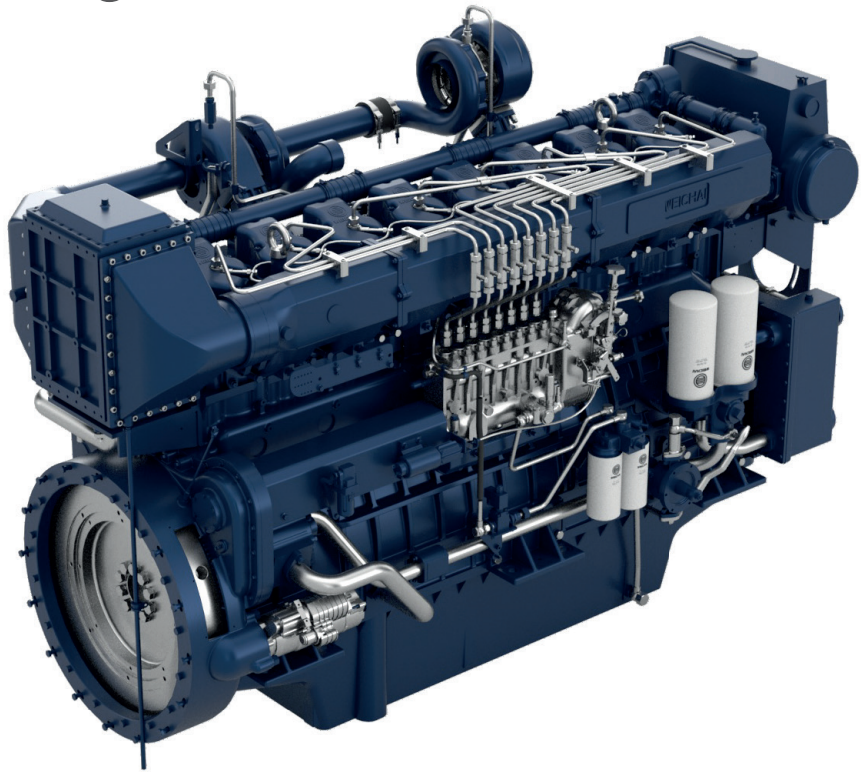


Marine Propulsion Engine

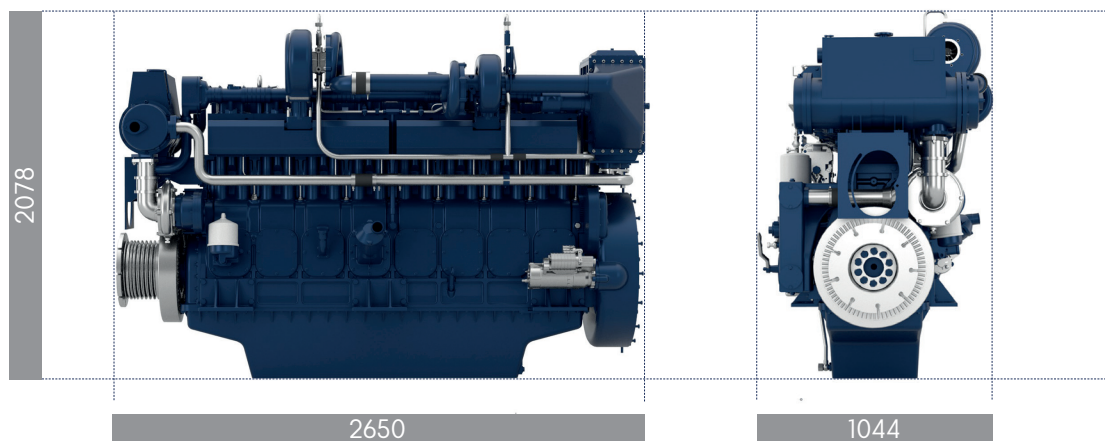


8170

Technical Data

Engine Model	8170ZC720-2	8170ZC818-3	8170ZC900-3	8170ZC1000-5
Rated power (HP/kW)	750 / 530	818 / 601	900 / 661	1000 / 735
Rated speed (rpm)	1200	1350	1350	1500
Power class	P1			
Min. fuel consumption	195			
No. of cylinders	8 In line			
Description	4-stroke, direct injected, turbocharged diesel engine with charge air cooler			
Bore/Stroke mm (in)	170 x 200 (6.69 x 7.87)			
Displacement (L)	36.32			
Compression ratio	15.1:1			
Dry weight bobtail (kg)	3800			
Emission compliance	IMO Tier II			
Firing order	1-6-2-4-8-3-7-5			
Idle speed (rpm)	500	550	550	600
Flywheel housing / Flywheel	SAE O/14", 16" or 18"			
Recommended fuel to conform to	ASTM-D975: 1-D; 2-D; DIN51601; NATO CODES F54, F57, F76, GB252 0, -10, -20, -35, -50; BS2869: A1, A2 (Under the circumstance of A2, pay attention to the sulphur content); W-F800C:DF-A, DF-1, DF-2			

* Consult your Baudouin sales representative to inquire about additional versions we have of this engine.



Connections

Raw water inlet	Ø 120mm
Raw water outlet	Ø 120mm
Fuel inlet	Ø 18mm
Fuel outlet	Ø 14mm
Exhaust	Ø 208mm

Class Definition

Rating	Time at full load	Mean engine load factor	Annual working time	Typical applications
P1 Continuous Duty	unlimited	80%-70%	Recommended but not limited to 5000h - 8000h	Oceanvessel, Engineering vessel
P2 Heavy Duty	8h per 12h	30%-40%	Recommended but not limited to 5000h	Ferries, High speed passenger baots, Trawlers, Inland waterway transport boats, Tugboat, offshore trade vessel, Purse seine vessel
P3 Intermittent Duty	2h per 4h	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 - 1995 (F)

Reference Conditions

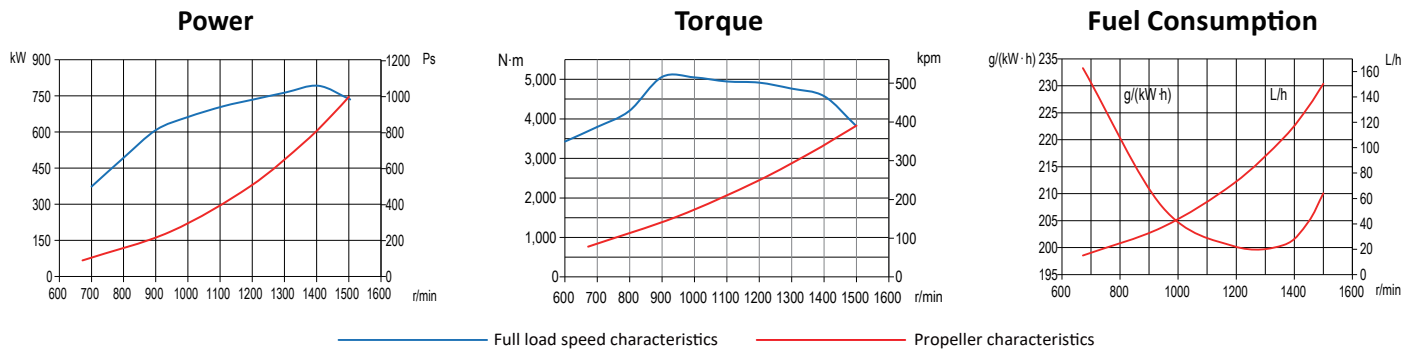
Ambient temperature	25°C / 77°F
Barometric pressure	100 kPa
Relative humidity	30%
Raw water temperature	25°C / 77°F

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



Technical Description

Cylinder block

- Gantry cylinder block and spherical crankshaft box, light weight and high rigidity, structural optimization design gives more potential for internal combustion pressure increase

Crankshaft

- Nodular iron crankshaft has enhanced strength and good balance, 6 counterweights design to reduce the moment of inertia, ensure the responsiveness under any complex operating condition

Piston

- Internal lubricate oil gallery design, three piston rings and gap on the bottom to reduce oil consumption

Connecting rod

- Oblique incision structure, good rigidity, light weight and small moment of inertia which decrease mechanical load effectively and to increase the reliability

Heat exchanger

- High cooling efficiency and sensitive temperature control, the cooling core has multiple materials and could be disassembled solely, easy maintenance, can meets the requirements of inland and sea-going application

Centrifugal water pump

- Forced cooling, mass flow, high cooling efficiency, multiple material vanes

Electrical starter

- High-power pre-engaged electrical starter, double wire system, starts power reach up to 11kW

Air starter

- High-power pre-engaged air starter, output power reach up to 7-17kW, ensure the engine can start easily in various ambient condition

