

Technical Data Sheet

Compressor model **ML60FR**
 Voltage **115-127V 60Hz ~1**
 Refrigerant **R404A**

APPLICATION

Application Low Back Pressure
 Refrigerant R404A
 Evaporating Temp. -40,0 °C to -10,0 °C
 Expansion Capillar/Valve
 Comp. Cooling Fan cooled
 Max. ambient temp. 43,0 °C

COMPRESSOR

Displacement 5,98 cm³
 Diameter 20,88 mm
 Stroke 17,47 mm
 Net Weight 9,54 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 300 cm³

MOTOR

Nominal Power 1/5 hp
 Voltage/Frequency 115-127V 60Hz
 Voltage range 98-140 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 25,50 A
 Max. Cont. Current (MCC) 5,70 A
 Main W. resist. at 25°C 1,78 Ω
 Start W. resist. at 25°C 8,00 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	263 kCal/h	207 W
COP	1,01 W/W	0,72 W/W
EER	0,87 kCal/Wh	0,62 kCal/Wh
Input Power	303 W	290 W
Current	3,70 A	3,61 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T _e)	-23,3 °C	-25,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	32,0 °C	55,0 °C
Ambient temp. (T _{amb.})	32,0 °C	32,0 °C
Suction temp. (T _{suction})	32,0 °C	32,0 °C
Voltage/Frequency	115 V 60 Hz	115 V 60 Hz

ELECTRICAL COMPONENTS

Starting capacitor	150 µF 160 V		
Relay	Option 1		
Reference	2014 166.		
Pick-Up	11,00 A		
Drop-Out	9,35 A		
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	-40	129	199	3,07	0,75	0,65
40	-35	174	224	3,21	0,90	0,78
40	-30	230	253	3,38	1,06	0,91
40	-25	297	285	3,58	1,21	1,04
40	-23,3	322	296	3,66	1,26	1,09
40	-20	374	320	3,82	1,36	1,17
40	-15	461	357	4,09	1,50	1,29
40	-10	558	398	4,41	1,63	1,40

45	-40	117	194	3,05	0,70	0,60
45	-35	160	222	3,20	0,84	0,72
45	-30	214	253	3,38	0,98	0,85
45	-25	278	287	3,59	1,13	0,97
45	-23,3	302	299	3,67	1,18	1,01
45	-20	352	323	3,84	1,27	1,09
45	-15	437	363	4,13	1,40	1,21
45	-10	532	405	4,47	1,53	1,31

50	-40	106	190	3,02	0,65	0,56
50	-35	146	219	3,18	0,78	0,67
50	-30	198	252	3,37	0,91	0,78
50	-25	259	288	3,60	1,05	0,90
50	-23,3	283	301	3,69	1,09	0,94
50	-20	331	327	3,87	1,18	1,01
50	-15	413	368	4,18	1,31	1,12
50	-10	506	413	4,54	1,43	1,23

55	-40	94	185	3,00	0,59	0,51
55	-35	133	217	3,17	0,71	0,61
55	-30	181	252	3,37	0,84	0,72
55	-25	241	290	3,61	0,97	0,83
55	-23,3	263	303	3,70	1,01	0,87
55	-20	310	330	3,89	1,09	0,94
55	-15	390	374	4,22	1,21	1,04
55	-10	480	420	4,60	1,33	1,14

60	-40	82	181	2,98	0,53	0,46
60	-35	119	214	3,16	0,64	0,55
60	-30	165	251	3,37	0,76	0,66
60	-25	222	291	3,62	0,89	0,76
60	-23,3	243	305	3,71	0,93	0,80
60	-20	289	334	3,92	1,01	0,87
60	-15	366	379	4,26	1,12	0,97
60	-10	454	428	4,66	1,24	1,06

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	135	199	3,07	0,68	0,59
40	-35	189	224	3,21	0,84	0,73
40	-30	252	253	3,38	1,00	0,86
40	-25	324	285	3,58	1,14	0,98
40	-23,3	350	296	3,66	1,18	1,02
40	-20	404	320	3,82	1,26	1,09
40	-15	493	357	4,09	1,38	1,19
40	-10	590	398	4,41	1,48	1,28

45	-40	117	194	3,05	0,60	0,52
45	-35	164	222	3,20	0,74	0,64
45	-30	220	253	3,38	0,87	0,75
45	-25	285	287	3,59	0,99	0,86
45	-23,3	309	299	3,67	1,03	0,89
45	-20	358	323	3,84	1,11	0,96
45	-15	440	363	4,13	1,21	1,05
45	-10	530	405	4,47	1,31	1,13

50	-40	99	190	3,02	0,52	0,45
50	-35	140	219	3,18	0,64	0,55
50	-30	188	252	3,37	0,75	0,65
50	-25	246	288	3,60	0,85	0,74
50	-23,3	268	301	3,69	0,89	0,77
50	-20	312	327	3,87	0,96	0,83
50	-15	387	368	4,18	1,05	0,91
50	-10	470	413	4,54	1,14	0,99

55	-40	81	185	3,00	0,44	0,38
55	-35	115	217	3,17	0,53	0,46
55	-30	157	252	3,37	0,62	0,54
55	-25	207	290	3,61	0,72	0,62
55	-23,3	226	303	3,70	0,75	0,65
55	-20	266	330	3,89	0,81	0,70
55	-15	334	374	4,22	0,89	0,77
55	-10	411	420	4,60	0,98	0,84

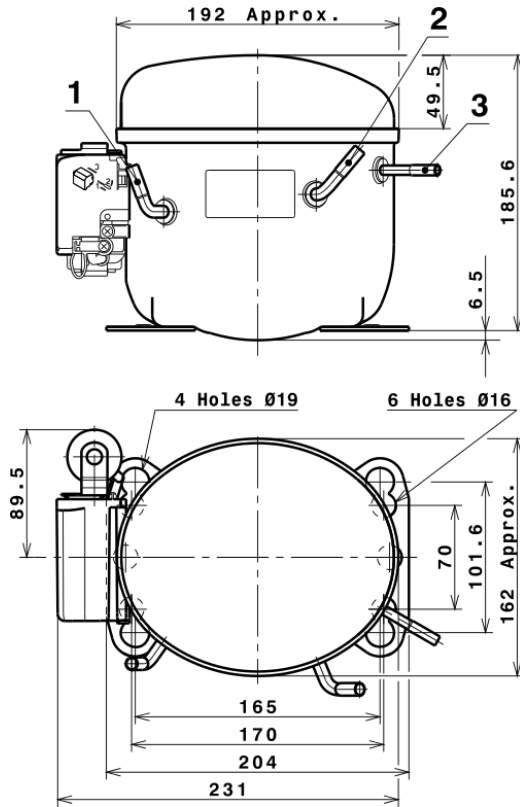
60	-40	63	181	2,98	0,35	0,30
60	-35	90	214	3,16	0,42	0,36
60	-30	125	251	3,37	0,50	0,43
60	-25	168	291	3,62	0,58	0,50
60	-23,3	185	305	3,71	0,61	0,52
60	-20	221	334	3,92	0,66	0,57
60	-15	282	379	4,26	0,74	0,64
60	-10	351	428	4,66	0,82	0,71

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.382,4344620996	406,7072981612	4,5628192305	30,168103089062
2	34,2726992343	6,6278357300	0,0687573985	0,8594931499376
3	-14,9640020219	2,3603316642	0,0192952021	-0,18225052337176
4	0,1634020383	0,0613113770	0,0009189380	0,0064743977363375
5	-0,2851067118	0,0820064648	0,0006014799	-0,0029464010837123

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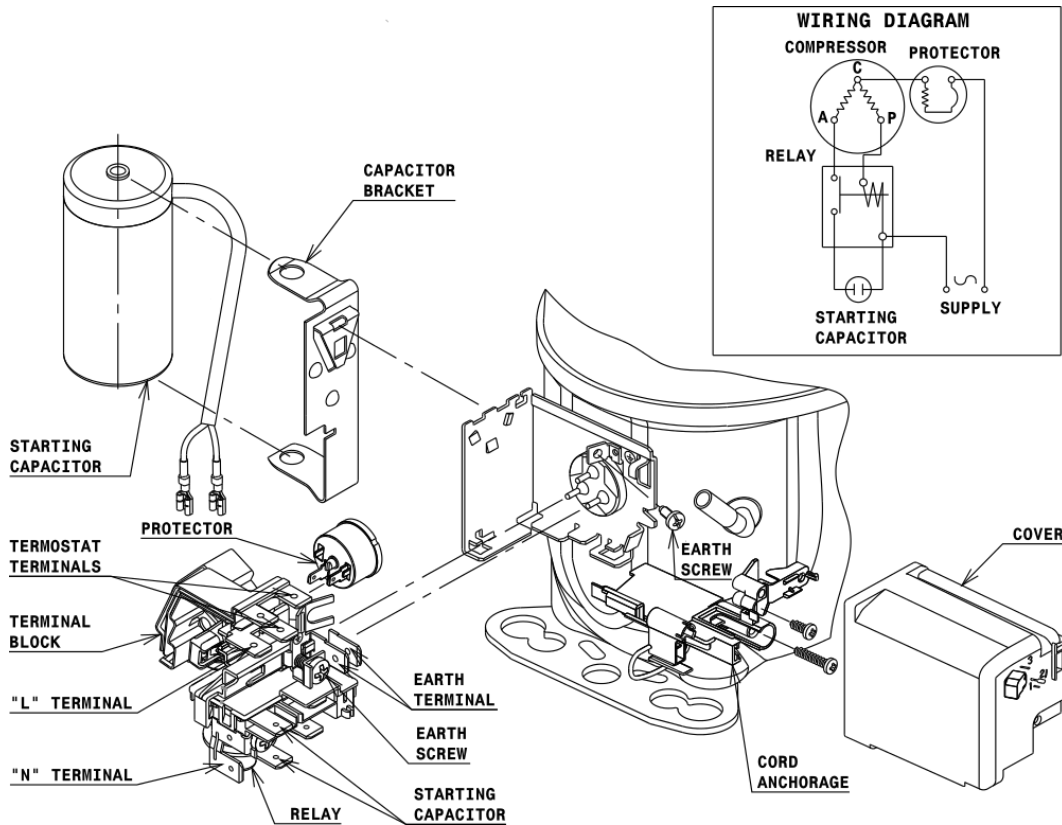
COMPRESSOR DIMENSIONS



DESIGNATION	INTERNAL DIAM.
1 Suction	6,5 mm
2 Service	6,5 mm
3 Discharge	4,9 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



Technical Data Sheet

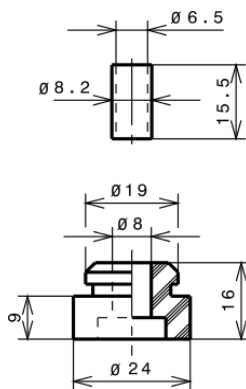
FIXINGS



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 LBP

