



DC COMPRESSORS
FOR BATTERY-DRIVEN
MOBILE
REFRIGERATION





SUSTAINABLE COOLING SOLUTIONS

Developed with you, customized for you.

Secop is your expert partner for advanced hermetic compressors, electronic controls, AC light commercial installations, DC mobile applications, and medical cold chain solutions.

Together with our customers, we develop high performance stationary and mobile cooling solutions, customized according to individual needs.

GREEN IS COOL

A complete range of sustainable and efficient cooling solutions

Designed to reduce energy consumption and carbon dioxide (CO₂) emissions, Secop solutions use state-of-the-art technology, such as variable speed compressors, as well as natural refrigerants (hydrocarbons – HC) to minimize the environmental and economic impact of commercial refrigeration.

A PARTNER YOU CAN TRUST

Robust design for commercial applications and proven track records of premium quality

Secop is committed to delivering advanced refrigeration compressors and controls, offering customers tailored sustainable solutions for light commercial, battery-driven, special cooling applications, and medical cold chain.

TOGETHER TO GET THERE

Application knowledge to support customers in system design and optimization with worldwide testing capabilities

Secop strives to be the first choice for partners seeking leading-edge refrigeration solutions and a premium customer experience. Our Sales and Application Team is always at hand to support customers in designing and engineering new, innovative solutions.

A PRESENCE MAKING THE DIFFERENCE

Sales and Customer Service team close to customers in every region

You will never work alone: our Sales and Customer Service team is ready to assist you from order to delivery, and to manage and quickly solve any problem that may occur. Wherever you are, whatever you do.

BEYOND THE PRODUCT, BEYOND THE STANDARDS

We do it better because we do it together

At Secop, cooperation in designing, engineering, and testing the solution with the partner is the standard. A proven combination of top quality and robust design guarantees reliable solutions. A network of 33 specialized laboratories continuously researches and tests new solutions. Our dedication to innovation, sustainability, and quality is recognized by prestigious international awards.

Committed to Quality Products

- Robust design with early risk control
- Capable, controlled manufacturing processes
- Comprehensive testing and validation excellence
- Traceable, qualified supply chain
- Closed-loop continuous improvement

Leading-Edge Application Engineering

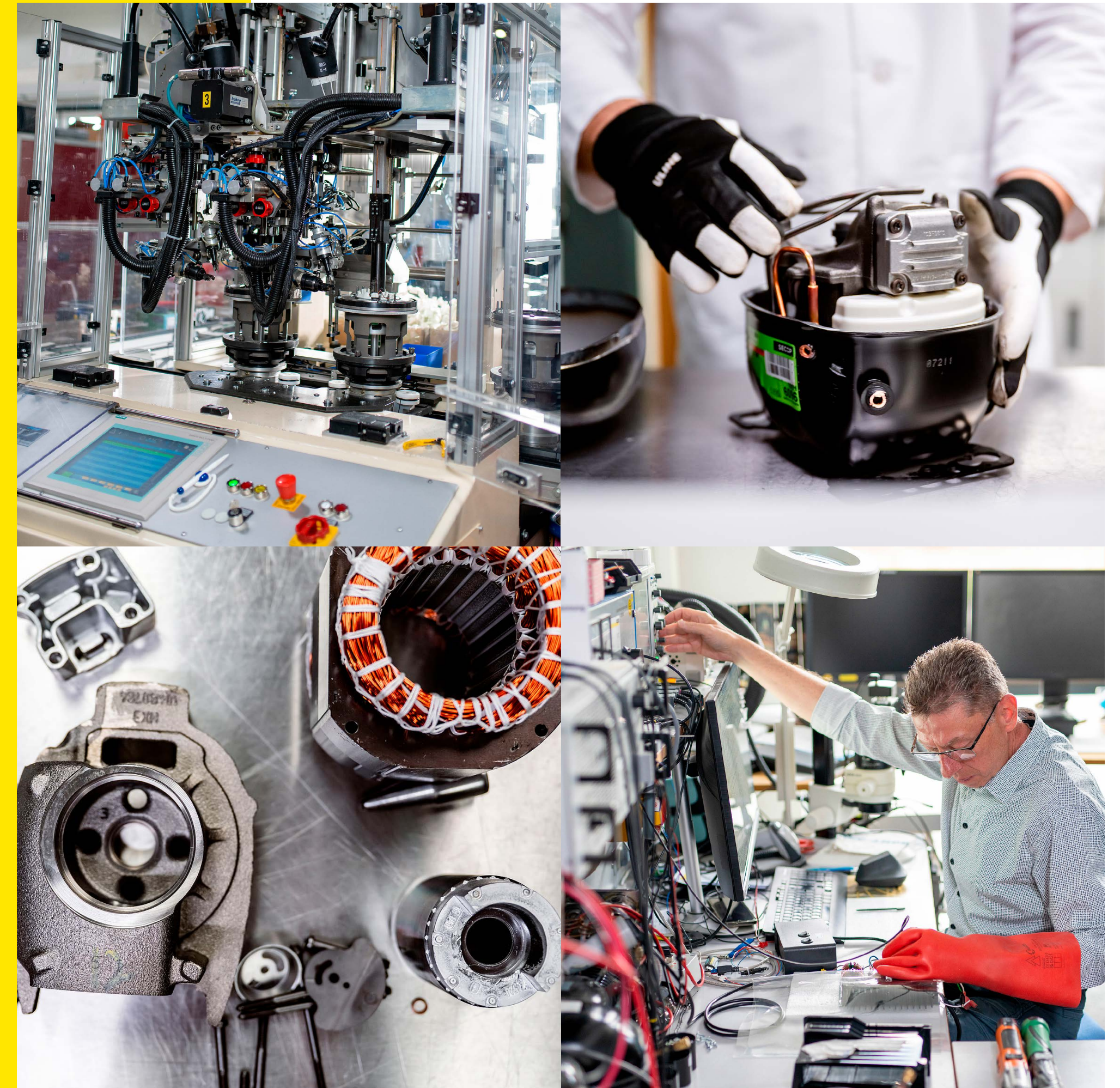
- Testing for customer's appliances
- Advanced trouble shooting
- System optimization support
- Support conversions to HC refrigerants
- System knowledge to support the introduction of variable-speed solutions

Engineering & Design Excellence

- Extensive engineering know-how in the integrated design of mechanical, electrical, and thermodynamic systems
- Specialized R&D teams with a proven track record in developing high-performance stationary, mobile and medical cooling solutions

Advanced Electronics & Control Systems

- Engineering mastery in motor design and advanced variable-speed control architectures
- In-house development of specialized inverter electronics and multi-voltage controllers
- Advanced simulation tools and data-driven design systems to support system reliability



International partners for advanced developments

12

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

33

R&D engineers and technicians

150+

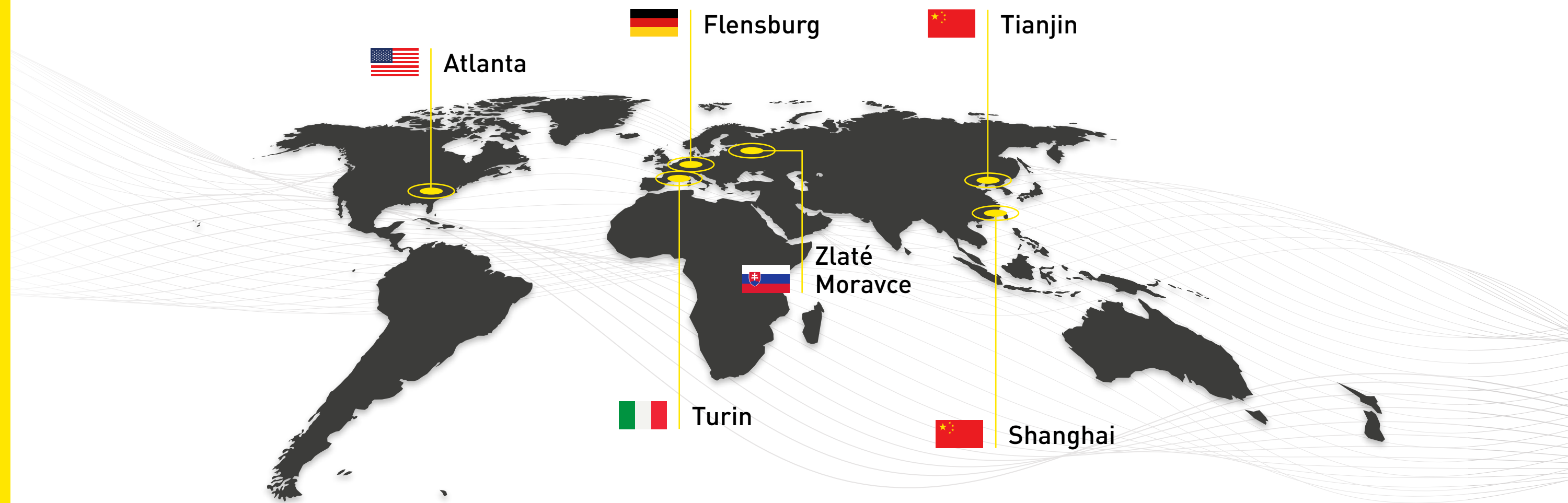
Patents globally

400+

Countries with customer support

50+

SECOP GROUP: AROUND THE WORLD



Flensburg: Sales, Application and R&D
Turin: Sales, Application and Marketing
Atlanta: Sales, Application and Logistics

Zlaté Moravce: R&D, Logistics, and Manufacturing
Tianjin: Sales, Application, R&D, Logistics, and Manufacturing
Shanghai: Sales, Application and Marketing

PREMIUM CUSTOMER SUPPORT

Sales team close to customers.
 Support in 50+ countries.
 Customer service in 10+ languages.
 Application engineering local support.
 Worldwide Distribution Network.



POWERED BY EXPERIENCE, INSPIRED BY THE FUTURE

With over 45 years of experience, Secop defines the standards for battery-driven compressors. Our technical heritage and engineering expertise establish us as a global leader in the DC mobile cooling market.

Our high-efficiency solutions provide the technical foundation for critical segments: from trucks, buses, and recreational markets to the evolving Electric cars and automotive landscapes in general.

We put our extensive know-how at the service of our partners, supporting R&D teams in system design and helping them meet global reliability and regulatory standards.



LEADER IN AUTOMOTIVE COOLING SOLUTIONS

With over 45 years of leadership, we drive innovation by putting our extensive know-how at the service of commercial partners through products engineered for the most rigorous automotive industry requirements: from cars, to trucks and buses.

Iatf 16949 certified plant

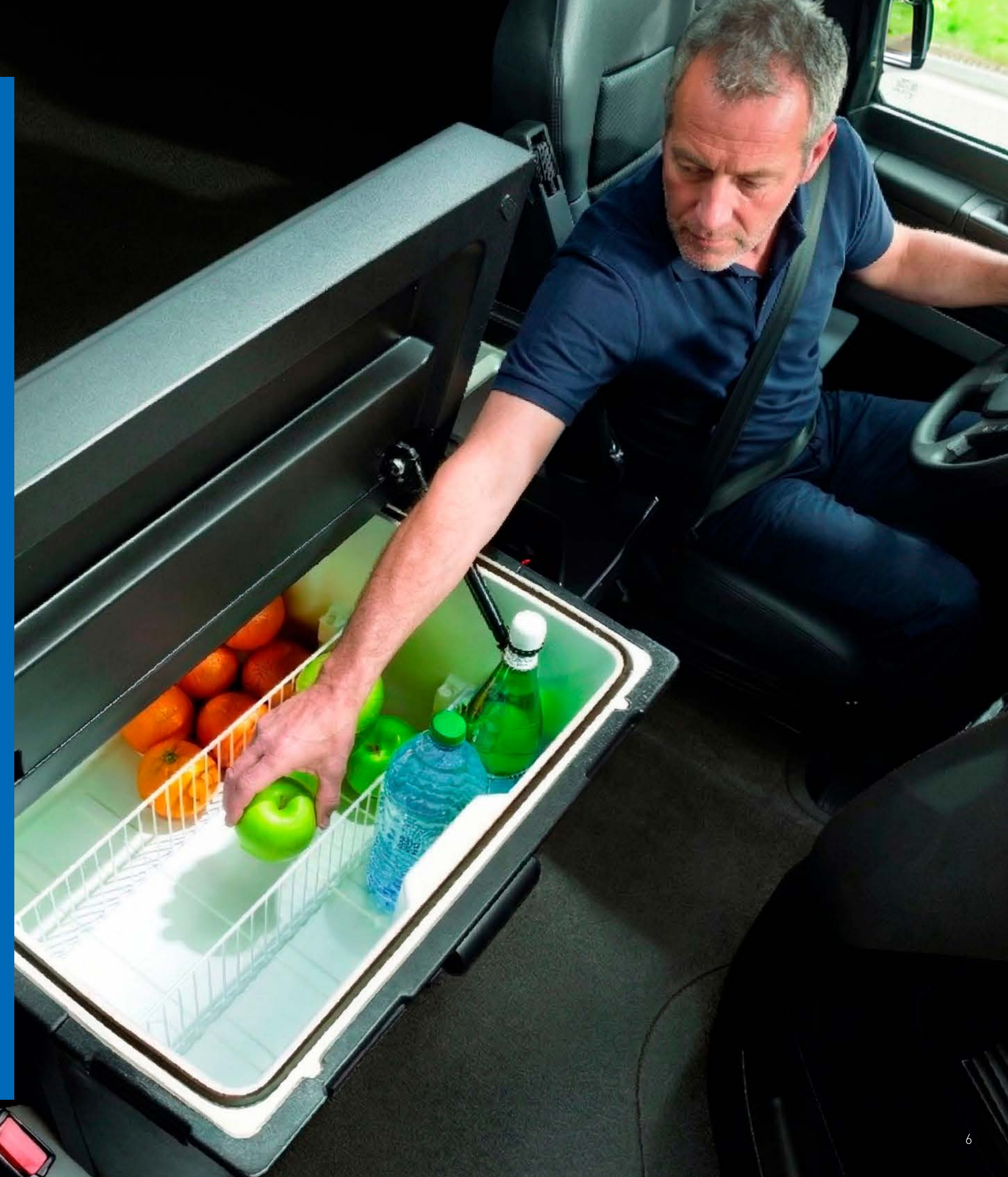
High-tier manufacturing standards: rigorous process control to minimize defects and support reliable, high-volume production.

ISO 16750 compliant

Automotive-grade reliability: high resistance to vibrations and thermal stress, contributing to a longer product lifecycle on the road.

High-efficiency flexibility

Optimized power footprint: low power draw supports multiple units on a single battery, enabling dual-system configurations without increasing power requirements.



PIONEERING ELECTRIC VEHICLES COOLING

We lead the electric transition by providing advanced cooling solutions specifically developed for the unique technical demands of EV mobility.

Low EMI (CISPR25 level 5)

System integrity: superior electromagnetic compatibility designed to protect sensitive electronics and support interference-free operation.

Ultra-silent operation

Acoustic comfort: near-silent performance, essential in electric vehicles where the absence of engine noise highlights every cabin sound.

Integrated smart electronics

Optimized thermal management: seamless communication with vehicle control systems to maximize energy efficiency and battery range.

Compact Space-Saving Design

Design freedom: reduces the overall weight of the cooling unit and maximizes internal storage space for the end-user.



PREMIUM QUALITY IN LEISURE MARKETS

In the leisure and marine sectors, equipment reliability is essential to prevent technical failures. Secop compressors are designed to minimize downtime, supporting continuous operation even in demanding environments.

Market-proven quality

Preferred choice for marine and luxury brands: high-tier reliability based on decades of field experience in premium applications.

Engineered for stability

High-angle operational reliability: maintains cooling performance at inclinations up to 30°, ensuring stability in rough seas and uneven terrain.

Fast pull-down

Efficient performance: engineered to reach setpoints quickly, supporting food preservation from the start of the journey.

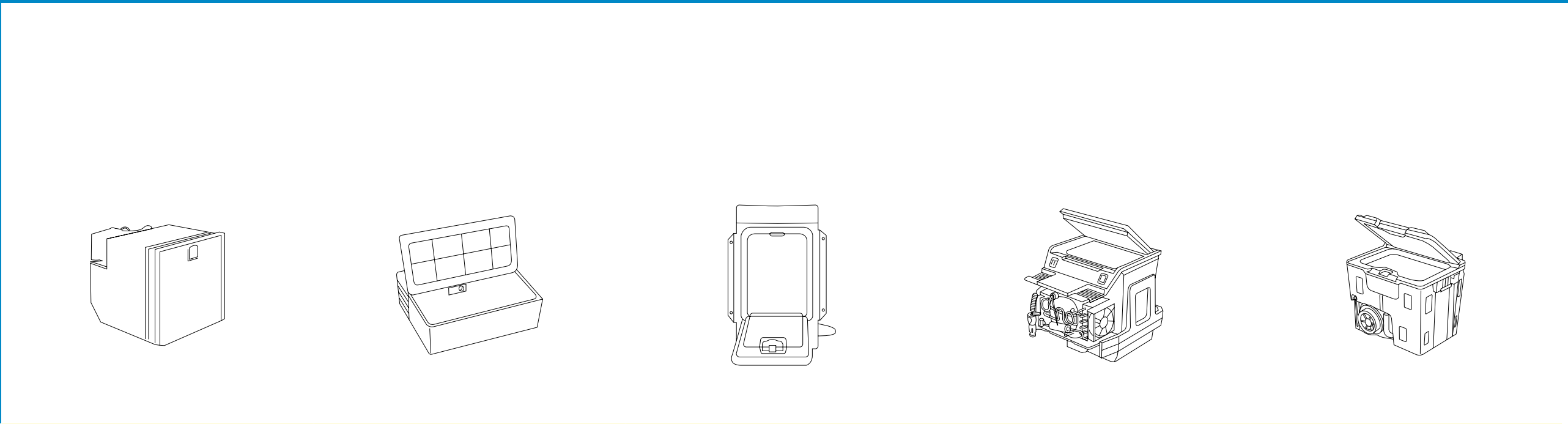
Sustainable cooling

Eco-friendly: utilizing natural refrigerants like R600a (GWP <3) for minimal environmental impact.



APPLICATION MAP

Automotive



Truck and bus, fridge

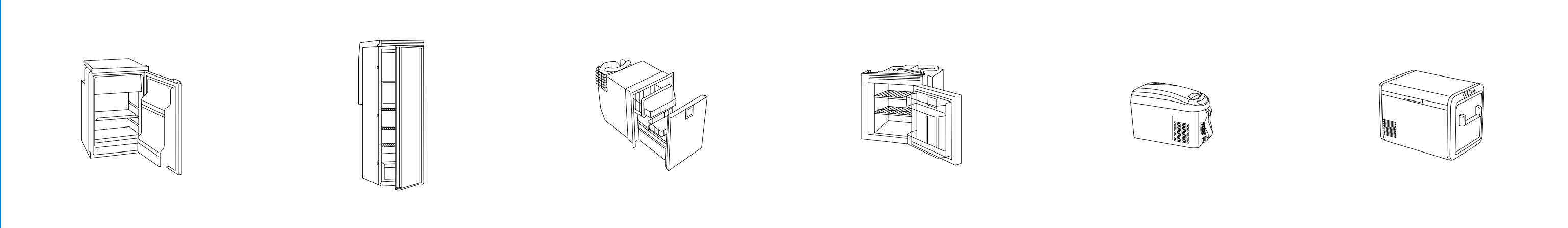
Truck, drawer fridge

Rear Armrest Cars console

ICE Cars console

EV Cars console

Recreation



RVs, small fridge

RVs, large fridge

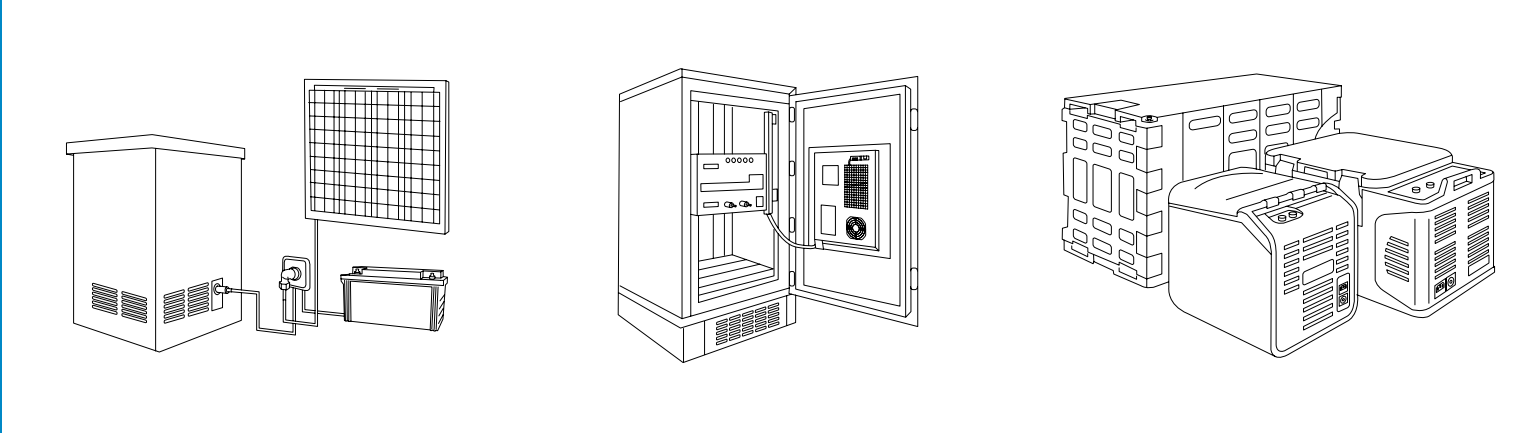
Maritime fridge, drawer

Maritime fridge, door

Portable box, small

Portable box, large

DC Special Applications



Solar powered fridge

Telecommunication

Van boxes

PRODUCT PORTFOLIO DC

Hermetic Refrigeration Compressors for DC Voltage, Mobile applications.

BD Nano



BD Micro



BD-P



Automotive					Recreation						DC Special Applications			
■	■	■	■	■	■	■	■	■	■	■	■	■		
■	■	■	■	■						■				
■	■				■	■	■	■			■	■	■	■

PRODUCT PORTFOLIO DC

The DC mobile compressor range for battery-driven applications, categorized according to the compressor series.



BD Nano



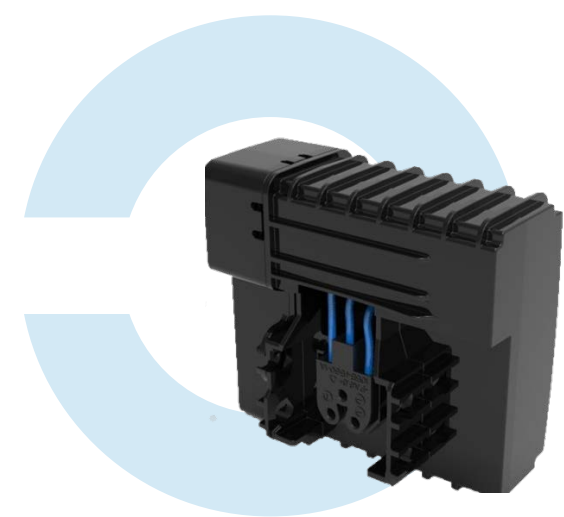
BD Micro



BD-P

Series	Displacement (cm ³)	LBP (W) ASHRAE	MBP (W) ASHRAE	HBP (W) ASHRAE	Refrigerants		
	0 — 10	0 — 300	0 — 500	0 — 1000	HC	HFO	HFC
BD Nano	1.42 - 2.6	28 - 69	62 - 131		R600a	R1234yf	R134a
BD Micro	1.41	13 - 34	42 - 94	83 - 173		R1234yf	R134a
BD-P	2.0 - 3.0	29 - 71	65 - 223	115 - 390	R290 R600a R170	R1234yf	R134a

BD NANO CONTROLLERS BY MARKET SEGMENT



AUTOMOTIVE MARKETS

- Electric cars
- ICE¹ Cars
- Truck
- Bus
- Custom solutions

RECREATION MARKETS

- Campervans / Motorhomes
- Boats
- Portable boxes

¹ ICE: Internal Combustion Engine

FEATURES OF BD NANO CONTROLLERS

		Automotive Core	Automotive Plus	Recreation
Category	Target Market / applications	Automotive (Electric cars, ICE cars, trucks, buses, etc)		Boats, Recreational vehicles, portable boxes
	CE	-	Compliant	Compliant
Compliance	UL	-	-	Approved
	Automotive EMC (CISPR 25)	External EMC protection required	Level 5	Level 1
Protection	Ambient Temperature	-	■	-
	Controller Temperature	■	■	■
	Reverse Polarity	-	■	■
	Battery Discharge Protection	■*	■*	■**
	Overload	■	■	■
	Tilt Protection	-	optional	-
	LIN communication Interface (Modbus Protocol)	■	■	■
Communication	Deep Sleep Mode	-	■	-
	Error LED Interface	■	■	■
Compressor	Speed control	■*	■*	■**
	Silent shut Down	■	■	■
Thermostat	Mechanical	■	■	■
	NTC (Thermal sensor)	■	■	■
Fan	Configurable speed	-	■*	■*
	Automatic speed control	-	Compressor Speed Ambient Temperature	Compressor Speed

* Configurable by communication interface

** Configurable by communication interface and external resistor

BD NANO COMPRESSORS

THE ULTIMATE DC EVOLUTION

Nominal Voltage: 12 V, 24 V

Hermetic Refrigeration Compressors for DC Voltage

The evolution of DC compressors for cooling solutions in automotive, e-cars, RVs and boats.



Top Automotive Quality

Manufactured in an IATF 16949 certified plant.

Automotive-grade Emi Protection

CISPR25 Level 5 compliance for minimized emissions and high immunity to external noise.

Maximum Efficiency, Lowest Operating Cost

Reduced energy draw to extend battery life and lower operational costs.

Extended Cooling Capacity

Up to 69 W (ASHRAE LBP) output, supporting applications up to 150 L volume.

Robust Design

ISO 16750 compliant for durability in demanding environments.

Extremely Compact

Ultra-compact (1.5 kg, 10 cm) for easy system integration.

Premium Quietness For Mobile Living

Optimized noise and vibration levels for premium in-cabin comfort.

Tailored Electronics For Every Segment Dedicated

Versions for Passenger Cars, Trucks, Buses, EVs, RVs, and Marine applications.

Series	Displacement (cm ³)	LBP (W) ASHRAE	MBP (W) ASHRAE	HBP (W) ASHRAE	Refrigerants		
					HC	HFO	HFC
	0 — 10	0 — 300	0 — 500	0 — 1000	HC	HFO	HFC
BD Nano	1.42 - 2.6	28 - 69	62 - 131		R600a	R1234yf	R134a

Applications

Automotive

Recreation

Designed for



Mobility Transportation



Automotive Compliant

BD MICRO COMPRESSORS

THE ORIGINAL INDUSTRY BENCHMARK

Nominal Voltage: 12 V, 24 V

Hermetic Refrigeration Compressors for DC Voltage

The outstanding DC compressor for automotive
and truck applications



BD Nano Predecessor

In the market since 2010, setting the standards of the automotive industry: trucks, passenger cars and buses.

Heavy Duty Endurance

Optimized motor supporting reliable performance and high acoustic comfort for cabin applications.

Variable-speed Efficiency

VSD technology optimizes power consumption and COP/EER, supporting extended battery life.

Universal Voltage Ready

Wide DC range (12/24 V, 9-34 V) supporting broad compatibility with mobile systems.

Compact Design

Compact size (< 2.3 kg) for integration into tight spaces.

Premium Quiet Operation

Low-noise motor designed for vibration reduction and premium cabin comfort.

Intelligent Controller

Features fan speed control, start/stop delays, NTC support, and polarity protection.

Wide Application Range

Covers LBP/MBP/HBP applications, simplifying inventory and product development.

Series	Displacement (cm ³)	LBP (W) ASHRAE	MBP (W) ASHRAE	HBP (W) ASHRAE	Refrigerants		
	0 — 10	0 — 300	0 — 500	0 — 1000	HC	HFO	HFC
BD Micro	1.41	13 - 34	42 - 94	83 - 173		R1234yf	R134a

Applications

Automotive

Recreation

Designed for



Mobility
Transportation



Automotive
Compliant

BD-P COMPRESSORS

THE UNIVERSAL SOLUTION

Nominal Voltage: 12 V, 24 V

Hermetic Refrigeration Compressors for DC Voltage

The most versatile Secop DC compressor series, featuring specialized models for ultra-low temperature applications.



Proven longevity

With over 30 years of field-tested success, it's a market classic recognized for its reliability and extended operational life.

Heavy Duty Resistance

Optimized for high vibrations and rough movements, supporting durability in demanding off-road conditions.

Ideal For Leisure Markets

Suited for marine and recreational applications, including boats, vans, and large portable boxes.

Universal Voltage Solution

Global availability in DC (12/24/48 V) and AC (110–240 V), supporting solar, truck, and car systems.

Multi-refrigerant Ready

Supports multiple refrigerants, including R600a and R290, to align with environmental regulations.

Ultra-low Temperature Capability

Specialized models for Ultra-Low Temperature (ULT) and medical cooling transport using variable-speed technology.

Series	Displacement (cm³)	LBP (W) ASHRAE	MBP (W) ASHRAE	HBP (W) ASHRAE	Refrigerants		
	0 — 10	0 — 300	0 — 500	0 — 1000	HC	HFO	HFC
BD-P	2.0 - 3.0	29 - 71	65 - 223	115 - 390	R290 R600a R170	R1234yf	R134a

Applications

Automotive

Recreation

DC Special Applications

Mobility Transportation

Automotive Compliant



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