Single Pack BD250GH.2 48V DC PM

Single pack code number: **195B4357**

Position	Title	Code	Amount
1	Compressor BD250GH.2	101Z0405	1
2	Electronic unit - Telecom	101N0732	1
3	DC Power cable	105N9542	1
4	Temperature sensor	105N9615	1
5	Bolt joint for one compressor | M6 | ø16mm	118-1917	1

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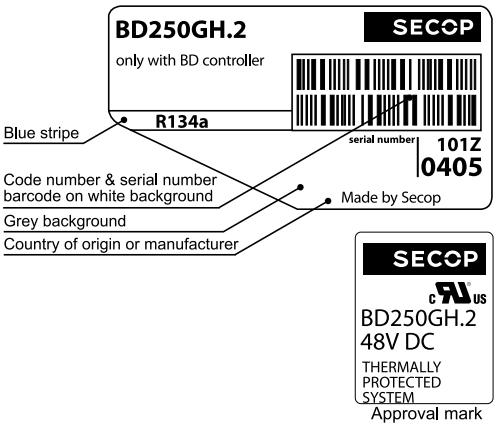
BD250GH.2
Direct Current Compressor
R134a
48V DC

TOOL4COOL®



S = Static cooling normally sufficient
O = Oil cooling
F_1 = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
F_2 = Fan cooling 3.0 m/s necessary
SG = Suction gas cooling normally sufficent
– = not applicable in this area

General

Code number (without electronic units)	101Z0405
Electronic unit - Telecom	101N0732, 36 pcs: 101N0733
Approvals	UL
Compressors on pallet	150

Application

Application		LBP/MBP/HBP
Evaporating temperature	°C	-25 to 15
Voltage range	VDC	32 - 60
Max. condensing temperature continuous (short)	°C	60 (70)
Max. winding temperature continuous (short)	°C	125 (135)

Cooling requirements

Application	LBP	MBP	HBP
32°C	S	S	S
38°C	S	S	S
43°C	S	S	F_1
Remarks on application:			

Motor

Motor type		variable speed
Resistance, all 3 windings (25°C)	Ω	1.03

Design

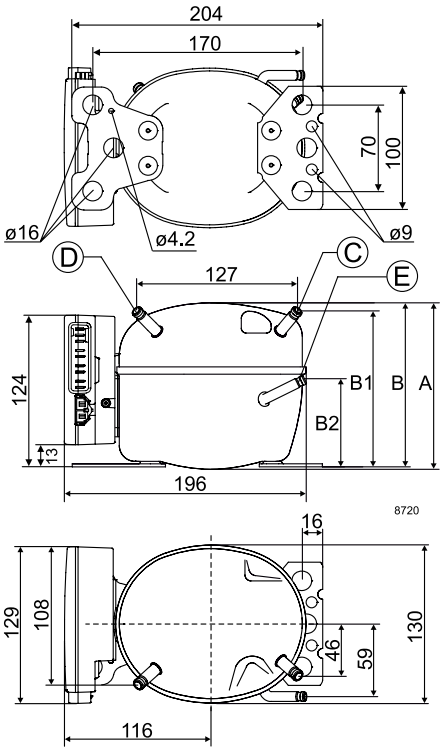
Displacement	cm^3	2.50
Oil quantity (type)	cm^3	150 (polyolester)
Maximum refrigerant charge	g	300
Free gas volume in compressor	cm^3	870
Weight - Compressor/Electronic unit	kg	4.4/0.24

Battery protection settings

Voltage			Min. value	Default	Max. value
Cut out	(0.1 steps)	VDC	32	36	60
Cut in diff.	(0.1 steps)	VDC	0.5	4.0	10.0

Dimensions

Height	mm	A	137
		B	135
		B1	128
		B2	73
Suction connector	location/I.D. mm | angle	C	6.2 | 40°
	material | comment		Cu-plated steel | Al cap
Process connector	location/I.D. mm | angle	D	6.2 | 45°
	material | comment		Cu-plated steel | Al cap
Discharge connector	location/I.D. mm | angle	E	5.0 | 21°
	material | comment		Cu-plated steel | Al cap
Connector tolerance	I.D. mm		±0.09, on 5.0 +0.12/+0.20
Remarks:	Clearance between electronic unit and baseplate does not allow the snap-on option for mounting.		



Capacity (EN 12900 Household/CECOMAF) 53V DC, fan cooling F_1 **watt**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	31.4	36.6	47.2	65.5	87.0	103	112	143	178	195	219	267
3,100	42.9	49.1	62.1	84.8	112	132	144	181	224	246	275	333
3,800	55.0	62.4	78.3	106	139	165	179	224	277	303	337	408
4,400	64.3	72.8	91.1	124	162	191	208	261	322	352	392	472

Capacity (ASHRAE LBP) 53V DC, fan cooling F_1 **watt**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	40.1	46.3	59.3	81.8	108	129	140	177	222	243	273	334
3,100	54.0	61.6	77.6	106	139	164	178	225	279	306	342	416
3,800	68.7	77.9	97.4	132	173	204	222	279	345	377	421	509
4,400	80.0	90.5	113	153	201	237	257	323	400	437	488	589

Power consumption 53V DC, fan cooling F_1 **watt**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	40.8	44.1	50.1	58.5	66.0	70.4	72.5	78.5	83.9	86.1	88.7	93.1
3,100	46.5	50.1	57.0	66.9	76.5	82.6	85.7	94.7	103	107	112	121
3,800	58.2	62.2	70.0	81.7	93.7	102	106	119	132	137	145	159
4,400	72.4	76.7	85.3	98.8	113	122	128	143	160	167	177	196

Current consumption 53V DC, fan cooling F_1 **A**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	0.78	0.86	1.01	1.23	1.43	1.55	1.60	1.75	1.87	1.91	1.95	1.98
3,100	0.65	0.74	0.90	1.14	1.38	1.52	1.59	1.79	1.97	2.04	2.12	2.23
3,800	0.87	0.96	1.13	1.40	1.67	1.85	1.94	2.20	2.45	2.55	2.68	2.89
4,400	1.36	1.45	1.64	1.93	2.24	2.44	2.55	2.86	3.17	3.30	3.47	3.76

COP (EN 12900 Household/CECOMAF) 53V DC, fan cooling F_1 **W/W**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	0.77	0.83	0.94	1.12	1.32	1.47	1.55	1.82	2.12	2.27	2.47	2.87
3,100	0.92	0.98	1.09	1.27	1.46	1.60	1.67	1.91	2.17	2.29	2.45	2.74
3,800	0.94	1.00	1.12	1.30	1.49	1.62	1.68	1.89	2.11	2.21	2.33	2.57
4,400	0.89	0.95	1.07	1.25	1.44	1.56	1.63	1.82	2.01	2.10	2.21	2.41

COP (ASHRAE LBP) 53V DC, fan cooling F_1 **W/W**

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	0.98	1.05	1.19	1.41	1.66	1.84	1.95	2.28	2.67	2.86	3.12	3.63
3,100	1.16	1.23	1.37	1.59	1.83	2.00	2.09	2.39	2.72	2.87	3.07	3.45
3,800	1.18	1.25	1.40	1.62	1.85	2.01	2.10	2.36	2.64	2.76	2.92	3.22
4,400	1.10	1.18	1.33	1.55	1.79	1.94	2.02	2.27	2.51	2.62	2.76	3.02

Test conditions	**EN 12900/CECOMAF**	**ASHRAE LBP**
Condensing temperature	55°C	54.4°C
Ambient temperature	32°C	32°C
Suction gas temperature	32°C	32°C
Liquid temperature	no subcooling	32°C

Operational errors

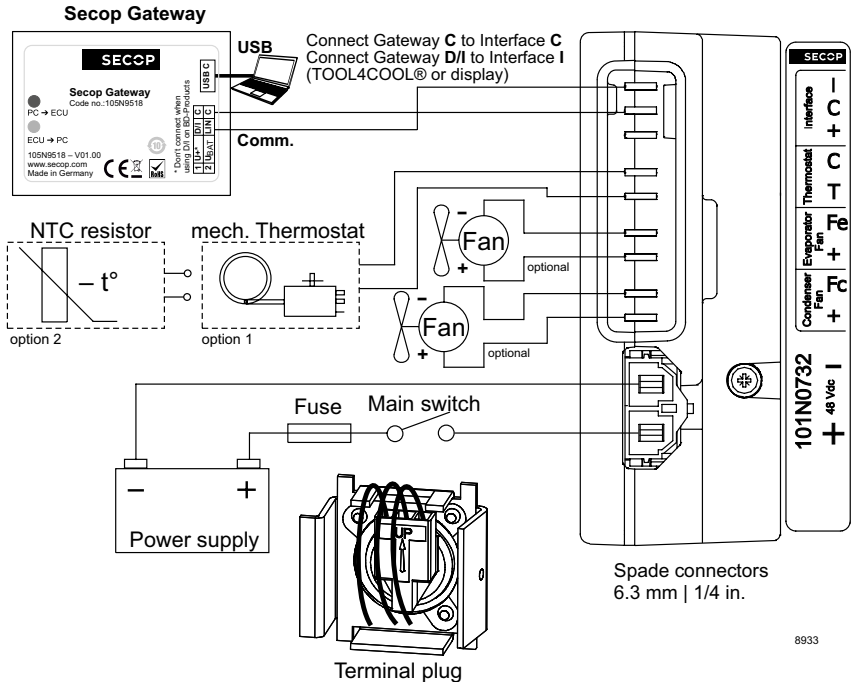
Error code	Error type Can be read out in the software **TOOL4COOL®**
6	**Thermostat failure** (If the NTC thermistor is short-circuit or has no connection, the electronic unit will enter manual mode).
5	**Thermal cut-out of electronic unit** (If the refrigeration system has been too heavily loaded, or if the ambient temperature is high, the electronic unit will run too hot).
4	**Minimum motor speed error** (If the refrigeration system is too heavily loaded, the motor cannot maintain minimum speed at approximately 1,850 rpm).
3	**Motor start error** (The rotor is blocked or the differential pressure in the refrigeration system is too high).
2	**Fan over-current cut-out** (The fan loads the electronic unit with more than $1.8A_{peak}$).
1	**Battery protection cut-out** (The voltage is outside the cut-out setting).

Accessories for BD250GH.2

Mounting		**Code number**
Bolt joint for one compressor	Ø: 16 mm	118-1917
Bolt joint in quantities	Ø: 16 mm	118-1918

Electrical (cables, sensors, etc.)	**Code number**	
	Single pack	**I - Pack**
DC line cord, 900 mm	105N9542	105N9543, 36 pcs.
DC line cord, 2000 mm	105N9540	105N9541, 36 pcs.
DC line cord, 5000 mm	105N9538	105N9539, 36 pcs.
Temperature sensor 470 mm	105N9612	105N9613, 200 pcs.
Temperature sensor 1000 mm	105N9614	105N9615, 100 pcs.
Temperature sensor 1500 mm	105N9616	105N9617, 100 pcs.
Secop Gateway	105N9518	–

Not deliverable from Secop	
Slow-blow fuse	16A
Main switch	rated to min. 25A



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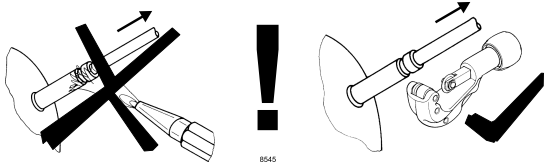
Keep electrical equipment clear from oil, chemicals, and water

BD Compressors

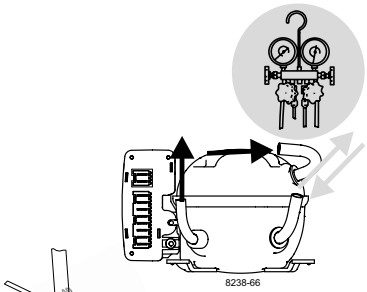
SECOP

Service/Repair – R290, R600a, R170, R1270, R1234yf (applies to all flammable refrigerants)



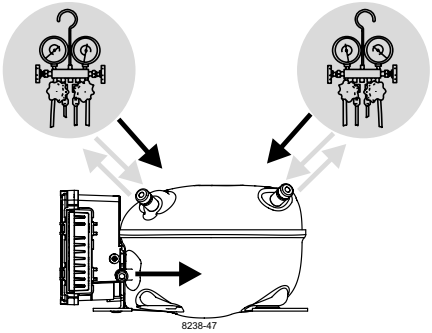
TOOL4COOL®

BD Nano

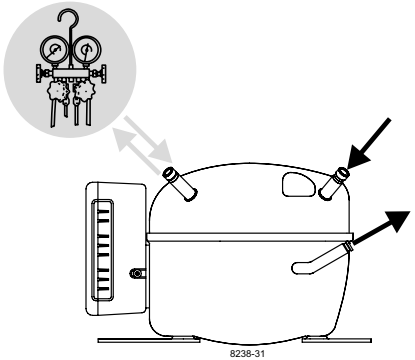


Do not heat up the bottom of the discharge connector directly.
Do not braze longer than 10 seconds and wait for 5 minutes for the next soldering attempt (Product Bulletin DES.N.101.M).

BD Micro



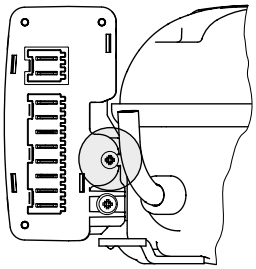
BD-P



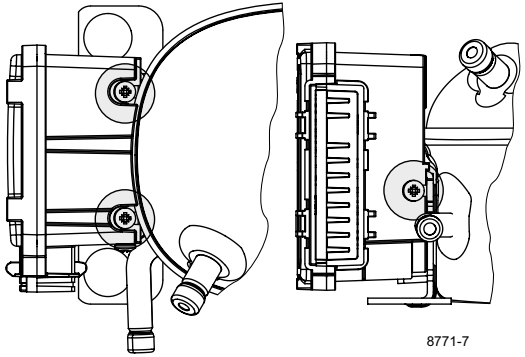
Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**

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

BD Compressors



BD Nano



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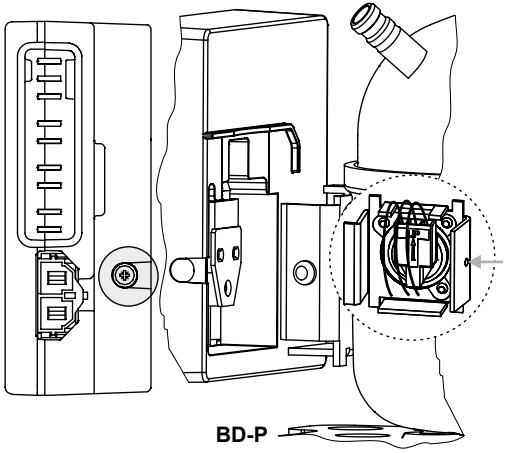

BD-P

BD Nano
Attach the electronic unit by pressing it linearly onto the compressor's Fusite® connector and bracket. The electronic unit must be mounted straight onto the compressor terminals. Ensure correct alignment before pressing it into place. Apply pressure until both screw heads snap into place. For high-vibration environments, the unit can optionally be secured with a third screw (marked in grey).

BD Micro
Attach the electronic unit by pressing it linearly onto the compressor's Fusite® connector and bracket. The electronic unit must be mounted straight onto the compressor terminals. Ensure correct alignment before pressing it into place. Secure it with at least two screws, either from the side or from above (marked in grey).

BD-P
The cable plug of the electronic unit is connected to the compressor's Fusite® connector. The electronic unit is then mounted onto the compressor bracket. First, the left side is attached; next, the right side is pressed sideways over the screw on the bracket (marked in grey). The unit snaps into place on the bracket and is now securely fixed to the compressor. An earth connection (via the compressor baseplate) can be used if required.

Dismantling, recycling, disposal: At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**