

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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WP12

MARINE PROPULSION POWER

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WEICHAI

Technical Data

Engine model	WP12C400-18	WP12C450-21
Rated power, Ps(kW)	400(295)	450(330)
Rated speed, r/min	1800	2100
Power rating	P1	
Min. fuel consumption, g/(kW·h)	195	
No. of cylinders and configuration	In-line 6	
Description	4-stroke,direct-injected,turbocharged diesel engine	
Bore x Stroke, mm (in)	126 x 155(4.96 x 6.1)	
Displacement, L (in ³)	11.596(707.6)	
Compression ratio	17:1	
Dry weight, kg (lb)	1200(2645.5)	
Emission	IMO Tier II	
Firing order	1-5-3-6-2-4	
Idle speed, r/min	650 ± 50	
Flywheel housing/Flywheel	SAE 1/14"	

Class Definition

Power Classification	Time at full load	Mean engine load factor	Annual working time	Typical applications
P1 Continuous Duty	Unlimited	70% ~ 100%	recommended but not limited to 5000h-8000h	Ocean vessel Engineering vessel
P2 Heavy Duty	8h per 12h	40% ~ 80%	recommended but not limited to 5000h	Ferries,High speed passengers boats,Trawlers,Inland waterway transport boats,Tugboat,offshore trade vessel,Purse seine vessel
P3 Intermittent Duty	4h per 12h	40% ~ 80%	recommended but not limited to 3000h	Offshore service boats,Seasonal cruise ship,Official vessels with high utilization rate
P4 Light Duty	2h per 8h	60%	recommended but not limited to 1000h	Fishery patrol ship,Maritime surveillance ship,Patrol boat,Life boat,Stormships used by local governments
P5 High Performance Duty	0.5h per 5h	60%	recommended but not limited to 500h	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

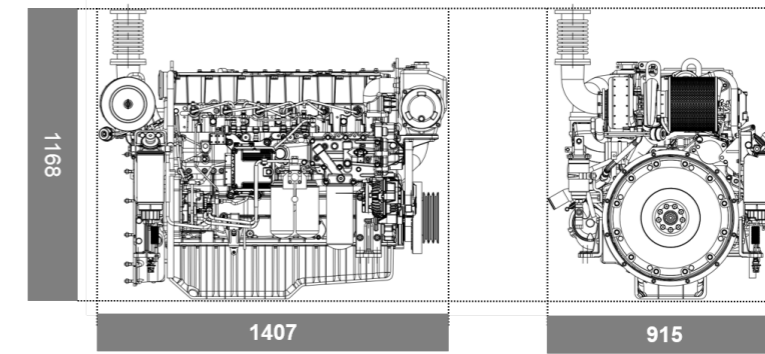
Fuel oil

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.

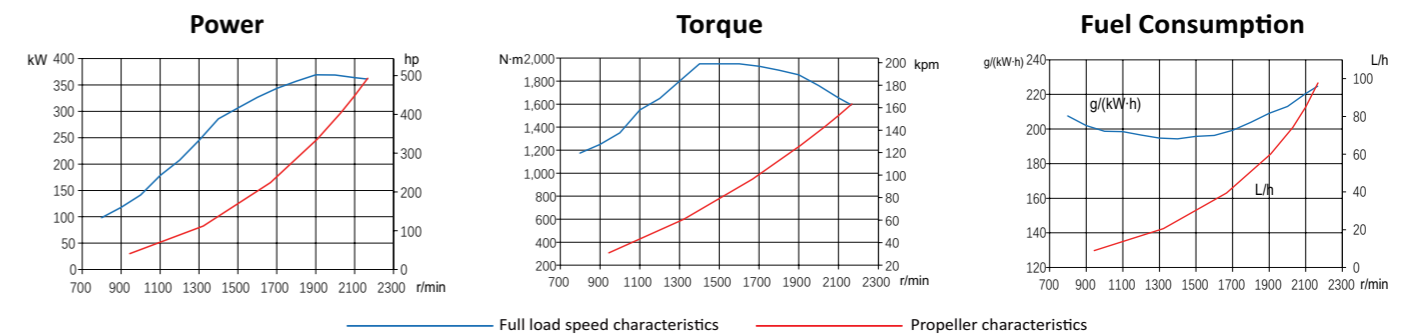
Ambient temperature 45 °C / 113 °F
 Raw water temperature 32 °C / 90 °F

Engine Dimensions



Dimensions may vary based on selected engine configuration

Performance Curves(WP12C450-21)



Technical Description

Engine and block

- Cylinder block made of cast iron
- 4 valves per cylinder
- Steel crankshaft
- Cylinder head of separated type
- Dry cylinder liner

Electrical system

- Starter motor 24V/7.5kW,double-wire system
- Alternator 28V/35A, double-wire system

Lubrication system

- Integrated oil cooler in cylinder block
- Fitted with a hand oil draining pump
- Duplex oil filter of spin-on type

Fuel system

- Anti-explosion high pressure fuel pipe with fuel leaking alarm
- 2 stop methods, electro magnet stop and electromagnetic valve
- Fuel fine filter can be changed without the engine shutdown

Air inlet and exhaust system

- Turbocharged and intercooled air intake system
- Engine coolant cooled or dry exhaust pipe

Cooling system

- Heat exchanger and air cooler with corrosion-resistance tubes and anti-corrosion Zinc bar

Instruments/controls (option)

- Local control panel and remote panel equipped
- Connectors of plug-in type

