

Technical Data Sheet

Compressor model **NBC22RA**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R290**

APPLICATION

COMPRESSOR

MOTOR

Application	High-Medium Back Pressure	Displacement	2,20 cm ³	Nominal Power	1/12 hp
Refrigerant	R290	Diameter	17,20 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-25,0 °C to 10,0 °C	Stroke	9,40 mm	Voltage range	187-255 V
Expansion	Capillar/Valve	Net Weight	5,20 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	120 cm ³	Locked Rotor Amps (LRA)	5,80 A
				Max. Cont. Current (MCC)	1,20 A
				Main W. resist. at 25°C	23,50 Ω
				Start W. resist. at 25°C	21,50 Ω

NOMINAL PERFORMANCE

APPROVALS

	ASHRAE	CECOMAF
Cooling Capacity	228 kCal/h	222 W
COP	2,21 W/W	1,87 W/W
EER	1,90 kCal/Wh	1,61 kCal/Wh
Input Power	120 W	119 W
Current	0,88 A	0,88 A

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	220 V 50 Hz	220 V 50 Hz

ELECTRICAL COMPONENTS

Starting capacitor	50 µF 330 V			
Relay	Option 1			
Reference	QL2-2.8			
Pick-Up	2,8 A			
Drop-Out	2,4 A			
Protector	Option 1			
Reference	DRB15N61A1 (126)			
Current	3,70 A			
Time check	7-16 seg			
Disc temp. (Open/Close)	120,00 / 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 °C	Te °C	Cooling Capacity kCal/h	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	66	76	0,80	1,01	0,87
40	-20	89	81	0,80	1,29	1,11
40	-15	117	85	0,81	1,60	1,37
40	-10	148	89	0,81	1,94	1,67
40	-5	184	92	0,81	2,32	1,99
40	0	223	95	0,82	2,74	2,35
40	5	266	97	0,82	3,20	2,75
40	7,2	287	98	0,82	3,42	2,94
40	10	313	98	0,82	3,71	3,19

45	-25	61	77	0,80	0,92	0,79
45	-20	82	83	0,80	1,15	0,99
45	-15	107	88	0,81	1,42	1,22
45	-10	137	93	0,82	1,71	1,47
45	-5	170	97	0,82	2,03	1,75
45	0	207	101	0,83	2,39	2,05
45	5	248	104	0,84	2,77	2,39
45	7,2	267	105	0,84	2,96	2,54
45	10	293	106	0,84	3,20	2,75

50	-25	56	78	0,80	0,84	0,72
50	-20	75	85	0,81	1,03	0,88
50	-15	98	91	0,81	1,25	1,07
50	-10	125	97	0,82	1,50	1,29
50	-5	156	102	0,83	1,77	1,52
50	0	190	107	0,84	2,07	1,78
50	5	229	111	0,85	2,40	2,07
50	7,2	248	113	0,86	2,56	2,20
50	10	272	114	0,86	2,76	2,38

55	-25	51	79	0,80	0,75	0,65
55	-20	68	87	0,81	0,91	0,78
55	-15	88	94	0,82	1,09	0,94
55	-10	113	101	0,83	1,30	1,12
55	-5	142	107	0,84	1,54	1,32
55	0	174	113	0,86	1,79	1,54
55	5	211	118	0,87	2,08	1,79
55	7,2	228	120	0,88	2,21	1,90
55	10	251	122	0,89	2,39	2,05

60	-25	46	80	0,80	0,67	0,57
60	-20	60	89	0,81	0,79	0,68
60	-15	79	97	0,82	0,94	0,81
60	-10	101	105	0,84	1,12	0,96
60	-5	128	112	0,86	1,32	1,14
60	0	158	119	0,88	1,54	1,33
60	5	192	125	0,90	1,79	1,54
60	7,2	209	128	0,91	1,90	1,64
60	10	230	131	0,92	2,05	1,77

CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	71	76	0,80	0,93	0,80
40	-20	96	81	0,80	1,19	1,03
40	-15	126	86	0,81	1,47	1,27
40	-10	160	89	0,81	1,79	1,55
40	-5	198	93	0,82	2,14	1,85
40	0	240	95	0,82	2,52	2,18
40	5	286	97	0,82	2,94	2,54
40	7,2	308	98	0,82	3,14	2,71
40	10	336	99	0,83	3,40	2,94

45	-25	65	77	0,80	0,84	0,73
45	-20	88	83	0,80	1,06	0,91
45	-15	115	89	0,81	1,30	1,12
45	-10	146	93	0,82	1,56	1,35
45	-5	182	98	0,82	1,86	1,61
45	0	221	101	0,83	2,18	1,88
45	5	265	105	0,84	2,53	2,19
45	7,2	285	106	0,84	2,70	2,33
45	10	312	107	0,84	2,92	2,52

50	-25	60	78	0,80	0,76	0,66
50	-20	80	85	0,81	0,93	0,81
50	-15	104	92	0,81	1,14	0,98
50	-10	133	98	0,82	1,36	1,18
50	-5	165	103	0,83	1,61	1,39
50	0	202	107	0,84	1,88	1,62
50	5	243	112	0,86	2,18	1,88
50	7,2	262	113	0,86	2,32	2,00
50	10	288	115	0,87	2,50	2,16

55	-25	54	79	0,80	0,68	0,58
55	-20	71	87	0,81	0,82	0,71
55	-15	93	95	0,82	0,98	0,85
55	-10	119	102	0,83	1,17	1,01
55	-5	149	108	0,85	1,38	1,19
55	0	183	114	0,86	1,61	1,39
55	5	222	119	0,88	1,87	1,61
55	7,2	240	121	0,88	1,98	1,71
55	10	264	123	0,89	2,14	1,85

60	-25	48	80	0,80	0,60	0,52
60	-20	63	89	0,81	0,70	0,61
60	-15	82	98	0,82	0,84	0,73
60	-10	105	106	0,84	1,00	0,86
60	-5	133	113	0,86	1,18	1,02
60	0	164	120	0,88	1,37	1,19
60	5	200	126	0,90	1,59	1,37
60	7,2	217	128	0,91	1,69	1,46
60	10	240	131	0,92	1,83	1,58

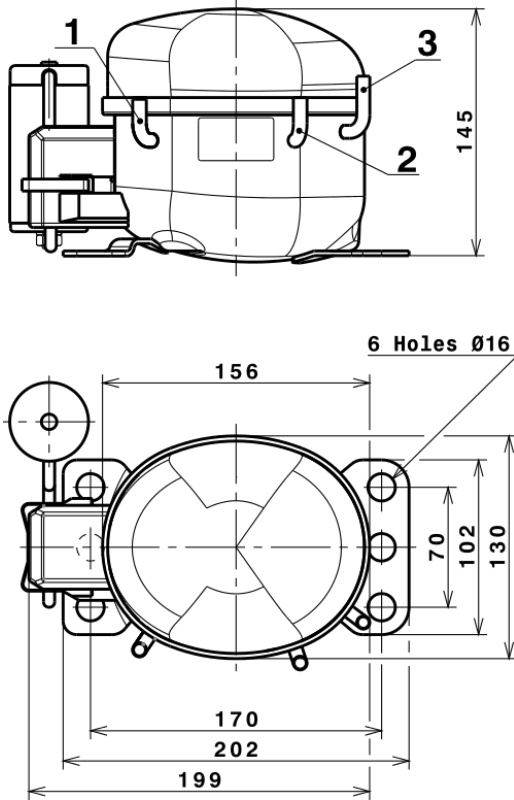
EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	391,3241423396	47,7552383164	0,6665992904	3,5860358722632
2	13,0431069538	-1,1586519534	-0,0042606786	0,13228549931252
3	-3,8737085789	1,2525127840	0,0036614126	-0,019769035816283
4	0,0812738717	-0,0108600966	0,0000319884	0,0012838114955496
5	-0,1085186841	0,0418729847	0,0001402148	-0,00051699423590317

Equation	$x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$
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Technical Data Sheet

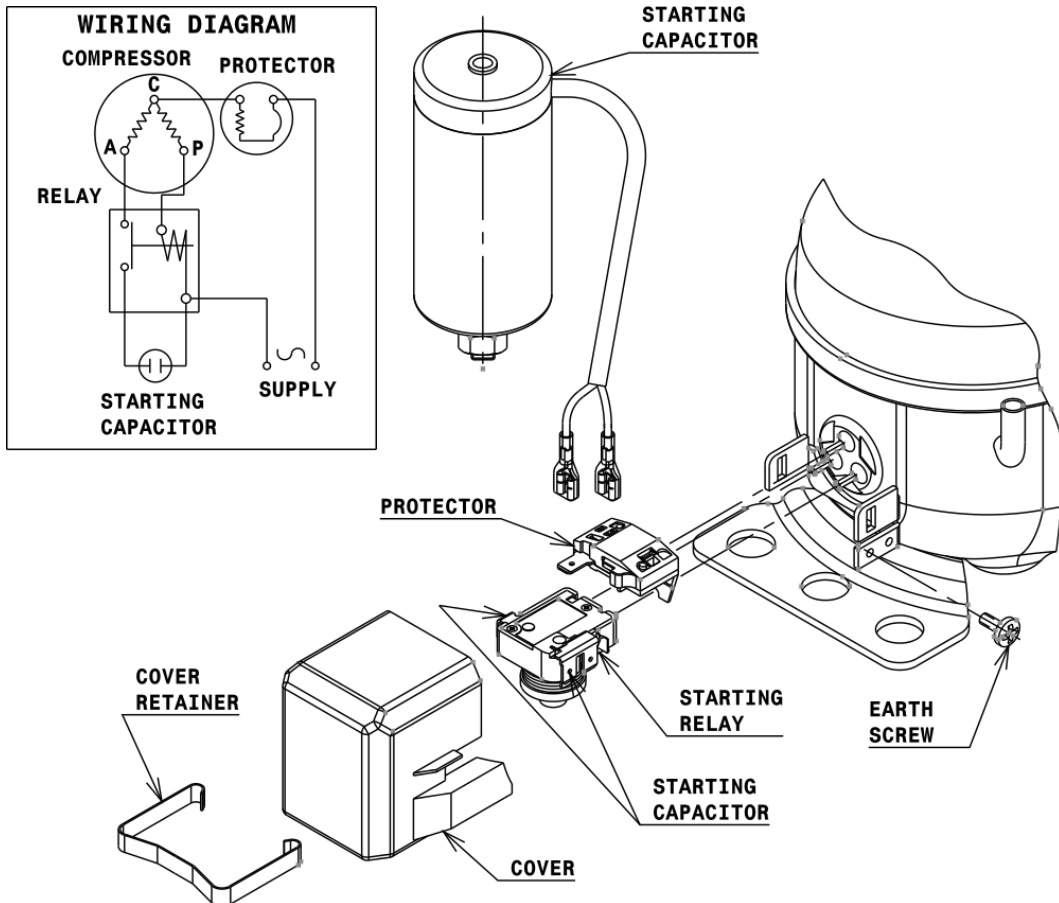
COMPRESSOR DIMENSIONS



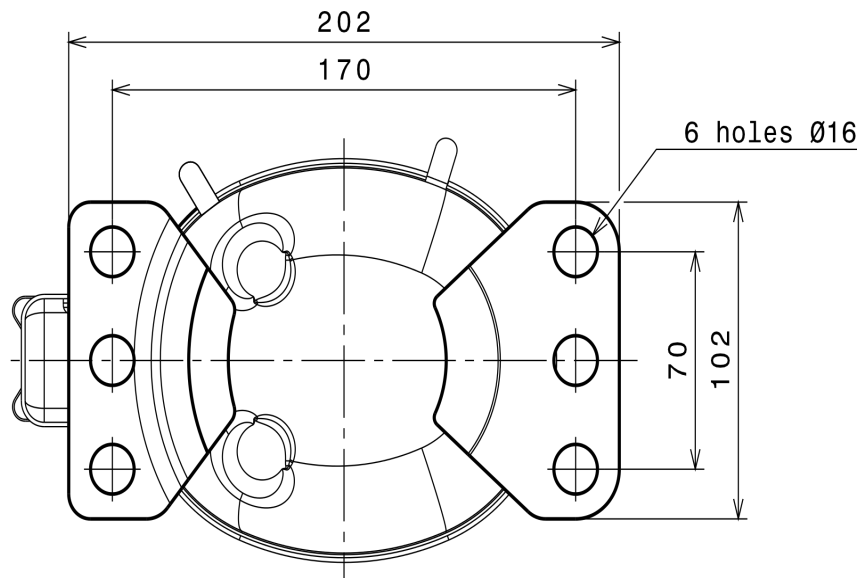
DESIGNATION	INTERNAL DIAM.
1 Suction	6,1 mm
2 Service	6,1 mm
3 Discharge	5,1 mm

WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

CSIR CONNECTION (B, Small L ranges)



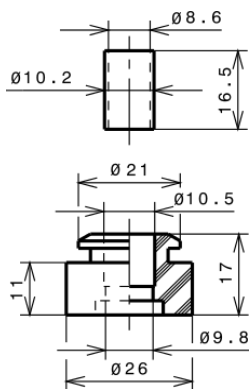
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

STANDARD

Ø16 holes (170x70 net)



SOA

SOA R290 HMBP

