

Fact Sheet

VLT® high power E Frame drives & modules

Extremely compact and powerful



VLT® E frame high power drives are now available in a new design that gives you greater output power, reduced physical dimensions, and improved functionality. You can choose between standalone or cabinet-mounted variants of the single integrated drive.

High power density

You get the highest possible power output for the physical dimensions of the drive through maximized use of silicon capacity, using cutting-edge technology in thermal management.

Improved connectivity

The new E frame design is easier to install, commission, and service. Even with a more compact enclosure size, the new E frame offers more space for cabling, easier access to terminals, and fewer parts.

Available for

- VLT® AutomationDrive FC 302
- VLT® AQUA Drive FC 202
- VLT® HVAC Drive FC 102
- VLT® Refrigeration Drive FC 103

Power range

450-950 HP (315-800 kW)

Voltage ranges

380-480/500 V
525-690 V

Protection rating

IP20 (Chassis)
IP21 (Type 1)
IP54 (Type 12)

Up to
750 HP
at 480 V output
power in a single
drive

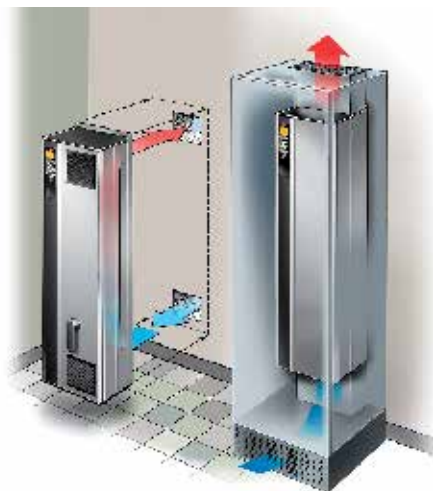
Feature	Benefit
Up to 73% less volume than previous generation	Save space in the cabinet or control room.
Greater power sizes in a single integrated drive	Get more flexibility, as OEM or cabinet builder, with new offerings in IP20 (Chassis).
Mains and motor terminals on the same plane	Save time during installation and commissioning, thanks to easier access to power terminals.
Built-in options	Eliminate the need for an extra cabinet when only the basic options are required. Save cost on equipment and reduce space requirements.
Back-channel cooling	Reduce the scale of air conditioning required for the room, and even reduce the room size, for savings in up-front cost and operating expenses.
Variable speed cooling fans	Improve efficiency of the drive and reduce audible noise.
VLT® drives family – one platform, one user interface, common graphical LCP	Know one drive, know them all. Save time and cost for training, service, ordering and spare parts logistics.
Door mounted LCP with USB port	Connect, monitor, and program the drive without opening the cabinet door.

Built-in options

- Fuses
- Disconnect and fuses
- Mains shield
- Brake chopper
- Regen terminals
- Load share terminals
- RFI filter
- Space heater
- USB through door
- Heat sink access panel
- Corrosion-resistant back-channel

Back-channel cooling

A unique ducted back-channel passes cooling air over heat sinks with minimal air passing through the electronics area. There is an IP54/Type 12 seal between the back-channel cooling duct and the electronics area of the VLT® drive. This allows 90% of the heat losses to be exhausted directly outside of the enclosure, improving reliability and prolonging life by dramatically reducing temperature rise and contamination of the electronic components.



Ratings (380-480/500 V)

Type code beginning with	kW @ 400V		HP @ 480V		Output Current [Amps]				Frame
	Overload		Overload		380-440 V		441-500 V		
	High	Normal	High	Normal	High	Normal	High	Normal	
FC-x02N315T5	315	355	450	500	600	658	540	590	E1h/E3h
FC-x02N355T5	355	400	500	600	658	745	590	678	
FC-x02N400T5	400	450	550	600	695	800	678	730	
FC-302N450T5	450	500	600	650	800	880	730	780	E2h/E4h
FC-x02N500T5	500	560	650	750	880	990	780	890	

Ratings (525-690 V)

Type code beginning with	HP @ 575V		kW @ 690V		Output Current [Amps]				Frame
	Overload		Overload		525-550 V		551-690 V		
	High	Normal	High	Normal	High	Normal	High	Normal	
FC-x02N355T7	400	450	355	450	395	470	380	450	E1h/E3h
FC-x02N400T7	400	500	400	500	429	523	410	500	
FC-x02N500T7	500	600	500	560	523	596	500	570	
FC-x02N560T7	600	650	560	630	596	630	570	630	
FC-x02N630T7	650	750	630	710	659	763	630	730	E2h/E4h
FC-x02N710T7	750	950	710	800	763	889	730	850	

Dimensions Inches (mm)

Protection rating	IP21/54 (Type 1/Type 12)		IP20 (Chassis)	
	E1h	E2h	E3h	E4h
E Frame Enclosure				
Width	23.62 (600)	27.56 (700)	19.96 (507)	23.90 (607)
Height	80.43 (2043)	80.43 (2043)	62.13 (1578)	62.13 (1578)
Depth	20.07 (510)	20.07 (510)	18.98 (482)	18.98 (482)

VLT® | VAGON®

Tel. +1 (888) Danfoss | www.danfossdrives.com | E-mail: salesinformation@danfoss.com
Danfoss Drives: Chambersburg, PA • Houston, TX • Loves Park, IL • Milwaukee, WI • Raleigh, NC • Stony Creek, ON

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.