

DRIVE SOLUTIONS CENTRE



Introduction
and overview



The Drive Solutions Centre
– you're in safe hands



Introducing the Drive Solutions Centre

A new collaboration that can help you deliver your complete drive solution.

The Drive Solutions Centre is a regional centre of excellence which combines global industry leader Mitsubishi Electric and a network of Drive Solutions Centre partners who have been specifically chosen based on their knowledge, skills and expertise.

By bringing together our global market leading technology and regional knowledge and speed of response, you have the peace of mind that whatever your drive solution requirement, we can deliver... you're in safe hands.

- ▶ Standard and customised engineering solutions
- ▶ Technical expertise is on hand
- ▶ Repair services
- ▶ Installation and commissioning

DRIVE SOLUTIONS CENTRE

A working collaboration between Mitsubishi Electric and selected partner companies across the UK

With years of experience working on both custom and standard engineering solutions, the Drive Solutions Centre team has the proven track record.

STANDARD ENGINEERED SOLUTIONS

If you are looking for low cost and quick delivery of standard engineered solutions, we can help. Our proven track record and practical industry experience means we meet the needs of a wide range of different applications within the industrial and commercial sectors.

CUSTOM ENGINEERED SOLUTIONS

Custom engineered solutions provide the performance and reliability you'd expect from Mitsubishi Electric products in packages tailored to your exact specifications.

Drive Solutions Centre partners design and construct fully customised, engineered solutions to meet the most demanding specifications.

A custom-packaged solution could range from a single enclosure to a complete shipping container full of pre-commissioned control equipment, and can be made to UK or global requirements.

Every package is supplied with full documentation and is backed by a comprehensive warranty



A customised engineering solution

Technical support and advice throughout the engineering process.



- ▶ Help with interpreting specifications
- ▶ Global standards alliance – CE, UL, cUL, CSA
- ▶ Full documentation, including autocad drawings
- ▶ Designs archived for future reference or repeat orders
- ▶ Field installation and start-up services
- ▶ Solutions built to your exact specification
- ▶ Integrated drive panels from 0.1kW to 1.5Mw
- ▶ Support from factory-trained engineers
- ▶ Competitively priced
- ▶ Innovative designs
- ▶ Complete solutions covered by a warranty to suit your needs

An experienced, products and solutions provider you can trust

The Drive Solutions Centre supports multiple industries, including aggregates, automotive, infrastructure and water.

Our combined expertise and deep understanding of your processes and systems means we can deliver the right solution for requirements.

Whether you need an 'off-the-shelf' or a specific form 2 or 4-form panel, we can help





Aggregates and Construction Materials

A deep understanding of the construction materials industry.

With over 35 years' experience supporting heavy duty industries in aggregates and construction materials, we understand how challenging your industry can be. Our experience includes:

- ▶ **Automated processes in cement and building products**
 - ▶ **Control of crushing, conveying and automated distribution in aggregates**
 - ▶ **Control of asphalt plant and other package plant**
 - ▶ **Providing harmonic mitigation solutions and compliance**
- ▶ **Quality:** Enhancement of product quality and cost effective production through better supervision and control
 - ▶ **Sustainability:** Reducing your carbon footprint whilst maintaining your key assets and energy saving technologies
 - ▶ **Safety:** Using trained engineers and installers to help you meet demanding regulatory standards set by the industry
 - ▶ **Keeping your production and assets running:** Loss of production and wasted product are cut with our integral preventative maintenance solutions

| INDUSTRIES



Automotive

Drive solutions from press to final assembly.

We understand your industry has its own specific challenges.

The need for shorter 'design-to-production' lifecycles and flexibility, along with an increasing requirement to share development costs between OEM manufacturers such as yourselves, means you need a solution that meets these challenges head on.

The Drive Solutions Centre can help you manage these requirements with a SMART factory solution which includes intelligent and efficient connectivity. These include:

- ▶ **Managing the production of many different car models**
- ▶ **Continuously needing to improve and optimise production speed and quality**
- ▶ **Ensuring workers are kept safe**
- ▶ **Embracing environmental initiatives**
- ▶ **Tracking and archiving production quality stage by stage**

With our extensive range of drives solutions we can help you select the right solution for your needs:

- ▶ **Press & Weld**
- ▶ **Body-in-White**
- ▶ **Paint**
- ▶ **Powertrain**
- ▶ **Final Assembly**

The Drive Solutions Centre provides the peace of mind you need to keep your production line moving

Food & Beverage

Keeping your production line moving.

We understand how important reliability, production uptime and long term sustainability are to you. If you need to quickly configure and install automation solutions and maintain them over a significant period of time, we can help.

With our expertise, combined with Mitsubishi Electric's Drives, HMIs and PLCs, the Drive Solutions Centre will help keep disruption to your site production to a minimum.

Delivering drive solutions every day





The Drive Solutions Centre provides the peace of mind you need to keep your production line moving.

- ▶ Our systems have been designed to provide simple migration of code or parameters using our latest application tools
- ▶ The installation of replacement units can often use existing field cabling enabling swift re-commissioning
- ▶ Our team of drive specialists and automation experts understand your requirements as they have worked extensively within the food & beverage industry

Infrastructure

Protecting communities through maintaining and improving our physical environment.

With over 40 years' experience delivering solutions into the UK's infrastructure network, the Drive Solutions Centre has the proven track record your business needs.

- ▶ **Environmental support solutions:** Flood defence systems are helping to protect communities and improve the operational running of the UK's canals and rivers. This work is helping to preserve our canals and rivers for future generations to come. Our solutions have helped to reduce energy usage, carbon emissions and provide waste recycling and reduction schemes
- ▶ **Reducing waste and carbon emissions:** We are working to improve the environment by reducing energy usage and carbon emissions and deliver 'energy from waste' solutions. These solutions help to improve the energy efficiencies of larger buildings including hospitals and public buildings, amongst others
- ▶ **Ventilation solutions:** Ventilation and air management within a tunnel environment is a high priority so we have developed a specific drive control solution which provides pressure management to manage the flow of air which means harmful fumes can be diverted away from public areas

Successful projects include a tunnel ventilation solution for the Mersey Tunnel in Liverpool and the HSI between London St Pancras and the Channel Tunnel.

Materials Handling

It's not just about moving products from A to B.

Whether it's a harsh environment, complex application or time critical operation, we understand materials handling is an essential but challenging requirement within industrial automation.

Add to that the large and diverse applications, you need a trusted provider who has the broad range of equipment and expertise to tailor the right solution for your needs.

The Drive Solutions Centre partners understand availability and productivity are important to you and have worked across multiple industries including:

- ▶ Heavy industry – mining, quarrying and aggregates
- ▶ Conveying
- ▶ Cranes and hoists
- ▶ Reel to reel
- ▶ Baggage handling
- ▶ Automated warehousing
- ▶ Manufacturing



With the Drive Solutions Centre
you have the peace of mind that
we understand your requirements



| INDUSTRIES



Water

A deep understanding of the water industry.

We understand the many challenges you face to effectively process and treat waste water and to collect, treat and supply fresh water:

- ▶ Water is seen as an 'always available' resource which impacts investment and operations
- ▶ Infrastructure upgrades and maintenance must happen in a specified five yearly period
- ▶ Reliability and longevity are key factors
- ▶ Processes must operate within strict EU & UK regulatory guidelines to maintain the safety of supply and protect the environment

Our experienced team at the Drive Solutions Centre will work with you to address these challenges and help you reduce your operational costs through the reduction of equipment failure.

Our range of systems have the flexibility and dependability to meet the demands in the water industry which will ultimately help you reduce costly downtime.

Our proven track record.

Our experience includes fresh and waste water treatment plants and desalination and irrigation plants and includes:

- ▶ **Water treatment:** Raw water extraction, inter-stage pumping, high lift pumps, booster pumps and chemical dosing
- ▶ **Waste water treatment:** Sewerage pumping, blower systems, centrifuges and chemical dosing
- ▶ **Solutions for harmonic mitigation and compliance**

Our proven track record means you have the peace of mind that we understand your requirements.

Mitsubishi Electric's class-leading range of drives

FR-A800 Advanced Variable Speed Drive. With its advanced performance and improved flexibility, this drive can support a wide range of applications, from conveyance and chemical machines, to line control applications such as winding and printing machines.

- ▶ Real sensorless vector (RSV) control achieves 200% torque at speeds as low as 0.3Hz
- ▶ Built-in PLC function allows users to create customised applications
- ▶ Positioning control as standard allows simple moves from position to position
- ▶ Sensorless torque control can be utilised for wind/unwind applications





Optimised to deliver maximum energy savings, the **FR-F800** is a pump and fan control that is often an engineer's first choice.

Equally at home in an industrial environment, or as part of an integrated HVAC system, it can be used as a cost-effective drive for controlling other types of lighter duty constant torque loads.

Built to optimise 3-phase motor control, it saves energy for virtually all general purpose applications, especially fan and pump with its unique AOEC algorithm. This provides intelligent energy saving, whilst allowing high levels of torque when needed.

It has USB slots which allow easy configuration with the FR-Configuration software, or via the standard DU08 keypad and supports all open communications protocols.

With its ability to add a plethora of option cards this drive is often first choice.

PRODUCTS

The **FR-A741** is a high performance drive that has a trick up its sleeve. In applications where regenerated energy is available, this drive can convert energy back to useful energy which can be used on the system by other consuming devices.

- ▶ Ideal for dynamic applications where traditionally braking resistors would be needed
- ▶ Lower overall system cost
- ▶ Saves energy instead of wasting as heat

Delivering outstanding performance across a wide range of demanding applications the **FR-E800SC** offers motor performance usually associated with high power sensorless vector Variable Speed Drive.

- ▶ Advance magnetic flux vector control
- ▶ Built in brake chopper across all sizes
- ▶ USB communications
- ▶ Modbus RTU
- ▶ Supports all open networks
- ▶ 200% overload

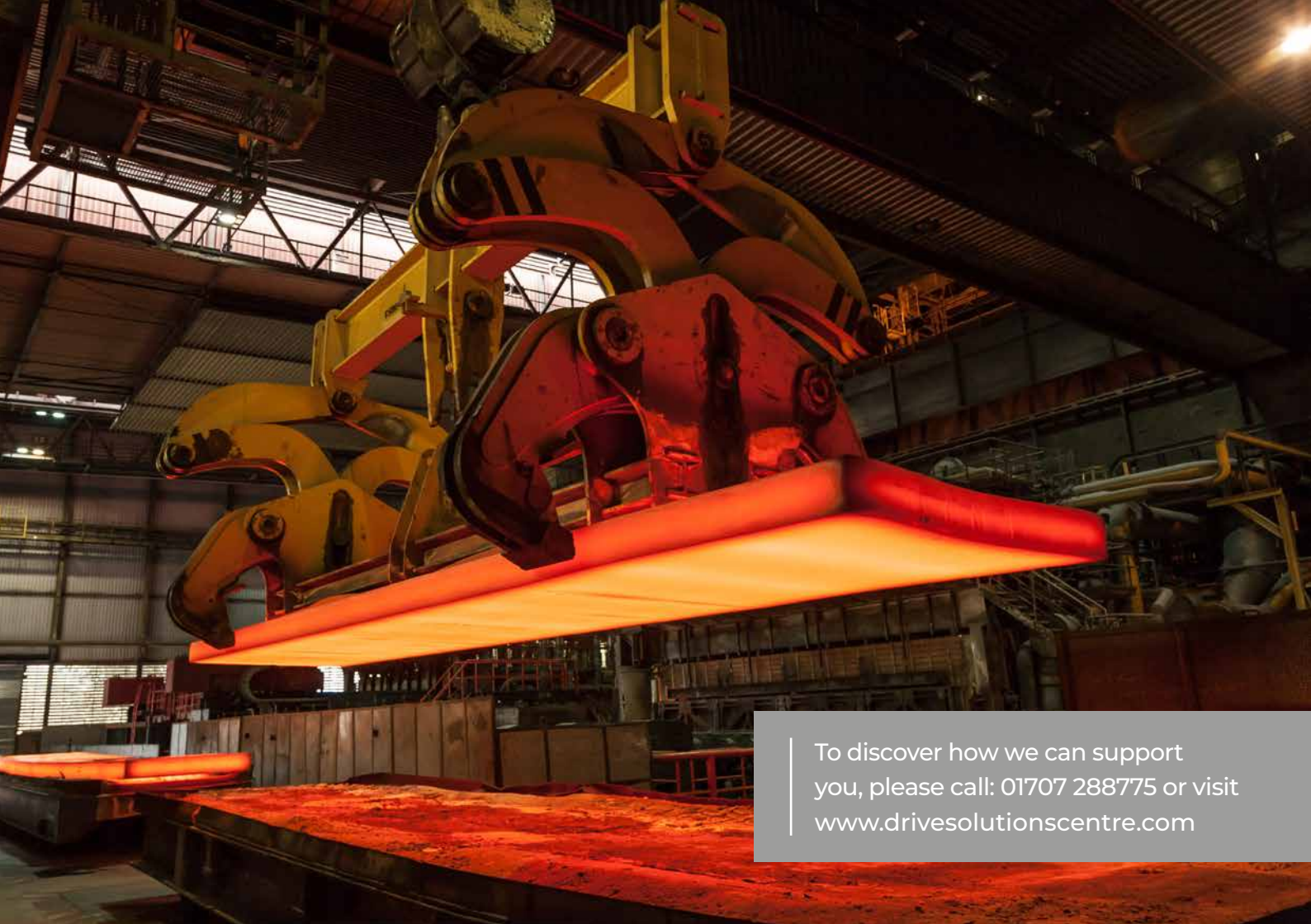


The **FR-F846** offers the same dynamic performance as the FR-F800 on which it is based and is designed to be installed as a standalone drive in harsh environments.

- ▶ High IP rated drive for ease of mounting
- ▶ Ideal for retrofit
- ▶ Sizes up to 160kW
- ▶ Three year warranty as standard
- ▶ Control terminals can be used over a network as remote I/O

Suitable for a wide variety of general purpose motor speed control applications, the **FR-D700** has earned an enviable reputation for durability and dependability in adverse environments. All of which makes it Mitsubishi Electric's leading cost effective drive solution.

- ▶ Digital setting dial with integrated display making configuration fast and easy
- ▶ One of the World's most popular drives
- ▶ Safe stop function
- ▶ Can be used in many different applications



To discover how we can support
you, please call: 01707 288775 or visit
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