

# Technical Data Sheet

Compressor model **NLY90NRa**  
 Voltage **115-127V 60Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	Low-Medium Back Pressure	Displacement	9,09 cm <sup>3</sup>	Nominal Power	1/3 hp
Refrigerant	R290	Diameter	24,29 mm	Voltage/Frequency	115-127V 60Hz
Evaporating Temp.	-40,0 °C to 0,0 °C	Stroke	16,62 mm	Voltage range	103-140 V
Expansion	Capillar/Valve	Net Weight	10,35 Kg	Type	CSIR
Comp. Cooling	Fan cooled	Oil type	ISO VG 32 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	350 cm <sup>3</sup>	Locked Rotor Amps (LRA)	35,00 A
				Max. Cont. Current (MCC)	7,80 A
				Main W. resist. at 25°C	1,24 Ω
				Start W. resist. at 25°C	6,95 Ω

## NOMINAL PERFORMANCE

## APPROVALS

	ASHRAE	CECOMAF
Cooling Capacity	419 kCal/h	362 W
COP	1,37 W/W	1,06 W/W
EER	1,18 kCal/Wh	0,92 kCal/Wh
Input Power	355 W	341 W
Current	4,39 A	4,30 A

## TEST CYCLE CONDITIONS

	ASHRAE LMBP (B)	CECOMAF LMBP (A)
Evaporating temp. (T <sub>e</sub> )	-23,3 °C	-25,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	32,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	32,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	32,0 °C	32,0 °C
Voltage/Frequency	115 V 60 Hz	115 V 60 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	200 µF 160 V			
Relay	Option 1			
Reference	2014 180.			
Pick-Up	16,70 A			
Drop-Out	14,00 A			
Protector	Option 1			
Reference	T0260			
Current	22,00 A			
Time check	7,5-14 seg			
Disc temp. (Open/Close)	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	192	227	3,56	0,98	0,84
40	-35	255	255	3,73	1,16	1,00
40	-30	335	286	3,93	1,36	1,17
40	-25	430	319	4,15	1,57	1,35
40	-23,3	466	331	4,22	1,64	1,41
40	-20	541	355	4,39	1,77	1,52
40	-15	668	393	4,66	1,97	1,70
40	-10	810	434	4,96	2,17	1,86
40	-5	968	478	5,30	2,36	2,03
40	0	1.143	525	5,67	2,53	2,18

45	-40	183	229	3,58	0,93	0,80
45	-35	245	259	3,76	1,10	0,94
45	-30	322	291	3,96	1,29	1,10
45	-25	415	326	4,19	1,48	1,27
45	-23,3	450	339	4,28	1,55	1,33
45	-20	524	364	4,45	1,67	1,44
45	-15	648	404	4,74	1,87	1,60
45	-10	789	447	5,06	2,05	1,76
45	-5	945	493	5,41	2,23	1,92
45	0	1.117	541	5,80	2,40	2,06

50	-40	175	231	3,59	0,88	0,76
50	-35	234	263	3,78	1,04	0,89
50	-30	309	297	4,00	1,21	1,04
50	-25	400	334	4,24	1,39	1,20
50	-23,3	435	347	4,33	1,46	1,25
50	-20	507	373	4,52	1,58	1,36
50	-15	629	415	4,82	1,76	1,51
50	-10	768	460	5,16	1,94	1,67
50	-5	922	508	5,53	2,11	1,82
50	0	1.092	558	5,94	2,28	1,96

55	-40	166	233	3,60	0,83	0,71
55	-35	223	266	3,81	0,97	0,84
55	-30	296	303	4,04	1,14	0,98
55	-25	385	341	4,30	1,31	1,13
55	-23,3	419	355	4,39	1,37	1,18
55	-20	490	383	4,58	1,49	1,28
55	-15	610	426	4,90	1,66	1,43
55	-10	746	473	5,26	1,84	1,58
55	-5	898	522	5,65	2,00	1,72
55	0	1.066	574	6,08	2,16	1,86

60	-40	158	235	3,61	0,78	0,67
60	-35	213	270	3,83	0,92	0,79
60	-30	284	308	4,07	1,07	0,92
60	-25	370	349	4,35	1,24	1,06
60	-23,3	403	363	4,45	1,29	1,11
60	-20	473	392	4,65	1,40	1,21
60	-15	591	438	4,99	1,57	1,35
60	-10	725	486	5,36	1,74	1,49
60	-5	875	537	5,77	1,90	1,63
60	0	1.041	591	6,22	2,05	1,76

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	208	227	3,56	0,91	0,79
40	-35	286	255	3,73	1,12	0,97
40	-30	378	286	3,93	1,32	1,14
40	-25	485	319	4,15	1,52	1,31
40	-23,3	525	331	4,22	1,59	1,37
40	-20	607	355	4,39	1,71	1,48
40	-15	743	393	4,66	1,89	1,63
40	-10	894	434	4,96	2,06	1,78
40	-5	1.060	478	5,30	2,22	1,91
40	0	1.240	525	5,67	2,36	2,04

45	-40	191	229	3,58	0,83	0,72
45	-35	261	259	3,76	1,01	0,87
45	-30	345	291	3,96	1,18	1,02
45	-25	444	326	4,19	1,36	1,18
45	-23,3	481	339	4,28	1,42	1,23
45	-20	558	364	4,45	1,53	1,32
45	-15	686	404	4,74	1,70	1,47
45	-10	829	447	5,06	1,85	1,60
45	-5	987	493	5,41	2,00	1,73
45	0	1.159	541	5,80	2,14	1,85

50	-40	173	231	3,59	0,75	0,65
50	-35	236	263	3,78	0,90	0,77
50	-30	312	297	4,00	1,05	0,91
50	-25	403	334	4,24	1,21	1,04
50	-23,3	438	347	4,33	1,26	1,09
50	-20	509	373	4,52	1,36	1,18
50	-15	629	415	4,82	1,52	1,31
50	-10	764	460	5,16	1,66	1,44
50	-5	914	508	5,53	1,80	1,56
50	0	1.078	558	5,94	1,93	1,67

55	-40	156	233	3,60	0,67	0,58
55	-35	210	266	3,81	0,79	0,68
55	-30	279	303	4,04	0,92	0,80
55	-25	362	341	4,30	1,06	0,92
55	-23,3	394	355	4,39	1,11	0,96
55	-20	460	383	4,58	1,20	1,04
55	-15	572	426	4,90	1,34	1,16
55	-10	699	473	5,26	1,48	1,28
55	-5	841	522	5,65	1,61	1,39
55	0	997	574	6,08	1,74	1,50

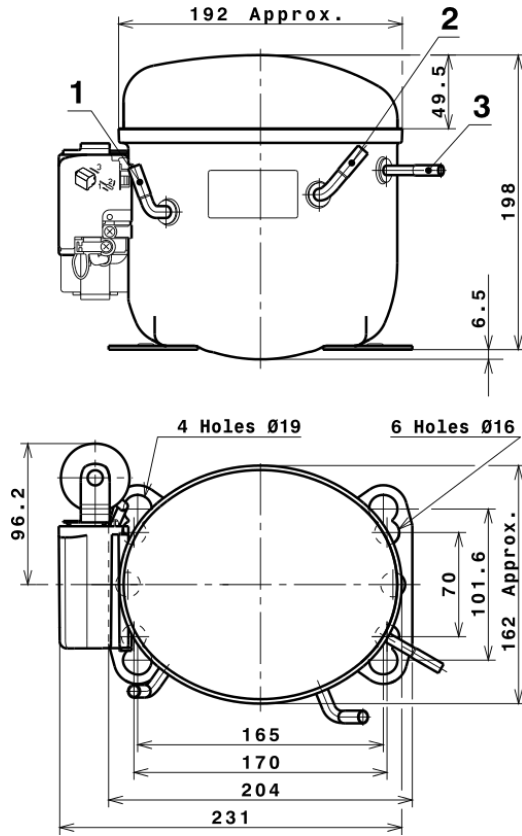
60	-40	139	235	3,61	0,59	0,51
60	-35	185	270	3,83	0,69	0,59
60	-30	246	308	4,07	0,80	0,69
60	-25	321	349	4,35	0,92	0,80
60	-23,3	350	363	4,45	0,96	0,83
60	-20	411	392	4,65	1,05	0,91
60	-15	516	438	4,99	1,18	1,02
60	-10	634	486	5,36	1,31	1,13
60	-5	768	537	5,77	1,43	1,24
60	0	916	591	6,22	1,55	1,34

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.885,9847165282	403,0155221920	4,6271850639	17,123461857827
2	50,0064202089	6,9047185511	0,0552098807	0,51991516120622
3	-16,6598718099	3,3884107598	0,0288110626	-0,06504218785186
4	0,2847191548	0,0554660768	0,0006723135	0,0042775909368417
5	-0,3303360863	0,0744935627	0,0006584335	-0,00110614703747

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 LMBP

