

# B22N Technical Data Sheet

Compressor model **B22N**  
 Voltage **220-240V 50/60Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	High-Medium Back Pressure	Displacement	2,20 cm <sup>3</sup>	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 <sup>3</sup>	Locked Rotor Amps (LRA)	5,80 A
				Max. Cont. Current (MCC)	1,20 A
				Main W. resist. at 25°C	24,80 Q
				Start W. resist. at 25°C	14,90 Q

## NOMINAL PERFORMANCE

	ASHRAE	CECOMAF
Cooling Capacity	251 kCal/h	244 W
COP	2,43 W/W	2,06 W/W
EER	2,09 kCal/Wh	1,78 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 <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

Starting capacitor	50 pF 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			

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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	80	81	0,82	1,15	0,99
40	-20	105	85	0,82	1,44	1,24
40	-15	134	88	0,83	1,77	1,52
40	-10	168	91	0,83	2,14	1,84
40	-5	205	93	0,83	2,56	2,20
40	0	247	95	0,84	3,02	2,59
40	5	294	97	0,84	3,52	3,03
40	7,2	316	98	0,84	3,76	3,24
40	10	344	98	0,84	4,08	3,51

45	-25	74	82	0,82	1,05	0,90
45	-20	97	87	0,82	1,29	1,11
45	-15	123	91	0,83	1,58	1,35
45	-10	154	95	0,84	1,89	1,63
45	-5	190	98	0,84	2,24	1,93
45	0	229	101	0,85	2,63	2,26
45	5	273	104	0,85	3,06	2,63
45	7,2	294	105	0,85	3,26	2,80
45	10	322	106	0,86	3,52	3,03

50	-25	68	83	0,82	0,95	0,82
50	-20	88	89	0,83	1,15	0,99
50	-15	113	94	0,84	1,39	1,20
50	-10	141	99	0,84	1,66	1,43
50	-5	174	103	0,85	1,96	1,68
50	0	211	107	0,86	2,29	1,97
50	5	253	111	0,86	2,65	2,28
50	7,2	273	113	0,87	2,82	2,42
50	10	299	114	0,87	3,04	2,61

55	-25	62	84	0,82	0,86	0,74
55	-20	80	91	0,83	1,02	0,88
55	-15	102	97	0,84	1,22	1,05
55	-10	128	103	0,85	1,45	1,24
55	-5	159	108	0,86	1,70	1,46
55	0	193	114	0,87	1,98	1,70
55	5	232	118	0,88	2,29	1,97
55	7,2	251	120	0,88	2,43	2,09
55	10	276	122	0,88	2,62	2,26

60	-25	56	85	0,82	0,77	0,66
60	-20	71	93	0,83	0,89	0,77
60	-15	91	100	0,85	1,06	0,91
60	-10	115	107	0,86	1,25	1,07
60	-5	143	114	0,87	1,46	1,26
60	0	175	120	0,88	1,71	1,47
60	5	212	125	0,89	1,97	1,69
60	7,2	230	128	0,89	2,09	1,80
60	10	253	130	0,90	2,26	1,94

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-25	86	81	0,82	1,06	0,91
40	-20	113	85	0,82	1,33	1,15
40	-15	145	89	0,83	1,64	1,41
40	-10	181	91	0,83	1,98	1,71
40	-5	221	94	0,84	2,36	2,04
40	0	266	96	0,84	2,78	2,40
40	5	316	98	0,84	3,24	2,80
40	7,2	339	98	0,84	3,45	2,98
40	10	370	99	0,84	3,74	3,23

45	-25	79	82	0,82	0,96	0,83
45	-20	103	87	0,82	1,19	1,02
45	-15	132	92	0,83	1,44	1,25
45	-10	165	95	0,84	1,73	1,50
45	-5	203	99	0,84	2,05	1,77
45	0	245	102	0,85	2,40	2,08
45	5	292	105	0,85	2,79	2,41
45	7,2	314	106	0,85	2,97	2,57
45	10	343	107	0,86	3,21	2,77

50	-25	72	83	0,82	0,87	0,75
50	-20	94	89	0,83	1,05	0,91
50	-15	120	95	0,84	1,27	1,09
50	-10	150	100	0,84	1,51	1,30
50	-5	185	104	0,85	1,78	1,54
50	0	224	108	0,86	2,08	1,79
50	5	268	112	0,87	2,40	2,07
50	7,2	289	113	0,87	2,55	2,20
50	10	317	115	0,87	2,75	2,38

55	-25	65	84	0,82	0,77	0,67
55	-20	84	91	0,83	0,92	0,80
55	-15	107	98	0,84	1,10	0,95
55	-10	135	104	0,85	1,30	1,12
55	-5	167	109	0,86	1,53	1,32
55	0	203	114	0,87	1,78	1,54
55	5	244	119	0,88	2,06	1,78
55	7,2	264	121	0,88	2,18	1,89
55	10	290	123	0,89	2,35	2,03

60	-25	58	85	0,82	0,68	0,59
60	-20	74	93	0,83	0,80	0,69
60	-15	95	101	0,85	0,94	0,81
60	-10	120	108	0,86	1,11	0,96
60	-5	149	114	0,87	1,30	1,13
60	0	183	120	0,88	1,52	1,31
60	5	221	126	0,89	1,75	1,51
60	7,2	239	128	0,90	1,86	1,61
60	10	263	131	0,90	2,01	1,73

# B22N Technical Data Sheet



## EN12900

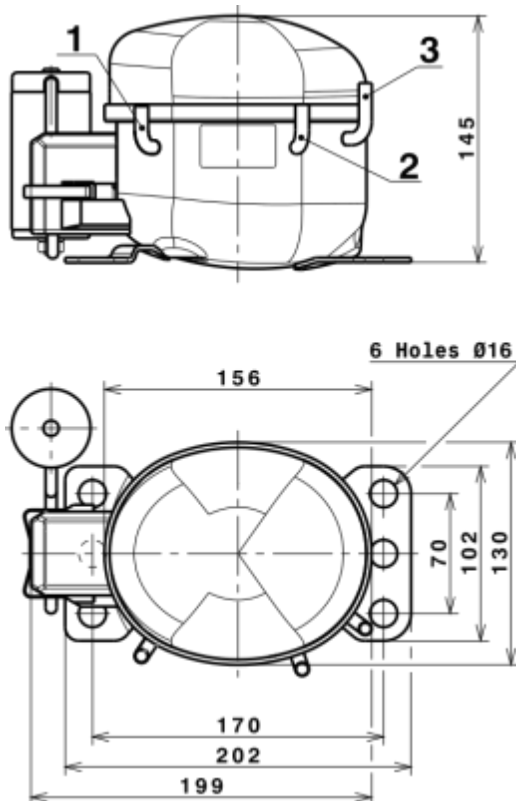
X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	434,2092940275	48,4270657257	0,7505459961	3,9819914709152
2	13,9515260945	-1,2710806046	-0,0024138257	0,14175343616102
3	-4,2959625084	1,2525127840	0,0022607868	-0,021962391655643
4	0,0875965173	-0,0082046399	-0,0000067782	0,0013846486885956
5	-0,1160509484	0,0418729847	0,0000781317	-0,000553634792291

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

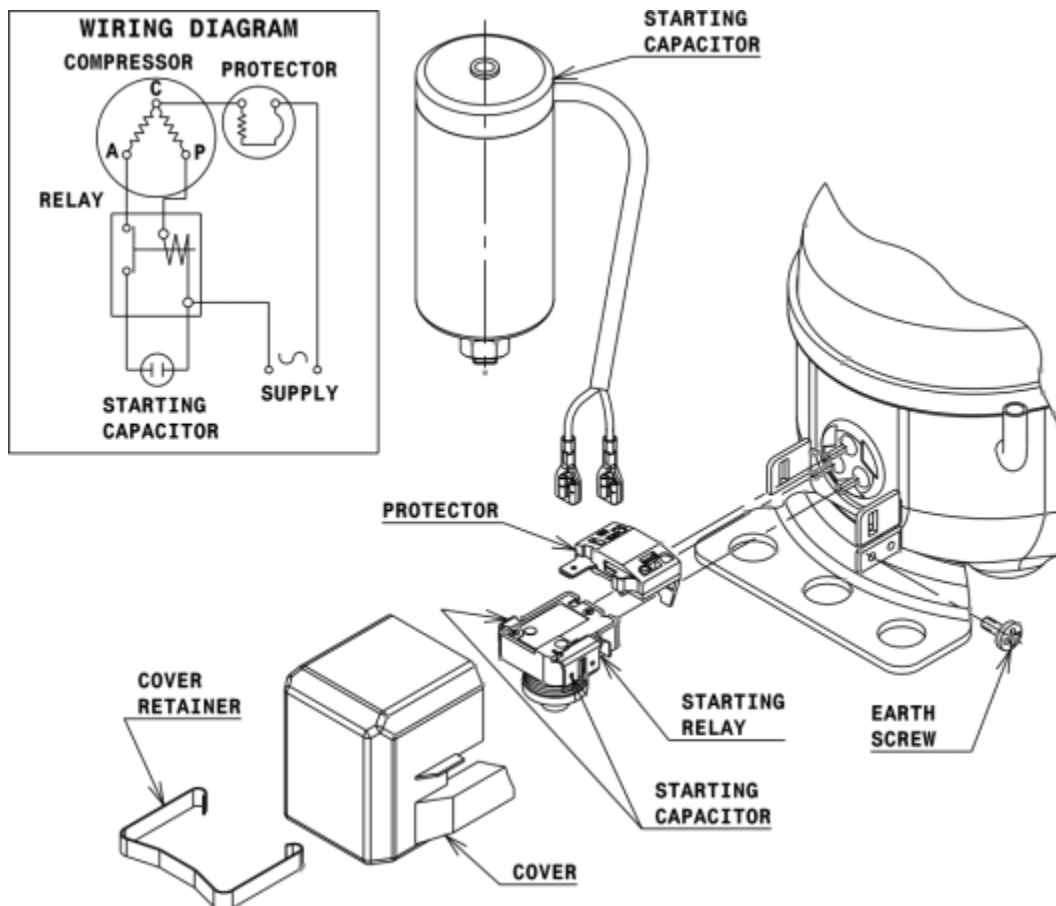


## DESIGNATION INTERNAL DIAM.

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

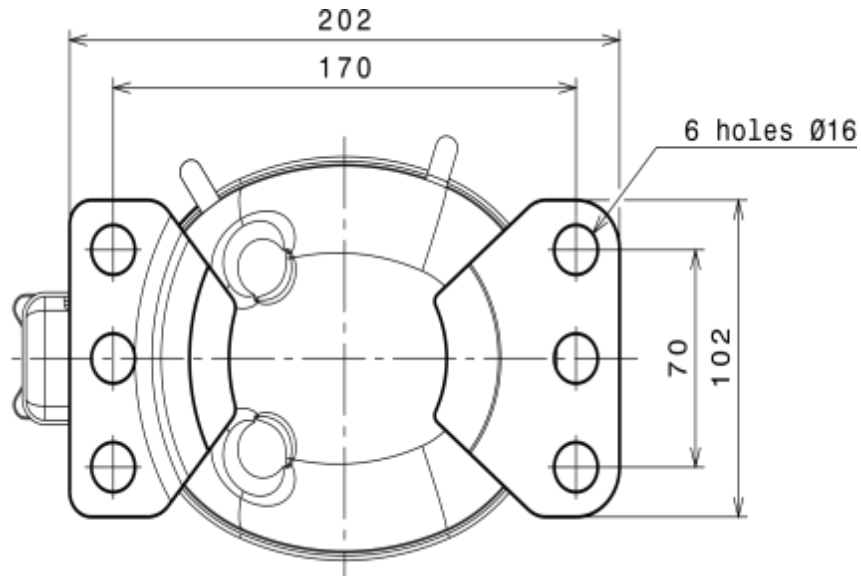
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### CSIR CONNECTION (B, Small L ranges)



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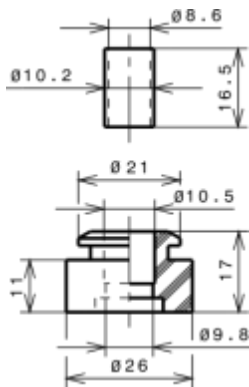
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø16 holes (170x70 net)



## SOA

SOA R290 HMBP

