VLT® common AC drive modules comprise sets of two to four VLT® high power drives connected in parallel, with 6-pulse and 12-pulse variants.

A reference design for the cabinet of the drives has been made using the Rittal TS8 enclosure. This reference design makes it easy for panel builders and machine builders to build their own cabinets, worldwide.

Reliability
Enjoy long drive lifetime and save on extra components, with integrated fuses and DC coils. The high-power drive modules are delivered with these components built-in as standard.

Increase uptime with the Reduce Run functionality. This function enables the system to run at part load even if one of the drive units fails.

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 design allows 90% of the heat losses to be exhausted directly outside of the enclosure. Back-channel cooling improves reliability and prolongs 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 VLT® drive.

Product families
- VLT® AutomationDrive FC 302
- VLT® AQUA Drive FC 202
- VLT® HVAC Drive FC 102

Power range
- 6-pulse
  - 450–1200 kW
  - 600–1350 hp
- 12-pulse
  - 250–1200 kW
  - 350–1350 hp

Voltage range
- 380-480/500 V
- 525–690 V

Enclosure rating
- IP00

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**Feature** | **Benefit**
---|---
VLT® family – one platform, one user interface, common graphical LCP | Know one drive, know them all. Savings in time and cost for training, service, ordering and spare parts logistics.
Compact size – high power density | Savings in space and cost, in cabinet design.
Runs at 100% load up to 45 °C | Full and reliable performance at high ambient temperatures.
Coated PCBs as standard | Extended lifetime, with high environmental resistance.
Built-in DC link reactors | Reduced harmonics distortion level and:
  - No need for external AC chokes
  - No additional panel space required
Built-in AC fuses | Savings on cost and space, for extra components.
Reduce Run function | Allows the system to run at part load, even if one of the drives fails.
98% efficiency | Low lifetime operating cost.
Back-channel cooling | Reduces the scale of air conditioning required for the room, reducing up-front cost and operating expenses.

www.danfoss.com/drives
Options
- Stainless steel back channel
- RFI filter
- Brake chopper
- Heat sink access panel
- Fieldbus options
- Application options
- Control power back-up input

Busbar kit
Factory designed kit, including:
- Flexible busbars
- Common AC terminals
- DC busbars
- Ground busbars
- EMC screens

Cooling Duct kits
Pre-fabricated kits in four different versions:
- Bottom-in/top-out
- Back-in/back-out
- Bottom-in/back-out
- Back-in/top-out

For more details, refer to www.danfoss.com/drives.

Nominal ratings

<table>
<thead>
<tr>
<th>Normal overload</th>
<th>High overload</th>
<th>Normal overload</th>
<th>High overload</th>
<th>Normal overload</th>
<th>High overload</th>
</tr>
</thead>
<tbody>
<tr>
<td>315</td>
<td>600</td>
<td>250</td>
<td>480</td>
<td>450</td>
<td>540</td>
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<tr>
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<tr>
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<td>450</td>
<td>800</td>
<td>400</td>
<td>695</td>
<td>600</td>
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<table>
<thead>
<tr>
<th>2-pulse</th>
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<tbody>
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<tr>
<td>560</td>
</tr>
<tr>
<td>630</td>
</tr>
<tr>
<td>710</td>
</tr>
<tr>
<td>800</td>
</tr>
<tr>
<td>1000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>6-pulse/12-pulse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1122 x 350 x 375 mm</td>
</tr>
<tr>
<td>44 x 14 x 15 in.</td>
</tr>
</tbody>
</table>

Normal overload: 110% of nominal current can be applied for intermittent duty (60 sec).
High overload: 150% of nominal current can be applied for intermittent duty (60 sec).

Compliance
- CE & UL Listed for common AC drive module design
- EMC compliance:
  - EN 55011, Class A2/IEC 61800-3 Category C3 (standard)
  - EN 55011, Class A1/IEC 61800-3 Category C2 (optional)
- Safety category 3, PL d (ISO 13849-1)
- Stop category 0 (EN 60204-1)
- STO: Safe Torque Off (IEC 61800-5-2) SIL 2 (IEC 61508)
- SILCL 2 (IEC 62061)