

ENGINEERING
TOMORROW

Danfoss

Product Overview

Danfoss Drives

– for your applications

Quality

application-
optimized
products, which
target your needs



www.danfossdrives.com

iC7 | iC2
VLT® | VAGON®

iC7 series

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Communications functionality

This legend indicates the communication interface and fieldbus protocol functionality which is specific to each product. For details, please refer to the individual product brochures.

Integrated

BAC	BACnet, MS/TP
ASi	AS interface
META	JCI Metasys N2
MOD	Modbus RTU
FLN	Siemens FLN P1
BIP	BACnet IP

Optional

PB	PROFIBUS DP V1
PN	PROFINET RT
PL	Powerlink
DN	DeviceNet
CAN	CANopen
AKD	LONworks for AKD
LON	LonWorks
BAC	BACnet (MSTP)
TCP	Modbus TCP
EIP	EtherNet/IP
ECAT	EtherCAT
DCP	DCP 3/4
DSP	CANopen DSP 417
BIP	BACnet IP
ASi	AS interface



True system independence

System independence

When it comes to optimizing system efficiency to meet your needs exactly, the right components are vital. Whether it's a particular vendor, certain motor technology or a standardized way to communicate, Danfoss Drives can provide the right AC drive to meet your specific needs. You'll always get the most flexible VLT®, VACON®, iC7 or iC2 drive adapted to:

- Meet the unique requirements of your applications
- Operate at peak performance
- Optimize efficiency

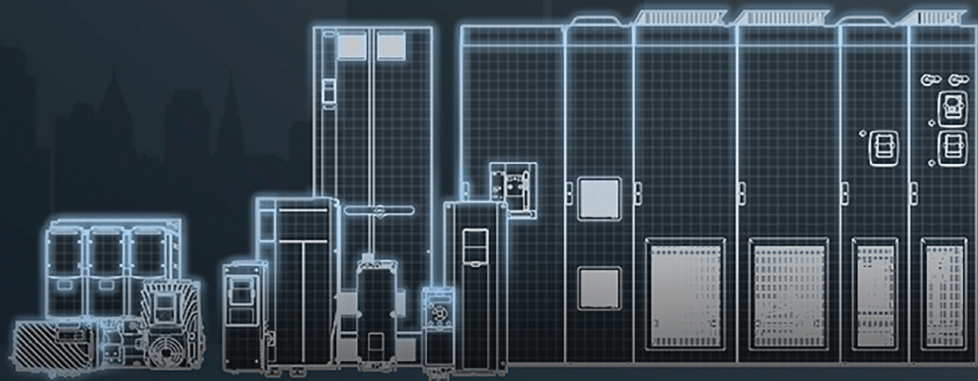
When you have the freedom to select the optimal components for your system, a potential energy saving of up to 60% is possible.

Fieldbus independence

One other important aspect of any system is the ability to efficiently communicate over standard interfaces such as PROFINET or EtherNet/IP in industrial applications or BACnet/IP in building automation applications. Regardless of your application or your preferred communication protocol, iC7, iC2, VLT® and VACON® drives have an extremely wide variety of communication protocols to select from. In this way you can ensure that the AC drive integrates seamlessly into your chosen system. The control system attains optimal efficiency while also reducing costs related to training, commissioning and maintenance.

Motor independence

With increasingly stringent demands on motor efficiency, traditional induction motors cannot always comply. New motor technologies therefore continue to emerge, extending both full-load and part-load efficiency. The unique requirements of these newer motor technologies – such as permanent magnet (PM) motors and synchronous reluctance (SynRM) motors – also demand special motor control algorithms within the AC drive. iC7, iC2, VLT® and VACON® drives have the built-in capabilities to control whatever motor technology your application requires, at optimum efficiency. The required performance of your system is always available exactly when you need it.



Do It **Differently**

At Danfoss Drives, we focus on AC drives. It's what we do best, and it helps you to focus on what you do best.

To ensure you engineer the best possible AC-drive solutions without compromises, and find the optimum outcome for your challenges, we give you the freedom to optimize your systems, the power to equip your drives and the choice to collaborate with your drives partner differently.

You decide the best equipment for your application, we'll make sure the AC drive fits that choice and support you every step along the way.

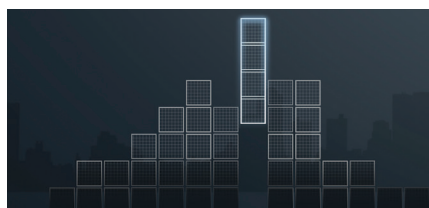


Optimize differently

You have the freedom to optimize and create the system that suits your application best. Whether off the shelf or purpose built, we provide all the support and software necessary so that you can tailor your drive so that its form, fit and function meet your needs exactly.

We offer:

- The widest portfolio of AC drives
- Fast, simple tools for customization
- Programmable drives and special software
- DrivePro® service and maintenance support

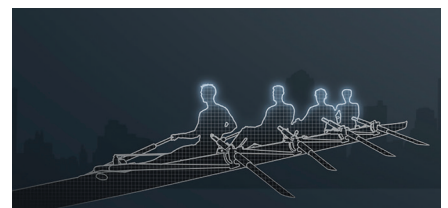


Equip differently

Choosing a Danfoss AC drive gives you the power to configure, modify and combine it with any motor type PLC and fieldbus. This allows you to match the drive to your specific application and to ensure you get the best mix of efficiency, speed and torque.

We offer:

- Compliance with the motor you need
- Compliance with the fieldbus you need
- Outstanding harmonic solutions expertise
- Innovation in energy storage projects



Collaborate differently

Choosing a Danfoss AC drive means selecting a vendor who goes the extra mile, who truly values your success and who works with you on your terms. To give you the power to engineer the optimal solution, we place a high emphasis on speed and agility in all areas of our operation.

We offer:

- Independence and 100% drives expertise
- A non-competitive relationship with you on system solutions
- Global presence and local support



Need flexibility to create more competitive systems?

The iC7 series of intelligent AC drives puts the power of compactness and integrated intelligence in your hands, so you can boost machine performance in new ways.

With the best heat management available anywhere, this drive delivers high torque performance in a small footprint, so you can get much more power into small spaces.

Integrated intelligence enables the drive to function as your most powerful sensor meaning you can regulate your process highly efficiently, saving money by reducing external devices.

For quick and trouble-free system integration the frequency converter comes with built-in EMC and harmonic filters.

Manage your process data in the cloud or your internal network with world-class stringent security.

You get full data traceability with end-to-end integrated digitized quality control throughout the drive lifetime from design and testing through to installation and service.

Frequency converters in the iC7 series are optimized for wall-mounted, cabinet mounted or free-standing installation, and meet requirements for operation at ambient temperatures up to 140 °F.



iC7-Automation Frequency Converter

The iC7 drive is configured and delivered to meet your exact requirements, saving expensive installation time. Everything can be integrated: EMC and harmonic filter, brake chopper and DC terminals. Fuse and disconnect are also available built-in, for IP21/UL Type 1 and IP54/ UL Type 12 enclosures (IP21 and IP54 are available on Frame Size 9-12. Frame Size 6-8 IP 21). Control is highly configurable and preconfigured at the factory or can easily be upgraded in the field.

Compact side-by-side mounting

Save space and reduce installation costs.

Compact bookshelf design reduce footprint and isolated cooling channel minimizes required installation space

Reduce space requirements and air-conditioning load.

Integrated options such as functional extensions, common-mode filters, fuses and disconnects mean no extra external devices are required

Save cost and time in installation.

Installer-friendly design includes pluggable control terminals, pluggable power terminals, and replaceable fans

Save cost and time in installation and service.

Robust by design, high uptime and quality

Reliable in heavy-duty service.

Power range

380-500 V AC (-15%...+10%)
0.5 - 850* HP (0.37 - 630kW) High Overload

iC7-Automation Air-cooled System Modules

iC7-Automation Air-cooled system modules deliver high torque performance in an ultra compact format. These modules give you a unique advantage in optimizing installation footprint, speeding up integration, and reducing costs more than you dreamed possible.

Efficient heat management

Heat pipe technology and segregated main cooling channel (back-channel cooling). Compact size enables you to pack more power into the space available.

Paralleling of 3-phase modules with no output filter required

Modular and scalable solutions for high powers and simplified spare unit handling.

Lightweight

Fast integration and serviceability.
High vibration robustness.

Optional integration unit for output filter integration, enabling back channel cooling

The compact size enables you to pack more power into the space available and benefit from a fast integration.

Pull-out of power unit without removing motor or mains cables, included with integration unit

Fast integration and serviceability.

AuxBus internal network for temperature monitoring of filters

Exceptional reliability and robustness for increased uptime.

Segregated IP54 cooling channel and dedicated PCB area

Extremely reliable in heavy-duty service, for increased uptime.

Power range

3 x 380-500 V AC (-15%...+10%)
250 - 2900 HP* High Overload
*Typical motor power at 460 volts



iC7-Marine Liquid-Cooled System Modules

Enter a new dimension of opportunities with this ultra-compact drive. As well as high power density, iC7-Marine gives you a powerful combination of intelligence and shaft performance, ready for the most challenging of applications.

iC7-Marine is equipped with a world-class IoT security approach that enables you to future-proof your system for the decades ahead.

Enjoy unparalleled performance and ease of system integration: for propulsion, thrusters, winches and more.

Robust thanks to high quality design

Vibration and shock resistant aluminium frame with IP55 protected electronics compartment. Ensure a peace of mind even in unpredictable conditions.

Output filters and fuses integrate neatly below the power module

Reduced footprint and reduced cost of integration and service. The integration unit saves up to 50% in space and reduce integration time significantly.

Performs reliably at high ambient and coolant temperature

High uptime in harsh environments.

Power range

Voltage Class B5: 3 x 380-500 V AC 120 to 2950 HP* High Overload

*Typical motor power for a 500V input

Voltage Class 07: 3 x 525-690 V AC 120 to 6165 HP* High Overload

*Typical motor power for a 690V input.

iC7-Hybrid Liquid-Cooled System Modules

The future is electric, and the iC7-Hybrid is your ticket to join the energy transition. This intelligent converter is the most competitive choice for system integrators and OEMs to build clean energy systems. Tap into energy savings with hybrid and pure electric solutions in marine power conversion. Or decarbonize in onshore smart grid applications such as energy storage, shore supply, fast charging, and hydrogen electrolysis (P2X).

Ultra-fast power conversion control

Fast control loops can handle rapid power system dynamics and enable you to use new control schemes. The iC7-Hybrid converter transitions smoothly between multiple control modes during operation, enabling easy power management.

Secure-by-design

Your converter is equipped with market-leading hardware-based protection against unauthorized access with a built-in crypto chip on the control unit. Access and transfer data securely via cloud. Tamper-proof hardware protects your intellectual property for customized software. Encrypted connectivity means you can connect with confidence to your PC tools.

Simulation reduces time to market

Remove the constraints of the physical environment and open up new opportunities using iC7 simulation models which perfectly mirror the converter or drive. You can predict performance, test scenarios, streamline commissioning, and collaborate across teams and locations in an open environment. Reliably validate interoperability of systems, using high-fidelity hardware-in-the-loop (HIL) simulation support from Danfoss.

Power range

Voltage Class B5: 3 x 380-500 V AC 227 to 2547 KVA*

*Typical apparent power for a 690V input.

Voltage Class 07: 3 x 525-690 V AC 283 to 6872 KVA*

*Typical apparent power for a 690V input.



MyDrive® Portfolio App

Performance that pays off.

More compact and intelligent than other micro drives, the iC2-Micro is a great retrofit option for the VLT® Micro Drive FC 51. This reliable and durable drive is even easier to use and install. You can reduce system complexity and cost whilst maintaining full performance.

This drive gives you excellent motor control and mechanical brake performance. New features include torque open loop control, locked motor detection, permanent magnet motor control, built-in control panel and, of course, connectivity with our MyDrive® Suite digital tools.

iC2-Micro

This quality general purpose drive is a perfect match for a wide range of applications. iC2-Micro performs with unsurpassed reliability even in complex applications. It gives you user-friendliness, condensed functionality, and easy commissioning, all in a powerful compact package.

Your choice of motor

iC2-Micro is compatible with the motor of your choice, so you can put together the best system for your application. iC2 Micro is compatible and ready to optimize Induction Motors (IM), Permanent Magnet Motors (PM), both Surface mount PM and Line-Start PM with buried magnets.

Highly integrated design

iC2-Micro contains an integrated control panel, potentiometer, RFI filter, brake chopper, and intelligent cooling to reduce the need for external components.

Easy to retrofit

Designed to smoothly replace VLT® Micro Drive FC 51 in established plants.

Flexible choice of EMC performance

Available in two versions, with and without RFI filter.

Remote control panel

An optional remote control panel provides extra functionalities:

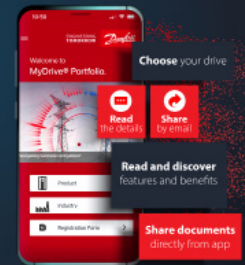
- 2.0" monochrome display
- Multi-language support
- Parameter copy and download
- Easy connection with RJ45 port
- Remote mounting kit

Digital tools

iC2-Micro is supported by powerful PC tools which help you select and commission the drive easily.

Power range

- 1 x 200-240 V ... 0.37-2.2 kW
- 3 x 380-480 V ... 0.37-22 kW
- 1 x 100-120 V ... 0.37-1.1 kW
- 3 x 200-240 V ... 0.37-11 kW1



MyDrive® Portfolio App for North America now available!

Exclusive offer for US and Canada.

Register your Danfoss Drives to receive a free 12 month extension of your existing warranty.

Safeguard your investment.

Investing in the future of your operations starts with securing your systems. Download or update to the latest version of the MyDrive® Portfolio App which includes a special offer for customers in the US or Canada — Register your Danfoss Variable Frequency Drives (VFD) and see if you qualify for a FREE 12-month extension of your warranty.

Enjoy the peace of mind you can only get from DrivePro® Lifecycle Services—a commitment to help extend the life and performance of your equipment.

All Drives must be currently covered by an active Danfoss Drive warranty to qualify for the extension. Registration submissions must include the company name, email address, and phone number for where the drives are installed.



Low power drives



VLT® Midi Drive FC 280

VLT® drives position you at the forefront of the energy-efficiency race. Outmaneuvering other precision drives, they excel, with remarkable fit, functionality and diverse connectivity.

VLT® drives play a key role in the rapid urbanization through an uninterrupted cold chain fresh food supply building comfort, clean water and environmental protection. Benefit from the universally-compatible VLT® effectiveness where ease of use unites seamlessly with high precision, synchronization and speed. You achieve servo-like performance with rationalized elegance, free of complexity.

Secure long-term economic benefits with documented low system-lifetime cost. VLT® drives consistently deliver, whether in Food and Beverage, Water and Wastewater, HVAC, Refrigeration, Material Handling, or Textile applications.

The steadfast longevity of VLT® drives is directly attributable to world-class quality assurance placing VLT® drives right at the sharp end. The sharp end of global resource management and factory automation.

VLT® Midi Drive FC 280

The VLT® Midi Drive delivers flexible and efficient motor control for use in a wide variety of of automation and machine building applications.

Flexible. Communicative.

This medium power-range drive is strong on control performance, functional safety, and flexible fieldbus communication. Integrated functionality such as DC choke, RFI filter, Safe Torque Off (STO), and brake chopper saves you from finding space and budget to install extra components.

Easy retrofit

VLT Midi Drive is prepared for compatibility with the VLT® 2800. Its exterior dimensions, cable plugs, cable lengths, and set-up software tools enable easy retrofit in established plant or machinery concepts.

Easy to use

A USB port provides easy PC connectivity. The VLT® Memory Module MCM 102 option facilitates fast implementation of factory settings, and transfer of settings during retrofit.

Power range

- 1 x 200-240 V 1/2 to 3 HP (0.37-2.2 kW)
- 3 x 200-240 V 1/2 to 5 HP (0.37-3.7 kW)
- 3 x 380-480 V 1/2 to 30 HP (0.37-2.2 kW)

Fieldbus

MOD				
PB	PN	CAN	EIP	PL
ECAT				

Enclosure

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

Dedicated VLT® Drives

Use of the AHRI Certified™ mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org



VLT® HVAC Basic FC 101



VLT® HVAC Drive FC 102



VLT® Refrigeration Drive FC 103

VLT® HVAC Basic Drive FC 101

Optimized for basic operation of pumps and fans, the variable torque AHRI Certified™ VLT® HVAC Basic Drive has built-in HVAC functions that reduce initial costs and increase productivity.

The FC101 is part of the Danfoss 2-tier strategy leaving the product available to OEM HVAC accounts only.

Features

- Integrated fan, pump functionality
- Fire Override Mode for enhanced safety
- Automatic Energy Optimizer function Saves 5 – 25% energy
- Unique cooling concept with no forced air flow over electronics
- Built-in DC coils – reduces harmonic distortions
- Category C1 filters: meets protection Class C1 and C2

Power range

3 x 200-240 V 1/3 to 60 HP (0.25-45 kW)
 3 x 380-480 V 1/2 to 125 HP (0.37-90 kW)
 3 x 525-600 V 5 to 125 HP (3.7-90 kW)



Fieldbus

MOD	META	BAC	FC	FLN
-----	------	-----	----	-----

Enclosure

IP00	IP20	UL Type 1
	■	■ (with kit)
IP54	IP55/Type 12	IP66
■ (480 V)		

VLT® HVAC Drive FC 102

The ideal choice for fan and pump applications in modern buildings. The AHRI Certified™ FC 102 HVAC Drive offers maximum flexibility in installation, bus connections and control intelligence.

HVAC Inside

The drive is specially engineered for building automation with intelligent HVAC functions.

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

1 x 200-240V 1 1/2 to 30 HP (1.1 - 22 kW)
 3 x 200-240V 1 1/2 to 60 HP (1.1 - 45 kW)
 3 x 380-480V 1 1/2 to 1350 HP (1.1 - 1000 kW)
 3 x 525-600V 1 1/2 to 1550 HP (1.1 - 1400 kW)
 3 x 525-690V 1.1-1400 kW
 With 110% overload torque



Fieldbus

MOD	META	BAC	FLN	FC
DN	LON	BAC	TCP	EIP
PB	PN	BIP		

Enclosure

IP00	IP20	IP21/Type 1
■	■	■
IP54 & IP55/Type 12	Type 3R	IP66/Type 4X
■	■	■

VLT® Refrigeration Drive FC 103

A variable torque drive specialized for control of compressors, pumps and fans for significant energy savings in refrigerating 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.

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 200-240V 1 1/2 to 60 HP (1.1 - 45 kW)
 3 x 380-480V 1 1/2 to 1350 HP (1.1 - 1000 kW)
 3 x 525-600V 1 1/2 to 1550 HP (1.1 - 1400 kW)
 With 110% overload torque

Fieldbus

MOD
AKD PB PN

Enclosure

IP20	IP21/Type 1	IP54/Type 12
	■	■
IP55/Type 12	Type 3R	IP66/Type 4X
■	■	■



VLT® AutomationDrive FC 302, VLT® AutomationDrive EZ FC 321, and VLT® AQUA Drive FC 202

VLT® AutomationDrive FC 302

The VLT® AutomationDrive 302 is a variable speed drive that comes in standard and advanced versions, with both offering optimized energy efficiency, flexibility, and process control in a user-friendly package

Built-In PID Controllers

PID controllers enable the drive to adjust motor speed to regulate pressure, flow, temperature or other system requirements, eliminating the need for auxiliary control devices.

Easy PLC Integration

VLT® drives offer easy PLC integration with support for major industrial Ethernet and fieldbus protocols. Function blocks ensure such communication is seamless and reliable.

IMC

Simplify complex motion control, enabling high-precision positioning and synchronization with or without encoder feedback to reduce system complexity and commissioning costs.

Power Range (FC 302)

3 x 200-240V... 0.33 to 50 HP (0.25 - 37 kW)
 3 x 380-500V... 1/2 to 1200 HP (0.37 - 800 kW)
 3 x 525-600V... 1 to 1350 HP (0.75 - 1000 kW)
 3 x 525-690V... 1.1 to 1200 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® AutomationDrive EZ FC 321

The new Danfoss VLT® AutomationDrive EZ FC 321 provides variable speed control of all asynchronous and permanent magnet motors, on any industrial machine or production line, and is packed with standard features right off the shelf with no special configuration or customization required.

Advanced Automatic Motor Adaption

The VLT® AutomationDrive EZ will automatically adapt to the motor to ensure supremely efficient motor performance, no matter which brand or type of motor technology you choose for your facility.

Dual rated to minimize inventory

Dual rated for both constant torque (CT) / high overload (HO) and variable torque (VT) / normal overload (NO) applications.

Power Range (FC EZ 321)

3 x 200 - 240V 0.33 to 120HP
 3 x 380 - 500V 0.5 to 250HP
 3 x 525 - 600V 1 to 125HP
 3 x 525 - 690V to 200HP

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 200-240V... 1 1/2 to 30 HP (1.1 - 22 kW)
 1 x 380-480V... 10 to 50 HP (7.5 - 37 kW)
 3 x 200-240V... 3 to 60 HP (0.25 - 45 kW)
 3 x 380-480V 1/2 to 1350 HP (0.37 - 1000 kW)
 3 x 525-600V... 1 to 1550 HP (0.75 - 1200 kW)
 3 x 525-690V... 1.1-1400 kW with 110% Normal Overload

Fieldbus

MOD		FC		
PN	DN	PB	TCP	EIP

Enclosure

IP00	IP20	IP21/Type 1
■	■	■
IP54 & IP55/Type 12	Type 3R	IP66/Type 4X
■	■	■

VLT[®] power options



Danfoss Advanced Active Filter AAF 007



VLT[®] Sine-Wave Filters



VLT[®] dV/dt Filters and VLT[®] Common Mode Filter

Danfoss Advanced Active Filter AAF 007

The Danfoss Advanced Active Filter AAF 007 is designed to reduce harmonic distortion of Danfoss drives. The newest generation SiC switches give unmatched high efficiency and effective elimination of high-order harmonics. The filter is compatible for use with any drive from the entire Danfoss product portfolio.

Plug and play

The VLT[®] Advanced Active Filter is configured for most applications upon leaving the factory.

Versatile

Use the individually adjustable compensation modes for adaptation to suit specific requirements.

Setup software

VLT[®] Advanced Active Filter supporting central, individual or group compensation.

Retrofit without removing existing installation

380-480 V..... 35 - 440 A
Up to 8 units can be paralleled for higher power

Flexible

VLT[®] Advanced Active Filter supporting central, individual or group compensation.

Power range

3 x 380-480 V AC..... 35 & 55 A modules
Maximum 440 A with 8 modules mounted in parallel.

Enclosure (side-by-side mounting)

IP00	IP20 (35A-600A)	IP21/Type 1
	■	
IP54 (100A-600A)	IP55/Type 12	IP66/Type 4X
■		

VLT[®] MCC 101 Sine-wave Filter

This output sine filter is available for Extra-Long motor lead applications and in situations where the output voltage is required to be a more pure sine-wave. Output sine filters can be challenging to implement and may cause performance issues if not done properly. Please contact our Application Engineering team before attempting to employ any sine filter.

For critical motors

Use the filter especially for AC drive operation of older motors, low permitted voltages in terminal boxes or without phase insulation.

Long motor cables

Enable use of motor cables with a length of 500 m and more, using a sine-wave filter.

Power range

3 x 200 – 500 V, 2.5 – 800 A
3 x 525 – 690 V, 4.5 – 660 A

Enclosure

IP00	IP20	IP23
■	■*	■**
IP54/Type 12	IP55/Type 12	IP66/Type 4X

* wall-mounted enclosure up to 75 A (500V)/45 A (690V)

** floor-standing enclosure from 115 A (500V)/76 A (690V)

VLT[®] dV/dt Filters

VLT[®] dV/dt Filters reduce the rate of voltage rise on the motor terminals and protect old or weak motor insulation against breakdown. This is particularly important for short motor cables.

Retrofit

Retrofit is easy in older systems or motors.

Compact

These filters are smaller, lighter and more affordable, compared to sine-wave filters.

Power range

3 x 200 – 690 V (up to 880 A)

Enclosure

IP00	IP20/23	IP21/Type 1
■	■	
IP54/Type 12	IP55/Type 12	IP66/Type 4X
■ up to 177 A		

VLT[®] Common Mode Filter

High-frequency common mode cores reduce electromagnetic interference and protect against bearing currents.

Wide coverage

Just five sizes cover the Danfoss FC series drives from A thru F frames.

Combinable

The filters can be combined with other output filters.

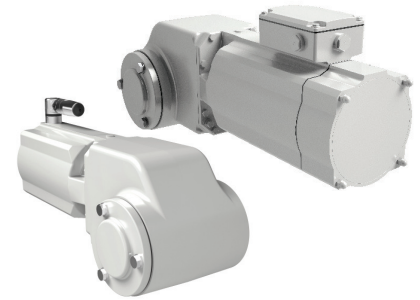
VLT® decentral drives



VLT® Decentral Drive FCD 302



VLT® DriveMotor FCP 106



VLT® OneGearDrive®

VLT® Decentral Drive FCD 302

This decentral drive in a rugged design offers a high degree of flexibility and functionality. It can be mounted close to the motor and is ideal for demanding applications.

One-box concept

Integrated two pc design (drive and Installation Box) house all required modules into one single housing. Integrated service switch and Safe Torque Off (STO) function available.

Minimizing installation costs

Fewer external components and connectors save installation, assembly and maintenance time. Integrated power and fieldbus looping reduces installation cost.

Hygienic design

The VLT® Decentral Drive FCD 302 complies with all requirements for ease of cleaning and hygienic design according to EHEDG (European Hygienic Engineering & Design Group).

Power range

3 x 380-480 V 1/2 to 4 HP (0.37-3 kW)

Fieldbus

MOD				
PN	EIP	PB	PL	ECAT

Enclosure

IP 00	IP20	IP21/Type 1
IP54/Type 12	IP55/Type 12	IP66/Type 4X

VLT® DriveMotor FCP 106

For full flexibility in motor choice, system design and energy efficiency, choose your own PM or induction motor and attach the standalone VLT® DriveMotor FCP 106.

Easy to install

Installation is simple due to the integrated cooling system and an individually adjustable motor adapter plate.

High performance

The standalone VLT® DriveMotor FCP 106 provides you with a high level of flexibility and stable, energy-efficient operation as the drive automatically sets the optimal parameters for the attached motor.

Power range

3 x 380-480 V 0.75 to 10 HP (.55 - 7.5 kW)
(with 110% overload torque)
3 x 380-480 V 0.75 to 7.5 HP (.55 - 5.5 kW)
(with 160% overload torque)

Fieldbus

MOD	BAC	FC
PB		

Enclosure

IP00	IP20	IP21/Type 1
IP54/UL Type 3R	IP55/Type 12	IP66/Type 4X

VLT® OneGearDrive®

The highly efficient combination of a permanent magnet motor and optimized bevel gearing, powered by a central or decentral VLT® drive, contributes significantly to operating and maintenance cost savings.

Long service intervals

VLT® OneGearDrive® operating under partial load does not require an oil change until after 35,000 operating hours.

Fewer variants

With only one motor type and three gear ratios available, the motor concept covers most typical conveyor drives.

Hygienic version

Use it with confidence in wet areas including aseptic areas and clean room production areas.

Power range

380-400 V 1 to 4 HP (.75 - 3 kW)

Enclosure

IP00	IP20	IP21/Type 1
IP54/Type 12	IP67/IP 69K	IP65/IP 67

*OGD-H version
** OGD-S version

Enclosed VLT® drives



VLT® Traditional Bypass Panels



VLT® Traditional Bypass Panel NEMA Type 3R



VLT® Vertical Bypass Panels



PHD-102

VLT® Traditional Bypass Panels

Danfoss Traditional Bypass Panels are known for their product quality and premium design standards. With this quality comes a wide array of choices among our standard base products, insuring you can have your Danfoss drive panel your way.

Drive features and options

Danfoss bypass panels are built to UL508 and UL508A standards and most have been seismically certified and OSHPD pre-approved. Disconnects include fused, or circuit breaker. We utilize Class 20 overloads in the bypass and 24V control for all but the largest sizes. The panels are available in Electronic or Electromechanical bypass and feature our premium VLT® HVAC or AQUA drive. Bypass options include 2 contactor with optional drive disconnect or 3 contactor.

Power Range

Normal Overload

- 3 x 208-240 V0.5 to 150 HP (.37 - 110 kW)
- 3 x 480 V0.5 to 350 HP (.37 - 250 kW)
- 3 x 600 V0.5 to 400 HP (.37 - 300 kW)

Fieldbus

MOD	META	BAC	FLN	FC
DN	LON	BAC	TCP	EIP
PB	PN	BIP		

Enclosure

IP00	IP20	IP21/Type 1
		■
IP54/Type 12	Type 3R	IP66/Type 4X
■	■	

VLT® Vertical Bypass Panel

The Vertical Panel design gives the installer and drive user a reduced horizontal footprint to make better use of available wall space. Engineered panels are available in a variety of configurations with user-specified options to best match individual application requirements.

Drive features and options

The Vertical Panels utilize the same features and options as the Traditional panels but is built in a subset of the Traditional panel sizes. It is available in a 3 contactor bypass design.

Power range

- 3 x 208-240 V 7.5 to 60 HP (5.5 - 45 kW)
- 3 x 480 V 15 to 125 HP (11 - 90 kW)
- 3 x 600 V 15 to 125 HP (11 - 90 kW)

Fieldbus

MOD	META	BAC	FLN	FC
DN	LON	BAC	TCP	EIP
PB	PN	BIP		

Enclosure

IP00	IP20	IP21/Type 1
		■
IP54/Type 12	Type 3R	IP66/Type 4X
■	■	

Preferred Harmonic Design (PHD)

The VLT® PHD-102 for HVAC applications are full-featured, dedicated drive solutions when conformance to IEEE-519 is required, even at the drive terminals. This design has excellent partial load performance often maintaining 5% THiD down to 50% load and outperforms multi-pulse, AFE, and competitive passive filter solutions. The PHD-102 has an array of functions developed to meet the diverse needs of HVAC applications, and are the most efficient solution to address growing harmonic concerns in the HVAC industries.

Panel features and options

Include non-bypass, 3 contactor bypass with either a fused or circuit breaker disconnect.

OSHPD pre approval is a result of testing that can place these products in any floor of any building in the United States.

Power range

- 3 x 460 V 1.5 to 600 HP (1.1 - 673 kW)
- 3 x 575 V 1.5 to 650 HP (1.1 - 600 kW) (Normal Overload)

Enclosure

IP00	IP20	IP21/Type 1
		■
IP54/Type 12	Type 3R	IP66/Type 4X
■	■	

VLT® Multi-pulse Drive Panels

Danfoss can offer Multi-Pulse Drive Panels as a low harmonic solution to meet specific industry requirements.

Please contact our Inside Sales Team.

VLT® Soft starters



VLT® Soft Start Controller MCD 100



VLT® Soft Starter MCD 600

VLT® Soft Start Controller MCD 100

The compact soft starter series is a cost-effective alternative to traditional contactors and can also replace star/delta combinations. The ramp time and the starting torque and kick start are adjusted via controls on the front of the unit.

Almost unlimited number of motor starts

For a power rating of up to 25 A, up to 480 starts per hour are possible. This is a true “fit and forget” soft starter for DIN rail mount. The unique contactor design allows an almost unlimited number of starts per hour without derating.

Technical data

Control voltage.....24-480 V AC or DC
Power 0.1-11 kW (25 A)

Power range 208- 600 V

MCD 100-001..... 2 HP
MCD 100-007..... 10 HP
MCD 100-011..... 15 HP

Enclosure

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

VLT® Compact Starter MCD 200

While the basic and the starting torque VLT® Compact Starter MCD 201 version is only used for motor starting, the extended VLT® Compact Starter MCD 202 version offers additional motor protection functions. These include, for example, current limitation during motor starting.

Built-in bypass

After the motor is started, the MCD 200 automatically connects the motor to the mains supply via the built-in bypass relay. This minimizes losses during operation under full load.

Technical data

Control voltage 24 V AC or DC/110-440 V AC
3 x 200-575 V 10 to 150 HP 7.5-110 kW (200 A)

Fieldbus

PB	DN	MOD
----	----	-----

Enclosure

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

VLT® Soft Starter MCD 600

The VLT® Soft Starter MCD 600 delivers an increased level of intelligence for superior performance in fixed-speed applications.

Fast and flexible installation

The MCD 600 is more flexible than ever to install, thanks to a wide variety of Ethernet and serial-based communication option cards, application-dedicated smart cards and support for eight languages.

Pump Clean / reverse function

The pump clean function uses reverse operation. Motor control is simple, with soft ramps in both directions.

More uptime

Ease of use is in focus with features such as the pump-clean function, PowerThrough operation, and calendar or run time-based scheduling. More extensive motor and starter protections ensure more uptime.

Technical data

Input.....3 x 200-690 V
Control voltage.....24 V DC or 110-240 V AC
Current range IP20..... 20-129 A
Current range IP00..... 144-579 A

Fieldbus

PB	DN	MOD	EIP
----	----	-----	-----

Enclosure

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

VLT® Software

VLT® Motion Control Tool MCT 10

VLT® Motion Control Tool MCT 10 is a windows-based engineering tool with a clearly structured interface that provides an instant overview of all the AC drives in a system of any size. The software runs under Windows and enables data exchange over a traditional RS485 interface, fieldbus (PROFIBUS, Ethernet, or other) or via USB.

Parameter configuration is possible both online on a connected drive and offline in the tool itself. Additional documentation, such as electrical diagrams or operating manuals, can be embedded in VLT® Motion Control Tool MCT 10. This reduces the risk of incorrect configuration while offering fast access to troubleshooting.

VLT® Energy Box

Calculate the energy consumption of HVAC applications controlled by VLT® drives and compare this with alternative - and less energy efficient methods of air flow control.

Using VLT® Energy Box it is easy to evaluate and document the savings achieved by using a VLT® HVAC Drive by comparison with other types of capacity control systems - for new installations as well as retrofit situations.

VLT® Motion Control Tool MCT 31

This software is designed to quickly assess the loads placed on the system by AC drives in the planning phase. This allows suitable measures to be taken to correct the system harmonics in advance.

VLT® Motion Control Tool MCT 31 calculates system harmonic distortion for both Danfoss and non-Danfoss AC drives, and calculates the effects of using various harmonic mitigation measures, including Danfoss harmonic filters.

Use VLT® Motion Control Tool MCT 31 in the planning phase to determine whether harmonics will be an issue in your installation, and if so, which strategy is most cost-effective in addressing the problem.



Full power range and dedicated VACON® drives



VACON® 100 INDUSTRIAL and VACON® 100 FLOW

Combine innovation and high durability for the sustainable industries of tomorrow.

For long lifetime, top performance, and full-throttle process throughput, equip your demanding process industries and marine applications with VACON® single or system drives.

Reduce emissions and increase fuel efficiency through trailblazing innovation in hybridization trends. Manage heat intelligently, and win focus, with functionalities dedicated to your industry alone. Connect rapidly and program with exceptional flexibility.

All these abilities mean VACON® drives form the robust foundation for optimization in harsh environments.

Whether in Marine and Offshore, Oil and Gas, Metals, Mining and Minerals, Pulp and Paper, Renewable Energy, or other heavy-duty industries, VACON® drives meet the challenge.

Tune total operational cost and cut capital expenditure thanks to compact size and lower air-conditioning load. Of course uncompromising reliability is a constant.

The exceptional VACON® range is continuously advancing, with rigorous application-optimized innovation, ready to be put to work.

VACON® 100 INDUSTRIAL

The VACON® 100 INDUSTRIAL is a workhorse for a wide range of industrial applications. It is easy to integrate into all major control systems and is easily adaptable to different needs.

Modules and enclosed drives

All power sizes are available as drive modules. The free-standing enclosed drive version for higher power sizes contains a wide range of configurable options and an innovative control compartment for safe access, without opening the cabinet door.

Cost-effective communication

Integrated Ethernet interfaces support all major industrial protocols. Save on extra interface cards - and use the same drive for all major protocols required.

Easy adaptation

For OEMs, utilizing VACON® PROGRAMMING enables the built-in PLC functionality according to IEC61131-1 to integrate their own functionality into the drive. The VACON® DRIVE CUSTOMIZER facilitates smaller logic adaptations for special needs or retrofit situations.

Power Range [High Overload]

3 x 208-240 V 1/2 to 100 HP (0.37-75 kW)
 3 x 380-500 V 1 to 800 HP (0.75-500 kW)
 3 x 525-600 V 3-650 HP
 3 x 525-690 V 5 to 650 HP (5.5-630 kW)

Fieldbus

MOD	META	BAC	TCP	BIP
PB	DN	CAN	BAC	LON
TCP	EIP	PN	ECAT	

Enclosure

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

*Dependent upon enclosure size

VACON® 100 FLOW

Delivering all the benefits of the VACON® 100 family of drives, the VACON® 100 FLOW offers dedicated functionality. It improves flow control and saves energy in industrial pump and fan applications in power sizes up to 800 kW.

Dedicated industrial flow control

The VACON® 100 FLOW provides specific flow control functions to enhance pump and fan performance and protect pipes and equipment, ensuring reliable operation.

Runs high-efficiency motors

Select the most efficient motor for your task, with the ability to run the new high-efficiency motor technologies, such as permanent magnet and synchronous reluctance motors, for improved system efficiency.

Power Range [Low Overload]

3 x 208-240 V
 3/4 to 125 HP (0.55-90 kW)
 3 x 380-500 V
 1.5 to 1000 HP (1.1-630 kW)
 3 x 525-600 V
 3 to 200 HP
 3 x 525-690 V
 5 to 800 HP (5.5-800 kW)

Fieldbus

MOD	META	BAC	TCP	BIP
PB	DN	CAN	BAC	LON
TCP	EIP	PN	ECAT	

Enclosure

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

*Dependent upon enclosure size



VACON® NXS



VACON® NXP Air Cooled



VACON® NXC Air Cooled Enclosed Drives

VACON® NXS

VACON® NXS is an AC drive for heavy use in machines, buildings and all branches of industry. Typical applications include pumps, multi-pump, conveyors, compressors

Simplified programming

Seven built in application packages for easy commissioning of the drive.

Flexible I/O selection

There are no fixed inputs or outputs in the control unit. There are five slots for I/O boards, and a suitable board can be selected for each slot.

Modular packaging

The drive has the same footprint if IP21/UL Type 1 or IP54/ UL Type 12 enclosure. Allows for field upgrade if required with no change in size.

Power Range [High Overload]

3 x 208-240 V . . . 3/4 to 100 HP (0.55 - 75 kW)
 3 x 380-480 V 1 to 550 HP (0.75 - 355 kW)
 3 x 525-690 V 2 to 500 HP (1.5 - 500 kW)

VACON® NXP Air Cooled

The VACON® NXP Air Cooled drive is designed for a broad range of demanding industrial applications, focusing on higher power sizes and system drives.

Top performance

VACON® NXP control flexibility delivers maximum motor control performance and dynamics, in both single-shaft machines and drive systems.

Configurable on all levels

Fully configurable I/O and fieldbuses cater for any connectivity need. Fast optical drive-to-drive communication gives you the flexibility of load sharing and paralleling of power units.

Extremely flexible

Adapt the drive to many diverse usage requirements by loading the VACON application software that best suits the needs. Built-in PLC functionality according to IEC61131-1 enables you to create new functionality in the drive to obtain cost savings and deeper machine integration.

Power Range

3 x 208-240 V 3/4 to 125 HP (0.55-90 kW)
 3 x 380-500 V . . . 1.5 to 1800 HP (1.5-1200 kW)
 3 x 525-690 V 3 to 2250 HP (2.0-2000 kW)

VACON® NXC Air Cooled Enclosed Drives

The VACON® NXC combines the VACON® NXP product range with a wide range of options in a single enclosed drive format.

Reliable operation

Based on a Rittal TS8 enclosure, the VACON® NXC enclosed drive is fully pre-designed and factory tested in order to ensure reliable and trouble-free operation.

Easy to work with

Access to the control equipment is easy and safe, due to the dedicated control compartment located at the front part of the enclosed drive. It is also internally protected against unintentional touch to increase user safety.

Easy to configure

When ordering, choose between a wide range of cabinet-installed options.

Power range

3 x 380-500 V 200 to 2250 HP (132-1200 kW)
 3 x 525-690 V 125 to 2250 HP (110-2000 kW)

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

*Dependent upon enclosure size

Full power range and dedicated VACON® drives



VACON® NXP Common DC Bus



VACON® NXP System Drive



VACON® NXP Liquid Cooled Drive

VACON® NXP Common DC Bus

VACON® NXP Common DC Bus components are designed to enable systems integrators, machine builders, and OEMs to design and build efficient industrial drives systems.

Comprehensive range

Build almost any kind of system imaginable, with this fully complete range of components, including inverter units (INUs), active front-end units (AFEs), non-regenerative front-end units (NFEs), and brake chopper units (BCUs).

Maximum uptime

Designed for absolutely reliable operation, the common DC bus range supports full availability with a minimum of operational interruptions.

Minimal installation width

Reduce installation cost and space requirements, with slim INU components optimized for minimal width of the complete drive line-up.

Power Range

DC @ 465 – 800 VDC 2 – 2000 HP single module

DC @ 640 - 1100 VDC 3 – 2300 HP single module

Parallel up to 4 modules with Drive Synch

3 x 380-500 V 2 to 2300 HP (1.5-1850 kW)

3 x 525-690 V3 to 2250 HP (3-2000 kW)

Fieldbus

MOD		META		
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

VACON® NXP System Drive

By combining common DC bus components the VACON® NXP System Drive provides you a drive configured and assembled to meet your needs - regardless of whether you need to control one or several motors.

Simplicity in projects

Using pre-designed enclosed drive sections for all main system parts, it enables a short engineering and configuration time for any drive system. Every project design is fully documented for the specific configuration.

Reliability is key

The verified and tested solutions that combine VACON® AC Drives, DC bus components and options result in verified and tested reliability.

Easy serviceability

A pullout system allows quick replacement of drives modules in service situations. Safety is a priority with internal touch protection and high power busbar sections in separate compartments.

Current ratings (main busbars)

3 x 380-500 V630-5000 A

3 x 525-690 V630-5000 A

Fieldbus

MOD		META		
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

VACON® NXP Liquid Cooled

A dedicated liquid-cooled drive for applications where air quality is critical, space is limited, and efficient heat transfer is essential. No need for air ducts or large fans and the compact size delivers high power density in your installation - and virtually silent operation.

Uptime and cost savings

Save on both investment and operating costs when removing heat using the liquid medium. Achieve maximum uptime, with robust operation in demanding conditions and minimal air filtering in dusty conditions.

Highest control flexibility

The drive utilizes the full VACON® NXP family control functionality to achieve modularity and scalability in a wide range of applications.

Power Range: Common DC Bus

DC @ 465 – 800 VDC 10 – 2000 HP single module

DC @ 640 - 1100 VDC . . 125 – 1750 HP single module

Parallel up to 4 modules with Drive Synch

3 x 380-500 V .200 to 2300 HP (132-2700 kW)

3 x 525-690 V .125 to 2250 HP (110-2800 kW)

Fieldbus

MOD		META		
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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



VACON® NXP Liquid Cooled Enclosed Drive



VACON® NXP Liquid Cooled Common DC Bus



VACON® NXP Grid Converter

VACON® NXP Liquid Cooled Enclosed Drive

The VACON® NXP Liquid Cooled Enclosed Drive offers all the benefits of VACON® NXP Liquid Cooled drives for high power applications in a compact IP54 rated enclosed drive package.

Pre-designed is easy

Being pre-designed and engineered, these drives are ready to go as soon as you receive them. Simply connect to the cooling system and the power and motor supplies.

Active Front End for clean supply

Drives with active front end minimize harmonic disturbance to the grid, enable regenerative braking and reduce the scale of infrastructure required, such as transformers and generators.

Fast serviceability

Fast access to the modules using pull-out rails saves time and money in service and maintenance situations.

Power range

3 x 525-690 V 800 to 1700 HP (800-1550 kW)

VACON® NXP Liquid Cooled Common DC Bus

This range of liquid-cooled common DC bus components brings the benefits of liquid cooling into common DC bus systems.

For demanding systems

Liquid cooling offers strong benefits in applications where cooling air supply or quality is limited, enabling creation of solutions that work even in demanding situations.

Minimum amount of spare parts

Built on a unified product platform reduces costs and increases availability of spare parts and service units, since there is a common hardware platform for all variants used.

Reliable and cost-saving

Enjoy economical installation cost, maximum uptime and full VACON® NXP control functionality.

Power range

3 x 380-500 V ... 2 to 3600 HP (7.5-2700 kW)
3 x 525-690 V ... 3 to 3100 HP (110-2800 kW)

VACON® NXP Grid Converter

This range of air and liquid-cooled drives is specifically designed for energy storage and marine energy management applications.

Reliable grid

VACON® NXP Grid Converter assures a reliable grid in applications for energy storage and energy management.

Save on fuel and emissions

In marine applications fuel savings and reduced emissions are immediate benefits of grid converters in shaft generator applications.

Power range

Air-cooled
3 x 380-500 V 180-1100 kW
3 x 525-690 V 200-1200 kW

Liquid-cooled
3 x 380-500 V 160-1800 kW
3 x 525-690 V 210-1800 kW

To achieve even higher power capacity, combine multiple VACON® NXP Grid Converter units.

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

Fieldbus

MOD	META			
PB	DN	CAN	BAC	LON
TCP	EIP	PN		

Enclosure

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

Condition-Based Monitoring



Turn the frequency drive you already have into the smartest sensor in your system with our three-step Condition-Based Monitoring procedure:



1. Establish a baseline



2. Define Thresholds

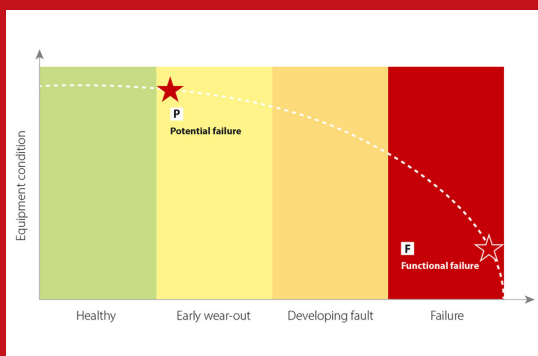


3. Perform Monitoring

Condition-Based Monitoring (CBM) is a maintenance strategy that uses real-time data and analytics to track the health of equipment and predict potential failures. Instead of relying on fixed maintenance schedules, CBM allows for proactive maintenance, optimizing uptime and reducing costs.

Features & Benefits:

- Motor-stator-winding condition monitoring
- Load envelope
- Vibration monitoring in application
- Cloud and advanced analytics
- Improved data security
- Reduced investment
- Lower data cost
- Open and independent



Decentral drives



VACON® 100 X

VACON® 100 X

Robust enclosure and high functionality is provided by the VACON® 100X for indoor and outdoor applications.

No extra enclosure - even outdoors

The drive withstands high-pressure water, high vibration levels, heat and dirt. The Gore® vent membrane and IP66 enclosure give you the freedom of indoor and outdoor use.

A really cool drive

An optional space heater is available for cold environments.

Wide power range

With power range extending up to 50 HP, this drive makes the benefits of decentralized solutions available for a wide range of applications.

Power Range [High Overload]

3 x 208-240 V 1.5 to 20 HP (1.1-15 kW)
3 x 380-480 V 1.5 to 50 HP (1.1-37 kW)

Fieldbus

MOD	META	BAC		
PB	DN	CAN	BAC	LON
TCP	EIP	PN	ECAT	

Enclosure

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

VACON® Software

VACON® Live

Commissioning, maintenance, parameterization and monitoring of multiple drives.

Supported drives:

VACON® 10, VACON® 20, VACON® 20 X, VACON® 100, VACON® 100 family

VACON® Loader

Updating drive software.

Supported drives:

VACON® 10, VACON® 20, VACON® 20 X, VACON® 100, VACON® 100 family

NCDrive

Commissioning, maintenance, parameterization and monitoring of drives.

Supported drives:

VACON® NXL, VACON® NXS, VACON® NXP

NCLoad

Updating drive software.

Supported drives:

VACON® NXL, VACON® NXS, VACON® NXP

VACON® Customizer

To freely customize the operation of an AC drive.

Supported drives:

VACON® 100 or VACON® 100 INDUSTRIAL and VACON® 100 FLOW

VACON® Programming

An AC drive application programming tool to optimize drive behavior.

Supported drives:

VACON® 20, VACON® 20 X, VACON® 100, VACON® 100 X, VACON® NXS, VACON® NXP

VACON® Key

Manage and handle VACON® NXP Grid Converter licenses.

Supported drives:

VACON® NXP Grid Converter

VACON® Harmonics

Simulate the expected harmonics of an AC drive or group of drives.

Supported drives:

VACON® NXS, VACON® NXP, VACON® 10, VACON® 20, VACON® 20 X, VACON® 100 family

VACON® Save

Calculate energy savings when using an AC drive with pumps, fans and compressors.

Supported drives:

VACON® NXS, VACON® NXP, VACON® 10, VACON® 20, VACON® 20 X, VACON® 100 family

VACON® Layout

Configure and obtain documentation

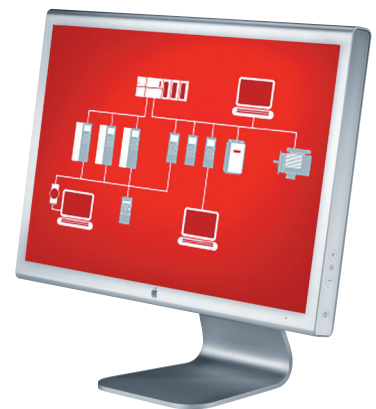
Supported drives:

VACON® NXP System Drive

VACON® Documentation Wizard

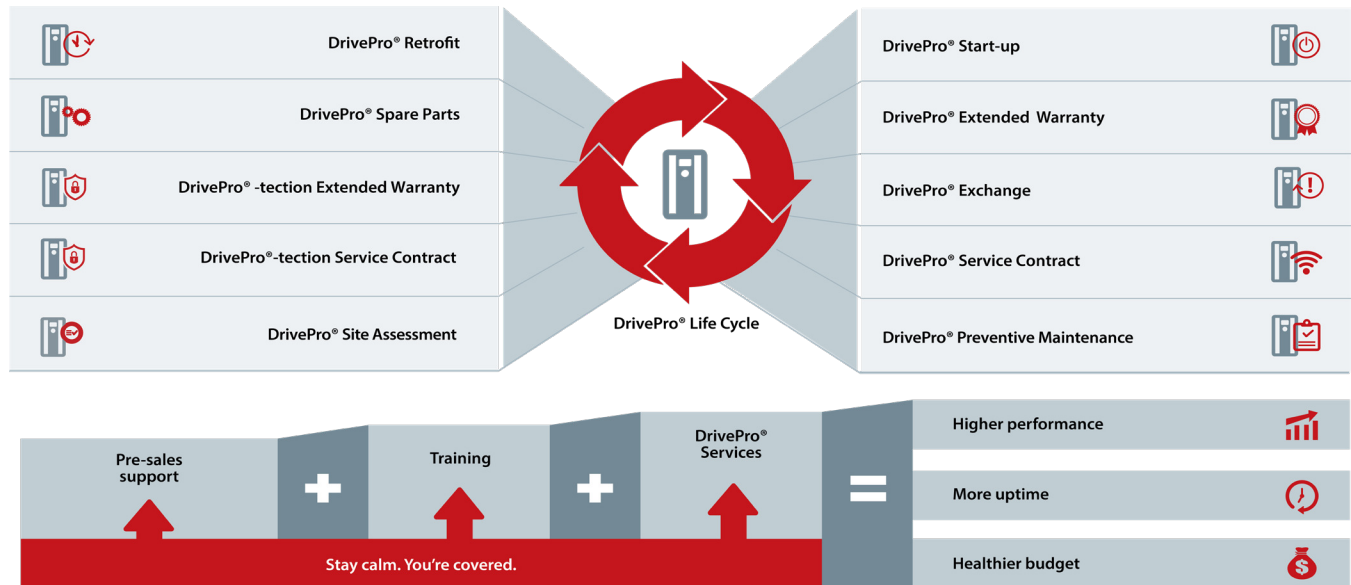
Diagrams and drawings

Supported drives: VACON® NXC



You're covered with DrivePro® Life Cycle service products

Get the most out of your systems, with the help of DrivePro® services for Danfoss VLT® and VACON® drives. You get services that go beyond simple troubleshooting, maintenance, repairs and replacements. They also proactively improve productivity, performance and uptime.



Danfoss Drives' comprehensive portfolio of services spans the entire life cycle of your drives, and is delivered by experts. The services are customized to your requirements, whenever and wherever you need them.

What DrivePro® services can do for your operations:

Add value: DrivePro® services add value to your processes and business. You win efficiency, predictability and peace of mind.

Deliver know-how: DrivePro® experts understand the special characteristics, needs and requirements of your AC drives applications, your industry, and your business.

Keep you at the forefront: DrivePro® services ensure you have access to all the latest innovations in the form of upgrades or exchanges. Because we understand your application needs, we are confident in making recommendations for the future. Discover more at drivepro.danfoss.com







DrivePro® app

Use the DrivePro app for fast access to the DrivePro® services, for improved productivity, performance and uptime of your systems. Find your closest service partner, place a service request, and register your VLT® and VACON® drives. You can also look up product information, specifications and manuals for your specific VLT® or VACON® drive based on the nameplate product code, or the product name.



Application focus to boost your business

- Danfoss iC2, iC7, VLT® and VACON® drives are optimized to create value for you. They enable maximum performance in all major applications irrespective of industry. Contact Danfoss Drives to learn how your own applications can benefit from using a iC2, iC7, VLT® or VACON® drive.

		INDUSTRIES			
		HVAC	Food and Beverage, Packaging	Water and Wastewater	Refrigeration
					
APPLICATIONS	Pumps	■	■	■	■
	Fans	■	■	■	■
	Compressors	■	■	■	■
	Conveyors		■		
	Process, Material Treatment		■	■	
	Mills, Drums, Kilns				
	Winding, Unwinding				
	Drilling				
	Propulsion, thrusters				
	Winches				
	Vertical & horizontal movement		■	■	
	Power conversion Generation, smart grids				
	Positioning, Synchronization		■		



Marine and Offshore	Mining and Minerals	Metals	Chemical	Cranes and Hoists	Energy	Elevators and Escalators	Material handling	Oil and Gas	Pulp and Paper	Textile
■	■	■	■		■			■	■	■
■	■	■	■		■		■	■	■	■
■	■	■	■		■			■	■	
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A better tomorrow is **driven by drives**

You can rely on us to share your goals. Striving for the best possible performance in your applications is our focus. We achieve this by providing the innovative products and application know-how required to optimize efficiency, enhance usability, and reduce complexity.

From supplying individual drive components to planning and delivering complete drive systems, our experts are ready to support you all the way.

You will find it easy to do business with us. Online, and locally in more than 50 countries, our experts are never far away, reacting fast when you need them.

You gain the benefit of decades of experience, since 1968. Our low voltage and medium voltage AC drives are used with all major motor brands and technologies in power sizes from small to large.

VACON® drives combine innovation and high durability for the sustainable industries of tomorrow.

For long lifetime, top performance, and full-throttle process throughout, equip your demanding process industries and marine applications with VACON® single or system drives.

VLT® drives play a key role in rapid urbanization through an uninterrupted cold chain, fresh food supply, building comfort, clean water and environmental protection.

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