

# Technical Data Sheet

Compressor model **NLY45LAa**  
 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 4,56 cm<sup>3</sup>  
 Diameter 19,09 mm  
 Stroke 15,93 mm  
 Net Weight 10,25 Kg  
 Oil type ISO VG 46 MINER  
 Oil charge 350 cm<sup>3</sup>

## MOTOR

Nominal Power 1/6 hp  
 Voltage/Frequency 220-240V 50Hz  
 Voltage range 187-264 V  
 Type CSIR  
 Phase number 1 PH  
 Locked Rotor Amps (LRA) 6,70 A  
 Max. Cont. Current (MCC) 1,60 A  
 Main W. resist. at 25°C 12,50 Ω  
 Start W. resist. at 25°C 16,30 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	176 kCal/h	152 W
COP	1,35 W/W	1,04 W/W
EER	1,16 kCal/Wh	0,90 kCal/Wh
Input Power	152 W	146 W
Current	0,99 A	0,97 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (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	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	47- 56 µF 330 V			
Relay	Option 1			
Reference	2014 118.			
Pick-Up	3,75 A			
Drop-Out	3,20 A			
Protector	Option 1	Option 2		
Reference	MSP346HV	T0067		
Current	6,40 A	6,60 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 78,00 °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

# Technical Data Sheet

## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	81	104	0,84	0,91	0,78
40	-35	108	110	0,85	1,15	0,99
40	-30	143	116	0,87	1,43	1,23
40	-25	184	123	0,89	1,74	1,50
40	-23,3	199	125	0,90	1,85	1,59
40	-20	232	130	0,92	2,07	1,78
40	-15	286	139	0,94	2,40	2,07
40	-10	348	148	0,97	2,74	2,36

45	-40	76	102	0,83	0,87	0,75
45	-35	103	111	0,86	1,08	0,93
45	-30	136	120	0,89	1,31	1,13
45	-25	176	131	0,92	1,57	1,35
45	-23,3	192	134	0,93	1,66	1,43
45	-20	223	141	0,95	1,84	1,58
45	-15	277	153	0,99	2,11	1,81
45	-10	338	165	1,04	2,38	2,05

50	-40	71	100	0,83	0,83	0,71
50	-35	97	112	0,86	1,00	0,86
50	-30	129	125	0,90	1,20	1,04
50	-25	169	138	0,94	1,42	1,22
50	-23,3	184	143	0,96	1,49	1,28
50	-20	215	152	0,99	1,64	1,41
50	-15	268	167	1,05	1,87	1,60
50	-10	328	183	1,11	2,09	1,80

55	-40	66	98	0,82	0,78	0,67
55	-35	91	113	0,86	0,93	0,80
55	-30	123	129	0,91	1,10	0,95
55	-25	161	146	0,97	1,28	1,10
55	-23,3	176	152	0,99	1,35	1,16
55	-20	207	163	1,03	1,47	1,26
55	-15	259	181	1,10	1,66	1,43
55	-10	318	200	1,18	1,85	1,59

60	-40	61	96	0,81	0,74	0,64
60	-35	85	115	0,87	0,86	0,74
60	-30	116	134	0,93	1,01	0,87
60	-25	154	154	1,00	1,16	1,00
60	-23,3	168	161	1,02	1,22	1,05
60	-20	198	174	1,07	1,32	1,14
60	-15	250	196	1,16	1,48	1,28
60	-10	308	218	1,26	1,65	1,42

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	88	104	0,84	0,84	0,73
40	-35	120	110	0,85	1,10	0,95
40	-30	159	116	0,87	1,37	1,18
40	-25	204	123	0,89	1,66	1,43
40	-23,3	221	125	0,90	1,76	1,52
40	-20	256	130	0,92	1,96	1,69
40	-15	313	139	0,94	2,26	1,95
40	-10	378	148	0,97	2,56	2,21

45	-40	79	102	0,83	0,78	0,67
45	-35	109	111	0,86	0,98	0,85
45	-30	144	120	0,89	1,20	1,04
45	-25	187	131	0,92	1,43	1,23
45	-23,3	202	134	0,93	1,51	1,30
45	-20	235	141	0,95	1,66	1,44
45	-15	290	153	0,99	1,90	1,64
45	-10	351	165	1,04	2,13	1,84

50	-40	71	100	0,83	0,71	0,61
50	-35	97	112	0,86	0,87	0,75
50	-30	130	125	0,90	1,04	0,90
50	-25	169	138	0,94	1,22	1,06
50	-23,3	184	143	0,96	1,29	1,11
50	-20	215	152	0,99	1,41	1,22
50	-15	267	167	1,05	1,59	1,38
50	-10	325	183	1,11	1,78	1,54

55	-40	62	98	0,82	0,63	0,55
55	-35	86	113	0,86	0,76	0,65
55	-30	116	129	0,91	0,89	0,77
55	-25	152	146	0,97	1,04	0,90
55	-23,3	165	152	0,99	1,09	0,94
55	-20	194	163	1,03	1,19	1,03
55	-15	243	181	1,10	1,34	1,16
55	-10	298	200	1,18	1,49	1,29

60	-40	54	96	0,81	0,56	0,48
60	-35	74	115	0,87	0,65	0,56
60	-30	101	134	0,93	0,75	0,65
60	-25	134	154	1,00	0,87	0,75
60	-23,3	147	161	1,02	0,91	0,79
60	-20	174	174	1,07	1,00	0,86
60	-15	220	196	1,16	1,12	0,97
60	-10	272	218	1,26	1,25	1,08

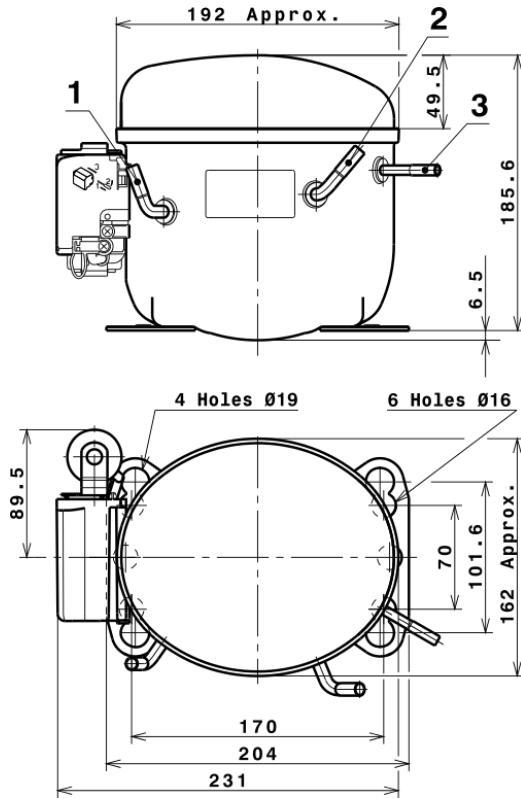
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	780,7960138800	-25,2436389564	0,2774095811	7,3762189307668
2	20,6090260492	-3,1585009627	-0,0094309287	0,2195744343868
3	-6,6401573602	4,9182341276	0,0201446903	-0,029393367821698
4	0,1233687804	0,0134400476	0,0001461070	0,0018032728562261
5	-0,1235036501	0,1331725595	0,0005320751	-0,00042916086341878

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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# Technical Data Sheet

## 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



## 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

