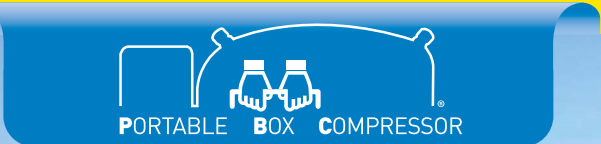


WE HAVE MORE THAN 40 YEARS OF EXPERIENCE DEVELOPING DIRECT CURRENT COMPRESSORS AND HELPING CUSTOMERS BENEFIT FROM THE OPPORTUNITIES OF MOBILE REFRIGERATION TECHNOLOGY.

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



PORTABLE BOX COMPRESSORS



COST-EFFICIENT RELIABILITY
COST-EFFICIENT CONVENIENCE

SMALL AND COMPACT | SILENT OPERATION | HIGH EFFICIENCY | LOW CURRENT CONSUMPTION

SECOP PORTABLE BOX COMPRESSORS – COST-EFFICIENT RELIABILITY

Today, more and more people expect to feel at home wherever they are. Even at places where there is no grid power available they still want their food and beverages perfectly chilled. This quest for mobility has developed a market for portable, cooling boxes. Battery-powered “PBC” compressors from Secop are an ideal choice for this application.

Specially designed for maximum efficiency and reliability, Secop “PBC” compressors make it easy to provide leading class mobile fridges. One thing is their small, compact size and weight – an essential in modern innovation. Another thing is the optimized, low noise motor which ensures outstanding performance and provide an extra degree of mobile luxury. In short, these compressors are customized to add cool and cost-efficient convenience to every holiday, picnic or travelling situation.

Less extras = More savings

The “PBC” compressors are universal for 12 and 24 V DC power supply and cover a capacity range from 65 to 155 W, ASHRAE at -10 °C (low and medium back pressure applications, cooling boxes from 20-70 liters). The capacity is variable through motor speed regulation (PBC-2.0/2.5 only).

The compressors operate with electronic as well as standard mechanical thermostats.

A switch in the power supply cables can be mounted to eliminate standby power consumption.

Safe and reliable - everyday

Moreover, the compressors have internal voltage detection and calibration to the applied voltage. An electronic unit including protection against overload and destructive battery discharge controls the compressors.

The fixed speed PBC-1.4 compressor is 60% smaller than the PBC-2.0/2.5 models and weighs only 2.1 kilograms. Its electronic unit supports an electronic thermostat, which provides an accurate temperature while the failure detection allows prompt fault diagnosis.

Features

Low weight

Small and compact

Silent operation

High efficiency. Low current consumption

Variable speed / capacity

Direct 12/24 V DC power supply

Electronic thermostat (PBC-1.4 only)

Advanced battery protection function

→ Benefits

→ 2.1 kg for PBC-1.4; 4.3 kg for PBC-2.0 & PBC-2.5 makes it easy to carry.

→ 60 % less volume on PBC-1.4 compared to PBC-2.0/2.5. Increase net volume of the box.

→ No disturbance by a noisy compressor.

→ Energy savings. Less battery capacity needed to keep the goods cooled.

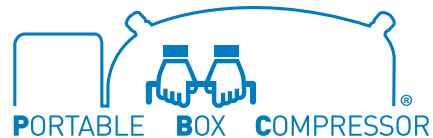
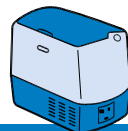
→ Energy savings. Adapt speed to cooling requirement (PBC-2.0/2.5).

→ Same compressor can be used globally. One product covers the world.

→ Cost savings. No extra thermostat needed. Less components and failure modes.

→ Safety. The battery will never be drained. Safe start every time.





PBC-1.4 Compressor for 20-Litre Portable Cooling Boxes

12/24V DC | R134a

GENERAL

Code number compressor with electronic unit	SBC50N30
Certificate	CE marking

APPLICATION

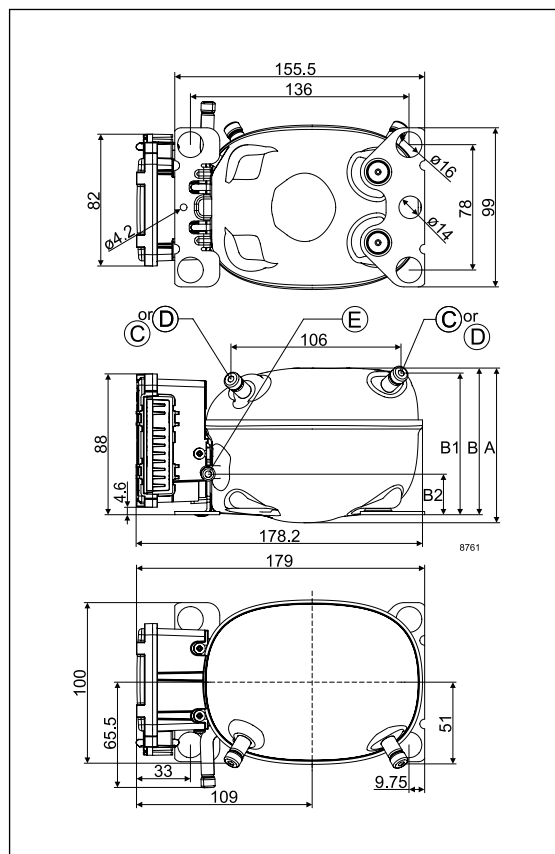
Application	LBP/MBP		
Evaporating temperature	°C	-30 to 0	
Voltage range DC	VDC	9.6 - 17 / 19 - 34	
Cooling requirements (max. 43°C ambient temp.)	Static cooling		

DESIGN

Displacement	cm ³	1.41
Weight - Compressor/Electronic unit	kg	2.1 / 0.11

DIMENSIONS

Height	mm	A	96.25
		B	91.25
		B1	88.00
		B2	25.20
Suction connector	location/I.D. mm angle	C	6.2 25°
	material comment	Cu-plated steel Al cap	
Process connector	location/I.D. mm angle	D	6.2 25°
	material comment	Cu-plated steel Al cap	
Discharge connector	location/I.D. mm angle	E	5.0 0°
	material comment	Cu-plated steel Al cap	
Connector tolerance	I.D. mm	±0.09, on 5.0 +0.12/+0.20	

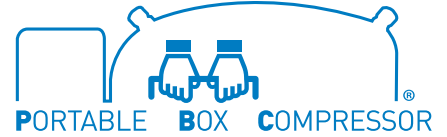
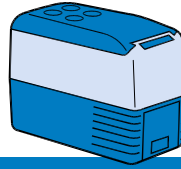


PERFORMANCE DATA

Speed	ASHRAE (International System of Units)							
	Tc=54.4°C, Tliq=32.2°C, Tsuc=32.2°C							
	LBP rating point -23.3°C / 54.4°C				MBP rating point -6.7°C / 54.4°C			
	Cooling capacity	COP	Power consumption	Current **	Cooling capacity	COP	Power consumption	Current **
[rpm]	[W]	[W/W]	[W]	[A]	[W]	[W/W]	[W]	[A]
3,000	20.8	0.83	24.9	1.89	74.8	1.75	42.6	3.23

Speed	ASHRAE (Imperial Units)							
	Tc=130°F, Tliq=90°F, Tsuc=90°F							
	LBP rating point -10°F / 130°F				MBP rating point 20°F / 130°F			
	Cooling capacity	EER	Power consumption	Current **	Cooling capacity	EER	Power consumption	Current **
[rpm]	[BTU/h]	[BTU/Wh]	[W]	[A]	[BTU/h]	[BTU/Wh]	[W]	[A]
3,000	70.7	2.84	24.9	1.89	256	5.99	42.7	3.24

** for 24V applications the values must be halved



PBC-2.0 Compressor for 40-Litre Portable Cooling Boxes

12/24V DC | R134a

GENERAL

Code number compressor with electronic unit	SBC00N20
Certificate	CE marking

APPLICATION

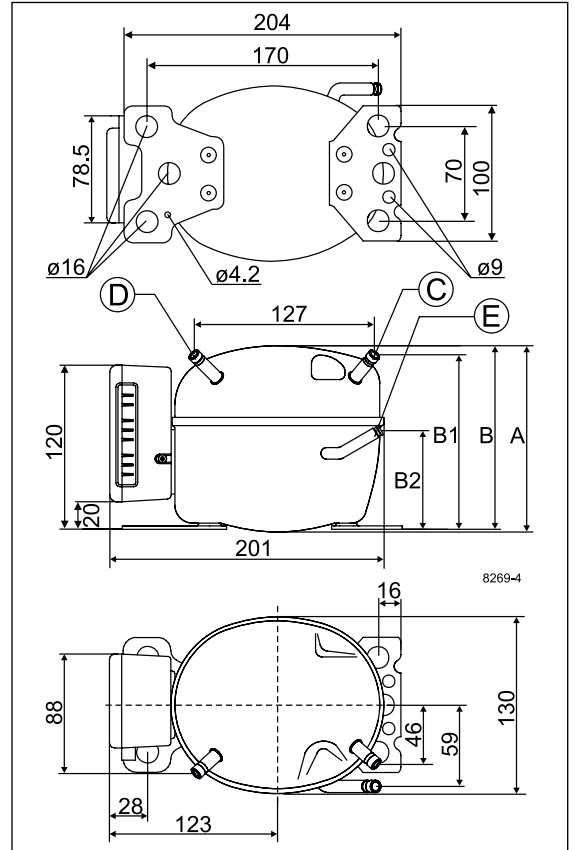
Application	LBP/MBP		
Evaporating temperature	°C	-30 to 0	
Voltage range DC	VDC	9.6 - 17 / 21.3 - 31.5	
Cooling requirements (max. 43°C ambient temp.)	Static cooling		

DESIGN

Displacement	cm ³	2.00
Weight - Compressor/Electronic unit	kg	4.3 / 0.19

DIMENSIONS

Height	mm	A	137
		B	135
		B1	128
		B2	73
Suction connector	location/I.D. mm angle	C	6.2 40°
	material comment	Cu-plated steel Al cap	
Process connector	location/I.D. mm angle	D	6.2 45°
	material comment	Cu-plated steel Al cap	
Discharge connector	location/I.D. mm angle	E	5.0 21°
	material comment	Cu-plated steel Al cap	
Connector tolerance	I.D. mm	±0.09, on 5.0 +0.12/+0.20	

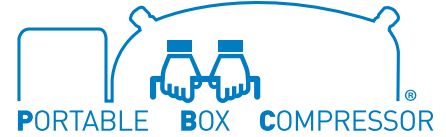
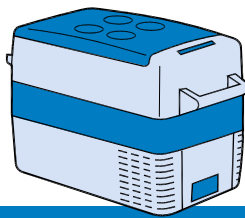


PERFORMANCE DATA

Speed	ASHRAE (International System of Units)							
	T _c =54.4°C, T _{liq} =32.2°C, T _{suc} =32.2°C							
	LBP rating point -23.3°C / 54.4°C				MBP rating point -6.7°C / 54.4°C			
	Cooling capacity	COP	Power consumption	Current ** consumption	Cooling capacity	COP	Power consumption	Current ** consumption
[rpm]	[W]	[W/W]	[W]	[A]	[W]	[W/W]	[W]	[A]
2,000	33.4	1.36	24.6	2.0	82.7	2.1	39.5	3.3
2,500	42.4	1.33	32.0	2.7	104	2.01	51.5	4.0
3,000	46.5	1.27	36.7	3.1	121	1.98	61.4	5.1
3,500	50.5	1.15	43.8	3.6	140	1.95	71.8	6.0

Speed	ASHRAE (Imperial Units)							
	T _c =130°F, T _{liq} =90°F, T _{suc} =90°F							
	LBP rating point -10°F / 130°F				MBP rating point 20°F / 130°F			
	Cooling capacity	EER	Power consumption	Current ** consumption	Cooling capacity	EER	Power consumption	Current ** consumption
[rpm]	[BTU/h]	[BTU/Wh]	[W]	[A]	[BTU/h]	[BTU/Wh]	[W]	[A]
2,000	114	4.63	24.5	2.0	283	7.15	39.5	3.3
2,500	144	4.51	31.9	2.7	354	6.86	51.6	4.3
3,000	158	4.31	36.6	3.1	415	6.74	61.5	5.1
3,500	172	3.93	43.7	3.6	479	6.65	72.0	6.0

** for 24V applications the values must be halved



PBC-2.5 Compressor for 70-Litre Portable Cooling Boxes 12/24V DC | R134a

GENERAL

Code number compressor with electronic unit	SBC02N21
Certificate	CE marking

APPLICATION

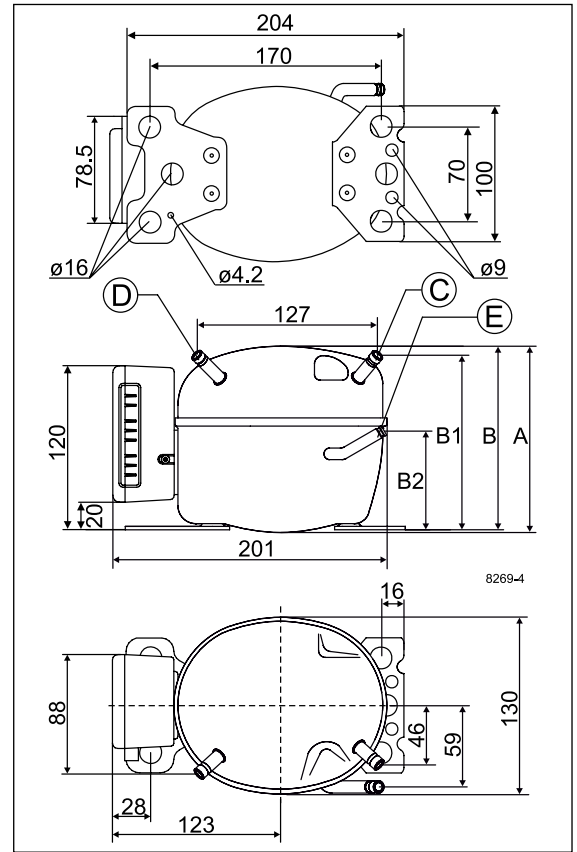
Application	LBP/MBP		
Evaporating temperature	°C	-30 to 0	
Voltage range DC	VDC	9.6 - 17 / 21.3 - 31.5	
Cooling requirements (max. 43°C ambient temp.)	Static cooling		

DESIGN

Displacement	cm ³	2.50
Weight - Compressor/Electronic unit	kg	4.3 / 0.19

DIMENSIONS

Height	mm	A	137
		B	135
		B1	128
		B2	73
Suction connector	location/I.D. mm angle	C	6.2 40°
	material comment	Cu-plated steel Al cap	
Process connector	location/I.D. mm angle	D	6.2 45°
	material comment	Cu-plated steel Al cap	
Discharge connector	location/I.D. mm angle	E	5.0 21°
	material comment	Cu-plated steel Al cap	
Connector tolerance	I.D. mm	±0.09, on 5.0 +0.12/+0.20	



PERFORMANCE DATA

Speed	ASHRAE (International System of Units)							
	T _c =54.4°C, T _{liq} =32.2°C, T _{suc} =32.2°C							
	LBP rating point -23.3°C / 54.4°C				MBP rating point -6.7°C / 54.4°C			
[rpm]	Cooling capacity [W]	COP [W/W]	Power consumption [W]	Current ** consumption [A]	Cooling capacity [W]	COP [W/W]	Power consumption [W]	Current ** consumption [A]
2,000	41.8	1.25	33.8	2.8	105	1.93	54.7	4.7
2,500	51.3	1.21	42.4	3.5	129	1.85	70	5.9
3,000	62.0	1.21	51.6	4.3	155	1.85	83.8	6.5
3,500	71.6	1.18	60.7	5.0	179	1.82 ***	98.5 ***	8.3 ***

Speed	ASHRAE (Imperial Units)							
	T _c =130°F, T _{liq} =90°F, T _{suc} =90°F							
	LBP rating point -10°F / 130°F				MBP rating point 20°F / 130°F			
[rpm]	Cooling capacity [BTU/h]	EER [BTU/Wh]	Power consumption [W]	Current ** consumption [A]	Cooling capacity [BTU/h]	EER [BTU/Wh]	Power consumption [W]	Current ** consumption [A]
2,000	142	4.24	33.5	2.8	360	6.57	54.8	4.7
2,500	174	4.12	42.3	3.5	442	6.30	70.2	5.9
3,000	211	4.10	51.4	4.3	531	6.32	84.0	7.0
3,500	244	4.03	60.5	4.5	613 ***	6.21 ***	98.7 ***	8.3 ***

** for 24V applications the values must be halved / *** fan cooling of electronic unit compulsory

DC-VOLTAGE MOBILE REFRIGERATION COMPRESSORS

Secop BD and PBC compressors provide extraordinary performance with minimal power consumption, extremely silent running, reliable operation even when tilted up to 30°, problem-free operation at 12/24/48 V and more than 40 years of experience in mobile refrigeration.

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, and portable boxes Secop has transcended the barriers for mobile refrigeration.



OUR JOURNEY SO FAR

1956

Production facility and headquarters in Flensburg, Germany founded.

1970

Introduction of SC compressors. The birth of a standard setting platform in the light commercial market.

1990

Introduction NL compressors.

1992

Introduction PL compressors.

1999

Start of production with natural refrigerant R290 (Propane).

2005

Introduction GS compressors.

2008

Production facility in Wuqing, China founded.

2013

Introduction of the XV compressor. Opening a new chapter in refrigeration history. Secop acquires ACC Fürstenfeld, Austria.

1958

Start up production of PW compressors.

1972

Introduction FR compressors.

1977

Introduction TL and BD compressors.

1993

Start of production with natural refrigerant R600a (Isobutane) Production facility in Ornomelj, Slovenia founded.

2002

Production facility in Zlate Moravce, Slovakia founded.

2010

Introduction SLV-CNK.2 and SLV-CLK.2 variable speed compressors. Introduction BD1.4F Micro DC compressor. Introduction of DLX and NLU compressors.

2015

New generation of energy-optimized propane compressors. New variable speed platforms for household and light commercial applications.



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