

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **NLY12RGa**
Voltage **200-220/220-230V 50/60Hz ~1**
Refrigerant **R290**

APPLICATION

COMPRESSOR

MOTOR

Application	High-Medium Back Pressure	Displacement	10,70 cm ³	Nominal Power	1/2 hp
Refrigerant	R290	Diameter	25,40 mm	Voltage/Frequency	220-230V 60Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	21,12 mm	Voltage range	187-253 V
Expansion	Capillar/Valve	Net Weight	12,14 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)	21,00 A
				Max. Cont. Current (MCC)	5,00 A
				Main W. resist. at 25°C	2,87 Ω
				Start W. resist. at 25°C	7,59 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.477 kCal/h	1.445 W
COP	2,41 W/W	2,07 W/W
EER	2,07 kCal/Wh	1,79 kCal/Wh
Input Power	712 W	697 W
Current	3,89 A	3,83 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HMBP (D)	CECOMAF HMBP (C)
Evaporating temp. (T _e)	7,2 °C	5,0 °C
Condensing temp. (T _c)	55,0 °C	55,0 °C
Liquid temp. (T _{liq.})	46,0 °C	55,0 °C
Ambient temp. (T _{amb.})	35,0 °C	32,0 °C
Suction temp. (T _{suction})	35,0 °C	32,0 °C
Voltage/Frequency	230 V 60 Hz	230 V 60 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	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

Made by Huayi for Danfoss

Technical Data Sheet NLY12RGa

Printed on 03/11/20

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ASHRAE

Tc °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	492	384	2,67	1,49	1,28
40	-20	632	423	2,80	1,74	1,50
40	-15	794	460	2,92	2,01	1,73
40	-10	978	496	3,05	2,29	1,97
40	-5	1.184	531	3,17	2,60	2,23
40	0	1.411	563	3,29	2,91	2,51
40	5	1.660	594	3,41	3,25	2,80
40	7,2	1.777	607	3,46	3,40	2,93
40	10	1.931	623	3,53	3,60	3,10

45	-25	460	389	2,68	1,38	1,18
45	-20	590	433	2,83	1,58	1,36
45	-15	741	475	2,97	1,81	1,56
45	-10	914	516	3,12	2,06	1,77
45	-5	1.109	554	3,26	2,33	2,00
45	0	1.326	591	3,40	2,61	2,24
45	5	1.565	627	3,54	2,90	2,50
45	7,2	1.677	642	3,60	3,04	2,61
45	10	1.826	661	3,68	3,21	2,76

50	-25	428	395	2,70	1,26	1,08
50	-20	547	443	2,86	1,44	1,24
50	-15	688	490	3,03	1,63	1,40
50	-10	851	535	3,19	1,85	1,59
50	-5	1.035	578	3,35	2,08	1,79
50	0	1.242	620	3,51	2,33	2,00
50	5	1.470	660	3,67	2,59	2,23
50	7,2	1.577	677	3,74	2,71	2,33
50	10	1.720	698	3,83	2,86	2,46

55	-25	396	400	2,72	1,15	0,99
55	-20	505	453	2,90	1,30	1,11
55	-15	635	504	3,08	1,46	1,26
55	-10	787	554	3,26	1,65	1,42
55	-5	961	602	3,44	1,86	1,60
55	0	1.157	648	3,63	2,08	1,78
55	5	1.374	693	3,81	2,31	1,98
55	7,2	1.477	712	3,89	2,41	2,07
55	10	1.614	736	3,99	2,55	2,19

60	-25	364	406	2,74	1,04	0,90
60	-20	462	463	2,93	1,16	1,00
60	-15	582	519	3,13	1,30	1,12
60	-10	723	573	3,33	1,47	1,26
60	-5	887	626	3,54	1,65	1,42
60	0	1.072	677	3,74	1,84	1,58
60	5	1.279	726	3,95	2,05	1,76
60	7,2	1.377	747	4,04	2,14	1,84
60	10	1.508	773	4,16	2,27	1,95

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	529	386	2,67	1,37	1,19
40	-20	682	425	2,80	1,60	1,39
40	-15	857	463	2,93	1,85	1,60
40	-10	1.055	499	3,06	2,11	1,83
40	-5	1.275	534	3,18	2,39	2,06
40	0	1.519	567	3,31	2,68	2,32
40	5	1.785	598	3,43	2,99	2,58
40	7,2	1.909	611	3,48	3,12	2,70
40	10	2.074	627	3,54	3,31	2,86

45	-25	492	391	2,69	1,26	1,09
45	-20	632	435	2,84	1,45	1,25
45	-15	794	478	2,98	1,66	1,44
45	-10	979	518	3,13	1,89	1,63
45	-5	1.188	558	3,27	2,13	1,84
45	0	1.418	595	3,42	2,38	2,06
45	5	1.672	631	3,56	2,65	2,29
45	7,2	1.791	646	3,62	2,77	2,39
45	10	1.948	665	3,70	2,93	2,53

50	-25	455	397	2,71	1,15	0,99
50	-20	582	445	2,87	1,31	1,13
50	-15	732	492	3,04	1,49	1,28
50	-10	904	538	3,20	1,68	1,45
50	-5	1.100	582	3,36	1,89	1,63
50	0	1.318	624	3,53	2,11	1,83
50	5	1.559	664	3,69	2,35	2,03
50	7,2	1.672	682	3,76	2,45	2,12
50	10	1.822	703	3,85	2,59	2,24

55	-25	418	402	2,73	1,04	0,90
55	-20	532	456	2,91	1,17	1,01
55	-15	669	507	3,09	1,32	1,14
55	-10	829	557	3,27	1,49	1,29
55	-5	1.012	606	3,46	1,67	1,44
55	0	1.217	652	3,64	1,87	1,61
55	5	1.445	697	3,83	2,07	1,79
55	7,2	1.553	717	3,91	2,17	1,87
55	10	1.696	741	4,01	2,29	1,98

60	-25	380	408	2,75	0,93	0,81
60	-20	482	466	2,94	1,04	0,89
60	-15	607	522	3,14	1,16	1,00
60	-10	754	577	3,35	1,31	1,13
60	-5	924	630	3,55	1,47	1,27
60	0	1.117	681	3,76	1,64	1,42
60	5	1.332	731	3,97	1,82	1,58
60	7,2	1.434	752	4,06	1,91	1,65
60	10	1.570	779	4,18	2,02	1,74

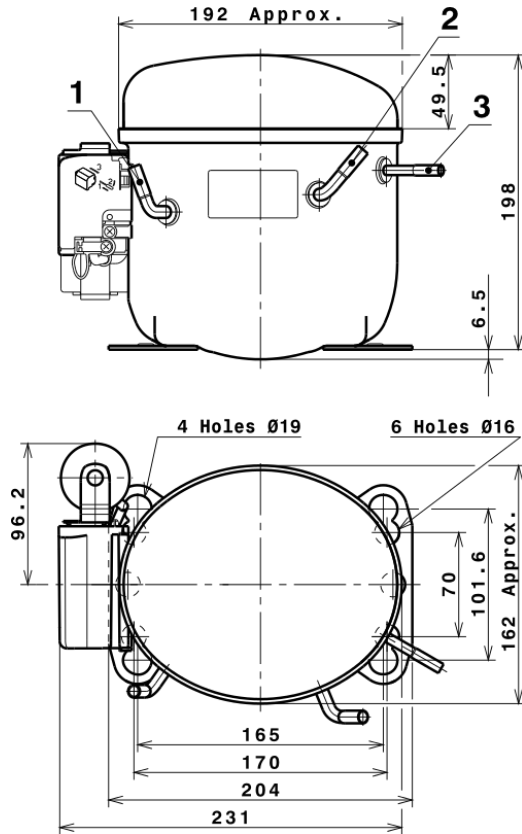


EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	2.329,3567058632	346,4804766773	2,3678692944	20,542969341757
2	71,4599472626	-0,8551957921	-0,0062767441	0,70390778200035
3	-20,8230047548	5,8833866462	0,0244684445	-0,071852943947985
4	0,4474614024	-0,0299275330	0,0000449547	0,0071984571224019
5	-0,5295097650	0,1900840691	0,0008300063	-0,0014404070069142

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

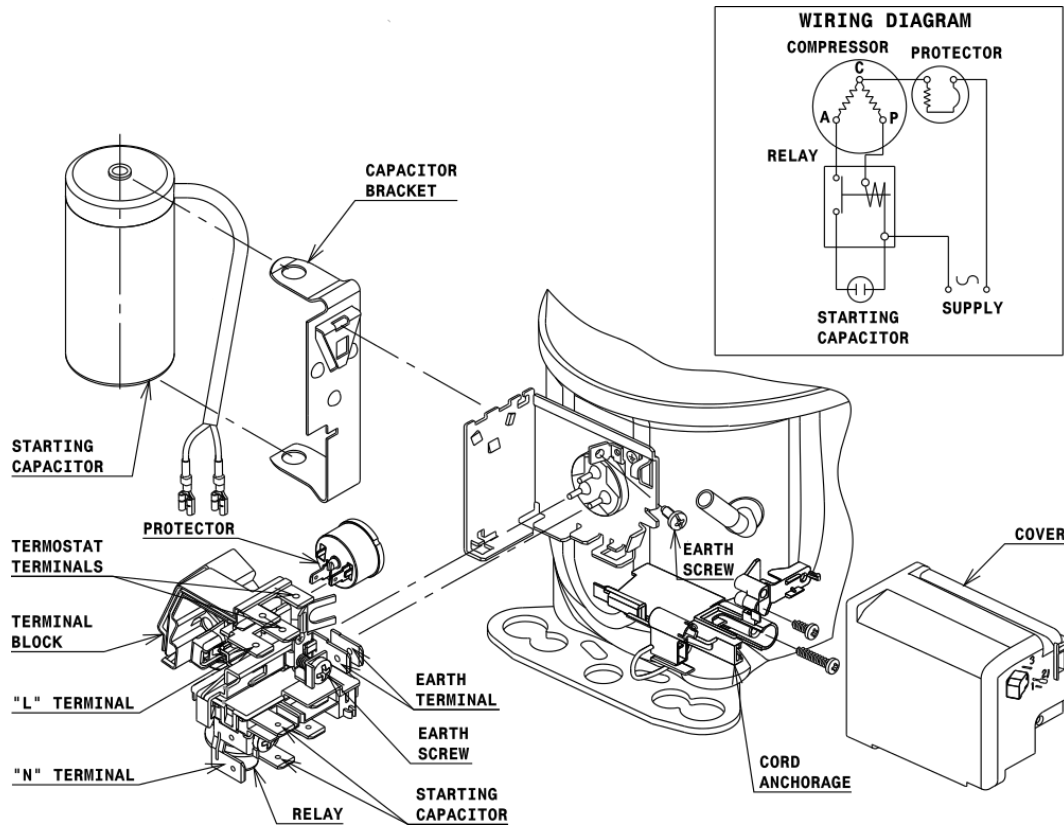


DESIGNATION INTERNAL DIAM.

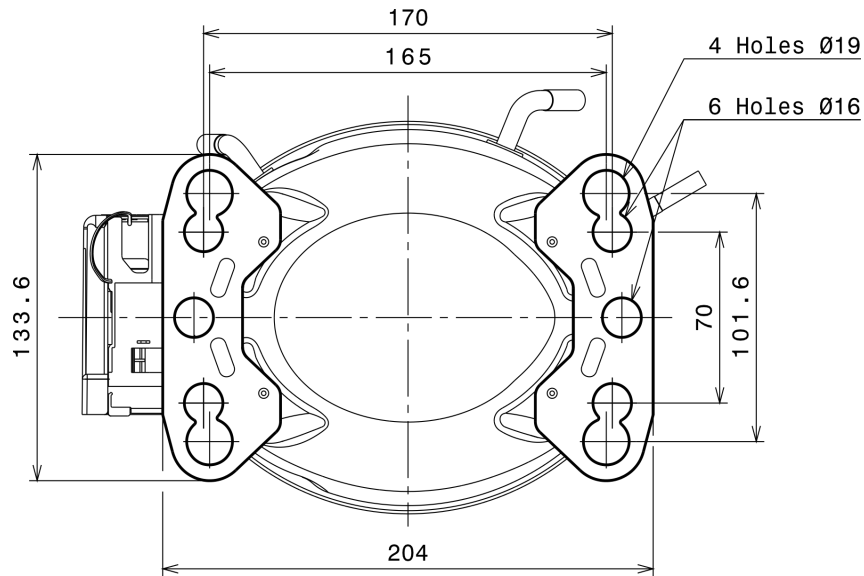
DESIGNATION	INTERNAL DIAM.
1 Suction	8,1 mm
2 Service	8,1 mm
3 Discharge	6,5 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (L, P ranges)



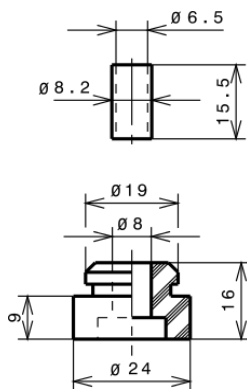
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

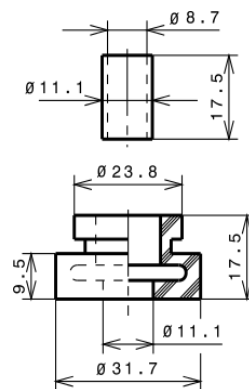
STANDARD

Ø16 holes (170x70 net)



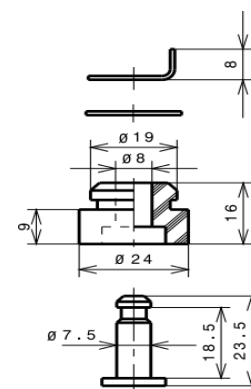
AMERICAN FEET

Ø19 holes (165x101.6 net)



SNAP-ON

Ø16 holes (170x70 net)



SOA

SOA R290 HMBP

