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SMOOTH SAILING STARTS HERE

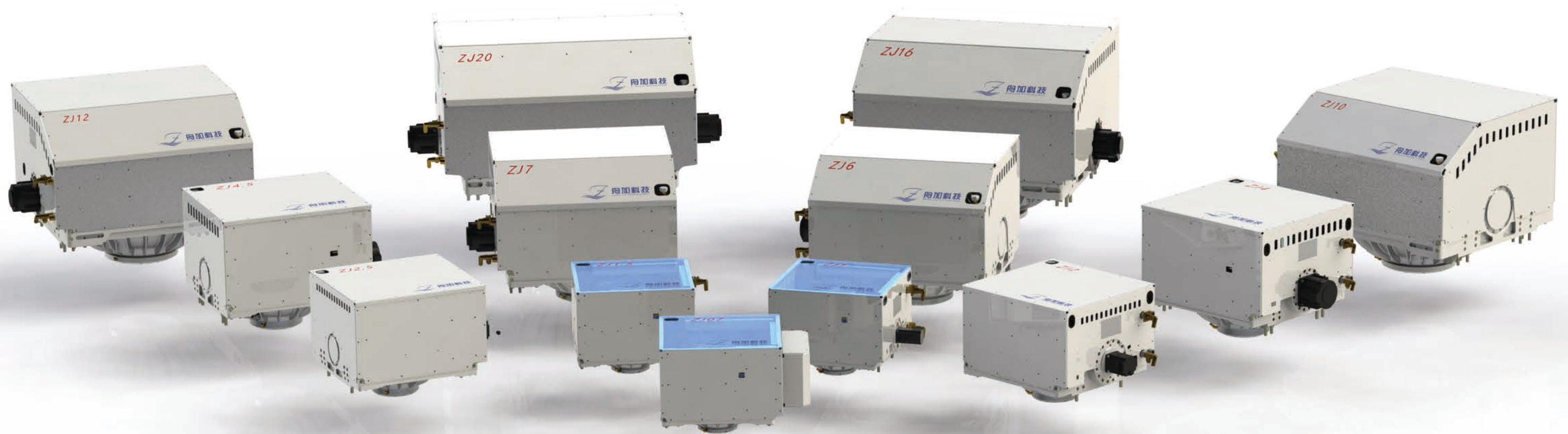


Shanghai ZGYRO Technology Co.,Ltd.is specialized in the R&D and manufacturing of marine gyroscopic anti-rolling devices, including ZGYRO[®] stabilizer and stabilization platform.

As one of the earliest enterprises engaged in the R&D of anti-rolling gyro stabilizer in China, we have always adhered to independent research and development and continuous innovation, committed to reducing ship rolling and improving ship safety and comfort.

ZGYRO series Products

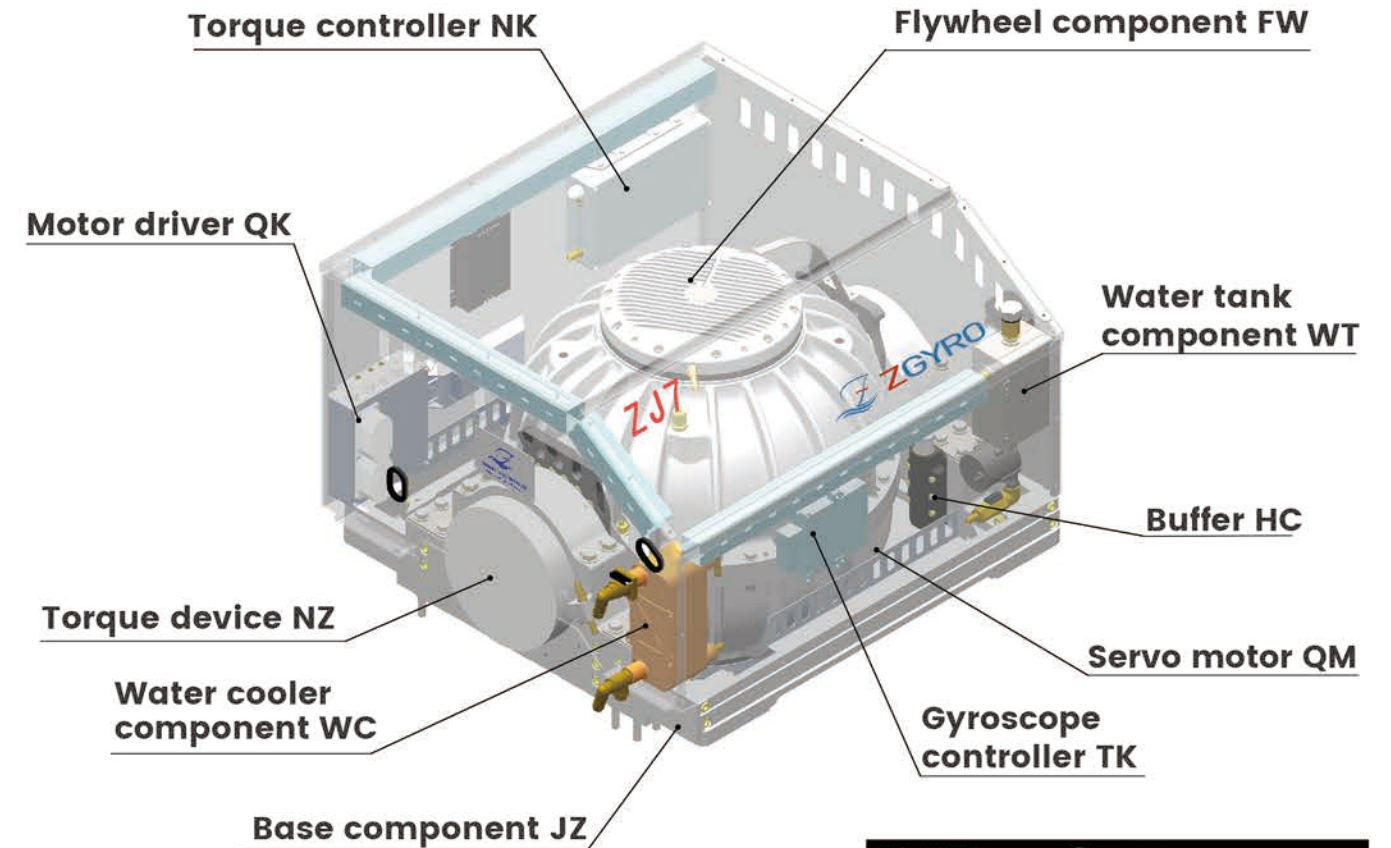
Smooth Sailing Starts Here



THE 3rd-GENERATION GYRO STABILIZER WITH **ZGYRO**® MECHATRONIC TORQUE CONTROL SYSTEM



The Structure of ZGYRO Stabilizer



Touch control screen KP





5 SYSTEMS OF ZGYRO STABILIZER

Gyro System

This includes the flywheel and its base. The flywheel, placed vertically in a sealed casing, connects to the base via a side shaft and bearings. Its high-speed rotational movement produces anti-roll torque during procession, which helps reduce ship sway.

Drive System

Consisting of a servo motor and a servo motor controller, the servo motor adopts a frame-less structure and directly drives the flywheel shaft, ensuring high transmission efficiency while also having the advantage of a compact structure.

Torque Control System

Comprising a torque device, controller, reducer, buffer, and electromagnetic brake. The system utilizes ZGYRO® patented integrated mechatronic torque device, combined with triple buffering protection, and surpasses traditional hydraulic systems in terms of compactness, durability, maintenance intervals (up to 5,000 hours of maintenance-free operation), reduced failures, maintenance convenience, and environmental friendliness (no oil pollution). It is also more capable of handling severe sea conditions.

Cooling System

Featuring a water tank, heat exchanger, water pump, piping, and antifreeze, this system uses the heat exchanger to exchange heat with seawater, subsequently cooling critical components like bearings, motors, and electronic controls.

Auto-Adaptive Control System

Consisting of a gyro controller and a touch control screen installed in the cockpit. The controller is specifically designed for adaptive active anti-roll control and is equipped with autonomous fault detection and an alarm-based shutdown mechanism. The touch screen supports one-button start-stop functionality, enabling fully automatic operation, and allows for the monitoring of operational parameters, enhancing both intuitiveness and ease of use.

Excellent Performance

Auto-Adaptive Stabilization with autonomous hull posture detection and self-regulating active control system, transforming every voyage into a silk-smooth journey across the waves

Up To 95% rolling reduction even in extreme sea states

Low Maintenance

Triple Protection System (Mechanical/Electromagnetic/Electronic) engineered for impact resilience, operational longevity, and minimized wear potential

User-Accessible Architecture with 90%+ maintenance procedures executable through remote technical support

Effortless Operation

One-Touch Control with fully automated operation ensures hassle-free usability

Intuitive Interface provides real-time operational status visualization

Universal Installation adaptable to all ship types with minimal configuration

Eco-friendly

Hydraulic-Free System powered by mechatronic architecture, eliminates the need for hydraulic oil, providing a definitive solution to the problem of hydraulic oil leaks and pollution.

Energy-Optimized Performance achieving lower power consumption and near-silent operation , compared to conventional stabilization systems



SPECIFICATION



Model	ZJ05	ZJ07	ZJ1
Applicable Boat Range	"Hull Length ≤ 6 m Full Load Displacement ≤ 2 t"	"Hull Length ≤ 7 m Full Load Displacement ≤ 3 t"	"Hull Length ≤ 9 m Full Load Displacement ≤ 5 t"
Rated RPM	10800 rpm	10800 rpm	9900 rpm
Angular Momentum	500 Nms	700 Nms	1000 Nms
Anti-rolling Torque	2000 Nm	2600 Nm	3500 Nm
Time to Rated RPM	15 min	20 min	20 min
Time to Stablization	7 min	10 min	10 min
Start-up Power	100 ~ 600 W	100 ~ 700 W	100 ~ 800 W
Operating Power	200 ~ 400 W	200 ~ 450 W	300 ~ 500 W
Power Input	DC12V	DC12V	DC12V
Weight	85kg	105kg	128kg
Overall Size Length*Width*Height	470*480*420 mm	470*480*420 mm	490*500*430 mm
Installation Space Length*Width*Height	490*500*460 mm	490*500*460 mm	530*680*470 mm
Cooling Method	Air cooling	Air cooling	Water cooling 5L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 50℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 68 dB	≤ 68 dB	≤ 68 dB
Protection Rating	IP65	IP65	IP66
Control Panel	5-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen



Model	ZJ1.5	ZJ2	ZJ2.5
Applicable Boat Range	"Hull Length ≤ 10 m Full Load Displacement ≤ 6.5 t"	"Hull Length ≤ 11 m Full Load Displacement ≤ 8 t"	"Hull Length ≤ 12 m Full Load Displacement ≤ 10 t"
Rated RPM	10800 rpm	9000 rpm	9600 rpm
Angular Momentum	1500 Nms	2000 Nms	2500 Nms
Anti-rolling Torque	4500 Nm	6000 Nm	7500 Nm
Time to Rated RPM	40 min	30 min	35 min
Time to Stablization	20 min	15 min	17 min
Start-up Power	100 ~ 900 W	200 ~ 1200 W	200 ~ 1400 W
Operating Power	300 ~ 600 W	700 ~ 1000 W	800 ~ 1200 W
Power Input	DC12V	1PH AC220V	1PH AC220V
Weight	146kg	210kg	245kg
Overall Size Length*Width*Height	490*500*430 mm	570*600*510 mm	570*600*510 mm
Installation Space Length*Width*Height	530*680*470 mm	610*780*590 mm	610*780*590 mm
Cooling Method	Water cooling 5L/min	Water cooling 5L/min	Water cooling 5L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 68 dB	≤ 70 dB	≤ 70 dB
Protection Rating	IP66	IP66	IP66
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen

SPECIFICATION



Model	ZJ4	ZJ4.5	ZJ6
Applicable Boat Range	"Hull Length ≤ 14 m Full Load Displacement ≤ 15 t"	"Hull Length ≤ 15 m Full Load Displacement ≤ 17 t"	"Hull Length ≤ 16 m Full Load Displacement ≤ 21 t"
Rated RPM	8700 rpm	9000 rpm	7800 rpm
Angular Momentum	4000 Nms	4500 Nms	6000 Nms
Anti-rolling Torque	12000 Nm	13500 Nm	18000 Nm
Time to Rated RPM	40 min	45 min	40 min
Time to Stablization	20 min	22 min	20 min
Start-up Power	200 ~ 2200 W	200 ~ 2400 W	200 ~ 2400 W
Operating Power	1200 ~ 1700 W	1400 ~ 2000 W	1200 ~ 1800 W
Power Input	1PH AC220V	1PH AC220V	1PH AC220V
Weight	318kg	345kg	465kg
Overall Size Length*Width*Height	640*683*595 mm	640*683*595 mm	760*805*690 mm
Installation Space Length*Width*Height	680*900*690 mm	680*900*690 mm	800*1020*800 mm
Cooling Method	Water cooling 10L/min	Water cooling 10L/min	Water cooling 10L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 72 dB	≤ 72 dB	≤ 72 dB
Protection Rating	IP66	IP66	IP66
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen



Model	ZJ7	ZJ10	ZJ12
Applicable Boat Range	"Hull Length ≤ 17 m Full Load Displacement ≤ 25 t"	"Hull Length ≤ 19 m Full Load Displacement ≤ 35 t"	"Hull Length ≤ 20 m Full Load Displacement ≤ 38 t"
Rated RPM	7800 rpm	6600 rpm	6600 rpm
Angular Momentum	7000 Nms	10000 Nms	12000 Nms
Anti-rolling Torque	21000 Nm	30000 Nm	36000 Nm
Time to Rated RPM	45 min	40 min	45 min
Time to Stablization	22 min	20 min	22 min
Start-up Power	200 ~ 2800 W	200 ~ 3200 W	200 ~ 3500 W
Operating Power	1500 ~ 2400 W	1800 ~ 2700 W	2000 ~ 3000 W
Power Input	1PH AC220V	1PH AC220V	1PH AC220V
Weight	510kg	690kg	780kg
Overall Size Length*Width*Height	760*805*690 mm	880*930*780 mm	880*930*780 mm
Installation Space Length*Width*Height	800*1020*800 mm	920*1150*930 mm	920*1150*930 mm
Cooling Method	Water cooling 10L/min	Water cooling 10L/min	Water cooling 10L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 72 dB	≤ 72 dB	≤ 72 dB
Protection Rating	IP66	IP66	IP66
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen

SPECIFICATION



Model	ZJ16	ZJ20	ZJ18
Applicable Boat Range	"Hull Length ≤ 21 m Full Load Displacement ≤ 50 t"	"Hull Length ≤ 23 m Full Load Displacement ≤ 62 t"	"Hull Length ≤ 22 m Full Load Displacement ≤ 55 t"
Rated RPM	5700 rpm	5100 rpm	3600 rpm
Angular Momentum	16000 Nms	20000 Nms	18 kNms
Anti-rolling Torque	48000 Nm	60000 Nm	54000 Nm
Time to Rated RPM	50 min	50 min	40 min
Time to Stablization	25 min	25 min	20 min
Start-up Power	200 ~ 4000 W	200 ~ 4500 W	0.4 ~ 5 kW
Operating Power	2500 ~ 3500 W	3000 ~ 4000 W	2.5 ~ 4 kW
Power Input	3PH AC380V	3PH AC380V	3PH AC380V
Weight	990kg	1200kg	1230kg
Overall Size Length*Width*Height	960*1070*890 mm	980*1204*900 mm	1050*1300*1200 mm
Installation Space Length*Width*Height	1000*1390*1090 mm	1020*1650*1100 mm	1250*1700*1300 mm
Cooling Method	Water cooling 10L/min	Water cooling 10L/min	Water cooling 15L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 72 dB	≤ 72 dB	≤ 72 dB
Protection Rating	IP66	IP66	IP66
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen



Model	ZJ22	ZJ28	ZJ35
Applicable Boat Range	"Hull Length ≤ 24 m Full Load Displacement ≤ 70 t"	"Hull Length ≤ 28 m Full Load Displacement ≤ 85 t"	"Hull Length ≤ 30 m Full Load Displacement ≤ 105 t"
Rated RPM	3600 rpm	3150 rpm	3150 rpm
Angular Momentum	22 kNms	28 kNms	35 kNms
Anti-rolling Torque	66000 Nm	84 kNm	105 kNm
Time to Rated RPM	40 min	40 min	40 min
Time to Stablization	20 min	20 min	20 min
Start-up Power	0.4 ~ 6 kW	0.4 ~ 9 kW	0.4 ~ 10 kW
Operating Power	2.5 ~ 4.5 kW	5 ~ 8 kW	6 ~ 9 kW
Power Input	3PH AC380V	3PH AC380V	3PH AC380V
Weight	1350kg	1680kg	1850kg
Overall Size Length*Width*Height	1050*1300*1200 mm	1150*1450*1300 mm	1150*1450*1300 mm
Installation Space Length*Width*Height	1250*1700*1300 mm	1350*2300*1440 mm	1350*2300*1440 mm
Cooling Method	Water cooling 15L/min	Water cooling 15L/min	Water cooling 15L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 72 dB	≤ 73 dB	≤ 73 dB
Protection Rating	IP66	IP65	IP65
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen

SPECIFICATION



Model	ZJ50	ZJ80	ZJ110
Applicable Boat Range	"Hull Length ≤ 35 m Full Load Displacement ≤ 135 t"	"Hull Length ≤ 40 m Full Load Displacement ≤ 205 t"	"Hull Length ≤ 42 m Full Load Displacement ≤ 280 t"
Rated RPM	2850 rpm	2500 rpm	2100 rpm
Angular Momentum	50 kNms	80 kNms	110 kNms
Anti-rolling Torque	150 kNm	240 kNm	330 kNm
Time to Rated RPM	40 min	40 min	40 min
Time to Stablization	20 min	20 min	20 min
Start-up Power	0.4 ~ 14 kW	0.4 ~ 18 kW	0.4 ~ 21 kW
Operating Power	8 ~ 12 kW	11 ~ 15 kW	12 ~ 18 kW
Power Input	3PH AC380V	3PH AC380V	3PH AC380V
Weight	2630kg	3540kg	4950kg
Overall Size Length*Width*Height	1250*1600*1440 mm	1370*1690*1570 mm	1600*1980*1720 mm
Installation Space Length*Width*Height	1450*2400*1540 mm	1570*2490*1670 mm	1800*2780*1820 mm
Cooling Method	Water cooling 15L/min	Water cooling 15L/min	Water cooling 15L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 73 dB	≤ 73 dB	≤ 74 dB
Protection Rating	IP65	IP65	IP65
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen



Model	ZJ150	ZJ200	ZJ400
Applicable Boat Range	"Hull Length ≤ 46 m Full Load Displacement ≤ 375 t"	"Hull Length ≤ 50 m Full Load Displacement ≤ 500 t"	"Hull Length ≤ 60 m Full Load Displacement ≤ 900 t"
Rated RPM	1800 rpm	1800 rpm	1800 rpm
Angular Momentum	150 kNms	200 kNms	400 kNms
Anti-rolling Torque	450 kNm	600 kNm	1200 kNm
Time to Rated RPM	40 min	40 min	40 min
Time to Stablization	20 min	20 min	20 min
Start-up Power	0.5 ~ 24 kW	0.5 ~ 27 kW	1 ~ 54 kW
Operating Power	13 ~ 20 kW	13 ~ 22 kW	26 ~ 44 kW
Power Input	3PH AC380V	3PH AC380V	3PH AC380V
Weight	5980kg	6880kg	13800kg
Overall Size Length*Width*Height	1750*2150*1870 mm	1750*2150*1920 mm	1750*4000*1970 mm
Installation Space Length*Width*Height	1950*2950*1970 mm	1950*2950*2020 mm	2750*5000*2070 mm
Cooling Method	Water cooling 15L/min	Water cooling 15L/min	Water cooling 30L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 74 dB	≤ 74 dB	≤ 75 dB
Protection Rating	IP65	IP65	IP65
Control Panel	7-inch Touch Screen	7-inch Touch Screen	7-inch Touch Screen

SPECIFICATION



Model	ZJ800	ZJ1000
Applicable Boat Range	"Hull Length ≤ 65 m Full Load Displacement ≤ 1800 t"	"Hull Length ≤ 70 m Full Load Displacement ≤ 2100 t"
Rated RPM	1800 rpm	1800 rpm
Angular Momentum	800 kNms	1000 kNms
Anti-rolling Torque	2400 kNm	2800 kNm
Time to Rated RPM	40 min	50 min
Time to Stablization	20 min	25 min
Start-up Power	2 ~ 108 kW	2 ~ 120 kW
Operating Power	52 ~ 88 kW	55 ~ 98 kW
Power Input	3PH AC380V	3PH AC380V
Weight	27600kg	30000kg
Overall Size Length*Width*Height	3700*4000*1970 mm	3700*4000*2020 mm
Installation Space Length*Width*Height	4700*5000*2070 mm	4700*5000*2120 mm
Cooling Method	Water cooling 60L/min	Water cooling 60L/min
Ambient Temperature	-20℃ ~ 60℃	-20℃ ~ 60℃
Noise Output @ 1 meter	≤ 75 dB	≤ 75 dB
Protection Rating	IP65	IP65
Control Panel	7-inch Touch Screen	7-inch Touch Screen

For more models
Please consult us



REFERENCE CASES



