Technical Data Sheet

Compressor model **ML90FG**

Voltage **200-220/230V 50/60Hz ~1**

Refrigerant **R404A**

APPLICATION

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

COMPRESSOR

Displacement	8,85 cm³
Diameter	25,40 mm
Stroke	17,47 mm
Net Weight	10,78 Kg
Oil type	ISO VG 32 ESTER
Oil charge	300 cm³

MOTOR

Nominal Power	1/3 hp
Voltage/Frequency	230V 60Hz
Voltage range	196-253 V
Type	CSIR
Phase number	1 PH
Locked Rotor Amps (LRA)	18,00 A
Max. Cont. Current (MCC)	4,50 A
Main W. resist. at 25ºC	4,23 Ω
Start W. resist. at 25ºC	34,16 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	410 kCal/h	323 W
COP	1,12 W/W	0,80 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	**CECOMAF**
	LBP (B)	**LBP (A)**
Evaporating temp. (T_e)	-23,3 ºC	-25,0 ºC
Condensing temp. (T_c)	55,0 ºC	55,0 ºC
Liquid temp. ($T_{liq.}$)	32,0 ºC	55,0 ºC
Ambient temp. ($T_{amb.}$)	32,0 ºC	32,0 ºC
Suction temp. ($T_{suction}$)	32,0 ºC	32,0 ºC
Voltage/Frequency	230 V 60 Hz	230 V 60 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Relay	Option 1			
Reference	2014 158.			
Pick-Up	9,05 A			
Drop-Out	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 ºC	105,00 / 52,00 ºC		

Technical Data Sheet

cubigel compressors

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	285	305	2,21	1,09	0,93
40	-30	378	345	2,34	1,27	1,10
40	-25	487	390	2,48	1,45	1,25
40	-23,3	528	407	2,54	1,51	1,30
40	-20	612	440	2,65	1,62	1,39
40	-15	752	495	2,84	1,77	1,52
40	-10	908	555	3,04	1,90	1,64
45	-40	185	265	2,08	0,81	0,70
45	-35	258	303	2,20	0,99	0,85
45	-30	346	347	2,34	1,16	1,00
45	-25	450	395	2,50	1,32	1,14
45	-23,3	488	413	2,56	1,38	1,18
45	-20	569	448	2,68	1,48	1,27
45	-15	704	507	2,88	1,62	1,39
45	-10	855	570	3,09	1,74	1,50
50	-40	163	260	2,07	0,73	0,63
50	-35	230	302	2,20	0,89	0,76
50	-30	313	348	2,35	1,05	0,90
50	-25	412	400	2,52	1,20	1,03
50	-23,3	449	419	2,58	1,25	1,07
50	-20	527	457	2,71	1,34	1,15
50	-15	657	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	203	300	2,19	0,78	0,67
55	-30	281	350	2,35	0,93	0,80
55	-25	375	405	2,53	1,08	0,92
55	-23,3	410	425	2,60	1,12	0,96
55	-20	484	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	175	298	2,19	0,68	0,59
60	-30	248	352	2,36	0,82	0,71
60	-25	337	410	2,55	0,96	0,82
60	-23,3	371	431	2,62	1,00	0,86
60	-20	442	473	2,76	1,08	0,93
60	-15	562	542	3,00	1,21	1,04
60	-10	698	615	3,25	1,32	1,13

CECOMAF

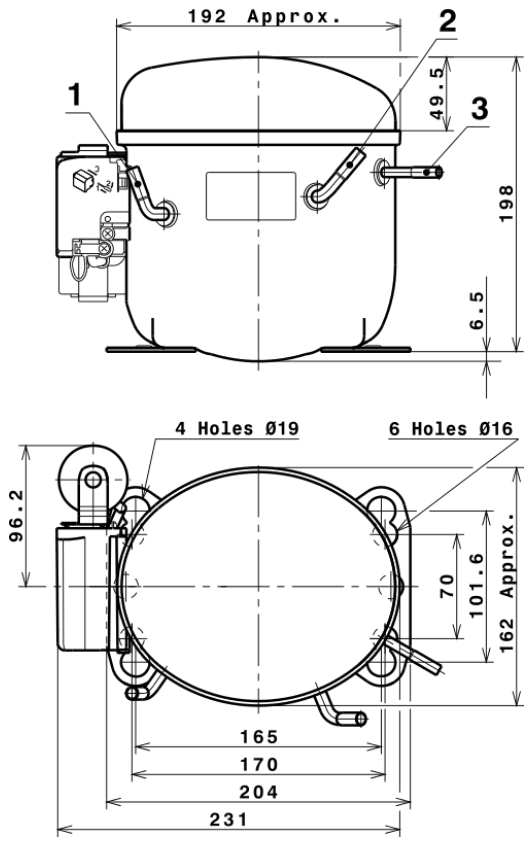
Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	217	270	2,10	0,81	0,70
40	-35	308	305	2,21	1,01	0,87
40	-30	412	345	2,34	1,19	1,03
40	-25	529	390	2,48	1,35	1,17
40	-23,3	571	407	2,54	1,40	1,21
40	-20	658	440	2,65	1,50	1,29
40	-15	801	495	2,84	1,62	1,40
40	-10	957	555	3,04	1,72	1,49
45	-40	185	265	2,08	0,70	0,60
45	-35	264	303	2,20	0,87	0,75
45	-30	355	347	2,34	1,02	0,89
45	-25	460	395	2,50	1,16	1,01
45	-23,3	498	413	2,56	1,21	1,04
45	-20	578	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	299	348	2,35	0,86	0,74
50	-25	391	400	2,52	0,98	0,84
50	-23,3	426	419	2,58	1,02	0,88
50	-20	497	457	2,71	1,09	0,94
50	-15	615	518	2,92	1,19	1,03
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	323	405	2,53	0,80	0,69
55	-23,3	353	425	2,60	0,83	0,72
55	-20	416	465	2,73	0,89	0,77
55	-15	522	530	2,96	0,99	0,85
55	-10	642	600	3,20	1,07	0,92
60	-40	89	250	2,03	0,36	0,31
60	-35	131	298	2,19	0,44	0,38
60	-30	186	352	2,36	0,53	0,46
60	-25	254	410	2,55	0,62	0,54
60	-23,3	280	431	2,62	0,65	0,56
60	-20	335	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	2.311,8734150512	531,8963444304	2,9696163143	51,659541646125
2	56,1088362763	9,5705827762	0,0353362738	1,4157512858175
3	-26,1642561040	4,4480923864	0,0155623324	-0,36772918527937
4	0,2474974198	0,1048691792	0,0004304910	0,0098547560321629
5	-0,4956698875	0,1367558355	0,0004696058	-0,0060494820608011

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

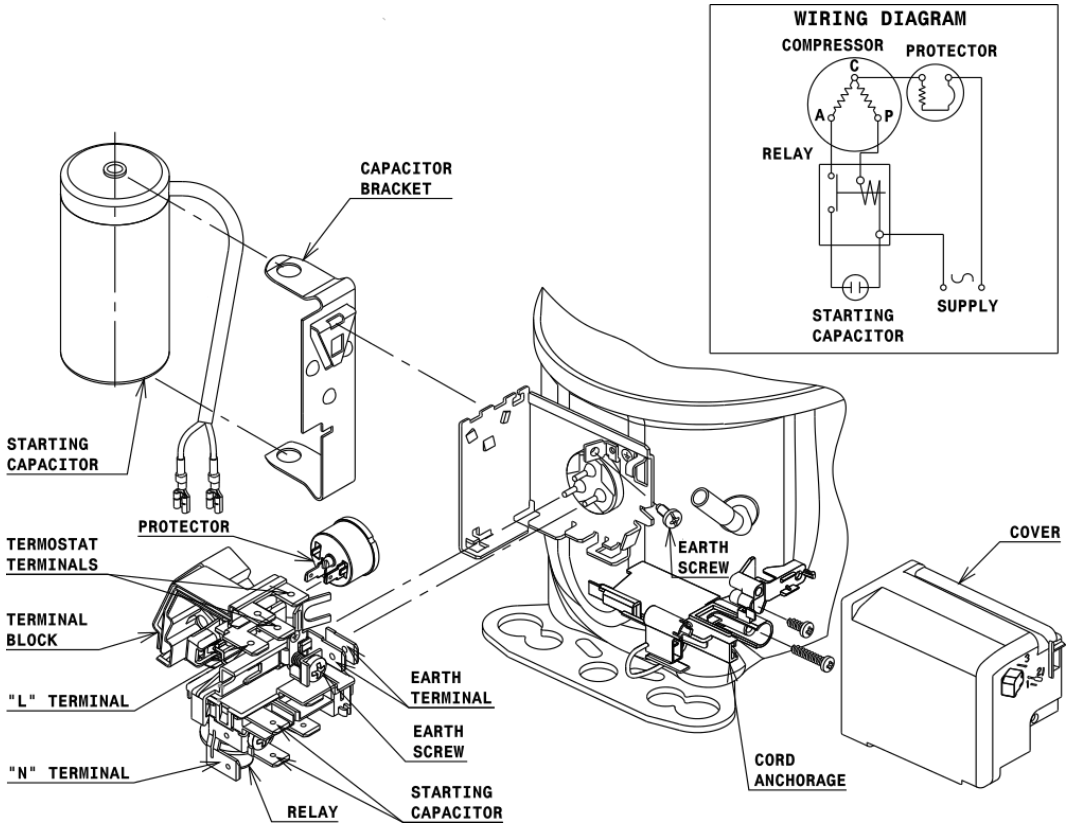
COMPRESSOR DIMENSIONS



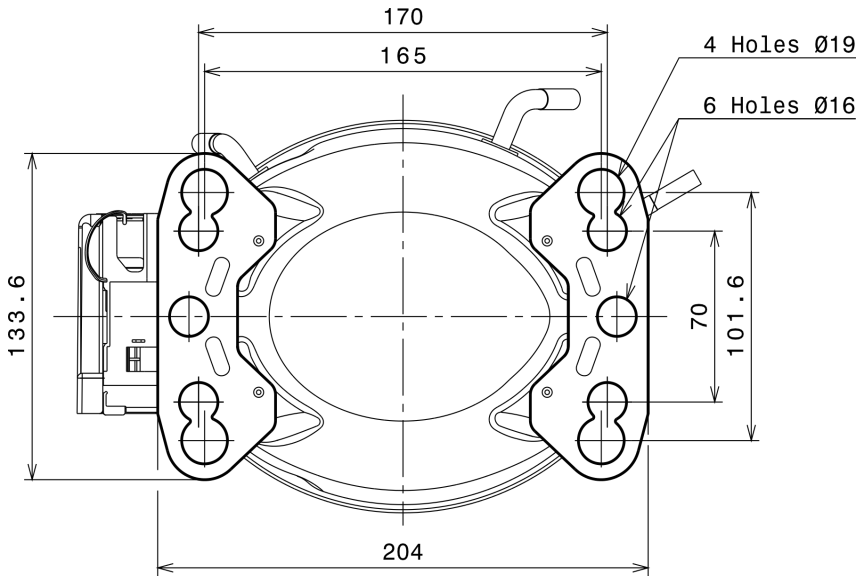
	DESIGNATION	INTERNAL DIAM.
1	Suction	6,5 mm
2	Service	6,5 mm
3	Discharge	4,9 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



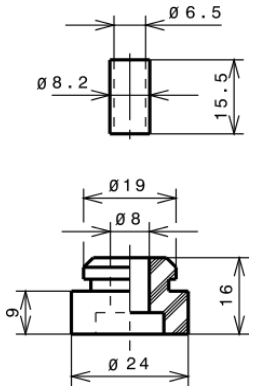
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

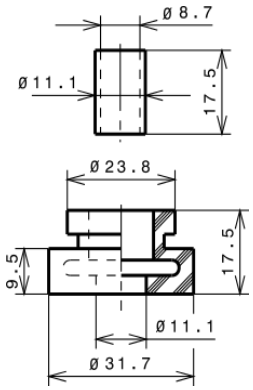
STANDARD

Ø16 holes (170x70 net)



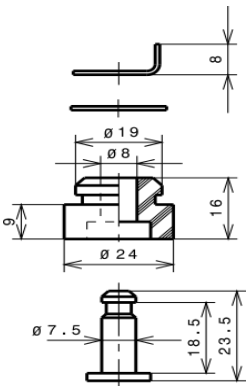
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A LBP