

Technical Data Sheet

Compressor model **NLY80LAa**
 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 8,10 cm³
 Diameter 24,29 mm
 Stroke 17,47 mm
 Net Weight 10,24 Kg
 Oil type ISO VG 46 MINER
 Oil charge 400 cm³

MOTOR

Nominal Power 1/4 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 198-255 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 10,50 A
 Max. Cont. Current (MCC) 2,50 A
 Main W. resist. at 25°C 11,04 Ω
 Start W. resist. at 25°C 12,00 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	306 kCal/h	264 W
COP	1,35 W/W	1,04 W/W
EER	1,16 kCal/Wh	0,90 kCal/Wh
Input Power	264 W	254 W
Current	1,80 A	1,76 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 135.			
Pick-Up	5,80 A			
Drop-Out	4,95 A			
Protector	Option 1			
Reference	T0168			
Current	9,50 A			
Time check	7,5-14 seg			
Disc temp. (Open/Close)	105,00 / 61,00 °C			

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

Technical Data Sheet

ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	143	168	1,43	0,99	0,85
40	-35	189	188	1,51	1,17	1,01
40	-30	249	210	1,60	1,38	1,18
40	-25	322	234	1,69	1,60	1,38
40	-23,3	349	242	1,72	1,68	1,44
40	-20	408	259	1,78	1,83	1,58
40	-15	507	286	1,88	2,07	1,78
40	-10	620	314	1,98	2,30	1,97

45	-40	135	169	1,44	0,93	0,80
45	-35	179	191	1,53	1,09	0,94
45	-30	237	215	1,62	1,28	1,10
45	-25	308	240	1,71	1,49	1,28
45	-23,3	335	249	1,75	1,56	1,34
45	-20	392	267	1,81	1,71	1,47
45	-15	489	296	1,91	1,92	1,65
45	-10	600	326	2,02	2,14	1,84

50	-40	128	171	1,44	0,87	0,75
50	-35	170	194	1,54	1,02	0,87
50	-30	225	220	1,64	1,19	1,02
50	-25	294	247	1,74	1,38	1,19
50	-23,3	320	257	1,77	1,45	1,25
50	-20	376	276	1,84	1,59	1,36
50	-15	471	306	1,95	1,79	1,54
50	-10	580	338	2,06	2,00	1,72

55	-40	120	172	1,45	0,81	0,70
55	-35	160	198	1,55	0,94	0,81
55	-30	214	225	1,66	1,10	0,95
55	-25	280	254	1,76	1,28	1,10
55	-23,3	306	264	1,80	1,35	1,16
55	-20	360	284	1,87	1,47	1,27
55	-15	453	316	1,99	1,67	1,43
55	-10	560	350	2,10	1,86	1,60

60	-40	113	174	1,46	0,75	0,65
60	-35	151	201	1,56	0,87	0,75
60	-30	202	230	1,67	1,02	0,88
60	-25	267	261	1,79	1,19	1,02
60	-23,3	292	271	1,83	1,25	1,07
60	-20	344	293	1,90	1,37	1,18
60	-15	436	327	2,02	1,55	1,33
60	-10	540	362	2,14	1,73	1,49

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	154	168	1,43	0,92	0,80
40	-35	210	188	1,51	1,12	0,96
40	-30	278	210	1,60	1,32	1,14
40	-25	358	234	1,69	1,53	1,32
40	-23,3	388	242	1,72	1,60	1,39
40	-20	450	259	1,78	1,74	1,50
40	-15	555	286	1,88	1,94	1,68
40	-10	672	314	1,98	2,14	1,85

45	-40	141	169	1,44	0,83	0,72
45	-35	190	191	1,53	0,99	0,86
45	-30	252	215	1,62	1,17	1,01
45	-25	326	240	1,71	1,36	1,17
45	-23,3	355	249	1,75	1,42	1,23
45	-20	413	267	1,81	1,55	1,34
45	-15	512	296	1,91	1,73	1,50
45	-10	623	326	2,02	1,91	1,65

50	-40	127	171	1,44	0,74	0,64
50	-35	171	194	1,54	0,88	0,76
50	-30	227	220	1,64	1,03	0,89
50	-25	295	247	1,74	1,19	1,03
50	-23,3	321	257	1,77	1,25	1,08
50	-20	376	276	1,84	1,36	1,18
50	-15	469	306	1,95	1,53	1,32
50	-10	574	338	2,06	1,70	1,47

55	-40	113	172	1,45	0,66	0,57
55	-35	151	198	1,55	0,76	0,66
55	-30	201	225	1,66	0,89	0,77
55	-25	264	254	1,76	1,04	0,90
55	-23,3	288	264	1,80	1,09	0,94
55	-20	338	284	1,87	1,19	1,03
55	-15	426	316	1,99	1,35	1,16
55	-10	525	350	2,10	1,50	1,30

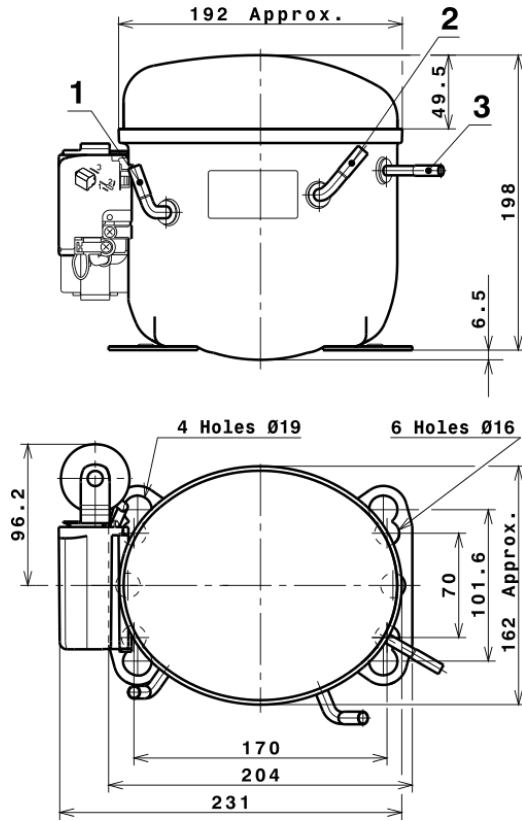
60	-40	99	174	1,46	0,57	0,49
60	-35	131	201	1,56	0,65	0,56
60	-30	176	230	1,67	0,76	0,66
60	-25	232	261	1,79	0,89	0,77
60	-23,3	254	271	1,83	0,94	0,81
60	-20	301	293	1,90	1,03	0,89
60	-15	382	327	2,02	1,17	1,01
60	-10	476	362	2,14	1,32	1,14

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.422,8706169822	258,3947603986	1,7906510457	13,595752039264
2	38,6375155894	3,8381604755	0,0120446230	0,41748815465507
3	-12,4171439484	3,1769264525	0,0105759786	-0,060802495947958
4	0,2403167978	0,0337509010	0,0000557152	0,003486356689369
5	-0,2412485306	0,0717606316	0,0002340569	-0,0010614497447785

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



DESIGNATION INTERNAL DIAM.

1	Suction	6,5 mm
2	Service	6,5 mm
3	Discharge	4,9 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION



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

