

# Technical Data Sheet

Compressor model **MS22TB\_V**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R404A**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	21,75 cm <sup>3</sup>	Nominal Power	1 hp
Refrigerant	R404A	Diameter	38,10 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	19,07 mm	Voltage range	187-264 V
Expansion	Capillar/Valve	Net Weight	20,51 Kg	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 46 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	750 cm <sup>3</sup>	Locked Rotor Amps (LRA)	32,00 A
				Max. Cont. Current (MCC)	8,40 A
				Main W. resist. at 25°C	1,81 Ω
				Start W. resist. at 25°C	6,52 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	2.789 kCal/h	2.550 W
COP	2,50 W/W	2,02 W/W
EER	2,15 kCal/Wh	1,74 kCal/Wh
Input Power	1.295 W	1.265 W
Current	6,40 A	6,26 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T <sub>e</sub> )	7,2 °C	5,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	46,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	35,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	35,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	72- 88 µF 330 V		
Run capacitor	20 µF 420 V		
Relay	Option 1	Option 2	
Reference	3ARR3 10AS3	RVA 3G..	
Pick-Up	180-195 V	180-195 V	
Drop-Out	40-105 V	40-105 V	
Protector	Option 1	Option 2	
Reference	MRA38123	T0534	
Current	22,00 A	20,00 A	
Time check	7,5-14 seg	7,5-14 seg	
Disc temp. (Open/Close)	105,00 / 52,00 °C	105,00 / 52,00 °C	

## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	825	663	3,58	1,45	1,25
40	-20	1.141	757	3,99	1,75	1,51
40	-15	1.505	843	4,36	2,07	1,78
40	-10	1.916	921	4,70	2,42	2,08
40	-5	2.374	989	5,00	2,79	2,40
40	0	2.879	1.048	5,27	3,19	2,75
40	5	3.431	1.099	5,50	3,63	3,12
40	7,2	3.689	1.118	5,59	3,84	3,30
40	10	4.031	1.140	5,69	4,11	3,54

45	-25	700	625	3,42	1,30	1,12
45	-20	989	735	3,89	1,57	1,35
45	-15	1.325	836	4,33	1,84	1,59
45	-10	1.709	928	4,73	2,14	1,84
45	-5	2.140	1.011	5,10	2,46	2,12
45	0	2.618	1.086	5,44	2,80	2,41
45	5	3.143	1.151	5,74	3,18	2,73
45	7,2	3.389	1.177	5,86	3,35	2,88
45	10	3.715	1.208	6,00	3,58	3,08

50	-25	575	588	3,26	1,14	0,98
50	-20	837	712	3,79	1,37	1,17
50	-15	1.146	828	4,30	1,61	1,38
50	-10	1.503	936	4,77	1,87	1,61
50	-5	1.906	1.034	5,21	2,14	1,84
50	0	2.357	1.123	5,61	2,44	2,10
50	5	2.855	1.203	5,98	2,76	2,37
50	7,2	3.089	1.236	6,13	2,91	2,50
50	10	3.400	1.275	6,31	3,10	2,67

55	-25	450	550	3,10	0,95	0,82
55	-20	685	690	3,69	1,15	0,99
55	-15	967	821	4,26	1,37	1,18
55	-10	1.296	943	4,80	1,60	1,37
55	-5	1.672	1.056	5,31	1,84	1,58
55	0	2.096	1.160	5,78	2,10	1,81
55	5	2.567	1.256	6,22	2,38	2,04
55	7,2	2.789	1.295	6,40	2,50	2,15
55	10	3.085	1.342	6,62	2,67	2,30

60	-25	325	513	2,94	0,74	0,63
60	-20	533	667	3,60	0,93	0,80
60	-15	787	813	4,23	1,13	0,97
60	-10	1.089	950	4,83	1,33	1,15
60	-5	1.439	1.079	5,41	1,55	1,33
60	0	1.835	1.198	5,95	1,78	1,53
60	5	2.279	1.308	6,46	2,03	1,74
60	7,2	2.489	1.354	6,68	2,14	1,84
60	10	2.770	1.410	6,94	2,29	1,96

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	862	666	3,59	1,29	1,12
40	-20	1.201	762	4,00	1,58	1,36
40	-15	1.587	848	4,38	1,87	1,62
40	-10	2.018	926	4,73	2,18	1,88
40	-5	2.495	995	5,03	2,51	2,17
40	0	3.018	1.055	5,30	2,86	2,47
40	5	3.587	1.107	5,54	3,24	2,80
40	7,2	3.851	1.127	5,63	3,42	2,95
40	10	4.201	1.149	5,73	3,66	3,16

45	-25	725	629	3,43	1,15	1,00
45	-20	1.030	739	3,91	1,39	1,20
45	-15	1.380	841	4,35	1,64	1,42
45	-10	1.777	934	4,76	1,90	1,64
45	-5	2.219	1.018	5,13	2,18	1,88
45	0	2.707	1.093	5,47	2,48	2,14
45	5	3.241	1.160	5,78	2,79	2,41
45	7,2	3.490	1.186	5,90	2,94	2,54
45	10	3.821	1.217	6,04	3,14	2,71

50	-25	588	591	3,27	0,99	0,86
50	-20	858	716	3,81	1,20	1,03
50	-15	1.174	833	4,32	1,41	1,22
50	-10	1.536	941	4,79	1,63	1,41
50	-5	1.943	1.041	5,24	1,87	1,61
50	0	2.396	1.131	5,64	2,12	1,83
50	5	2.896	1.212	6,02	2,39	2,06
50	7,2	3.130	1.245	6,17	2,51	2,17
50	10	3.440	1.285	6,35	2,68	2,31

55	-25	451	553	3,11	0,82	0,70
55	-20	686	694	3,71	0,99	0,85
55	-15	967	826	4,28	1,17	1,01
55	-10	1.294	949	4,83	1,36	1,18
55	-5	1.667	1.063	5,34	1,57	1,35
55	0	2.086	1.169	5,82	1,78	1,54
55	5	2.550	1.265	6,26	2,02	1,74
55	7,2	2.769	1.305	6,45	2,12	1,83
55	10	3.060	1.353	6,67	2,26	1,95

60	-25	314	515	2,95	0,61	0,53
60	-20	514	671	3,61	0,77	0,66
60	-15	761	818	4,25	0,93	0,80
60	-10	1.053	956	4,86	1,10	0,95
60	-5	1.391	1.086	5,44	1,28	1,11
60	0	1.775	1.206	5,99	1,47	1,27
60	5	2.204	1.318	6,51	1,67	1,45
60	7,2	2.408	1.364	6,72	1,76	1,52
60	10	2.680	1.421	6,99	1,89	1,63

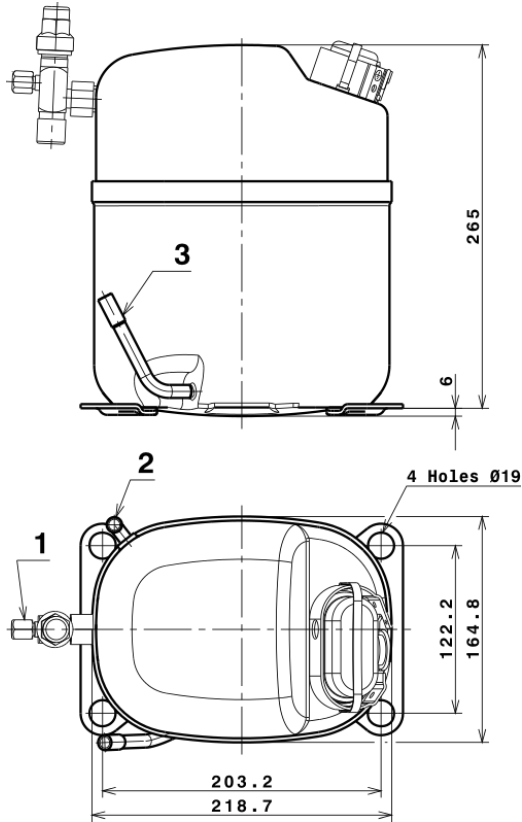
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	5.492,6083125778	774,5387074083	3,9418450849	112,55706758625
2	164,8645435715	-12,8531942332	-0,0554307415	3,6698459775073
3	-63,8904606116	7,8218979997	0,0370311399	-0,72143560722575
4	0,8666330389	-0,1676583967	-0,0005710562	0,040488132901773
5	-1,4758979264	0,6217846157	0,0027916952	-0,0060195450887361

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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# Technical Data Sheet

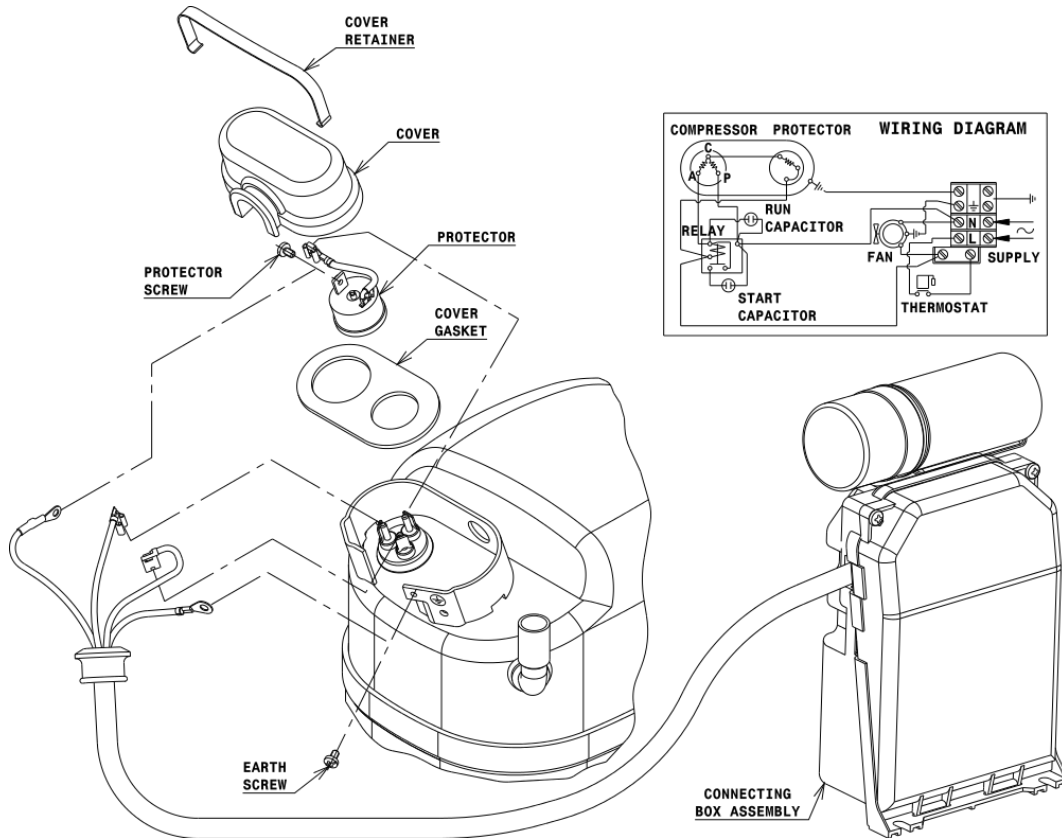
## COMPRESSOR DIMENSIONS



DESIGNATION	INTERNAL DIAM.
1 Service Valve	1/2" SAE
2 Service	9,7 mm
3 Discharge	8,0 mm

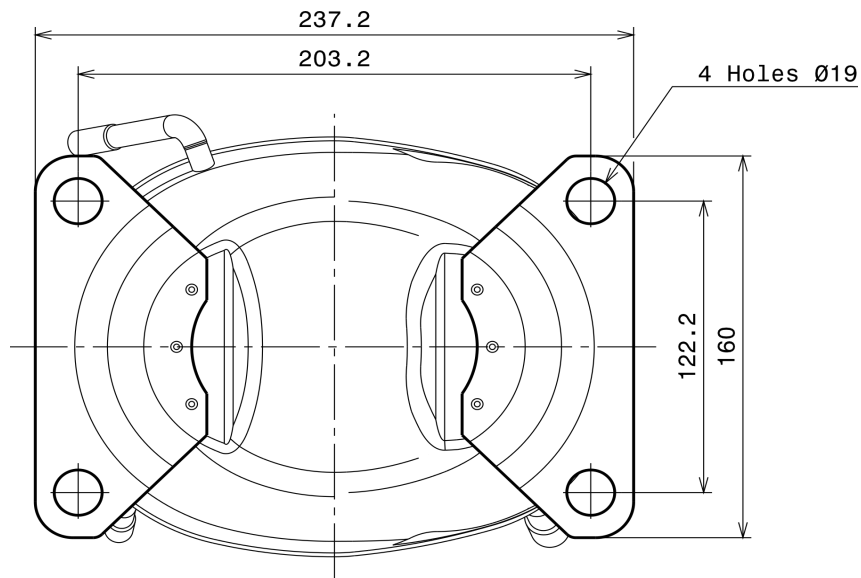
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSR CONNECTION (EXTERNAL CONNECTING BOX) (S range)



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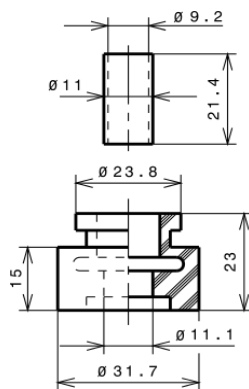
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø19 holes (203.2x122.2 net)



## SOA

SOA R404A HMBP

