

Technical Data Sheet

Compressor model **NLY90LAa**
 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 9,09 cm³
 Diameter 24,29 mm
 Stroke 19,62 mm
 Net Weight 10,32 Kg
 Oil type ISO VG 46 MINER
 Oil charge 395 cm³

MOTOR

Nominal Power 1/3 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 187-255 V
 Type CSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 13,50 A
 Max. Cont. Current (MCC) 2,80 A
 Main W. resist. at 25°C 8,40 Ω
 Start W. resist. at 25°C 17,30 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	355 kCal/h	307 W
COP	1,37 W/W	1,06 W/W
EER	1,18 kCal/Wh	0,91 kCal/Wh
Input Power	302 W	291 W
Current	2,10 A	2,07 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	Option 2		
Reference	2014 145.	QLZ-7.1A		
Pick-Up	7,10 A	7,10 A		
Drop-Out	6,00 A	6,00 A		
Protector	Option 1	Option 2		
Reference	T0057	AE39FHY		
Current	8,50 A	9,00 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 61,00 °C	105,00 / 62,00 °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	164	189	1,79	1,01	0,87
40	-35	220	215	1,85	1,19	1,02
40	-30	290	242	1,92	1,40	1,20
40	-25	372	268	2,00	1,61	1,39
40	-23,3	403	277	2,03	1,69	1,45
40	-20	467	295	2,08	1,84	1,58
40	-15	575	322	2,16	2,08	1,78
40	-10	696	350	2,26	2,32	1,99

45	-40	155	190	1,79	0,95	0,82
45	-35	209	218	1,86	1,12	0,96
45	-30	277	247	1,94	1,30	1,12
45	-25	357	276	2,02	1,50	1,29
45	-23,3	387	286	2,05	1,58	1,35
45	-20	450	305	2,11	1,72	1,48
45	-15	555	334	2,20	1,94	1,66
45	-10	674	363	2,30	2,16	1,86

50	-40	147	192	1,80	0,89	0,77
50	-35	199	222	1,87	1,04	0,90
50	-30	264	253	1,95	1,21	1,04
50	-25	342	283	2,04	1,40	1,21
50	-23,3	371	294	2,07	1,47	1,26
50	-20	432	314	2,14	1,60	1,38
50	-15	536	345	2,24	1,80	1,55
50	-10	652	377	2,35	2,01	1,73

55	-40	138	193	1,80	0,83	0,72
55	-35	188	225	1,88	0,97	0,83
55	-30	251	258	1,97	1,13	0,97
55	-25	326	291	2,07	1,31	1,12
55	-23,3	355	302	2,10	1,37	1,18
55	-20	415	324	2,17	1,49	1,28
55	-15	516	357	2,28	1,68	1,45
55	-10	630	390	2,40	1,88	1,62

60	-40	130	195	1,80	0,77	0,67
60	-35	177	229	1,89	0,90	0,77
60	-30	238	264	1,99	1,05	0,90
60	-25	311	298	2,09	1,21	1,04
60	-23,3	339	310	2,13	1,27	1,09
60	-20	397	333	2,20	1,39	1,19
60	-15	496	368	2,32	1,57	1,35
60	-10	608	404	2,45	1,75	1,51

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	177	189	1,79	0,94	0,81
40	-35	244	215	1,85	1,13	0,98
40	-30	322	242	1,92	1,33	1,15
40	-25	413	268	2,00	1,54	1,33
40	-23,3	446	277	2,03	1,61	1,39
40	-20	515	295	2,08	1,74	1,51
40	-15	629	322	2,16	1,95	1,69
40	-10	755	350	2,26	2,16	1,87

45	-40	161	190	1,79	0,85	0,73
45	-35	221	218	1,86	1,01	0,88
45	-30	293	247	1,94	1,19	1,03
45	-25	377	276	2,02	1,37	1,18
45	-23,3	409	286	2,05	1,43	1,24
45	-20	473	305	2,11	1,55	1,34
45	-15	581	334	2,20	1,74	1,50
45	-10	700	363	2,30	1,93	1,67

50	-40	146	192	1,80	0,76	0,66
50	-35	199	222	1,87	0,90	0,78
50	-30	265	253	1,95	1,05	0,91
50	-25	342	283	2,04	1,21	1,04
50	-23,3	371	294	2,07	1,26	1,09
50	-20	431	314	2,14	1,37	1,19
50	-15	533	345	2,24	1,54	1,33
50	-10	646	377	2,35	1,71	1,48

55	-40	130	193	1,80	0,67	0,58
55	-35	177	225	1,88	0,79	0,68
55	-30	236	258	1,97	0,91	0,79
55	-25	307	291	2,07	1,06	0,91
55	-23,3	334	302	2,10	1,11	0,95
55	-20	390	324	2,17	1,20	1,04
55	-15	484	357	2,28	1,36	1,17
55	-10	591	390	2,40	1,51	1,31

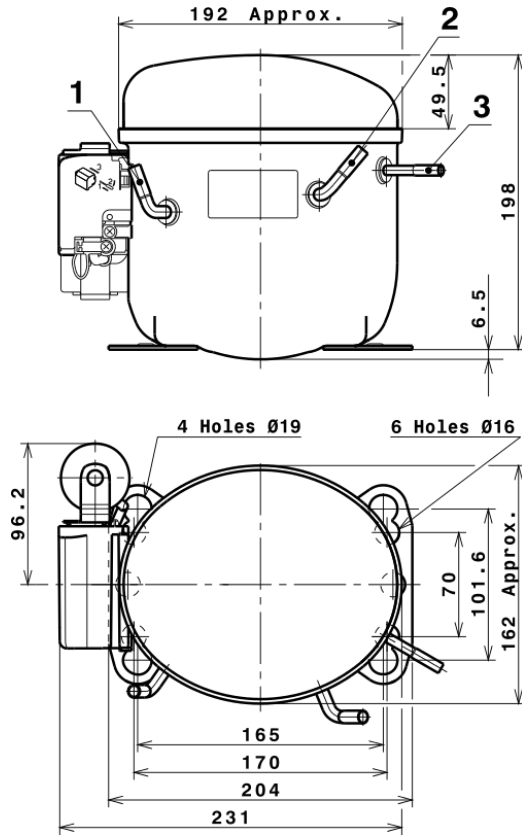
60	-40	114	195	1,80	0,59	0,51
60	-35	155	229	1,89	0,68	0,58
60	-30	207	264	1,99	0,79	0,68
60	-25	272	298	2,09	0,91	0,79
60	-23,3	296	310	2,13	0,96	0,83
60	-20	348	333	2,20	1,04	0,90
60	-15	436	368	2,32	1,18	1,02
60	-10	536	404	2,45	1,33	1,15

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.576,0727692682	271,5670442259	1,9788053922	14,978681461811
2	41,1739639519	2,4527092470	0,0118500470	0,43966244068367
3	-13,8190793724	3,5868131420	0,0133093459	-0,066682599239164
4	0,2316532663	0,0042913700	0,0001654234	0,0033978611978156
5	-0,2665557983	0,0820077988	0,0003142933	-0,0011472941964659

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)



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

