

Technical Data Sheet

Compressor model **NPY12LAa**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**

APPLICATION

Application Low Back Pressure
 Refrigerant R290
 Evaporating Temp. -40,0 °C to -10,0 °C
 Expansion Capillar/Valve
 Comp. Cooling Fan cooled
 Max. ambient temp. 43,0 °C

COMPRESSOR

Displacement 12,10 cm³
 Diameter 27,00 mm
 Stroke 21,13 mm
 Net Weight 12,13 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 400 cm³

MOTOR

Nominal Power 3/8 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 198-255 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 14,20 A
 Max. Cont. Current (MCC) 3,80 A
 Main W. resist. at 25°C 6,40 Ω
 Start W. resist. at 25°C 10,40 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	465 kCal/h	402 W
COP	1,35 W/W	1,05 W/W
EER	1,16 kCal/Wh	0,90 kCal/Wh
Input Power	400 W	384 W
Current	2,50 A	2,44 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

Starting capacitor	47- 56 µF 330 V			
Relay	Option 1			
Reference	2014 149.			
Pick-Up	7,80 A			
Drop-Out	6,65 A			
Protector	Option 1	Option 2		
Reference	MRA38139	T0269		
Current	10,30 A	9,60 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	-40	223	254	2,00	1,02	0,88
40	-35	291	283	2,10	1,20	1,03
40	-30	378	314	2,20	1,40	1,20
40	-25	483	348	2,32	1,62	1,39
40	-23,3	523	360	2,36	1,69	1,45
40	-20	607	384	2,44	1,84	1,58
40	-15	749	423	2,58	2,06	1,77
40	-10	910	464	2,73	2,28	1,96

45	-40	210	254	2,00	0,96	0,83
45	-35	276	287	2,11	1,12	0,96
45	-30	361	322	2,23	1,30	1,12
45	-25	465	360	2,36	1,50	1,29
45	-23,3	504	373	2,41	1,57	1,35
45	-20	586	400	2,50	1,70	1,47
45	-15	726	443	2,65	1,91	1,64
45	-10	885	488	2,82	2,11	1,81

50	-40	198	254	2,00	0,90	0,78
50	-35	262	291	2,12	1,05	0,90
50	-30	345	330	2,26	1,21	1,04
50	-25	446	372	2,40	1,39	1,20
50	-23,3	484	387	2,45	1,46	1,25
50	-20	565	416	2,56	1,58	1,36
50	-15	704	463	2,73	1,77	1,52
50	-10	860	512	2,91	1,95	1,68

55	-40	185	254	2,00	0,85	0,73
55	-35	247	295	2,14	0,98	0,84
55	-30	328	338	2,28	1,13	0,97
55	-25	427	384	2,44	1,29	1,11
55	-23,3	465	400	2,50	1,35	1,16
55	-20	545	432	2,62	1,47	1,26
55	-15	681	483	2,80	1,64	1,41
55	-10	835	536	3,00	1,81	1,56

60	-40	173	254	2,00	0,79	0,68
60	-35	233	299	2,15	0,91	0,78
60	-30	311	346	2,31	1,05	0,90
60	-25	408	396	2,49	1,20	1,03
60	-23,3	446	413	2,55	1,25	1,08
60	-20	524	448	2,67	1,36	1,17
60	-15	658	503	2,87	1,52	1,31
60	-10	810	560	3,09	1,68	1,45

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	241	254	2,00	0,95	0,82
40	-35	323	283	2,10	1,14	0,99
40	-30	421	314	2,20	1,34	1,16
40	-25	537	348	2,32	1,54	1,33
40	-23,3	580	360	2,36	1,61	1,39
40	-20	670	384	2,44	1,74	1,51
40	-15	820	423	2,58	1,94	1,68
40	-10	988	464	2,73	2,13	1,84

45	-40	219	254	2,00	0,86	0,74
45	-35	293	287	2,11	1,02	0,88
45	-30	384	322	2,23	1,19	1,03
45	-25	492	360	2,36	1,37	1,18
45	-23,3	533	373	2,41	1,43	1,23
45	-20	617	400	2,50	1,54	1,33
45	-15	760	443	2,65	1,72	1,48
45	-10	919	488	2,82	1,88	1,63

50	-40	196	254	2,00	0,77	0,67
50	-35	263	291	2,12	0,90	0,78
50	-30	346	330	2,26	1,05	0,91
50	-25	447	372	2,40	1,20	1,04
50	-23,3	485	387	2,45	1,25	1,08
50	-20	565	416	2,56	1,36	1,17
50	-15	699	463	2,73	1,51	1,31
50	-10	851	512	2,91	1,66	1,44

55	-40	174	254	2,00	0,69	0,59
55	-35	233	295	2,14	0,79	0,68
55	-30	309	338	2,28	0,91	0,79
55	-25	402	384	2,44	1,05	0,90
55	-23,3	437	400	2,50	1,09	0,94
55	-20	512	432	2,62	1,18	1,02
55	-15	639	483	2,80	1,32	1,14
55	-10	783	536	3,00	1,46	1,26

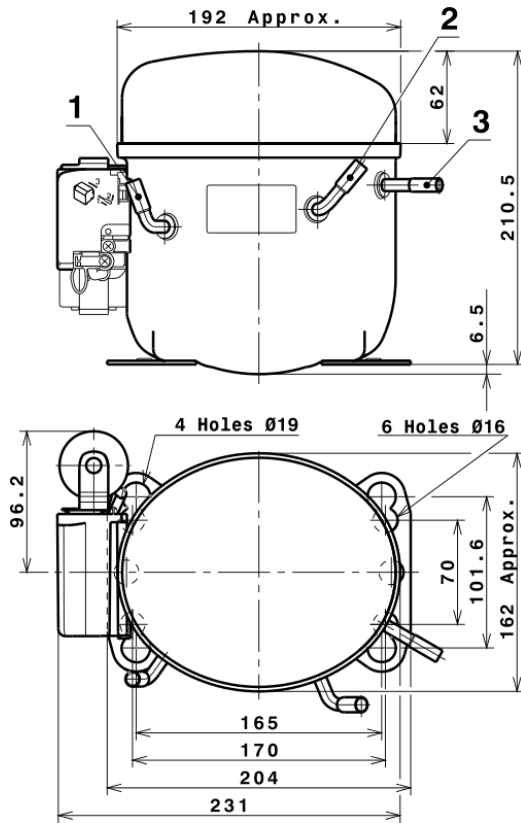
60	-40	152	254	2,00	0,60	0,52
60	-35	203	299	2,15	0,68	0,59
60	-30	271	346	2,31	0,78	0,68
60	-25	357	396	2,49	0,90	0,78
60	-23,3	389	413	2,55	0,94	0,81
60	-20	459	448	2,67	1,02	0,88
60	-15	578	503	2,87	1,15	0,99
60	-10	715	560	3,09	1,28	1,10

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.031,8344581952	306,0480571153	2,1402212132	19,168377072768
2	53,7812646534	3,2554834643	0,0138760242	0,57513807653976
3	-17,0967670190	6,5581870311	0,0247745428	-0,073493007129601
4	0,3335219955	0,0522972635	0,0002706123	0,0048611236519214
5	-0,3159973779	0,1639546758	0,0006193636	-0,0010730440805642

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

CSIR CONNECTION (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 LBP

