

# Technical Data Sheet

ENGINEERING  
TOMORROW



Compressor model **MPT16LA**  
Voltage **220-240V 50Hz ~1**  
Refrigerant **R404A**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	Low Back Pressure	Displacement	16,15 cm <sup>3</sup>	Nominal Power	1/2 hp
Refrigerant	R404A	Diameter	31,19 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-40,0 °C to -10,0 °C	Stroke	21,13 mm	Voltage range	187-255 V
Expansion	Capillar/Valve	Net Weight	12,37 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	450 cm <sup>3</sup>	Locked Rotor Amps (LRA)	19,00 A
				Max. Cont. Current (MCC)	4,00 A
				Main W. resist. at 25°C	5,30 Ω
				Start W. resist. at 25°C	8,70 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	765 kCal/h	605 W
COP	1,40 W/W	1,00 W/W
EER	1,20 kCal/Wh	0,86 kCal/Wh
Input Power	635 W	608 W
Current	3,04 A	2,92 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T <sub>e</sub> )	-23,3 °C	-25,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	32,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	32,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	32,0 °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	16 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	Option 2	
Reference	MRA38145	T0266	
Current	14,90 A	11,00 A	
Time check	2,8-5,2 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	-40	337	393	1,98	1,00	0,86
40	-35	456	441	2,18	1,20	1,03
40	-30	603	496	2,42	1,41	1,22
40	-25	776	556	2,68	1,62	1,40
40	-23,3	842	578	2,78	1,69	1,46
40	-20	977	622	2,98	1,83	1,57
40	-15	1.205	694	3,31	2,02	1,74
40	-10	1.460	772	3,67	2,20	1,89

45	-40	319	394	1,98	0,94	0,81
45	-35	436	448	2,21	1,13	0,97
45	-30	580	508	2,47	1,33	1,14
45	-25	752	573	2,76	1,53	1,31
45	-23,3	816	597	2,87	1,59	1,37
45	-20	950	645	3,08	1,71	1,47
45	-15	1.175	722	3,44	1,89	1,63
45	-10	1.428	805	3,83	2,06	1,77

50	-40	301	395	1,99	0,89	0,76
50	-35	416	454	2,24	1,06	0,92
50	-30	558	519	2,52	1,25	1,07
50	-25	727	590	2,84	1,43	1,23
50	-23,3	791	616	2,95	1,49	1,28
50	-20	923	667	3,19	1,61	1,38
50	-15	1.146	750	3,57	1,78	1,53
50	-10	1.397	839	3,99	1,94	1,67

55	-40	283	396	1,99	0,83	0,71
55	-35	396	461	2,27	1,00	0,86
55	-30	535	531	2,58	1,17	1,01
55	-25	702	608	2,92	1,34	1,16
55	-23,3	765	635	3,04	1,40	1,20
55	-20	896	690	3,29	1,51	1,30
55	-15	1.117	778	3,70	1,67	1,44
55	-10	1.365	872	4,15	1,82	1,57

60	-40	265	397	1,99	0,78	0,67
60	-35	375	467	2,30	0,93	0,80
60	-30	513	543	2,63	1,10	0,94
60	-25	677	625	2,99	1,26	1,08
60	-23,3	739	654	3,13	1,31	1,13
60	-20	869	713	3,40	1,42	1,22
60	-15	1.088	806	3,83	1,57	1,35
60	-10	1.334	906	4,31	1,71	1,47

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	357	393	1,98	0,91	0,78
40	-35	499	441	2,18	1,13	0,98
40	-30	665	496	2,42	1,34	1,16
40	-25	852	556	2,68	1,53	1,32
40	-23,3	921	578	2,78	1,59	1,38
40	-20	1.063	622	2,98	1,71	1,48
40	-15	1.295	694	3,31	1,87	1,61
40	-10	1.551	772	3,67	2,01	1,74

45	-40	319	394	1,98	0,81	0,70
45	-35	447	448	2,21	1,00	0,86
45	-30	597	508	2,47	1,18	1,02
45	-25	770	573	2,76	1,34	1,16
45	-23,3	834	597	2,87	1,40	1,21
45	-20	965	645	3,08	1,50	1,29
45	-15	1.183	722	3,44	1,64	1,42
45	-10	1.423	805	3,83	1,77	1,53

50	-40	282	395	1,99	0,71	0,62
50	-35	395	454	2,24	0,87	0,75
50	-30	530	519	2,52	1,02	0,88
50	-25	687	590	2,84	1,16	1,01
50	-23,3	746	616	2,95	1,21	1,05
50	-20	868	667	3,19	1,30	1,12
50	-15	1.070	750	3,57	1,43	1,23
50	-10	1.296	839	3,99	1,55	1,34

55	-40	245	396	1,99	0,62	0,53
55	-35	342	461	2,27	0,74	0,64
55	-30	462	531	2,58	0,87	0,75
55	-25	605	608	2,92	1,00	0,86
55	-23,3	658	635	3,04	1,04	0,90
55	-20	770	690	3,29	1,12	0,96
55	-15	958	778	3,70	1,23	1,06
55	-10	1.168	872	4,15	1,34	1,16

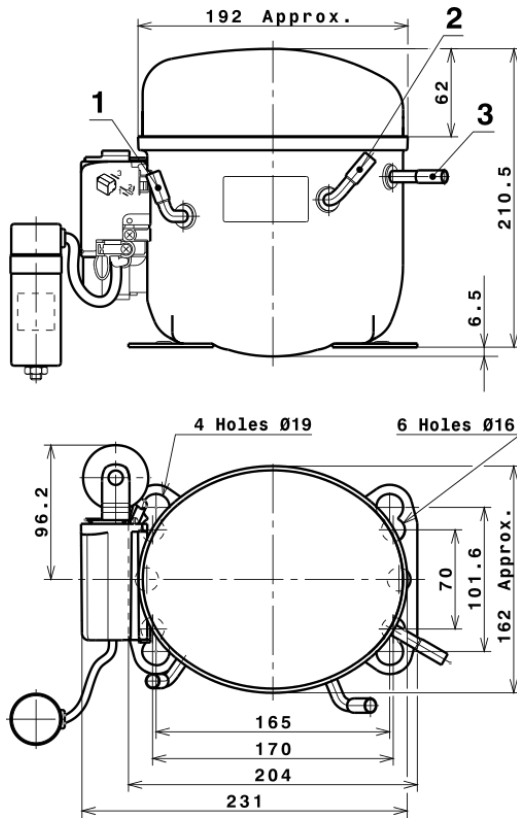
60	-40	207	397	1,99	0,52	0,45
60	-35	290	467	2,30	0,62	0,54
60	-30	395	543	2,63	0,73	0,63
60	-25	522	625	2,99	0,84	0,72
60	-23,3	571	654	3,13	0,87	0,75
60	-20	672	713	3,40	0,94	0,82
60	-15	845	806	3,83	1,05	0,91
60	-10	1.041	906	4,31	1,15	0,99

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	3.362,1829001525	607,9057911504	2,8882650777	68,668162249381
2	85,0151846976	10,3320870430	0,0519916419	2,0654376965691
3	-32,5548335048	9,1050030476	0,0438754093	-0,21904919996161
4	0,4274901012	0,1243137426	0,0007317660	0,017111540000665
5	-0,6260593207	0,2225143710	0,0010751288	-0,0029379360044573

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

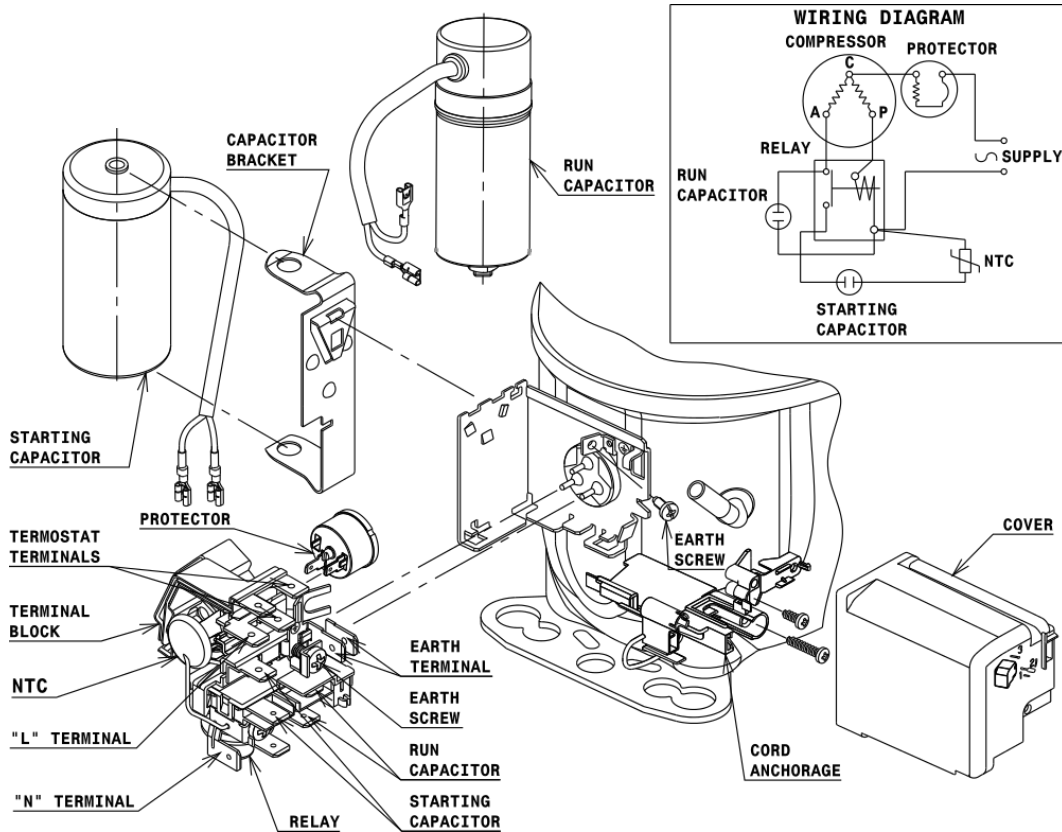


## DESIGNATION INTERNAL DIAM.

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

Ø16 holes (170x70 net)



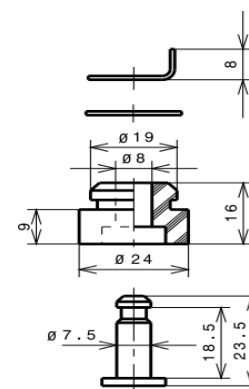
### AMERICAN FEET

Ø19 holes (165x101.6 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R404A LBP

