



MODEL	rpm / Hz	VOLTAGE	PRIME <sup>(1)</sup>	STANDBY <sup>(2)</sup>
PI 110Y	1500 / 50	400 / 230 V	100kVA/ 80kWe	110kVA / 88kWe

Full rated power available upto 100 meter elevation at ambient of 27degC, for other temperature and altitude limits please consult application team.

### ENGINE SPECIFICATIONS

Rated Output (PRP) <sup>(1)</sup>	95 kW <sub>m</sub>
Rated Output (ESP) <sup>(2)</sup>	105 kW <sub>m</sub>
Engine Make & Model	Yuchai YC4A140L-D20
No. of Cylinders	4 Vertical In-line
Cycle	4 Strokes
Aspiration	Turbocharged, air-air intercooled
Cooling Method	Water
Governing Type	Electronic
Governing Class	G2 - ISO 8528 Part 1
Compression Ratio	17.5:1
Displacement	4.84 L
BorexStroke (mm)	108 x 132
Battery and Charger Alternator	24 VDC, 27 Amp

### AIR SYSTEM

Air Filter Type	Dry Element
Combustion Air Flow (PRP)	6.76 m <sup>3</sup> /min
Combustion Air Flow (ESP)	7.17 m <sup>3</sup> /min
Radiator Air Flow	186 m <sup>3</sup> /min

### COOLING SYSTEM

Total Coolant Capacity (L)	26.3 L
Water Pump Type	Centrifugal Eng-Driven
Radiator Fan Load	4 kW
Heat Radiation to Room (PRP)	3.5 kW
Heat Radiation to Room (ESP)	3.8 kW

### LUBRICATION SYSTEM

Oil Filter Type	Spin on full flow filter
Total Oil Capacity	17 L
Oil Pan	15 L
Oil Type	API CH4/CI4; SAE 15W-40

### FUEL SYSTEM

Fuel Filter: Split element fuel filter	
Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	25.8 L/hr
Fuel Consumption 100% PRP	23.1 L/hr
Fuel Consumption 75% PRP	17.2 L/hr
Fuel Consumption 50% PRP	11.8 L/hr

### EXHAUST SYSTEM

Muffler Type	Residential grade
Max. Back Pressure	10 kPa
Exhaust Gas Flow (PRP/ESP)	18.4 / 19 m <sup>3</sup> /min
Exhaust Gas Temperature (PRP/ESP)	550°C/550°C

### ALTERNATOR SPECIFICATIONS

Rated Output (Prime) <sup>(1)</sup>	120 kVA / 100kVA
Rated Output (Standby) <sup>(2)</sup>	130 kVA / 110kVA
Alternator Make & Model	Stamford UCI274D / LeroySommer TAL-A44-D
Number of Poles	4
Number of Winding Leads	12 / 6 or 12
Type of Bearing	Single
Insulation Class / Temp Rise	H/H
Efficiency @ Rated Voltage	90.6% / 89%
Ingress Protection Rating	IP 23
Excitation System	Self Excited
AVR Model	AS440 / R120

### ALTERNATOR OPERATING DATA

Overspeed	2250 r.p.m
Voltage Regulation	± 1.0 %
Waveform distortion	NO LOAD (< 1.5% / <3.5%) NON-DISTORTING BALANCED LINEAR LOAD < 5.0%
Radio Interface	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N
Cooling Air Flow	0.514 m <sup>3</sup> /sec / 0.25 m <sup>3</sup> /sec

<sup>(1)</sup> **PRIME POWER RATING (PRP):** PRP is defined as the maximum power which a Generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours shall not exceed 70% of PRP unless otherwise agreed by RIC engine manufacturer. An overload capability of 10% of 100% of the prime rated electrical power is permitted for emergency use for a period of 1 hour within 12 hours of operation

<sup>(2)</sup> **EMERGENCY STANDBY POWER RATING (ESP):** ESP is defined as the maximum power available during a variable electrical power sequence, under the stated operation condition, for which a generating set is capable of delivering power in the event of a utility power outage or under test condition for up to 200 Hours of operation per year. The permissible average output over 24 hour of operation shall not exceed 70 % of the ESP power rating noting that no over load is permitted.



### CONTROLLER SPECIFICATIONS

Controller Make & Model	DeepSea 4520 MKII
Operation Mode	Autostart/Manual/AMF
Display	Graphic Back-lit LCD
Ingress Protection Rating	IP65
Binary Inputs/Outputs	4 / 4
Analog Inputs	3
Measurement	Vac, A, Hz, kVA, kW, Vdc
Event Log	Alarms log, Hrs log
Communication	USB

### ENCLOSURE SPECIFICATIONS

Enclosure Type	Acoustic & Weather Proof
Anticorrosive Protection	Polyester Powder Coated Galvanized Sheet
Ingress Protection Rating	IP22
Lifting	ISO Standard Lifting
Emergency	External Emergency Push Button
Canopy RAL Color	RAL 2000
Baseframe RAL Color	RAL 9011
Noise Pressure level @ 7m	78 dB(A)

### GENSET DIMENSIONS & WEIGHT

GENSET TYPE	Length (mm)	Width (mm)	Height (mm)	Fuel Tank Capacity (L)	Dry Weight (kg) Appx	Wet Weight (kg) Appx
OPEN	2200	1260	1525	325	1400	1500
CLOSE	3835	1225	1865	400	2430	2490

Note: The following dimensions are for preliminary guidance. For more detailed and accurate dimensions, please refer to the General Arrangement Drawing (GAD).

### STANDARD MECHANICAL FEATURES

Genset design provides a low noise level with an optimized performance of the ventilation and exhaust systems at 50 °C ambient temperature.

Robust structure design of Enclosure and Baseframe.

Heavy duty lifting lugs.

Multi doors for easy access & maintenance.

Ingress Protection Rating according to BS EN 60529.

Heavy Duty Baseframe with built-in tank & forklift pockets.

Residential Grade Muffler with rain cap.

### STANDARD ELECTRICAL FEATURES

An advanced Control system is designed to provide a comprehensive protection and to monitor the parameters of generating set.

MCCB power circuit breaker.

Battery with charging alternator, cables, and tray.

Sealed harness & high resistant electrical connections.

Fast and accurate protection response.

Generating Set remote start function.

Numeric display with LED. Various languages capable.

### OPTIONAL FEATURES

Advanced Controllers are available on request.

4 poles manual / Motorized Circuit breaker

Pre heating system

Static Battery Charger

Critical grade muffler

Electronic governor

Remote Annunciator

### Application

Infrastructure, Industrial, Residential, Telecom,  
Defense, Mining, Agriculture

