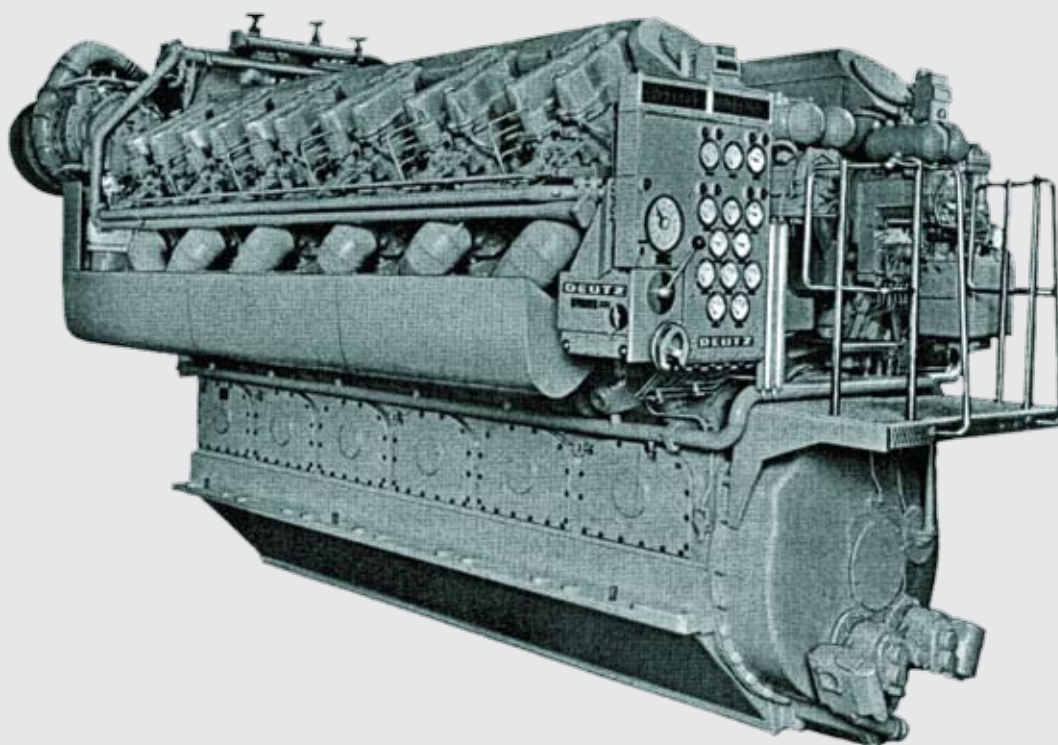


350

1894-2721 kW at 300-425 min⁻¹

TOTAL SERVICE



WÄRTSILÄ DEUTZ MARINE ENGINES

CHARACTERISTICS

- Four stroke 60° V-engines.
- Bedplate, crankcase and two cylinder blocks.
- Direct fuel injection.
- Two turbochargers with air cooler.
- Water-cooled cylinders.
- Mechanical speed governing.
- One inlet and one exhaust valve per cylinder.

BENEFITS

- Engine can be furnished for direct reversing, clockwise or counter-clockwise running.



ENGINE DESCRIPTION

Crankcase	The crankcase consists of a bedplate and a frame.
Cylinder block	Two cylinder blocks are mounted on the crankcase, resulting in an A and a B-bank.
Crankshaft	The forged crankshaft is made of Siemens-Martin steel. It is mounted in the bedplate. The counter weights are bolted on the crankshaft.
Torsional vibration damper	A viscous-fluid damper is mounted on the crankshaft.
Cylinder liner	The water-cooled cylinder liner is made of high-grade cast iron.
Connecting rod	The horizontally split connecting rod has four bolts securing the cap.
Piston	The piston is made of high-grade light-metal alloy. In the engine a cooled or uncooled piston is mounted, which depends on engine application and engine output. A cooled piston has 6 piston rings. An uncooled piston has 7 piston rings.
Cylinder head	The water-cooled cylinder head is made of grey cast iron. The cylinder head has one inlet and one exhaust valve, each mounted in a valve housing. Some applications have rotocaps fitted on the exhaust valves. If the engine is running on HFO, the injector valves are cooled.
Camshaft	V-engines have two camshafts. Each gear driven camshaft consists of two coupled sections. Reversible engines have a synchronizing shaft, which couples both camshafts, for shifting them together for reverse.
Injection pump	The injection pump is a V-shaped block-type.
Governor	A mechanical governor controls the engine speed.
Fuel system	A pre-filter, a fuel feed pump, a fine filter and a spill valve are mounted in the fuel system.
Lubricating oil system	An engine-mounted gear pump circulates the lubricating oil through the engine. The system is provided with a priming pump, a duplex filter, and an externally mounted oil cooler.
Starting system	Compressed air starting via pneumatically controlled starting valves mounted in the cylinder heads.
Cooling water system	The engine is standard provided with a closed circuit cooling water system. In special cases, a straight-through cooling water system is provided.
Exhaust gas system	The engine has insulated exhaust manifolds.
Charge air system	Intake silencer with air filter.
Turbocharging	The engine has water-cooled turbochargers and a charge air cooler.
Flywheel brake system	Direct reversing engines have a flywheel brake system to stop the engine quickly, when a reversal of the rotation direction is needed.
EIAPP	The engine can be provided with an EIAPP certificate if it complies with the NO _x Technical Code according IMO regulations MARPOL 73/78 - Annex VI.

TECHNICAL DATA

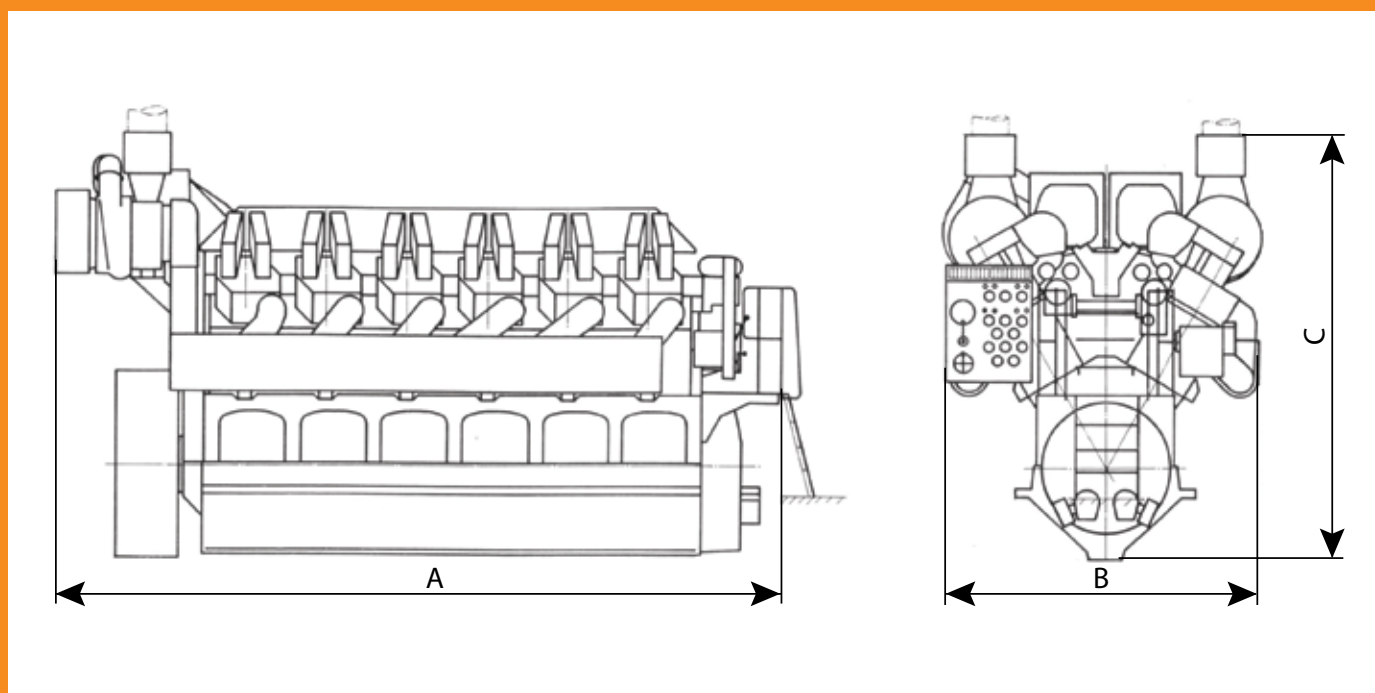
TECHNICAL DATA				
Engine type		R/S/BV 12 M 350		
Model		60° V-engine		
Number of cylinders		12		
Bore / stroke	mm	400 / 500		
Displacement	l	753.98		
Compression ratio		12		
Direction of rotation		Clockwise or counter-clockwise		
Continuous operation				
Engine speed	min ⁻¹	300	350	425
Engine output	kW	1894	2206	2721
Mean effective pressure	bar	10.06	10.06	10.06
Specific fuel consumption				
At full load	g/kWh	208	211	216
At ¾ load	g/kWh	208	209	212
At ½ load	g/kWh	209	211	211
Oil consumption	kg/h	2.5	3.1	3.9
Idling speed	min ⁻¹	90	90	90

Note:

The values given in this document are for information purposes only and not binding.
The date provided in the offer is decisive.



DIMENSIONS



PRINCIPAL ENGINE DIMENSIONS (mm) AND WEIGHTS (t)

Engine type	A	B	C	Weight (dry)
R/S/BV 12 M 350	6508	2785	3688	± 55

Letter 'B' refers to turbocharging principle version / Büchi system

Letter 'V' refers to four-stroke

Letter 'M' refers to water-cooled version

Letter 'R' refers to reversible version

Letter 'S' refers to ship version

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