

# Technical Data Sheet

Compressor model **NLY12RAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	10,70 cm <sup>3</sup>	Nominal Power	3/8 hp
Refrigerant	R290	Diameter	25,40 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	21,11 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	11,44 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)	17,50 A
				Max. Cont. Current (MCC)	4,90 A
				Main W. resist. at 25°C	5,45 Ω
				Start W. resist. at 25°C	8,72 Ω

## NOMINAL PERFORMANCE

## APPROVALS

	ASHRAE	CECOMAF
Cooling Capacity	1.249 kCal/h	1.224 W
COP	2,41 W/W	2,06 W/W
EER	2,07 kCal/Wh	1,78 kCal/Wh
Input Power	602 W	594 W
Current	3,44 A	3,40 A

## 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	72- 88 µF 330 V			
Relay	Option 1			
Reference	2014 158.			
Pick-Up	9,05 A			
Drop-Out	7,70 A			
Protector	Option 1			
Reference	T0188			
Current	12,30 A			
Time check	7,5-14 seg			
Disc temp. (Open/Close)	115,00 / 61,00 °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	434	353	2,45	1,43	1,23
40	-20	549	389	2,57	1,64	1,41
40	-15	683	421	2,68	1,88	1,62
40	-10	834	451	2,79	2,15	1,85
40	-5	1.004	477	2,89	2,45	2,10
40	0	1.193	501	2,99	2,77	2,38
40	5	1.400	521	3,07	3,13	2,69
40	7,2	1.497	529	3,11	3,29	2,83
40	10	1.625	538	3,14	3,52	3,02

45	-25	409	358	2,46	1,33	1,14
45	-20	515	397	2,59	1,51	1,30
45	-15	640	433	2,72	1,72	1,48
45	-10	783	465	2,85	1,96	1,68
45	-5	944	495	2,96	2,22	1,91
45	0	1.123	521	3,07	2,51	2,16
45	5	1.321	544	3,17	2,83	2,43
45	7,2	1.414	553	3,21	2,97	2,56
45	10	1.537	564	3,26	3,17	2,73

50	-25	384	364	2,48	1,23	1,06
50	-20	481	405	2,62	1,38	1,19
50	-15	597	444	2,76	1,56	1,34
50	-10	731	480	2,90	1,77	1,52
50	-5	883	512	3,03	2,01	1,72
50	0	1.054	541	3,16	2,26	1,95
50	5	1.243	567	3,28	2,55	2,19
50	7,2	1.332	578	3,32	2,68	2,31
50	10	1.450	590	3,38	2,86	2,46

55	-25	359	369	2,50	1,13	0,97
55	-20	447	414	2,65	1,26	1,08
55	-15	554	456	2,81	1,41	1,22
55	-10	679	494	2,96	1,60	1,37
55	-5	822	529	3,11	1,81	1,55
55	0	984	561	3,25	2,04	1,75
55	5	1.164	590	3,38	2,29	1,97
55	7,2	1.249	602	3,44	2,41	2,07
55	10	1.362	616	3,51	2,57	2,21

60	-25	334	375	2,52	1,04	0,89
60	-20	413	422	2,68	1,14	0,98
60	-15	511	467	2,85	1,27	1,09
60	-10	627	508	3,02	1,44	1,23
60	-5	762	547	3,18	1,62	1,39
60	0	914	582	3,34	1,83	1,57
60	5	1.085	613	3,50	2,06	1,77
60	7,2	1.167	627	3,56	2,17	1,86
60	10	1.275	642	3,64	2,31	1,99

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	467	354	2,45	1,32	1,14
40	-20	592	391	2,57	1,52	1,31
40	-15	736	424	2,69	1,74	1,50
40	-10	900	454	2,80	1,98	1,71
40	-5	1.082	480	2,90	2,25	1,95
40	0	1.284	504	3,00	2,55	2,20
40	5	1.505	524	3,09	2,87	2,48
40	7,2	1.608	532	3,12	3,02	2,61
40	10	1.745	541	3,16	3,22	2,79

45	-25	438	360	2,47	1,22	1,05
45	-20	552	399	2,60	1,38	1,19
45	-15	686	435	2,73	1,58	1,36
45	-10	838	468	2,86	1,79	1,55
45	-5	1.010	498	2,97	2,03	1,75
45	0	1.201	524	3,09	2,29	1,98
45	5	1.411	547	3,19	2,58	2,23
45	7,2	1.510	557	3,23	2,71	2,34
45	10	1.641	568	3,28	2,89	2,50

50	-25	408	365	2,49	1,12	0,96
50	-20	512	408	2,63	1,26	1,08
50	-15	635	447	2,77	1,42	1,23
50	-10	777	482	2,91	1,61	1,39
50	-5	938	515	3,05	1,82	1,57
50	0	1.118	545	3,18	2,05	1,77
50	5	1.318	571	3,29	2,31	1,99
50	7,2	1.412	581	3,34	2,43	2,10
50	10	1.536	594	3,40	2,59	2,24

55	-25	379	371	2,51	1,02	0,88
55	-20	472	416	2,66	1,13	0,98
55	-15	584	458	2,82	1,27	1,10
55	-10	715	497	2,97	1,44	1,24
55	-5	866	532	3,12	1,63	1,40
55	0	1.035	565	3,27	1,83	1,58
55	5	1.224	594	3,40	2,06	1,78
55	7,2	1.313	606	3,46	2,17	1,87
55	10	1.432	620	3,53	2,31	1,99

60	-25	349	377	2,52	0,93	0,80
60	-20	431	425	2,69	1,02	0,88
60	-15	533	470	2,86	1,14	0,98
60	-10	654	511	3,03	1,28	1,10
60	-5	794	550	3,20	1,44	1,25
60	0	953	585	3,36	1,63	1,41
60	5	1.131	618	3,52	1,83	1,58
60	7,2	1.215	631	3,58	1,93	1,66
60	10	1.328	647	3,66	2,05	1,77

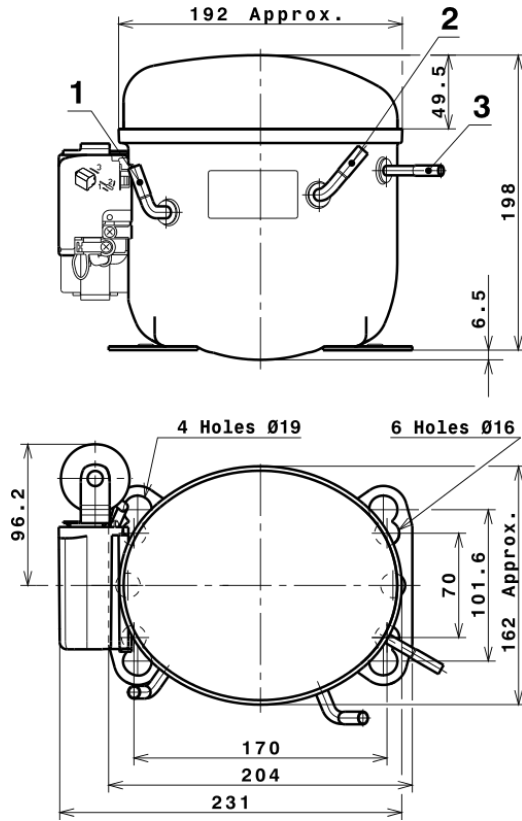
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.952,6185616732	349,5432867994	2,2508050663	17,122050874491
2	59,5241967109	-0,2584892094	-0,0048313352	0,58836929180866
3	-17,1884216669	4,1942580878	0,0196526398	-0,054718800451429
4	0,3760214747	-0,0619704313	-0,0000677453	0,006042790984469
5	-0,4460336413	0,1225189268	0,0006367019	-0,0012956851155093

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	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION



## 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

