

# G71 HIGH VOLTAGE INVERTER

JD-BP37/38 series high voltage frequency

inverter



**Model no.:** G71 Standard High Voltage Inverter

**Power range:** 6kV:200kW–5000kW (Two quadrant)

10kV:200kW–9000kW (Two quadrant); 6kV:200kW–2600kW (Four quadrant)

10kV:200kW–8000kW (Four quadrant) Cooling mode: forced air cooling, water cooling

**Performance features:** Based on two / four quadrant synchronous (including permanent magnet synchronous motor) / asynchronous motor platform design and unit sealing design, the whole machine adopts modular design idea and high production efficiency.

**Competitive advantages:** modular design of control system, small harmonic, accurate speed regulation, good sealing of power unit and strong environmental adaptability.

**Load type:** fan and water pump load; Hoist and belt conveyor loads

## —、Structural features

### Transformer cabinet

It contains phase-shifting transformer, temperature sensor, current and voltage detection device. Phase

-shifting transformer provides independent three-phase input power supply for power unit; The temperature sensor monitors the internal temperature of the transformer in real time to realize the functions of over temperature alarm and over temperature protection; The current and voltage detection device can monitor the input current and voltage of the transformer in real time to realize the protection function of the frequency converter. Independent air duct design reduces transformer temperature rise and prolongs service life.

### Switching cabinet

When the frequency inverter fails, the motor can be switched to the grid power from the frequency conversion to continue operation. There are two types of switching: automatic and manual. The difference is that the manual switching cabinet needs to switch the main circuit according to the operating procedures; aAnd the automatic switching cabinet can automatically switch the main circuit under the system control, except during maintenance. The switching cabinet is non-standard and needs to be customized according to the user's on-site requirements.



### Power unit cabinet

There are power units inside. Each power unit is completely consistent in structure and can be interchanged. Its shell adopts mold integrated design and has good sealing performance. It is suitable for occasions with high tide humidity, multi dust and multi corrosive gas. The power cabinet communicates with the control cabinet through optical fiber, which can effectively suppress electromagnetic interference.

### Control cabinet

It contains HMI, ARM, FPGA, DSP and other high-precision chips. Multi language human-machine interface, less parameters and easy operation; Rich external interfaces, convenient for connection with user system and field expansion. The main controller uses the self-developed box structure for packaging. The box has passed the strict EMC certification and the treatment of temperature cycle and vibration test, with high reliability.

## 二、Product Parameters

Model		JD-BP37/38-F	JD-BP37/38-T
Motor power (kW)		200kW-20000kW(Using 4-pole motors as standard, selecting the motor type for 6-12 pole motors based on current)	200kW-8000kW(Using 4-pole motors as standard,selecting for 6-12 pole motors based on current)
Output	Rated power(kW)	Power operated at rated voltage	Power operated at rated voltage
		200kW-20000kW	200kW-8000kW
	Rated current(A)	Current operated at rated voltage	Current operated at rated voltage
	Overload capacity	Continuous operation at 105%	Continuous operation at 105%
		Permitted for 1 minute at 130%	Permitted for 1 minute at 130%
		Permitted for 3 seconds at 150%	Permitted for 3 seconds at 150%
	Output voltage(kV)	Three phase 0-6kV, 0-10kV	
	Waveform	SPWM sinusoidal wave	
Input	Phase number, frequency, voltage	Three phase ,50Hz/60Hz,6kV(10kV)	
	Allowable fluctuation	Voltage: -10%~+10%,frequency:±5%,-10% ~ -35% continuous operation under derating	
Basic feature	Starting frequency	0—10Hz can set	
	Accuracy	Analog setting: 0.3% of the highest frequency setpoint value (25±10°C). Digital setting: 0.02% of the highest frequency setpoint value (-10~+50°C).	
	Resolution	Analog setting: 0.05% of the highest frequency setpoint value. Digital setting: 0.01Hz (for frequencies below 99.99Hz) and 0.1Hz (for frequencies above 100Hz).	
	Efficiency	>At 98% during rated output	
	Power factor	>0.95	
Control	Acceleration and deceleration time	0.1~6000.0 seconds, with the ability to set acceleration and deceleration times separately	
	Voltage/Frequency Characteristics	Determined by the selected V/F curve	
	PID	Manual setting of PID parameter	
	Additional functions	V/F curve, low-frequency compensation, rated current, current protection threshold settings	
	High-voltage isolation	Electromagnetic coupling, multi-channel optical fiber transmission	
	Control power input	AC 220V 2kVA	
Opera	Operation	Local control (touch screen, cabinet door switch) operation, remote control operation at a distance , upper-level computer operation (optional)	
	Frequency reference	Touch screen digital setpoint, multi-segment speed setpoint, external control analog signal (DC 4~20mA) setpoint	

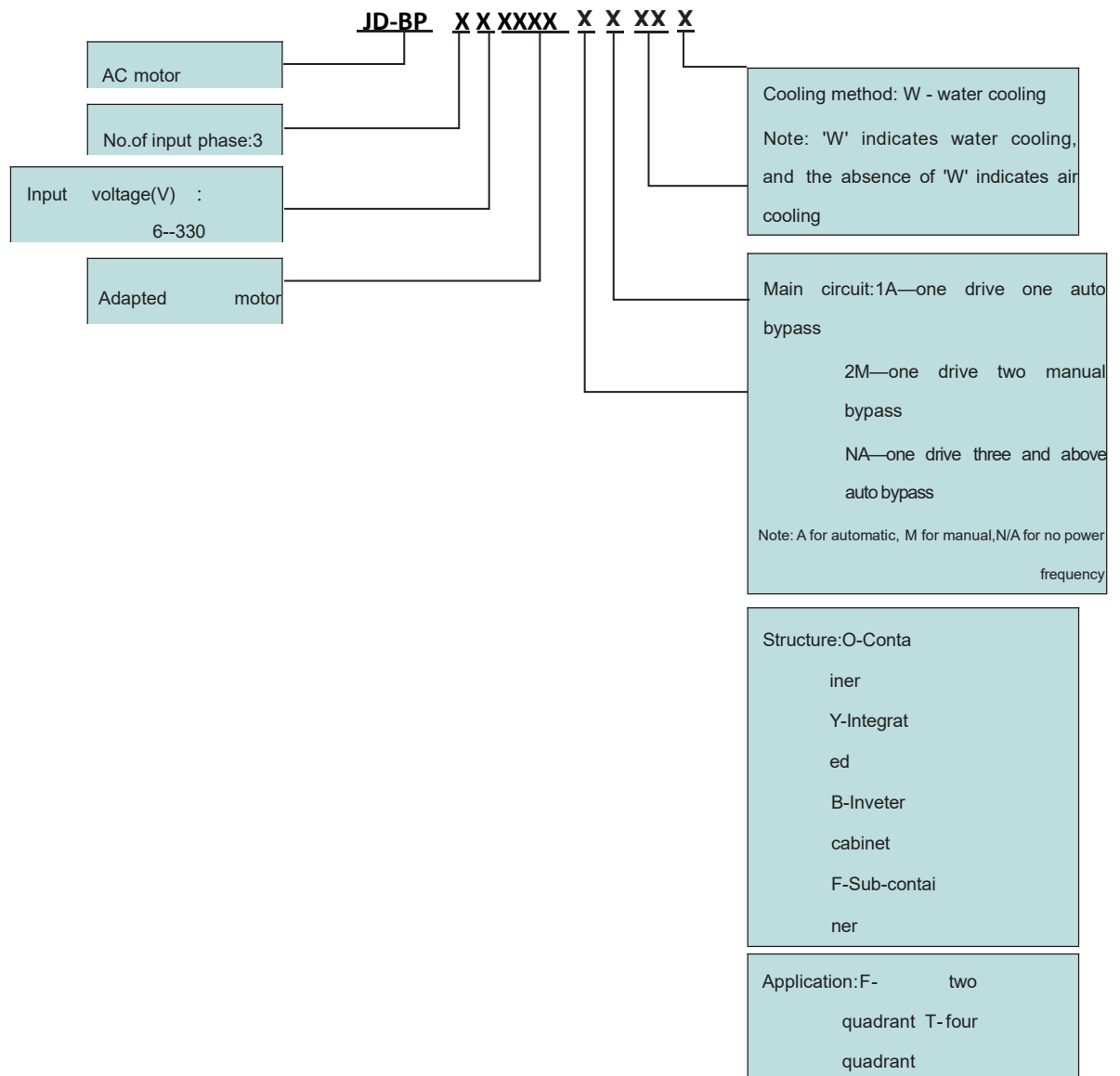
tion	Status output	Relay status output, inverter fault, alarm, run/stop status indicators, etc
	Touch screen	Input/output voltage, input/output current, setpoint, status of each unit, operating status, transformer status, voltage of each unit bus, etc
	Protection function	"Motor overcurrent, system overvoltage/undervoltage, unit overcurrent/overvoltage/overheating, input phase loss, optical fiber communication failure, etc.
Environ ment	Environment	Indoor, free from corrosive or conductive gases, dust, and direct sunlight
	Temperature, humidity	-10°C ~+40°C / 20~90%RH no condensation
	Vibration	5m/ s <sup>2</sup> (0.6g or less )
	Storage temperature	-20 to +65°C (suitable for short-term storage, such as during transportation)
	Altitude	≤ 1000m, customizable for altitudes exceeding 1000 meters
Cooling method/IP degree		Forced air cooling /IP31 Liquid cooling/IP40

### 三、Product size

Model	Power rating	Dimension and weight			Weight (kg)
		Width (mm)	Depth (mm)	Height (mm)	
JD-BP38-250F	250 kW/10kV	2000	1500	1900	2160
JD-BP38-280F	280 kW/10kV	2000	1500	1900	2220
JD-BP38-315F	315 kW/10kV	2000	1500	1900	2290
JD-BP38-355F	355 kW/10kV	2000	1500	1900	2350
JD-BP38-400F	400 kW/10kV	2000	1500	1900	2440
JD-BP38-450F	450 kW/10kV	2000	1500	1900	2500
JD-BP38-500F	500 kW/10kV	2000	1500	1900	2560
JD-BP38-560F	560 kW/10kV	2000	1500	1900	2640
JD-BP38-630F	630 kW/10kV	2000	1500	1900	2720
JD-BP38-710F	710 kW/10kV	2000	1500	1900	2790
JD-BP38-800F	800 kW/10kV	2000	1500	1900	2860
JD-BP38-900F	900 kW/10kV	2000	1500	1900	2980
JD-BP38-1000F	1000 kW/10kV	2000	1500	1900	3100
JD-BP38-1120F	1120 kW/10kV	2800	1700	2120	4320
JD-BP38-1250F	1250 kW/10kV	2800	1700	2120	4600
JD-BP38-1400F	1400 kW/10kV	2800	1700	2120	5090
JD-BP38-1600F	1600 kW/10kV	2800	1700	2120	5200
JD-BP38-1800F	1800 kW/10kV	2800	1700	2120	5580
JD-BP38-2000F	2000 kW/10kV	2800	1700	2120	5720
JD-BP38-2250F	2250 kW/10kV	4200	1700	2420	9380
JD-BP38-2500F	2500 kW/10kV	4200	1700	2420	9380
JD-BP38-2800F	2800 kW/10kV	4500	1700	2420	10900
JD-BP38-3250F	3250 kW/10kV	4500	1700	2420	11300
JD-BP38-4000F	4000 kW/10kV	4500	1700	2420	11900
JD-BP38-4500F	4500 kW/10kV	4500	1700	2420	12500
JD-BP38-5000F	5000 kW/10kV	8100	1700	2620	13975

Model	Power rating	Dimension and weight			Weight (kg)
		Width (mm)	Depth (mm)	Height (mm)	
JD-BP37-225F	225 kW/6kV	1700	1500	1900	1900
JD-BP37-250F	250 kW/6kV	1700	1500	1900	1960
JD-BP37-280F	280 kW/6kV	1700	1500	1900	1980
JD-BP37-315F	315 kW/6kV	1700	1500	1900	2000
JD-BP37-355F	355 kW/6kV	1700	1500	1900	2125
JD-BP37-400F	400 kW/6kV	1700	1500	1900	2190
JD-BP37-450F	450 kW/6kV	1700	1500	1900	2210
JD-BP37-500F	500 kW/6kV	1700	1500	1900	2380
JD-BP37-560F	560 kW/6kV	1700	1500	1900	2410
JD-BP37-630F	630 kW/6kV	2200	1700	2120	3250
JD-BP37-710F	710 kW/6kV	2200	1700	2120	3385
JD-BP37-800F	800 kW/6kV	2200	1700	2120	3435
JD-BP37-1000F	1000 kW/6kV	2200	1700	2120	3910
JD-BP37-1120F	1120 kW/6kV	2200	1700	2120	4000
JD-BP37-1250F	1250 kW/6kV	3300	1700	2420	4950
JD-BP37-1400F	1400 kW/6kV	3300	1700	2420	5600
JD-BP37-1600F	1600 kW/6kV	3600	1700	2420	6900
JD-BP37-1800F	1800 kW/6kV	3600	1700	2420	7060
JD-BP37-2000F	2000 kW/6kV	3600	1700	2420	7100
JD-BP37-2250F	2250 kW/6kV	3600	1700	2420	7150
JD-BP37-2500F	2500 kW/6kV	3600	1700	2420	7210
JD-BP37-2800F	2800 kW/6kV	3600	1700	2420	7300
JD-BP37-3250F	3250 kW/6kV	4600	1700	2420	11750
JD-BP37-4000F	4000 kW/6kV	5900	1700	2420	11800
JD-BP37-4500F	4500 kW/6kV	6500	1700	2620	12950
JD-BP37-5000F	5000 kW/6kV	6500	1700	2620	13600

## 4、 Model no. description



For example:

6kV 560kW one-to-one automatic integrated high-voltage inverter for speed control, named JD-BP37-560FY1A

10kV 1600kW one-to-two manual sub-cabinet style high-voltage inverter for speed control named JD-BP38-1600FB2M

10kV 2500kW one-to-three automatic containerized water-cooled high-voltage inverter for speed control named JD-BP38-2500FONAW

## Scope of application

Power generation	Boiler feed pump, forced draft fan, induced draft fan, condensate pump, circulating water pump, mortar pump, compressor, dust suction fan and booster fan. There are more than 2000 sets of high-voltage frequency converters in the power generation industry.
Petroleum, petrochemical and natural gas	Air compressor, induced draft fan, pipeline pump, water injection pump, oil transfer pump, feed pump, submersible pump, circulating water pump and brine pump. Daqing Oilfield, Shengli Oilfield, Qinghai Oilfield, Liaohe Oilfield and other groups continue to cooperate, and the number of high and low voltage frequency converters exceeds 2500 sets.
Coal and mine	Mine hoist, counter-rotating fan, counter cyclone, axial flow fan, descaling pump, mixing pump, dust removal fan, mud pump, slurry pump, clean water pump, feed pump, drainage pump and medium pump. Shenhua Ningxia coal industry group has more than 100 high-voltage frequency converters.
Metallurgy	Dust removal fan, blast furnace blower, induced draft fan, compression fan, oxygen compressor, forced draft fan, feed pump, feed pump, descaling pump, SO <sub>2</sub> fan, slag flushing machine, converter, electric furnace, blast furnace, descaling pump and gas compressor.
Cement, building materials	Raw meal grinding induced draft fan, cement grinding fan, sorter fan, kiln induced draft fan, kiln air supply fan, kiln tail exhaust fan, high temperature fan, coal mill, dust removal fan, circulating fan and pressure supply fan.
Municipal	Booster pump, hot water circulating pump, sewage pump, clean water pump, water supply pump, induced draft fan, forced draft fan
Light industry, chemical industry	Booster pump, compressor, axial flow pump, soft water pump, water supply pump, blower, induced draft fan
Others	Air pump test bench, wind tunnel test device