

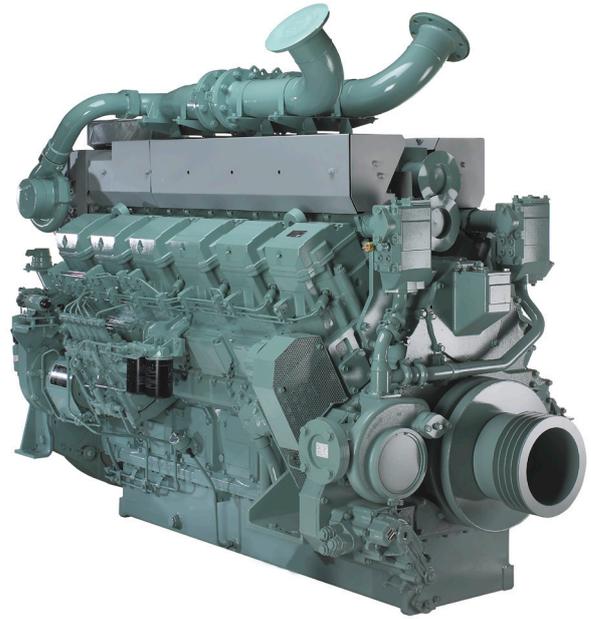
S12R-PTAA2

INDUSTRIAL ENGINE | CONSTANT SPEED

MAX OUTPUT 1633 kWm

MITSUBISHI DIESEL ENGINE

POWERFUL AND RELIABLE



ENGINE DATA

Engine model	S12R-PTAA2
Engine type	4-stroke, diesel
Cylinder configuration	12/60°V
Bore x stroke (mm)	170 x 180
Total displacement (l)	49.03
Dry weight (kg)	5520
Aspiration	turbocharged

Cooling system	water-cooled with separate air-to-air charge-air cooler (integrated in radiator - radiator as option)
Combustion system	direct injection
Fuel injection system	pump-line-nozzle (2x in-line pump)
Electrical system (V)	24
Rotation (ISO 1204)	counter clockwise
Flywheel and housing	SAE 21" / SAE #00

RATING^{1,2}

	Standby				LTP / PRP / DCCP			
	50		60		50		60	
Frequency (Hz)	without fan	with fan ⁶	without fan	with fan ⁶	without fan	with fan ⁶	without fan	with fan ⁶
Output (kWm)	1441	1404	1633	1596	1314	1277	1484	1447
Output (bhp)	1932	1882	2189	2139	1761	1711	1989	1939
Output (kWe) ³	1369	1334	1551	1516	1248	1213	1410	1375
Output (kVA) ⁴	1711	1667	1939	1895	1560	1516	1762	1718
Engine speed (rpm)	1500		1800		1500		1800	
Fuel consumption 100% load (g/kWh) ⁵	207	213	208	213	205	211	208	213
Fuel consumption 75% load (g/kWh) ⁵	205	211	209	214	206	212	211	217
Fuel consumption 50% load (g/kWh) ⁵	212	218	219	224	215	221	222	228
Emission	not regulated							

¹ For rating definitions, please see our website.

² All data represents net performance with standard accessories under the condition of 100 kPa barometric pressure, 298 K ambient temperature and 30% relative humidity.

³ kWe ratings based on 95% alternator efficiency.

⁴ kVA ratings based on a power factor of 0.8.

⁵ Fuel consumption is based on ISO3046/1 with +5% tolerance at 100% rated power, +10% tolerance at 75% and 50% rated power.

⁶ Based on MHIET's recommended/estimated fan loss. These engines are not available in a configuration that includes an engine-mounted fan.

BENEFITS

The Mitsubishi Diesel Engine range is designed to provide premium levels of performance, durability and reliability with ease of maintenance. Every Mitsubishi Diesel Engine benefits from the following features and advantages:

- Compact configuration to minimize installation footprint.
- Cast iron crankcase with access door per cylinder for easy inspection and maintenance.
- Quenched and tempered steel crankshaft with induction-hardened journals and pins to ensure maximum strength and low bearing wear. The crankshaft can be reground, if required, during a major overhaul.
- Wet-liner cylinder construction to ensure the bore geometry accuracy required to achieve low oil consumption. This type of construction allows easy replacement, if required, during a major overhaul.
- High performance AC8A aluminium-alloy pistons with Ni-Resist iron top ring groove insert ensure low long-term oil consumption with reduced carbon deposits.
- Individual cylinder head assemblies for easy and cost effective servicing.
- Basic consumable parts, such as fuel and oil filters, are positioned to allow easy access during routine maintenance.
- A low number of specialised tools is required to carry out maintenance activities.
- High level of commonality of parts across the Mitsubishi Diesel Engine ranges ensures ease of procurement and simplifies spare part stock control.
- Wide range of engine configurations allows choice of engine to be optimised for the requirements of each individual application.

Air intake and exhaust systems

The proprietary MHIET* -designed and -manufactured turbochargers are specifically matched to the characteristics of the engine to provide maximum power output with minimum fuel consumption. Noise-reducing air inlet silencers fitted to turbochargers as standard. Exhaust manifold heat-shield plates available on various models.

Option kits available

- Heavy-duty air inlet filter
- Flexible expansion joint (including counter flange)

Fuel system

Mechanical pump-line-nozzle fuel system offers reliable operation with simplified diagnostics and servicing. Engine-mounted fuel-feed pump allows direct coupling to day-tank system. Standardized spin-on cartridge-type fuel filters allow simplified spare parts management.

Governing system

There are range of electrical and hydraulic governing systems available:

- Woodward EPG actuator and control system
- Woodward ProAct Intergrated Speed Control actuator
- Woodward PSG hydraulic governing system

Option kits available

- Digital setting unit for load-sharing

Cooling system

The separate air-to-air charge-cooling system provides increased charge-air density to allow higher power output and improved fuel economy.

Option kits available

- Various radiator designs for different ambient conditions
- Pre-heater and pump system

Lubrication system

Gear-driven oil pump and engine-integrated oil cooler ensures optimum performance of the lubrication system and minimum rate of wear in the engine. Easy-access filter bracket includes a bypass filter for added safety. Standardized spin-on cartridge-type oil filters allows simplified spare parts management.

Option kits available

- Pre-lubrication pump system
- Manual oil drain pump

Starter system

24V starter motor system and battery-charging alternator installed as standard. System sized to ensure reliable, fast starting under conditions as low as -10°C. (The use of pre-heating and pre-lubrication starting aids may be necessary under certain conditions).

Option kits available

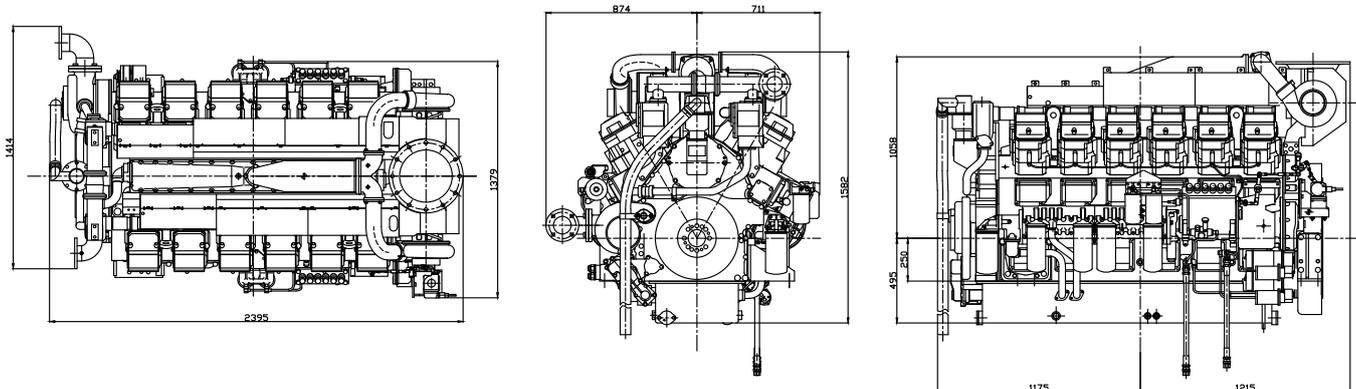
- Air starter
- Redundant starter

Monitoring system

High coolant temperature, low oil pressure and oil filter status alarm switches fitted as standard.

**MHIET: Mitsubishi Heavy Industries Engine & Turbocharger, Ltd. Headquarter for Engine & Energy Division.*

DIMENSIONS



More information

Contact your local dealer for more information regarding Mitsubishi Diesel Engines and optional equipment or, visit engine-genset.mhi.com

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