Technical Data Sheet

ENGINEERING TOMORROW

Compressor model **ML45TB**

Voltage **220-240V 50Hz ~1**

Refrigerant **R404A**

APPLICATION

Application	High-Medium Back Pressure
Refrigerant	R404A
Evaporating Temp.	-25,0 ºC to 10,0 ºC
Expansion	Capillar/Valve
Comp. Cooling	Fan cooled
Max. ambient temp.	43,0 ºC

COMPRESSOR

Displacement	4,56 cm³
Diameter	19,09 mm
Stroke	15,93 mm
Net Weight	9,10 Kg
Oil type	ISO VG 32 ESTER
Oil charge	295 cm³

MOTOR

Nominal Power	1/5 hp
Voltage/Frequency	220-240V 50Hz
Voltage range	187-264 V
Type	CSIR
Phase number	1 PH
Locked Rotor Amps (LRA)	9,70 A
Max. Cont. Current (MCC)	3,20 A
Main W. resist. at 25ºC	12,00 Ω
Start W. resist. at 25ºC	30,00 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	570 kCal/h	525 W
COP	1,82 W/W	1,47 W/W
EER	1,56 kCal/Wh	1,27 kCal/Wh
Input Power	365 W	357 W
Current	2,10 A	2,06 A

APPROVALS

TEST CYCLE CONDITIONS

	ASHRAE	**CECOMAF**
	HMBP (D)	**HMBP (C)**
Evaporating temp. (T_e)	7,2 ºC	5,0 ºC
Condensing temp. (T_c)	55,0 ºC	55,0 ºC
Liquid temp. ($T_{liq.}$)	46,0 ºC	55,0 ºC
Ambient temp. ($T_{amb.}$)	35,0 ºC	32,0 ºC
Suction temp. ($T_{suction}$)	35,0 ºC	32,0 ºC
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Relay	Option 1			
Reference	2014 127.			
Pick-Up	4,80 A			
Drop-Out	4,10 A			
Protector	Option 1	Option 2		
Reference	MRP56AMK	T0057		
Current	9,40 A	8,50 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 61,00 ºC	105,00 / 61,00 ºC		

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ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	203	198	1,44	1,19	1,02
40	-20	260	217	1,50	1,39	1,20
40	-15	327	235	1,57	1,61	1,39
40	-10	403	254	1,64	1,85	1,59
40	-5	490	272	1,71	2,10	1,80
40	0	586	290	1,78	2,35	2,02
40	5	693	308	1,85	2,62	2,25
40	7,2	743	316	1,88	2,74	2,35
40	10	809	325	1,93	2,89	2,49
45	-25	185	200	1,45	1,08	0,93
45	-20	236	221	1,52	1,24	1,07
45	-15	297	242	1,59	1,43	1,23
45	-10	367	262	1,67	1,63	1,40
45	-5	448	283	1,75	1,84	1,58
45	0	538	303	1,83	2,06	1,77
45	5	638	323	1,92	2,30	1,97
45	7,2	685	332	1,95	2,40	2,06
45	10	748	343	2,00	2,53	2,18
50	-25	168	202	1,45	0,96	0,83
50	-20	212	225	1,53	1,10	0,94
50	-15	267	248	1,62	1,25	1,07
50	-10	331	271	1,71	1,42	1,22
50	-5	405	294	1,80	1,60	1,38
50	0	489	316	1,89	1,80	1,55
50	5	583	339	1,98	2,00	1,72
50	7,2	628	349	2,03	2,09	1,80
50	10	687	361	2,08	2,21	1,90
55	-25	150	204	1,46	0,86	0,74
55	-20	189	230	1,55	0,96	0,82
55	-15	237	255	1,64	1,08	0,93
55	-10	295	280	1,74	1,23	1,05
55	-5	363	305	1,84	1,38	1,19
55	0	441	330	1,94	1,55	1,34
55	5	528	354	2,05	1,73	1,49
55	7,2	570	365	2,10	1,82	1,56
55	10	626	379	2,16	1,92	1,65
60	-25	133	206	1,47	0,75	0,64
60	-20	165	234	1,56	0,82	0,70
60	-15	207	261	1,67	0,92	0,79
60	-10	259	289	1,77	1,04	0,90
60	-5	321	316	1,89	1,18	1,01
60	0	392	343	2,00	1,33	1,14
60	5	474	370	2,12	1,49	1,28
60	7,2	513	382	2,18	1,56	1,34
60	10	565	396	2,25	1,66	1,42

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	212	199	1,44	1,07	0,92
40	-20	274	218	1,51	1,26	1,08
40	-15	345	237	1,58	1,46	1,26
40	-10	425	255	1,64	1,67	1,44
40	-5	515	274	1,72	1,88	1,63
40	0	615	292	1,79	2,11	1,82
40	5	724	310	1,86	2,34	2,02
40	7,2	775	318	1,89	2,44	2,11
40	10	843	328	1,94	2,57	2,22
45	-25	192	201	1,45	0,95	0,82
45	-20	245	222	1,52	1,10	0,95
45	-15	309	243	1,60	1,27	1,10
45	-10	382	264	1,68	1,45	1,25
45	-5	464	285	1,76	1,63	1,41
45	0	556	305	1,84	1,82	1,57
45	5	658	326	1,93	2,02	1,75
45	7,2	705	335	1,97	2,11	1,82
45	10	769	346	2,01	2,22	1,92
50	-25	171	203	1,46	0,84	0,73
50	-20	217	227	1,54	0,96	0,83
50	-15	273	250	1,62	1,09	0,94
50	-10	338	273	1,71	1,24	1,07
50	-5	413	296	1,80	1,40	1,21
50	0	497	319	1,90	1,56	1,35
50	5	591	341	1,99	1,73	1,50
50	7,2	636	351	2,04	1,81	1,56
50	10	695	364	2,09	1,91	1,65
55	-25	150	205	1,46	0,73	0,63
55	-20	189	231	1,55	0,82	0,71
55	-15	237	256	1,65	0,92	0,80
55	-10	295	282	1,75	1,05	0,90
55	-5	362	307	1,85	1,18	1,02
55	0	439	332	1,95	1,32	1,14
55	5	525	357	2,06	1,47	1,27
55	7,2	566	368	2,11	1,54	1,33
55	10	621	382	2,18	1,63	1,41
60	-25	130	207	1,47	0,63	0,54
60	-20	161	235	1,57	0,68	0,59
60	-15	201	263	1,67	0,76	0,66
60	-10	251	291	1,78	0,86	0,75
60	-5	311	318	1,90	0,98	0,84
60	0	380	345	2,01	1,10	0,95
60	5	458	373	2,13	1,23	1,06
60	7,2	496	384	2,19	1,29	1,11
60	10	547	400	2,26	1,37	1,18

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Danfoss

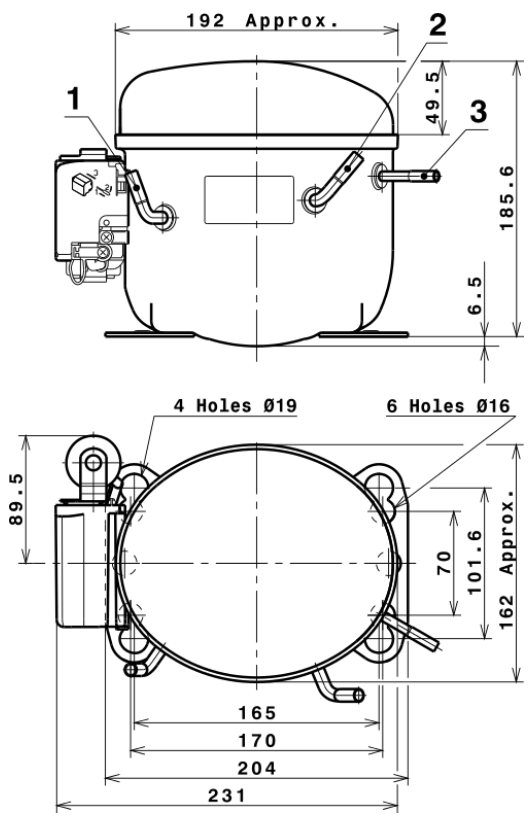
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.085,3988810307	190,3520653592	1,3185064849	21,573638682011
2	33,0339534494	0,1238300787	-0,0009476918	0,7653026382345
3	-12,1694610377	2,7625008520	0,0123723952	-0,11374290927852
4	0,1807041554	0,0002372725	0,0000967727	0,0082798452586022
5	-0,3196400808	0,0940249036	0,0004380328	-0,0025778349828867

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

Technical Data Sheet

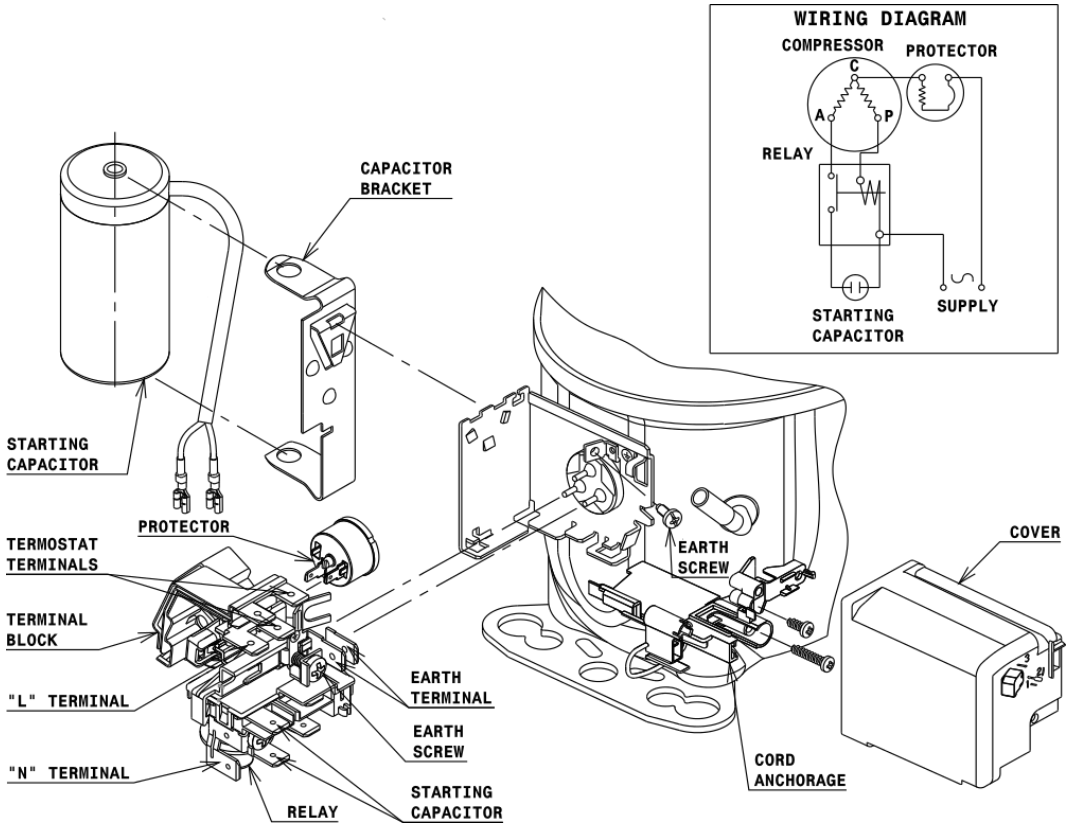
COMPRESSOR DIMENSIONS



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

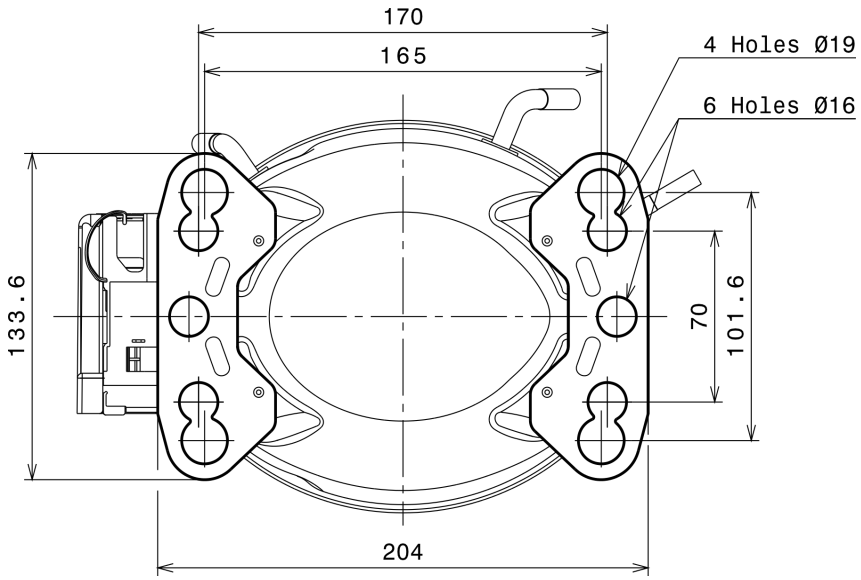
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



Technical Data Sheet

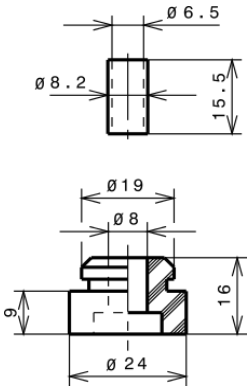
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

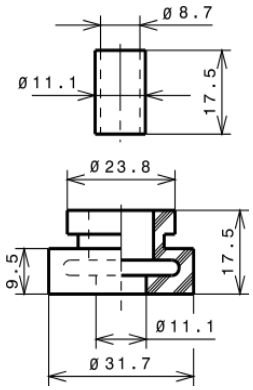
STANDARD

Ø16 holes (170x70 net)



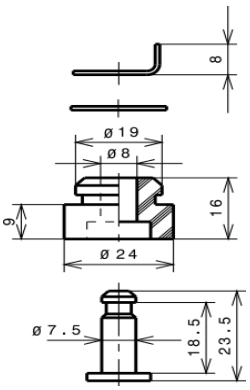
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R404A HMBP