

Single Pack BDN50K 12/24V DC PM

Single pack code number: **195B3445**

Position	Title	Code	Amount
1	Compressor BDN50K	109Z0420	1
2	Electronic unit - Leisure BD	101N2741	1
3	Bolt joint for one compressor M5 ø17.5mm	118-1960	1

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BDN50K Direct Current Compressor R600a 12/24V DC

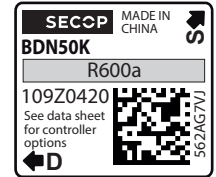


General

Code number (without electronic unit)	109Z0420
Electronic unit - Leisure	101N2740, 40 pcs: 101N2741
Compressors on pallet	240

Approvals

UL / CB



Application

Application range	LBP/MBP
Voltage range	VDC 9.6 - 17 / 19 - 34

Cooling requirements

Application	LBP	MBP
32°C / 38°C / 43°C	S	S

Absolute maximum ratings

Machine compartment temperature for compressor operation	°C	-10 to 50
Max. compressor tilt angle for temporary operation		±30°
Operating pressure range		see diagram to the right
Any levels of stress exceeding the absolute maximum value of machine compartment temperature range or operating pressure range or tilt angle may damage the device. Prolonged exposure to stress above the recommended operating conditions may also affect the device's reliability.		

Motor

Motor type	permanet magnet, brushless DC
Speed	rpm variable speed
Resistance, each of the three windings (25°C)	Ω 3.1

Design

Displacement	cm ³	2.60
Oil quantity (type)	cm ³	53 (polyolester)
Maximum refrigerant charge	g	70
Free gas volume in compressor	cm ³	472
Weight - Compressor/Electronic unit	kg	1.37 / 0.14

Standard battery protection settings

Voltage (0.1 steps)		Default	Min. value	Max. value	
12V	± 0.3V DC, all values	Cut out level	VDC 10.4	9.6	17
24V	± 0.3V DC, all values	Cut out level	VDC 21.3	19	32
Battery cut-in difference		VDC	1.3	0.5	10

Dimensions

Height	mm	A	89.0
		B	82.4
		B1	48.7
		B2	45.8
Suction connector	location/I.D. mm angle	C	6.2 5°
	material comment		Copper Rubber plug
Process connector	location/I.D. mm angle	D	6.2 77.9°
	material comment		Copper Rubber plug
Discharge connector	location/I.D. mm angle	E	5.0 86.9°
	material comment		Cu-plated steel Rubber plug
Connector tolerance	I.D. mm		±0.09, on 5.0 +0.12/+0.20

Remarks:

Please follow the brazing instructions on page 3 (Product Bulletin DES.N.101.M1).

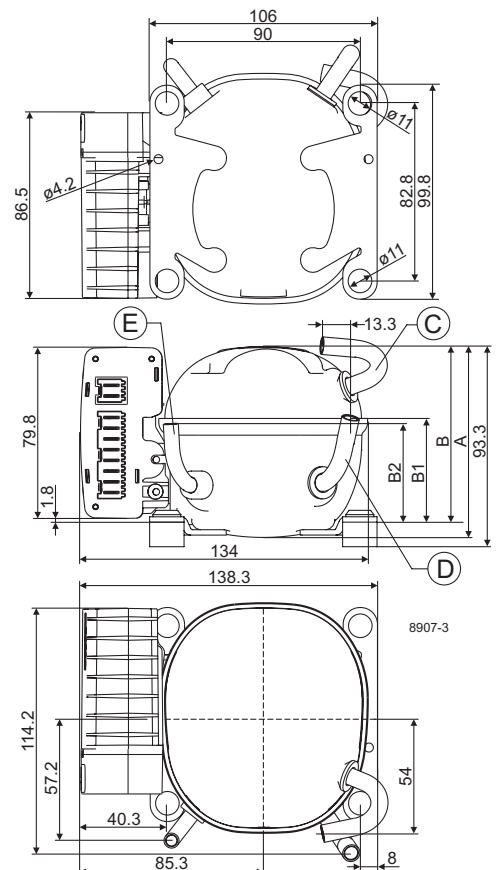
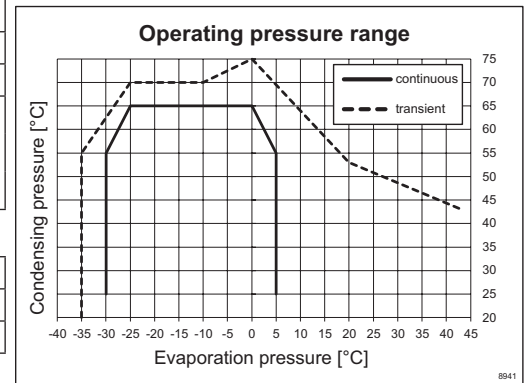


Approvals and warning label

S = Static cooling normally sufficient

Note: In case fan cooling is used:

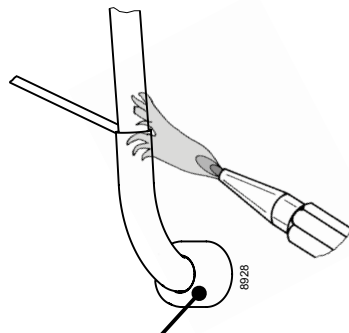
condenser => fan => electronic => compressor



Brazing on Discharge Connector (BDN45F, BDN50K, BDN45F-A, and MB3CKV)

The BDN45F, BDN50K, and MB3CKV compressors use a special discharge connector element (see figure 2) that is directly connected to the discharge tube to optimize energy consumption. This element is made from plastic and sensitive to high heat exposure.

When brazing a tube into the discharge connector (see figure 1) please ensure that the area with the discharge connector element never exceeds 150°C / 302°F. Don't heat up the bottom of the connector directly.



! max. 150°C/302°F !
at socket
 brazing solder: silver with flux

Use a fork burner (see figure 3) and/or a damp cloth, if necessary. A protective plate can also serve to protect the discharge connector element from direct heat from a flame. Do not braze longer than 10 seconds and wait for 5 minutes for the next soldering attempt.

Further information:

Product Bulletin – Brazing Technique for Compressor Connectors (DES.N.600.A1.02)



Fig.1 BDN45F discharge connector

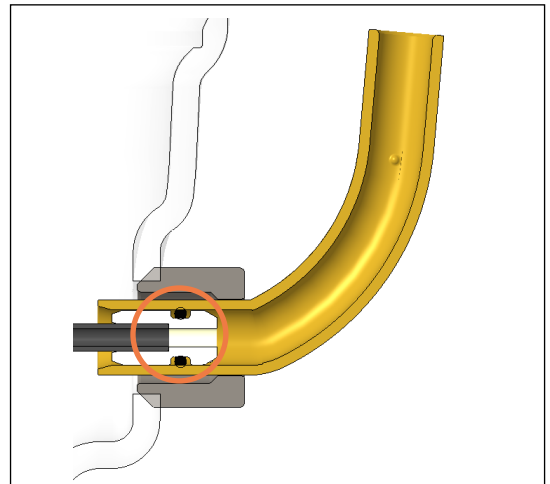


Fig.2 Discharge connector element

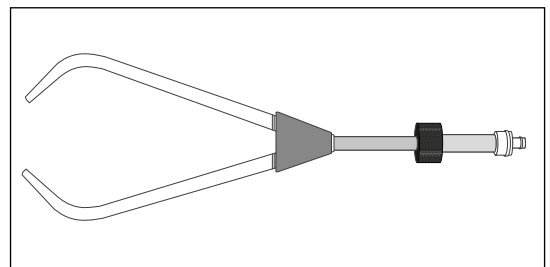


Fig.3 Fork burner



Instructions for Electronic Units
are available for download on
www.secop.com



BD Compressors



Service/Repair



BD Nano

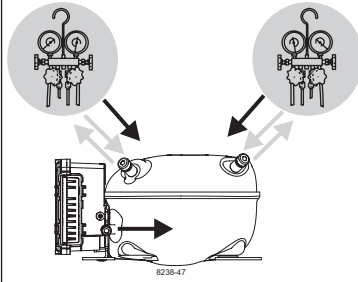


! max. 150°C/302°F !
at socket

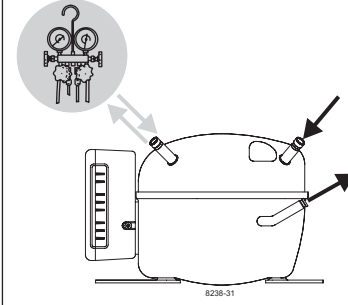
brazing solder: silver with flux

Do not heat up the bottom of the discharge connector directly.
Do not braze longer than 10 seconds and wait for 5 minutes for the next soldering attempt (Product Bulletin DES.N.101.M1).

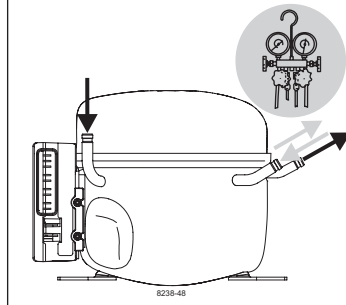
BD Micro



BD P-Housing



BD T-Housing



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