# T4.230 Specifications



Power at crankshaft	169.1 kW [230 hp]
Displacement	2.982 I [182 in³]
Configuration	4 cylinders in line 4 valves per cylinder
Operation type	4 stroke Diesel
Bore & Stroke	96 x 103 mm [3.78 x 4.06 in]
Compression ratio	15:1
Rated speed	3600 rpm
Idle speed	700 rpm
Peak torque	573 Nm
Peak torque speed	2000 rpm
Dry weight	350 kg [771 lb]

Engine base	Toyota
Fuel system	Direct injection High pressure Common Rail Electronically controlled
Air intake	Turbocharged with intercooler
Cooling	Closed cooling with heat exchanger
Mounting angle	7° Front up 7° Front down
Alternator	12 Volt 100 Amp
Rating	M6
Emission compliand	RCD 94/25/EC EPA marine Tier 3 BSO 2



# 169.1 kW [230 hp] @ 3600 rpm

## **TECHNICAL DESCRIPTION**

## **Engine block**

- 4 cylinders in line
- 4 valves per cylinder
- Dual overhead camshafts (DOHC)
- Watercooled exhaust manifold
- Internal balancers

## Fuel system

- Common Rail fuel injection system
- Fuel filter with hand primer
- Integrated fuel cooler

#### **Lubrication system**

- Replaceable full-flow oil filter
- Oil dipstick
- Transmission oil cooler

## Cooling system

- Closed cooling with heat exchanger
- Gear driven self-priming raw water pump
- Coolant circulating pump
- Water cooled exhaust elbow

## **Electrical system & Instrumentation**

- 12V 100A alternator
- 12V Electrical system
- Complete instrumentation including key switch and alarms
- Extension cable harness with plug-in connection

#### Air intake

- Dry turbocharger
- Intercooler

## Other features

Flexible engine mounting

## Optional equipment & accessories

- Complete marine propulsion systems
- Marine transmission adaptation kits
- Throttle and shift controls
- Additional instrumentation, Flying bridge extension harness
- Water boiler systems
- Complete fuel systems
- Complete exhaust systems
- Trolling valve

# **RATING**

- Up to 500 annual operating hours
- Load factor up to 35%
- Full power for no more than 30 minutes out of each 8 hours of operation. The remaining operation time must be at or below cruising speed

# **TRANSMISSIONS**

#### **Shaft line**

- TTM50A
- ZF45A
- ZF63A

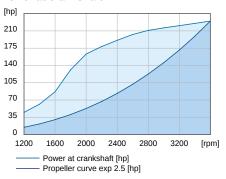
#### Stern Drive

- Bravo X One
- Bravo X Three
- Bravo X Two

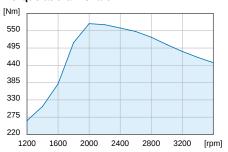
Contact your local dealer for more details and availability for transmission model and type.

## PERFORMANCE CURVES

## Power at crankshaft

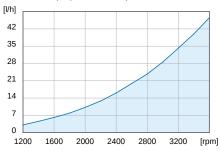


#### Torque at crankshaft

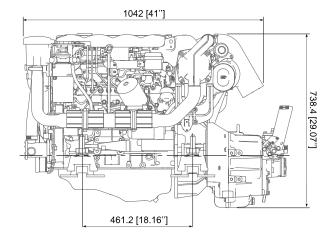


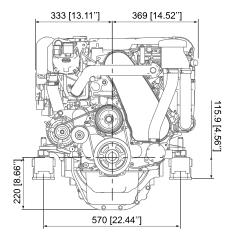
#### **Fuel consumption**

At calculated propeller load exp 2.5



# **DIMENSIONS WITH TTM50A**





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Via Degli Olmetti, 5/B 00060 Formello (RM) - Italia Tel: +39 (0)6 30 88 42 51/52/53 Fax: +39 (0)6 30 88 42 54 Technical data according to ISO 8665. Specifications are subject to change without notice. Images and illustrations may shown non standard equipments. All combination of equipment & accessory are not available.

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