

Technical Data Sheet

ENGINEERING
TOMORROW



Compressor model **NUY80RAb**
Voltage **220-240V 50Hz ~1**
Refrigerant **R290**

APPLICATION

COMPRESSOR

MOTOR

Application	High Back Pressure	Displacement	8,10 cm ³	Nominal Power	1/3 hp
Refrigerant	R290	Diameter	24,28 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-15,0 °C to 10,0 °C	Stroke	17,50 mm	Voltage range	198-255 V
Expansion	Capillar/Valve	Net Weight	9,53 Kg	Type	CSR
Comp. Cooling	Fan cooled	Oil type	ISO VG 22 ESTER	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	220 cm ³	Locked Rotor Amps (LRA)	17,70 A
				Main W. resist. at 25°C	5,89 Ω
				Start W. resist. at 25°C	25,80 Ω

NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	980 kCal/h	958 W
COP	2,71 W/W	2,30 W/W
EER	2,33 kCal/Wh	1,98 kCal/Wh
Input Power	420 W	417 W
Current	2,15 A	2,14 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	64-77 / 60-61 μF 330 V		
Run capacitor	10 μF 420 V		
Relay	Option 1	Option 2	
Reference	2014 125. + NTC15Ω	QLZ-4.55A + NTC15Ω	
Pick-Up	4,55 A	4.55 A	
Drop-Out	3,90 A	3.90 A	
Protector	Option 1	Option 2	
Reference	T0266	B110-105	
Current	11,00 A	11,00 A	
Time check	7,5-14 seg	7,5-16 seg	
Disc temp. (Open/Close)	105,00 / 52,00 °C	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	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	kCal/h	W	A	W/W	kCal/Wh
40	-15	521	304	1,63	1,99	1,71
40	-10	637	323	1,73	2,29	1,97
40	-5	769	338	1,80	2,65	2,28
40	0	916	348	1,85	3,07	2,64
40	5	1.079	353	1,87	3,55	3,06
40	7,2	1.156	354	1,88	3,80	3,26
40	10	1.257	354	1,88	4,13	3,55

45	-15	488	311	1,67	1,82	1,57
45	-10	599	333	1,78	2,09	1,80
45	-5	725	351	1,87	2,40	2,06
45	0	866	365	1,93	2,76	2,37
45	5	1.023	374	1,96	3,19	2,74
45	7,2	1.097	376	1,98	3,39	2,92
45	10	1.195	378	1,98	3,68	3,16

50	-15	456	318	1,70	1,67	1,43
50	-10	560	344	1,83	1,90	1,63
50	-5	680	365	1,93	2,17	1,86
50	0	816	382	2,00	2,49	2,14
50	5	967	394	2,05	2,85	2,45
50	7,2	1.039	398	2,07	3,03	2,61
50	10	1.134	402	2,08	3,28	2,82

55	-15	423	325	1,74	1,51	1,30
55	-10	522	354	1,88	1,71	1,47
55	-5	636	379	1,99	1,95	1,68
55	0	766	399	2,07	2,23	1,92
55	5	911	415	2,13	2,56	2,20
55	7,2	980	420	2,15	2,71	2,33
55	10	1.072	426	2,17	2,93	2,52

60	-15	391	332	1,77	1,37	1,18
60	-10	484	365	1,93	1,54	1,33
60	-5	592	393	2,04	1,75	1,51
60	0	716	416	2,14	2,00	1,72
60	5	855	435	2,20	2,29	1,97
60	7,2	922	442	2,23	2,42	2,08
60	10	1.010	450	2,25	2,61	2,25

CECOMAF

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	W	W	A	W/W	kCal/Wh
40	-15	560	306	1,64	1,83	1,58
40	-10	686	325	1,74	2,11	1,82
40	-5	828	340	1,81	2,44	2,11
40	0	986	350	1,86	2,82	2,44
40	5	1.160	355	1,88	3,26	2,82
40	7,2	1.242	356	1,89	3,48	3,01
40	10	1.350	356	1,89	3,79	3,27

45	-15	522	313	1,68	1,67	1,44
45	-10	640	335	1,79	1,91	1,65
45	-5	775	353	1,88	2,19	1,89
45	0	926	367	1,94	2,52	2,18
45	5	1.093	376	1,98	2,91	2,51
45	7,2	1.171	379	1,99	3,09	2,67
45	10	1.276	380	1,99	3,35	2,90

50	-15	484	320	1,71	1,51	1,31
50	-10	595	346	1,84	1,72	1,49
50	-5	723	367	1,94	1,97	1,70
50	0	866	384	2,01	2,25	1,95
50	5	1.026	397	2,06	2,59	2,23
50	7,2	1.101	401	2,08	2,75	2,37
50	10	1.201	405	2,09	2,97	2,57

55	-15	446	327	1,75	1,36	1,18
55	-10	550	356	1,89	1,54	1,33
55	-5	670	381	2,00	1,76	1,52
55	0	806	401	2,08	2,01	1,73
55	5	958	417	2,14	2,30	1,98
55	7,2	1.030	423	2,16	2,44	2,11
55	10	1.127	429	2,18	2,63	2,27

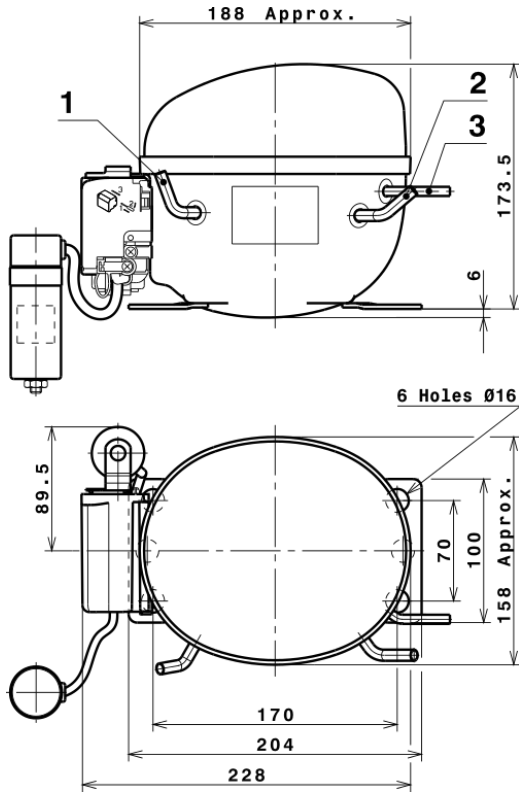
60	-15	408	334	1,78	1,22	1,06
60	-10	504	367	1,94	1,38	1,19
60	-5	617	395	2,05	1,56	1,35
60	0	746	419	2,15	1,78	1,54
60	5	891	438	2,21	2,03	1,76
60	7,2	960	445	2,24	2,16	1,86
60	10	1.052	453	2,26	2,32	2,01

EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.468,9362775069	217,2002465558	1,3558272669	12,810703376216
2	45,3293579832	-3,9035373445	-0,0100160024	0,41689502004147
3	-12,4528471062	3,5476182448	0,0139202295	-0,033784990585453
4	0,3174595968	-0,0904124717	-0,0004869326	0,0054179860946984
5	-0,3120203246	0,1403856516	0,0004539896	1,2933820984173E-5

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

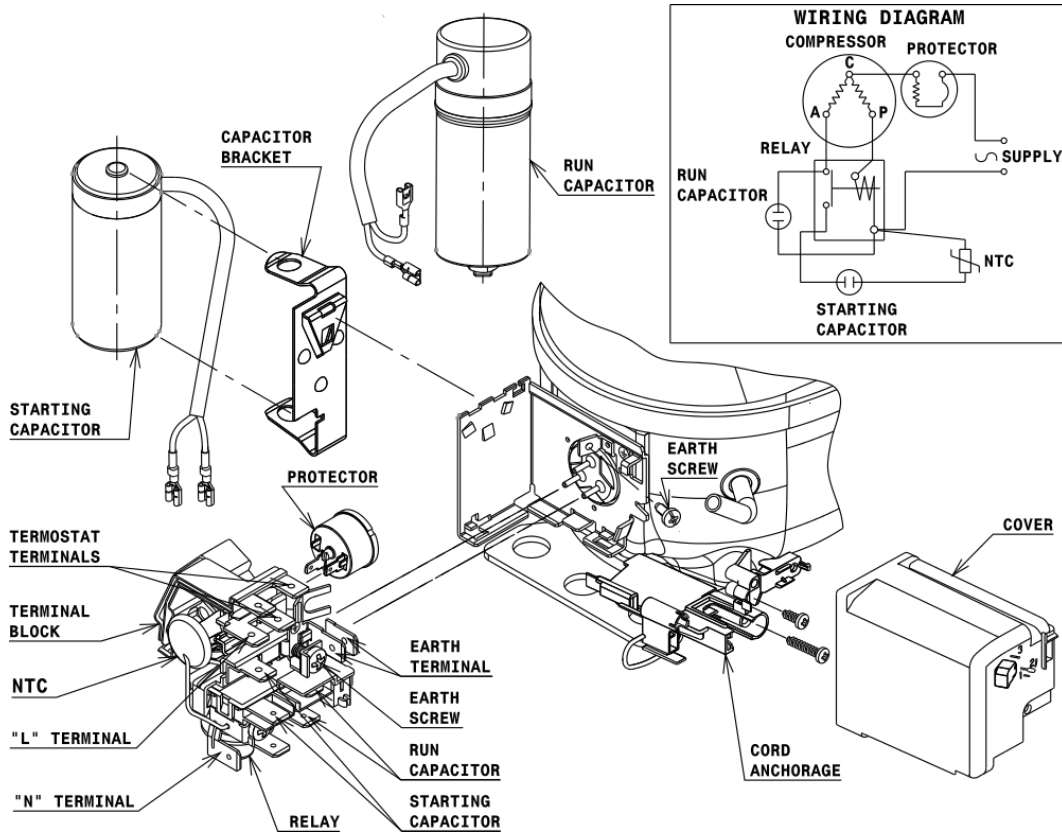


DESIGNATION INTERNAL DIAM.

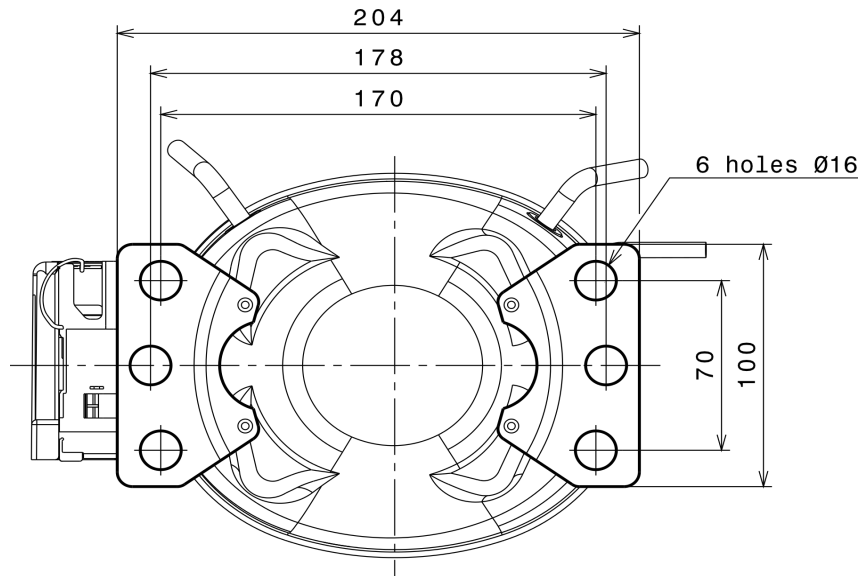
DESIGNATION	INTERNAL DIAM.
1 Service	6,2 mm
2 Suction	6,2 mm
3 Discharge	4,9 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

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



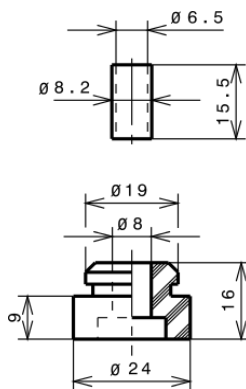
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

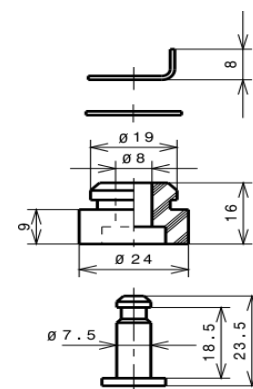
STANDARD

$\varnothing 16$ holes (170x70 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R290 HBP

