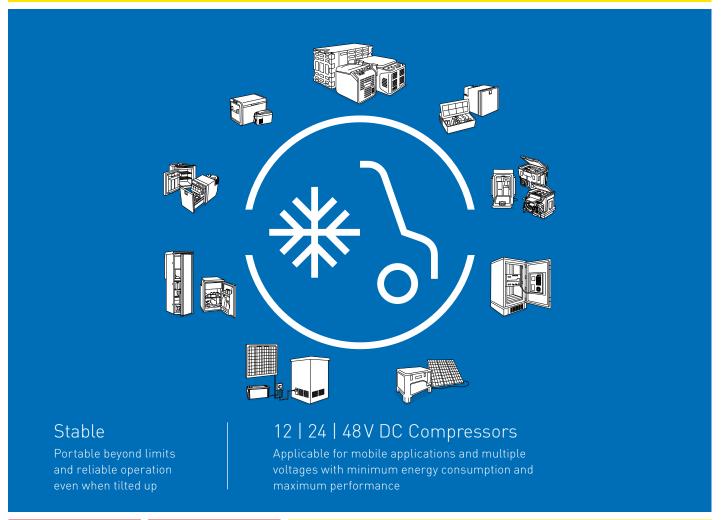
Secop is the first choice for partners looking for leading-edge refrigeration solutions and a premium customer experience.

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

SECOP









## 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 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 (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.

Compressors R134a	Capacity [W] at max. speed EN12900 Household/CECOMAF   ASHRAE														
R404A/R507* R600a**, R290***	*					Eva	oorating te	mperature	[°C]						
R134a/R1234yf****	-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10	15	
BDN45F	-	-	29   36	42   52	47   59	58   72	77   96	98   122	121   150	-	-	-		-	
BDN45F****	-	-	32   41	45   58	50   65	60   78	78   101	98   127	119   154	-	-	-	-	-	
BD1.4F-VSD.2/-HD	-	-	12   15	23   29	27   34	36   45	52   65	71   88	92   114	116   144	142   177	155   193	172   214	203   254	
BD1.4F-VSD.3****	-	-	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****	-	-	27   34	36   45	40   51	50   63	70   87	94   117	122   153	-	-	-	-	-	
BD50F****	-	-	37   46	52   64	58   72	71   88	95   117	123   152	157   194	-	-	-	-	-	
BD80F	-	-	55   68	78   96	87   108	105   130	138   170	176   218	221   274	-	-	-	-	-	
BD250GH.2	-	-	-	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)	-	-	-	64   80	73   91	91   113	124   153	162   201	208   257	261   323	322   400	352   437	392   488	472   589	
BD350GH (12V)	-	-	-	126   156	139   173	169   209	220   273	282   349	355   440	440   546	540   670	588   731	654   814	786   979	
BD350GH (24V)	-	-	-	126   156	139   173	169   209	220   273	282   349	355   440	440   546	540   670	588   731	654   814	786   979	
BD350GH (48V)	-	-	-	121   150	135   167	164   203	216   267	277   343	350   434	436   540	535   664	584   725	650   808	781   973	
BD220CL*	83   96	121   140	166   193	220   255	240   279	283   328	355   413	439   511	535   624	-	-	-	-	-	
BDN50K/MB3CKV**	-	-	36   45	50   62	55   68	66   81	83   102	103   127	128   156	-	-	-	-	-	
BD35K /-B**	-	-	25   31	36   44	40   49	49   60	65   79	84   102	106   129	-	-	-	-	-	
BD50K**	-	-	30   36	42   51	47   57	58   70	77   94	101   123	129   158	162   198	199   244	218   266	242   296	-	
BD80CN***	31   35	45   51	62  69	82   91	90   100	105   118	133   148	164   184	-	-	-	-	-	-	
BD100CN***	44   49	62   70	83   93	108   120	117   131	137   153	170   190	209   233	-	-	-	-	-	-	

Compressors R134a	0.1	Power consumption [W] at max. speed																			
R404A/R507* R600a**, R290***	Code numbers						Evapoi	rating te	mperatu	re [°C]					15						
R134a/R1234yf****		-40	-35	-30	-25	-23.3	-20	-15	-10	-5	0	5	7.2	10	15						
BDN45F	109Z0400	-	-	29	36	39	44	52	59	66	-	-	-	-	-						
BDN45F****	109Z0400	-	-	33	39	42	47	54	61	67	-	-	-	-	-						
BD1.4F-VSD.2/-HD	109Z0206 /209 /250 /251	-	-	27	34	36	41	48	55	61	68	75	77	81	87						
BD1.4F-VSD.3****	109Z0209	-	-	30	37	40	44	51	57	63	68	74	76	78	83						
BD35F /-B /-HD.2****	101Z0200 /204 /205 /216	-	-	35	41	44	49	57	66	75	-	-	-	-	-						
BD50F****	101Z1220 /0203	-	-	45	57	61	68	80	91	104	-	-	-	-	-						
BD80F	101Z0280	-	-	66	83	89	100	118	138	161	-	-	-	-	-						
BD250GH.2	101Z0406	-	-	-	65	69	78	91	104	117	132	150	158	170	194						
BD250GH.2 /-HD (48V)	101Z0405 /410	-	-	-	72	77	85	99	113	128	143	160	167	177	196						
BD350GH (12V)	102Z3015	-	-	-	140	149	168	197	228	259	292	325	340	358	391						
BD350GH (24V)	102Z3016	-	-	-	122	129	144	169	194	221	248	276	288	303	330						
BD350GH (48V)	102Z3031	-	-	-	131	139	155	181	208	236	265	294	307	323	352						
BD220CL*	102Z3020	121	147	173	200	209	227	255	284	314	-	-	-	-	-						
BDN50K/MB3CKV**	109Z0420 / 109M0860	-	-	34	42	44	49	56	63	70	-	-	-	-	-						
BD35K /-B**	101Z0211 /214	-	-	34	41	44	48	54	60	67	-	-	-	-	-						
BD50K**	101Z0213	-	-	42	50	53	59	68	77	86	94	103	107	111	-						
BD80CN***	101Z0403	47	55	63	72	75	81	89	97	-	-	-	-	-	-						
BD100CN***	101Z0401	55	66	78	89	93	100	110	120	-	-	-	-	-	-						

# 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 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.

## MB3CKV (BD Nano)

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.

PL-BD / TL-BD					Ele	ctronic units	(voltages &	code numbe	ers)			
Compressors R134a R404A/R507* R600a** R290*** R134a/R1234yf****	Code numbers	Standard 12/24V DC 101N0242	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	101N08xxx 12V DC 101N0820+0800 (alt.: 101N0830)	101N8xxx 24V DC 101N0820+0810	101N07xx 24V DC 101N0715	Telecom 48V DC 101N0720	Telecom 48V DC 101N0732
BD35F****	101Z0200	✓	-	✓	✓	<b>✓</b>	<b>✓</b>	-	-	-	-	-
BD35F (inch con.)****	101Z0204	✓	-	<b>✓</b>	✓	✓	<b>✓</b>	-	-	-	-	-
BD35F-B****	101Z0205	✓	-	<b>✓</b>	-	✓	/	-	-	-	-	-
BD35F-HD.2****	101Z0216	✓	-	/	-	-	/	-	-	-	-	-
BD50F****	101Z1220	✓	-	<b>✓</b>	-	<b>✓</b>	/	-	-	-	-	-
BD50F (inch con.)****	101Z0203	✓	-	<b>✓</b>	-	✓	/	-	-	-	-	-
BD80F	101Z0280	-	<b>✓</b>	-	-	-	-	-	-	-	-	-
BD250GH.2	101Z0406	-	<b>✓</b>	-	-	-	-	-	-	-	-	-
BD250GH.2 (48V)	101Z0405	-	-	-	-	-	-	-	-	-	-	✓
BD250GH.2-HD (48V)	101Z0410	-	-	-	-	-	-	-	-	-	-	✓
BD350GH (12V)	102Z3015	-	-	-	-	-	-	<b>/</b> + <b>/</b>	-	-	-	-
BD350GH (24V)	102Z3016	-	-	-	-	-	-	-	<b>/</b> + <b>/</b>	<b>✓</b>	-	-
BD350GH (48V)	102Z3031	-	-	-	-	-	-	-	-	-	✓	-
BD220CL*	102Z3020	-	-	-	-	-	-	<b>/</b> + <b>/</b>	-	-	-	-
BD35K /-B**	101Z0211/214	✓	-	/	/	/	/	-	-	-	-	-
BD50K**	101Z0213	-	/	-	-	-	-	-	-	-	-	-
BD80CN***	101Z0403	✓	-	/	/	✓	/	-	-	-	-	-
BD100CN***	101Z0401	-	/	-	-	-	-	-	-	-	-	
TOOL4COOL® applicable		<b>✓</b>	/	✓	~	✓	~	✓	/	~	/	~

BD MICRO / BD NANO Compressors R134a R600a** R134a/R1234yf****  BDN45F****  BDN45F****  BDN50K**  109Z0420 -   MB3CKV**  109M0860 -   BD1.4F-VSD.3****  109Z0209 \( - \)  BD1.4F-VSD.HD  109Z0250 \( - \)  BD1.4F-VSD.HD	Solar I, IU INZ/42 + SDD Power Management Module
BDN50K** 109Z0420 - \(  \) MB3CKV** 109M0860 BD1.4F-VSD.3**** 109Z0209 \(  \) -	Solar I, Power N
MB3CKV** 109M0860 BD1.4F-VSD.3**** 109Z0209 ✓ -	-
BD1.4F-VSD.3**** 109Z0209 ✓ -	-
	/
BD1.4F-VSD-HD 109Z0250 ✓ -	-
	-
BD1.4F-VSD.2 (inch con.) 109Z0206 ✓ -	-
BD1.4F-VSD-HD (inch con.) 109Z0251 🗸 –	-
TOOL4COOL® applicable	

		Compressors															
APPLICATIONS	BDN45F	BDN50K	MB3CKV	BD1.4F-VSD.2	BD1.4F-VSD-HD	BD35F	BD35F-B	BD35F-HD.2	BD35K/-B	BD50K	BD50F	BD80F	BD80CN	BD100CN	ВD2506Н.2	врз506Н	BD220CL
Truck refrigerators	/	/	-	~	/	~	-	/	/	/	/	-	/	-	-	-	-
Boat refrigerators	/	~	-	~	-	~	-	-	~	~	~	/	~	~	-	-	-
Bus refrigerators	~	~	-	~	-	~	<b>✓</b>	-	~	~	-	-	~	-	-	-	-
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	-	-	~	-	-	-	-	-	-	-	-	-	-	-	-	-	-



#### 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, 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\*.



#### 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.,

portable boxes, boats, trucks 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\*.



#### 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\*.



#### BD350GH

R134a, -25°C, +15°C evap. temp.

Tailored for spotcooling systems in sleeping compartments in trucks, caravans, golf buggies, etc., 85-786 W cooling capacity\*.

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









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