



PRODUCTS CATALOGUE



Liaoning MEC Group Co., Ltd.

Introduction



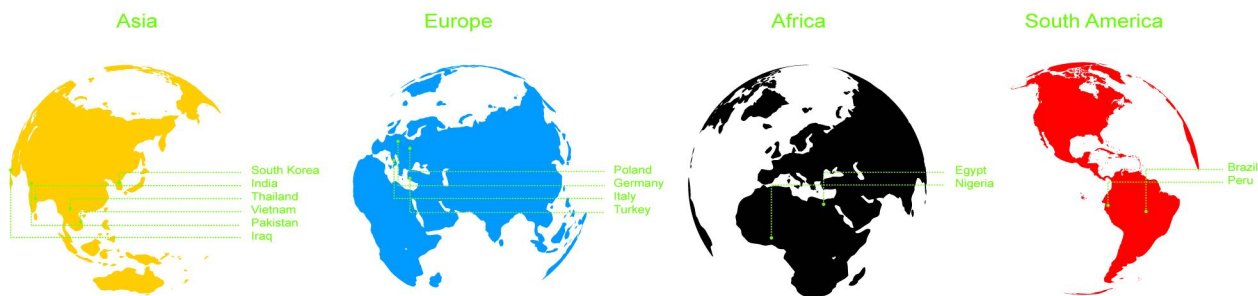
Liaoning MEC Group Co., Ltd. is an integrated group company located in the coastal city of Dalian, China. The government owned company was established in 1978 and became a share holding company in 1994. Our group company engages in the business of industrial manufacturing, international trade, logistics, real estate and we also invest in various fields as shareholders of many corporations.

As one of the first class power equipment suppliers in China, our product line covers flexible AC/DC transmission system, motor frequency converting & energy saving system, control system for new energy, coal mine safety & automation system and etc which can improve power quality, increase power safety level and realize energy saving.

Our products are widely used in various fields such as power generation & transmission, photovoltaic power & wind power generation, petrochemical industry, metallurgy, coal mining, electric railway, shipping industry and etc. Our products have been supplied to many companies all over the world which enjoy high reputations from our customers with high quality and excellent service.

Our advantages:

- Quality Assurance
--From the very beginning, MEC ensures quality in every step to achieve the best quality.
- Experience Sharing
--With more than 30 years' experience in power industry, MEC brings you an optimized solution.
- Global Service
--Wherever you are, MEC global network will support and provide you with value.
- Quick Response
--In response to your needs without delay, MEC knows the value of your time.



Flexible AC/DC transmission system

1、Static Var Compensator (SVC)



FUNCTION

Effect solution to: voltage fluctuation, flicker, voltage drop, increased line loss, low transmission capacity, harmonic distortion, low power factor and energy saving

VOLTAGE

6kV / 10kV / 27.5kV / 35kV / 66 kV / 69 kV

CAPACITY

6Mvar - 300Mvar



Motor frequency converting & energy saving series

1、Standardized Variable Frequency Drive

FUNCTION

MV motor speed regulation; energy saving



The new generation variable frequency drive has high reliability and 30% less in volume in comparison with those ordinary drives.



4th generation

6kV series:240kVA~5800kVA 50/60Hz
10kV series:240kVA~10000kVA 50/60Hz



5th generation

6kV series:240kVA~1250kVA 50/60Hz
10kV series:240kVA~2000kVA 50/60Hz

2、Shoreside power supply AMP

AMP equipment is used to power supply hotelling ship at berth, providing clean energy and establishing "Green Port"

PARAMETERS:

RATED CAPACITY

The same capacity of substation at port

INPUT VOLTAGE

6kV/10kV

OUTPUT FREQUENCY RANGE

0 ~ 60Hz

OUTPUT VOLTAGE

0 ~ 6.6kV/10kV

STRUCTURE

Fixed Type/Mobile Type with container enclosure



2、 Static Synchronous Compensator (STATCOM)



FUNCTION

Stabilizing grid voltage, reducing system loss, increasing transmission efficiency, improving transient limit, mitigating harmonics, and energy saving.

VOLTAGE

6kV / 10kV / 27.5kV / 35kV

CAPACITY

0.5MVA - 200MVA

3、 Light DC transmission HVDC

FUNCTION

Remote area passive network power supply, island and offshore drilling platform power supply, renewable energy grid connection and so on.

PARAMETERS:

RATED CAPACITY

10MVA~200MVA

DC VOLTAGE

+/-20kV +/-200kV

TRANSMISSION LENGTH

40km~100km

STRUCTURE

Container Enclosure



3、Power converter for Test station

Applicable Area: Large power motor and transformer

PARAMETERS:

RATED CAPACITY

In accordance with motor and transformer to be tested

INPUT VOLTAGE

6kV/10kV

OUTPUT VOLTAGE

In accordance with the requirements of customer

VARIABLE FREQUENCY RANGE

Motor test station 0~120Hz ; Transformer test station 0~200Hz

LOAD TYPE

Synchronous motor, Asynchronous motor, DC motor, Transformer

RUNNING MODE

Four-quadrant



4、Power converter with container enclosure for railways

Applicable Area: Electric railway power supply systems



Type	Rated Capacity	Input Voltage	Input Phase	Allowed Variations	Output Voltage	Output Frequency	Structure
RX-P27/10 -1000	1000kVA	27.5kV, 50Hz	Single Phase	+10% — —30%	10kV	In accordance with the requirements of customer	Standardized Structure/ Container Enclosure
RX-P27/10 -1800	1800kVA						

5、Low Voltage Ride Through (LVRT) Detection Device VSG

To detect the capability of LVRT of wind power generator and photovoltaic generation system

PARAMETERS:

RATED CAPACITY

5000kVA

RATED VOLTAGE

35kV

OUTPUT FREQUENCY

0—60Hz



New energy technology

Photovoltaic Inverter/Wind power converter

Photovoltaic Inverter/Wind Power Converter converts energy from photovoltaic array and wind power generator, and achieves the process of grid connection.

PARAMETERS:

GRID SIDE

RATED CAPACITY

690V +10%/-20%

FREQUENCY

47.5Hz~52Hz

CURRENT THD

<5%(satisfies the index under 50% load)

GENERATOR SIDE

DIRECT DRIVE GENERATOR POWER

1.5MW

RATED VOLTAGE

690V

FREQUENCY

6Hz~20Hz

IP RATING

IP54



Coal Mine Safety & Automation System

1、 Mine Explosion-Proof & Intrinsical Safe Static Var Generator



FUNCTION

Provide reactive power compensation for coal mine power system; energy saving

VOLTAGE CLASS

1140V

POWER CLASS

300kVar / 500kVar

2、 Mine Explosion-Proof & Intrinsical Safe Frequency Converter

FUNCTION

Motor speed regulation and soft starting for mine used belt conveyor, fan and pump; energy saving

VOLTAGE CLASS

660V / 1140V

POWER CLASS

75kW - 400kW



3、 Special anti-explosion frequency converter for ventilator



FUNCTION

High-concentrated gas control in coal mine; energy saving

VOLTAGE CLASS

660V

POWER CLASS

Single Machine type 110kW
Dual Machine type 2×110kW

4、 Mine Explosion-Proof & Intrinsical Safe MV Soft Starter

FUNCTION

Soft starting and soft braking for underground mining used motors; reduce the impact to grid

VOLTAGE CLASS

6kV

POWER CLASS

2000kW



Custom power technology products

1、Solid-state transfer switch



FUNCTION

Dual power supply design with automatic switch upon faults ensures the safety of sensitive equipment.

VOLTAGE CLASS

Low voltage: 400V-1500V

Medium voltage: 7.2 kV-10 kV

High voltage: 35 kV

SHUTDOWN CURRENT

20-50kA

SWITCHING TIME

< 5ms

RECOVERY TIME

Approximately zero

2、Fault Current Limiter

FUNCTION

Limit short-circuit current so as to protect power equipment.

VOLTAGE / CURRENT RATING

66kV—500kV / 1000A—9000A

SHORT-CIRCUIT CURRENT DECAY RATIO (CURRENT-LIMITING IMPEDANCE)

Below 40kA or custom design

RESPONSE TIME

2ms

RECOVERY TIME

Approximately zero



TRT & waste heat power generating system

Top Pressure Recovery Turbine Unit (TRT) generating system

Sinter waste heat generating system

Converter saturated steam generating system

Coke oven waste heat generating system

Pelletizing waste generating system

Converter fume purification (OG) system

Cement kiln low temperature waste heat generating system



DL9006 ACTIVE POWER FILTER(APF)

DL9006 Active Power Filters target is the harmonic current filtering including zero sequence currents (harmonics multiple of three generated by single phase rectifiers), load current balance across phases and between phases and neutral wire and reactive current compensation.

The operating principle of Active Power Filters is to detect the difference between the required sinus wave and the signal deformed by the effect of the harmonics. Therefore the Active Power Filter injects the difference of currents between both waves.



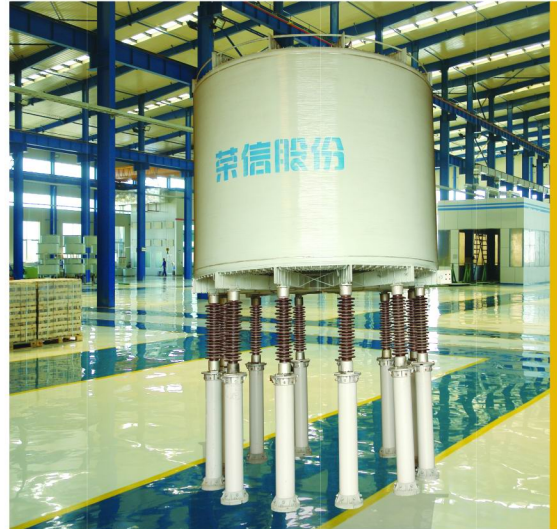
Voltage	380V(-20%~+15%)		
Rated Current	50A	100A 150A 200A 250A 300A	350A 400A 450A 500A 550A 600A
Frequency	50Hz		
Filter Range	2~60rd		
Size(W x D x H mm)	550 x 252.5 x 627.5 600 x 800 x 2200	600 x 800 x 2200	(600 x 800 x 2200) x 2

Dry-type air-core reactor

Product Category and Utility

According to the basic function, dry-type air-core reactors can be classified as three applications. Connected in series with circuit: the reactance of dry-type air-core can be used to limit the impulse current or fault current which may arise in the circuit, such as damping reactor, series reactor, current-limiting reactor, starting reactor and so on. Connected in parallel with circuit: reactive current generated in the circuit will compensate the capacitive current in the original circuit, such as shunt reactor of electric system, thyristor controlled reactor.

Series or parallel with capacitors: Series resonance or parallel resonance will occur when reactors match with capacitors appropriately in a certain frequency. And it will form low impedance or high impedance blocking, such as filter reactor.



6kV/10kV/27.5kV/35kV/66kV

CAPACITY GRADE:

3kvar-62000 kvar

Dry-type air-core filter reactor

Utility:

Series or parallel with capacitors: Series resonance or parallel resonance will occur when reactors match with capacitors appropriately in a certain frequency. And it will form low impedance or high impedance blocking.

6kV/10kV/27.5kV/35kV/66kV

CAPACITY GRADE:

3kvar-10000 kvar



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