

# Technical Data Sheet

ENGINEERING  
TOMORROW



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

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	16,15 cm <sup>3</sup>	Nominal Power	1/2 hp
Refrigerant	R134a	Diameter	31,19 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	21,13 mm	Voltage range	187-255 V
Expansion	Capillar/Valve	Net Weight	12,10 Kg	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	450 cm <sup>3</sup>	Locked Rotor Amps (LRA)	22,10 A
Compatible refriger.	R1234yf			Max. Cont. Current (MCC)	5,60 A
				Main W. resist. at 25°C	4,10 Ω
				Start W. resist. at 25°C	11,36 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.351 kCal/h	1.317 W
COP	2,50 W/W	2,15 W/W
EER	2,15 kCal/Wh	1,86 kCal/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 <sub>e</sub> )	7,2 °C	5,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	46,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	35,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	35,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	72- 88 μF 330 V		
Run capacitor	10 μF 420 V		
Relay	Option 1	Option 2	
Reference	2014 166. + NTC15Ω	QLZ-11.0A+NTC15	
Pick-Up	11,00 A	11,00 A	
Drop-Out	9,35 A	9,35 A	
Protector	Option 1	Option 2	
Reference	T0268	B154-105	
Current	15,00 A	15,80 A	
Time check	7,5-14 seg	7,5-16 seg	
Disc temp. (Open/Close)	105,00 / 52,00 °C	105,00 / 52,00 °C	



## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	371	295	1,78	1,46	1,26
40	-20	504	335	1,91	1,75	1,50
40	-15	661	375	2,04	2,05	1,76
40	-10	843	414	2,19	2,37	2,03
40	-5	1.048	453	2,35	2,69	2,31
40	0	1.277	491	2,51	3,03	2,60
40	5	1.531	529	2,69	3,37	2,90
40	7,2	1.650	545	2,77	3,52	3,03
40	10	1.808	566	2,87	3,72	3,20

45	-25	344	303	1,80	1,32	1,14
45	-20	466	346	1,94	1,57	1,35
45	-15	612	389	2,09	1,83	1,57
45	-10	782	431	2,26	2,11	1,81
45	-5	976	473	2,43	2,40	2,06
45	0	1.194	514	2,62	2,70	2,32
45	5	1.436	555	2,82	3,01	2,59
45	7,2	1.550	573	2,91	3,15	2,71
45	10	1.702	595	3,02	3,33	2,86

50	-25	317	310	1,83	1,19	1,02
50	-20	428	357	1,98	1,39	1,20
50	-15	562	403	2,15	1,62	1,40
50	-10	721	448	2,33	1,87	1,61
50	-5	904	493	2,52	2,13	1,83
50	0	1.110	537	2,73	2,40	2,07
50	5	1.341	581	2,95	2,68	2,31
50	7,2	1.451	600	3,05	2,81	2,42
50	10	1.596	625	3,18	2,97	2,56

55	-25	290	318	1,85	1,06	0,91
55	-20	389	368	2,02	1,23	1,06
55	-15	513	417	2,20	1,43	1,23
55	-10	660	465	2,40	1,65	1,42
55	-5	831	513	2,61	1,89	1,62
55	0	1.027	560	2,84	2,13	1,83
55	5	1.247	607	3,09	2,39	2,05
55	7,2	1.351	628	3,20	2,50	2,15
55	10	1.490	654	3,35	2,65	2,28

60	-25	263	326	1,87	0,94	0,81
60	-20	351	378	2,06	1,08	0,93
60	-15	463	430	2,26	1,25	1,08
60	-10	599	482	2,47	1,45	1,24
60	-5	759	533	2,71	1,66	1,42
60	0	944	584	2,96	1,88	1,62
60	5	1.152	634	3,23	2,11	1,82
60	7,2	1.251	656	3,36	2,22	1,91
60	10	1.384	683	3,52	2,36	2,03

65	-25	236	333	1,90	0,82	0,71
65	-20	313	389	2,10	0,93	0,80
65	-15	413	444	2,31	1,08	0,93
65	-10	538	499	2,55	1,25	1,08
65	-5	687	553	2,81	1,44	1,24
65	0	860	607	3,09	1,65	1,42
65	5	1.057	660	3,38	1,86	1,60
65	7,2	1.152	683	3,52	1,96	1,69
65	10	1.278	713	3,70	2,09	1,79

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	400	297	1,78	1,35	1,16
40	-20	544	337	1,91	1,62	1,40
40	-15	715	377	2,05	1,90	1,64
40	-10	910	416	2,20	2,19	1,89
40	-5	1.131	455	2,36	2,48	2,15
40	0	1.377	494	2,53	2,79	2,41
40	5	1.648	532	2,70	3,10	2,68
40	7,2	1.776	549	2,78	3,24	2,80
40	10	1.945	569	2,89	3,42	2,95

45	-25	369	304	1,81	1,21	1,05
45	-20	500	348	1,95	1,44	1,24
45	-15	657	391	2,10	1,68	1,45
45	-10	839	433	2,27	1,94	1,67
45	-5	1.047	476	2,45	2,20	1,90
45	0	1.280	517	2,63	2,47	2,14
45	5	1.538	558	2,83	2,75	2,38
45	7,2	1.659	576	2,92	2,88	2,49
45	10	1.821	599	3,04	3,04	2,63

50	-25	338	312	1,83	1,08	0,94
50	-20	456	359	1,99	1,27	1,10
50	-15	600	405	2,16	1,48	1,28
50	-10	769	451	2,34	1,71	1,47
50	-5	963	496	2,54	1,94	1,68
50	0	1.182	541	2,75	2,19	1,89
50	5	1.427	585	2,97	2,44	2,11
50	7,2	1.543	604	3,07	2,55	2,21
50	10	1.698	629	3,20	2,70	2,33

55	-25	307	320	1,86	0,96	0,83
55	-20	412	369	2,02	1,11	0,96
55	-15	542	419	2,21	1,29	1,12
55	-10	698	468	2,41	1,49	1,29
55	-5	879	516	2,63	1,70	1,47
55	0	1.085	564	2,86	1,92	1,66
55	5	1.317	611	3,11	2,15	1,86
55	7,2	1.427	632	3,22	2,26	1,95
55	10	1.574	658	3,37	2,39	2,07

60	-25	276	327	1,88	0,84	0,73
60	-20	368	380	2,06	0,97	0,84
60	-15	485	433	2,27	1,12	0,97
60	-10	627	485	2,49	1,29	1,12
60	-5	795	536	2,72	1,48	1,28
60	0	988	587	2,98	1,68	1,45
60	5	1.206	638	3,25	1,89	1,63
60	7,2	1.311	660	3,38	1,99	1,72
60	10	1.450	688	3,54	2,11	1,82

65	-25	245	335	1,91	0,73	0,63
65	-20	324	391	2,10	0,83	0,71
65	-15	427	447	2,32	0,96	0,83
65	-10	557	502	2,56	1,11	0,96
65	-5	711	556	2,82	1,28	1,10
65	0	891	611	3,10	1,46	1,26
65	5	1.096	664	3,41	1,65	1,43
65	7,2	1.194	688	3,54	1,74	1,50
65	10	1.326	717	3,72	1,85	1,60

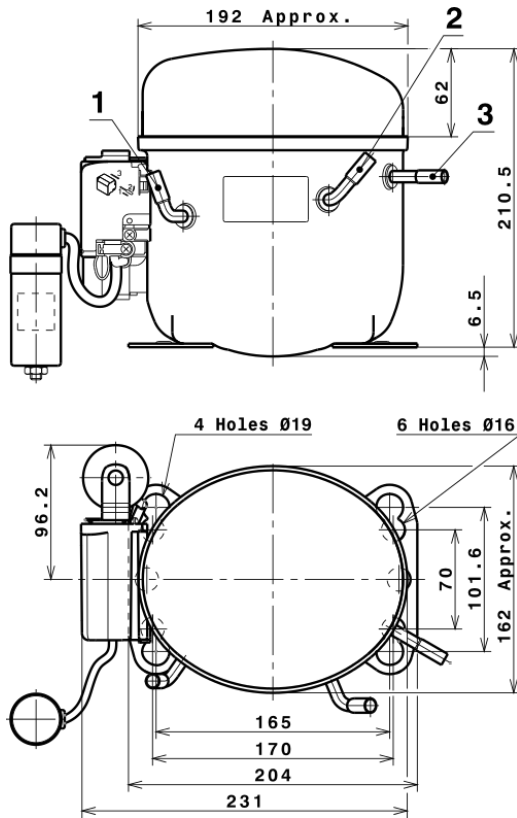


## EN12900

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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## COMPRESSOR DIMENSIONS

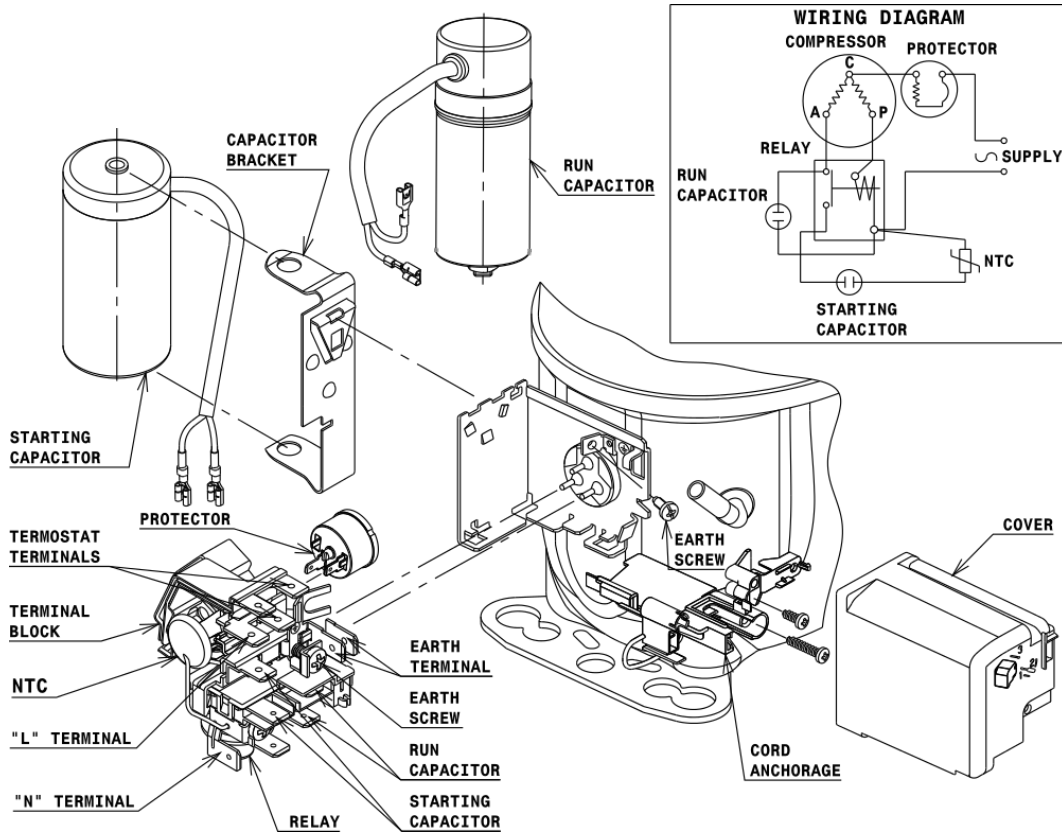


## DESIGNATION INTERNAL DIAM.

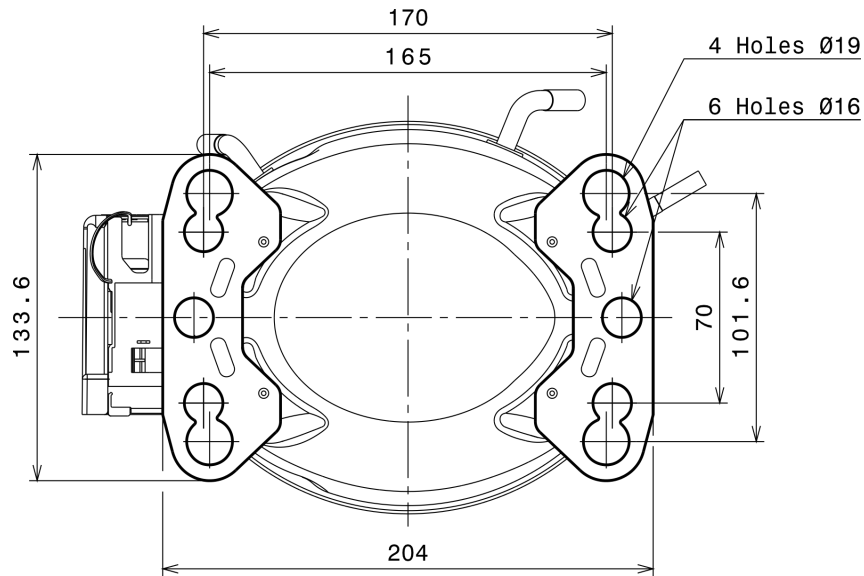
DESIGNATION	INTERNAL DIAM.
1 Suction	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



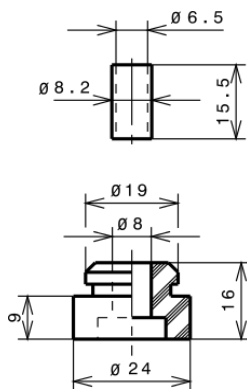
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

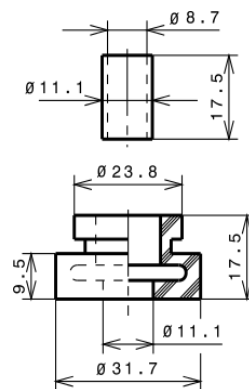
### STANDARD

Ø16 holes (170x70 net)



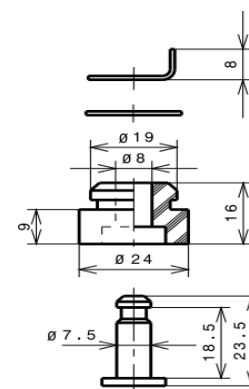
### AMERICAN FEET

Ø19 holes (165x101.6 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R134a HMBP

