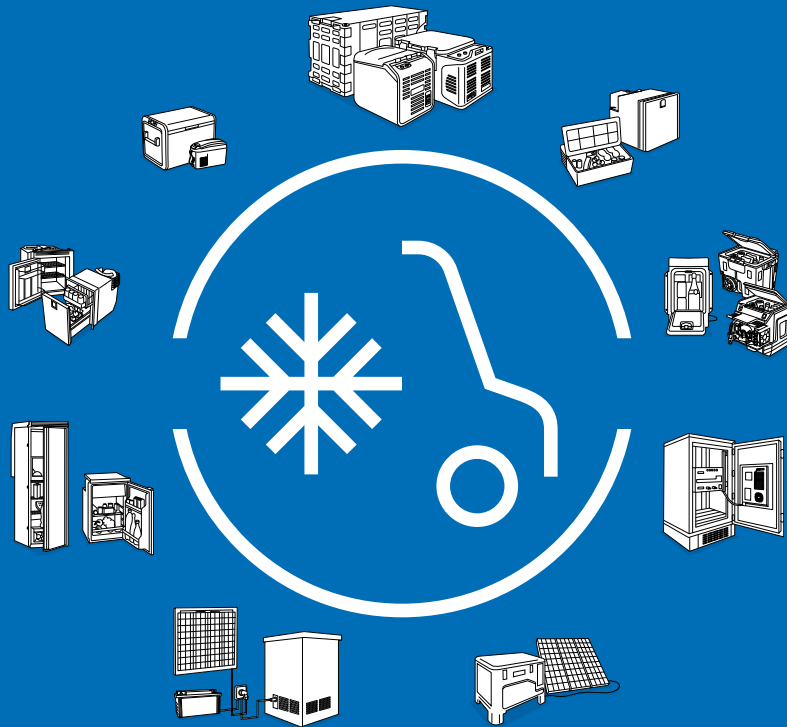


Secop is the first choice for partners looking for leading-edge refrigeration solutions and a premium customer experience.

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

# DC-POWERED COMPRESSORS FOR MOBILE COOLING

**SECCOP**



## Stable

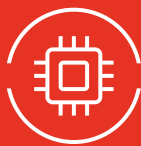
Portable beyond limits  
and reliable operation  
even when tilted up

## 12 | 24 | 48V DC Compressors

Applicable for mobile applications and multiple  
voltages with minimum energy consumption and  
maximum performance



Variable-Speed  
Efficiency



Premium  
Controllers



**BD35F/50F/80F, BD35/50K, BD250GH.2, BD350GH**

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 48V 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.

Compressors	Refrigerant	Capacity [W] EN12900 Household / CECOMAF   ASHRAE at max. speed													
		Evaporating temperature [°C]													
		-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10	15
BDN45F /-A	R134a	-	-	29   36	42   52	47   59	58   72	77   96	98   122	121   150	-	-	-	-	-
	R1234yf	-	-	32   41	45   58	50   65	60   78	78   101	98   127	119   154	-	-	-	-	-
BD1.4F-VSD.3	R134a	-	-	12   15	23   29	27   34	36   45	52   65	71   88	92   114	116   144	142   177	155   193	172   214	203   254
	R1234yf	-	-	13   17	24   32	29   38	38   50	54   70	71   93	91   118	111   145	134   174	144   188	158   206	182   239
BD1.4F-VSD-HD	R134a	-	-	12   15	23   29	27   34	36   45	52   65	71   88	92   114	116   144	142   177	155   193	172   214	203   254
	R1234yf	-	-	13   17	24   32	29   38	38   50	54   70	71   93	91   118	111   145	134   174	144   188	158   206	182   239
BD35F /-B /-HD.2	R134a	-	-	27   34	36   45	40   51	50   63	70   87	94   117	122   153	-	-	-	-	-
	R1234yf	-	-	30   39	39   51	43   57	53   69	70   91	91   119	116   152	-	-	-	-	-
BD35F.2	R134a	-	-	27   34	36   45	40   51	50   63	70   87	94   117	122   153	-	-	-	-	-
	R1234yf	-	-	30   39	39   51	43   57	53   69	70   91	91   119	116   152	-	-	-	-	-
BD50F	R134a	-	-	37   46	52   64	58   72	71   88	95   117	123   152	157   194	-	-	-	-	-
	R1234yf	-	-	42   54	58   74	64   82	77   99	99   128	126   162	156   202	-	-	-	-	-
BD80F	R134a	-	-	55   68	78   96	87   108	105   130	138   170	176   218	221   274	-	-	-	-	-
	R1234yf	-	-	58   74	77   99	84   109	101   131	132   171	168   218	211   273	-	-	-	-	-
BD250GH.2	R134a	-	-	-	61   76	69   86	87   108	119   148	156   194	200   249	251   311	308   383	336   418	373   465	446   556
BD250GH.2 /-HD [48V]	R134a	-	-	-	64   80	73   91	91   113	124   153	162   201	208   257	261   323	322   400	352   437	392   488	472   589
BDN50K /-A, MB3CKV	R600a	-	-	36   45	50   62	55   68	66   81	83   102	103   127	128   156	-	-	-	-	-
BD35K /-B	R600a	-	-	25   31	36   44	40   49	49   60	65   79	84   102	106   129	-	-	-	-	-
BD35K.2	R600a	-	-	25   31	36   44	40   49	49   60	65   79	84   102	106   130	-	-	-	-	-
BD50K	R600a	-	-	30   36	42   51	47   57	58   70	77   94	101   123	129   158	162   198	199   244	218   266	242   296	-
BD80CN	R290	31   35	45   51	62   69	82   91	90   100	105   118	133   148	164   184	-	-	-	-	-	-
BD100CN	R290	44   49	62   70	83   93	108   120	117   131	137   153	170   190	209   233	-	-	-	-	-	-

Compressors	Refrigerant	Power consumption [W] at max. speed													
		Evaporating temperature [°C]													
		-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10	15
BDN45F /-A	R134a	-	-	29	36	39	44	52	59	66	-	-	-	-	-
	R1234yf	-	-	33	39	42	47	54	61	67	-	-	-	-	-
BD1.4F-VSD.3	R134a	-	-	27	34	36	41	48	55	61	68	75	77	81	87
	R1234yf	-	-	30	37	40	44	51	57	63	68	74	76	78	83
BD1.4F-VSD-HD	R134a	-	-	27	34	36	41	48	55	61	68	75	77	81	87
	R1234yf	-	-	30	37	40	44	51	57	63	68	74	76	78	83
BD35F /-B /-HD.2	R134a	-	-	35	41	44	49	57	66	75	-	-	-	-	-
	R1234yf	-	-	39	45	47	52	60	68	76	-	-	-	-	-
BD35F.2	R134a	-	-	36	43	46	51	60	69	79	-	-	-	-	-
	R1234yf	-	-	41	47	49	54	63	71	80	-	-	-	-	-
BD50F	R134a	-	-	45	57	61	68	80	91	104	-	-	-	-	-
	R1234yf	-	-	49	60	64	71	82	94	106	-	-	-	-	-
BD80F	R134a	-	-	66	83	89	100	118	138	161	-	-	-	-	-
	R1234yf	-	-	71	85	90	101	121	142	166	-	-	-	-	-
BD250GH.2	R134a	-	-	-	65	69	78	91	104	117	132	150	158	170	194
BD250GH.2 /-HD [48V]	R134a	-	-	-	72	77	85	99	113	128	143	160	167	177	196
BDN50K /-A , MB3CKV	R600a	-	-	34	42	44	49	56	63	70	-	-	-	-	-
BD35K /-B	R600a	-	-	34	41	44	48	54	60	67	-	-	-	-	-
BD35K.2	R600a	-	-	35	43	46	50	57	63	70	-	-	-	-	-
BD50K	R600a	-	-	42	50	53	59	68	77	86	94	103	107	111	-
BD80CN	R290	47	55	63	72	75	81	89	97	-	-	-	-	-	-
BD100CN	R290	55	66	78	89	93	100	110	120	-	-	-	-	-	-

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 (Heavy Duty)**

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

**BD35F-B, BD35K-B (Bus-optimized)**

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

**BD35F.2, BD35K.2**

The BD35F.2 and BD35K.2 are new versions of the BD-P platform, featuring a new motor and electronics specifically designed for leisure applications, making them ideal for use in RVs, boats, and portable refrigeration units.

**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).

**BDN45F, BDN50K (BD Nano)**

Secop's latest innovation for mobile refrigeration is the new extreme compact BD Nano compressor which is available for low GWP refrigerants R600a and R1234yf as well as for R134a.

PL-BD Compressors	Electronic units (voltages & code numbers)								
	Code numbers	Standard 12/24V DC 101N0242	Standard 12/24V DC 101N0226	High Speed 12/24V DC 101N0390	AEO 12/24V DC 101N0340	Solar 10-45V DC 101N0420	AC/DC converter 12/24V DC & 100-240V AC 101N0510	Automotive 12/24V DC 101N0680	Telecom 48V DC 101N0732
R134a R134a/R1234yf* R600a** R290***									
BD35F*	101Z0200	✓	-	-	✓	✓	✓	✓	-
BD35F (inch con.)*	101Z0204	✓	-	-	✓	✓	✓	✓	-
BD35F-B*	101Z0205	✓	-	-	✓	-	✓	✓	-
BD35F-HD.2*	101Z0216	✓	-	-	✓	-	-	✓	-
BD35F.2*	101Z0700	-	✓	-	-	-	-	-	-
BD50F*	101Z1220	✓	-	-	✓	-	✓	✓	-
BD50F (inch con.)*	101Z0203	✓	-	-	✓	-	✓	✓	-
BD80F*	101Z0280	-	-	✓	-	-	-	-	-
BD250GH.2	101Z0406	-	-	✓	-	-	-	-	-
BD250GH.2 [48V]	101Z0405	-	-	-	-	-	-	-	✓
BD250GH.2-HD [48V]	101Z0410	-	-	-	-	-	-	-	✓
BD35K**	101Z0211	✓	-	-	✓	✓	✓	✓	-
BD35K-B**	101Z0214	✓	-	-	✓	-	✓	✓	-
BD35K.2**	101Z0711	-	✓	-	-	-	-	-	-
BD50K**	101Z0213	-	-	✓	-	-	-	-	-
BD80CN***	101Z0403	✓	-	-	✓	✓	✓	✓	-
BD100CN***	101Z0401	-	-	✓	-	-	-	-	-
TOOL4COOL® applicable		✓	-	✓	✓	✓	✓	✓	✓

BD NANO BD MICRO Compressors	Code numbers	Electronic units				APPLICATIONS	Compressors																			
		Variable Speed [VSD] 12/24V DC, 101N2130	Leisure 12/24V DC, 101N2740	Automotive 12/24V DC, 101N2720	Solar 1, 101N2742 + SDD Power Management Module 101N3110, 30-55V DC		BDN45F	BDN50K	BDN45F-A	BDN50K-A	MB3CKV	BD1.4F-VSD.2	BD1.4F-VSD-HD	BD35F	BD35F.2	BD35F-B	BD35F-HD.2	BD35K	BD35K.2	BD35K-B	BD50K	BD50F	BD80F	BD80CN	BD100CN	BD250GH.2
R134a/R1234yf* R600a**						Truck refrigerators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Boat refrigerators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Bus refrigerators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						RV refrigerators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Portable boxes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Car minibars (high end)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Car minibars (SUV, MPV)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Spot cooling (e.g. trucks)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Van boxes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Battery cooling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Solar refrigerators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
						Solar Direct Drive <sup>medical applications</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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



#### 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\*.



#### BD35F/50F/80F Basic, and BD35F.2

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\*.



#### BD35K Multivoltage, BD50K, and BD35K.2

R600a, -30°C, +10°C evap. temp.

Solar-powered applications, etc., 100-250 l coolers, 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 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\*.



#### 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\*.



#### 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\*.



#### BDN45F/-A, BDN50K/-A, 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\*.

#### Test Conditions\*

EN12900/CECOMAF

Condensing temperature: 55°C

Suction gas temperature: 32°C

Ambient temperature: 32°C

Liquid temperature: no subcooling

## SECOP GROUP: AROUND THE WORLD

# SECOP



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

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.



### Stationary Cooling



### Mobile Cooling



### Medical Cooling



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