

Vacon® 100 Flow

Total motor starting solution

The VACON® 100 FLOW is an AC drive dedicated to improving flow control in pumping and ventilating applications. It combines the core functionality of VACON® 100 with dedicated functions that are specifically designed with flow-control application processes in mind.



Multipump control solutions

Get the best functionality and cost-efficiency from your process with the VACON 100 FLOW. Choose from three Multipump control solutions, each of which offers unsurpassed control of flow and pressure. Demand for water or ventilation fluctuates throughout the course of a day. For instance, cooling water demand in a plant may peak during the day as the plant runs at full capacity. Conversely, in the middle of the night the plant may run at reduced capacity reducing the requirements for cooling water. The use of several pumps instead of just a single one results in higher efficiency as several pumps share the load. This also makes the system more redundant: if one pump fails, the others can take on its load.

Single drive pump system Multipump control is a single drive solution in which one AC drive controls, the leading pump. If the demand exceeds the capabilities of the pump, additional fixed-speed pumps can be connected online directly or with a soft starter. You can choose between fixed setups and solutions in which the leading and auxiliary pumps alternate in roles to equalize wear and tear.

Single drive system in brief

- Maximum 8 pumps
- No need for an external controller
- Alternation of all pumps or only auxiliary pumps

Multidrive pump systems In Multimaster technology, separate AC drives control each pump. The integrated RS485 interface allows the drives to communicate without the need for any external controller. As demand increases, the leading drive increases its speed until the capacity is exceeded, at which point the excess load is transferred to the next drive in the series. This method ensures pumps start and stop smoothly, and reduces the need for additional control wiring, motor protection relay and contactors. Multifollower mode follows the same principle as Multimaster in that separate AC drives control each pump. Where this system differs is that, as demand increases and the lead drive's capacity is exceeded, the system brings additional parallel drives into operation. This ensures that all pumps run at the same operating speed, reducing noise and general stress, thus improving reliability.

Multidrive systems in brief

- Maximum 8 pumps
- No need for an external controller
- Communication between drives using integrated RS485

Typical applications for VACON® 100 FLOW

Industrial water treatment	General industry
Cooling water systems Boiler water systems	Compressors Pumps and fans



Danfoss Drives
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Partner**

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Dedicated pump, fan and compressor features

	Dedicated Features	Added benefits
Pumps	2 PID controllers with sleep mode, soft fill, jockey pump, pump autoclean, PM and induction motor support Multipump control solutions	Demand-based optimization of the process for accurate process control and energy saving Easy selection for any motor PM motor allows higher power density, less mechanics
Fans	Flying start, motor switch 3 prohibit frequency ranges PM and induction motor support	Save time during process operation and maintenance Fan lifetime increased due to reduced mechanical stress Easy selection for any motor PM motor allows higher power density = energy savings
Compressors	IP21/UL Type 1 and IP54/UL Type 12 Flange (through-hole) mounting IP00 for MR8 and MR12	Suitable for wide installation needs Easy to integrate into the machine, saving space and cost of integration and cooling

Vacon® 100 Wall-mounted drives



The VACON® 100 wall-mounted drives are compact and comprehensive drive packages, with all the necessary components integrated in a single drive.

Features

- Conformal coating
- IP54/UL Type 12 has the same footprint as IP21/UL Type 1
- Flange mounting
- Side-by-side mounting for IP54/UL Type 12
- Integrated DC choke and EMC filters
- Integrated brake chopper standard in frames MR4 to MR6

Power range

- 3 x 208-240 V.....0.55-90 kW
- 3 x 380-500 V.....1.1-630 kW
- 3 x 525-690 V.....5.5-800 kW

Vacon® 100 Drive Modules



VACON® 100 IP00 drive modules are intended for installation into any enclosure. Module installation in standard enclosures is easy due to the compact design.

VACON 100 drive modules start at frame size MR8 and go up to frame MR12. The modules contain all necessary components including DC chokes and brake choppers (optional). Module frame sizes MR10 and MR12 have an options module that can house optional output filters and brake choppers. The options are integrated in the main cooling channel.

Features

- Wide power range using only four frames
- Integrated DC chokes
- Integrated brake chopper (optional)
- Integrated output filters (optional)
- Options module for easy integration(frames MR10 and MR12)
- Remotely mountable control box

Power range

- 3 x 208-240 V.....37-90 kW
- 3 x 380-500 V.....75-630 kW
- 3 x 525-690 V.....45-800 kW



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