

# Technical Data Sheet

Compressor model **NLY90RAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	9,09 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	19,62 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	10,64 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	395 cm <sup>3</sup>	Locked Rotor Amps (LRA)	15,50 A
				Max. Cont. Current (MCC)	4,00 A
				Main W. resist. at 25°C	7,30 Ω
				Start W. resist. at 25°C	12,00 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.080 kCal/h	1.054 W
COP	2,56 W/W	2,18 W/W
EER	2,20 kCal/Wh	1,89 kCal/Wh
Input Power	490 W	483 W
Current	3,00 A	2,98 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	Option 2		
Reference	2014 149.	QLZ-7.8A		
Pick-Up	7,80 A	7,80 A		
Drop-Out	6,65 A	6,65 A		
Protector	Option 1			
Reference	T0267			
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	365	292	2,35	1,45	1,25
40	-20	464	314	2,42	1,72	1,48
40	-15	582	335	2,49	2,02	1,73
40	-10	717	355	2,55	2,35	2,02
40	-5	870	373	2,61	2,71	2,33
40	0	1.042	389	2,67	3,11	2,67
40	5	1.231	404	2,71	3,54	3,04
40	7,2	1.320	411	2,73	3,74	3,22
40	10	1.438	418	2,76	4,00	3,44

45	-25	340	297	2,37	1,33	1,14
45	-20	431	323	2,45	1,55	1,33
45	-15	539	347	2,53	1,81	1,55
45	-10	666	370	2,60	2,09	1,80
45	-5	811	391	2,67	2,41	2,07
45	0	974	411	2,74	2,76	2,37
45	5	1.155	429	2,80	3,13	2,69
45	7,2	1.240	437	2,82	3,30	2,84
45	10	1.354	446	2,85	3,53	3,03

50	-25	315	302	2,38	1,21	1,04
50	-20	397	331	2,48	1,39	1,20
50	-15	497	359	2,57	1,61	1,39
50	-10	616	385	2,65	1,86	1,60
50	-5	752	410	2,73	2,13	1,84
50	0	906	433	2,81	2,44	2,09
50	5	1.078	454	2,88	2,76	2,37
50	7,2	1.160	464	2,91	2,91	2,50
50	10	1.269	475	2,95	3,11	2,67

55	-25	290	307	2,40	1,10	0,94
55	-20	364	340	2,50	1,25	1,07
55	-15	455	371	2,60	1,43	1,23
55	-10	565	400	2,70	1,64	1,41
55	-5	693	428	2,79	1,88	1,62
55	0	838	454	2,88	2,15	1,84
55	5	1.002	479	2,96	2,43	2,09
55	7,2	1.080	490	3,00	2,56	2,20
55	10	1.184	503	3,04	2,74	2,35

60	-25	265	312	2,42	0,99	0,85
60	-20	330	348	2,53	1,10	0,95
60	-15	413	382	2,64	1,26	1,08
60	-10	514	415	2,75	1,44	1,24
60	-5	634	446	2,85	1,65	1,42
60	0	771	476	2,95	1,88	1,62
60	5	926	505	3,05	2,13	1,84
60	7,2	1.000	517	3,09	2,25	1,94
60	10	1.099	531	3,14	2,41	2,07

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	393	294	2,36	1,34	1,16
40	-20	501	316	2,43	1,58	1,37
40	-15	628	337	2,50	1,86	1,61
40	-10	773	357	2,56	2,17	1,87
40	-5	938	375	2,62	2,50	2,16
40	0	1.121	392	2,67	2,86	2,47
40	5	1.323	407	2,72	3,25	2,81
40	7,2	1.418	413	2,74	3,43	2,97
40	10	1.544	421	2,77	3,67	3,17

45	-25	364	299	2,37	1,22	1,05
45	-20	462	325	2,46	1,42	1,23
45	-15	578	349	2,53	1,66	1,43
45	-10	714	372	2,61	1,92	1,66
45	-5	868	394	2,68	2,21	1,91
45	0	1.041	414	2,74	2,52	2,18
45	5	1.234	432	2,81	2,85	2,47
45	7,2	1.324	440	2,83	3,01	2,60
45	10	1.444	449	2,86	3,21	2,78

50	-25	335	304	2,39	1,10	0,95
50	-20	422	333	2,48	1,27	1,10
50	-15	529	361	2,57	1,47	1,27
50	-10	655	387	2,66	1,69	1,46
50	-5	799	412	2,74	1,94	1,67
50	0	962	436	2,82	2,21	1,91
50	5	1.144	457	2,89	2,50	2,16
50	7,2	1.230	467	2,92	2,64	2,28
50	10	1.345	478	2,96	2,81	2,43

55	-25	306	309	2,41	0,99	0,86
55	-20	383	341	2,51	1,12	0,97
55	-15	480	373	2,61	1,29	1,11
55	-10	595	402	2,71	1,48	1,28
55	-5	729	431	2,80	1,69	1,46
55	0	882	457	2,89	1,93	1,67
55	5	1.054	483	2,98	2,18	1,89
55	7,2	1.136	493	3,01	2,30	1,99
55	10	1.245	506	3,06	2,46	2,12

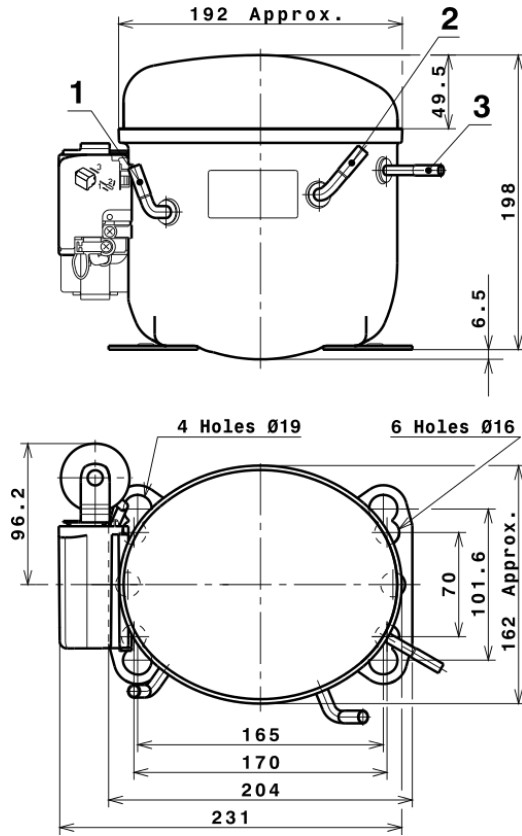
60	-25	277	314	2,42	0,88	0,76
60	-20	344	350	2,54	0,98	0,85
60	-15	431	384	2,65	1,12	0,97
60	-10	536	417	2,76	1,28	1,11
60	-5	660	449	2,86	1,47	1,27
60	0	803	479	2,96	1,67	1,45
60	5	964	508	3,06	1,90	1,64
60	7,2	1.041	520	3,10	2,00	1,73
60	10	1.145	535	3,15	2,14	1,85

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.761,4480895845	222,6382018709	2,0999216084	15,747679407072
2	54,8840165351	-2,1590625479	-0,0077027872	0,54926765069768
3	-16,4211834557	4,4930006683	0,0151166156	-0,067629794187117
4	0,3696307566	-0,0279162804	-0,0000709935	0,0058463651481011
5	-0,4215507490	0,1385823933	0,0004740370	-0,0014964703783762

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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## COMPRESSOR DIMENSIONS

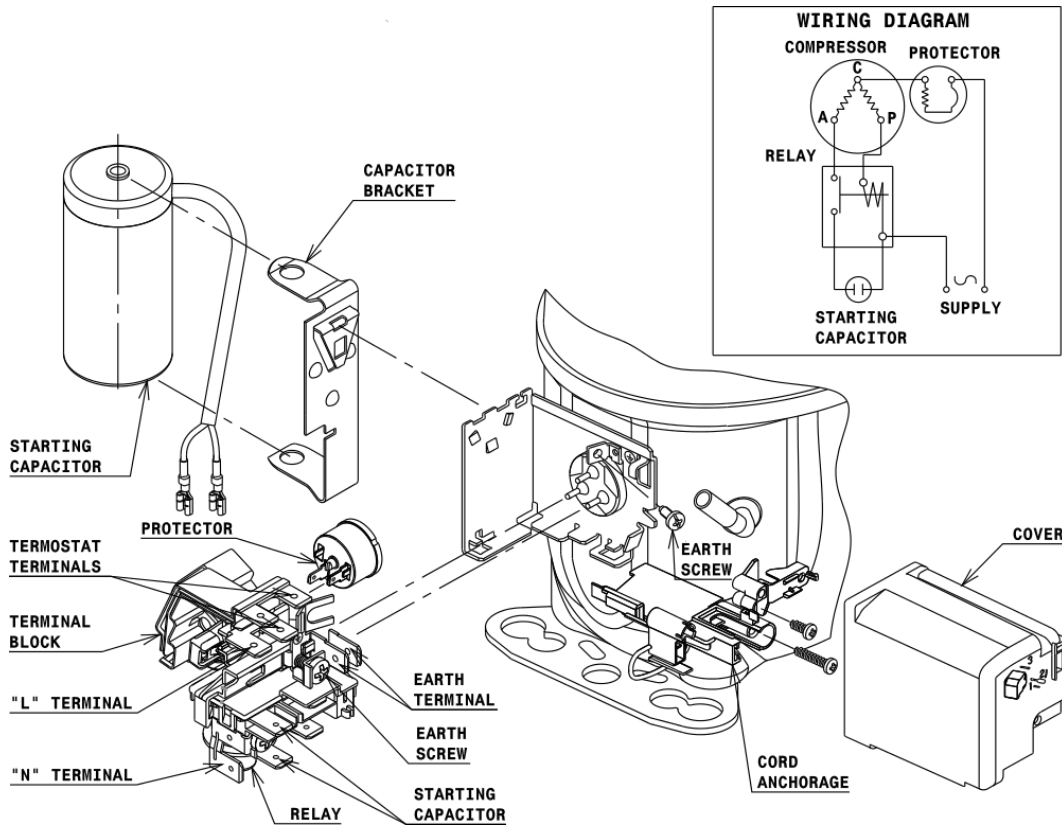


## DESIGNATION INTERNAL DIAM.

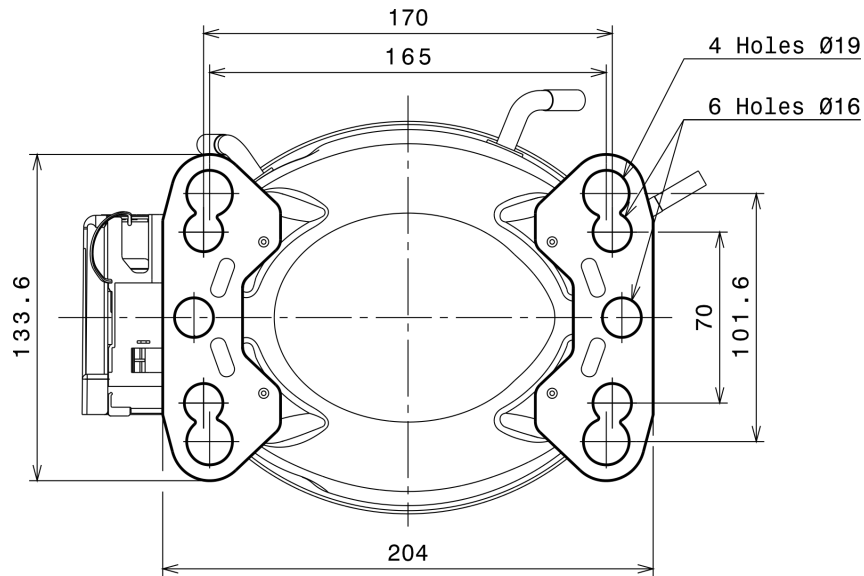
1	Suction	6,5 mm
2	Service	6,5 mm
3	Discharge	4,9 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (L, P ranges)



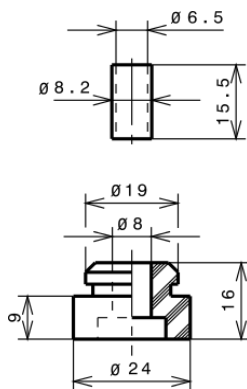
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

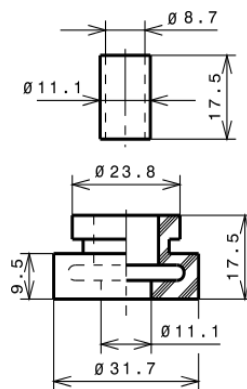
### STANDARD

$\varnothing 16$  holes (170x70 net)



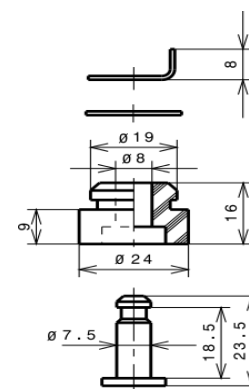
### AMERICAN FEET

$\varnothing 19$  holes (165x101.6 net)



### SNAP-ON

$\varnothing 16$  holes (170x70 net)



## SOA

SOA R290 HMBP

