

CG Drives & Automation Emotron service offer





Commissioning to get the best from your drives

Discover the functionality of your Emotron product and make sure your equipment is set up to optimize your critical processes. Let an experienced Emotron engineer guide you to make sure your Emotron products perform at best efficiency from the start.





Commissioning service covers:

- 1. Installation check.
- 2. Parameterization of the drive as per application and customer needs.
- 3. Operation of drive as per process needs including load trials.
- 4. Recommendation on regular maintenance and spare parts.
- 5. A service report along with parameter list.

All you need to get started

Putting Emotron drives into operation is generally not very complex and follows easy procedures and parameter settings. This is supported by quick guides and user manuals. These are supplied with our products, but are also downloadable from our website

However, your engineers may not have the daily experience with our products and need additional support from Emotron. Take this chance to make sure you are fully aware of the full functionality of your product from the start with the help of your Emotron service team.

Professional email support

Emotron offers professional email support during regular office working hours, simply email service.int@cgglobal.com or check our website for your local Emotron office.

Site service

Your engineers may not have the daily experience with our products. We offer additional Emotron support and have the ability to visit you regardless of your location. Our site service for all drives and softstarters is charged at:

- Product based commissioning service rates
- Daily rate for standard commissioning (specialized commissioning for areas such as Marine commissioning)

Peace of mind

Whatever be your application, our experienced service team will set up the product to your requirements. But this is only the start of your journey to a more efficient operation. The Emotron service team offers a range of support following installation and commissioning, please read more on https://www.emotron.com/service-and-support/

Pricing

We offer fixed pricing for standard applications based on product size.

For project commissioning and specialised system commissioning, we offer a daily rate.

How to order

Commissioning service can be ordered along with the product ordering or even in a later stage.

Our sales personnel will assist you with your order.



The complete Emotron service offer includes:

- ✓ Remote access
- ✓ Test facilities
- **▼** Training
- ✓ Maintenance
- **✓** Commissioning
- ✓ Extended warranty
- ✓ 24/7 support
- ✓ Repairs
- ✓ Rentals
- Application diagnostics



nergy



Extended warranty for prolonged peace of mind

Your Emotron drive is a durable product that can be useful for many years to come. Avoid the risk of increasing costs of spare parts and repairs in the long run. Let us take care of your drive while you concentrate on your essential business.





Extended warranty covers:

- 1. Normal/standard warranty conditions extended to 3/5 years
- 2. Spare part support for up to 10 years beyond discontinuation of a product line
- 3. Onsite support for all frame sizes in country of sale
- 4. 24/7 access to service department
- 5. Local service engineers
- 6. Original factory parts

Be prepared when it really matters

Time flies but Emotron remains. The standard warranty period on your Emotron product can be extended to cover 3 or 5 years from date of purchase. Not sure what to do right now? Discuss your needs with your Emotron representative and decide on your extended warranty period within 3 months of purchase.

Controlling cost and reducing downtime

The Emotron extended warranty gives you all the benefits of your normal warranty, just for a longer period of time. Trained Emotron service staff will always assist with any issue or question you may have, while you keep full control of your costs and essential operations.

The Emotron extended warranty is available for all Emotron AC drives, soft starters and monitors.

Pricing

The service is subject to frame size and configuration and naturally to your requested warranty extension period. Please request warranty as an option on the product of your choice.

Coverage

The extended warranty prolongs the standard warranty of your Emotron product to 3 or 5 years. The extended warranty covers material and labour costs, even when the defect is as a result of normal wear and tear.

Making a claim is easy

To make your claim, simply contact your Emotron service partner. Your invoice or delivery note stating the article number and registered serial number is sufficient to claim support during your guaranteed period of extension.



The complete Emotron service offer includes:

- ✓ Remote access
- ✓ Test facilities
- **▼** Training
- ✓ Maintenance
- **✓** Commissioning
- ✓ Extended warranty
- ✓ 24/7 support
- ✓ Repairs
- ✓ Rentals
- Application diagnostics





Maintenance for optimal drive functionality

All Emotron drives are made to last. However, to get the most out of your drive and keep it at optimum functionality we strongly recommend our maintenance products.





Maintenance actions

To limit and optimize the different maintenance activities, the following maintenance actions are available:

- 1 Maintenance inspection, including a status report and recommendations
- 2 Cleaning the drive from dust and particles
- 3 Cooling fan(s) replacement
- 4 DC-link capacitors replacement
- 5 Powerboard Low Voltage (SMPS) capacitors

Minimizing downtime and total cost

Without maintenance the chance that a drive will fail will increase over time. This can be caused by wear and aging of components, but also heavy loads and harsh environmental conditions like temperature, moisture, dust and chemicals can make the drive deteriorate over time.

Maintenance intervals

The maintenance intervals for replacing components, due to aging and wear, are defined by taking following conditions into account:

- a. Environment
 - A drive in a clean MCC environment needs less maintenance than a drive which is placed outdoors or in a production environment.
- b. Running hours per year
 - Continuous operation drives (24/7) needs more maintenance than a drive which runs only 8-12 hours a day or less.
- c. Ambient temperature
 - Our drives are made for 40°C ambient temperature (without derating) but a lower ambient temperature has a positive effect on the service life of the drive.

CG Drives & Automation Version 2.1 2021-04

Combining the different maintenance parameters results in the following intervals for the replacement of components affected by aging and/or wear. Table 1 shows the intervals for clean environment, and Table 2 does the same for all other ambient situations.

Table 1

Clean environment				
Max ambient temperature	<30°C		<40°C	
Running hours	<4000h/y	>4000h/y	<4000h/y	>4000h/y
Fan replacement after (years)	10	5	10	5
Capacitor replacement after (years)	20	10	10	5

Table 2

Production environment/Outdoor cabinet				
Max ambient temperature	<30°C		<40°C	
Running hours	<4000h/y	>4000h/y	<4000h/y	>4000h/y
Fan replacement after (years)	8	4	8	5
Capacitor replacement after (years)	16	8	8	5

Our maintenance portfolio

The maintenance products are defined for all frame size/variants in "400V" and "690V", and offer:

- 1) Maintenance inspection with report.
- 2) Maintenance inspection and replacement of all fans.
- 3) Maintenance inspection and replacement of all DC-link capacitors.
- 4) Maintenance inspection and replacement of all fans and all DC-link capacitors.
- 5) SMPS capacitors replacement.

(All subject to drive size)

Based on above considerations and structure we can offer you fixed maintenance prices for any of your Emotron drives.

Either for occasional maintenance jobs or for annual maintenance contracts.

The Emotron Service Team will be happy to inform you or prepare a clear proposal.





Remote access for instant support on site

Working on-site and in need of extra support from the Emotron service team? With our new remote access solution you always have instant support to back you up, regardless of your location.



Direct response reducing downtime and cost

For AC Drives and softstarters we offer our service partners, distributors and endcustomers remote support and "first aid" service. We offer remote access to these products via a reliable and safe communication channel, without the need to be connected to the customer's local Ethernet or other networks on site.



Full connectivity

Devices can be accessed via this gateway by:

- Ethernet
- USB2.0 port
- Serial port
- WiFi (optional via USB)

This gateway also offers internet access via:

- 4G/GPRS
- Ethernet 10/100Mbit
- WiFi (via USB)



Features

- ✓ Global coverage
- ✓ Secure and reliable communication
- ✓ Suitable for use in industrial environments
- **▼ VPN-like access**
- ✓ Battery backup
- ✓ Gateway based on 4G GSM



All-inclusive box

A complete package including:

- ✓ 24VDC supply unit
- ✓ backup battery

and all possible connection types to connect to Emotron devices:

- ✓ USB
- ✓ WAN
- ✓ LAN
- ✓ RS232

Remote access

Remote access is offered in two ways, as a portable service unit or as a fixed unit.

Fixed service unit

- Possibility to connect multiple drives simultaneously (Modbus TCP or RS485)
- ✓ VPN connection by local internet connection or 3G/4G network

Portable service unit

- ✓ Applicable on all FDU/VFX drives
- ✓ Applicable to all TSA soft starters
- Connect to the drives display port
- ✓ VPN connection by 3G/4G network (worldwide)







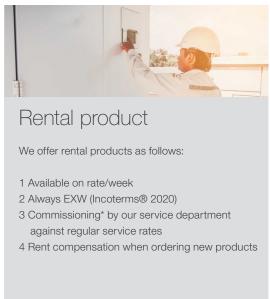
CG Drives & Automation Version 2.2 2021-04-EN



Rental products on standby for quick support

In case of unexpected downtime or unscheduled repair, either for testing purposes or during maintenance, we keep a variety of drives and softstarters on standby for rental and installation at short notice.





How does it work?

Contact our local Emotron service partner/department and request for a temporary drive or soft-starter delivery under rental conditions.

Please present the specifications of the product that needs to be replaced or the details of the application (minimal supply voltage and motor specifications).

- For what period do your need the product?
- Will you install the product yourself or do you want us to install it for you?

We will offer availability and rental fee.

In case you would decide to order a new Emotron drive, after the rental period, we will reduce the price for the new drive by 50% of the accumulated rental costs.

^{*} Commissioning includes checking the mounted and cabled drive/soft-starter on functionality and setting the drive-parameters to the required application.

Why choose us?

- Affordable pricing
- Excellent customer service
- Safe work practices
- Quality workmanship

Applies to drives and soft-starters

Rest assured. In case of an unexpected failure of your Emotron product, we are available to solve the problem quickly, while you keep full control of your costs.

Pricing:

Feel free to request pricing on the rental product of your choice.





The complete Emotron service offer includes:

- ✓ Remote access
- ✓ Test facilities
- ✓ Training
- ✓ Maintenance
- ✓ Commissioning
- Extended warranty
- ✓ 24/7 support
- ✓ Repairs
- ✓ Rentals
- Application diagnostics



Quick and efficient repair in our workshops

In case of a product malfunction we offer quick turnaround workshop repairs to minimize your downtime. In our workshops, we can repair both our current drive series and older machines.





We offer repairs in our workshops:

Non warranty: generally < 5 days in-out *

Under warranty: generally < 5 days in-out – free* Fixed investigation costs depending on drive size

Repair costs will be offered before repair, no

unexpected costs afterwards

*subject to availability of parts

How does it work?

Simply contact your local Emotron repair workshop, inform them on the coming repair unit and agree on the needed repair service. Send the malfunctioning unit for workshop repair, including problem/failure description, your company and contact details and the return address.

When we have received your unit, we will analyse the problem and send a repair quote. To accept the quote, please send your confirmation in writing and a PO number for the repair. Our qualified staff will repair and test the unit to secure a functioning unit.

The product will be carefully packed and prepared for shipment to the agreed return address, and the repair report will be sent together with the invoice.

Minimizing downtime and total cost

- Best knowledge of products
- Affordable pricing
- Excellent customer service
- Safe work practices
- · Quality workmanship
- Use of original components

Peace of mind

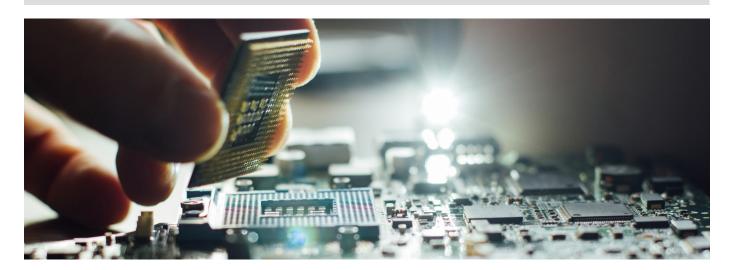
In case of an unexpected failure of your Emotron product, we are available to solve the problem quickly, while you keep full control of your costs.

Pricing

Feel free to request pricing as an option on the product of your choice.

Workshop repair covers:

- 1. Fault finding diagnostics
- 2. Repair after approval
- 3. Spare parts support for up to 10 years beyond discontinuation of a product line
- 4. Original factory parts
- 5. Full warranty on repair



The complete Emotron service offer includes:

- ✓ Remote access
- ✓ Test facilities
- ✓ Training
- Maintenance
- **✓** Commissioning
- Extended warranty
- ✓ 24/7 support
- ✓ Repairs
- ✓ Rentals
- Application diagnostics





Training that will take you to the next level

Managing your drives and applications is becoming more demanding and requires up-to-date skills of your engineers. Emotron offers a variety of different training programs that will bring your team exactly the knowledge they need.



Our general programs

In our facilities, we can offer full hands-on training possibilities, including simulations for commissioning and service of modern AC drives. Our training centres are located in Helsingborg/ Sweden, Bladel/Holland, Wernigerode/Germany and Mandideep/ India.

A general product and application training program is running on a cyclical basis. Hear with your CG Emotron representative or our service department when your next training opportunity will arise.

Special training needs

We can also configure training sessions to suit your special requirements. Training can be conducted either on one of our sites, our demo centres or on your own site. Our service department will be happy to help you tailor training to your needs.

Contact: +31 497 389 222 service.int@cgglobal.com



General training program

Main training topics:

1.	Product Training

FDU-VFX 2.0

12	MSE 2.0

1.3	TSA

1.5.	M20

2.	Application	Training
----	-------------	----------

2.1.	Pump application
۷.۱.	rump application

2.3. I	Master	slave	application
--------	--------	-------	-------------

3.1.	FMC:	and Filters

3.2.	Power	Quality
------	-------	---------

3.3.	Bearing	currents
------	---------	----------

3.4.	Four-quadrant operation

^{3.5.} AFE/Low Harmonics

Pricing - On and off-site training

02-90xx-00	Training in-house standard	on request
02-90xx-00	Training in-house customized 1 day	on request
02-90xx-00	Training on-site standard 1 day	on request
02-90xx-00	Training on-site customized 1 day	on request



Request application form.

Optimize your operation

Learning more about the functionality of Emotron products will help you make the best use of them in your process.



CG Drives & Automation Service Training Version 1.2 2021-04-EN