



POWER



DRIVE SOLUTIONS
EMPOWERED BY EMOTRON

emotron

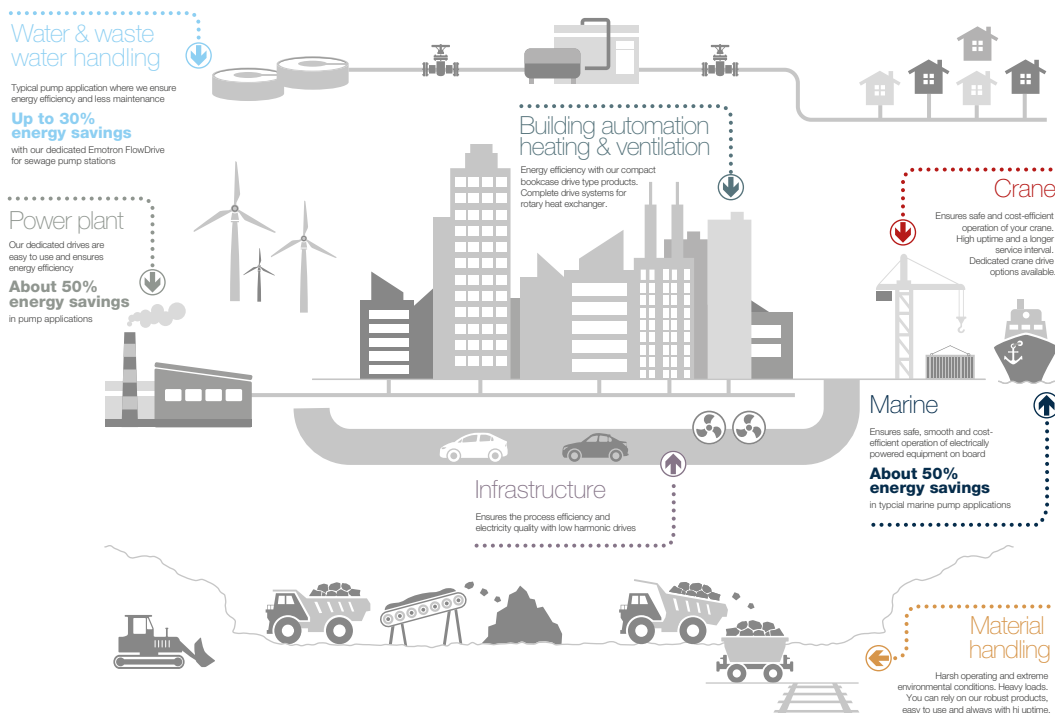
DEDICATED DRIVE



| A CG Product

We put all our **energy** into **saving** yours

CG Drives & Automation has been developing, manufacturing and delivering efficient and reliable motor control equipment for more than 35 years. We offer energy-efficient solutions based on our dedicated AC drives. This ensures safe and cost-effective operation of demanding industrial applications. We provide smart solutions to users, operators, system integrators and OEMs around the world, wherever there are demanding applications. We create robust, reliable and flexible drive solutions – resulting in lower operating costs and a longer service life.



Our project team

We have been working with the energy sector for many years. Our project team delivers turnkey solutions and offers start-up and service commitments for the whole lifespan of the product. We use our personal commitment to make our solutions work according to your requirements. Saving energy is not just about your electricity bill – we make sure that you can put your own energy into your core business.

Simplicity and reliability

We use our know-how and experience to create robust and reliable, yet easy-to-handle drive solutions – resulting in lower operating costs and a longer service life.

Our experience is based on decades of product development and thousands of customer installations – as well as the very latest advances in control technology. Our modular design offers the possibility of redundancy.

Swedish supplier

At our production plant in Helsingborg, Sweden we manufacture, assemble and test products with short lead times, and this even applies to customised solutions. We have a global supply chain for our components, and we use efficient and flexible ISO 9001 certified production methods. We have ESA14 certified personnel.

Service & support

Quick and reliable service is crucial for keeping your processes up and running. Our local service and support department is available 24 hours a day.



Our technicians offer qualified and quick workshop repairs of your products. For equipment found to be impossible or inappropriate to repair, we can in most cases offer replacement products.

When we carry out on-site servicing for you, commissioning, maintenance, fault remedying and repairs can be included. Service contracts can be drawn up for critical processes requiring guaranteed availability.

Quick delivery of spare parts or replacement equipment helps to reduce costly downtime. We keep units available throughout the lifespan of the products, and as long as technically and economically viable.



Our project team consists of Mattias Johansson, Roger Pålsson, Mikael Mårtensson, Pär Ölund, Anders Robertsson and Irene Josefsson.

Powerful drive systems for power generation

Our robust AC drives offer efficient and reliable operation of your pumps, fans and cranes. That means reduced energy, maintenance and downtime costs. The range can be used for motor powers of up to 3,000 kW at 690 V mains supply.

Controlled power-ups and stops reduce wear

Low start current reduces hydraulic and mechanical stress on pipes and gaskets. Linear stops eliminate the risk of water hammer in your pumps, without the need for costly motor-controlled valves to reduce pressure spikes. Starting a fan which is rotating in the wrong direction is handled safely with a spin power-up function which ensures the correct direction and function before full speed operation is reached.

High dynamics for demanding applications

Emotron AC drives also offer high accuracy in dynamic applications, for example cranes used in biofuel-fired power plants. Efficient and precise control minimises cycle times and mechanical wear. Direct torque control handles abrupt load changes and overcomes initial peak loads. Electronic grab control coordinates the drive systems and allows different movements to be controlled independently. The operator can close or open the grab while it is being hoisted and lowered, reducing cycle times and wear to the ropes.



Cost-efficient and trouble-free operation with AFE

Emotron Active Front End AC drives are available in two versions: low harmonic AC drives and regenerative AC drives. Both are based on standard Emotron AC drives, offering the same reliability, easy handling and advanced functionality. The AC drives are supplied as complete solutions.

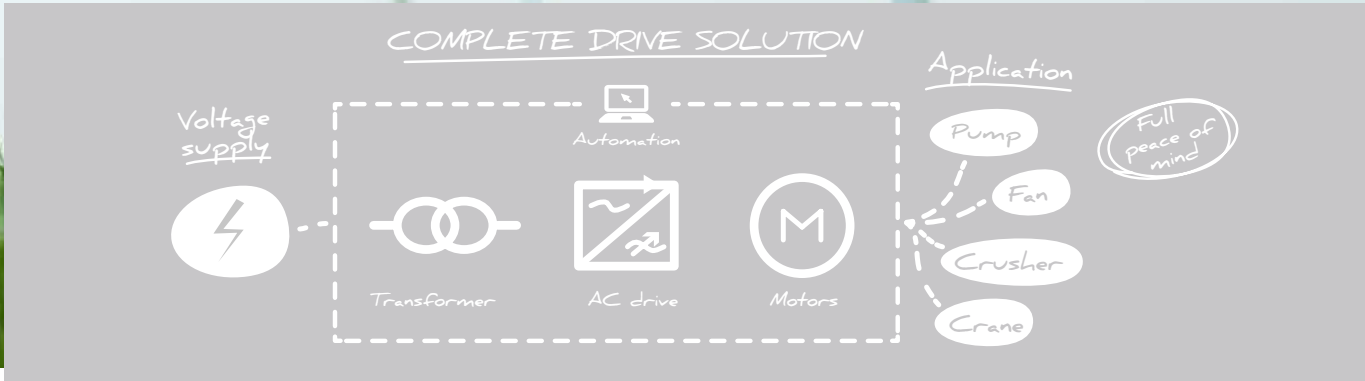
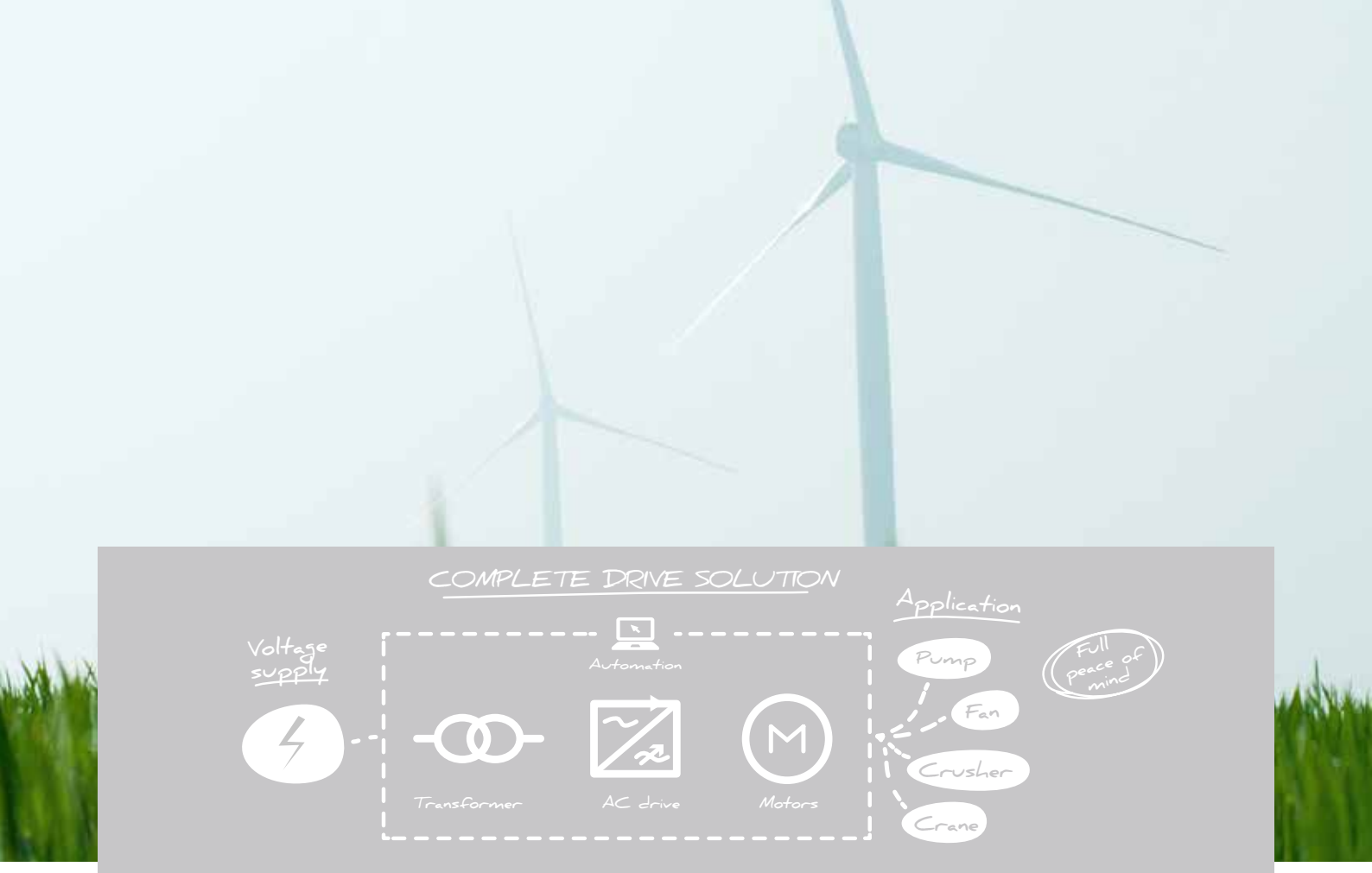
Emotron AC drives with Active Front End technology produce extremely low harmonic distortion. They provide a genuine unity power factor (1.0) and offer the possibility of reactive power compensation. The AC drives are not sensitive to voltage drops or harmonics from other equipment which might otherwise cause them to trip or break down. Voltage boosting assures full motor power in the case of mains voltage fluctuations.

Modular design

Emotron AC drives from 160 to 3,000 kW are composed of parallel connected 3-phase power modules. This modular design offers the possibility of redundancy. Operation can continue by temporarily running with reduced power capacity while one of the modules is out of operation. For very critical processes you can even equip the system with an extra power module to ensure full capacity at all times.

Flexible cable connections

The Emotron FDU and VFX offer flexible connection to a large number of cables and a wide range of cable types. Different cable dimensions or double cables are easily fitted. The connections are easily accessible, as the baseplate of the housing can be removed.



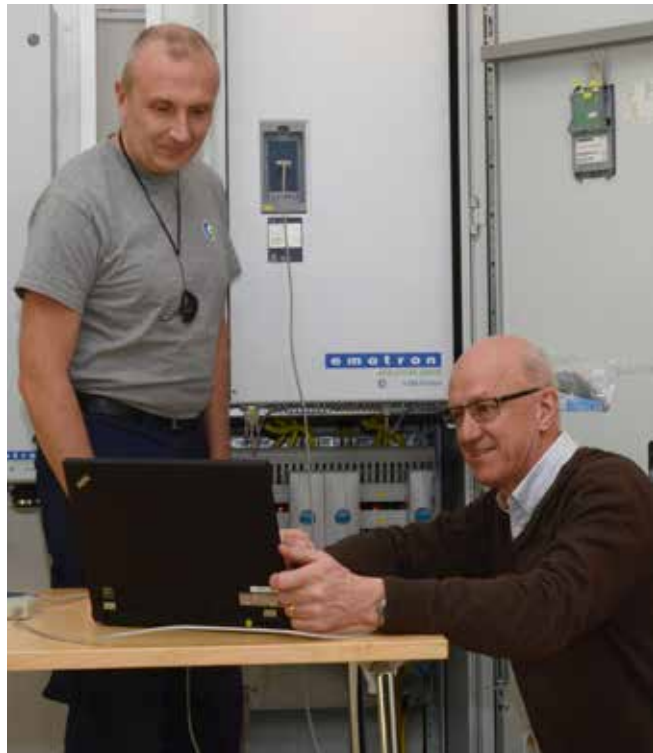
Complete drive solution

Choosing a complete drive solution optimised for your application will give the best possible performance for your industrial process and peace of mind for you. We provide a complete solution where other companies need to add external equipment. This makes installation and commissioning not only simple but also cost-effective.

We can deliver the AC drive, motor and cabinet in a single integrated solution with advanced functionality. Everything is optimised for your application, in cooperation with your team. Our modular design philosophy enables us to deliver complete solutions based on standard products – regardless of the area of application.

Our project team offers:

- ✓ Delivery of complete systems based on our Emotron products
- ✓ Project management – we appoint a project manager who is your contact throughout the duration of the project
- ✓ Design
- ✓ Installation and commissioning
- ✓ Documentation
- ✓ Training, maintenance and service



Project flow



Our product portfolio

AC DRIVES



EMOTRON FDU 2.0

Full control and optimised operation

Emotron FDU AC drives help you to save energy and draw maximum efficiency from your process. The AC drives have been developed in line with the most up-to-date concepts. They are cost-effective, and a perfect choice for customised requirements.

Rated power	0.55-3,000 kW
Supply voltage	230-690 V, 3-ph
Rated current	2.5-3,000 A
Protection class	IP54
Approvals	CE, UL, DNV, GOST R

EMOTRON VXF 2.0

Full control with precision

The Emotron VFX 2.0 AC drive optimises processes and prevents damage and downtime. The combination of direct torque control, accurate speed control and efficient vector braking makes it the ideal solution for all dynamic applications such as cranes, crushers, mills, mixers and centrifuges.

Rated power	0.55-3,000 kW
Supply voltage	230-690 V, 3-ph
Rated current	2.5-3,000 A
Protection class	IP20, IP21, IP54
Approvals	CE, UL, DNV, GOST R (DNV pending for IP20/21)

EMOTRON AFE

Cost-effective and trouble-free operation

Emotron Active Frontend (AFE) AC drives are available in two versions: low harmonic AC drives and regenerative AC drives. Both are based on standard Emotron AC drives, offering the same reliability, easy handling and advanced functionality. The AC drives are delivered as complete solutions in IP54 classified cabinets.

Rated power	55-1,100 kW
Supply voltage	380-690 V



EMOTRON FLOWDRIVE

AC drive for waste water treatment

Emotron FlowDrive is designed for use in the most common pumping scenarios (1-2 pumps of any brand) in the waste water management industry. Emotron Flowdrive helps you to save energy and draw maximum efficiency from your process.

Rated power	0.75-160 kW @ 400 VAC
Supply voltage	230-690 VAC, 3-ph
Rated current	2.5-295 A
Protection class	IP20, IP21, IP54
Approvals	CE, EAC (cULus pending)

Coated boards and EMC filter category C3 included as standard.



EMOTRON VS10 AND VS30

Optimised in size and price for small applications

Although small in size, our new Emotron VS10 and VS30 AC drives are equipped with a number of advanced features. The functions can be easily adapted to your specific application requirements.

The Emotron VS10 and VS30 offer reliable and cost-effective operation of your pumps, fans and compressors, as well as applications with constant torque such as conveyors.

Rated power	VS10: 0.25-2.2 kW 1-phase VS30: 0.25-7.5 kW 3-phase
Supply voltage	230 V 1-ph, 230-480 V 3-ph
Protection class	IP20
Approvals	CE, cULus



EMOTRON CDU / CDX 2.0

Compact and intelligent

The integrated speed control adds considerable value to your pump, enabling you to increase your turnover. Optimise your pump with a plug-and-play solution with built-in intelligence.

You will benefit from the simplified installation, the energy savings and the improved reliability – all from a single supplier.

Rated power	3-22 kW
Supply voltage	380-480 VAC / 480-525 VAC, 3-ph
Protection class	IP55
Approvals	Global standards

For further technical information, visit www.emotron.com or see our technical catalogues and datasheets.

SOFTSTARTERS



EMOTRON TSA SOFTSTARTERS

Powers up, stops and protects

Emotron TSA takes your motors to a completely new level. Soft torque starting and intelligent load monitoring, real time clock, programming block and by-pass contactor give low losses, all packaged in an inclusive robust and compact design.

Supply voltages;	200 – 525 VAC, 3-ph, 50/60 Hz 200 – 690 VAC, 3-ph, 50/60 Hz
Rated current	16–1,800 A
Rated power	5.5–1,800 kW
Supply voltage	100–240 V
Ambient temperature	0–55°C (40°C without derating)
Protection class	IP20, NEMA type 1 (up to 800 A) IP00, NEMA open type (1,000–1,800 A)
Approvals	CE (UL, GOST R pending)

EMOTRON MSF 2.0 SOFTSTARTER

More than just soft power-ups

Traditional softstarters handle the most common power-up challenges. But Emotron MSF 2.0 offers a lot more. Optimised power-up and stop sequences and advanced braking technology give increased productivity. Built-in monitoring protects your process from inefficiency, damage and downtime. Simple installation and set-up save both time and money.

Supply voltage	200 – 690 V, 3-ph
Rated current	17–1,650 A
Rated power	7.5 – 1,600 kW
Protection class	IP20, NEMA 1 (up to 960 A) IP00, NEMA 0 (up to 1,650 A)
Approvals	CE, UL, GOST R

SHAFT POWER MONITORS



EMOTRON M20 SHAFT POWER MONITORS

Your protection against overload and damage

Emotron M20 shaft power monitors help you to save time and money. They protect pumps and other equipment against damage and inefficient processes. The early warning system means that you have time to take preventive action. Unique features include measurement of shaft power output and the possibility of using the power monitor as a sensor. The result: reduced maintenance and installation costs, extended equipment lifetime and increased reliability.

SOLUTIONS



DRIVE SOLUTIONS

We offer complete drive solutions that ensure safe and cost-effective operation of demanding industrial applications. We provide smart solutions to users, operators, system integrators and OEMs around the world. Wherever there are demanding applications – for example cranes, water treatment systems, material handling systems and marine applications and offshore systems.

- ✓ Delivery of complete systems based on standard products
- ✓ Drive, cabinet, motor, transformer
- ✓ Design, installation, commissioning, maintenance

REFERENCES



We put all our energy into saving yours

At CG Drives & Automation we use our know-how to create technical solutions that meet your requirements, and our personal commitment to make them work in practice – on your site, with your personnel. Simplicity and reliability are keywords that apply not only to our products, but also to the support and service that our committed professionals provide. This will save you energy in every sense of the word!

CG Drives & Automation, formerly Emotron, has been developing, manufacturing and delivering efficient and reliable motor control equipment for 35 years. Since 2011 we have been part of Crompton Greaves (CG), a leading global player in the management and application of electrical energy. CG provides electrical products, systems and services for power utilities, industries and consumers, and has over 15,000 employees in around 85 countries.

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