

# 30RW/30RWA

## WATER-COOLED/CONDENSERLESS LIQUID CHILLERS WITH INTEGRATED HYDRONIC MODULE



WATER-COOLED/CONDENSERLESS LIQUID CHILLERS WITH INTEGRATED HYDRONIC MODULE 30RW/30RWA

### Physical data

30RW/RWA		020	025	030	040	045	060	070	080	090	110	120	135	150	160	185	210	245	275	300	
Nominal cooling capacity 30RW*	kW	20.2	25.9	29.9	39.7	45.3	56.0	70.0	80.0	91.0	108.0	123.0	139.0	149.0	162.0	183.0	216.0	247.0	284.0	310.0	
Nominal cooling capacity 30RWA**	kW	19.0	24.4	28.2	37.8	43.5	54.0	67.0	76.0	87.0	102.0	117.0	134.0	143.0	148.0	170.0	198.0	226.0	264.0	291.0	
Operating weight 30RW																					
With hydronic module, single pump	kg	377	396	399	432	452	717	748	789	815	959	1032	1052	1072	1404	1469	1697	1811	1897	1897	
With hydronic module, dual pump	kg	-	-	-	-	-	901	931	973	999	1134	1207	1226	1247	1519	1584	1913	2027	2113	2113	
Without hydronic module	kg	350	369	372	405	425	689	719	761	787	872	945	964	985	1089	1154	1367	1481	1567	1572	
Operating weight 30RWA																					
With hydronic module, single pump	kg	333	347	347	370	383	638	658	693	714	788	851	860	871	1193	1241	1404	1558	1596	1596	
With hydronic module, dual pump	kg	-	-	-	-	-	728	749	783	804	903	966	975	985	1248	1296	1517	1671	1709	1709	
Without hydronic module	kg	325	339	339	361	375	627	648	682	703	777	840	849	859	953	1001	1164	1318	1361	1371	
Refrigerant 30RW†		R-407C																			
Compressors 30RW/30RWA		Hermetic scroll, 48,3 r/s																			
Control		PRO-DIALOG Plus																			
Condensers (30RW)		Welded plate heat exchangers, max. water-side operating pressure with hydronic module 1000 kPa, without hydronic module 400 kPa																			
Hydronic condenser module (30RW)		Removable screen filter, variable-speed water pump, expansion tank, safety valve, pressure gauge, and purge valve																			
Condenser pump (single monocoil centrifugal)		One, composite, variable speed by frequency converter										One, variable speed by frequency converter (48,3 r/s)									
Evaporator (30RW/30RWA)		Welded direct-expansion plate heat exchanger, max. water-side operating pressure with hydronic module 1000 kPa, without hydronic module 400 kPa																			
Hydronic evaporator module (30RW/30RWA)		Removable screen filter, water pump, expansion tank, water flow switch, safety valve, pressure gauge, purge valve and control valve																			
Evaporator pump (single monocoil centrifugal)		One composite pump, 48,3 r/s										One, 48,3 r/s									
Water connections (30RW/30RWA)		Victaulic‡ (30RW 025-045 without hydronic module: threaded gas connections)																			
Field refrigerant connections (30RWA)		Welded copper tube																			

\* Standard EUROVENT conditions: evaporator entering/leaving water temperature = 12°C/7°C, condenser entering/leaving water temperature = 30°C/35°C.

\*\* Standard EUROVENT conditions: evaporator entering/leaving water temperature = 12°C/7°C, saturated bubble point condensing temperature = 45°C, subcooling = 5 K.

† The RWA units only have a nitrogen holding charge

‡ With tubular sleeve, supplied with the unit, consisting of a Victaulic connection at one end and a plain section at the other end

### Electrical data

30RW/RWA		020	025	030	040	045	060	070	080	090	110	120	135	150	160	185	210	245	275	300	
Power circuit																					
Nominal power supply	V-ph-Hz	400-3-50 ± 10%																			
Control circuit supply		The control circuit is supplied via the unit-mounted transformer																			
Maximum unit power input 30RW and 30RWA*	kW	8.1	10.3	12.0	15.8	18.0	22.3	27.8	31.6	36.1	42.4	48.8	54.0	59.1	63.2	72.2	84.9	97.6	107.9	118.2	
Nominal unit current draw 30RW**	A	9.9	12.6	14.6	17.9	21.1	27.2	32.5	35.8	42.1	48.1	54.0	61.0	68.0	71.7	84.2	96.1	108.0	122.0	136.0	
Nominal unit current draw 30RWA***	A	10.4	13.3	15.5	19.1	22.4	28.8	34.5	38.1	44.8	51.4	58.0	64.7	71.4	76.3	89.6	102.8	116.0	129.4	142.8	
Maximum start-up current (standard unit without electronic starter) 30RW and 30RWA†	A	86.0	130.0	130.0	135.0	155.0	147.6	155.5	160.9	185.2	245.2	254.0	309.0	318.0	212.6	245.7	314.5	332.0	396.0	414.0	
Maximum start-up current (electronic-starter option) 30RW and 30RWA‡	A	51.6	78.0	78.0	81.0	93.0	95.6	101.5	106.9	123.2	159.2	168.0	201.0	210.0	158.6	183.7	228.5	246.0	288.0	306.0	

\* Power input of the compressor(s) at maximum unit operating conditions: entering/leaving evaporator water temperature = 15°C/10°C, maximum condensing temperature of 65°C, and 400 V nominal voltage.

\*\* Nominal unit current draw at standard conditions: evaporator entering/leaving water temperature 12°C/7°C, condenser entering/leaving water temperature 30°C/35°C. The current values are given at 400 V nominal voltage.

\*\*\* Nominal unit current draw at standard conditions: evaporator entering/leaving water temperature 12°C/7°C, saturated condensing temperature (dew point) 45°C, subcooling 5 K. The current values are given at 400 V nominal voltage.

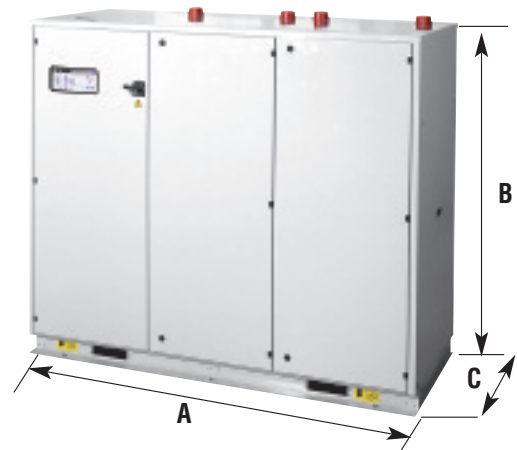
† Maximum instantaneous starting current at 400 V nominal voltage and with compressor in across-the-line start (maximum operating current of the smallest compressor(s) + locked rotor current of the largest compressor).

‡ Maximum instantaneous starting current at 400 V nominal voltage and with compressor with electronic starter (maximum operating current of the smallest compressor(s) + reduced start-up current of the largest compressor).

### Dimensions/clearances (mm)

30RW/30RWA	A	B	C
020-045	1204	1750	695
060-150	2004	1750	895
160-300	2950	1993	922

Please leave 700 mm clearance at both sides of the unit (900 mm for 30RW/RWA without hydronic module), and 900 mm (1100 mm for sizes 160-300) behind the unit.





PRO-DIALOG Plus



PRO-DIALOG Plus operator interface

## AQUASNAP

### FEATURES

- Nineteen sizes with nominal cooling capacities from 20 to 310 kW.
- New Aquasnap chillers with scroll compressors, digital auto-adaptive Pro-Dialog control and ozone-friendly refrigerant HFC-407C.
- Integrated hydronic evaporator and condenser modules, limiting the installation to simple operations such as the entering and leaving water piping connection.
- Intelligent control of condenser water pump speed and operation of glycol cooler (30RW) or air-cooled condenser fans (30RWA) to ensure reliable and economical operation.
- Quick electrical connections.
- Units can operate down to -20°C outside temperature.
- The variable-speed condenser water pump automatically adjusts the water flow rate to maintain the ideal condensing conditions.
- High-performance plate heat exchangers maximise the thermodynamic properties of refrigerant HFC-407C. From size 30RW 160 the evaporator and the condenser have two interlaced refrigerant circuits.
- Space-saving design.
- No plant room required – unit can be installed in a place that is open to the public, if local regulations permit.
- The refrigerant circuit is completely leak-proof.
- Used with Carrier 09 series glycol coolers or air-cooled condensers, supplied ready for installation with a control box. All control components are installed and tested in the factory.

### OPTIONS/ACCESSORIES

- Chiller with a dual evaporator and condenser water pump (30RW 060-300) (option)
- Chiller without condenser 30RWA (with hydronic evaporator module) (option)
- Chiller without hydronic module (option)
- Heat pump (hot or cold water control) (option)
- Low leaving water temperature down to -10°C (30RW) (option)
- Electronic starter for reduced start-up current (option)
- CCN Clock Board RS485 communications and time schedule board (option/accessory)
- Communications board for the AQUASmart system (option)