

Air cooled chiller

AQVL 85-140

 84-137 kW

 HFC 410A

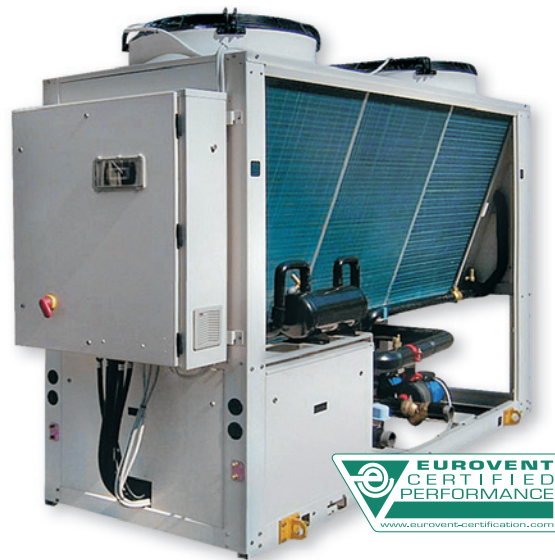
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Technical feature

- 6 sizes.
- Cooling capacity from 84 to 137 kW.
- 4 versions:
 - STD (Standard);
 - HSE (High Seasonal Efficiency);
 - HT (High Temperature);
 - HPF (High Pressure Fans).
- 2 acoustic versions:
 - Standard version (STD);
 - Extra Low Noise version (ELN).
- Two refrigerant circuits.
- Scroll compressors.
- Microprocessor control.
- Low operating water content in the plant.
- Electronic expansion valve as standard.

Accessories and options

- Hydrokit with 1 or 2 pumps with or without buffer tank.
- Desuperheater.
- Coils treatments.
- Unit protection grilles.
- Sofstart.
- BMS interface.
- Overload protection for compressors.
- Automatic circuit breaker.
- Fan speed control.
- Flow switch (standard).
- Mechanical gauges kit.
- Pressure switch.
- Water filter.
- Power factor corrector capacitors.
- Compressors acoustic box as standard.
- Sequence phases control as standard.
- Compressors jackets.



Operating limit

AQVL			Min	Max
Leaving water temperature	Water	°C	+5	+18
	Water with glycol	°C	-8	+18
Air temperature	BLN	°C	+5	+47
	ELN	°C	-18	+44
	HSE/HT	°C	-18	+50 (85-115) +47 (125-140)
External static pressure	Standard fans	Pa	0	
	High Pressure Fans (HPF)	Pa	< 120	

Technical feature AQLV 85-140 BLN

Model AQLV BLN		85	95	105	115	125	140
Cooling capacity (1)	kW	83,6	93,7	102,8	110,6	122,3	137,1
Power input (2)	kW	24,6	28,5	31,1	33,9	37,2	42,1
GROSS EER		3,13	3,07	3,1	3,08	3,01	3,01
GROSS ESEER		4,39	4,29	4,34	4,31	4,22	4,22
GROSS EER HSE		3,24	3,16	3,19	3,15	3,09	3,08
GROSS ESEER HSE		4,77	4,64	4,69	4,64	4,54	4,53
EER		3,08	3,01	3,05	3,02	2,97	2,96
ESEER		4,16	4,15	4,07	4,12	3,95	4,01
EER HSE		3,19	3,09	3,13	3,10	3,05	3,03
ESEER HSE		4,06	4,12	4,23	4,19	3,96	4,08
Number of refrigerant circuits		2	2	2	2	2	2
Part load steps	%	0-25-50-75-100	0-25-50-75-100	0-24-47-74-100	0-25-50-75-100	0-22-43-72-100	0-25-50-75-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	17,6	19,7	21,6	23,2	25,7	28,8
Compressor							
Qty		4	4	4	4	4	4
Type		Scroll					
Crankcase heater	W	90	90	90	90	90	90
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	m ³ /h	14.377	16.116	17.681	19.023	21.033	23.588
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Male gas threaded					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.000x1.200	2.000x1.200	2.000x1.200	2.000x1.200	2.600x1.200	2.600x1.200
Fan							
Qty		2	2	2	2	2	2
Air flow	m ³ /h	34.000	34.000	33.200	32.400	44.000	42.800
Speed	rpm/min	690	690	690	690	900	900
Power input	kW	2,1	2,1	2,1	2,1	3,4	3,4
Power input HSE	kW	1,2	1,2	1,2	1,2	2,4	2,4
Power input HPF	kW	3,6	3,6	3,6	3,6	4,6	4,6
Weight							
Shipping	kg	1.033	1.047	1.084	1.116	1.151	1.230
Operating	kg	1.058	1.072	1.111	1.143	1.183	1.262
Dimensions							
Length	mm	2.555	2.555	2.555	2.555	3.155	3.155
Width	mm	1.095	1.095	1.095	1.095	1.095	1.095
Height	mm	2.185	2.185	2.185	2.185	2.185	2.185
Acoustical data							
Sound power level (3)	dB(A)	85	85	85	85	89	89
Sound pressure level (4)	dB(A)	53	53	53	53	57	57
Sound power level HSE (3)	dB(A)	92	92	92	92	95	95
Sound pressure level HSE (4)	dB(A)	60	60	60	60	63	63

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

(2) Compressors only.

(3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.

(4) The sound pressure is calculated from a distance of 10 m.

GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.

EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQLV 85-140 ELN

Model AQLV ELN		85	95	105	115	125	140
Cooling capacity (1)	kW	80,9	90,3	98,7	105,8	119,5	133,6
Power input (2)	kW	26,0	30,4	33,3	36,4	38,6	43,9
GROSS EER		2,91	2,80	2,81	2,77	2,93	2,91
GROSS ESEER		4,07	3,93	3,94	3,88	4,11	4,07
GROSS EER HSE		3,04	2,91	2,91	2,86	3,00	2,96
GROSS ESEER HSE		4,46	4,28	4,28	4,20	4,41	4,36
EER		2,87	2,75	2,77	2,73	2,90	2,86
ESEER		3,91	3,78	3,81	3,67	3,92	3,93
EER HSE		3,00	2,87	2,87	2,81	2,96	2,91
ESEER HSE		3,91	3,87	3,87	3,79	3,99	3,94
Number of refrigerant circuits		2	2	2	2	2	2
Part load steps	%	0-25-50-75-10	0-25-50-75-100	0-24-47-74-100	0-25-50-75-100	0-22-43-72-100	0-25-50-75-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	17,0	19,0	20,7	22,2	25,1	28,1
Compressor							
Qty		4	4	4	4	4	4
Type		Scroll					
Crankcase heater	W	90	90	90	90	90	90
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	l/h	13.906	15.532	16.971	18.204	20.550	22.988
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Male gas threaded					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.000x1.200	2.000x1.200	2.000x1.200	2.000x1.200	2.600x1.200	2.600x1.200
Fan							
Qty		2	2	2	2	2	2
Air flow	m³/h	25.200	25.200	24.600	24.000	36.500	35.000
Speed	rpm/min	500	500	500	500	690	690
Power input	kW	1,8	1,8	1,8	1,8	2,1	2,1
Power input HSE	kW	0,6	0,6	0,6	0,6	1,2	1,2
Weight							
Shipping	kg	1.063	1.077	1.114	1.146	1.181	1.260
Operating	kg	1.088	1.102	1.141	1.173	1.213	1.292
Dimensions							
Length	mm	2.555	2.555	2.555	2.555	3.155	3.155
Width	mm	1.095	1.095	1.095	1.095	1.095	1.095
Height	mm	2.185	2.185	2.185	2.185	2.185	2.185
Acoustical data							
Sound power level (3)	dB(A)	82	82	82	82	86	86
Sound pressure level (4)	dB(A)	50	50	50	50	54	54

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

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(3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.

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EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQLV 85-140 HT

Model AQLV BLN		85	95	105	115	125	140
Cooling capacity (1)	kW	86,2	97,0	106,9	115,3	124,6	139,6
Power input (2)	kW	23,2	26,6	28,9	31,4	36,1	40,9
GROSS EER		3,10	3,10	3,19	3,21	3,06	3,07
GROSS ESEER		4,34	4,34	4,46	4,49	4,29	4,30
Number of refrigerant circuits		2	2	2	2	2	2
Part load steps	%	0-25-50-75-100	0-25-50-75-100	0-24-47-74-100	0-25-50-75-100	0-22-43-72-100	0-25-50-75-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	18	20	22	24	26	29
Compressor							
Qty		4	4	4	4	4	4
Type		Scroll					
Crankcase heater	W	90	90	90	90	90	90
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	l/h	14.835	16.680	18.381	19.838	21.427	24.014
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Male gas threaded					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.000x1.200	2.000x1.200	2.000x1.200	2.000x1.200	2.600x1.200	2.600x1.200
Fans							
Qty		2	2	2	2	2	2
Air flow	m³/h	49.700	49.700	48.950	48.200	52.200	50.700
Speed	rpm/min	1.130	1.130	1.130	1.130	1.130	1.130
Power input	kW	4,6	4,6	4,6	4,6	4,6	4,6
Weight							
Shipping	kg	1.033	1.047	1.084	1.116	1.151	1.230
Operating	kg	1.058	1.072	1.111	1.143	1.183	1.262
Dimensions							
Length	mm	2.555	2.555	2.555	2.555	3.155	3.155
Width	mm	1.095	1.095	1.095	1.095	1.095	1.095
Height	mm	2.185	2.185	2.185	2.185	2.185	2.185
Acoustical data							
Sound power level (3)	dB(A)	95	95	95	95	95	95
Sound pressure level (4)	dB(A)	63	63	63	63	63	63

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

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