The Dtorque Turbo Diesel sets a new benchmark in diesel engineering, especially for outboard motors. Its 804 cm³ twin-cylinder aluminium powerhead delivers a lusty 50 hp at the propeller shaft. With a remarkable torque output, peaking at 111 Nm at 2,500 rpm, the Dtorque’s performance surpasses even the leading 70 hp fuel-injected, four-stroke gasoline outboards.

It offers exceptional capability when powering heavy loads at low rpm, as well as enabling the boat to get on plane quickly. This can be achieved with excellent fuel efficiency, averaging less than 12 litres per hour at WOT.

All this, as well as emissions well within the latest EU limits, is with state-of-the-art common rail fuel injection (BOSCH), but the unique innovation is the dual counter-rotating crankshaft design. By generating opposite forces, the two shafts cancel out most of the vibrations and moments around the steering axis that would otherwise make such a small and powerful twin-cylinder diesel outboard hard to handle.

When you’ve got a serious job to do, you need the hardworking dependability of a diesel engine. Low fuel consumption means less queuing for fuel. Boat operators will welcome the lower operating costs, range, and the low noise and vibration levels. Yanmar’s global distribution network can provide owners with swift and thorough service wherever they are.
AT WORK, DIESEL DOES BETTER ON LOW-END TORQUE PERFORMANCE, FUEL ECONOMY AND RANGE.
Gasoline outboards are for leisure use mainly. When you’ve got a serious job of work to do and need to put in a full shift day after day you need the hardworking dependability of a diesel engine.

Now operators of small workboats have that option in outboard form with the Dtorque.

This compact unit is the only outboard in the mid-power range to offer all the advantages of state-of-the-art diesel engineering.

The Dtorque develops a creditable 50hp when you need a turn of speed, but it’s the torque figure that matters most in the working environment. The delivery of a mighty 111Nm at 2,000-3,000rpm will get you quickly up onto plane and also provide all the muscle you need when the boat is fully laden.

So whether you are patrolling harbours, delivering supplies afloat, transferring personnel, or checking nets, Dtorque is the strong, reliable workhorse you need for unwaveringly reliable performance, long range, and low operating costs time after time.

But for a workhorse it is also remarkably refined. Its unique dual counter-rotating crankshaft engineering means ultra-low vibration and noise, so less fatigue for the user at the end of the working day. And less stress for the engine and its suspension as well.
Queuing at the fuel pump can take up valuable working time, but the frugal diesel consumption of the Dtorque means fewer refuelling stops and lower running costs than you would expect from most gasoline outboards of 60 or 70hp with lower torque output. Its fuel consumption peaks where the gasoline burners are just starting out. Then at full throttle 2.5 times more fuel is likely to be used by the gas outboards than the diesel fuel-sipping Dtorque.

For most applications, with a Dtorque on your transom you have all the benefits of less frequent visits to the pumps – so less downtime, greater operational independence, more productive working hours and, when it comes to running costs, a better bottom line on the balance sheet at the end of the month.
SAFETY WITHOUT COMPROMISE.
WITH FIRE RISKS,
DIESEL IS A BETTER OUTBOARD OPTION.

For operational reasons in the great majority of workboat applications, from fish farming to harbour patrol duties, offshore wind-turbine farms to charter services, the technical advantages of the Dtorque’s advanced diesel engineering are clear. But for those working in environments where fire is a real hazard, such as in the offshore oil industry, diesel has the added safety benefit of low flammability.

That’s just one good reason why gasoline is seldom carried on most large seagoing vessels. In the wider picture, diesel is always the sensible propulsion option for tenders to run and collect crew, passengers, and goods ashore where docking is not always practical, for example with cruise ships and mega-yachts.
YANMAR is pleased to offer you direct access to our technical excellence in marine diesel engineering and a well-established distribution network for Dtorque. This covers over 130 countries around the world with strategically located dealer service centers.

Cutting-edge diesel engineering is YANMAR’s lifeblood. It fields a full range of inboard engines from 9 close to 2,000 mhp for commercial and leisure applications which are renowned as class leaders for high power density, fuel efficiency, reliability, smooth and quiet operation, and low emissions. Since 2000 the company has led the adoption of common rail fuel injection and electronic management to optimise engine efficiency.

It also offers transmissions from gearboxes to sterndrives and saildrives and is no newcomer to outboard motors. Until 2008 it fielded its own range of small diesel outboards. Although these ceased production owing to global recession, it now makes a welcome return by taking on distribution of a new product with ground-breaking engineering that is spot-on for today’s market - the Dtorque Turbo Diesel outboard.
For its size, Dtorque’s unique 804cm³ reciprocating two-cylinder diesel powerhead design produces an impressive 50hp. More important is its 111Nm torque output, which outstrips that of most of the latest 70hp gasoline outboards on the market. But what’s most impressive is minimal vibration.

The secret behind that is the company patented ‘Spaceball’ design. The aluminium cylinder block houses dual crankshafts which rotate in opposite directions to absorb the considerable vibration that a conventional small two-cylinder diesel engine would normally generate.

For the user, the benefits are immediately apparent. Less vibration, less noise, and lighter boat handling without having to continually wrestle with the tiller to correct for torque steering all mean less operator fatigue - and less stress on the engine, too.

The engineering refinement doesn’t end there. Common rail fuel injection - rare indeed in diesel engines as small as this one - and turbocharging with integrated charge air cooling are just two of a list of features which contribute to performance, fuel saving and lower emissions.
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>36.8 kW/50 hp at 3,500 - 4,000 min⁻¹</td>
</tr>
<tr>
<td>Max. Torque</td>
<td>111 Nm at 2,000 - 3,000 min⁻¹</td>
</tr>
<tr>
<td>Engine Type</td>
<td>4-Stroke turbo diesel</td>
</tr>
<tr>
<td>Balance</td>
<td>Dual counter-rotation crankshafts</td>
</tr>
<tr>
<td>Swept Volume</td>
<td>804 ccm</td>
</tr>
<tr>
<td>Bore x Stroke</td>
<td>80 x 80 mm</td>
</tr>
<tr>
<td>No. Cylinders</td>
<td>2 In-Line, twin</td>
</tr>
<tr>
<td>Intake</td>
<td>Water cooled turbo charger and charge air cooling</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Integrated dry sump – pressure lubricated</td>
</tr>
<tr>
<td>Fuel</td>
<td>Diesel</td>
</tr>
<tr>
<td>Injection</td>
<td>Bosch common rail direct injection</td>
</tr>
<tr>
<td>Starting</td>
<td>Electric</td>
</tr>
<tr>
<td>Alternator</td>
<td>Standard 12 V/300 W</td>
</tr>
<tr>
<td>Cooling</td>
<td>Active Thermo-Management System (ATMS)</td>
</tr>
<tr>
<td>Exhaust</td>
<td>Integrated underwater thru-hub propeller</td>
</tr>
<tr>
<td>Steering</td>
<td>Tiller / remote control, optional</td>
</tr>
<tr>
<td>Suspension</td>
<td>Silent-block-controlled compression and traction</td>
</tr>
<tr>
<td>Trim</td>
<td>Power trim</td>
</tr>
<tr>
<td>Shift</td>
<td>Mechanical – dog-clutch gearing</td>
</tr>
<tr>
<td>Transmission</td>
<td>Ratio 13/27 (2.07:1)</td>
</tr>
<tr>
<td>Available Shaft</td>
<td>Versions 20&quot; and 25&quot;</td>
</tr>
<tr>
<td>Standard Propeller</td>
<td>3-blade with built-in damper</td>
</tr>
<tr>
<td>Type</td>
<td>Basic Version 175 kg (dry)</td>
</tr>
</tbody>
</table>

Technical data are subject of change.
DTORQUE BENEFITS AT A GLANCE:

LOW FUEL CONSUMPTION
ø 11 l/hour at full throttle

INCREASED SAFETY
diesel is less flammable than gasoline

ECONOMIC FUEL LOGISTICS
fewer refuelling stops to maximise the number of working hours and less cost per hour of operation

POWERFUL DRIVE
111 Nm at 2,500 rpm

LOW VIBRATION & LOW NOISE
makes work more comfortable

DURABILITY AND RELIABILITY
the lifespan is more than 10,000 hours

COST SAVINGS
Up to 40% due to lower fuel consumption and lower prices for diesel fuel (partial tax exemption) as well as less maintenance and lower invest due to lower safety requirements

SYSTEM WEIGHT
half the fuel consumption on the same route = lower tank filling = lower total weight, comparable to an outboard petrol engine