

Technical Data Sheet

Compressor model **NLY80LRa**
 Voltage **115-127V 60Hz ~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 9,57 Kg
 Oil type ISO VG 32 ESTER
 Oil charge 350 cm³

MOTOR

Nominal Power 1/4 hp
 Voltage/Frequency 115-127V 60Hz
 Voltage range 98-140 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 29,50 A
 Max. Cont. Current (MCC) 5,80 A
 Main W. resist. at 25°C 1,98 Ω
 Start W. resist. at 25°C 7,12 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	373 kCal/h	322 W
COP	1,37 W/W	1,06 W/W
EER	1,18 kCal/Wh	0,91 kCal/Wh
Input Power	317 W	304 W
Current	4,10 A	4,02 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	115 V 60 Hz	115 V 60 Hz

ELECTRICAL COMPONENTS

Starting capacitor	170 µF 160 V			
Relay	Option 1			
Reference	2014 180.			
Pick-Up	16,70 A			
Drop-Out	14,00 A			
Protector	Option 1	Option 2		
Reference	MRA38134	T0348		
Current	15,80 A	15,40 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	171	203	3,53	0,98	0,84
40	-35	223	226	3,63	1,15	0,99
40	-30	292	252	3,75	1,35	1,16
40	-25	376	282	3,90	1,55	1,33
40	-23,3	408	292	3,96	1,62	1,40
40	-20	476	315	4,09	1,76	1,51
40	-15	592	351	4,31	1,96	1,69
40	-10	723	391	4,59	2,15	1,85

45	-40	163	204	3,54	0,93	0,80
45	-35	214	229	3,64	1,09	0,94
45	-30	282	257	3,78	1,27	1,09
45	-25	365	289	3,94	1,47	1,26
45	-23,3	396	301	4,00	1,53	1,32
45	-20	463	324	4,14	1,66	1,43
45	-15	578	362	4,39	1,85	1,59
45	-10	708	404	4,69	2,04	1,75

50	-40	156	206	3,54	0,88	0,76
50	-35	206	233	3,66	1,03	0,88
50	-30	272	263	3,80	1,20	1,03
50	-25	353	297	3,98	1,39	1,19
50	-23,3	385	309	4,05	1,45	1,25
50	-20	451	334	4,20	1,57	1,35
50	-15	564	374	4,47	1,75	1,51
50	-10	693	418	4,79	1,93	1,66

55	-40	148	207	3,55	0,83	0,71
55	-35	197	236	3,67	0,97	0,83
55	-30	262	268	3,83	1,13	0,97
55	-25	342	304	4,02	1,31	1,12
55	-23,3	373	317	4,10	1,37	1,18
55	-20	438	343	4,26	1,49	1,28
55	-15	550	385	4,55	1,66	1,43
55	-10	678	431	4,90	1,83	1,57

60	-40	141	209	3,56	0,78	0,67
60	-35	188	240	3,69	0,91	0,79
60	-30	252	274	3,86	1,07	0,92
60	-25	331	312	4,07	1,23	1,06
60	-23,3	361	325	4,15	1,29	1,11
60	-20	426	353	4,32	1,40	1,21
60	-15	537	397	4,64	1,57	1,35
60	-10	663	445	5,01	1,73	1,49

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	185	203	3,53	0,91	0,79
40	-35	248	226	3,63	1,10	0,95
40	-30	326	252	3,75	1,30	1,12
40	-25	419	282	3,90	1,49	1,29
40	-23,3	454	292	3,96	1,55	1,34
40	-20	527	315	4,09	1,67	1,45
40	-15	649	351	4,31	1,85	1,60
40	-10	785	391	4,59	2,01	1,74

45	-40	170	204	3,54	0,83	0,72
45	-35	227	229	3,64	0,99	0,86
45	-30	300	257	3,78	1,16	1,01
45	-25	387	289	3,94	1,34	1,16
45	-23,3	420	301	4,00	1,40	1,21
45	-20	488	324	4,14	1,51	1,30
45	-15	605	362	4,39	1,67	1,44
45	-10	735	404	4,69	1,82	1,57

50	-40	155	206	3,54	0,75	0,65
50	-35	206	233	3,66	0,89	0,77
50	-30	273	263	3,80	1,04	0,90
50	-25	354	297	3,98	1,19	1,03
50	-23,3	385	309	4,05	1,25	1,08
50	-20	450	334	4,20	1,35	1,17
50	-15	561	374	4,47	1,50	1,30
50	-10	686	418	4,79	1,64	1,42

55	-40	139	207	3,55	0,67	0,58
55	-35	186	236	3,67	0,79	0,68
55	-30	246	268	3,83	0,92	0,79
55	-25	322	304	4,02	1,06	0,91
55	-23,3	351	317	4,10	1,11	0,96
55	-20	412	343	4,26	1,20	1,04
55	-15	516	385	4,55	1,34	1,16
55	-10	636	431	4,90	1,48	1,27

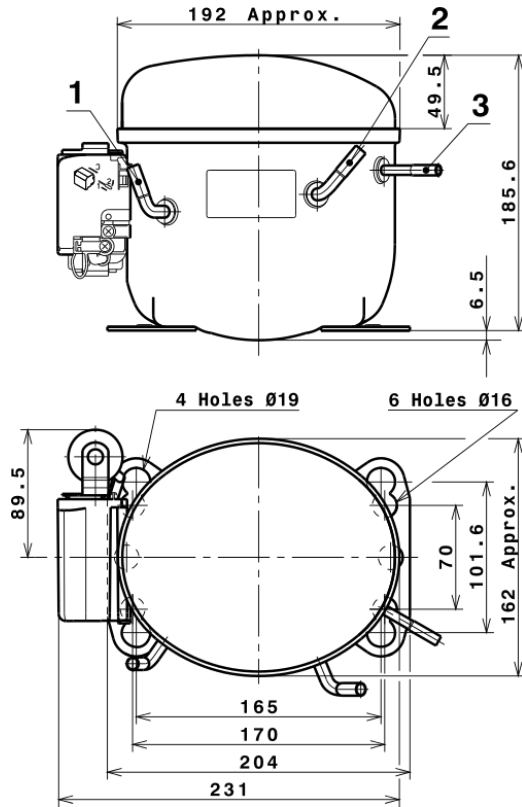
60	-40	124	209	3,56	0,60	0,51
60	-35	165	240	3,69	0,69	0,59
60	-30	220	274	3,86	0,80	0,69
60	-25	289	312	4,07	0,93	0,80
60	-23,3	316	325	4,15	0,97	0,84
60	-20	374	353	4,32	1,06	0,92
60	-15	472	397	4,64	1,19	1,03
60	-10	586	445	5,01	1,32	1,14

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.587,6131551770	348,7220899183	4,2468548560	14,798929417987
2	43,5272381533	6,6145001096	0,0571772112	0,46543809288037
3	-12,6320541569	3,5868131420	0,0290489548	-0,044141585978295
4	0,2855452247	0,0690538560	0,0009624479	0,0041470187567715
5	-0,2393817628	0,0820077988	0,0006950953	-0,00064479012122363

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	6,5 mm
2 Service	6,5 mm
3 Discharge	4,9 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 LBP

