

Technical Data Sheet

Compressor model **ML90FG**
Voltage **200-220/230V 50/60Hz ~1**
Refrigerant **R404A**
Compressor status

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	8,85 cm ³
Diameter	25,40 mm
Stroke	17,47 mm
Net Weight	10,55 Kg
Oil type	ISO VG 32 ESTER
Oil charge	395 cm ³
HP	1/3 hp

MOTOR

Voltage/Frequency	230V 60Hz
Voltage range	196-253 V
Type	CSIR
Phase number	1 PH
Locked Rotor Amps (LRA)	18,60 A
Max. Cont. Current (MCC)	3,40 A
Main W. resist. at 25°C	5,68 Ω
Start W. resist. at 25°C	35,40 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	409 kCal/h	322 W
COP	1,12 W/W	0,79 W/W
EER	0,96 kCal/Wh	0,69 kCal/Wh
Input Power	425 W	405 W
Current	2,60 A	2,53 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	230 V 60 Hz	230 V 60 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Relay	Option 1	Option 2		
Reference	2014 158.	QLZ-9.05A		
Pick-Up	9,05 A	9.05 A		
Drop-Out	7,70 A	7.7 A		
Protector	Option 1	Option 2		
Reference	T0289	B90-105		
Current	9,50 A	9,40 A		
Time check	7,5-14 seg	7,5-16 seg		
Disc temp. (Open/Close)	110,00 / 52,00 °C	110,00 / 62,00 °C		

ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	208	270	2,10	0,89	0,77
40	-35	284	305	2,21	1,08	0,93
40	-30	377	345	2,34	1,27	1,09
40	-25	486	390	2,48	1,45	1,25
40	-23,3	527	407	2,54	1,51	1,30
40	-20	611	440	2,65	1,61	1,39
40	-15	751	495	2,84	1,76	1,52
40	-10	908	555	3,04	1,90	1,64

45	-40	185	265	2,08	0,81	0,70
45	-35	257	303	2,20	0,98	0,85
45	-30	345	347	2,34	1,16	0,99
45	-25	449	395	2,50	1,32	1,14
45	-23,3	487	413	2,56	1,37	1,18
45	-20	568	448	2,68	1,47	1,27
45	-15	704	507	2,88	1,61	1,39
45	-10	855	570	3,09	1,74	1,50

50	-40	163	260	2,07	0,73	0,63
50	-35	229	302	2,20	0,88	0,76
50	-30	312	348	2,35	1,04	0,90
50	-25	411	400	2,52	1,19	1,03
50	-23,3	448	419	2,58	1,24	1,07
50	-20	526	457	2,71	1,34	1,15
50	-15	656	518	2,92	1,47	1,27
50	-10	803	585	3,15	1,60	1,37

55	-40	140	255	2,05	0,64	0,55
55	-35	202	300	2,19	0,78	0,67
55	-30	280	350	2,35	0,93	0,80
55	-25	374	405	2,53	1,07	0,92
55	-23,3	409	425	2,60	1,12	0,96
55	-20	483	465	2,73	1,21	1,04
55	-15	609	530	2,96	1,34	1,15
55	-10	750	600	3,20	1,45	1,25

60	-40	118	250	2,03	0,55	0,47
60	-35	174	298	2,19	0,68	0,58
60	-30	247	352	2,36	0,82	0,70
60	-25	336	410	2,55	0,95	0,82
60	-23,3	370	431	2,62	1,00	0,86
60	-20	441	473	2,76	1,08	0,93
60	-15	561	542	3,00	1,20	1,04
60	-10	698	615	3,25	1,32	1,13

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	217	270	2,10	0,81	0,70
40	-35	308	305	2,21	1,01	0,87
40	-30	411	345	2,34	1,19	1,03
40	-25	528	390	2,48	1,35	1,17
40	-23,3	570	407	2,54	1,40	1,21
40	-20	658	440	2,65	1,49	1,29
40	-15	801	495	2,84	1,62	1,40
40	-10	957	555	3,04	1,72	1,49

45	-40	185	265	2,08	0,70	0,60
45	-35	263	303	2,20	0,87	0,75
45	-30	355	347	2,34	1,02	0,88
45	-25	459	395	2,50	1,16	1,00
45	-23,3	498	413	2,56	1,21	1,04
45	-20	577	448	2,68	1,29	1,11
45	-15	708	507	2,88	1,40	1,21
45	-10	852	570	3,09	1,49	1,29

50	-40	153	260	2,07	0,59	0,51
50	-35	219	302	2,20	0,73	0,63
50	-30	298	348	2,35	0,86	0,74
50	-25	390	400	2,52	0,98	0,84
50	-23,3	425	419	2,58	1,01	0,88
50	-20	496	457	2,71	1,09	0,94
50	-15	615	518	2,92	1,19	1,02
50	-10	747	585	3,15	1,28	1,10

55	-40	121	255	2,05	0,47	0,41
55	-35	175	300	2,19	0,58	0,50
55	-30	242	350	2,35	0,69	0,60
55	-25	322	405	2,53	0,79	0,69
55	-23,3	352	425	2,60	0,83	0,72
55	-20	415	465	2,73	0,89	0,77
55	-15	522	530	2,96	0,98	0,85
55	-10	642	600	3,20	1,07	0,92

60	-40	89	250	2,03	0,36	0,31
60	-35	130	298	2,19	0,44	0,38
60	-30	185	352	2,36	0,53	0,45
60	-25	253	410	2,55	0,62	0,53
60	-23,3	279	431	2,62	0,65	0,56
60	-20	334	473	2,76	0,71	0,61
60	-15	429	542	3,00	0,79	0,68
60	-10	537	615	3,25	0,87	0,75

EN12900

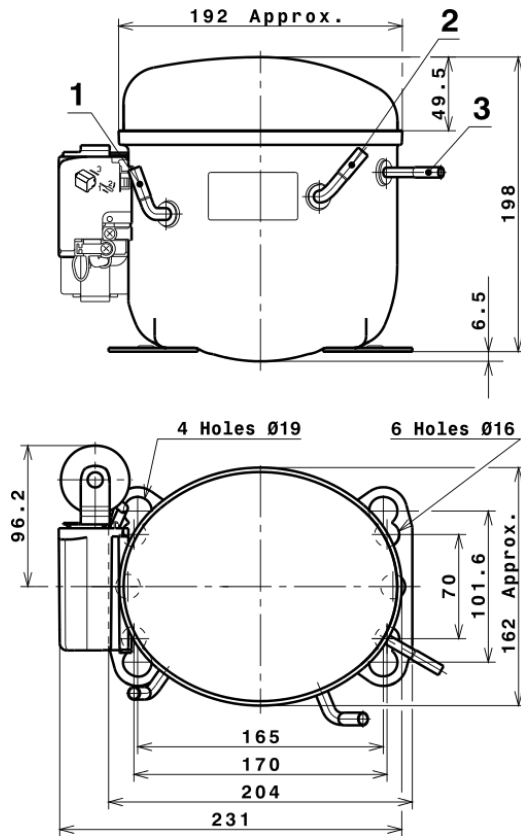
X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.313,3451897668	531,8963444304	2,9696163143	51,710274105693
2	56,2928081158	9,5705827762	0,0353362738	1,4220928432635
3	-26,1642561040	4,4480923864	0,0155623324	-0,36772918527937
4	0,2511768566	0,1048691792	0,0004304910	0,0099815871810819
5	-0,4956698875	0,1367558355	0,0004696058	-0,0060494820608011

Equation

$$x_1 + x_2 Te + x_3 Tc + x_4 Te^2 + x_5 Te Tc$$

Technical Data Sheet

COMPRESSOR DIMENSIONS

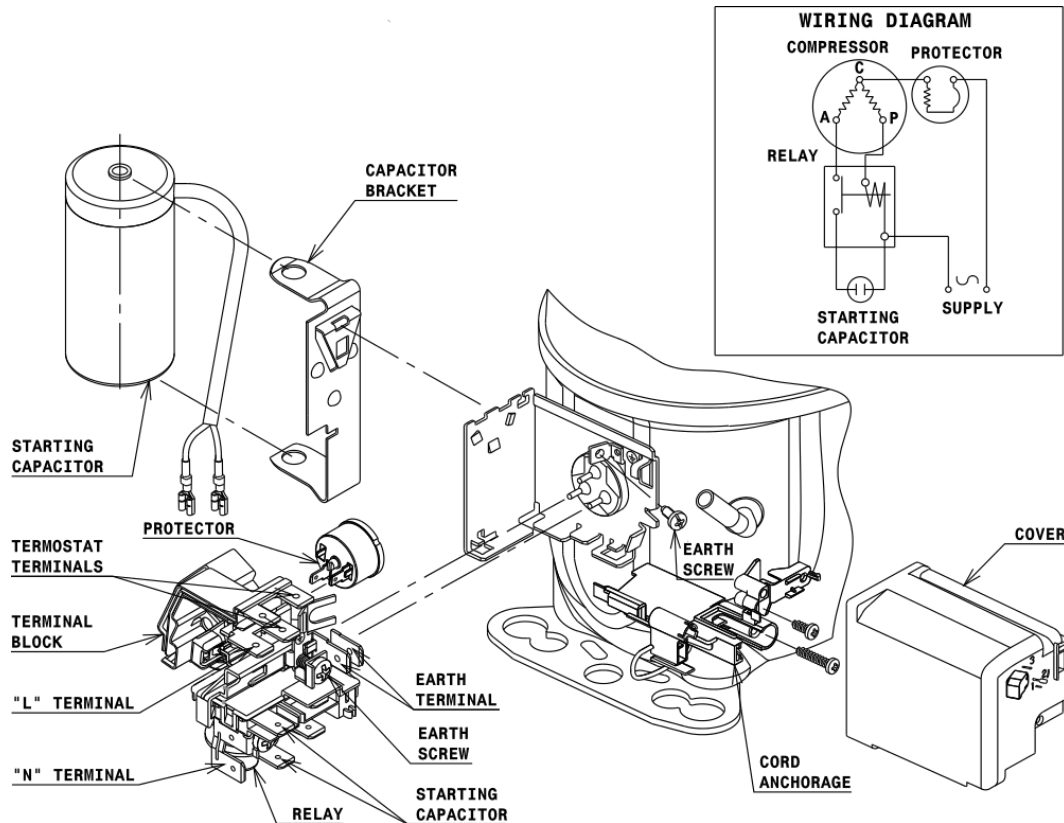


DESIGNATION INTERNAL DIAM.

1	Suction	6,5 mm
2	Service	6,5 mm
3	Discharge	4,9 mm

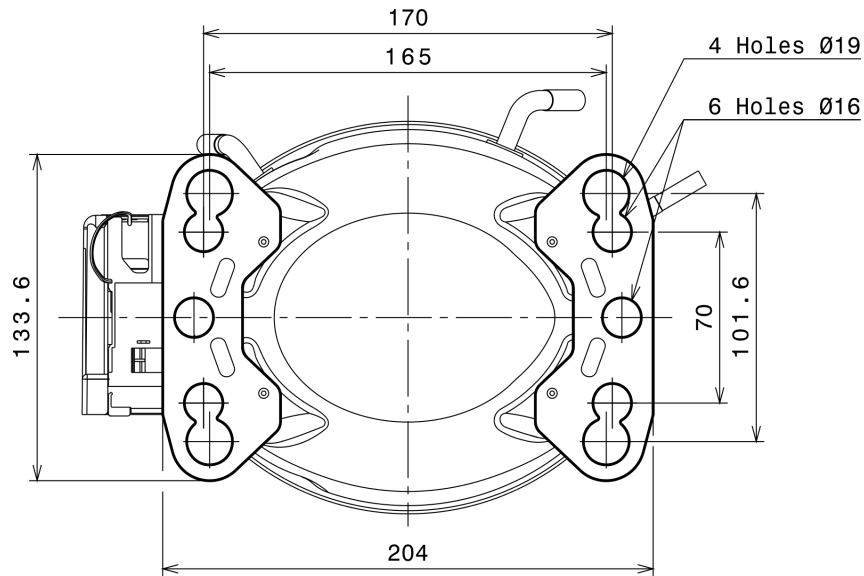
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



Technical Data Sheet

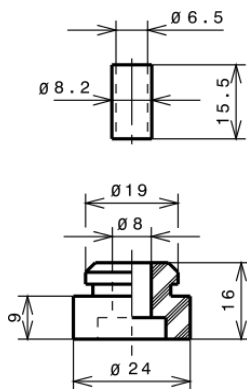
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

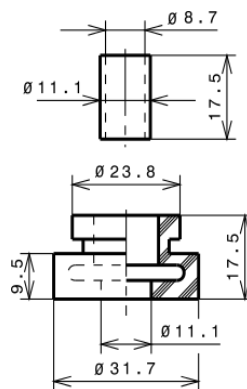
STANDARD

Ø16 holes (170x70 net)



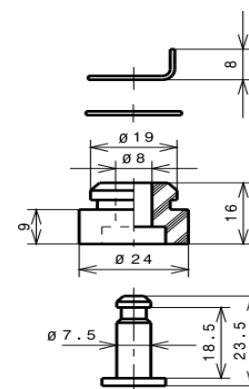
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A LBP

