

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **GPY12RAb**
Voltage **220-240V 50Hz ~1**
Refrigerant **R134a**

APPLICATION

Application	High-Medium Back Pressure
Refrigerant	R134a
Evaporating Temp.	-25,0 °C to 10,0 °C
Expansion	Capillar/Valve
Comp. Cooling	Fan cooled
Max. ambient temp.	43,0 °C
Compatible refriger.	R1234yf

COMPRESSOR

Displacement	12,10 cm ³
Diameter	27,00 mm
Stroke	21,13 mm
Net Weight	12,23 Kg
Oil type	ISO VG 32 ESTER
Oil charge	400 cm ³

MOTOR

Nominal Power	3/8 hp
Voltage/Frequency	220-240V 50Hz
Voltage range	187-255 V
Type	CSR
Phase number	1 PH
Locked Rotor Amps (LRA)	15,10 A
Max. Cont. Current (MCC)	3,10 A
Main W. resist. at 25°C	6,12 Ω
Start W. resist. at 25°C	17,65 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.030 kCal/h	1.003 W
COP	2,62 W/W	2,26 W/W
EER	2,25 kCal/Wh	1,96 kCal/Wh
Input Power	457 W	443 W
Current	2,25 A	2,18 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T _e)	7,2 °C	5,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	46,0 °C	55,0 °C
Ambient temp. (T _{amb.})	35,0 °C	32,0 °C
Suction temp. (T _{suction})	35,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Run capacitor	8 µF 400 V			
Relay	Option 1	Option 2		
Reference	2014 149. + NTC15Ω	QLZ 7.8A + NTC15Ω		
Pick-Up	7,80 A	7,80 A		
Drop-Out	6,50 A	6,65 A		
Protector	Option 1	Option 2		
Reference	T0269	B96-105		
Current	9,60 A	9,60 A		
Time check	7,5-14 seg	7,5-16 seg		
Disc temp. (Open/Close)	105,00 / 52,00 °C	115,00 / 52,00 °C		

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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	290	214	1,20	1,58	1,36
40	-20	383	239	1,30	1,86	1,60
40	-15	496	266	1,40	2,17	1,87
40	-10	628	293	1,51	2,50	2,15
40	-5	779	320	1,63	2,83	2,43
40	0	950	348	1,75	3,17	2,73
40	5	1.140	377	1,88	3,52	3,02
40	7,2	1.230	390	1,93	3,67	3,15
40	10	1.350	407	2,01	3,86	3,32

45	-25	268	217	1,21	1,44	1,24
45	-20	355	245	1,32	1,68	1,45
45	-15	460	274	1,44	1,95	1,68
45	-10	585	304	1,56	2,24	1,92
45	-5	730	335	1,69	2,53	2,18
45	0	893	366	1,83	2,84	2,44
45	5	1.077	398	1,97	3,15	2,70
45	7,2	1.163	412	2,04	3,28	2,82
45	10	1.279	431	2,12	3,45	2,97

50	-25	247	219	1,22	1,31	1,12
50	-20	326	251	1,34	1,51	1,30
50	-15	425	283	1,47	1,74	1,50
50	-10	543	316	1,61	2,00	1,72
50	-5	680	350	1,75	2,26	1,94
50	0	837	384	1,91	2,53	2,18
50	5	1.013	419	2,07	2,81	2,42
50	7,2	1.097	435	2,14	2,93	2,52
50	10	1.209	455	2,24	3,09	2,66

55	-25	225	222	1,23	1,18	1,01
55	-20	297	257	1,37	1,35	1,16
55	-15	389	292	1,51	1,55	1,33
55	-10	500	328	1,66	1,77	1,52
55	-5	630	365	1,82	2,01	1,73
55	0	780	402	1,99	2,26	1,94
55	5	949	440	2,17	2,51	2,16
55	7,2	1.030	457	2,25	2,62	2,25
55	10	1.138	479	2,36	2,76	2,38

60	-25	203	225	1,24	1,05	0,91
60	-20	269	262	1,39	1,19	1,02
60	-15	353	301	1,54	1,37	1,17
60	-10	457	340	1,71	1,57	1,35
60	-5	581	380	1,89	1,78	1,53
60	0	724	420	2,07	2,00	1,72
60	5	886	461	2,27	2,23	1,92
60	7,2	963	479	2,36	2,34	2,01
60	10	1.067	503	2,48	2,47	2,12

65	-25	182	227	1,25	0,93	0,80
65	-20	240	268	1,41	1,04	0,90
65	-15	318	310	1,58	1,19	1,03
65	-10	415	352	1,76	1,37	1,18
65	-5	531	394	1,95	1,57	1,35
65	0	667	438	2,16	1,77	1,52
65	5	822	482	2,37	1,98	1,71
65	7,2	897	502	2,47	2,08	1,79
65	10	997	527	2,60	2,20	1,89

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	312	215	1,20	1,45	1,25
40	-20	414	241	1,30	1,72	1,49
40	-15	536	267	1,41	2,01	1,73
40	-10	678	294	1,52	2,31	1,99
40	-5	841	322	1,63	2,61	2,26
40	0	1.024	350	1,76	2,92	2,53
40	5	1.228	379	1,89	3,24	2,80
40	7,2	1.324	393	1,95	3,37	2,91
40	10	1.452	409	2,02	3,55	3,06

45	-25	288	218	1,21	1,32	1,14
45	-20	381	247	1,33	1,54	1,33
45	-15	494	276	1,44	1,79	1,55
45	-10	628	306	1,57	2,05	1,77
45	-5	783	337	1,70	2,32	2,01
45	0	958	368	1,84	2,60	2,25
45	5	1.153	401	1,98	2,88	2,49
45	7,2	1.245	415	2,05	3,00	2,59
45	10	1.368	434	2,14	3,16	2,73

50	-25	263	220	1,22	1,19	1,03
50	-20	348	252	1,35	1,38	1,19
50	-15	453	285	1,48	1,59	1,37
50	-10	579	318	1,62	1,82	1,57
50	-5	725	352	1,76	2,06	1,78
50	0	891	386	1,92	2,31	1,99
50	5	1.078	422	2,08	2,56	2,21
50	7,2	1.166	437	2,16	2,67	2,30
50	10	1.285	458	2,25	2,81	2,43

55	-25	238	223	1,23	1,07	0,92
55	-20	315	258	1,37	1,22	1,05
55	-15	412	294	1,51	1,40	1,21
55	-10	529	330	1,67	1,60	1,39
55	-5	666	367	1,83	1,82	1,57
55	0	824	404	2,00	2,04	1,76
55	5	1.003	443	2,18	2,26	1,96
55	7,2	1.088	460	2,26	2,37	2,04
55	10	1.202	482	2,37	2,49	2,15

60	-25	213	226	1,24	0,94	0,82
60	-20	281	264	1,39	1,07	0,92
60	-15	370	302	1,55	1,22	1,06
60	-10	479	342	1,72	1,40	1,21
60	-5	608	382	1,90	1,59	1,38
60	0	758	423	2,09	1,79	1,55
60	5	928	464	2,28	2,00	1,73
60	7,2	1.009	482	2,37	2,09	1,81
60	10	1.118	506	2,49	2,21	1,91

65	-25	189	229	1,26	0,83	0,71
65	-20	248	270	1,42	0,92	0,80
65	-15	329	311	1,59	1,06	0,91
65	-10	429	354	1,77	1,21	1,05
65	-5	550	397	1,97	1,39	1,20
65	0	691	441	2,17	1,57	1,36
65	5	853	485	2,39	1,76	1,52
65	7,2	931	505	2,49	1,84	1,59
65	10	1.035	530	2,62	1,95	1,69

EN12900

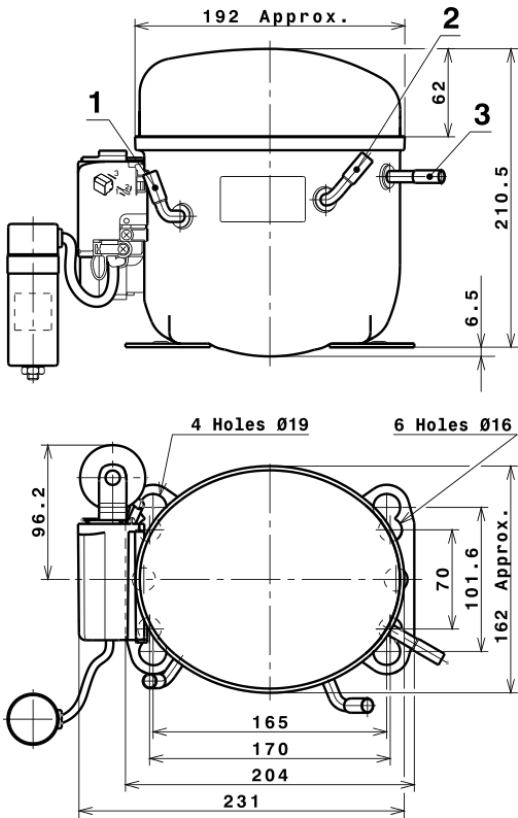
X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.562,3845513342	210,9991210993	1,0831990905	25,986801453912
2	52,2068970847	0,9425078624	0,0028173093	0,97264573651585
3	-13,7823738035	3,7107180755	0,0176019793	-0,086751208599649
4	0,4007616840	0,0169040216	0,0002004655	0,011619520480849
5	-0,3506474747	0,1265046884	0,0006200587	-0,0012861540465607

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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Air Con Parts Service

Technical Data Sheet

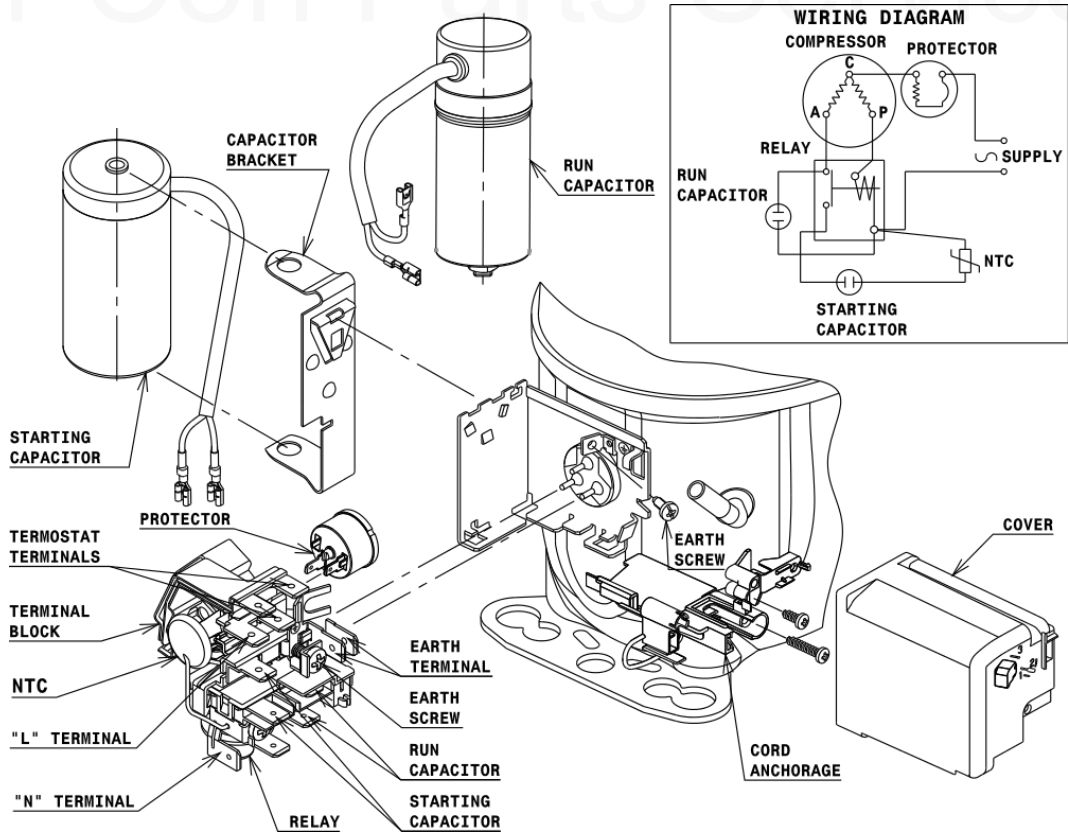
COMPRESSOR DIMENSIONS



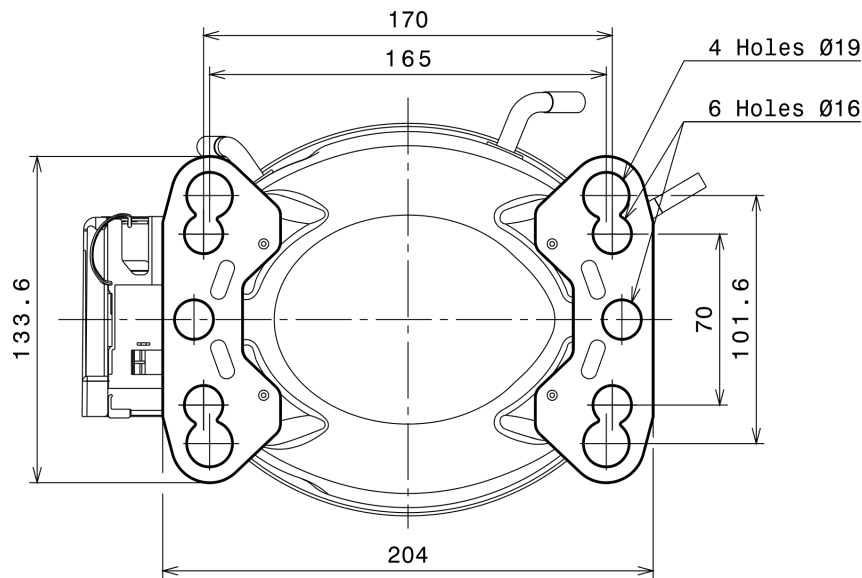
	DESIGNATION	INTERNAL DIAM.
1	Suction	8,1 mm
2	Service	8,1 mm
3	Discharge	6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (L, P ranges)



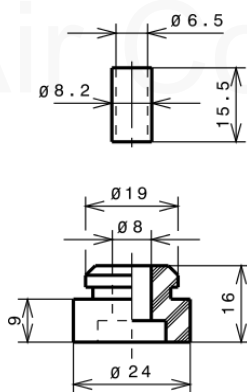
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

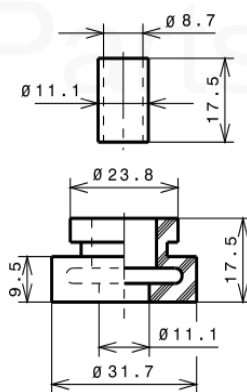
STANDARD

Ø16 holes (170x70 net)



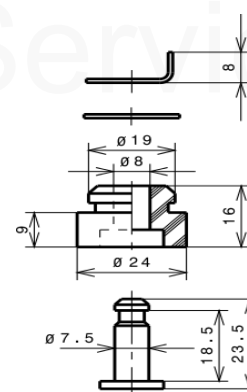
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R134a HMBP

