

# HIGH VOLTAGE/HIGH POWER AIR CORE REACTORS

MHVXL –Series

## Introduction

BPEG reactor is dry type air core construction with multi-layer of windings paralleled. Each Winding consists of small-section parallel-insulated aluminum wires, the whole reactor is integrated by epoxy fiberglass hardened in drying store, the leading-out ends of each winding layer are welded to upper and lower spider arms.

The reactor is cooled with neutral air cooling; the surface of reactor is painted with resist aging, ultraviolet-proof insulation coatings. All these make BPEG reactors have many advantages, such as low loss, high strength, low noise, being easy to mount and simple for maintenance. Their life expectancy is more than 30 years. In addition to the normal fixed inductance type of coil, BPEG also manufactures Adjustable Reactor including multi-tapped adjustable ones and continuous adjustable ones. Generally, the variation in inductance of coil is 5% or extended.

The application Standards: IEEE/ANSI, GB10229, IEC289-88 or other concerned standards on request. BPEG Reactors have wide applications. Types of them including: Shunt Reactor, Thyristor Controlled Shunt Reactor (TCR), Series Reactor, Special Series Reactor used in electric railway, Current-limiting Reactor, Filter Reactor, Smoothing Reactor, Test Lab Reactor, Damping Reactor Splitting Reactor, Neutral-Grounding Current-limiting Reactor, Starting Reactor, Load-sharing Reactor, Lighting Coils, etc

## Shunt Reactors

Shunt reactors are parallel connected with the transformer tertiary winding in 220kV or 500kV Substation. They are used to compensate for the capacitive VAR reactance of the underground cable in transmission line of long distance and low load

## TCR Shunt Reactors

Thyristor Controlled Shunt Reactors (TCR) are used in static VAR compensating device and can dynamically change the VAR compensating power and keep the voltage stability.

## Series Reactors

Series reactors are series connected with VAR compensating shunt capacitor bank. They are used to restrain harmonic voltages, reduce distortion of system voltage and limit inrush current when capacitor circuit is putted into network for operation.

## Filter Reactors

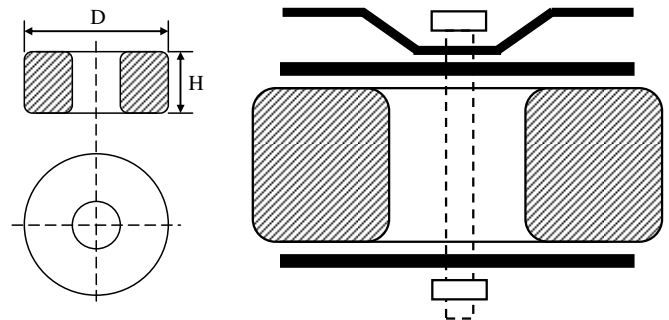
Filter reactors are series connected with filter capacitor bank to form resonant circuit, which can filter specified harmonic currents.

## Current-Limiting Reactors

Current-limiting reactors are series connected with power system (bus, line and load) They can reduce the short circuit current to allowable level for other equipment

## Advantage:

- Energy efficient due to low no-load current.
- Reduce  $dv/dt$  and  $di/dt$
- Better voltage regulation due to low inductance/resistance.
- Minimize flicker / voltage fluctuation/power oscillation
- Compact size/ Unbalanced loads/ Low inrush current.
- High kilo Voltage fluctuation/ Low stress on switch gear
- Enhance capacity of distribution/transmission/transformer/motor
- Reduce stress on switchgear/semiconductor devices



**MOTORON SEMICONDUCTORS CORPORATION**

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# HIGH VOLTAGE/HIGH POWER AIR CORE REACTORS

MHVXL –Series

ELECTRICAL & MECHANICAL SPECIFICATION(Low/High frequency):

Reactive Power < 1000,000 VAR

Model	Capacity (VAR)	Insuctance Linear/saturation Milli-henry	Frequency (HZ)	Output (V) r.m.s.	Thermal rise (°C)	Formal Size		Weight kg	Fix-OS (mm)
						H (mm)	D (mm)		
MPPT-103	010000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	080	180	053	option
MPPT-153	015000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	100	200	085	option
MPPT-203	020000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	125	250	110	option
MPPT-253	025000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	150	300	135	option
MPPT-303	030000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	200	350	168	option
MPPT-403	040000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	250	390	230	option
MPPT-503	050000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	300	600	280	option
MPPT-753	075000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	500	650	347	option
MPPT-993	100000		50/150/250/550/1100/optional	0.44/3.3/6 .6/11/33	≤65	600	700	605	option

Company may modify some of the specification(electrical/mechanical) in light of operation aspect of site.



AIR CORED REACTOR



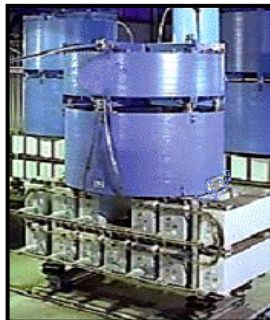
TUNING REACTOR



three phase current limiting reactor



Plinth mounted H.V. Harmonic reactor



high voltage passive harmonic filter



Pole mountewd harmonic filter

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# HIGH VOLTAGE/HIGH POWER AIR CORE REACTORS

MHVXL-Series

ELECTRICAL & MECHANICAL SPECIFICATION(LOW/HIGH FREQUENCY):

Reactive Power < 1000,000 VAR

Model	Capacity (VAR)	Input (V)	Frequency (HZ)	OPERATING VOLTAGE A.C.	Thermal rise (°C)	Formal Size		Weight Kg	Fix-OS (mm)
						H (mm)	D (mm)		
MPPT-302	00200000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	700	750	001500	option
MPPT-502	00500000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	1000	1100	004000	option
MPPT-802	01000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	1200	1500	008500	option
MPPT-1052	02000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	1200	1800	018000	option
MPPT-1202	05000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	1800	2200	030000	option
MPPT-1502	08000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	2000	2800	062000	option
MPPT-1902	15000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	3000	3200	130000	option
MPPT-2402	25000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	3800	3400	26000	option
MPPT-3002	50000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	4500	6200	52000	option
MPPT-5002	70000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	≤65	6000	8000	84000	option
MPPT-5002	80000000		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	NOT MFR	nOT MFR	not MFR	not mfr	option
MPPT-5002	99999999		50/150/250/550/1100/optional	0.44/3.3/6.6/11/33	NOT MFR	nOT MFR	nOT MFR	not mfr	option

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