

# Technical Data Sheet

Compressor model **NLY45RAa**  
 Voltage **220-240V 50Hz ~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	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	15,93 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	9,44 Kg	Type	CSIR
Comp. Cooling	Fan cooled	Oil type	ISO VG 46 MINER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	345 cm <sup>3</sup>	Locked Rotor Amps (LRA)	8,20 A
				Max. Cont. Current (MCC)	2,00 A
				Main W. resist. at 25°C	16,10 Ω
				Start W. resist. at 25°C	23,50 Ω

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	530 kCal/h	518 W
COP	2,51 W/W	2,13 W/W
EER	2,15 kCal/Wh	1,84 kCal/Wh
Input Power	246 W	243 W
Current	1,48 A	1,47 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	47- 56 µF 330 V			
Relay	Option 1			
Reference	2014 125.			
Pick-Up	4,55 A			
Drop-Out	3,90 A			
Protector	Option 1	Option 2		
Reference	T0069	AE26FHY		
Current	7,10 A	7,10 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 62,00 °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

## ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	185	153	1,15	1,41	1,21
40	-20	235	164	1,18	1,67	1,43
40	-15	294	174	1,21	1,96	1,68
40	-10	360	183	1,24	2,28	1,96
40	-5	434	191	1,26	2,65	2,28
40	0	517	197	1,28	3,05	2,62
40	5	608	202	1,30	3,49	3,00
40	7,2	650	204	1,31	3,71	3,19
40	10	706	206	1,31	3,99	3,43

45	-25	170	152	1,15	1,30	1,12
45	-20	216	166	1,19	1,52	1,30
45	-15	271	178	1,22	1,77	1,52
45	-10	333	189	1,26	2,05	1,76
45	-5	404	199	1,29	2,36	2,03
45	0	483	208	1,32	2,70	2,32
45	5	569	215	1,35	3,08	2,65
45	7,2	610	218	1,36	3,25	2,80
45	10	664	221	1,37	3,49	3,00

50	-25	155	152	1,15	1,19	1,02
50	-20	197	168	1,19	1,37	1,18
50	-15	248	182	1,23	1,58	1,36
50	-10	307	196	1,28	1,82	1,57
50	-5	373	208	1,32	2,09	1,80
50	0	448	219	1,36	2,38	2,05
50	5	531	228	1,40	2,71	2,33
50	7,2	570	232	1,42	2,86	2,46
50	10	622	236	1,44	3,06	2,63

55	-25	140	151	1,15	1,08	0,93
55	-20	179	169	1,20	1,23	1,05
55	-15	225	186	1,25	1,41	1,21
55	-10	280	202	1,30	1,61	1,39
55	-5	343	216	1,35	1,84	1,58
55	0	414	229	1,41	2,10	1,80
55	5	493	241	1,46	2,38	2,04
55	7,2	530	246	1,48	2,51	2,15
55	10	580	252	1,51	2,68	2,30

60	-25	125	151	1,15	0,97	0,83
60	-20	160	171	1,20	1,09	0,93
60	-15	202	190	1,26	1,24	1,06
60	-10	253	208	1,32	1,41	1,22
60	-5	312	225	1,39	1,62	1,39
60	0	379	240	1,45	1,84	1,58
60	5	454	254	1,52	2,08	1,79
60	7,2	490	260	1,55	2,19	1,88
60	10	538	267	1,58	2,34	2,01

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	199	153	1,16	1,30	1,12
40	-20	254	165	1,18	1,54	1,33
40	-15	317	175	1,21	1,81	1,56
40	-10	388	184	1,24	2,11	1,82
40	-5	468	192	1,27	2,44	2,11
40	0	556	198	1,29	2,80	2,42
40	5	653	204	1,31	3,21	2,77
40	7,2	698	205	1,31	3,40	2,94
40	10	758	207	1,32	3,66	3,16

45	-25	182	153	1,15	1,19	1,03
45	-20	232	167	1,19	1,39	1,20
45	-15	290	179	1,23	1,62	1,40
45	-10	357	191	1,26	1,87	1,62
45	-5	432	201	1,29	2,16	1,86
45	0	516	209	1,33	2,47	2,13
45	5	608	217	1,35	2,81	2,43
45	7,2	651	219	1,37	2,97	2,56
45	10	709	223	1,38	3,18	2,75

50	-25	165	152	1,15	1,08	0,93
50	-20	210	168	1,19	1,25	1,08
50	-15	264	183	1,24	1,44	1,24
50	-10	326	197	1,28	1,66	1,43
50	-5	397	209	1,33	1,90	1,64
50	0	476	220	1,37	2,16	1,87
50	5	563	230	1,41	2,45	2,12
50	7,2	604	234	1,42	2,59	2,24
50	10	659	238	1,44	2,77	2,39

55	-25	148	152	1,15	0,97	0,84
55	-20	188	170	1,20	1,11	0,96
55	-15	237	187	1,25	1,27	1,09
55	-10	295	203	1,30	1,45	1,25
55	-5	361	218	1,36	1,66	1,43
55	0	435	231	1,41	1,89	1,63
55	5	518	243	1,47	2,13	1,84
55	7,2	557	248	1,49	2,25	1,94
55	10	609	253	1,52	2,40	2,08

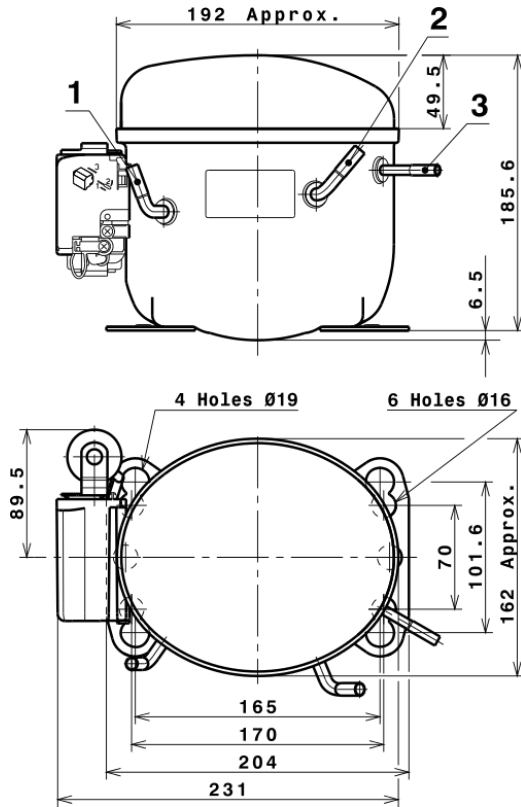
60	-25	131	151	1,15	0,86	0,75
60	-20	167	172	1,20	0,97	0,84
60	-15	211	191	1,26	1,10	0,95
60	-10	264	209	1,33	1,26	1,09
60	-5	325	226	1,39	1,44	1,24
60	0	395	242	1,46	1,63	1,41
60	5	473	256	1,53	1,85	1,60
60	7,2	510	262	1,56	1,95	1,68
60	10	560	269	1,59	2,08	1,80

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	880,3152869844	114,5612628956	0,8841098943	7,9320761768184
2	26,0253584499	-2,4906312924	-0,0110084320	0,25779452503633
3	-8,3057681704	2,2291752186	0,0100487013	-0,036324844631184
4	0,1656517677	-0,0254016873	0,0000234984	0,0026539738598093
5	-0,1941111157	0,0932807721	0,0004119871	-0,00057222105985386

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

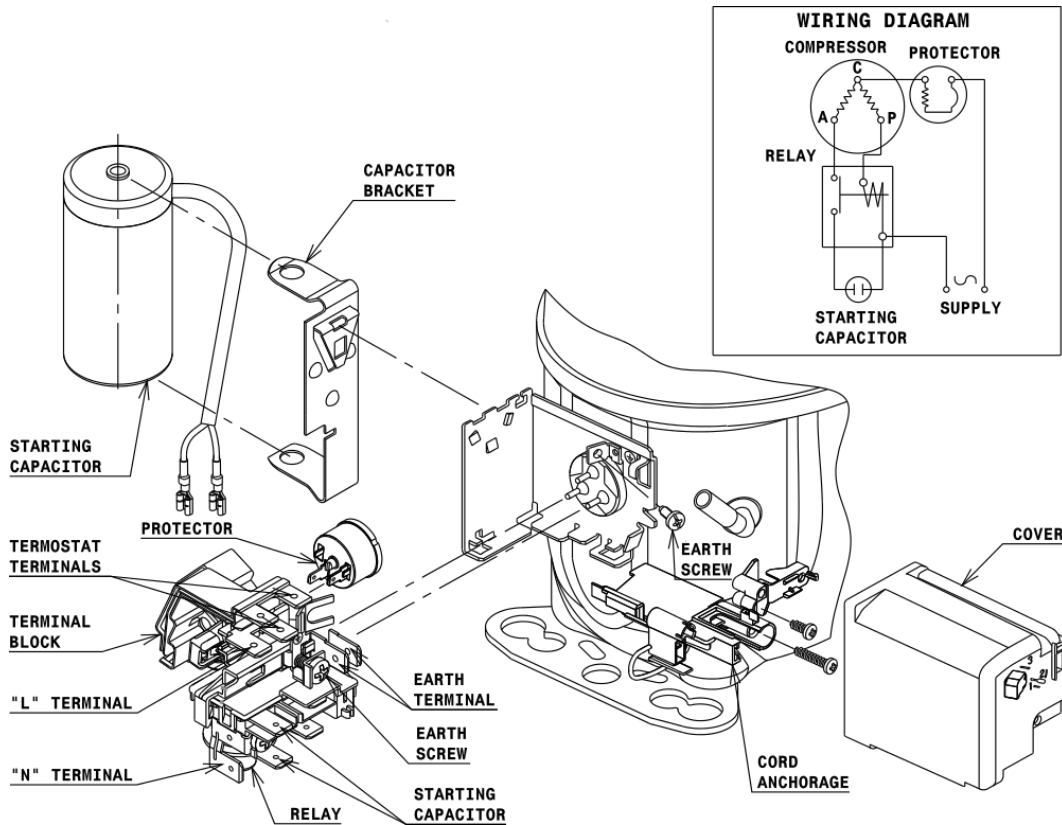


## DESIGNATION INTERNAL DIAM.

DESIGNATION	INTERNAL DIAM.
1 Suction	6,5 mm
2 Service	6,5 mm
3 Discharge	4,9 mm

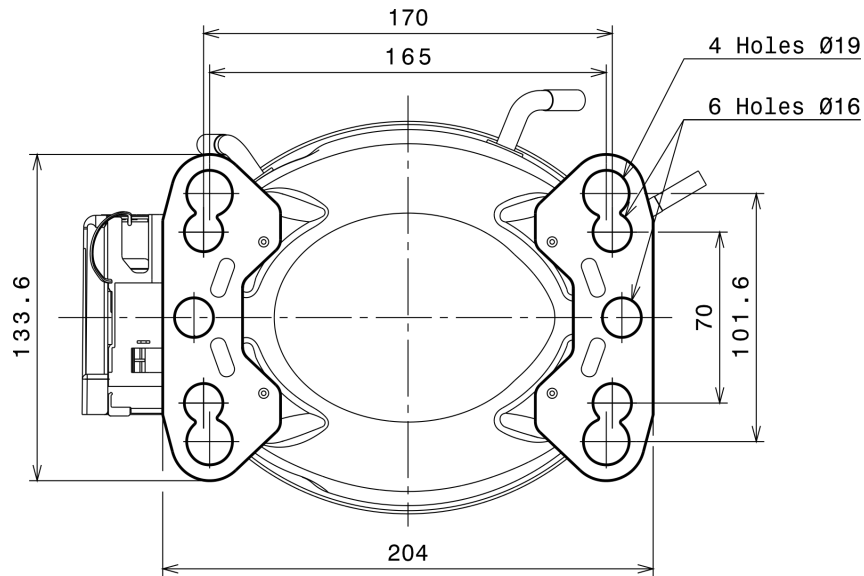
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (L, P ranges)



# Technical Data Sheet

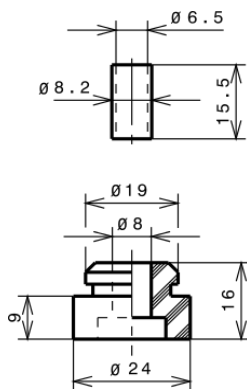
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

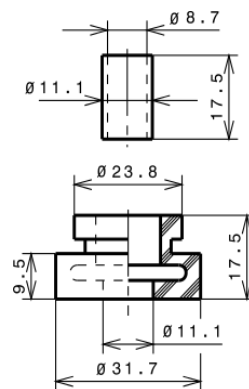
### STANDARD

Ø16 holes (170x70 net)



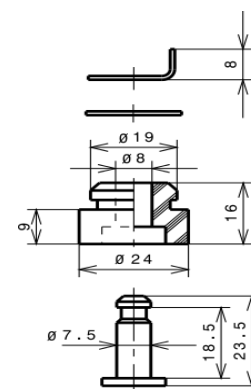
### AMERICAN FEET

Ø19 holes (165x101.6 net)



### SNAP-ON

Ø16 holes (170x70 net)



## SOA

SOA R290 HMBP

