

APPLICATION STUDY: TO A NEW LEVEL

SECCP

Date: December 2021

SUMMARY

Project: SLVE18CN
in stainless steel freezer/LBP application

Sector: Food service/professional kitchen

Task: Refitting a three doored professional freezer with a new, electronic controlled compressor.



STATIONARY
COOLING



THE STORY

Energy Class: China Energy Level 3
Dimensions: 2050 mm × 830 mm × 1630 mm
Net Volume: 1251 l

STARTING CONFIGURATION

Compressor: Fixed-speed drive hermetic compressor
Refrigerant: R290 **Displacement:** 27.8 cc.
Height: 246 mm **Weight:** 17.4 kg

BACKGROUND

Light commercial refrigeration market is driven by the new energy regulations, like the "China Energy Level". So installations in food retail, food service optimized electronic controls.

REQUIREMENTS

- Upgrade the cabinet to an optimized energy consumption level so that it achieves level 1 of the "China Energy Level"
- Achieve the same cooling capacity as the original configuration

CHALLENGES

Lower the energy consumption of the original configuration while maintaining the cooling capacity.



VARIABLE
SPEED DRIVE

THE OUTCOME

SOLUTION:
from R290 fixed-speed to R290 variable speed compressor

Replace the original R290 fixed-speed compressor with a variable-speed compressor was possible thanks to the availability of the Secop SLVE18CN. This is because the size of this optimized compressor can achieve a similar cooling capacity of larger displacement fixed-speed drive compressors required by freezers of this size.

RESULTS:
SLVE18CN confirmed the capability of covering same cooling capacity as a 27.8 cc. fixed-speed compressor

-11 %

Footprint (Compressor size vs. R290 fixed-speed)

Level 1

China Energy Level

-25 %

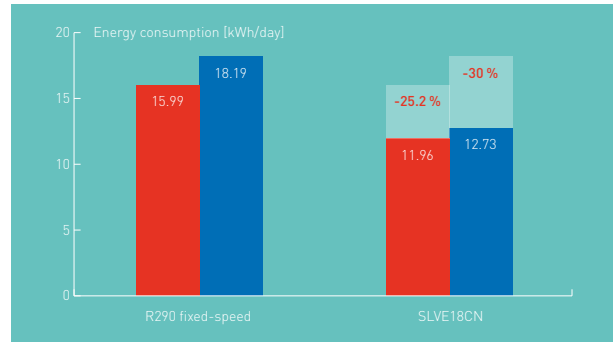
Energy consumption

THE NUMBERS

Key improvements vs. R290 fixed-speed

Footprint (compressor size)	-11%
COP	+27%
Energy consumption	-25%

■ CN-standard ■ EU-standard



THE BENEFITS

<p>EFFECTIVE SOLUTIONS</p> <p>Efficient system settings and control</p>	<p>ENERGY EFFICIENT</p> <p>Better "China Energy Level"</p>	<p>SMALL FOOTPRINT</p> <p>Advantages in stock management and cooler design</p>	<p>NATURAL REFRIGERANTS</p> <p>R290 green refrigerant</p>	<p>PREMIUM CONTROLLERS</p> <p>High level controls and settings</p>	<p>VARIABLE-SPEED DRIVE</p> <p>Optimal energy consumption and performances</p>
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TAKE AWAY

- Secop's new SLVE18CN is the most powerful hermetic reciprocating variable-speed compressor for propane on the market
- It can operate continuously inside an evaporating temperature range from -45 °C to +10 °C and can cover the full range of LBP and MBP application conditions
- Meets Level 1 "China Energy Level" requirements
- Intelligent electronics-controlled compressor supports all customers' needs (simple drop-in, frequency control and serial control) with automatic input detection
- Easy customization via Tool4Cool®
- Learn more about the SLVE18CN <https://rb.gy/l2f4st>



ABOUT SECOP

Secop is the expert for advanced hermetic compressor technologies and cooling solutions in commercial refrigeration.

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Secop GmbH · Lise-Meitner-Straße 29 · 24941 Flensburg, Germany · Tel: +49 461 4941 0 · www.secop.com

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