

Certified for US EPA-Tier 2 / Constant Speed

Standard Model [800kWe/60Hz]

S12A2-Y2PTAW-2

SPECIFICATION SHEET

MITSUBISHI

DIESEL ENGINES

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.)	160	(6.30)
Displacement liter(in ³)	33.93	(2071)
Compression Ratio	15.3:1	
Dry Weight - Engine only - kg(lb)	3380	(7453)
Wet Weight - Engine only - kg(lb)	3600	(7938)

PERFORMANCE DATA

Steady State Speed Stability Band at any Constant Load		
Electric Governor - %	±0.25 or better	
Maximum Overspeed Capacity - rpm	2400	
Moment of inertia of Rotating Components - kgf · m ² (lbf · ft ²)	37.7	(894.8)
(Includes Std. Flywheel)		
Cyclic Speed Variation with Flywheel at 1800rpm	1/449	

ENGINE MOUNTING

Maximum Bending Moment at Rear Face of Flywheel Housing - kgf · m(lbf · ft)	200	(1447)
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AIR INLET SYSTEM

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

EXHAUST SYSTEM

Maximum Allowable Back Pressure - mm H ₂ O (in. H ₂ O)	600	(23.6)
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LUBRICATION SYSTEM

Oil Pressure at Idle - kgf/cm ² (psi)	2 ~ 3	(29 ~ 43)
at Rate Speed - kgf/cm ² (psi)	4 ~ 6	(57 ~ 86)
Maximum Oil Temperature - °C(°F)	110	(230)
Oil Capacity of Standard Pan High - liter (U.S. gal)	100	(26.4)
Low - liter (U.S. gal)	80	(21.1)
Total System Capacity (Includes Oil Filter) - liter (U.S. gal)	120	(31.7)
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)	86	(22.7)
Coolant Capacity of Air cooler (Engine only) - liter (U.S. gal)	14	(3.7)
Maximum External Friction Head at Engine Outlet - kgf/cm ² (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)	65 ~ 85	(149 ~ 185)
Standard Thermostat (modulating) Range of Air Cooler - °C(°F)	35 ~ 50	(95 ~ 122)
Maximum Coolant Temperature at Engine Outlet - °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 ₂ O(in. H ₂ O)	10	(0.4)

APPLICATION : GENERATOR

Pub. No. T13-0631-E

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FUEL SYSTEM

Fuel Injector _____ Bosch P Type × 2
Maximum Suction Head of Feed Pump - mm Hg (in. Hg) _____ 75 (3.0)
Maximum Static Head of Return & Leak Pipe - mm Hg (in.Hg) _____ 150 (5.9)

STARTING SYSTEM

Battery Charging Alternator - V- Ah _____ 24-25
Starting Motor Capacity - V - kW _____ 24-6.0 × 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) _____ 500

The specifications are subject to change without notice.

APPLICATION : GENERATOR

Pub. No.T13-0471-E

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MITSUBISHI

DIESEL ENGINE

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.)	160 (6.30)			
Displacement	liter (in. ³)	33.93 (2071)			
Brake Horse power without Fan	HP (kW)	1207 (900)	1099 (820)		
Brake Mean Effective Pressure without Fan	kgf/cm ² (psi)	18.0 (256)	16.4 (233)		
Mean Piston Speed	m/s (ft/min)	9.6 (1890)	9.6 (1890)		
Maximum Regenerative Power Absorption Capacity without Fan	HP (kW)	125 (93)	125 (93)		
Intake Air flow	m ³ /min (CFM)	88 (3107)	75 (2648)		
Exhaust Gas Flow	m ³ /min (CFM)	232 (8192)	200 (7062)		
Coolant Flow	liter/min (U.S. GPM)	1100 (291)	1100 (291)		
Coolant Flow to Intercooler (PTAW only)	liter/min (U.S. GPM)	470 (124)	470 (124)		
Cooling Air Flow (Std. Fan)	m ³ /min (CFM)	-	-		
Allowable Fan Loss Horse Power	HP (kW)	51 (38)	51 (38)		
Radiated Heat to Ambient	kcal/hr (BTU/min)	66155 (4375)	56798 (3757)		
Heat Rejection to Coolant	kcal/hr (BTU/min)	308721 (20418)	265058 (17531)		
Heat Rejection to Air Cooler (PTAW Version)	kcal/hr (BTU/min)	242567 (16043)	208260 (13774)		
Heat Rejection to Exhaust	kcal/hr (BTU/min)	813498 (53804)	658220 (43534)		
Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan)	dB(A)	105	103		

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