

# Technical Data Sheet

Compressor model **NLY45RRa**  
 Voltage **115-127V 60Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	4,56 cm <sup>3</sup>	Nominal Power	1/5 hp
Refrigerant	R290	Diameter	19,09 mm	Voltage/Frequency	115-127V 60Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	15,93 mm	Voltage range	98-140 V
Expansion	Capillar/Valve	Net Weight	9,19 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	295 cm <sup>3</sup>	Locked Rotor Amps (LRA)	20,50 A
				Max. Cont. Current (MCC)	5,30 A
				Main W. resist. at 25°C	2,80 Ω
				Start W. resist. at 25°C	8,55 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	633 kCal/h	618 W
COP	2,41 W/W	2,08 W/W
EER	2,08 kCal/Wh	1,80 kCal/Wh
Input Power	305 W	297 W
Current	3,39 A	3,33 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	115 V 60 Hz	115 V 60 Hz

## ELECTRICAL COMPONENTS

Starting capacitor	125 µF 160 V			
Relay	Option 1	Option 2		
Reference	2014 166.	QLZ-11.0A		
Pick-Up	11,00 A	11 A		
Drop-Out	9,35 A	9.35 A		
Protector	Option 1			
Reference	T0253			
Current	15,00 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	219	178	2,56	1,43	1,23
40	-20	276	189	2,62	1,70	1,46
40	-15	344	202	2,70	1,98	1,70
40	-10	422	216	2,78	2,27	1,95
40	-5	511	231	2,87	2,57	2,21
40	0	610	247	2,98	2,87	2,47
40	5	719	264	3,09	3,17	2,72
40	7,2	771	272	3,15	3,30	2,83
40	10	840	282	3,22	3,46	2,97

45	-25	203	179	2,56	1,32	1,13
45	-20	255	192	2,64	1,54	1,33
45	-15	318	207	2,72	1,79	1,54
45	-10	392	222	2,82	2,05	1,76
45	-5	476	239	2,92	2,32	1,99
45	0	570	256	3,04	2,59	2,23
45	5	675	275	3,16	2,86	2,46
45	7,2	725	283	3,23	2,98	2,56
45	10	791	294	3,31	3,13	2,69

50	-25	187	181	2,57	1,20	1,04
50	-20	235	195	2,65	1,40	1,20
50	-15	293	211	2,75	1,61	1,39
50	-10	362	228	2,85	1,85	1,59
50	-5	441	246	2,97	2,09	1,79
50	0	531	265	3,10	2,33	2,00
50	5	632	285	3,24	2,58	2,22
50	7,2	679	294	3,31	2,69	2,31
50	10	742	306	3,40	2,82	2,43

55	-25	171	182	2,58	1,09	0,94
55	-20	214	198	2,67	1,26	1,08
55	-15	268	216	2,78	1,44	1,24
55	-10	332	234	2,89	1,65	1,42
55	-5	407	253	3,02	1,87	1,60
55	0	492	274	3,16	2,09	1,80
55	5	588	295	3,32	2,31	1,99
55	7,2	633	305	3,39	2,41	2,08
55	10	694	318	3,49	2,54	2,18

60	-25	155	184	2,59	0,98	0,84
60	-20	194	201	2,69	1,12	0,96
60	-15	243	220	2,80	1,28	1,10
60	-10	302	240	2,93	1,46	1,26
60	-5	372	261	3,07	1,66	1,43
60	0	453	283	3,22	1,86	1,60
60	5	544	306	3,39	2,07	1,78
60	7,2	587	316	3,48	2,16	1,86
60	10	645	330	3,58	2,28	1,96

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	236	178	2,56	1,32	1,14
40	-20	298	190	2,63	1,56	1,35
40	-15	371	203	2,70	1,82	1,58
40	-10	455	217	2,79	2,09	1,81
40	-5	550	233	2,88	2,37	2,04
40	0	656	249	2,99	2,64	2,28
40	5	773	266	3,10	2,91	2,51
40	7,2	828	274	3,16	3,03	2,61
40	10	901	284	3,23	3,17	2,74

45	-25	217	180	2,57	1,21	1,04
45	-20	274	193	2,64	1,42	1,22
45	-15	341	208	2,73	1,64	1,42
45	-10	420	223	2,82	1,88	1,62
45	-5	510	240	2,93	2,12	1,83
45	0	610	258	3,05	2,37	2,05
45	5	722	276	3,18	2,61	2,26
45	7,2	774	285	3,24	2,72	2,35
45	10	844	296	3,32	2,85	2,46

50	-25	199	181	2,58	1,10	0,95
50	-20	250	196	2,66	1,27	1,10
50	-15	312	212	2,76	1,47	1,27
50	-10	385	229	2,86	1,68	1,45
50	-5	469	247	2,98	1,89	1,64
50	0	564	267	3,11	2,11	1,83
50	5	670	287	3,25	2,34	2,02
50	7,2	720	296	3,32	2,43	2,10
50	10	787	308	3,41	2,55	2,21

55	-25	180	183	2,59	0,99	0,85
55	-20	226	199	2,68	1,13	0,98
55	-15	282	217	2,78	1,30	1,12
55	-10	350	235	2,90	1,49	1,28
55	-5	428	255	3,03	1,68	1,45
55	0	518	276	3,17	1,88	1,62
55	5	618	297	3,33	2,08	1,80
55	7,2	666	307	3,41	2,17	1,87
55	10	729	320	3,51	2,28	1,97

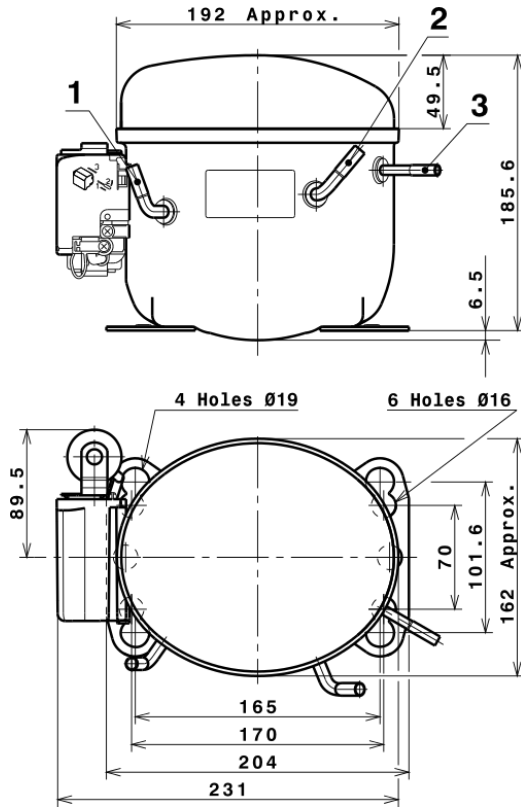
60	-25	162	184	2,59	0,88	0,76
60	-20	202	202	2,70	1,00	0,86
60	-15	253	221	2,81	1,14	0,99
60	-10	315	241	2,94	1,30	1,13
60	-5	387	262	3,08	1,48	1,28
60	0	471	284	3,24	1,66	1,43
60	5	566	308	3,41	1,84	1,59
60	7,2	611	318	3,49	1,92	1,66
60	10	672	332	3,60	2,03	1,75

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.028,3868952824	181,8978477876	2,4621960753	9,1757676190538
2	31,3106233784	1,0455087132	0,0052457106	0,3115238872585
3	-9,5434464756	1,8385518293	0,0139368317	-0,038541944849069
4	0,2154618756	0,0231149251	0,0002930912	0,0034098630484448
5	-0,2324613302	0,0612007832	0,0004887508	-0,00070130544545818

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 HMBP

