

Nidec

Drives



500 kW / 700 hp Power Module

For pumps, HVAC/R,
mining and high
performance
applications



High performance control For higher power applications

250 kW to 500 kW (400 hp to 700 hp) / Up to 865 A

380 to 480 VAC ($\pm 10\%$)

500 to 575 VAC ($\pm 10\%$)

500 to 690 VAC ($\pm 10\%$)

Energy-saving applications are the biggest driver of growth in high power drives. Fans, pumps, compressors and extruders are the most common uses of drives which are increasingly in need of higher power options.

Power up, slim down

Having 500 kW / 700 hp of power in a single power module, that, at just 130 kg (287 lb) is up to 69 kg (152 lb) lighter than competitors drives is a game changer. Its small footprint and pre-engineered accessories make it easy to install or retrofit in industry-standard cubicles. The drive can be installed in under 30 minutes which is testament to its simplicity.

Includes a choice of control stage to meet the needs of any application with induction, permanent magnet or hybrid motors.

This 500 kW / 700 hp drive can be controlled by the Unidrive M600 and M700 (plus its variant controllers), or the Pump Drive F600 or HVAC Drive H300 for specialist drive features dependent on your application requirements.

Every accessory required to fit in a cubicle is available to order. Alternatively, the power module 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 format.



35%
lighter than
competitor
drives



**5-year warranty
as standard***

Our drives are so reliable we are confident enough to supply them with a free five-year warranty.

Now you can buy with the same confidence.

*Warranty terms and conditions apply.



Installation and servicing

- A single installer can handle wiring and connection using comprehensive accessories.
- Under 30 minutes to replace the drive using service accessories.
- During service, factory-tested spare parts (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 using a single module.
- Online diagnostic app aids commissioning & user support.
- A compact Active Front End solution is available with an LCL filter and cubicle integration accessories.

Controls, communications & configuration

- Renowned Unidrive AC motor control extended up to 500 kW / 700 hp 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 user fitted options.
- On-board machine and motion control, open programming architecture and safety features.
- 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.

Drive ratings and ordering information

Model	Normal Duty			Heavy Duty			
	Maximum Continuous Output Current	Nominal Power	Nominal Power	Maximum Continuous Output Current	Nominal Power	Nominal Power	
	A	kW	hp	A	kW	hp	
400 V	M000-12404800	608	315	500	480	250	400
	M000-12405660	660	355	550	566	315	450
	M000-12406600	755	400	650	660 ²	355	550
	M000-12407200	865 ¹	500	700	720 ³	400	600
575 V	M000-12503150	376	250	350	315	250	350
	M000-12503600	428	300	400	360	250	350
	M000-12504100	480	330	450	410	300	400
	M000-12504600	532	370	500	460	330	450
690 V	M000-12603150	376	355	450	315	280	400
	M000-12603600	428	400	500	360	355	450
	M000-12604100	480	450	600	410	400	500
	M000-12604600	532	500	650	460	450	600

Implement 2.8 MW (4,200 hp) drive systems by connecting this module in parallel

Construct regenerative and low harmonic AFE systems with 'D' type or DC to AC modules and a new integrated LCL filter

Note¹ 110 % Overload at 30°C and below and No Overload above that.

Note² 140 % Overload at 35°C and below and 125% above that.

Note³ 140 % Overload at 30°C and below and 125% above that.

Kits and accessories ordering information

Area of drive / cubicle	Part No.	Description
Input/Output wiring connections	6772-0006	VX25/TS8 AC input wiring kit
	6772-0007	VX25/TS8 output wiring kit
	6772-0008	VX25/TS8 earth kit
	6772-0014	Output busbar pass-through kit
	6772-0012	DC input busbar kit
	6772-0016	VX25/TS8 DC input wiring kit (No fuse holders)
	6772-0032	VX25/TS8 DC input wiring kit (IEC fuse holders)
Cubicle fitting kit	6772-0033	VX25/TS8 DC input wiring kit (UL fuse holders)
	6772-0009	VX25 fitting kit
	6772-0010	TS8 fitting kit
AFE filter/fitting kit	4595.000	VX25/TS8 Wall bracket (Rittal)
	6772-0022	AFE filter fitting kit VX25/TS8
	6772-0020	AFE filter/drive divide kit
	4200-6326	400 V AFE filter
Lifting and ramp	4200-0037	575 / 690 V AFE filter
	6500-0158	Frame 12 ramp
	6500-0159	Pallet truck kit
Cubicle ventilation	9681.846	VX25 roof plate (Rittal)
	3240.200	VX25/TS8 Outlet filter with mat (Rittal)
	3172.200	Spare outlet filter mats (0ty.5) (Rittal)

Dimensions



W: 295 mm (11.61 in)
H: 1750 mm (68.90 in)
D: 526 mm (20.71 in)

Weights

AC to AC ('T' type): 130 kg (287 lb)

DC to AC ('D' type): 113 kg (249 lb)

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