Technical Data Sheet

ENGINEERING TOMORROW

Compressor model **MP12RB**

Voltage **220-240V 50Hz ~1**

Refrigerant **R404A**

APPLICATION

Application	High-Medium Back Pressure
Refrigerant	R404A
Evaporating Temp.	-25,0 ºC to 10,0 ºC
Expansion	Capillar/Valve
Comp. Cooling	Fan cooled
Max. ambient temp.	43,0 ºC

COMPRESSOR

Displacement	12,05 cm³
Diameter	29,37 mm
Stroke	17,78 mm
Net Weight	12,51 Kg
Oil type	ISO VG 32 ESTER
Oil charge	350 cm³

MOTOR

Nominal Power	1/2 hp
Voltage/Frequency	220-240V 50Hz
Voltage range	187-264 V
Type	CSR
Phase number	1 PH
Locked Rotor Amps (LRA)	17,00 A
Max. Cont. Current (MCC)	6,00 A
Main W. resist. at 25ºC	4,28 Ω
Start W. resist. at 25ºC	9,99 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.580 kCal/h	1.454 W
COP	2,30 W/W	1,86 W/W
EER	1,98 kCal/Wh	1,61 kCal/Wh
Input Power	800 W	780 W
Current	3,80 A	3,71 A

APPROVALS

TEST CYCLE CONDITIONS

	ASHRAE	**CECOMAF**
	HMBP (D)	**HMBP (C)**
Evaporating temp. (T_e)	7,2 ºC	5,0 ºC
Condensing temp. (T_c)	55,0 ºC	55,0 ºC
Liquid temp. ($T_{liq.}$)	46,0 ºC	55,0 ºC
Ambient temp. ($T_{amb.}$)	35,0 ºC	32,0 ºC
Suction temp. ($T_{suction}$)	35,0 ºC	32,0 ºC
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Run capacitor	16 µF 420 V			
Relay	Option 1			
Reference	2014 158. + NTC15Ω			
Pick-Up	9,05 A			
Drop-Out	7,70 A			
Protector	Option 1	Option 2		
Reference	MRA38130	T0252		
Current	11,70 A	11,50 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 52,00 ºC	105,00 / 52,00 ºC		

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ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	535	418	2,07	1,49	1,28
40	-20	697	457	2,25	1,77	1,53
40	-15	884	495	2,43	2,08	1,78
40	-10	1.098	534	2,60	2,39	2,06
40	-5	1.337	572	2,77	2,72	2,34
40	0	1.602	610	2,95	3,05	2,63
40	5	1.894	648	3,12	3,40	2,92
40	7,2	2.030	665	3,19	3,55	3,05
40	10	2.211	686	3,29	3,75	3,22
45	-25	480	420	2,08	1,33	1,14
45	-20	627	465	2,29	1,57	1,35
45	-15	800	511	2,50	1,82	1,57
45	-10	999	556	2,70	2,09	1,80
45	-5	1.223	601	2,90	2,37	2,04
45	0	1.474	646	3,11	2,65	2,28
45	5	1.750	690	3,31	2,95	2,53
45	7,2	1.880	710	3,40	3,08	2,65
45	10	2.053	735	3,51	3,25	2,79
50	-25	425	422	2,09	1,17	1,01
50	-20	557	474	2,33	1,37	1,18
50	-15	715	526	2,57	1,58	1,36
50	-10	899	578	2,80	1,81	1,56
50	-5	1.109	630	3,03	2,05	1,76
50	0	1.345	681	3,27	2,30	1,97
50	5	1.607	732	3,50	2,55	2,19
50	7,2	1.730	755	3,60	2,67	2,29
50	10	1.894	784	3,73	2,81	2,42
55	-25	370	424	2,10	1,01	0,87
55	-20	487	483	2,37	1,17	1,01
55	-15	631	541	2,63	1,35	1,16
55	-10	800	600	2,90	1,55	1,33
55	-5	995	658	3,16	1,76	1,51
55	0	1.216	717	3,43	1,97	1,70
55	5	1.463	775	3,69	2,20	1,89
55	7,2	1.580	800	3,80	2,30	1,98
55	10	1.736	832	3,94	2,43	2,09
60	-25	315	426	2,11	0,86	0,74
60	-20	418	492	2,41	0,99	0,85
60	-15	546	557	2,70	1,14	0,98
60	-10	701	622	3,00	1,31	1,13
60	-5	881	687	3,29	1,49	1,28
60	0	1.087	752	3,58	1,68	1,45
60	5	1.320	817	3,87	1,88	1,62
60	7,2	1.430	845	4,00	1,97	1,69
60	10	1.578	881	4,16	2,08	1,79

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	560	420	2,08	1,33	1,15
40	-20	734	459	2,26	1,60	1,38
40	-15	933	498	2,44	1,87	1,62
40	-10	1.157	537	2,62	2,15	1,86
40	-5	1.406	576	2,79	2,44	2,11
40	0	1.681	615	2,97	2,73	2,36
40	5	1.980	653	3,14	3,03	2,62
40	7,2	2.120	670	3,22	3,16	2,73
40	10	2.305	692	3,31	3,33	2,88
45	-25	497	422	2,09	1,18	1,02
45	-20	652	468	2,30	1,39	1,20
45	-15	832	514	2,51	1,62	1,40
45	-10	1.038	559	2,72	1,86	1,60
45	-5	1.268	605	2,92	2,10	1,81
45	0	1.524	650	3,13	2,34	2,02
45	5	1.805	696	3,33	2,59	2,24
45	7,2	1.936	715	3,42	2,71	2,34
45	10	2.111	741	3,53	2,85	2,46
50	-25	434	424	2,10	1,02	0,88
50	-20	570	477	2,34	1,20	1,03
50	-15	732	529	2,58	1,38	1,19
50	-10	918	582	2,82	1,58	1,36
50	-5	1.130	634	3,05	1,78	1,54
50	0	1.367	686	3,29	1,99	1,72
50	5	1.629	738	3,52	2,21	1,91
50	7,2	1.752	761	3,62	2,30	1,99
50	10	1.916	790	3,75	2,43	2,10
55	-25	371	426	2,11	0,87	0,75
55	-20	488	486	2,38	1,01	0,87
55	-15	631	545	2,65	1,16	1,00
55	-10	799	604	2,92	1,32	1,14
55	-5	992	663	3,18	1,50	1,29
55	0	1.210	722	3,45	1,68	1,45
55	5	1.454	780	3,71	1,86	1,61
55	7,2	1.569	806	3,83	1,95	1,68
55	10	1.722	839	3,97	2,05	1,77
60	-25	307	428	2,12	0,72	0,62
60	-20	406	494	2,42	0,82	0,71
60	-15	530	560	2,72	0,95	0,82
60	-10	680	626	3,02	1,09	0,94
60	-5	854	692	3,31	1,23	1,07
60	0	1.053	757	3,61	1,39	1,20
60	5	1.278	823	3,90	1,55	1,34
60	7,2	1.385	851	4,03	1,63	1,41
60	10	1.528	888	4,19	1,72	1,49

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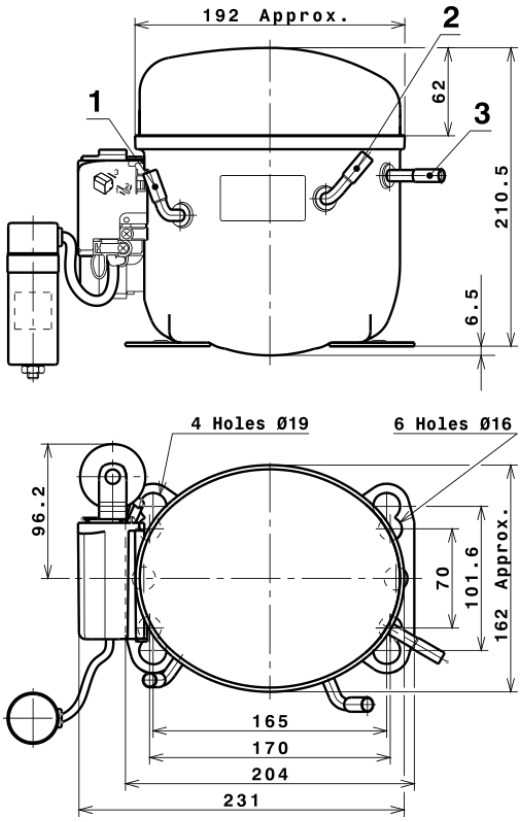
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.937,0175228059	338,2704915566	1,7312524008	57,749699174817
2	87,4324710066	-2,8743185570	-0,0126847149	1,9605998134782
3	-32,5254918013	7,3750165922	0,0330404471	-0,28149123791797
4	0,4758234052	0,0060947147	0,0000091459	0,022158636460065
5	-0,7943549695	0,2785255333	0,0012464223	-0,003633655454375

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

Technical Data Sheet

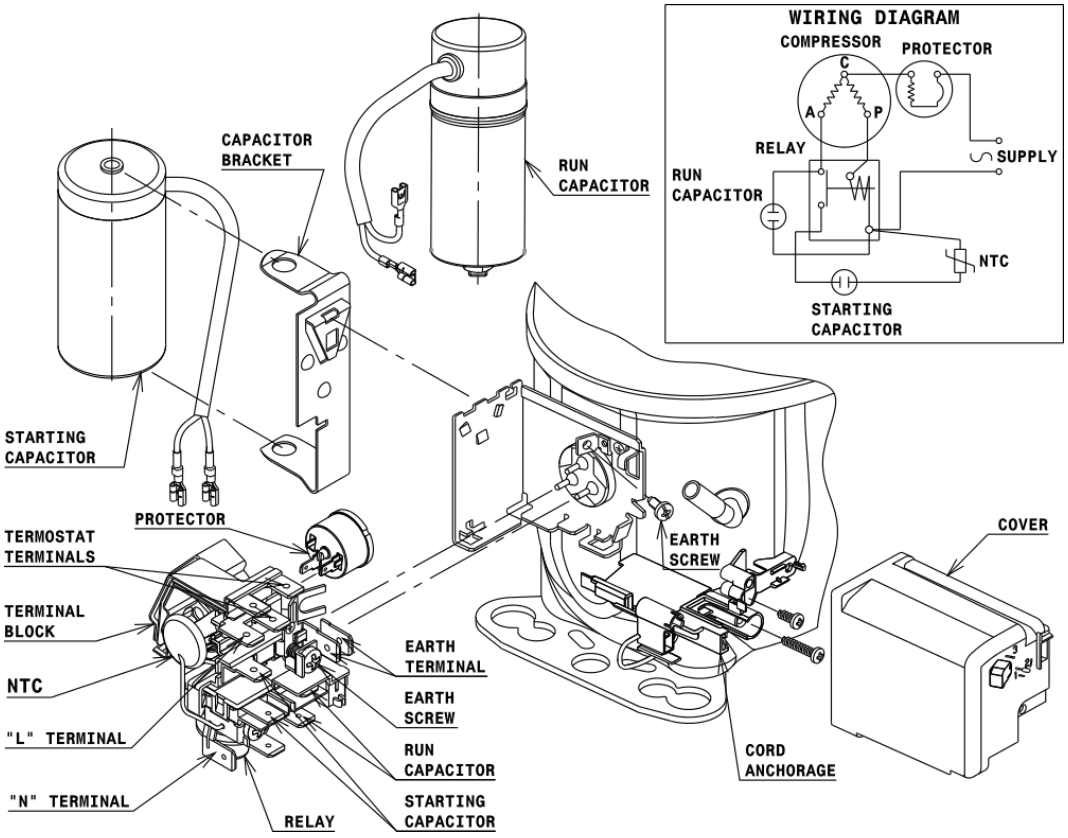
COMPRESSOR DIMENSIONS



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

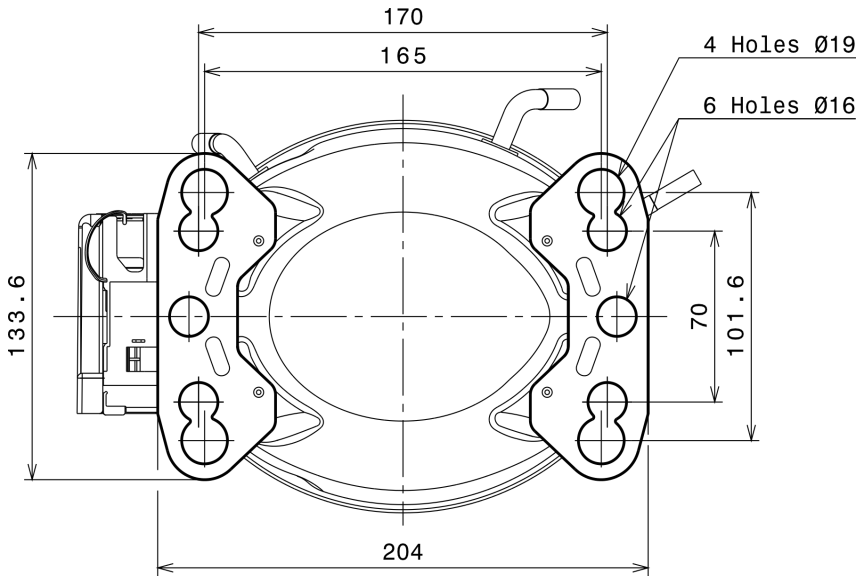
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (L, P ranges)



Technical Data Sheet

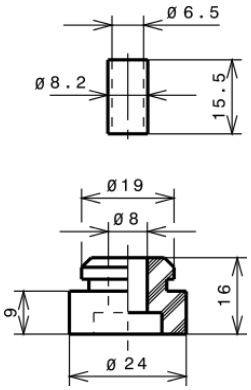
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

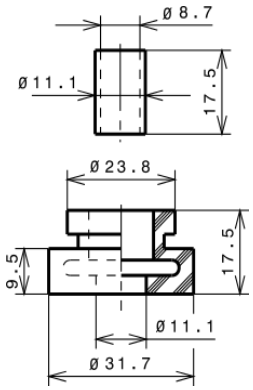
STANDARD

Ø16 holes (170x70 net)



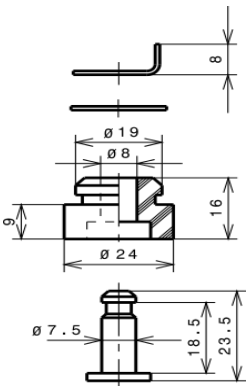
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A HMBP

