

Technical Data Sheet

Compressor model **MS30FB_T**
 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 29,95 cm³
 Diameter 39,98 mm
 Stroke 23,85 mm
 Net Weight 22,70 Kg
 Oil type ISO VG 46 ESTER
 Oil charge 887 cm³

MOTOR

Nominal Power 7/8 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 187-264 V
 Type CSR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 30,00 A
 Max. Cont. Current (MCC) 9,50 A
 Main W. resist. at 25°C 1,99 Ω
 Start W. resist. at 25°C 3,72 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.201 kCal/h	932 W
COP	1,35 W/W	0,95 W/W
EER	1,16 kCal/Wh	0,82 kCal/Wh
Input Power	1.036 W	980 W
Current	5,10 A	4,86 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T _e)	-23,3 °C	-25,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	32,0 °C	55,0 °C
Ambient temp. (T _{amb.})	32,0 °C	32,0 °C
Suction temp. (T _{suction})	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	88-108 μF 330 V		
Run capacitor	20 μF 420 V		
Relay	Option 1	Option 2	
Reference	3ARR3 3AP3	RVA 2E..	
Pick-Up	162-175 V	162-175 V	
Drop-Out	40-90 V	40-90 V	
Protector	Option 1	Option 2	
Reference	MRA38088	T0452	
Current	22,00 A	21,00 A	
Time check	7,5-14 seg	7,5-14 seg	
Disc temp. (Open/Close)	105,00 / 57,00 °C	95,00 / 57,00 °C	

ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	450	575	3,20	0,91	0,78
40	-35	729	700	3,70	1,21	1,04
40	-30	1.049	827	4,22	1,48	1,27
40	-25	1.412	957	4,77	1,71	1,47
40	-23,3	1.545	1.002	4,96	1,79	1,54
40	-20	1.816	1.091	5,34	1,94	1,67
40	-15	2.263	1.227	5,93	2,14	1,84
40	-10	2.751	1.366	6,55	2,34	2,01

45	-40	380	550	3,10	0,80	0,69
45	-35	645	685	3,64	1,10	0,94
45	-30	953	824	4,21	1,34	1,16
45	-25	1.302	965	4,80	1,57	1,35
45	-23,3	1.430	1.014	5,00	1,64	1,41
45	-20	1.693	1.109	5,42	1,78	1,53
45	-15	2.126	1.256	6,06	1,97	1,69
45	-10	2.601	1.406	6,73	2,15	1,85

50	-40	310	525	3,00	0,69	0,59
50	-35	562	671	3,58	0,97	0,84
50	-30	856	820	4,19	1,21	1,04
50	-25	1.192	972	4,83	1,43	1,23
50	-23,3	1.316	1.025	5,05	1,49	1,28
50	-20	1.570	1.127	5,49	1,62	1,39
50	-15	1.989	1.285	6,19	1,80	1,55
50	-10	2.451	1.446	6,92	1,97	1,70

55	-40	240	500	2,90	0,56	0,48
55	-35	479	657	3,52	0,85	0,73
55	-30	759	817	4,18	1,08	0,93
55	-25	1.082	980	4,86	1,28	1,10
55	-23,3	1.201	1.036	5,10	1,35	1,16
55	-20	1.446	1.146	5,57	1,47	1,26
55	-15	1.853	1.314	6,32	1,64	1,41
55	-10	2.301	1.486	7,10	1,80	1,55

60	-40	170	475	2,80	0,42	0,36
60	-35	395	643	3,47	0,72	0,61
60	-30	663	814	4,16	0,95	0,81
60	-25	972	987	4,89	1,14	0,98
60	-23,3	1.086	1.047	5,15	1,21	1,04
60	-20	1.323	1.164	5,66	1,32	1,14
60	-15	1.716	1.344	6,45	1,49	1,28
60	-10	2.151	1.526	7,28	1,64	1,41

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	467	575	3,20	0,81	0,70
40	-35	786	700	3,70	1,12	0,97
40	-30	1.140	827	4,22	1,38	1,19
40	-25	1.529	957	4,77	1,60	1,38
40	-23,3	1.669	1.002	4,96	1,67	1,44
40	-20	1.953	1.091	5,34	1,79	1,55
40	-15	2.411	1.227	5,93	1,97	1,70
40	-10	2.904	1.366	6,55	2,13	1,84

45	-40	381	550	3,10	0,69	0,60
45	-35	662	685	3,64	0,97	0,83
45	-30	979	824	4,21	1,19	1,03
45	-25	1.330	965	4,80	1,38	1,19
45	-23,3	1.457	1.014	5,00	1,44	1,24
45	-20	1.716	1.109	5,42	1,55	1,34
45	-15	2.137	1.256	6,06	1,70	1,47
45	-10	2.592	1.406	6,73	1,84	1,59

50	-40	294	525	3,00	0,56	0,48
50	-35	538	671	3,58	0,80	0,69
50	-30	817	820	4,19	1,00	0,86
50	-25	1.131	972	4,83	1,16	1,00
50	-23,3	1.246	1.025	5,05	1,22	1,05
50	-20	1.479	1.127	5,49	1,31	1,13
50	-15	1.863	1.285	6,19	1,45	1,25
50	-10	2.281	1.446	6,92	1,58	1,36

55	-40	207	500	2,90	0,41	0,36
55	-35	414	657	3,52	0,63	0,54
55	-30	656	817	4,18	0,80	0,69
55	-25	932	980	4,86	0,95	0,82
55	-23,3	1.034	1.036	5,10	1,00	0,86
55	-20	1.243	1.146	5,57	1,08	0,94
55	-15	1.589	1.314	6,32	1,21	1,04
55	-10	1.969	1.486	7,10	1,33	1,14

60	-40	121	475	2,80	0,25	0,22
60	-35	290	643	3,47	0,45	0,39
60	-30	494	814	4,16	0,61	0,52
60	-25	733	987	4,89	0,74	0,64
60	-23,3	822	1.047	5,15	0,78	0,68
60	-20	1.006	1.164	5,66	0,86	0,75
60	-15	1.314	1.344	6,45	0,98	0,85
60	-10	1.657	1.526	7,28	1,09	0,94

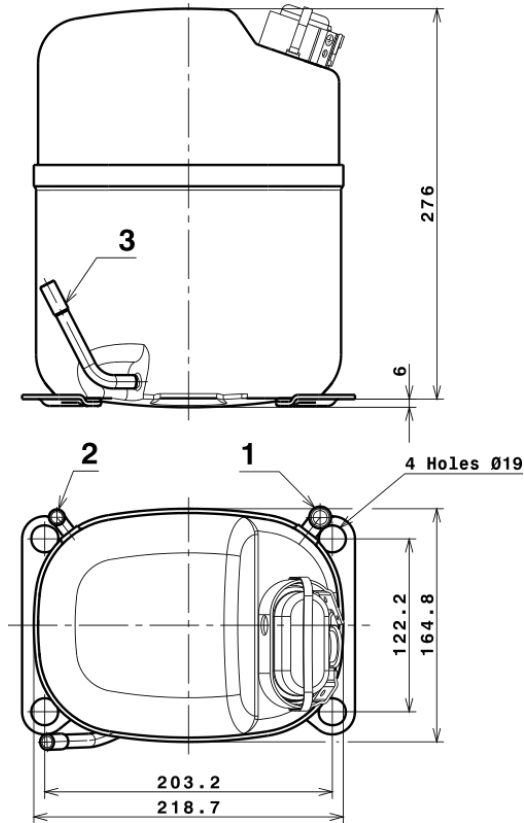
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	6.994,4292340913	1.195,1716499514	5,8656377442	154,17083128897
2	172,9843487772	12,7871794305	0,0728076864	4,229978796413
3	-78,2766610639	12,6565782779	0,0570909980	-1,0415926292118
4	0,6579958620	0,0677967672	0,0006868615	0,026962381316591
5	-1,5338337599	0,4441820860	0,0019313085	-0,016285908959284

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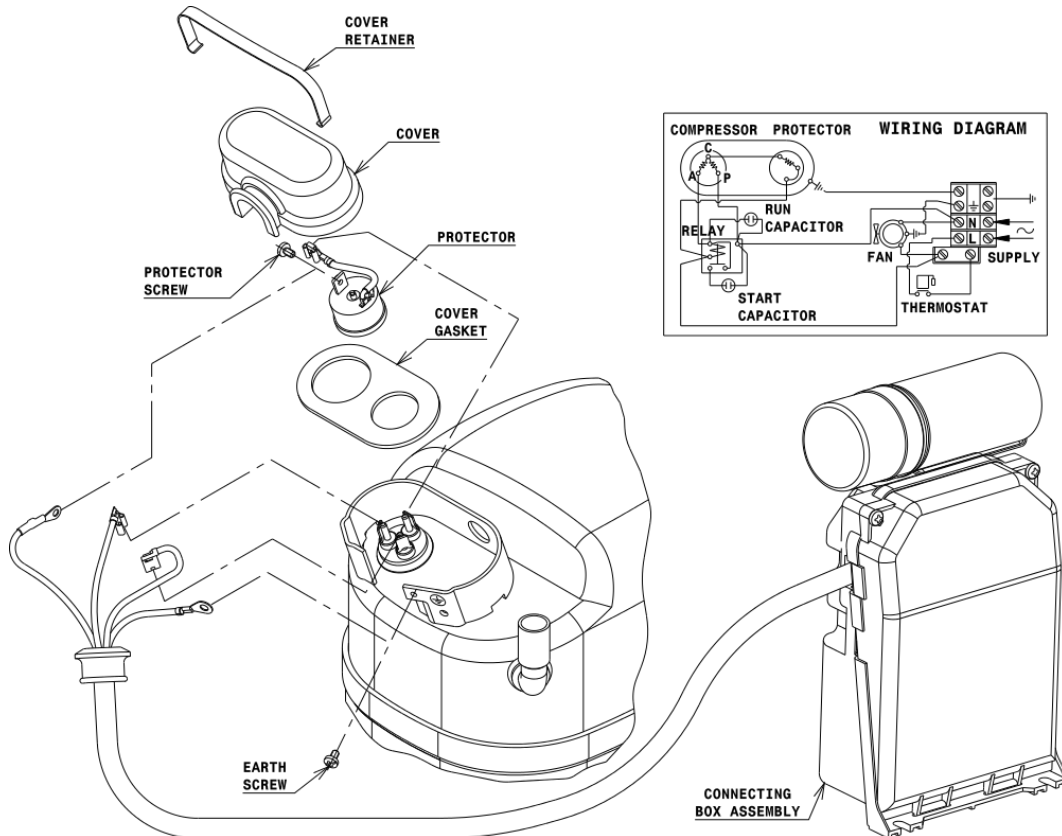
COMPRESSOR DIMENSIONS



	DESIGNATION	INTERNAL DIAM.
1	Suction	12,7 mm
2	Service	9,7 mm
3	Discharge	8,0 mm

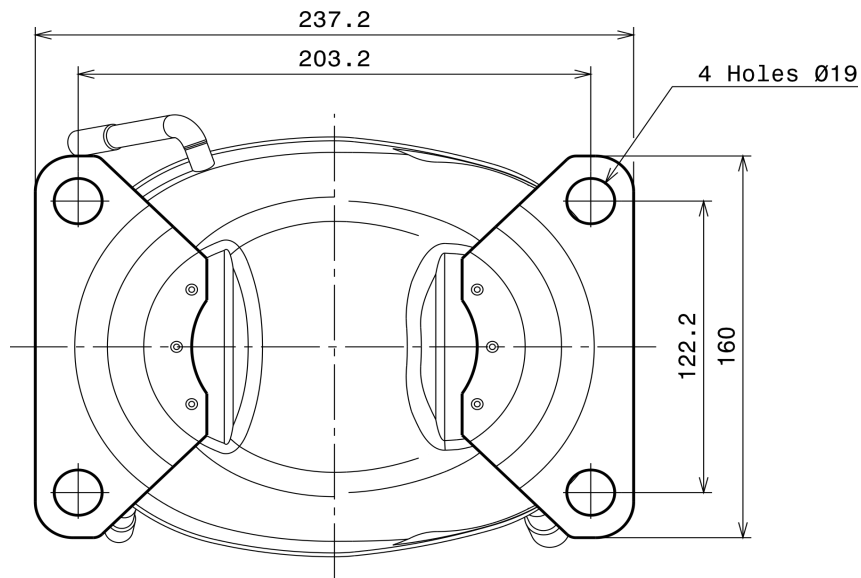
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (EXTERNAL CONNECTING BOX) (S range)



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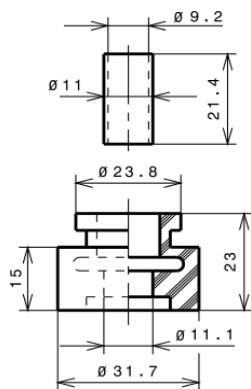
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø19 holes (203.2x122.2 net)



SOA

SOA R404A LBP

