

# Technical Data Sheet

ENGINEERING  
TOMORROW



Compressor model **NUY80RAa**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**  
 Compressor status

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High Back Pressure	Displacement	8,10 cm <sup>3</sup>	Voltage/Frequency	220-240V 50Hz
Refrigerant	R290	Diameter	24,28 mm	Voltage range	187-254 V
Evaporating Temp.	-15,0 °C to 10,0 °C	Stroke	17,50 mm	Type	CSIR
Expansion	Capillar/Valve	Net Weight	9,43 Kg	Phase number	1 PH
Comp. Cooling	Fan cooled	Oil type	ISO VG 46 ESTER	Main W. resist. at 25°C	5,89 Ω
Max. ambient temp.	43,0 °C	Oil charge	220 cm <sup>3</sup>	Start W. resist. at 25°C	25,80 Ω
		HP	1/3 hp		

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	980 kCal/h	958 W
COP	2,69 W/W	2,29 W/W
EER	2,32 kCal/Wh	1,98 kCal/Wh
Input Power	423 W	419 W
Current	2,80 A	2,78 A

## APPROVALS



## TEST CYCLE CONDITIONS

	ASHRAE HBP (D)	CECOMAF HBP (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

	Option 1	Option 2		
Starting capacitor	64-77 / 60-61 μF 330 V			
Relay	Option 1	Option 2		
Reference	2014 145.	QLZ-7.1A		
Pick-Up	7,10 A	7,10 A		
Drop-Out	6,00 A	6,00 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	307	2,41	1,98	1,70
40	-10	637	332	2,47	2,23	1,92
40	-5	769	356	2,53	2,51	2,16
40	0	916	379	2,61	2,81	2,42
40	5	1.079	399	2,69	3,14	2,70
40	7,2	1.156	408	2,73	3,29	2,83
40	10	1.257	418	2,78	3,49	3,00

45	-15	488	317	2,43	1,79	1,54
45	-10	599	341	2,49	2,04	1,75
45	-5	725	364	2,56	2,31	1,99
45	0	866	385	2,63	2,61	2,25
45	5	1.023	405	2,72	2,94	2,53
45	7,2	1.097	413	2,75	3,09	2,66
45	10	1.195	423	2,80	3,29	2,83

50	-15	456	328	2,45	1,62	1,39
50	-10	560	351	2,52	1,86	1,60
50	-5	680	372	2,59	2,13	1,83
50	0	816	392	2,66	2,42	2,08
50	5	967	410	2,74	2,74	2,36
50	7,2	1.039	418	2,78	2,89	2,48
50	10	1.134	427	2,82	3,09	2,65

55	-15	423	338	2,48	1,46	1,25
55	-10	522	360	2,54	1,69	1,45
55	-5	636	380	2,62	1,95	1,67
55	0	766	399	2,69	2,23	1,92
55	5	911	416	2,77	2,55	2,19
55	7,2	980	423	2,80	2,69	2,32
55	10	1.072	431	2,84	2,89	2,48

60	-15	391	349	2,51	1,30	1,12
60	-10	484	369	2,58	1,52	1,31
60	-5	592	388	2,65	1,77	1,52
60	0	716	406	2,72	2,05	1,76
60	5	855	422	2,79	2,36	2,03
60	7,2	922	428	2,82	2,50	2,15
60	10	1.010	436	2,86	2,70	2,32

## CECOMAF

Tc	Te	Cooling Capacity	Consumption	Current	COP	EER
°C	°C	W	W	A	W/W	kCal/Wh
40	-15	560	308	2,41	1,82	1,57
40	-10	686	334	2,47	2,05	1,77
40	-5	828	358	2,54	2,31	2,00
40	0	986	381	2,62	2,59	2,24
40	5	1.160	402	2,70	2,89	2,49
40	7,2	1.242	411	2,74	3,02	2,61
40	10	1.350	421	2,79	3,20	2,77

45	-15	522	319	2,43	1,64	1,41
45	-10	640	343	2,49	1,86	1,61
45	-5	775	366	2,57	2,12	1,83
45	0	926	388	2,64	2,39	2,06
45	5	1.093	408	2,73	2,68	2,32
45	7,2	1.171	416	2,77	2,82	2,43
45	10	1.276	426	2,81	3,00	2,59

50	-15	484	329	2,46	1,47	1,27
50	-10	595	353	2,52	1,69	1,46
50	-5	723	375	2,59	1,93	1,67
50	0	866	395	2,67	2,19	1,90
50	5	1.026	413	2,75	2,48	2,14
50	7,2	1.101	421	2,79	2,62	2,26
50	10	1.201	430	2,84	2,79	2,41

55	-15	446	340	2,49	1,31	1,13
55	-10	550	362	2,55	1,52	1,31
55	-5	670	383	2,62	1,75	1,51
55	0	806	401	2,70	2,01	1,73
55	5	958	419	2,78	2,29	1,98
55	7,2	1.030	426	2,81	2,42	2,09
55	10	1.127	434	2,86	2,59	2,24

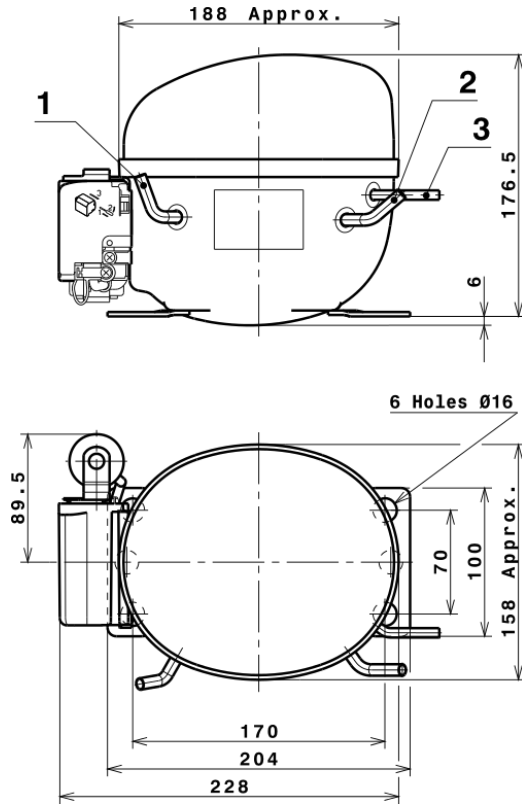
60	-15	408	350	2,51	1,16	1,01
60	-10	504	371	2,58	1,36	1,17
60	-5	617	391	2,66	1,58	1,37
60	0	746	408	2,73	1,83	1,58
60	5	891	424	2,81	2,10	1,81
60	7,2	960	431	2,84	2,23	1,93
60	10	1.052	439	2,88	2,40	2,07

## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	1.468,9362775069	335,2405053178	2,4494052300	12,810703376216
2	45,3293579832	6,6113608669	0,0179660193	0,41689502004147
3	-12,4528471062	1,4014317219	0,0054496762	-0,033784990585453
4	0,3174595968	-0,0307624823	0,0000804785	0,0054179860946984
5	-0,3120203246	-0,0507545657	-0,0000122618	1,2933820984173E-5

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

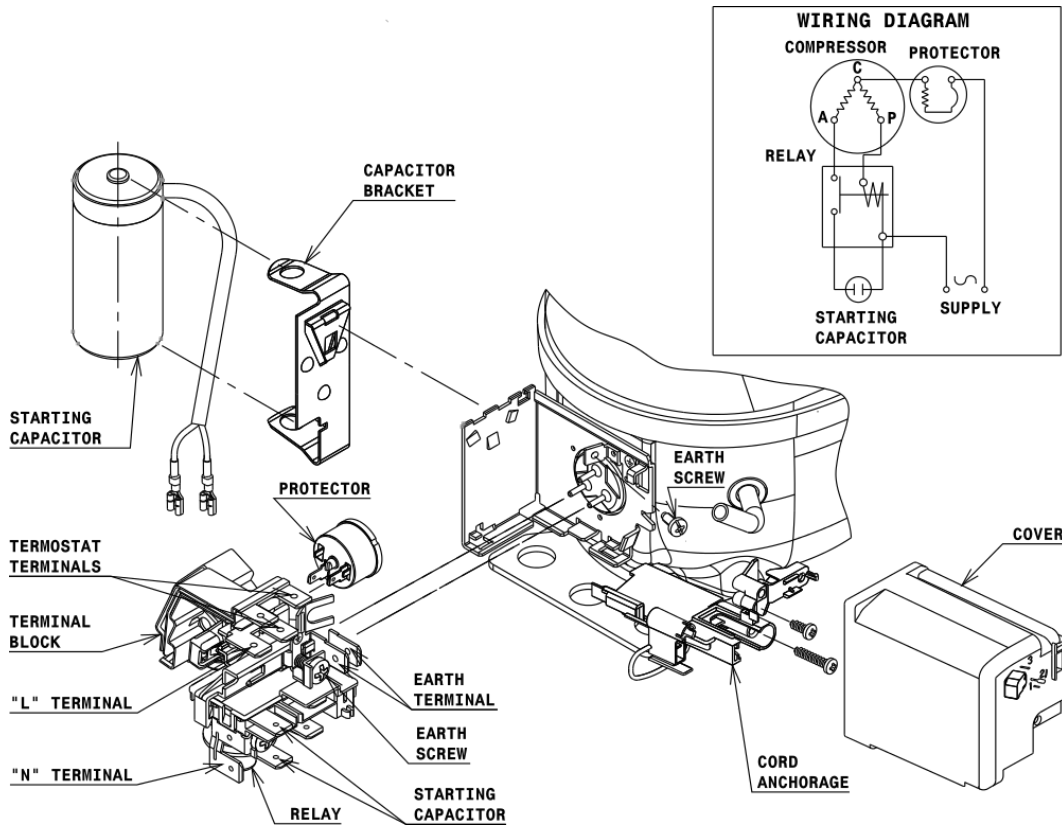


## DESIGNATION INTERNAL DIAM.

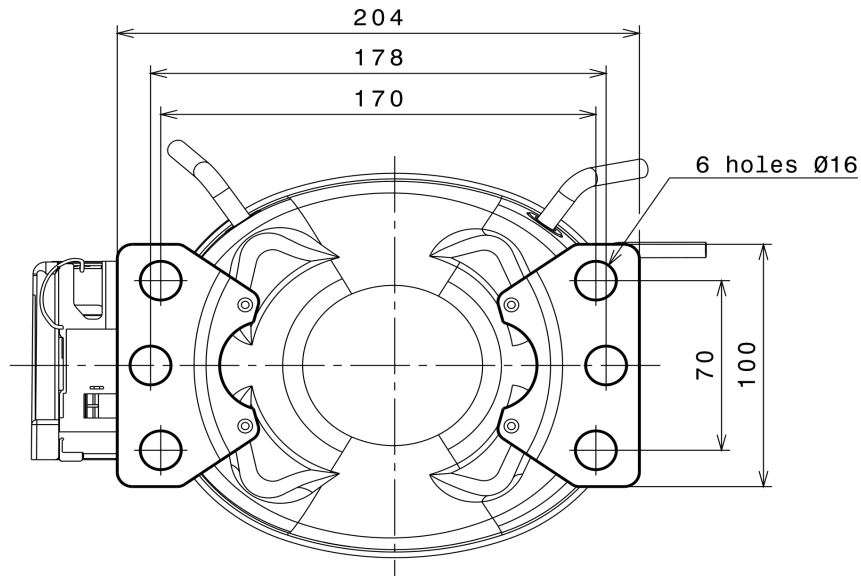
DESIGNATION	INTERNAL DIAM.
1 Service	6,2 mm
2 Suction	6,2 mm
3 Discharge	4,9 mm

## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (U range)



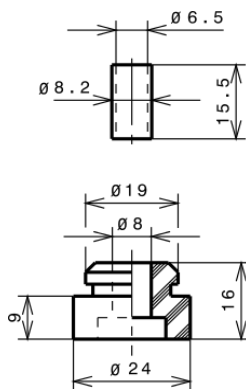
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

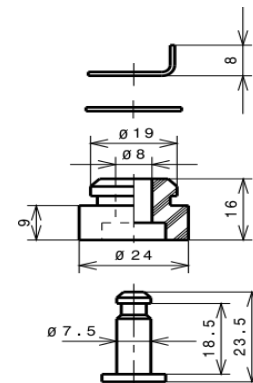
### STANDARD

$\varnothing 16$  holes (170x70 net)



### SNAP-ON

$\varnothing 16$  holes (170x70 net)



## SOA

SOA R290 HBP

