

CR Water chillers and heat pumps air cooled With radial fans and capacities from 5.7 to 38 kW

R407C



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• STANDARD VERSION • VERSION EQUIPPED WITH WATER PUMP

• VERSION EQUIPPED WITH WATER PUMP AND STORAGE TANK

Features

- Available in 10 different sizes
- Cooling only and heat pump (H) versions
- All versions are supplied for use with R407C
- 3 versions are available:
 - CR: standard version
 - CR P: version equipped with water pump
 - CR A: version equipped with water pump, expansion vessel, mechanical water filter, storage tank
- The cooling-only versions can be requested for silenced operation with a reduction in the fan speed. This request must be specified when the order is placed
- All versions, except the motocondensing one, can be requested to operate at low temperature to produce water cooled from 4 °C down to -6 °C. This request must be specified when the order is placed
- All the versions can be ordered with an up-rated fan assembly that enables higher useful heads to be reached at the nominal flow rate. This request must be specified when the order is placed. Please refer to the technical manuals for technical data
- Compressor disconnect switch and main power switch with door lock handle standard equipment on all models
- Horizontal (standard) or vertical air discharge (this request must be specified when the order is placed)
- Quiet operation
- Scroll compressor
- Electric heater for the compressor carter
- Supplied water filter, already mounted on CR A - P
- Differential pressure switch on all models except for CR 020, 025, 030, 040 A - P where a flow switch is installed
- Variable speed radial fans
- Electronic control and management card with start-up timer and defrost cycle optimization function
- Plate type exchangers
- Metallic protective cabinet with rustproof polyester paint

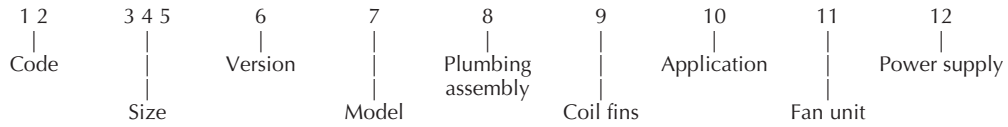
Accessories

- **DR:** Low temperature device for correct cooling mode operation with ambient temperatures from less than 20 °C down to - 10 °C. **For the combination with the FRC flange, please refer to the technical manual of the unit.**
- **DRE:** Peak current reducer. **It must be factory-mounted.**
- **FRC:** Flange made of galvanized and painted sheet steel for connection to air intake and delivery ducts.
- **GPCR:** Safety grille: protects external coils from accidental impact.
- **KR:** Antifreeze electric heater for plate exchanger. **It must be factory-mounted.**
- **PR3:** Simplified remote control panel. All main functions of the unit, alarms included, are possible. It can be used with a shielded cable at a distance of 30 m.
- **PRD:** 'Intelligent' remote control panel with the same functions as the on-board panel. It can be used with a shielded cable at a distance of 150 m.
- **RA:** Antifreeze electric heater for the storage tank. **It must be factory-mounted.**
- **SDP:** Electronic card for using PR1 accessory up to a distance of 150 m.
- **VT:** Anti-vibration mounts.

Selection

By combining the various options, each model can be configured exactly to match even the most specific system requirements.

Configuration rules:



Code:

CR

Size:

020, 025, 030, 040, 050, 080, 090, 100, 150, 200

Version:

- ° - Standard
- L - Silenced

Model:

- ° - Cooling only
- H - Heat pump

Plumbing assembly:

- ° - Standard
- P - With pump
- A - With pump and storage tank

Coil fins:

- ° - Aluminium
- R - Copper
- S - Tinned copper
- N - Painted copper / aluminium version

Application:

- ° - Standard
- Y - Low temperature with water produced down to -6 °C

Fan unit:

- ° - Front supply
- V - Vertical supply

Power supply:

- ° - 3N~ 400V 50Hz
- 3 - 3~ 230V 50Hz
- M - 3~ 230V 50Hz

Warning:

- standard options are shown by symbol °;
- heat pump version and the silenced version (field 6: option L; field 7: option H);
- Single-phase power supply (field 12: option M) is possible for 020 - 025 - 030 - 040 size only.

Commercial code example: **CR100°HA°°°3**

This is a new CR unit, size 100, charged with R407C, equipped with heat pump, storage tank and water pump, suitable for compressor with 3~ 230V 50Hz motor.

All versions	Compatibility of accessories									
	020	025	030	040	050	080	090	100	150	200
DR 22	✓	✓								
DR 32			✓	✓						
DR 52					✓					
DR 77						✓	✓			
DR 102								✓		
DR 152									✓	✓
DRE 5					✓	✓	✓			
DRE 10								✓		
DRE 15									✓	✓
FRC 1	✓*	✓*	✓	✓						
FRC 2					✓					
FRC 3						✓	✓			
FRC 4								✓		
FRC 5									✓	✓
GPCR 1	✓	✓	✓	✓						
GPCR 2					✓					
GPCR 3						✓	✓			
GPCR 4								✓		
GPCR 5									✓	✓
KR 2	✓	✓								
KR 3			✓	✓	✓	✓	✓	✓	✓	✓
PR3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PRD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Standard - L - P versions	020	025	030	040	050	080	090	100	150	200
VT 7	✓	✓	✓	✓						
VT 8					✓	✓				
VT 9							✓	✓	✓	✓
A versions	020	025	030	040	050	080	090	100	150	200
RA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VT 7	✓	✓								
VT 8			✓	✓						
VT 9					✓	✓	✓			
VT 15								✓	✓	✓

* = Only for CR A versions.

Technical data

Mod. CR		Version	020	025	030	040	050	080	090	100	150	200
Cooling capacity	kW	All	5.7	6.7	8.0	10.0	12.1	16.3	18.0	25.0	33.3	38.0
Total input power	kW	Standard	2.6	3.06	3.44	4.68	5.16	7.25	7.75	11.25	13.55	16.75
		A - P	2.85	3.31	3.69	4.93	5.49	7.58	8.08	12.25	14.55	17.88
Total input current (A)	3N~ 400V	Standard	4.7	5.7	6.3	8.5	9.7	13.6	14.7	20.9	23.9	30.2
		A - P	5.8	6.8	7.4	9.6	11.4	15.2	16.3	23.0	25.9	32.6
	1~ 230V	Standard	12.7	15.0	16.8	24.1	-	-	-	-	-	-
		A - P	13.8	16.1	17.9	25.2	-	-	-	-	-	-
	3~ 230V	Standard	-	-	-	16.5	19.0	27.7	30.2	42.8	49.5	61.8
		A - P	-	-	-	17.59	20.7	29.3	31.8	46.4	53.0	66.0
Water flow rate	l/h	All	980	1150	1380	1720	2080	2800	3100	4300	5730	6540
Pressure drop	kPa	Standard	4.3	4.5	26.8	24.9	28.8	23.1	22.3	21.9	26.3	29.5
Useful head on water side	kPa	A - P	70	68	68	62	72	67	64	79	74	83
♪ Sound pressure	dB (A)	All	38	39	40	43	42	46	45.5	47	46	46.5
Nominal motor power	n. x kW	All	1x0.55	1x0.55	1x0.55	1x0.75	1x1.1	1x1.5	1x1.5	2x1.1	2x1.5	2x1.5
Nominal air flow rate	m³/h	All	2400	2500	3050	3500	4400	7700	7100	10300	12600	15200
Maximum static pressure	Pa	All	160	120	100	113	135	115	124	155	95	80

Mod. CR H		Version	020	025	030	040	050	080	090	100	150	200
Cooling capacity	kW	All	5.7	6.7	8.0	10.0	12.1	16.3	18.0	25.0	33.3	38.0
Total input power	kW	Standard	2.6	3.05	3.45	4.7	5.15	7.25	7.75	11.25	13.55	16.75
		A - P	2.85	3.3	3.7	4.95	5.48	7.58	8.08	12.25	14.55	17.9
Total input current (A)	3N~ 400V	Standard	4.7	5.7	6.3	8.5	9.7	13.6	14.7	20.9	23.9	30.2
		A - P	5.8	6.8	7.4	9.6	11.4	15.2	16.3	23.0	25.9	32.6
	1~ 230V	Standard	12.7	15.0	16.8	24.1	-	-	-	-	-	-
		A - P	13.8	16.1	17.9	25.2	-	-	-	-	-	-
	3~ 230V	Standard	-	-	-	16.5	19.0	27.7	30.2	42.8	49.5	61.8
		A - P	-	-	-	17.59	20.7	29.3	31.8	46.4	53.0	66.0
Water flow rate	l/h	All	980	1150	1380	1720	2080	2800	3100	4300	5730	6540
Pressure drop	kPa	Standard	4.3	4.5	26.8	24.9	28.8	23.1	22.3	21.9	26.3	29.5
Useful head on water side	kPa	A - P	70	68	68	62	72	67	64	79	74	83
Heating capacity	kW	All	6.1	7.2	8.5	10.6	12.5	17.0	19.2	26.3	35.0	39.5
Total input power	kW	Standard	2.99	3.53	3.97	5.27	5.69	8.23	8.57	12.78	15.4	18.75
		A - P	3.24	3.78	4.22	5.52	6.02	8.56	8.9	13.78	16.4	19.88
Total input current (A)	3N~ 400V	Standard	5.3	6.3	7.0	9.2	10.4	15.0	15.7	22.9	26.3	32.8
		A - P	6.4	7.4	8.1	10.3	12.0	16.7	17.3	24.9	28.3	35.3
	1~ 230V	Standard	14.7	17.4	19.6	27.0	-	-	-	-	-	-
		A - P	15.8	18.5	20.7	28.1	-	-	-	-	-	-
	3~ 230V	Standard	-	-	-	17.6	19.9	28.9	30.2	44.0	51.0	63.3
		A - P	-	-	-	18.72	21.6	30.5	31.9	47.6	54.5	67.5
Water flow rate	l/h	All	1050	1240	1460	1820	2150	2920	3300	4520	6020	6790
Pressure drop	kPa	Standard	4.9	5.2	30.0	27.9	30.8	25.2	25.3	24.2	29.0	31.8
♪ Sound pressure	dB (A)	All	38	39	40	43	42	46	45.5	47	46	46.5
Nominal motor power	n. x kW	All	1x0.55	1x0.55	1x0.55	1x0.75	1x1.1	1x1.5	1x1.5	2x1.1	2x1.5	2x1.5
Nominal air flow rate	m³/h	All	2400	2500	3050	3500	4400	7700	7100	10300	12600	15200
Maximum static pressure	Pa	All	160	120	100	113	135	115	124	155	95	80

Mod. CR L		Version	020	025	030	040	050	080	090	100	150	200
Cooling capacity	kW	All	5.4	6.4	7.5	9.4	11.5	15.3	17.0	23.6	31.5	35.7
Total input power	kW	Standard	2.8	3.3	3.71	4.98	5.53	7.75	8.24	12.0	14.55	17.85
		A - P	3.05	3.55	3.96	5.23	5.86	8.08	8.57	13.0	15.55	18.98
Total input current (A)	3N~ 400V	Standard	5.0	6.0	6.6	8.9	10.1	14.3	15.3	22.0	25.2	31.8
		A - P	6.1	7.1	7.7	10.0	11.8	16.0	17.0	24.0	27.3	34.2
	1~ 230V	Standard	13.5	16.0	18.0	25.4	-	-	-	-	-	-
		A - P	14.6	17.1	19.1	26.5	-	-	-	-	-	-
	3~ 230V	Standard	-	-	-	17.4	19.5	28.2	30.3	43.3	50.3	62.7
		A - P	-	-	-	18.48	21.2	29.8	32.0	46.9	53.9	66.9
Water flow rate	l/h	All	930	1100	1290	1620	1980	2630	2920	4060	5420	6140
Pressure drop	kPa	Standard	3.9	4.1	23.4	22.1	26.1	20.4	19.8	19.5	23.5	26.0
Useful head on water side	kPa	A - P	71	69	69	64	75	71	69	85	80	90
♪ Sound pressure	dB (A)	All	33	34	35	38	37	41	40.5	42	41	41.5
Nominal motor power	n. x kW	All	1x0.55	1x0.55	1x0.55	1x0.75	1x1.1	1x1.5	1x1.5	2x1.1	2x1.5	2x1.5
Nominal air flow rate	m³/h	All	1920	2000	2440	2800	3520	6160	5680	8240	10080	12160
Maximum static pressure	Pa	All	117	105	65	115	70	90	90	75	62	70

Technical data

Mod. CR - CR H - CR L	Version	020	025	030	040	050	080	090	100	150	200	
Evaporator water contents	dm ³	All	0.6	0.6	0.85	0.85	1.03	1.41	1.78	2.44	3.1	3.1
Carter electric heater	W	All	40	40	40	35/70	35/70	70	70/75	44/75	44/75	75
Pump speed	n.	A - P	3	3	3	3	3	3	3	1	1	1
Storage tank capacity	l	A	26	26	35	35	75	75	75	150	150	150
Expansion tank capacity	l	A	2	2	2	5	5	5	5	8	8	8
Water connections	Ø ⁽¹⁾	Standard	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
	Ø ⁽²⁾	A - P	1"	1"	1"	1"	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4	1" 1/4
Peak current (A)	3N~ 400V	All	34.6	42.6	48.6	52.9	70.2	106.4	104.4	137.9	144.7	185.0
	1~ 230V	All	66.2	81.2	105.2	120.3	-	-	-	-	-	-
	3~ 230V	All	-	-	-	102.2	145.4	186.7	181.7	223.6	226.8	287.4
Max. current (A)	3N~ 400V	Standard	6.15	7.12	7.94	9.4	12.5	17.0	18.3	25.5	32.6	36.8
		A - P	7.25	8.22	9.04	10.5	14.45	18.95	20.25	27.56	34.66	39.23
	1~ 230V	Standard	17.33	19.79	22.6	27.9	-	-	-	-	-	-
		A - P	18.43	20.89	23.7	29.0	-	-	-	-	-	-
	3~ 230V	Standard	-	-	-	16.3	21.7	29.5	31.6	43.4	56.1	64.1
		A - P	-	-	-	17.4	23.7	31.5	33.6	47.0	59.7	68.3

Power supply: for 020 - 025 - 030: 1~ 230V 50 Hz; 3N~ 400V 50 Hz.
for 040: 1~ 230V 50 Hz; 3~ 230V 50 Hz; 3N~ 400V 50 Hz.
for 050 - 080 - 090 - 100 - 150 - 200: 3~ 230V 50 Hz; 3N~ 400V 50 Hz.

Performance values refer to the following conditions:

- ♪ Sound pressure measured in free field conditions at distance of 10 m and direction factor = 2.
- In accordance with ISO 3744 regulations

■ Cooling:

- water outlet temperature 7 °C;
- ambient air temperature 35 °C;
- Δt = 5 °C.

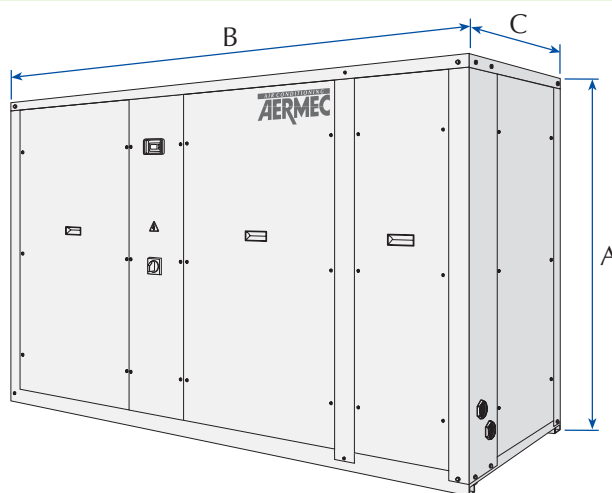
■ Heating:

- water outlet temperature 50 °C;
- ambient air temperature 7 °C D.B., 6 °C W.B.;
- Δt = 5 °C.

⁽¹⁾ = male connection.

⁽²⁾ = female connection.

Dimensions (mm)



Mod. CR Standard - P		020	025	030	040	050	080	090	100	150	200
Height	A	755	755	1010	1010	1010	1200	1200	1350	1500	1500
	A*	1068	1068	1085	1085	1085	1260	1260	1420	1650	1650
Width	B	950	950	950	950	1300	1500	1500	1750	2000	2000
Depth	C	600	600	600	600	600	700	700	800	850	850
	CR	115	115	150	160	198	255	285	351	445	485
Weight (kg)	CR P	125	125	160	170	208	265	295	361	455	495
	CR H	136	137	177	188	229	287	313	393	490	523
	CR HP	149	151	191	201	244	302	328	409	506	543
Mod. CR A		020	025	030	040	050	080	090	100	150	200
Height	A	1010	1010	1010	1010	1010	1200	1200	1350	1500	1500
	A*	1068	1068	1085	1085	1085	1260	1260	1420	1650	1650
Width	B	950	950	1300	1300	1750	1950	1950	2150	2400	2400
Depth	C	600	600	600	600	600	700	700	800	850	850
	CR A	145	150	185	200	263	300	335	401	495	535
Weight (kg)	CR HA	170	175	225	240	290	350	385	460	555	595

* = with vertical air supply.