

# Technical Data Sheet

ENGINEERING  
TOMORROW



Compressor model **MPT12RA**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R404A**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	12,10 cm <sup>3</sup>	Nominal Power	3/8 hp
Refrigerant	R404A	Diameter	27,00 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	21,13 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	12,20 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 <sup>3</sup>	Locked Rotor Amps (LRA)	18,50 A
				Max. Cont. Current (MCC)	5,30 A
				Main W. resist. at 25°C	5,19 Ω
				Start W. resist. at 25°C	7,67 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.685 kCal/h	1.559 W
COP	2,35 W/W	1,91 W/W
EER	2,02 kCal/Wh	1,65 kCal/Wh
Input Power	834 W	817 W
Current	3,84 A	3,76 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	64- 77 μF 330 V		
Run capacitor	20 μF 420 V		
Relay	Option 1	Option 2	
Reference	2014 158. + NTC15Ω	QLZ-9.05A + NTC15Ω	
Pick-Up	9,05 A	9,05 A	
Drop-Out	7,70 A	7,70 A	
Protector	Option 1		
Reference	T0188		
Current	12,30 A		
Time check	7,5-14 seg		
Disc temp. (Open/Close)	115,00 / 61,00 °C		



## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	594	470	2,18	1,47	1,26
40	-20	774	507	2,35	1,78	1,53
40	-15	978	544	2,52	2,09	1,80
40	-10	1.204	580	2,68	2,41	2,07
40	-5	1.453	616	2,85	2,74	2,36
40	0	1.726	652	3,01	3,08	2,65
40	5	2.020	687	3,17	3,42	2,94
40	7,2	2.158	702	3,24	3,57	3,07
40	10	2.338	721	3,33	3,77	3,24

45	-25	541	477	2,21	1,32	1,13
45	-20	705	520	2,41	1,58	1,36
45	-15	893	563	2,60	1,84	1,59
45	-10	1.103	605	2,80	2,12	1,82
45	-5	1.336	647	2,99	2,40	2,07
45	0	1.592	688	3,17	2,69	2,31
45	5	1.870	728	3,36	2,99	2,57
45	7,2	2.000	746	3,44	3,12	2,68
45	10	2.172	768	3,54	3,29	2,83

50	-25	489	485	2,25	1,17	1,01
50	-20	637	533	2,47	1,39	1,19
50	-15	808	582	2,69	1,61	1,39
50	-10	1.001	629	2,91	1,85	1,59
50	-5	1.218	677	3,12	2,09	1,80
50	0	1.458	724	3,34	2,34	2,01
50	5	1.720	770	3,55	2,60	2,23
50	7,2	1.843	790	3,64	2,71	2,33
50	10	2.005	816	3,76	2,86	2,46

55	-25	436	492	2,28	1,03	0,89
55	-20	568	547	2,53	1,21	1,04
55	-15	722	601	2,78	1,40	1,20
55	-10	900	654	3,02	1,60	1,38
55	-5	1.100	707	3,26	1,81	1,56
55	0	1.324	759	3,50	2,03	1,74
55	5	1.570	811	3,74	2,25	1,93
55	7,2	1.685	834	3,84	2,35	2,02
55	10	1.838	863	3,97	2,48	2,13

60	-25	384	500	2,31	0,89	0,77
60	-20	499	560	2,59	1,04	0,89
60	-15	637	619	2,86	1,20	1,03
60	-10	799	679	3,13	1,37	1,18
60	-5	983	737	3,40	1,55	1,33
60	0	1.189	795	3,66	1,74	1,50
60	5	1.419	853	3,93	1,94	1,66
60	7,2	1.528	878	4,04	2,02	1,74
60	10	1.672	910	4,19	2,14	1,84

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	622	472	2,19	1,32	1,14
40	-20	815	510	2,36	1,60	1,38
40	-15	1.031	547	2,53	1,88	1,63
40	-10	1.268	584	2,70	2,17	1,88
40	-5	1.528	620	2,87	2,46	2,13
40	0	1.809	656	3,03	2,76	2,38
40	5	2.113	692	3,19	3,05	2,64
40	7,2	2.253	707	3,26	3,19	2,75
40	10	2.438	727	3,35	3,35	2,90

45	-25	560	480	2,22	1,17	1,01
45	-20	733	523	2,42	1,40	1,21
45	-15	928	566	2,62	1,64	1,42
45	-10	1.145	609	2,81	1,88	1,63
45	-5	1.384	651	3,01	2,13	1,84
45	0	1.645	693	3,20	2,38	2,05
45	5	1.928	734	3,38	2,63	2,27
45	7,2	2.060	752	3,47	2,74	2,37
45	10	2.233	775	3,57	2,88	2,49

50	-25	498	487	2,26	1,02	0,88
50	-20	651	536	2,48	1,21	1,05
50	-15	825	585	2,71	1,41	1,22
50	-10	1.022	633	2,93	1,61	1,39
50	-5	1.241	681	3,14	1,82	1,57
50	0	1.481	729	3,36	2,03	1,76
50	5	1.744	776	3,57	2,25	1,94
50	7,2	1.866	796	3,67	2,34	2,03
50	10	2.028	822	3,79	2,47	2,13

55	-25	437	495	2,29	0,88	0,76
55	-20	569	550	2,54	1,03	0,89
55	-15	723	604	2,79	1,20	1,03
55	-10	899	658	3,04	1,37	1,18
55	-5	1.097	712	3,28	1,54	1,33
55	0	1.317	765	3,52	1,72	1,49
55	5	1.559	817	3,76	1,91	1,65
55	7,2	1.673	840	3,87	1,99	1,72
55	10	1.823	870	4,00	2,10	1,81

60	-25	375	502	2,33	0,75	0,65
60	-20	487	563	2,60	0,86	0,75
60	-15	620	623	2,88	1,00	0,86
60	-10	776	683	3,15	1,14	0,98
60	-5	953	742	3,42	1,28	1,11
60	0	1.153	801	3,69	1,44	1,24
60	5	1.375	859	3,95	1,60	1,38
60	7,2	1.479	885	4,07	1,67	1,44
60	10	1.619	917	4,22	1,76	1,52

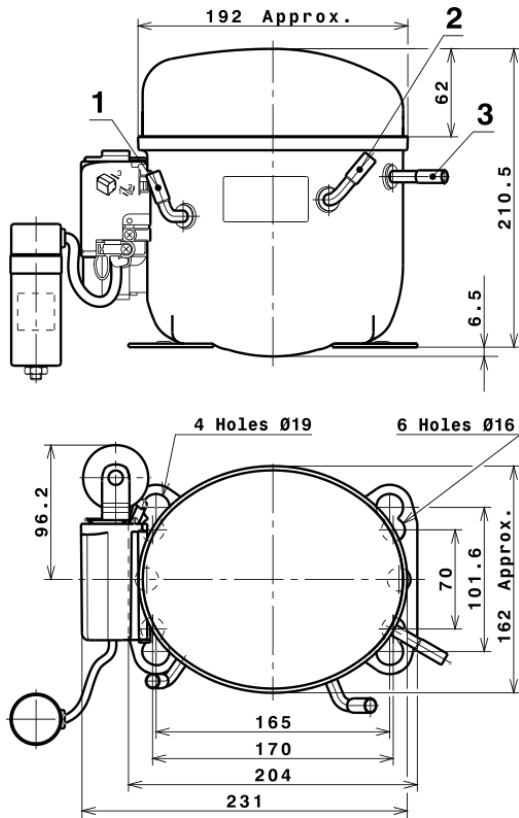


## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	3.123,5715199558	377,7345835684	1,7635894083	61,198874875094
2	91,3414162096	-1,7883684705	-0,0080465481	2,0499033740154
3	-34,0737733604	7,4664406913	0,0339790807	-0,27684296606097
4	0,4169323808	-0,0012534812	-0,0000102950	0,020336021367936
5	-0,8641069427	0,2368758885	0,0010766198	-0,0049608801811585

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

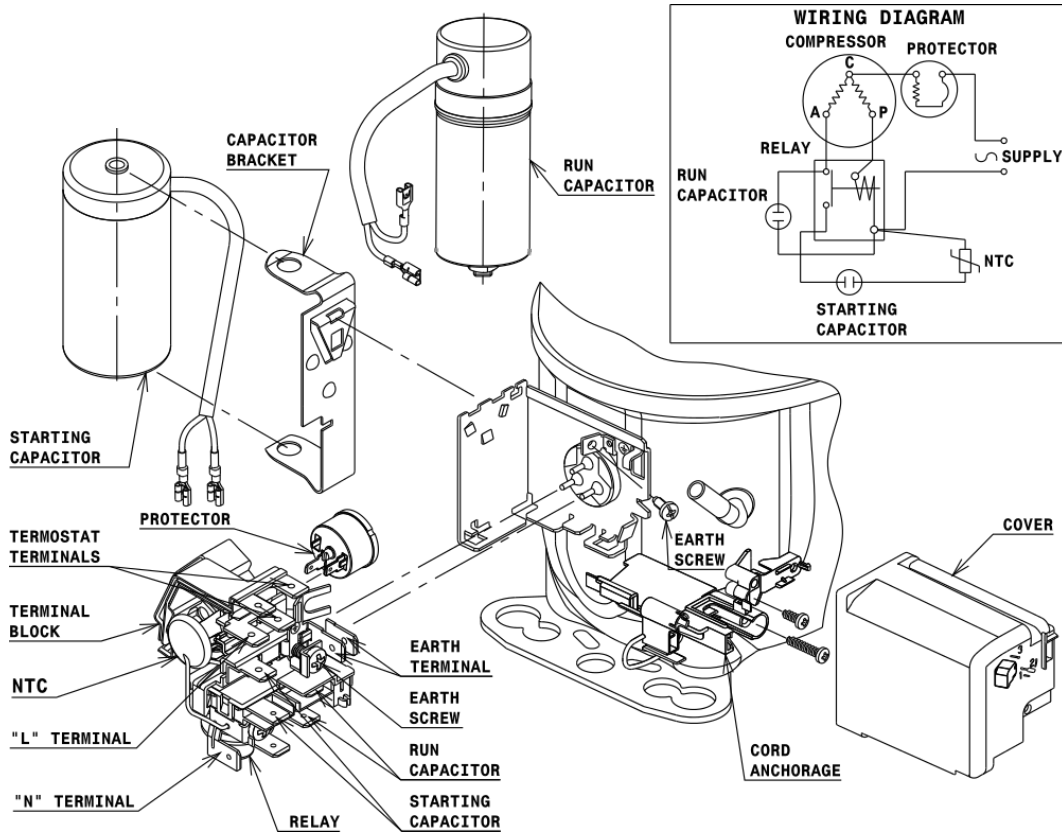


## DESIGNATION INTERNAL DIAM.

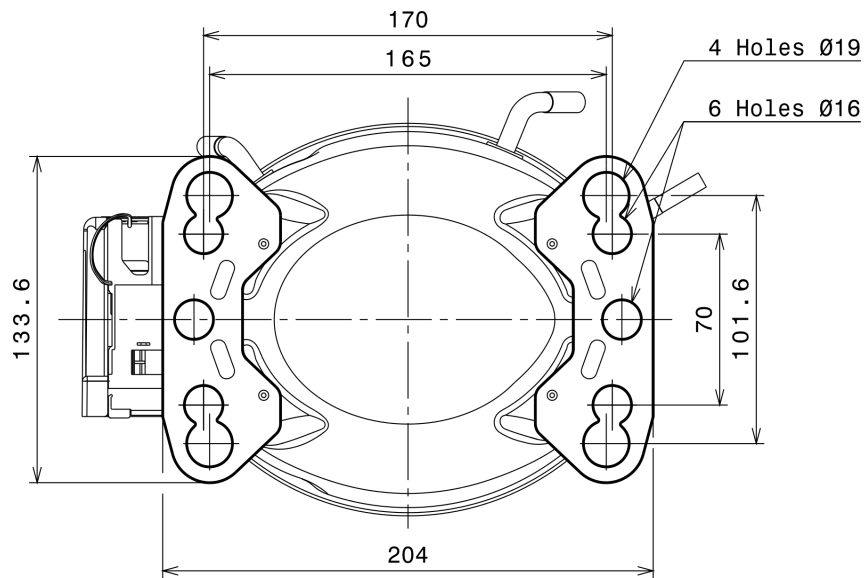
DESIGNATION	INTERNAL DIAM.
1 Suction	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



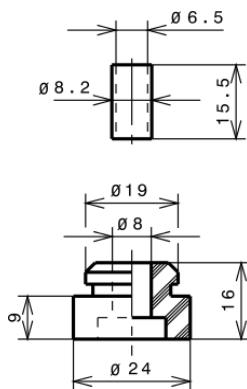
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

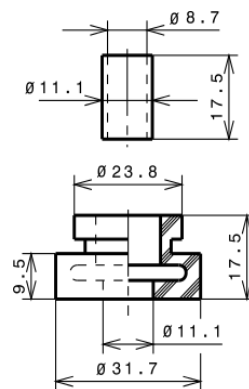
### STANDARD

$\varnothing 16$  holes (170x70 net)



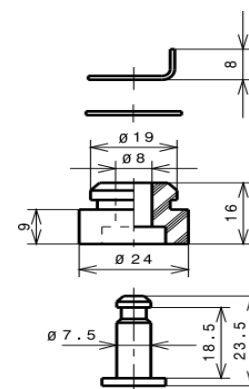
### AMERICAN FEET

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



### SNAP-ON

$\varnothing 16$  holes (170x70 net)



## SOA

SOA R404A HMBP

