

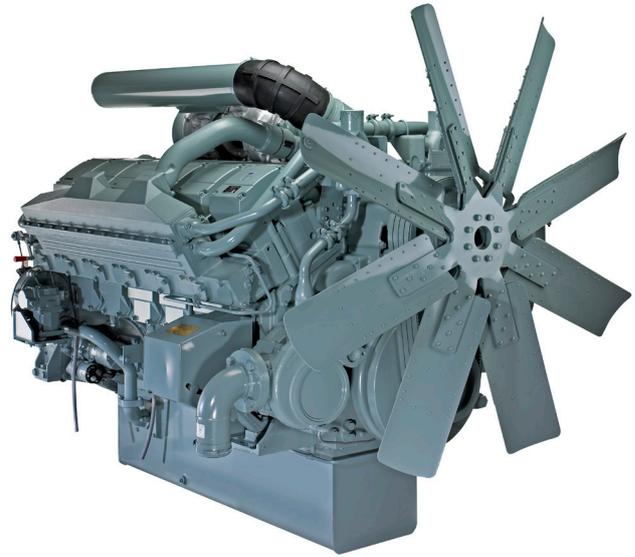
S12H-PTA

INDUSTRIAL ENGINE | CONSTANT SPEED

MAX OUTPUT 1120 kWm

MITSUBISHI DIESEL ENGINE

POWERFUL AND RELIABLE



ENGINE DATA

Engine model	S12H-PTA
Engine type	4-stroke, diesel
Cylinder configuration	16/60°V
Bore x stroke (mm)	150 x 175
Total displacement (l)	37.11
Dry weight (kg)	4450
Aspiration	turbocharged

Cooling system	water-cooled with common jacket water and charge-air cooling circuits
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 18" / SAE #00

RATING^{1,2}

	Standby		LTP / PRP / DCCP	
	Switchable		Switchable	
	without fan	with fan	without fan	with fan
Frequency (Hz)				
Output (kWm)	1020, 1120	980, 1080	930, 990	890, 950
Output (bhp)	1367, 1501	1314, 1448	1247, 1367	1194, 1314
Output (kWe) ³	969, 1064	931, 1026	884, 969	846, 931
Output (kVA) ⁴	1211, 1330	1164, 1283	1104, 1176	1057, 1128
Engine speed (rpm)	1500, 1800		1500, 1800	
Fuel consumption 100% load (g/kWh) ⁵	197, 205	201, 209	197, 206	201, 209
Fuel consumption 75% load (g/kWh) ⁵	198, 209	201, 212	199, 211	201, 212
Fuel consumption 50% load (g/kWh) ⁵	204, 220	207, 218	206, 223	211, 225
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.

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

Toho Seisakusho SG-4017-BR/XS-400B-03 control system provides 'isochronous' or 'droop' governing with fast load-step response characteristics that can be easily adjusted to the design of each genset installation.

Option kits available

- Digital setting unit for load-sharing

Cooling system

Combined jacket water and intercooler coolant circuit, driven by the engine-mounted pump, enables the simplest radiator/heat-exchanger designs to be utilized.

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

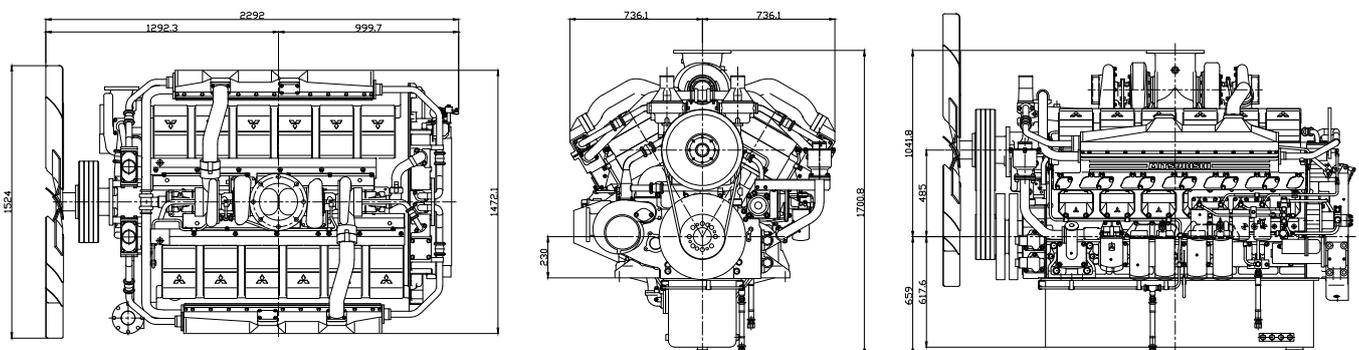
- Air starter
- Redundant starter

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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