

# Technical Data Sheet

ENGINEERING  
TOMORROW



Compressor model **NPY12RAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**  
 Compressor status

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High Back Pressure	Displacement	12,10 cm <sup>3</sup>	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	CSIR
Expansion	Capillar/Valve	Net Weight	12,16 Kg	Phase number	1 PH
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Locked Rotor Amps (LRA)	20,00 A
Max. ambient temp.	43,0 °C	Oil charge	400 cm <sup>3</sup>	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	2,45 W/W	2,12 W/W
EER	2,11 kCal/Wh	1,83 kCal/Wh
Input Power	712 W	699 W
Current	4,05 A	4,00 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE HBP (D)	CECOMAF HBP (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

	Option 1	Option 2		
Starting capacitor	64- 77 μF 330 V			
Relay	Option 1	Option 2		
Reference	2014 158.	QLZ-9.05A		
Pick-Up	9,05 A	9.05 A		
Drop-Out	7,70 A	7.7 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	478	3,18	1,93	1,66
40	-10	944	508	3,29	2,16	1,86
40	-5	1.109	536	3,39	2,40	2,07
40	0	1.287	563	3,49	2,66	2,28
40	5	1.478	589	3,58	2,92	2,51
40	7,2	1.566	600	3,62	3,04	2,61
40	10	1.682	613	3,67	3,19	2,74

45	-15	753	492	3,23	1,78	1,53
45	-10	909	527	3,36	2,00	1,72
45	-5	1.078	561	3,48	2,23	1,92
45	0	1.259	593	3,59	2,47	2,12
45	5	1.454	624	3,71	2,71	2,33
45	7,2	1.544	637	3,76	2,82	2,42
45	10	1.662	653	3,82	2,96	2,54

50	-15	714	506	3,28	1,64	1,41
50	-10	873	547	3,42	1,86	1,60
50	-5	1.046	586	3,57	2,08	1,79
50	0	1.232	623	3,71	2,30	1,98
50	5	1.430	659	3,84	2,52	2,17
50	7,2	1.522	675	3,90	2,62	2,26
50	10	1.642	694	3,98	2,75	2,37

55	-15	674	520	3,33	1,51	1,30
55	-10	838	566	3,49	1,72	1,48
55	-5	1.014	610	3,66	1,93	1,66
55	0	1.204	653	3,82	2,14	1,84
55	5	1.407	694	3,98	2,36	2,03
55	7,2	1.500	712	4,05	2,45	2,11
55	10	1.622	734	4,14	2,57	2,21

60	-15	635	534	3,38	1,38	1,19
60	-10	802	585	3,57	1,59	1,37
60	-5	983	635	3,75	1,80	1,55
60	0	1.176	683	3,94	2,00	1,72
60	5	1.383	729	4,12	2,20	1,90
60	7,2	1.478	750	4,20	2,29	1,97
60	10	1.603	775	4,30	2,41	2,07

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-15	853	481	3,19	1,77	1,53
40	-10	1.017	511	3,30	1,99	1,72
40	-5	1.195	540	3,40	2,21	1,91
40	0	1.386	567	3,50	2,44	2,11
40	5	1.590	593	3,59	2,68	2,32
40	7,2	1.684	604	3,63	2,79	2,41
40	10	1.808	617	3,68	2,93	2,53

45	-15	805	495	3,24	1,63	1,41
45	-10	972	530	3,37	1,83	1,58
45	-5	1.152	564	3,49	2,04	1,76
45	0	1.346	597	3,61	2,26	1,95
45	5	1.553	628	3,73	2,47	2,14
45	7,2	1.649	641	3,78	2,57	2,22
45	10	1.774	658	3,84	2,70	2,33

50	-15	758	509	3,29	1,49	1,29
50	-10	927	550	3,44	1,69	1,46
50	-5	1.110	589	3,58	1,88	1,63
50	0	1.307	627	3,72	2,08	1,80
50	5	1.516	663	3,86	2,29	1,97
50	7,2	1.613	679	3,92	2,38	2,05
50	10	1.740	698	4,00	2,49	2,15

55	-15	710	523	3,34	1,36	1,17
55	-10	882	569	3,51	1,55	1,34
55	-5	1.068	614	3,67	1,74	1,50
55	0	1.267	657	3,84	1,93	1,67
55	5	1.479	699	4,00	2,12	1,83
55	7,2	1.577	717	4,07	2,20	1,90
55	10	1.705	739	4,16	2,31	1,99

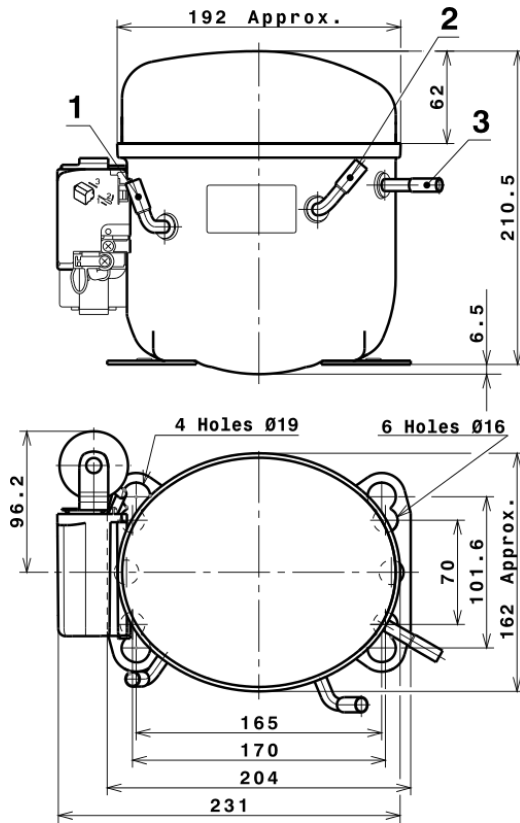
60	-15	663	537	3,39	1,23	1,07
60	-10	838	589	3,58	1,42	1,23
60	-5	1.026	639	3,76	1,61	1,39
60	0	1.228	687	3,95	1,79	1,54
60	5	1.443	734	4,14	1,96	1,70
60	7,2	1.541	755	4,22	2,04	1,77
60	10	1.671	780	4,32	2,14	1,85

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.717,1266056909	334,6101085575	2,5859432241	12,865782457014
2	36,5309029560	-3,1982400221	-0,0159453328	0,22544465382393
3	-8,8143184717	6,1852375005	0,0239659718	0,079080356665631
4	0,2684976420	-0,0250988635	-0,0000049299	0,0052292540245497
5	0,0666158602	0,2201047039	0,0009174931	0,0067845457077612

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
----------	---

## COMPRESSOR DIMENSIONS

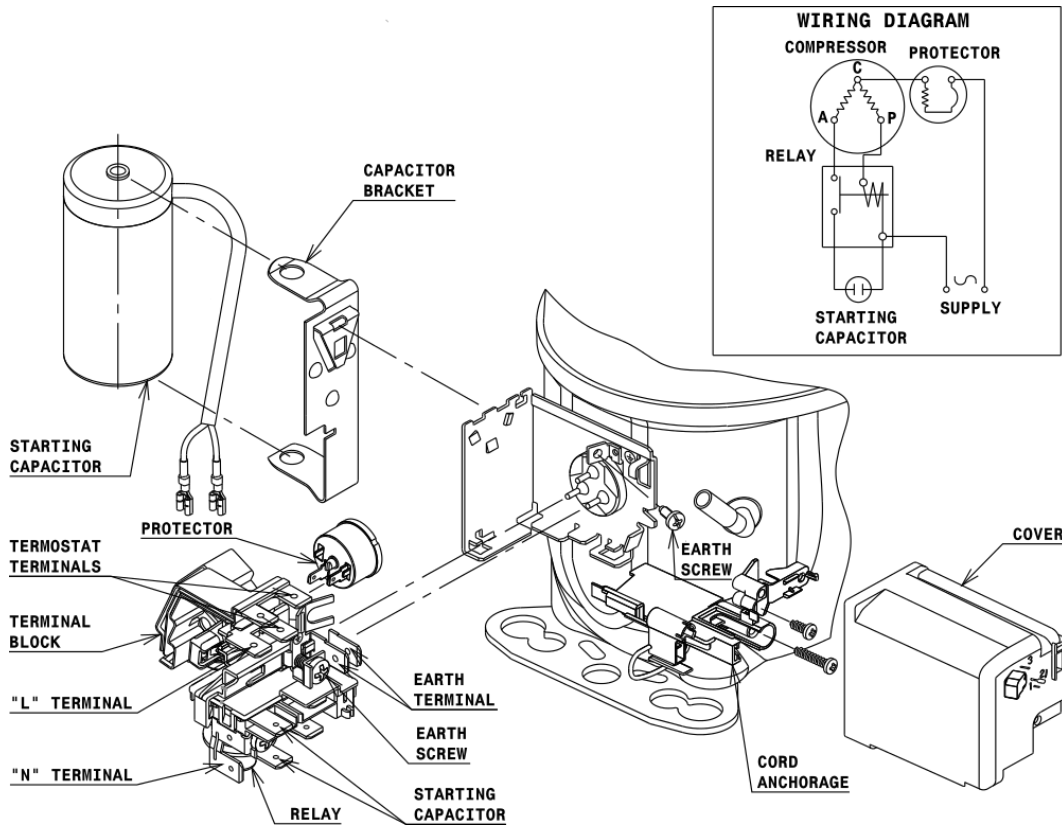


## DESIGNATION INTERNAL DIAM.

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

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (L, P ranges)



## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

$\varnothing 16$  holes (170x70 net)



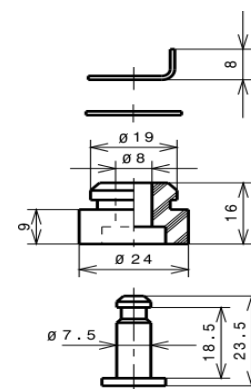
### AMERICAN FEET

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



### SNAP-ON

$\varnothing 16$  holes (170x70 net)



## SOA

SOA R290 HBP

