

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **NUY90RAb**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**
 Compressor status

APPLICATION

COMPRESSOR

MOTOR

Application	High Back Pressure	Displacement	8,90 cm ³	Voltage/Frequency	220-240V 50Hz
Refrigerant	R290	Diameter	24,30 mm	Voltage range	187-255 V
Evaporating Temp.	-15,0 °C to 10,0 °C	Stroke	19,00 mm	Type	CSR
Expansion	Capillar/Valve	Net Weight	9,85 Kg	Phase number	1 PH
Comp. Cooling	Fan cooled	Oil type	ISO VG 46 ESTER	Locked Rotor Amps (LRA)	17,50 A
Max. ambient temp.	43,0 °C	Oil charge	200 cm ³	Max. Cont. Current (MCC)	3,65 A
		HP	3/8 hp	Main W. resist. at 25°C	6,22 Ω
				Start W. resist. at 25°C	12,34 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	1.072 kCal/h	1.050 W
COP	2,70 W/W	2,31 W/W
EER	2,33 kCal/Wh	1,99 kCal/Wh
Input Power	461 W	455 W
Current	2,38 A	2,35 A

APPROVALS



TEST CYCLE CONDITIONS

	ASHRAE HBP (D)	CECOMAF HBP (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	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	60-61 µF 330 V		
Run capacitor	10 µF 420 V		
Relay	Option 1		
Reference	QLZ 7.8A + NTC151©		
Pick-Up	7,80 A		
Drop-Out	6,65 A		
Protector	Option 1		
Reference	B100-105		
Current	10,50 A		
Time check	7,5-16 seg		
Disc temp. (Open/Close)	105,00 / 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	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	kCal/h	W	A	W/W	kCal/Wh
40	-15	571	315	1,83	2,11	1,81
40	-10	704	336	1,90	2,44	2,10
40	-5	852	354	1,96	2,80	2,41
40	0	1.015	370	2,02	3,19	2,75
40	5	1.192	383	2,06	3,62	3,12
40	7,2	1.275	388	2,08	3,83	3,29
40	10	1.384	393	2,10	4,10	3,52

45	-15	533	326	1,87	1,90	1,63
45	-10	660	350	1,95	2,19	1,89
45	-5	801	371	2,02	2,51	2,16
45	0	957	390	2,09	2,86	2,46
45	5	1.127	406	2,15	3,23	2,78
45	7,2	1.207	412	2,18	3,41	2,93
45	10	1.312	419	2,21	3,64	3,13

50	-15	495	337	1,90	1,71	1,47
50	-10	615	364	2,00	1,97	1,69
50	-5	750	388	2,09	2,25	1,93
50	0	899	410	2,17	2,55	2,19
50	5	1.063	429	2,25	2,88	2,48
50	7,2	1.140	437	2,28	3,04	2,61
50	10	1.241	445	2,31	3,24	2,79

55	-15	457	348	1,94	1,53	1,31
55	-10	570	378	2,05	1,76	1,51
55	-5	698	405	2,15	2,00	1,72
55	0	841	430	2,25	2,27	1,96
55	5	998	452	2,34	2,57	2,21
55	7,2	1.072	461	2,38	2,70	2,33
55	10	1.170	472	2,43	2,89	2,48

60	-15	419	359	1,98	1,36	1,17
60	-10	526	392	2,10	1,56	1,34
60	-5	647	422	2,22	1,78	1,53
60	0	783	450	2,33	2,02	1,74
60	5	934	475	2,44	2,28	1,96
60	7,2	1.005	486	2,49	2,41	2,07
60	10	1.099	498	2,54	2,57	2,21

CECOMAF

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	W	W	A	W/W	kCal/Wh
40	-15	614	317	1,83	1,94	1,67
40	-10	758	338	1,90	2,24	1,94
40	-5	917	356	1,97	2,58	2,23
40	0	1.092	372	2,03	2,94	2,54
40	5	1.281	385	2,07	3,33	2,87
40	7,2	1.370	390	2,09	3,51	3,03
40	10	1.486	396	2,11	3,76	3,24

45	-15	570	328	1,87	1,74	1,50
45	-10	706	352	1,95	2,01	1,73
45	-5	857	373	2,03	2,29	1,98
45	0	1.023	392	2,10	2,61	2,25
45	5	1.204	408	2,16	2,95	2,55
45	7,2	1.289	415	2,19	3,11	2,68
45	10	1.401	422	2,22	3,32	2,87

50	-15	526	339	1,91	1,55	1,34
50	-10	653	366	2,00	1,78	1,54
50	-5	796	391	2,09	2,04	1,76
50	0	954	412	2,18	2,31	2,00
50	5	1.127	432	2,26	2,61	2,26
50	7,2	1.208	439	2,29	2,75	2,38
50	10	1.315	448	2,33	2,93	2,53

55	-15	482	350	1,95	1,38	1,19
55	-10	601	380	2,06	1,58	1,37
55	-5	735	408	2,16	1,80	1,56
55	0	885	433	2,26	2,05	1,77
55	5	1.050	455	2,35	2,31	1,99
55	7,2	1.127	464	2,39	2,43	2,10
55	10	1.230	475	2,44	2,59	2,24

60	-15	437	361	1,99	1,21	1,05
60	-10	548	394	2,11	1,39	1,20
60	-5	675	425	2,23	1,59	1,37
60	0	816	453	2,35	1,80	1,56
60	5	973	478	2,46	2,03	1,76
60	7,2	1.046	489	2,50	2,14	1,85
60	10	1.144	501	2,56	2,28	1,97

EN12900

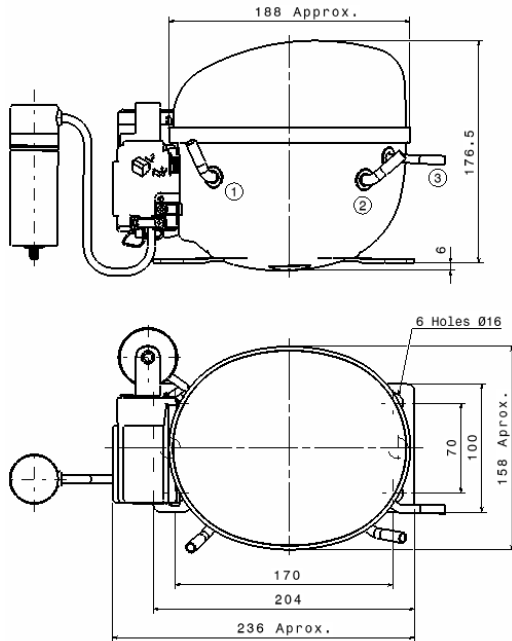
X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.646,2486491868	215,2884159479	1,3685474330	14,527700072227
2	50,0681111963	-1,9853404812	-0,0132288522	0,46048316563833
3	-14,2809755231	4,1648302367	0,0171049760	-0,045505375159219
4	0,3004288278	-0,0501578873	-0,0001035459	0,00527806894366
5	-0,3519553910	0,1266061283	0,0006155950	-9,3443041196861E-5

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

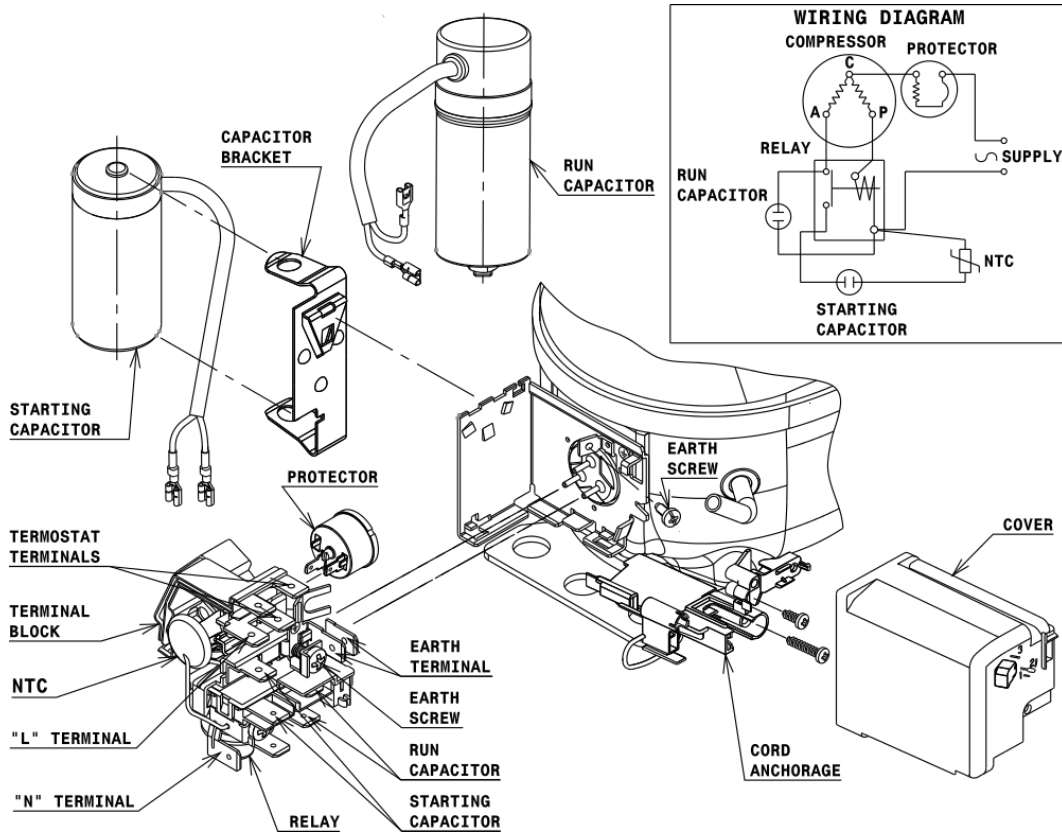
DESIGNATION INTERNAL DIAM.

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

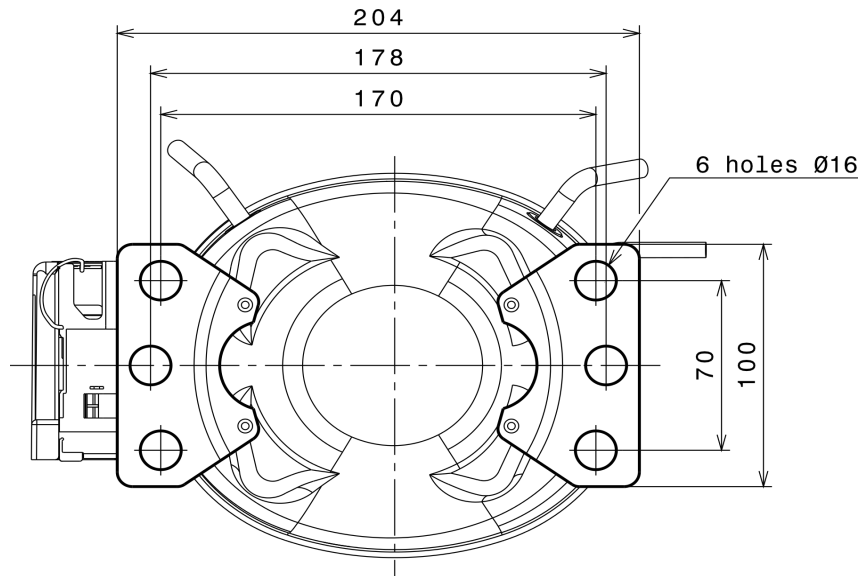


WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSR CONNECTION (CURRENT RELAY + NTC) (U range)



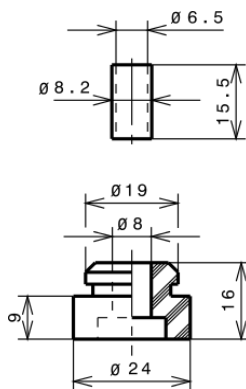
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

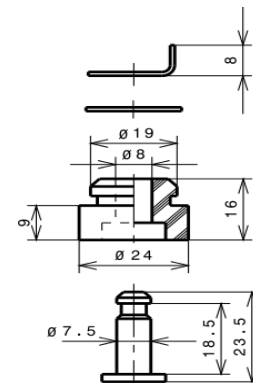
STANDARD

$\varnothing 16$ holes (170x70 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R290 HBP

