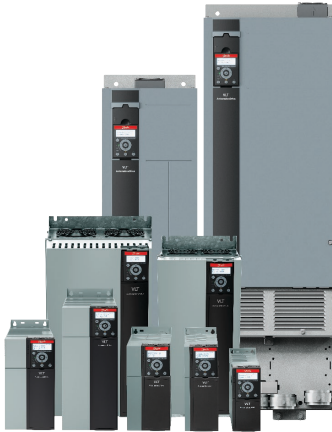


Fact Sheet

# VLT® AutomationDrive FC 360

## High performer in challenging environments



### Dedicated drive for industrial applications in a compact, energy saving package.

The VLT® AutomationDrive FC 360 is a reliable, energy efficient and user-friendly solution placed in a price/performance sweet spot, making it a preferred choice for all customers.

Designed to work in harsh and humid environments, the drive provides reliable operation in industries such as textile, plastic & rubber, metal work, material handling, food & beverage, and building materials.

### The right mix

of features gives you freedom to achieve your system goals

The drive enables precise and efficient motor control of a wide range of industrial applications such as extruders, winders, conveyors, drawing benches, texturizing, pumps, and fans.

The efficient cooling concept ensures there is no forced air over the printed circuit board, which improves reliability. Also, a removable fan makes it possible to clean the inside of the drive quickly and easily, thereby reducing the risk of downtime.

FC 360 reduces initial costs and effort with a wide range of built-in features that simplify installation and commis-

sioning, including an EMC filter, built-in brake chopper up to 22 kW, and a user-friendly LCPs

A built-in DC choke reduces harmonics to 40-48% THD, significantly extending the lifetime of the DC capacitors. Application selection guides enable users to set up common applications with ease.

### Product range

#### 3 x 380-480 V

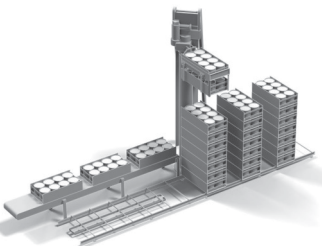
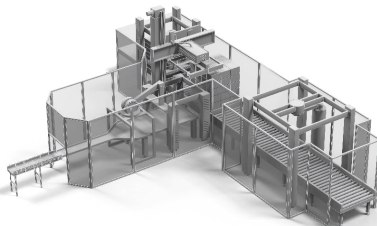
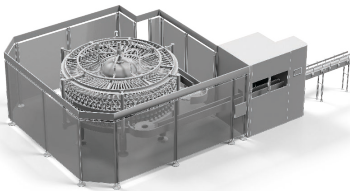
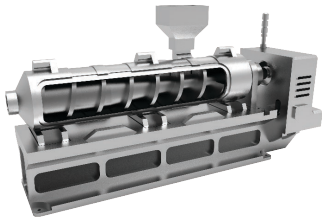
High overload 150% .....0.37-250 kW

Normal overload 110% .....0.37-315 kW

### Enclosure ratings

IP20

Feature	Benefit
<b>Reliable</b>	<b>Maximum uptime</b>
Maximum ambient temperature 55 °C (up to 40-50 °C without derating in normal operation)	Reliable operation in many environments
Coated PCB	Prepared for harsh environments
Unique cooling concept with no forced air flow over electronics	Unequaled robustness – maximum uptime
<b>User friendly</b>	<b>Saves commissioning and operating cost</b>
Enhanced numeric LCP and graphical LCP	Easy setup
Application selection and guidance	Easy commissioning
Removable cooling fan	Fast cleaning and extended lifetime
Integrated DC choke	Small power cables, less harmonics
Built-in EMC filter	Increases reliability and reduces interference with sensitive electronics
24V DC supply option	Guarantee live communication in case power is lost
<b>Versatile</b>	<b>Energy saving</b>
Automatic Energy Optimizer function	Saves 5-15% energy and reduces operation costs
Built-in PID controller	Eliminates external controller
Feed-forward PID	Higher stability for workbench
Kinetic backup	Controlled ramp down at mains fail can reduce material waste
Built-in brake chopper up to 22 kW	Saves panel space and cost (no need to buy external braking chopper)
PM motor control for whole power range	High efficiency
Torque control	Solution for winder applications
Built-in position controller	Saves external position controller
Various control mode, v/f, VVC+, Flux Basic	Fit to different applications



## Specifications

### Main supply (L1, L2, L3)

Supply voltage	J1-J7: 380-480 V -15%/+10% J8-J9: 380-480 V -10%/+10%
Supply frequency	50/60 Hz ±5%
Displacement power factor (cos φ)	> 0.98
Switching on input supply L1, L2, L3	0.37-7.5 kW maximum 2 times/min. 11-315 kW maximum 1 time/min.

### Output data (U, V, W)

Output voltage	0-100% of supply voltage
Output frequency	Induction motor:
	V/F mode: 0-500 Hz
	VVC+ mode: 0-200 Hz
	Flux basic mode: 0-200 Hz
Switching on output	PM motor:
	VVC+ mode: 0-400 Hz
	Flux basic mode: 0-300 Hz
Ramp times	Unlimited 0.01-3600 sec

Note: 150%/110% current can be provided for 1 minute.

Higher overload rating is achieved by oversizing the drive.

### Digital inputs

Programmable digital inputs	7
Changeable to digital output	2 (Terminal 27,29)
Logic	PNP or NPN
Voltage level	0-24 V DC

\* 2 can be used as digital outputs

### Analog inputs

Analogue inputs	2
Modes	Voltage or current
Voltage level	0 to +10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)

### Pulse/encoder inputs

Programmable pulse/encoder inputs	2/1
Voltage level	0-24 V DC (PNP positive logic)

\* Utilize some of the digital inputs

### Digital outputs

Programmable digital/pulse outputs	2
Voltage level at digital/frequency output	0-24 V DC
Max. output current (sink or source)	40 mA

\* Utilize 2 digital inputs

### Analogue output

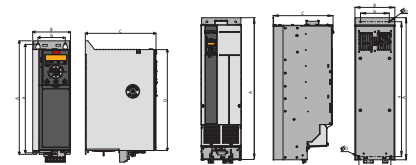
Programmable analogue outputs	2
Current range at analogue output	0/4 – 20 mA

### Relay output

Programmable relay outputs	2
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### Fieldbus communication

Standard built-in	FC Protocol, Modbus RTU
Fieldbus built-in control card variants	PROFIBUS or PROFINET



## Dimensions [mm (in)]

Enclosure size 380-480 V	J1	J2	J3	J4	J5	J6	J7	J8	J9
Power size [kW (hp)]	0.37-2.2 (0.5-3)	3.0-5.5 (4.0-7.5)	7.5 (10)	11-15 (15-20)	18.5-22 (25-30)	30-45 (40-60)	55-90 (75-125)	110-160 (150-250)	200-315 (300-450)
Height A	210 (8.3)	272.5 (10.7)	272.5 (10.7)	317.5 (12.5)	410 (16.1)	515 (20.3)	550 (21.7)	889 (35.0)	1096 (43.1)
Height A <sup>1)</sup>	–	–	–	–	–	–	–	909 (35.8)	1122 (44.2)
Width B	75 (3.0)	90 (3.5)	115 (4.5)	133 (5.2)	150 (5.9)	233 (9.2)	308 (12.1)	250 (9.8)	350 (13.8)
Depth C	168 (6.6)	168 (6.6)	168 (6.6)	245 (9.6)	245 (9.6)	241 (9.5)	323 (12.7)	375 (14.8)	375 (14.8)
Depth C <sup>2)</sup>	173 (6.8)	173 (6.8)	173 (6.8)	250 (9.8)	250 (9.8)	241 (9.5)	323 (12.7)	–	–
D	180 (7.1)	240 (9.4)	240 (9.4)	270 (10.6)	364.7 (14.4)	452 (17.8)	484.5 (19.0)	–	–

<sup>1)</sup> Note: Including decoupling plate. <sup>2)</sup> Note: With option B.