

↓ 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.





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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.

We call it the 'DC series'.

Robust and built to last

OJ DC 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 DC ideal for central and decentralised locations where environments get rough.

Recognising the OJ Drives® signature

The tried and tested technology in the DC 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

Features to support a broad range of solutions – designed to meet your requirements

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.

Designed to fit your application

Both the DV and DC series result from combining the technologies behind EC (electronic commutation) and FC (frequency converter) with compact housings to fit in your exact installation.

Covers a wide power range

The OJ DC 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 DC drive is matched with your compressor specifications.

Comes with integrated EMC filter

Like the OJ DV series, the DC series comes with a fully integrated EMC filter. This means that DC 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 DC 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 & 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 DC drives series has been designed to be configured for a variety of scroll compressors.

It means that the DC 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 DC series, your solutions are refined to accommodate precisely that.



Assemble and Test Your System at the Factory

We have made it quite simple to mount your DC 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.

DC is 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 DC 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. OJ's DC series has 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 DC product 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



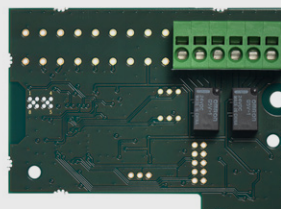
11.0 to 15.0 kW

- 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-DC 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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DC 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 DC 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.

The OJ Way

The OJ Way is the unique tie-in of product leadership, global supply chain, perfect platforms for customisation, industry best quality processes, and a diamond partnership in one coherent package.

All processes are focused on the same general goal – to improve the climate – always – through connected electronics solutions.

In this way, we help you differentiate in the market.



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