

SECCP

2015

**XV COMPRESSOR FOR
R600A – A NEW STANDARD
FOR COOL SAVINGS**

– CASE STUDY

published by



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XV Compressor for R600a – A new standard for cool savings

INTRODUCTION

Danish Technological Institute (DTI) has, together with EUFP and producer Vestfrost Solutions, made comprehensive energy tests of commercial wine coolers. Results show that the variable speed Secop XV5.0KX compressor for R600a ensures a 47% overall energy savings compared to wine coolers with fixed speed compressors.

ABOUT THE SYSTEM

Secop's XV Compressor – a new standard for cool savings

Design and usability are important matters in the light commercial market, but above all these ranks cost-efficiency. Refrigerators, freezers and coolers are always in use, which is why improved energy efficiency along with increasing environmental standards is so essential to the business.

Together with DTI and EUDP – a programme that furthers new energy-friendly technologies – the Danish producer Vestfrost Solutions made numerous tests, both in laboratories and 'real life' in order to ensure that their new wine coolers also would set a new standard for energy savings.

Wine cooler + XV compressor with variable speed = Up to 47% energy savings

The criteria included a compressor that could combine high performance and low energy consumption with temperature precision and low noise. Tests demonstrated that the Secop XV5.0KX was a very good match.

In contrast to traditional fixed compressors, the XV5.0KX is able to adjust the supplied cooling capacity of the compressor to the required cooling capacity of the cabinet by operating at different speeds. This rules out the constant stop-and-go-motion and leads to a more balanced cooling temperature and reduces energy consumption considerably. Results showed that the Secop XV5.0KX compressor managed the same high performance as the fixed compressors but used 36% less energy.



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ABOUT THE COMPANY

With more than 50 years of experience in compressor technology and highly committed employees, Secop's focus is to develop and apply their advanced compressor technologies to achieve a standard-setting performance for leading products and businesses around the world.

Secop are already well-established within the manufacturing and sale of compressors in China and are determined to challenge their Chinese competitors in this increasingly important market.

Best in class + Best in fit

The XV compressor made the Vestfrost Solutions wine cooler take a best-in-class-leap from energy efficiency class B to energy efficiency class A+ and simultaneously provided improvements on noise levels – an instrumental feature when choosing wine coolers.

Furthermore, the compressor was able to demonstrate great flexibility. Due to its extremely small size and weight, it only took minor adjustments to make the Secop compressor fit within the pre-existing cabinet. With the XV5.0KX, it is possible to reduce energy consumption without the need for big design changes to the appliance.

The Secop XV Compressor – Small is the new big

Secop's XV compressor is showing that you don't need to be big to be powerful, with the following specifications ensuring this compressor has all the capabilities of a larger compressor, but with the added value of being compact:

- » Used in applications with evaporating temperatures of -35°C to 0°C
- » Height of 100mm and weight of 4.8kg
- » Low noise of 32 dB(A)
- » Broad dynamic range (1:4)
- » Up to 40% efficiency gain
- » Up to 20l extra storage volume in cooling cabinets
- » Adaptable capacity

A big part of the XV compressors secret is its unique external rotor motor that enables the use of much larger magnets, ensuring a superior compressor efficiency. Another big part of the secret is the know-how that goes into the assembly process. The key is the modular design of the XV compressor, combining the advantages of standardisation with those of customisation. On top of that, the compressor is uniquely assembled without any screws whatsoever. This new kind of construction also allows for a reduction in the use of the traditional and expensive copper material.

SUMMARY

A new cool for wine coolers

Vestfrost Solutions has been pleased with the outcome and so have the different end-users who have already had the opportunity to try out the 'upgraded' wine coolers. They mention the new cooling qualities as something to look out for and, naturally, the prospect of saving both energy and total costs.

“*The XV5.0KX is the perfect choice for a wine refrigerator, because it is able to work both in low back pressure and medium back pressure ranges. It is very efficient thanks to its wide dynamic range. Its cooling capacity is adjustable from low to high demand with little vibration and noise.*”

– Jürgen Gläser - Senior Application Engineer and System Specialist at Secop GmbH

The logo for SECOP, featuring the word "SECOP" in a bold, white, sans-serif font centered within a black rectangular box. This box is itself centered within a larger white rounded rectangle.



Get in touch with shecco's Market Development team to learn more about the market for natural refrigerants in China or find out how we can help you in gathering market intelligence and proactively building your business with our tailored market development services, to get your technology faster to market.

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This case study was published as part of '**GUIDE to Natural Refrigerants in China - State of the Industry 2015**', which is available for download at <http://publication.shecco.com/publications/view/68>

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