



Water chillers

AQUACIAT 2

High energy efficiency with
R410A
 Compact and quiet
Scroll compressors
 Brazed plate heat exchangers
 Self adjusting electronic **control system**



Cooling capacity: 20 to 290 kW
 Heating capacity: 20 to 285 kW



Cooling or heating



Hydraulic pack



Heat recovery



USE

The **AQUACIAT 2 series LD-LDC-LDH** or **ILD-ILDC-ILDH** water chillers or heaters with air-cooled condensers are medium capacity units particularly adapted for heating and air conditioning applications in the fields of Offices, Healthcare, Industry, Administration, Commercial and Residential buildings.

These standard packaged units are designed for outdoor installation; no particular precautions have to be taken against adverse weather conditions.

An optional XTRAFAN version allows if necessary the possibility of mounting an air duct on the fan(s) discharge in the case of air recycling risk or for an acoustic treatment on site.

To operate in **COOLING** or **HEATING** mode, these units use outside 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 a heating or cooling floor, to fan coil units or to an air handling unit, the reversible Aquaciat 2 Series **ILD-ILDC-ILDH** permits easy heating and air conditioning of buildings.

Each unit is assembled, electrically wired (control and capacity), charged with refrigerant, and tested in factory.

The installation is very simple and the only operations to be carried out on site are the electrical wiring and water connections.

RANGE

AQUACIAT 2 series LD

Cooling only chillers without hydraulic equipment.

AQUACIAT 2 series LDC - LDH

Cooling only chillers with hydraulic equipment, water pump only, or pump and buffer tank.

AQUACIAT 2 series ILD

Reversible air/water cooled models without hydraulic equipment.

AQUACIAT 2 series ILDC - ILDH

Reversible air/water cooled models with hydraulic equipment (circulating water pump only or pump and buffer tank).

DESCRIPTION

The standard **AQUACIAT 2 series LD-LDC-LDH (cooling only)** or **series ILD-ILDC-ILDH (reversible)** are delivered with the following components:

- air-cooled condenser with propeller fan motor assembly,
 - chilled water evaporator (or hot water condenser on reversible models),
 - capacity control system on chilled or hot water,
 - starting automatic control, electrical compartment:
 - . Power supply : 3~50Hz 400V (+6%/- 10%) + earth
 - . Control circuit: 1~50Hz 230V
- (transformers are mounted on the unit in the standard version),
- cabinet for outdoor installation.



80 to 300

■ Conformity with the EC European directives

- Machines EC 98 / 37
- Electromagnetic EMC 2004/108/CE
- Under pressure equipment DESP EC 97 / 23:
 - category 2 for LD - LDC - LDH 80V à 1100V
 - category 2 for ILD - ILDC - ILDH 80V à 700V
 - category 3 for ILD - ILDC - ILDH 702V à 1100V
- Low voltage 2006/95/CE

■ Conformity to standards

- EN 60-204 , EN 378-2 (NFC15 - 100 France).

NOMENCLATURE

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

STANDARD OR OPTIONAL EQUIPMENT

	LD	LDC-LDH	ILD	ILDC - ILDH
	COOLING ONLY		HEAT PUMP	
3-400V 50hz main supply without neutral with transformer	Std	Std	Std	Std
Coil protective grille	Std ➔ 300	Std ➔ 300	Std ➔ 300	Std ➔ 300
Resilient mounts	Std	Std	Std	Std
Main switch	Std	Std	Std	Std
Water flow switch	Std	Std	Std	Std
Additional potential free contacts board	O	O	O	O
Remote control (Remote console)	O	O	O	O
Phases control system (direction, absence, under & over voltage)	O	O	O	O
Progressive soft start	O	O	O	O
Anti-frost protection	O	O	O	O
All year round operation (min. outdoor temp.: -15°C)	Std	Std	Std	Std
Condenser fan speed control (min. outdoor temp.: -20°C)	O	O	O	O
Partial heat recovery -Desuperheater	O	O	O	O
BLYGOLD coil protective coating	O	O	O	O
Polyurethane fin protective coating	O	O	O	O
Water filter - 800 µm	O	Std	O	Std
Water adjustment kit (manifold, control valve, stop valve)	O	O	O	O
Flexible water connections	O	O	O	O
Twin pump	-	O / 180 ➔ 1100	-	O / 180 ➔ 1100
Additional technical compartment (without equipment)	O / 180 ➔ 300	O / 180 ➔ 300	O / 180 ➔ 300	O / 180 ➔ 300
Electric auxiliary heater kit 15 kW	-	-	O / 80 ➔ 150	O / 80 ➔ 150
Electric auxiliary heater module 15 - 30 - 45 kW	-	-	O / 180 ➔ 300	O / 180 ➔ 300
MULTICONNECT several units management	O	O	O	O
Auxiliary external heater management board (4 stages)	-	-	O	O
XTRAFAN air fans system	O / ➔ 700	O / ➔ 700	O / ➔ 700	O / ➔ 700
Low temperature glycol/water reinforced insulation (0 to -12°C)	O / 350 ➔	O / 350 ➔	O / 350 ➔	O / 350 ➔
LONWORKS communication gateway	O	O	O	O
Handling for container	350 ➔ 1100	350 ➔ 1100	350 ➔ 1100	350 ➔ 1100
Optimised high pressure operation (all-season operation with energy optimisation)	O / 350 ➔ 1100	O / 350 ➔ 1100	-	-
Electronic expansion valve	O / 350 ➔ 1100	O / 350 ➔ 1100	-	-
Total heat recovery	O / 350 ➔ 1100	O / 350 ➔ 1100	-	-

Std: Standard feature

O: Optional equipment

-: Not available

Note: Some technical specifications not appearing on the above list can however be quoted on request (consult us)



COOLING ONLY - TECHNICAL CHARACTERISTICS



LD - LDC - LDH		350V	400V	500V	540V	600V	700V	702V	800V	900V	1000V	1100V
Cooling capacity ①	kW	92.5	102.6	123.9	135.9	151.1	173.3	189.3	209.9	250.9	270.6	291.5
Power input	kW	30.9	36.1	46.2	47.5	55.8	64.4	60.3	69.7	81.5	89.6	100.2
EER Efficiency ②		2.99	2.84	2.68	2.80	2.71	2.69	3.14	3.01	3.08	3.02	2.91
Seasonal efficiency ESEER		4.16	3.85	3.36	3.90	3.91	3.70	4.24	4.12	4.11	4.08	3.98
Lw / Lp ③ (High Perf. - HP)	dB(A)	89/57	90/58		90/58	91/59		89/57	90/58			
Lw / Lp ③ (Low Noise version - LN)	dB(A)	83/51			85/53			84/52	85/53	84/52		85/53
Lw / Lp ③ (Xtra Low Noise version - XLN)	dB(A)	-	-	-	-	-	-	81/49	82/50	81/49	81/49	83/51
Compressor		Polyester SCROLL 2900 rpm										
Starting mode		Direct in series										
Quantity		2	2	2	4	4	4	4	4	4	4	4
Capacity 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		100-81-69-62.5-50-37.5-31-19-0	100-83-66-55-33-16-0	100-80-70-60-50-40-30-20-0	100-77-73-54-50-45-27-23-0
Refrigerant oil type		Polyester POE 3MAF (32cst)										
Oil volume	l	8.8	9.8	11.2	14.8	16.6	17.6	17.6	21.8	20.8	22.2	26.2
Refrig. circuit number		1			2							
Refrigerant fluid (GWP)		R410A (1890)										
Refrigerant load	kg	18.5	18	11.8 +11.8	13.0 +13.5	13.2 +13.7	17.8 +17.8	18.0 +18.0	17.0 +17.0	21.0 +21.0	22.0 +22.0	23.0 +23.0
Electric supply	ph/Hz/V	3-50Hz 400V (+6%/-10%) + Earth										
Unit protection index		IP 44										
Circuit control voltage	ph/Hz/V	1-50Hz 230V (+6%/-10%) - transformer mounted										
Evaporator		Braze plates type exchanger										
Water content	l	8.68	9.88	10.66	12.48	15.42	15.42	15.8	15.8	18	20.4	20.4
Chilled water outlet min. / max.	°C	-12 / +18										
Minimum water flow	m³/h	11.7	13.3	17.3	18.1	20.8	20.8	22.1	24.4	29.3	31.6	34
Maximum water flow	m³/h	30.7	34.6	41.9	45.9	50.7	50.7	63.2	69.5	77	77	77
Water connections	≥	Male G 2 1/4"			Flange DN80			Flange DN100				
Maximum pressure (water side)	bar	LD 10 bars / LDC-LDH 4 bars										
Air cooled condenser		Finned heat exchanger										
Fan ≥	mm	800										
Number x Motor rated power High Performance series- HP	nb x kW	2x1.7	2x1.7	2x1.8	2x1.7	2x1.7	2x1.7	4x1.55	4x1.55	4x1.66	4x1.66	4x1.66
Number x Motor rated power Low Noise series - LN	nb x kW	2x1.6	2x1.2	2x1.2	2x1.1	2x1.1	2x1.1	4x1.06	4x1.06	4x1.1	4x1.1	4x1.1
High Performance air flow - HP	m³/h	44000	42000	41000	44000	44000	44000	81200		78000		
Low Noise air flow - LN - XLN	m³/h	32000	29000	30500	35000	35000	35000	60000		58400		
Mini water content (ILD-ILDC)	l	220	213	357	164	207	203	213	212	213	290	364
Water tank content H model	l	250					500					
Expansion vessel C & H model	l	18					35					
Standard pump	n°	④										
Height without mounts	mm	2117			2117			2080 (+ 205 XLN)				
Standard series length	mm	2190			2740			3698				
C series length	mm	2190			2740			3698				
H series length	mm	2190			2740			3698				
Depth	mm	2129			2129			2200				
Std range weight without charge	kg	1046	1145	1183	1460	1596	1768	2135	2175	2215	2255	2310
C range weight without charge	kg	1144	1242	1254	1654	1775	1947	2360	2400	2455	2495	2625
H range weight without charge	kg	1207	1306	1318	1718	1838	2010	2510	2550	2605	2645	2745
Storage temperature	°C	+ 50°C										

① Capacities of HIGH PERFORMANCE series based on:EUROVENT conditions (EN 14511)

COOLING mode: +12°C/+7°C and condenser air inlet temperature +35°C

② EER in gross values

③ Total Sound power Lw, total sound pressure at 10 m from the unit, in free field, conformity with ISO 3744 norm

④ According to selection.



ELECTRICAL SPECIFICATIONS

■ Standard units (pump not included)

		80V	90V	100V	120V	150V	180V	200V	240V	300V	350V
Electrical supply	ph/Hz/V	3~50Hz 400V (+6%/-10%) + Earth									
Control circuit voltage	ph/Hz/V	1~50Hz 230V (+6%/-10%) - transformer mounted									
Starting current without pump	A	95	111	118	135	198	130	143	149	230	256
Starting current SOFT START option	A	57	66	70	81	118	83	90	104	146	163
Circuit breaker (Neutral condition TN-TT)	kA	15			10		15			10	
Maxi wires section	mm ²	10			35			70			95
Maxi rated current ①	A	16.8	17.8	22.7	24.8	30.9	33.0	43.4	49.6	60.0	72.0

		400V	500V	540V	600V	700V	702V	800V	900V	1000V	1100V	
Electrical supply	ph/Hz/V	3~50Hz 400V (+6%/-10%) + Earth										
Control circuit voltage	ph/Hz/V	1~50Hz 230V (+6%/-10%) - transformer mounted										
Starting current without pump	A	303	320	276	286	325	333	388	440	457	474	
Starting current SOFT START option	A	191	209	192	202	237	243	279	317	333	350	
Circuit breaker (Neutral condition TN-TT)	kA	10	35	10			50					
Maxi wires section	mm ²	95					150					
Maxi rated current ①	A	82.0	104.0	110.0	120.0	138	144	161	190	207	224	

① Pump rated current not included

■ Hydraulic pumps (C and H models)

SINGLE PUMP														
	n°	44	45	40	41	42	43	117	118	119	102	103	105	107
Mini flow	m ³ /h	1.0	1.9	5.0	6.0	7.0	8.0	15.0	15.0	15.0	20.0	20.0	20.0	20.0
Maxi pressure	mCE	20.6	20.9	17.5	21.5	22.0	24.5	15.5	26.0	39.0	14.5	18.0	26.0	33.0
Maxi flow	m ³ /h	8.0	13.0	19.0	22.5	30.0	30.0	50.0	50.0	50.0	70.0	86.0	74.0	74.0
Mini pressure	mCE	7.3	9.7	8.5	8.0	10.0	14.0	10.0	21.0	31.0	8.0	10.0	19.5	27.0
Main supply	V	3ph~50Hz 400V (+6%/-10%) + Earth												
Rated output	kW	0.55	0.75	0.75	1.1	1.5	1.85	2.2	4.0	7.5	3.0	4.0	5.5	7.5
Maxi rated current	A	1.7	2.1	1.85	2.67	3.9	4.61	4.5	7.8	13.8	6.3	8.0	10.3	13.8

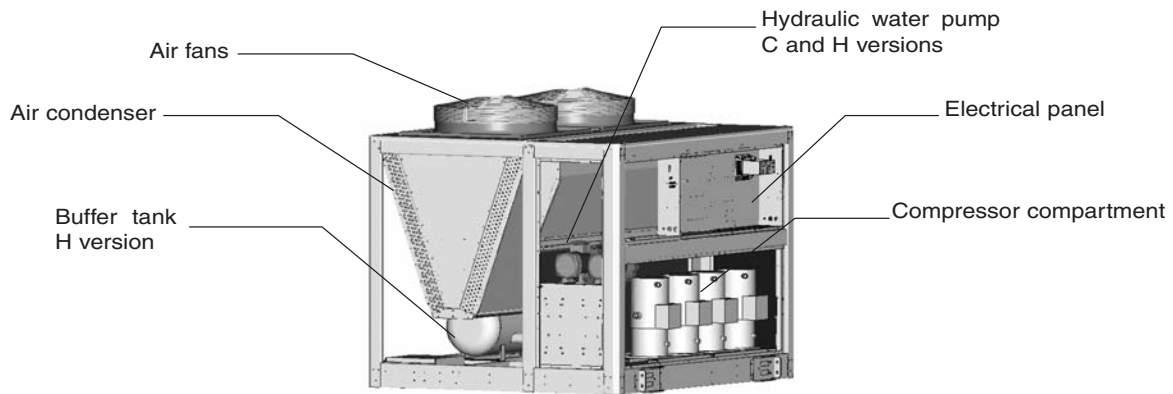
TWIN PUMP												
	n°	2 x 40	2 x 41	2 x 42	2 x 43	217	218	219	202	203	205	207
Mini flow	m ³ /h	5.0	6.0	7.0	8.0	15.0	15.0	15.0	20.0	20.0	20.0	20.0
Maxi pressure	mCE	17.5	21.5	22.0	24.5	15.5	26.0	39.0	14.5	18.0	26.0	33.0
Maxi flow	m ³ /h	19.0	22.5	30.0	30.0	50.0	50.0	50.0	70.0	86.0	74.0	74.0
Mini pressure	mCE	8.5	8.0	10.0	14.0	10.0	21.0	31.0	8.0	10.0	19.5	27.0
Main supply	V	3ph~50Hz 400V (+6%/-10%) + Earth										
Rated output	kW	0.75	1.1	1.5	1.85	2.2	4.0	7.5	3.0	4.0	5.5	7.5
Maxi rated current	A	1.85	2.67	3.9	4.61	4.5	7.8	13.8	6.3	8.0	10.3	13.8



Water chillers

Control functions or safety devices

- Water flow control
- Thermostatic expansion valve
- High and low refrigerant pressure safety devices
- Safety relief valves on refrigerant circuit
- Temperature sensors and pressure transducers
- Chilled water flow switch mounted
- Unit starting sequence,



Electrical box

The electrical box is fully wired and contains all the electric components and the control process unit (CPU) board. It controls all the functions of the machine and allows operation monitoring, adjustment of the water temperature settings, or the interface with an external managing system.

The electrical box includes:

- Power and control circuit
- Wiring numbering
- Main safety circuit breaker on front panel with handle
- Control circuit transformer
- Protection circuit breakers on power and control circuits
- Compressor motor contactor(s)
- Main earthing
- Microprocessor electronic control system
- Free contacts for remote information or alarms.

ELECTRONIC CONTROL SYSTEM



Connect 2

CIAT microprocessor and CPU electronic control system with centralized controls and monitoring of internal operating status.

Includes:

- Run, Stop, Reset or Remote control functions,
- COOLING or HEATING mode selection switch,
- Output. RS485 output for BMS control (ModBus-JBus),
 - . Additional voltage free output adapter board ,
 - . Adapter for remote control (optional).
- Analogical multi-language LCD screen and LED indicators,

Functions:

- Monitoring of operation information by:

- . direct display of messages in different languages
- . direct display of temperatures and pressures
- Global compressors control with starting sequence, counting and equalization of compressors running times
- Auto-adaptive and advanced functions with a control system adjustment on the parameters drift
- Capacity stage control system on multi compressors as a function of the cooling or heating requirements on the water temperatures
- Control of the internal operating parameters
- Second setting point control
- Direct display of water temperatures and pressures
- Diagnosis of operating status and faults:
 - HP/LP, water flow, compressor motor(s), anti-frost
- Anti-short cycle protection
- Remote management and remote control
- Master/slave control of two units on the same water loop with alternation of the master unit and the slave unit based on the running times.
- Setpoint adjustable via a 4-20 mA signal
- Weekly schedules

OPTIONAL EQUIPMENT (KIT FOR ON-SITE MOUNTING)

Main options

- Additional potential free contact boards,
- Remote control box,
- Phase control = rotation direction, phase absence, under and over voltage (factory mounted size 350 to 1100),
- SOFT START (factory mounted size 350 to 1100),
- Anti-freeze protection,
- Fan speed control (factory mounted for 350 to 1100 sizes),
- Water filter 800 microns as standard equipment on LD-LDC-LDH or ILDC-ILDH, and optional accessory on LD-ILD,
- Evaporator and condenser flexible connections,
- Water adjustment kit including pressure gauge manifold, control valve and stop valve,
- Twin pump on sizes 180 to 1100 (factory mounted for 350 to 1100 models).
- 15 kW extra heater kit (ILD, ILDC, ILDH 80 to 150)
- Extra heater MODULE kit 15-30-45-60 kW (ILD, ILDC, ILDH 180 to 300)
- MULTICONNECT management up to 8 units.
- Management 4 extra heater
- LONWORKS protocol (gateway)
- Handling for container (350 to 1100)



Water chillers

COOLING CAPACITIES



COOLING ONLY models

LD LDC LDH	Evaporator water outlet temperature °C	INLET AIR TEMPERATURE AT THE CONDENSER °C												
		25		30		35		40		46				
		Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW			
600V	Glycol water	-12	84,9	38,3	80,4	41,7	75,5	45,4	69,6	49,2				
		-10	92,0	39,1	87,0	42,6	81,9	46,4	75,9	50,4				
		-8	98,9	39,7	94,0	43,4	88,4	47,3	82,5	51,4				
		-4	114,5	41,1	108,7	45,0	102,4	49,2	95,7	53,5				
	0	131,2	42,5	124,7	46,6	117,5	51,0	110,0	55,5					
	Pure water	5	157,8	44,8	149,7	49,0	141,3	53,6	132,4	58,3	117,6	65,2		
		7	169,1	45,8	160,3	50,1	151,1	55,7	141,8	59,4	126,1	66,5		
		12	195,2	48,1	185,1	52,5	174,7	57,1	163,9	61,9	146,1	69,4		
		15	211,9	49,7	201,0	54,0	189,6	58,6	178,1	63,6	158,5	69,5		
		18	229,5	51,5	217,6	55,7	205,2	60,3	193,2	65,2	164,7	71,0		
700V		Glycol water	-12	93,6	43,2	88,9	47,3							
	-10		102,0	44,0	96,6	48,0	90,7	52,5						
	-8		110,5	44,7	104,8	48,8	98,7	53,3						
	-4		128,7	46,2	122,4	50,5	115,0	55,2	107,6	60,4				
	0	148,7	47,8	141,3	52,2	132,8	57,0	124,1	62,3	113,7	69,2			
	Pure water	5	182,0	50,7	172,6	55,2	162,8	60,2	152,7	65,6	140,8	72,6		
		7	193,9	51,7	183,8	56,3	173,3	64,3	162,7	66,7	150,1	73,7		
		12	225,1	54,6	213,5	59,3	201,3	65,3	189,3	69,8	175,4	76,9		
		15	244,9	56,5	232,3	61,2	219,3	66,4	206,5	71,9	192,0	78,9		
		18	265,9	58,7	252,2	63,4	238,2	68,5	224,6	74,0	209,5	81,1		
702V		Glycol water	-12	97,9	44,0	92,6	47,9	87,1	52,3	80,7	57,4			
	-10		107,6	44,3	102,0	48,2	95,9	52,6	89,4	57,6				
	-8		117,5	44,6	111,5	48,5	105,2	52,9	98,4	58,0	89,0	64,9		
	-4		137,8	45,7	131,1	49,7	123,8	54,2	116,2	59,2	106,5	66,0		
	0	161,3	47,0	153,1	51,1	144,9	55,7	136,1	60,8	125,3	67,7			
	Pure water	5	196,9	49,0	187,5	53,2	177,3	58,0	166,9	63,3	153,9	70,4		
		7	210,5	49,9	200,2	54,1	189,3	60,2	178,1	64,2	164,3	71,3		
		12	245,9	52,1	234,2	56,5	221,3	61,3	208,4	66,7	192,6	73,9		
		15	269,2	53,8	256,0	58,1	242,0	63,0	227,9	68,4	211,0	75,6		
		18	293,3	55,5	278,7	59,9	263,8	64,8	248,5	70,2	230,5	77,5		
800V		Glycol water	-12	108,4	49,7	104,0	54,3	97,3	59,2	89,5	64,8			
	-10		120,6	50,2	114,2	54,8	107,4	59,8	99,9	65,4				
	-8		131,1	50,8	124,2	55,6	117,3	60,6	109,5	66,2	98,3	73,4		
	-4		153,4	52,3	146,1	57,2	138,0	62,5	129,3	68,2	117,9	75,6		
	0	178,6	54,0	170,4	59,0	161,2	64,4	151,5	70,3	138,9	77,9			
	Pure water	5	218,0	56,6	208,0	61,7	196,9	67,3	185,2	73,4	170,2	81,2		
		7	232,8	57,7	221,8	62,8	209,9	69,8	197,5	74,5	181,7	82,3		
		12	271,4	60,5	258,3	65,6	244,6	71,2	230,2	77,4	212,2	85,3		
		15	296,5	62,5	281,8	67,5	267,0	73,2	251,1	79,3	231,9	87,2		
		18	322,5	64,5	306,7	69,6	290,2	75,2	273,2	81,3	252,7	89,2		
900V		Glycol water	-12	132,8	57,9	126,0	63,6	118,9	69,9	111,2	76,7			
	-10		144,9	58,4	137,9	64,1	130,3	70,3	122,3	77,3				
	-8		157,5	59,2	149,6	64,9	141,6	71,2	133,1	78,1				
	-4		184,0	60,9	175,0	66,6	165,6	73,0	155,7	79,9	143,5	89,2		
	0	214,7	62,9	203,9	68,6	192,9	75,0	181,6	82,1	167,4	91,4			
	Pure water	5	261,6	66,1	249,0	72,0	235,3	78,4	221,5	85,5	204,3	94,9		
		7	278,9	67,3	265,5	73,2	250,9	81,5	236,3	86,9	218,0	96,2		
		12	325,4	70,8	309,3	76,8	292,5	83,3	275,4	90,6	254,3	100,0		
		15	355,7	73,2	337,8	79,2	319,3	85,8	300,3	93,0	277,8	102,3		
		18	386,7	75,8	367,4	81,9	347,2	88,5	326,3	95,9	302,2	105,0		
1000V		Glycol water	-12	141,5	63,1	134,4	69,3	126,9	76,3	118,6	84,4			
	-10		155,0	64,0	147,1	70,1	138,8	77,0	130,3	84,9				
	-8		169,0	64,9	160,2	71,1	151,4	78,0	142,1	85,8				
	-4		198,1	67,0	188,3	73,1	177,8	80,0	166,9	87,8	153,7	98,3		
	0	230,4	69,7	219,5	75,6	207,7	82,4	195,3	90,0	179,6	100,6			
	Pure water	5	281,5	73,6	268,2	79,8	253,8	86,6	238,8	94,3	219,9	104,8		
		7	300,8	75,1	286,0	81,3	270,6	89,7	254,5	95,9	234,6	106,4		
		12	350,7	78,8	333,4	85,3	315,2	92,4	296,5	100,2	273,7	110,7		
		15	383,1	81,3	363,6	87,9	343,6	95,1	323,4	103,0	298,9	113,4		
		18	416,5	83,9	395,2	90,6	373,4	97,9	351,6	105,8	325,3	116,2		
1100V		Glycol water	-12	154,1	69,4	145,9	76,3	137,1	83,9	127,7	92,2			
	-10		168,3	70,5	159,4	77,4	150,2	85,0	140,2	93,4				
	-8		183,3	71,7	173,7	78,6	163,8	86,2	153,3	94,5				
	-4		214,4	74,1	203,9	81,1	192,3	88,7	180,4	97,2	165,1	108,2		
	0	248,5	77,1	237,2	84,0	224,5	91,6	211,1	100,0	193,2	111,2			
	Pure water	5	303,6	81,8	289,3	88,8	273,6	96,4	257,3	104,9	236,5	116,2		
		7	324,0	83,5	308,0	90,5	291,5	100,0	273,9	106,7	251,8	118,1		
		12	376,4	87,8	358,2	95,1	338,3	102,9	318,1	111,5	293,0	122,5		
		15	410,6	90,7	389,9	98,0	367,1	106,3	346,2	114,5	319,4	125,3		
		18	445,6	93,6	423,0	101,1	399,5	109,0	375,5	117,5	346,8	128,3		

Pf: Cooling capacity valid for delta T according to operating limits
 Pa: Power input
 Pc: Heating capacity valid for delta T according to operating limits

Mandatory glycol water utilization zone
 Calculation fouling factor 0,0005 m² °C/W
 EUROVENT conditions (EN 14511)

COOLING CAPACITIES



COOLING ONLY models

LD LDC LDH	Evaporator water outlet temperature °C	INLET AIR TEMPERATURE AT THE CONDENSER °C										
		25		30		35		40		46		
		Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	
600V	Glycol water	-12	83,3	38,2	78,7	41,8	73,8	45,3				
		-10	90,1	39,1	85,4	42,7	80,1	46,4	74,0	50,5		
		-8	96,9	40,1	92,1	43,7	86,5	47,6	80,4	51,6		
		-4	112,2	41,6	106,1	45,6	99,9	49,7	93,2	53,9		
		0	128,1	43,3	121,5	47,5	114,3	51,7	106,8	56,2		
	Pure water	5	153,1	46,0	145,3	50,3	136,8	54,8	128,0	59,5	117,6	65,2
		7	163,5	47,0	155,3	51,5	146,1	57,0	136,9	60,7	126,1	66,5
		12	188,6	49,8	178,4	54,2	168,1	58,8	157,8	63,6	146,1	69,4
		15	204,1	51,6	193,3	56,0	182,2	60,6	171,3	65,4		
		18	220,4	53,5	208,7	57,9	196,9	62,5	185,7	67,3		
700V	Glycol water	-12	91,6	43,3	87,1	47,5						
		-10	99,9	44,3	94,5	48,4						
		-8	108,3	45,1	102,4	49,4	96,1	54,0				
		-4	125,8	47,0	119,3	51,4	112,1	56,1	104,6	61,3		
		0	144,4	48,9	137,1	53,5	128,9	58,3	120,7	63,6		
	Pure water	5	175,3	52,2	166,7	57,0	157,3	62,1	147,4	67,5	136,1	74,4
		7	187,1	53,6	177,1	58,4	167,0	65,0	156,7	68,8	145,0	75,8
		12	216,1	57,0	204,6	61,8	193,1	67,0	181,8	72,5	168,9	79,3
		15	234,3	59,3	222,2	64,2	209,8	69,3	197,8	74,8		
		18	253,6	61,7	240,4	66,6	227,3	71,8	214,9	77,4		
702V	Glycol water	-12	97,9	42,3	92,5	46,1	87,0	50,5	80,5	55,3		
		-10	107,3	42,9	101,1	46,8	95,3	51,2	89,1	56,0		
		-8	116,1	43,6	110,0	47,5	103,7	51,9	97,1	56,9		
		-4	135,8	44,9	129,1	49,0	121,7	53,6	114,2	58,6	104,6	65,5
		0	158,1	46,4	150,4	50,6	142,1	55,3	133,6	60,6	122,8	67,5
	Pure water	5	192,8	48,9	183,4	53,2	173,2	58,1	162,8	63,5	150,0	70,6
		7	206,1	49,9	195,4	54,2	184,7	60,5	173,9	64,5	160,1	71,7
		12	239,5	52,5	227,6	57,0	215,0	62,0	202,2	67,5	187,3	74,7
		15	261,2	54,3	248,2	58,8	234,4	63,8	220,7	69,4	204,7	76,6
		18	283,9	56,2	269,7	60,9	254,8	66,0	240,2	71,5	223,3	78,8
800V	Glycol water	-12	109,0	48,6	103,0	53,1	96,4	57,9	88,9	63,2		
		-10	118,9	49,4	112,7	54,1	105,7	59,0	98,1	64,4		
		-8	129,3	50,3	122,5	55,0	115,5	60,1	107,6	65,6		
		-4	151,1	52,0	143,4	56,9	135,4	62,2	126,6	67,9	115,2	75,2
		0	175,2	53,9	167,2	59,1	157,8	64,5	147,9	70,5	135,3	78,0
	Pure water	5	213,0	57,1	202,9	62,3	191,7	68,0	180,1	74,1	165,3	81,8
		7	227,3	58,3	216,0	63,6	204,1	70,6	191,7	75,4	176,3	83,2
		12	263,7	61,5	250,5	66,9	236,8	72,6	222,5	78,8	205,2	86,6
		15	286,9	63,7	272,8	69,1	257,5	74,8	242,3	81,0	223,9	88,7
		18	311,3	66,0	295,6	71,4	279,3	77,1	262,9	83,3	243,4	91,0
900V	Glycol water	-12	131,7	56,7	125,0	62,4	118,1	68,7	110,7	75,6		
		-10	143,2	57,7	136,3	63,3	128,8	69,6	120,9	76,5		
		-8	155,8	58,5	147,9	64,3	139,8	70,6	131,4	77,4		
		-4	181,4	60,4	172,5	66,3	162,9	72,7	153,3	79,6	141,2	88,8
		0	210,7	62,7	200,7	68,6	189,9	75,0	178,4	82,2	164,4	91,4
	Pure water	5	257,2	66,5	243,6	72,3	230,3	79,0	216,6	86,1	199,8	95,4
		7	272,8	67,7	259,7	73,8	245,8	81,7	230,8	87,7	212,9	97,0
		12	317,7	71,7	301,3	77,8	284,2	84,6	267,7	91,8	247,6	101,0
		15	345,9	74,4	328,1	80,5	310,0	87,3	291,7	94,5	269,9	103,6
		18	375,3	77,3	356,0	83,5	336,3	90,3	317,0	97,3	293,4	106,5
1000V	Glycol water	-12	140,2	62,5	132,9	68,6	125,6	75,6	117,5	83,5		
		-10	153,2	63,4	145,2	69,6	137,1	76,6	128,7	84,5		
		-8	166,8	64,4	158,0	70,7	149,2	77,7	140,0	85,5		
		-4	195,3	66,8	185,2	73,0	174,5	80,0	164,1	87,9	151,1	98,4
		0	226,1	69,7	215,8	75,9	203,9	82,8	191,5	90,6	176,1	101,3
	Pure water	5	274,5	74,1	262,2	80,5	247,7	87,5	232,7	95,5	214,6	106,0
		7	294,4	75,9	279,0	82,2	263,7	91,0	248,0	97,2	228,6	107,8
		12	341,2	80,2	323,7	86,9	306,1	94,1	287,9	102,0	266,2	112,4
		15	371,6	83,1	352,4	89,8	333,0	97,1	313,4	105,1	290,1	115,5
		18	402,7	86,1	382,0	93,0	360,9	100,3	339,8	108,3	315,2	118,6
1100V	Glycol water	-12	151,1	68,8	143,8	75,9	135,2	83,5	125,8	91,9		
		-10	165,9	70,2	157,2	77,2	148,0	84,8	138,0	93,2		
		-8	180,5	71,6	171,1	78,5	161,0	86,2	150,7	94,5		
		-4	210,7	74,3	200,3	81,4	188,7	89,2	176,8	97,6	162,0	108,7
		0	244,4	77,8	232,6	84,7	219,8	92,4	206,2	100,8	187,2	111,8
	Pure water	5	296,3	82,9	282,3	90,2	266,6	97,9	250,4	106,6	229,8	117,7
		7	315,9	84,9	300,0	92,1	283,6	102,0	266,4	108,5	244,8	119,6
		12	365,6	89,9	347,2	97,4	328,0	105,3	308,2	113,8	283,9	124,7
		15	397,5	93,2	377,1	100,7	356,0	108,5	334,5	117,1	308,7	127,8
		18	430,1	96,6	407,8	104,1	385,0	112,0	362,0	120,4		

Pf: Cooling capacity valid for delta T according to operating limits
 Pa: Power input
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Mandatory glycol water utilization zone
 Calculation fouling factor 0,0005 m² °C/W
 EUROVENT conditions (EN 14511)