



## The New Marine Power Reference

#### 4 stroke diesel engine, direct injection, common-rail

Bore and stroke Number of cylinders Total displacement Compression ratio Engine rotation (ISO 1204 standard) Idle speed Flywheel housing Flywheel 150 x 150 mm 6 in line 15.9 litres 15/1 counterclockwise 700 rpm SAE 1 SAE 14"

#### **Customer benefits**

Genuine marine design with simple solutions, full service accessibility, engine block inspection hatches

Continuous compact power with reference performances in its category

Global environment care with low exhaust emissions and controlled fuel consumption at any running cycle

Latest safe technology including electronic injection dynamic redundancy, high efficient ball bearing turbocharger, integrated circuits with 0 flexible hoses, and more...

Life cycle cost efficiency with extended MTBO, reduced number of components and interfaces

## Rated power - Fuel consumption

Duty	kW	hp	rpm	BFSC g/kWh*	IMO	EPA	CCNR	CE 97/68
P1	404	550	1600	206	П	-	II	IIIA
P1	441	600	1800	197	II		II	IIIA
P2	485	660	1800	207	II	-	II	IIIA
P2	515	700	2000	203	II	111	II	IIIA
P2	551	750	2100	209	II	III	II	IIIA
P3	599	815	2100	216	II	III	-	-

\* Declared BSFC at IMO II rating

	P1	P2	P3
Application	unrestricted continuous	continuous	intermittent
Engine load variations	very little or none	numerous	important
Mean engine load factor	80 to 100%	30 to 80%	50%
Annual working time	more than 5000 h	3000 to 5000 h	1000 to 3000 h
Time at full load	unlimited	8 h each 12 h	2 h each 12 h

### Power definition

(Standard ISO 3046/1 - 1995 (F)

#### **Reference conditions**

Ambient temperature Barometric pressure Relative humidity Raw water temperature

## Fuel oil

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

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

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

# 

25 °C / 77 °F

25 °C / 77 °F

100 kPa

30%

SAIL DIFFERENT

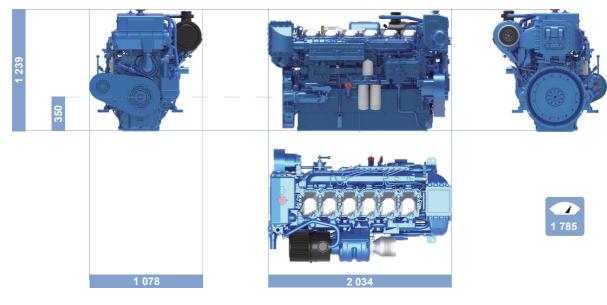
## **Standard equipment**

Cooling system	Two stages cooling circuit with built in HT thermostatic valve Integrated fresh water expansion tank High efficiency tubular heat exhanger Gear driven centrifugal fresh water pump Self priming raw water pump with bronze impeller
Lubrication system	Full flow lube oil filters duplex type - Centrifugal lube oil purifier Fresh water cooled lube oil heat exchanger Manual priming and draining pump
Fuel system	Common-rail electronic injection High pressure pump with shielded high pressure injection rail and pipes Fuel oil filter duplex type Water separator
Intake air and exhaust system	Double flow raw water cooled intake air heat exchanger module Fresh water cooled exhaust gas manifold High efficiency dry turbocharger with ball bearing technology
Electrical system	Voltage: 24VDC insulated Electrical starter 190A battery charger

## **Optional solutions** (extract)

Cooling circuit configuration for box/keel cooling Application injection map (Eco mode - Comfort - High performance) Integral electronic injection ECU dynamic redundancy High efficiency air filter with blow-by recycler Equipment and factory trial according to Classification Societies

## Dimensions and dry weight (mm / kg)



### Connections

Raw water inlet	Raw water outlet	Fuel inlet	Fuel outlet	Exhaust
Ø 76.1 mm	Ø 2 x 60 mm	Ø 22 mm	Ø 22 mm	Ø 194 mm