

New Power of Marine Diesel Engines

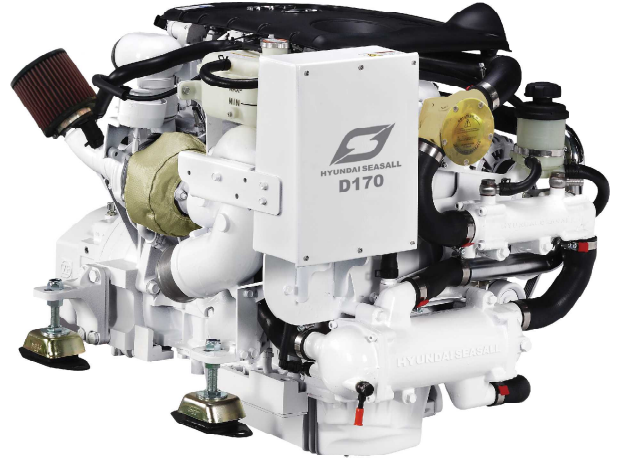
D-Series

170hp [125kW] / 150hp [110kW] acc. to ISO 8665

Solenoid Common Rail Direct Injection System (CRDi) delivers 170hp and 36kg·m of torque from the 2.2 liter engine.

The common rail multiple injection system of the inline-4 D-series protects air quality by minimizing emissions of particulates and NO_x. It is designed to optimize fuel injection, intake porting and combustion performance.

This improves low temperature combustion stability through lean air-fuel rationing. The result? The engine which satisfies the world's strictest exhaust emission standards.



Technical Descriptions

Material

- Cast iron engine cylinder block
- Aluminum head
- Oil cooled pistons
- Hydraulic lash adjusters
- Intergrated water jacket
- Balance shaft
- Timing / drive belt auto tensioner

Engine Mounting

- Adjustable engine mounts

Lubrication System

- Easily exchangeable oil filter cartridge
- Electric oil extraction pump

Fuel System

- Common Rail Direct Injection (CRDi)-Solenoid Injector
- Fuel filter with sensor to detect water in the fuel
- Electric fuel pump
- Dual pressure control valve
- Low and high pressure fuel pump

Electrical System

- 12 volt system and 120A alternator
- Auxiliary engine stop button
- Glow plugs for a trouble-free cold start

Cooling System

- Seawater pump directly driven from the camshaft
- Seawater cooled intercooler, heat exchanger
- Connector prepared for cabin heater
- Corrosion resistant material for the seawater circuit

Engine Operating Indicator



- Engine self protection and diagnosis
- Displays CAN information
- Displays engine diagnostic error codes
- Audible alarm and control lamps

Air Inlet System

- Oil-wetted air cleaner
- Crankcase gases vented into the air inlet

Exhaust System

- Thermal insulated exhaust manifold
- Seawater cooled exhaust elbow

Turbocharger

- Variable Geometry Turbine (VGT)

Engine Coupler

- Life-long and rattle free rubber roller coupler

Emissions

- EPA Tier 2, IMO and RCD compliant

Noise Level

- 69dB (RCD Standard 75dB)

D-Series



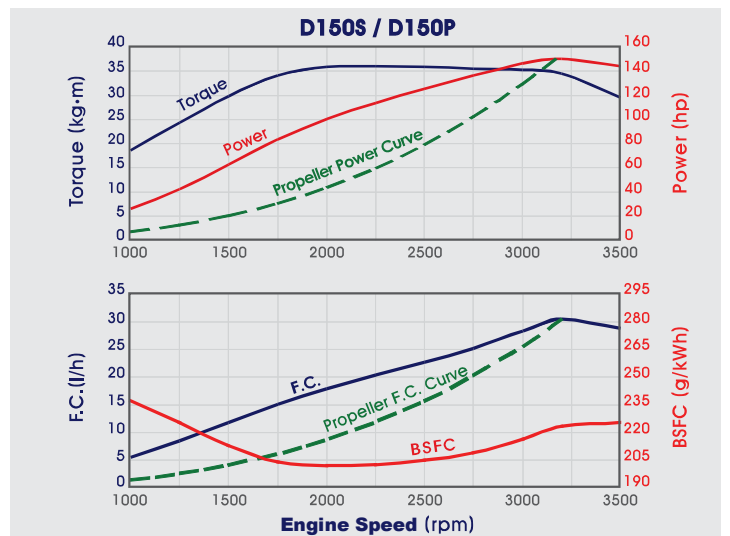
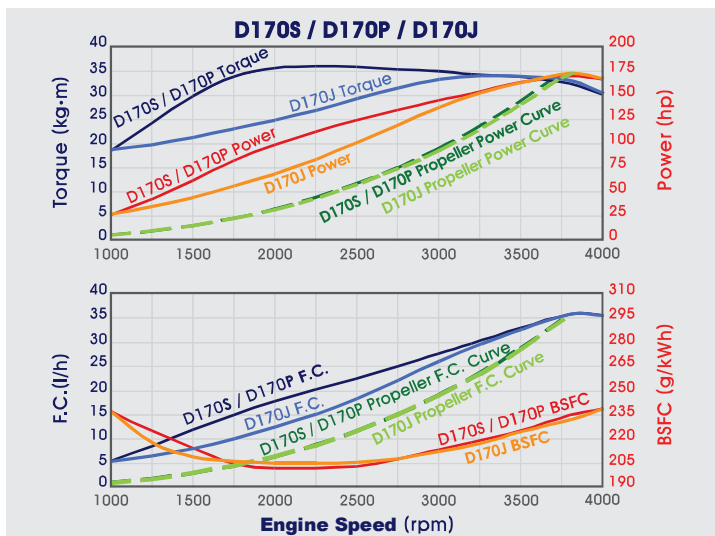
D 2.2 Series Diesel Engine Specifications

Engine type	D170S	D170P	D170J	D150S	D150P
Engine Duty Rating	Pleasure Duty (S5) Special Pleasure Duty, Special Light Duty Commercial (S4)			Light Duty Commercial (S3)	
	4-Stroke, 4-Valve, VGT with Intercooler, Fresh Water Cooling				
Output [HP (kW)]	170 (125)			150 (110)	
RPM @ Full Load	3,800			3,200	
Cylinders	Inline-4				
Displacement [cc]	2188				
Bore X Stroke [mm]	87 X 92				
Compression Ratio	17.3 : 1				
Max. Torque @ RPM	36 kg-m @ 2,000		34 kg-m @ 3,500	36 kg-m @ 2,000	
Injection System	Common Rail Direct Injection (CRDI) - Solenoid Injector				
Alternator [A]	120				
Electronic Engine Diagnostic	YES				
MAX. Fuel Consumption [l/h]	36.0			30.5	
Dry Weight [kg]	261				
Propulsion system	Sterndrive	Shaftdrive	Waterjet	Sterndrive	Shaftdrive

D 2.2 Series Propulsion System

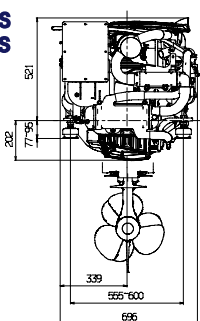
Propulsion type	Model	D170S / D170P / D170J	D150S / D150P	Weight [kg]
Sterndrive	Bravo One X Diesel	1.36 / 1.50 / 1.65	1.50 / 1.65	59
	Bravo Two X Diesel	1.81 / 2.0 / 2.2	1.81 / 2.0 / 2.2	64
	Bravo Three X Diesel	1.65 / 1.81 / 2.0 / 2.2	1.81 / 2.0 / 2.2	68
Inboard	ZF 45 A for P	1.26 / 1.51 / 2.03 / 2.43	1.26 / 1.51 / 2.03 / 2.43	28
	ZF 45 C for J	1 : 1	-	31

Performance Curve

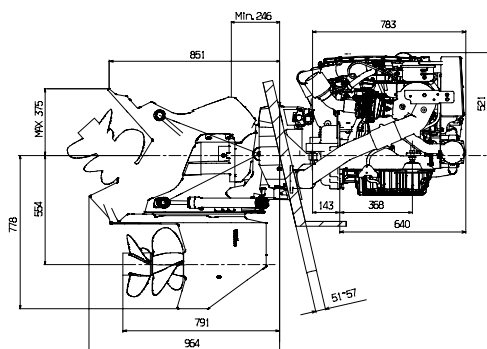


Dimensions

**D170S
D150S**

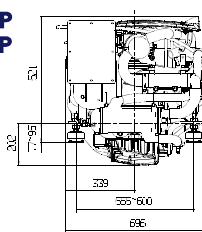


Front View

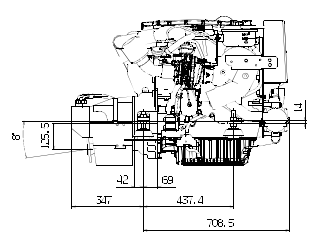


Bravo Three X Diesel
Side View

**D170P
D150P**

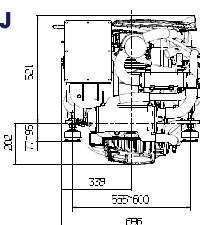


Front View

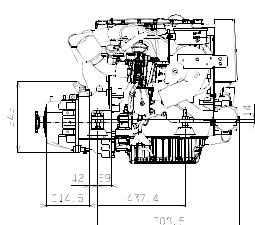


ZF 45 A
Side View

D170J



Front View



ZF 45 C
Side View

※ This data is subject to continual updates without notice.