

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **MP12TG**
Voltage **200-220/220-230V 50/60Hz ~1**
Refrigerant **R404A**

APPLICATION		COMPRESSOR		MOTOR	
Application	High-Medium Back Pressure	Displacement	12,05 cm ³	Nominal Power	1/2 hp
Refrigerant	R404A	Diameter	29,37 mm	Voltage/Frequency	200-220V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	17,78 mm	Voltage range	170-242 V
Expansion	Capillar/Valve	Net Weight	12,53 Kg	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	400 cm ³	Locked Rotor Amps (LRA)	22,00 A
				Max. Cont. Current (MCC)	7,50 A
				Main W. resist. at 25°C	2,88 Ω
				Start W. resist. at 25°C	9,40 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.580 kCal/h	1.454 W
COP	2,25 W/W	1,83 W/W
EER	1,94 kCal/Wh	1,58 kCal/Wh
Input Power	815 W	795 W
Current	4,70 A	4,59 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T _e)	7,2 °C	5,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	46,0 °C	55,0 °C
Ambient temp. (T _{amb.})	35,0 °C	32,0 °C
Suction temp. (T _{suction})	35,0 °C	32,0 °C
Voltage/Frequency	200 V 50 Hz	200 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V		
Run capacitor	10 µF 420 V		
Relay	Option 1	Option 2	
Reference	3ARR3 10S3	RVA 3AG..	
Pick-Up	180-195 V	180-195 V	
Drop-Out	40-105 V	40-105 V	
Protector	Option 1	Option 2	
Reference	MRA38134	T0348	
Current	15,80 A	15,40 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	535	438	3,03	1,42	1,22
40	-20	697	477	3,17	1,70	1,46
40	-15	884	516	3,31	1,99	1,71
40	-10	1.098	555	3,47	2,30	1,98
40	-5	1.337	593	3,63	2,62	2,25
40	0	1.602	632	3,80	2,95	2,54
40	5	1.894	671	3,97	3,28	2,82
40	7,2	2.030	688	4,05	3,43	2,95
40	10	2.211	709	4,16	3,63	3,12

45	-25	480	435	3,02	1,28	1,10
45	-20	627	481	3,18	1,52	1,30
45	-15	800	527	3,36	1,76	1,52
45	-10	999	573	3,54	2,03	1,74
45	-5	1.223	619	3,74	2,30	1,98
45	0	1.474	664	3,94	2,58	2,22
45	5	1.750	710	4,16	2,87	2,46
45	7,2	1.880	730	4,26	3,00	2,58
45	10	2.053	755	4,39	3,16	2,72

50	-25	425	433	3,01	1,14	0,98
50	-20	557	486	3,20	1,33	1,15
50	-15	715	539	3,40	1,54	1,33
50	-10	899	592	3,62	1,77	1,52
50	-5	1.109	644	3,85	2,00	1,72
50	0	1.345	697	4,10	2,24	1,93
50	5	1.607	749	4,36	2,49	2,14
50	7,2	1.730	773	4,47	2,60	2,24
50	10	1.894	802	4,63	2,75	2,36

55	-25	370	430	3,00	1,00	0,86
55	-20	487	490	3,22	1,16	0,99
55	-15	631	550	3,45	1,33	1,15
55	-10	800	610	3,70	1,53	1,31
55	-5	995	670	3,97	1,73	1,49
55	0	1.216	729	4,26	1,94	1,67
55	5	1.463	789	4,56	2,16	1,85
55	7,2	1.580	815	4,70	2,25	1,94
55	10	1.736	848	4,88	2,38	2,05

60	-25	315	428	2,99	0,86	0,74
60	-20	418	495	3,23	0,98	0,84
60	-15	546	562	3,50	1,13	0,97
60	-10	701	628	3,78	1,30	1,12
60	-5	881	695	4,09	1,47	1,27
60	0	1.087	762	4,42	1,66	1,43
60	5	1.320	828	4,77	1,85	1,59
60	7,2	1.430	858	4,93	1,94	1,67
60	10	1.578	895	5,15	2,05	1,76

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	560	440	3,03	1,27	1,10
40	-20	734	479	3,18	1,53	1,32
40	-15	933	519	3,32	1,80	1,55
40	-10	1.157	558	3,48	2,07	1,79
40	-5	1.406	597	3,64	2,35	2,03
40	0	1.681	636	3,82	2,64	2,28
40	5	1.980	676	4,00	2,93	2,53
40	7,2	2.120	693	4,08	3,06	2,64
40	10	2.305	715	4,18	3,23	2,79

45	-25	497	437	3,03	1,14	0,98
45	-20	652	484	3,19	1,35	1,16
45	-15	832	530	3,37	1,57	1,36
45	-10	1.038	577	3,56	1,80	1,56
45	-5	1.268	623	3,76	2,04	1,76
45	0	1.524	669	3,97	2,28	1,97
45	5	1.805	715	4,19	2,52	2,18
45	7,2	1.936	736	4,29	2,63	2,27
45	10	2.111	761	4,42	2,77	2,40

50	-25	434	435	3,02	1,00	0,86
50	-20	570	488	3,21	1,17	1,01
50	-15	732	542	3,42	1,35	1,17
50	-10	918	595	3,64	1,54	1,33
50	-5	1.130	649	3,87	1,74	1,51
50	0	1.367	702	4,12	1,95	1,68
50	5	1.629	755	4,39	2,16	1,86
50	7,2	1.752	778	4,51	2,25	1,95
50	10	1.916	808	4,66	2,37	2,05

55	-25	371	432	3,01	0,86	0,74
55	-20	488	493	3,23	0,99	0,86
55	-15	631	553	3,46	1,14	0,99
55	-10	799	614	3,72	1,30	1,12
55	-5	992	674	3,99	1,47	1,27
55	0	1.210	734	4,28	1,65	1,42
55	5	1.454	795	4,59	1,83	1,58
55	7,2	1.569	821	4,73	1,91	1,65
55	10	1.722	855	4,92	2,01	1,74

60	-25	307	430	3,00	0,72	0,62
60	-20	406	497	3,24	0,82	0,71
60	-15	530	565	3,51	0,94	0,81
60	-10	680	632	3,80	1,07	0,93
60	-5	854	700	4,11	1,22	1,05
60	0	1.053	767	4,45	1,37	1,19
60	5	1.278	834	4,81	1,53	1,32
60	7,2	1.385	864	4,97	1,60	1,38
60	10	1.528	902	5,19	1,69	1,46

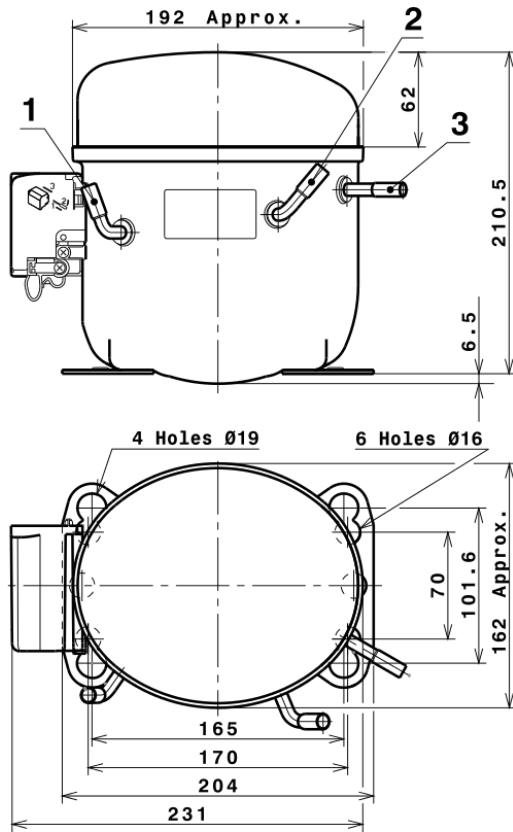


EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2,937,0175228059	385,2669838303	2,3939189385	57,749699174817
2	87,4324710066	-3,2562816108	-0,0189476259	1,9605998134782
3	-32,5254918013	6,7631916928	0,0364238887	-0,28149123791797
4	0,4758234052	0,0070587789	0,0004413106	0,022158636460065
5	-0,7943549695	0,2911215808	0,0015291427	-0,003633655454375

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

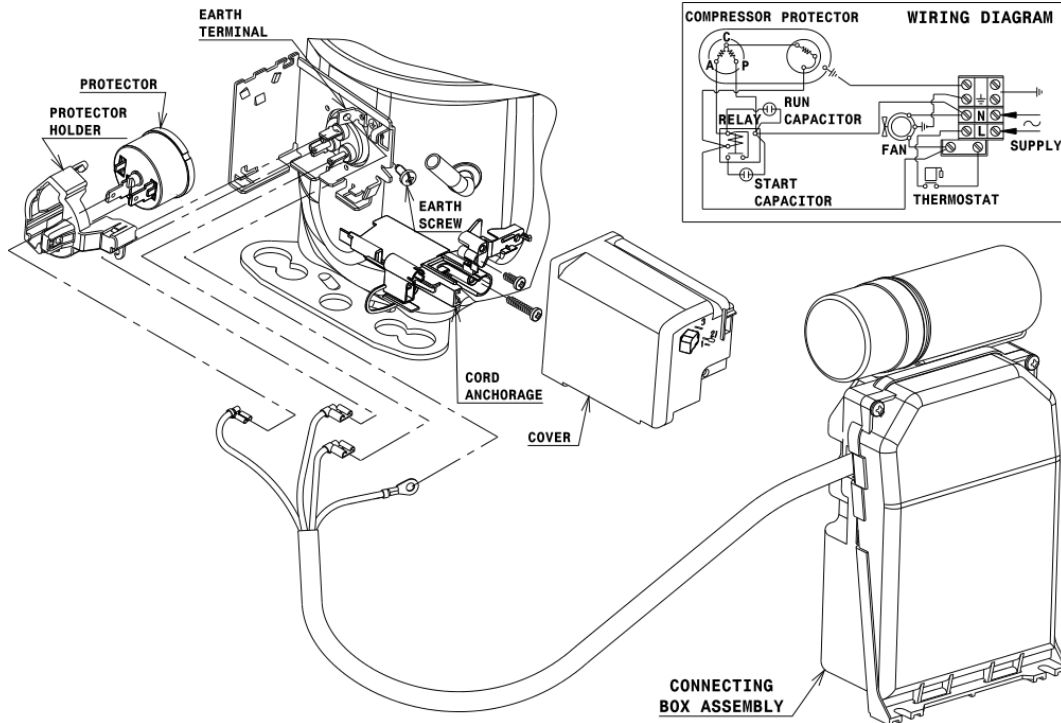


DESIGNATION INTERNAL DIAM.

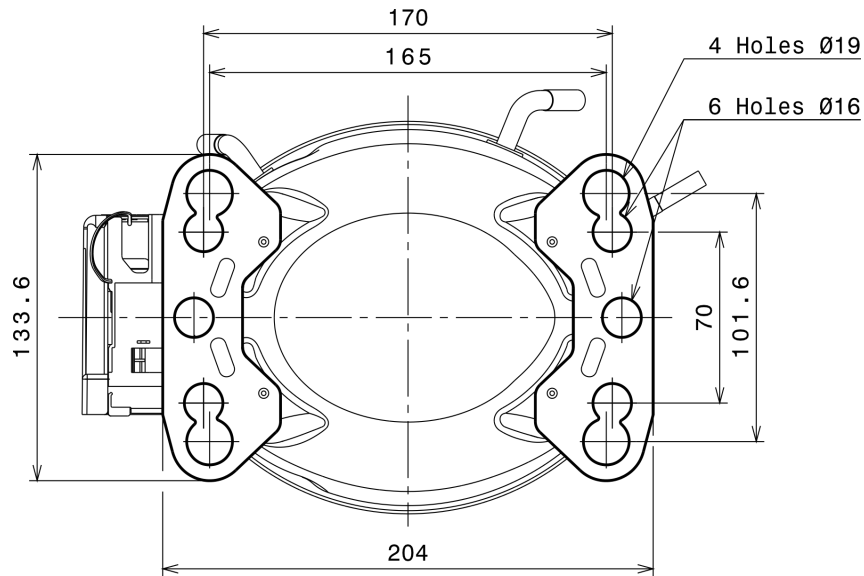
DESIGNATION	INTERNAL DIAM.
1 Suction/Service	8,1 mm
2 Service/Suction	8,1 mm
3 Discharge	6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (EXTERNAL CONNECTING BOX) (P range)



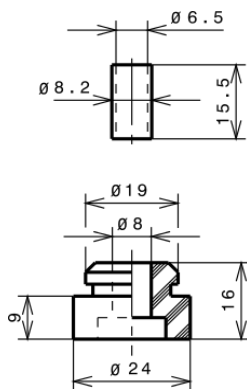
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

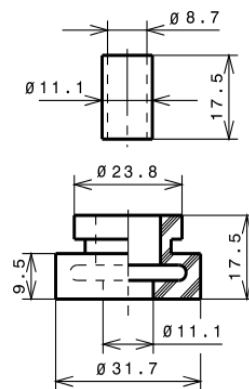
STANDARD

Ø16 holes (170x70 net)



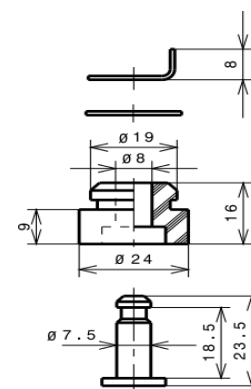
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A HMBP

