



VLT® Lift Drive LD 302



VLT® Refrigeration Drive FC 103

### VLT® Lift Drive LD 302

Suitable for both traction and hydraulic elevators, the VLT® Lift Drive is operating open or closed-loop systems.

#### Smooth, silent and safe

Absolute safety is standard with all VLT® drive solutions, and comfort is our highest priority. With a high switching frequency, optimized-controlled internal cooling fan and no motor contactors, VLT® Lift Drive ensures a quiet run with low acoustic noise and high reliability.

#### Operate without motor contactors

The embedded Safe Stop function matches safety standards of the conventional two-contactor version for elevators. This patented feature opens up new opportunities, especially for machine roomless lifts.

#### Operation with any typical motor type or brand

Regardless of motor type or brand, static automatic motor adaptation (AMA) enables easy commissioning, without having to remove the ropes from the traction sheaves.

#### Power range

380-400 V.....4-55 kW

#### Fieldbus

DCP    DSP

#### Enclosure

IP00	IP20	IP21/Type 1
	■	■
IP54/Type 12	IP55/Type 12	IP66/Type 4X
	■	

### VLT® Refrigeration Drive FC 103

Dedicated to control compressors, pumps and fans for significant energy savings in refrigeration plants, whilst prolonging the service life of components.

#### Improving COP (Coefficient of performance)

Intelligent power adjustment increases system stability and optimizes the volumetric efficiency of the evaporator, the compressor, and the total refrigeration system. Compressor lifetime is extended by reducing the number of starts and stops, and constantly adapting cooling capacity to the need, thereby maintaining stable temperature.

#### Refrigeration terminology

The use of refrigeration terminology allows quick and easy configuration.

#### AC drive as standard

The combination of speed-controlled and mains-operated compressors enables the design of low-wear and energy-efficient systems.

#### Power range

3 x 200-240 V..... 1.1-45 kW  
 3 x 380-480 V.....1.1-560 kW  
 3 x 525-600 V ..... 1.1-7,5 kW  
 3 x 525-690 V.....75-800 kW

#### Fieldbus

MOD    META  
 AKD    PB    PN

#### Enclosure

IP00	IP20	IP21/Type 1
	■	■
IP54/Type 12	IP55/Type 12	IP66/Type 4X
■	■	■



VLT® AutomationDrive FC 302, VLT® AQUA Drive FC 202 and VLT® HVAC Drive FC 102

### VLT® AutomationDrive FC 302

The VLT® AutomationDrive FC 302 is a modular drive designed to comply with all modern automation application requirements with easy configuration and a broad power range.

#### Safety where it matters

The VLT® AutomationDrive FC 302 features Safe Torque Off as standard. Easily configurable options are available: SS1, SLS, SMS and SSM.

#### Integrated Motion Controller

The Integrated Motion Controller software enables the VLT® AutomationDrive FC 302 to run induction and PM motors in positioning and synchronization applications, both with and without encoders.

#### Harmonic mitigation

Advanced active filter variants reduce harmonics to below 3% at best, and 12-pulse drives provide robust cost-effective harmonics reduction in supply applications.

#### Power range

3 x 200-240 V.....	0.25-37 kW
3 x 380-500 V.....	0.37-1100 kW
3 x 525-600 V.....	0.75-75 kW
3 x 525-690 V.....	1.1-1400 kW

#### Power range - Low harmonic drive

3 x 380-480 V.....	132-450 kW
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#### Power range - 12-pulse drive

3 x 380-500 V.....	250-1000 kW
3 x 525-690 V.....	250-1400 kW

#### Fieldbus

MOD				
DN	CAN	PB	TCP	EIP
ECAT	PN	PL		

#### Enclosure

IP00	IP20	IP21/Type 1
■	■	■
IP54/Type 12	IP55/Type 12	IP66/Type 4X
■	■	■

### VLT® AQUA Drive FC 202

The VLT® AQUA Drive FC 202 drives and controls all types of pumps. In addition to the widely used centrifugal pumps (quadratic load torque), the VLT® AQUA Drive FC 202 is ideal for displacement pumps or eccentric screw pumps (constant load torque).

#### Focusing on water and pumps

Dedicated functions such as burst pipe monitoring, dry-running protection and flow compensation secure and empower your pumping application independent of the motor technology.

#### Cascade controller as standard

The cascade controller connects or disconnects pumps as necessary and according to specified limits. It also enables master/follower operation. Extended functionality is available via an option.

#### Power range

1 x 200-240 V.....	1.1-22 kW
1 x 380-480 V.....	7.5-37 kW
3 x 200-240 V.....	0.25-45 kW
3 x 380-480 V.....	0.37-1000 kW
3 x 525-600 V.....	0.75-90 kW
3 x 525-690 V.....	1.1-1400 kW

#### Power range - Low harmonic drive

3 x 380-480 V.....	132-450 kW
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#### Power range - 12-pulse drive

3 x 380-500 V.....	250-1000 kW
3 x 525-690 V.....	250-1400 kW

#### Fieldbus

MOD				
PN	DN	PB	TCP	EIP

#### Enclosure

IP00	IP20	IP21/Type 1
■	■	■
IP54/Type 12	IP55/Type 12	IP66/Type 4X
■	■	■

### VLT® HVAC Drive FC 102

Enhanced intelligent fan and pump control for modern buildings. This drive solves extreme climate challenges, and gives you flexibility in installation, motor choice, and bus connectivity.

#### HVAC Inside

The VLT® HVAC Drive FC 102 delivers smart control for building automation, with abilities like reliable -25°C operability and remote control from outside the AHU.

#### Optimal EMC protection

Standard integrated chokes and high-quality RFI filters ensure interference-free operation at all times.

#### EC+

The intelligent VVC+ control principle enables the use of permanent magnet motors or synchronous reluctance motors with efficiency equal to or better than EC technology.

#### Power range

3 x 200-240 V.....	1.1-45 kW
3 x 380-480 V.....	1.1-1000 kW
3 x 525-600 V.....	1.1-90 kW
3 x 525-690 V.....	1.1-1400 kW

#### Power range - Low harmonic drive

3 x 380-480 V.....	160-710 kW
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#### Power range - 12-pulse drive

3 x 380-500 V.....	315-1000 kW
3 x 525-690 V.....	450-1400 kW

#### Fieldbus

MOD				
DN	LON	BAC	TCP	EIP
PB	PN	BIP		

#### Enclosure

IP00	IP20	IP21/Type 1
■	■	■
IP54/Type 12	IP55/Type 12	IP66/Type 4X
■	■	■