

EVAPORATING UNITS R407C – R134A – R22

EVAPORATING UNITS WITH HOUSING AND SCROLL COMPRESSORS



MEE 391

MEE... Series

One circuit - Cooling capacity from 5 kW to 83 kW

Evaporating units suitable for water cooling in air-conditioning and industrial systems to be connected to remote condensers
Designed for internal installation

Compact and packaged units, with painted steel plates housing
1 cooling circuit

Available versions:

MEE...K with ecological gas R407C charge

MEE...Ka with ecological gas R134a charge

MEE... standard with R22

Made up of:

1 high efficient Scroll compressor (COP 3.37 under ARI conditions), with low sound level (on average 6dB(A) less than the corresponding hermetic compressors), internal heat protection, installed on rubber dampers.

Units with a high capacity are equipped with tandem compressors.

Weld-brazed plate evaporator with thermal insulation.

Electric panel in compliance with CE norms, provided with protection fuses and safety transformer.

The cooling circuit is composed of: thermostatic expansion valve, sight glass, dehydrating filter, high and low pressure switches, shut-off valve on the liquid line, shut-off valve on compressor discharge, solenoid valve.

Electronic microprocessor for unit management for all the models.

The available water accessories, like pump and buffer tank, are installed inside an housing under the unit and include the electric control device of the pump.

Compressor hour counter.

Accessories

AE	Electrical power supply different from standard
AC	Electrical control for condensers
CL	Soundproofed compressors housing with standard material
CM	Soundproofed compressors housing with lead material
CS	Compressor inrush counter
HG	Hot gas by-pass
IH	Serial interface RS 485
IM	Seawood packing
MF	Phase monitor
MT	High and low pressure gauges
MV	Buffer tank / expansion vessel / safety valve / water gauge / water charge and discharge valves / air discharge valves
P1	Pump group / expansion vessel / safety valve / water gauge / water charge and discharge valves / air discharge valves
P1H	High head pressure pump group / expansion vessel / safety valve / water gauge / water charge and discharge valves / air discharge valves
PA	Rubber - type vibration dampers
PF	Safety water flow switch on evaporator
PQ	Remote microprocessor
RA	Antifreeze heater on evaporator
RL	Compressors overload relays
RV	Personalized RAL paint
SN	Main switch

EVAPORATING UNITS R407C – R134A – R22

EVAPORATING UNITS WITH HOUSING AND SCROLL COMPRESSORS

MEE...K Technical data with refrigerant R407C

MODEL	MEE...	61 K	111 K	171K	201 K	221 K	251 K	301 K	381 K	461 K	501 K	571 K	751 K	901 K
Cooling capacity 1)	kW	5,5	10,0	15,2	17,9	19,3	23,1	27,2	35,1	42,0	45,5	52,8	69,1	80,9
Absorbed power	kW	1,2	2,1	2,9	3,4	4,6	5,6	6,3	8,5	9,9	11,2	12,8	17,0	19,8
Brazed plate evaporator														
Quantity	n	1	1	1	1	1	1	1	1	1	1	1	1	1
Circuits	n	1	1	1	1	1	1	1	1	1	1	1	1	1
Water flow rate	l/s	0,25	0,47	0,72	0,86	0,92	1,11	1,31	1,67	2,00	2,17	2,53	3,31	3,86
Water flow rate	m ³ /h	0,90	1,70	2,60	3,10	3,30	4,00	4,70	6,00	7,20	7,80	9,10	11,90	13,90
Pressure drop	kPa	23	27	32	38	40	46	46	50	73	19	22	20	21
Pumps														
Available pressure with P1	kPa	64	43	58	79	72	64	94	85	76	85	67	49	37
Motor power with P1	kW	0,18	0,18	0,55	0,55	0,55	0,55	0,75	0,75	0,75	0,55	0,55	0,55	0,55
Available pressure with P1H	kPa	84	70	90	111	104	98	138	128	120	142	123	112	100
Motor power with P1H	kW	0,18	0,18	0,75	0,75	0,75	0,75	1,1	1,1	1,1	0,75	0,75	0,75	0,75
Buffer tank water volume	l	80	80	80	80	80	80	80	80	80	110	110	110	110
Scroll compressors														
Quantity	n	1	1	1	1	1	1	1	1	1	2	2	2	2
Standard steps capacity	n	1	1	1	1	1	1	1	1	1	2	2	2	2
Nominal absorbed current	A	5,6	9,9	6,6	6,6	9,6	11,7	13,4	18,3	19,4	23,4	24,5	36,5	38,7
Maximum absorbed current	A	11	19	10	11	17	19	29	35	35	40	50	70	70
Inrush current	A	38	80	52	59	78	104	104	140	140	116	108	158	159
Sound pressure level 2)	dB(A)	58	59	58	60	60	61	61	62	62	63	63	64	64
Dimensions														
Length	mm	800	800	800	800	800	800	800	800	800	1.600	1.600	1.600	1.600
Length with MV included	mm	800	800	800	800	800	800	800	800	800	1.600	1.600	1.600	1.600
Width	mm	500	500	500	500	500	500	500	500	500	750	750	750	750
Width with MV included	mm	500	500	500	500	500	500	500	500	500	750	750	750	750
Height	mm	960	960	960	960	960	960	960	960	960	960	960	960	960
Height with MV included	mm	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.340	1.340	1.340	1.340
Transport weight	kg	113	120	133	135	170	180	181	198	210	290	290	337	358
Weight with empty MV included	kg	163	170	183	185	220	230	231	248	260	450	450	497	518
Power supply		230 V/50 Hz / 1Ph + N + T						400V / 50 Hz / 3Ph + N + T						

1) Nominal condition referred to: Chilled water 7/12 °C - Condensing temperature 49 °C (Dew)

2) Measured at 1 m in open field (ISO 3746)

EVAPORATING UNITS R407C – R134A – R22

EVAPORATING UNITS WITH HOUSING AND SCROLL COMPRESSORS

MEE...Ka Technical data with refrigerant R134a

MODEL	MEE...	151 Ka	181 Ka	211 Ka	271 Ka	311 Ka	351 Ka	421 Ka	521 Ka	601 Ka
Cooling capacity 1)	kW	13,5	16,3	18,8	24,7	28,0	31,9	38,3	47,8	54,5
Absorbed power	kW	3,2	3,8	4,4	5,9	6,7	7,7	9,0	11,8	13,8
Brazed plate evaporator										
Quantity	n	1	1	1	1	1	1	1	1	1
Circuits	n	1	1	1	1	1	1	1	1	1
Water flow rate	l/s	0,64	0,78	0,89	1,17	1,33	1,53	1,83	2,28	2,61
Water flow rate	m ³ /h	2,30	2,80	3,20	4,20	4,80	5,50	6,60	8,20	9,40
Pressure drop	kPa	21	32	33	25	22	17	18	27	23
Pumps										
Available pressure with P1	kPa	72	87	75	71	110	111	110	96	92
Motor power with P1	kW	0,55	0,55	0,55	0,55	0,75	0,55	0,55	0,55	0,55
Available pressure with P1H	kPa	103	118	107	104	152	164	165	152	150
Motor power with P1H	kW	0,75	0,75	0,75	0,75	1,1	0,75	0,75	0,75	0,75
Buffer tank water volume	l	80	80	80	80	80	110	110	110	110
Scroll compressors										
Quantity	n	1	1	1	1	1	2	2	2	2
Standard steps capacity	n	1	1	1	1	1	2	2	2	2
Nominal absorbed current	A	8,1	9,9	11,4	13,2	15,7	20,0	19,5	26,5	31,7
Maximum absorbed current	A	17	19	29	35	35	40	50	70	70
Inrush current	A	78	104	104	140	140	114	106	153	156
Sound pressure level 2)	dB(A)	56	57	57	58	58	59	59	60	60
Dimensions										
Length	mm	800	800	800	800	800	1.600	1.600	1.600	1.600
Length with MV included	mm	800	800	800	800	800	1.600	1.600	1.600	1.600
Width	mm	500	500	500	500	500	750	750	750	750
Width with MV included	mm	500	500	500	500	500	750	750	750	750
Height	mm	960	960	960	960	960	960	960	960	960
Height with MV included	mm	1.430	1.430	1.430	1.430	1.430	1.340	1.340	1.340	1.340
Transport weight	kg	170	180	181	198	210	290	287	337	358
Weight with empty MV included	kg	220	230	231	248	260	450	437	497	518
Power supply	400V / 50 Hz / 3Ph + N + T									

1) Nominal condition referred to: Chilled water 7/12 °C - Condensing temperature 47 °C

2) Measured at 1 m in open field (ISO 3746)

EVAPORATING UNITS R407C – R134A – R22

EVAPORATING UNITS WITH HOUSING AND SCROLL COMPRESSORS

MEE... Technical data with refrigerant R22

MODEL	MEE...	61	111	161	191	221	271	311	391	461	521	601	771	901
Cooling capacity 1)	kW	5,3	9,7	14,4	17,2	20,1	24,5	28,0	35,7	42,5	48,2	54,6	71,2	83,2
Absorbed power	kW	1,6	2,8	4,2	5,3	6,2	7,3	8,3	11,1	12,8	14,6	16,5	22,1	25,6
Brazed plate evaporator														
Quantity	n	1	1	1	1	1	1	1	1	1	1	1	1	1
Circuits	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
Water flow rate	l/s	0,25	0,47	0,69	0,83	0,94	1,17	1,33	1,69	2,03	2,31	2,61	3,39	3,97
Water flow rate	m³/h	0,90	1,70	2,50	3,00	3,40	4,20	4,80	6,10	7,30	8,30	9,40	12,20	14,30
Pressure drop	kPa	21	26	22	33	41	45	46	48	67	21	24	22	22
Pumps														
Available pressure with P1	kPa	66	44	64	80	64	70	93	83	85	104	98	74	57
Motor power with P1	kW	0,18	0,18	0,55	0,55	0,55	0,55	0,75	0,75	0,75	0,55	0,55	0,55	0,55
Available pressure with P1H	kPa	86	71	99	114	96	99	134	123	130	159	156	139	120
Motor power with P1H	kW	0,18	0,18	0,75	0,75	0,75	0,75	1,1	1,1	1,1	0,75	0,75	0,75	0,75
Buffer tank water volume	l	80	80	80	80	80	80	80	80	80	110	110	110	110
Scroll compressors														
Quantity	n	1	1	1	1	1	1	1	1	1	2	2	2	2
Standard steps capacity	n	1	1	1	1	1	1	1	1	1	2	2	2	2
Nominal absorbed current	A	5	10	7	7	10	12	14	18	20	24	26	37	40
Maximum absorbed current	A	11	19	10	11	17	19	29	35	35	40	50	70	70
Inrush current	A	38	80	52	59	78	104	104	140	140	116	109	158	160
Sound pressure level 2)	dB(A)	57	58	58	59	59	60	60	61	61	62	62	63	63
Dimensions														
Length	mm	800	800	800	800	800	800	800	800	800	1.600	1.600	1.600	1.600
Length with MV included	mm	800	800	800	800	800	800	800	800	800	1.600	1.600	1.600	1.600
Width	mm	500	500	500	500	500	500	500	500	500	750	750	750	750
Width with MV included	mm	500	500	500	500	500	500	500	500	500	750	750	750	750
Height	mm	960	960	960	960	960	960	960	960	960	960	960	960	960
Height with MV included	mm	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.430	1.340	1.340	1.340	1.340
Transport weight	kg	113	121	134	138	172	183	183	200	215	299	304	351	372
Weight with empty MV included	kg	163	171	184	188	222	233	233	250	265	459	464	511	532
Power supply		230 V/50 Hz / 1Ph + N + T							400V / 50 Hz / 3Ph + N + T					

1) Nominal condition referred to: Chilled water 7/12 °C - Condensing temperature 47 °C

2) Measured at 1 m in open field (ISO 3746)