Wolong Drive System Solutions

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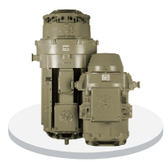
GREEN INDUSTRY PRODUCT FAMILY

LV motors

IEC motors

NEMA motors



NEMA vertical motors

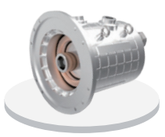
Vibration motors

Ex d motors

Ex t/Ex n motors

Special Ex d motors

Smoke extraction motors



Oil-cooled PM motors

Fan-cooled PM motors

Low speed PM motors

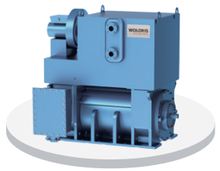
Industrial hair-pin motors

HV motors & Generators

HV Ex-proof AC motors

HV tube-cooled Ex-proof motors

HV Ex modular motors



Maglev high speed motors

WPI/WPII motors

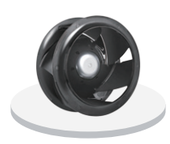
Generators

Drive & Control products

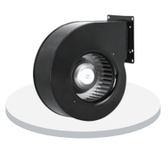
EC motors

Integrated motor products

SynRM motors



Backward Centrifugal Fan



Forward Centrifugal Fan

Axial Fan

Ex-proof integrated motors & drives

LV drives

HV drives

Low Voltage PM & SR Motors and Drive Control Products

WEPM Series Variable Frequency Drive PM Synchronous Motors

Applicable to applications with strict requirements for speed control, precise low-speed control, low noise, and compact design, such as water pumps, fans, air compressors, machine tools, reducers, packaging machinery, mining machinery, construction machinery, and various other transmission machinery.

- Covering a full range of frame sizes from H63 to H315, with power ranging from 0.18kW to 315kW
- Energy efficiency levels comply with IE4~IE5, meeting national standard Grade 1
- Featuring flux-weakening speed extension capability for overspeed operation
- Wide speed control range, resulting in significant energy savings
- Using rare earth magnets for strong and permanent magnetism
- Low vibration and noise

Rated voltage	380V/660V
Rated speed	3000r/min,1500r/min,1000r/min
Protection grade	IP55
Cooling method	IC411, IC416

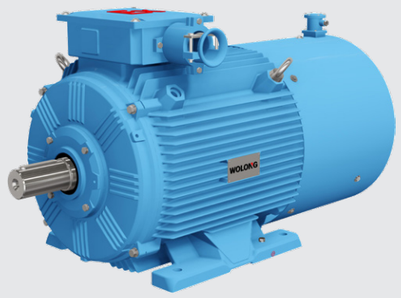
TYCP5 Series Low Speed Direct Drive Permanent Magnet Synchronous Motors

Suitable for mechanical equipment of low speed, high torque and continuous operation such as mixing tank, belt conveyor, elevator, ball mill, crushing machinery, cooling tower etc.

- The series covers the frame 180 ~ 560, the power is 1.1kW ~900kW
- Energy efficiency level reached IE5, national standard level
- It can realize S-curve starting under low speed and heavy load
- It has many advantages such as low speed, large torque, high transmission efficiency, smooth operation, compact structure and small space

Rated voltage	380V/660V
Rated speed	25r/min ～ 500r/min
Protection grade	IP55
Cooling method	IC410, IC70W

TYFB5 Series Dust Explosion-proof Variable Frequency Speed Permanent Magnet Synchronous Motors



Mainly used in grain or feed processing, wood processing, flour milling and storage, pharmaceuticals, agricultural products and other combustible dust places.

- Full range covering frame sizes H80 to H355, power 0.18kW to 375kW.
- Energy efficiency level up to IE5.
- It uses the latest technology to optimize the thermal energy of the motor, and the whole series supports temperature monitoring.
- Explosion Protection：Ex tb III C T130°C Db
- Voltage range extended to 660/1140V
- Up to CX (High Humidity, High Salinity, Marine Environment) corrosion protection level.

Rated voltage	380V/660V
Rated speed	3000r/min,1500r/min,1000r/min
Protection grade	IP55
Cooling method	IC411, IC416

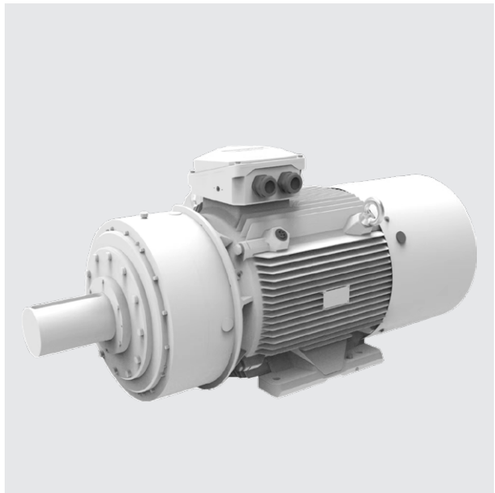
WERM5 Series PM-assisted Synchronous Reluctance Motors

Applicable to fluid loads such as fans and water pumps.

- Covering a full range of frame sizes from H80 to H315, with power ranging from 0.37kW to 315kW
- Energy efficiency level reaching IE5, meeting national standard Grade 1
- Using a special salient pole structure design for the rotor, with reluctance torque driving motor rotation
- Selecting high-temperature-resistant ferrite as the auxiliary magnetic material.
- Combining the reliability of asynchronous motors with the high performance of permanent magnet motors

Rated voltage	380V/660V
Rated speed	3000r/min,1500r/min,1000r/min
Protection grade	IP55, IP56, IP65, IP66
Cooling method	IC411, IC416

TYCPJ Series Ultra-low Speed Permanent Magnet Semi-direct Drive Motors



FSuitable for belt conveyors, hoists, mixers, transfer machines, cooling towers, emulsion pump stations and other machinery and equipment running at low speed and high torque in Steel & Metallurgy, Petrochemical, Mining, Coal Mining, Oil and gas, paper making and shipping.

- A new product combined permanent magnet drive with high energy efficiency technology, can realize low-speed and heavy-load variable frequency soft start. Excellent starting: variable frequency soft start, large starting torque and strong overload capacity
- Compact structure: compact, light weighted, easy installation and space saving. Low noise and environmental protection: low vibration, low noise and low temperature rise

Rated voltage	380V/660V
Rated speed	30r/min~90r/min
Protection grade	IP55
Cooling method	IC416/IC410/IC411/IC71W

WIDM100/110 Series Intelligent Integrated Drive Permanent Magnet Motors

Suitable for speed regulation, accurate control of low speed, low noise and compact design applications such as water pumps, fans, air compressors, machine tools, reducers, packaging machinery, mining machinery, construction machinery and other types of transmission machinery.

- Integrated: Integrated PLC, drive and motor together
- Power Range: 1.5-18.5kW
- High efficiency: Adopts IE5 high-efficiency permanent magnet synchronous motor
- High protection: the whole machine can reach up to IP55 protection level
- Low noise: better matching between motor and drive, excellent control performance, low noise

Input power supply	380V~440V 50Hz/60Hz
Control mode	vector control
Speed range	1:25
Overload capacity	110% rated torque 60s

TBYBP Series Flameproof Variable Frequency Speed Permanent Magnet Synchronous Motors

Widely used in explosive environments (non-mining face) and explosive gas environments in coal mines to drive various pumps, compressors, fans, reducers and other loads.

- Full range covering frame sizes H80 to H315, power 1.1kW to 315kW.
- The energy efficiency level is in line with IE4~IE5 efficiency.
- Explosion Protection：Ex dI Mb, Ex dIIBT4 Gb, Ex dIICT4 Gb
- With permanent magnet rotor for higher efficiency and power density
- Excellent performance of constant torque operation at low speeds, wide speed range and high efficiency in the full speed range
- Two frame sizes to meet retrofit needs and new project needs

Rated voltage	380V,660V,1140V
Rated speed	3000r/min,1500r/min,1000r/min
Protection grade	IP55
Cooling method	IC411/IC416

EMR-Bulldozer™ Ferrite-assisted Synchronous Reluctance Integrated Driver

Applicable for fans, pumps compressors or loaded machinery.

- An integrated product that combines a top-mounted controller unit and a ferrite-assisted synchronous reluctance motor
- Full range covers frame: H112 ~ H132. Power rating: 2.2kW ~ 7.5kW
- Full range obtained CE, UL certification
- Efficiency grate: IE5
- Wide debugging range, with more than 2 times overspeed zone full load speed control ability, and 2 times overspeed zone efficiency of more than 90%
- No electrolytic capacitor scheme, high temperature resistance and no demagnetization, long service life
- Excellent control performance, dynamic response and torque fluctuation are comparable to permanent magnet synchronous motor

Input power supply	220V~480V 50Hz/60Hz
Control mode	direct flux control
Speed range	180r/min~4000r/min
Overload capacity	110%-10 minutes and 136%-10 seconds

Liquid-cooled Permanent Magnet Motor Special for Screw Air Compressors

Special for screw air compressors.

- The whole series meets IE5 efficiency requirements and leads the industry in energy saving
- Adopt unique oil circuit design to prevent high oil pressure
- The weak magnetic control design is adopted to ensure a wide and efficient operation area of the motor
- The motor adopts liquid cooling, which has good cooling effect, low temperature rise and long service life
- The casing is made of cast aluminum, with light weight, high strength and beautiful appearance. Integrated structure with load end makes the system more compact

Power	5.5-250kW
Rotating speed	0~7000rpm
Protection grade	IP65
Service coefficient	SF=1.0~1.2

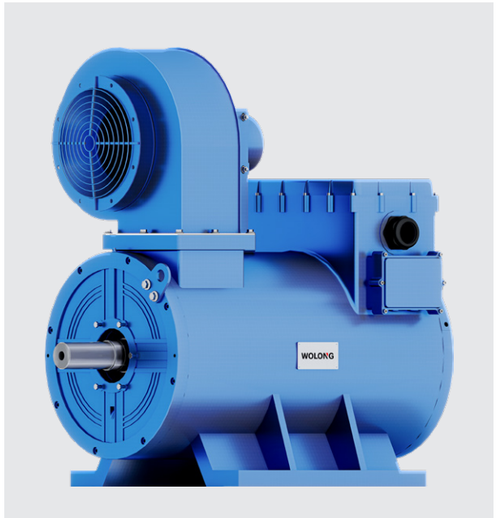
Liquid-Cooled Permanent Magnet Motors for Vacuum Pumps

Special for vacuum pumps.

- The whole series meets IE5 efficiency requirements and leads the industry in energy saving
- The weak magnetic control design is adopted to ensure a wide and efficient operation area of the motor
- The motor adopts liquid cooling, which has good cooling effect, low temperature rise and long service life
- The casing is made of cast aluminum, with light weight, high strength and beautiful appearance. Integrated structure with load end makes the system more compact
- Using glue pouring technology, the reliability of motor is effectively improved
- Compact size, which is 1/2 of similar products in the industry
- Stainless steel waterway, corrosion resistance
- Sealed structure

Power	4~22kW
Rotating speed	3000~7500rpm
Protection grade	IP65
Service coefficient	SF=1.0~1.2

Wind Cooling Permanent Magnet Motors for Refrigeration Compressors



Special for refrigeration compressors.

- Internal forced wind cooling, and the stator and rotor cores are provided with special ventilation holes, which has good cooling effect, low temperature rise and long service life
- The weak magnetic control design is adopted to ensure a wide and efficient operation area of the motor
- The frame adopts aluminum alloy shell, which is light in weight, high in strength and beautiful in appearance
- Compact size and high efficiency
- The bearing is ventilated and cooled, and the temperature rise is low

Power range	110-500kW
Rotating speed	500r/min~7000r/min
Cooling method	Internal forced wind cooling IC416
Energy efficiency	⩾ IE5

Industrial Hair-pin Motors

With the mass production of hair-pin motors for new energy vehicles and rapid decline in manufacturing cost, hair-pin motor technology is applicable in industrial motors. The advantages of hair-pin motor are very obvious in some areas.

- High efficiency, compact, low temperature rise, good heat dissipation and low noise
- The copper full rate of flat wire motor can reach 70%, and the efficiency of flat wire motor can be improved under the same power. 1%, the volume decreased by 30%
- Special design can be made according to customer needs

Power range	75~250KW
Rotating speed	5000~18000rpm
Protection grade	IP56
Cooling method	Water cooling, wind cooling
Energy efficiency	⩾ IE5

WD200 Series General Purpose Frequency Converters

Widely used in water treatment, food and beverage, building materials, mining belts, chemicals, papermaking, ports etc.

- The internal circuit board is coated with 100% enhanced paint and adopts independent air duct design, which can meet strict requirement in harsh environments
- Silicon controlled rectifier is used for medium and high power, and there is no mechanical contact inside the machine.
- Abundant interface resources
- Expandable LCD panel

Supply voltage	Single phase 220V~240V ±10%; Three-phase 200V~240V ±10%; Three-phase 380V~480V ±10%; Three-phase 660V~690V ±10%; 0.75-1000KW
Control mode	V/F, SVC, FVC and voltage-frequency separation control
Speed regulation range	1:200 (SVC) 1:1000 (FVC)
Steady speed accuracy	IM: ±0.5%/PMSM: ±0.1% (SVC) ±0.02 (FVC)
Output frequency range	0-600Hz
Overload capacity	G-heavy load: 150%Rated current 60s P-light load: 120%Rated current 60s

WD300 Series Reluctance Motor Special Converters

Widely used in fan, pump, compressor and other applications.

- WD300 series reluctance motor special inverter power coverage 0.75kW~800kW
- Advanced motor control algorithm is adopted to match with Wolong permanent magnet auxiliary reluctance synchronous motor efficiently
- Support synchronous reluctance motor, permanent magnet synchronous motor control
- It has the characteristics of high reliability, high performance and strong expansion ability

Input power supply	380V~480V 50Hz/60Hz
Control mode	V/F, DFC
Speed regulation range	1:200 (DFC)
Steady speed accuracy	SynRM±0.1%
Output frequency range	0-600Hz
Overload capacity	G-heavy load: 150%Rated current 60s P-light load: 120%Rated current 60s

WD400 Series High Performance Frequency Converters

Widely used in high control precision scenarios such as performance platform, warehousing and logistics, lithium battery, ceramics and papermaking.

- Built-in DC reactor for converters above 30kW (inclusive)
- The upper computer is equipped with virtual control and parameter monitoring platform, which can realize online debugging and motor control, online learning, parameter copying, parameter loading, user rights management etc.
- Can be matched with IOT module to realize intelligent remote inspection, remote fault warning and visual analysis and adapt to all kinds of cloud platforms.
- CE, EAC, UL, CSA, UKCA, etc. certifications to meet different overseas requirements

Supply voltage	Single phase 220V~240V ±10%; Three-phase 200V~240V ±10%; Three-phase 380V~480V ±10%; Three-phase 660V~690V ±10%; 0.75-1000KW
Control mode	V/F, SVC, FVC
Speed range	1:200 (SVC) 1:1000 (FVC)
Steady speed accuracy	IM: ±0.5%/PMSM: ±0.1% (SVC) ±0.02 (FVC)
Output frequency range	0-600Hz
Overload capacity	150%Rated current 60s

WD600A High Speed Frequency Converters

Used in high-speed application scenarios such as AC permanent magnet synchronous motor and AC asynchronous motors.

- Simple debugging and easy to use.
- Using strong robust control algorithm, achieve good control even when the motor parameters changes
- Reliable thermal design and efficient heat dissipation capacity
- Adopt efficient and accurate thermal simulation platform software, with high accuracy, efficiency and stability.
- High switching frequency and low output harmonics.
- The switching frequency can reach 16KHz, which reduces the harmonic and loss of the motor and ensures the low temperature rise and long life of the motor

Supply voltage	Single phase 200V~240V Three-phase 380V-480V -15%~10% 0.75-1000kW
Control mode	V/F, SVC, FVC, Voltage-frequency separation
Speed regulation range	1:200 (SVC) 1:1000 (FVC)
Output frequency range	0-4000Hz
Overload capacity	150%Rated current 60s; 180%Rated current 3s

High Voltage PM Motors and Drive Control Products

High Voltage Permanent Magnet Low-speed Direct Drive Motors

Suitable for belt conveyors, scraper conveyors, mills, mixers, elevators or other mechanical equipment that require low-speed operation in mining, coal, shipbuilding, metallurgy, chemical, building materials, power, oil fields and other fields.

- Smooth operation, minimal vibration, low noise, and high reliability
- Equipped with zero speed full torque output characteristics, achieving smooth start-up under heavy loads

Rated voltage	6kV, 10kV
Power range	355-2000kW
Speed	90rpm
Rated frequency	45Hz, 60Hz
Cooling method	IC46W

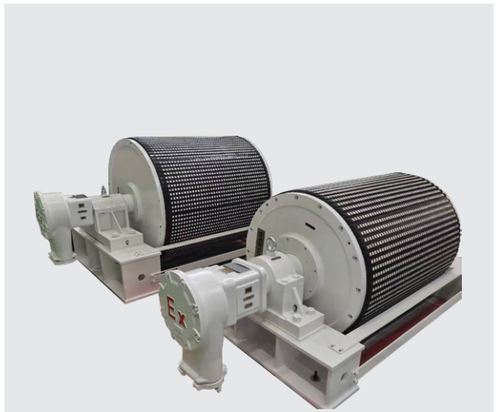
Permanent Magnet Semi Direct Drive Variable Frequency Integrated Machine

Suitable for general equipment such as scraper conveyors, transfer machines, belt conveyors, emulsion pump stations, etc. in mining, coal and other fields.

- Integrated frequency converter, reducer, and motor, small size, simplified system, and low maintenance cost
- Capable of heavy-duty starting, strong electromagnetic compatibility, minimal impact on the power grid and machinery
- Equipped with comprehensive protection functions and advanced diagnostic management.

Rated voltage	1140V
Power range	250-800kW
Speed	60rpm
Rated frequency	50Hz
Cooling method	IC3W7

Permanent Magnet Electric Drum Moto



Suitable for belt conveyors, scraper conveyors, mills, mixers, elevators or other mechanical equipment that require low-speed operation in mining, coal, shipbuilding, metallurgy, chemical, building materials, power, oil fields and other fields.

- High starting torque, high efficiency, integrated design, small size, compact structure, easy installation

Rated voltage	660V, 1140V
Power range	75-315kW
Belt speed	2m/s-5m/s
Drum diameter	630mm, 800mm, 1000mm, 1250mm

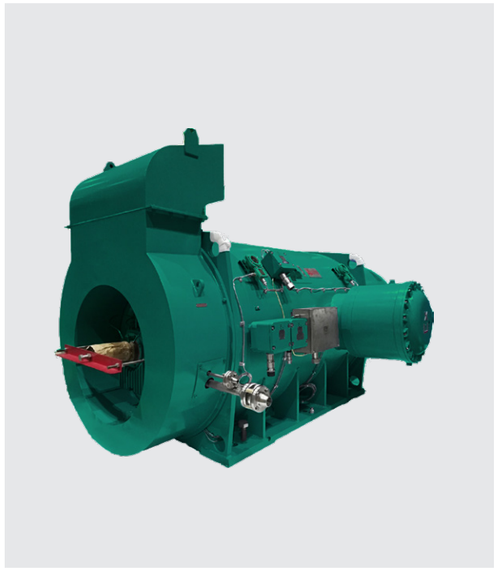
High Voltage Platform Permanent Magnet Motor(TEFC)

Suitable for general equipment such as pumps, fans, compressors, conveyors, mixers, mills, winches, etc. in the fields of petroleum, coal, chemical, oil and gas pipelines, mining, metallurgy, electricity, building materials, and ports.

- High power density, high efficiency, easy to use and maintain, energy-saving and environmentally friendly

Rated voltage	6kv, 10kV
Power range	280-2500kW
Poles	500-3000rpm
Rated frequency	100Hz, 66.7Hz, 50Hz, 40Hz, 33.3Hz
Cooling method	IC411, 1C416

High Voltage Platform Permanent Magnet Motors (TETC)

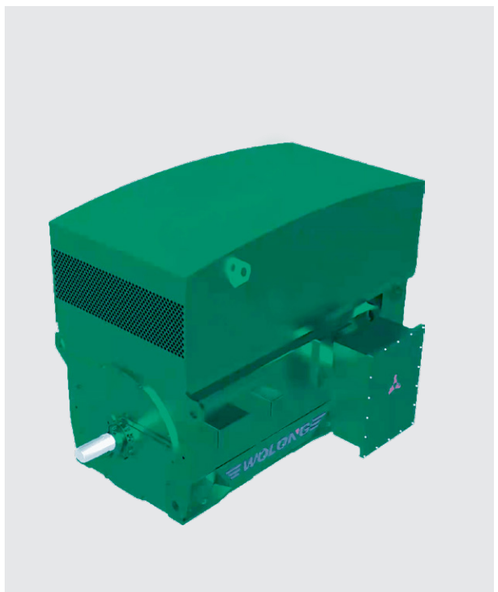


Suitable for general equipment such as pumps, fans, compressors, conveyors, mixers, mills, winches, etc. in the fields of petroleum, coal, chemical, oil and gas pipelines, mining, metallurgy, electricity, building materials, and ports.

- High power density, high efficiency, easy to use and maintain, energy-saving and environmentally friendly

Rated voltage	6kV, 10kV
Power range	400-3550kW
Poles	500-3000rpm
Rated frequency	100Hz, 66.7Hz, 50Hz, 40Hz, 33.3Hz
Cooling method	IC511, 1C516

High Voltage Platform Permanent Magnet Motors (TEAAC)



Suitable for general equipment such as pumps, fans, compressors, conveyors, mixers, mills, winches, etc. in the fields of petroleum, coal, chemical, oil and gas pipelines, mining, metallurgy, electricity, building materials, and ports.

- High power density, high efficiency, easy to use and maintain, energy-saving and environmentally friendly

Rated voltage	6kV, 10kV
Power range	250-5000kW
Poles	500-3000rpm
Rated frequency	100Hz, 66.7Hz, 50Hz, 40Hz, 33.3Hz
Cooling method	IC611, 1C666, IC81W, IC86W

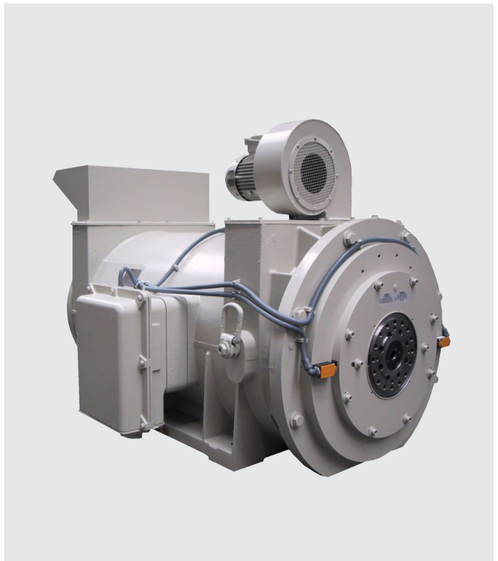
Permanent Magnet Frequency Conversion Integrated Machine

Suitable for general equipment such as scraper conveyors, transfer machines, belt conveyors, emulsion pump stations, etc. in mining, coal and other fields.

- Integrated frequency converter and motor, small size, simplified system, and low maintenance cost; Capable of heavy-duty starting, strong electromagnetic compatibility, minimal impact on the power grid and machinery
- Equipped with comprehensive protection functions and advanced diagnostic management

Rated voltage	1140V, 3.3kV
Power range	315-1600kW
Speed	1500rpm
Rated frequency	75Hz
Cooling method	IC3W7

Variable Frequency Drive Explosion-proof Three-phase Permanent Magnet Synchronous Motors (High-speed Motors)



High speed ventilators, Pump direct-driven and high speed compressor system; Explosion proof mining locomotive high speed driving system; Distributed energy resource high speed generator.

- This series of motor is energy saving, high efficiency, and environmentally friendly. It has the characteristics of small in size, low weight, low noise, safe and reliable operation, convenient use and maintenance, and space saving, etc.

Rated voltage	380V, 400V, 660V, 690V
Power range	11-200kW
Rated speed	15000r/min, 7500r/min
Rated frequency	250Hz
Cooling method	IC3W7, 1C416

6MW High Speed Permanent Magnet Motors

Applicable to equipment such as compressors and testing platforms in the fields of petroleum, coal, chemical, oil and gas pipelines, mining, metallurgy, electricity, building materials, ports, etc.

- High power density, high efficiency, small size, and light weight
- Small moment of inertia and fast dynamic response; Low temperature rise, minimal vibration, and long lifespan

Rated voltage	6kV, 10kV
Power Range	1000-6000kW
Speed	6000-20000rpm
Rated frequency	333Hz
Cooling method	IC86W

5000 Series Integrated Type High Voltage VFD

Widely used in fans, pumps, compressors and other loads.

- The product is further optimized and upgraded on the basis of compact structure of the original series, and the integrated design of the whole machine achieves higher power density, smaller floor space, higher reliability, and easier arrangement and maintenance.
- The variable frequency system adopts voltage source multi-level topology. The power cell is equipped with dry type metalized film capacitors. With high efficiency, high power factor, no special requirements for the motor and other characteristics.

Input voltage	6~11kV
Output voltage	6~11kV
Rated capacity	250~3500kVA (at 10kV)
Rated current	15~203A
Rated input frequency	50Hz/60Hz
Rated output frequency range	0~120Hz (customizable)
Cooling method	Air Cooled

5100 Series Air-cooled High Voltage VFD

Widely used in fans, pumps, compressors, belt conveyor, elevator and other loads.

- The variable frequency system adopts voltage source type multi-level topology and split cabinet design.
- The power cells are equipped with dry metalized film capacitors.
- The variable frequency system adopts dry phase-shifting transformer, applying multi-pulse rectification technology, with low grid side harmonics; the output of the inverter adopts multi-unit cascade scheme, with good output waveform quality, no need to configure the output filter, which can satisfy the demand of driving motors with ordinary cables for a long distance.
- Series of frequency converters have the features of high efficiency, high power factor, no special requirements for motors, etc.

Input voltage	3.3~35kV
Output voltage	3.3~13.8kV
Rated capacity	250~20000kVA（at 10kV）
Rated current	15~1200A
Rated input frequency	50Hz/60Hz
Rated output frequency range	0~120Hz(customizable)
Cooling method	Air Cooled

5100 Series Water-cooled High Voltage VFD

Mainly used in pipeline, petrochemical, metallurgy, air energy storage, military industry, test station and other fields.

- The product adopts voltage source multi-level topology, the power system adopts water-water cooling scheme, power module dual water circuit parallel design, water-cooled pipe using quick connector design scheme, support online plugging and unplugging.
- The power unit is modularized and assembled, with strong expansion capability.
- The DC side of the unit is equipped with metallized film capacitors, high-voltage IGBT power devices, and the VFD transformer can be either oil-immersed transformer or dry-type transformer.
- The inverter has the features of flexible layout, high reliability, small number of modules, good quality of output waveforms, and friendliness to the grid side to meet the user's requirements for the drive control of the core loads and key equipment.

Input voltage	6~35kV
Output voltage	6~13.8kV
Rated capacity	250~80000kVA (at 10kV)
Rated current	15~2300A (single VFD)
Rated input frequency	50Hz/60Hz
Rated output frequency range	0~120Hz (customizable)
Cooling method	Air Cooled

WD6000 Series High-voltage Frequency Converter(SCH)

Suitable for electric power, petrochemical, water treatment, mining, building materials, metallurgy and other fields.

- This series of frequency converters has a fast torque response
- Strong overload capacity, capable of achieving 150% to 250% rated torque output
- The input current has low harmonic content and high power factor
- Modular design
- The device has a small size, high power density, and is easy to install and maintain

Rated voltage	6.6kV
Rated capacity	250~2800kVA
Rated current	15~231A
Rated input frequency	50/60Hz
Rated output frequency range	0~120Hz（customizable）
Cooling method	Air-cooled

WL_Group_01_Drive System_202409_EN-VER1.0

WOLONG

Power your future

Wolong Electric Group Co.,Ltd.

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