Secop is the first choice for partners looking for leading-edge refrigeration solutions and a premium customer experience.

Secop delivers advanced refrigeration compressors and controls, providing customers tailored sustainable solutions for light commercial, battery-driven, and special cooling applications.

# HERMETIC COMPRESSORS

SECOP

# DC VOLTAGE

Variable Speed Efficiency

Premium Controllers

Mobile Cooling









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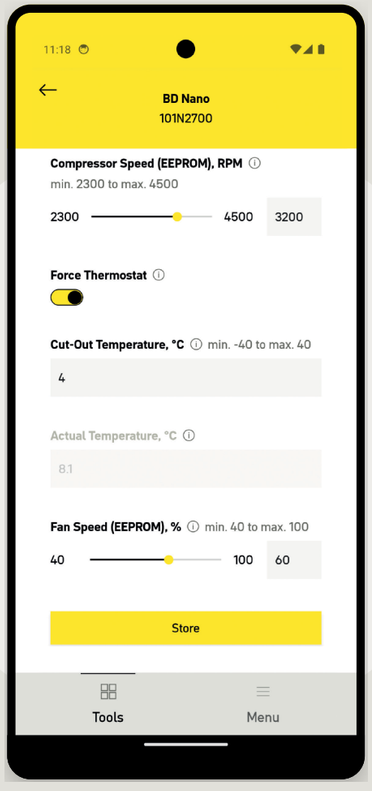
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# TOOL4COOL® MOBILE APP
# ADAPT YOUR COOLING PERFORMANCE




The mobile version of Tool4Cool® offers the possibility to adapt cooling performance relevant parameters primarily used in laboratories when testing an application:

- → **Compressor speed**
- → **Cut out temperature**
- → **Fan speed**

The new feature provides an exceptional user experience with a simplified layout and intuitive design. This first version is available for **BD Nano**, **BD Micro**, **BD-P** and related controllers. Setting these parameters for the DC range compressors is simple and can be done in four easy steps.

Thanks to the "actual temperature" parameter, the user can monitor the temperature inside the application.

Compared to the Tool4Cool® v3.01 version, which is still in use and available, the new mobile app feature reduces the user's effort. Indeed, the Product Key and the Parameter Definition files are automatically downloaded via the network connection. The new solution will automatically read the data from the electronic controller, let the user change the settings, and save them. The app communicates the parameters change to the controller, and the compressor starts operating with the new settings.

1 | Scan the QR code

2 | Download the app

3 | Connect the mobile phone

4 | Set the parameters and test

SEE IT IN ACTION!
For an easy to follow video instruction scan here.

# SECOP VARIABLE-SPEED BD COMPRESSORS FOR DIRECT CURRENT



BD Nano



BD Micro



BD-P

**Introduction**

With more than 45 years of experience in DC battery-driven compressors, Secop supports partners in developing cooling solutions for mobile applications across various market segments such as passenger cars, e-cars, trucks, motorhomes, boats, and refrigerated boxes. As market leader for mobile cooling solutions, we have gained a wide range of experience in different segments. This enables us to support our customers with premium solutions to meet the highest standards for performances, reliability, efficiency, and sustainability.

Secop BD compressors mean: extraordinary performance at minimum power consumption, superbly silent running, reliable operation even when tilted up to 30 degrees, problem-free operation at 12/24/48 volts.

**Highlights**

| | |
|---|---|
| **1977** | Introduction of BD compressors |
| **1998** | BD35F compressor for 12 or 24 V DC. |
| **1999** | BD50F compressor for 12 or 24 V DC |
| **2002** | BD150F compressor with variable-speed technology and 12/24 V DC option. |
| **2003** | BD35F and BD35K compressors for solar applications |
| **2005** | BD250GH compressor and AC/DC electronic unit |
| **2007** | BD350GH compressor for 12 or 24 V DC. |
| **2010** | BD Micro Automotive compressor |
| **2012** | BD Micro Variable-Speed Drive compressor |
| **2018** | BD50K compressor for isobutane |
| **2022** | BD Nano-Series – Next-generation mobile cooling compressors |

**Mobile Cooling Solutions**

Secop variable speed compressors type BD (battery driven) **BDN45F/-A, BD1.4F-VSD.3**, **BD35F**, **BD50F**, **BD80F**, and **BD250GH.2** are designed for connection to 12 – 24V DC and 48V DC power supply and for refrigerant R134a and/or R1234yf.

In bus applications a special version of **BD35F-B** has been developed. It is designed to minimize noise when the bus is driving. In truck applications special versions, **BD35F-HD.2** and **BD1.4F-VSD-HD**, have been made to meet truck standards in regards to shock and vibration.

The compressors **BDN50K, MB3CKV, BD35K, BD50K, BD80CN** and **BD100CN** are especially designed for refrigeration systems using isobutane, refrigerant R600a and propane, refrigerant R290, respectively, as can be seen from the individual type label information. Isobutane and propane are also called hydrocarbons.

Hydrocarbons are not implicated in ozone depletion (ODP), and the majority of hydrocarbon refrigerants have a GWP rating (Global Warming Potential) of 3.

**Sustainable Solutions**

The role of hydrocarbon refrigerant systems in reducing harmful greenhouse gases is twofold: Firstly, direct greenhouse gas ($CO_2$) emissions are significantly decreased thanks to the low GWP rating of hydrocarbons. And secondly, the features of a hydrocarbon system (lower condensing point, positive thermodynamic attributes, and superior COP) act in combination to optimize energy-efficient operation.

Assisted by the cheap availability of hydrocarbons produced as a by-product of gas and oil working, and by many studies demonstrating the energy savings hydrocarbon systems can deliver, hydrocarbons have proved to be viable replacements for fluorocarbons and other environmentally harmful refrigerants.

R600a and R290 are classified as flammable refrigerants of class A3 according to ANSI/ASHRAE 34. Accordingly, special safety regulations must be complied with. A special test schedule has been integrated in the European standards EN 60335-2-24 for domestic and EN 60335-2-89 for commercial appliances and in the corresponding international standards IEC 60335-2-24 and IEC 60335-2-89.

The compressors **BDN50K, MB3CKV, BD35K, BD50K, BD80CN** and **BD100CN** must only and exclusively be used in appliances certified for flammable refrigerants according to these or later regulations.

Secop BD compressors are intended for use in mobile and stationary applications e.g. portable cooling boxes, boats, caravans, trucks, parking cooling in trucks, vans, buses, cars and battery and shelter cooling in telecom stations. Due to the low power consumption and the option for a wide supply voltage range, the compressors are also suitable for stationary applications powered by photovoltaic solar panels, or fuel cells.

**Advantages of Direct Current Compressors**

Secop BD compressors can be used in refrigerators and freezers using either capillary tube or TEV as the throttling device. BD compressors must be mounted in a dry and clean place. The compressors will withstand storage temperatures down to -25°C and up to +70°C. Condensing temperatures are max. 60°C at stable conditions and max. 70°C at peak load. Ambient temperatures are min. -10°C, max. 43°C.

Secop BD compressors are designed to be mounted in a horizontal position. However they are also designed to operate temporarily in conditions with heeling up to 30° such as can occur in boats, car and trucks driving in mountains. Under such heeling conditions the compressor can be noisy when internal compressor parts knock against the compressor shell. In addition to being especially quiet in operation – ranging from 33 dB(A) to 38 dB(A)– depending on model and speed of compressor, all BD compressors have high COP values.

**Variable Speed Efficiency**

The BD compressor concept includes an electronic unit (controller) which features overload protection, battery protection, wrong polarity protection, evaporator and condenser fan control, LED diagnosis signal, light bulb connection, load dump protection, mechanical or electronic thermostat, ECO function, AEO (Adapative Energy Optimizing) function and bus communication interface. These features are model dependant.

The electronic module has internal voltage recording and calibration to the applied voltage.

The electronic module may also be powered directly from certain types of electronic power supply units and thus no battery is required.

These variable-speed drive controllers offer the possibility to adjust the refrigeration capacity of the compressor and adapt it to the desired need by controlling the motor speed. The most important advantage of adaptable capacity is reduced energy consumption but also a reduced average noise level is possible.

# BD COMPRESSORS
# PRODUCT RANGE



## BD NANO, BD MICRO, BD-P CHARACTERISTICS

**BDN45F, BDN50K, MB3CKV (BD Nano)**
Secop's latest innovation for mobile refrigeration is the new BD Nano compressor which is available for low GWP refrigerants R600a and R1234yf as well as for R134a. This compact very low vibrating low noise emitting compressor is the ideal solution for small and silent cooling units.

Together with its premium controller, this highly efficient mobile direct current compressor preserves battery life during cooling. Compared to its predecessor models, the BD Nano offers enhanced connectivity and lower EMI, thus making it easier for our customers to meet the stringent standards for equipment approvals, they also achieve a lower TCO.

The extreme compact BD Nano provides the same cooling capacity as much bigger BD35F/50F/35K/50K compressors yet with unrivaled efficiency.

Secop's solar direct drive (SDD) and weak grid power management system consists of the new generation SDD Power Management Module, the new MB3CKV medical version of the BD Nano compressor series, and its controller.

**BD1.4F-VSD.3, BD1.4F-VSD-HD (BD Micro)**
The BD1.4F-VSD.3 (new BD Micro generation with optimized noise level and approved for refrigerant R1234yf) is 60 % smaller than previous models and weighs in at only 2.3 kilograms, perfect for 10–30 liter in car, van, boat cabinets, or portable boxes that need to fit into tight spaces without compromising storage space. 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. Low energy consumption is good for car, boat, or van batteries as well as the environment. The optimized, low-noise motor ensures outstanding performance for offering that extra degree of luxury on the go. The electronic thermostat (NTC sensor support) provides an accurate temperature while the failure detection allows fast fault diagnosis. The computer interface makes it easier for customization.

BD1.4F-VSD-HD is a special version which can handle extreme vibrations (Heavy Duty).

**BD35F, BD 50F, BD 80F,**
**BD35K, BD50K, BD80CN, BD100CN**
**BD250GH.2, BD250GH.2-HD,**
**BD35F-HD.2, BD35F-B, BD35K-B**
BD35F / 50F / 80F for 12 / 24 V DC power supply can be used in mobile refrigerators and freezers with refrigerant R134a and also with R1234yf (except BD80F).

The BD250GH.2 and the BD350GH compressors in 12 / 24 or 48 V DC versions are R134a HBP compressors used for mobile spot cooling systems or telecommunication cooling.

BD35 / 50K (R600a) and BD80/100CN (R290) are compressors that use HFC-free refrigerants. The BD50K offers 25 % additional cooling capacity compared to the BD35K compressor.

All compressors are equipped with an electronic unit with built-in protection against shortages, operation outside temperature limits, and destructive battery discharge. The advanced micro-controller technology enables new functions such as an electronic thermostat, fan speed, ECO function, alarm log, event log, and software main switch.

Thanks to an extensive voltage rate the BD compressors are ideal for operation by solar power. The exceptionally low-starting current eliminates the need for batteries if an ice bank is used for energy storage. When storing the converted sun energy in ice packs, the cabinet can be kept at desired temperatures both night and day. This feature offers numerous uses in areas without power supply such as for the storage and transportation of vaccines, drugs, ice cream stands in holiday resorts, food preservation under off road conditions, and refrigerators in boats to name only a few.

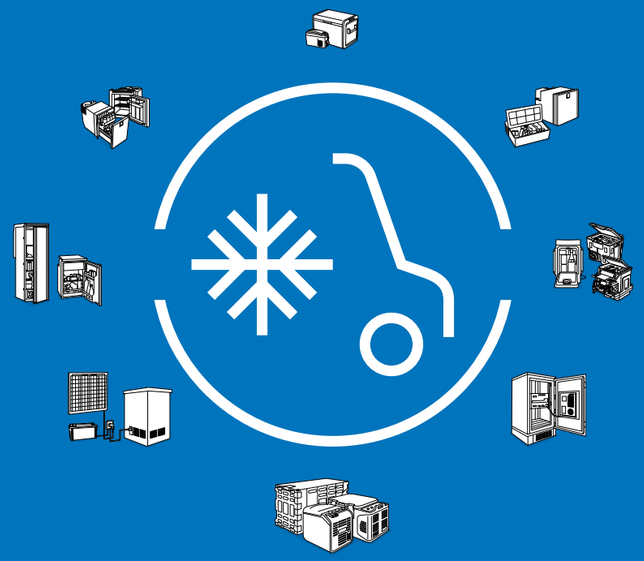
BD35F-HD.2, BD250GH.2-HD (48 V) are special versions which can handle extreme vibrations (Heavy Duty).

The BD35F-B and the BD35K-B are special versions optimized for rough vehicle motions, especially in buses (Bus-optimized).

| APPLICATIONS | Compressors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BDN45F | BDN45AF-A | BDN50K | MB3CKV | BD1.4F-VSD.2 | BD1.4F-VSD-HD | BD35F | BD35F-B | BD35F-HD.2 | BD35K/-B | BD50K | BD50F | BD80F | BD80CN | BD100CN |
| Truck refrigerators | ✓ | – | ✓ | – | ✓ | ✓ | ✓ | – | ✓ | ✓ | ✓ | ✓ | – | ✓ | – |
| Boat refrigerators | ✓ | – | ✓ | – | ✓ | – | ✓ | – | – | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bus refrigerators | ✓ | – | ✓ | – | ✓ | – | ✓ | ✓ | – | ✓ | ✓ | – | – | ✓ | – |
| RV refrigerators | ✓ | – | ✓ | – | ✓ | ✓ | ✓ | – | ✓ | ✓ | ✓ | ✓ | – | ✓ | – |
| Portable boxes | ✓ | – | ✓ | – | ✓ | – | ✓ | – | – | ✓ | ✓ | ✓ | ✓ | – | – |
| Car minbars (high end) | – | ✓ | ✓ | – | ✓ | – | ✓ | – | – | ✓ | – | – | – | – | – |
| Car minibars (SUV, MPV) | – | ✓ | ✓ | – | ✓ | – | ✓ | – | – | ✓ | – | – | – | – | – |
| Spot cooling (e.g. trucks) | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Van boxes | – | – | – | – | – | – | – | – | – | – | – | ✓ | ✓ | ✓ | ✓ |
| Battery cooling | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Solar refrigerators | ✓ | | ✓ | ✓ | – | – | ✓ | – | – | ✓ | ✓ | – | – | ✓ | – |
| Solar Direct Drive e.g. medicial applications | – | | – | ✓ | – | – | – | – | – | – | – | – | – | – | – |

# BD COMPRESSORS PORTFOLIO

DC-powered or battery-driven compressors specifically designed for mobile cooling solutions: automotive (trucks, cars, bus), recreations vehicles, portable boxes, medical, solar, and special applications



| Series | Displacement (cm³) | Cooling Capacity: LBP (W) ASHRAE | Cooling Capacity: MBP (W) ASHRAE | Cooling Capacity: HBP (W) ASHRAE | Refrigerants |
|---|---|---|---|---|---|
| BD Nano | 1.42 – 2.60 | 28 – 69 | 63 – 139 | | R134a<br>R1234yf<br>R600a |
| BD Micro | 1.41 | 13 – 34 | 42 – 94 | 83 – 173 | R134a<br>R1234yf |
| BD-P | 2.0 – 3.0 | 29 – 71 | 65 – 223 | 115 – 390 | R600a<br>R290<br>R134a<br>R1234yf |
| | 0 – 35 | 0 – 2000 | 0 – 3500 | 0 – 2750 | |

Natural Refrigerants

Variable-Speed Drive

Secop mobile cooling compressors are available for a variety of DC voltage ranges and certain controllers even feature an AC option for various mains supply.

# BD COMPRESSORS AT A GLANCE

Modern comfort is brought into life when leaving home. As people go mobile, so does food. The excellent performance of the BD series safeguards food preservation.

With our outstanding DC compressors for cars, vans, boats, trucks, etc., Secop has transcended the barriers for mobile refrigeration.



**BD80 / 100CN**
R290, -40°C, -5°C evap. temp.

Freezer applications, solar-powered applications, ice cream boxes up to 200 l, 16-203 W / 20-250 W cooling capacity*.



**BD35K Multivoltage and BD50K**
R600a, -30°C, +10°C evap. temp.

Solar-powered applications, etc., 100-250 l coolers, 13-242 W cooling capacity*. BD35K can be powered with AC and DC, 85-240 V AC 50/60 Hz, 12-24 V DC, automatic selection of AC when available. 13-128 W and 17-242 W cooling capacity*.



**BD35F / 50F / 80F Basic**
R134a/R1234yf, -30°C, +10°C, -5°C (BD80F) evap. temp.

All mobile applications for portable boxes, boats, trucks, solar-powered applications, etc., 16-152 W / 21-191 W / 35-221 W cooling capacity*.



**BD35F/ 50F Multivoltage**
R134a/R1234yf, -30°C, +10°C evap. temp.

All mobile applications for portable boxes, boats, trucks, etc., can be powered with AC and DC, 85-240 V AC 50/60 Hz, 12-24 V DC, automatic selection of AC when available, 16-152 W / 21-191 W cooling capacity*.



**BD250GH.2**
R134a, -25°C, +15°C evap. temp.

Designed for cabin cooling in trucks during nighttime, very silent operation, 31-446 W cooling capacity*.



**BD1.4F-VSD.3 (BD Micro)**
R134a/R1234yf, -30°C, +15°C evap. temp.

In-car cabinets and all mobile applications for portable boxes, boats, trucks, etc., 10-203 W cooling capacity*.



**BDN45F, BDN50K, and MB3CKV (BD Nano)**
R134a/R1234yf, R600a, -30°C, +5°C evap. temp.

In-car cabinets and all mobile applications for portable boxes, boats, trucks, etc., Solar Direct Drive powered vaccine refrigerators, 14-130 W and 17-146 W cooling capacity*.

* EN12900/CECOMAF conditions:
Condensing temp.: 55°C | Suction gas temp.: 32°C | Ambient temp.: 32°C, | Liquid temp.: no subcooling

# BD NANO
# BDN45F | BDN45F-A
# BDN50K | MB3CKV




| Compressors | Code number | Description |
|---|---|---|
| BDN45F | 109Z0400 | variable speed drive compressor, mm tube connectors |
| BDN45F-A | 109Z0445 | automotive variable speed drive compressor, mm tube connectors |
| BDN50K (R600a) | 109Z0420 | variable speed drive compressor, mm tube connectors |
| MB3CKV (R600a) | 109M0860 | variable speed drive compressor for medical applications (e.g. Solar Direct Drive), mm tube connectors |

| Electronic Single Pack | Code number | Description |
|---|---|---|
| Leisure | 101N2740 | for BDN45F, BDN50K, leisure and general purpose ECU, integrated thermostat, NTC, battery programming, intelligent fan control, standby mode, LIN, standalone mode |
| Automotive | 101N2720 | for BDN45F-A, automotive standard ECU, integrated thermostat, NTC, compressor temperature protection, intelligent fan control, deep sleep, LIN |
| Solar 1 | 101N2742 | for MB3CKV (BDN45F, BDN50K are also supported), solar and medical applications (e.g. SDD) ECU, integrated thermostat, NTC, intelligent fan control, standby mode, LIN, standalone mode |

| Electronic I – Pack | Code number | Description |
|---|---|---|
| Leisure | 101N2741 | for BDN45F, BDN50K, leisure and general purpose ECU, integrated thermostat, NTC, battery programming, intelligent fan control, standby mode, LIN, standalone mode, 40 pcs. |
| Automotive | 101N2721 | or BDN45F-A, automotive standard ECU, integrated thermostat, NTC, compressor temperature protection, intelligent fan control, deep sleep, LIN, 40 pcs. |
| Solar 1 | 101N2743 | for MB3CKV (BDN45F, BDN50K are also supported), solar and medical applications (e.g. SDD) ECU, integrated thermostat, NTC, intelligent fan control, standby mode, LIN, standalone mode, 40 pcs. |

The new solar direct drive (SDD) and weak grid power management system designed by Secop consists of the new generation **SDD Power Management Module**, the **MB3CKV** medical version of the BD Nano compressor series, and its dedicated **Solar 1** controller. For more information please refer to our Quick Reference brochure: **Solar Direct Drive and Weak Grid Power Management System** (DES.B.101.L_)

| | Item | Code number | Description |
|---|---|---|---|
| Accessories | Temperature sensor, 470 mm, spade connectors | 105N9612 | accessories |
| | Temperature sensor, 1000 mm, spade connectors | 105N9614 | accessories |
| | Temperature sensor, 1500 mm, spade connectors | 105N9616 | accessories |
| | Secop One Wire/LIN gateway with cables | 105N9518 | accessories |

| | | | |
|---|---|---|---|
| Accessories | Temperature sensor, 470 mm, spade connectors | 105N9613 | accessories, 200 pcs. |
| | Temperature sensor, 1000 mm, spade connectors | 105N9615 | accessories, 100 pcs. |
| | Temperature sensor, 1500 mm, spade connectors | 105N9617 | accessories, 100 pcs. |

# BD NANO R134a

| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | |
| | | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | [cm³] | |
| BDN45F 2300 rpm | 109Z0400 | L/MBP | – | 44.8 | 74.7 | 94.1 | – | – | 27.6 | 1.37 | 61.5 | 1.86 | – | – | 1.42 | S |
| BDN45F 4500 rpm | 109Z0400 | L/MBP | – | 95.9 | 150.4 | – | – | – | 58.7 | 1.52 | 125.6 | 1.98 | – | – | 1.42 | S |
| BDN45F-A 2300 rpm | 109Z0445 | L/MBP | – | 44.8 | 74.7 | 94.1 | – | – | 27.6 | 1.37 | 61.5 | 1.86 | – | – | 1.42 | S |
| BDN45F-A 4500 rpm | 109Z0445 | L/MBP | – | 95.9 | 150.4 | – | – | – | 58.7 | 1.52 | 125.6 | 1.98 | – | – | 1.42 | S |

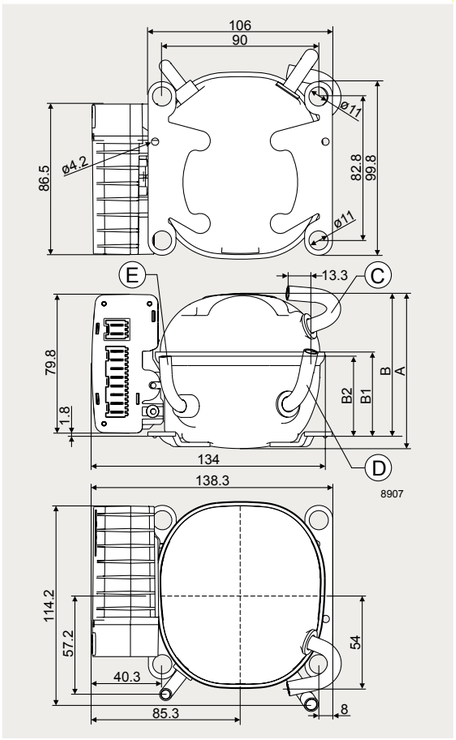
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | Code number | Electronic unit | | |
|---|---|---|---|---|
| | | Leisure 12–24 V DC 101N2740 | Automotive 12–24 V DC 101N2720 | Solar 1 12–24 V DC 101N2742 |
| BDN45F | 109Z0400 | ✓ | – | ✓ |
| BDN45F-A | 109Z0442 | – | ✓ | – |




| Compressor | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | | Suction | Process | Discharge | |
| | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | A | B | C (I.D.) | D (I.D.) | E (I.D.) | |
| – | 36.0 | 60.1 | 75.6 | – | – | 19.9 | 1.05 | 47.0 | 1.52 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6–34, 19–34 V DC |
| – | 77.4 | 121.2 | – | – | – | 42.0 | 1.16 | 98.4 | 1.66 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |
| – | 36.0 | 60.1 | 75.6 | – | – | 19.9 | 1.05 | 47.0 | 1.52 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6–34, 19–34 V DC |
| – | 77.4 | 121.2 | – | – | – | 42.0 | 1.16 | 98.4 | 1.66 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |

**BDN45F** with 101N2740



# BD NANO R1234yf

Low GWP Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | |
| | | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | [cm³] | |
| BDN45F 2300 rpm | 109Z0400 | L/MBP | – | 47.5 | 76.4 | 94.8 | – | – | 30.5 | 1.39 | 62.2 | 1.83 | – | – | 1.42 | S |
| BDN45F 4500 rpm | 109Z0400 | L/MBP | – | 101.2 | 153.7 | – | – | – | 64.5 | 1.54 | 126.7 | 1.97 | – | – | 1.42 | S |
| BDN45F-A 2300 rpm | 109Z0445 | L/MBP | – | 47.5 | 76.4 | 94.8 | – | – | 30.5 | 1.39 | 62.2 | 1.83 | – | – | 1.42 | S |
| BDN45F-A 4500 rpm | 109Z0445 | L/MBP | – | 101.2 | 153.7 | – | – | – | 64.5 | 1.54 | 126.7 | 1.97 | – | – | 1.42 | S |

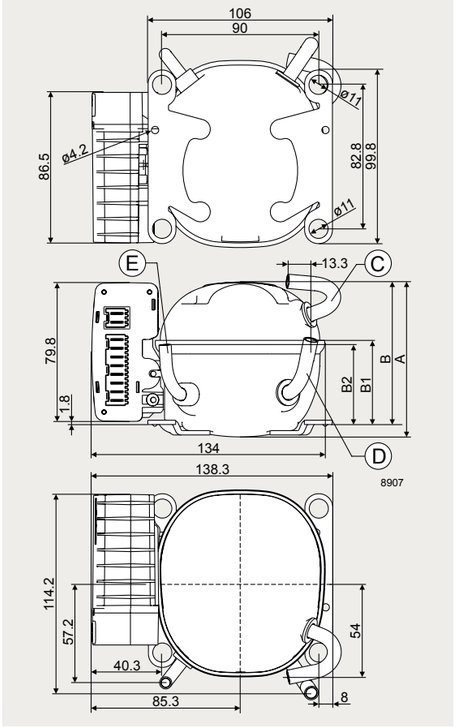
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | Code number | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | | Suction | Process | Discharge | |
| | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | A | B | C (I.D.) | D (I.D.) | E (I.D.) | |
| BDN45F 2300 rpm | 109Z0400 | – | 36.5 | 58.8 | 72.9 | – | – | 21.2 | 1.02 | 46.7 | 1.48 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6-34, 19-34 V DC |
| BDN45F 4500 rpm | 109Z0400 | – | 78.2 | 118.5 | – | – | – | 44.8 | 1.14 | 97.7 | 1.61 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |
| BDN45F-A 2300 rpm | 109Z0445 | – | 36.5 | 58.8 | 72.9 | – | – | 21.2 | 1.02 | 46.7 | 1.48 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6-34, 19-34 V DC |
| BDN45F-A 4500 rpm | 109Z0445 | – | 78.2 | 118.5 | – | – | – | 44.8 | 1.14 | 97.7 | 1.61 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |

| Compressor | Code number | Electronic unit | | |
|---|---|---|---|---|
| | | Leisure 12–24 V DC 101N2740 | Automotive 12–24 V DC 101N2720 | Solar 1 12–24 V DC 101N2742 |
| BDN45F | 109Z0400 | ✓ | – | ✓ |
| BDN45F-A | 109Z0442 | – | ✓ | – |




## BDN45F with 101N2740



# BD NANO **R600a**

Natural Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE | | | | | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | LBP rating point -23.3°C / 54.4°C | | MBP rating point -6.7°C / 54.4°C | | HBP rating point 7.2°C / 54.4°C | | | |
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | |
| | | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | [cm³] | |
| BDN50K 2300 rpm | 109Z0420 | L/MBP | – | 50.0 | 79.9 | 98.4 | – | – | 31.6 | 1.48 | 66.7 | 1.90 | – | – | 2.60 | S |
| BDN50K 4500 rpm | 109Z0420 | L/MBP | – | 101.6 | 156.4 | – | – | – | 68.1 | 1.54 | 131.0 | 1.95 | – | – | 2.60 | S |
| MB3CKV 2300 rpm | 109M0860 | L/MBP | – | 50.0 | 79.9 | 98.4 | – | – | 31.6 | 1.48 | 66.7 | 1.90 | – | – | 2.60 | S |
| MB3CKV 4500 rpm | 109M0860 | L/MBP | – | 101.6 | 156.4 | – | – | – | 68.1 | 1.54 | 131.0 | 1.95 | – | – | 2.60 | S |

Please refer to the individual compressor data sheets for the complete application range.

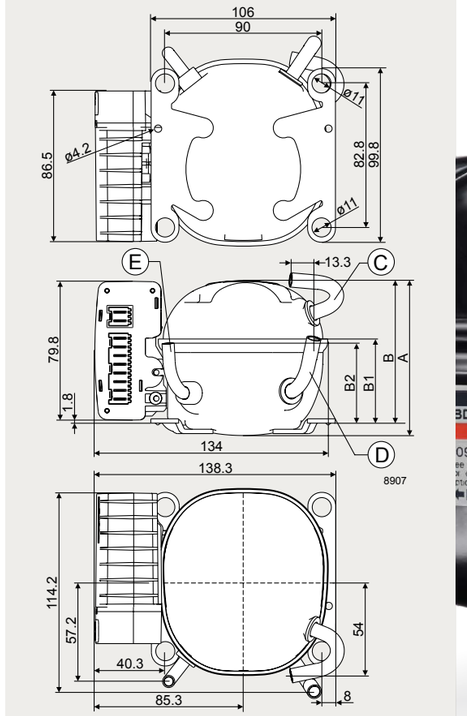
| Compressor | Code number | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF | | | | | | Dimensions | | | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | LBP rating point -25°C / 55°C | | MBP rating point -10°C / 55°C | | HBP rating point 5°C / 55°C | | Height [mm] | | Connectors location/I.D. [mm] | | | |
| | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | | Suction | Process | Discharge | |
| | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | A | B | C (I.D.) | D (I.D.) | E (I.D.) | |
| BDN50K 2300 rpm | 109Z0420 | – | 40.9 | 65.4 | 80.5 | – | – | 23.3 | 1.16 | 52.2 | 1.60 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6-34, 19-34 V DC |
| BDN50K 4500 rpm | 109Z0420 | – | 82.8 | 127.9 | – | – | – | 50.2 | 1.20 | 103.2 | 1.64 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |
| MB3CKV 2300 rpm | 109M0860 | – | 40.9 | 65.4 | 80.5 | – | – | 23.3 | 1.16 | 52.2 | 1.60 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | 9.6-17, 9.6-34, 19-34 V DC |
| MB3CKV 4500 rpm | 109M0860 | – | 82.8 | 127.9 | – | – | – | 50.2 | 1.20 | 103.2 | 1.64 | – | – | 89.0 | 82.4 | 6.20 | 6.20 | 5.00 | |

| Compressor | Code number | Electronic unit | |
|---|---|---|---|
| | | Leisure 12–24 V DC 101N2740 | Solar 1 12–24 V DC 101N2742 |
| BDN50K | 109Z0420 | ✓ | ✓ |
| MB3CKV | 109M0860 | – | ✓ |

The new solar direct drive (SDD) and weak grid power management system designed by Secop consists of the new generation **SDD Power Management Module**, the **MB3CKV** medical version of the BD Nano compressor series, and its dedicated **Solar 1** controller.

For more information please refer to our Quick Reference brochure: **Solar Direct Drive and Weak Grid Power Management System** (DES.B.101.L_)

**BDN50K** with 101N2740






# BD MICRO

# BD1.4F-VSD.2/.3
# BD1.4F-VSD-HD




| Compressors | Code number | Description |
|---|---|---|
| BD1.4F-VSD.3 | 109Z0209 | variable speed drive compressor, mm tube connectors |
| BD1.4F-VSD.2 inch | 109Z0206 | similar as 109Z0209, inch tube connectors |
| BD1.4F-VSD-HD | 109Z0250 | variable speed drive compressor (heavy duty), mm tube connectors, for trucks and buses |
| BD1.4F-VSD-HD inch | 109Z0251 | same as 109Z0250, inch tube connectors, for trucks and buses |

| Electronic Single Pack | Code number | Description |
|---|---|---|
| Variable Speed (VSD) | 101N2130 | for BD1.4F-VSD.2/.3, BD1.4F-VSD-HD, speed setting, battery protection, 12/24 V, ECO function |

| Electronic I – Pack | Code number | Description |
|---|---|---|
| Variable Speed (VSD) | 101N2131 | for BD1.4F-VSD.2/.3, BD1.4F-VSD-HD, speed setting, battery protection, 12/24 V, ECO function, 30 pcs. |

| | Item | Code number | Description |
|---|---|---|---|
| Accessories | Temperature sensor, 470 mm, spade connectors | 105N9612 | accessories |
| | Temperature sensor, 1000 mm, spade connectors | 105N9614 | accessories |
| | Temperature sensor, 1500 mm, spade connectors | 105N9616 | accessories |
| | Secop One Wire/LIN gateway with cables | 105N9518 | accessories |

| | | | |
|---|---|---|---|
| Accessories | Temperature sensor, 470 mm, spade connectors | 105N9613 | accessories, 200 pcs. |
| | Temperature sensor, 1000 mm, spade connectors | 105N9615 | accessories, 100 pcs. |
| | Temperature sensor, 1500 mm, spade connectors | 105N9617 | accessories, 100 pcs. |

# BD MICRO R134a



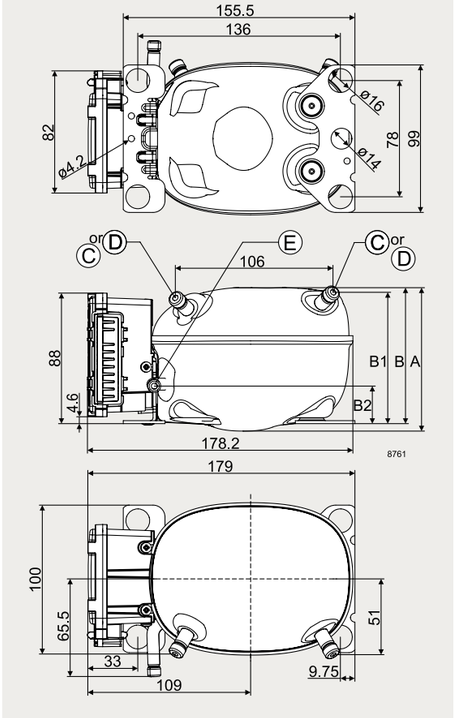
| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | [cm³] | |
| BD1.4F-VSD.3 2000 rpm | 109Z0209 | L/M/HBP | – | 28 | 52 | 68 | 105 | 126 | 14 | 0.83 | 43 | 1.53 | 83 | 2.05 | 1.41 | S |
| BD1.4F-VSD.3 4000 rpm | 109Z0209 | L/M/HBP | – | 65 | 114 | 144 | 214 | 254 | 34 | 0.94 | 94 | 1.59 | 172 | 2.23 | 1.41 | S |
| BD1.4F-VSD.2 2000 rpm | 109Z0206 | L/M/HBP | – | 28 | 52 | 68 | 105 | 126 | 14 | 0.83 | 43 | 1.53 | 83 | 2.05 | 1.41 | S |
| BD1.4F-VSD.2 4000 rpm | 109Z0206 | L/M/HBP | – | 65 | 114 | 144 | 214 | 254 | 34 | 0.94 | 94 | 1.59 | 172 | 2.23 | 1.41 | S |
| BD1.4F-VSD-HD 2000 rpm | 109Z0250 | L/M/HBP | – | 28 | 52 | 68 | 105 | 126 | 14 | 0.83 | 43 | 1.53 | 83 | 2.05 | 1.41 | S |
| BD1.4F-VSD-HD 4000 rpm | 109Z0250 | L/M/HBP | – | 65 | 114 | 144 | 214 | 254 | 34 | 0.94 | 94 | 1.59 | 172 | 2.23 | 1.41 | S |
| BD1.4F-VSD-HD 2000 rpm | 109Z0251 | L/M/HBP | – | 28 | 52 | 68 | 105 | 126 | 14 | 0.83 | 43 | 1.53 | 83 | 2.05 | 1.41 | S |
| BD1.4F-VSD-HD 4000 rpm | 109Z0251 | L/M/HBP | – | 65 | 114 | 144 | 214 | 254 | 34 | 0.94 | 94 | 1.59 | 172 | 2.23 | 1.41 | S |

Please refer to the individual compressor data sheets for the complete application range.

| Compressor | Code number | Electronic unit Variable Speed (VSD) 12–24 V DC 101N2130 |
|---|---|---|
| BD1.4F-VSD.3 | 109Z0209 | ✓ |
| BD1.4F-VSD-HD | 109Z0250 | ✓ |
| BD1.4F-VSD.2 (inch connectors) | 109Z0206 | ✓ |
| BD1.4F-VSD-HD (inch connectors) | 109Z0251 | ✓ |

| CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | A | B | Suction C (I.D.) | Process D (I.D.) | Discharge E (I.D.) | |
| – | 22 | 42 | 54 | 84 | 101 | 9 | 0.59 | 31 | 1.24 | 68 | 1.76 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 19–34 V DC |
| – | 52 | 92 | 116 | 172 | 203 | 23 | 0.68 | 71 | 1.30 | 142 | 1.91 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | |
| – | 22 | 42 | 54 | 84 | 101 | 9 | 0.59 | 31 | 1.24 | 68 | 1.76 | 96.0 | 91.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 19–34 V DC |
| – | 52 | 92 | 116 | 172 | 203 | 23 | 0.68 | 71 | 1.30 | 142 | 1.91 | 96.0 | 91.0 | 6.50 | 6.50 | 5.00 | |
| – | 22 | 42 | 54 | 84 | 101 | 9 | 0.59 | 31 | 1.24 | 68 | 1.76 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 19–34 V DC |
| – | 52 | 92 | 116 | 172 | 203 | 23 | 0.68 | 71 | 1.30 | 142 | 1.91 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | |
| – | 22 | 42 | 54 | 84 | 101 | 9 | 0.59 | 31 | 1.24 | 68 | 1.76 | 96.0 | 91.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 19–34 V DC |
| – | 52 | 92 | 116 | 172 | 203 | 23 | 0.68 | 71 | 1.30 | 142 | 1.91 | 96.0 | 91.0 | 6.50 | 6.50 | 5.00 | |

**BD1.4F-VSD.3 /.2 /HD** with 101N2130






# BD MICRO R1234yf

Low GWP Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | |
| | | | | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | [cm³] | |
| BD1.4F-VSD.3 2000 rpm | 109Z0209 | L/M/HBP | – | 30 | 55 | 69 | 102 | 120 | 15 | 0.85 | 44 | 1.52 | 81 | 2.04 | 1.41 | S |
| BD1.4F-VSD.3 4000 rpm | 109Z0209 | L/M/HBP | – | 70 | 118 | 145 | 206 | 239 | 38 | 0.95 | 96 | 1.57 | 165 | 2.18 | 1.41 | S |

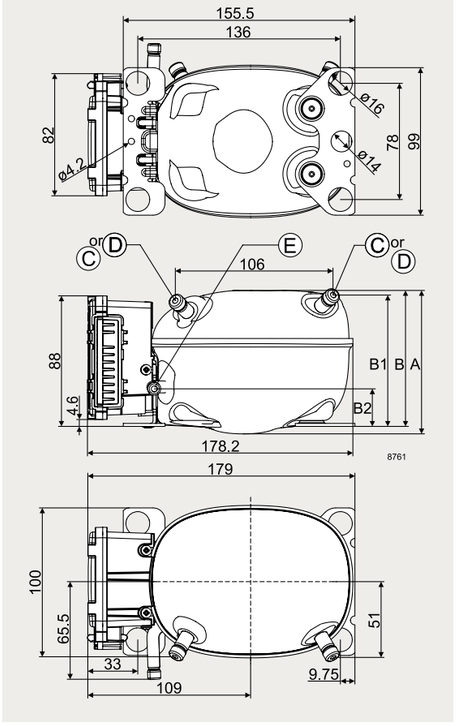
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | Code number | Electronic unit |
|---|---|---|
| | | Variable Speed (VSD) 12–24 V DC 101N2130 |
| BD1.4F-VSD.3 | 109Z0209 | ✓ |




| CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity | COP | Cooling capacity | COP | Cooling capacity | COP | | | Suction | Process | Discharge | |
| | | | | | | [W] | [W/W] | [W] | [W/W] | [W] | [W/W] | A | B | C (I.D.) | D (I.D.) | E (I.D.) | |
| – | 23 | 42 | 53 | 78 | 91 | 10 | 0.58 | 32 | 1.20 | 65 | 1.70 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 19–34 V DC |
| – | 54 | 91 | 111 | 158 | 182 | 24 | 0.66 | 71 | 1.25 | 134 | 1.82 | 96.0 | 91.0 | 6.20 | 6.20 | 5.00 | |

## BD1.4F-VSD.3 with 101N2130



# BD-P

# BD35/50/80F | BD250GH.2
# BD35F-HD.2 | BD35F-B
# BD35/50K | BD80/100CN
# BD250GH.2/-HD.2 (48 V)




| Compressors | Code number | Description |
|---|---|---|
| BD35F | 101Z0200 | standard compressor, mm tube connectors |
| BD35F inch | 101Z0204 | same as 101Z0200, inch tube connectors |
| BD35F-B | 101Z0205 | optimized for rough vehicle motions (especially in buses), mm tube connectors |
| BD35F-HD.2 | 101Z0216 | heavy duty version which can handle extreme vibrations, mm tube connectors |
| BD35K (R600a) | 101Z0211 | mainly solar applications, mm tube connectors |
| BD35K-B (R600a) | 101Z0214 | optimized for rough vehicle motions (especially in buses), other HD applications, mm tube connectors |
| BD50K (R600a) | 101Z0213 | standard compressor, mm tube connectors |
| BD50F | 101Z1220 | standard compressor, mm tube connectors |
| BD50F inch | 101Z0203 | same as 101Z1220, inch tube connectors |
| BD80F | 101Z0280 | standard compressor, mm tube connectors |
| BD250GH.2 | 101Z0406 | mm tube connectors, HBP compressor |
| BD80CN (R290) | 101Z0403 | mm tube connectors |
| BD100CN (R290) | 101Z0401 | mm tube connectors |
| BD250GH.2 48 V DC supply | 101Z0405 | for telecommunication applications (battery cooling), mm tube connectors |
| BD250GH.2-HD 48 V DC supply | 101Z0410 | for cooling and comfort cooling in trucks and vans, mm tube connectors |

| Electronic Unit Single Pack | Code number | Description |
|---|---|---|
| Standard | 101N0242 | for BD35F/BD50F/BD35K/BD80CN, speed setting, battery protection, ECO function, high starting torque (HST), reduced EMI and leakage current |
| AEO | 101N0340 | for BD35F/BD50F/BD80CN, Adaptive Energy Optimization |
| High speed | 101N0390 | for BD50K/BD80F/BD250GH.2/etc., Adaptive Energy Optimization, speed setting, battery protection |
| Solar 10-45 V DC | 101N0420 | for BD35F/BD50F/BD35K/BD80CN, optimized for direct solar panel operation, speed setting |
| AC/DC converter | 101N0510 | for BD35F/BD50F/BD35K/BD80CN speed setting, battery protection, integrated AC/DC converter |
| Automotive | 101N0680 | for BD35F/BD50F/BD35K/BD80CN, speed setting, battery protection, ECO function, high starting torque (HST), reduced EMI and leakage current |
| Telecom 48 V DC | 101N0732 | for BD250GH.2/-HD (48 V), 60 W fan output, ECO function |

| Electronic Unit I – Pack | Code number | Description |
|---|---|---|
| Standard | 101N0243 | for BD35F/BD50F/BD35K/BD80CN, speed setting, battery protection, ECO function, high starting torque (HST), reduced EMI and leakage current, 30 pcs. |
| AEO | 101N0341 | for BD35F/BD50F/BD80CN, Adaptive Energy Optimization, 30 pcs. |
| High speed | 101N0391 | for BD80F/BD250GH.2/etc., Adaptive Energy Optimization, speed setting, battery protection, 30 pcs. |
| Solar 10-45 V DC | 101N0421 | for BD35F/BD50F/BD35K/BD80CN, optimized for direct solar panel operation, speed setting, 30 pcs. |
| AC/DC converter | 101N0511 | for BD35F/BD50F/BD35K/BD80CN, speed setting, battery protection, integrated AC/DC converter, 28 pcs. |
| Automotive | 101N0681 | for BD35F/BD50F/BD35K/BD80CN, speed setting, battery protection, ECO function, high starting torque (HST), reduced EMI and leakage current 30 pcs. |
| Telecom 48 V DC | 101N0733 | for BD250GH.2/-HD (48 V), 36 pcs. |

| | Item | Code number | Description |
|---|---|---|---|
| Electrical (cables, sensors, etc.) | 48 V DC line cord, 900 mm, 6mm² | 105N9542 | accessories |
| | 48 V DC line cord, 2000 mm, 6 mm² | 105N9540 | accessories |
| | 48 V DC line cord, 5000 mm, 6 mm² | 105N9538 | accessories |
| | Temperature sensor, 470 mm, spade connectors | 105N9612 | accessories |
| | Temperature sensor, 1000 mm, spade connectors | 105N9614 | accessories |
| | Temperature sensor, 1500 mm, spade connectors | 105N9616 | accessories |
| | Remote kit with cable | 105N9100 | bracket, cover, 750 mm cable with two plugs |
| | Remote kit without cable | 105N9210 | bracket, cover, two plugs |
| | Secop One Wire/LIN gateway with cables | 105N9518 | accessories |

| | | | |
|---|---|---|---|
| Electrical (cables, sensors, etc.) | Communication cable, 1500 mm, AMP connector | 105N9545 | accessories, 100 pcs. |
| | Communication cable, 3000 mm, AMP connector | 105N9547 | accessories, 50 pcs. |
| | 48 V DC line cord, 900 mm, 6 mm² | 105N9543 | accessories, 36 pcs. |
| | 48 V DC line cord, 2000 mm, 6 mm² | 105N9541 | accessories, 36 pcs. |
| | 48 V DC line cord, 5000 mm, 6 mm² | 105N9539 | accessories, 36 pcs. |
| | Temperature sensor, 470 mm, spade connectors | 105N9613 | accessories, 200 pcs. |
| | Temperature sensor, 1000 mm, spade connectors | 105N9615 | accessories, 100 pcs. |
| | Temperature sensor, 1500 mm, spade connectors | 105N9617 | accessories, 100 pcs. |
| | Temperature sensor, 400 mm, AMP connector | 105N9611 | accessories, 200 pcs. |
| | Remote kit without cable | 105N9200 | bracket, cover and two plugs, 200 pcs. |

# BD-P R134a



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | [cm³] | |
| BD35F 2000 rpm | 101Z0200 | L/M/HBP | – | 55 | 90 | 112 | 169 | – | 33 | 1.36 | 74 | 1.87 | 135 | 2.51 | 2.00 | S |
| BD35F 3500 rpm | 101Z0200 | L/M/HBP | – | 87 | 153 | – | – | – | 51 | 1.16 | 125 | 1.74 | – | – | 2.00 | S |
| BD35F 2000 rpm | 101Z0204 | L/M/HBP | – | 55 | 90 | 112 | 169 | – | 33 | 1.36 | 74 | 1.87 | 135 | 2.51 | 2.00 | S |
| BD35F 3500 rpm | 101Z0204 | L/M/HBP | – | 87 | 153 | – | – | – | 51 | 1.16 | 125 | 1.74 | – | – | 2.00 | S |
| BD35F-B 2000 rpm | 101Z0205 | L/M/HBP | – | 55 | 90 | 112 | 169 | – | 33 | 1.36 | 74 | 1.87 | 135 | 2.51 | 2.00 | S |
| BD35F-B 3500 rpm | 101Z0205 | L/M/HBP | – | 87 | 153 | – | – | – | 51 | 1.16 | 125 | 1.74 | – | – | 2.00 | S |
| BD35F-HD.2 2000 rpm | 101Z0216 | L/M/HBP | – | 55 | 90 | 112 | 169 | – | 33 | 1.36 | 74 | 1.87 | 135 | 2.51 | 2.00 | S |
| BD35F-HD.2 3500 rpm | 101Z0216 | L/M/HBP | – | 87 | 153 | – | – | – | 51 | 1.16 | 125 | 1.74 | – | – | 2.00 | S |
| BD50F 2000 rpm | 101Z1220 | L/M/HBP | – | 69 | 114 | 141 | 204 | – | 42 | 1.24 | 94 | 1.72 | 165 | 2.14 | 2.50 | S |
| BD50F 3500 rpm | 101Z1220 | L/M/HBP | – | 117 | 194 | – | – | – | 72 | 1.18 | 160 | 1.62 | – | – | 2.50 | S |
| BD50F 2000 rpm | 101Z0203 | L/M/HBP | – | 69 | 114 | 141 | 204 | – | 42 | 1.24 | 94 | 1.72 | 165 | 2.14 | 2.50 | S |
| BD50F 3500 rpm | 101Z0203 | L/M/HBP | – | 117 | 194 | – | – | – | 72 | 1.18 | 160 | 1.62 | – | – | 2.50 | S |
| BD80F 2500 rpm | 101Z0280 | LBP | – | 108 | 174 | – | – | – | 69 | 1.34 | 144 | 1.65 | – | – | 3.00 | S |
| BD80F 4400 rpm | 101Z0280 | LBP | – | 170 | 274 | – | – | – | 107 | 1.20 | 227 | 1.49 | – | – | 3.00 | S |
| BD250GH.2 2500 rpm | 101Z0406 | L/M/HBP | – | 158 | 259 | 321 | 477 | 574 | 91 | 1.16 | 214 | 1.77 | 382 | 2.75 | 2.50 | S |
| BD250GH.2 4400 rpm | 101Z0406 | L/M/HBP | – | 81 | 137 | 174 | 273 | 337 | 46 | 1.07 | 113 | 1.94 | 216 | 2.79 | 2.50 | S |
| BD250GH.2 2500 rpm | 101Z0405 | L/M/HBP | – | 80 | 137 | 175 | 273 | 334 | 50 | 1.14 | 112 | 1.67 | 216 | 2.62 | 2.50 | F1 |
| BD250GH.2 4400 rpm | 101Z0405 | L/M/HBP | – | 156 | 259 | 324 | 486 | 585 | 93 | 1.16 | 214 | 1.77 | 389 | 2.43 | 2.50 | F1 |
| BD250GH.2-HD 2500 rpm | 101Z0410 | L/M/HBP | – | 80 | 137 | 175 | 273 | 334 | 50 | 1.14 | 112 | 1.67 | 216 | 2.62 | 2.50 | F1 |
| BD250GH.2-HD 4400 rpm | 101Z0410 | L/M/HBP | – | 156 | 259 | 324 | 486 | 585 | 93 | 1.16 | 214 | 1.77 | 389 | 2.43 | 2.50 | F1 |

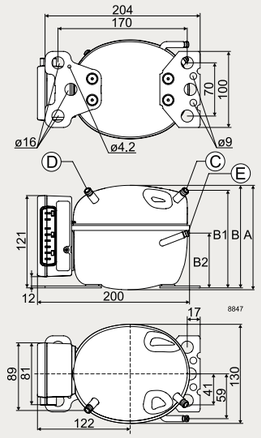
| Compressor | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | A | B | Suction C (I.D.) | Process D (I.D.) | Discharge E (I.D.) | |
| BD35F 2000 rpm | – | 44 | 72 | 90 | 136 | – | 24 | 1.04 | 57 | 1.54 | 111 | 2.15 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35F 3500 rpm | – | 70 | 122 | – | – | – | 36 | 0.87 | 94 | 1.42 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD35F 2000 rpm | – | 44 | 72 | 90 | 136 | – | 24 | 1.04 | 57 | 1.54 | 111 | 2.15 | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35F 3500 rpm | – | 70 | 122 | – | – | – | 36 | 0.87 | 94 | 1.42 | – | – | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | |
| BD35F-B 2000 rpm | – | 44 | 72 | 90 | 136 | – | 24 | 1.04 | 57 | 1.54 | 111 | 2.15 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD35F-B 3500 rpm | – | 70 | 122 | – | – | – | 36 | 0.87 | 94 | 1.42 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD35F-HD.2 2000 rpm | – | 44 | 72 | 90 | 136 | – | 24 | 1.04 | 57 | 1.54 | 111 | 2.15 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD35F-HD.2 3500 rpm | – | 70 | 122 | – | – | – | 36 | 0.87 | 94 | 1.42 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD50F 2000 rpm | – | 56 | 92 | 114 | 165 | – | 30 | 0.95 | 73 | 1.43 | 138 | 1.87 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD50F 3500 rpm | – | 95 | 157 | – | – | – | 52 | 0.92 | 123 | 1.35 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD50F 2000 rpm | – | 56 | 92 | 114 | 165 | – | 30 | 0.95 | 73 | 1.43 | 138 | 1.87 | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD50F 3500 rpm | – | 95 | 157 | – | – | – | 52 | 0.92 | 123 | 1.35 | – | – | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | |
| BD80F 2500 rpm | – | 87 | 140 | – | – | – | 50 | 1.04 | 112 | 1.40 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD80F 4400 rpm | – | 138 | 221 | – | – | – | 78 | 0.94 | 176 | 1.27 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD250GH.2 2500 rpm | – | 128 | 209 | 259 | 383 | 460 | 62 | 0.85 | 166 | 1.43 | 316 | 2.31 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD250GH.2 4400 rpm | – | 65 | 110 | 140 | 218 | 270 | 32 | 0.77 | 86 | 1.57 | 176 | 2.36 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD250GH.2 2500 rpm | – | 64 | 110 | 141 | 219 | 268 | 37 | 0.88 | 85 | 1.33 | 177 | 2.19 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 32–60 V DC |
| BD250GH.2 4400 rpm | – | 126 | 209 | 261 | 391 | 470 | 67 | 0.88 | 165 | 1.44 | 321 | 2.10 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD250GH.2-HD 2500 rpm | – | 64 | 110 | 141 | 219 | 268 | 37 | 0.88 | 85 | 1.33 | 177 | 2.19 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 32–60 V DC |
| BD250GH.2-HD 4400 rpm | – | 126 | 209 | 261 | 391 | 470 | 67 | 0.88 | 165 | 1.44 | 321 | 2.10 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |

-HD = optimized for rough vehicle motions
-B = optimized for rough vehicle motions, especially in buses

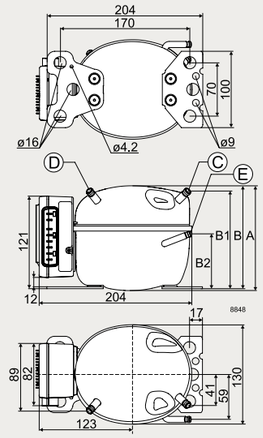
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | Electronic unit | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Code number | Standard 12–24 V DC 101N0242 | High Speed 12–24 V DC 101N0390 | AEO 12–24 V DC 101N0340 | Solar 10–45 V DC 101N0420 | AC/DC converter 12–24 V DC & 100–240 V AC 101N0510 | Automotive 12–24 V DC 101N0680 | Telecom 48 V DC 101N0732 |
| BD35F | 101Z0200 | ✓ | – | ✓ | ✓ | ✓ | ✓ | – |
| BD35F (inch con.) | 101Z0204 | ✓ | – | ✓ | ✓ | ✓ | ✓ | – |
| BD35F-B | 101Z0205 | ✓ | – | ✓ | – | ✓ | ✓ | – |
| BD35F-HD.2 | 101Z0216 | ✓ | – | ✓ | – | – | ✓ | – |
| BD50F | 101Z1220 | ✓ | – | ✓ | – | ✓ | ✓ | – |
| BD50F (inch con.) | 101Z0203 | ✓ | – | ✓ | – | ✓ | ✓ | – |
| BD80F | 101Z0280 | – | ✓ | – | – | – | – | – |
| BD250GH.2 | 101Z0406 | – | ✓ | – | – | – | – | – |
| BD250GH.2 (48V) | 101Z0405 | – | – | – | – | – | – | ✓ |
| BD250GH.2-HD (48V) | 101Z0410 | – | – | – | – | – | – | ✓ |

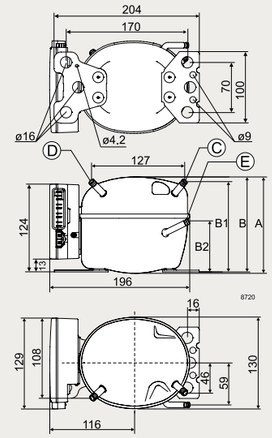
**BD-P** with 101N0242




**BD-P** with 101N0390




**BD-P** with 101N0732



# BD-P R1234yf

Low GWP Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | [cm³] | |
| BD35F 2000 rpm | 101Z0200 | L/M/HBP | – | 59 | 94 | 114 | 163 | – | 36 | 1.41 | 76 | 1.88 | 130 | 2.43 | 2.00 | S |
| BD35F 3500 rpm | 101Z0200 | L/M/HBP | – | 91 | 152 | – | – | – | 57 | 1.20 | 123 | 1.68 | – | – | 2.00 | S |
| BD35F 2000 rpm | 101Z0204 | L/M/HBP | – | 59 | 93 | 114 | 163 | – | 36 | 1.41 | 76 | 1.88 | 130 | 2.43 | 2.00 | S |
| BD35F 3500 rpm | 101Z0204 | L/M/HBP | – | 91 | 152 | – | – | – | 57 | 1.20 | 123 | 1.68 | – | – | 2.00 | S |
| BD35F-B 2000 rpm | 101Z0205 | L/M/HBP | – | 59 | 93 | 114 | 163 | – | 36 | 1.41 | 76 | 1.88 | 130 | 2.43 | 2.00 | S |
| BD35F-B 3500 rpm | 101Z0205 | L/M/HBP | – | 91 | 152 | – | – | – | 57 | 1.20 | 123 | 1.68 | – | – | 2.00 | S |
| BD35F-HD.2 2000 rpm | 101Z0216 | L/M/HBP | – | 59 | 93 | 114 | 163 | – | 36 | 1.41 | 76 | 1.88 | 130 | 2.43 | 2.00 | S |
| BD35F-HD.2 3500 rpm | 101Z0216 | L/M/HBP | – | 91 | 152 | – | – | – | 57 | 1.20 | 123 | 1.68 | – | – | 2.00 | S |
| BD50F 2000 rpm | 101Z1220 | L/M/HBP | – | 73 | 116 | 141 | 201 | – | 46 | 1.33 | 95 | 1.68 | 161 | 2.10 | 2.50 | S |
| BD50F 3500 rpm | 101Z1220 | L/M/HBP | – | 128 | 202 | – | – | – | 82 | 1.29 | 165 | 1.62 | – | – | 2.50 | S |
| BD50F 2000 rpm | 101Z0203 | L/M/HBP | – | 73 | 116 | 141 | 201 | – | 46 | 1.33 | 95 | 1.68 | 161 | 2.10 | 2.50 | S |
| BD50F 3500 rpm | 101Z0203 | L/M/HBP | – | 128 | 202 | – | – | – | 82 | 1.29 | 165 | 1.62 | – | – | 2.50 | S |

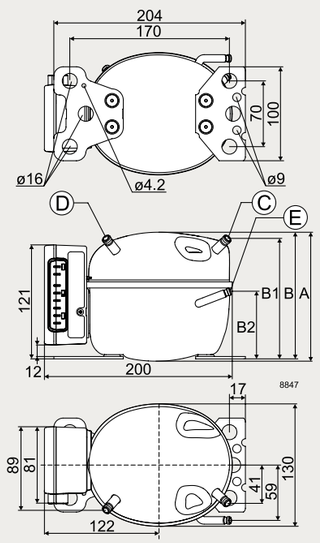
-HD = optimized for rough vehicle motions
-B = optimized for rough vehicle motions, especially in buses

Please refer to the individual compressor data sheets for the complete application range.

| Compressor | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | A | B | Suction C (I.D.) | Process D (I.D.) | Discharge E (I.D.) | |
| BD35F 2000 rpm | – | 45 | 72 | 88 | 125 | – | 24.8 | 1.08 | 58 | 1.52 | 105 | 2.04 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35F 3500 rpm | – | 70 | 116 | – | – | – | 39.3 | 0.92 | 91 | 1.34 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD35F 2000 rpm | – | 45 | 72 | 88 | 125 | – | 24.8 | 1.08 | 58 | 1.52 | 105 | 2.04 | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35F 3500 rpm | – | 70 | 116 | – | – | – | 39.3 | 0.92 | 91 | 1.34 | – | – | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | |
| BD35F-B 2000 rpm | – | 45 | 72 | 88 | 125 | – | 24.8 | 1.08 | 58 | 1.52 | 105 | 2.04 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD35F-B 3500 rpm | – | 70 | 116 | – | – | – | 39.3 | 0.92 | 91 | 1.34 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD35F-HD.2 2000 rpm | – | 45 | 72 | 88 | 125 | – | 24.8 | 1.08 | 58 | 1.52 | 105 | 2.04 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD35F-HD.2 3500 rpm | – | 70 | 116 | – | – | – | 39.3 | 0.92 | 91 | 1.34 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD50F 2000 rpm | – | 57 | 90 | 109 | 155 | – | 32.3 | 0.98 | 72 | 1.38 | 131 | 1.78 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD50F 3500 rpm | – | 99 | 156 | – | – | – | 57.6 | 0.96 | 125 | 1.33 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD50F 2000 rpm | – | 57 | 90 | 109 | 155 | – | 32.3 | 0.98 | 72 | 1.38 | 131 | 1.78 | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz |
| BD50F 3500 rpm | – | 99 | 156 | – | – | – | 57.6 | 0.96 | 125 | 1.33 | – | – | 137.0 | 135.0 | 6.50 | 6.50 | 5.00 | |

| Compressor | Electronic unit | | | | | |
|---|---|---|---|---|---|---|
| | Code number | Standard 12–24 V DC 101N0242 | AEO 12–24 V DC 101N0340 | Solar 10–45 V DC 101N0420 | AC/DC converter 12–24 V DC & 100–240 V AC 101N0510 | Automotive 12–24 V DC 101N0680 |
| BD35F | 101Z0200 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BD35F (inch con.) | 101Z0204 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BD35F-B | 101Z0205 | ✓ | ✓ | – | ✓ | ✓ |
| BD35F-HD.2 | 101Z0216 | ✓ | ✓ | – | – | ✓ |
| BD50F | 101Z1220 | ✓ | ✓ | – | ✓ | ✓ |
| BD50F (inch con.) | 101Z0203 | ✓ | ✓ | – | ✓ | ✓ |

## BD-P with 101N0242






# BD-P **R600a**

Natural Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | [cm³] | |
| BD35K 2000 rpm | 101Z0211 | L/M/HBP | – | 48 | 78 | 97 | 142 | – | 29 | 1.27 | 65 | 1.86 | 115 | 2.53 | 3.00 | S |
| BD35K 3500 rpm | 101Z0211 | L/M/HBP | – | 79 | 130 | – | – | – | 49 | 1.13 | 108 | 1.67 | – | – | 3.00 | S |
| BD35K-B 2000 rpm | 101Z0214 | L/M/HBP | – | 48 | 78 | 97 | 142 | – | 29 | 1.27 | 65 | 1.86 | 115 | 2.53 | 3.00 | S |
| BD35K-B 3500 rpm | 101Z0214 | L/M/HBP | – | 79 | 130 | – | – | – | 49 | 1.13 | 108 | 1.67 | – | – | 3.00 | S |
| BD50K 2500 rpm | 101Z0213 | L/M/HBP | – | 53 | 89 | 112 | 168 | – | 32 | 1.17 | 74 | 1.94 | 136 | 2.76 | 3.00 | S |
| BD50K 4400 rpm | 101Z0213 | L/M/HBP | – | 94 | 158 | 198 | 296 | – | 57 | 1.08 | 131 | 1.59 | 240 | 2.26 | 3.00 | S |

-B = optimized for rough vehicle motions, especially in buses

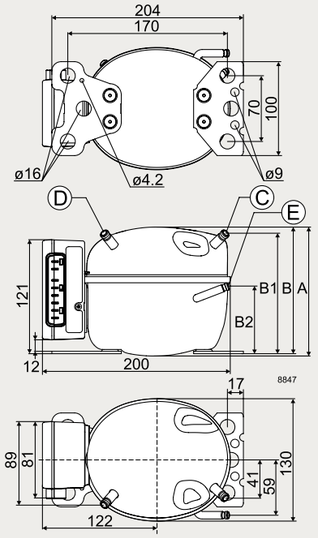
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | A | B | Suction C (I.D.) | Process D (I.D.) | Discharge E (I.D.) | |
| BD35K 2000 rpm | – | 40 | 64 | 79 | 116 | – | 21 | 0.97 | 51 | 1.56 | 96 | 2.18 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35K 3500 rpm | – | 65 | 106 | – | – | – | 36 | 0.87 | 84 | 1.39 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD35K-B 2000 rpm | – | 40 | 64 | 79 | 116 | – | 21 | 0.97 | 51 | 1.56 | 96 | 2.18 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 V, 50/60 Hz 10–45 V DC solar |
| BD35K-B 3500 rpm | – | 65 | 106 | – | – | – | 36 | 0.87 | 84 | 1.39 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD50K 2500 rpm | – | 44 | 73 | 92 | 137 | – | 24 | 0.89 | 57 | 1.60 | 113 | 2.37 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD50K 4400 rpm | – | 77 | 129 | 162 | 242 | – | 42 | 0.84 | 101 | 1.32 | 199 | 1.94 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |

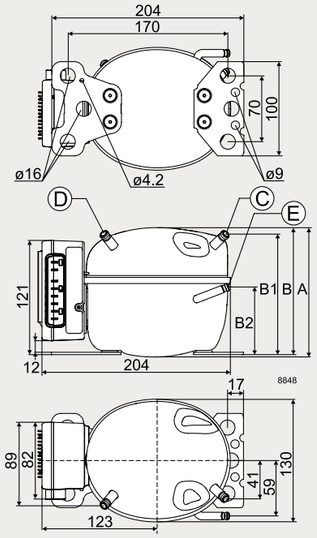
| Compressor | Code number | Electronic units Standard 12–24 V DC 101N0242 | High Speed 12–24 V DC 101N0390 | AEO 12–24 V DC 101N0340 | Solar 10–45 V DC 101N0420 | AC/DC converter 12–24 V DC & 100–240 V AC 101N0510 | Automotive 12–24 V DC 101N0680 |
|---|---|---|---|---|---|---|---|
| BD35K /-B | 101Z0211 /214 | ✓ | – | ✓ | ✓ | ✓ | ✓ |
| BD50K | 101Z0213 | – | ✓ | – | – | – | – |




**BD P-Housing** with 101N0242




**BD P-Housing** with 101N0390



# BD P-HOUSING **R290**

Natural Refrigerant



| Compressor | Code number | Application | ASHRAE Capacity [W] Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C Evaporating temperature [°C] | | | | | | ASHRAE LBP rating point -23.3°C / 54.4°C | | ASHRAE MBP rating point -6.7°C / 54.4°C | | ASHRAE HBP rating point 7.2°C / 54.4°C | | Displacement | Compressor Cooling (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | [cm³] | |
| BD80CN 2000 rpm | 101Z0403 | L/MBP | 23 | 78 | 122 | 149 | – | – | 51 | 1.40 | 102 | 1.92 | – | – | 2.00 | S |
| BD80CN 3500 rpm | 101Z0403 | L/MBP | 44 | 137 | 219 | – | – | – | 89 | 1.14 | 182 | 1.84 | – | – | 2.00 | S |
| BD100CN 2500 rpm | 101Z0401 | L/MBP | 10 | 109 | 158 | 190 | – | – | 73 | 1.34 | 133 | 1.77 | – | – | 2.00 | S |
| BD100CN 4400 rpm | 101Z0401 | L/MBP | 58 | 176 | 265 | – | – | – | 119 | 1.26 | 222 | 1.61 | – | – | 2.00 | S |

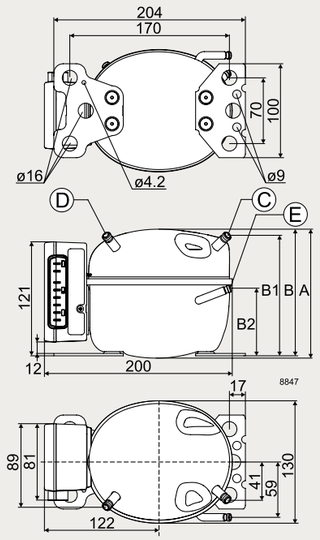
Please refer to the individual compressor data sheets for the complete application range.

| Compressor | CECOMAF Capacity [W] Tc=55°C, Tliq=55°C, Tsuc=32°C Evaporating temperature [°C] | | | | | | CECOMAF LBP rating point -25°C / 55°C | | CECOMAF MBP rating point -10°C / 55°C | | CECOMAF HBP rating point 5°C / 55°C | | Dimensions Height [mm] | | Dimensions Connectors location/I.D. [mm] | | | Voltage range (refer to data sheet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -35 | -15 | -5 | 0 | 10 | 15 | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | Cooling capacity [W] | COP [W/W] | A | B | Suction C (I.D.) | Process D (I.D.) | Discharge E (I.D.) | |
| BD80CN 2000 rpm | 18 | 63 | 98 | 120 | – | – | 37 | 1.07 | 80 | 1.61 | 144 | 2.20 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC 100–240 Hz, 50/60 Hz 10–45 V DC solar |
| BD80CN 3500 rpm | 36 | 111 | 177 | – | – | – | 66 | 0.88 | 141 | 1.45 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |
| BD100CN 2500 rpm | 7 | 88 | 128 | 154 | – | – | 52 | 0.99 | 107 | 1.49 | 186 | 2.08 | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | 9.6-17, 21.3-31.5 V DC |
| BD100CN 4400 rpm | 47 | 142 | 214 | – | – | – | 88 | 0.98 | 175 | 1.35 | – | – | 137.0 | 135.0 | 6.20 | 6.20 | 5.00 | |

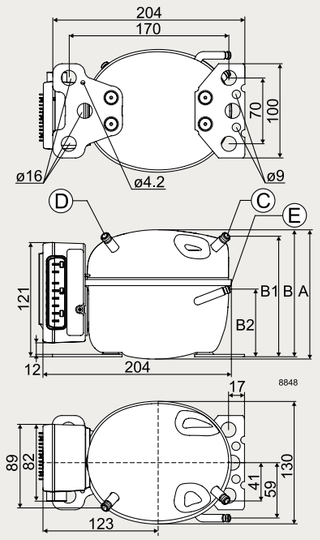
| Compressor | Electronic units | | | | | | |
|---|---|---|---|---|---|---|---|
| | Code number | Standard 12–24 V DC 101N0242 | High Speed 12–24 V DC 101N0390 | AEO 12–24 V DC 101N0340 | Solar 10–45 V DC 101N0420 | AC/DC converter 12–24 V DC & 100–240 V AC 101N0510 | Automotive 12–24 V DC 101N0680 |
| BD80CN | 101Z0403 | ✓ | – | ✓ | ✓ | ✓ | ✓ |
| BD100CN | 101Z0401 | – | ✓ | – | – | – | – |




**BD P-Housing** with 101N0242



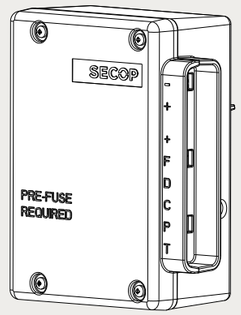

**BD P-Housing** with 101N0390



# ELECTRONIC UNITS (CONTROLLERS) – TECHNICAL DATA & HOUSINGS

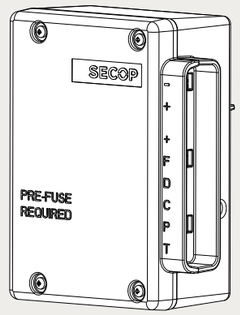



**BD-P**



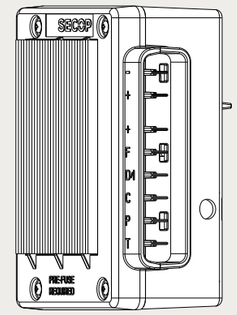

Standard 101N0242
Automotive 101N0680
AEO 101N0340
Solar 101N0420

**BD-P**



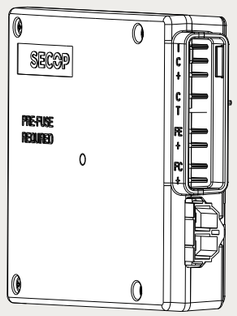

AC/DC converter 101N0510

**BD-P**



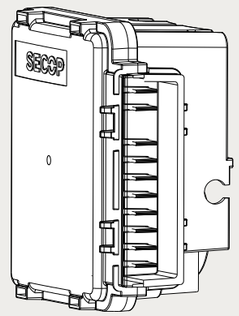

High Speed 101N0390

**BD-P**



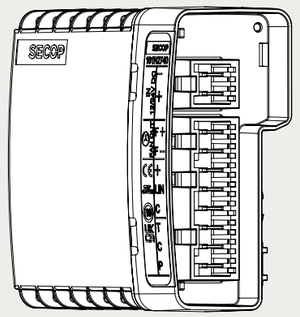

Telecom 101N0732

**BD Micro**




VSD 101N2130

**BD Nano**




**Leisure 101N2740**
**Automotive 101N2720** (similar)
**Solar 1 101N2742** (similar)

# ELECTRONIC UNITS (CONTROLLERS)

| Technical data | | Electronic units (code number) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | BD-P | | | | | | | BD Micro |
| | | Standard (2nd generation) 101N0242 | High Speed 101N0390 | AEO 101N0340 | Solar 101N0420 | AC/DC converter 101N0510 | Automotive 2nd generation) 101N0680 | Telecom 101N0732 | Variable Speed (VSD) 101N2130 |
| Approvals | Approvals and certificates * | – | – | UL/VDE/CB | UL/VDE/CB | UL/VDE | UL/ VDE/CB UN-ECE-R10 | UL | – |
| | Type approval (E-marking) 2004/104/EC | – | – | – | – | e4 03 1588 | – | – | compliant |
| | EU declaration 2014/30/EU and RoHS declaration 2011/65/EU | yes | yes | yes | yes | yes | yes | yes | yes |
| | Further EMC tests ** | CISPR25/1 CISPR14 | CISPR25/1 | CISPR25/1 | CISPR25/1 | – | CISPR25/5 | – | CISPR25/1 |
| Supply voltage | DC supply voltage range (V) | (9) 9.6 – 17 21.3 – 31.5 | (9) 9.6 – 17 21.3 – 31.5 | (9) 9.6 – 17 21.3 – 31.5 | 10 – 45 | (9) 9.6 – 17 21.3 – 31.5 | (9) 9.6 – 17 21.3 – 31.5 | 32 – 60 | 9.6 – 17 19 – 34 |
| | AC supply voltage range (V) | – | – | – | – | 100 –240 | – | – | – |
| | Frequency (Hz) | – | – | – | – | 50–60 | – | – | – |
| | Fuses required for e.g. 12/24V DC usage (A) | 15 / 7.5 | 30 / 15 | 15 / 7.5 | 15 | 15 / 7.5 | 15 / 7.5 | 15 | 15 / 7.5 |
| | Fuse required AC usage | – | – | – | – | 4 | – | – | – |
| Environments | Ambient temperature operation (°C) | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| | Ambient temp. during storage/transport (°C) | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 | -40 to 85 |
| Enclosure | IP Class | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 42 |
| | Weight (kg) | 0.19 | 0.26 | 0.19 | 0.19 | 0.40 | 0.19 | 0.24 | 0.11 |
| Connectivity | Connectors | 6.3 mm | 6.3 mm | 6.3 mm | 6.3 mm | 6.3 mm | 6.3 mm | 6.3 mm Molex | 6.3 mm |
| | Fan ($V/W_{max}$) | 12 / 6 | 12 / 6 | 12 / 6 | 12 / 6 | 12 / 6 | 6 / 12 | 48 / 60+60 | 12 / 6 |
| | NTC sensor | yes | yes | yes | yes | yes | yes | yes | yes |
| | Bus communication | 1 wire | 1 wire | 1 wire | 1 wire | 1 wire | 1 wire | 1 wire | 1 wire |
| | Light (V/W) | – | – | – | – | 12 / 5 | – | – | – |
| | LED (alarm) | yes | yes | yes | yes | yes | yes | – | yes |
| | Tool4Cool® | yes | yes | yes | yes | yes | yes | yes | yes |
| | Program input | yes | yes | yes | yes | yes | yes | yes | yes *** |
| | Thermostat input | yes | yes | yes | yes | yes | yes | yes | yes |

| Technical data | | Electronic units (code number) | | |
|---|---|---|---|---|
| | | BD Nano | | |
| | | Leisure 101N2740 | Automotive 101N2720 | Solar 1 101N2742 |
| Approvals | Approvals and certificates * | UL/CB | – | UL/CB |
| | Type approval (E-marking) 2004/104/EC | compliant | compliant | compliant |
| | EU declaration 2014/30/EU and RoHS declaration 2011/65/EU | yes | yes | yes |
| | Further EMC tests ** | – | – | – |
| Supply voltage | DC supply voltage range (V) | 9.6 – 17 9.6 – 34 19 – 34 | 9.6 – 17 9.6 – 34 19 – 34 | 9.6 – 17 9.6 – 34 19 – 34 |
| | AC supply voltage range (V) | – | – | – |
| | Frequency (Hz) | – | – | – |
| | Fuses required for e.g. 12/24V DC usage (A) | 15 | 15 | 15 |
| | Fuse required AC usage | – | – | – |
| Environments | Ambient temperature operation (°C) | 85 | 85 | 85 |
| | Ambient temp. during storage/transport (°C) | -40 to 85 | -40 to 85 | -40 to 85 |
| Enclosure | IP Class | 20 | 20 | 20 |
| | Weight (kg) | 0.14 | 0.14 | 0.14 |
| Connectivity | Connectors | 6.3 mm RAST | 6.3 mm RAST | 6.3 mm RAST |
| | Fan ($V/W_{max}$) | 12 / 6 | 12 / 6 | 12 / 6 |
| | NTC sensor | yes | yes | yes |
| | Bus communication | LIN | LIN | LIN |
| | Light (V/W) | – | – | – |
| | LED (alarm) | yes | yes | yes |
| | Tool4Cool® | yes | yes | yes |
| | Program input | yes | no | no |
| | Thermostat input | yes | yes | yes |

* Please refer to table: VDE/CB/UL approved compressor – electronic unit combinations
** EMC test on stand-alone compressor, appliance level can differ
*** Additional setpoint selection input for standalone NTC appliances



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laboratories located in Austria, Germany, Slovakia, China, U.S.A., and Turkey

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R&D engineers and technicians

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Secop is the expert for advanced hermetic compressor technologies and cooling solutions in commercial refrigeration. We develop high performance stationary and mobile cooling solutions for leading international commercial refrigeration manufacturers and are the first choice when it comes to leading hermetic compressors and electronic controls for refrigeration solutions for light commercial and DC-powered applications.

Secop was formerly known as Danfoss Compressors and is one of the founding fathers of modern compressor technology with years of experience that goes back to the beginning of the 1950s.

- **Flensburg:** Sales and R&D
- **Turin:** Sales
- **Gleisdorf:** R&D
- **Zlaté Moravce:** R&D, Logistics, and Manufacturing
- **Tianjin:** Sales, R&D, Logistics, and Manufacturing
- **Atlanta:** Sales and Logistics

## Stationary Cooling



## Mobile Cooling



## Medical Cooling



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