

WITH MORE THAN 60 YEARS OF EXPERIENCE IN COMPRESSOR TECHNOLOGY AND HIGHLY DEDICATED EMPLOYEES, OUR FOCUS IS ON DEVELOPING AND

APPLYING ADVANCED COMPRESSOR TECHNOLOGIES TO ACHIEVE STANDARD SETTING PERFORMANCE FOR LEADING PRODUCTS AND BUSINESSES AROUND THE WORLD.



ENERGY-OPTIMIZED PROPANE COMPRESSORS



R290

DLE COMPRESSORS
NLE/NLY COMPRESSORS
SCE COMPRESSORS



3GWP

ACHIEVABLE WITH POWERFUL EFFICIENT LBP/MBP COMPRESSORS, DESIGNED FOR BOTTLE COOLERS, COMMERCIAL FREEZERS, FOOD RETAIL AND ICE-CREAM CABINETS, ETC.





SECOF PROPANE COMPRESSORS – TAILORED FOR LIGHT COMMERCIAL APPLICATIONS

For more than 25 years, Secop (formerly known as Danfoss Compressors) has been developing highly efficient compressors working with hydrocarbons (R290 and R600a).

Since 2015 Secop enhances its successful R290 compressor program with the release of a new generation of propane compressors for LBP and MBP applications, such as bottle coolers, ice cream cabinets, and commercial refrigerators.

The new DLE, NLE/NLY, and SCE compressors are tailored for commercial use and capable of replacing products made for high-global warming potential (GWP) refrigerants, such as R404A and R134a. With optional run capacitors, the efficiency can be further increased if required.

With these compressors, Secop perfectly meets the increasing market demand for high efficiency and natural refrigerants with a very low GWP.

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.

Secop's ingenuity goes beyond enhancing the technical aspects and performance. This new line's flexibility not only simplifies but also makes demand forecasting and supply management mainstream by streamlining and abridging the order process to just one compressor.

A GWP of three is achievable with our powerful, efficient R290 DLE, NLE/NLY, and SCE compressors, designed for LBP/MBP applications, such as bottle coolers, commercial freezers, food retail and ice-cream cabinets, etc..

These compressors represent a giant energy efficiency leap for Secop's propane compressor technology.

Make the switch now to replace R404A and R134a systems with environmentally friendly R290 and save additional cost by utilizing smaller compressor platforms that provide unique opportunities in your market.

The new 50/60 Hz compressors with denominations ending with CNT, CNLT or MNT are designed to support regions which 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.

On March 25, the organization committee of China Refrigeration 2017 announced that Secop's SCE21MNX won the Innovation Award for 2017.

REPLACE R134a WITH ENVIRONMENTALLY FRIENDLY R290 AND 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 1.61 COP	432 W 1.66 COP	476 W 1.59 COP	556 W 1.42 COP	614 W 1.60 COP	745 W 1.57 COP	893 W 1.58 COP	916 W 1.63 COP	1114 W 1.76 COP	1228 W 1.60 COP	1446 W 1.82 COP	1774 W 1.63 COP
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Compressor	DLE4CN	DLE4.8CN	DLE5.7CN	DLE6.5CN	DLE7.5CN	NLE8.8CN	NLE10CN	NLE11MN	NLE12.6MN	SCE15MNX	SCE18MNX	SCE21MNX
to... R290	338 W 1.97 COP	415 W 1.98 COP	507 W 1.97 COP	548 W 1.92 COP	643 W 1.91 COP	752 W 1.98 COP	872 W 1.89 COP	981 W 2.01 COP	1060 W 1.97 COP	1267 W 2.04 COP	1501 W 1.98 COP	1762 W 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 1.22 COP	213 W 1.21 COP	274 W 1.22 COP	324 W 1.11 COP	386 W 1.18 COP	448 W 1.17 COP	462 W 1.23 COP	569 W 1.27 COP	783 W 1.12 COP	921 W 1.13 COP
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Compressor	DLE4CN	DLE4.8CN	DLE5.7CN	DLE6.5CN	DLE7.5CN	NLE8.8CN	NLE10CN	NLE11CNL	SCE18CNLX	SCE21CNLX
to... R290	191 W 1.48 COP	243 W 1.56 COP	298 W 1.53 COP	315 W 1.53 COP	366 W 1.47 COP	431 W 1.57 COP	486 W 1.47 COP	540 W 1.52 COP	793 W 1.51 COP	953 W 1.61 COP

Energy-optimized Propane (R290) Compressors • 220-240 V / 50 Hz

General	DLE4CN	DLE4.8CN	DLE5.7CN	DLE6.5CN	DLE7.5CN	NLE8.8CN	NLE10CN	NLE11CNL	NLE11MN
Code number	102H4465	102H4565	102H4653	102H4765	102H4853	105H6880	105H6175	105H6174	105H6177
Approvals	EN 60335-2-34 w. Annex AA, CCC					EN 60335-2-34 w. Annex AA,			

Application										
Application	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP	MBP	
Evaporating temperature	°C	-35 to 7.2	-35 to 7.2	-35 to 7.2	-35 to 7.2	-35 to 7.2	-35 to 10	-35 to 10	-35 to -10	-30 to 10
Voltage range / frequency	V/Hz	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50	198-254 / 50
Applicable motor configurations		CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR

Performance data [ASHRAE LBP ASHRAE MBP • 220V/50Hz • fan cooling]															
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
Cooling capacity	W	191	338	242	415	298	507	315	548	366	643	430	751	486	872
Power consumption	W	129	172	155	210	195	258	206	285	249	336	275	380	331	462
COP	W/W	1.48	1.97	1.56	1.98	1.53	1.97	1.53	1.93	1.47	1.91	1.57	1.98	1.47	1.89
Test conditions	motor configuration	CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

Condensing temperature: LBP: 54
Ambient temperature: LBP: 3

Performance data [EN 12900 LBP EN 12900 MBP • 220V/50Hz • fan cooling]															
Evaporating temperature	°C	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10
Cooling capacity	W	107	303	114	363	167	446	172	483	209	572	256	670	285	781
Power consumption	W	94	149	116	182	139	222	147	243	185	288	203	327	232	417
COP	W/W	1.14	2.04	0.99	2.00	1.20	2.01	1.17	1.99	1.06	1.99	1.26	2.05	1.23	1.96
Test conditions	motor configuration	CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

Condensing temperature: LBP:
Ambient temperature: LBP:

Dimensions										
Height	mm	A	175					203		
		B	169					197		
Suction connector	location/I.D. mm angle material seal	C	8.2 18° Copper Rubber plug					8.2 15° Copper Rubber plug		
		D	6.2 61° Copper Rubber plug					6.2 25° Copper Rubber plug		
Process connector	location/I.D. mm angle material seal	E	6.2 25° Copper Rubber plug					6.2 21° Copper Rubber plug		
			±0.09					±0.09		
Connector tolerance	I.D. mm									±0.09
Remarks	DLE4CN connectors: 6.2/6.2/5.0 [±0.09, on 5.0 +0.12/+0.22]									-

Energy-optimized Propane (R290) Compressors • 115-127 V / 60 Hz

General	DLE4CN	DLE4.8CN	DLE5.7CN	DLE6.5CN	NLE8.0CN	NLE8.8CN	NLY10CN	NLE10CN
Code number	102H3482	102H3582	102H3682	102H3792	105H6093	105H6094	105H6164	105H6194
Code number (pre-assembled start equipment)	102H3483	102H3583	102H3683	102H3793	105H6095	105H6096	105H6165	105H6195
Approvals	UL984, CCC				UL984, CCC		UL984	

Application									
Application	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP
Evaporating temperature	°F	-31 to 45	-31 to 45	-31 to 45	-31 to 45	-31 to 45	-31 to 45	-31 to 45	-31 to 45
Voltage range/frequency	V/Hz	95-135 / 60	95-135 / 60	95-135 / 60	95-135 / 60	95-135 / 60	95-135 / 60	95-135 / 60	103-127 / 60
Applicable motor configurations		CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR	CSIR, RSIR RSCR

Performance data [ASHRAE LBP 130/90/90/90 °F • 115V/60Hz • fan cooling]															
Evaporating temperature	°F	-31	-10	-31	-10	-31	-10	-31	-10	-31	-10	-31	-10	-31	-10
Cooling capacity	BTU/h	436	782	525	971	661	1187	698	1285	830	1545	1008	1749	1227	2021
Power consumption	W	117	153	148	194	176	233	188	251	213	288	247	326	270	371
EER	BTU/Wh	3.70	5.11	3.54	5.00	3.75	5.10	3.71	5.11	3.89	5.36	4.09	5.38	4.54	5.45
Motor configuration at test		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

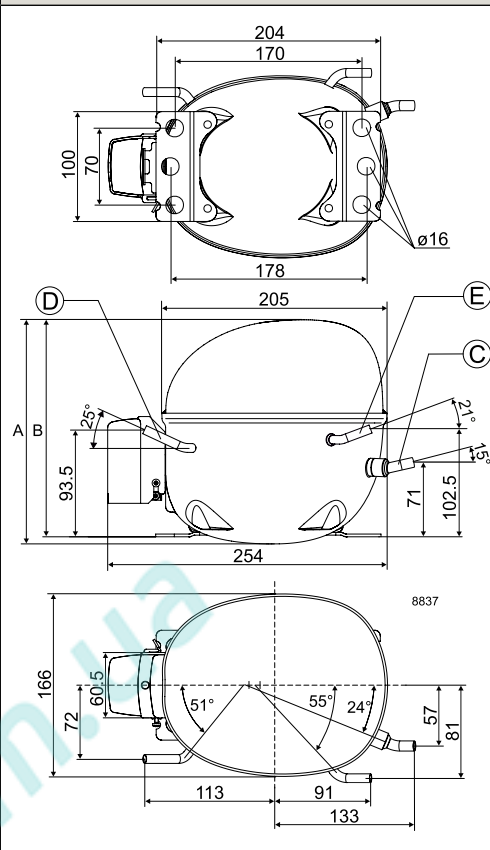
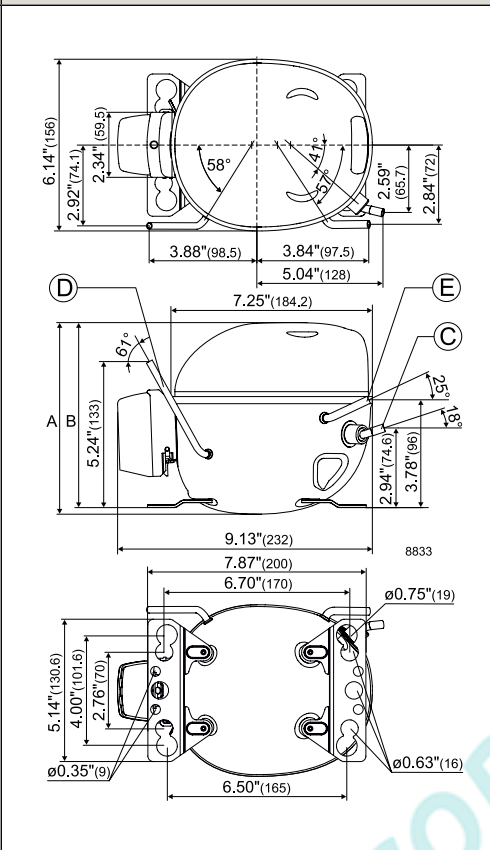
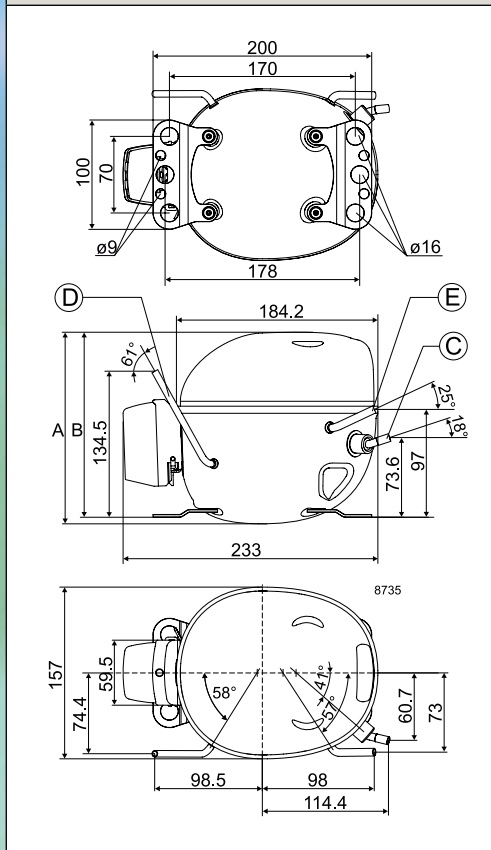
Performance data [ASHRAE MBP 130/95/115/90 °F • 115V/60Hz • fan cooling]															
Evaporating temperature	°F	20	45	20	45	20	45	20	45	20	45	20	45	20	45
Cooling capacity	BTU/h	1414	2337	1720	2792	2078	3350	2284	3840	2754	4574	3122	4998	3646	5812
Power consumption	W	204	236	252	286	311	364	342	419	389	463	439	567	498	598
EER	BTU/Wh	6.93	9.91	6.82	9.78	6.68	9.19	6.68	9.17	7.07	9.88	7.10	8.81	7.33	9.71
Motor configuration at test		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

Dimensions										
Height	inch	A	6.90					7.99		
		B	6.64					7.76		
Suction connector	location/I.D. in. angle material seal	C	0.320-0.327 18° Copper Rubber plug					0.320-0.327 15° Copper Rubber plug		
		D	0.252-0.259 61° Copper Rubber plug					0.252-0.259 25° Copper Rubber plug		
Process connector	location/I.D. in. angle material seal	E	0.252-0.259 25° Copper Rubber plug					0.252-0.259 21° Copper Rubber plug		

DLE • 220-240 V / 50 Hz | 208-230 V / 60 Hz

DLE • 115-127 V / 60 Hz

NLE • 220-240 V / 50 Hz | 208-230 V / 60 Hz



Electrical Equipment • Motor Systems

RSIR: Resistant Start, Induction Run (ePTC)	RSCR: Resistant Start, Capacitor Run (ePTC + run capacitor)	CSIR: Capacitor Start, Induction Run (relay + start capacitor)	CSCR: Capacitor Start, Capacitor Run (relay + start capacitor + run capacitor)
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Energy-optimized Propane (R290) Compressors • 208-230 V / 60 Hz • 220-240 V / 50/60 Hz

General	DLE4.8CNT	DLE5.7CNT	NLE8.0CNT	NLE8.8CNT	NLE10CNT	NLE11CNLT	NLE11MNT
Code number	102H4587	102H4678	105H6073	105H6088	105H6179	105H6109	105H6199
Approvals	UL984, CB IEC 60335-2-34		UL984, CB IEC 60335-2-34				

Application	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP/MBP	LBP	MBP
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
Voltage range/frequency V/Hz	187-254 / 50 187-253 / 60	187-254 / 50 187-253 / 60	187-242 / 50 187-253 / 60	187-253 / 60	187-242 / 50 187-253 / 60	187-253 / 60	187-242 / 60
Applicable motor configurations	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR	CSIR, RSIR, RSCR

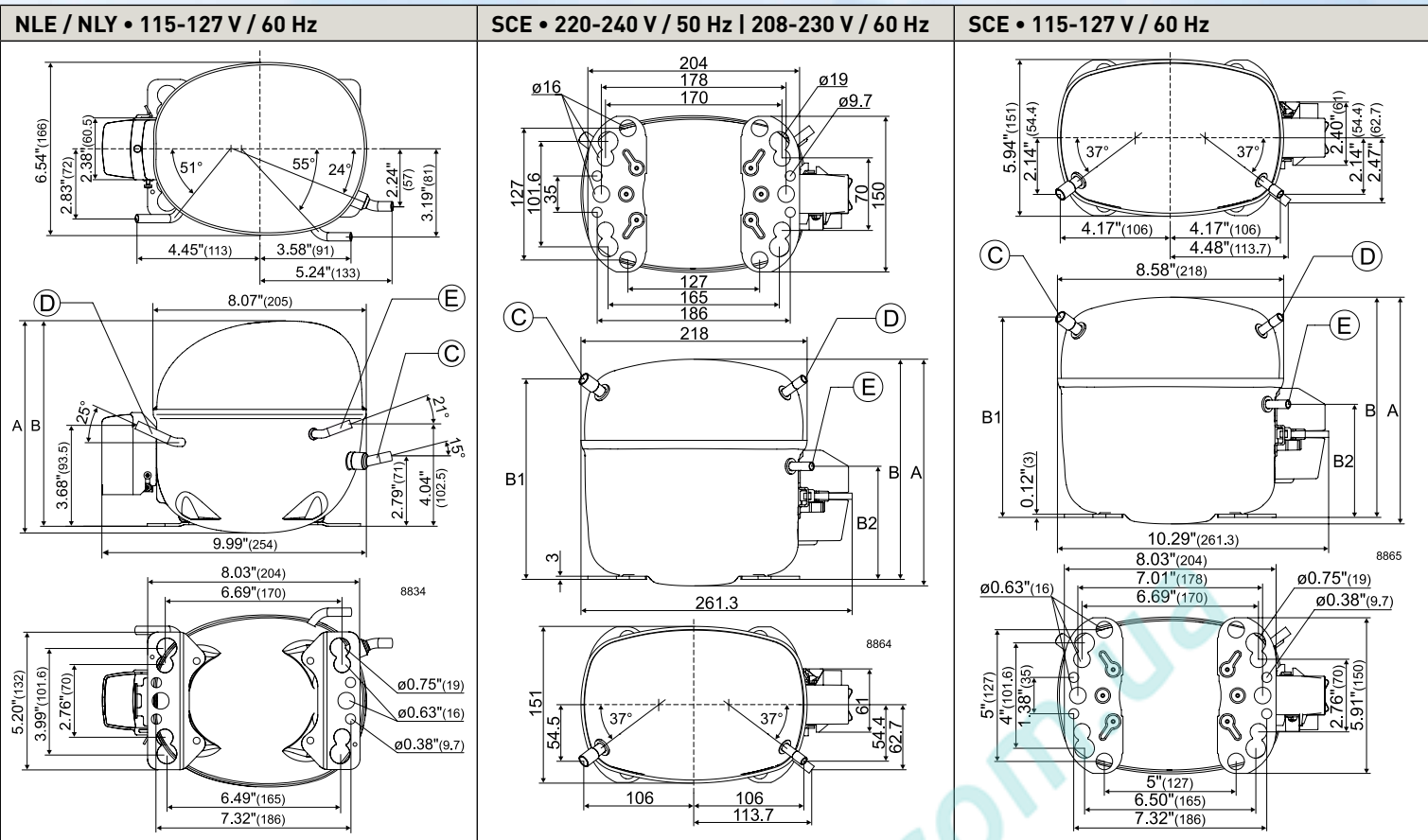
Performance data [ASHRAE LBP ASHRAE MBP • 230V/60Hz • fan cooling • without run capacitor]	-23.3		-6.7		-23.3		-6.7		-23.3		-6.7		-23.3		-6.7	
Evaporating temperature °C	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7	-23.3	-6.7
Cooling capacity W	283	501	353	611	441	808	511	914	607	1077	670					1176
Power consumption W	187	247	229	305	291	397	328	447	372	513	405					583
COP W/W	1.51	2.03	1.55	2.00	1.52	2.04	1.56	2.05	1.63	2.10	1.65					2.02
Test conditions	motor configuration		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

Condensing temperature: LBP: 54.4°C, M
Ambient temperature: LBP: 32.2°C,

Performance data [EN 12900 LBP EN 12900 MBP • 230V/60Hz • fan cooling • without run capacitor]	-35		-10		-35		-10		-35		-10		-35		-10	
Evaporating temperature °C	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10
Cooling capacity W	160	443	199	536	244	718	299	807	347	947	383					1038
Power consumption W	140	218	165	265	203	341	245	393	269	448	291					512
COP W/W	1.15	2.03	1.20	2.02	1.20	2.10	1.22	2.05	1.29	2.12	1.32					2.03
Test conditions	motor configuration		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR		CSIR or RSIR	

Condensing temperature
Ambient temperature

Dimensions		A	175	203
Height	mm	B	169	197
	location/I.D. mm angle	C	8.2 18°	8.2 15°
Suction connector	material seal		Copper Rubber plug	Copper Rubber plug
	location/I.D. mm angle	D	6.5 61°	6.5 25°
Process connector	material seal		Copper Rubber plug	Copper Rubber plug
	location/I.D. mm angle	E	6.5 25°	6.5 21°
Discharge connector	material seal		Copper Rubber plug	Copper Rubber plug
	I.D. mm		±0.09	±0.09



SCE15CNLX	SCE15CNLX	SCE15MNX	SCE15MNX	SCE18CNLX	SCE18CNLX	SCE18MNX	SCE18MNX	SCE21CNLX	SCE21CNLX
104H8577	104H8588	104H8579	104H8589	104H8878	104H8888	104H8879	104H8889	104H8173	104H8174
UL984, CB IEC 60335-2-34									

LBP	LBP	MBP	MBP	LBP	LBP	MBP	MBP	LBP	LBP
-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	-40 to -5
187-253 / 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
CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR

-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
769	766	1552	1534	910	896	1802	1795	1102	1088	710	710	710	710	710	710
470	498	689	743	544	580	817	879	669	669	710	710	710	710	710	710
1.64	154	2.25	2.07	1.67	1.55	2.21	2.04	1.65	1.53	1.53	1.53	1.53	1.53	1.53	1.53
CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR

MBP: 54.4°C | Suction gas temperature: LBP: 32.2°C, MBP: 35°C
 MBP: 35°C | Liquid temperature: LBP 32.2°C, MBP: 46.1°C

-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10	-35	-10
416	416	1376	1361	495	490	1594	1589	602	594	594	594	594	594	594	594
342	353	621	668	387	405	730	785	482	509	509	509	509	509	509	509
1.22	1.18	2.22	2.04	1.28	1.21	2.19	2.03	1.25	1.17	1.17	1.17	1.17	1.17	1.17	1.17
CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR	CSCR	CSIR

LBP: 40°C, MBP: 45°C | Suction gas temperature: LBP: 20°C, MBP: 20°C
 LBP: 32°C, MBP: 32°C | Liquid temperature: LBP 40°C, MBP: 45°C

218
212
10.2 37°
Copper Rubber plug
6.2 37°
Copper Rubber plug
6.2 37°
Copper Rubber plug
±0.09

SECOF PROPANE COMPRESSORS – COOLING WITH CONSCIENCE®

At Secop, the development of leading compressor technologies always goes hand in hand with social and environmental responsibility.

We think it is the least we can do, helping our customers to meet regulations and build a better world.

This means all Secop compressors are designed to save energy and reduce emissions in customer applications all over the world.

It also means that we carry out environmental manufacturing practices wherever we operate.

It means we are a participant of the Global Compact, an initiative of the United Nations for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment, and anti-corruption.

And it means that when you choose a Secop compressor, you're opting for high-performing solutions that cool with a conscience – now and in the future.



LEADING TECHNOLOGY
THE RESPONSIBLE WAY

