Air cooled Heat Pump AQH 20–35

18–33 kW | 17–33 kW | HFC 410A | Scroll

Technical feature

- 4 sizes.
- Cooling capacity from 18 to 33 kW.
- Heating capacity from 17 to 33 kW.
- One refrigerant circuit.
- Scroll compressors.
- ILTC control.
- Operating low water content in the plant.
- Pump as standard.

Accessories and options

- Water filter (standard).
- Flow switch.
- Fan speed control (standard).
- Differential pressure switch (standard).
- Sequence phases control (standard).
- Automatic circuit breaker (standard).
- Hydrometer (standard).
- Mechanical gauges.
- Softstart.
- Power factor corrector capacitors (standard).
- Buffer tank placed under unit.
- Coils treatments.
- Coil grilles (standard).

Operating limit

Cooling mode

AQH		20		25		30		35	
		Min	Max	Min	Max	Min	Max	Min	Max
Leaving water temperature*	°C	-8	18	-8	18	-8	18	-8	18
Δ T water	K	3	8	3	8	3	8	3	8
Air temperature**	°C	-10	50	-10	50	-10	50	-10	50

Heating mode

AQH		20		25		30		35	
		Min	Max	Min	Max	Min	Max	Min	Max
Leaving water temperature*	°C	20	50	20	50	20	50	20	50
Δ T water	K	3	8	3	8	3	8	3	8
Air temperature**	°C	-10	20	-10	20	-10	20	-10	20

* Below 5°C, glycol is required.
** -10°C is given for unit with fan speed controller (optional). Without fan speed controller, the limit is 10°C.

Chillers suitable for operation without buffer tank for water content greater than 2.5 liters of water per kW of output.

Technical feature AQH 20–35

Model AQH		20	25	30	35
Cooling capacity (1)	kW	17,8	23,2	28,8	33,5
Power input (2)	kW	5,83	7,69	10,20	11,5
GROSS EER		2,77	2,8	2,67	2,77
Energy class		C	C	D	C
GROSS ESEER		4,73	4,06	4,13	3,86
EER		2,87	2,88	2,73	2,81
ESEER		4,29	3,86	3,82	3,69
ESEER a carico parziale		4,97	4,26	4,34	4,05
Heating capacity (3)	kW	17,0	23,6	29,0	33,1
Power input (2)	kW	4,70	7,14	8,91	10,4
GROSS COP		3,21	3,05	3,05	3,02
COP		3,12	2,98	2,98	2,94
Number of refrigerant circuits		1	1	1	1
Part load steps	%	0-50-100	0-50-100	0-50-100	0-50-100
Power supply	V/ph/Hz	400/3+N/50			
Startup type		Direct			
Refrigerant					
Type		HFC 410A			
Charge	kW	5,6	7,5	7,6	8,1
Compressor					
Qty		2	2	2	2
Type		Scroll			
Crankcase heater	W	70	70	70	70
Evaporator					
Qty		1	1	1	1
Type		Plate exchanger AISI 316			
Water flow	l/h	3.062	3.990	4.954	5.762
Pressure drop	kPa	21	38	39	53
Antifreeze heater	W	35	35	35	35
Connection type		Male gas threaded			
Inlet/outlet diameter	inch	1½"	1½"	1½"	1½"
Water drain connection	inch	⅜"	⅜"	⅜"	⅜"
Condenser					
Qty		1	1	1	1
Frontal surface	mm	986x1.500	1.350x1.500	1.350x1.500	1.350x1.500
Number of rows		2	2	2	2
Fan					
Qty		2	2	2	2
Air flow	m^3/h	11.300	13.000	13.000	12.500
Speed	rpm/min	630	630	630	630
Power Input	kW	0,6	0,6	0,6	0,6
Pump					
Qty		1	1	1	1
Power Input	kW	0,49	0,53	0,80	0,83
Static head pressure	kPa	163	128	174	129
Weight					
Shipping	kg	296	314	322	337
Operating	kg	289	307	316	331
Dimensions					
Length	mm	1.477	1.477	1.477	1.477
Width	mm	538	538	538	538
Height	mm	1.625	1.625	1.625	1.625
Acoustical data					
Sound power level (4)	dB(A)	74	75	75	75
Sound pressure level (5)	dB(A)	43	44	44	44

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.
(2) Compressors only.
(3) Data based on 45°C leaving hot water temperature and 7°C ambient air temperature.
(4) Sound pressure values in accordance with ISO 3744.
(5) The sound pressure is calculated from a distance of 10 m.
GROSS EER-COP: efficiency in cooling-heating mode without considering the available head of the pump or the pressure drop of the heat exchanger.
EER-COP: efficiency in cooling-heating unit according to EN14511-2011.