

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **HPY16AAa**
Voltage **220-240V 50Hz ~1**
Refrigerant **R600a**

APPLICATION

Application	Low Back Pressure
Refrigerant	R600a
Evaporating Temp.	-35,0 °C to -10,0 °C
Expansion	Capillar
Comp. Cooling	Static
Max. ambient temp.	43,0 °C

COMPRESSOR

Displacement	16,15 cm ³
Diameter	31,19 mm
Stroke	21,13 mm
Net Weight	10,64 Kg
Oil type	ISO VG 10 MINER
Oil charge	300 cm ³

MOTOR

Nominal Power	1/4 hp
Voltage/Frequency	220-240V 50Hz
Voltage range	187-264 V
Type	RSIR
Phase number	1 PH
Locked Rotor Amps (LRA)	11,70 A
Max. Cont. Current (MCC)	1,90 A
Main W. resist. at 25°C	10,91 Ω
Start W. resist. at 25°C	17,33 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	208 kCal/h	181 W
COP	1,44 W/W	1,14 W/W
EER	1,24 kCal/Wh	0,98 kCal/Wh
Input Power	168 W	160 W
Current	1,06 A	1,03 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T _e)	-23,3 °C	-25,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	32,0 °C	55,0 °C
Ambient temp. (T _{amb.})	32,0 °C	32,0 °C
Suction temp. (T _{suction})	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Relay	Option 1			
Reference	PTC K100			
Voltage	200-240 V			
Resistance	14.00 Ω			
Protector	Option 1	Option 2	Option 3	Option 4
Reference	MSP304LZ	4TM319NFBYY	T0490	AE11FU
Current	9,40 A	12,00 A	9,40 A	9,40 A
Time check	7,5-14 seg	5-15 seg	7,5-14 seg	7,5-14 seg
Disc temp. (Open/Close)	120,00 / 61,00 °C	120,00 / 61,00 °C	130,00 / 62,00 °C	120,00 / 62,00 °C

This product is approved for R290 and R600a regarding explosion safety according to standard EN 60335-1 and EN 60335-2-34

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ASHRAE

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	kCal/h	W	A	W/W	kCal/Wh
40	-35	129	119	0,88	1,26	1,08
40	-30	170	135	0,93	1,46	1,25
40	-25	222	154	1,00	1,67	1,44
40	-23,3	242	161	1,03	1,75	1,50
40	-20	285	175	1,09	1,89	1,62
40	-15	359	199	1,19	2,10	1,80
40	-10	444	225	1,32	2,30	1,97

45	-35	121	118	0,87	1,19	1,03
45	-30	161	136	0,94	1,37	1,18
45	-25	211	156	1,01	1,57	1,35
45	-23,3	231	163	1,04	1,64	1,41
45	-20	272	179	1,10	1,77	1,53
45	-15	345	203	1,21	1,97	1,70
45	-10	429	231	1,34	2,16	1,86

50	-35	114	118	0,87	1,12	0,97
50	-30	151	137	0,94	1,29	1,11
50	-25	200	158	1,02	1,47	1,27
50	-23,3	219	166	1,05	1,54	1,32
50	-20	260	182	1,12	1,67	1,43
50	-15	331	208	1,23	1,85	1,59
50	-10	413	236	1,37	2,03	1,75

55	-35	106	117	0,87	1,05	0,91
55	-30	142	137	0,94	1,21	1,04
55	-25	189	160	1,03	1,38	1,19
55	-23,3	208	168	1,06	1,44	1,24
55	-20	248	185	1,13	1,56	1,34
55	-15	317	212	1,25	1,74	1,50
55	-10	398	242	1,40	1,91	1,64

60	-35	98	116	0,87	0,98	0,85
60	-30	133	138	0,94	1,12	0,96
60	-25	179	162	1,03	1,29	1,11
60	-23,3	197	170	1,07	1,34	1,16
60	-20	236	188	1,14	1,46	1,25
60	-15	304	217	1,27	1,63	1,40
60	-10	383	248	1,43	1,80	1,55

CECOMAF

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	W	W	A	W/W	kCal/Wh
40	-35	141	119	0,88	1,19	1,02
40	-30	189	135	0,93	1,39	1,20
40	-25	247	154	1,00	1,60	1,38
40	-23,3	269	161	1,03	1,67	1,44
40	-20	316	175	1,09	1,80	1,56
40	-15	395	199	1,19	1,99	1,72
40	-10	485	225	1,32	2,16	1,86

45	-35	128	118	0,87	1,08	0,93
45	-30	171	136	0,94	1,26	1,09
45	-25	225	156	1,01	1,44	1,25
45	-23,3	246	163	1,04	1,50	1,30
45	-20	290	179	1,10	1,62	1,40
45	-15	365	203	1,21	1,79	1,55
45	-10	450	231	1,34	1,95	1,69

50	-35	115	118	0,87	0,98	0,84
50	-30	154	137	0,94	1,13	0,97
50	-25	203	158	1,02	1,29	1,11
50	-23,3	223	166	1,05	1,34	1,16
50	-20	263	182	1,12	1,45	1,25
50	-15	334	208	1,23	1,61	1,39
50	-10	416	236	1,37	1,76	1,52

55	-35	102	117	0,87	0,87	0,75
55	-30	136	137	0,94	0,99	0,86
55	-25	181	160	1,03	1,14	0,98
55	-23,3	199	168	1,06	1,19	1,02
55	-20	237	185	1,13	1,28	1,11
55	-15	304	212	1,25	1,43	1,24
55	-10	381	242	1,40	1,57	1,36

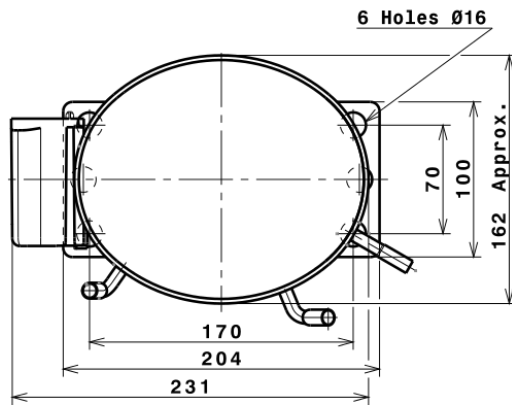
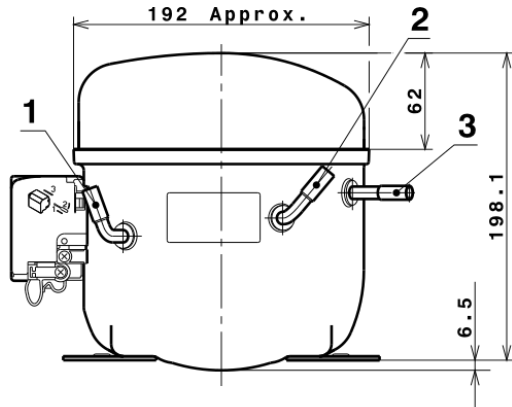
60	-35	88	116	0,87	0,76	0,66
60	-30	119	138	0,94	0,86	0,74
60	-25	160	162	1,03	0,99	0,85
60	-23,3	176	170	1,07	1,03	0,89
60	-20	211	188	1,14	1,12	0,97
60	-15	273	217	1,27	1,26	1,09
60	-10	346	248	1,43	1,40	1,21

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.033,0612556961	223,7996685928	1,3223171933	10,462771990828
2	29,7847760870	4,5063022132	0,0256072382	0,33283626336177
3	-8,8073440418	1,6768007395	0,0084016146	-0,048351047110534
4	0,2059048971	0,0496968714	0,0003901295	0,0029863764923234
5	-0,1765082890	0,0517985277	0,0002533475	-0,00081251456639013

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

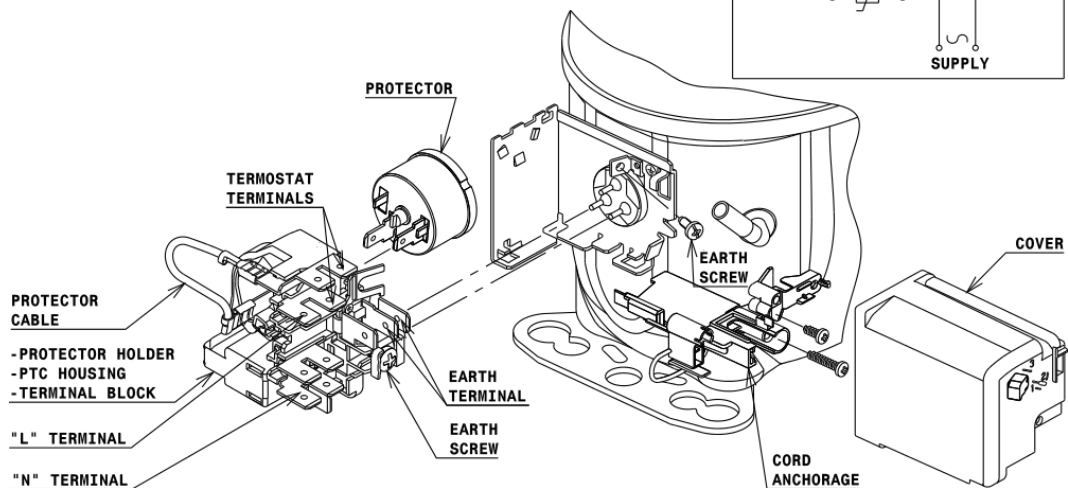
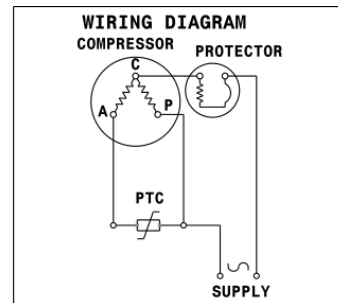


DESIGNATION INTERNAL DIAM.

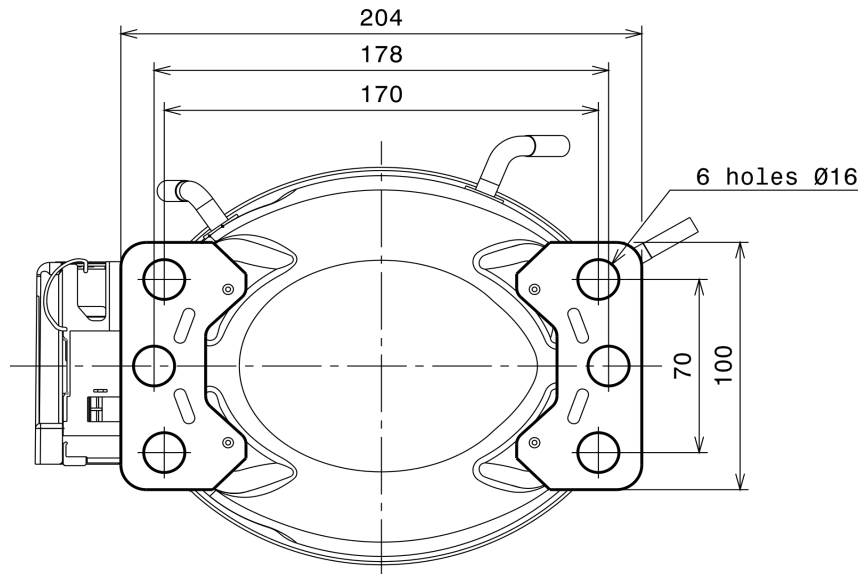
DESIGNATION	INTERNAL DIAM.
1 Suction	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

RSIR CONNECTION (PTC) (L, P ranges)



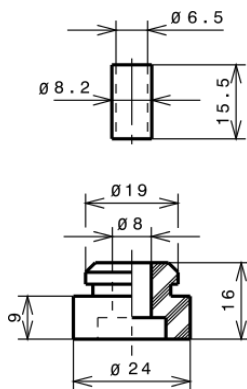
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

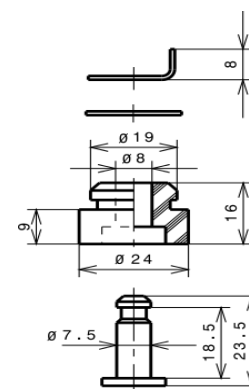
STANDARD

$\varnothing 16$ holes (170x70 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R600a LBP

