MONOBLOCK DIESEL

[**Marine engine series – MO 4 cylinder**]
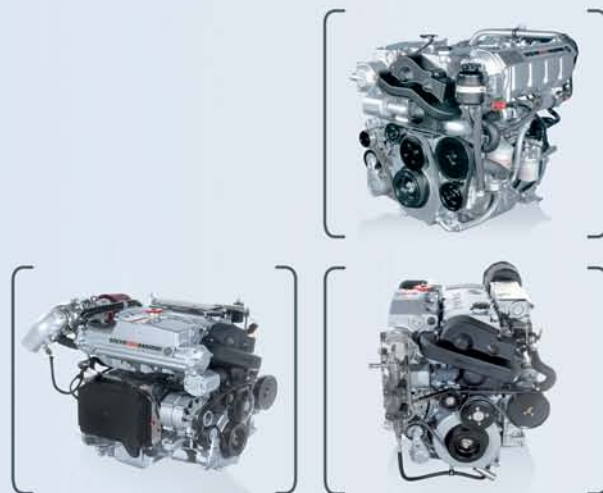
4 CYLINDER

MO 4cyl. | 40-125 kW
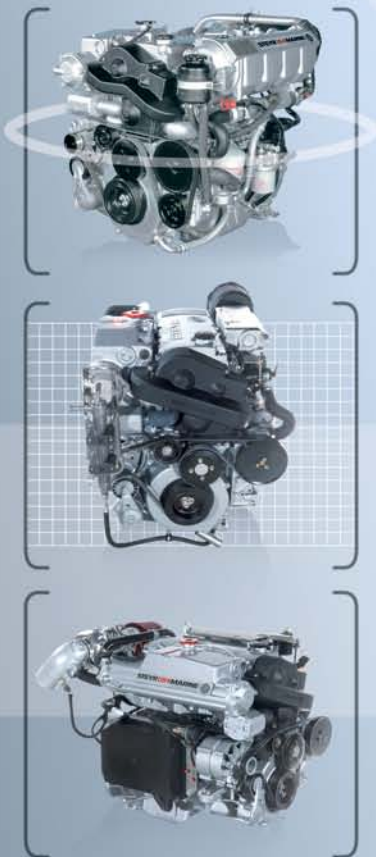
The STEYR Marine MONOBLOCK Engines are designed for high performance and continuous rating. The High Pressure UNIT INJECTOR technology enables an excellent torque and speed range. The complete engine package is conceived for Sterndrive, transmission and Water Jet systems. Remarkable features of the STEYR Marine Engines are the dynamic behaviour and immediate response as well as the impressive acceleration.

SERVICE LIFE

The STEYR Marine Engines are manufactured using high alloy materials to provide enduring longevity for all running components. Using corrosion resistant materials for the entire seawater system as a standard in the dual circuit cooling system. Consequently designed solutions to meet the criteria of marine environment guarantee the best corrosion protection for any auxiliaries and electronic components in marine ambience.

COMFORT

The patented STEYR 2-stage UNIT INJECTOR technology ensures a worldwide approved and smooth operation noise. The additional elastic separation of the MONOBLOCK against the aluminum casted engine housing reduces the engine related vibration transmitted into the hull – therefore the noise level on board is further reduced. Torque and speed range characteristics enable optimal matching to individual application while maintaining transmission, gear ratio and propeller dimensions. The big choice of matched accessories fulfills the highest level of quality and comfort for you on board your vessel.

EXHAUST EMISSIONS

The trend-setting UNIT INJECTOR system is most environmentally friendly. It fulfills the RCD 2003/44 as well as the actual EPA and IMO emission regulations.

TRANSMISSION

STEYR Marine Engines allow the installation with different driving systems in your boat. Adaptation for Marine transmission with different output configuration (direct, horizontal down-angle 8°, V-drive 12°), to choose from as well as an intermediate housing for propeller shaft and kits for installation to MerCruiser Bravo I, Bravo II and Bravo III Sterndrives.

TECHNICAL DESCRIPTION

ENGINE MONOBLOCK

The unique and robust MONOBLOCK design, engine block and cylinder head made from high grade alloy cast iron, without limitation in cooling and unrivaled roundness of the cylinder, give exceptional life time for the liner.

> Chrome-Molybdenum forged crankshaft, dynamically balanced
> Pistons are cast from high silicon aluminum, with oil cooling gallery and a ceramic coated top ring
> Hardened valve-seats high performance NIMONIC valve material
> Elastic coupling on flywheel, design matched depending on application

ENGINE MOUNTING

Adjustable front and rear silent blocks capable to take propeller thrust

LUBRICATION SYSTEM

> Exchangeable oil filter cartridge
> Oil scavenging through dipstick pipe
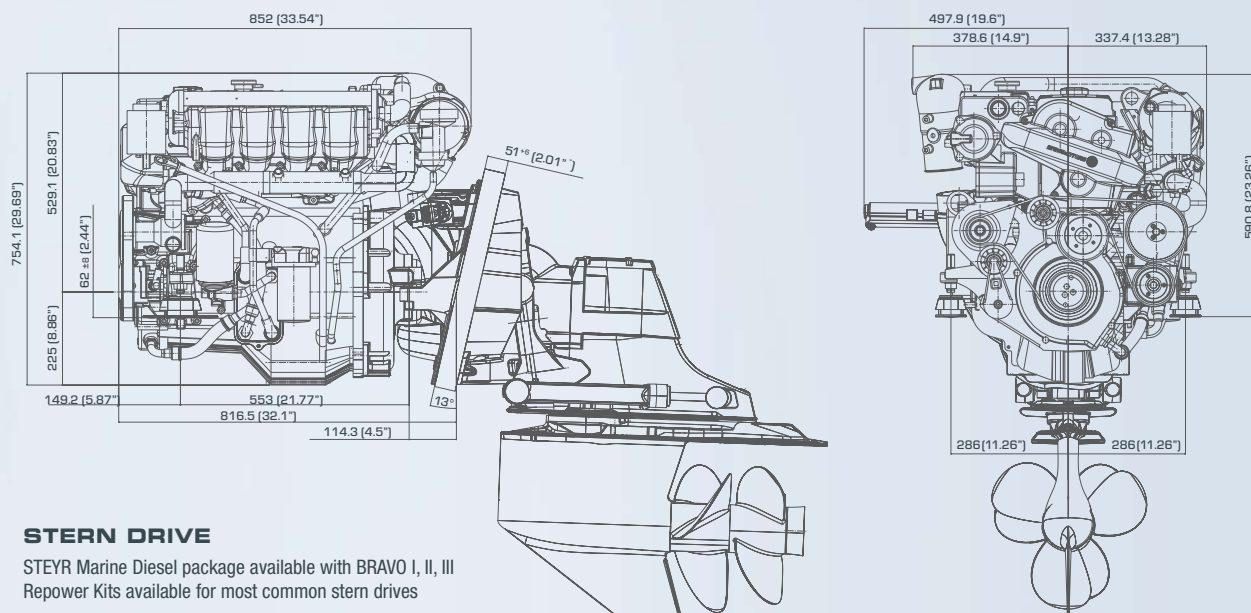> Closed crankcase breathing system

FUEL SYSTEM

> Integrated high pressure UNIT INJECTOR up to 2,000 bar with dual stage fuel injection technology, operated by overhead camshaft and rocker arms
> Electric fuel pump (automatic bleeding capability)
> Exchangeable fuel filter cartridge

EXHAUST SYSTEM

Freshwater cooled exhaust manifold and seawater cooled exhaust elbow

COOLING SYSTEM
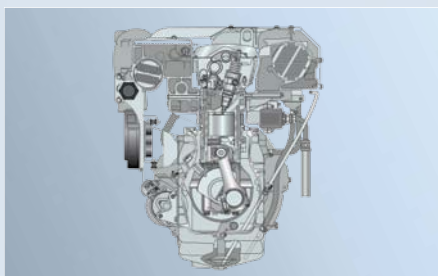
> Freshwater cooling system with thermostat control and expansion tank
> Heat exchanger with integrated expansion tank system
> Connection prepared for boiler/cabin heating system
> Sea water pump with impeller, integrated and replaceable wear plates

![STEYRMOTORS - INNOVATION WITH LIGHTNESS]

Dimensions may differ according to engine types and are not for installations.
Technical modifications as well as misprints and typeset errors are subjects to change.

852 (33.54")
529.1 (20.83")
754.1 (29.69")
62 ±8 (2.44")
225 (8.86")
51⁺⁶ (2.01") → 51^{+6} (2.01")
149.2 (5.87")
553 (21.77")
816.5 (32.1")
13°
114.3 (4.5")

497.9 (19.6")
378.6 (14.9")
337.4 (13.28")
590.8 (23.26")
286 (11.26")
286 (11.26")

STERN DRIVE

STEYR Marine Diesel package available with BRAVO I, II, III
Repower Kits available for most common stern drives

Engine type	MO54NA33	MO84K32	MO94K33	MO114K33	MO144M38	MO164M40	MO174V40
Output (crankshaft) [kW (HP)]	40 (54)	55 (75)	66 (90)	81 (110)	106 (144)	120 (163)	125 (170)
	4-stroke, turbocharged, intercooled, direct-injection, fresh water cooling						
rated speed [rpm]	3300	3200	3300	3300	3800	4000	4000
full power speed range [rpm] [1]	3250 - 3370	3000 - 3200	3050 - 3300	3200 - 3300	3700 - 3800	3800 - 4000	3850 - 4050
Cylinders	4 in line	4 in line	4 in line	4 in line	4 in line	4 in line	4 in line
Displacement [cm³]	2100	2100	2100	2100	2100	2100	2100
Bore [mm]	85	85	85	85	85	85	85
Stroke [mm]	94	94	94	94	94	94	94
Compression ratio	17:1	17,5:1	17,5:1	17,5:1	17,5:1	17,5:1	17:1
Max. torque [Nm]	130	190	210	255	284	320	330
at speed [rpm]	2000	2050	2800	2500	3300	2800	2000
Max. torque [lbs-ft]	96	140	155	188	209	236	243
Rating	P/HO/INT/MCD	P/HO/INT/MCD	P/HO/INT/MCD	P/HO/INT/MCD	P/HO/INT/MCD	P/HO	P/HO
Injection system	two stage unit injectors						
Alternator [A]	Standard: 90A / 12V						
Electronic engine diagnostic	yes						
Weight [kg] [2]	224	243	243	255	258	258	258
Weight per unit of power [kg/HP]	4,15	3,24	2,70	2,32	1,79	1,58	1,52
Weight per unit of power [lbs/HP]	9,15	7,14	5,95	5,11	3,95	3,49	3,35
Emission standard	RCD			RCD, EPA Tier II			

1) exact setting depending on application   2) dry weight with Bobtail set   **P** ... Pleasure   **HO**...High Output   **INT**...Intermediate Duty   **MCD**...Medium Commercial Duty
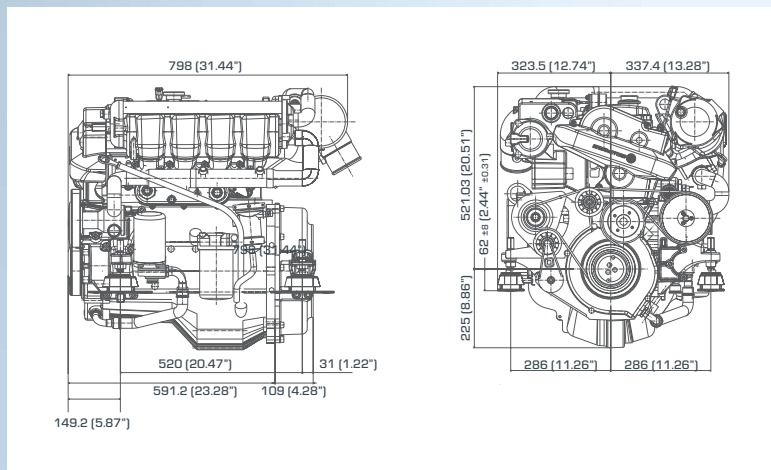
◥◥ 4-cylinder, Bobtail

798 (31.44")
323.5 (12.74") 337.4 (13.28")
521.03 (20.51")
62 ±8 (2.44" ±0.31")
225 (8.86")
520 (20.47") 31 (1.22")
591.2 (23.28") 109 (4.28")
286 (11.26") 286 (11.26")
149.2 (5.87")

Dimensions may differ according to engine types and are not for installations

SCC – STEYR CONTROL CENTER

REPRESENTS THE STATE OF THE ART

Engine Interface and Multipurpose Touch Screen-Display
based on SAE J1939 CAN2.0 Databus

Features are:
- Intuitive and logical user-interface
- Integrated Engine Diagnostic
- Electronic switches for external inputs / outputs
- GPS: speed / position / course / time
- On-Bord-Diagnosis: water temperature, oil pressure, voltage, propeller slip,...
- Fuel management: current fuel consumption, driving range, load
- Metric, British & US values
- 5,5" Colour Display active, polarized, transflective - Active Matrix TFT screen
- Comes with GPS-Sensor, installation, brackets and cables
- Casing Water proof IP 67

To use QR-Codes you need a Smart-Phone App.
For example „Red Laser" for iPhone and „Barcode Scanner"
for Android. The installed App will automatically recognize it
when you point your camera at the QR Code.
Your preferred App is available in your trusted App-Store.
(Terms according to your mobile phone provider)