PI 150Y /PI 165Y

Industrial Generating Set

PRECISION INDUSTRIES

POWERED BY YC DIESEL

MODEL	rpm / Hz	VOLTAGE	PRIME (1)	STANDBY (2)
PI 150Y /PI 165Y	1800 / 60	480 /277 V	150kVA /120kWe	165kVA / 132kWe

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) (1)	140 kW_m
Rated Output (ESP) (2)	154 kW_m
Engine Make & Model	Yuchai YC6B210L-D20
No. of Cylinders	6 Vertical in-line
Cycle	4 Strokes
Aspiration	Turbocharged, air-air intercooled
Cooling Method	Water
Governing Type	Electronic governor
Governing Class	ISO 8528 G2
Compression Ratio	17.5:1
Displacement	6.87 L
BorexStroke (mm)	108×115mm
Battery and Charger Alternator	24 V

AIR SYSTEM

Air Filter Type	Dry-type, filter cartridge of paper
Combustion Air Flow (PRP)	10.9 m^3/min
Combustion Air Flow (ESP)	11.8 m^3/min
Radiator Air Flow	186 m^3/min

COOLING SYSTEM

Total Coolant Capacity (L)	45 L
Water Pump Type	Centrifugal Eng-Driven
Radiator Fan Load	8 kW
Heat Radiation to Room (PRP)	15 kW
Heat Radiation to Room (ESP)	18 kW

LUBRICATION SYSTEM

Oil Filter	
Total Oil Capacity	17 L
Oil Pan	16 L
Oil Type	15W-40 in summer; 10W-30 or other environmentally suitable

FUEL SYSTEM

Fuel Filter:	
Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	41.8 L/hr
Fuel Consumption 100% PRP	37.1 L/hr
Fuel Consumption 75% PRP	27 L/hr
Fuel Consumption 50% PRP	18.6 L/hr

EXHAUST SYSTEM

Muffler Type	Residential
Max. Back Pressure	10 kPa
Exhaust Gas Flow (PRP/ESP)	26 / 28.9 m^3/min
Exhaust Gas Temperature(PRP/ESP)	445^0C/471^0C

ALTERNATOR SPECIFICATIONS

Rated Output (Prime) (1)	206.3kVA / 180kVA
Rated Output (Standby) (2)	218.8kVA / 198kVA
Alternator Make & Model	Stamford UCI274F / LeroySomer TAL-A44-J
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	92.7% / 91.8%
Ingress Protection Rating	IP 23
Excitation System	Self Excited / SHUNT
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	0.617 /0.3 m^3/sec

(1) **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

(2) **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.

Data Tolerance limit ± 5%

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POWERED BY

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 Botton
Canopy RAL Color	RAL 2000
Baseframe RAL Color	RAL 9011
Noise Pressure level @ 7m	82dB(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	2250	1340	1600	325	1900	2000
CLOSE	3764	1125	1865	400	2380	2480

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 ºC ambient temperature.
- Robust structure design of Enclosure and Baseframe.
- Hevy 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 advance Control system is designed to provide a comperhensive 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 , Aggriculture

PRECISION INDUSTRIES

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