

# S16R-PTA

INDUSTRIAL ENGINE | CONSTANT SPEED MAX OUTPUT 1750 kWm

# **MITSUBISHI DIESEL ENGINE**

**POWERFUL AND RELIABLE** 



ENGINE DATA					
Engine model	S16R-PTA				
Engine type	4-stroke, diesel				
Cylinder configuration	16/60°V				
Bore x stroke (mm)	170 x 180				
Total displacement (l)	65.37				
Dry weight (kg)	6750				
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 21" / SAE #00

RATING <sup>1,2</sup>	Standby				LTP / PRP / DCCP				
	50		60		50		60		
Frequency (Hz)	without fan	with fan	without fan	with fan	without fan	with fan	without fan	with fan	
Output (kWm)	1620	1590	1750	1700	1480	1450	1590	1540	
Output (bhp)	2172	2132	2346	2279	1984	1944	2131	2064	
Output (kWe) <sup>3</sup>	1539	1511	1663	1615	1406	1378	1511	1463	
Output (kVA) <sup>4</sup>	1924	1888	2078	2019	1758	1722	1888	1829	
Engine speed (rpm)	1500		1800		1500		1800		
Fuel consumption 100% load (g/kWh) <sup>5</sup>	194	199	198	203	194	199	197	202	
Fuel consumption 75% load (g/kWh) <sup>5</sup>	195	200	198	205	195	201	201	207	
Fuel consumption 50% load (g/kWh) <sup>5</sup>	200	211	211	221	203	215	215	227	
Emission	not regulated								

For rating definitions, please see our website.

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

KWe ratings based on 95% alternator efficiency.

KWA ratings based on a power factor of 0.8.

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
- 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 daytank system. Standardized spin-on cartridgetype 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

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**





