

**Nidec**

**Drives**



# Mentor MP

Enhanced motor  
performance and reliability

DC Drives



# The ultimate DC Drive

## Mentor MP

25 A to 7400 A

400 V | 575 V | 690 V

### The ultimate DC drive

As a world leader in DC drive technology, our innovative products are used in the most demanding applications requiring performance, reliability & energy efficiency.

Mentor MP integrates the control platform from the world's leading intelligent AC drive technology making it the most advanced DC drive available. With optimum performance and flexible system interfacing capability, the Mentor MP drive allows you to maximize motor performance & enhance system reliability. Interface digitally with modern control equipment using Ethernet & fieldbus networks.

It is very easy to retrofit from Mentor II.



### 5-year warranty as standard\*

Our Mentor series is so reliable we are confident enough to supply it with a five-year warranty as standard.

Now you can buy with the same confidence.

\*Warranty terms and conditions apply.





Machine communications flexibility



Drive intelligence and system integration



Easy to set-up and commission

# Easy set-up of Enhanced control and monitoring



## Greater motor field control

- Built in 8 A or 20 A field controller as standard.
- Gives excellent field control for the majority of DC motors.
- Reduces the need for external components.



## Enhanced system design

- The heatsink cooling fans are intelligently controlled and only run when required, thus increasing reliability and reducing maintenance.
- Eighteen different option modules allow customisation of the drive, including fieldbus, Ethernet, I/O, extra feedback devices and motion controllers.
- The drive system designer is able to embed automation and motion control within the drive, eliminating communications delays that reduce performance.



## Enhanced field control with FXMP25

- The FXMP25 may be controlled digitally by using a standard RJ45 connection, allowing set-up by standard drive parameters.
- The FXMP25 can also function in standalone mode using its integrated keypad and display.
- An external field controller for up to 25 A with reversible capability.



## Fast set-up, configuration and monitoring

- Quick and easy to set-up.
- Can be configured using optional removable keypads.
- Advanced auto-tune features help you get the best performance from your machine.

# PC software & smartcard tools:

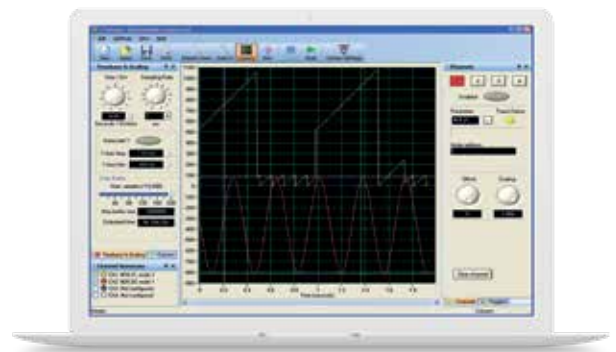
# Rapid commissioning

Control Techniques' software makes it easy to access the drive's feature set. It allows you to optimize drive tuning, back-up the configuration and set-up a communications network.

## CTScope

Drive oscilloscope software for viewing & analysing changing values within the drive.

- The time base can be set to give high speed capture for tuning or for longer term trends.
- Based on a traditional oscilloscope, making it easy to use for all engineers.



## Smartcard

The smartcard is a backup memory device that brings the following benefits:

- Parameter and program storage.
- Simplify drive maintenance and commissioning.
- Quick set-up for sequential build of machines.
- Machine upgrades can be stored on a smartcard & sent to the customer for installation.



## CTSoft

Our drive configuration tool for commissioning, optimising and monitoring allows you to:

- Use configuration wizards to commission your drive.
- Read, save and load drive configuration settings.
- Manage the drive's smartcard data.
- Visualize and modify the configuration with live animated diagrams.
- All motor data is entered in real units and the current limit window will calculate parameter settings based on ambient temperature and required overload rating.



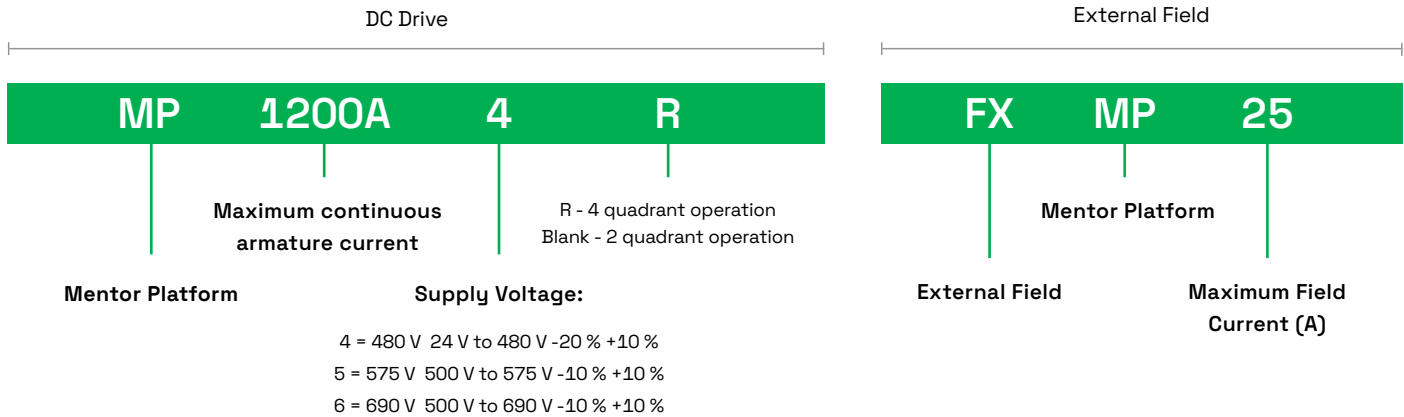
# Mentor MP

## Technical data

### Conformance

- Humidity 95 % maximum (non condensing) at 40 °C (104 °F)
- Ambient temperature -15 °C to +40 °C (5 °F to +104 °F), 55 °C (131 °F) with derating
- Altitude: 0 to 3000 m, derate 1 % per 100 m between 1000 m and 3000 m
- Vibration: Tested in accordance with IEC 60068-2-64
- Mechanical shock tested in accordance with IEC 60068-2-29
- Storage temperature -40 °C to +70 °C (-40 °F to +158 °F)
- Notch Immunity to IEC60146-1-1 class A
- Electromagnetic immunity complies with EN 61800-3 and EN 61000-6-2
- IEC 61800-5-1 Electrical safety
- IEC 61131-2 I/O
- EN 60529 Ingress protection
- UL508C
- EN 61000-6-4 EMC - with optional EMC filters
- RoHS compliant





**Note:** At the time of ordering, please select the required interface option.

Model			Frame	Armature current (A)*	Internal Field Controller Current (A)	Overall dimensions			Quadrants of Operation
480V EN / IEC cULus	575V EN / IEC cULus to 600V	690V EN / IEC				Width (W)	Height (H)	Depth (D)	
MP25A4(R)	MP25A5(R)			25	8	293mm (11.54in)	444mm (17.48in)	222mm (8.74in)	2 and 4
MP45A4(R)	MP45A5(R)		1A	45					
MP75A4(R)	MP75A5(R)			75					
MP105A4(R)	MP105A5(R)			105	20	293mm (11.54in)	444mm (17.48in)	251mm (9.88in)	2 and 4
MP155A4(R)	MP155A5(R)		1B	155					
MP210A4(R)	MP210A5(R)			210					
MP350A4(R)	MP350A5(R)	MP350A6(R)		350	2A	495mm (19.49in)	640mm (25.20in)	301mm (11.85in)	2 and 4
MP420A4(R)				420					
	MP470A5(R)	MP470A6(R)		470**					
MP550A4(R)				550	2C	555mm (21.85in)	1050mm (41.34in) ***	611mm (24.06in)	2
MP700A4(R)	MP700A5(R)	MP700A6(R)		700					
MP825A4(R)	MP825A5(R)	MP825A6(R)	2B	825**					
MP900A4(R)				900	2D	555mm (21.85in)	1510mm (59.45in) ***	611mm (24.06in)	4
MP1200A4	MP1200A5	MP1200A6		1200					
MP1850A4	MP1850A5	MP1850A6		1850					
MP1200A4R	MP1200A5R	MP1200A6R		1200					
MP1850A4R	MP1850A5R	MP1850A6R		1850					

7030 A is achieved by parallel connection of Mentor MP drives

\* Current ratings are at 40°C with 150% overload for 30s.

\*\* For this rating at 575V and 690V, 150% overload time is 20s at 40°C and 30s at 35°C.

\*\*\* Height including optional fit exhaust duct cover is 1252mm (49.29in) for size 2C and 1712mm (67.40in) for size 2D.



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