

# APPLICATION STUDY: POWERFUL OPTIMIZATION

SECCP

Date: January 2026

## SUMMARY

**Project:** SLVE18CN  
in vertical multideck cooler/MBP application

**Sector:** Food retail, food service

**Task:** Conversion to a new generation  
electronic controlled hermetic  
hydrocarbon compressor.



Stationary  
Cooling



## THE STORY

**Energy Class:** D level Europe Ecodesign

Commission Delegated Regulation (EU) 2019/2018 of 11 March 2019

**Dimensions:** Length with ends: 2540 mm

Horizontal display surface: 5.35 m<sup>2</sup>

Number of doors: 4

**Net Volume:** 1062 l

### Starting configuration

**Compressor:** Fixed-speed drive hermetic compressor

**Refrigerant:** R404A **Displacement:** 27.8 cc.

**Height:** 250 mm **Weight:** 18.3 kg

### Requirements

- Achieve targets of new energy regulations
- Adopt low GWP refrigerants
- Electronic controlled variable speed drive for optimized performances

### Background

Light commercial refrigeration market is driven by the new energy regulations, like Ecodesign in Europe, and the transition to low GWP refrigerants, like F-gas regulation in EU. So installations in food retail, food service require more efficient green solutions, both in LBP and MBP applications.

### Challenges

Reduce energy consumption with electronic controlled efficient compressors and optimize performances with the conversion to green refrigerant.



Energy  
Efficient



Natural  
Refrigerants



Variable-Speed  
Efficiency

## THE OUTCOME

**SOLUTION:**  
from FSD\* R404A to VSD\*\* R290

Direct drop-in from a R404A compressor to a R290 compressor improved energy savings for the system by up to 15% and ranked the cabinet 1 level higher based on the EU standards.

Upgrade from fixed-speed compressors to variable-speed compressors controlled by optimized electronic control unit.

\*Fixed-speed drive | \*\*Variable-speed drive (electronic controlled)

### RESULTS:

Secop SLVE18CN R290 VSD 17.7 cc. compressor installed

**-12 %**

Footprint (Compressor Size vs. FSD 27.8 cc.)

**1 Level higher**

Europe Ecodesign (EU Standard)

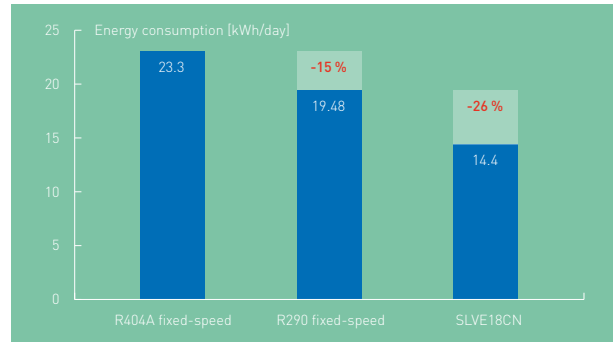
Commission Delegated Regulation (EU) 2019/2018 of 11 March 2019

**-37 %**







Energy consumption

## THE NUMBERS

Key improvements EC R290	vs. R404A fixed-speed	vs. R290 fixed-speed
Footprint (compressor size)	-12 %	-12 %
COP	+20 %	+15 %
Energy consumption	-37 %	-26 %
Pull-down time	-	-14 %



## THE BENEFITS

 Effective Solutions	 Energy Efficient	 Small Footprint	 Natural Refrigerants	 Premium Controllers	 Variable-Speed Efficiency
Efficient system settings and control	Better Ecodesign ranking	Advantages in stock management and cooler design	R290 green refrigerant	High level controls and settings	Optimal energy consumption and performances

## 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 Ecodesign requirements and all related safety regulations
- Intelligent electronics-controlled compressor supports all customers' needs (simple drop-in, frequency control and serial control) with automatic input detection and easy customization via Tool4Cool®
- The new Multipurpose controller offers enhanced robustness and safety, featuring two additional relay outputs for case control and two-speed defrost control
- Learn more about the SLVE18CN <https://lmy.de/Glyup>



Try our **PRODUCT SELECTOR**

[Direct Link](#)

### ABOUT SECOP

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