ENGINEERING
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Fact Sheet

VLT® drive with enclosure size E
Extremely compact and powerful

The VLT® drives in enclosure size E 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. We have achieved this performance level for you by maximum use of silicon capacity, using cutting-edge technology in thermal management.

Improved connectivity

It is now easier to install, commission, and service VLT® drives with enclosure size E. Even though the layout is more compact, the new enclosures offer 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

315-800 kW

Voltage ranges

380-480/500 V
525-690 V

Protection rating

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

Up to
800 kW
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.

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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)

kW @ 400 V		Nominal output current [A]				Enclosure
Overload		380-440 V		441-500 V		
High	Normal	High	Normal	High	Normal	
315	355	600	658	540	590	E1h/E3h
355	400	658	745	590	678	
400	450	695	800	678	730	
450	500	800	880	730	780	E2h/E4h
500	560	880	990	780	890	

Ratings (525-690 V)

kW @ 690 V		Nominal output current [A]				Enclosure
Overload		525-550 V		551-690 V		
High	Normal	High	Normal	High	Normal	
355	450	395	470	380	450	E1h/E3h
400	500	429	523	410	500	
500	560	523	596	500	570	
560	630	596	630	570	630	
630	710	659	763	630	730	E2h/E4h
710	800	763	889	730	850	

High overload: *150 % of nominal current can be applied for intermittent duty (60 sec).*
Normal overload: *110 % of nominal current can be applied for intermittent duty (60 sec).*

Dimensions (mm)

Protection rating	IP21/54 (Type 1/Type 12)		IP20 (Chassis)	
Enclosure size	E1h	E2h	E3h	E4h
Width	600	700	507	607
Height	2043	2043	1578	1578
Depth	510	510	482	482

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