

# Technical Data Sheet

Compressor model **NLY80RAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	8,10 cm <sup>3</sup>	Nominal Power	3/8 hp
Refrigerant	R290	Diameter	24,29 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	17,47 mm	Voltage range	187-255 V
Expansion	Capillar/Valve	Net Weight	10,54 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	400 cm <sup>3</sup>	Locked Rotor Amps (LRA)	12,50 A
				Max. Cont. Current (MCC)	3,50 A
				Main W. resist. at 25°C	8,62 Ω
				Start W. resist. at 25°C	12,15 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	955 kCal/h	930 W
COP	2,60 W/W	2,21 W/W
EER	2,24 kCal/Wh	1,91 kCal/Wh
Input Power	427 W	421 W
Current	2,80 A	2,77 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T <sub>e</sub> )	7,2 °C	5,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	46,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	35,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	35,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	64- 77 µF 330 V			
Relay	Option 1			
Reference	2014 149.			
Pick-Up	7,80 A			
Drop-Out	6,65 A			
Protector	Option 1			
Reference	T0266			
Current	11,00 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	-25	313	263	2,29	1,38	1,19
40	-20	400	282	2,32	1,65	1,42
40	-15	504	300	2,36	1,96	1,68
40	-10	625	316	2,40	2,30	1,98
40	-5	764	331	2,44	2,68	2,31
40	0	919	344	2,48	3,10	2,67
40	5	1.091	356	2,52	3,56	3,06
40	7,2	1.173	361	2,54	3,78	3,25
40	10	1.281	367	2,56	4,06	3,49

45	-25	290	265	2,29	1,27	1,09
45	-20	370	287	2,33	1,50	1,29
45	-15	466	308	2,38	1,76	1,51
45	-10	580	327	2,43	2,06	1,77
45	-5	710	345	2,49	2,39	2,06
45	0	858	362	2,54	2,76	2,37
45	5	1.022	377	2,59	3,15	2,71
45	7,2	1.100	383	2,62	3,34	2,87
45	10	1.204	390	2,64	3,59	3,08

50	-25	268	267	2,30	1,17	1,00
50	-20	339	292	2,35	1,35	1,16
50	-15	428	316	2,40	1,57	1,35
50	-10	534	339	2,46	1,83	1,58
50	-5	657	360	2,53	2,12	1,83
50	0	796	379	2,60	2,44	2,10
50	5	953	397	2,67	2,79	2,40
50	7,2	1.028	405	2,70	2,95	2,54
50	10	1.127	414	2,74	3,16	2,72

55	-25	245	269	2,30	1,06	0,91
55	-20	309	297	2,36	1,21	1,04
55	-15	390	324	2,42	1,40	1,20
55	-10	488	350	2,50	1,62	1,39
55	-5	603	374	2,58	1,87	1,61
55	0	735	397	2,67	2,15	1,85
55	5	884	418	2,76	2,46	2,11
55	7,2	955	427	2,80	2,60	2,24
55	10	1.050	438	2,85	2,79	2,40

60	-25	223	271	2,30	0,95	0,82
60	-20	279	303	2,37	1,07	0,92
60	-15	352	333	2,45	1,23	1,06
60	-10	442	361	2,54	1,42	1,22
60	-5	549	389	2,64	1,64	1,41
60	0	674	414	2,74	1,89	1,63
60	5	815	439	2,86	2,16	1,86
60	7,2	883	449	2,91	2,29	1,97
60	10	973	462	2,97	2,45	2,11

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	336	264	2,29	1,27	1,10
40	-20	431	284	2,33	1,52	1,31
40	-15	544	301	2,37	1,80	1,56
40	-10	675	318	2,41	2,12	1,83
40	-5	823	333	2,45	2,47	2,14
40	0	989	346	2,49	2,86	2,47
40	5	1.173	359	2,53	3,27	2,83
40	7,2	1.260	363	2,54	3,47	2,99
40	10	1.375	369	2,56	3,72	3,22

45	-25	310	266	2,30	1,16	1,01
45	-20	396	289	2,34	1,37	1,18
45	-15	500	310	2,39	1,61	1,39
45	-10	621	329	2,44	1,89	1,63
45	-5	760	347	2,49	2,19	1,89
45	0	917	364	2,55	2,52	2,18
45	5	1.092	379	2,60	2,88	2,49
45	7,2	1.175	386	2,63	3,05	2,63
45	10	1.285	393	2,65	3,27	2,82

50	-25	284	268	2,30	1,06	0,91
50	-20	361	294	2,35	1,23	1,06
50	-15	455	318	2,41	1,43	1,24
50	-10	568	341	2,47	1,67	1,44
50	-5	698	362	2,54	1,93	1,67
50	0	845	382	2,61	2,21	1,91
50	5	1.011	400	2,68	2,53	2,18
50	7,2	1.089	408	2,71	2,67	2,31
50	10	1.194	417	2,76	2,86	2,47

55	-25	258	270	2,30	0,96	0,83
55	-20	326	299	2,36	1,09	0,94
55	-15	411	326	2,43	1,26	1,09
55	-10	514	352	2,51	1,46	1,26
55	-5	635	376	2,59	1,69	1,46
55	0	773	399	2,68	1,94	1,67
55	5	930	421	2,77	2,21	1,91
55	7,2	1.004	430	2,81	2,34	2,02
55	10	1.104	441	2,87	2,50	2,16

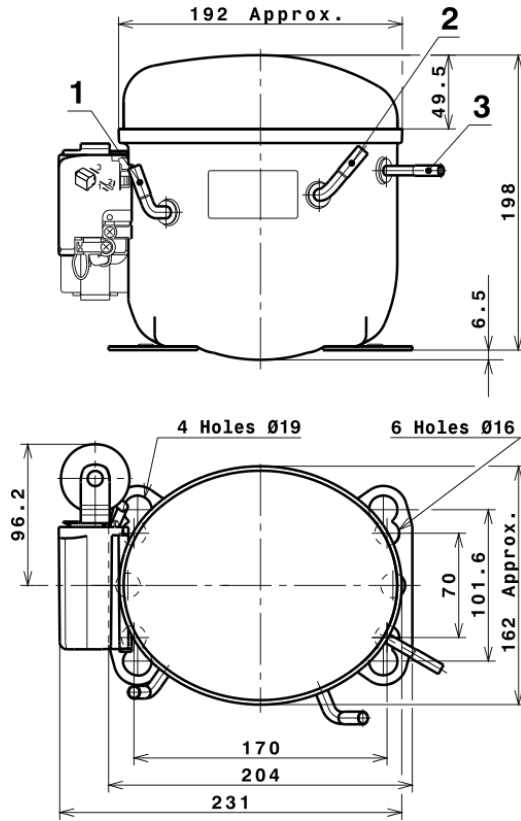
60	-25	232	272	2,31	0,85	0,74
60	-20	291	304	2,37	0,96	0,83
60	-15	367	335	2,45	1,10	0,95
60	-10	461	363	2,54	1,27	1,09
60	-5	572	391	2,65	1,46	1,26
60	0	701	417	2,75	1,68	1,45
60	5	849	442	2,87	1,92	1,66
60	7,2	919	452	2,92	2,03	1,76
60	10	1.014	465	2,99	2,18	1,88

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.567,4848713137	210,4470970331	1,8438614075	14,062755211063
2	49,8168810449	-2,4156558495	-0,0133954122	0,50008427913582
3	-14,8196901275	3,63111112735	0,0159447468	-0,063947806167796
4	0,3486582133	-0,0269017714	0,0001495604	0,0054749365177885
5	-0,3824598948	0,1287893976	0,0006075352	-0,0013968677532538

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 HMBP

