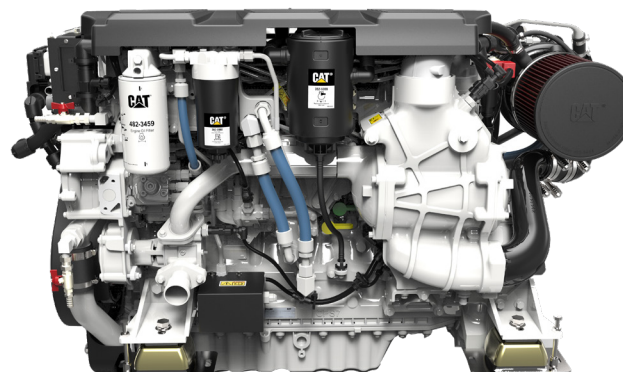
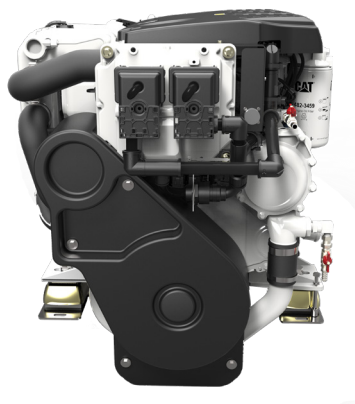


# C7.1

## Marine Propulsion Engine

### High Performance Applications



## ENGINE SPECIFICATIONS

<b>CONFIGURATION</b>	In-line 6, 4-stroke cycle diesel
<b>EMISSIONS</b>	U.S. EPA Tier 3, IMO II, RCD II, China II
<b>RATED ENGINE SPEED</b>	2900 rpm
<b>DISPLACEMENT</b>	7.01 L (428 cu in)
<b>ASPIRATION</b>	Turbocharged - aftercooled
<b>GOVERNOR</b>	Electronic (A5E2 V2 ECM)
<b>FLYWHEEL HOUSING</b>	SAE No. 03

<b>BORE x STROKE</b>	105 mm x 135 mm / 4.13 in x 5.31 in
<b>REFILL CAPACITY LUBE OIL SYSTEM W/ OIL FILTER CHANGE</b>	20 L (5.3 gal)
<b>OIL CHANGE INTERVAL</b>	250 hrs
<b>ROTATION (from flywheel end)</b>	Counterclockwise from the flywheel end
<b>COOLING</b>	Heat Exchanger Cooled

## KEY FEATURES & BENEFITS

- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- 12V or 24V electrical system
- Compatible with Cat® displays and electronics
- Closed crankcase ventilation system improves engine room cleanliness
- Gear-driven jacket water pump and sea water pump for superior reliability
- Maintenance free valve train with hydraulic valve lash adjusters
- Self-priming fuel system ensures a smooth start every time

## STANDARD EQUIPMENT

- Water cooled turbocharger and exhaust manifold
- Common rail fuel system
- Corrosion resistant sea water aftercooler
- Closed crankcase ventilation system
- Starter motors – 12V or 24V
- Fuel cooler
- Integral engine oil cooler
- Vibration damper and guard
- Electric fuel priming pump
- Self-tensioning multi-vee alternator drive belt
- Gear driven sea water pump (rubber impeller)
- Fin and tube type jacket water heat exchanger
- Front and rear engine mounting brackets

## OPTIONAL ATTACHMENTS

- Alternators
  - 24V 140 amp – 12V 175 amp
- Transmission gear oil cooler (engine mounted)
- Instrument panels
- Glow plugs
- Jacket water heater
- 6" water cooled exhaust elbow
- Isolation mounts
- Primary fuel filter/water separator (remote mount)
- Selection of factory-fitted marine transmissions and oil hoses
- Cabin heater (calorifier) connections
- Triple groove PTO pulley (crankshaft mounted)
- Flexible fuel hoses
- Right-hand and high level left hand oil dipsticks

# RATINGS & FUEL CONSUMPTION - PROPULSION ENGINES

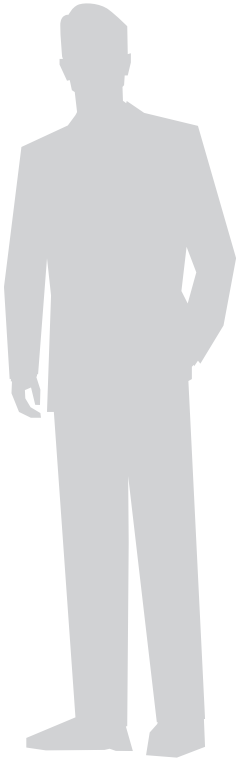
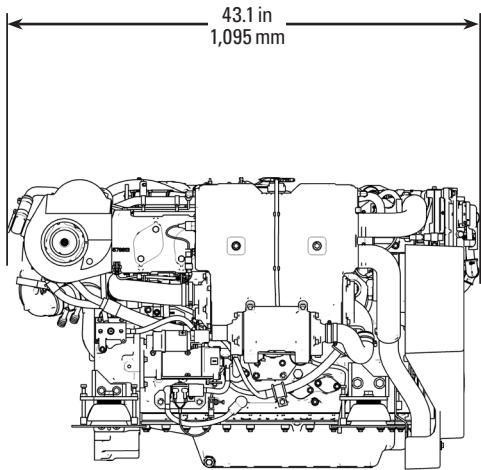
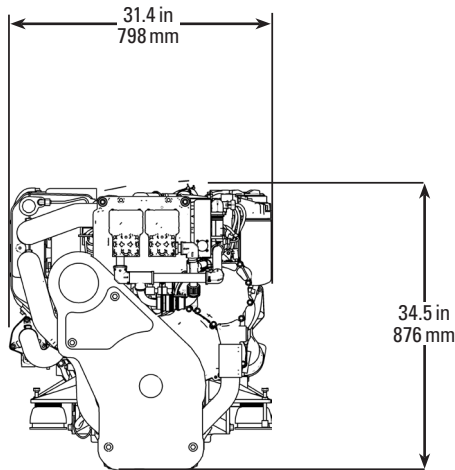
Rating	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	IMO	U.S. EPA	EU	China
E	406	400	298	2900	21.8	220.5	II	T3R	RCD	C-II
E	456	450	336	2900	24.4	219.9	II	T3R	RCD	C-II
E	507	500	373	2900	27.3	221.0	II	T3R	RCD	C-II

Remarks, e.g. footnotes, references  
ISO 3046/1 BSFC tolerance of -0/+5%

Rating Definitions  
E Rating (High Performance): For vessels operating at rated load and rated speed up to 8% of the time (up to 30% load factor).  
Typical operation ranges from 250 to 1000 hours per year

## ENGINE DIMENSIONS & WEIGHT

LENGTH	43.1 in / 1,095 mm
HEIGHT	34.5 in / 876 mm
WIDTH	31.4 in / 798 mm
DRY WEIGHT	1,676 lb / 760 kg



Contact your local Cat® Dealer  
for more information!

