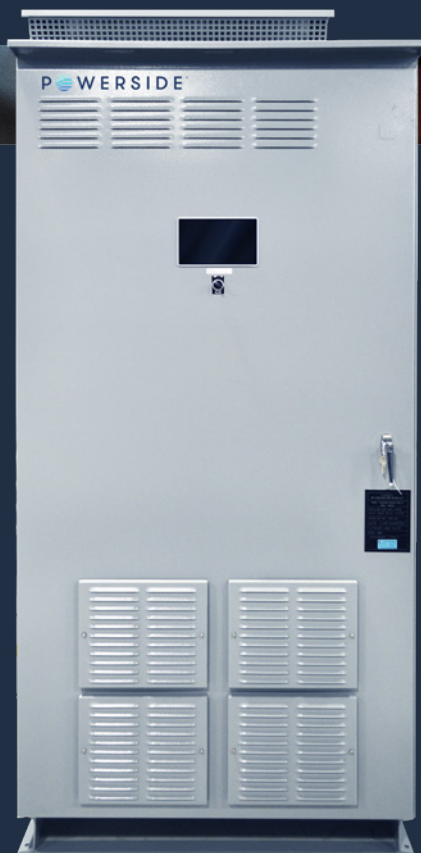


POWERSIDE®

# PowerAct

Low-Voltage Active Harmonic Filter



## Why Mitigate Harmonics

Harmonics are a distortion of the current waveform, typically transmitted by non-linear loads, such as AC drives and DC drives, power converters, arcing devices, and LED lighting, resulting in:

- Cables and transformers overheating
- Circuit breakers tripping
- Equipment malfunction
- Premature equipment wear and failure
- Energy losses
- Performance reduction

Powerside's PowerAct active harmonic filter dramatically improves power quality by mitigating harmonics, stabilizing voltage, balancing phase loads and compensating for poor power factor by providing a fast and efficient response to power system variations.

Flexible, controlled, and compact, PowerAct is safe and easy to use and if properly sized, it can help to meet IEEE519-2014 harmonic requirements.

## Choose PowerAct to Improve Power Quality

- Protects equipment from harmonics generated by other industrial operations
- Stabilizes voltage with Var compensation
- Increases operational reliability by reducing maintenance repairs
- Extends the lifetime of electrical equipment
- Provides additional capacity in an existing electrical network
- Reduces energy costs, lowering CO2 emissions
- Fast return on investment
- Load balancing for asymmetrical current consumption
- Modular design
- Automatic resonance detection
- Sensorless voltage control mode to mitigate grid voltage distortion



**Wall Mount PowerAct Active Filter 125A:** 65x36x14 (IN), 1615x914x355 (MM), 592 lbs



**PowerAct Active Filter 500A:** (Floor Mount), 90x40x25 (IN), 2286x1016x635 (MM), 1526 lbs

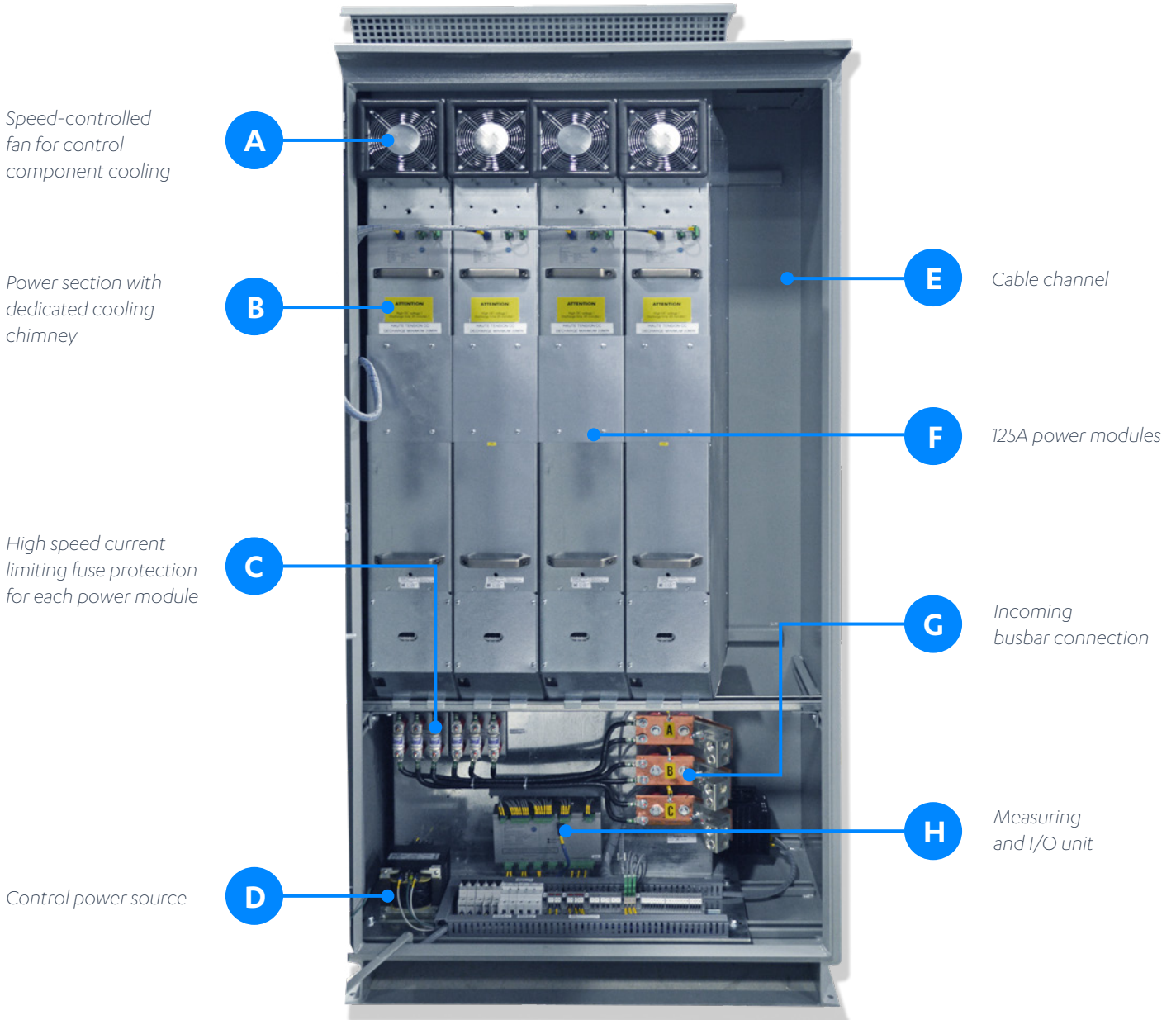


**PowerAct Active Filter 750A:** (Floor Mount) 90x60x25 (IN), 2286x1524x635 (MM), 2218 lbs

## Future proof processes. Easy to grow. Easy to service.

The PowerAct active harmonic filter is a compact modular system designed for small areas. It is equipped with an intelligent 7" touch screen controller that can also be accessed remotely via TCP/IP. It compensates all odd harmonics up to the 51st order without limit and has 4 priority settings to compensate for harmonics, dynamic reactive power, voltage stabilization, and unbalanced loads. Using a predictive algorithm, PowerAct provides anti-resonance protection during network transients.

**Energy-efficient, PowerAct is built with 3-level IGBT inverter topology. It has two distinct cooling ducts for main components and power electronic modules.**



## Low life-cycle costs. Easy to service.

PowerAct Family							
<b>Compensation type</b>	Active Filter						
<b>Mounting</b>	Floor Mount						Wall Mount
<b>Number of modules</b>	1	2	3	4	5	6	1
<b>Reactive power @480V</b>	104 kvar	208 kvar	312 kvar	416 kvar	520 kvar	624 kvar	104 kvar
<b>Rated current</b>	125 A	250 A	375 A	500 A	625 A	750 A	125 A
<b>Reactive power @600V</b>	130 kvar	260 kvar	390 kvar	520 kvar	650 kvar	780 kvar	130 kvar
<b>Connection</b>	3 wire (no neutral required)						
<b>Control methods</b>	Open loop, closed loop						
<b>Nominal frequency</b>	50 Hz / 60 Hz						
<b>Nominal voltage</b>	208/240/480/600 V						
<b>Inverter</b>	3-Level IGBT with voltage link						
<b>Peak current</b>	200%						
<b>Cooling</b>	Air cooling with speed-controlled fans						
<b>Harmonic compensation</b>	1st to 51st harmonic. All harmonics can be filtered simultaneously (in current control or sensorless voltage control modes)						
<b>Power factor correction</b>	Fixed and dynamic reactive power compensation						
<b>Load balancing</b>	Up to 100% of rated current (negative sequence)						
<b>Voltage regulation</b>	Voltage stabilization via Q(U)-control, flicker compensation						
<b>Power losses</b>	< 2.1% of compensation power maximum < 1.8% in typical operation < 0.4% when idle, < 100 W in standby						
<b>Expandability</b>	Modular-Parallel additional systems as require						
<b>Controller</b>	Distributed control system with high speed inter-module communication bus						
<b>Communication</b>	Ethernet, Profibus, Modbus. 4 x digital output (isolated, parameterized) for status messages 4 x digital input (24 VDC, parameterized) for external control						
<b>Maximum voltage</b>	690V continuous (+ -10%)						
<b>Response time</b>	< 1ms						
<b>Operating temperature</b>	32° to 104° F (0° to 40°C) without de-rating and internal heating. De-rated output above						
<b>Enclosure rating</b>	NEMA 1 (Option NEMA 3R)						

Enclosure, Dimensions and Weight (480 and 600V)				
	Amperage	H X W X D (IN)	H X W X D (MM)	LB/KG
<b>Floor Mount</b>	125A	90x40x25	2286x1016x635	834/379
	250A	90x40x25	2286x1016x635	1064/483
	375A	90x40x25	2286x1016x635	1295/588
	500A	90x40x25	2286x1016x635	1526/693
	625A	90x60x25	2286x1524x635	1989/902
	750A	90x60x25	2286x1524x635	2218/1006
<b>Wall Mount</b>	125A	65x36x14	1651x914x355	592/269

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