



PURPLE FC

FREE COOLING CAPACITY 54 ÷ 146 kW

High efficiency air-water free-cooling chiller
with axial fans and natural refrigerant gas R290



PURPLE FC

High efficiency air-water free-cooling chiller
with axial fans and natural refrigerant gas R290



Technical brochure
PURPLE FC

TECHNICAL DATA



LN VERSION



NATURAL
REFRIGERANT



TWO
CIRCUITS

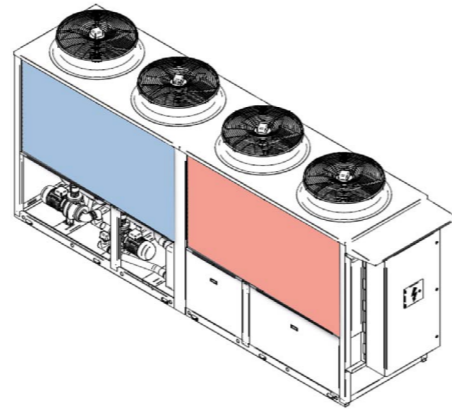
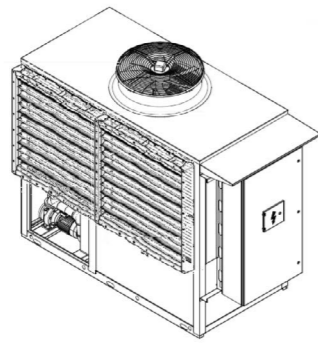
Standard version in 11 sizes
Cooling capacity (A35;W7) 54 ÷ 146 kW

STRONG POINTS

- > **100% natural refrigerant - R290**
- > **Free cooling integrated**
- > **Cascade mode upto 4 units**
- > **Modularity and full accessibility**
- > **LN version - STANDARD**
- > **Supervision of the unit via x-web**

UNIT SIZE	30.1	32.1	34.1	35.1
Cooling capacity	54,6	59,2	65,6	73,2

UNIT SIZE	40.1	45.1	50.1	55.1	60.1	75.1	35.2
Cooling capacity	81,2	89,1	98,6	104,3	117,3	129,2	146,0

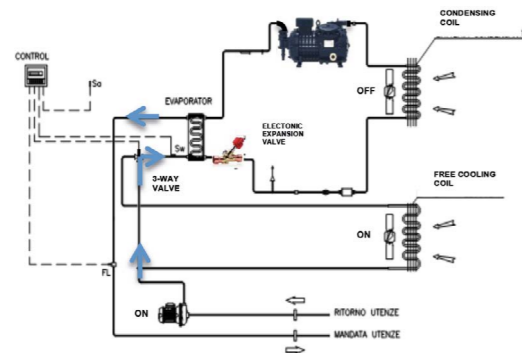


Free cooling equipment includes:

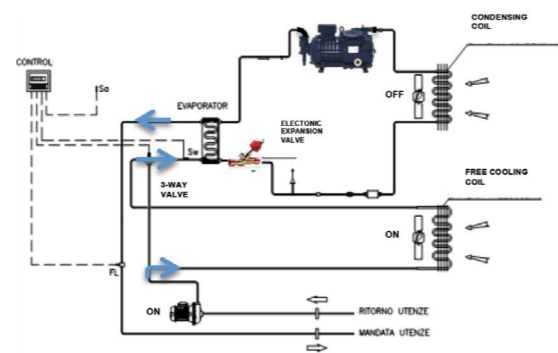
- > Dampers
- > One Water coil
- > One Fan only
- > 3 way valve

Integrated free cooling module includes:

- > Additional module without Dampers
- > Water coils (2 pcs)
- > Fans
- > 3 way valve



**Summer
Freecooling mode OFF**



**Mid-season and Winter
Freecooling mode ON**

Freecooling consists of the partial or total supply of cooling capacity as an alternative, free of charge, to the capacity produced by compressors like a traditional chiller. The unit is equipped with an additional water coil and when the external air temperature is less than the temperature of the water returning from the system, the coil can pre-cool or fully cool it.

The servo-controlled three-way valve opens or closes the flow to the water coil, depending on the signal coming from the control.

// Technical data

UNIT SIZE			30.1	32.1	34.1	35.1	40.1	45.1	50.1	55.1	60.1	75.1	35.2
Cooling (A35;W 12/7 30% glicole)													
Cooling capacity	(1)	kW	54,6	59,2	65,6	73,2	81,2	89,1	98,6	104,3	117,3	129,2	146,0
Total power input	(1)(2)	kW	19,4	21,0	23,1	25,8	30,3	32,6	35,7	38,1	42,4	46,4	51,4
Water Flow	(1)	m ³ /h	10,4	11,3	12,5	14,0	15,5	17,0	18,8	19,9	22,4	24,6	27,8
EER	(1)		2,8	2,8	2,8	2,8	2,7	2,7	2,8	2,7	2,8	2,8	2,8
Free-Cooling (A5;W 12/-)													
Cooling capacity	(5)	kW	25,5	26,7	29,1	30,6	41,5	44,6	46,4	49,0	53,6	57,1	60,8
Outlet water temperature	(5)	°C	9,6	9,7	9,7	9,9	9,4	9,5	9,6	9,6	9,7	9,8	9,9
Total Free-Cooling temperature													
TFT - Total Free-Cooling temperature		°C	-0,5	-1,2	-1,0	-2,3	1,8	1,1	1,1	0,6	-0,3	-1,2	-2,6
Compressor													
Type			Semihhermetic										
Quantity	n°		1	1	1	1	1	1	1	1	1	1	2
Refrigerant circuits	n°		1	1	1	1	1	1	1	1	1	1	2
Capacity steps	n°		2	2	2	2	2	2	2	2	2	2	4
Fans condensing section													
Type			Axial										
Quantity	n°		1	1	1	1	2	2	2	2	2	2	2
Fans power input	kW		1,6	1,6	1,6	1,6	3,2	3,2	3,2	3,2	3,2	3,2	3,2
Fans current	A		3,4	3,4	3,4	3,4	6,8	6,8	6,8	6,8	6,8	6,8	6,8
Total air flow	m ³ /h		21000	21000	21000	21000	42000	42000	42000	42000	42000	42000	42000
Fans free cooling section													
Type			Axial										
Quantity	n°		1	1	1	1	2	2	2	2	2	2	2
Fans power input	kW		1,6	1,6	1,6	1,6	3,2	3,2	3,2	3,2	3,2	3,2	3,2
Fans current	A		3,4	3,4	3,4	3,4	6,8	6,8	6,8	6,8	6,8	6,8	6,8
Total air flow	m ³ /h		21000	21000	21000	21000	42000	42000	42000	42000	42000	42000	42000
User side exchanger													
Type			Plate										
Quantity	n°		1	1	1	1	1	1	1	1	1	1	1
Nominal water flow rate (A35;W12/7)	(1)	m ³ /h	10,4	11,3	12,5	14,0	15,5	17,0	18,8	19,9	22,4	24,6	27,8
Pressure drop Water (A35;W12/7)	(1)	kPa	73	71	68	73	73	72	67	70	67	67	38
Desuperheater (accessory)													
Type			Plate										
Quantity	n°		1	1	1	1	1	1	1	1	2	2	2
Heat Capacity	(4)	kW	11,3	12,4	15,0	19,2	19,4	21,6	24,5	25,0	28,7	32,5	34,1
Water flow		m ³ /h	1,9	2,1	2,6	3,3	3,3	3,7	4,2	4,3	4,9	5,6	5,9
Pressure drop		kPa	7	8	8	12	8	9	11	9	11	11	10
Hydraulic module (version)													
External available pressure		kPa	66	62	101	74	76	77	87	87	89	81	90
Storage tank capacity		l	250	250	250	250	250	250	250	250	250	250	250
Acoustic data LN (STD version)													
Sound power level	(3)	dBA	82	82	82	82	84	84	84	84	86	86	86
Noise pressure level (10 m)	(3)	dBA	54	54	54	54	56	56	56	56	58	58	58
Dimension Data													
Lenght		mm	2890	2890	2890	2890	5330	5330	5330	5330	5330	5330	5330
Depth		mm	1208	1208	1208	1208	1208	1208	1208	1208	1208	1208	1208
Height		mm	2390	2390	2390	2390	2390	2390	2390	2390	2390	2390	2390

(1) Air temperature 35°; Evaporator water temperature IN/OUT 12/7°C glycol 30% according EN 14511

(2) The total power is given by the sum of the power absorbed by the compressors and by the fans according EN 14511

(3) Lw: sound power values in free field calculated in compliance with ISO 3744. Chiller working conditions (A35;W7)

(3) Sound pressure levels detected at 10/5/1 m from electrical panel, not channelled in free field, in compliance with ISO 3744. Chiller working conditions (A35;W7)

(4) Evaporator water 12/7°- Desuperheater 40/45°C

(5) Ambient air temperature 5°C; Inlet evaporator water temperature 12°C, glycol 30%, Nominal flow rate.