

APPLICATION STUDY: TO A NEW LEVEL

SECOP

Date: January 2026

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 (China Energy Rating GB26920.2 2015)	Background
Dimensions: 2050 mm x 830 mm x 1630 mm	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.
Net Volume: 1251l	

Starting Configuration
Compressor: Fixed-speed drive hermetic compressor
Refrigerant: R290 Displacement: 27.8 cc.

Height: 246 mm Weight: 17.4 kg
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Requirements

- Upgrade the cabinet to an optimized energy consumption level so that it meets "China Energy Level" requirements
- 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
Efficiency

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
(in accordance with China Energy Rating GB26920.2 2015)

-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

■	■ Effective Solutions	■	■ Energy Efficient	■	■ Small Footprint	■	■ Natural Refrigerants	■	■ Premium Controllers	■	■ Variable-Speed Efficiency
Efficient system settings and control	Better "China Energy Level"	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 "China Energy Level" requirements
- 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



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ABOUT SECOP

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