

**GENERAL ENGINE DATA**

Type .....	4-Cycle, Water Cooled	
Aspiration .....	Turbo-Charged, Inter Cooler (Fresh water to Cooler)	
Cylinder Arrangement .....	60°V	
No.of Cylinders .....	12	
Bore mm(in.) .....	150	(5.91)
Stroke mm(in.) .....	175	(6.89)
Displacement liter(in <sup>3</sup> ) .....	37.11	(2265)
Compression Ratio .....	14.5:1	
Dry Weight - Engine only - kg(lb) .....	4300	(9482)
Wet Weight - Engine only - kg(lb) .....	4560	(10055)

**PERFORMANCE DATA**

Steady State Speed Stability Band at any Constant Load		
Electric Governor - % .....	±0.25 or better	
Maximum Overspeed Capacity - rpm .....	2000	
Moment of inertia of Rotating Components - kgf·m <sup>2</sup> (lbf·ft <sup>2</sup> ) .....	55.6	(1319.6)
(Includes Std.Flywheel)		
Cyclic Speed Variation with Flywheel at 1800rpm .....	1/523	

**ENGINE MOUNTING**

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft) .....	200	(1446.9)
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**AIR INLET SYSTEM**

Maximum Intake Air Restriction (Includes piping)		
With Clean Filter Element - mm H <sub>2</sub> O (in.H <sub>2</sub> O) .....	400	(15.7)
With Dirty Filter Element - mm H <sub>2</sub> O (in.H <sub>2</sub> O) .....	635	(25.0)

**EXHAUST SYSTEM**

Maximum Allowable Back Pressure - mm H <sub>2</sub> O (in.H <sub>2</sub> O) .....	600	(23.6)
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**LUBRICATION SYSTEM**

Oil Pressure at Idle - kgf/cm <sup>2</sup> (psi) .....	2 ~ 3	(29 ~ 43)
at Rate Speed - kgf/cm <sup>2</sup> (psi) .....	5 ~ 6	(71 ~ 86)
Maximum Oil Temperature - °C(°F) .....	110	230
Oil Capacity of Standard Pan	High - liter (U.S.gal) .....	180 (48)
	Low - liter (U.S.gal) .....	150 (39.6)
Total System Capacity (Includes Oil Filter) - liter (U.S.gal) .....	200	(52.8)
Maximum Angle of Installation (Std. Pan)	Front Down .....	9.5°
(Engine Only)	Front Up .....	11°
	Side to Side .....	22.5°

**COOLING SYSTEM**

Coolant Capacity of Jacket (Engine only) - liter (U.S.gal) .....	83	(21.9)
Coolant Capacity of Air cooler (Engine only) - liter (U.S.gal) .....	17	(4.5)
Maximum External Friction Head at Engine Outlet - kgf/cm <sup>2</sup> (psi)	(For Jacket and Air Cooler) .....	
	0.35	(5.0)
Maximum Static Head of Coolant above Crankshaft Center - m(ft) .....	10	(32.8)
Standard Thermostat (modulating)Range of Jacket - °C(°F) .....	71 ~ 85	(160 ~ 185)
Standard Thermostat (modulating)Range of Air Cooler - °C(°F) .....	35 ~ 50	(95 ~ 122)
Maximum Coolant Temperature at Engine Outlet of Jacket - °C(°F) .....	98	(208)
Minimum Coolant Expansion Space - % of System Capacity	(For Jacket and Air Cooler) .....	
	10	(0.4)
Maximum Coolant Temperature at Intercooler Inlet, PTAW type - °C(°F) .....	45	(113)
Maximum Air Restriction on Discharge Side of Radiator and Fan - mm H <sub>2</sub> O(in.H <sub>2</sub> O) .....	10	(0.4)

Certified for US EPA-Tier 2 / Constant Speed

Standard Model [1000kWe/60Hz]

mitsubishi

**S12H-Y2PTAW-1**

SPECIFICATION SHEET

DIESEL ENGINES

**FUEL SYSTEM**

Fuel Injector	_____	Mitsubishi Electrical controlled Unit injector × 12
Maximum Suction Head of Feed Pump - mm Hg (in. Hg)	_____	75 (3.0)
Maximum Static Head of Return Pipe - mm Hg (in.Hg)	_____	220 (8.7)

**STARTING SYSTEM**

Battery Charging Alternator - V- Ah	_____	24-30
Starting Motor Capacity - V - kW	_____	24-7.5 × 2
Maximum Allowable Resistance of Cranking Circuit - m	_____	1.5
Recommended Minimum Battery Capacity		
At 5°C (41°F) and above - Ah	_____	300
Below 5°C (41°F) through - 5°C (23°F)	_____	600

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APPLICATION : GENERATOR

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**S12H-Y2PTAW-1**

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINES

**ENGINE RATING**

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

ITEM	UNIT	STAND-BY POWER	PRIME POWER		
		60Hz	60Hz		
Engine Speed	rpm	1800	1800		
No. of Cylinders		12			
Bore	mm (in.)	150 (5.91)			
Stroke	mm (in.)	175 (6.89)			
Displacement	liter (in. <sup>3</sup> )	37.11 (2265)			
Brake Horse power without Fan	HP (kW)	1528 (1140)	1389 (1036)		
Brake Mean Effective Pressure without Fan	kgf/cm <sup>2</sup> (psi)	20.9 (297)	19.0 (270)		
Mean Piston Speed	m/s (ft/min)	10.5 (2067)	10.5 (2067)		
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	145 (108)	145 (108)		
Intake Air flow	m <sup>3</sup> /min (CFM)	102 (3602)	93 (3284)		
Exhaust Gas Flow	m <sup>3</sup> /min (CFM)	270 (9534)	247 (8722)		
Coolant Flow	liter/min (U.S. GPM)	1450 (383)	1450 (383)		
Coolant Flow to Intercooler (PTAW only)	liter/min (U.S. GPM)	500 (132)	500 (132)		
Cooling Air Flow (Std. Fan)	m <sup>3</sup> /min (CFM)	-	-		
Allowable Fan Loss Horse Power	HP (kW)	54 (40)	54 (40)		
Radiated Heat to Ambient	kcal/hr (BTU/min)	76835 (5082)	70236 (4645)		
Heat Rejection to Coolant	kcal/hr (BTU/min)	358563 (23715)	327770 (21678)		
Heat Rejection to Air Cooler (PTAW Version)	kcal/hr (BTU/min)	281728 (18633)	257534 (17033)		
Heat Rejection to Exhaust	kcal/hr (BTU/min)	863831 (57133)	794890 (52573)		
Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan)	dB(A)	113	111		

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