30RW/30RWA

WATER-COOLED/CONDENSERLESS LIQUID CHILLERS WITH INTEGRATED HYDRONIC MODULE

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	150.0	171.0	198.0	226.0	264.0	291.0
Operating weight																				
30RW without hydronic module	kg	316	335	338	367	387	683	713	755	781	864	937	956	977	1079	1144	1357	1471	1421	1491
30RWA without hydronic module	kg	325	339	339	361	375	627	648	682	703	777	840	849	859	953	1000	1318	1318	1361	1371
Extra weight																				
Evaporator with single-pump hydronic kit	kg	25	25	25	27	27	14	14	14	14	15	15	15	15	75	75	75	75	60	63
Condenser with single-pump hydronic kit	kg	35	35	35	37	37	20	20	20	20	80	80	80	80	80	80	95	95	97	101
Evaporator with twin-head pump hydronic kit	kg	-	-	-	-	-	104	104	104	104	130	130	130	130	130	130	188	188	-	-
Condenser with twin-head pump hydronic kit	kg	-	-	-	-	-	114	114	114	114	140	140	140	140	140	140	198	198	-	-
Casing, if hydronic option is used	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	170	170	170	170	-	-
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) Condenser pump		Removable screen filter, variable-speed water pump, expansion tank, safety valve, pressure gauge, and purge valve Single or twin-head composite centrifugal pump, according to option used, 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) Evaporator pump		Removable screen filter, water pump, expansion tank, water flow switch, safety valve, pressure gauge, purge valve and control valve Single or twin-head composite centrifugal pump, according to option used (48.3 r/s)																		
Water connections (30RW/30RWA) Field refrigerant connections (30RWA)		Victaulic‡ (30RW 025-045 without hydronic module: threaded gas connections) 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

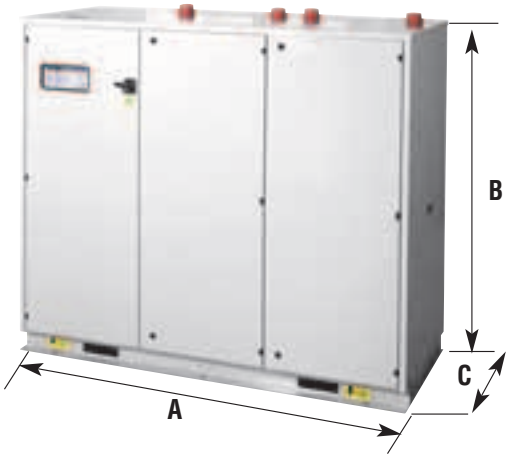
30RW/RWA		020	025	030	040	045	060	070	080	090	110	120	135	150	160	185	210	245	275	300
Power circuit																				
Nominal power supply	V-ph-Hz	400-3-50 ± 10%																		
Control circuit supply		The control circuit is supplied via the unit-mounted transformer																		
Maximum unit 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 (standard unit)	xx	1698	695
020-045 (with hydronic module and/or option 116E)	1204	1750	695
060-150	2004	1750	895
160-300 (standard unit)	2300	1963	922
160-300 (with hydronic module)	2950	1993	922
160-300	2950	1993	922

Please leave 700 mm clearance at both sides of the unit (900 mm for 30RW/RWA 020-045 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.
- Can be supplied with 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

- Evaporator hydronic module with single pump or with twin-head pump (sizes 060-300) (option)
- Condenser hydronic module with single pump or with twin-head pump (sizes 060-300) (option)
- Chiller without condenser 30RWA (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)