

# Technical Data Sheet

Compressor model **NBC25CA**  
 Voltage **220-240V 50Hz ~1**  
 Refrigerant **R290**

## APPLICATION

## COMPRESSOR

## MOTOR

Application	Low-Medium Back Pressure	Displacement	2,60 cm <sup>3</sup>	Nominal Power	1/12 hp
Refrigerant	R290	Diameter	17,20 mm	Voltage/Frequency	220-240V 50Hz
Evaporating Temp.	-40,0 °C to 0,0 °C	Stroke	11,20 mm	Voltage range	187-255 V
Expansion	Capillar	Net Weight	5,46 Kg	Type	RSIR
Comp. Cooling	Static	Oil type	POE 22	Phase number	1 PH
Max. ambient temp.	43,0 °C	Oil charge	120 cm <sup>3</sup>	Locked Rotor Amps (LRA)	7,10 A
				Max. Cont. Current (MCC)	1,00 A
				Main W. resist. at 25°C	24,50 Ω
				Start W. resist. at 25°C	39,60 Ω

## NOMINAL PERFORMANCE

## APPROVALS

	ASHRAE	CECOMAF
Cooling Capacity	89 kCal/h	76 W
COP	1,33 W/W	1,01 W/W
EER	1,14 kCal/Wh	0,88 kCal/Wh
Input Power	78 W	75 W
Current	0,54 A	0,53 A

## TEST CYCLE CONDITIONS

	ASHRAE LMBP (B)	CECOMAF LMBP (A)
Evaporating temp. (T <sub>e</sub> )	-23,3 °C	-25,0 °C
Condensing temp. (T <sub>c</sub> )	55,0 °C	55,0 °C
Liquid temp. (T <sub>liq.</sub> )	32,0 °C	55,0 °C
Ambient temp. (T <sub>amb.</sub> )	32,0 °C	32,0 °C
Suction temp. (T <sub>suction</sub> )	32,0 °C	32,0 °C
Voltage/Frequency	220 V 50 Hz	220 V 50 Hz

## ELECTRICAL COMPONENTS

Relay	Option 1			
Reference	QL2-2.0 (015)			
Voltage	V			
Resistance	Ω			
Protector	Option 1			
Reference	DRB174N61A1 (081)			
Current				
Time check				
Disc temp. (Open/Close)				

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	-40	41	48	0,45	0,98	0,84
40	-35	56	54	0,47	1,19	1,02
40	-30	75	61	0,49	1,44	1,23
40	-25	98	67	0,50	1,71	1,47
40	-23,3	107	69	0,51	1,81	1,56
40	-20	126	72	0,52	2,02	1,73
40	-15	157	78	0,54	2,34	2,01
40	-10	193	84	0,56	2,68	2,31
40	-5	233	89	0,58	3,04	2,61
40	0	278	95	0,60	3,42	2,94

45	-40	37	48	0,45	0,90	0,77
45	-35	51	55	0,47	1,08	0,93
45	-30	70	62	0,49	1,30	1,12
45	-25	92	69	0,51	1,55	1,33
45	-23,3	101	72	0,52	1,64	1,41
45	-20	119	76	0,53	1,82	1,56
45	-15	150	83	0,56	2,11	1,81
45	-10	185	89	0,58	2,41	2,07
45	-5	225	96	0,60	2,73	2,34
45	0	268	102	0,62	3,06	2,63

50	-40	34	48	0,45	0,81	0,70
50	-35	47	56	0,47	0,97	0,84
50	-30	65	64	0,50	1,17	1,01
50	-25	87	72	0,52	1,40	1,20
50	-23,3	95	75	0,53	1,48	1,27
50	-20	113	80	0,55	1,64	1,41
50	-15	143	88	0,57	1,90	1,63
50	-10	177	95	0,60	2,17	1,86
50	-5	216	102	0,62	2,45	2,11
50	0	259	110	0,65	2,75	2,36

55	-40	30	48	0,45	0,73	0,63
55	-35	43	57	0,48	0,87	0,75
55	-30	60	66	0,50	1,05	0,90
55	-25	81	75	0,53	1,25	1,08
55	-23,3	89	78	0,54	1,33	1,14
55	-20	106	84	0,56	1,47	1,27
55	-15	136	92	0,59	1,71	1,47
55	-10	169	101	0,62	1,96	1,68
55	-5	207	109	0,65	2,21	1,90
55	0	249	117	0,68	2,48	2,13

60	-40	27	48	0,45	0,64	0,55
60	-35	39	58	0,48	0,77	0,66
60	-30	55	68	0,51	0,94	0,80
60	-25	75	78	0,54	1,12	0,97
60	-23,3	83	81	0,55	1,19	1,02
60	-20	100	87	0,57	1,33	1,14
60	-15	128	97	0,60	1,54	1,32
60	-10	161	106	0,64	1,76	1,52
60	-5	198	115	0,67	2,00	1,72
60	0	240	125	0,71	2,24	1,92

## CECOMAF

Tc °C	Te °C	Cooling Capacity W	Consumption W	Current A	COP W/W	EER kCal/Wh
40	-40	44	48	0,45	0,91	0,79
40	-35	62	54	0,47	1,15	0,99
40	-30	85	61	0,49	1,40	1,21
40	-25	111	67	0,50	1,67	1,44
40	-23,3	121	69	0,51	1,76	1,52
40	-20	141	72	0,52	1,95	1,68
40	-15	175	78	0,54	2,24	1,94
40	-10	213	84	0,56	2,54	2,20
40	-5	255	89	0,58	2,86	2,47
40	0	301	95	0,60	3,18	2,75

45	-40	39	48	0,45	0,80	0,69
45	-35	55	55	0,47	0,99	0,86
45	-30	75	62	0,49	1,21	1,04
45	-25	99	69	0,51	1,43	1,24
45	-23,3	109	72	0,52	1,51	1,31
45	-20	127	76	0,53	1,67	1,44
45	-15	159	83	0,56	1,92	1,66
45	-10	195	89	0,58	2,18	1,88
45	-5	235	96	0,60	2,45	2,12
45	0	278	102	0,62	2,73	2,36

50	-40	33	48	0,45	0,70	0,60
50	-35	48	56	0,47	0,85	0,73
50	-30	66	64	0,50	1,02	0,88
50	-25	88	72	0,52	1,22	1,05
50	-23,3	96	75	0,53	1,28	1,11
50	-20	114	80	0,55	1,42	1,23
50	-15	143	88	0,57	1,64	1,41
50	-10	177	95	0,60	1,86	1,61
50	-5	214	102	0,62	2,09	1,81
50	0	255	110	0,65	2,33	2,02

55	-40	28	48	0,45	0,59	0,51
55	-35	40	57	0,48	0,71	0,61
55	-30	56	66	0,50	0,85	0,73
55	-25	76	75	0,53	1,01	0,88
55	-23,3	84	78	0,54	1,07	0,93
55	-20	100	84	0,56	1,19	1,03
55	-15	127	92	0,59	1,38	1,19
55	-10	159	101	0,62	1,58	1,36
55	-5	194	109	0,65	1,78	1,54
55	0	233	117	0,68	1,99	1,72

60	-40	23	48	0,45	0,48	0,42
60	-35	33	58	0,48	0,57	0,49
60	-30	47	68	0,51	0,69	0,59
60	-25	64	78	0,54	0,83	0,71
60	-23,3	71	81	0,55	0,88	0,76
60	-20	86	87	0,57	0,98	0,85
60	-15	111	97	0,60	1,15	0,99
60	-10	140	106	0,64	1,32	1,14
60	-5	173	115	0,67	1,50	1,30
60	0	210	125	0,71	1,69	1,46

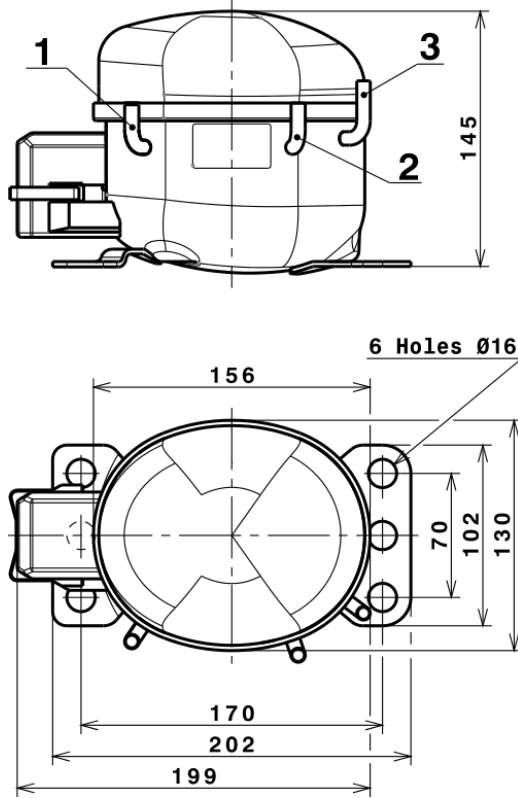
## EN12900

X	Cooling Capacity (W)	Consumption (W)	Current (A)	Mass Flow (kg/h)
1	480,1879007388	35,4242943073	0,3666684913	4,4951739514077
2	12,9256757234	-0,4501737677	-0,0014346970	0,13626343468656
3	-4,6124347980	1,5401867090	0,0059220476	-0,024200344401041
4	0,0753092918	-0,0027444092	0,0000180042	0,0011201802033965
5	-0,0897492524	0,0385046677	0,0001480512	-0,00039111646910641

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

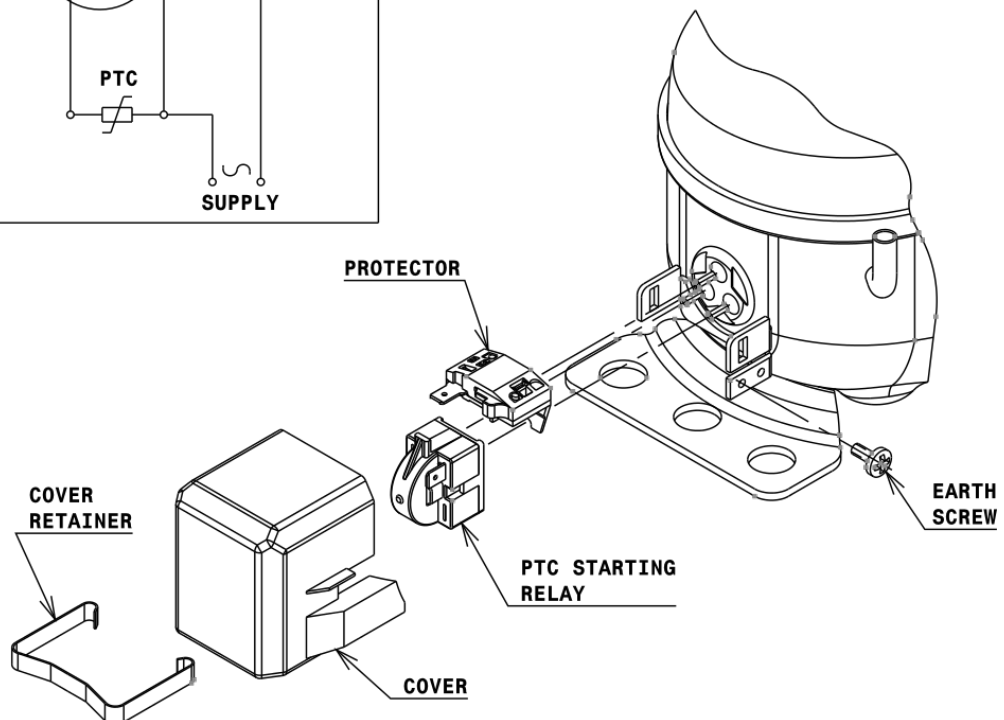
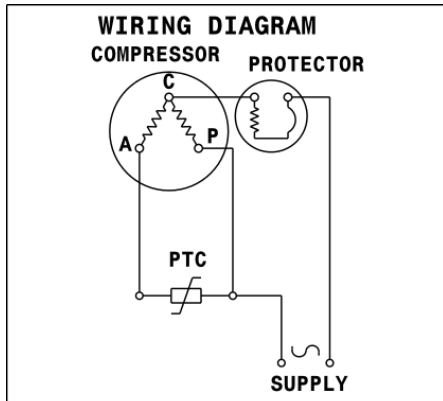
## COMPRESSOR DIMENSIONS



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

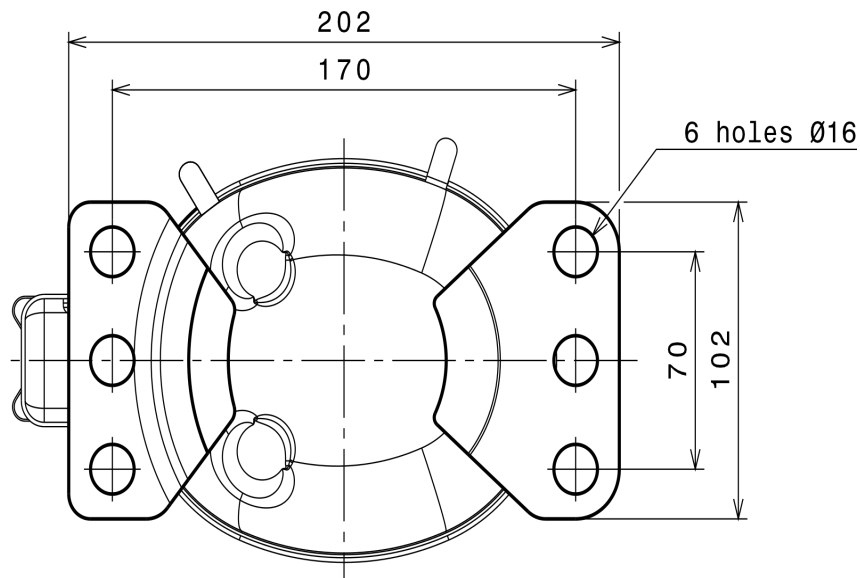
## WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

### RSIR CONNECTION (PTC) (B, Small L ranges)



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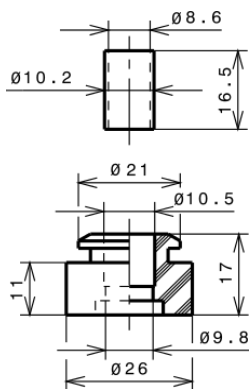
## FIXINGS



## SILENT BLOCKS (MOUNTING ACCESSORIES)

### STANDARD

Ø16 holes (170x70 net)



### SOA

SOA R290 LMBP

