



PRO-DIALOG

AQUAFORCE®

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Quality and Environment Management Systems Approval

30XW- 30XWH

Nominal cooling capacity 275-1765 kW
Nominal heating capacity 320-1875 kW

The 30XW liquid chillers are the premium solution for industrial and commercial applications where installers, consultants and building owners require optimal performances and maximum quality.

The 30XW liquid chillers are designed to meet current and future requirements in terms of energy efficiency, flexibility of use and compactness. They use the most reliable technologies available today:

- Twin-rotor screw compressors with a variable capacity valve
- Single refrigerant R-134a
- Pro-Dialog control system
- Flooded heat exchangers that are mechanically cleanable

To meet to all environmental and economic requirements, the 30XW is available in two efficiency classes:

- Standard-efficiency 30XW units that offer an optimised balance of technical and economical aspects, while at the same time boasting superior energy efficiency.
- High-efficiency 30XW-P units that offer unequalled energy efficiency to satisfy the most stringent demands of building owners wanting to reduce operating costs to the minimum.

The 30XW Aquaforce range is also split into two versions:
- 30XW for air conditioning and refrigeration applications
- 30XWH for heating applications

These two versions provide the following performances:

- High heating temperature, allowing the 30XWH Aquaforce to supply water with a condenser leaving water temperature of +63°C (option 150)
- Low temperature, allowing the 30XW Aquaforce to operate with an evaporator leaving glycol temperature down to -6°C (option 5) or -12°C (option 6).

Features and advantages

Superior operating economy

- Full load and part load energy efficiency that surpasses the industry average:
 - Eurovent energy efficiency class "A"
 - EER of up to 6.15 kW/kW (30XW-P)
 - ESEER of up to 8.0 kW/kW (30XW-P)
 - New twin-rotor screw compressor equipped with a high-efficiency motor and a variable capacity valve that permits exact matching of the cooling capacity to the load.
 - Flooded multi-pipe evaporator and condenser for increased heat exchange efficiency.
 - Electronic expansion device permitting operation at a lower condensing pressure and improved utilisation of the evaporator heat exchange surface.
 - Economizer system with electronic expansion device for increased cooling capacity (30XW-P).

Low operating sound levels

- Compressors
 - Silencers on the discharge line.
 - Silencers on the economiser return line.
 - Acoustic insulation on the components that are most subjected to radiated noise.

Easy and fast installation

- Compact design
 - The 30XW units are designed to offer the most compact dimensions on the market.
 - With a width of approximately 1 m up to 1500 kW the units can pass through standard door openings and only require minimum floor space in the plant room.
- Simplified electrical connections
 - Main disconnect switch with high trip capacity
 - Transformer to supply the integrated control circuit (400/24 V)
- Simplified hydronic connections
 - Victaulic connections on the evaporator and condenser
 - Practical reference marks for entering and leaving water connections
 - Possibility to reverse the heat exchanger water inlet and outlet at the factory
 - Possibility to modify the number of heat exchanger passes
- Fast commissioning
 - Systematic factory operation test before shipment
 - Quick-test function for step-by-step verification of the instruments, expansion devices and compressors

Environmental care

- R-134a refrigerant
 - Refrigerant of the HFC group with zero ozone depletion potential
- Leak-tight refrigerant circuit
 - Reduction of leaks as no capillary tubes and flare connections are used
 - Verification of pressure transducers and temperature sensors without transferring refrigerant charge
 - Discharge line shut-off valve and liquid line service valve for simplified maintenance.

Absolute reliability

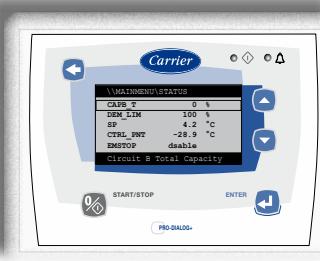
- Screw compressors
 - Industrial-type screw compressors with oversized bearings and motor cooled by suction gas.
 - All compressor components are easily accessible on site minimising down-time.
 - Protection increased by an electronic board.
- Refrigerant circuit
 - Two independent refrigerant circuits (from 1000 kW upwards); the second one automatically takes over, if the first one develops a fault, maintaining partial cooling under all circumstances.
- Evaporator
 - Electronic paddle-free flow switch. Auto-setting according to cooler size and fluid type.
- Auto-adaptive control
 - Control algorithm prevents excessive compressor cycling (Carrier patent)
 - Automatic compressor unloading in case of abnormally high condensing pressure.
- Exceptional endurance tests
 - Partnerships with specialised laboratories and use of limit simulation tools (finite element calculation) for the design of critical components.
 - Transport simulation test in the laboratory on a vibrating table and then on an endurance circuit (based on a military standard).

Pro-Dialog control

- Pro-Dialog combines intelligence with operating simplicity. The control constantly monitors all machine parameters and precisely manages the operation of compressors, electronic expansion devices and of the evaporator water pump for optimum energy efficiency.
- Energy management
 - Internal time schedule clock: controls chiller on/off times and operation at a second set-point
 - Set-point reset based on the return water temperature
 - Master/slave control of two chillers operating in parallel with operating time equalisation and automatic change-over in case of a unit fault.
- Ease-of-use
 - User interface with large touch screen (120 x 99 mm) for intuitive access to the operating parameters. The information is in clear text and can be displayed in local language (please contact your distributor).

Operator interfaces for 30XW 252-1762 units

- Pro-Dialog + interface (standard)
The standard interface includes five keys to allow Pro-Dialog+ navigation using the intuitive menu structure. All information is thus quickly accessible.



- Pro-Dialog Touch Screen interface (option 158)
This very user-friendly operator interface with its touch screen is available as an option. The information is easily accessible on the large-format touch screen as clear text in the selected language and allows access to all operating parameters. There is also the possibility to personalise up to eight screens.



Remote management (standard)

The 30XW is equipped with an RS485 serial port that offers multiple remote control, monitoring and diagnostic possibilities. Carrier offers a vast choice of control products, specially designed to control, manage and supervise the operation of an air conditioning system. Please consult your Carrier representative for more information.

The 30XW also communicates with other building management systems via optional communication gateways.

A connection terminal allows remote control of the 30XW by wired cable:

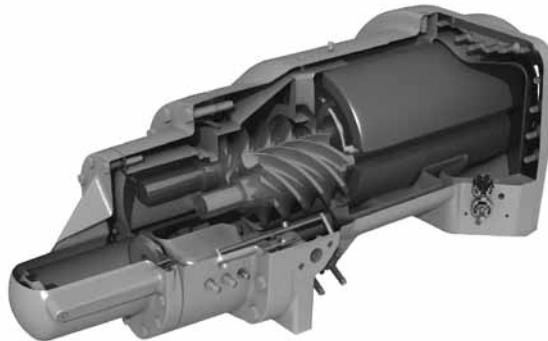
- Start/stop: opening of this contact will shut down the unit
- Dual set-point: closing of this contact activates a second set-point (example: unoccupied mode)
- Demand limit: closing of this contact limits the maximum chiller capacity to a predefined value
- Operation indication: this volt-free contact indicates that the chiller is operating (cooling load) or that it is ready to operate (no cooling load)
- Alert indication: this volt-free contact indicates the necessity to carry out a maintenance operation or the presence of a minor fault
- Alarm indication: this volt-free contact indicates the presence of a major fault that has led to the shut-down of one or several refrigerant circuits

Remote management (EMM option)

The Energy Management Module offers extended remote control possibilities:

- Room temperature: permits set-point reset based on the building indoor air temperature (with Carrier thermostat)
- Set point reset: ensures reset of the cooling set-point based on a 4-20 mA or 0-10 V signal
- Demand limit: permits limitation of the maximum chiller power or current based on a 0-10 V signal
- Demand limit 1 and 2: closing of these contacts limits the maximum chiller power or current to two predefined values
- User safety: this contact can be used for any customer safety loop; opening of the contact generates a specific alarm
- Ice storage end: when ice storage has finished, this input permits return to the second set-point (unoccupied mode)
- Time schedule override: closing of this contact cancels the time schedule effects
- Out of service: this signal indicates that the chiller is completely out of service
- Chiller capacity: this analogue output (0-10 V) gives an immediate indication of the chiller capacity

New generation 06T screw compressor



The new generation of the Carrier 06T screw compressors benefits from Carrier's long experience in the development of twin-rotor screw compressors. The compressor is equipped with bearings with oversized rollers, oil pressure lubricated for reliable and durable operation, even at maximum load.

A variable control valve controlled by the oil pressure permits infinitely variable capacity.

Among the other advantages: if a fault occurs e.g. if the condenser is fouled or at very high water temperature, the compressor does not switch off, but continues operation with a reduced capacity (unloaded mode).

The silencer in the discharge line considerably reduces discharge gas pulsations for much quieter operation.

The condenser includes an oil separator that minimises the amount of oil in circulation in the refrigerant circuit and re-directs it to the compressor function.

Main options and accessories

Options	No.	Description	Advantages	Use
Medium-temperature brine solution	5	Medium-temperature glycol solution production down to -6°C	Covers specific applications such as ice storage and industrial processes	Only for: 30XW 0512, 0562, 1012, 1152
Low-temperature brine solution	6	Low-temperature glycol solution production down to -12°C	Covers specific applications such as ice storage and industrial processes	As above
Unit supplied in two assembled parts	51	Unit supplied in two assembled parts. The unit is equipped with flanges that allow disassembly of the unit on site.	Facilitates installation in plant rooms with limited access	Only for: 30XW 1312, 1462, 1612, 1652, 1702, 1762
Single power connection point	81	Power connection of the unit via one main supply connection	Quick and easy installation	30XW 1002-1762
No disconnect switch/but with short-circuit protection	82A	Unit without disconnect switch, but with short-circuit protection device	Permits an external electrical disconnect system for the unit (to be field-supplied). Short-circuit protection of the unit remains.	30XW 252-1762
Evaporator pump electrical power/control circuit	84	Unit equipped with an electrical power/control circuit for single evaporator pumps	Quick and easy installation	30XW 252-1252
Dual evaporator pump electrical power/control circuit	84D	Unit equipped with an electrical power/control circuit for dual evaporator pumps	Quick and easy installation	30XW 252-1252
Condenser pump electrical power/control circuit	84R	Unit equipped with an electrical power/control circuit for single condenser pumps	Quick and easy installation	30XW 252-1252
Condenser insulation	86	Thermal condenser insulation	Allows configuration with special installation criteria (hot parts insulated).	30XW 252-1762
Service valve set	92	Valve set consisting of liquid line valve (evaporator inlet), economiser return line valve and compressor suction line valve to isolate the various refrigerant circuit components.	Simplified service and maintenance	30XW 252-1762
Evaporator with one pass	100C	Evaporator with one pass on the water-side. Evaporator inlet and outlet on opposite sides.	Quick and easy installation. Reduced evaporator pressure losses.	30XW 252-1762
Condenser with one pass	102C	Condenser with one pass on the water-side. Condenser inlet and outlet on opposite sides.	Quick and easy installation. Reduced condenser pressure losses.	30XW 252-1762
21 bar evaporator	104	Reinforced evaporator for extension of the maximum water-side service pressure to 21 bar	Covers applications with a high water column (high buildings)	30XW 252-1762
21 bar condenser	104A	Reinforced condenser for extension of the maximum water-side service pressure to 21 bar	Covers applications with a high water column (high buildings)	30XW 252-1762
Reversed evaporator water connections	107	Evaporator with reversed water inlet/outlet	Simplification of the water piping	30XW 252-1762
Reversed condenser water connections	107A	Condenser with reversed water inlet/outlet	Simplification of the water piping	30XW 252-1762
JBus gateway	148B	Two-directional communications board, complies with JBus protocol	Easy connection by communication bus to a building management system	30XW 252-1762
BacNet gateway	148C	Two-directional communications board, complies with BacNet protocol	Easy connection by communication bus to a building management system	30XW 252-1762
LON gateway	148D	Two-directional communications board, complies with LON protocol	Easy connection by communication bus to a building management system	30XW 252-1762
High condensing temperature	150	Increased condenser leaving water temperature up to 63°C. To ensure control of the condenser leaving water temperature, this option must be fitted for 30XWH units (but not for 30XW units).	Allows applications with high condensing temperature (for heat reclaim or dry cooler applications)	30XW 252-1762
Condensing temperature limitation	150B	Limitation of the maximum condenser leaving water temperature to 45°C. Modification on the unit name plate to reflect the reduced power input and current values.	Avoids oversizing of the protection elements and the power cables.	30XW 252-1762
Control for low condensing temperature systems	152	Output signal (0-10 V) to control the condenser water inlet valve.	Used for applications with cold water at condenser inlet (well water). In this case the valve controls the water entering temp. to maintain an acceptable condensing pressure.	30XW 252-1762
Energy Management Module EMM	156	Remote control module. Additional contacts for an extension of the unit control functions.	Easy connection by wired connection to a building management system	30XW 252-1762
Touch Screen interface	158	Touch Screen interface	User-friendly, intuitive large interface with touch screen technology (120 x 99 mm)	30XW 252-1762
Code compliance for Switzerland in addition to PED code	197	Additional tests on the water heat exchangers. Additional supply of PED documents, supplementary certificates and test certificates.	Conformance with Swiss regulations	30XW 252-1762
Code compliance for Australia	200	Heat exchanger approved in accordance with the Australian code.	Conformance with Australian regulations	30XW 252-1762
Low noise level (-3 dB(A) compared to standard unit)	257	Evaporator and suction piping sound insulation	3 dB(A) quieter than a unit without this option	30XW 402-1762
Thermal compressor insulation	271	Thermal compressor insulation	Prevents condensation forming on the compressor (due to the ambient air)	30XW 252-1762
Options	Description	Advantages	Use	
CCN JBus gateway	See option 148B	See option 148B	30XW 252-1762	
CCN BacNet gateway	See option 148C	See option 148C	30XW 252-1762	
CCN LON Talk gateway	See option 148D	See option 148D	30XW 252-1762	
Energy Management Module EMM	See option 156	Easy connection by wired connection to a building management system	30XW 252-1762	
Lead-lag kit	Supplementary water outlet temperature sensor kit, field-installed, allows master/slave operation of two chillers connected in parallel.	Optimised operation of two chillers connected in parallel with operating time balancing.	30XW 252-1762	
Water connection kit for welded connections	Victaulic piping connections with welded joints.	Easy installation	30XW 252-1762	
Water connection kit for flanged connections	Victaulic piping connections with flanged joints.	Easy installation	30XW 252-1762	
Very low noise level (-20 dB(A) compared to standard unit)	Sound absorbing cabinet around the unit	Significantly quieter (-20 dB(A)) than a unit without this option	30XW 252-1252, 1352, 1452, 1552	

Physical data, standard units

Standard-efficiency units

High-efficiency units

* Standard Eurovent conditions, cooling: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C, fouling factor = 0 m² K/W

** Standard Eurovent conditions, heating: condenser entering/leaving water temperature = 10°C/7°C, evaporator entering/leaving water temperature = -10°C/-5°C, fouling factor = 10 W/m²K.

** Conditions in cooling and heating mode: evaporator entering/leaving water temperature = 10°C/7°C, condenser entering/leaving water temperature = 40°C/45°C, fouling factor = 0 m² K/W.
 *** 10⁻¹² W in accordance with ISO 9614-1

\dagger in a free field

‡ Weights are c

[†] Weights are guidelines only. The refrigerant charge is given on the unit nameplate.

Electrical data, standard units

Standard-efficiency units

30XW-/30XWH	252	302	352	402	452	552	602	652	702	802	852	1002	1052	1152	1252	1352	1452	1552	1652	1702
Power circuit																				
Nominal power supply	V-ph-Hz	400-3-50																		
Voltage range	V	360-440																		
Control circuit																				
Nominal start-up current*																				
Circuit A	A	233	233	303	414	414	414	414	587	587	587	587	414	414	414	587	587	587	587	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	414	414	414	414	587	587	587	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	558	574	574	747	780	801	819	
Maximum start-up current**																				
Circuit A	A	233	233	303	414	414	414	414	587	587	587	587	414	414	414	587	587	587	587	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	414	414	414	414	587	587	587	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	631	656	656	829	882	904	938	
Cosine phi																				
Nominal***		0.83	0.85	0.83	0.87	0.88	0.89	0.89	0.88	0.89	0.90	0.90	0.88	0.89	0.89	0.88	0.88	0.89	0.9	
Maximum****		0.89	0.89	0.88	0.90	0.90	0.91	0.91	0.90	0.91	0.92	0.92	0.90	0.91	0.91	0.90	0.90	0.91	0.92	
Maximum power input†																				
Circuit A	kW	76	89	97	128	135	151	151	184	200	223	223	150	151	151	184	184	200	223	
Circuit B	kW	-	-	-	-	-	-	-	-	-	-	-	135	151	151	151	184	200	223	
Option 81	kW	-	-	-	-	-	-	-	-	-	-	-	284	301	301	334	367	399	447	
Nominal current drawn***																				
Circuit A	A	84	96	113	136	144	162	162	193	214	232	232	162	162	162	193	193	214	232	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	144	162	162	162	193	214	232	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	306	324	324	355	386	427	446	
Maximum current drawn (Un)†																				
Circuit A	A	123	145	160	206	217	242	242	295	317	351	351	242	242	242	295	295	317	351	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	217	242	242	242	295	317	351	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	459	484	484	537	590	634	702	
Maximum current drawn (Un -10%)****																				
Circuit A	A	138	162	178	218	230	260	260	304	340	358	358	260	260	260	304	304	340	358	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	230	260	260	304	340	358	340	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	490	520	520	564	608	680	716	
Maximum power input with option 150B†																				
Circuit A	kW	67	79	87	114	118	133	134	173	183	205	205	133	133	133	173	173	183	207	
Circuit B	kW	-	-	-	-	-	-	-	-	-	-	-	118	133	133	133	173	183	207	
Option 81	kW	-	-	-	-	-	-	-	-	-	-	-	251	265	265	305	346	365	414	
Maximum current drawn (Un) with option 150B†																				
Circuit A	A	109	129	142	183	191	212	212	278	290	325	325	212	212	212	278	278	290	325	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	191	212	212	212	278	290	325	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	403	424	424	490	556	580	650	

High-efficiency units

30XW-P/30XWHP	512	562	712	812	862	1012	1162	1312	1462	1612	1762
Power circuit											
Nominal power supply	V-ph-Hz	400-3-50									
Voltage range	V	360-440									
Control circuit											
Nominal start-up current*											
Circuit A	A	414	414	587	587	587	414	414	587	587	587
Circuit B	A	-	-	-	-	-	414	414	587	587	587
Option 81	A	-	-	-	-	-	556	574	747	801	819
Maximum start-up current**											
Circuit A	A	414	414	587	587	587	414	414	587	587	587
Circuit B	A	-	-	-	-	-	414	414	587	587	587
Option 81	A	-	-	-	-	-	631	656	829	882	904
Cosine phi											
Nominal***		0.88	0.89	0.88	0.89	0.90	0.86	0.87	0.88	0.88	0.90
Maximum****		0.90	0.90	0.90	0.91	0.92	0.89	0.90	0.90	0.90	0.92
Maximum power input†											
Circuit A	kW	135	151	184	200	223	134	151	184	184	200
Circuit B	kW	-	-	-	-	-	134	151	184	200	223
Option 81	kW	-	-	-	-	-	267	301	334	367	447
Nominal current drawn***											
Circuit A	A	144	162	193	214	232	144	162	193	193	214
Circuit B	A	-	-	-	-	-	144	162	193	214	232
Option 81	A	-	-	-	-	-	288	324	355	386	464
Maximum current drawn (Un)†											
Circuit A	A	217	242	295	317	351	217	242	295	295	351
Circuit B	A	-	-	-	-	-	217	242	242	295	351
Option 81	A	-	-	-	-	-	434	484	537	590	634
Maximum current drawn (Un -10%)****											
Circuit A	A	230	260	304	340	358	230	260	304	304	358
Circuit B	A	-	-	-	-	-	230	260	304	340	358
Option 81	A	-	-	-	-	-	460	520	564	608	716
Maximum power input with option 150B†											
Circuit A	kW	118	133	173	183	207	118	133	173	173	207
Circuit B	kW	-	-	-	-	-	118	133	173	173	207
Option 81	kW	-	-	-	-	-	235	265	305	346	414
Maximum current drawn (Un) with option 150B†											
Circuit A	A	191	212	278	290	325	191	212	278	278	325
Circuit B	A	-	-	-	-	-	191	212	212	278	325
Option 81	A	-	-	-	-	-	382	424	490	556	650

* Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values obtained at standard Eurovent unit operating conditions: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C.

** Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values obtained at operation with maximum unit power input.

*** Values obtained at standard Eurovent unit operating conditions: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C

**** Values obtained at operation with maximum unit power input.

† Values obtained at operation with maximum unit power input. Values given on the unit name plate.

Physical data, units for high condensing temperatures

Standard-efficiency units (option 150)

30XW-/30XWH	252	302	352	402	452	552	602	652	702	802‡	852‡	1002	1052	1152	1252	1352	1452	1552‡	1652‡	1702‡	
Nominal cooling capacity*	kW	288	316	354	426	457	511	527	647	714	-	-	1003	1059	1150	1250	1336	1442	-	-	
Power input	kW	55.8	62.2	70.2	91.9	92.2	104	104	132	144	-	-	195	208	216	232	263	284	-	-	
EER	kW/kW	5.16	5.08	5.04	4.64	4.96	4.92	5.07	4.89	4.96	-	-	5.13	5.09	5.31	5.38	5.08	5.08	-	-	
Eurovent class, cooling	A	A	B	C	B	B	A	B	B	-	-	A	A	A	A	A	A	-	-		
Heating capacity**	kW	316	348	391	458	485	543	579	687	757	-	-	1054	1115	1245	1307	1407	1521	-	-	
Power input	kW	65.9	73.9	83.7	105.3	105.5	119	123	150	164	-	-	223	238	255	265	298	323	-	-	
Coefficient of performance (COP)	kW/kW	4.79	4.71	4.67	4.35	4.49	4.51	4.62	4.53	4.60	-	-	4.66	4.66	4.82	4.94	4.64	4.67	-	-	
Eurovent class, heating	A	A	A	B	A	A	A	A	A	-	-	A	A	A	A	A	A	-	-		
Nominal cooling capacity***	kW	236	259	289	308	331	370	429	466	516	-	-	722	761	920	914	956	1036	-	-	
Power input	kW	87.0	97.7	111	135	135	152	164	192	211	-	-	285	304	339	340	382	416	-	-	
EER	kW/kW	2.71	2.65	2.61	2.29	2.45	2.43	2.62	2.42	2.44	-	-	2.54	2.51	2.72	2.69	2.50	2.49	-	-	
Heating capacity***	kW	315	348	391	431	454	508	578	641	708	-	-	980	1038	1227	1223	1303	1414	-	-	
Coefficient of performance (COP)	kW/kW	3.62	3.56	3.52	3.20	3.29	3.30	3.47	3.31	3.35	-	-	3.40	3.39	3.58	3.60	3.36	3.37	-	-	
Operating weight	kg	2054	2059	2083	2575	2575	2613	2644	3407	3438	3462	3672	5370	5408	5705	7233	7554	7622	7670	9006	9032
Sound levels																					
Sound power level****	dB(A)	252	302	352	402	452	552	602	655	705	-	-	1002	1052	1152	1255	1355	1455	-	-	
Sound pressure level at 1 m†	dB(A)	78	78	78	82	82	82	84	84	84	-	-	84	84	84	86	86	86	-	-	
Sound levels with option 257																					
Sound power level****	dB(A)	-	-	-	399	449	549	599	652	702	-	-	999	1049	1149	1252	1352	1452	-	-	
Sound pressure level at 1 m†	dB(A)	-	-	-	78	78	78	78	81	81	-	-	80	80	80	83	83	83	-	-	
Compressors																					
Circuit A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Circuit B	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	
Refrigerant charge††																					
Circuit A	kg	84	80	78	82	82	82	82	145	140	135	140	85	85	105	120	115	110	105	195	195
Circuit B	kg	-	-	-	-	-	-	-	-	-	-	-	85	85	105	120	115	110	105	195	195
Oil charge																					
		SW220																			
Circuit A	l	23,5	23,5	23,5	32	32	32	36	36	36	36	36	32	32	32	36	36	36	36	36	
Circuit B	l	-	-	-	-	-	-	-	-	-	-	-	32	32	32	32	36	36	36	36	
Capacity control																					
Minimum capacity	%	30	30	30	30	30	30	30	15	15	15	15	10	10	10	10	10	10	10	10	
Evaporator																					
Net water volume	l	64	64	64	72	72	72	72	109	109	109	98	185	185	214	307	307	307	363	363	
Water inlet/outlet connections (Victaulic)	in	5	5	5	5	5	5	5	6	6	6	6	6	6	8	8	8	8	8	8	
Drain and vent connections (NPT)	in	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	
Max. water-side operating pressure	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Condenser																					
Net water volume	l	55	55	55	80	80	80	80	80	80	80	80	141	238	238	238	347	347	347	426	426
Water inlet/outlet connections (Victaulic)	in	5	5	5	5	5	5	5	6	6	6	6	8	8	8	8	8	8	8	8	
Drain and vent connections (NPT)	in	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	
Max. water-side operating pressure	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	

High-efficiency units (option 150)

30XW-P/30XWH	512	562	712	812	862‡	1012	1162	1312	1462	1612	1762‡	
Nominal cooling capacity*	kW	520	580	727	783	-	1029	1202	1327	1460	1638	
Power input	kW	95.8	105	138	153	-	195	215	245	278	302	
EER	kW/kW	5.43	5.51	5.28	5.13	-	5.27	5.60	5.41	5.25	5.42	
Eurovent class, cooling	A	A	A	A	A	-	A	A	A	A	-	
Heating capacity**	kW	562	625	794	861	-	1117	1286	1443	1595	1781	
Power input	kW	112.6	124	162	180	-	229	252	289	327	356	
Coefficient of performance (COP)	kW/kW	4.83	4.86	4.90	4.75	-	4.86	5.06	4.88	4.72	4.81	
Eurovent class, heating	A	A	A	A	A	-	A	A	A	A	-	
Nominal cooling capacity***	kW	418	466	592	641	-	827	958	1087	1184	1332	
Power input	kW	150	165	215	240	-	305	336	382	433	473	
EER	kW/kW	2.80	2.83	2.76	2.67	-	2.71	2.85	2.85	2.74	2.81	
Heating capacity***	kW	553	616	787	859	-	1105	1264	1433	1577	1760	
Coefficient of performance (COP)	kW/kW	3.60	3.61	3.67	3.55	-	3.61	3.73	3.67	3.54	3.59	
Operating weight	kg	2981	3020	4072	4117	4145	6872	6950	9278	9614	11225	11279
Sound levels												
Sound power level****	dB(A)	99	99	102	102	-	102	102	105	105	105	-
Sound pressure level at 1 m†	dB(A)	78	78	84	84	-	84	84	86	86	86	-
Sound levels with option 257												
Sound power level****	dB(A)	96	96	99	99	-	99	99	102	102	102	-
Sound pressure level at 1 m†	dB(A)	78	78	81	81	-	80	80	83	83	83	-
Compressors												
Circuit A	1	1	1	1	1	1	1	1	1	1	1	-
Circuit B	-	-	-	-	-	-	1	1	1	1	1	-
Refrigerant charge††												
Circuit A	kg	130	130	180	175	170	120	120	205	205	240	250
Circuit B	kg	-	-	-	-	-	120	120	205	205	240	250
Oil charge												
		SW220										
Circuit A	l	32	32	36	36	36	32	32	36	36	36	36
Circuit B	l	-	-	-	-	-	32	32	32	36	36	36
Capacity control												
Minimum capacity	%	30	30	15	15	15	10	10	10	10	10	10
Evaporator												
Net water volume	l	106	106	154	154	154	307	307	363	363	473	473
Water inlet/outlet connections (Victaulic)	in	6	6	8	8	8	8	8	8	8	10	10
Drain and vent connections (NPT)	in	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Max. water-side operating pressure	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Condenser												
Net water volume	l	112	112	165	165	165	347	347	497	497	623	623
Water inlet/outlet connections (Victaulic)	in	6	6	8	8	8	8	8	8	10	10	10

Electrical data, units for high condensing temperatures

Standard-efficiency units (option 150)

30XW-/30XWH	252	302	352	402	452	552	602	652	702	802	852	1002	1052	1152	1252	1352	1452	1552	1652	1702
Power circuit																				
Nominal power supply																				
Nominal power supply	V-ph-Hz	400-3-50																		
Voltage range	V	360-440																		
Control circuit																				
24 V via the built-in transformer																				
Nominal start-up current*																				
Circuit A	A	303	388	388	587	587	587	587	772	772	772	772	587	587	772	772	772	772	772	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	587	587	772	772	772	772	772	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	757	757	757	965	986	1004	1004	
Maximum start-up current**																				
Circuit A	A	303	388	388	587	587	587	587	772	772	772	772	587	587	772	772	772	772	772	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	587	587	587	772	772	772	772	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	887	887	887	1172	1172	1202	1232	
Cosine phi																				
Nominal***		0.79	0.78	0.79	0.83	0.85	0.85	0.85	0.84	0.86	0.87	0.87	0.85	0.85	0.85	0.86	0.85	0.86	0.87	
Maximum****		0.88	0.87	0.88	0.90	0.90	0.91	0.91	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Maximum power input†																				
Circuit A	kW	97	111	122	156	173	191	191	249	268	286	286	191	191	191	252	252	271	290	
Circuit B	kW	-	-	-	-	-	-	-	-	-	-	-	173	191	191	191	252	271	290	
Option 81	kW	-	-	-	-	-	-	-	-	-	-	-	364	382	382	443	504	542	580	
Nominal current drawn***																				
Circuit A	A	95	109	125	150	162	171	171	193	214	232	232	171	171	171	210	210	230	250	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	162	171	171	171	210	230	250	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	333	342	342	381	420	460	500	
Maximum current drawn (Un)†																				
Circuit A	A	160	185	200	250	275	300	300	400	430	460	460	300	300	300	400	400	430	460	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	275	300	300	300	400	430	460	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	575	600	600	700	800	860	920	
Maximum current drawn (Un -10%)****																				
Circuit A	A	176	206	224	270	300	330	330	419	455	476	476	330	330	330	419	419	455	476	
Circuit B	A	-	-	-	-	-	-	-	-	-	-	-	300	330	330	330	419	455	476	
Option 81	A	-	-	-	-	-	-	-	-	-	-	-	630	660	660	749	838	910	952	

High-efficiency units (option 150)

30XW-P/30XWHP	512	562	712	812	862	1012	1162	1312	1462	1612	1762
Power circuit											
Nominal power supply											
V-ph-Hz											
400-3-50											
Voltage range											
V											
360-440											
Control circuit											
24 V via the built-in transformer											
Nominal start-up current*											
Circuit A	A	587	587	772	772	772	587	587	772	772	772
Circuit B	A	-	-	-	-	-	587	587	772	772	772
Option 81	A	-	-	-	-	-	749	757	965	986	1004
Maximum start-up current**											
Circuit A	A	587	587	772	772	772	587	587	772	772	772
Circuit B	A	-	-	-	-	-	587	587	772	772	772
Option 81	A	-	-	-	-	-	862	887	1172	1172	1232
Cosine phi											
Nominal***		0.88	0.88	0.84	0.86	0.87	0.87	0.88	0.86	0.85	0.86
Maximum****		0.91	0.92	0.90	0.90	0.91	0.92	0.91	0.91	0.91	0.91
Maximum power input†											
Circuit A	kW	173	191	194	209	223	173	191	252	252	271
Circuit B	kW	-	-	-	-	-	173	191	252	271	290
Option 81	kW	-	-	-	-	-	346	382	443	504	580
Nominal current drawn***											
Circuit A	A	162	171	193	214	232	162	171	210	210	250
Circuit B	A	-	-	-	-	-	162	171	210	230	250
Option 81	A	-	-	-	-	-	324	342	381	420	500
Maximum current drawn (Un)†											
Circuit A	A	275	300	400	430	460	275	300	400	400	460
Circuit B	A	-	-	-	-	-	275	300	400	430	460
Option 81	A	-	-	-	-	-	550	600	700	800	920
Maximum current drawn (Un -10%)****											
Circuit A	A	300	330	419	455	476	300	330	419	419	476
Circuit B	A	-	-	-	-	-	300	330	419	455	476
Option 81	A	-	-	-	-	-	600	660	749	838	952

* Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values based on standard Eurovent unit operating conditions: evaporator entering/leaving water temp. = 12°C/7°C, condenser entering/leaving water temp. = 30°C/35°C.

** Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values obtained at operation with maximum unit power input.

*** Values based on standard Eurovent unit operating conditions: evaporator entering/leaving water temp. = 12°C/7°C, condenser entering/leaving water temp. = 30°C/35°C.

**** Values obtained at operation with maximum unit power input.

† Values obtained at operation with maximum unit power input. Values given on the unit name plate.

Physical data, low-temperature units

Standard and high-efficiency 30XW-30XWH units (options 5 and 6)

Reference number	Option 5 (medium temperature)				Option 6 (low temperature)			
	P0512	P0562	P1012	-1152	P0512	P0562	P1012	-1152
Nominal cooling capacity*	kW	298	332	626	705	222	245	452
Power input	kW	85	93	173	193	80	87	163
EER	kW/kW	3.49	3.56	3.62	3.66	2.76	2.81	2.78
Heating capacity	kW	376	417	784	880	295	325	601
Coefficient of performance (COP)	kW/kW	4.40	4.47	4.53	4.57	3.67	3.72	3.69
Nominal cooling capacity**	kW	316	354	668	760	245	271	505
Power input	kW	87	95	176	196	82	89	167
EER	kW/kW	3.65	3.72	3.80	3.87	3.00	3.04	3.03
Heating capacity	kW	395	440	827	938	320	352	657
Coefficient of performance (COP)	kW/kW	4.56	4.63	4.71	4.78	3.91	3.95	3.94

Option 5

* Values based on 25% ethylene glycol, evaporator entering/leaving water temperatures of -2°C/-6°C and condenser entering/leaving water temperatures of 30°C/35°C.

** Values based on 24% propylene glycol, evaporator entering/leaving water temperatures of +1°C/-3°C and condenser entering/leaving water temperatures of 30°C/35°C.

Note: Evaporator with 2 pass configuration with water inlet and outlet on the same side.

Option 6

* Values based on 35% ethylene glycol, evaporator entering/leaving water temperatures of -8°C/-12°C and condenser entering/leaving water temperatures of 30°C/35°C.

** Values based on 30% propylene glycol, evaporator entering/leaving water temperatures of -4°C/-8°C and condenser entering/leaving water temperatures of 30°C/35°C.

Note: Evaporator with 3 pass configuration with water inlet and outlet on opposite sides.

Electrical data, low-temperature units

Standard and high-efficiency 30XW-30XWH units (options 5 and 6)

Reference number	Options 5 and 6			
	P0512	P0562	P1012	-1152
Power circuit				
Nominal power supply V-ph-Hz 400-3-50				
Voltage range	V	360-440		
Control circuit 24 V via the built-in transformer				
Nominal start-up current*				
Circuits A/B	A	587/-	587/-	587/587
Option 81	A	-	-	749
				757
Maximum start-up current**				
Circuits A/B	A	587/-	587/-	587/587
Option 81	A	-	-	862
				887
Cosine phi				
Nominal***		0.88	0.88	0.87
Maximum****		0.91	0.92	0.91
Maximum power input†				
Circuits A/B	kW	173/-	191/-	173/173
Option 81	kW	-	-	346
				382
Nominal current drawn***				
Circuits A/B	A	162/-	171/-	162/162
Option 81	A	-	-	324
				342
Maximum current drawn (Un)†				
Circuits A/B	A	275/-	300/-	275/275
Option 81	A	-	-	550
				600
Maximum current drawn (Un -10%)****				
Circuits A/B	A	300/-	330/-	300/300
Option 81	A	-	-	600
				660

* Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values obtained at standard Eurovent unit operating conditions: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C.

** Instantaneous start-up current (maximum operating current of the smallest compressor(s) + locked rotor current or reduced start-up current of the largest compressor). Values obtained at operation with maximum unit power input.

*** Values obtained at standard Eurovent unit operating conditions: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C. Maximum values obtained at operation with maximum unit power input.

**** Values obtained at operation with maximum unit power input.

† Values obtained at operation with maximum unit power input. Values given on the unit name plate.

Notes, electrical data and operating conditions 30XW

- As standard
30XW 252 to 862 units have a single power connection point located immediately upstream of the main disconnect switch.
30XW 1002 to 1762 units have two connection points located immediately upstream of the main disconnect switches.
- The control box includes the following standard features:
 - One main disconnect switch per circuit*
 - Starter and motor protection devices for each compressor
 - Anti-short cycle protection devices*
 - Control devices
- Field connections:
All connections to the system and the electrical installations must be in full accordance with all applicable codes.
- The Carrier 30XW units are designed and built to ensure conformance with local codes. The recommendations of European standard EN 60204-1 (corresponds to IEC 60204-1) (machine safety - electrical machine components - part 1: general regulations) are specifically taken into account, when designing the electrical equipment.
- The absence of power supply disconnect switch(es) and short-cycle protection devices in option 82A is an important factor that has to be taken into consideration at the installation site.
Units equipped with one of these two options are supplied with a declaration of incorporation, as required by the machinery directive.

Notes:

- Generally the recommendations of IEC 60364 are accepted as compliance with the requirements of the installation directives. Conformance with EN 60204-1 is the best means of ensuring compliance with the Machines Directive.
- Annex B of EN 60204-1 describes the electrical characteristics used for the operation of the machines.

- The operating environment for the 30XW units is specified below:
 - Environment** Environment as classified in EN 60721 (corresponds to IEC 60721):
 - indoor installation
 - ambient temperature range: minimum temperature +5°C to +42°C, class AA4
 - altitude: lower than or equal to 2000 m
 - presence of water: class AD2 (possibility of water droplets)
 - presence of hard solids, class 4S2 (no significant dust present)
 - presence of corrosive and polluting substances, class 4C2 (negligible)
- Power supply frequency variation: ± 2 Hz.
- The neutral (N) line must not be connected directly to the unit (if necessary use a transformer).
- Overshoot protection of the power supply conductors is not provided with the unit.
- The factory installed disconnect switch(es)/circuit breaker(s) is (are) of a type suitable for power interruption in accordance with EN 60947-3 (corresponds to IEC 60947-3).
- The units are designed for connection to TN networks (IEC 60364). For IT networks the earth connection must not be at the network earth. Provide a local earth, consult competent local organisations to complete the electrical installation.

NOTE: If particular aspects of an actual installation do not conform to the conditions described above, or if there are other conditions which should be considered, always contact your local Carrier representative.

* Not provided for units equipped with option 82A

** The required protection level for this class is IP21BW or 1PX1B (according to reference document IEC 60529). All 30XW units fulfil this protection condition. In general the casings fulfil class IP23.

Please note that for machine sizes 652 to 852 equipped with option 150 access to the motor terminals is classified as IPX3B.

Part load performances

With the rapid increase in energy costs and the care about environmental impacts of electricity production, power consumption of air conditioning equipment has become an important topic. The energy efficiency of a liquid chiller at full load is rarely representative of the actual performance of the units, as on average a chiller works less than 5% of the time at full load.

IPLV (in accordance with ARI 550/590-98)

The IPLV (integrated part load value) allows evaluation of the average energy efficiency based on four operating conditions defined by the ARI (American Refrigeration Institute). The IPLV is the average weighted value of the energy efficiency ratios (EER) at different operating conditions, weighted by the operating time.

IPLV (integrated part load value)

Load %	Condenser entering water temperature, °C	Energy efficiency	Operating time, %
100	35	EER ₁	1
75	26.7	EER ₂	42
50	18.3	EER ₃	45
25	12.8	EER ₄	12

$$\text{IPLV} = \text{EER}_1 \times 1\% + \text{EER}_2 \times 42\% + \text{EER}_3 \times 45\% + \text{EER}_4 \times 12\%$$

The heat load of a building depends on many factors, such as the outside air temperature, the exposure to the sun and its occupation.

Consequently it is preferable to use the average energy efficiency, calculated at several operating points that are representative for the unit utilisation.

ESEER (in accordance with EUROVENT)

The ESEER (European seasonal energy efficiency ratio) permits evaluation of the average energy efficiency at part load, based on four operating conditions defined by Eurovent. The ESEER is the average value of energy efficiency ratios (EER) at different operating conditions, weighted by the operating time.

ESEER (European seasonal energy efficiency ratio)

Load %	Condenser entering water temperature, °C	Energy efficiency	Operating time, %
100	30	EER ₁	3
75	26	EER ₂	33
50	22	EER ₃	41
25	18	EER ₄	23

$$\text{ESEER} = \text{EER}_1 \times 3\% + \text{EER}_2 \times 33\% + \text{EER}_3 \times 41\% + \text{EER}_4 \times 23\%$$

Part load performances

30XW--/30XWH	252	302	352	402	452	552	602	652	702	802	852	1002	1052	1152	1252	1352	1452	1552	1652	1702
ESEER kW/kW	6.29	6.13	6.15	6.15	6.34	6.51	6.33	6.77	6.81	6.65	6.66	7.37	7.61	7.62	7.69	7.46	7.43	7.31	7.58	7.59
30XW-P/30XWH	512	562	712	812	862	1012	1162	1312	1462	1612	1762									
ESEER kW/kW	6.62	6.76	6.96	6.84	6.86	7.49	7.91	7.58	7.59	7.65	7.52									

Sound spectra

30XW									
Octave bands, Hz									
	125	250	500	1k	2k	4k	Sound power levels		
Standard-efficiency units 30XW--/30XWH-									
252	dB	56	81	86	93	88	70	dB(A)	95
302	dB	56	81	86	93	88	70	dB(A)	95
352	dB	56	81	86	93	88	70	dB(A)	95
402	dB	76	85	94	97	87	75	dB(A)	99
452	dB	76	85	94	97	87	75	dB(A)	99
552	dB	76	85	94	97	87	75	dB(A)	99
602	dB	76	85	94	97	87	75	dB(A)	99
652	dB	72	84	94	97	89	74	dB(A)	99
702	dB	72	84	94	97	89	74	dB(A)	99
802	dB	72	84	94	97	89	74	dB(A)	99
852	dB	72	84	94	97	89	74	dB(A)	99
1002	dB	79	88	97	100	90	78	dB(A)	102
1052	dB	79	88	97	100	90	78	dB(A)	102
1252	dB	79	88	97	100	90	78	dB(A)	102
1352	dB	77	88	97	100	91	78	dB(A)	102
1452	dB	75	87	97	100	92	77	dB(A)	102
1552	dB	75	87	97	100	92	77	dB(A)	102
1652	dB	75	87	97	100	92	77	dB(A)	102
1702	dB	75	87	97	100	92	77	dB(A)	102
1702	dB	75	87	97	100	92	77	dB(A)	102

High-efficiency units 30XW-P/30XWHP									
	125	250	500	1k	2k	4k	Sound power levels		
512	dB	76	85	94	97	87	75	dB(A)	99
562	dB	76	85	94	97	87	75	dB(A)	99
712	dB	72	84	94	97	89	74	dB(A)	99
812	dB	72	84	94	97	89	74	dB(A)	99
862	dB	72	84	94	97	89	74	dB(A)	99
1012	dB	79	88	97	100	90	78	dB(A)	102
1162	dB	79	88	97	100	90	78	dB(A)	102
1312	dB	77	88	97	100	91	78	dB(A)	102
1462	dB	75	87	97	100	92	77	dB(A)	102
1612	dB	75	87	97	100	92	77	dB(A)	102
1762	dB	75	87	97	100	92	77	dB(A)	102

30XW for high condensing temperatures (option 150)									
	125	250	500	1k	2k	4k	Sound power levels		
252	dB	55	80	89	92	88	77	dB(A)	95
302	dB	55	80	89	92	88	77	dB(A)	95
352	dB	55	80	89	92	88	77	dB(A)	95
402	dB	76	85	94	97	87	75	dB(A)	99
452	dB	76	85	94	97	87	75	dB(A)	99
552	dB	76	85	94	97	87	75	dB(A)	99
602	dB	76	85	94	97	87	75	dB(A)	99
652	dB	69	89	97	99	92	77	dB(A)	102
702	dB	69	89	97	99	92	77	dB(A)	102
802	dB	-	-	-	-	-	-	dB(A)	-
852	dB	-	-	-	-	-	-	dB(A)	-
1002	dB	79	88	97	100	90	78	dB(A)	102
1052	dB	79	88	97	100	90	78	dB(A)	102
1252	dB	79	88	97	100	90	78	dB(A)	102
1352	dB	74	92	100	102	95	79	dB(A)	105
1452	dB	74	92	100	102	95	79	dB(A)	105
1552	dB	74	92	100	102	95	79	dB(A)	105
1652	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-

High-efficiency units 30XW-P/30XWHP (option 150)									
	125	250	500	1k	2k	4k	Sound power levels		
512	dB	76	85	94	97	87	75	dB(A)	99
562	dB	76	85	94	97	87	75	dB(A)	99
712	dB	69	89	97	99	92	77	dB(A)	102
812	dB	69	89	97	99	92	77	dB(A)	102
862	dB	-	-	-	-	-	-	dB(A)	-
1012	dB	79	88	97	100	90	78	dB(A)	102
1162	dB	79	88	97	100	90	78	dB(A)	102
1312	dB	74	92	100	102	95	79	dB(A)	105
1462	dB	74	92	100	102	95	79	dB(A)	105
1612	dB	74	92	100	102	95	79	dB(A)	105
1762	dB	-	-	-	-	-	-	dB(A)	-

30XW with option 257*

Octave bands, Hz								Sound power levels	
	125	250	500	1k	2k	4k			
Standard-efficiency units 30XW--/30XWH-									
252	dB	-	-	-	-	-	-	dB(A)	-
302	dB	-	-	-	-	-	-	dB(A)	-
352	dB	-	-	-	-	-	-	dB(A)	-
402	dB	76	85	90	93	85	75	dB(A)	96
452	dB	76	85	90	93	85	75	dB(A)	96
552	dB	76	85	90	93	85	75	dB(A)	96
602	dB	76	85	90	93	85	75	dB(A)	96
652	dB	72	84	90	93	87	74	dB(A)	96
702	dB	72	84	90	93	87	74	dB(A)	96
802	dB	72	84	90	93	87	74	dB(A)	96
852	dB	72	84	90	93	87	74	dB(A)	96
1002	dB	79	88	93	96	88	78	dB(A)	99
1052	dB	79	88	93	96	88	78	dB(A)	99
1252	dB	79	88	93	96	88	78	dB(A)	99
1352	dB	77	87	93	96	89	77	dB(A)	99
1452	dB	77	87	93	96	89	77	dB(A)	99
1552	dB	77	87	93	96	89	77	dB(A)	99
1652	dB	77	87	93	96	89	77	dB(A)	99
1702	dB	77	87	93	96	89	77	dB(A)	99
1702	dB	77	87	93	96	89	77	dB(A)	99
High-efficiency units 30XW-P/30XWHP									
512	dB	76	85	90	93	85	75	dB(A)	96
562	dB	76	85	90	93	85	75	dB(A)	96
712	dB	72	84	90	93	87	74	dB(A)	96
812	dB	72	84	90	93	87	74	dB(A)	96
862	dB	72	84	90	93	87	74	dB(A)	96
1012	dB	79	88	93	96	88	78	dB(A)	99
1162	dB	79	88	93	96	88	78	dB(A)	99
1312	dB	77	87	93	96	89	77	dB(A)	99
1462	dB	77	87	93	96	89	77	dB(A)	99
1612	dB	77	87	93	96	89	77	dB(A)	99
1762	dB	77	87	93	96	89	77	dB(A)	99

30XW for high condensing temperatures (option 150) with option 257*

Octave bands, Hz								Sound power levels	
	125	250	500	1k	2k	4k			
Standard-efficiency units 30XW-/30XWH- (option 150)									
252	dB	-	-	-	-	-	-	dB(A)	-
302	dB	-	-	-	-	-	-	dB(A)	-
352	dB	-	-	-	-	-	-	dB(A)	-
402	dB	76	85	90	93	85	75	dB(A)	96
452	dB	76	85	90	93	85	75	dB(A)	96
552	dB	76	85	90	93	85	75	dB(A)	96
602	dB	76	85	90	93	85	75	dB(A)	96
652	dB	69	89	93	96	91	77	dB(A)	99
702	dB	69	89	93	96	91	77	dB(A)	99
802	dB	-	-	-	-	-	-	dB(A)	-
852	dB	-	-	-	-	-	-	dB(A)	-
1002	dB	79	88	93	96	88	78	dB(A)	99
1052	dB	79	88	93	96	88	78	dB(A)	99
1252	dB	79	88	93	96	88	78	dB(A)	99
1352	dB	74	92	96	99	94	79	dB(A)	102
1452	dB	74	92	96	99	94	79	dB(A)	102
1552	dB	74	92	96	99	94	79	dB(A)	102
1652	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-
High-efficiency units 30XW-P/30XWHP (option 150)									
512	dB	76	85	90	93	85	75	dB(A)	96
562	dB	76	85	90	93	85	75	dB(A)	96
712	dB	69	89	93	96	91	77	dB(A)	99
812	dB	69	89	93	96	91	77	dB(A)	99
862	dB	-	-	-	-	-	-	dB(A)	-
1012	dB	79	88	93	96	88	78	dB(A)	99
1162	dB	79	88	93	96	88	78	dB(A)	99
1312	dB	74	92	96	99	94	79	dB(A)	102
1462	dB	74	92	96	99	94	79	dB(A)	102
1612	dB	74	92	96	99	94	79	dB(A)	102
1762	dB	-	-	-	-	-	-	dB(A)	-

30XW with option 258*

Octave bands, Hz								Sound power levels	
	125	250	500	1k	2k	4k			
Standard-efficiency units 30XW--/30XWH-									
252	dB	51	64	67	72	68	57	dB(A)	75
302	dB	51	64	67	72	68	57	dB(A)	75
352	dB	51	64	67	72	68	57	dB(A)	75
402	dB	71	68	75	74	65	61	dB(A)	79
452	dB	71	68	75	74	65	61	dB(A)	79
552	dB	71	68	75	74	65	61	dB(A)	79
602	dB	71	68	75	74	65	61	dB(A)	79
652	dB	67	67	75	74	67	60	dB(A)	79
702	dB	67	67	75	74	67	60	dB(A)	79
802	dB	67	67	75	74	67	60	dB(A)	79
852	dB	67	67	75	74	67	60	dB(A)	79
1002	dB	70	72	78	79	67	60	dB(A)	82
1052	dB	70	72	78	79	67	60	dB(A)	82
1252	dB	70	72	78	79	67	60	dB(A)	82
1352	dB	68	72	78	79	68	60	dB(A)	82
1452	dB	66	71	78	79	69	59	dB(A)	82
1552	dB	66	71	78	79	69	59	dB(A)	82
1652	dB	66	71	78	79	69	59	dB(A)	82
1702	dB	66	71	78	79	69	59	dB(A)	82
1702	dB	66	71	78	79	69	59	dB(A)	82
High-efficiency units 30XW-P/30XWHP									
512	dB	71	68	75	74	65	61	dB(A)	79
562	dB	71	68	75	74	65	61	dB(A)	79
712	dB	67	67	75	74	67	60	dB(A)	79
812	dB	67	67	75	74	67	60	dB(A)	79
862	dB	67	67	75	74	67	60	dB(A)	79
1012	dB	70	72	78	79	67	60	dB(A)	82
1162	dB	70	72	78	79	67	60	dB(A)	82
1312	dB	68	72	78	79	68	60	dB(A)	82
1462	dB	66	71	78	79	69	59	dB(A)	82
1612	dB	66	71	78	79	69	59	dB(A)	82
1762	dB	66	71	78	79	69	59	dB(A)	82

Octave bands, Hz								Sound power levels	
	125	250	500	1k	2k	4k			
Standard-efficiency units 30XW-/30XWH- (option 150)									
252	dB	50	64	70	71	68	64	dB(A)	75
302	dB	50	64	70	71	68	64	dB(A)	75
352	dB	50	64	70	71	68	64	dB(A)	75
402	dB	71	68	75	74	65	61	dB(A)	79
452	dB	71	68	75	74	65	61	dB(A)	79
552	dB	71	68	75	74	65	61	dB(A)	79
602	dB	71	68	75	74	65	61	dB(A)	79
652	dB	64	72	78	78	72	64	dB(A)	82
702	dB	64	72	78	78	72	64	dB(A)	82
802	dB	-	-	-	-	-	-	dB(A)	-
852	dB	-	-	-	-	-	-	dB(A)	-
1002	dB	74	71	78	77	68	64	dB(A)	82
1052	dB	74	71	78	77	68	64	dB(A)	82
1252	dB	74	71	78	77	68	64	dB(A)	82
1352	dB	65	76	81	81	72	61	dB(A)	85
1452	dB	65	76	81	81	72	61	dB(A)	85
1552	dB	65	76	81	81	72	61	dB(A)	85
1652	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-
1702	dB	-	-	-	-	-	-	dB(A)	-
High-efficiency units 30XW-P/30XWHP (option 150)									

Operating limits and operating ranges

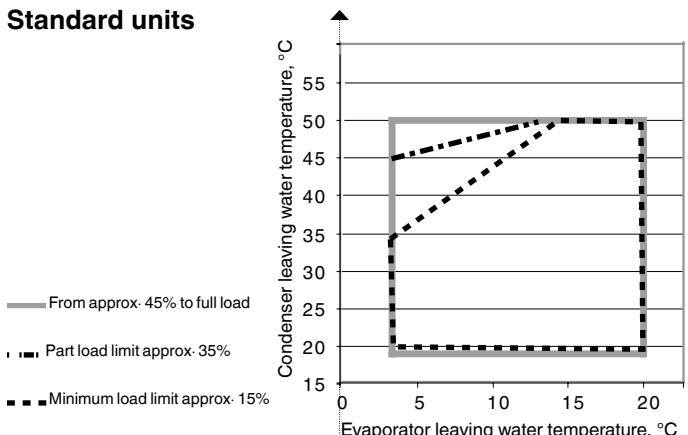
Standard 30XW-- and 30XW-P units	Minimum	Maximum
Evaporator		
Entering temperature at start-up	-	35.0°C
Leaving temperature during operation	3.3°C*	20.0°C
Entering/leaving temperature difference at full load	2.8 K	11.1 K
Condenser		
Entering temperature at start-up	13.0°C**	-
Leaving temperature during operation	19.0°C**	50.0°C***
Entering/leaving temperature difference at full load	2.8 K	11.1 K

* For low-temperature applications, where the leaving water temperature is below 3.3°C, a frost protection solution must be used. Please refer to option 5 and option 6.

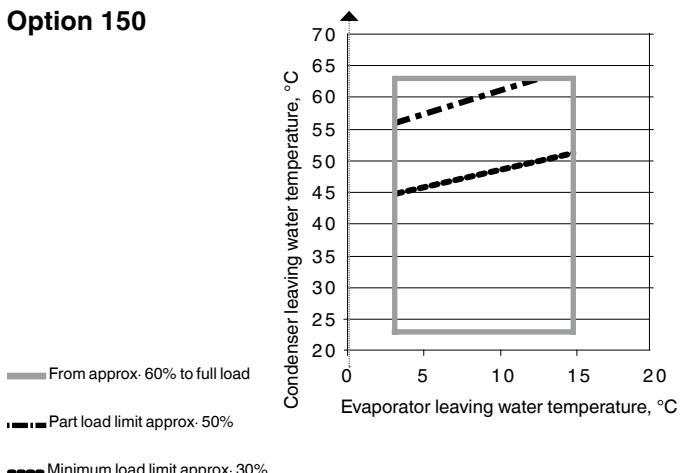
** For lower condenser temperatures, a water flow control valve must be used at the condenser (two or three-way valve). Please refer to option 152 to ensure the correct condensing temperature.

*** Please refer to option 150 for applications with a high condenser leaving temperature (up to 63°C).

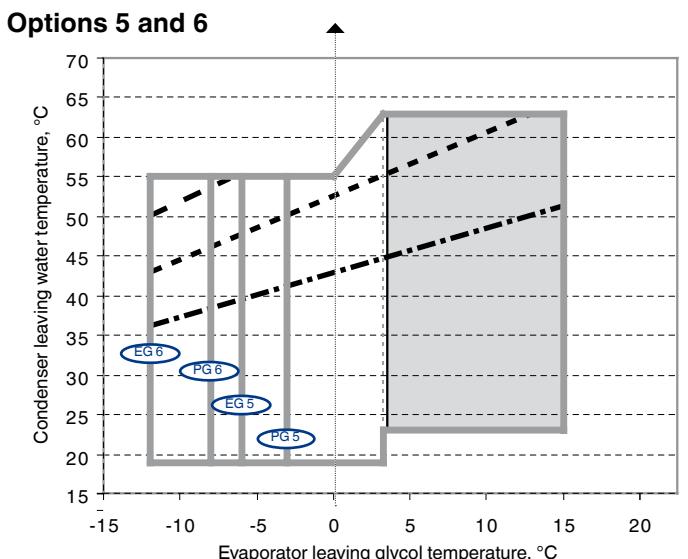
Standard units



Option 150



Options 5 and 6



■ Operating range permitted, but performances are not optimised

■ Full load with option 5/6 and ethylene or propylene glycol

— Part load limit approx. 80%

··· Part load limit approx. 50%

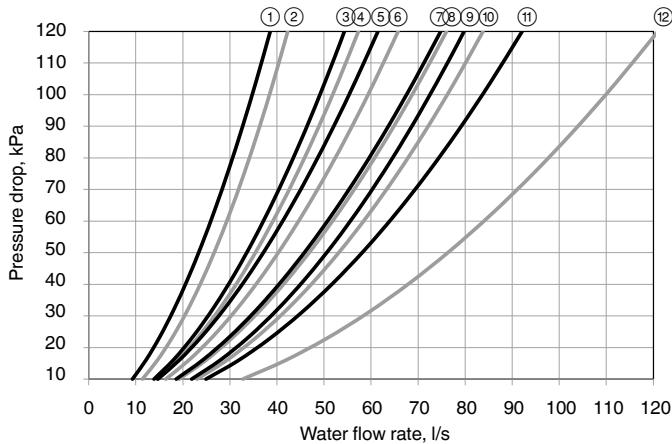
····· Part load limit approx. 30%

NOTES: Ambient temperatures: During storage and transport of the 30XW units (including by container) the minimum and maximum permissible temperatures are -20°C and 72°C (and 65°C for option 200).

For more precise details refer to the unit selection program.

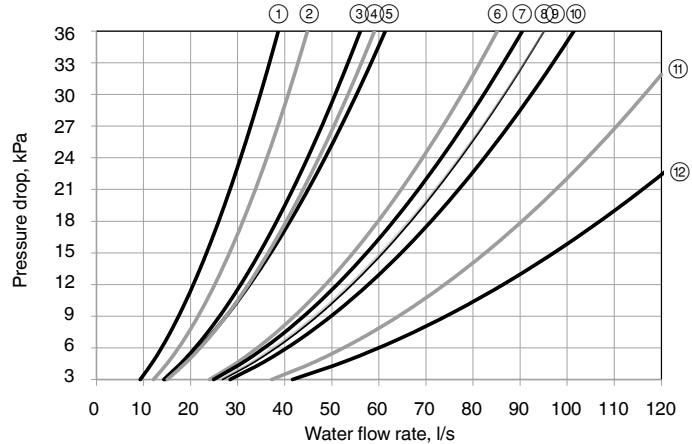
Evaporator pressure drop curves

**Units with two evaporator passes (standard):
30XW--/30XWH-/30XW-P/30XWHP**



- (1) 252, 302, 352
- (2) 402, 452, 552, 602
- (3) 512, 562
- (4) 652, 702, 802
- (5) 852
- (6) 1002, 1052
- (7) 1152
- (8) 712, 812, 862
- (9) 1012, 1162
- (10) 1252, 1352, 1452, 1552
- (11) 1312, 1462, 1652, 1702
- (12) 1612, 1762

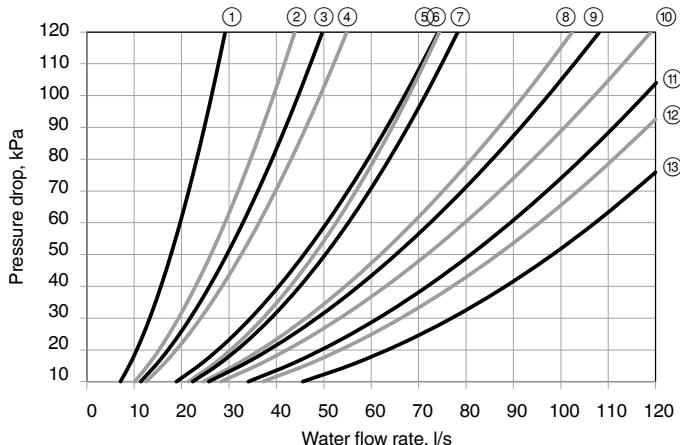
**Units with one evaporator pass (option 100C):
30XW--/30XWH-/30XW-P/30XWHP**



- (1) 252, 302, 352
- (2) 402, 452, 552, 602
- (3) 512, 562
- (4) 652, 702, 802
- (5) 852
- (6) 1002, 1052
- (7) 1012, 1162
- (8) 1252, 1352, 1452, 1552
- (9) 712, 812, 862
- (10) 1152
- (11) 1312, 1462, 1652, 1702
- (12) 1612, 1762

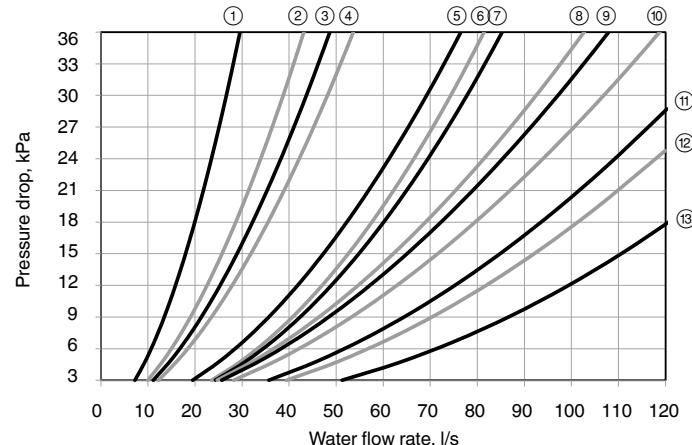
Condenser pressure drop curves

**Units with two condenser passes (standard):
30XW--/30XWH-/30XW-P/30XWHP**



- (1) 252, 302, 352
- (2) 402, 452, 552, 602
- (3) 512, 562
- (4) 652, 702, 802
- (5) 712, 812, 862
- (6) 852
- (7) 1002, 1052
- (8) 1152
- (9) 1012, 1162
- (10) 1252, 1352, 1452, 1552
- (11) 1312, 1462
- (12) 1652, 1702
- (13) 1612, 1762

**Units with one condenser pass (option 102C):
30XW--/30XWH-/30XW-P/30XWHP**

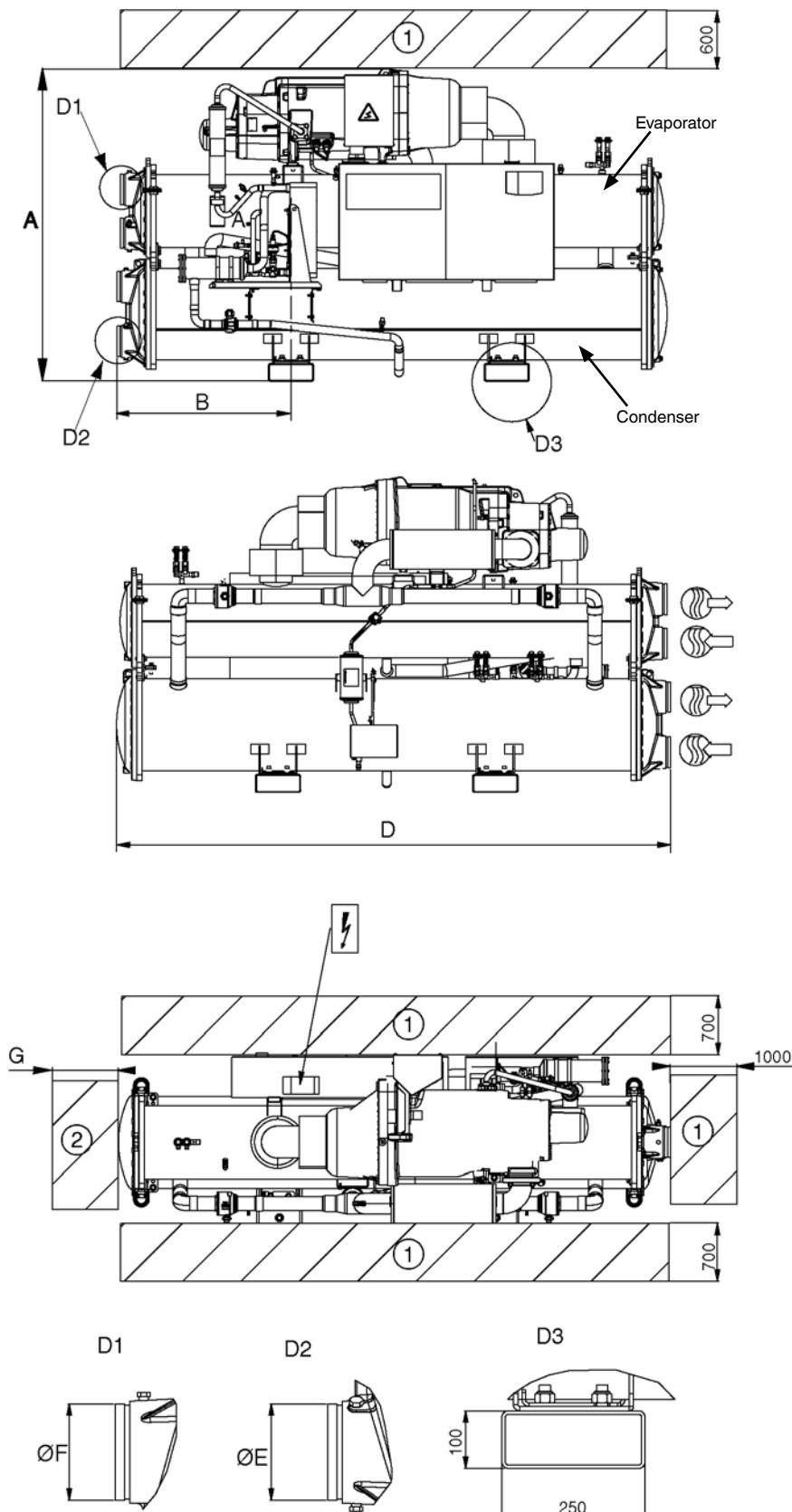


- (1) 252, 302, 352
- (2) 402, 452, 552, 602
- (3) 512, 562
- (4) 652, 702, 802
- (5) 712, 812, 862
- (6) 852
- (7) 1002, 1052
- (8) 1152
- (9) 1012, 1162
- (10) 1252, 1352, 1452, 1552
- (11) 1312, 1462
- (12) 1652, 1702
- (13) 1612, 1762

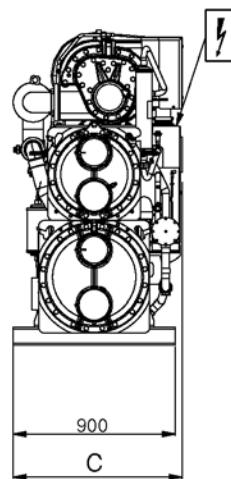
Dimensions/clearances

30XW--/30XWH- 252-852

30XW-P/30XWHP 512-862



NOTE: Drawings are not contractually binding. Before designing an installation, consult the certified dimensional drawings, available on request.



Dimensions in mm

	A	B	C	D	E	F	G
Standard-efficiency units 30XW--/30XWH-							
252	1580	800	927	2732	141.3	141.3	2600
302	1580	800	927	2732	141.3	141.3	2600
352	1580	800	927	2732	141.3	141.3	2600
402	1693	810	936	2742	141.3	141.3	2600
452	1693	810	936	2742	141.3	141.3	2600
552	1693	810	936	2742	141.3	141.3	2600
602	1693	810	936	2742	141.3	141.3	2600
652	1848	968	1044	3059	168.3	168.3	2800
702	1848	968	1044	3059	168.3	168.3	2800
802	1848	968	1044	3059	168.3	168.3	2800
852	1898	828	1044	2780	219.1	168.3	2600
High-efficiency units 30XW-P/30XHP							
512	1743	968	936	3059	168.3	168.3	2800
562	1743	968	936	3059	168.3	168.3	2800
712	1950	1083	1065	3290	219.1	219.1	3100
812	1950	1083	1070	3290	219.1	219.1	3100
862	1950	1083	1070	3290	219.1	219.1	3100
Standard-efficiency units 30XW--/30XWH- (option 150)							
252	1580	800	927	2732	141.3	141.3	2600
302	1580	800	927	2732	141.3	141.3	2600
352	1580	800	927	2732	141.3	141.3	2600
402	1693	810	936	2742	141.3	141.3	2600
452	1693	810	936	2742	141.3	141.3	2600
552	1693	810	936	2742	141.3	141.3	2600
602	1693	810	936	2742	141.3	141.3	2600
652	1868	968	1090	3059	168.3	168.3	2800
702	1868	968	1090	3059	168.3	168.3	2800
802	1868	968	1090	3059	168.3	168.3	2800
852	1920	828	1090	2780	168.3	219.1	2600
High-efficiency units 30XW-P/30XHP (option 150)							
512	1743	968	936	3059	168.3	168.3	2800
562	1743	968	936	3059	168.3	168.3	2800
712	1970	1083	1105	3290	219.1	219.1	3100
812	1970	1083	1105	3290	219.1	219.1	3100
862	1970	1083	1105	3290	219.1	219.1	3100

Legend:

All dimensions are in mm.

(1) Required clearance for maintenance

(2) Recommended clearance for tube removal

Water inlet

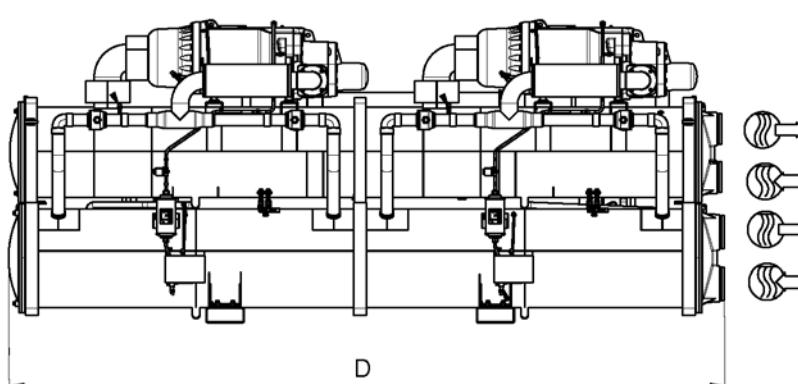
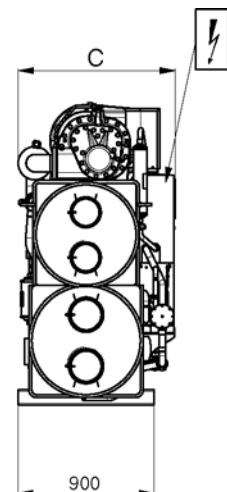
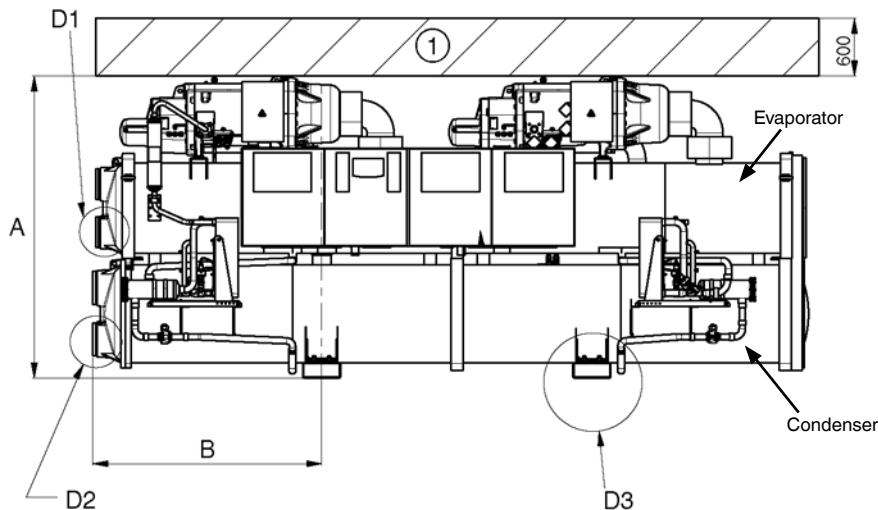
Water outlet

Power supply connection

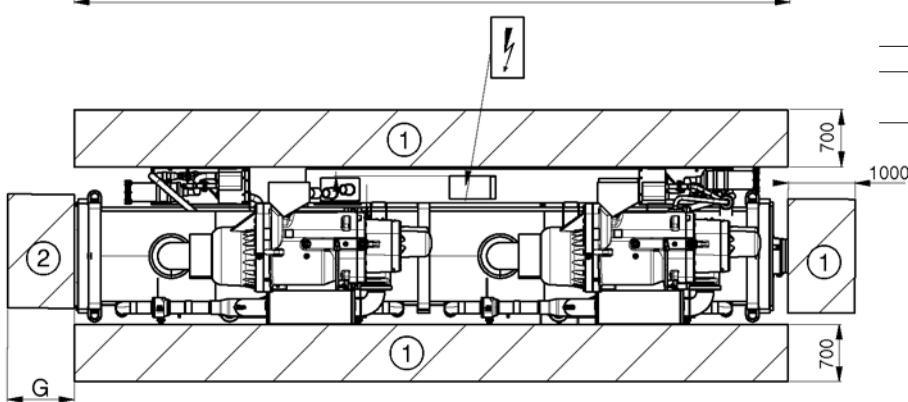
Dimensions/clearances

30XW-/30XWH- 1002-1552

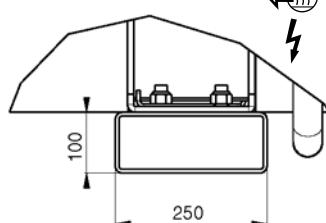
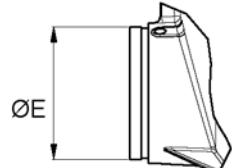
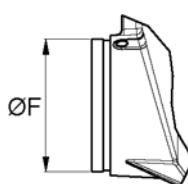
30XW-P/30XWHP 1012-1162



Dimensions in mm						
A	B	C	D	E	F	G
Standard-efficiency units 30XW-/30XWH-						
1002	1870	950	1036	4025	219.1	168.3 3800
1052	1870	950	1036	4025	219.1	168.3 3800
1152	1926	950	1036	4025	219.1	219.1 3800
1252	2051	1512	1162	4730	219.1	219.1 4500
1352	2051	1512	1162	4730	219.1	219.1 4500
1452	2051	1512	1162	4730	219.1	219.1 4500
1552	2051	1512	1162	4730	219.1	219.1 4500
High-efficiency units 30XW-P/30XWHP						
1012	1997	1512	1039	4730	219.1	219.1 4500
1162	1997	1512	1039	4730	219.1	219.1 4500
Standard-efficiency units 30XW-/30XWH- (option 150)						
1002	1870	950	1036	4025	219.1	168.3 3800
1052	1870	950	1036	4025	219.1	168.3 3800
1152	1926	950	1036	4025	219.1	219.1 3800
1252	2071	1512	1201	4730	219.1	219.1 4500
1352	2071	1512	1201	4730	219.1	219.1 4500
1452	2071	1512	1201	4730	219.1	219.1 4500
1552	2071	1512	1201	4730	219.1	219.1 4500
High-efficiency units 30XW-P/30XWHP (option 150)						
1012	1997	1512	1039	4730	219.1	219.1 4500
1162	1997	1512	1039	4730	219.1	219.1 4500



D1 D2 D3



Legend:

All dimensions are in mm.

(1) Required clearance for maintenance

(2) Recommended clearance for tube removal

Water inlet

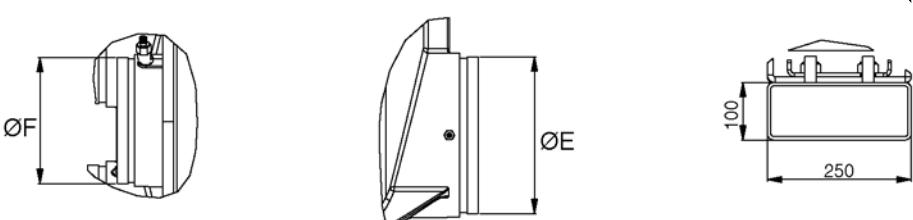
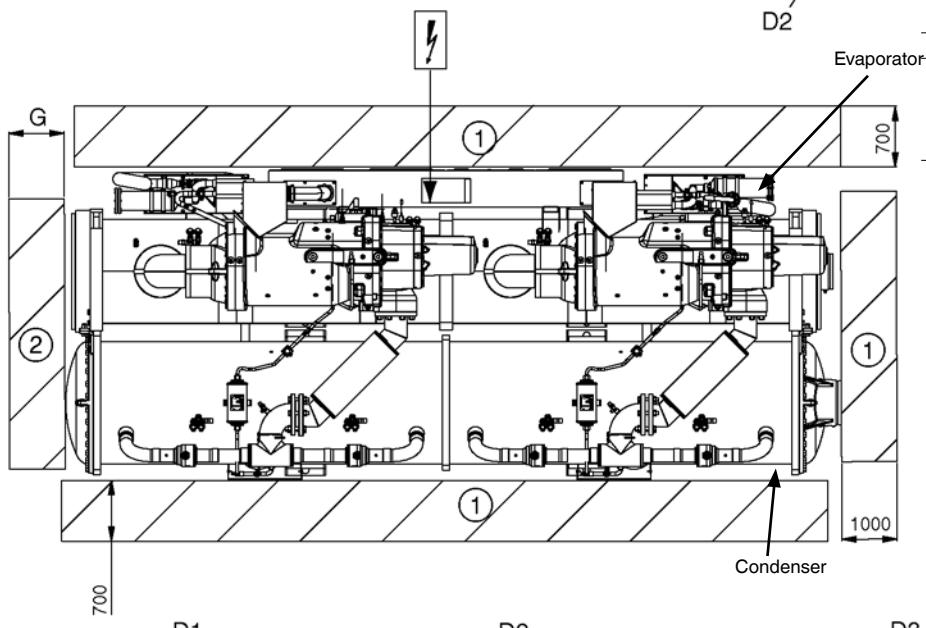
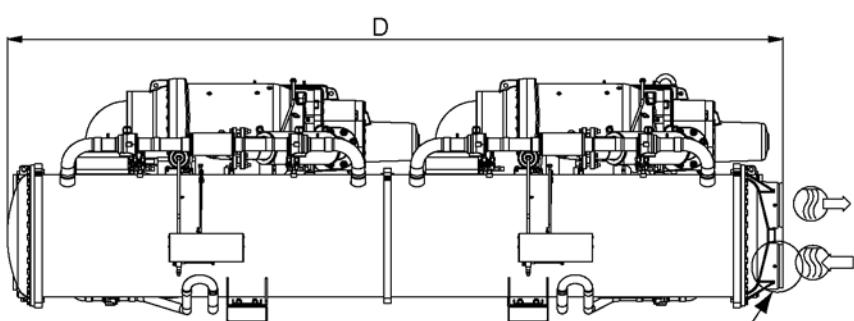
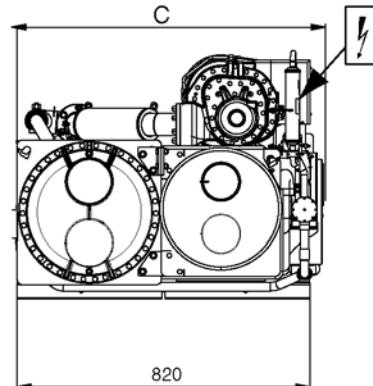
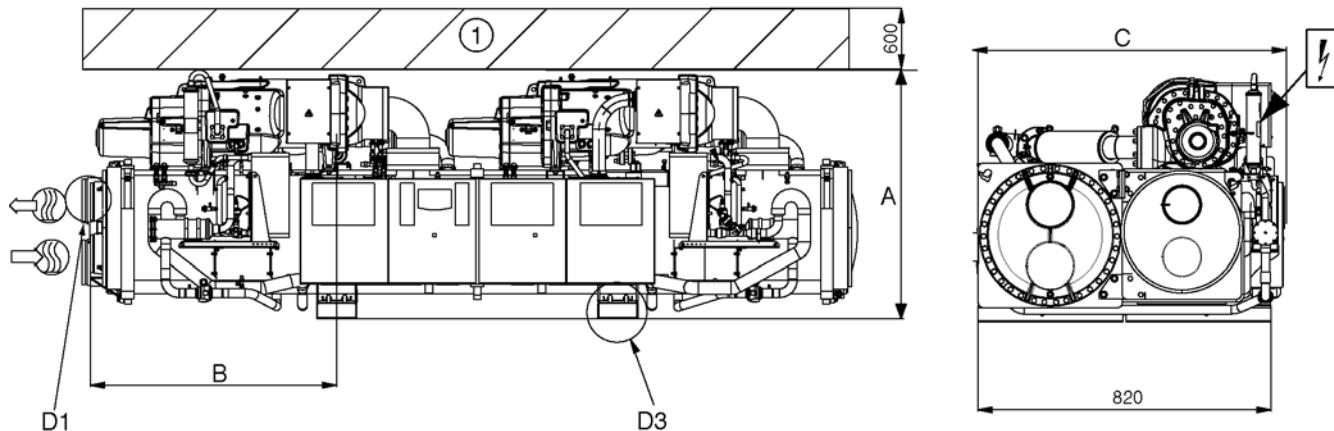
Water outlet

Power supply connection

NOTE: Drawings are not contractually binding. Before designing an installation, consult the certified dimensional drawings, available on request.

Dimensions/clearances

30XW--/30XWH- 1652-1702
30XW-P/30XWHP 1312-1762



Dimensions in mm						
A	B	C	D	E	F	G
Standard-efficiency units 30XW--/30XWH-						
1652	1515	1568	1902	4790	219.1	219.1 4500
1702	1515	1568	1902	4790	219.1	219.1 4500
High-efficiency units 30XW-P/30XHP						
1312	1515	1581	1935	4812	273.0	219.1 4500
1462	1515	1581	1935	4812	273.0	219.1 4500
1612	1562	1591	2129	4832	273.0	273.0 4600
1762	1562	1591	2129	4832	273.0	273.0 4600
Standard-efficiency units 30XW--/30XWH- (option 150)						
1652	1535	1568	1947	4790	219.1	219.1 4500
1702	1535	1568	1947	4790	219.1	219.1 4500
High-efficiency units 30XW-P/30XHP (option 150)						
1312	1535	1581	1980	4812	273.1	219.1 4500
1462	1535	1581	1980	4812	273.1	219.1 4500
1612	1585	1591	2174	4832	273.1	273.1 4600
1762	1585	1591	2174	4832	273.1	273.1 4600

Legend:

All dimensions are in mm.

① Required clearance for maintenance

② Recommended clearance for tube removal

Water inlet

Water outlet

Power supply connection

NOTE: Drawings are not contractually binding. Before designing an installation, consult the certified dimensional drawings, available on request.

Cooling and heating capacities

Standard efficiency 30XW--/30XWH- units

		Condenser leaving water temperature, °C																														
30XW		30			35			40			45			50			55			60			65			70						
LWT	°C	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	Qc kW	Qh kW	EER	Cool kW/kW	Cool I/s	
252	5	268	310	6.23	12.8	19	259	308	5.17	12.3	18	249	306	4.31	11.9	17	238	303	3.59	11.4	15	227	301	3.00	10.8	15	252	304	2.92	12.0	17	
302	299	346	6.14	14.2	23	288	344	5.09	13.7	21	277	341	4.22	13.2	20	264	338	3.51	12.6	18	251	336	2.92	14.1	21	352	340	3.53	14.7	23		
352	346	403	6.00	16.5	28	335	400	5.02	15.9	26	322	397	4.21	15.3	25	309	395	3.53	14.7	23	295	393	2.97	14.1	21	402	421	3.50	16.8	22		
452	459	533	6.08	21.9	34	435	520	5.06	20.7	30	410	506	4.20	19.5	27	385	493	3.46	18.3	24	358	481	2.84	17.0	21	552	517	490	2.77	19.2	26	
602	517	602	5.99	24.6	43	500	597	5.03	23.8	40	482	594	4.21	22.9	37	462	591	3.53	22.0	35	442	589	2.95	21.0	32	652	661	764	2.82	24.1	25	
702	712	825	6.17	33.9	46	673	802	5.10	32.0	42	632	780	4.20	30.1	37	590	758	3.43	28.1	33	545	737	2.78	26.0	29	802	758	882	2.80	28.3	34	
852	798	926	6.15	37.9	55	780	926	5.22	37.1	53	748	916	4.37	35.6	50	715	907	3.65	34.0	46	678	897	3.04	32.3	42	1002	992	1152	2.84	36.7	43	
1052	1035	1203	6.05	49.3	75	981	1171	5.04	46.7	68	924	1142	4.17	44.0	61	866	1113	3.43	41.2	54	806	1086	2.82	38.4	48	1152	1113	1285	3.09	44.9	47	
1252	1234	1416	6.64	58.7	62	1166	1373	5.49	55.5	55	1095	1333	4.52	52.2	49	1023	1293	3.71	48.7	43	948	1255	3.02	45.1	37	1352	1314	1514	2.91	48.0	44	
1452	1425	1645	6.34	67.9	86	1346	1598	5.24	64.1	77	1264	1552	4.30	60.2	69	1178	1507	3.51	56.1	60	1091	1466	2.86	52.0	52	1552	1519	1756	2.86	55.3	60	
1652	1596	1835	6.55	76.0	56	1550	1825	5.52	73.8	53	1488	1804	4.60	70.8	49	1420	1784	3.83	67.6	44	1348	1763	3.18	64.2	40	1702	1664	1913	3.22	66.8	43	
252	7	286	328	6.70	13.6	21	276	325	5.54	13.2	20	266	322	4.60	12.7	18	254	319	3.83	12.1	17	242	317	3.19	11.6	16	302	315	362	3.10	12.8	19
352	315	362	6.50	15.0	25	307	362	5.44	14.6	24	295	359	4.50	14.1	22	282	356	3.73	13.4	20	268	353	3.10	12.8	19	402	453	522	3.16	15.0	24	
452	494	568	6.53	23.6	38	469	553	5.44	22.3	34	442	538	4.52	21.1	31	415	524	3.73	19.8	27	386	510	3.07	18.4	24	552	530	615	2.99	20.7	30	
602	552	636	6.41	26.3	48	533	630	5.38	25.4	45	514	625	4.50	24.5	42	493	621	3.76	23.5	39	471	618	3.15	22.5	35	652	711	814	3.04	26.0	29	
702	758	872	6.56	36.2	52	723	853	5.47	34.5	47	680	828	4.50	32.4	42	635	804	3.68	30.3	37	588	780	3.00	28.0	32	802	774	899	3.01	30.5	39	
852	814	941	6.26	38.8	57	830	977	5.55	39.6	59	798	966	4.65	38.0	55	762	954	3.88	36.3	51	723	942	3.23	34.5	46	1002	1067	1227	3.06	39.7	48	
1052	1113	1281	6.49	53.1	84	1055	1246	5.41	50.3	76	995	1213	4.48	47.5	69	933	1181	3.70	44.5	61	869	1150	3.04	41.5	54	1152	1170	1342	3.30	47.9	53	
1252	1329	1511	7.15	63.4	71	1257	1464	5.92	59.9	63	1182	1419	4.88	56.3	56	1105	1375	4.01	52.7	49	1025	1332	3.27	48.9	43	1352	1415	1615	3.27	51.8	50	
1452	1534	1754	6.82	73.1	98	1449	1702	5.63	69.1	88	1362	1650	4.63	64.9	78	1271	1600	3.79	60.6	69	1178	1552	3.08	56.1	59	1552	1604	1841	3.08	59.7	68	
1652	1649	1888	6.76	78.6	59	1654	1929	5.87	78.8	60	1587	1904	4.90	75.7	55	1516	1880	4.07	72.3	50	1439	1855	3.38	68.6	45	1702	1713	1962	3.43	71.4	49	
252	10	304	346	7.19	14.5	23	303	352	6.13	14.5	23	292	348	5.07	13.9	21	279	344	4.20	13.3	20	266	341	3.50	12.7	18	302	323	370	3.22	14.0	22
352	405	461	7.09	19.3	36	393	458	5.92	18.7	34	378	453	4.95	18.1	32	363	449	4.14	17.4	30	348	446	3.47	16.6	27	402	481	550	3.49	19.0	26	
452	517	592	6.83	24.7	41	521	605	6.04	24.9	41	493	589	5.03	23.5	37	463	572	4.16	22.1	33	432	556	3.43	20.6	29	552	545	630	3.43	23.2	36	
602	604	688	7.03	28.9	56	586	683	5.93	28.0	53	564	676	4.95	27.0	49	541	670	4.14	25.9	45	517	664	3.46	24.7	42	652	745	849	3.46	29.1	34	
702	787	901	6.79	37.6	54	802	932	6.02	38.3	56	757	905	4.98	36.1	50	708	877	4.09	33.8	45	657	849	3.33	31.4	39	802	796	921	3.32	34.0	46	
852	833	960	6.40	39.8	58	875	1024	5.74	41.8	63	875	1044	5.07	41.8	63	836	1030	4.23	39.9	59	794	1015	3.53	37.9	54	1002	1162	1322	3.42	44.5	58	
1052	1209	1377	7.04	57.7	96	1175	1366	6.01	56.1	91	1109	1327	4.98	53.0	82	1041	1289	4.12	49.7	73	971	1252	3.39	46.4	65	1152	1216	1388	3.39	52.8	61	
1252	1461	1643	7.84	69.8	83	1401	1609	6.60	66.9	77	1320	1557	5.45	63.0	68	1235	1505	4.48	59.0	60	1148	1455	3.66	54.8	52	1352	1573	1774	3.50	58.0	61	
1452	1668	1889	7.40	79.7	114	1615	1867	6.25	77.1	107	1519	1808	5.15	72.5	95	1419	1749	4.22	67.8	83	1316	1692	3.43	62.8	72	1552	1684	1921	3.43	66.8	83	
1652	1716	1955	7.02	81.9	63	1762	2038	6.24	84.1	67	1743	2062	5.35	83.2	65	1664	2031	4.45	79.5	60	1580	2000	3.69	75.5	54	1702	1785	2034	3.74	78.6	58	

Legend:
 Qc kW Cooling capacity
 Qh kW Heating capacity
 EER Energy efficiency ratio
 LWT Leaving water temperature, evaporator
 Cool I/s Evaporator water flow rate
 Cool kPa Evaporator pressure drop

Application data:
 Standard units, refrigerant R-134a
 Evaporator water temperature rise: 5 K
 Evaporator fluid: chilled water
 Fouling factor: $0.18 \times 10^{-4} (\text{m}^2 \text{K})/\text{W}$
 Performances in accordance with EN 14511

Cooling and heating capacities

High-efficiency 30XW-P/30XWHP units

		Condenser leaving water temperature, °C																													
		30						35						40						45						50					
30XW	C	Qc kW	Qh kW	EER	Cool kW	Cool kPa	Qc kW	Qh kW	EER	Cool kW	Cool kPa	Qc kW	Qh kW	EER	Cool kW	Cool kPa	Qc kW	Qh kW	EER	Cool kW	Cool kPa	Qc kW	Qh kW	EER	Cool kW	Cool kPa					
LWT																															
512	5	493	567	6.56	23.5	25	476	561	5.50	22.7	24	458	555	4.61	21.8	22	439	551	3.86	20.9	20	420	547	3.23	20.0	19					
562		558	642	6.56	26.6	31	539	635	5.49	25.6	29	518	629	4.59	24.7	27	497	624	3.84	23.7	25	474	619	3.21	22.6	23					
712	712	816	6.69	33.9	28	687	808	5.58	32.7	27	662	801	4.66	31.5	25	635	795	3.89	30.2	23	606	789	3.23	28.8	21						
812	760	875	6.49	36.2	33	734	866	5.41	34.9	31	706	859	4.51	33.6	29	676	852	3.74	32.2	27	644	847	3.11	30.7	24						
862	833	957	6.56	39.7	39	803	946	5.50	38.2	37	771	935	4.60	36.7	34	736	924	3.84	35.1	32	699	913	3.20	33.3	29						
1012	1008	1157	6.63	48.0	40	973	1145	5.56	46.3	38	937	1133	4.66	44.6	35	898	1124	3.90	42.8	32	858	1115	3.26	40.8	30						
1162	1125	1290	6.71	53.6	55	1084	1273	5.61	51.6	52	1042	1259	4.68	49.6	48	997	1247	3.91	47.5	44	952	1237	3.27	45.3	40						
1312	1275	1459	6.79	60.7	35	1230	1442	5.67	58.6	32	1183	1428	4.73	56.3	30	1134	1416	3.94	54.0	27	1081	1404	3.28	51.5	25						
1462	1423	1629	6.77	67.8	42	1374	1612	5.65	65.4	40	1322	1597	4.71	62.9	37	1266	1582	3.92	60.3	34	1206	1570	3.25	57.5	30						
1612	1574	1800	6.81	75.0	52	1519	1781	5.68	72.3	48	1460	1763	4.72	69.5	45	1397	1747	3.91	66.5	41	1330	1732	3.24	63.3	37						
1762	1700	1948	6.73	81.0	60	1639	1924	5.63	78.1	56	1574	1901	4.71	74.9	52	1503	1878	3.92	71.6	47	1427	1854	3.27	67.9	43						
512	7	525	599	7.00	25.0	28	508	593	5.89	24.2	26	489	586	4.93	23.3	24	469	580	4.13	22.4	23	448	575	3.45	21.4	21					
562		597	680	7.03	28.4	34	575	671	5.88	27.4	32	553	663	4.91	26.4	30	530	657	4.10	25.3	28	506	651	3.43	24.1	25					
712	760	864	7.16	36.2	32	734	854	5.98	35.0	30	706	845	4.99	33.7	28	677	837	4.15	32.3	26	646	830	3.45	30.8	24						
812	811	926	6.94	38.7	37	783	915	5.78	37.3	34	752	906	4.81	35.9	32	721	897	3.99	34.4	30	686	890	3.31	32.7	27						
862	888	1013	6.98	42.3	44	856	1000	5.85	40.8	41	822	987	4.90	39.2	38	786	974	4.09	37.5	35	746	961	3.41	35.6	32						
1012	1070	1219	7.06	51.0	45	1040	1211	5.97	49.6	42	1001	1197	5.00	47.7	39	960	1184	4.18	45.7	36	916	1173	3.49	43.7	33						
1162	1183	1347	7.07	56.4	60	1159	1347	6.02	55.2	58	1113	1330	5.02	53.1	54	1065	1315	4.19	50.8	49	1016	1301	3.49	48.4	45						
1312	1363	1546	7.28	65.0	39	1314	1526	6.07	62.6	37	1263	1508	5.06	60.2	34	1210	1492	4.21	57.7	31	1154	1477	3.50	55.0	28						
1462	1520	1725	7.24	72.5	48	1467	1705	6.04	69.9	45	1411	1686	5.03	67.3	41	1352	1668	4.19	64.4	38	1288	1651	3.47	61.4	34						
1612	1679	1905	7.27	80.0	58	1620	1881	6.06	77.2	54	1557	1859	5.04	74.2	50	1490	1839	4.17	71.0	46	1418	1820	3.45	67.6	42						
1762	1817	2064	7.18	86.6	67	1749	2034	6.00	83.4	63	1679	2007	5.02	80.0	58	1604	1979	4.18	76.5	53	1523	1951	3.48	72.6	48						
512	10	551	625	7.36	26.3	30	558	642	6.49	26.6	31	538	635	5.44	25.7	29	516	627	4.55	24.6	27	493	620	3.80	23.5	24					
562		635	718	7.51	30.3	38	634	729	6.52	30.3	38	609	719	5.43	29.1	35	584	710	4.53	27.9	32	557	701	3.78	26.6	30					
712	815	919	7.69	38.9	35	808	928	6.59	38.6	35	777	916	5.49	37.1	32	745	904	4.57	35.6	30	710	894	3.79	33.9	28						
812	880	994	7.52	42.0	42	860	993	6.35	41.1	40	827	980	5.28	39.5	37	792	969	4.38	37.8	35	754	958	3.63	36.0	32						
862	955	1080	7.49	45.6	49	941	1085	6.40	44.9	48	903	1069	5.34	43.1	44	863	1053	4.46	41.2	41	820	1036	3.72	39.2	37						
1012	1124	1272	7.43	53.7	48	1137	1307	6.55	54.3	49	1103	1298	5.53	52.7	47	1057	1281	4.62	50.5	43	1009	1265	3.85	48.2	39						
1162	1247	1411	7.47	59.5	66	1255	1443	6.54	59.9	67	1227	1443	5.55	58.6	64	1174	1422	4.63	56.0	58	1118	1403	3.85	53.4	53						
1312	1470	1653	7.86	70.2	45	1447	1659	6.71	69.1	44	1391	1635	5.58	66.4	40	1331	1612	4.64	63.6	37	1269	1592	3.85	60.6	34						
1462	1663	1868	7.93	79.4	57	1614	1852	6.66	77.1	53	1552	1827	5.54	74.1	49	1486	1802	4.60	71.0	45	1416	1780	3.81	67.6	41						
1612	1776	2002	7.70	84.8	63	1781	2043	6.67	85.1	64	1710	2013	5.54	81.7	59	1636	1986	4.58	78.1	54	1557	1960	3.79	74.4	49						
1762	1919	2167	7.58	91.6	73	1927	2213	6.60	92.0	74	1845	2174	5.49	88.1	68	1762	2139	4.57	84.1	62	1674	2104	3.81	79.9	57						

Legend:

Qc kW Cooling capacity
Qh kW Heating capacity
EER Energy efficiency ratio
LWT Leaving water temperature, evaporator
Cool l/s Evaporator water flow rate
Cool kPa Evaporator pressure drop

Application data:

Standard units, refrigerant R-134a
 Evaporator water temperature rise: 5 K
 Evaporator fluid: chilled water
 Fouling factor: $0.18 \times 10^{-4} (\text{m}^2 \text{K})/\text{W}$

Performances in accordance with EN 14511

Cooling and heating capacities, units for high condensing temperatures

Standard-efficiency units 30XW-P/30XWHP (option 150)

		Condenser leaving water temperature, °C																													
30XW		35			40			45			50			55			60														
LWT	°C	Qc	kW	Qh	kW	EER	Cool	Cool	Qc	Qh	kW	kW/kW	I/s	kPa	Qc	Qh	kW	kW/kW	I/s	kPa	Qc	Qh	kW	kW/kW	I/s	kPa					
252	5	268	317	4.90	12.7	19	259	313	4.32	12.3	18	250	309	3.80	11.9	17	240	305	3.33	11.4	16	229	301	2.90	10.9	15	219	297	2.52	10.4	15
302	294	349	4.82	14.0	22	284	345	4.24	13.5	21	273	340	3.71	13.0	20	262	336	3.24	12.5	18	251	332	2.81	11.9	17	238	327	2.43	11.3	15	
352	329	392	4.77	15.7	27	317	386	4.18	15.1	25	306	382	3.66	14.5	24	293	377	3.20	14.0	22	280	372	2.78	13.3	20	266	367	2.40	12.7	19	
402	391	473	4.35	18.6	27	370	458	3.82	17.6	25	349	444	3.33	16.6	22	327	430	2.88	15.6	19	304	416	2.47	14.5	17	281	403	2.10	13.4	15	
452	419	501	4.66	20.0	30	397	485	4.09	18.9	27	374	469	3.56	17.8	24	350	453	3.08	16.7	21	326	438	2.65	15.5	19	301	423	2.25	14.3	16	
552	468	560	4.61	22.3	37	443	542	4.05	21.1	33	417	524	3.53	19.8	30	390	506	3.05	18.6	26	363	489	2.61	17.3	23	334	472	2.21	15.9	20	
602	487	580	4.77	23.2	40	470	572	4.21	22.4	38	453	564	3.69	21.5	35	434	556	3.22	20.7	32	415	549	2.80	19.7	30	394	542	2.41	18.8	27	
652	596	713	4.63	28.4	36	563	689	4.07	26.8	32	530	666	3.55	25.2	29	495	642	3.06	23.6	26	460	620	2.62	21.9	22	424	598	2.22	20.2	19	
702	657	784	4.69	31.3	43	621	758	4.12	29.6	39	584	733	3.57	27.8	35	546	707	3.07	26.0	31	507	683	2.62	24.1	27	467	659	2.21	22.2	23	
802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
852	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1002	922	1095	4.83	43.9	61	872	1058	4.24	41.5	55	820	1022	3.69	39.0	50	767	985	3.19	36.5	44	713	950	2.74	34.0	39	658	914	2.32	31.3	33	
1052	973	1158	4.78	46.3	67	920	1119	4.20	43.8	61	865	1081	3.66	41.2	55	809	1042	3.16	38.6	48	752	1004	2.71	35.8	42	692	967	2.29	33.0	37	
1152	1068	1261	5.02	50.8	60	1028	1239	4.43	48.9	56	987	1218	3.88	47.0	52	944	1198	3.38	45.0	48	899	1178	2.93	42.8	44	853	1160	2.52	40.6	40	
1252	1159	1366	5.11	55.2	58	1086	1307	4.47	51.7	51	1040	1280	3.94	49.5	47	975	1236	3.41	46.4	42	905	1187	2.92	43.1	36	835	1142	2.48	39.8	31	
1352	1232	1464	4.82	58.7	64	1164	1413	4.24	55.4	57	1096	1365	3.70	52.2	51	1026	1317	3.20	48.8	45	953	1270	2.74	45.4	39	879	1223	2.32	41.9	33	
1452	1332	1583	4.82	63.4	75	1259	1529	4.24	59.9	67	1183	1474	3.68	56.3	60	1107	1423	3.18	52.7	53	1029	1373	2.71	49.0	46	949	1325	2.29	45.2	39	
1552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
252	7	285	336	5.10	13.6	21	276	332	4.50	13.1	20	266	327	3.95	12.7	18	255	322	3.46	12.2	17	244	318	3.02	11.6	16	233	313	2.63	11.1	15
302	313	370	5.00	14.9	24	302	365	4.40	14.4	23	291	360	3.85	13.9	22	279	354	3.36	13.3	20	267	349	2.93	12.7	18	253	344	2.54	12.1	17	
352	350	414	4.96	16.7	30	338	409	4.35	16.1	28	325	403	3.80	15.5	26	312	397	3.32	14.9	24	297	392	2.88	14.2	22	282	386	2.48	13.5	20	
402	420	504	4.57	20.0	31	398	488	4.02	19.0	28	375	473	3.51	17.9	25	352	457	3.04	16.8	22	328	442	2.62	15.6	19	303	427	2.23	14.5	17	
452	451	535	4.89	21.5	34	427	517	4.30	20.4	31	402	500	3.76	19.2	28	377	482	3.26	18.0	24	351	465	2.80	16.8	21	325	449	2.38	15.5	18	
552	502	597	4.83	24.0	42	476	578	4.25	22.7	38	448	558	3.71	21.4	34	420	539	3.21	20.0	30	391	520	2.76	18.6	26	361	501	2.34	17.2	22	
602	520	615	4.98	24.8	45	501	605	4.39	23.9	42	482	596	3.86	23.0	39	462	587	3.37	22.0	36	441	578	2.92	21.0	33	419	570	2.52	20.0	30	
652	639	759	4.83	30.5	40	605	734	4.26	28.8	36	569	708	3.72	27.1	33	533	683	3.22	25.4	29	495	658	2.75	23.6	25	457	634	2.34	21.8	22	
702	704	835	4.88	33.6	48	666	807	4.30	31.8	44	627	779	3.74	29.9	39	587	752	3.23	28.0	35	545	725	2.76	26.0	30	503	698	2.34	24.0	26	
802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
852	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1002	991	1169	5.06	47.3	69	938	1129	4.45	44.7	62	883	1089	3.89	42.1	56	827	1050	3.37	39.4	50	769	1010	2.89	36.7	44	710	971	2.46	33.8	38	
1052	1046	1236	5.01	49.9	76	990	1194	4.41	47.2	69	932	1152	3.85	44.4	62	872	1110	3.33	41.6	55	811	1069	2.86	38.7	48	748	1027	2.43	35.6	42	
1152	1140	1337	5.24	54.3	66	1097	1312	4.62	52.3	62	1052	1288	4.05	50.2	57	1006	1265	3.53	48.0	53	958	1242	3.06	45.7	49	908	1221	2.64	43.3	44	
1252	1236	1448	5.32	58.9	65	1143	1368	4.62	54.5	56	1094	1338	4.08	52.1	51	1050	1316	3.59	50.1	47	976	1264	3.08	46.5	41	901	1213	2.62	42.9	35	
1352	1323	1562	5.03	63.1	73	1251	1507	4.44	59.6	65	1177	1453	3.88	56.1	58	1103	1401	3.36	52.6	51	1026	1349	2.89	48.9	45	948	1298	2.45	45.2	38	
1452	1430	1689	5.02	68.2	85	1352	1630	4.43	64.5	76	1272	1571	3.86	60.6	68	1189	1513	3.34	56.7	60	1107	1459	2.86	52.8	52	1023	1406	2.43	48.8	45	
1552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
252	10	313	366	5.38	15.0	24	302	360	4.75	14.4	23	291	355	4.18	13.9	21	280	349	3.67	13.4	20	267	343	3.20	12.8	18	254	338	2.78	12.2	17
302	343	402	5.27	16.4	28	331	396	4.64	15.8	27	318	390	4.06	15.2	25	305	384	3.55	14.6	23	291	377	3.09	13.9							

Cooling and heating capacities, units for high condensing temperatures

High-efficiency units 30XW-P/30XWHP (option 150)

		Condenser leaving water temperature, °C																														
30XW		35				40				45				50				55				60										
LWT °C	Qc kW	Qh kW	EER	Cool kPa	Cool I/s	Cool kW	Cool I/s	Cool kPa	Cool I/s	Cool kW	Cool I/s	Cool kPa	Cool I/s	Cool kW	Cool I/s	Cool kPa	Cool I/s	Cool kW	Cool I/s	Cool kPa	Cool I/s	Cool kW	Cool I/s	Cool kPa								
512	5	483	568	5.14	23.0	24	465	558	4.54	22.2	22	447	549	3.99	21.3	21	429	540	3.49	20.4	19	409	532	3.03	19.5	18	389	524	2.62	18.5	16	
562		538	632	5.21	25.6	29	518	621	4.59	24.7	27	498	610	4.03	23.7	25	477	600	3.52	22.7	23	455	590	3.05	21.7	21	432	581	2.63	20.6	19	
712		678	801	5.03	32.3	28	656	790	4.45	31.2	26	631	778	3.91	30.1	24	605	766	3.42	28.8	22	577	754	2.97	27.5	21	548	742	2.56	26.1	19	
812		731	866	4.89	34.8	31	706	855	4.33	33.6	29	680	843	3.80	32.4	27	653	832	3.31	31.1	26	624	822	2.87	29.7	24	594	812	2.48	28.3	22	
862		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1012		959	11345.01	45.7	40	924	11444.42	44.0	38	887	1095	3.88	42.3	35	850	10783.39	40.5	32	811	1061	2.95	38.6	29	770	10452.55	36.7	26					
1162		111813095.32	53.2	54	1076	12844.68	51.2	50	1032	1260	4.11	49.1	46	987	12373.58	47.0	43	941	12163.11	44.8	39	893	11962.68	42.5	35							
1312		123914575.17	59.0	33	1198	14364.57	57.1	30	1155	1415	4.02	55.0	28	1108	13943.52	52.8	26	1059	13743.06	50.5	24	1008	13532.65	48.0	21							
1462		136616125.02	65.0	39	1318	15884.44	62.8	37	1268	1563	3.89	60.4	34	1213	15373.39	57.8	31	1156	15112.94	55.0	28	1095	14862.54	52.1	25							
1612		153017975.19	72.9	47	1479	17714.59	70.4	44	1424	1745	4.02	67.8	41	1366	17193.51	65.1	38	1305	16943.04	62.2	35	1241	16702.62	59.1	32							
1762		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
512	7	516	603	5.37	24.6	27	497	592	4.75	23.7	25	477	581	4.17	22.8	23	457	571	3.65	21.8	21	436	561	3.17	20.8	20	414	551	2.74	19.7	18	
562		575	671	5.44	27.4	32	553	658	4.80	26.4	30	531	646	4.21	25.3	28	509	634	3.67	24.2	26	485	623	3.19	23.1	24	460	612	2.75	21.9	21	
712		722	848	5.23	34.4	31	698	835	4.63	33.3	29	672	822	4.08	32.1	27	645	809	3.57	30.8	25	616	796	3.11	29.4	23	585	783	2.69	27.9	21	
812		777	916	5.08	37.1	35	751	903	4.50	35.8	33	724	890	3.95	34.5	30	695	878	3.45	33.1	28	664	866	3.00	31.7	26	632	854	2.59	30.2	24	
862		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1012		102512035.24	48.9	45	987	11814.63	47.0	42	947	1159	4.07	45.2	39	907	11393.55	43.2	36	865	11193.09	41.2	33	821	11002.67	39.1	30							
1162		119513915.56	57.0	61	1149	13624.90	54.8	56	1102	1335	4.30	52.5	52	1053	13083.75	50.2	48	1002	12833.25	47.8	43	951	12592.80	45.3	39							
1312		132115445.38	63.0	37	1277	15204.76	60.9	34	1231	1497	4.19	58.7	32	1182	14733.67	56.3	29	1129	14503.20	53.9	27	1075	14272.77	51.2	24							
1462		145417065.22	69.3	44	1404	16804.62	66.9	41	1350	1652	4.06	64.4	38	1293	16243.54	61.7	35	1233	15953.08	58.8	32	1169	15672.66	55.7	28							
1612		162719015.38	77.6	52	1573	18714.77	75.0	49	1515	1842	4.19	72.2	46	1453	18133.65	69.3	42	1389	17853.17	66.2	39	1321	17572.74	63.0	35							
1762		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Legend:
 Qc kW Cooling capacity
 Qh kW Heating capacity
 EER Energy efficiency ratio
 LWT Leaving water temperature, evaporator
 Cool I/s Evaporator water flow rate
 Cool kPa Evaporator pressure drop

Application data:
 Standard units, refrigerant R-134a
 Evaporator water temperature rise: 5 K
 Evaporator fluid: chilled water
 Fouling factor: $0.18 \times 10^{-4} (\text{m}^2 \text{K})/\text{W}$

Performances in accordance with EN 14511