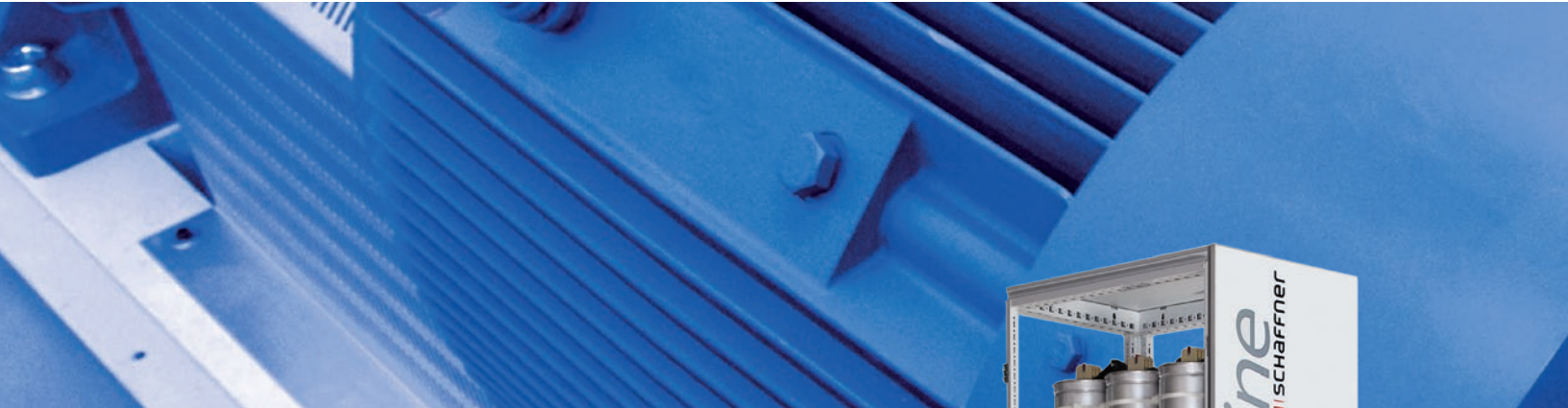




**Power Quality**  
Product Line Card

**SCHAFFNER**  
shaping electrical power



## Active Harmonic Filter Products and Systems

### ECOsine® 50Amp (3-wire), 480vac

- Open chassis type for enclosure integration; wall mounted capable
- Compact foot-print; optimum performance; multi-unit installation

### ECOsine® 100Amp (3-wire), 480vac

- Popular specification rating, can accommodate 600vac with transformer
- Open chassis; NEMA enclosure options; parallelable

### ECOsine® Integrated Active Harmonic Filter Systems (3-wire), 480vac

- Standard rating 50 to 400Amp, higher ratings available
- Disconnect switch or C/B, various options, custom designs
- NEMA 1 and NEMA 3R wall mount and free standing enclosures



### ECOsine® Active Harmonic Filter 200/250/300Amp

- Standard NEMA 12 protection for indoor industrial use
- Internal liquid cooling and forced air cooled

### ECOsine® Active Harmonic Filter 600/690vac

- 200Amp, NO step-down AHF transformer required
- Parallel up to ten AHF's



## ECOsine Features

- Mitigates harmonics to the 50th order
- Provides reactive compensation (PFC)
- Performs current load balancing
- <300 microseconds response
- Available for 3-wire UL and 4-wire, (non-UL) systems
- AHF's can accommodate higher voltages using a step-down transformer
- Certified (GL) for marine and shipboard use, 100A AHF
- Use with multiple VFD's of any manufacturer



### ECOsine® Passive Harmonic Filters

Passive Filter advantages:

- Superior inductor design
- Advanced temperature management
- Small physical footprint
- Reduced weight design
- For both diode and thyristor rectifier VFD's
- Can be used with or without DC link choke



### ECOsine Features

- Two designs <5% THDi and 7-10% THDi
- "Simple" plug-and-play concept
- 5 through 500HP, standard UL product
- Parallel units to accommodate up to 1000HP
- Panel mount, open type design
- NEMA 1 and NEMA 3R enclosed
- Application engineered PHF's to meet specific requirements

## Sine Wave, dV/dT Filters and Line Reactors

### Motor Drive Sine Wave and dV/dT Benefits

Design feature - less dV/dT stress on motor and insulation, reduces reflected harmonics and allowing for longer cable runs

### Sine Wave Filters

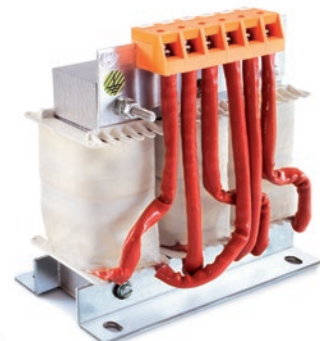
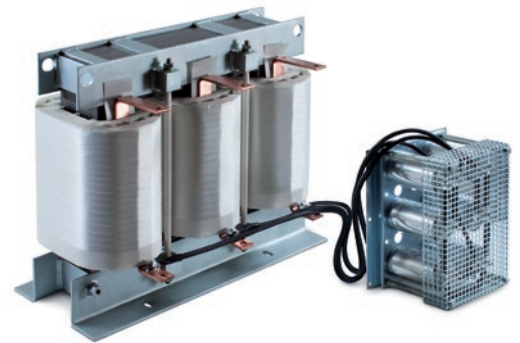
- Open and enclosed
- Up to 690vac, Up to 1500A
- To 15kHz, to 600hz
- Custom SWF filters

### dV/dT Filters

- Up to 690vac
- Up to 1100A
- Open Type

### Line Reactors

- 4% Impedance
- Open Type
- To 1100A rating





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## Schaffner Services

- Existing installation evaluation
- PQ survey, problem solving, equipment recommendations
- Start-up and commissioning
- Emergency service
- Maintenance and equipment life extension
- Engineering services
- PQS, Power Quality Simulator

## Other Schaffner Product Areas

- Schaffner EMC, EMI and RFI filters
- Medium voltage transformers and custom magnetics
- Low voltage reactors, inductors and 18-pulse autotransformers

## About Schaffner

The Schaffner Group is a global leader in providing solutions that ensure the efficient and reliable operation of power electronic systems by shaping electrical power. The Company's portfolio includes EMI filters, power magnetic components and power quality filters with related services.

Schaffner components and systems are deployed in electric motor controls and with variable frequency drives, in wind power and photovoltaic systems, rail technology applications, machine tools and robotics, water and waste water, oil and gas, electrical infrastructure and the manufacturing industry.

Headquartered in Switzerland, Schaffner serves its global customers through its engineering and manufacturing centers in Europe, Asia and in North America. Through significant investments into research and development, the Company strives to expand its leading position in growing markets.

Schaffner in North America has design and manufacturing facilities located in Edison, New Jersey for power quality and EMC products; and Wytheville, Virginia for low and medium voltage power magnetics equipment. All of our solutions and systems are provided for a wide range of markets and applications.