



Water chillers Heat pumps

AQUACIAT2 EVOLUTION

High energy efficiency with **R410A**
Compact and quiet
Scroll compressors
Brazen plate heat exchangers
Electronic control
self-regulating



Cooling capacity: 20 to 170 kW
Heating capacity: 20 to 180 kW



Cooling or
heating



Hydraulic
module



Heat
recovery



Use

AQUACIAT2 LD-LDC-LDH or ILDC-ILDH series packaged air-cooled water chillers or heaters are medium-capacity units specifically designed for heating and air conditioning applications in Offices, Healthcare, Administrations, Shopping Centres and the Residential sector.

These standard packaged units are designed for outdoor installation and require no special protection against adverse weather conditions.

An optional XTRAFAN version allows installation with ductable fan(s) if required, where air recycling is hazardous or for acoustic treatment on site.

To operate in HEATING or COOLING mode, they use the

outdoor air as the only external source; this permits the evacuation of heat in summer or the supply of thermal energy for heating in winter.

Connected to an underfloor heating or cooling system, fan coil units or an air handling unit, the reversible AquaCiat 2 ILDC-ILDH series is an extremely easy way to heat and air condition buildings.

Each unit is delivered fully assembled, wired (control and power), charged with refrigerant and factory tested.

Simply make the necessary electrical and hydraulic connections, and your unit is ready to operate.

RANGE

AQUACIAT2 LD series

Cooling only models without hydraulic system

AQUACIAT2 LDC-LDH series

Cooling only models with hydraulic system (circulator pump only or pump and buffer tank).

AQUACIAT2 ILDC-ILDH series

Reversible Air/Water models without hydraulic system

AQUACIAT2 ILDC-ILDH series

Reversible Air/Water models with hydraulic system (circulator pump only or pump and buffer tank).



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DESCRIPTION

AQUACIAT2 LD-LDC-LDH cooling only or reversible ILD-ILDC-ILDH series models are supplied as standard with the following components:

- air-cooled condenser with axial fan motor assembly,
- chilled water evaporator (or hot water condenser on reversible models),
- chilled water or hot water capacity control,
- control, automatic operation and start-up box:
 - . Power supply: three-phase 50Hz 400V (+10%/-10%) + earth
 - . Control circuit single-phase 50Hz 230V (transformers fitted as standard on the machine),
- casing for outdoor installation.

■ Complies with European CE directives

- Machinery directive 2006 / 42 / CE
- EMC directive (2004/108 EC)
- Pressure equipment directive PED 97 / 23 CE:
 - category 2 for LD - LDC - LDH 80V to 700V
 - category 2 for ILD - ILDC - ILDH 80V to 700V
- Low voltage (2006/95/EC)

■ Complies with standards

- EN 60204, EN 378-2 (NFC 15-100, France)



80 to 300

DESCRIPTION

ILD	>	reversible version	H	>	hydraulic with pump and buffer tank
LD	>	cooling only version	540	>	unit size
C	>	hydraulic with pump only	V	>	R410A refrigerant

MAIN COMPONENTS

■ Casing

- Removable galvanised metal panels,
- RAL 7024 and RAL 7035 lacquer coating

■ Hermetic SCROLL compressors

- Built-in electric motor cooled by suction gases
- Motor protected by internal winding thermostat
- Placed on anti-vibration mounts

■ Evaporator

- Brazed plate exchanger(s)
- End and inside plates in AISI 316 stainless steel
- High-performance, optimised plate patterns
- Thermal insulation

■ Condenser

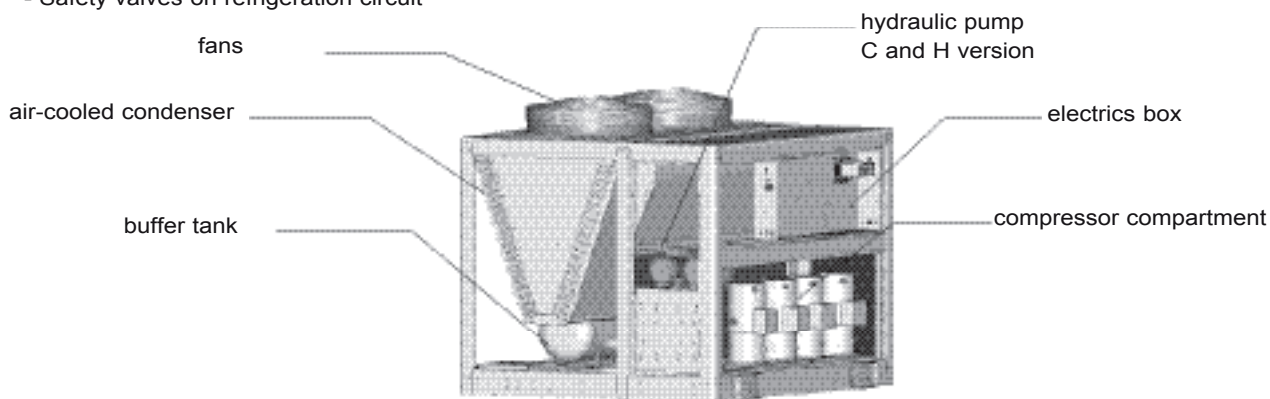
- High efficiency air-cooled exchanger(s), aluminium fins with optimised profiles and grooved copper tubes
- Condenser or evaporator mode heat exchanger on ILD-ILDC-ILDH series reversible heat pumps
- Axial fan(s) with aluminium airfoil blades
- 2-speed motors - IP 54, class F



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Control functions and safety devices

- Water flow control
- Thermostatic expansion valve(s)
- Refrigerant high and low-pressure safety devices,
- Safety valves on refrigeration circuit
- Temperature and pressure sensors
- Evaporator water flow controller fitted
- Unit start-up sequence



Electrics box

The fully wired electrics box, which houses all the electrical components and the electronic CPU board, controls the entire unit, monitors its operation, adjusts water setpoints and interfaces with an external control system.

It comprises:

- Control and power circuits,
- Wire numbering,
- Main safety switch with handle on front,
- Control circuit transformer,
- Circuit breakers on the power and control circuits,
- Compressor and motor switches,
- Main earth connection,
- Microprocessor-controlled electronic control unit,
- Alarm or information signals on free terminals.

ELECTRONIC CONTROL MODULE



Connect 2

CIAT electronic control module with microprocessor and CPU, with central automatic operation and access to internal operation states.

Features:

- Start, stop, reset or remote control,
- COOLING or HEATING mode selector,
- Outputs: RS485 output for GTC link (ModBus-JBus),
 - . board adapter for additional voltage-free contacts,
 - . remote control adapter (optional)
- Multilingual analogue LCD and LEDs.

Functions:

- operation information displayed via:
 - . multilingual clear-text messages
 - . direct temperature and pressure readings

- complete management of compressors with start-up sequence, timer and runtime balancing
- Self-adjusting and proactive functions with adjustment of settings drift control
- Series stage reduction system on multiple compressors lowers power according to cooling and heating demands which are controlled based on water temperatures
- Monitoring of internal operation parameters
- Monitoring of pumps based on demand
- Second setpoint management
- Direct display of water and pressure temperatures
- Diagnosis of operation and fault states: HP/LP, water flow, compressor motor(s), frost protection
- Short-cycle protection
- Remote management and remote monitoring
- Master Slave Management allows two machines to be controlled on a single water loop, by alternating the Master and Slave according to the running time.
- Setpoint adjusted by 4-20 mA signal
- Weekly programming

OPTIONS (KIT FOR INSTALLATION ON SITE)

Main options

- Additional voltage-free contact boards,
- Remote control unit,
- Phase controller = direction of rotation, missing phases, over- and undervoltage (factory fitted on sizes 350 to 700)
- Soft start (factory fitted on sizes 350 to 700)
- Frost protection,
- Fan variable speed drive (factory fitted from 350 to 700)
- 800-micron water filter supplied as standard on LDC-LDH or ILDC-ILDH, and as an option on LD-ILD,
- Evaporator and condenser flexible couplings,
- Hydraulic control kit including manifold pressure gauges, control valve and shut-off valve,
- Double pump for models 180 to 700 (factory fitted from 350 to 700),
- 15 kW auxiliary heater kit (ILD, ILDC, ILDH 80 to 150).
- 15-30-45-60 kW auxiliary heater MODULE kit (ILD, ILDC, ILDH 180 to 300).
- MULTICONNECT management of up to 8 units.
- Management of 4 auxiliary heating devices.
- LONWORKS protocol (gateway)
- Container handling kit (350 to 700)



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STANDARD AND OPTIONAL EQUIPMENT

	LD	LDC-LDH	ILD	ILDC-ILDH
	COOLING ONLY		HEAT PUMP	
Power supply: 400 V, 3-Phase, 50 Hz, without neutral, with transformer	Std	Std	Std	Std
Coil protection screen	Std ➡ 300	Std ➡ 300	Std ➡ 300	Std ➡ 300
Resilient mounts	Std	Std	Std	Std
MODBUS-JBUS RS 485 and MODBUS-TCP Ethernet communication interface	Std	Std	Std	Std
Main disconnect switch	Std	Std	Std	Std
Water flow regulator	Std	Std	Std	Std
Additional voltage-free contacts board	O	O	O	O
Remote control (remote console)	O	O	O	O
Phase monitor (reversal, loss, over- and undervoltage)	O	O	O	O
Soft start	O	O	O	O
Antifreeze protection	O	O	O	O
All-season operation (min. outdoor temp.: -15°C)	Std	Std	Std	Std
Condenser ventilation variable speed drive (min. outdoor temp.: -20°C)	O	O	O	O
Partial heat recovery - Desuperheater	O	O	O	O
ALTENA coated coil	O	O	O	O
Polyurethane coated coil fins	O	O	O	O
800 micron water filter	O	Std	O	Std
Hydraulic control kit (manifold, control & shut-off valve)	O	O	O	O
Hydraulic hoses	O	O	O	O
Double pump	–	O / 180 ➡ 700	–	O / 180 ➡ 700
Additional technical compartment (without equipment)	O / 180 ➡ 300	O / 180 ➡ 300	O / 180 ➡ 300	O / 180 ➡ 300
15 kW auxiliary electric heater kit	–	–	O / 80 ➡ 150	O / 80 ➡ 150
15 - 30 - 45 - 60 kW auxiliary electric heater module kit	–	–	O / 180 ➡ 300	O / 180 ➡ 300
MULTICONNECT multiple unit management	O	O	O	O
External auxiliary heating management board (4-stage)	–	–	O	O
XTRAFAN fan system	O / ➡ 700	O / ➡ 700	O / ➡ 700	O / ➡ 700
Reinforced insulation, low-temperature glycol/water mix (0°C to -12°C)	O / 350 ➡	O / 350 ➡	O / 350 ➡	O / 350 ➡
LonWorks gateway	O	O	O	O
Container handling kit	350 ➡ 700	350 ➡ 700	350 ➡ 700	350 ➡ 700
Optimised high pressure operation (all-season operation with energy optimisation)	O / 350 ➡ 700	O / 350 ➡ 700	–	–
Electronic expansion valve	O / 350 ➡ 700	O / 350 ➡ 700	–	–
Total heat recovery	O / 350 ➡ 700	O / 350 ➡ 700	–	–
Shell and tube exchanger	O / 350 ➡ 700	–	–	–

Std: Supplied as standard

O: Optional

– : Unavailable

Note: Some technical options not listed above may be added on special request (please contact us).



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TECHNICAL SPECIFICATIONS - COOLING ONLY



Aquaciat LD - LDC - LDH		80V	90V	100V	120V	150V	180V	200V	240V	300V
Net cooling capacity (1)	kW	20,50	23,37	27,28	30,43	38,24	46,18	53,20	60,10	75,73
Net absorbed power	kW	6,73	7,73	8,74	10,10	13,88	14,77	17,74	20,44	28,07
Net energy efficiency rating (EER) (2)		3,04	3,02	3,12	3,01	2,75	3,12	2,99	2,93	2,69
Net seasonal energy efficiency rating (ESEER) LN		3,68	3,66	3,78	3,63	3,18	4,26	4,28	4,10	4,01
Net seasonal energy efficiency rating (ESEER) HP		3,62	3,63	3,81	3,69	3,29	4,36	4,31	4,01	4,01
Lw / Lp 3 (HP high performance version)	dB(A)	75/43		77/45		78/46	79/47		84/52	87/55
Lw / Lp (3) (Low Noise (LN) version)	dB(A)	71/39		73/41		75/43	77/45	76/44	80/48	81/49
Compressor		Hermetic SCROLL (2900 rpm)								
Start-up mode		Direct in line in series								
Quantity		1					2			
Power control	%	100-0					100-50-0			
Refrigerant oil type		Polyol ester POE 3MAF (32 cst)								
Oil capacity	l	2,50	3,25	3,25	3,25	4,14	6,50	6,50	6,50	8,30
No. of refrigerating circuits		1								
Refrigerant (GWP)		R410A (GWP = 2088)								
Refrigerant charge	kg	3,7	3,9	5,5	5,5	5,2	10,0	10,5	10,2	11,0
Electrical supply	ph/Hz/V	Three-phase 50 Hz 400 V (+10%/-10%) + Earth								
Machine protection rating		IP 44								
Control circuit voltage	ph/Hz/V	Single-phase 50 Hz 230 V (+10%/-10%) - transformer fitted								
Evaporator		Brazen plate exchanger(s)								
Water content	l	1,78	1,78	2,22	2,22	3,11	3,55	4,22	4,77	7,71
Chilled water outlet temp. (min./max.)		-12 / +18								
Minimum water flow rate	m³/h	2,4	2,7	3,1	3,5	4,4	5,4	6,1	6,9	8,8
Maximum water flow rate	m³/h	7,2	8,3	9,6	10,8	13,4	16,2	18,7	21,3	26,3
Water connections	Ø	Male G 1"1/4		Male G 1"1/2			Male G 2"			
Max. pressure, water end	bar	10 bar (LOD)/4 bar (LDC-LDH)								
Air-cooled condenser		Finned heat exchanger								
Fan Ø	mm	800								
No. x Motor output, high-performance (HP) version	no. x kW	1x0.8	1x0.8	1x0.8	1x0.8	1x0.8	1x0.8	1x0.8	1x1.6	1x1.6
No. x Motor output, low noise (LN) version	no. x kW	1x0.5	1x0.5	1x0.5	1x0.5	1x0.5	1x0.5	1x0.5	1x1.1	1x1.1
Air flow, high-performance (HP) version	m³/h	15500	15500	16100	16100	16100	16200	16200	21700	21700
Air flow, low noise (LN) version	m³/h	12300	12300	13100	13100	13100	13200	13200	17600	17600
Min water volume (ILD - ILDC)	l	114	130	155	173	229	131	149	173	209
Tank volume, model H	l	100		150			200			
Expansion vessel, C & H	l	6					18			
Standard pump	no.	44	44	44	44	45	40	40	40	41
Height (excluding mounts)	mm	1170		1393			1743			
Length (standard version)	mm	1995		1995			1995			
Length (version C)	mm	1995		1995			1995			
Length (version H)	mm	1995		1995			2676			
Depth	mm	1055		1055			1055			
Weight (empty, standard version)	kg	347	350	365	367	449	569	575	581	711
Weight (empty, version C)	kg	365	368	383	385	467	616	619	625	756
Weight (empty, version H)	kg	390	393	407	409	492	813	816	822	953
Storage temperature	°C	+ 50°C								

(1) Capacities in HIGH PERFORMANCE version based on: Net conditions, COOLING: +12°C/+7°C and condenser air inlet temperature +35°C

(2) Net EER value (Excluding pump)

(3) Lw: Overall sound power level as per ISO3744

Lp: Overall pressure levels measured at 10m in a free field, calculated using the formula $LP=Lw-10 \log S$

(4) Based on selection



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SPECIFICATIONS - COOLING ONLY

Aquaciat LD - LDC - LDH		350V	400V	500V	540V	600V	700V
Net cooling capacity (1)	kW	91,95	100,81	125,65	141,08	154,23	170,45
Net absorbed power	kW	30,23	35,02	43,17	46,31	53,73	62,95
Net energy efficiency rating (EER) (2)		3,04	2,87	2,91	3,04	2,87	2,70
Seasonal energy efficiency rating (ESEER)	Net Ln	4,10	4,12	3,43	4,08	3,85	3,78
Seasonal energy efficiency rating (ESEER)	Net HP	4,08	4,05	3,48	4,04	3,89	3,86
Lw / Lp 3 (HP high performance version)	dB(A)	87/55	88/56	88/56	88/56	89/57	89/57
Lw / Lp (3) (Low Noise (LN) version)	dB(A)	81/49	81/49	83/51	83/51	83/51	83/51
Compressor		Hermetic SCROLL (2900 rpm)					
Start-up mode		Direct in line in series					
Quantity		2	2	2	4	4	4
Power control	%	100-57-43-0	100-63-37-0	100-50-0	100-78-72-55-50-45-28-22-0	100-75-50-25-0	100-78-71-57-50-43-28-21-0
Refrigerant oil type		Polyol ester POE 3MAF (32 cst)					
Oil capacity	l	8,8	9,8	11,2	14,8	16,6	17,6
No. of refrigerating circuits		1		2			
Refrigerant (GWP)		R410A (GWP = 2088)					
Refrigerant charge	kg	18,5	18	11,8 +11.8	13,0 +13.5	13,2 +13.7	17,8 +17.8
Electrical supply	ph/Hz/V	Three-phase 50 Hz 400 V (+10%/-10%) + Earth					
Machine protection rating		IP 44					
Control circuit voltage	ph/Hz/V	Single-phase 50 Hz 230 V (+10%/-10%) - transformer fitted					
Evaporator		Brazed plate exchanger(s)					
Water content	l	6,4	7,5	9,3	9,3	10,6	11,8
Chilled water outlet temp. (min./max.)	°C	-12 / +18					
Minimum water flow rate	m³/h	10,7	11,8	17,3	18,1	20,8	20,8
Maximum water flow rate	m³/h	32,5	35,3	43,6	48,7	53,0	59,0
Water connections	Ø	DN 80 flange			DN80 flange		
Max. pressure, water end	bar	10 bar (LOD)/4 bar (LDC-LDH)					
Air-cooled condenser		Finned heat exchanger					
Fan Ø	mm	800					
Number x Motor output High-performance (HP version)	no. x kW	2x1.7	2x1.7	2x1.7	2x1.6	2x1.6	2x1.6
No. x Motor output, low noise (LN - XLN) version	no. x kW	2x1.1	2x1.1	2x1.1	2x1.1	2x1.1	2x1.1
Air flow, high-performance (HP) version	m³/h	37 600	37 600	40 000	41 500	41 500	41 500
Air flow, low noise (LN - XLN) version	m³/h	29 000	29 000	31 000	33 200	33 200	33 200
Min water volume (ILD - ILDC)	l	220	213	357	164	207	203
Tank volume, model H	l	250					
Expansion vessel, C & H	l	18					
Standard pump	no.	(4)					
Height (excluding mounts)	mm	2117			2117		
Length (standard version)	mm	2190			2740		
Length (version C)	mm	2190			2740		
Length (version H)	mm	2190			2740		
Depth	mm	2129			2129		
Weight (empty, standard version)	kg	1064	1163	1245	1530	1666	1732
Weight (empty, version C)	kg	1162	1268	1315	1725	1845	1911
Weight (empty, version H)	kg	1233	1332	1380	1790	1908	1974
Storage temperature	°C	+ 50°C					

(1) Capacities in HIGH PERFORMANCE version based on: Net conditions, COOLING: +12°C/+7°C and condenser air inlet temperature +35°C

(2) Net EER value (Excluding pump)

(3) Lw: Overall sound power level as per ISO3744

Lp: Overall pressure levels measured at 10m in a free field, calculated using the formula $LP=Lw-10 \log S$

(4) Based on selection



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TECHNICAL SPECIFICATIONS - REVERSIBLE HEAT PUMPS



Aquaciat ILD - ILDC - ILDH		80V	90V	100V	120V	150V	180V	200V	240V	300V	
Net cooling capacity (1)	kW	20,06	22,72	27,21	30,26	40,22	46,77	53,16	61,50	75,29	
Net absorbed power	kW	7,03	8,17	9,29	10,83	13,27	15,52	18,64	21,09	27,90	
Net energy efficiency rating (EER) (2)		2,85	2,77	2,92	2,79	3,02	3,01	2,85	2,91	2,69	
Seasonal energy efficiency rating (ESEER)	Net Ln	3,16	3,03	3,17	2,95	3,11	4,09	3,93	3,83	3,66	
Seasonal energy efficiency rating (ESEER)	Net HP	3,20	3,10	3,30	3,13	3,38	4,07	4,05	3,75	3,70	
Lw / Lp 3 (HP high performance version)	dB(A)	75/43		77/45		78/46		79/47		84/52	87/55
Lw / Lp (3) (Low Noise (LN) version)	dB(A)	71/39		73/41		75/43		76/44		80/48	81/49
Net Heating capacity (1)	kW	20,84	23,38	28,30	31,85	41,69	48,74	55,25	64,12	81,75	
Net absorbed power	kW	7,14	8,08	9,80	10,95	13,89	15,74	18,25	21,32	26,65	
Net COP/COP performance		2,91	2,89	2,88	2,90	3,00	3,09	3,02	3,00	3,06	
Compressor		Hermetic SCROLL (2900 rpm)									
Start-up mode		Direct in line in series									
Quantity		1					2				
Power control	%	100-0					100-50-0				
Refrigerant oil type		Polyol ester POE 3MAF (32 cst)									
Oil capacity	l	2,50	3,25	3,25	3,25	4,14	6,50	6,50	6,50	8,30	
No. of refrigerating circuits		1									
Refrigerant (GWP)		R410A (GWP = 2088)									
Refrigerant charge	kg	5,2	5,2	6,4	7,1	9,7	12,5	12,7	13,1	13,1	
Electrical supply	ph/Hz/V	Three-phase 50 Hz 400 V (+10%/-10%) + Earth									
Machine protection rating		IP 44									
Control circuit voltage	ph/Hz/V	Single-phase 50 Hz 230 V (+10%/-10%) - transformer fitted									
Evaporator		Brazen plate exchanger(s)									
Water content	l	1,78	1,78	2,22	2,22	3,11	3,55	4,22	4,77	7,71	
Chilled water outlet temp. (min./max.)	°C	-10 / +18									
Hot water outlet temp. (min./max.)	°C	+30 / +50									
Minimum water flow rate	m³/h	2,9	2,9	3,6	3,6	5,1	5,8	6,9	7,8	10,4	
Maximum water flow rate	m³/h	6,7	7,4	9,0	10	13,1	15,4	17,6	20,4	24,5	
Water connections	Ø	Male G 1”1/4		Male G 1”1/2			Male G 2”				
Max. pressure, water end	bar	ILD 10 bars / ILDC-ILDH 4 bars									
Air-cooled condenser		Finned heat exchanger									
Fan Ø	mm	800									
Number x Motor output	no. x kW	1x0,5	1x0,5	1x0,9	1x0,9	1x0,9	1x0,9	1x0,9	1x1,7	1x1,7	
High-performance (HP version)											
No. x Motor output, low noise (LN) version	no. x kW	1x0,35	1x0,35	1x0,46	1x0,46	1x0,46	1x0,46	1x0,46	1x1,2	1x1,2	
Air flow, high-performance (HP) version	m³/h	10800	10800	16700	16700	15500	16100	16100	24000	24000	
Air flow, low noise (LN) version	m³/h	8700	8700	10800	10800	9700	10800	10800	18000	18000	
Min water volume (ILD - ILDC)	l	114	130	155	173	229	131	149	173	209	
Tank volume, model H	l	100		150			200				
Expansion vessel, C & H	l	6					18				
Standard pump	no.	44		44	44	45	40	40	40	41	
Height (excluding mounts)	mm	1170		1393			1743				
Length (standard version)	mm	1995		1995			1995				
Length (version C)	mm	1995		1995			1995				
Length (version H)	mm	1995		1995			2676				
Depth	mm	1055		1055			1055				
Weight (empty, standard version)	kg	328	331	366	368	452	611	614	620	756	
Weight (empty, version C)	kg	346	349	384	386	470	648	651	656	789	
Weight (empty, version H)	kg	371	374	409	411	495	845	848	853	986	
Storage temperature	°C	+ 50°C									

- (1) High-performance version capacities based on: Net conditions,
a/ COOLING: +12°C/+7°C and condenser air inlet temperature of +35°C
b/ HEATING: hot water outlet at +45°C and external air at +7°C DB, 86% RH

(2) Net EER or COP values(excluding pump)

(3) Lw: Overall sound power level as per ISO3744

Lp: Overall pressure levels measured at 10m in a free field, calculated using the formula LP=Lw-10 log S



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TECHNICAL SPECIFICATIONS - REVERSIBLE HEAT PUMPS



Aquaciat ILD - ILDC - ILDH		350V	400V	500V	540V	600V	700V
Net cooling capacity (1)	kW	92,41	104,77	127,51	139,23	154,68	162,42
Net absorbed power	kW	31,78	35,61	44,98	46,76	53,11	60,21
Net energy efficiency rating (EER) (2)		2,90	2,94	2,83	2,97	2,91	2,69
Seasonal energy efficiency rating (ESEER)	Net LN	3,71	3,77	3,15	3,99	3,91	3,69
Seasonal energy efficiency rating (ESEER)	Net HP	3,56	3,70	3,16	3,83	3,81	3,50
Lw / Lp 3 (HP high performance version)	dB(A)	87/55	88/56	88/56	88/56	89/57	89/57
Lw / Lp (3) (Low Noise (LN) version)	dB(A)	81/49	81/49	83/51	83/51	83/51	83/51
Net Heating capacity (1)	kW	95,40	109,25	133,22	147,83	164,68	182,37
Net absorbed power	kW	31,80	36,45	43,72	48,43	53,68	58,89
Net COP/COP performance		2,99	2,99	3,04	3,05	3,06	3,15
Compressor		Hermetic SCROLL (2900 rpm)					
Start-up mode		Direct in line in series					
Quantity		2	2	2	4	4	4
Power control	%	100-57-43-0	100-63-37-0	100-50-0	100-78-72-55-50-45-28-22-0	100-75-50-25-0	100-78-50-22-0
Refrigerant oil type		Polyol ester POE 3MAF (32 cst)					
Oil capacity	l	8,8	9,8	11,2	14,8	16,6	17,6
No. of refrigerating circuits		1		2			
Refrigerant (GWP)		R410A (GWP = 2088)					
Refrigerant charge	kg	21	24	14,0 +14,0	18,0 +18,0	18,2 +19,2	19,5 +19,5
Electrical supply	ph/Hz/V	Three-phase 50 Hz 400 V (+10%/-10%) + Earth					
Machine protection rating		IP 44					
Control circuit voltage	ph/Hz/V	Single-phase 50 Hz 230 V (+10%/-10%) - transformer fitted					
Evaporator		Braze plate exchanger(s)					
Water content	l	8,68	9,88	10,66	12,48	15,42	15,42
Chilled water outlet temp. (min./max.)	°C	-10 / +18					
Hot water outlet temp. (min./max.)	°C	+30 / +50					
Minimum water flow rate	m³/h	11,7	13,3	17,3	18,1	20,8	20,8
Maximum water flow rate	m³/h	30,7	34,6	41,9	45,9	50,7	50,7
Water connections	Ø	DN 80 flange			DN80 flange		
Max. pressure, water end	bar	ILD 10 bars / ILDC-ILDH 4 bars					
Air-cooled condenser		Finned heat exchanger					
Fan Ø	mm	800					
Number x Motor output High-performance (HP version)	no. x kW	2x1,7	2x1,7	2x1,8	2x1,7	2x1,7	2x1,7
No. x Motor output, low noise (LN) version	no. x kW	2x1,2	2x1,2	2x1,2	2x1,1	2x1,1	2x1,1
Air flow, high-performance (HP) version	m³/h	44000	42000	41000	44000	44000	44000
Air flow, low noise (LN - XLN) version	m³/h	32000	29000	30500	35000	35000	35000
Min water volume (ILD - ILDC)	l	220	213	357	164	207	203
Tank volume, model H	l	250					
Expansion vessel, C & H	l	18					
Standard pump	no.	(4)					
Height (excluding mounts)	mm	2117			2117		
Length (standard version)	mm	2190			2740		
Length (version C)	mm	2190			2740		
Length (version H)	mm	2190			2740		
Depth	mm	2129			2129		
Weight (empty, standard version)	kg	1096	1195	1283	1570	1706	1878
Weight (empty, version C)	kg	1194	1292	1355	1675	1804	1976
Weight (empty, version H)	kg	1257	1356	1418	1748	1868	2040
Storage temperature	°C	+ 50°C					

- (1) High-performance version capacities based on net conditions:
a/ COOLING: +12°C/+7°C and condenser air inlet temperature of +35°C
b/ HEATING: hot water outlet at +45°C and external air at +7°C DB, 86% RH
- (2) Net EER or COP values(excluding pump)

- (3) Lw: Overall sound power level as per ISO3744
Lp: Overall pressure levels measured at 10m in a free field, calculated using the formula $LP=Lw-10 \log S$
- (4) Based on selection