

# Technical Data Sheet

ENGINEERING  
TOMORROW



Compressor model **MP14FB**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R404A**

## APPLICATION

Application Low Back Pressure  
Refrigerant R404A  
Evaporating Temp. -40,0 °C to -10,0 °C  
Expansion Capillar/Valve  
Comp. Cooling Fan cooled  
Max. ambient temp. 43,0 °C

## COMPRESSOR

Displacement 14,17 cm<sup>3</sup>  
Diameter 31,19 mm  
Stroke 18,54 mm  
Net Weight 12,07 Kg  
Oil type ISO VG 32 ESTER  
Oil charge 400 cm<sup>3</sup>

## MOTOR

Nominal Power 1/2 hp  
Voltage/Frequency 220-240V 50Hz  
Voltage range 187-264 V  
Type CSIR  
Phase number 1 PH  
Locked Rotor Amps (LRA) 17,50 A  
Max. Cont. Current (MCC) 5,00 A  
Main W. resist. at 25°C 4,86 Ω  
Start W. resist. at 25°C 17,03 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	540 kCal/h	421 W
COP	1,12 W/W	0,79 W/W
EER	0,96 kCal/Wh	0,69 kCal/Wh
Input Power	560 W	530 W
Current	3,40 A	3,29 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T <sub>e</sub> )	-23,3 °C	-25,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	32,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	32,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	72- 88 µF 330 V		
Relay	Option 1		
Reference	2014 158.		
Pick-Up	9,05 A		
Drop-Out	7,70 A		
Protector	Option 1	Option 2	
Reference	MRP00AMK	T0425	
Current	11,70 A	11,50 A	
Time check	7,5-14 seg	7,5-14 seg	
Disc temp. (Open/Close)	105,00 / 61,00 °C	105,00 / 61,00 °C	

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## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	230	325	2,63	0,82	0,71
40	-35	335	384	2,80	1,02	0,87
40	-30	462	445	2,99	1,21	1,04
40	-25	609	508	3,21	1,39	1,20
40	-23,3	663	530	3,29	1,46	1,25
40	-20	777	573	3,45	1,58	1,35
40	-15	965	641	3,71	1,75	1,51
40	-10	1.175	710	4,00	1,92	1,65

45	-40	200	310	2,58	0,75	0,65
45	-35	302	376	2,78	0,93	0,80
45	-30	425	445	2,99	1,11	0,96
45	-25	569	515	3,24	1,28	1,10
45	-23,3	622	540	3,33	1,34	1,15
45	-20	733	588	3,51	1,45	1,25
45	-15	919	663	3,80	1,61	1,39
45	-10	1.125	740	4,13	1,77	1,52

50	-40	170	295	2,54	0,67	0,58
50	-35	269	369	2,75	0,85	0,73
50	-30	388	445	2,99	1,02	0,87
50	-25	529	523	3,26	1,18	1,01
50	-23,3	581	550	3,36	1,23	1,06
50	-20	690	603	3,56	1,33	1,14
50	-15	872	686	3,90	1,48	1,27
50	-10	1.075	770	4,26	1,62	1,40

55	-40	140	280	2,50	0,58	0,50
55	-35	235	361	2,73	0,76	0,65
55	-30	352	445	2,99	0,92	0,79
55	-25	489	530	3,29	1,07	0,92
55	-23,3	540	560	3,40	1,12	0,96
55	-20	647	618	3,62	1,22	1,05
55	-15	825	708	3,99	1,36	1,17
55	-10	1.025	800	4,40	1,49	1,28

60	-40	110	265	2,46	0,48	0,42
60	-35	202	354	2,71	0,66	0,57
60	-30	315	445	2,99	0,82	0,71
60	-25	449	538	3,32	0,97	0,83
60	-23,3	499	570	3,44	1,02	0,88
60	-20	603	633	3,68	1,11	0,95
60	-15	779	731	4,09	1,24	1,07
60	-10	975	830	4,54	1,37	1,17

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	240	325	2,63	0,74	0,64
40	-35	364	384	2,80	0,95	0,82
40	-30	505	445	2,99	1,14	0,98
40	-25	663	508	3,21	1,31	1,13
40	-23,3	721	530	3,29	1,36	1,18
40	-20	839	573	3,45	1,46	1,27
40	-15	1.033	641	3,71	1,61	1,39
40	-10	1.243	710	4,00	1,75	1,51

45	-40	200	310	2,58	0,65	0,56
45	-35	310	376	2,78	0,82	0,71
45	-30	438	445	2,99	0,98	0,85
45	-25	583	515	3,24	1,13	0,98
45	-23,3	636	540	3,33	1,18	1,02
45	-20	745	588	3,51	1,27	1,09
45	-15	924	663	3,80	1,39	1,20
45	-10	1.121	740	4,13	1,52	1,31

50	-40	161	295	2,54	0,54	0,47
50	-35	257	369	2,75	0,70	0,60
50	-30	371	445	2,99	0,83	0,72
50	-25	502	523	3,26	0,96	0,83
50	-23,3	550	550	3,36	1,00	0,86
50	-20	650	603	3,56	1,08	0,93
50	-15	816	686	3,90	1,19	1,03
50	-10	999	770	4,26	1,30	1,12

55	-40	121	280	2,50	0,43	0,37
55	-35	204	361	2,73	0,56	0,49
55	-30	304	445	2,99	0,68	0,59
55	-25	421	530	3,29	0,79	0,69
55	-23,3	465	560	3,40	0,83	0,72
55	-20	556	618	3,62	0,90	0,78
55	-15	708	708	3,99	1,00	0,86
55	-10	877	800	4,40	1,10	0,95

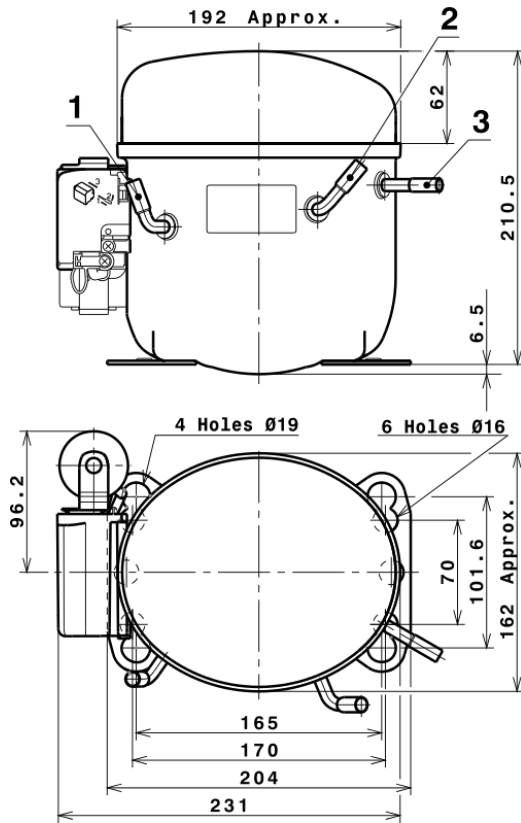
60	-40	81	265	2,46	0,31	0,27
60	-35	150	354	2,71	0,42	0,37
60	-30	237	445	2,99	0,53	0,46
60	-25	340	538	3,32	0,63	0,55
60	-23,3	379	570	3,44	0,67	0,57
60	-20	461	633	3,68	0,73	0,63
60	-15	599	731	4,09	0,82	0,71
60	-10	755	830	4,54	0,91	0,79

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.879,5895814597	511,1320956407	3,2450801755	61,851295648731
2	71,5708739841	3,3330185121	0,0371178724	1,7473406557418
3	-30,4797443021	9,2368984503	0,0404001993	-0,33674771583261
4	0,3289292515	0,0481508777	0,0007658534	0,013206786679089
5	-0,5674090975	0,3075830387	0,0012231471	-0,0042333870333976

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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## COMPRESSOR DIMENSIONS

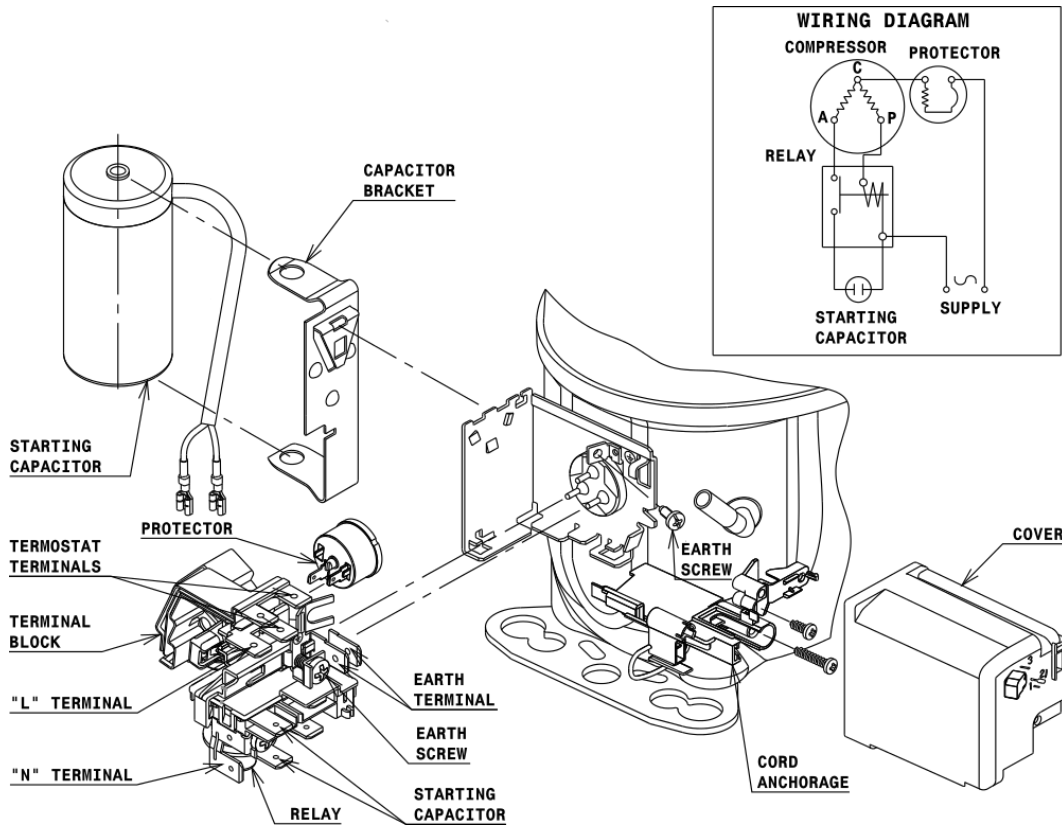


## DESIGNATION INTERNAL DIAM.

DESIGNATION	INTERNAL DIAM.
1 Suction	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (L, P ranges)



## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

$\varnothing 16$  holes (170x70 net)



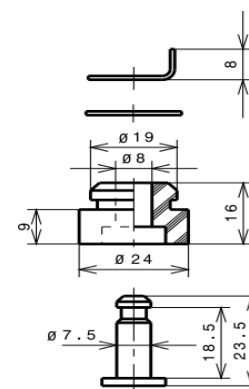
### AMERICAN FEET

$\varnothing 19$  holes (165x101.6 net)



### SNAP-ON

$\varnothing 16$  holes (170x70 net)



## SOA

SOA R404A LBP

