

DRIVING THE WORLD WITH CLASS-LEADING MOTOR CONTROL PRODUCTS

Control Techniques is 100% focused on delivering world-class variable speed drives and power conversion technologies that are used in industry, commerce and renewable energy schemes.

Our motor control solutions help businesses to significantly reduce energy costs and improve their operating efficiency.



General Purpose Drives

Commander

- S100
- C200
- C300

High Performance Drives

Unidrive

- M700
- M600
- M400
- Extreme Power

Freestanding Drives

DFS Series

- DFS Series

Specialist Drives

- Elevator Drive E300
- Pump Drive F600/IP65
- HVAC Drive H300/IP65



Servo Drives & Motors

Digitax

Digitax HD Series
Digitax SF
Unimotor hd



DC Drives

Mentor MP

Mentor MP



Industrial Control

PLC Controlled Motion
MCH040, MCH070, MCHMobile
Remote I/O and EtherCAT I/O
MCe Machine Controller
MCz Industrial PC
Integration Modules

GENERAL PURPOSE DRIVES

COMMANDER

PRODUCTS IN THIS RANGE

C200 | C300 | S100

Applications:



**Pumping, Ventilating
& Compressing**



Moving Applications
conveyors, treadmills, automatic
doors & barriers



Processing
mixers, crushers, agitators, centrifuges,
kneaders, spinning & braiding machines
for textile



**Lifting, Hoisting
& Winching**



Free 5 year warranty

Our Commander series is built and verified to be robust. In fact, it is so reliable we are confident enough to supply it with a free five-year warranty.

Warranty terms and conditions apply.

COMMANDER C

SIMPLE, RELIABLE MOTOR CONTROL

0.25kW - 132kW (0.33 hp to 200hp) 100 V | 200 V | 400 V



The new Commander C series has been designed to be a simple and reliable AC motor speed controller that meets advanced requirements in a wide range of applications and provides optimum user experience. Now with a free five-year warranty*.

Value Proposition:

- 1 Improved machine productivity**
Commander C provides superior motor control for a broad range of general applications.
- 2 Lower start up costs**
Easy & fast installation, online start-up guides & videos.
- 3 Common control philosophy**
For both our general purpose and high performance drives.
- 4 Lower system costs**
Advanced control with extensive on board feature set, PLC and plug-in option modules.
- 5 Commander brand**
A platform that has driven continuous technological advancements since 1983.
- 6 5 year free warranty**
Guaranteed quality (Terms and conditions apply).

*Warranty terms and conditions apply.



Equipped with the latest energy saving features

The latest energy-saving technology means you get high productivity and low running costs.

Plug-in options for advanced control

The plug in communication modules enable integration with a wide range of industrial fieldbuses

Straightforward installation and commissioning

For a quick motor set-up the key parameters are printed on the front of the drive so you can be up and running within seconds.

Dual Safe Torque Off (STO)

Commander C300 (only) features a Dual Safe Torque Off input, certified to SIL3/PLe safety rating and compliant with EN/IEC 61800-5-2.

Set just four parameters to get your drive started

Simply select the motor rated current, RPM, voltage and power factor from parameters 6 to 9.

Wide availability and outstanding service

Through our local Drive Centres.



COMMANDER S

MAKING SIMPLE

APPLICATIONS, SIMPLE

0.18 to 4 kW (0.25 to 5 hp)
1 Φ 100 & 200 V, 3 Φ 200 & 400 V
Linear V to F, Square V to F, Resistance Compensation

Take charge of motor control and energy savings with the latest addition to the Control Techniques portfolio. With a feature set optimised for simple applications, Commander S provides a cost-effective solution for installations that require plug and play convenience straight from the box.

Commander S is the first drive to come with an app interface as a standard feature. The Marshal app is our revolutionary way to interface with the drive covering commissioning, monitoring, diagnostics and support.



Easy to install

The sleek curved design of Commander S optimises component layout for a small footprint and easy access to terminals. The click-on/click-off DIN rail mount makes installation remarkably easy.



5 YEAR FREE WARRANTY

Free 5 year warranty*

Our Commander S series is built and verified to be robust. In fact, it is so reliable we are confident enough to supply it with a free five-year warranty.

*Warranty terms and conditions apply



Easy to use

Using our new Marshal app (Android/iOS) your drive can be configured in under 60 seconds.



Reliable

Durability is at the core of Commander S design, guaranteeing performance throughout its whole lifetime.



Cost effective

Equipped with unique features designed to save you time, energy and money.

COMMANDER S





Cost effective

- Intelligent fan control reduces energy usage
- Easy integration to automation via the onboard ModbusRTU
- Integrated C1 EMC filter variants can operate in EMC-sensitive environments such as residential areas, without requiring additional external filters
- Environmentally friendly – meets ECO design regulations



Easy to install

- Simple to fit with click on/click off DIN rail mounting
- Angled and offset screw terminal connectors for easy access and fast installation
- The small footprint and side-by-side installation saves cabinet space



Easy to use

- Marshal App interface enables drive set-up in only 60s
- Simple setup routines tailored to your application
- FastStart commissioning menu – only 4 simple steps to get your motor running
- Full flexibility in choosing your preferred interface; Marshal App, drive keypad, Connect PC Tool
- A PIN can be set on the drive or Marshal to restrict unwanted access



Reliable

- 100% conformal coating ensures moisture, corrosion and dust protection
- Free 5 Year Warranty gives peace of mind
- Latest generation of components from trusted suppliers, for robust performance and long term reliability
- Keep running by default allows for continuous run during unusual loadings or operating conditions

MARSHAL

REVOLUTIONISE THE WAY YOU INTERFACE WITH YOUR DRIVE

Control Techniques has a long tradition of challenging the status-quo with innovative ideas and making a profound impact in the drives industry. And we've done it again with Marshal: Control Techniques is the 1st drive supplier to implement NFC technology as standard on a drive and offer the Marshal app interface at no extra cost.

Marshal is your drive expert in the field. This rich content interface means you can commission, clone, diagnose system issues and monitor the drive in just a few screen taps.

TAP: JUST BRING YOUR PHONE NEAR THE NFC LOGO TO CONNECT TO THE DRIVE





Powered by NFC* technology, data transfer between the drive and mobile device takes less than 0.5s.



YOUR DRIVE EXPERT IN THE FIELD

Commissioning

- Power off or on commissioning (even in the box)
- FastStart – assisted commissioning. Only 4 simple steps to get you up and running
- Advanced features available in parameter setting
- Pre-set application configurations

Cloning

- Parameters can be easily transferred from one drive to another - just tap to write as many drives as you want
- Back-up and restore drive configuration via the app

Share

- Share configuration via Outlook, OneDrive, WhatsApp etc.
- Shared configurations are compatible with Marshal & Connect (our PC commissioning tool)
- Export customised wiring diagram and drive configuration to PDF format

Offline capabilities

- Create new configurations in the app
- Open existing projects to review/change parameters





Diagnostics

Guided diagnostics for the system even without drive alarms or errors

Diagnostics available with power off or on

Get support for drive alarms within the app

Error log & active error diagnostics – view active and historic error info

Differences from default – compare configuration against factory defaults

Registration

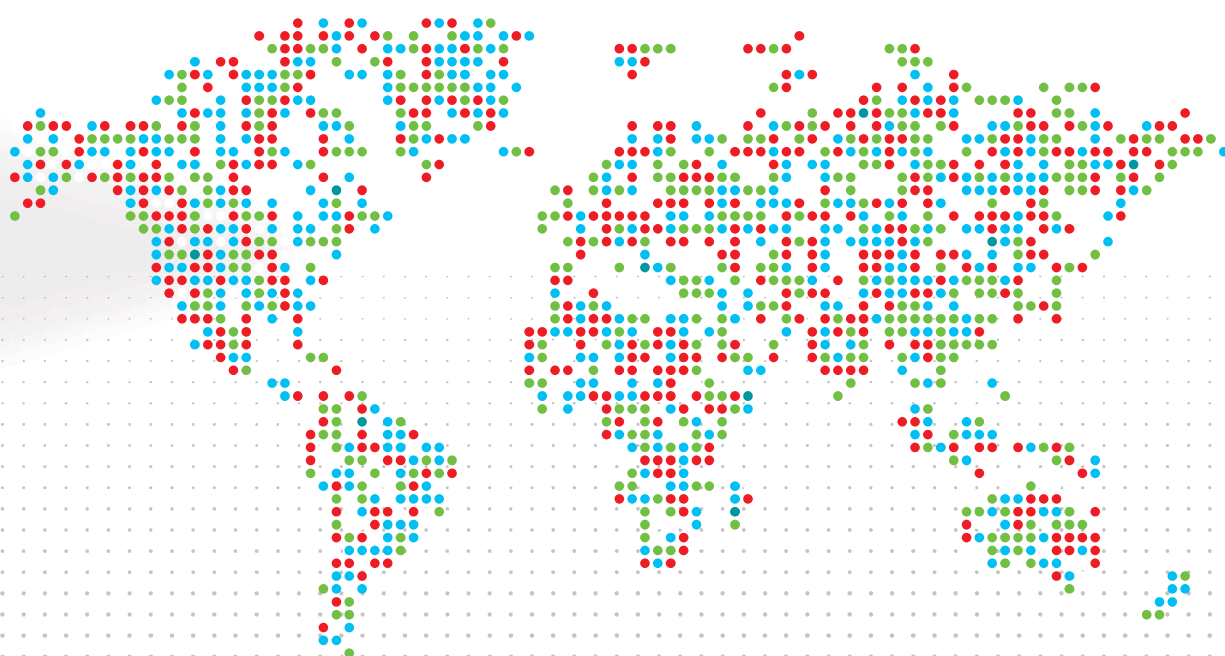
- Activate the 5 Year Warranty via the app
- Access & download support materials via your CT account

Monitoring and security

- Quick view of parameter settings & drive status
- Restrict access to drive configuration via PIN
- Quick visualisation of I/O, motor, and speed settings

Contact us

Access to worldwide distribution network and local drive centres for sales and technical support



HIGH PERFORM ANCE DRIVES

UNIDRIVE

PRODUCTS IN THIS RANGE

M700 | M600 | M400 | DFS SERIES | EXTREME POWER | MODULAR POWER

UNIDRIVE Applications:



Hoists



Winding



Cutting



Woodworking



Test Stands



Printing



Web Handling



Textiles



Packaging
Machines



Tyre
Manufacturing



Speed & Position
Control
(For Gearing & Ratio Control)



UNIDRIVE M700

ADVANCED

MOTOR CONTROL

0.75 kW – 2.8 MW (1.0 - 4,200 hp) 200 V | 400 V | 575 V | 690 V

Class-leading Induction, Servo and PM Motor Performance.

Delivers high performance motor control for induction, permanent magnet & servo applications, plus onboard real-time Ethernet.

Unidrive provides ultimate control flexibility to satisfy the requirements of machine builders and high specification industrial applications. Unidrive M700 offers an enhanced upgrade for existing Unidrive SP users.

Flexible control systems

- Ideal for centralised & decentralised control.
- MCi module advanced system control capability.
- Onboard PLC for logic programs.
- IEC61131-3 programming.
- Onboard real-time Ethernet (IEEE 1588 V2 PTP).





Optimise system performance

- Onboard Advanced Motion Controller.
- 1.5 axes control.

Conform to safety standards

- Integrate directly with safety systems.
- Onboard STO.
- Add a safety option for safe motion functions.

Flexible communications

- Synchronised RTMoE comms.
- Fieldbus communications: PROFINET, Ethernet/IP, Modbus TCP/IP and EtherCAT.
- Onboard web-server for flexible setup and monitoring.

Maximise throughput

- High bandwidth motor control.
- Flexible speed & position feedback.

Variants

- M701 – Unidrive SP replacement with RS485 port.
- M702 – 2 x STO, real-time Ethernet & digital I/O.

UNIDRIVE M600 OPEN-LOOP CONTROL DRIVE

0.75 kW – 2.8 MW (1.0 - 4,200 hp) 200 V | 400 V | 575 V | 690 V

High performance drive for induction and sensorless control of permanent magnet motors.

The perfect choice for applications that require high performance open-loop control of induction or permanent magnet motors.

SI-Encoder option modules are available for applications that require more precise closed-loop velocity and digital lock/frequency following of induction motors.

Reduced system costs with direct integration

- Incorporates an onboard PLC which can execute Machine Control Studio (IEC61131-3) programs for logic control, sequencing, speed following and digital lock - removing the need for additional PLCs.
- Fit up to three SI modules to add safe motion, speed feedback and additional I/O.

Fast and Easy access for Commissioning, Monitoring and Diagnostics





Enhance throughput with high performance open-loop control of induction and permanent magnet motors

- Advanced Rotor Flux Control (RFC) algorithm gives maximum stability and control of induction and permanent magnet motors.
- Up to 200% motor overload suitable for heavy industrial machinery applications.

Flexible communications

- Modbus RTU communications onboard.
- Full Ethernet based and traditional fieldbus.
- Support available through user-fit SI options.

Energy Efficiency

- Low power standby mode.
- Easy common DC bus configuration enables braking energy to be recycled within the drive system, reducing energy usage and eliminating external supply components.
- Supports sensorless (open loop) control of compact high efficiency permanent magnet motors.
- Active Front End for regenerative AC drive systems.
- Dyneo®: perfectly synergised permanent magnet motor and Unidrive M solutions - optimised for performance and energy saving.
- Dyneo®, Unidrive M and permanent magnet motor solutions offer exceptional efficiency levels across all operating speeds, especially at lower speeds where the efficiency is much higher than induction motors.
- Low losses, up to 98% efficiency.

UNIDRIVE M400

MINIMISE DOWNTIME

& SYSTEM SETUP

0.25 - 132 kW (0.33 - 200 hp) 100 V | 200 V | 400 V | 575 V | 690 V

Optimised throughput, open automation systems, maximum ease of use.

Unidrive M400 minimises downtime with an intuitive LCD display for rapid set-up and clear diagnostic help. The integrated PLC will execute a substantial range of sequencing and logic programs.

Coupled with an impressive I/O count complete with two STO inputs and an SI interface for a fieldbus option or extended I/O, the feature set ensures Unidrive M400's flexible integration with any system. Unidrive M400 provides an upgrade path for existing Commander SK users who use LogicStick.

Energy Savings

- Low power standby mode for applications where drives can sit idle for significant periods.
- Automatic 3-speed cooling fan keeps energy usage and acoustic noise to a minimum by intelligently responding to load and environmental conditions (from 0.37W).
- Square law V/F mode is optimised for quadratic loads like pumps and fans to keep motor losses to a minimum.
- Dynamic V to F mode keeps energy usage and motor losses to a minimum in low load conditions.
- Unidrive M400 is highly efficient (above 98%).





Minimise downtime and system set-up time with advanced keypad options

- Informative, multi-language, 3 line display aids set up and provides diagnostic information.
- 4 navigation buttons facilitate intuitive navigation and programming.
- Keypad options available:
 - CI Keypad - Drive mounted LCD keypad.
 - Remote IP66 keypad - rapid panel mount (1 x 32mm Ø hole).
 - No Keypad - Control/programming performed by PC or fieldbus.

Reduced system costs with direct integration

- Incorporates an onboard PLC which can execute Machine Control Studio (IEC61131-3) programs for logic and sequencing with real-time tasks - removing the need for additional PLC's.
- Fit an SI module to add a fieldbus communications option or additional I/O.

Improve throughput with advanced open-loop motor control algorithms

- Rotor Flux Control (RFC-A) gives maximum stability and control of induction motors at all powers.
- 180% motor overload (suitable for heavy industrial machinery applications).
- Precise frequency following is possible from an encoder or frequency/ direction inputs.

Conform to safety standards, maximise uptime and reduce costs by direct safety system integration

M400 has integrated dual STO inputs for SIL3 / PLe conformity, eliminating the need for external safety components.

EXTREME POWER ENGINEERED TO FIT THE WORLD

315 kW to 500 kW | Up to 865 A | 380 to 480 VAC (± 10%)
with 110% Overload

You loved the smaller ones. Here's the big one.

While low power accounts for most of the growth for variable speed drives, energy-saving applications are driving growth in high power drives.

Fans, pumps, compressors and extruders are common uses of drives that increasingly need a higher power option.

Light weight, but no light weight!

Enter the new high power drive, which not only offers 500 kW of power in a single module, but at 130kg is up to 60kg lighter than competitors drives.

Its small footprint and pre-engineered accessories make it easy to install or retrofit in industry-standard cubicles.

A choice of control module options

This 500 kW drive can be fitted with a Unidrive M600/ M70X or Pump Drive F600 control module and has a wide range of accessories available for easy installation.

Alternatively, the frame can be provided pre-assembled in its own industry-standard cabinet, with user-selectable system components included.

This is the ready to use DFS series free standing version.





Installation and servicing

- A **single installer can handle wiring and connection** using comprehensive accessories.
- **Under 30 minutes for one engineer** to replace the drive using service accessories.
- During service, factory-tested **sub-assemblies can be exchanged** on site without having to replace the complete drive.
- **Wider front face design & lower centre of gravity** provide greater physical stability and safety during installation.
- Always **smaller than an existing drive when retrofitting**, so will always fit space available.
- **Fixed lifting points on the chassis** (no additional brackets required) for safe handling.
- **No additional chokes are required** for the vast majority of applications.
- **Online diagnostic app** aids commissioning & user support.

Controls, communications & configuration

- **Renowned Unidrive AC motor control** extended up to 500 kW in a single power module.
- Optimised for the key **high-power drive applications** of fans, pumps, compressors and extruders.
- As **powerful as any other drive on the market**, yet very light and easy to handle.
- All leading **industrial communications protocols supported**, on-board as standard or with userfitted options.
- **On-board machine control**, open programming architecture and safety features.
- **User-connectable 12-pulse operation** as standard for supply current harmonic reduction.
- **Enhanced IGBT protection** during short circuit protects against external fault conditions.
- **Novel capacitor bank protection** provides enhanced reliability and increases up-time.

HIGH POWER MODULAR DRIVES HIGHLY RELIABLE DRIVE MODULES

M700 | M701 | M702 | M600 | Pump Drive F600 | HVAC Drive H300

The modular offering provides a flexible method of building compact, reliable high-power solutions.

Paralleled together, they can control asynchronous and permanent magnet motors in systems up to 2.8 MW (4,200 hp). The frame 12 is a 500 kW (700 hp) module that allows system builders to create high power solutions with the smallest number of components, keeping both footprint and costs to a minimum.

Unidrive M differentiates itself on performance with extremely fast current control algorithms and high switching frequencies. Active Front End (AFE) solutions deliver unparalleled torque precision & power quality.

The Unidrive M modules can be paralleled into a wide range of flexible solutions to solve all system needs including Active Front End and multi-pulse rectifier configurations. They can be controlled by M700, M701, M702, M600, Pump Drive F600 or HVAC Drive H300 controllers.





F12 T



F12 D



RECT..A, RECT..T



F9, 10 & 11 A, E, T



F9, 10 & 11 D



**Master Control,
Standard Control**



Follower Control

Format

A	AC in AC out module with integrated rectifier and line choke. Available in frame size 9 and can be paralleled up to 1,9 MW (2,100hp) (Unidrive SPMA replacement)
E	AC in AC out module with integrated rectifier. Available in frame sizes 9, 10 & 11 and can be paralleled up to 2,8 MW (4,200hp)
T	AC in AC out module with 12 pulse integrated rectifier. Available in frame size 9, 10, 11 & 12 and can be paralleled up to 2,8 MW (4,200hp)
D	DC in AC out module. Available in frame size 9, 10, 11 & 12 and can be paralleled up to 2,8 MW (4,200hp) (Unidrive SPMD replacement)
RECT..A	AC in DC out rectifier 6 pulse module (Unidrive SPMC replacement), Available in frame size 9, 10 & 11
RECT..T	AC in DC out rectifier 12 pulse module (Unidrive SPMC2 replacement), Available in frame size 9, 10 & 11
Standard Control	M700, M701, M702, M600, F600, H300 controller for single module systems
Master Control	M700, M701, M702, M600, F600, H300 master controller for systems with more than one module
Follower Control	Follower controller for all paralleled modules



Create flexible systems easily

The modular approach to building high power systems provides machine builders with flexibility while keeping complexity low. Modules with integrated rectifiers and / or line chokes can be easily paralleled keeping installation time and component count to a minimum. Separate inverter and rectifier modules (D, RECT..A and RECT.T) can be paralleled into more flexible common DC bus and regenerative configurations where power management and system design efficiency are key.

Flexible and easy system design:

- Unidrive M high power modules are designed to fit in standard 600 mm deep x 400 mm wide (23.6 x 15.7 in) cubicles
- 6,12,18 and 24 pulse input and Active Front End configurations are easy to achieve
- Integrated cooling fan power supply means no additional power supplies are required
- Output current ratings have been increased for a wider range of global motors
- A common control interface ensures a consistent programming method and feature set across the whole range.



Minimize downtime for critical operations

We know how important reliability is to our customers and that every second of system downtime can be costly. Control Techniques high power modules have exceptional build quality based on over 45 years of drive knowledge, expertise and development.

Built using world leading manufacturing processes, the modules are packed with features proven to keep the drive running in the most testing of environments. Control Techniques Automation Centres are situated in many global regions to provide local design consultation and rapid specialist technical support wherever your business is located.



Make compact, easily maintainable systems

- Control Techniques high power modules are incredibly compact given the impressive amount of power they can deliver. For example, the powerful AC in AC out 500 kW (700 hp) module measures only 295 x 1750 x 526 mm (11.61 x 68.90 x 20.71 in) - a power density unrivalled in the market place and almost half the size of other leading suppliers.
- Overall system size and footprint is kept to a minimum
- Manageable small and light modules are maintained and replaced rapidly and easily



Reduce spares inventory

Control Techniques modular approach gives customers the opportunity to standardize their solutions in order to keep spares holding to a minimum as different systems can be serviced using one common spare. Additionally, large volumes of standard product modules are stocked at local distribution hubs in convenient locations around the world meaning that rapid delivery is always available to all customers.



Reliability assured

- Every power module has been thoroughly tested in environmental chambers that cycle a wide range of load and thermal conditions
- PCBs have conformal coating to further increase resilience to harsh environmental conditions
- Trip avoidance features take intelligent action instead of interrupting critical processes.
- Protection alarms safeguard the wider system (e.g. over current, over temperature, over voltage and short circuit protection)
- Intelligent variable speed fans ensure operating temperature stays within limits. They are easily replaceable as part of routine maintenance
- Wide supply voltage tolerance keeps drive operation smooth in areas where supplies are variable



Upgrade legacy modular systems painlessly

Migration of Unidrive SP modular systems is fast and easy with many conversion tools available:

- Parameter porting tools such as Connect and Smartcard are available SyptPro can recompile SM-Applications programs for SI-Applications and connect to existing CNet networks
- Identical width and depth dimensions, along with retrofit kits, mean that Unidrive M modules frame sizes 9, 10, 11 can easily fit into SP modular locations using existing fittings



Environmental safety and electrical conformance

- UL and DNV listed
- Electromagnetic immunity complies with EN 61800-3 and EN 61000-6-2
- Electromagnetic emissions comply with EN 61800-3



Create high performance solutions

Unidrive M delivers market leading control performance at high powers with extremely fast current control algorithms, advanced thermal monitoring and high switching frequencies. When Control Techniques power modules are configured with an Active Front End, dynamic torque response can be effectively demanded across all power quadrants.

- Switching frequencies of up to 16 kHz in systems up to 160 kW (250 hp) and 8 kHz in systems up to 500 kW (700 hp) allow Unidrive M to provide precision torque. This is effective in demanding applications such as test stands, where our ETPS solution (engine torque pulsation system) can precisely simulate dynamic engine torque profiles.
- Highly accurate thermal model ensures:
 - i. High overload capability – 150% Heavy Duty, (140 % with frame 12)
 - ii. Impressive low derating requirement in applications that demand high torque at low speeds. Power device temperature is intelligently managed meaning smaller lower priced systems can be specified and product life is extended.
- Dynamic Active Front End configurations provide:
 - i. Precision torque linearity across quadrants
 - ii. Corrective power factor operation (lagging, unity or leading) for high quality power
 - iii. Harmonic mitigation

FREE STANDING DRIVES

DFS SERIES

PRODUCTS IN THIS RANGE

DFS SERIES

DFS Series Applications:



Fans & Pumps



Compressor



General Automation



DFS SERIES HIGH POWER FREE STANDING DRIVES

55 kW to 540 kW 400 V | 690 V

Efficient System Build.

For many drive users, designing and building a high power drive cubicle requires extensive in house engineering expertise that they do not have...

DFS is a pre-assembled, ready to install drive cubicle system designed for use in high power applications where energy saving and high ingress protection are key. With fast, easy installation, plant availability is maximised with virtually zero requirement from your engineering resource.

Optimum local service support to minimise downtime

- Rapid on-site support, in your language, from highly qualified and experienced service and application engineers
- Efficient service with replacement parts available locally
- Comprehensive online support including:
 - i. Drive set-up, diagnostic tool and
 - ii. online support system with dynamic logic diagrams

Pre-installed options available include:

EMC filter | Energy monitoring | 24V back-up supply wiring |
Empty sections can be integrated for customer equipment & installation cables





Includes power disconnect and fuses

Fast turnaround

- Control Techniques Drive Centres and Partners have all the tools required to generate fast quotations to minimise delays in the ordering process.
- For emergency breakdowns where a replacement drive is needed quickly, DFS can be shipped in as little as one week.
- Standard lead-times are six weeks.

Easy set-up

- Door-mounted multi-language HMI for easy commissioning.
- Real time clock for enhanced diagnostics.
- Connect PC tool for optimised commissioning:
 - i. Full parameter management features including cloning.
 - ii. Real time visualisation and manipulation of drive control system with dynamic logic diagrams.

Industry standard cubicles which integrate with your existing installation

Rugged, reliable drive systems

- Highly robust cabinets with ingress protection options to meet the needs of the application – IP23 as standard.
 - i. IP54 as selectable option – IP55 water-cooled on request.
- Cabinet temperature control via intelligent fan system.
- Built with stringent quality controls with full traceability & rigorous testing gives our plant ISO-9001 accreditation.
- High quality auxiliary components sourced from leading automation industry vendors.

SPECIALIST DRIVES

ELEVATOR, PUMP & HVAC

PRODUCTS IN THIS RANGE

ELEVATOR DRIVE E300 | PUMP DRIVE F600 | HVAC DRIVE H300



ELEVATOR DRIVE E300

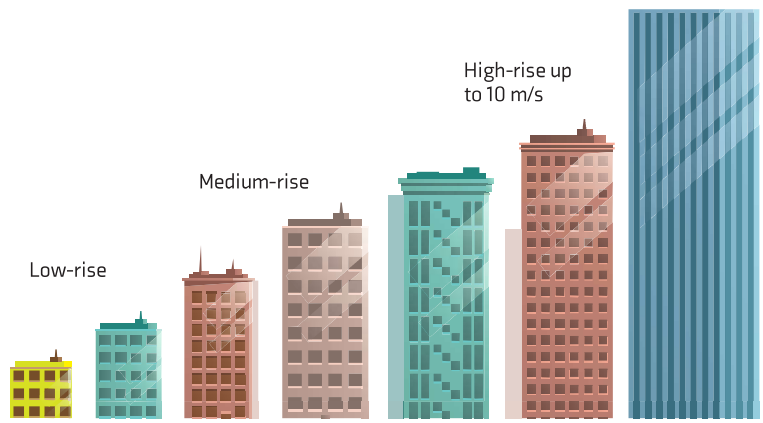
CLASS-LEADING

RIDE COMFORT

2.2 – 250 kW (3 – 400 hp) | 200 V | 400 V | 575 V | 690 V

Match all requirements seamlessly

We provide elevator drive solutions for any size of building, from small residential to luxury high-rise; new build or modernisation projects. Our mission is to make every step of the process as easy as possible, from product selection to installation, setup & service.



Building Type

Unparalleled performance


We design and rate our drives to offer top performance, regardless of traffic requirements or installation preference. Control Techniques' low noise and jerk-free drives are the product of choice in modern elevator systems. Our reputation for industry benchmark ride comfort is second to none.



Product Range



Taking elevator drives to another level

Freedom to Design	Quick Setup	Easy Optimisation	Class-Leading Performance & Maintenance Support
<p>Broad range, compact form factor</p> <p>A full range of some of the smallest drives in the industry per kW rating, for all elevator applications, giving flexibility without constraints.</p>	<p>Elevator specific menu structure</p> <p>Easily make adjustments to drive settings, even without having the manual at hand.</p> 	<p>Keypad with backlit LCD display</p> <p>The Remote Keypad RTC provides clear parameter descriptions and units. All laid out in a logical sequence to support a rapid and effortless system start up.</p>	<p>Brake contact monitoring</p> <p>The TÜV certified Brake Contact Monitoring allows monitoring of up to four motor brakes. This can help even old lift systems to comply with Unintended Car Movement, and EN81-20 and EN81-50.</p>
<p>Match any control interface</p> <p>Analog speed reference, digital I/O control, comms control, digital communications control. (CANopen, DCP & Ethernet).</p>	<p>Stationary autotune</p> <p>Encoder offset detection & optimum current loop configuration without the need to lift the brake or de-rope the system.</p>	<p>PC tools</p> <p>The advanced graphic interface lets you fine-tune your elevator system with just a few clicks.</p>	<p>Enhanced data logger</p> <p>All drives have a built in data logger that can monitor any parameter, recording events such as drive trips. This can be written onto an SD Card or retrieved by the elevator controller via the communications link.</p>
<p>Encoder range</p> <p>Flexible encoder interface supporting resolvers and 16 different encoder types as standard. Ranging from incremental encoders to EnDat, Hiperface and BiSS. All without the need for additional encoder cards.</p>	<p>Simple UPS connection</p> <p>The easy connectivity ensures optimum backup & rescue operation.</p>	<p>Parameter storage & cloning</p> <p>Quickly back up drive configurations to an SD Card or Smartcard, or use the Elevator Connect PC tool.</p>	<p>Travel counter</p> <p>The built in travel counter helps keep track of rope lifetime when plastic ropes are used in the elevator system. The drive warns when critical thresholds have been reached, and maintenance is necessary.</p>
<p>Safe Torque Off</p> <p>Our TÜV certified STO function provides a highly dependable method for preventing the motor from being driven, removing the need for both output motor contactors.</p>	<p>Pluggable drive terminals</p> <p>Control terminal connections are pluggable across the full range and biased to ensure correct connection. Supply and motor power terminal connections are pluggable up to 22 kW.</p>	<p>Diagnostics</p> <p>Simple trip code system makes it easy to diagnose drive errors. Records the last 10 trip codes within the drive to aid troubleshooting. Time and date stamp option with the Remote Keypad RTC.</p>	<p>Blocked cabin release function</p> <p>The release blocked cabin control will release the elevator's safety gear when it has been deployed, and helps return the blocked cabin to normal operation. This removes the need to climb into the elevator shaft to release the safety gear.</p>

Easy click-in keypad connection

Dedicated elevator keypad, providing:

- Easy-to-use menu and parameter structure.
- Local and remote mounting.
- Real-time clock.



Power on / Drive status LED

Single screw removable cover

3 x System Integration (SI) module slots for communications, I/O, additional feedback devices

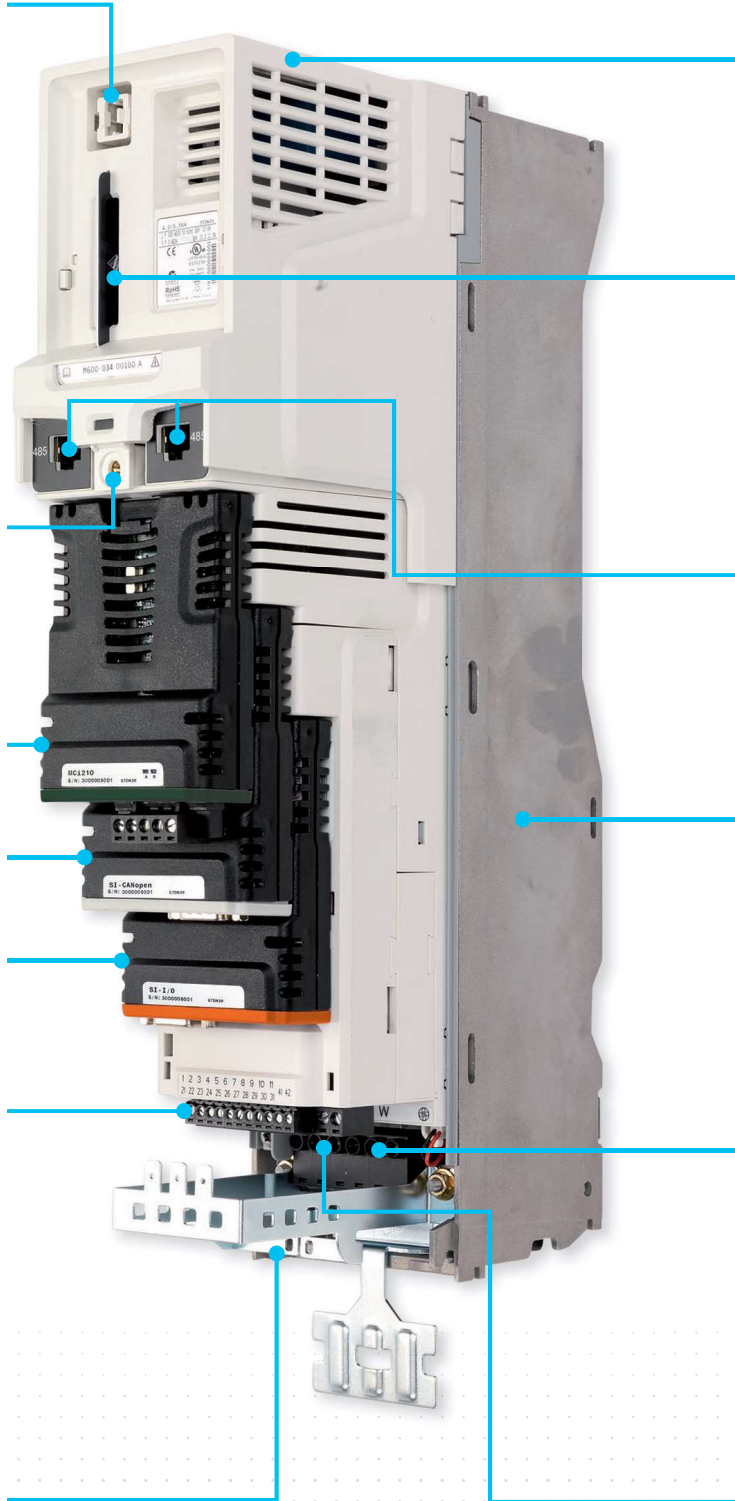
Pluggable control connections

Robust cable management system

Grounding point for shielded control and power cables



*Features and their locations vary between drive sizes.



Terminal cover for DC bus, braking terminal and onboard EMC filter*

Slot for Smartcard / SD Card Adaptor
 For parameter storage, backup of drive configuration and cloning of parameters.

RS485 communications port Modbus RTU

Aluminium chassis
 Allows flexible mounting, with high performance extruded heatsink.

Flexible dual port universal encoder interface
 Supporting a wide range of incremental encoders (e.g. AB and SC), absolute encoders (e.g. SC.SSI, SC.EnDat, SC.Hiperface, SC.SC and SC.BiSS) and absolute comms encoders (EnDat and BiSS).

User-friendly power connections
 With removable terminals*.

PUMP DRIVE F600

SIMPLE, RELIABLE FLOW CONTROL

The specialist pump drive from the drive specialists.

Available in IP20 and IP65 variants

F600 has energy-saving features and simple guided setup for your pump, no matter the requirements.

Applications involving the flow of air or water demand extreme reliability and low energy consumption. Control Techniques' F600, part of its new Specialist category of industry-specific drive technologies, meets these needs. It builds on five decades of specialist drives expertise from Control Techniques, delivering fast, dependable control in the areas it's needed most.

Everything you need is baked into the drive itself. We've thought of all the details, from the features you'll need the most to the terminology you'll understand. This isn't a general-purpose drive with pump features added on; it's a dedicated, specialist pump drive, designed from the ground up to deliver the performance, reliability and efficiency you need.



Free 5 year warranty

To share our confidence in the reliability of Control Techniques, drives in the F600 range are eligible for Control Techniques' extended warranty, at no extra cost.

With 5 years guarantee, rest assured your application will continue to run uninterrupted, giving an unbeatable total cost

Warranty terms and conditions apply.