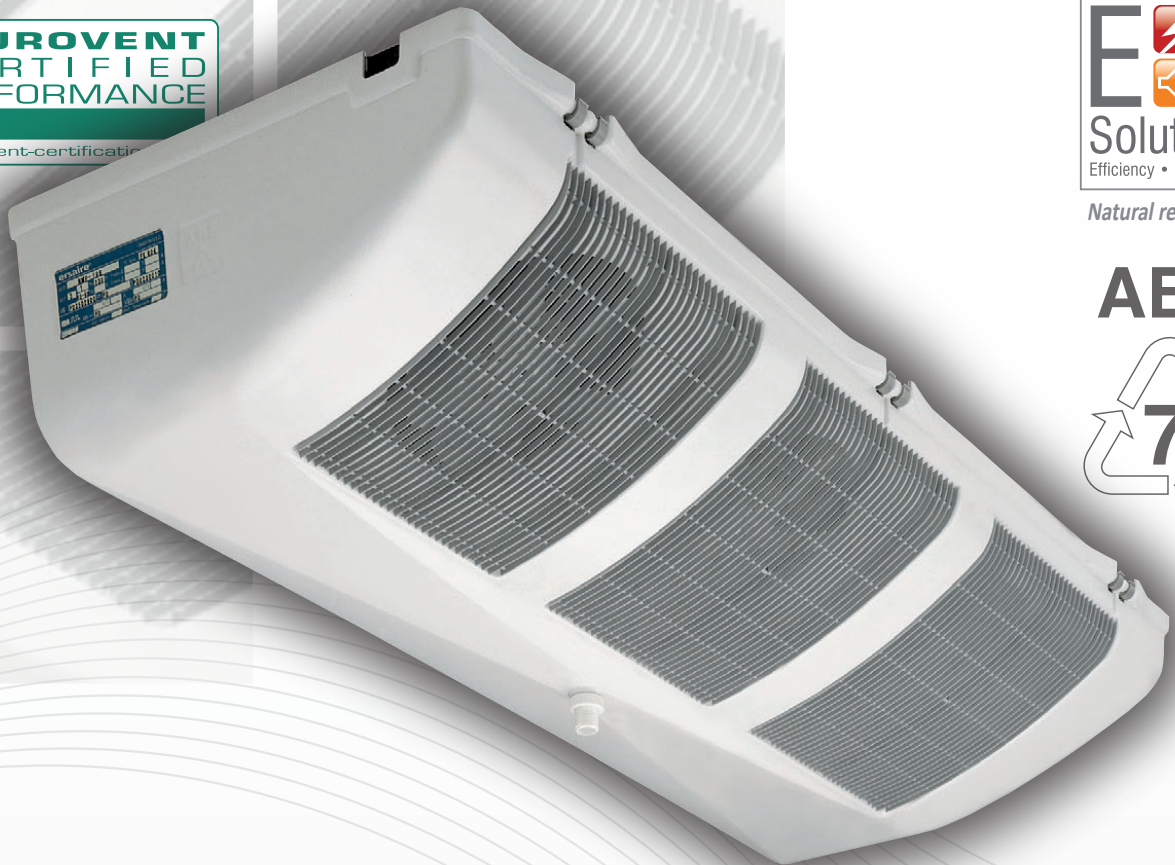


Unit coolers MR



Natural refrigerants

ABS



MR units coolers are suitable for small refrigerated rooms for chilling or low temperature storage applications. 28 basic models with capacity ranging from 380 to 2620 W.

Heatcraft reserves itself the right to make changes at any time without preliminary notice - Photos non-contractual



FRIGA-BOHN



Unit coolers MR



Coil with a polyester painting protection

Description

Casing

- ABS recycle casing guarantees a high quality level with regard to:
 - robustness: high thermal (at low and high temperatures) and mechanical shock-proof characteristics,
 - aesthetics: its look, its finish and granulated white casing make the MR integrate completely with its installed environment, MR fins with polyester finish,
 - hygiene: no water retaining areas favourable to germ development due to its round cornered casing and no corrosive elements (for example: stainless steel screws),
 - safety: no sharp or cutting edges.

Ventilation

- 50-60 Hz fan assembly (Ø 200 mm) used for MR and MRE models, is designed with an enclosed frame, class B, impedance protected, life lubricated motor, connected to the junction box (except for MR 75/65).
- Fan guards conform to safety regulations.

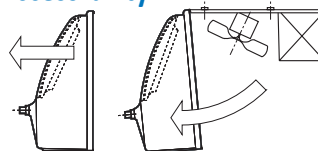
Coil

- The high efficient and compact MR range finned coils, are designed with corrugated aluminium fins (fin spacing: 4.23 or 6.35 mm) and grooved internal structure copper tubes.
- The refrigerant distributors are Venturi type for models MR 160/140 to MR 270/250 and MRE 135/120 to MRE 270/250.
- The whole MR coil has a polyester painting protection, particularly for corrosive atmospheres.

Defrost

- 230 V /1 tubular electric heater connected to a junction box (MRE only) is inserted in slots, under the coil which facilitates easy maintenance and ensures equal heat distribution through the coil. So, defrost is perfect.
- Defrost water is collected in an intermediate drain pan then drained through a Ø 1" G threaded polyamid drain fitting.

Accessibility



- The MR line has been designed to facilitate easy installation, maintenance and cleaning.
- Casing fitted with polyamid hinges, enables full access to all unit components (coil, motorfan, defrost heater, connections,...). These hinges allow the casing removal, too.

Nomenclature

MRE⁽¹⁾ 210⁽²⁾ E⁽³⁾

- (1) Unit cooler:
MR : positive temp. application without defrost system
MRE : negative temp. application with defrost system
- (2) Model
- (3) Fins spacing : **R / E** : 4.23 mm - **L / C** : 6.35 mm

Options

Coil

- WCO** Glycol water, brine (please consult us).
CO2 R744 optimization (please consult us).

Defrost

- E1K** Light electric defrosting: MR ... R and MR ... L.
THD For low temperature refrigerated rooms, defrost termination and fan delay thermostat with single-pole, double throw switch at +12 °C (±3 K) and +2 °C (±3 K).
 Supplied with a sensor and a fitting clamp.

Fully equipped unit coolers

- EEC** Fully equipped unit cooler (see pages "APPENDIX").



EUROVENT - The performance published of our products are certified in conformity with european standards EN327, EN328, EN1048.



ISO 9001 - Our company is certified by LRQA to comply with quality standards ISO 9001.



RoHS - WEEE - Our products are compliant with regards to european guideline 2002/95/CE and 2002/96/CE concerning electric and enlectronic components.



CE - Our products are in conformity with european guidelines.



GOST - Products in conformity with "GOST" agreement.

"According the requirements of the European measures, we draw your attention to the fact that our technical documents are at least translated into french and english. For any translation in another language such as the end user can require it, thank you to consult us."

MR ...

4,23 mm

		MR ... R	75	110	135	160	180	210	270
Capacity	DT1 = 8K - SC 2 (1)	W	680	1070	1270	1550	1860	2060	2620
Surface		m ²	3,35	3,66	6,10	8,04	8,04	10,05	13,40
Circuit volume		dm ³	0,58	0,63	1,05	1,1	1,38	1,73	2,30
Air flow		m ³ /h	290	650	580	880	880	870	1160
Fan 230 V/1/50-60 Hz 1500 r.p.m.	Air throw (2)	m	3	3,7	3,5	4,1	4,1	4	4,5
	Ø 200 mm	Num.	1	2	2	3	3	3	4
	230 V/1/50 Hz	W max	1 x 38	2 x 38	2 x 38	3 x 38	3 x 38	3 x 38	4 x 38
		A max (3)	1 x 0,24	2 x 0,24	2 x 0,24	3 x 0,24	3 x 0,24	3 x 0,24	4 x 0,24
Net weight		kg	3	7,5	9,5	14,5	14,5	15	20
Dimensions	A	mm	514	784	784	1174	1174	1174	1504
	B	mm	326	596	596	493	493	493	658
Connections	Inlet	Ø ODF *	3/8" / 10 mm **	3/8" / 10 mm **	3/8" / 10 mm **	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***
	Outlet	Ø ODF *	3/8" / 10 mm	3/8" / 10 mm	3/8" / 10 mm	1/2" / 12 mm	1/2" / 12 mm	1/2" / 12 mm	1/2" / 12 mm

MR ...

6,35 mm

		MR ... L	65	100	120	140	170	190	250
Capacity	DT1 = 8K - SC 2 (1)	W	620	890	1180	1370	1680	1890	2440
Glycol water (4)	DT1 = 8K - SC 2 (1)	W	-	-	1220	1150	-	1790	2380
Surface		m ²	2,32	2,53	4,22	5,56	5,56	6,96	9,27
Circuit volume		dm ³	0,58	0,63	1,05	1,10	1,38	1,73	2,30
Air flow		m ³ /h	310	660	620	960	960	930	1240
Fan 230 V/1/50-60 Hz 1500 r.p.m.	Air throw (2)	m	3	3,7	3,5	4,1	4,1	4	4,5
	Ø 200 mm	Num.	1	2	2	3	3	3	4
	230 V/1/50 Hz	W max	1 x 38	2 x 38	2 x 38	3 x 38	3 x 38	3 x 38	4 x 38
		A max (3)	1 x 0,24	2 x 0,24	2 x 0,24	3 x 0,24	3 x 0,24	3 x 0,24	4 x 0,24
Net weight		kg	3	7,5	9,5	14,5	14,5	15	20
Dimensions	A	mm	514	784	784	1174	1174	1174	1504
	B	mm	326	596	596	493	493	493	658
Connections	Inlet	Ø ODF *	3/8" / 10 mm **	3/8" / 10 mm **	3/8" / 10 mm **	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***
	Outlet	Ø ODF *	3/8" / 10 mm	3/8" / 10 mm	3/8" / 10 mm	1/2" / 12 mm	1/2" / 12 mm	1/2" / 12 mm	1/2" / 12 mm

(1) See pages "APPENDIX".

(2) Effective when the room cross section allows air circulation (see CECOMAF GT 6001, DIN8955, ENV328).

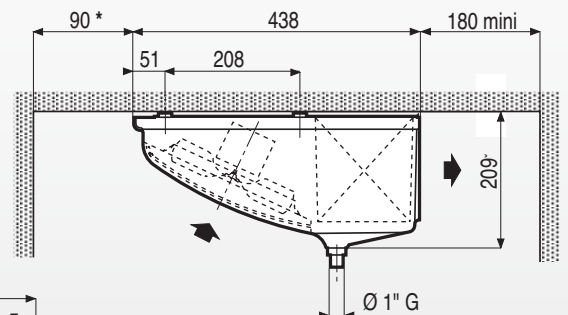
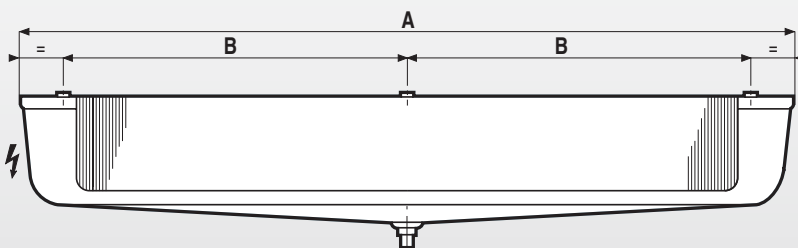
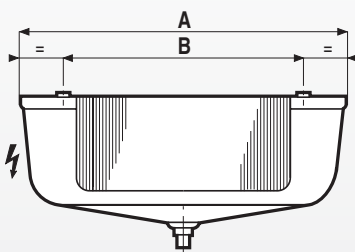
(3) Setting of overload protections. For room temperatures 'ti' other than +20 °C, multiply the given amperage by the ratio 293/(273 + 'ti') so as to obtain the approximate amperage after the room pull down.

(4) Glycol water :
Percentage of glycol = 30%
Fluid inlet temp. = -8°C
Fluid outlet temp. = -4°C
Dry air inlet temp. = +2°C
Relative humidity = 85%

* ODF: Female sweat type connection.

** Adapter parts supplied for Ø 1/2" or Ø 12 mm expansion valve to be brazed.

*** Liquid distributor: Ø 1/2" male to be brazed. Adapter part supplied for either Ø 12 mm expansion valve to be brazed.

* 90 mini: Casing opening
160 mini: Casing removal

MR ...	WCO	CO2	E1K	THD	ECC
	+	-	0	-	0

t_{A1} +10°C +2°C -5°C -10°C -25°C

MRE ...

4,23 mm

		MRE ... E	75	110	135	160	180	210	270
Capacity	DT1 = 7K - SC 3 (1)	W	530	820	1070	1210	1440	1660	2230
	DT1 = 6K - SC 4 (1)	W	420	640	840	960	1140	1320	1780
Surface		m ²	3,35	3,66	6,10	8,04	8,04	10,05	13,40
Circuit volume		dm ³	0,58	0,63	1,05	1,1	1,38	1,73	2,30
Air flow		m ³ /h	290	650	580	880	880	870	1160
Fan	Air throw (2)	m	3	3,7	3,5	4,1	4,1	4	4,5
	∅ 200 mm	Num.	1	2	2	3	3	3	4
230 V/1/50-60 Hz 1500 r.p.m.	230 V/1/50 Hz	W max	1 x 38	2 x 38	2 x 38	3 x 38	3 x 38	3 x 38	4 x 38
		A max (3)	1 x 0,24	2 x 0,24	2 x 0,24	3 x 0,24	3 x 0,24	3 x 0,24	4 x 0,24
Electric defrost	230 V/1/50 Hz	W	400	440	730	960	960	1200	1600
		A	1,8	2,0	3,3	4,4	4,4	5,5	7,3
Net weight		kg	3	7,5	9,5	14,5	14,5	15	20
Dimensions	A	mm	514	784	784	1174	1174	1174	1504
	B	mm	326	596	596	493	493	493	658
Connections	Inlet	∅ ODF *	3/8" 10 mm **	3/8" 10 mm **	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***
	Outlet	∅ ODF *	3/8" 10 mm	3/8" 10 mm	1/2" 12 mm	5/8" 16 mm	5/8" 16 mm	5/8" 16 mm	3/4" 18 mm

MRE ...

6,35 mm

		MRE ... C	65	100	120	140	170	190	250
Capacity	DT1 = 7K - SC 3 (1)	W	480	670	950	1080	1310	1510	2030
	DT1 = 6K - SC 4 (1)	W	380	540	760	850	1040	1210	1630
Surface		m ²	2,32	2,53	4,22	5,56	5,56	6,96	9,27
Circuit volume		dm ³	0,58	0,63	1,05	1,10	1,38	1,73	2,30
Air flow		m ³ /h	310	660	620	960	960	930	1240
Fan	Air throw (2)	m	3	3,7	3,5	4,1	4,1	4	4,5
	∅ 200 mm	Num.	1	2	2	3	3	3	4
230 V/1/50-60 Hz 1500 r.p.m.	230 V/1/50 Hz	W max	1 x 38	2 x 38	2 x 38	3 x 38	3 x 38	3 x 38	4 x 38
		A max (3)	1 x 0,24	2 x 0,24	2 x 0,24	3 x 0,24	3 x 0,24	3 x 0,24	4 x 0,24
Electric defrost	230 V/1/50 Hz	W	400	440	730	960	960	1200	1600
		A	1,8	2,0	3,3	4,4	4,4	5,5	7,3
Net weight		kg	3	7,5	9,5	14,5	14,5	15	20
Dimensions	A	mm	514	784	784	1174	1174	1174	1504
	B	mm	326	596	596	493	493	493	658
Connections	Inlet	∅ ODF *	3/8" 10 mm **	3/8" 10 mm **	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***	D 1/2" ***
	Outlet	∅ ODF *	3/8" 10 mm	3/8" 10 mm	1/2" 12 mm	5/8" 16 mm	5/8" 16 mm	5/8" 16 mm	3/4" 18 mm

(1) See pages "APPENDIX".

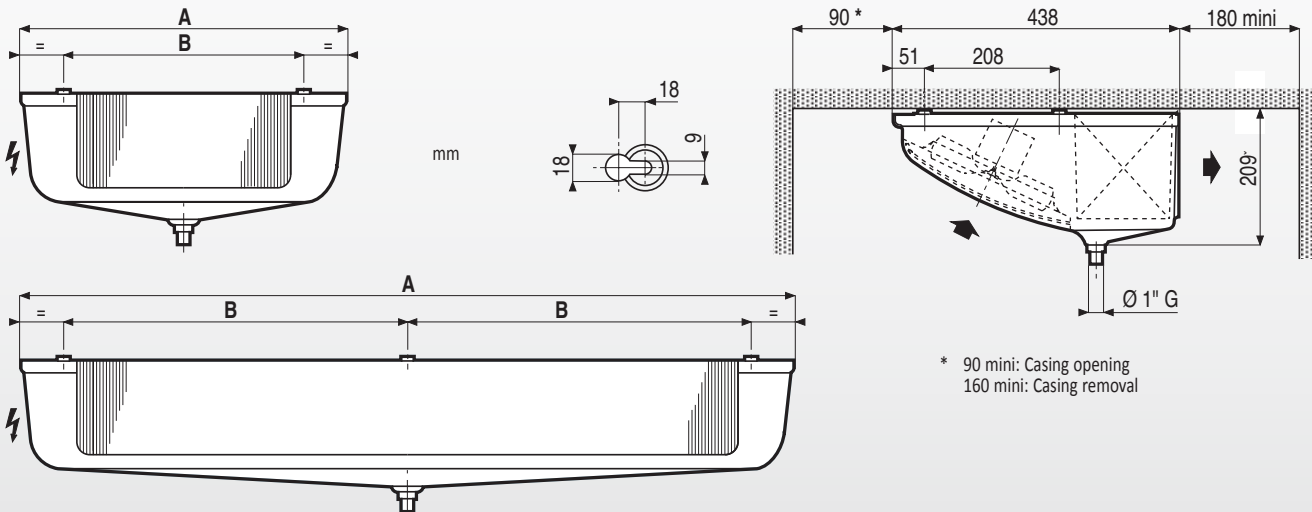
(2) Effective when the room cross section allows air circulation (see CECOMAF GT 6001, DIN8955, ENV328).

(3) Setting of overload protections. For room temperatures 'ti' other than +20 °C, multiply the given amperage by the ratio 293/(273 + 'ti') so as to obtain the approximate amperage after the room pull down.

* ODF: Female sweat type connection.

** Adapter parts supplied for ∅ 1/2" or ∅ 12 mm expansion valve to be brazed.

*** Liquid distributor: ∅ 1/2" male to be brazed. Adapter part supplied for either ∅ 12 mm expansion valve to be brazed.



MRE ...	WCO	CO2	E1K	THD	EEC
	-		0	-	0