COMPLEXITY DOWN
FLEXIBILITY UP

BD1.4F-VSD.3
BD1.4F-VSD-HD
BD MICRO VARIABLE SPEED DRIVE

One4all

LESS IS MORE
REDUCED WEIGHT AND SIZE COMPARED TO PREVIOUS SOLUTIONS.

WE HAVE MORE THAN 40 YEARS OF EXPERIENCE DEVELOPING DIRECT CURRENT COMPRESSORS AND HELPING CUSTOMERS BENEFIT FROM THE OPPORTUNITIES OF MOBILE REFRIGERATION TECHNOLOGY.

WITH IN-DEPTH KNOWLEDGE OF USE ACROSS VARIOUS APPLICATIONS, WE HAVE EARNED A POSITION AS MARKET LEADER, WORKING WITH OEM CUSTOMERS.

www.secop.com

SETTING THE STANDARD
The new BD1.4F-VSD.3 (new generation with optimized noise level and released for refrigerant R1234yf) from Secop is 60% smaller than previous models and weighs in at only 2.3 kilos.

Perfect for 10-30 liter in car / van / boat cabinets or portable boxes that need to fit into tight spaces without compromising storage space.

Specially designed for maximum efficiency and reliability, this powerhouse of a compressor makes it easier than ever to provide leading class mobile refrigerators. Enabling the variable speed function increases the system’s COP/EER.

Low energy consumption is good for car / boat/van batteries – as well as the environment. The optimized, low-noise motor ensures outstanding performance when you want to provide that extra degree of luxury on the move.

The electronic thermostat [NTC sensor support] provides an accurate temperature while the failure detection allows a fast fault diagnosis. The computer interface makes it easier for customization.

The Heavy Duty version BD1.4F-VSD-HD (Heavy Duty) can handle extreme vibrations.

Cool beverages on demand make your journey so much more of an excellent experience.

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**General (code numbers)**

<table>
<thead>
<tr>
<th>BD1.4F-VSD.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor (2.1 kg)</td>
</tr>
<tr>
<td>Electronic unit (0.11 kg)</td>
</tr>
</tbody>
</table>

**Application**

<table>
<thead>
<tr>
<th>LBP/MBP/HBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporating temp. °C</td>
</tr>
<tr>
<td>Voltage (range) V DC</td>
</tr>
</tbody>
</table>

**Performance data (for 12 V DC, static cooling)**

<table>
<thead>
<tr>
<th>R134a</th>
<th>R1234yf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evap. temp. in °C</td>
<td>watt</td>
</tr>
<tr>
<td>2,000 rpm</td>
<td>-30</td>
</tr>
<tr>
<td>3,000 rpm</td>
<td>12</td>
</tr>
<tr>
<td>4,000 rpm</td>
<td>15</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
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<th>R1234yf</th>
</tr>
</thead>
<tbody>
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<td>watt</td>
</tr>
<tr>
<td>2,000 rpm</td>
<td>-30</td>
</tr>
<tr>
<td>3,000 rpm</td>
<td>16</td>
</tr>
<tr>
<td>4,000 rpm</td>
<td>19</td>
</tr>
</tbody>
</table>

**Current consumption (for 24 V applications the following must be halved)**

<table>
<thead>
<tr>
<th>R134a</th>
<th>R1234yf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evap. temp. in °C</td>
<td>A</td>
</tr>
<tr>
<td>2,000 rpm</td>
<td>-30</td>
</tr>
<tr>
<td>3,000 rpm</td>
<td>1.25</td>
</tr>
<tr>
<td>4,000 rpm</td>
<td>2.07</td>
</tr>
</tbody>
</table>

**COP (ASHRAE LBP)**

<table>
<thead>
<tr>
<th>R134a</th>
<th>R1234yf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evap. temp. in °C</td>
<td>W/W</td>
</tr>
<tr>
<td>2,000 rpm</td>
<td>-30</td>
</tr>
<tr>
<td>3,000 rpm</td>
<td>0.74</td>
</tr>
<tr>
<td>4,000 rpm</td>
<td>0.58</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>BD1.4F-VSD.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height mm</td>
</tr>
<tr>
<td>B 91.25</td>
</tr>
<tr>
<td>B1 88.00</td>
</tr>
<tr>
<td>B2 25.20</td>
</tr>
<tr>
<td>Suction connector location/I.D. mm</td>
</tr>
<tr>
<td>Process connector location/I.D. mm</td>
</tr>
<tr>
<td>Discharge connector location/I.D. mm</td>
</tr>
</tbody>
</table>

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The Heavy Duty version BD1.4F-VSD-HD (Heavy Duty) can handle extreme vibrations.
**General (code numbers)**

- BD1.4F-VSD-HD
- BD1.4F-VSD-HD (inch connectors)

**Compressor**

- (2.1 kg | 4.63 lbs)
- 109Z0250
- 109Z0251

**Electronic unit**

- (0.11 kg | 0.24 lbs)
- 101N2100

**Application**

- LBP/MBP/HBP

**Evaporating temperature**

- C° | °F
- -30 to 15 | -20 to 59

**Voltage (voltage range)**

- V DC
- 12 (9.6 - 17) / 24 (19 - 34)

**Dimensions**

- Height
  - [mm, inch]
  - A: 96.25
  - B: 91.25
  - B1: 88.00
  - B2: 25.20

- Suction connector
  - location/L.D. | I.D. | angle
  - C: 6.2 | 25° | 0.252-0.259 | 25°

- Process connector
  - location/L.D. | I.D. | angle
  - D: 6.2 | 25° | 0.252-0.259 | 25°

- Discharge connector
  - location/L.D. | I.D. | angle
  - E: 5.0 | 0° | 0.202-0.205 | 0°

**Performance data (12 V DC, static cooling)**

- **Capacity (ASHRAE LBP)**
  - watt | BTU/h
  - Evap. in °F | C° | -22 | -13 | -10 | -5 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - Evap. in °C | -30 | -25 | -20 | -15 | -11 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - 2,000 rpm | 12 | 14 | 19 | 28 | 39 | 52 | 68 | 85 | 93 | 105 | 126
  - 3,000 rpm | 11 | 20 | 24 | 32 | 47 | 64 | 83 | 106 | 131 | 143 | 159 | 190
  - 4,000 rpm | 15 | 29 | 34 | 45 | 65 | 88 | 114 | 144 | 177 | 193 | 214 | 254

- **Power consumption**
  - watt | BTU/h
  - Evap. in °F | C° | -22 | -13 | -10 | -5 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - Evap. in °C | -30 | -25 | -20 | -15 | -11 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - 2,000 rpm | 1.25 | 1.33 | 1.48 | 1.74 | 2.02 | 2.33 | 2.66 | 3.02 | 3.18 | 3.40 | 3.81
  - 3,000 rpm | 1.49 | 1.84 | 1.96 | 2.20 | 2.59 | 2.99 | 3.40 | 3.84 | 4.29 | 4.49 | 4.75 | 5.24

- **COP (ASHRAE LBP)**
  - W/W
  - Evap. in °F | C° | -22 | -13 | -10 | -5 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - Evap. in °C | -30 | -25 | -20 | -15 | -11 | 0 | 5 | 10 | 14 | 23 | 32 | 41 | 45 | 50 | 59
  - 2,000 rpm | 0.74 | 0.83 | 1.01 | 1.29 | 1.57 | 1.85 | 2.12 | 2.38 | 2.59 | 2.81 | 3.11 | 3.41 | 3.71 | 4.02 | 4.33
  - 3,000 rpm | 0.57 | 0.84 | 0.93 | 1.11 | 1.37 | 1.62 | 1.87 | 2.12 | 2.35 | 2.59 | 2.82 | 3.06 | 3.30 | 3.53 | 3.76

**BD 1.4F-VSD.3 features**

- low weight, less than 2.3 kg
- portable applications are easier to carry (45% less weight)
- reduced size, 60% less than standard products
- compressor covers LBP/MBP/HBP application range
- reduced size, 60% less than standard products
- increase your net volume
- one compressor for all applications

**BD 1.4F-VSD.3 functions**

- fan speed control: 40 -100%, start/stop delays
- increased comfort, less noise, energy savings
- compressor speed control
- less energy consumption, reduced noise
- ECO function
- energy savings, reduced noise
- flexible thermostats selection: mechanical or electronic
- easy installation, customizing, less costs
- start & stop delay for compressor and fans
- long lifetime, less spare parts
- battery protection
- increased comfort, less noise, energy savings
- PCB temperature protection
- protect from overheating, no damage
- increased comfort, less noise, energy savings

**BD 1.4F-VSD.3 benefits**

- portable applications are easier to carry (45% less weight)
- increased comfort, less noise, energy savings
- one compressor for all applications
- reduced size, 60% less than standard products
- increase your net volume

**BD 1.4F-VSD.3 functions**

- transport-stable
- flexible programming options
- communication interface
- protection against wrong polarity
- weather protection
- easy installation, customizing, less costs
- start & stop delay for compressor and fans
- long lifetime, less spare parts
- battery protection
- PCB temperature protection

**BD 1.4F-VSD.3 functions**

- reduced size, 60% less than standard products
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60%  
LESS IS MORE  
REDUCED WEIGHT AND SIZE COMPARED TO PREVIOUS SOLUTIONS.  

SIZE DOWN BUSINESS UP

WEIGHT DOWN MOBILITY UP

Save 2 KG

LESS IS MORE  
REDUCED WEIGHT AND SIZE COMPARED TO PREVIOUS SOLUTIONS.