



## AHF Series

### Advanced Harmonic Filters

Danfoss AHF Series Advanced Harmonic Filters are available for our many drive product families:

- VLT® 4000 VT
- VLT® 5000 Process
- VLT® 5000 FLUX
- VLT® 6000 HVAC
- VLT® 8000 AQUA

As a cost-effective total solution, Danfoss Advanced Harmonic Solutions (AHS) packages combine the reliability and performance of VLT® Series drives with the innovative technology of AHF Series Filters.

#### AHF Advantages:

- Designed for matched performance with Danfoss VLT® Series drives
- User-friendly startup; no adjustment necessary
- Requires no routine maintenance
- Protects multiple drives with one filter
- Designed to address the current distortion limit guidelines of IEEE 519-1992
- AHF 10 has THiD < 10%; equal or superior performance and cost competitive compared to 12-pulse rectifiers
- AHF 05 has THiD < 5%; equal or superior performance and cost competitive compared to 18-pulse rectifiers
- Compact housing can be fit into a panel

#### Product Range

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Line Voltage: 440-480 VAC (60 Hz)

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Filter Current: 10A – 370A (for higher ratings, modules can be paralleled)

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Enclosure: Chassis

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#### Technical Specification

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Line Voltage:  $\pm 10\%$

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Frequency:  $\pm 5\%$

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Overload Current: 160% for 60 seconds

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Efficiency:  $> 0.98$

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True Power Factor: 0.85 @ 50% load; 0.99 @ 100% load

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Ambient Temperature: 5°C - 40°C without derating

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# AHF Series Advanced Harmonic Filters

## AHF Selection (440 - 480V, 60Hz)

| HP        | Typical Danfoss VLT* |            |            |            | Output Amps | AHF Filter Ordering Number |          |
|-----------|----------------------|------------|------------|------------|-------------|----------------------------|----------|
|           | VLT 4000 VT          | VLT 5000   | VLT 6000   | VLT 8000   |             | AHF 005                    | AHF 010  |
| 10 - 15   | 4011, 4016           | 5011, 5016 | 6011, 6016 | 8011, 8016 | 19          | 175G6612                   | 175G6634 |
| 20        | 4022                 | 5022       | 6022       | 8022       | 26          | 175G6613                   | 175G663  |
| 25 - 30   | 4027, 4032           | 5027, 5032 | 6027, 6032 | 8027, 8032 | 35          | 175G6614                   | 175G6636 |
| 40        | 4042                 | 5042       | 6042       | 8042       | 43          | 175G6615                   | 175G6637 |
| 50 - 60   | 4052, 4062           | 5052, 5062 | 6052, 6062 | 8052, 8062 | 72          | 175G6616                   | 175G6638 |
| 75        | 4072                 | 5072       | 6072       | 8072       | 101         | 175G6617                   | 175G6639 |
| 100 - 125 | 4102, 4122           | 5102, 5122 | 6102, 6122 | 8102, 8122 | 144         | 175G6618                   | 175G6640 |
| 150       | 4152                 | 5152       | 6152       | 8152       | 180         | 175G6619                   | 175G6641 |
| 200       | 4202                 | 5202       | 6172       | 8202       | 217         | 175G6620                   | 175G6642 |
| 250       | 4252                 | 5252       | 6222       | 8252       | 289         | 175G6621                   | 175G6643 |
| 300       | 4302                 | 5302       | 6272       | 8302       | 324         | 175G6689                   | 175G6692 |
| 350       | 4352                 | 5350       | 6352       | 8352       | 370         | 175G6690                   | 175G6693 |
| 450       | 4450                 | 5450       | 6400       | 8450       | 506         | 217 A and 289 A unit       |          |
| 500       | 4500                 | 5500       | 6500       | 8500       | 578         | Two 289 A units            |          |
| 600       | 4600                 | 5500**     | 6600       | 8600       | 648         | Two 324 A units            |          |

\* Note: Matching of the typical Danfoss VFD and filter is pre-calculated based on 440V and assuming typical motor load (4 pole). VLT 5000 series is based on a 160 % torque application, while VLT 6000 and 8000 series are based on a 110% torque application. The pre-calculated filter currents above may be different than input current rating of the VLT Series drive.

\*\* When operating in Normal Overload (110%)



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