

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **GPY16RAb**
Voltage **220-240V 50Hz ~1**
Refrigerant **R134a**

APPLICATION

COMPRESSOR

MOTOR

Application	High-Medium Back Pressure	Displacement	0,99 in ³	Nominal Power	1/2 hp
Refrigerant	R134a	Diameter	1,23 in	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-13,0 °F to 50,0 °F	Stroke	0,83 in	Voltage range	187-264 V
Expansion	Capillar/Valve	Net Weight	28,53 lb	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Phase number	1 PH
Max. ambient temp.	109,4 °F	Oil charge	24,41 in ³	Locked Rotor Amps (LRA)	16,50 A
Compatible refriger.	R1234yf			Max. Cont. Current (MCC)	6,20 A
				Main W. resist. at 77°F	3,93 Ω
				Start W. resist. at 77°F	10,70 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	5.361 BTU/h	4.493 BTU/h
COP	2,50 W/W	2,15 W/W
EER	8,54 BTU/Wh	7,39 BTU/Wh
Input Power	628 W	611 W
Current	3,20 A	3,11 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T _e)	45 °F	41 °F
Condensing temp. (T _c)	131 °F	131 °F
Liquid temp. (T _{liq.})	115 °F	131 °F
Ambient temp. (T _{amb.})	95 °F	90 °F
Suction temp. (T _{suction})	95 °F	90 °F
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	64- 77 µF 330 V			
Run capacitor	10 µF 420 V			
Relay	Option 1			
Reference	2014 166. + NTC15Ω			
Pick-Up	11,00 A			
Drop-Out	9,35 A			
Protector	Option 1	Option 2		
Reference	MRA38130	T0252		
Current	11,70 A	11,50 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	221,00 / 125,60 °F	221,00 / 125,60 °F		

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ASHRAE

Tc	Te	Cooling	Consumption	Current	COP	EER
°F	°F	Capacity BTU/h	W	A	W/W	BTU/Wh
104	-13	1.472	295	1,78	1,46	4,99
104	-4	2.000	335	1,91	1,75	5,97
104	5	2.624	375	2,04	2,05	7,00
104	14	3.343	414	2,19	2,37	8,07
104	23	4.158	453	2,35	2,69	9,18
104	32	5.068	491	2,51	3,03	10,32
104	41	6.074	529	2,69	3,37	11,49
104	45	6.547	545	2,77	3,52	12,01
104	50	7.176	566	2,87	3,72	12,68

113	-13	1.365	303	1,80	1,32	4,51
113	-4	1.848	346	1,94	1,57	5,34
113	5	2.427	389	2,09	1,83	6,24
113	14	3.102	431	2,26	2,11	7,20
113	23	3.872	473	2,43	2,40	8,19
113	32	4.737	514	2,62	2,70	9,21
113	41	5.699	555	2,82	3,01	10,27
113	45	6.152	573	2,91	3,15	10,74
113	50	6.755	595	3,02	3,33	11,35

122	-13	1.258	310	1,83	1,19	4,05
122	-4	1.696	357	1,98	1,39	4,76
122	5	2.231	403	2,15	1,62	5,54
122	14	2.860	448	2,33	1,87	6,38
122	23	3.586	493	2,52	2,13	7,27
122	32	4.406	537	2,73	2,40	8,20
122	41	5.323	581	2,95	2,68	9,16
122	45	5.756	600	3,05	2,81	9,59
122	50	6.335	625	3,18	2,97	10,14

131	-13	1.151	318	1,85	1,06	3,62
131	-4	1.545	368	2,02	1,23	4,20
131	5	2.034	417	2,20	1,43	4,88
131	14	2.619	465	2,40	1,65	5,63
131	23	3.299	513	2,61	1,89	6,43
131	32	4.075	560	2,84	2,13	7,27
131	41	4.947	607	3,09	2,39	8,14
131	45	5.361	628	3,20	2,50	8,54
131	50	5.914	654	3,35	2,65	9,04

140	-13	1.044	326	1,87	0,94	3,20
140	-4	1.393	378	2,06	1,08	3,68
140	5	1.837	430	2,26	1,25	4,27
140	14	2.377	482	2,47	1,45	4,93
140	23	3.013	533	2,71	1,66	5,65
140	32	3.744	584	2,96	1,88	6,42
140	41	4.571	634	3,23	2,11	7,21
140	45	4.965	656	3,36	2,22	7,57
140	50	5.494	683	3,52	2,36	8,04

149	-13	936	333	1,90	0,82	2,81
149	-4	1.241	389	2,10	0,93	3,19
149	5	1.641	444	2,31	1,08	3,69
149	14	2.136	499	2,55	1,25	4,28
149	23	2.727	553	2,81	1,44	4,93
149	32	3.413	607	3,09	1,65	5,62
149	41	4.195	660	3,38	1,86	6,36
149	45	4.570	683	3,52	1,96	6,69
149	50	5.073	713	3,70	2,09	7,12

CECOMAF

Tc	Te	Cooling	Consumption	Current	COP	EER
°F	°F	Capacity BTU/h	W	A	W/W	BTU/Wh
104	-13	1.364	297	1,78	1,35	4,62
104	-4	1.858	337	1,91	1,62	5,54
104	5	2.438	377	2,05	1,90	6,50
104	14	3.105	416	2,20	2,19	7,49
104	23	3.858	455	2,36	2,48	8,51
104	32	4.698	494	2,53	2,79	9,56
104	41	5.624	532	2,70	3,10	10,62
104	45	6.059	549	2,78	3,24	11,10
104	50	6.636	569	2,89	3,42	11,71

113	-13	1.258	304	1,81	1,21	4,15
113	-4	1.707	348	1,95	1,44	4,93
113	5	2.242	391	2,10	1,68	5,76
113	14	2.864	433	2,27	1,94	6,64
113	23	3.572	476	2,45	2,20	7,55
113	32	4.366	517	2,63	2,47	8,48
113	41	5.247	558	2,83	2,75	9,44
113	45	5.662	576	2,92	2,88	9,87
113	50	6.214	599	3,04	3,04	10,42

122	-13	1.153	312	1,83	1,08	3,71
122	-4	1.556	359	1,99	1,27	4,36
122	5	2.046	405	2,16	1,48	5,08
122	14	2.623	451	2,34	1,71	5,85
122	23	3.285	496	2,54	1,94	6,66
122	32	4.035	541	2,75	2,19	7,50
122	41	4.870	585	2,97	2,44	8,37
122	45	5.265	604	3,07	2,55	8,76
122	50	5.792	629	3,20	2,70	9,26

131	-13	1.047	320	1,86	0,96	3,29
131	-4	1.406	369	2,02	1,11	3,82
131	5	1.850	419	2,21	1,29	4,44
131	14	2.382	468	2,41	1,49	5,12
131	23	2.999	516	2,63	1,70	5,84
131	32	3.703	564	2,86	1,92	6,60
131	41	4.493	611	3,11	2,15	7,39
131	45	4.868	632	3,22	2,26	7,74
131	50	5.370	658	3,37	2,39	8,20

140	-13	942	327	1,88	0,84	2,89
140	-4	1.255	380	2,06	0,97	3,32
140	5	1.654	433	2,27	1,12	3,84
140	14	2.140	485	2,49	1,29	4,44
140	23	2.713	536	2,72	1,48	5,08
140	32	3.371	587	2,98	1,68	5,77
140	41	4.117	638	3,25	1,89	6,49
140	45	4.472	660	3,38	1,99	6,81
140	50	4.948	688	3,54	2,11	7,23

149	-13	836	335	1,91	0,73	2,51
149	-4	1.104	391	2,10	0,83	2,84
149	5	1.459	447	2,32	0,96	3,28
149	14	1.899	502	2,56	1,11	3,80
149	23	2.426	556	2,82	1,28	4,38
149	32	3.040	611	3,10	1,46	5,00
149	41	3.740	664	3,41	1,65	5,66
149	45	4.075	688	3,54	1,74	5,95
149	50	4.526	717	3,72	1,85	6,34

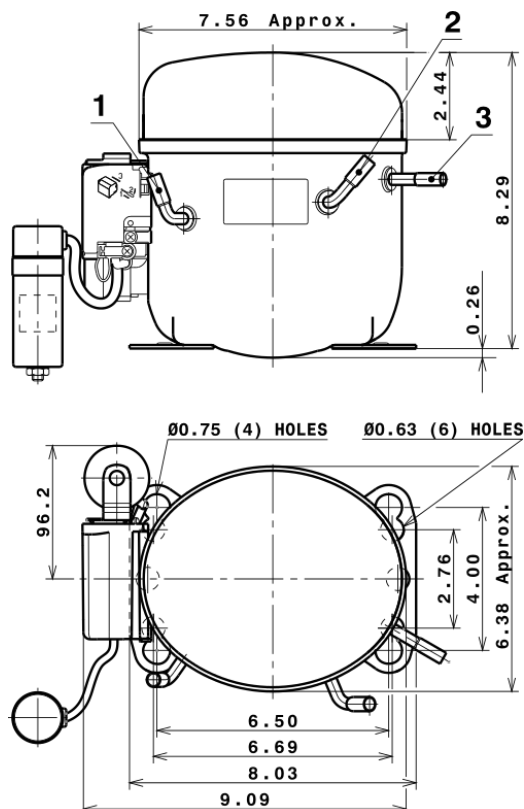
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.160,1817636339	314,8207809979	1,5637370846	36,640318551433
2	73,1160210372	2,8321124379	0,0071713671	1,3777802210271
3	-20,0247762843	4,7973862717	0,0249499535	-0,15845601753067
4	0,4980619762	-0,0062100447	0,0003512767	0,014528986008497
5	-0,5502214214	0,1288638512	0,0007984601	-0,0036958309386737

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

COMPRESSOR DIMENSIONS

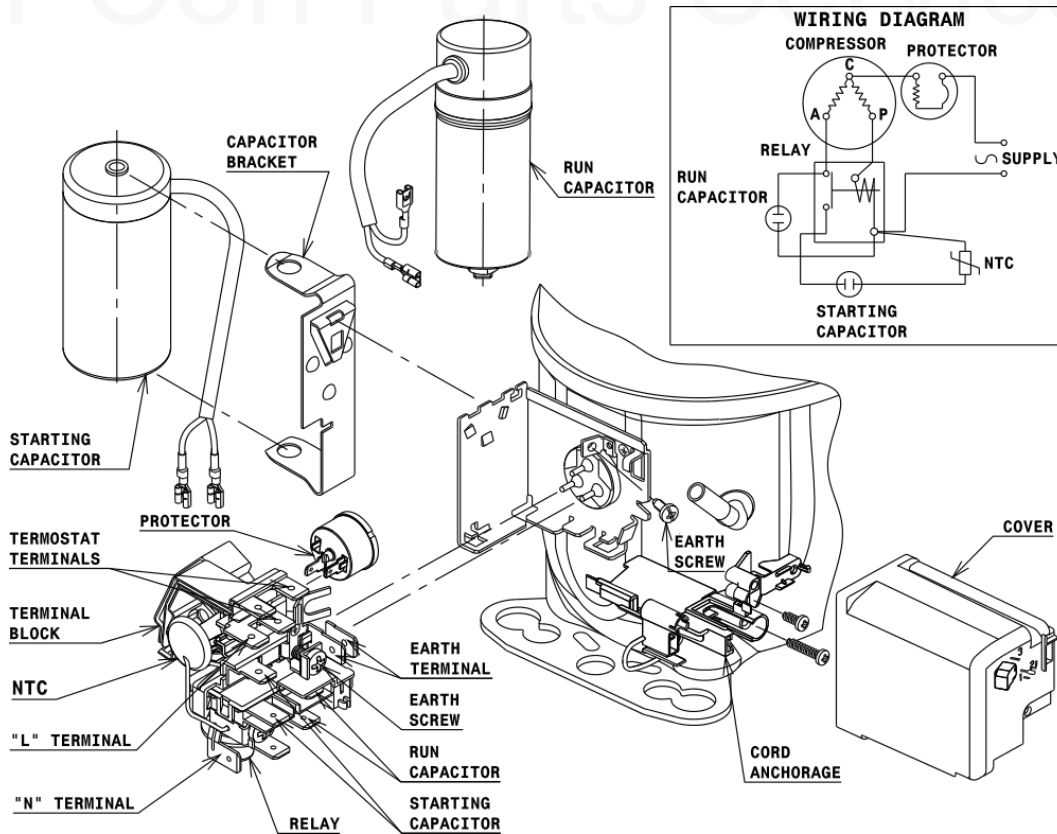


DESIGNATION INTERNAL DIAM.

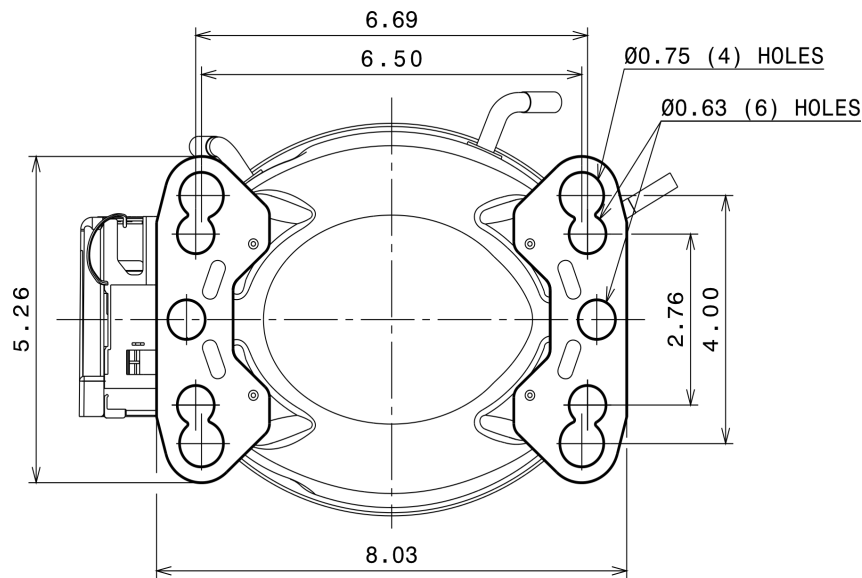
1	Suction	0,32 in
2	Service	0,32 in
3	Discharge	0,26 in

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



FIXINGS



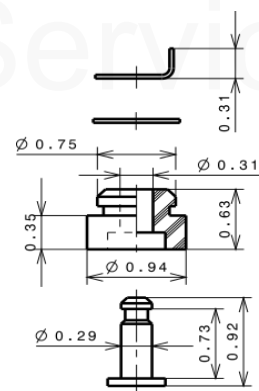
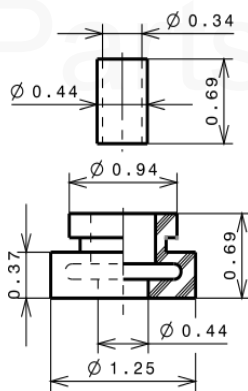
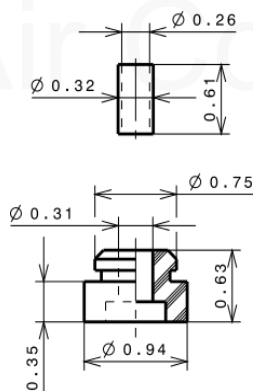
SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø0.63 holes (6.69x2.76 net)

Ø0.75 holes (6.50x4.00 net)

Ø0.63 holes (6.69x2.76 net)



SOA

SOA R134a HMBP

