

# Technical Data Sheet

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

## APPLICATION

Application High Back Pressure  
 Refrigerant R290  
 Evaporating Temp. -15,0 °C to 10,0 °C  
 Expansion Capillar/Valve  
 Comp. Cooling Fan cooled  
 Max. ambient temp. 43,0 °C

## COMPRESSOR

Displacement 12,10 cm<sup>3</sup>  
 Diameter 27,00 mm  
 Stroke 21,13 mm  
 Net Weight 12,26 Kg  
 Oil type ISO VG 32 ESTER  
 Oil charge 400 cm<sup>3</sup>

## MOTOR

Nominal Power 1/2 hp  
 Voltage/Frequency 220-240V 50Hz  
 Voltage range 198-255 V  
 Type CSR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 22,00 A  
 Max. Cont. Current (MCC) 5,20 A  
 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	1.460 W
COP	2,70 W/W	2,28 W/W
EER	2,32 kCal/Wh	1,97 kCal/Wh
Input Power	646 W	639 W
Current	3,19 A	3,16 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

Starting capacitor	64- 77 µF 330 V		
Run capacitor	10 µF 420 V		
Relay	Option 1		
Reference	2014 158. + NTC15Ω		
Pick-Up	9,05 A		
Drop-Out	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	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	kCal/h	W	A	W/W	kCal/Wh
40	-15	653	468	2,46	1,62	1,39
40	-10	813	496	2,57	1,91	1,64
40	-5	1.000	520	2,67	2,24	1,92
40	0	1.213	538	2,75	2,62	2,25
40	5	1.452	553	2,81	3,06	2,63
40	7,2	1.566	558	2,83	3,27	2,81
40	10	1.718	562	2,85	3,55	3,06

45	-15	636	477	2,50	1,55	1,33
45	-10	795	510	2,63	1,81	1,56
45	-5	981	538	2,75	2,12	1,82
45	0	1.192	561	2,84	2,47	2,12
45	5	1.431	580	2,92	2,87	2,47
45	7,2	1.544	587	2,95	3,06	2,63
45	10	1.696	594	2,98	3,32	2,85

50	-15	620	486	2,53	1,48	1,27
50	-10	777	523	2,69	1,73	1,49
50	-5	962	556	2,82	2,01	1,73
50	0	1.172	584	2,94	2,33	2,01
50	5	1.409	608	3,03	2,70	2,32
50	7,2	1.522	617	3,07	2,87	2,47
50	10	1.673	626	3,11	3,11	2,67

55	-15	603	495	2,57	1,42	1,22
55	-10	760	537	2,74	1,65	1,41
55	-5	943	574	2,90	1,91	1,64
55	0	1.152	607	3,03	2,21	1,90
55	5	1.388	635	3,15	2,54	2,19
55	7,2	1.500	646	3,19	2,70	2,32
55	10	1.650	659	3,24	2,91	2,51

60	-15	587	504	2,61	1,35	1,16
60	-10	742	551	2,80	1,57	1,35
60	-5	924	593	2,97	1,81	1,56
60	0	1.132	630	3,12	2,09	1,80
60	5	1.366	663	3,26	2,40	2,06
60	7,2	1.478	676	3,31	2,54	2,19
60	10	1.627	691	3,37	2,74	2,36

## CECOMAF

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	W	W	A	W/W	kCal/Wh
40	-15	702	471	2,47	1,49	1,29
40	-10	876	499	2,59	1,76	1,52
40	-5	1.078	523	2,68	2,06	1,78
40	0	1.306	542	2,76	2,41	2,08
40	5	1.563	556	2,82	2,81	2,43
40	7,2	1.684	561	2,84	3,00	2,59
40	10	1.847	566	2,86	3,26	2,82

45	-15	680	480	2,51	1,42	1,22
45	-10	851	513	2,64	1,66	1,43
45	-5	1.049	541	2,76	1,94	1,68
45	0	1.275	565	2,86	2,26	1,95
45	5	1.528	584	2,94	2,62	2,26
45	7,2	1.649	591	2,96	2,79	2,41
45	10	1.809	599	3,00	3,02	2,61

50	-15	658	489	2,54	1,35	1,16
50	-10	826	526	2,70	1,57	1,36
50	-5	1.021	559	2,83	1,82	1,58
50	0	1.244	588	2,95	2,12	1,83
50	5	1.494	612	3,05	2,44	2,11
50	7,2	1.613	621	3,09	2,60	2,25
50	10	1.772	631	3,13	2,81	2,43

55	-15	635	498	2,58	1,28	1,10
55	-10	800	540	2,76	1,48	1,28
55	-5	993	578	2,91	1,72	1,48
55	0	1.212	611	3,05	1,98	1,71
55	5	1.460	639	3,16	2,28	1,97
55	7,2	1.577	650	3,21	2,43	2,10
55	10	1.735	663	3,26	2,62	2,26

60	-15	613	507	2,62	1,21	1,05
60	-10	775	554	2,81	1,40	1,21
60	-5	964	596	2,99	1,62	1,40
60	0	1.181	634	3,14	1,86	1,61
60	5	1.425	667	3,28	2,14	1,85
60	7,2	1.541	680	3,33	2,27	1,96
60	10	1.697	695	3,39	2,44	2,11

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.575,1320947625	367,0453386699	2,0454974670	11,219235789163
2	54,2752886615	-4,0699288581	-0,0166471278	0,42600330700353
3	-7,2003082256	4,7312232687	0,0194116861	0,095499137702538
4	0,5430912733	-0,0900505574	-0,0003710251	0,0091359740275923
5	-0,1575522295	0,1918291585	0,0007861498	0,0045041594526353

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

# Technical Data Sheet

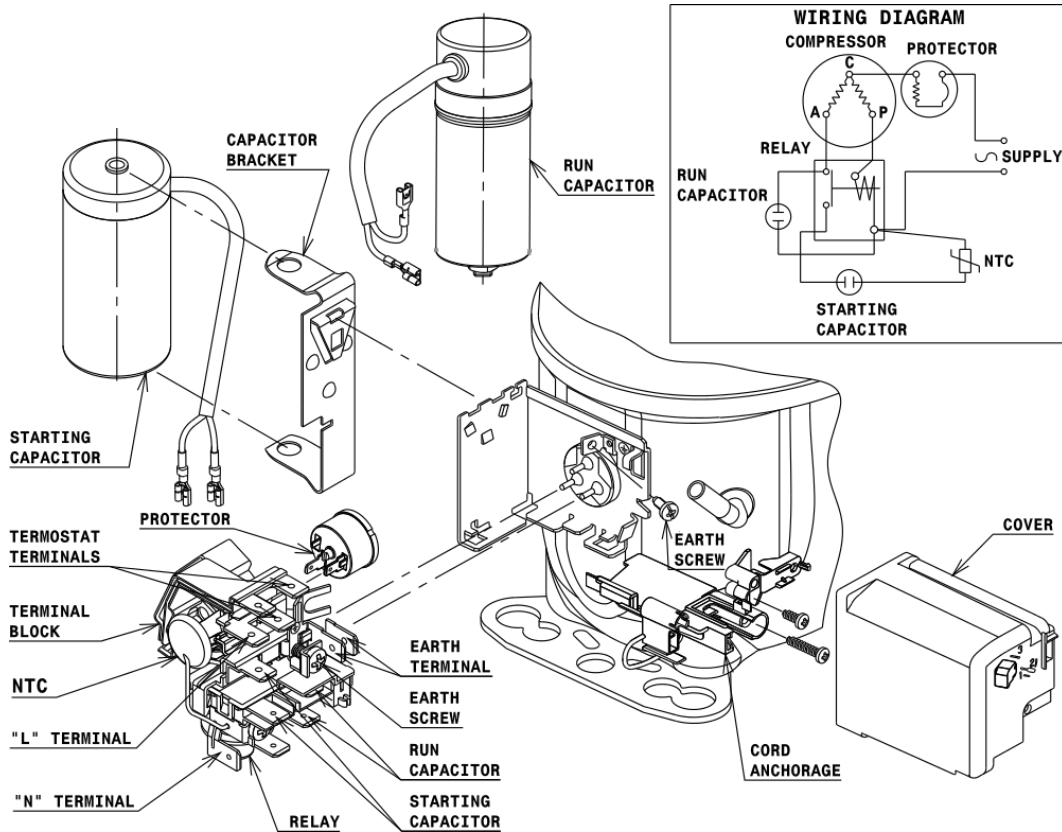
## COMPRESSOR DIMENSIONS



	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)



# Technical Data Sheet

## 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 R290 HBP

