WEICHAI pursues an active policy of product development and improvement.For this reason the company reserves the right to change specifications without prior notice.

Contact your local dealer for more information regarding WEICHAI engine and optional equipment/accessories

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WP6

Marine Propulsion Power

Reliable · Durable · Powerful

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WEICHAI

Technical Data

Engine model	WP6C150-15	WP6C165-18	WP6C185-21	WP6C220-23	WP6C250-23
Rated power, Ps(kW)	150(110)	165(122)	185(136)	220(162)	250(168)
Rated speed, r/min	1500	1800	2100	2300	2230
Power rating	P1				P3
Min. fuel consumption, g/(kW·h)	195				
No. of cylinders and configuration	in-line 6				
Description	4-stroke, direct-injected, turbocharged diesel engine with charge air cooler				
Bore x Stroke, mm (in)	105 x 130 (4.17 x 5.12)				
Displacement, L (in^3)	6.75 (411.9)				
Compression ratio	18:1				
Dry weight, kg (lb)	750 (1653)				
Emission	IMO Tier II				
Firing order	1-5-3-6-2-4				
Idle speed, r/min	650±30				
Flywheel housing/Flywheel	SAE 1/14"				
Other engine models	Wp6C142-23, WP6C142-18, WP6C156-21, WP6C163-23				

Class Definition

Power Classification	Typical Conditions of Usage	Typical applications
P1 Continuous Duty	1.Typical annual usage is recommended but not limited to 5000h~8000h; 2.Full power can be used without interrupt; 3.Average load: 70%~100%of rated power; 4.The operating state in common use:Uninterrupted continuous full load use.	Ocean vessel，Engineering vehicle
P2 Heavy Duty	1.Typical annual usage is recommended but not limited to 5000h; 2.Full power could be utilized max8h per 12h; 3.Average load: 40%~80%of rated power; 4.The operating state in common use:Continuous variable load,common use operating state is high load in high speed and middle speed.	Ferries，High speed，Passengers boats Trawlers，Inland waterway transport boats，Tugboat，Offshore trade vessel，Purse seine vessel
P3 Intermittent Duty	1. Typical annual usage is recommended but not limited to 3000h; 2.Full power could be utilized max4h per 12h; 3.Average load: 40%~80%of rated power; 4.The operating state in common use:high load in high speed and variable load in low speed.	Offshore service boats， Seasonal cruise ship，Official vessels with high utilization rate
P4 Light Duty	1.Typical annual usage is recommended but not limited to 1000h; 2. Full power could be utilized max2h per 8h; 3.Average load: 60%of rated power; 4.The operating state in common use:high load in high speed.Have higher requirement to acceleration.	Fishery patrol ship，Maritime surveillance ship，Patrol boat，Life boat，Stormships used by local governments
P5 High Performance Duty	1.Typical annual usage is recommended but not limited to 500h; 2.Full power could be utilized max0.5h per 5h; 3.Average load: 60%of rated power; 4.The operating state in common use:high load in high speed,Have higher requirement to acceleration.	Leisure yachts

Power Definition

Standard ISO 3046-1

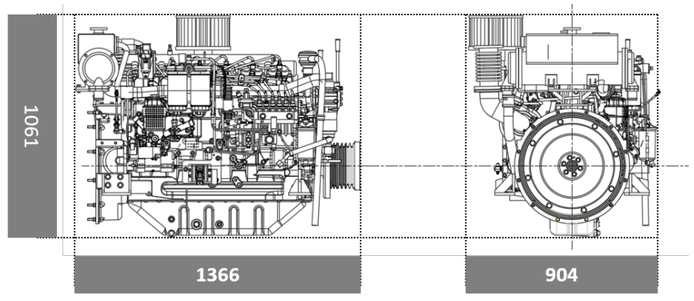
Reference conditions
Ambient temperature 25 °C / 77 °F
Barometric pressure 100 kPa
Relative humidity 30%
Raw water temperature 25 °C / 77 °F

Fuel oil
Relative density 0,840 ± 0,005g/ml
Lower calorific power 42,700 kJ/kg
Consumption tolerance 0 ± 5%
Inlet limit temperature 35 °C / 95 °F

Our ratings also comply with classification societies maximum temperature definition without power derating.

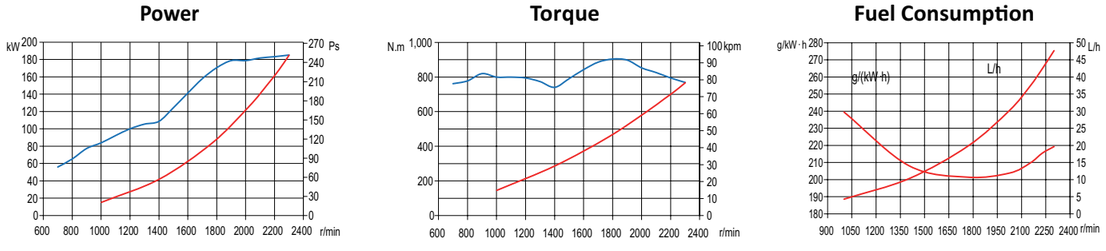
Ambient temperature 45 °C / 113 °F
Raw water temperature 32 °C / 90 °F

Engine Dimensions



Dimensions may vary based on selected engine configuration

Performance Curves(WP6C250-23)



Technical Description

Engine and block
• Cylinder block made of cast iron
• Individual cast-iron cylinder head
• Replaceable wet cylinder linersand valve seats/guides
• Drop forged crankshaft with induction hardened bearing surfaces and fillets with seven main bearings
• Two-valve-per-cylinder layout with middle positioned camshaft and center position of fuel injectors
• Gallery oil-cooled cast aluminum alloy pistons with three piston rings

Engine mounting
• Flexible engine mounting

Lubrication system
• Middle positioned single full flow oil filter of spin-on type filter

Fuel system
• Mechanical high pressure fuel injection pump
• Gear-driven fuel pump and injection timing
• Twin full flow fuel filter of spin-on type and by-pass filter tube

Air inlet and exhaust system
• Turbo technology with fresh water cooled charge air cooler
• Air filter with replaceable inserts
• Dry exhaust pipe

Cooling system
• Seawater-cooled tube heat exchanger
• Coolant system prepared for hot water outlet
• Easily accessible seawater pump in front end of engine

Electrical system
• 28V/35A double-wire system alternator
• 24V/6kW double-wire system starter

Instruments/controls (option)
• Complete instrumentation including water temperature,oil temperature, oil pressure and speed alarm