	
				Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Chilled Liquid	Liquid outlet temperature	Water outlet	°C	+6 to +15									
		Brine outlet	°C	-8 to +15									
		ΔT	K	3 to 8									
	Flow rate (1)		l/h	38700	103200	43183	115154	50740	135307	57728	153940	64715	172273
	Pressure drop (1)		kPa	17.7	126.0	17.5	125.0	19.5	138.0	25.2	179.0	26.9	191.0
	Maximum operating pressure		bar	10									
Heat pump		Water outlet	°C	+30 to +50									
Ambient Air	Air entering temperature	Cooling (BLN)	°C	-5 to +44		+0 to +44		+0 to +44		+0 to +44		+0 to +44	
		Cooling (LN)	°C	-5 to +42		+0 to +42		+0 to +42		+0 to +42		+0 to +42	
		Cooling (ELN)	°C	-18 to +40		-18 to +40		-18 to +40		-18 to +40		-18 to +40	
		Cooling (HT) (3)	°C	-18 to +45		-18 to +45		-18 to +45		-18 to +45		-18 to +45	
		Heating (4)	°C	-10 to +20									
	External static pressure	Standard fans	Pa	0									
		High pressure fans	Pa	< 120									
Recommended system chilled water volume (2)			l	1200		1300		1500		1700		2000	
Minimum capacity step			%	21		25		17		15		17	
Power supply voltage (5)			V	400 V, 3 Ph, 50 Hz (nominal)									

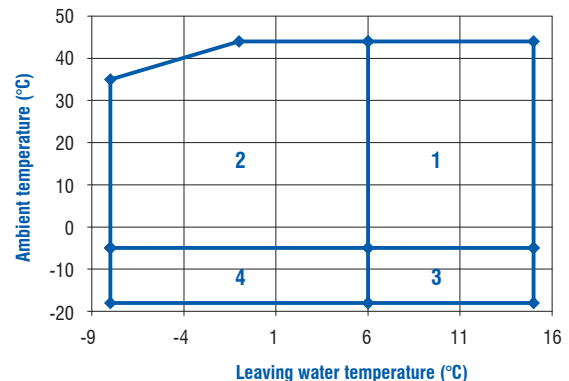
- (1) Total unit flow rate and pressure are given for STD units.
Caution : Minimum flow rates may only be used with brine solutions after reprogramming the unit parameters.
- (2) Minimum water/brine volume of system (about 3 litres/kW).
- (3) Max. ambient air temperature of +48 °C in part loaded conditions.
- (4) Max. LWT = 40 °C at -10 °C in fully loaded conditions and LWT = 45 °C in part loaded conditions.
- (5) Voltage : 400 V ± 10 %.

Cooling mode

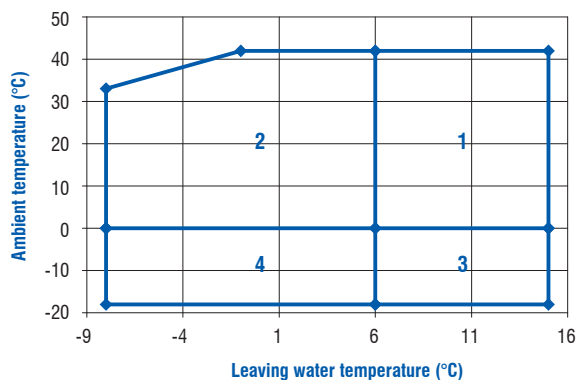
1404 - 1604 - 2106 BLN



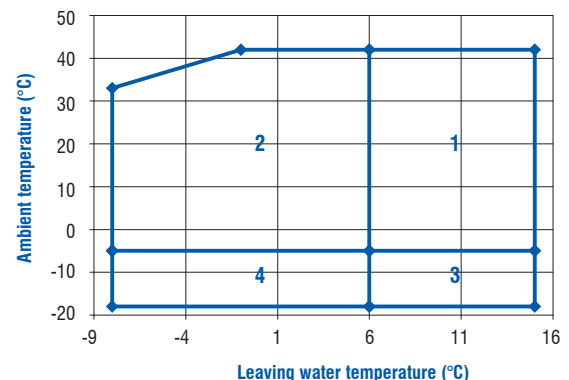
1806 - 2406 BLN



1404 - 1604 - 2106 LN



1806 - 2406 LN

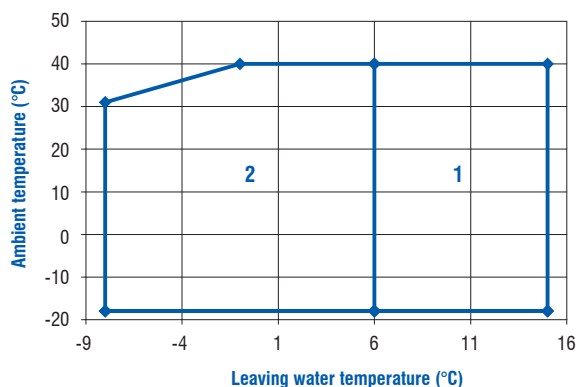


- (1) Water (2) Water and glycol (3) Water and FSC (4) Water, glycol and FSC (5) Reachable only with partialization.

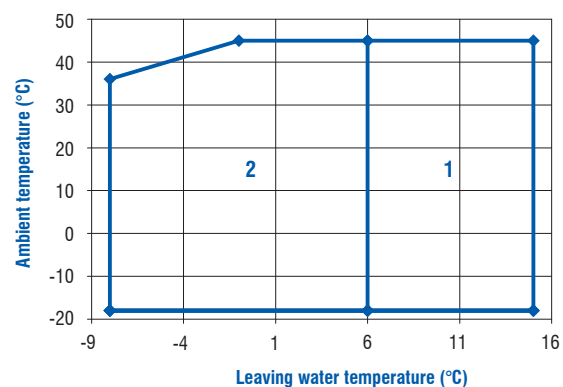
Operating Limits - AQWH 1404 to 2406 (continued)

Cooling mode

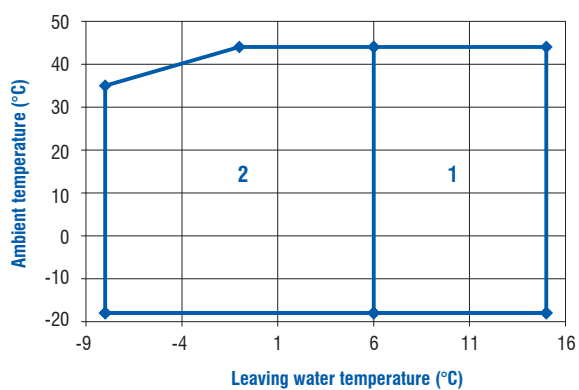
1404 - 1604 - 1806 - 2106 - 2406 ELN/HSE ELN



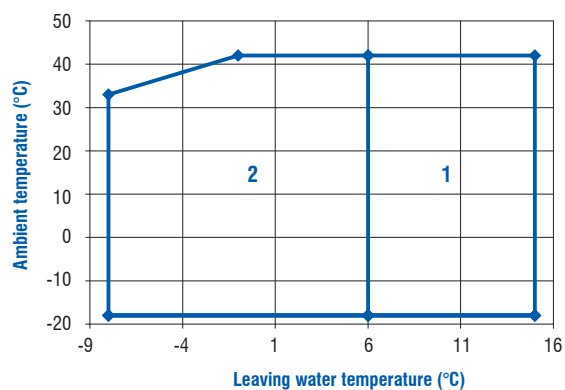
1404 - 1604 - 1806 - 2106 - 2406 HT



1404 - 1604 - 1804 - 2106 - 2406 HSE BLN/HPF

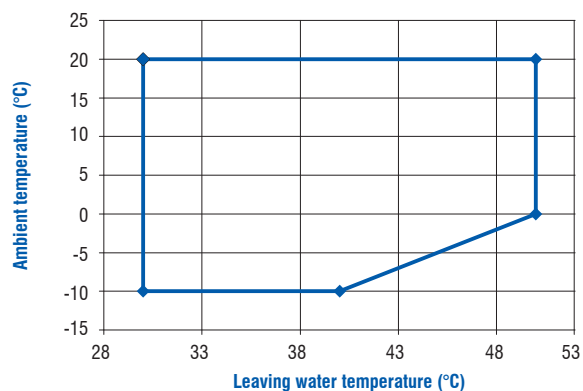


1404 - 1604 - 1804 - 2106 - 2406 HSE LN



Heating mode

All units



(1) Water (2) Water and glycol (3) Water and FSC (4) Water, glycol and FSC (5) Reachable only with partialization.

Correction Factors

Fouling factors

EVAPORATOR			CONDENSER		
Fouling factor (m ² .°C/kW)	Cooling capacity factor	Power input factor	Fouling factor (m ² .°C/kW)	Cooling capacity factor	Power input factor
0.044	1.000	1.000	0.044	1.000	1.000
0.088	0.987	0.995	0.088	0.987	1.023
0.176	0.964	0.985	0.176	0.955	1.068
0.352	0.915	0.962	0.352	0.910	1.135

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	1.029
2400	0.943	1.038

System Water Volume

The minimum system water volume is calculated using **the minimum compressor running time (1.5 minute for scroll compressor)** and the **lower capacity step** (only one compressor running among the six compressors installed) :

$$V = \frac{P \times t}{(n \times 25 \times \Delta T)}$$

Where

- V** : Water volume (litre)
- P** : Unit total cooling capacity (W)
- n** : Number of compressor steps
- t** : Compressor minimum running time (minute)
- ΔT** : Evaporator temperature difference (°C)

With t = 1.5 minute, ΔT = 5 °C and n = 6, the minimum system water volume is about **V = 2.4 litres/kW**.

Physical Data - AQWL STD/HSE/HPF - BLN Version

AQWL STD/HSE/HPF - BLN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	380.0	422.9	496.0	562.0	634.4
Input power (2)	kW	116.6	131.2	153.0	174.9	196.8
EER (2)		3.26	3.22	3.24	3.21	3.22
EER (Total unit)		2.90	2.90	2.90	2.91	2.90
Energy Efficiency Class		B	B	B	B	B
ESEER		4.07	4.08	4.07	4.09	4.08
EER (Total unit) (*)		2.93	2.93	2.93	2.94	2.93
Energy Efficiency Class		B	B	B	B	B
ESEER (*)		4.22	4.22	4.22	4.23	4.22
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		3 + 3	4 + 4	3 + 3	3 + 3	3 + 3
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	880	880	880	880	880
Total airflow	m³/h	162000	153000	190000	204000	227000
Total input power	kW	14.4	14.4	18.0	18.0	21.6
Total input power (*)	kW	13.0	13.0	16.2	16.2	19.5
External static pressure	Pa	0 or 120 Pa (**)				
WEIGHT						
Shipping weight	kg	2633	2850	3559	3814	3932
Operating weight	kg	2668	2887	3599	3854	3975
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
HPF version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (3)	dB(A)	97	97	98	98	99
Sound pressure level - (10m) (4)	dB(A)	65	65	66	66	67
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

(2) Compressors only.

(3) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.

(4) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.

(*) High efficiency units (HSE) with inverter fans.

(**) HPF units with high static pressure fans.

Physical Data - AQWL STD/HSE - LN Version

AQWL STD/HSE - LN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	368.2	410.3	481.0	544.0	615.4
Input power (2)	kW	122.0	137.0	160.0	182.0	205.0
EER (2)		3.02	2.99	3.01	2.99	3.00
EER (Total unit)		2.80	2.80	2.80	2.80	2.80
ESEER		4.08	4.08	4.08	4.09	4.09
EER (Total unit) (*)		2.86	2.86	2.86	2.86	2.86
ESEER (*)		4.28	4.27	4.27	4.27	4.28
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		3 + 3	4 + 4	3 + 3	3 + 3	3 + 3
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	700	700	700	700	700
Total airflow	m³/h	124000	116000	142000	156000	172000
Total input power	kW	9.6	9.6	12.0	12.0	14.4
Total input power (*)	kW	6.6	6.6	8.2	8.2	9.8
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2633	2850	3559	3814	3932
Operating weight	kg	2668	2887	3599	3854	3975
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (3)	dB(A)	91	91	92	92	93
Sound pressure level - (10m) (4)	dB(A)	59	59	60	60	61
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

(2) Compressors only.

(3) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.

(4) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.

(*) High efficiency units (HSE) with inverter fans.

Physical Data - AQWL STD/HSE - ELN Version

AQWL STD/HSE - ELN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	349.8	389.0	456.5	517.2	584.0
Input power (2)	kW	129.4	145.2	170.4	194.1	217.8
EER (2)		2.70	2.68	2.68	2.66	2.68
EER (Total unit)		2.52	2.51	2.50	2.51	2.52
ESEER		3.81	3.80	3.78	3.79	3.80
EER (Total unit) (*)		2.65	2.63	2.63	2.62	2.64
ESEER (*)		4.10	4.07	4.07	4.06	4.08
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		3 + 3	4 + 4	3 + 3	3 + 3	3 + 3
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	550	550	550	550	550
Total airflow	m³/h	97000	91000	112000	122000	135000
Total input power	kW	9.6	9.6	12.0	12.0	14.4
Total input power (*)	kW	2.6	2.6	3.2	3.2	3.8
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2633	2850	3559	3814	3932
Operating weight	kg	2668	2887	3599	3854	3975
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (3)	dB(A)	88	88	89	89	90
Sound pressure level - (10m) (4)	dB(A)	56	56	57	57	58
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

(2) Compressors only.

(3) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.

(4) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.

(*) High efficiency units (HSE) with inverter fans.

Physical Data - AQWL HT

AQWL HT		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	383.8	427.1	501.0	567.6	640.7
Input power (2)	kW	115.4	129.9	151.5	173.2	194.8
EER (2)		3.33	3.29	3.31	3.28	3.29
EER (Total unit)		2.82	2.83	2.82	2.85	2.83
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		3 + 3	4 + 4	3 + 3	3 + 3	3 + 3
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	1100	1100	1100	1100	1100
Total airflow	m³/h	198000	187000	232000	249000	277000
Total input power (*)	kW	20.8	20.8	26.0	26.0	31.2
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2633	2850	3559	3814	3932
Operating weight	kg	2668	2887	3599	3854	3975
ADDITIONAL WEIGHT						
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (3)	dB(A)	103	103	104	104	105
Sound pressure level - (10m) (4)	dB(A)	71	71	72	72	73
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

(2) Compressors only.

(3) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.

(4) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.

(*) High temperature units (HT) with inverter fans.

Physical Data - AQWH STD/HSE/HPF - BLN Version

AQWH STD/HSE/HPF - BLN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	360.2	401.7	472.2	537.0	601.9
Input power (3)	kW	119.0	134.0	156.0	178.5	201.0
EER (3)		3.03	3.00	3.03	3.01	2.99
EER (Total unit)		2.77	2.71	2.77	2.71	2.70
Energy Efficiency Class		C	C	C	C	C
ESEER		3.90	3.80	3.89	3.80	3.80
EER (Total unit) (*)		2.80	2.73	2.79	2.73	2.73
Energy Efficiency Class		C	C	C	C	C
ESEER (*)		4.03	3.94	4.02	3.94	3.93
Nominal heating capacity (2)	kW	418.1	467.6	545.7	623.9	702.0
Input power (3)	kW	116.0	130.0	151.8	173.4	195.0
COP (3)		3.60	3.60	3.59	3.60	3.60
COP (Total unit)		3.21	3.24	3.21	3.26	3.24
Energy Class Heating		A	A	A	A	A
COP (Total unit) (*)		3.24	3.27	3.25	3.29	3.27
Energy Efficiency Class Heating (*)		A	A	A	A	A
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		4 + 4	4 + 4	4 + 4	3 + 4	4 + 4
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	880	880	880	880	880
Total airflow	m³/h	181000	181000	200000	214500	242000
Total input power	kW	14.4	14.4	18.0	18.0	21.6
Total input power (*)	kW	13.0	13.0	16.3	16.3	19.6
External static pressure	Pa	0 or 120 Pa (**)				
WEIGHT						
Shipping weight	kg	2896	3018	3967	4083	4465
Operating weight	kg	2931	3056	4007	4123	4507
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
HPF version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (4)	dB(A)	97	97	98	98	99
Sound pressure level - (10m) (5)	dB(A)	65	65	66	66	67
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

(2) Data based on 45 °C leaving hot water temperature and 7 °C ambient coil air temperature with 88 % relative humidity.

(3) Compressors only.

(4) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO standard 3744, parallelepiped shape.

(*) High efficiency units (HSE) with inverter fans.

(**) HPF units with high static pressure fans.

Physical Data - AQWH STD/HSE - LN Version

AQWH STD/HSE - LN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	347.8	388.3	457.3	520.2	582.0
Input power (3)	kW	124.0	139.0	163.0	186.0	209.0
EER (3)		2.80	2.79	2.56	2.80	2.78
EER (Total unit)		2.65	2.61	2.65	2.61	2.60
ESEER		3.86	3.81	3.86	3.81	3.80
EER (Total unit) (*)		2.70	2.67	2.70	2.67	2.66
ESEER (*)		4.03	3.98	4.03	3.99	3.97
Nominal heating capacity (2)	kW	396.4	443.9	517.1	591.2	665.4
Input power (3)	kW	115.0	130.0	152.0	173.0	194.0
COP (3)		3.45	3.41	3.13	3.42	3.43
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		4 + 4	4 + 4	4 + 4	3 + 4	4 + 4
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	700	700	700	700	700
Total airflow	m³/h	142000	142000	153000	165000	183000
Total input power	kW	9.6	9.6	12.0	12.0	14.4
Total input power (*)	kW	6.6	6.6	8.2	8.2	9.8
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2896	3018	3967	4083	4465
Operating weight	kg	2931	3056	4007	4123	4507
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (4)	dB(A)	91	91	92	92	93
Sound pressure level - (10m) (5)	dB(A)	59	59	60	60	61
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

- (1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.
 (2) Data based on 45 °C leaving hot water temperature and 7 °C ambient coil air temperature with 88 % relative humidity.
 (3) Compressors only.
 (4) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.
 (5) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.
 (*) High efficiency units (HSE) with inverter fans.

Physical Data - AQWH STD/HSE - ELN Version

AQWH STD/HSE - ELN models		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	330.2	367.7	433.6	492.3	551.1
Input power (3)	kW	132.0	148.0	174.0	198.0	222.0
EER (3)		2.50	2.48	2.49	2.49	2.48
EER (Total unit)		2.37	2.33	2.36	2.33	2.33
ESEER		3.59	3.53	3.57	3.52	3.52
EER (Total unit) (*)		2.47	2.44	2.46	2.44	2.44
ESEER (*)		3.82	3.78	3.80	3.78	3.78
Nominal heating capacity (2)	kW	379.8	426.4	496.3	567.6	639.0
Input power (3)	kW	115.0	129.0	151.8	172.8	193.8
COP (3)		3.30	3.31	3.05	3.28	3.30
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		4 + 4	4 + 4	4 + 4	3 + 4	4 + 4
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	550	550	550	550	550
Total airflow	m³/h	112000	112000	120000	130000	144000
Total input power	kW	9.6	9.6	12.0	12.0	14.4
Total input power (*)	kW	2.6	2.6	3.2	3.2	3.8
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2896	3018	3967	4083	4465
Operating weight	kg	2931	3056	4007	4123	4507
ADDITIONAL WEIGHT						
HSE version	kg	0	0	0	0	0
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (4)	dB(A)	88	88	89	89	90
Sound pressure level - (10m) (5)	dB(A)	56	56	57	57	58
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

- (1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.
 (2) Data based on 45 °C leaving hot water temperature and 7 °C ambient coil air temperature with 88 % relative humidity.
 (3) Compressors only.
 (4) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.
 (5) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.
 (*) High efficiency units (HSE) with inverter fans.

Physical Data - AQWH HT

AQWH HT		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	363.8	405.7	477.0	542.3	608.0
Input power (3)	kW	117.8	132.7	154.4	176.7	199.0
EER (3)		3.09	3.06	3.09	3.07	3.06
EER (Total unit)		2.73	2.64	2.72	2.64	2.64
Nominal heating capacity (2)	kW	422.0	473.0	551.0	630.0	709.0
Input power (3)	kW	114.8	128.7	150.3	171.7	193.0
COP (3)		3.68	3.68	3.67	3.67	3.67
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
AIR COOLED CONDENSER						
Number of coils		4	4	4	4	4
Total coil face area per coil	m²	4.4	4.4	5.6	6.7	6.7
Number of rows		4 + 4	4 + 4	4 + 4	3 + 4	4 + 4
FANS						
Number of fans		8	8	10	10	12
Nominal speed	rpm	1100	1100	1100	1100	1100
Total airflow	m³/h	220000	220000	244000	278000	295000
Total input power (*)	kW	20.8	20.8	26.0	26.0	31.2
External static pressure	Pa	0 Pa				
WEIGHT						
Shipping weight	kg	2896	3018	3967	4083	4465
Operating weight	kg	2931	3056	4007	4123	4507
ADDITIONAL WEIGHT						
Desuperheater version	kg	TBD	TBD	TBD	TBD	TBD
With pump/s	kg	TBD	TBD	TBD	TBD	TBD
With pump/s and tank	kg	TBD	TBD	TBD	TBD	TBD
Copper Fins	kg	TBD	TBD	TBD	TBD	TBD
SOUND LEVELS						
Sound power level (4)	dB(A)	103	103	104	104	105
Sound pressure level - (10m) (5)	dB(A)	71	71	72	72	73
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

- (1) Data based on 7 °C leaving chilled water temperature and 35 °C condenser air temperature.
 (2) Data based on 45 °C leaving hot water temperature and 7 °C ambient coil air temperature with 88 % relative humidity.
 (3) Compressors only.
 (4) Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744 and Eurovent 8/1.
 (5) Sound pressure levels refer to ISO standard 3744, parallelepiped shape.
 (*) High temperature units (HT) with inverter fans.

Physical Data - AQWR

AQWR		1404	1604	1806	2106	2406
Nominal cooling capacity (1)	kW	380	423	496	562	634
Input power (2)	kW	117	131	153	175	197
EER (2)		3,26	3,22	3,24	3,21	3,22
Total heat recovery	kW	489	546	639	726	818
Number of refrigerant circuits		2	2	2	2	2
Total capacity steps	%	21-50-71-100	25-50-75-100	17-33-50-67-83-100	15-29-43-62-81-100	17-33-50-67-83-100
COMPRESSORS						
Number		4	4	6	6	6
Type		Scroll				
Oil type		POE				
N° of loading stages		0/100	0/100	0/100	0/100	0/100
EVAPORATOR						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
RECOVERY CONDENSER						
Number		1	1	1	1	1
Type		PLATE	PLATE	PLATE	PLATE	PLATE
Water volume	l	33	35	38	38	40
Inlet/Outlet water connection	Inch	3"	3"	3"	3"	3"
WEIGHT						
Shipping weight	kg	2896	3133	3922	4177	4315
Operating weight	kg	2966	3207	4002	4257	4400
ADDITIONAL WEIGHT						
ELN version	kg	0	0	0	0	0
HSE version	kg	0	0	0	0	0
HPF version	kg	0	0	0	0	0
DIMENSIONS						
Length	mm	4000	4000	5000	6000	6000
Width	mm	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550

(1) Data based on 7 °C leaving chilled water temperature and 45 °C condenser water temperature.

(2) Compressors only.

HPF Version Fan Data

Sizes	Fan Static Pressure (Pa)	Fan rpm	Parameter in Service Level Max Speed (Vdc)	Sound Power Level dB(A)
1404	40	900	8.3	96
	60	930	8.5	97
	80	970	8.8	98
	100	1000	9.1	99
	120	1030	9.3	100
1604	40	900	8.2	96
	60	930	8.5	97
	80	970	8.8	98
	100	1000	9.1	99
	120	1030	9.3	100
1806	40	900	8.3	97
	60	930	8.5	98
	80	970	8.8	99
	100	1000	9.1	100
	120	1030	9.3	101
2106	40	900	8.3	97
	60	940	8.6	98
	80	970	8.8	99
	100	1000	9.1	100
	120	1040	9.4	101
2406	40	1010	9.1	101
	60	1040	9.4	102
	80	1080	9.7	103
	100	1100	9.8	104
	120	1130	10.0	105

Note : Values in bold are standard factory settings.

Electrical Data - AQWL/AQWH 1404 to 2406 - R410A

Compressors @ 400 V / 3 Ph / 50 Hz

Models		Power input at max. conditions per compressor (kW)	Current at max. conditions per compressor FLA (A)	Start up current LRA (A)	Crankcase heater (W)
1404	Circuit 1	46.7	82.0	408	150
		36.1	65.4	310	150
	Circuit 2	36.1	65.4	310	150
		46.7	82.0	408	150
1604	Circuit 1	46.7	82.0	310	150
		46.7	82.0	408	150
	Circuit 2	46.7	82.0	408	150
		46.7	82.0	408	150
1806	Circuit 1	36.1	65.4	310	150
		36.1	65.4	310	150
		36.1	65.4	310	150
	Circuit 2	36.1	65.4	310	150
		36.1	65.4	310	150
		36.1	65.4	310	150
2106	Circuit 1	36.1	65.4	310	150
		36.1	65.4	310	150
		36.1	65.4	310	150
	Circuit 2	46.7	82.0	408	150
		46.7	82.0	408	150
		46.7	82.0	408	150
2406	Circuit 1	46.7	82.0	408	150
		46.7	82.0	408	150
		46.7	82.0	408	150
	Circuit 2	46.7	82.0	408	150
		46.7	82.0	408	150
		46.7	82.0	408	150

Fans - 400 V / 3 Ph / 50 Hz

Model	Standard Fans 6 poles										Electronic Fans (Brushless)				
	BLN - fans D (Delta connection)					LN and ELN - fans Y (Star connection)									
	Fans number	Nominal power (kW)	Max running current (A)	Total nominal power (kW)	Total max current (A)	Fans number	Nominal power (kW)	Max running current (A)	Total nominal power (kW)	Total max current (A)	Fans number	Nominal power (kW)	Max running current (A)	Total nominal power (kW)	Total max current (A)
1404	8	1.8	3.8	14.4	30.4	8	1.15	2.2	9.2	17.6	8	2.67	4.1	21.36	32.8
1604	8	1.8	3.8	14.4	30.4	8	1.15	2.2	9.2	17.6	8	2.67	4.1	21.36	32.8
1806	10	1.8	3.8	18	38	10	1.15	2.2	11.5	22	10	2.67	4.1	26.7	41
2106	10	1.8	3.8	18	38	10	1.15	2.2	11.5	22	10	2.67	4.1	26.7	41
2406	12	1.8	3.8	21.6	45.6	12	1.15	2.2	13.8	26.4	12	2.67	4.1	32.04	49.2

Electrical Data - AQWL/AQWH 1404 to 2406 - R410A (continued)

Units - 400 V / 3 Ph / 50 Hz

AQWL/AQWH BLN models		1404	1604	1806	2106	2406
Maximum power input (*)	kW	180	201	235	266	302
Maximum current input (*)	A	325	358	430	480	538
Start-up current (*)	A	651	684	675	806	864

AQWL/AQWH LN models		1404	1604	1806	2106	2406
Maximum power input (*)	kW	175	196	228	260	294
Maximum current input (*)	A	312	346	414	464	518
Start-up current (*)	A	638	672	659	790	844

AQWL/AQWH ELN models		1404	1604	1806	2106	2406
Maximum power input (*)	kW	175	196	228	260	294
Maximum current input (*)	A	312	346	414	464	518
Start-up current (*)	A	638	672	659	790	844

AQWL/AQWH HSE/HT/HPF models		1404	1604	1806	2106	2406
Maximum power input (*)	kW	187	208	243	275	312
Maximum current input (*)	A	328	361	433	483	541
Start-up current (*)	A	654	687	678	809	867

(*) Data to be specified on the unit characteristic plate.

Sound Data - AQWL/AQWH Units

		FREQUENCY (Hz)							Sound Power dB(A)	Sound Pressure (*) dB(A)
		125	250	500	1000	2000	4000	8000		
AQWL/AQWH BLN	1404	91.0	90.0	98.0	92.0	86.0	71.0	59.0	97	65
	1604	91.0	90.0	98.0	92.0	86.0	71.0	59.0	97	65
	1806	92.0	91.0	99.0	93.0	87.0	72.0	60.0	98	66
	2106	92.0	91.0	99.0	93.0	87.0	72.0	60.0	98	66
	2406	93.0	92.0	100.0	94.0	88.0	73.0	61.0	99	67
AQWL/AQWH LN	1404	85.0	84.0	92.0	86.0	80.0	65.0	53.0	91	59
	1604	85.0	84.0	92.0	86.0	80.0	65.0	53.0	91	59
	1806	86.0	85.0	93.0	87.0	81.0	66.0	54.0	92	60
	2106	86.0	85.0	93.0	87.0	81.0	66.0	54.0	92	60
	2406	87.0	86.0	94.0	88.0	82.0	67.0	55.0	93	61
AQWL/AQWH ELN	1404	82.0	81.0	89.0	83.0	77.0	62.0	50.0	88	56
	1604	82.0	81.0	89.0	83.0	77.0	62.0	50.0	88	56
	1806	83.0	82.0	90.0	84.0	78.0	63.0	51.0	89	57
	2106	83.0	82.0	90.0	84.0	78.0	63.0	51.0	89	57
	2406	84.0	83.0	91.0	85.0	79.0	64.0	52.0	90	58
AQWL/AQWH HT (**)	1404	97.0	96.0	104.0	98.0	92.0	77.0	65.0	103	71
	1604	97.0	96.0	104.0	98.0	92.0	77.0	65.0	103	71
	1806	98.0	97.0	105.0	99.0	93.0	78.0	66.0	104	72
	2106	98.0	97.0	105.0	99.0	93.0	78.0	66.0	104	72
	2406	99.0	98.0	106.0	100.0	94.0	79.0	67.0	105	73

(*) Sound pressure levels are given at 10 meters distance according to ISO standard 3744 with parallelepiped shape.

(**) Sound data is given at maximum air flow rate condition.

Cooling Capacities - AQWL STD/HSE/HPF - BLN Version

AQWL models	LWT (°C)	Condenser air entering temperature (°C)											
		25		30		32		35		40		44	
		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)
1404 BLN	5	398.2	95.2	379.1	104.5	371.0	108.3	358.6	114.1	333.4	126.7	317.8	134.8
	6	410.1	96.3	390.1	105.7	382.0	109.5	369.2	115.4	343.3	128.1	327.2	136.2
	7	422.0	97.4	401.5	106.9	393.0	110.8	380.0	116.6	353.1	129.4	336.7	137.6
	8	432.6	98.6	411.7	108.0	403.1	112.0	389.5	117.9	362.2	130.6	345.3	138.9
	9	443.4	99.8	421.8	109.3	412.7	113.3	399.4	119.1	371.3	131.9	353.9	140.2
	10	454.0	101.1	432.0	110.5	422.8	114.6	408.9	120.5	379.7	133.3	362.1	141.6
	12	475.6	103.5	452.5	113.2	443.1	117.2	428.3	123.1	398.1	136.2	379.4	144.6
	15	508.0	107.5	483.6	117.1	473.4	121.2	457.4	127.4	425.4	140.4	405.4	149.0
1604 BLN	5	443.3	107.1	422.0	117.6	413.0	121.9	399.2	128.4	371.1	142.6	353.8	151.7
	6	456.5	108.3	434.2	118.9	425.2	123.2	410.9	129.9	382.2	144.1	364.3	153.3
	7	469.8	109.6	446.9	120.2	437.4	124.7	423.0	131.2	393.1	145.6	374.8	154.8
	8	481.5	111.0	458.3	121.6	448.7	126.0	433.6	132.7	403.2	146.9	384.3	156.3
	9	493.6	112.3	469.6	123.0	459.5	127.5	444.6	134.0	413.3	148.4	394.0	157.8
	10	505.3	113.7	480.9	124.4	470.7	128.9	455.2	135.6	422.7	149.9	403.1	159.4
	12	529.4	116.5	503.7	127.4	493.2	131.8	476.8	138.5	443.1	153.2	422.3	162.7
	15	565.5	121.0	538.4	131.8	527.0	136.4	509.1	143.3	473.5	158.0	451.3	167.6
1806 BLN	5	519.7	124.9	494.8	137.1	484.2	142.1	468.1	149.7	435.1	166.3	414.8	176.9
	6	535.3	126.3	509.1	138.7	498.6	143.7	481.8	151.4	448.1	168.0	427.1	178.7
	7	550.8	127.8	524.1	140.2	512.9	145.4	496.0	153.0	460.9	169.8	439.5	180.5
	8	564.6	129.4	537.4	141.8	526.1	146.9	508.4	154.7	472.7	171.4	450.7	182.2
	9	578.8	130.9	550.6	143.5	538.7	148.6	521.3	156.3	484.6	173.1	462.0	184.0
	10	592.5	132.6	563.9	145.0	551.9	150.3	533.8	158.1	495.6	174.9	472.7	185.8
	12	620.8	135.9	590.6	148.6	578.3	153.7	559.1	161.5	519.6	178.7	495.2	189.8
	15	663.1	141.1	631.3	153.7	617.9	159.0	597.0	167.1	555.2	184.2	529.1	195.5
2106 BLN	5	588.9	142.8	560.6	156.8	548.7	162.5	530.4	171.2	493.0	190.1	470.0	202.2
	6	606.5	144.4	576.9	158.5	564.9	164.2	546.0	173.1	507.8	192.1	484.0	204.3
	7	624.1	146.1	593.8	160.3	581.2	166.2	562.0	174.9	522.3	194.1	498.0	206.4
	8	639.8	147.9	608.9	162.1	596.1	168.0	576.1	176.9	535.6	195.9	510.6	208.3
	9	655.8	149.7	623.9	164.0	610.4	169.9	590.7	178.6	549.1	197.9	523.4	210.3
	10	671.4	151.6	638.9	165.8	625.3	171.9	604.8	180.8	561.6	199.9	535.6	212.4
	12	703.4	155.3	669.2	169.8	655.3	175.8	633.5	184.7	588.7	204.2	561.1	216.9
	15	751.3	161.3	715.3	175.7	700.1	181.8	676.4	191.0	629.1	210.6	599.6	223.5
2406 BLN	5	664.4	160.7	632.4	176.4	619.0	182.8	598.3	192.6	556.2	213.9	530.2	227.5
	6	684.2	162.5	650.8	178.4	637.3	184.8	615.9	194.8	572.8	216.1	546.0	229.9
	7	704.1	164.4	669.9	180.4	655.7	187.0	634.0	196.8	589.2	218.4	561.7	232.2
	8	721.7	166.4	686.9	182.4	672.5	189.0	649.9	199.0	604.3	220.4	576.0	234.4
	9	739.8	168.4	703.8	184.5	688.6	191.2	666.4	201.0	619.5	222.7	590.5	236.7
	10	757.4	170.6	720.8	186.5	705.5	193.4	682.3	203.4	633.5	224.9	604.2	239.0
	12	793.5	174.8	754.9	191.1	739.2	197.8	714.7	207.8	664.1	229.8	633.0	244.1
	15	847.5	181.5	806.9	197.7	789.8	204.5	763.1	215.0	709.7	237.0	676.4	251.5

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Cooling Capacities - AQWL STD/HSE - LN Version

AQWL models	LWT (°C)	Condenser air entering temperature (°C)									
		25		30		32		35		40	
		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)
1404 LN	5	385.6	99.6	367.1	109.3	359.3	113.3	347.3	119.4	322.8	132.6
	6	397.2	100.7	377.7	110.6	369.9	114.6	357.5	120.8	332.5	134.0
	7	408.7	101.9	388.8	111.8	380.6	115.9	368.0	122.0	342.0	135.4
	8	418.9	103.2	398.7	113.0	390.3	117.2	377.2	123.4	350.7	136.6
	9	429.4	104.4	408.5	114.4	399.7	118.5	386.8	124.6	359.6	138.0
	10	439.6	105.8	418.4	115.6	409.5	119.9	396.0	126.1	367.7	139.4
	12	460.6	108.3	438.2	118.5	429.1	122.6	414.8	128.8	385.5	142.5
	15	491.9	112.5	468.4	122.5	458.5	126.8	442.9	133.3	412.0	146.9
1604 LN	5	429.6	111.9	409.0	122.8	400.3	127.3	386.9	134.1	359.7	148.9
	6	442.5	113.1	420.8	124.2	412.1	128.7	398.3	135.6	370.4	150.5
	7	455.3	114.5	433.2	125.6	424.0	130.2	410.0	137.0	381.0	152.0
	8	466.7	115.9	444.2	126.9	434.9	131.6	420.3	138.5	390.8	153.4
	9	478.4	117.2	455.1	128.5	445.3	133.1	430.9	139.9	400.6	155.0
	10	489.8	118.8	466.1	129.9	456.2	134.6	441.2	141.6	409.7	156.6
	12	513.2	121.7	488.2	133.0	478.0	137.7	462.2	144.6	429.5	160.0
	15	548.1	126.3	521.8	137.6	510.8	142.4	493.5	149.6	459.0	165.0
1806 LN	5	504.0	130.6	479.8	143.4	469.6	148.6	453.9	156.6	422.0	173.9
	6	519.1	132.1	493.7	145.0	483.5	150.3	467.3	158.4	434.6	175.7
	7	534.2	133.7	508.2	146.6	497.4	152.0	481.0	160.0	447.0	177.5
	8	547.6	135.3	521.1	148.3	510.2	153.7	493.0	161.8	458.4	179.2
	9	561.3	136.9	534.0	150.0	522.5	155.4	505.6	163.4	470.0	181.0
	10	574.6	138.7	546.9	151.7	535.2	157.2	517.6	165.4	480.6	182.9
	12	602.0	142.1	572.8	155.4	560.8	160.8	542.2	168.9	503.9	186.8
	15	643.0	147.6	612.2	160.7	599.2	166.3	578.9	174.8	538.5	192.7
2106 LN	5	570.0	148.6	542.7	163.1	531.1	169.1	513.4	178.1	477.2	197.8
	6	587.1	150.2	558.4	165.0	546.8	170.9	528.5	180.2	491.5	199.9
	7	604.1	152.1	574.8	166.8	562.6	172.9	544.0	182.0	505.6	202.0
	8	619.3	153.9	589.4	168.6	577.0	174.8	557.6	184.0	518.5	203.8
	9	634.8	155.7	603.9	170.7	590.9	176.8	571.8	185.9	531.5	205.9
	10	649.9	157.8	618.5	172.5	605.3	178.8	585.4	188.1	543.6	208.0
	12	680.9	161.6	647.8	176.7	634.3	182.9	613.2	192.2	569.8	212.5
	15	727.2	167.8	692.4	182.8	677.7	189.2	654.7	198.8	609.0	219.1
2406 LN	5	644.4	167.4	613.5	183.7	600.4	190.4	580.4	200.6	539.5	222.8
	6	663.7	169.2	631.3	185.8	618.2	192.5	597.4	202.9	555.7	225.1
	7	683.0	171.3	649.8	187.9	636.0	194.8	615.0	205.0	571.5	227.5
	8	700.1	173.4	666.3	190.0	652.3	196.9	630.4	207.3	586.1	229.6
	9	717.6	175.4	682.7	192.2	668.0	199.2	646.4	209.4	600.9	231.9
	10	734.7	177.7	699.2	194.3	684.3	201.4	661.8	211.9	614.5	234.3
	12	769.8	182.0	732.3	199.1	717.1	206.0	693.2	216.4	644.2	239.4
	15	822.1	189.0	782.7	205.9	766.2	213.1	740.2	223.9	688.5	246.8

Notes :
 - LWT : Leaving water temperature.
 - Power input data are given for compressors only.

Cooling Capacities - AQWL STD/HSE - ELN Version

AQWL models	LWT (°C)	Condenser air entering temperature (°C)									
		25		30		32		35		40	
		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)
1404 ELN	5	366.8	105.7	349.1	116.0	341.7	120.2	330.3	126.6	307.0	140.6
	6	377.7	106.8	359.3	117.3	351.8	121.5	340.0	128.1	316.2	142.1
	7	388.7	108.1	369.8	118.6	362.0	123.0	350.0	129.4	325.3	143.6
	8	398.4	109.4	379.2	119.9	371.2	124.3	358.8	130.8	333.6	144.9
	9	408.4	110.7	388.5	121.3	380.2	125.7	367.9	132.2	342.0	146.4
	10	418.1	112.2	397.9	122.6	389.4	127.2	376.6	133.7	349.7	147.9
	12	438.1	114.9	416.8	125.7	408.1	130.0	394.5	136.6	366.6	151.1
	15	467.9	119.3	445.4	130.0	436.0	134.5	421.2	141.3	391.8	155.8
1604 ELN	5	407.6	118.6	388.0	130.1	379.8	134.9	367.1	142.1	341.3	157.8
	6	419.8	119.9	399.3	131.6	391.0	136.4	377.9	143.7	351.5	159.5
	7	432.0	121.3	411.0	133.1	402.3	138.0	389.0	145.2	361.5	161.1
	8	442.8	122.8	421.5	134.5	412.6	139.4	398.7	146.8	370.8	162.6
	9	453.9	124.3	431.8	136.2	422.5	141.1	408.9	148.3	380.1	164.3
	10	464.7	125.9	442.3	137.6	432.8	142.7	418.6	150.1	388.7	165.9
	12	486.9	128.9	463.2	141.0	453.5	145.9	438.5	153.3	407.5	169.6
	15	520.0	133.9	495.1	145.8	484.6	150.9	468.2	158.6	435.5	174.8
1806 ELN	5	477.8	139.1	454.9	152.7	445.2	158.3	430.3	166.8	400.0	185.2
	6	492.1	140.7	468.1	154.5	458.4	160.0	443.0	168.7	412.0	187.1
	7	506.4	142.4	481.8	156.2	471.6	161.9	456.0	170.4	423.8	189.1
	8	519.1	144.1	494.1	157.9	483.7	163.6	467.4	172.3	434.6	190.9
	9	532.1	145.8	506.2	159.8	495.3	165.5	479.3	174.0	445.5	192.8
	10	544.8	147.7	518.4	161.5	507.4	167.4	490.7	176.1	455.7	194.7
	12	570.7	151.3	543.0	165.5	531.7	171.2	514.0	179.9	477.7	199.0
	15	609.6	157.1	580.4	171.2	568.1	177.1	548.8	186.1	510.5	205.2
2106 ELN	5	541.8	158.5	515.7	174.0	504.7	180.3	487.9	190.0	453.6	211.0
	6	558.0	160.2	530.7	175.9	519.7	182.3	502.2	192.1	467.1	213.2
	7	574.2	162.2	546.3	177.9	534.7	184.4	517.0	194.1	480.5	215.4
	8	588.6	164.1	560.1	179.9	548.4	186.4	529.9	196.3	492.7	217.4
	9	603.3	166.1	573.9	182.0	561.6	188.6	543.4	198.2	505.1	219.6
	10	617.6	168.2	587.8	184.0	575.3	190.7	556.4	200.6	516.6	221.8
	12	647.1	172.4	615.6	188.5	602.8	195.0	582.8	204.9	541.6	226.7
	15	691.1	179.0	658.0	195.0	644.1	201.7	622.2	212.0	578.8	233.7
2406 ELN	5	612.0	177.8	582.6	195.2	570.2	202.3	551.1	213.2	512.3	236.7
	6	630.3	179.8	599.5	197.4	587.0	204.5	567.3	215.6	527.6	239.2
	7	648.6	182.0	617.1	199.6	603.9	207.0	584.0	217.8	542.7	241.7
	8	664.8	184.2	632.7	201.8	619.4	209.2	598.6	220.2	556.6	243.9
	9	681.4	186.4	648.3	204.2	634.3	211.6	613.8	222.4	570.6	246.4
	10	697.7	188.8	664.0	206.4	649.8	214.0	628.5	225.1	583.6	248.9
	12	731.0	193.4	695.4	211.5	680.9	218.9	658.3	229.9	611.7	254.3
	15	780.7	200.9	743.3	218.8	727.5	226.4	702.9	237.9	653.8	262.3

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Cooling Capacities - AQWL HT

AQWL models	LWT (°C)	Condenser air entering temperature (°C)											
		25		30		32		35		40		44	
		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)
1404 HT	5	402.2	94.2	382.9	103.4	374.7	107.2	362.2	112.9	336.7	125.4	321.0	133.4
	6	414.2	95.3	394.0	104.6	385.8	108.4	372.8	114.2	346.8	126.7	330.5	134.8
	7	426.2	96.4	405.5	105.8	396.9	109.7	383.8	115.4	356.7	128.1	340.1	136.2
	8	436.9	97.6	415.8	106.9	407.1	110.8	393.4	116.7	365.8	129.3	348.7	137.4
	9	447.8	98.8	426.1	108.2	416.9	112.1	403.4	117.9	375.0	130.6	357.5	138.8
	10	458.5	100.0	436.3	109.4	427.1	113.4	413.0	119.3	383.5	131.9	365.7	140.2
	12	480.4	102.5	457.0	112.1	447.5	116.0	432.6	121.8	402.0	134.8	383.2	143.1
	15	513.1	106.4	488.5	115.9	478.1	119.9	461.9	126.1	429.6	139.0	409.5	147.5
1604 HT	5	447.5	106.1	426.1	116.4	417.0	120.7	403.1	127.1	374.7	141.2	357.2	150.2
	6	460.9	107.2	438.4	117.7	429.3	122.0	414.9	128.6	385.9	142.7	367.8	151.8
	7	474.3	108.5	451.3	119.1	441.7	123.4	427.1	129.9	396.9	144.1	378.4	153.3
	8	486.2	109.9	462.7	120.4	453.0	124.8	437.8	131.3	407.1	145.5	388.1	154.7
	9	498.4	111.2	474.1	121.8	463.9	126.2	448.9	132.7	417.3	147.0	397.8	156.2
	10	510.2	112.6	485.6	123.1	475.2	127.6	459.6	134.2	426.8	148.5	407.0	157.8
	12	534.6	115.3	508.6	126.1	498.0	130.5	481.4	137.1	447.4	151.7	426.4	161.1
	15	571.0	119.8	543.6	130.5	532.1	135.0	514.0	141.9	478.1	156.4	455.6	166.0
1806 HT	5	525.0	123.7	499.8	135.8	489.1	140.7	472.8	148.3	439.5	164.7	419.0	175.2
	6	540.7	125.1	514.3	137.3	503.6	142.3	486.7	150.0	452.7	166.4	431.5	177.0
	7	556.4	126.6	529.4	138.9	518.1	144.0	501.0	151.5	465.6	168.1	443.9	178.8
	8	570.3	128.1	542.8	140.4	531.4	145.5	513.5	153.2	477.5	169.7	455.2	180.4
	9	584.6	129.6	556.2	142.1	544.2	147.2	526.6	154.7	489.5	171.4	466.6	182.2
	10	598.5	131.3	569.6	143.6	557.5	148.9	539.1	156.6	500.6	173.1	477.4	184.0
	12	627.1	134.5	596.6	147.1	584.1	152.2	564.7	160.0	524.8	176.9	500.2	187.9
	15	669.7	139.7	637.6	152.2	624.1	157.5	603.0	165.5	560.8	182.4	534.5	193.6
2106 HT	5	594.8	141.4	566.2	155.2	554.1	160.9	535.7	169.5	497.9	188.2	474.7	200.3
	6	612.6	143.0	582.6	157.0	570.6	162.7	551.4	171.4	512.8	190.2	488.8	202.3
	7	630.4	144.7	599.7	158.7	587.0	164.6	567.6	173.2	527.5	192.2	502.9	204.4
	8	646.2	146.5	615.0	160.5	602.0	166.3	581.8	175.1	541.0	194.0	515.7	206.3
	9	662.3	148.2	630.1	162.4	616.5	168.3	596.6	176.9	554.6	196.0	528.6	208.3
	10	678.1	150.1	645.3	164.2	631.6	170.2	610.8	179.0	567.2	197.9	540.9	210.4
	12	710.4	153.8	675.9	168.2	661.8	174.0	639.8	182.9	594.6	202.3	566.7	214.8
	15	758.8	159.7	722.4	174.0	707.1	180.0	683.1	189.2	635.4	208.6	605.5	221.3
2406 HT	5	671.4	159.1	639.1	174.6	625.5	181.0	604.6	190.7	562.1	211.7	535.8	225.2
	6	691.5	160.8	657.7	176.6	644.0	182.9	622.4	192.8	578.9	213.9	551.8	227.6
	7	711.5	162.8	677.0	178.5	662.6	185.1	640.7	194.8	595.4	216.2	567.7	229.8
	8	729.4	164.7	694.2	180.5	679.6	187.1	656.7	197.0	610.6	218.2	582.1	232.0
	9	747.6	166.7	711.2	182.7	695.9	189.2	673.4	198.9	626.0	220.4	596.7	234.2
	10	765.4	168.9	728.4	184.6	712.9	191.4	689.5	201.3	640.2	222.6	610.6	236.6
	12	801.9	173.0	762.9	189.2	747.0	195.8	722.2	205.7	671.1	227.5	639.7	241.6
	15	856.5	179.6	815.4	195.7	798.2	202.5	771.1	212.8	717.2	234.6	683.5	248.9

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Cooling Capacities - AQWH STD/HSE/HPF - BLN Version

AQWH models	LWT (°C)	Condenser air entering temperature (°C)											
		25		30		32		35		40		44	
		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)
1404 BLN	5	377.4	97.2	359.3	106.7	351.6	110.5	339.9	116.5	316.0	129.3	301.2	137.6
	6	388.7	98.2	369.7	107.9	362.1	111.8	349.9	117.8	325.4	130.7	310.2	139.0
	7	400.0	99.4	380.6	109.1	372.5	113.1	360.2	119.0	334.7	132.0	319.1	140.4
	8	410.0	100.6	390.2	110.3	382.0	114.3	369.2	120.3	343.3	133.3	327.3	141.7
	9	420.3	101.8	399.8	111.6	391.2	115.6	378.6	121.5	351.9	134.6	335.5	143.1
	10	430.3	103.2	409.5	112.8	400.8	116.9	387.6	123.0	359.9	136.0	343.2	144.5
	12	450.8	105.7	428.9	115.6	419.9	119.6	406.0	125.6	377.3	139.0	359.6	147.6
	15	481.5	109.7	458.4	119.5	448.7	123.7	433.5	130.0	403.2	143.3	384.3	152.1
1604 BLN	5	421.2	109.4	401.0	120.1	392.5	124.5	379.4	131.1	352.7	145.6	336.2	154.9
	6	433.8	110.6	412.6	121.5	404.1	125.8	390.5	132.6	363.2	147.2	346.2	156.6
	7	446.4	112.0	424.8	122.8	415.7	127.3	402.0	134.0	373.6	148.7	356.2	158.1
	8	457.6	113.3	435.5	124.2	426.4	128.7	412.1	135.5	383.1	150.1	365.2	159.6
	9	469.1	114.7	446.3	125.7	436.6	130.2	422.5	136.9	392.8	151.6	374.4	161.1
	10	480.2	116.2	457.0	127.0	447.3	131.7	432.6	138.5	401.7	153.1	383.1	162.8
	12	503.2	119.0	478.7	130.1	468.7	134.7	453.1	141.5	421.1	156.5	401.4	166.2
	15	537.4	123.6	511.6	134.6	500.8	139.3	483.8	146.4	450.0	161.4	428.9	171.2
1806 BLN	5	494.6	127.4	470.8	139.8	460.8	144.9	445.4	152.7	414.1	169.5	394.7	180.4
	6	509.4	128.8	484.5	141.4	474.5	146.5	458.5	154.4	426.5	171.3	406.5	182.3
	7	524.2	130.4	498.7	143.0	488.1	148.2	472.0	156.0	438.6	173.1	418.2	184.1
	8	537.3	131.9	511.4	144.6	500.6	149.8	483.8	157.7	449.9	174.7	428.9	185.8
	9	550.7	133.5	524.0	146.3	512.7	151.6	496.1	159.3	461.2	176.5	439.6	187.6
	10	563.9	135.2	536.6	147.9	525.2	153.3	507.9	161.2	471.6	178.3	449.8	189.5
	12	590.8	138.5	562.0	151.5	550.3	156.8	532.1	164.7	494.4	182.2	471.2	193.5
	15	631.0	143.9	600.7	156.7	588.0	162.1	568.1	170.4	528.4	187.8	503.5	199.3
2106 BLN	5	562.7	146.1	535.7	160.4	524.3	166.3	506.8	175.2	471.1	194.5	449.1	207.0
	6	579.5	147.8	551.2	162.2	539.8	168.1	521.7	177.2	485.2	196.6	462.5	209.1
	7	596.4	149.6	567.4	164.1	555.3	170.1	537.0	179.0	499.0	198.6	475.8	211.2
	8	611.3	151.4	581.8	165.9	569.6	171.9	550.4	181.0	511.8	200.5	487.9	213.2
	9	626.6	153.2	596.1	167.9	583.3	173.9	564.4	182.8	524.7	202.5	500.1	215.2
	10	641.5	155.2	610.5	169.7	597.5	175.9	577.9	185.0	536.6	204.6	511.7	217.4
	12	672.1	158.9	639.4	173.8	626.1	179.9	605.3	189.0	562.5	209.0	536.1	222.0
	15	717.9	165.1	683.4	179.8	669.0	186.0	646.3	195.5	601.1	215.5	572.9	228.7
2406 BLN	5	630.8	164.1	600.5	180.2	587.7	186.7	568.1	196.7	528.1	218.5	503.5	232.4
	6	649.7	165.9	617.9	182.2	605.1	188.8	584.8	199.0	543.9	220.7	518.4	234.8
	7	668.6	168.0	636.1	184.2	622.6	191.0	602.0	201.0	559.5	223.0	533.4	237.2
	8	685.3	170.0	652.2	186.2	638.5	193.0	617.1	203.2	573.8	225.1	547.0	239.4
	9	702.4	172.0	668.3	188.5	653.9	195.3	632.8	205.3	588.2	227.4	560.7	241.7
	10	719.2	174.2	684.4	190.5	669.8	197.5	647.8	207.7	601.6	229.7	573.7	244.1
	12	753.5	178.5	716.8	195.2	701.9	202.0	678.6	212.2	630.6	234.7	601.0	249.3
	15	804.8	185.4	766.2	201.9	750.0	208.9	724.5	219.6	673.9	242.0	642.2	256.8

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Heating Capacities - AQWH STD/HSE/HPF - BLN Version

AQWH models	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)
1404 BLN	30	319.8	80.6	336.5	80.9	363.7	81.1	411.3	82.2	432.2	82.8	465.7	83.6	527.5	85.0
	35	315.6	94.8	335.2	90.5	361.6	90.7	407.1	91.9	427.2	92.5	459.4	93.3	518.3	94.8
	40	311.8	106.3	331.9	101.4	359.9	101.7	403.4	102.9	422.6	103.4	453.1	104.3	509.1	105.8
	45	308.5	119.5	328.1	113.9	355.7	114.4	400.0	115.4	418.0	116.0	447.3	116.8	499.9	118.4
	50					352.0	129.3	397.9	130.0	414.7	130.5	441.8	131.2	491.2	132.7
1604 BLN	30	358.0	90.4	376.7	90.6	407.2	90.9	460.5	92.2	483.9	92.8	521.4	93.7	590.6	95.3
	35	353.3	106.2	375.3	101.4	404.8	101.7	455.8	103.0	478.3	103.6	514.3	104.5	580.3	106.2
	40	349.1	119.1	371.6	113.6	402.9	114.0	451.6	115.3	473.1	115.8	507.3	116.9	570.0	118.6
	45	345.4	133.9	367.4	127.7	398.3	128.2	447.9	129.4	468.0	130.0	500.8	130.9	559.7	132.7
	50					394.1	145.0	445.5	145.7	464.3	146.3	494.7	147.0	549.9	148.7
1806 BLN	30	417.7	105.6	439.5	105.9	475.0	106.2	537.3	107.8	564.6	108.5	608.2	109.6	689.1	111.4
	35	412.2	124.2	437.9	118.6	472.3	118.9	531.8	120.4	558.0	121.1	600.1	122.2	677.0	124.2
	40	407.3	139.2	433.5	132.8	470.1	133.3	526.9	134.8	552.0	135.4	591.9	136.6	665.0	138.6
	45	402.9	156.6	428.6	149.3	464.6	149.9	522.5	151.2	546.0	152.0	584.2	153.1	653.0	155.2
	50					459.7	169.5	519.8	170.4	541.6	171.0	577.1	171.9	641.6	173.9
2106 BLN	30	477.4	120.2	502.3	120.6	542.9	120.9	614.0	122.7	645.2	123.5	695.1	124.7	787.5	126.8
	35	471.1	141.3	500.4	134.9	539.8	135.3	607.8	137.0	637.7	137.9	685.8	139.1	773.8	141.3
	40	465.5	158.5	495.5	151.2	537.3	151.7	602.2	153.5	630.9	154.1	676.4	155.5	760.0	157.8
	45	460.5	178.2	489.8	169.9	531.0	170.6	597.2	172.1	624.0	173.0	667.7	174.2	746.3	176.6
	50					525.4	192.9	594.0	193.9	619.0	194.6	659.6	195.7	733.2	197.9
2406 BLN	30	537.0	135.5	565.1	135.9	610.7	136.3	690.8	138.3	725.9	139.2	782.0	140.6	885.9	142.9
	35	530.0	159.3	563.0	152.1	607.2	152.5	683.7	154.4	717.4	155.4	771.5	156.8	870.5	159.3
	40	523.7	178.6	557.4	170.4	604.4	171.0	677.4	173.0	709.7	173.7	761.0	175.3	855.0	177.8
	45	518.1	200.9	551.1	191.5	597.4	192.3	671.8	194.0	702.0	195.0	751.1	196.4	839.6	199.1
	50					591.1	217.4	668.3	218.6	696.4	219.4	742.0	220.5	824.9	223.1

- Notes :**
- LWT : Leaving water temperature.
 - Power input data are given for compressors only.

Cooling Capacities - AQWH STD/HSE - LN Version

AQWH models	LWT (°C)	Condenser air entering temperature (°C)									
		25		30		32		35		40	
		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)
1404 LN	5	364.7	101.2	347.1	111.1	339.7	115.2	328.4	121.4	305.3	134.8
	6	375.6	102.4	357.2	112.4	349.8	116.4	338.1	122.7	314.4	136.2
	7	386.5	103.6	367.7	113.6	359.9	117.8	348.0	124.0	323.4	137.6
	8	396.2	104.9	377.0	114.9	369.1	119.1	356.7	125.4	331.7	138.9
	9	406.1	106.1	386.3	116.3	378.0	120.5	365.8	126.6	340.0	140.3
	10	415.7	107.5	395.6	117.5	387.2	121.8	374.5	128.2	347.7	141.7
	12	435.6	110.1	414.4	120.4	405.7	124.6	392.3	130.9	364.5	144.8
	15	465.2	114.4	442.9	124.5	433.5	128.9	418.8	135.4	389.6	149.3
1604 LN	5	406.6	113.5	387.0	124.6	378.8	129.1	366.2	136.0	340.4	151.1
	6	418.7	114.8	398.3	126.0	390.0	130.5	376.9	137.6	350.6	152.7
	7	430.9	116.1	410.0	127.4	401.3	132.1	388.0	139.0	360.6	154.2
	8	441.7	117.5	420.4	128.8	411.5	133.5	397.7	140.6	369.8	155.7
	9	452.7	118.9	430.7	130.3	421.4	135.0	407.8	142.0	379.1	157.3
	10	463.5	120.5	441.1	131.7	431.7	136.6	417.5	143.7	387.7	158.9
	12	485.6	123.4	462.0	135.0	452.4	139.7	437.4	146.8	406.4	162.3
	15	518.7	128.2	493.8	139.6	483.4	144.5	467.0	151.8	434.3	167.4
1806 LN	5	478.9	133.1	455.9	146.1	446.2	151.4	431.3	159.5	400.9	177.2
	6	493.2	134.6	469.1	147.7	459.4	153.1	444.0	161.3	412.9	179.0
	7	507.5	136.2	482.9	149.4	472.6	154.9	457.0	163.0	424.7	180.9
	8	520.2	137.8	495.1	151.0	484.7	156.5	468.4	164.8	435.6	182.6
	9	533.2	139.5	507.3	152.8	496.4	158.4	480.3	166.5	446.5	184.4
	10	546.0	141.3	519.6	154.5	508.5	160.2	491.8	168.5	456.7	186.3
	12	572.0	144.7	544.2	158.3	532.8	163.8	515.1	172.1	478.7	190.3
	15	610.9	150.3	581.6	163.7	569.3	169.4	550.0	178.0	511.6	196.3
2106 LN	5	544.9	151.9	518.7	166.7	507.7	172.8	490.7	182.0	456.2	202.1
	6	561.2	153.6	533.8	168.6	522.7	174.7	505.2	184.1	469.8	204.3
	7	577.5	155.4	549.4	170.5	537.8	176.7	520.0	186.0	483.2	206.4
	8	592.0	157.3	563.4	172.3	551.6	178.6	533.0	188.1	495.6	208.3
	9	606.8	159.2	577.2	174.4	564.8	180.7	546.6	190.0	508.1	210.5
	10	621.2	161.2	591.2	176.3	578.6	182.8	559.6	192.2	519.6	212.6
	12	650.9	165.2	619.2	180.6	606.3	186.9	586.2	196.4	544.7	217.2
	15	695.1	171.5	661.8	186.8	647.8	193.3	625.9	203.2	582.1	224.0
2406 LN	5	609.9	170.6	580.6	187.3	568.2	194.2	549.3	204.5	510.6	227.1
	6	628.1	172.5	597.4	189.4	585.0	196.3	565.4	206.9	525.8	229.5
	7	646.3	174.6	614.9	191.5	601.9	198.6	582.0	209.0	540.9	231.9
	8	662.5	176.7	630.6	193.7	617.3	200.7	596.6	211.3	554.7	234.1
	9	679.1	178.9	646.1	196.0	632.2	203.0	611.7	213.5	568.7	236.5
	10	695.3	181.2	661.7	198.1	647.6	205.4	626.3	216.0	581.6	238.9
	12	728.5	185.6	693.0	203.0	678.6	210.0	656.0	220.7	609.6	244.1
	15	778.0	192.7	740.7	209.9	725.1	217.2	700.5	228.3	651.5	251.7

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Heating Capacities - AQWH STD/HSE - LN Version

AQWH models	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)
1404 LN	30	302.9	79.9	318.8	80.2	344.5	80.4	389.7	81.5	409.5	82.1	441.1	82.9	499.8	84.3
	35	299.0	94.0	317.6	89.7	342.5	89.9	385.7	91.1	404.7	91.7	435.2	92.5	491.0	94.0
	40	295.4	105.3	314.4	100.5	341.0	100.9	382.1	102.0	400.4	102.5	429.3	103.4	482.3	104.9
	45	292.2	118.5	310.9	112.9	337.0	113.4	379.0	114.4	396.0	115.0	423.7	115.8	473.6	117.4
	50					333.4	128.2	377.0	128.9	392.8	129.4	418.6	130.1	465.3	131.6
1604 LN	30	339.7	90.4	357.4	90.6	386.3	90.9	436.9	92.2	459.1	92.8	494.6	93.7	560.3	95.3
	35	335.2	106.2	356.1	101.4	384.1	101.7	432.5	103.0	453.8	103.6	488.0	104.5	550.6	106.2
	40	331.2	119.1	352.5	113.6	382.3	114.0	428.5	115.3	448.9	115.8	481.3	116.9	540.8	118.6
	45	327.7	133.9	348.5	127.7	377.8	128.2	424.9	129.4	444.0	130.0	475.1	130.9	531.0	132.7
	50					373.8	145.0	422.7	145.7	440.4	146.3	469.3	147.0	521.7	148.7
1806 LN	30	395.5	105.6	416.2	105.9	449.8	106.2	508.7	107.8	534.6	108.5	575.9	109.6	652.5	111.4
	35	390.3	124.2	414.6	118.6	447.2	118.9	503.6	120.4	528.4	121.1	568.2	122.2	641.1	124.2
	40	385.7	139.2	410.5	132.8	445.1	133.3	498.9	134.8	522.7	135.4	560.4	136.6	629.7	138.6
	45	381.5	156.6	405.8	149.3	440.0	149.9	494.8	151.2	517.0	152.0	553.2	153.1	618.3	155.2
	50					435.3	169.5	492.2	170.4	512.9	171.0	546.5	171.9	607.5	173.9
2106 LN	30	452.1	120.2	475.8	120.6	514.2	120.9	581.5	122.7	611.1	123.5	658.4	124.7	745.8	126.8
	35	446.2	141.3	474.0	134.9	511.2	135.3	575.6	137.0	604.0	137.9	649.5	139.1	732.8	141.3
	40	440.9	158.5	469.3	151.2	508.9	151.7	570.3	153.5	597.5	154.1	640.6	155.5	719.8	157.8
	45	436.2	178.2	463.9	169.9	502.9	170.6	565.6	172.1	591.0	173.0	632.4	174.2	706.8	176.6
	50					497.6	192.9	562.6	193.9	586.3	194.6	624.7	195.7	694.4	197.9
2406 LN	30	508.7	134.8	535.3	135.2	578.6	135.6	654.4	137.5	687.6	138.5	740.8	139.9	839.2	142.2
	35	502.1	158.5	533.3	151.3	575.2	151.7	647.7	153.6	679.6	154.6	730.8	156.0	824.6	158.5
	40	496.1	177.7	528.0	169.6	572.6	170.1	641.7	172.1	672.3	172.9	720.9	174.4	810.0	176.9
	45	490.8	199.8	522.0	190.5	565.9	191.3	636.4	193.0	665.0	194.0	711.6	195.4	795.3	198.1
	50					559.9	216.3	633.1	217.5	659.7	218.3	702.9	219.4	781.4	221.9

- Notes :**
- LWT : Leaving water temperature.
 - Power input data are given for compressors only.

Cooling Capacities - AQWH STD/HSE - ELN Version

AQWH models	LWT (°C)	Condenser air entering temperature (°C)									
		25		30		32		35		40	
		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)
1404 ELN	5	345.8	107.8	329.2	118.3	322.2	122.6	311.4	129.2	289.5	143.5
	6	356.1	109.0	338.7	119.6	331.7	124.0	320.6	130.7	298.2	145.0
	7	366.5	110.3	348.7	121.0	341.3	125.4	330.0	132.0	306.7	146.5
	8	375.7	111.6	357.5	122.3	350.0	126.8	338.3	133.5	314.5	147.8
	9	385.1	113.0	366.3	123.8	358.4	128.2	346.9	134.8	322.4	149.4
	10	394.2	114.4	375.2	125.1	367.2	129.7	355.1	136.4	329.8	150.9
	12	413.0	117.2	392.9	128.2	384.8	132.6	372.0	139.4	345.7	154.1
	15	441.1	121.7	420.0	132.6	411.1	137.2	397.2	144.2	369.4	158.9
1604 ELN	5	385.6	120.8	367.1	132.7	359.3	137.5	347.3	144.8	322.8	160.8
	6	397.2	122.2	377.7	134.1	369.9	139.0	357.5	146.5	332.5	162.5
	7	408.7	123.7	388.8	135.6	380.6	140.6	368.0	148.0	342.0	164.2
	8	418.9	125.2	398.7	137.1	390.3	142.1	377.2	149.7	350.7	165.8
	9	429.4	126.6	408.5	138.8	399.7	143.8	386.8	151.2	359.6	167.5
	10	439.6	128.3	418.4	140.3	409.5	145.4	396.0	153.0	367.7	169.1
	12	460.6	131.4	438.2	143.7	429.1	148.7	414.8	156.3	385.5	172.8
	15	491.9	136.5	468.4	148.7	458.5	153.8	442.9	161.7	412.0	178.2
1806 ELN	5	454.8	142.1	432.9	156.0	423.7	161.6	409.6	170.3	380.7	189.1
	6	468.4	143.6	445.5	157.7	436.3	163.4	421.6	172.2	392.1	191.1
	7	482.0	145.4	458.6	159.5	448.8	165.3	434.0	174.0	403.3	193.1
	8	494.1	147.1	470.2	161.2	460.3	167.1	444.9	175.9	413.6	194.9
	9	506.4	148.9	481.8	163.2	471.4	169.0	456.2	177.7	424.1	196.9
	10	518.5	150.8	493.4	164.9	482.9	171.0	467.0	179.8	433.7	198.9
	12	543.2	154.5	516.8	169.0	506.0	174.8	489.2	183.7	454.6	203.2
	15	580.2	160.5	552.4	174.8	540.7	180.8	522.3	190.1	485.8	209.5
2106 ELN	5	515.6	161.7	490.8	177.5	480.3	183.9	464.3	193.8	431.6	215.2
	6	531.0	163.5	505.0	179.5	494.6	185.9	478.0	196.0	444.5	217.5
	7	546.4	165.5	519.9	181.5	508.8	188.1	492.0	198.0	457.2	219.7
	8	560.1	167.4	533.1	183.5	521.9	190.2	504.3	200.2	468.9	221.8
	9	574.1	169.4	546.2	185.7	534.4	192.4	517.1	202.2	480.7	224.0
	10	587.8	171.6	559.4	187.7	547.5	194.6	529.5	204.6	491.6	226.3
	12	615.8	175.8	585.9	192.3	573.6	199.0	554.6	209.0	515.4	231.2
	15	657.7	182.6	626.2	198.9	612.9	205.8	592.2	216.3	550.8	238.4
2406 ELN	5	577.4	181.3	549.6	199.0	537.9	206.2	520.0	217.3	483.4	241.3
	6	594.6	183.3	565.6	201.2	553.9	208.5	535.3	219.7	497.8	243.8
	7	611.9	185.5	582.2	203.5	569.8	211.0	551.0	222.0	512.1	246.3
	8	627.3	187.7	597.0	205.7	584.4	213.2	564.8	224.5	525.2	248.6
	9	642.9	190.0	611.7	208.2	598.5	215.7	579.1	226.7	538.4	251.2
	10	658.3	192.4	626.4	210.4	613.1	218.1	592.9	229.4	550.6	253.7
	12	689.7	197.1	656.1	215.6	642.4	223.1	621.1	234.4	577.2	259.2
	15	736.6	204.7	701.3	223.0	686.4	230.7	663.2	242.5	616.8	267.3

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Heating Capacities - AQWH STD/HSE - ELN Version

AQWH models	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)
1404 ELN	30	290.7	79.9	305.9	80.2	330.6	80.4	373.9	81.5	392.9	82.1	423.3	82.9	479.6	84.3
	35	286.9	94.0	304.8	89.7	328.7	89.9	370.1	91.1	388.4	91.7	417.6	92.5	471.2	94.0
	40	283.5	105.3	301.7	100.5	327.2	100.9	366.7	102.0	384.2	102.5	411.9	103.4	462.8	104.9
	45	280.4	118.5	298.3	112.9	323.4	113.4	363.7	114.4	380.0	115.0	406.6	115.8	454.5	117.4
	50					320.0	128.2	361.8	128.9	377.0	129.4	401.7	130.1	446.5	131.6
1604 ELN	30	325.9	89.7	342.9	89.9	370.6	90.2	419.2	91.5	440.5	92.1	474.6	93.0	537.6	94.6
	35	321.6	105.4	341.7	100.6	368.5	100.9	414.9	102.2	435.4	102.8	468.2	103.7	528.2	105.4
	40	317.8	118.2	338.2	112.7	366.8	113.1	411.1	114.4	430.7	114.9	461.8	116.0	518.9	117.6
	45	314.4	132.9	334.4	126.7	362.5	127.2	407.7	128.4	426.0	129.0	455.8	129.9	509.5	131.7
	50					358.7	143.8	405.6	144.6	422.6	145.1	450.3	145.9	500.6	147.6
1806 ELN	30	379.9	105.6	399.8	105.9	432.1	106.2	488.7	107.8	513.5	108.5	553.3	109.6	626.8	111.4
	35	375.0	124.2	398.3	118.6	429.6	118.9	483.7	120.4	507.6	121.1	545.8	122.2	615.8	124.2
	40	370.5	139.2	394.3	132.8	427.6	133.3	479.3	134.8	502.1	135.4	538.4	136.6	604.9	138.6
	45	366.5	156.6	389.9	149.3	422.6	149.9	475.3	151.2	496.6	152.0	531.4	153.1	594.0	155.2
	50					418.2	169.5	472.8	170.4	492.7	171.0	524.9	171.9	583.6	173.9
2106 ELN	30	434.5	120.2	457.2	120.6	494.2	120.9	558.9	122.7	587.3	123.5	632.8	124.7	716.8	126.8
	35	428.8	141.3	455.5	134.9	491.3	135.3	553.2	137.0	580.5	137.9	624.2	139.1	704.3	141.3
	40	423.7	158.5	451.0	151.2	489.0	151.7	548.1	153.5	574.2	154.1	615.7	155.5	691.8	157.8
	45	419.2	178.2	445.9	169.9	483.4	170.6	543.6	172.1	568.0	173.0	607.8	174.2	679.3	176.6
	50					478.3	192.9	540.7	193.9	563.5	194.6	600.4	195.7	667.4	197.9
2406 ELN	30	488.8	134.8	514.4	135.2	555.9	135.6	628.8	137.5	660.7	138.5	711.8	139.9	806.4	142.2
	35	482.4	158.5	512.5	151.3	552.7	151.7	622.4	153.6	653.1	154.6	702.3	156.0	792.4	158.5
	40	476.7	177.7	507.4	169.6	550.2	170.1	616.6	172.1	646.0	172.9	692.7	174.4	778.3	176.9
	45	471.6	199.8	501.6	190.5	543.8	191.3	611.5	193.0	639.0	194.0	683.7	195.4	764.2	198.1
	50					538.0	216.3	608.3	217.5	633.9	218.3	675.4	219.4	750.8	221.9

- Notes :**
- LWT : Leaving water temperature.
 - Power input data are given for compressors only.

Cooling Capacities - AQWH HT

AQWH models	LWT (°C)	Condenser air entering temperature (°C)											
		25		30		32		35		40		44	
		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)
1404 HT	5	381.2	96.2	362.9	105.6	355.2	109.4	343.3	115.3	319.2	128.0	304.3	136.2
	6	392.6	97.2	373.4	106.8	365.7	110.6	353.4	116.6	328.7	129.4	313.3	137.6
	7	404.0	98.4	384.4	108.0	376.2	111.9	363.8	117.8	338.1	130.7	322.3	139.0
	8	414.1	99.6	394.2	109.2	385.9	113.1	372.9	119.1	346.7	131.9	330.5	140.3
	9	424.5	100.8	403.8	110.5	395.2	114.4	382.4	120.3	355.5	133.3	338.8	141.7
	10	434.6	102.1	413.6	111.7	404.8	115.8	391.5	121.7	363.5	134.6	346.7	143.1
	12	455.3	104.6	433.2	114.4	424.2	118.4	410.1	124.4	381.1	137.6	363.2	146.1
	15	486.3	108.6	463.0	118.3	453.2	122.4	437.9	128.7	407.3	141.8	388.1	150.5
1604 HT	5	425.1	108.3	404.7	118.9	396.1	123.3	382.9	129.9	355.9	144.2	339.3	153.4
	6	437.8	109.5	416.4	120.3	407.8	124.6	394.1	131.4	366.6	145.7	349.4	155.0
	7	450.6	110.9	428.7	121.6	419.6	126.1	405.7	132.7	377.0	147.3	359.5	156.6
	8	461.8	112.2	439.6	123.0	430.3	127.4	415.9	134.2	386.7	148.6	368.6	158.0
	9	473.4	113.6	450.4	124.4	440.7	128.9	426.4	135.5	396.4	150.1	377.9	159.6
	10	484.7	115.0	461.2	125.8	451.4	130.4	436.6	137.1	405.4	151.7	386.6	161.2
	12	507.8	117.8	483.1	128.9	473.0	133.3	457.3	140.1	425.0	155.0	405.1	164.6
	15	542.3	122.4	516.3	133.3	505.4	137.9	488.3	144.9	454.2	159.8	432.8	169.6
1806 HT	5	499.8	126.1	475.8	138.4	465.7	143.4	450.2	151.1	418.5	167.8	398.9	178.5
	6	514.8	127.5	489.6	139.9	479.5	145.0	463.4	152.8	431.0	169.6	410.8	180.4
	7	529.7	129.0	504.0	141.5	493.3	146.7	477.0	154.4	443.3	171.3	422.6	182.2
	8	543.0	130.6	516.8	143.1	505.9	148.3	488.9	156.1	454.6	172.9	433.4	183.9
	9	556.6	132.1	529.5	144.8	518.1	150.0	501.4	157.7	466.1	174.7	444.3	185.7
	10	569.8	133.8	542.3	146.3	530.8	151.7	513.3	159.6	476.6	176.5	454.6	187.5
	12	597.0	137.1	568.0	149.9	556.2	155.2	537.7	163.0	499.7	180.3	476.2	191.5
	15	637.7	142.4	607.1	155.1	594.2	160.5	574.1	168.6	534.0	185.9	508.9	197.3
2106 HT	5	568.3	144.3	541.0	158.4	529.4	164.2	511.8	172.9	475.7	192.0	453.5	204.3
	6	585.3	145.9	556.6	160.2	545.1	165.9	526.8	174.9	490.0	194.1	467.0	206.4
	7	602.3	147.7	573.0	161.9	560.8	167.9	542.3	176.7	504.0	196.1	480.5	208.5
	8	617.4	149.4	587.6	163.7	575.2	169.7	555.9	178.7	516.9	197.9	492.7	210.4
	9	632.8	151.2	602.0	165.7	589.0	171.7	570.0	180.5	529.9	199.9	505.1	212.5
	10	647.9	153.2	616.5	167.5	603.4	173.6	583.6	182.6	541.9	201.9	516.8	214.6
	12	678.8	156.9	645.7	171.6	632.3	177.6	611.3	186.6	568.1	206.3	541.4	219.2
	15	725.0	163.0	690.2	177.5	675.6	183.6	652.7	193.0	607.1	212.8	578.5	225.8
2406 HT	5	637.1	162.5	606.5	178.4	593.6	184.9	573.8	194.8	533.4	216.3	508.5	230.1
	6	656.2	164.3	624.1	180.4	611.2	186.9	590.6	197.0	549.3	218.5	523.6	232.5
	7	675.2	166.3	642.4	182.4	628.8	189.1	608.0	199.0	565.0	220.8	538.7	234.8
	8	692.1	168.3	658.7	184.4	644.9	191.1	623.2	201.2	579.5	222.9	552.4	237.0
	9	709.4	170.3	674.9	186.6	660.4	193.3	639.1	203.2	594.1	225.2	566.3	239.3
	10	726.3	172.5	691.2	188.6	676.5	195.5	654.3	205.7	607.5	227.4	579.4	241.7
	12	761.0	176.7	724.0	193.2	708.9	200.0	685.4	210.1	636.9	232.4	607.0	246.8
	15	812.8	183.5	773.8	199.9	757.4	206.8	731.8	217.4	680.6	239.6	648.6	254.3

Notes :

- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Heating Capacities - AQWH HT

AQWH models	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10		15	
		Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)	Heating cap. (kW)	Input power (kW)
1404 HT	30	322.8	79.8	339.7	80.0	367.1	80.2	415.2	81.4	436.3	82.0	470.1	82.8	532.6	84.1
	35	318.6	93.8	338.4	89.5	365.0	89.8	411.0	90.9	431.3	91.5	463.8	92.3	523.3	93.8
	40	314.8	105.2	335.1	100.3	363.3	100.7	407.2	101.8	426.6	102.3	457.4	103.2	514.0	104.7
	45	311.4	118.2	331.3	112.7	359.1	113.2	403.9	114.2	422.0	114.8	451.5	115.6	504.7	117.2
	50					355.3	128.0	401.7	128.7	418.6	129.2	446.1	129.8	495.9	131.3
1604 HT	30	361.8	89.4	380.8	89.7	411.5	90.0	465.4	91.2	489.1	91.9	526.9	92.8	596.9	94.3
	35	357.1	105.1	379.3	100.4	409.1	100.6	460.7	101.9	483.4	102.6	519.8	103.5	586.5	105.1
	40	352.9	117.9	375.6	112.5	407.3	112.9	456.4	114.2	478.2	114.7	512.7	115.7	576.1	117.4
	45	349.1	132.6	371.3	126.4	402.5	126.9	452.7	128.1	473.0	128.7	506.1	129.6	565.7	131.4
	50					398.3	143.5	450.3	144.3	469.2	144.8	500.0	145.6	555.8	147.2
1806 HT	30	421.5	104.5	443.6	104.8	479.4	105.1	542.2	106.6	569.7	107.3	613.8	108.4	695.4	110.2
	35	416.0	122.8	441.9	117.2	476.6	117.5	536.7	119.0	563.1	119.8	605.5	120.8	683.2	122.8
	40	411.0	137.7	437.5	131.4	474.4	131.8	531.7	133.3	557.1	133.9	597.3	135.1	671.1	137.1
	45	406.6	154.8	432.5	147.6	468.9	148.2	527.3	149.5	551.0	150.3	589.6	151.4	659.0	153.5
	50					463.9	167.6	524.6	168.5	546.6	169.1	582.4	170.0	647.4	171.9
2106 HT	30	482.0	119.3	507.2	119.7	548.1	120.0	619.9	121.7	651.4	122.6	701.8	123.8	795.1	125.9
	35	475.7	140.3	505.3	133.9	545.0	134.3	613.6	136.0	643.9	136.8	692.4	138.0	781.2	140.3
	40	470.0	157.3	500.2	150.1	542.4	150.6	608.0	152.3	636.9	153.0	682.9	154.4	767.3	156.6
	45	464.9	176.9	494.6	168.6	536.1	169.3	602.9	170.8	630.0	171.7	674.1	172.9	753.5	175.3
	50					530.5	191.4	599.8	192.5	625.0	193.2	665.9	194.2	740.3	196.4
2406 HT	30	542.4	134.1	570.7	134.5	616.8	134.9	697.7	136.8	733.1	137.8	789.8	139.2	894.8	141.5
	35	535.3	157.7	568.6	150.5	613.3	150.9	690.6	152.9	724.6	153.8	779.2	155.2	879.2	157.7
	40	528.9	176.8	562.9	168.7	610.4	169.3	684.2	171.2	716.8	172.0	768.6	173.5	863.6	176.0
	45	523.2	198.8	556.6	189.5	603.4	190.3	678.5	192.0	709.0	193.0	758.6	194.4	848.0	197.1
	50					597.0	215.2	675.0	216.4	703.3	217.1	749.4	218.3	833.1	220.8

- Notes :**
- LWT : Leaving water temperature.
 - Power input data are given for compressors only.

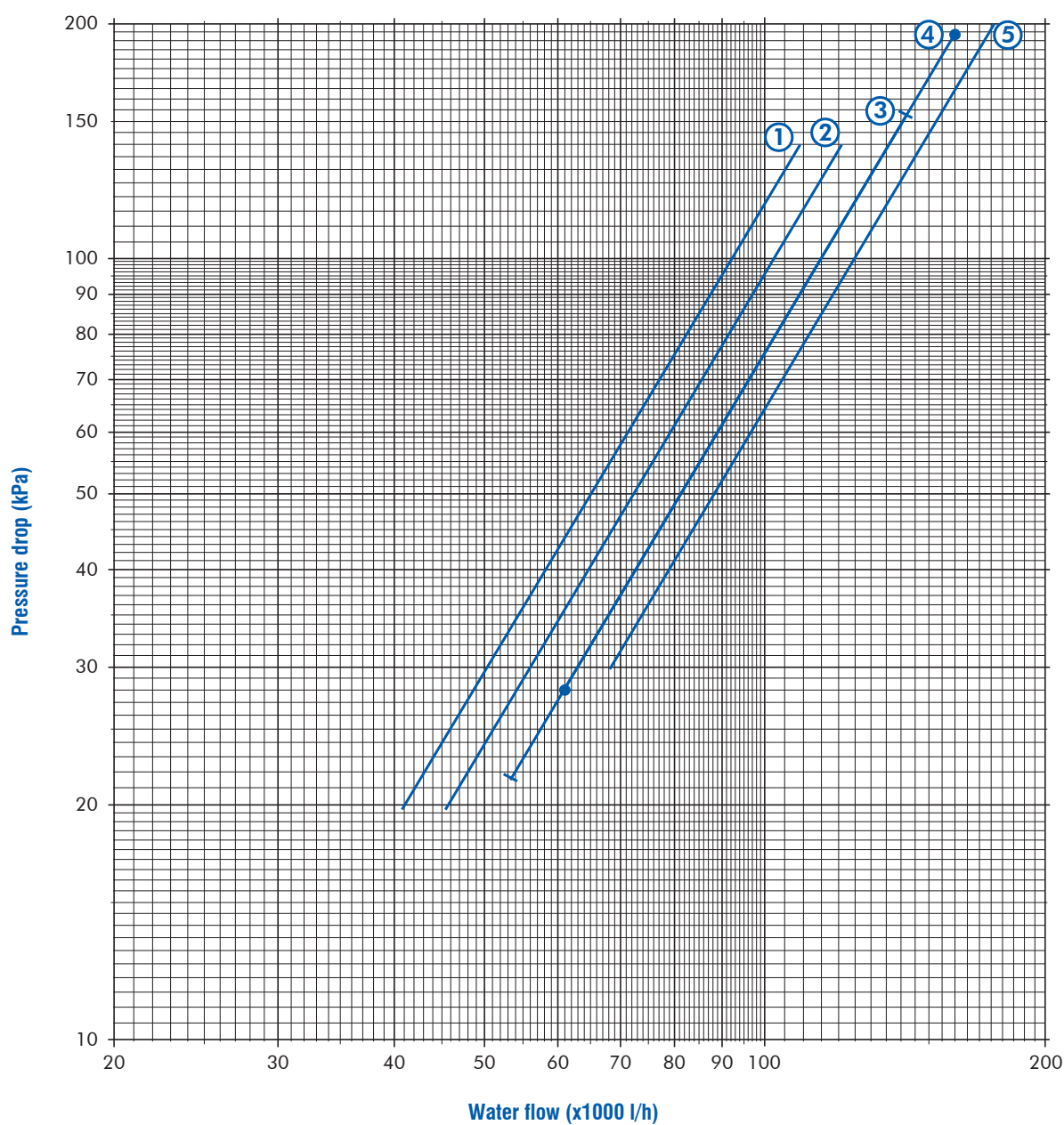
Total Heat Recovery - AQWR

AQWR Models	LWT (°C)	Outlet Condenser Water Temperature (°C)														
		35			40			45			50			55		
		Cooling cap. (kW)	Input power (kW)	Heat recovery (kW)	Cooling cap. (kW)	Input power (kW)	Heat recovery (kW)	Cooling cap. (kW)	Input power (kW)	Heat recovery (kW)	Cooling cap. (kW)	Input power (kW)	Heat recovery (kW)	Cooling cap. (kW)	Input power (kW)	Heat recovery (kW)
1404	5	398.2	95.2	468.7	379.1	104.5	459.4	358.6	114.1	449.1	333.4	126.7	437.1	317.8	134.8	430.0
	6	410.1	96.3	481.0	390.1	105.7	471.0	369.2	115.4	460.3	343.3	128.1	447.8	327.2	136.2	440.3
	7	422.0	97.4	493.5	401.5	106.9	483.0	380.0	116.6	471.8	353.1	129.4	458.4	336.7	137.6	450.6
	8	432.6	98.6	504.6	411.7	108.0	493.8	389.5	117.9	482.0	362.2	130.6	468.1	345.3	138.9	459.9
	9	443.4	99.8	516.0	421.8	109.3	504.6	399.4	119.1	492.6	371.3	131.9	478.1	353.9	140.2	469.4
	10	454.0	101.1	527.3	432.0	110.5	515.4	408.9	120.5	503.0	379.7	133.3	487.3	362.1	141.6	478.6
	12	475.6	103.5	550.2	452.5	113.2	537.4	428.3	123.1	523.9	398.1	136.2	507.5	379.4	144.6	497.8
	15	508.0	107.5	584.7	483.6	117.1	570.7	457.4	127.4	555.5	425.4	140.4	537.5	405.4	149.0	526.7
1604	5	443.3	107.1	522.9	422.0	117.6	512.6	399.2	128.4	501.2	371.1	142.6	488.0	353.8	151.7	480.2
	6	456.5	108.3	536.6	434.2	118.9	525.5	410.9	129.9	513.8	382.2	144.1	500.0	364.3	153.3	491.7
	7	469.8	109.6	550.4	446.9	120.2	538.8	423.0	131.2	526.5	393.1	145.6	511.8	374.8	154.8	503.1
	8	481.5	111.0	562.9	458.3	121.6	550.9	433.6	132.7	537.9	403.2	146.9	522.6	384.3	156.3	513.6
	9	493.6	112.3	575.6	469.6	123.0	563.0	444.6	134.0	549.7	413.3	148.4	533.7	394.0	157.8	524.1
	10	505.3	113.7	588.1	480.9	124.4	575.0	455.2	135.6	561.3	422.7	149.9	544.0	403.1	159.4	534.3
	12	529.4	116.5	613.6	503.7	127.4	599.5	476.8	138.5	584.6	443.1	153.2	566.5	422.3	162.7	555.8
	15	565.5	121.0	652.1	538.4	131.8	636.6	509.1	143.3	619.8	473.5	158.0	599.9	451.3	167.6	588.0
1806	5	519.7	124.9	612.4	494.8	137.1	600.3	468.1	149.7	586.9	435.1	166.3	571.3	414.8	176.9	562.1
	6	535.3	126.3	628.5	509.1	138.7	615.4	481.8	151.4	601.6	448.1	168.0	585.4	427.1	178.7	575.6
	7	550.8	127.8	644.8	524.1	140.2	631.1	496.0	153.0	616.6	460.9	169.8	599.2	439.5	180.5	589.0
	8	564.6	129.4	659.3	537.4	141.8	645.2	508.4	154.7	630.0	472.7	171.4	611.9	450.7	182.2	601.2
	9	578.8	130.9	674.2	550.6	143.5	659.4	521.3	156.3	643.7	484.6	173.1	624.9	462.0	184.0	613.6
	10	592.5	132.6	688.9	563.9	145.0	673.5	533.8	158.1	657.3	495.6	174.9	637.0	472.7	185.8	625.6
	12	620.8	135.9	718.8	590.6	148.6	702.2	559.1	161.5	684.6	519.6	178.7	663.3	495.2	189.8	650.7
	15	663.1	141.1	763.9	631.3	153.7	745.7	597.0	167.1	725.9	555.2	184.2	702.5	529.1	195.5	688.4
2106	5	588.9	142.8	695.1	560.6	156.8	681.5	530.4	171.2	666.5	493.0	190.1	649.0	470.0	202.2	638.6
	6	606.5	144.4	713.4	576.9	158.5	698.6	546.0	173.1	683.1	507.8	192.1	664.9	484.0	204.3	653.9
	7	624.1	146.1	731.8	593.8	160.3	716.4	562.0	174.9	700.1	522.3	194.1	680.5	498.0	206.4	669.1
	8	639.8	147.9	748.3	608.9	162.1	732.4	576.1	176.9	715.3	535.6	195.9	695.0	510.6	208.3	683.0
	9	655.8	149.7	765.2	623.9	164.0	748.5	590.7	178.6	730.9	549.1	197.9	709.7	523.4	210.3	697.1
	10	671.4	151.6	781.9	638.9	165.8	764.5	604.8	180.8	746.3	561.6	199.9	723.4	535.6	212.4	710.6
	12	703.4	155.3	815.8	669.2	169.8	797.1	633.5	184.7	777.2	588.7	204.2	753.3	561.1	216.9	739.2
	15	751.3	161.3	866.9	715.3	175.7	846.4	676.4	191.0	824.1	629.1	210.6	797.7	599.6	223.5	781.9
2406	5	664.4	160.7	783.8	632.4	176.4	768.4	598.3	192.6	751.4	556.2	213.9	731.6	530.2	227.5	719.9
	6	684.2	162.5	804.4	650.8	178.4	787.7	615.9	194.8	770.2	572.8	216.1	749.5	546.0	229.9	737.1
	7	704.1	164.4	825.1	669.9	180.4	807.7	634.0	196.8	789.3	589.2	218.4	767.2	561.7	232.2	754.2
	8	721.7	166.4	843.8	686.9	182.4	825.8	649.9	199.0	806.4	604.3	220.4	783.4	576.0	234.4	769.9
	9	739.8	168.4	862.8	703.8	184.5	843.9	666.4	201.0	824.0	619.5	222.7	800.0	590.5	236.7	785.8
	10	757.4	170.6	881.6	720.8	186.5	862.0	682.3	203.4	841.4	633.5	224.9	815.5	604.2	239.0	801.0
	12	793.5	174.8	919.9	754.9	191.1	898.7	714.7	207.8	876.3	664.1	229.8	849.2	633.0	244.1	833.2
	15	847.5	181.5	977.6	806.9	197.7	954.3	763.1	215.0	929.1	709.7	237.0	899.4	676.4	251.5	881.4

Notes :

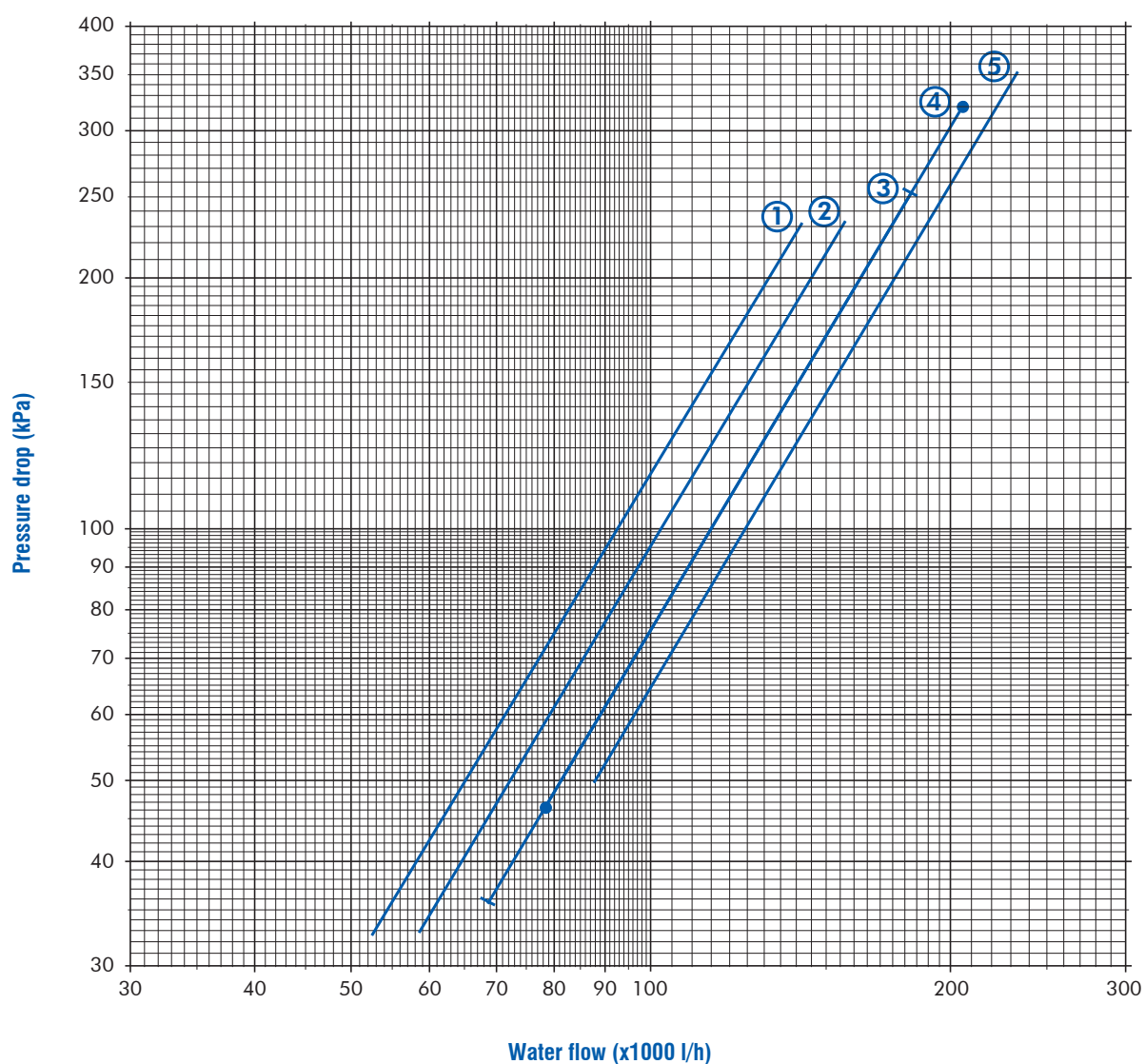
- LWT : Leaving water temperature.
- Power input data are given for compressors only.

Evaporator Water Pressure Drop Curves - AQWL/AQWH Units

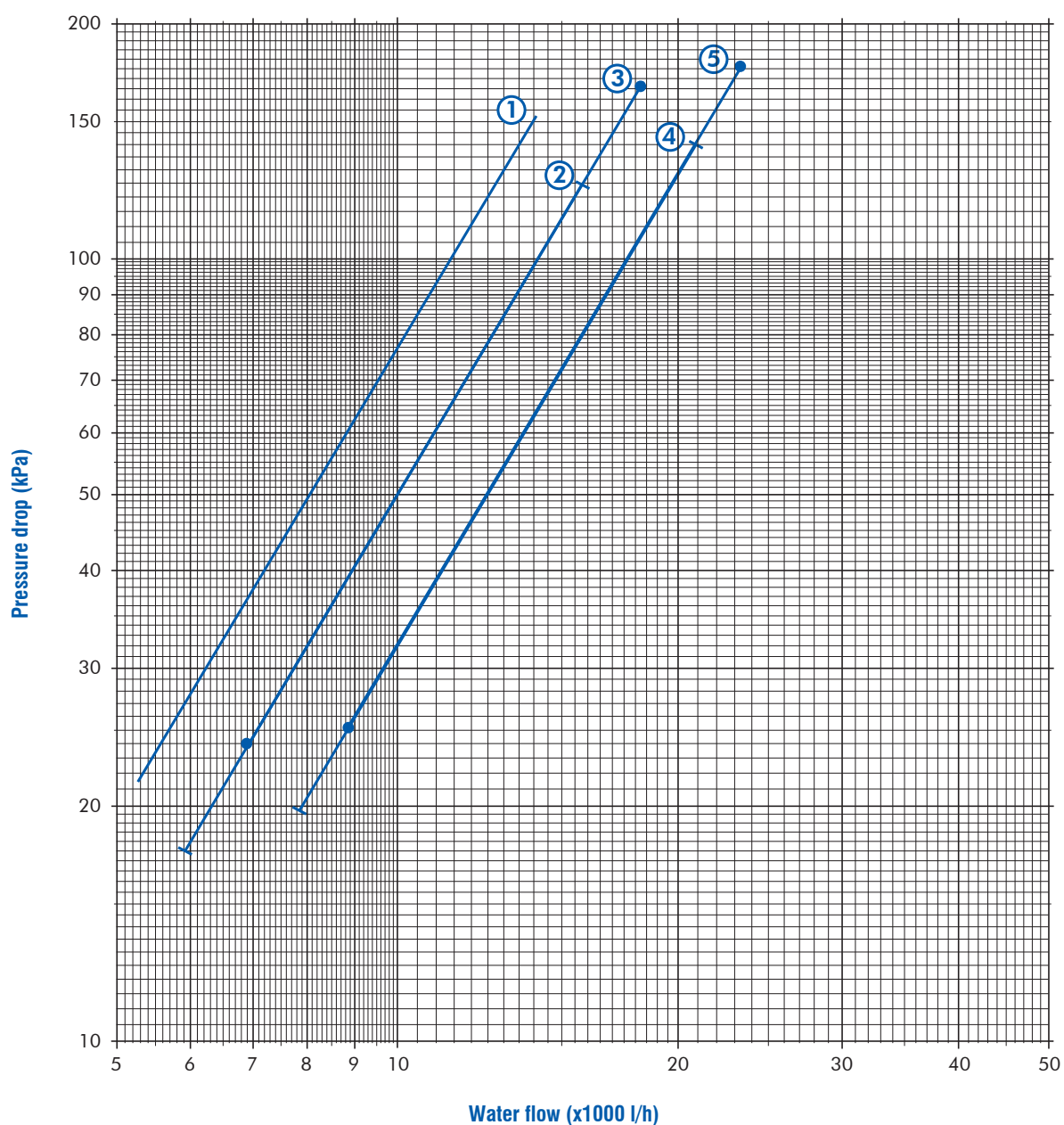


Curve n°	Unit model	Qnom (l/h)	Qmax (l/h)	Qmin (l/h)	ΔP_{nom} (kPa)	ΔP_{max} (kPa)	ΔP_{min} (kPa)
1	1404	65360	108933	40850	50.4	140.0	19.7
2	1604	72739	121231	45462	50.3	139.8	19.7
3	1806	85312	142187	53320	55.0	152.8	21.5
4	2106	96664	161107	60415	70.6	196.2	27.6
5	2406	109117	181861	68198	76.4	212.3	29.9

Total Heat Recovery Condenser Water Pressure Drop Curves - AQWR Units



Desuperheater Water Pressure Drop Curves - AQWL/AQWH Units

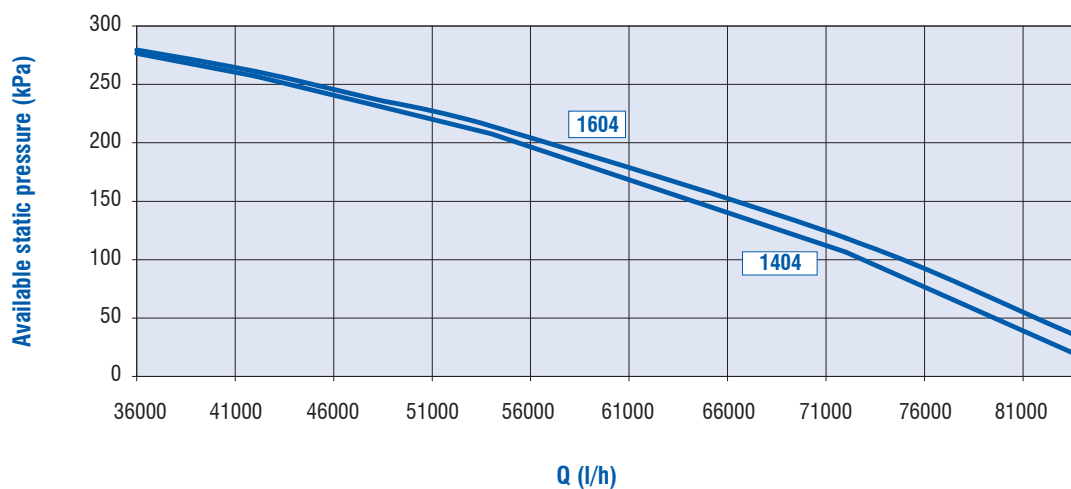


Curve n°	Unit model	Qnom (l/h)	Qmax (l/h)	Qmin (l/h)	ΔP_{nom} (kPa)	ΔP_{max} (kPa)	ΔP_{min} (kPa)
1	1404	8428	14047	5268	54.8	152.3	21.4
2	1604	9460	15767	5913	44.8	124.5	17.5
3	1806	11008	18347	6880	60.7	168.6	23.7
4	2106	12556	20927	7848	50.4	140.1	19.7
5	2406	14104	23507	8815	63.7	176.8	24.9

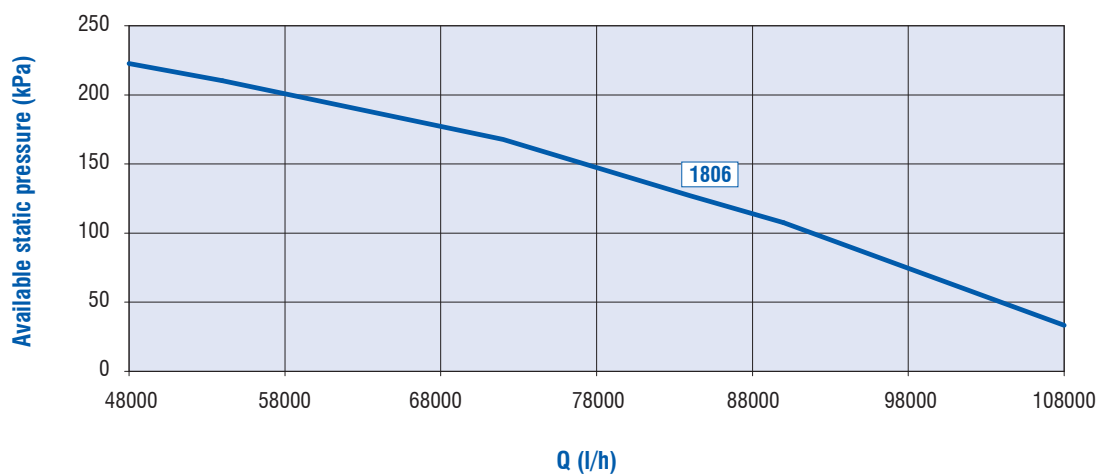
Note : Flow rate refers to one condenser only.

Circulating Pump Curves

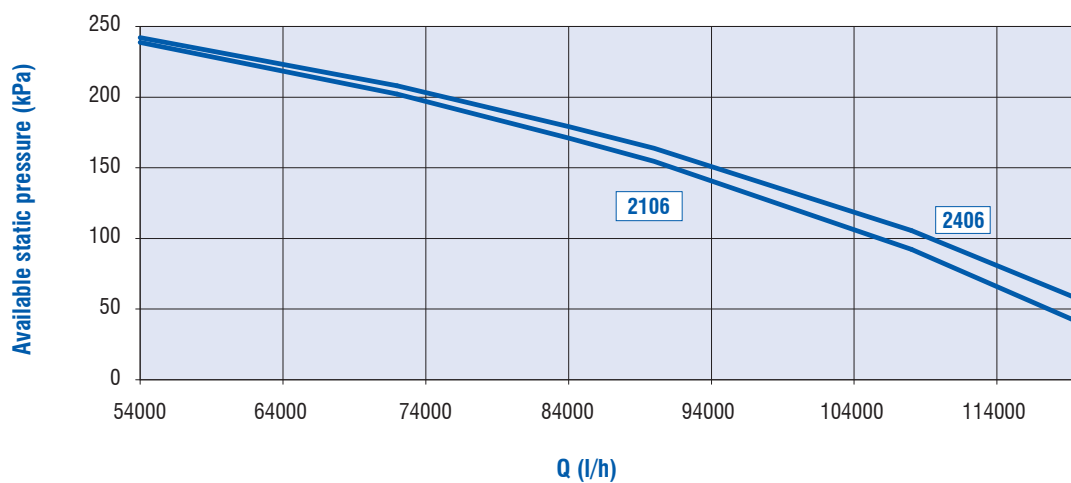
Pump static head pressure (low head pumps) - Models 1404 & 1604



Pump static head pressure (low head pumps) - Model 1806

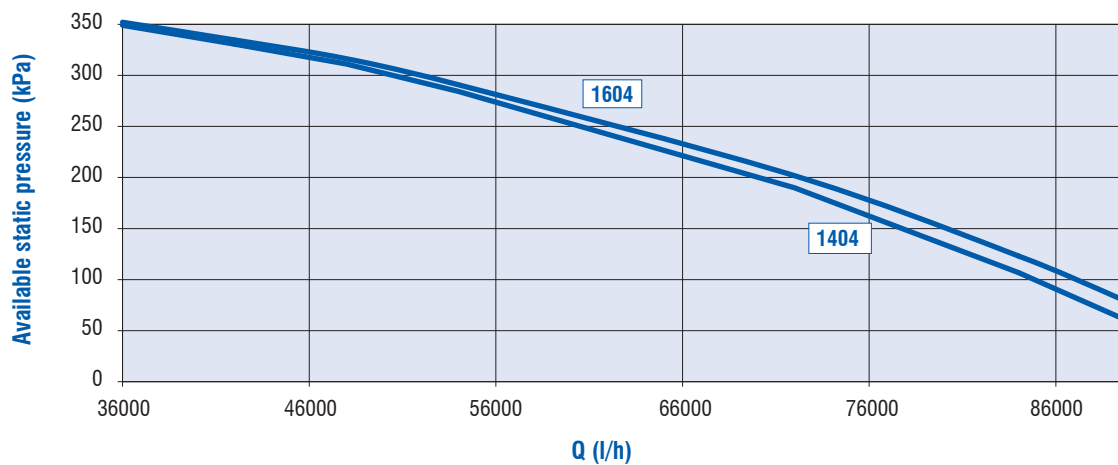


Pump static head pressure (low head pumps) - Models 2106 & 2406

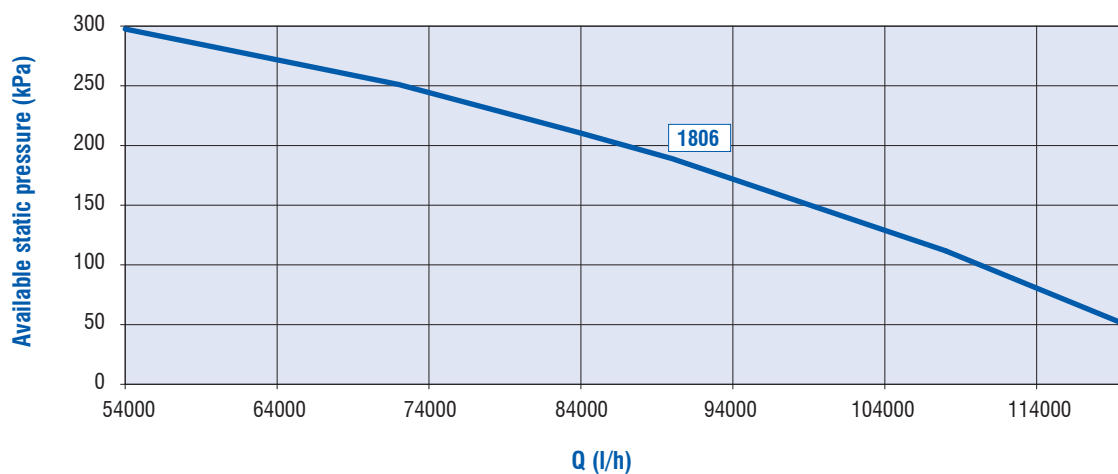


Circulating Pump Curves (continued)

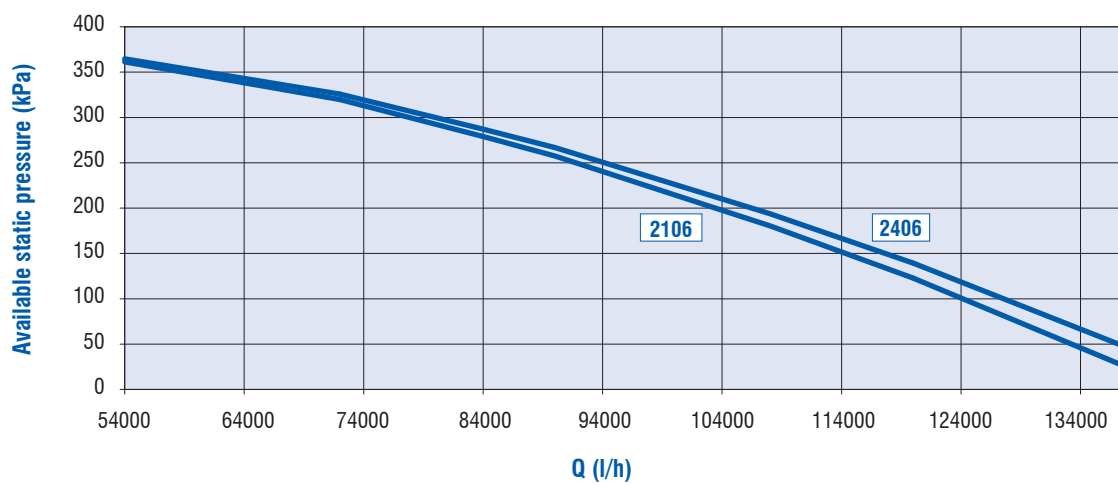
Pump static head pressure (high head pumps) - Models 1404 & 1604



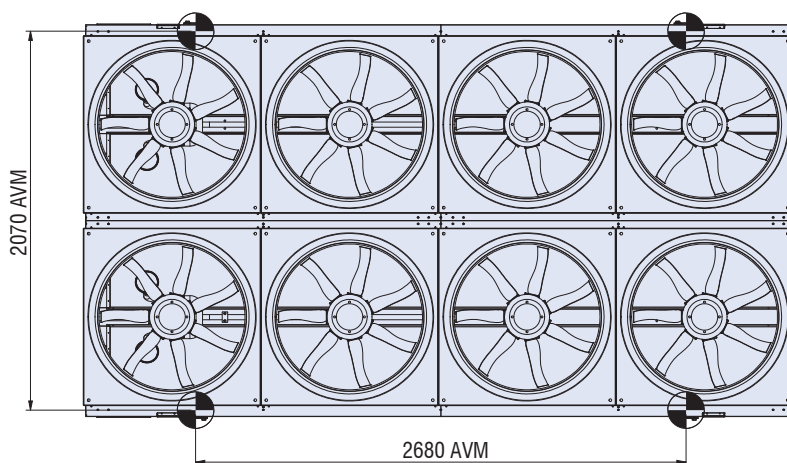
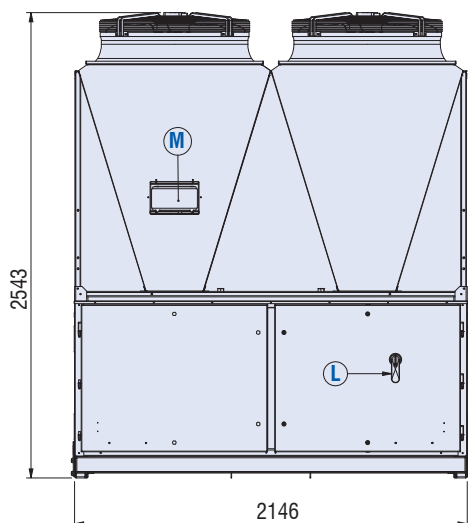
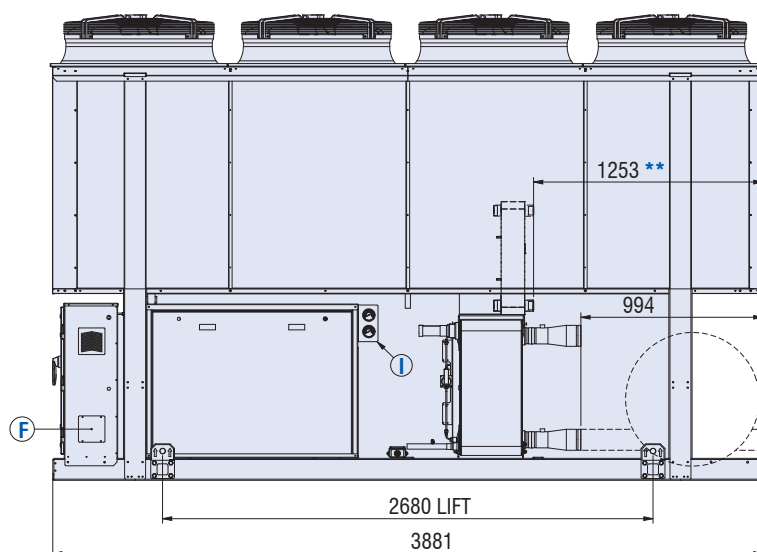
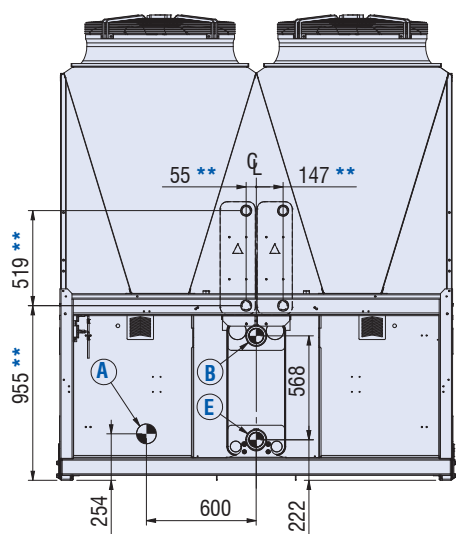
Pump static head pressure (high head pumps) - Model 1806



Pump static head pressure (high head pumps) - Models 2106 & 2406



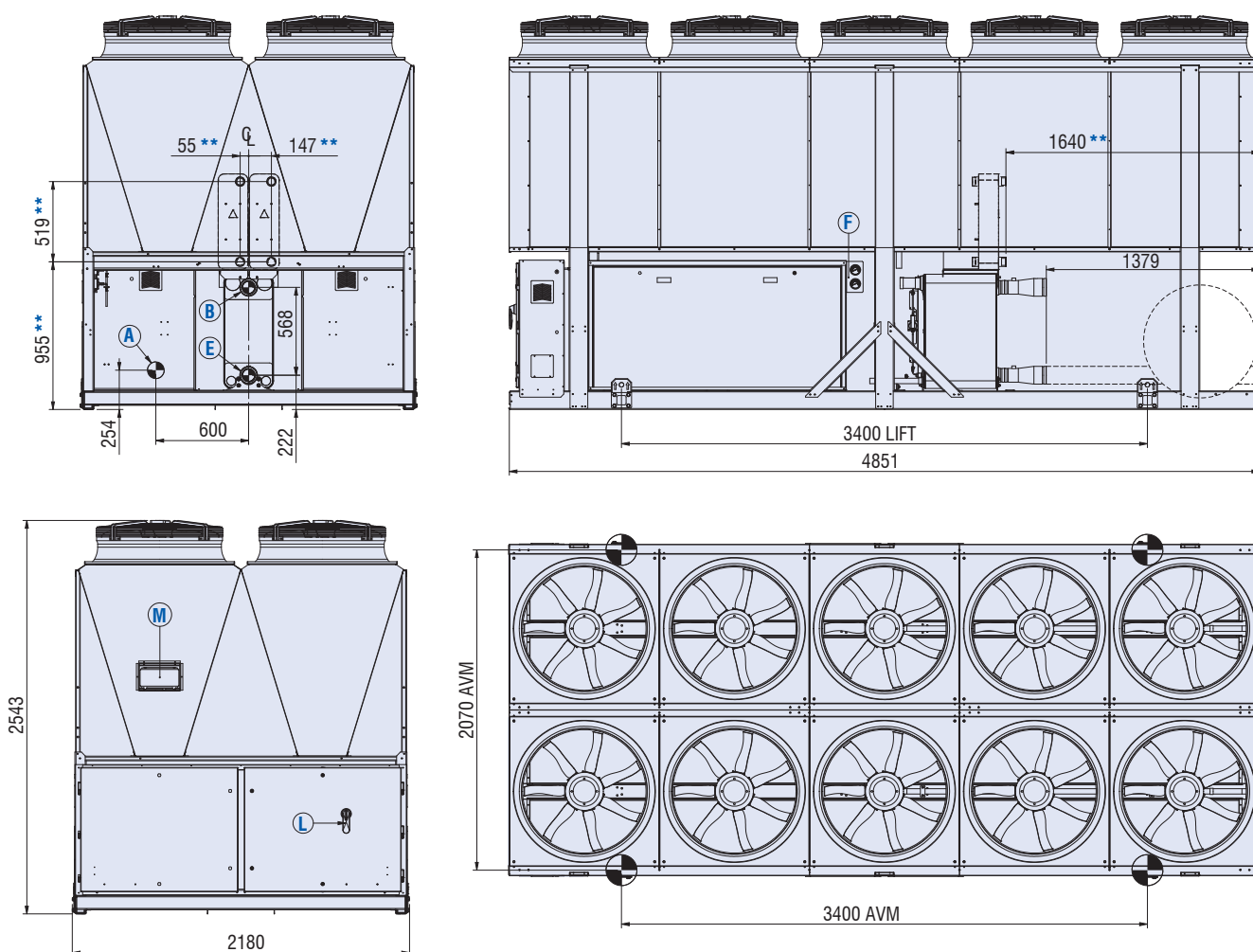
Dimensions (mm) - AQWL/AQWH 1404 & 1604



A	Water connection 4" Victaulic Ø104 mm
B	Water connection 4" Victaulic Ø104 mm
C	Water connection 4" Victaulic Ø104 mm
D	Water connection 4" Victaulic Ø104 mm
E	Water connection 4" Victaulic Ø104 mm
F	Electrical power supply
I	Gauge kit (accessory)
L	Main switch
M	Control keypad / Display
N	Optional desuperheater water inlet Ø2" gas **
O	Optional desuperheater water outlet Ø2" gas **

Hydraulic option	Water in	Water out
STD	B	E
1P/2P/T *	A	E

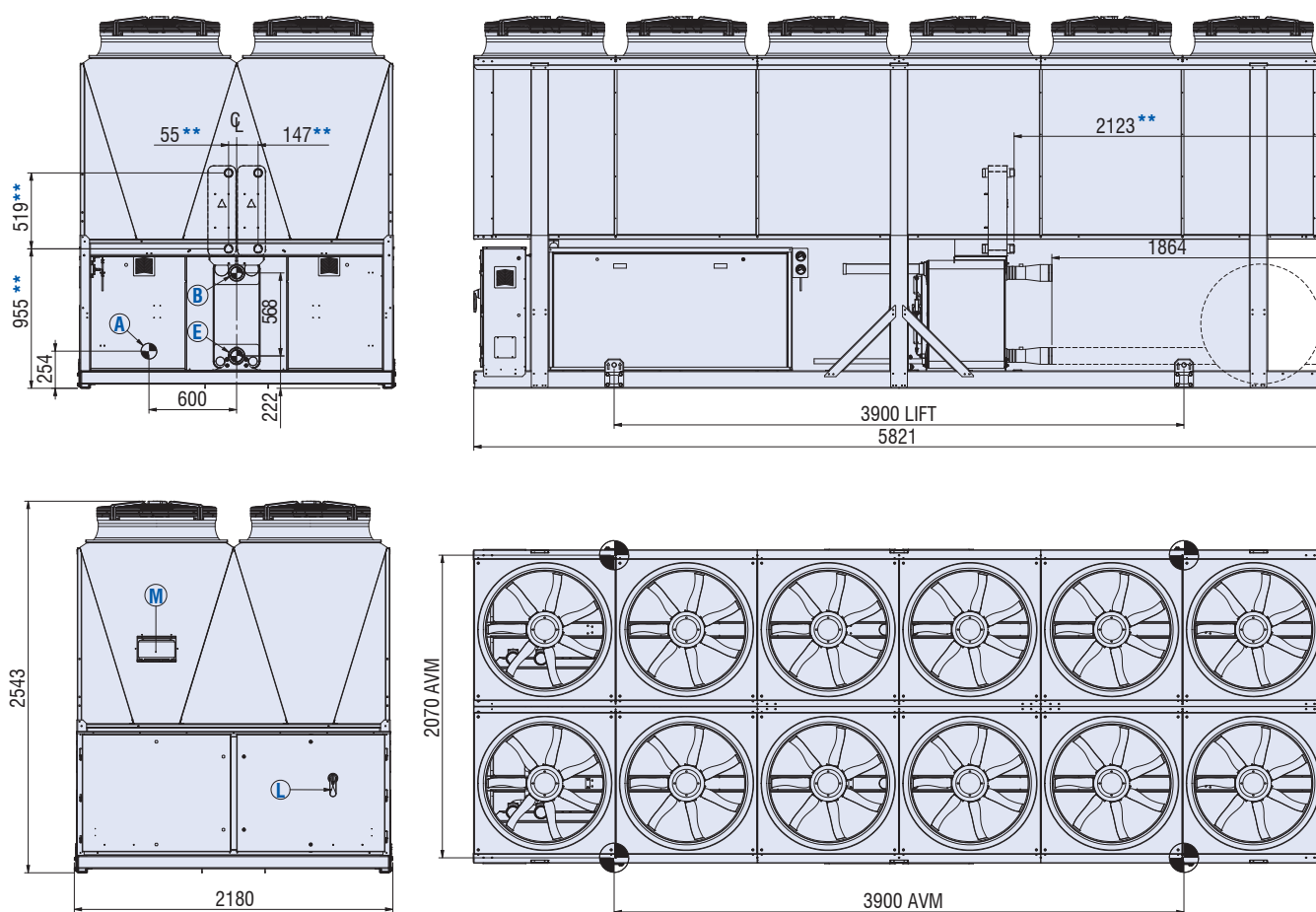
Dimensions (mm) - AQWL/AQWH 1806



A	Water connection 4" Victaulic Ø104 mm
B	Water connection 4" Victaulic Ø104 mm
C	Water connection 4" Victaulic Ø104 mm
D	Water connection 4" Victaulic Ø104 mm
E	Water connection 4" Victaulic Ø104 mm
F	Electrical power supply
I	Gauge kit (accessory)
L	Main switch
M	Control keypad / Display
N	Optional desuperheater water inlet Ø2" gas **
O	Optional desuperheater water outlet Ø2" gas **

Hydraulic option	Water in	Water out
STD	B	E
1P/2P/T *	A	E

Dimensions (mm) - AQWL/AQWH 2106 & 2406

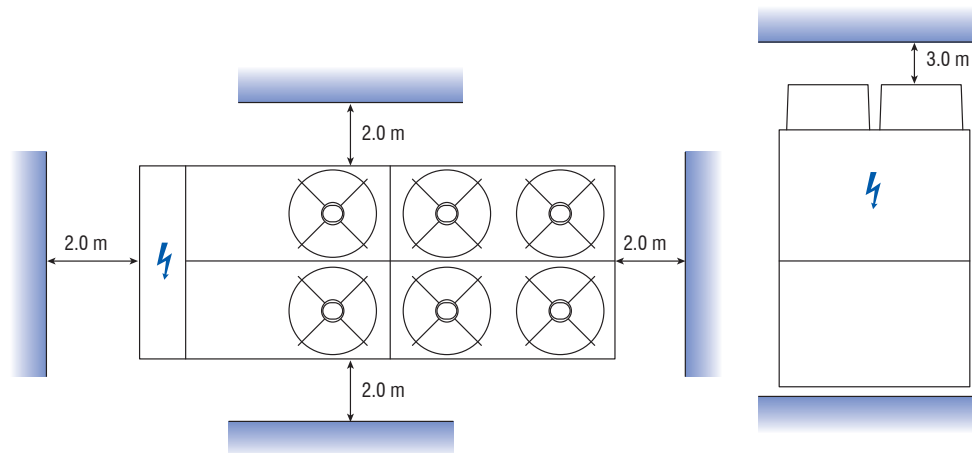


A	Water connection 4" Victaulic Ø104 mm
B	Water connection 4" Victaulic Ø104 mm
C	Water connection 4" Victaulic Ø104 mm
D	Water connection 4" Victaulic Ø104 mm
E	Water connection 4" Victaulic Ø104 mm
F	Electrical power supply
I	Gauge kit (accessory)
L	Main switch
M	Control keypad / Display
N	Optional desuperheater water inlet Ø2" gas **
O	Optional desuperheater water outlet Ø2" gas **

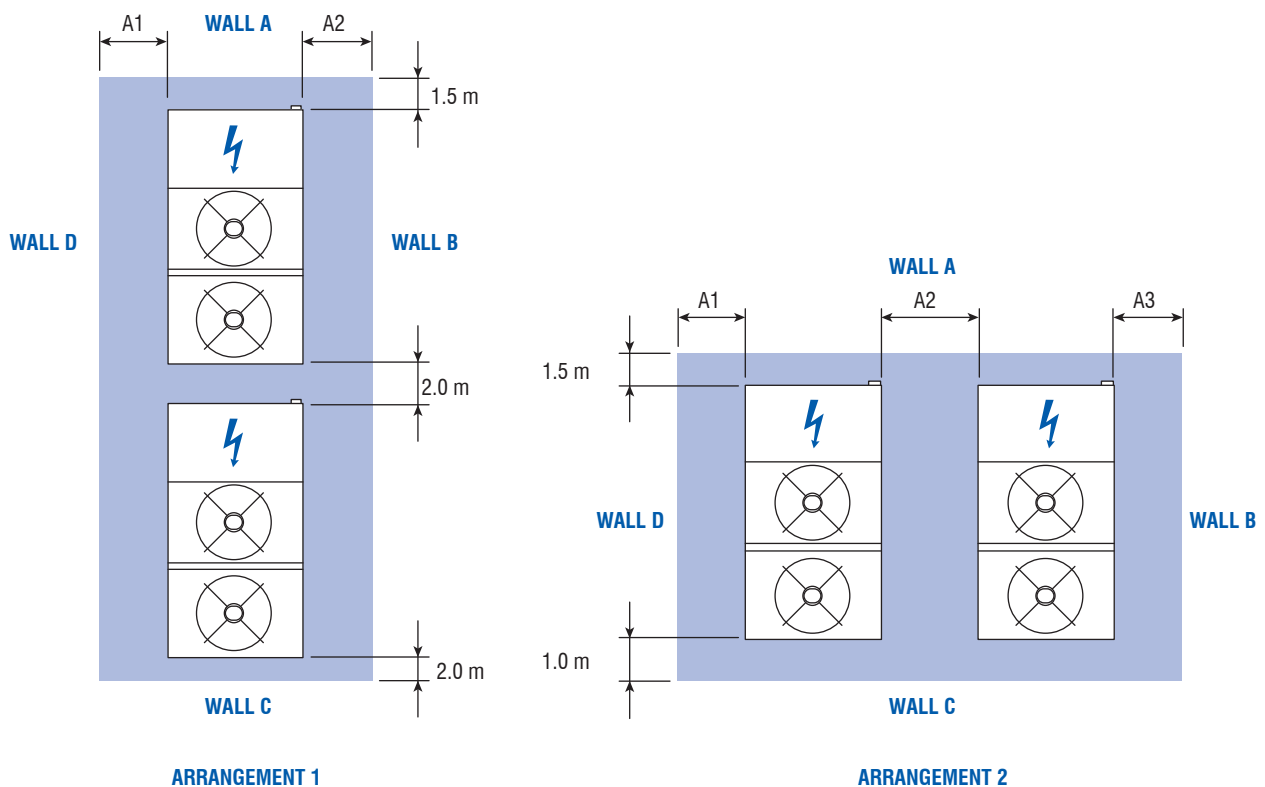
Hydraulic option	Water in	Water out
STD	B	E
1P/2P/T *	A	E

Space Requirements

Installation of single units



Installation of several units



	A and C SCREENED B and D SOLID			A and B SOLID C and D SOLID			B and D SCREENED A and C SOLID			A and B SCREENED C and D SOLID			A and D SCREENED B and D SOLID		
	A1	A2	A3	A1	A2	A3	A1	A2	A3	A1	A2	A3	A1	A2	A3
ARRANGEMENT 1	2	2		2	2		1.5	1.5		1.0	2		1.5	2	
ARRANGEMENT 2	2	2	2	2	2	2	1.5	2	1.5	1.0	2	2	2	2	2

Note : No more than one wall can be higher than the unit.
The area enclosed by the wall must be kept clear of all obstructions that would impede air flow to the unit. Dimensions in metre.



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

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

infoAC@systemair.it
www.systemair.com