

# ↓ Energy-Efficient Drives for Scroll Compressors

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**HVAC**  
CONTROLS & DRIVES

**OJ DC**

Designed for compressors in AHUs and chillers.  
Built on proven OJ Drives® technology.

  
**OJ ELECTRONICS**  
BY BITZER GROUP

# OJ Drives®

Designed for compressors in AHUs and chillers. Built on proven OJ Drives® technology.



## Ignition protected

To ensure safety and future-proof your systems, all OJ compressor drives are certified ignition protected in accordance with applicable UL and IEC standards.

# Dedicated Compressor Drives in Compact Housings

With more than 25 years of experience in developing drives for ventilation systems, designing a dedicated drive for scroll compressors was the most natural thing for us to do.

Through partnerships with customers, we have used our engineering skills, passion, and know-how to create a solution ideal for chillers and AHUs.

## Robust and built to last

OJ compressor drives is built on proven OJ technology used in the existing DV series. The drives come with two compact housing sizes and have a power range span from 4 kW to 15 kW, depending on your needs and system requirements. Durability has been an essential keyword throughout the R&D phase, rendering OJ compressor drives ideal for central and decentralised locations where environments get rough.

## Recognising the OJ Drives® signature

The tried and tested technology in the OJ compressor drive series will grant you the same familiar experience you know from all other OJ Drives®.

- ✓ Pre-programmed and configured at delivery
- ✓ Motor and drive can be mounted separately
- ✓ Dedicated to the application
- ✓ Designed and made in Denmark
- ✓ Differentiated EC solution

## Designed to fit your application

As with all solutions from OJ Electronics, simplicity and efficiency are absolute keywords. The focus revolves around delivering the functions and features you need to develop and offering the best possible system to your customers.

## Covers a wide power range

The compressor drive programme aims to cover the common scroll compressor setups in modern AHUs and chillers. The programme offers drives with power ranges from 4 kW to 15 kW and with an all-condition performance. The power range is UL listed.

## Enjoy dedicated compressor functions

With a dedicated drive for scroll compressors in your chiller or AHU system, you can rest assured that you will have optimal lubrication control and flawless performance regardless of variable loads or capacity. The OJ compressor drive is matched with your compressor specifications.

## Integrated Safety: Safe Torque Off (STO)

The OJ compressor drive series includes Safe Torque Off (STO) to prevent unintended motor operation by disabling the drive output without requiring external contactors. Compliance with IEC 61800-5-2 and ISO 13849-1, STO enhances safety by ensuring a controlled shutdown of the compressor. This simplifies system design, reduces downtime, and ensures reliable operation in HVAC, AHUs, and chiller applications.

## Comes with integrated EMC filter

Like the OJ DV series, the OJ compressor drives comes with a fully integrated EMC filter. This means that the drives complies with EN 61800-3 (C1 and C2) and meets all current norms and required standards regarding emissions and immunity in industrial and residential areas.

## Setup is easy as pie

All drives are delivered with Modbus RTU, BACnet MS/TP and 0-10 V control. The drives will automatically detect exactly which protocol is used, enabling you to deliver a fully Plug and Play solution.

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# Designed for AHUs and Chillers

No two heating solutions or cooling systems are alike. With a specific focus on AHUs and chiller systems, the OJ compressor drive series has been designed to be configured for a variety of scroll compressors.

It means that the drive unit is easy for us to match with your compressor, ensuring optimal performance throughout the compressor's operational life.



Chiller



Scroll compressor



Air Handling Unit (AHU)

# Scroll Compressors with Permanent Magnet Motors

OJ Drives® for scroll compressors are ideal for permanent magnet brushless motors. To get the optimal performance out of your compressor, oil/lubricant control is vital – especially during start-up and partial-load operation.

In energy-efficient systems operating in buildings where outside temperatures fluctuate during the course of a day or week, this situation becomes real. With the OJ compressor drives, your solutions are refined to accommodate precisely that.

## Assemble and Test Your System at the Factory

We have made it quite simple to mount the drive unit with your scroll compressor at the factory.

This way, you can test it all before installing at your customer, ensuring a smooth power-up and flawless performance from the outset.

### Rely on experience with EC/PM motors

We have applied our knowledge and extensive experience with PM motors (permanent magnets) to develop a dedicated solution that, despite the advanced and sensible technology, is very easy for you to control.

The drives are built on the technologies behind EC (electronic commutation) and FC (frequency converter), aligning it with the known DV series. This means it has also undergone the same thorough testing. We are used to configuring our drives, so you can rest assured your drive will be precisely matched with your unique scroll compressor setup.

### Built for hard weather and rough environments

Creating drives that can be placed in decentralised system designs grants end users several advantages.

However, installing your drive near the compressor occasionally means operating in rather rough environments. Using OJ Drives® for compressors, most volatile environments have been considered. The drives have been thoroughly tested for continuous and unaffected performance in temperatures between -40°C and +50°C (104°F to 122°F), and meeting an IP55/IP65 (NEMA 4X) rating is more than sufficient in most situations.

# Product Range

The OJ compressor drives range covers several options of variation in order to cover different system setups. Physically, two compact standard housings make up the frame for drives, covering a power range from 4 kW to 15 kW. All OJ Drives® are cRUus approved and are capable of continuous operation in temperatures between -40°C to 50°C (104°F to 122°F).



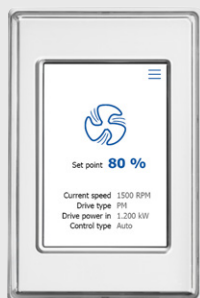
## 4.0 to 7.5 kW

- H4 housing
- Three phase supply connection
- Dimensions: 220 x 294 x 107 mm
- 600V variant available



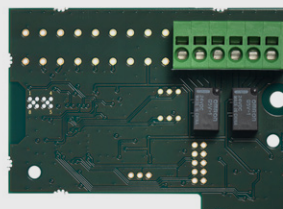
## 11.0 to 15.0 kW

- H5 housing
- Three phase supply connection
- Dimensions: 244 x 399 x 144 mm



## OJ-DV-HMI-35T

User-friendly user interface customised for operating the OJ-DC.



## OJ-DV Option modules

Add-on modules for mounting inside the OJ-DC range.

- add A/D inputs and outputs
- add potential-free operating and alarm signals



## OJ-DC PC Tool

Engineering tool for controlling, monitoring, setting up and configuring OJ-DC products.





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# Product Programme

The entire programme has been developed with simplicity and efficiency in mind.

## Gain a competitive edge with an agile partner

At OJ Electronics® we develop and build our business around strong partnerships and cross-functional collaborations. This has been the OJ way for the past 50 years, and in our passion for software know-how and in-depth application knowledge you will discover the strong pull of innovative power you get from our skilled and dedicated employees.

The entire product programme has been developed with simplicity and efficiency in mind. Though our products do complex and highly specialised tasks in modern HVAC systems, we have made it easy for you to implement and use our drives solutions.



# About OJ Electronics

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Founded in 1964 and headquartered in Sønderborg, Denmark, OJ Electronics produces electronic controls for underfloor heating and HVAC controls and drives. Our products are available through partners and distributors worldwide, and we have subsidiaries and sales offices in key markets, including the United States and Poland. Everywhere, we are known for our innovative approach, insistence on product quality, and deep application knowledge – all of which helps customers differentiate themselves in the market.

In June 2023, OJ Electronics was acquired by BITZER Electronics, a BITZER Group company also headquartered in Sønderborg. This makes OJ Electronics part of the BITZER Group family, which is represented at 75 locations in over 40 countries and employs some 4000 people worldwide.



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