

WOLONG

Power your future



MV Drives

WD4000 Medium Voltage Inverters

Proven Technology

System reliability and efficiency

Wolong is highly experienced with the development and manufacturing of medium and high voltage drives.

Industrial electric motors consume more than 50% of all global electricity costs annually. And frequency conversion devices achieve effective energy savings from motors in fans, pumps and other equipment. They significantly save on operational costs and also helps companies achieve carbon reduction targets.

Wolong is a leading manufacturer of high voltage drives. We have been developing, producing and delivering a wide range of inverter equipment for over 25 years with a large global installed base.



Wolong's Anshan facility produces drives and soft starters ranging from 1.0 to 13.8 kV up to 80 MW, including control electronics and complete power modules.



Benefits and Applications

WD4000 Benefits - 4.16 kV, 1000-5500 HP

Protects Driven Equipment	Best-in-class, starting at 18-pulse up to 72 pulse phase shift transformer delivering clean performance to the grid across all ratings, exceeding IEEE 519.
Reliable Design	Cascaded H-Bridge inverter topology features state-of-the-art protection for high system reliability and continuous operation.
Compact Footprint	Multi-level PWM design suitable for legacy and modern motors without a need for extra power filters. All-in-one integrated transformer optimizes max. space use.
Ease of Maintenance	A modular power cell architecture allows fast maintenance and repair. It also minimizes system downtime.
Designed for Longevity	Redundant fans with an innovative ventilation design keep power elements cool promoting longer life and high system reliability.



Petroleum & Chemical

Electric submersible pumps
Water injection pumps
Oil pumps
Compressors
Boiler feedwater pumps
Booster pumps
Hydrogenation pumps



Mining

Hoists
Belt conveyors
Main ventilation fans
Air compressors
Gas discharge pumps
Slurry pumps



Power Generation

Induced/forced draft fans
Desulfurization booster fans
Primary and secondary fans
Circulating pumps
Water supply pumps
Condensate water pumps



Water / Wastewater

Water intake pumps
Water supply pumps
Primary water pumps
Secondary water pumps
Desalination pumps
Aerator pumps



Steel

Cooling circulation pumps
Phosphorus removal pumps
Sintering main exhaust fans
Cooling fans
Blast furnace blowers
Dust removal fans



Building Materials

Raw mat. circulating fans
Coal circulating fans
Kiln head exhaust fans
High temp. kiln tail fans
Kiln tail exhaust fans
Conveyor belts

Technical Features



WD4000 Technical Features	
Output Power Capacity	4160 V, 1000 - 5500 HP Output, 130 - 635 A Current
Input Voltage	4160V ±10%, optionally 3.3 - 13.8kV
Input Voltage Frequency	50/60 Hz, ±5%
Input Power Factor	≥0.95, load >10%
Efficiency	>98.5% (drive converter only)
Overload Capacity	110% - 60 min, 120% - 1 min, 150% - 3 sec
System Protections	Over current / ground fault / over voltage / under voltage / phase loss / over temperature / fan failure / communication failure
Software Functions	Redundant supply / Fault diagnostic / Torque & current limiting / Spinning start (Flying start) / Low voltage ride-through (LVRT) / Master-Slave / Energy saver / Synchronous transfer to grid (Drive bypass) / Skip frequencies / Motor parameter auto-tune
Environment	Indoor, safe area
Cooling	Oversized forced air cooling with integrated fans
Enclosure	IP31 / NEMA2 (IP42 option)
Humidity	<95%, non-condensing
Operating Temperature	+5 to +40 °C (Derate option up to +50 °C)
Altitude	<1000m (Derate option up to 3000m)

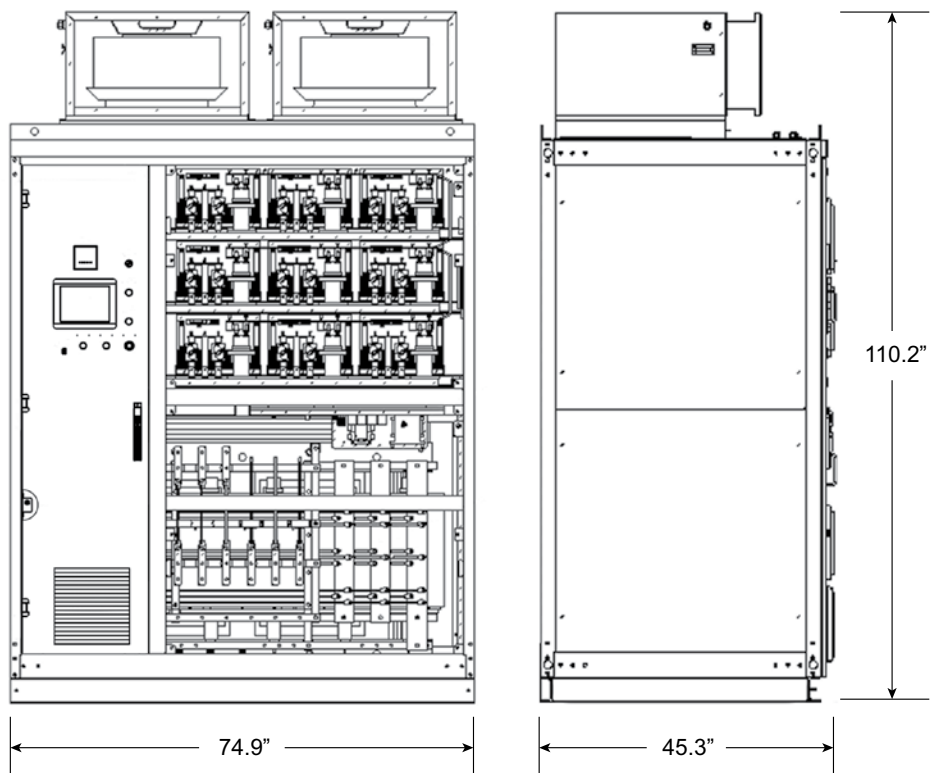
▼ Cooling

Heat Dissipation

WD4000 top mounted fans pull cool air up through independent air paths for control, inverter, and transformer sections ensuring high reliability and performance.



▼ Compact Frame



Monitoring System

HMI

The Wolong drive interface enables users to intuitively monitor the operation and fault alarm situation. Through this system, users can conveniently view all parameters, fault records, etc.

The main interface includes three areas: a navigation bar, status display area, and control buttons.

The status display area shows the current status of the drive, including time, communication status between the touch screen, control boards, operation data, and control status of the drive and its load.



PARAMETERS	
VFD	Setting the drive parameters according to its ratings.
Motors	Setting the motor parameters according to their ratings.
Speed Regulation	Acceleration and deceleration settings, transition frequency limits, critical speed avoidance

REAL-TIME DATA INTERFACE	
Converter Cell Status	Color coding shows cells that are unenergized, in running state, in fault, or bypassed. Phase cell status including: - Failed Downlink Comms - Failed Uplink Comms - Running State - IGBT No. 1-4 Fault - Cell Over Temperature - Cell Undervoltage - Cell Overvoltage - Cell Bypass
Digital I/O Status	Color coding to indicate operating relays among the 20 available I/O.
Analog I/O Status	List of the I/O channel number, name and value. 15 analogue input channels and corresponding signal detection values are displayed.

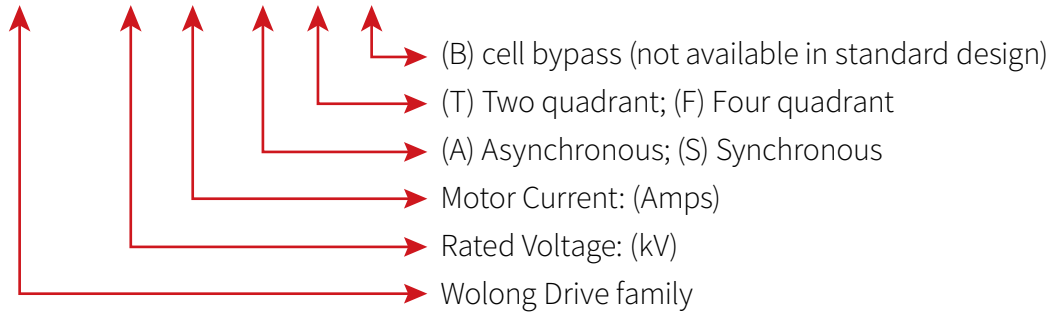
HISTORY DATA INTERFACE	
Fault Records	Fault time and content arranged in chronological order.
Alarm Records	Alarm time and content arranged in chronological order.
Operation Records	Operation time and content arranged in chronological order.
Running Time Record	Running time duration information.

HELP	
Operation Flow	Operation sequence of drive from start to stop in detail.
Safety Standards	Lists the main installation and operation safety issues.
Version Information	The program version of the drive CPU board and touch screen, etc. to facilitate access by commissioning staff

WAVEFORM DISPLAY INTERFACE	
Waveform	View transient and running curves and fault records of the drive.

▼ Ratings

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Model Number	Amps	Power Cell Current	Rated Power	
			HP	kW
WD4000-4-130-XXX	130	140 A	1000	746
WD4000-4-159-XXX	159	260 A	1250	933
WD4000-4-190-XXX	190	260 A	1500	1119
WD4000-4-222-XXX	222	260 A	1750	1306
WD4000-4-254-XXX	254	260 A	2000	1492

▼ Services

Wolong drives are backed by a comprehensive network of service professionals, offering expert assistance in everything from routine maintenance to emergency repairs.

Additionally, we maintain a robust inventory of genuine spare parts to help keep your equipment running at peak performance.

With extended service options and global coverage, you can trust that your equipment will run smoothly and with minimal downtime.



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