

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **NLY12LAa**
Voltage **220-240V 50Hz ~1**
Refrigerant **R290**

APPLICATION

COMPRESSOR

MOTOR

Application	Low Back Pressure	Displacement	10,70 cm ³	Nominal Power	3/8 hp
Refrigerant	R290	Diameter	25,40 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-40,0 °C to -10,0 °C	Stroke	21,12 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	11,21 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 ³	Locked Rotor Amps (LRA)	16,50 A
				Max. Cont. Current (MCC)	3,10 A
				Main W. resist. at 25°C	5,70 Ω
				Start W. resist. at 25°C	17,00 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	420 kCal/h	364 W
COP	1,24 W/W	0,96 W/W
EER	1,06 kCal/Wh	0,83 kCal/Wh
Input Power	395 W	380 W
Current	2,16 A	2,10 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE LBP (B)	CECOMAF LBP (A)
Evaporating temp. (T _e)	-23,3 °C	-25,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	32,0 °C	55,0 °C
Ambient temp. (T _{amb.})	32,0 °C	32,0 °C
Suction temp. (T _{suction})	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

	Option 1	Option 2		
Starting capacitor	47- 56 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	Option 2		
Reference	T0269	AE39FHS		
Current	9,60 A	9,20 A		
Time check	7,5-14 seg	7,5-14 seg		
Disc temp. (Open/Close)	105,00 / 52,00 °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

Made by Huayi for Danfoss

Technical Data Sheet NLY12LAa

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ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	196	282	1,94	0,81	0,69
40	-35	261	317	1,96	0,96	0,82
40	-30	342	352	2,02	1,13	0,97
40	-25	438	385	2,12	1,32	1,14
40	-23,3	473	395	2,16	1,39	1,20
40	-20	548	416	2,26	1,53	1,32
40	-15	673	447	2,43	1,75	1,51
40	-10	813	476	2,63	1,99	1,71

45	-40	188	268	1,95	0,82	0,70
45	-35	251	308	1,95	0,95	0,82
45	-30	328	346	2,00	1,10	0,95
45	-25	421	383	2,11	1,28	1,10
45	-23,3	456	395	2,16	1,34	1,15
45	-20	528	419	2,27	1,47	1,26
45	-15	650	453	2,47	1,67	1,44
45	-10	787	486	2,71	1,88	1,62

50	-40	181	255	1,97	0,82	0,71
50	-35	240	298	1,94	0,94	0,81
50	-30	315	341	1,99	1,07	0,92
50	-25	404	382	2,11	1,23	1,06
50	-23,3	438	395	2,16	1,29	1,11
50	-20	508	421	2,28	1,40	1,21
50	-15	627	460	2,51	1,59	1,36
50	-10	761	497	2,79	1,78	1,53

55	-40	173	241	1,99	0,83	0,72
55	-35	230	289	1,94	0,93	0,80
55	-30	301	335	1,98	1,05	0,90
55	-25	387	380	2,10	1,19	1,02
55	-23,3	420	395	2,16	1,24	1,06
55	-20	488	424	2,30	1,34	1,15
55	-15	604	466	2,56	1,51	1,30
55	-10	735	507	2,88	1,69	1,45

60	-40	166	228	2,02	0,85	0,73
60	-35	219	279	1,94	0,91	0,78
60	-30	287	330	1,97	1,01	0,87
60	-25	371	379	2,10	1,14	0,98
60	-23,3	402	395	2,16	1,18	1,02
60	-20	469	426	2,31	1,28	1,10
60	-15	581	473	2,60	1,43	1,23
60	-10	709	518	2,97	1,59	1,37

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	212	282	1,94	0,75	0,65
40	-35	289	317	1,96	0,91	0,79
40	-30	380	352	2,02	1,08	0,93
40	-25	485	385	2,12	1,26	1,09
40	-23,3	524	395	2,16	1,32	1,14
40	-20	604	416	2,26	1,45	1,25
40	-15	736	447	2,43	1,65	1,42
40	-10	882	476	2,63	1,85	1,60

45	-40	196	268	1,95	0,73	0,63
45	-35	265	308	1,95	0,86	0,74
45	-30	348	346	2,00	1,01	0,87
45	-25	445	383	2,11	1,16	1,00
45	-23,3	481	395	2,16	1,22	1,05
45	-20	555	419	2,27	1,33	1,15
45	-15	680	453	2,47	1,50	1,30
45	-10	818	486	2,71	1,68	1,45

50	-40	179	255	1,97	0,70	0,61
50	-35	241	298	1,94	0,81	0,70
50	-30	316	341	1,99	0,93	0,80
50	-25	405	382	2,11	1,06	0,92
50	-23,3	438	395	2,16	1,11	0,96
50	-20	507	421	2,28	1,20	1,04
50	-15	623	460	2,51	1,36	1,17
50	-10	753	497	2,79	1,52	1,31

55	-40	163	241	1,99	0,68	0,58
55	-35	216	289	1,94	0,75	0,65
55	-30	283	335	1,98	0,85	0,73
55	-25	364	380	2,10	0,96	0,83
55	-23,3	395	395	2,16	1,00	0,86
55	-20	459	424	2,30	1,08	0,94
55	-15	567	466	2,56	1,22	1,05
55	-10	689	507	2,88	1,36	1,17

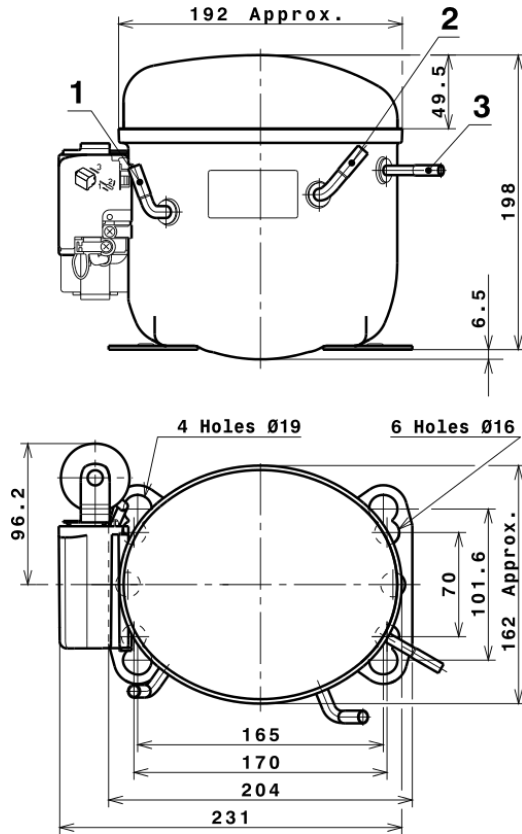
60	-40	147	228	2,02	0,64	0,56
60	-35	192	279	1,94	0,69	0,59
60	-30	251	330	1,97	0,76	0,66
60	-25	324	379	2,10	0,86	0,74
60	-23,3	352	395	2,16	0,89	0,77
60	-20	411	426	2,31	0,96	0,83
60	-15	511	473	2,60	1,08	0,93
60	-10	625	518	2,97	1,21	1,04

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.845,9770659050	391,9898886599	2,6301378722	17,582998187453
2	48,3650773109	-1,1753043019	0,0827694101	0,51881966553286
3	-16,3352268892	3,7887103936	0,0239615758	-0,080876146850617
4	0,2681829105	-0,0256633438	0,0015475799	0,0039324967649105
5	-0,3254972213	0,1636805274	0,0005150748	-0,0015630319338234

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

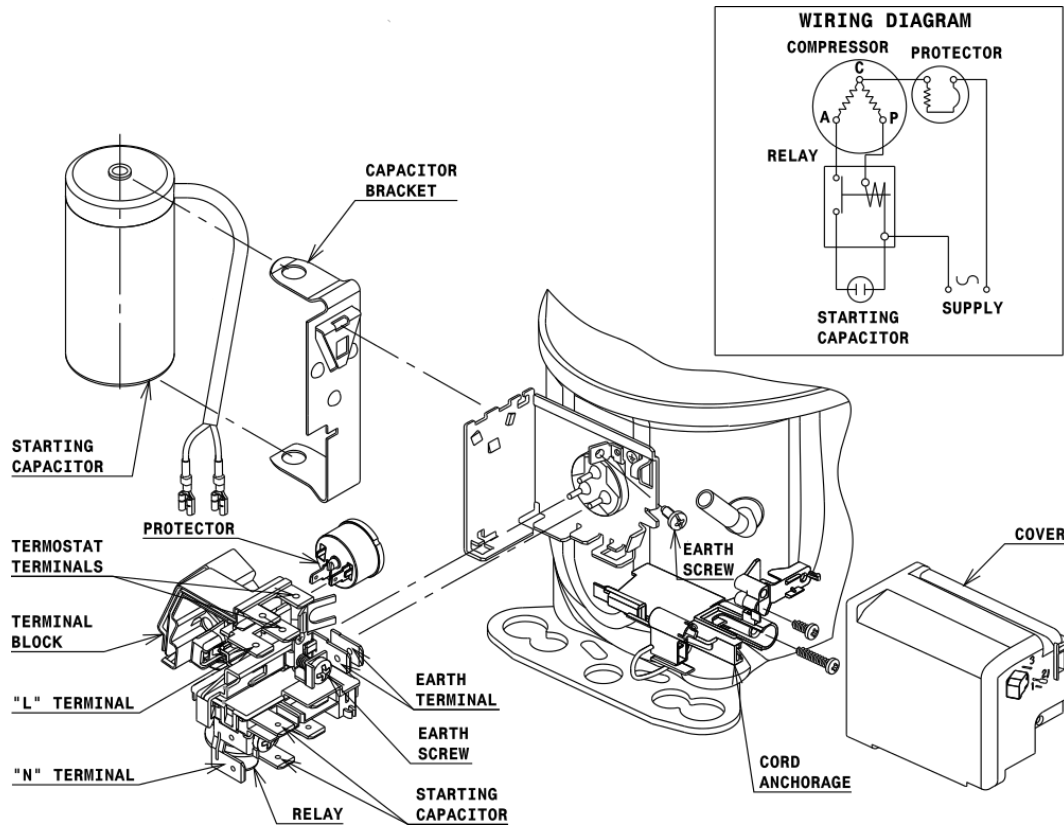


DESIGNATION INTERNAL DIAM.

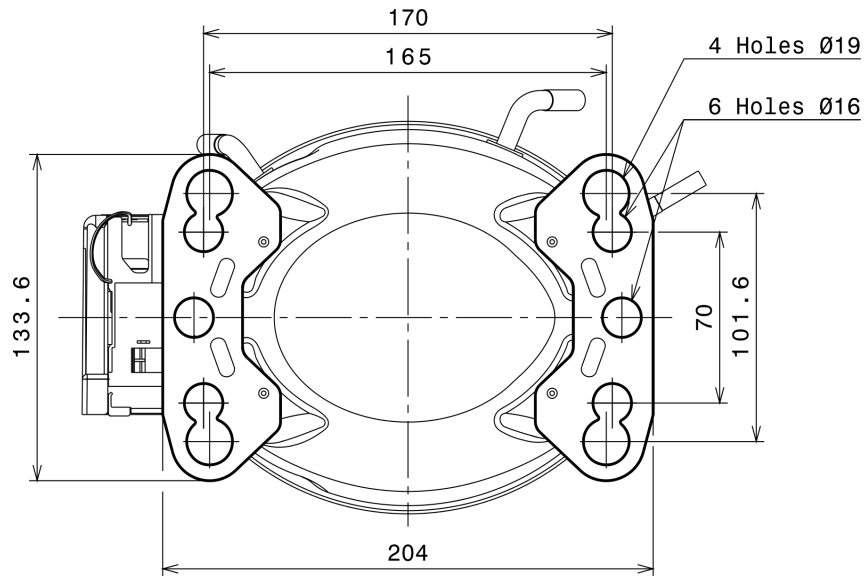
1	Suction	8,1 mm
2	Service	8,1 mm
3	Discharge	6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



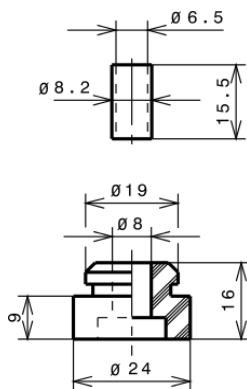
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

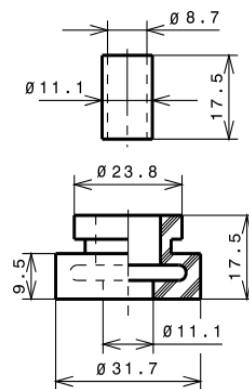
STANDARD

$\varnothing 16$ holes (170x70 net)



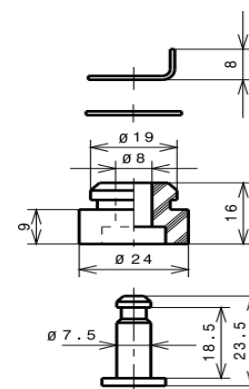
AMERICAN FEET

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



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R290 LBP

