

**GENERAL ENGINE DATA**

|                                      |  |
|--------------------------------------|--|
| Type                                 | 4-Cycle, Water Cooled                                  |
| Aspiration                           | Turbo-Charged, Inter Cooler<br>(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 <sup>3</sup> ) | 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 <sup>2</sup> (lbf · ft <sup>2</sup> )<br>(Includes Std. Flywheel) | 37.7 (894.8)    |
| 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) |
|---|------------|

**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) |
|---|------------|

**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)                     | 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 <sup>2</sup> (psi)<br>(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<br>(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 [800kWe/60Hz]

MITSUBISHI

**S12A2-Y2PTAW-2**

SPECIFICATION SHEET

DIESEL ENGINES

---

**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

Certified for US EPA-Tier 2 / Constant Speed

Standard Model [800kWe/60Hz]

**S12A2-Y2PTAW-2**

**SPECIFICATION SHEET**

**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<br>(in.)                  | 150<br>(5.91)     |                   |  |  |
| Stroke   | mm<br>(in.)                  | 160<br>(6.30)     |                   |  |  |
| Displacement   | liter<br>(in. <sup>3</sup> ) | 33.93<br>(2071)   |                   |  |  |
| Brake Horse power without Fan  | HP<br>(kW)                   | 1207<br>(900)     | 1099<br>(820)     |  |  |
| Brake Mean Effective Pressure without Fan                            | kgf/cm <sup>2</sup><br>(psi) | 18.0<br>(256)     | 16.4<br>(233)     |  |  |
| Mean Piston Speed  | m/s<br>(ft/min)              | 9.6<br>(1890)     | 9.6<br>(1890)     |  |  |
| Maximum Regenerative Power Absorption Capacity without Fan           | HP<br>(kW)                   | 125<br>(93)       | 125<br>(93)       |  |  |
| Intake Air flow  | m <sup>3</sup> /min<br>(CFM) | 88<br>(3107)      | 75<br>(2648)      |  |  |
| Exhaust Gas Flow   | m <sup>3</sup> /min<br>(CFM) | 232<br>(8192)     | 200<br>(7062)     |  |  |
| Coolant Flow   | liter/min<br>(U.S. GPM)      | 1100<br>(291)     | 1100<br>(291)     |  |  |
| Coolant Flow to Intercooler (PTAW only)                              | liter/min<br>(U.S. GPM)      | 470<br>(124)      | 470<br>(124)      |  |  |
| Cooling Air Flow (Std. Fan)  | m <sup>3</sup> /min<br>(CFM) | -                 | -                 |  |  |
| Allowable Fan Loss Horse Power                                       | HP<br>(kW)                   | 51<br>(38)        | 51<br>(38)        |  |  |
| Radiated Heat to Ambient   | kcal/hr<br>(BTU/min)         | 66155<br>(4375)   | 56798<br>(3757)   |  |  |
| Heat Rejection to Coolant  | kcal/hr<br>(BTU/min)         | 308721<br>(20418) | 265058<br>(17531) |  |  |
| Heat Rejection to Air Cooler (PTAW Version)                          | kcal/hr<br>(BTU/min)         | 242567<br>(16043) | 208260<br>(13774) |  |  |
| Heat Rejection to Exhaust  | kcal/hr<br>(BTU/min)         | 813498<br>(53804) | 658220<br>(43534) |  |  |
| Noise Level (1 m height & distance) (excludes, Intake,Exhaust & Fan) | dB(A)                        | 105               | 103               |  |  |

The specifications are subject to change without notice.

**APPLICATION : GENERATOR**

Pub. No.T13-0471-E