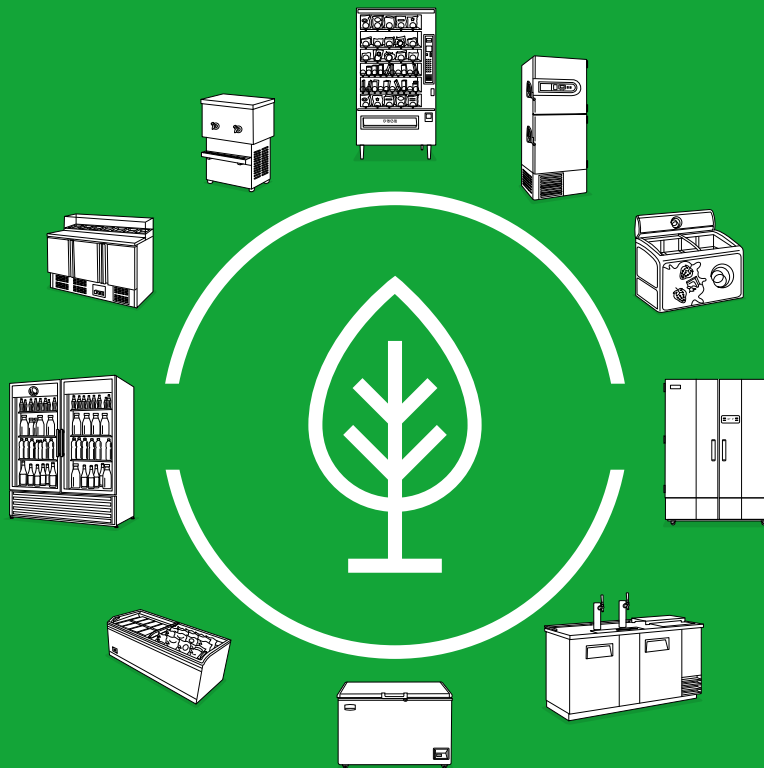


Secop is the first choice for partners searching for leading-edge refrigeration solutions and a premium customer experience.

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

ENERGY-OPTIMIZED PROPANE COMPRESSORS

SECCP



R290

KLF Compressors
NLE Compressors
SCE Compressors

3 GWP

Achievable with powerful efficient LBP/MBP compressors, designed for food retail, food service, and medical applications



Stationary Cooling



Medical Cooling



High Efficiency





SECOP PROPANE SOLUTIONS

Tailored Solutions in Light Commercial Applications for Today and Tomorrow



Food Retail and Food Service



Medical Applications



For more than 25 years, Secop has been developing highly efficient compressors that use hydrocarbons (R290 and R600a) and since 2015, Secop has been improving its successful R290 compressor line with the release of a new generation of propane compressors for LBP and MBP applications.

Given their outstanding versatility and reliability, Secop's new generation of energy-optimized propane compressors achieve maximum performance for an array of refrigeration/freezer applications. The range was recently optimized to also meet the needs in food retail and medical applications and Secop is constantly developing models with higher capacities.

The KLF, NLE, and SCE compressor ranges are tailored for commercial use and capable of replacing products made for high global warming potential (GWP) refrigerants such as R404A and R134a. The efficiency can be further increased with optional run capacitors, if required.

A GWP of three is achievable with our powerful, efficient R290 KLF, NLE, and SCE compressors designed for LBP/MBP applications, such as bottle coolers, ice-cream cabinets, commercial refrigerators, or medical refrigerators and medical ultra low temperature freezers that are suitable for markets with a voltage range of 220V to 240V, 50/60 Hz as well as 115V to 127V, 60 Hz.

The KLF compressor includes an innovative patented hermetic terminal plug. Backed by years of experience with hydrocarbons refrigerants, testing of R290 solutions, and optimization of system conversion from HFC to HC refrigerants, Secop has developed a new design for terminal plugs to prevent root causes for electrical arcs injection with flammable refrigerants. This has set a benchmark in the industry to support the design of reliable systems with new flammable refrigerants.

Dual frequency (50/60 Hz) compressors ending in CNT, CNLT, or MNT are designed to support regions that experience harsh and challenging environments and where voltage fluctuations as well as high ambient temperatures need to be taken into account. The ability to start under low voltage conditions without stalling presents an outstanding solution for those harsh environments.

Make the switch now to replace R404A and R134a systems with environmentally friendly R290 and save on additional costs by utilizing smaller compressor platforms that provide unique opportunities in your market. Secop not only offers a complete range of highly efficient compressors that work with propane, Secop is also a solution provider that offers technical support and safety upgrades for any type of applications and compressors.



Replace R134a with Environmentally Friendly Natural Refrigerant R290

Save Additional Cost by Utilizing Smaller Compressor Platforms



Conversion Examples from R134a to R290 (220-240 V/50 Hz)

MBP applications, e.g. beverage coolers, display cabinets, commercial chillers (at ASHRAE MBP conditions)

Evaporating temperature: -6.7°C | Condensing temperature: 54.4°C | Suction gas temperature: 35°C | Ambient temperature: 35°C | Liquid temperature: MBP: 46.1°C

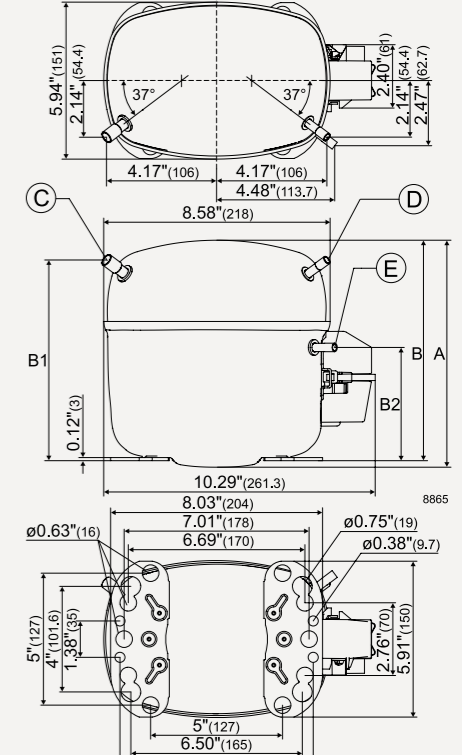
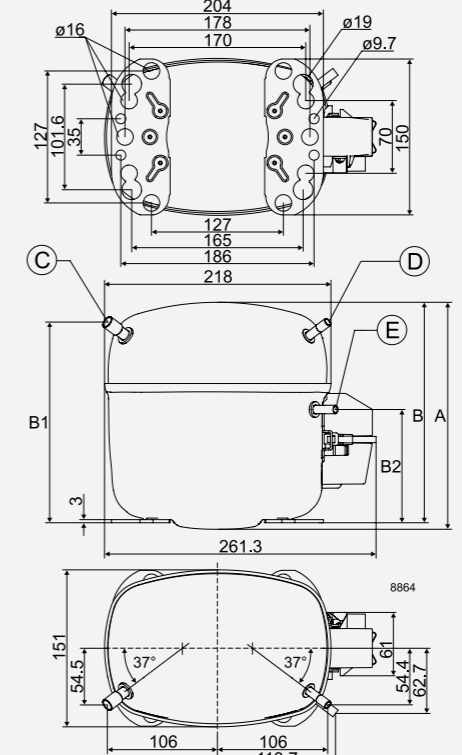
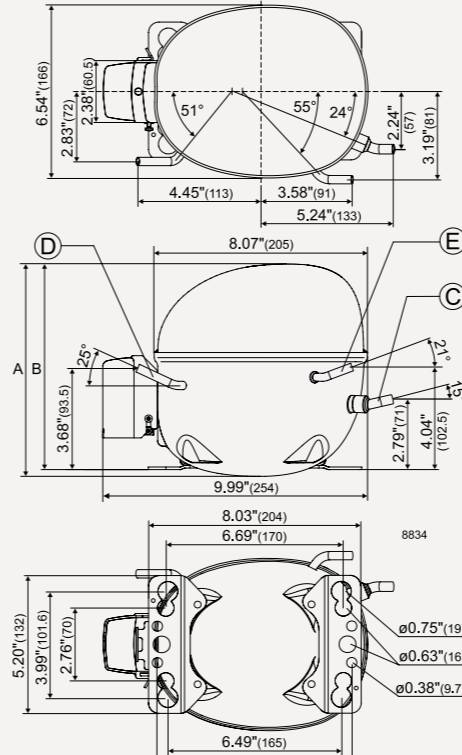
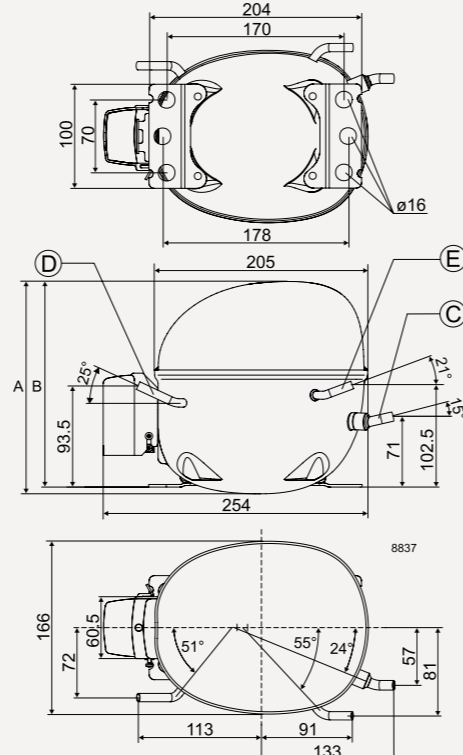
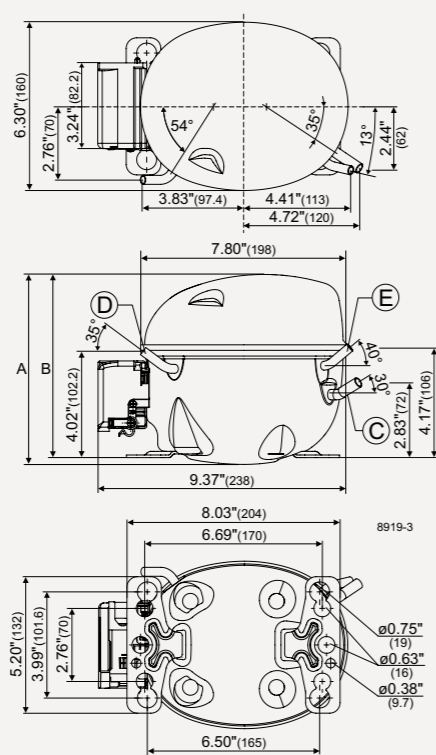
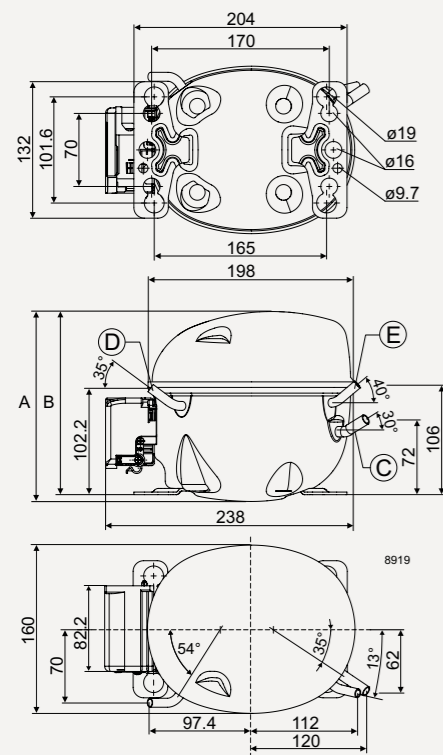
Compressor	NL6.1MF	NF7FX	NF9FX	NF10FX	SC12G	SC15G	SC18G	SC18MFX	SC21MFX	SC12/12G	GS26MFX	SC18/18G
from... R134a	320 W	432 W	476 W	556 W	614 W	745 W	893 W	916 W	1114 W	1228 W	1446 W	1774 W
	1.61 COP	1.66 COP	1.59 COP	1.42 COP	1.60 COP	1.57 COP	1.58 COP	1.63 COP	1.76 COP	1.60 COP	1.82 COP	1.63 COP
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Compressor	KLF4.0CND	KLF4.8CND	KLF5.6CND	KLF6.6CND	KLF7.7CND	NLE8.8CN	NLE10CN	NLE11MN	NLE12.6MN	SCE15MNX	SCE18MNX	SCE21MNX
to... R290	336 W	414 W	495 W	597 W	704 W	752 W	872 W	981 W	1060 W	1267 W	1501 W	1762 W
	2.08 COP	2.08 COP	2.10 COP	2.05 COP	1.97 COP	1.98 COP	1.89 COP	2.01 COP	1.97 COP	2.04 COP	1.98 COP	2.12 COP

Conversion Examples from R134a to R290 (220-240 V/50 Hz)

LBP applications, e.g. commercial freezers, ice cream cabinets (at ASHRAE LBP conditions)

Evaporating temperature: -23.3 °C | Condensing temperature: 54.4°C | Suction gas temperature: 32.2°C | Ambient temperature: 32.2°C | Liquid temperature: MBP: 32.2°C

Compressor	NL7F	NL9F	NL11F	SC15F	SC15FT	SC18FTX	SC21G	SC21FTX	SC18/18G	SC21/21G
from... R134a	187 W	213 W	274 W	324 W	386 W	448 W	462 W	569 W	783 W	921 W
	1.22 COP	1.21 COP	1.22 COP	1.11 COP	1.18 COP	1.17 COP	1.23 COP	1.27 COP	1.12 COP	1.13 COP
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Compressor	KLF4.0CND	KLF4.8CND	KLF5.6CND	KLF6.6CND	KLF7.7CND	NLE8.8CN	NLE10CN	NLE11CNL	SCE18CNLX	SCE21CNLX
to... R290	183 W	230 W	273 W	337 W	385 W	431 W	486 W	540 W	793 W	953 W
	1.48 COP	1.50 COP	1.55 COP	1.51 COP	1.52 COP	1.57 COP	1.47 COP	1.52 COP	1.51 COP	1.61 COP



KLF: 200/220-240 V/50 Hz · 208-230 V/60 Hz

KLF: 115-127 V/60 Hz

NLE: 220-240 V/50 Hz · 208-230 V/60 Hz

NLE: 115-127 V/60 Hz

SCE: 220-240 V/50 Hz · 208-230 V/60 Hz

SCE: 115-127 V/60 Hz

Electrical Equipment: Motor Systems

RSIR:
Resistant Start, Induction Run (ePTC)

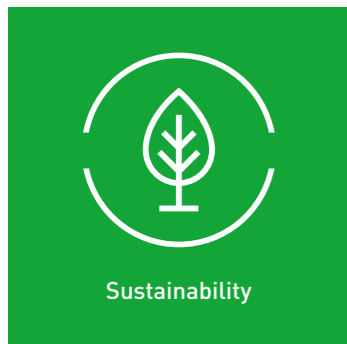
RSCR:
Resistant Start, Capacitor Run (PTC/ePTC + run capacitor)

CSIR:
Capacitor Start, Induction Run (relay + start capacitor)

CSCR:
Capacitor Start, Capacitor Run (relay + start capacitor + run capacitor)



High Efficiency



Sustainability

ENERGY-OPTIMIZED PROPANE (R290) COMPRESSORS: 208-230 V / 60 Hz · 220-240 V / 50/60 Hz

General	KLF4.8CNT	KLF5.6CNT	NLE8.0CNT	NLE8.8CNT	NLE10CNT	NLE11CNT	NLE11MNT	SCE15CNLX	SCE15CNLX	SCE15MNX	SCE15MNX	SCE18CNLX	SCE18CNLX	SCE18MNX	SCE18MNX	SCE21CNLX	SCE21CNLX					
Code number	106H2502	106H2602	105H6073	105H6088	105H6179	105H6109	105H6199	104H8577	104H8588	104H8579	104H8589	104H8878	104H8888	104H8879	104H8889	104H8173	104H8174					
Approvals	UL 60335-2-34, IEC 60335-2-34 IEC/UL 60079-1, IEC/UL 60079-15							UL 60335-2-34, CB/IEC 60335-2-34 IEC/UL 60079-1, IEC/UL 60079-15				UL 60335-2-34, CB/IEC 60335-2-34 IEC/UL 60079-1, IEC/UL 60079-15										
Application																						
Application	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP	MBP	LBP	LBP	MBP	MBP	LBP	LBP	MBP	MBP	LBP	LBP					
Evaporating temperature	°C	-35 to 7.2	-35 to 7.2	-35 to 7.2	-35 to 7.2	-35 to 7.2	-40 to -10	-20 to 7.2	-40 to -5	-40 to -5	-23.3 to 7.2	-23.3 to 7.2	-40 to -5	-40 to -5	-23.3 to 7.2	-23.3 to 7.2	-40 to -5					
Voltage range/frequency	V/Hz	187-254 / 50 198-253 / 60	187-254 / 50 198-253 / 60	187-242 / 50 187-253 / 60	187-253 / 60	187-242 / 50 187-253 / 60	187-253 / 60	187-242 / 60	187-253 / 60	187-253 / 60	187-253 / 60	187-253 / 60	187-253 / 60	187-253 / 60	187-253 / 60	187-253 / 60	198-253 / 60					
Applicable motor configurations		CSIR, RSCR	CSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR					
Performance Data (ASHRAE LBP ASHRAE MBP · 230V/60Hz · fan cooling · without run capacitor)																						
Evaporating temperature	°C	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7					
Cooling capacity	W	271	496	332	604	441	808	511	914	607	1077	670	-	1176	769	-	766					
Power consumption	W	170	232	212	296	291	397	328	447	372	513	405	-	583	470	-	498					
COP	W/W	1.60	2.14	1.56	2.04	1.52	2.04	1.56	2.05	1.63	2.10	1.65	-	2.02	1.64	-	1.54					
Test conditions		Condensing temperature: LBP: 54.4°C, MBP: 54.4°C Suction gas temperature: LBP: 32.2°C, MBP: 35°C Ambient temperature: LBP: 32.2°C, MBP: 35°C Liquid temperature: LBP 32.2°C, MBP: 46.1°C																				
Performance Data (EN 12900 LBP EN 12900 MBP · 230V/60Hz · fan cooling · without run capacitor)																						
Evaporating temperature	°C	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10					
Cooling capacity	W	153	441	189	538	244	718	299	807	347	947	383	-	1038	416	-	416					
Power consumption	W	127	207	158	261	203	341	245	393	269	448	291	-	512	342	-	353					
COP	W/W	1.20	2.13	1.20	2.06	1.20	2.10	1.22	2.05	1.29	2.12	1.32	-	2.03	1.22	-	1.18					
Test conditions		Condensing temperature: LBP: 40°C, MBP: 45°C Suction gas temperature: LBP: 20°C, MBP: 20°C Ambient temperature: LBP: 32°C, MBP: 32°C Liquid temperature: LBP 40°C, MBP: 45°C																				
Dimensions																						
Height	mm	A	182													B				218		
		B	175													C				212		
Suction connector	location/I.D. mm angle material seal	C	8.2 30°								8.2 15°								10.2 37°			
			Copper Rubber plug								Copper Rubber plug								Copper Rubber plug			
Process connector	location/I.D. mm angle material seal	D	6.2 35°								6.5 25°								6.2 37°			
			Copper Rubber plug								Copper Rubber plug								Copper Rubber plug			
Discharge connector	location/I.D. mm angle material seal	E	6.2 40°								6.5 21°								6.2 37°			
			Copper Rubber plug								Copper Rubber plug								Copper Rubber plug			
Connector tolerance	I.D. mm		±0.09																			

SECOP GROUP: AROUND THE WORLD



12
international
partner for
advanced
developments

33
laboratories
located in Austria,
Germany, Slovakia,
China, US, and
Turkey

160
R&D engineers
and technicians

440
patents globally

50+
countries with
customer support



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

