



High-Power VLT® Series

F1 and F2 frame variable frequency drives

Power Range:

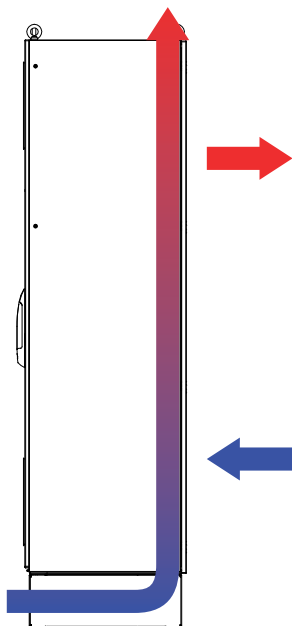
- F1: 450–900 kW
- F2: 710–1200 kW

Voltage Range:

- 380–690 VAC

Back-channel cooling

A unique design uses a ducted back channel to pass cooling air over heat sinks, with minimal air passing through the electronics area. This allows 85% 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. There is an IP54 seal between the back-channel cooling duct and the electronics area of the drive.



Standard Features	Benefit
Common control platform with smaller drives	• Ease of use; once you know one drive, you know them all
Proven power electronics	• Reliable operation
Modular design	• Components are accessible from the front for easy serviceability
	• Quick and easy replacement
Back-channel cooling	• Reduced maintenance requirements
	• Longer drive lifetime
Rittal TS8 enclosure systems in IP21 (NEMA 1) or IP54 (NEMA 12)	• Allows easy expansion
Class A1 RFI filter (optional class A2)	• Reduced EMI/RFI without need for external filters
DC-link reactors	• Reduced harmonics without external AC line reactors
DC-link fuses	• Independent protection of inverters
Coated PCBs	• Protection against corrosive environments

Options	
<p>Power options:</p> <ul style="list-style-type: none"> • Class A2 RFI • Disconnect (mains switch) • Contactor • Circuit breaker • AC fuses • Load share terminals • Regeneration terminals 	<p>Control and convenience options:</p> <ul style="list-style-type: none"> • 24 VDC regulated power supply • 30A fuse protected circuit • Manual motor starters • NAMUR terminals
<p>Monitoring options:</p> <ul style="list-style-type: none"> • RCD (Residual Current Devices) • IRM (Insulation Resistance Monitor) • Motor temperature monitoring 	<p>Enclosure options:</p> <ul style="list-style-type: none"> • Door interlocks • Cabinet lights • Convenience power outlets • Space heaters and thermostat



Current and Power Ratings

400 VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N kW	I _H Amps	P _H kW	
880	500	800	450	F1
990	560	880	500	F1
1120	630	990	560	F1
1260	710	1120	630	F1
1460	800	1260	710	F2
1720	1000	1460	800	F2

460 VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N HP	I _H Amps	P _H HP	
780	650	730	600	F1
890	750	780	650	F1
1050	900	890	750	F1
1160	1000	1050	900	F1
1380	1200	1160	1000	F2
1530	1350	1380	1200	F2

500VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N kW	I _H Amps	P _H kW	
780	560	730	530	F1
890	630	780	560	F1
1050	710	890	630	F1
1160	800	1050	710	F1
1380	1000	1160	800	F2
1530	1100	1380	1000	F2

* 110% current (for 60 sec)

** 150% current (for 60 sec)

550 VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N kW	I _H Amps	P _H kW	
763	560	659	500	F1
889	670	763	560	F1
988	750	889	670	F1
1108	850	988	750	F2
1317	1000	1108	850	F2

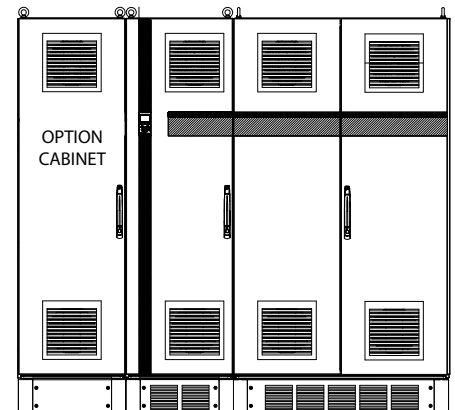
575 VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N HP	I _H Amps	P _H HP	
730	750	630	650	F1
850	950	730	750	F1
945	1050	850	950	F1
1060	1150	945	1050	F2
1260	1350	1060	1150	F2

690 VAC				
Normal Overload*		High Overload**		Frame
I _N Amps	P _N kW	I _H Amps	P _H kW	
730	710	630	630	F1
850	800	730	710	F1
945	900	850	800	F1
1060	1000	945	900	F2
1260	1200	1060	1000	F2

Dimensions

Frame	Height*		Width		Depth		Weight	
	mm	in	mm	in	mm	in	kg	lbs
F1	2204	86.8	1400	55.1	606	23.9	1004	2214
F2	2204	86.8	1803	71.0	606	23.9	1246	2748

* Includes the 200mm plinth/base



F2 frame shown with option cabinet, which adds 600mm to width and an additional 295 kg (650 lbs.)



AHF Filter

Available options and accessories

- **Modular application options:** plug-and-play cards facilitate drive upgrades, startup and servicing
- **dv/dt filters:** for providing motor insulation protection
- **Sine filters (LC filters):** reduce motor noise
- **Advanced Harmonic Filters:** reduce harmonic distortion in sensitive applications

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Danfoss Drives

Division of Danfoss Inc.
 4401 N. Bell School Rd.
 Loves Park, IL 61111, USA
 Phone: 1.800.432.6367
 1.815.639.8600
 Fax: 1.815.639.8000