

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **NPY12RAb**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**
 Compressor status

APPLICATION

COMPRESSOR

MOTOR

Application	High Back Pressure	Displacement	12,10 cm ³	Voltage/Frequency	220-240V 50Hz
Refrigerant	R290	Diameter	27,00 mm	Voltage range	198-255 V
Evaporating Temp.	-15,0 °C to 10,0 °C	Stroke	21,13 mm	Type	CSR
Expansion	Capillar/Valve	Net Weight	12,26 Kg	Phase number	1 PH
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Locked Rotor Amps (LRA)	22,00 A
Max. ambient temp.	43,0 °C	Oil charge	400 cm ³	Max. Cont. Current (MCC)	5,20 A
		HP	1/2 hp	Main W. resist. at 25°C	4,50 Ω
				Start W. resist. at 25°C	8,70 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.500 kCal/h	1.479 W
COP	2,70 W/W	2,33 W/W
EER	2,32 kCal/Wh	2,01 kCal/Wh
Input Power	646 W	636 W
Current	3,19 A	3,15 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HBP (D)	CECOMAF HBP (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	64- 77 μF 330 V		
Run capacitor	10 μF 420 V		
Relay	Option 1	Option 2	
Reference	2014 158. + NTC15î©	QLZ-9.05A + NTC15î©	
Pick-Up	9,05 A	9,05 A	
Drop-Out	7,70 A	7,70 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)	105,00 / 52,00 °C	105,00 / 52,00 °C	

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



ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-15	793	443	2,37	2,08	1,79
40	-10	944	473	2,48	2,32	2,00
40	-5	1.109	500	2,59	2,58	2,22
40	0	1.287	526	2,69	2,85	2,45
40	5	1.478	548	2,79	3,14	2,70
40	7,2	1.566	558	2,82	3,27	2,81
40	10	1.682	569	2,87	3,44	2,96

45	-15	753	456	2,42	1,92	1,65
45	-10	909	490	2,55	2,16	1,86
45	-5	1.078	521	2,68	2,41	2,07
45	0	1.259	550	2,79	2,66	2,29
45	5	1.454	576	2,90	2,94	2,52
45	7,2	1.544	587	2,94	3,06	2,63
45	10	1.662	600	3,00	3,22	2,77

50	-15	714	469	2,47	1,77	1,52
50	-10	873	506	2,62	2,01	1,72
50	-5	1.046	541	2,76	2,25	1,93
50	0	1.232	574	2,89	2,50	2,15
50	5	1.430	604	3,01	2,75	2,37
50	7,2	1.522	617	3,07	2,87	2,47
50	10	1.642	632	3,13	3,02	2,60

55	-15	674	482	2,52	1,63	1,40
55	-10	838	523	2,68	1,86	1,60
55	-5	1.014	562	2,84	2,10	1,81
55	0	1.204	598	2,99	2,34	2,01
55	5	1.407	632	3,13	2,59	2,23
55	7,2	1.500	646	3,19	2,70	2,32
55	10	1.622	663	3,26	2,84	2,45

60	-15	635	495	2,57	1,49	1,28
60	-10	802	540	2,75	1,73	1,49
60	-5	983	582	2,92	1,96	1,69
60	0	1.176	622	3,09	2,20	1,89
60	5	1.383	660	3,25	2,44	2,10
60	7,2	1.478	676	3,31	2,54	2,19
60	10	1.603	695	3,40	2,68	2,31

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-15	853	446	2,38	1,91	1,65
40	-10	1.017	476	2,49	2,14	1,85
40	-5	1.195	503	2,61	2,37	2,05
40	0	1.386	529	2,71	2,62	2,26
40	5	1.590	552	2,80	2,88	2,49
40	7,2	1.684	561	2,84	3,00	2,59
40	10	1.808	573	2,89	3,16	2,73

45	-15	805	459	2,43	1,76	1,52
45	-10	972	492	2,56	1,97	1,71
45	-5	1.152	524	2,69	2,20	1,90
45	0	1.346	553	2,81	2,43	2,10
45	5	1.553	580	2,92	2,68	2,31
45	7,2	1.649	591	2,96	2,79	2,41
45	10	1.774	604	3,02	2,94	2,54

50	-15	758	472	2,48	1,61	1,39
50	-10	927	509	2,63	1,82	1,57
50	-5	1.110	545	2,77	2,04	1,76
50	0	1.307	577	2,91	2,26	1,96
50	5	1.516	608	3,03	2,49	2,16
50	7,2	1.613	621	3,08	2,60	2,25
50	10	1.740	636	3,15	2,73	2,36

55	-15	710	485	2,53	1,47	1,27
55	-10	882	526	2,70	1,68	1,45
55	-5	1.068	565	2,85	1,89	1,63
55	0	1.267	602	3,01	2,11	1,82
55	5	1.479	636	3,15	2,33	2,01
55	7,2	1.577	650	3,21	2,43	2,10
55	10	1.705	668	3,28	2,55	2,21

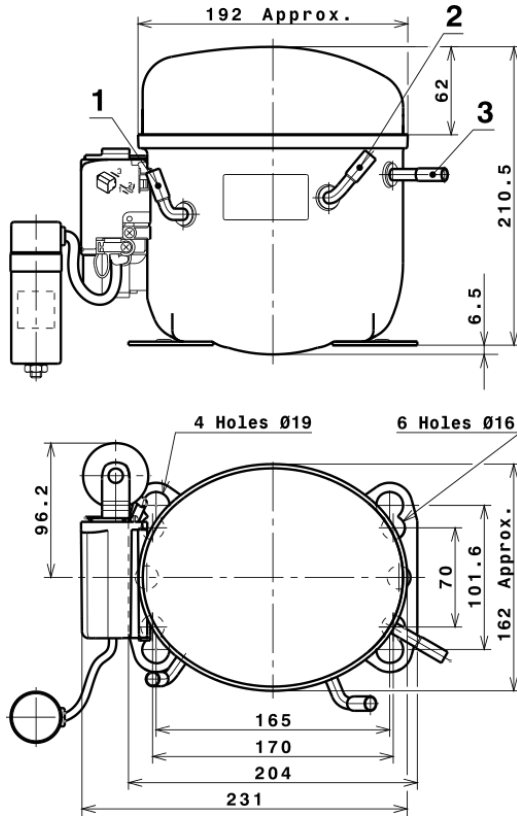
60	-15	663	498	2,58	1,33	1,15
60	-10	838	543	2,76	1,54	1,33
60	-5	1.026	586	2,94	1,75	1,51
60	0	1.228	626	3,11	1,96	1,69
60	5	1.443	664	3,27	2,17	1,88
60	7,2	1.541	680	3,33	2,27	1,96
60	10	1.671	700	3,42	2,39	2,06

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.717,1266056909	343,0482235177	1,9312989437	12,865782457014
2	36,5309029560	-1,0675450663	-0,0061878839	0,22544465382393
3	-8,8143184717	4,9984356495	0,0207542646	0,079080356665631
4	0,2684976420	-0,0441409924	-0,0001410339	0,0052292540245497
5	0,0666158602	0,1547163278	0,0006745928	0,0067845457077612

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

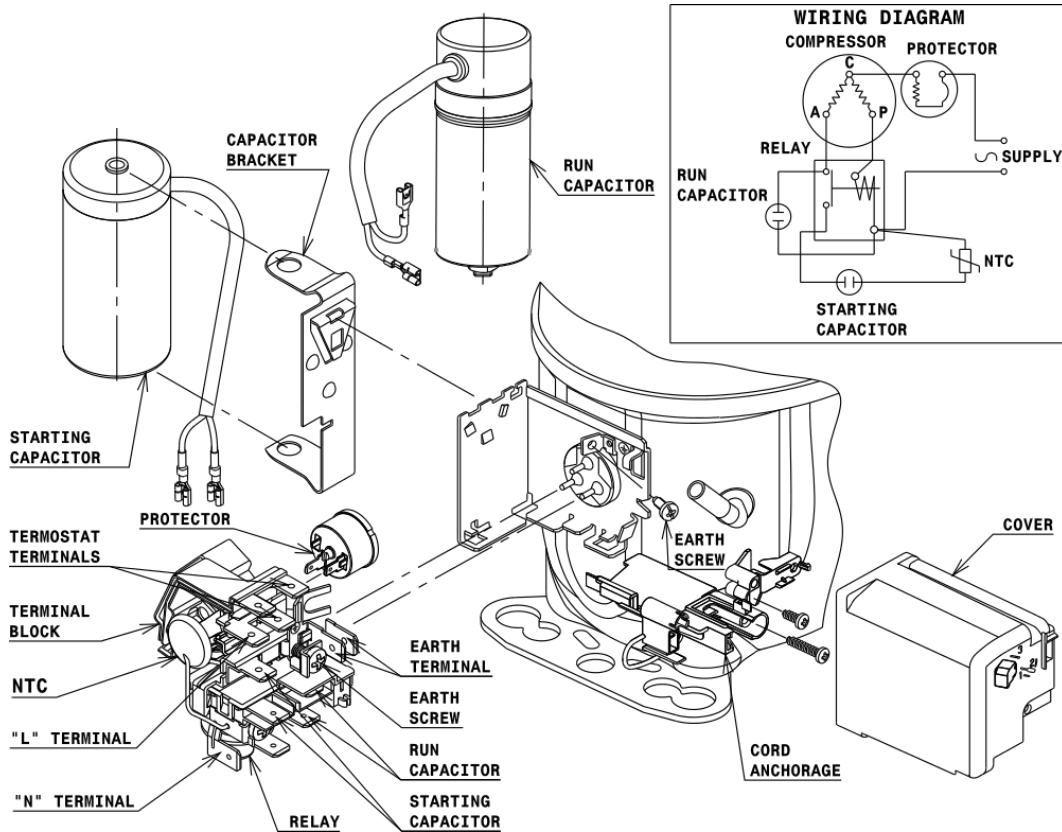


DESIGNATION INTERNAL DIAM.

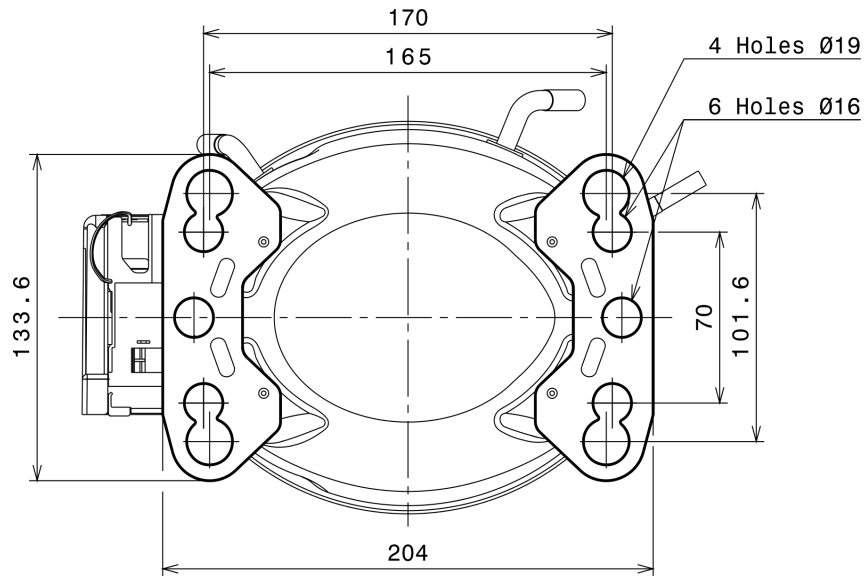
DESIGNATION	INTERNAL DIAM.
1	Suction 8,1 mm
2	Service 8,1 mm
3	Discharge 6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



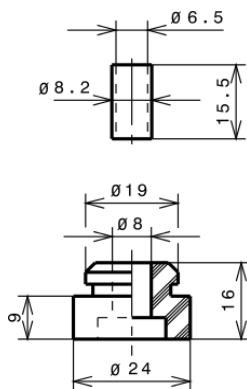
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

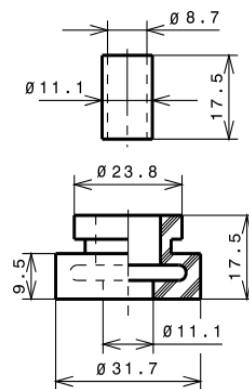
STANDARD

$\varnothing 16$ holes (170x70 net)



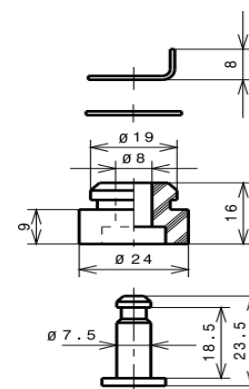
AMERICAN FEET

$\varnothing 19$ holes (165x101.6 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R290 HBP

