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|-----------------|------------------------|--------------------|---------------------------|-----------------------------|
| 1500 RPM | 400/230 V 50 Hz | Type ID-021 | 20/16 Kva/KW (PRP) | 21/16,8 Kva/KW (LTP) |
|-----------------|------------------------|--------------------|---------------------------|-----------------------------|

Engine: F3M2011
Alternator: ECO28-1L/4

Scope of Supply:

The engine and the alternator are mounted together forming a rigid monoblock, the shafts are connected by a flexible disc connection. The monoblock is mounted via silent blocks inside a steel plate soundproofed canopy including a built in fuel tank. The canopy is painted with powder paint and covered with noise insulator material. Starting is electric and it includes a battery. The genset monitoring system consist of a control module.

GEN SET POWER

| Voltage | Hz | Phase | Cos Ø | PRP* Kva/KW | LTP** Kva/KW | Amp. |
|----------------|-----------|--------------|--------------|--------------------|---------------------|-------------|
| 415/240 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 29.2 |
| 400/230 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 30.3 |
| 380/220 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 31.9 |
| 240/120 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 50.6 |
| 230/115 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 52.8 |
| 220/110 | 50 | 3 | 0,8 | 20/16 | 21/16.8 | 55.2 |

PRP* Kva/KW:

Available electrical power (at a variable load) with a medium of 80% of the indicated maximum power. A 10% overload capability is available

LTP Kva/KW:**

Available electrical load (at a variable load) during a maximum of 500 hours per year. No overload capability is available.

Control Cubicle Alternatives

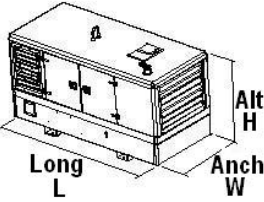
Manual/Remote Control Cubicle:: STANDARD MCP SAM 712 / OPTIONAL MCP DSE 710
 Automatic Control Cubicle: STANDARD ACP DSE 720 / OPTIONAL ACP DSE 5320

Options::

Please see the price list



TECHNICAL DATA

| Engine | | Alternator | |
|--------------------------------------|---------------|--|------------|
| Engine type: | F3M2011 | Alternator Type: | ECO28-1L/4 |
| Eng. Power kW COP: | 18,1 | Nº of poles: | 4 |
| Eng. Power kW PRP: | 19 | Eff. At 3/4 %: | 88 |
| Eng. Power kW LTP: | 20 | Eff. At 4/4 %: | 87,6 |
| Nº Cylinders: | 3 | Alt. rating PRP kVA III Kw II: | 20 |
| Displacement cm3: | 2330 | Alt. rating LTP kVA III kW II: | 22 |
| Bore/stroke (mm/mm): | 94/112 | Output Power PRP kVA III kW II: | 20 |
| Compression ratio: | 19 | Output Power LTP kVA III kW II: | 21,9 |
| Cooling: | OIL | Current Amp PRP: | 29,9 |
| Injection: | DIRECT | Current Amp LTP: | 31,4 |
| Aspiration: | NATURAL | Standard Circuit Breaker (Amp): | 32 IV |
| Standard governor: | MECHANICAL | Xd (%): | 175 |
| Governing control quality: | G2 | X'd (%): | 16,5 |
| Speed droop mech gov. (%): | 5 | X: | 9,4 |
| Exhaust gases temperature (°C): | 510 | Nº of wires: | 12 |
| Exhaust gases flow (m3/h): | 230 | Insulation: | H |
| Max Exh. Back pres. (mbar): | 30 | Regulator AVR: | SR7/2 |
| Coolant capacity (lit.): | 5,5 | Protection: | IP23 |
| Cooling air flow (m3/h): | 1800 | <p style="text-align: center;">DIMENSIONS</p>  <p>Height: 1270 mm Width: 950 mm Length: 2000 mm Weight: 900 kgs Tank: 117 lit</p> | |
| Max allow. Intake dep. (mbar): | 20 | | |
| Combustion air flow (m3/h): | 86 | | |
| Oil cap. (Litres): | 5,5 | | |
| Oil cons. (kg/hr or % of fuel cons): | 0,30% | | |
| Min oil press warning (bar): | 2,1 | | |
| Fuel cons. 25% lit/h: | 2,3 | | |
| Fuel cons. 50% lit/h: | 2,9 | | |
| Fuel cons. 75% lit/h: | 3,9 | | |
| Fuel cons. 100% lit/h: | 5,0 | | |
| Electric system VDC: | 12 | | |
| Type: | Neg to ground | | |
| Battery (Ah): | 66 | | |
| Starting motor (kW): | 3 | | |
| Flywheel Housing: | SAE3/11,5 | | |

Technical information available in download section.:

| Engine technical data | Alternator Technical data | Gen Set Drawing | Instalation drawing | Control cubicle descr. |
|-----------------------|---------------------------|-----------------|------------------------|------------------------|
| Engine manual | Alternator Manual | Gen Set Manual | Gen Set Condensed Man. | Controler manual |
| | | | | |

Control Cubicles

MANUAL -REMOTE START CONTROL MODULE: MCP SAM 712
SAM 712 CONTROLLER

- Manual or Automatic remote start controller, Selector switch for Off, Man and Auto with key. Complete engine protection functions with alarms visualised via LEDs in the front. The controller is set up via 6 DIP switches in the rear of the case.
- Standard circuit breaker and differential relay.


MANUAL-REMOTE START : MCP DSE 710
DSE 720 CONTROLLER

- The Model 710 is a Manual or Automatic Start Control Module.
- The module is used to manually or automatically start and monitor a generator set.
- The module also provides indication of operational status and fault conditions,
 - Control via interface or cable via PC
- Operation of the module is via pushbutton controls mounted on the front panel with STOP/RESET, MANUAL, AUTO and START pushbuttons.
- Standard Circuit Breaker and differential relay.


AUTOMATIC CONTROL MODULE : ACP DSE 720
DSE 720 CONTROLLER

- The Model 720 is a Manual or Automatic Start Control Module. The module is used to manually or automatically start and monitor a generator set.
- Operation of the module is via pushbutton controls with STOP/RESET, MANUAL, TEST, AUTO and START
- Communication via interface or cable via PC. Selected timers and alarms can be altered by the customer from the front panel. Alterations to the system are made using the 810 interface and a PC. This interface also provides real time diagnostic facilities. It is also possible to monitor and control the system via PC up to 100metres (111 yards) from the controller.
- Standard IV poles circuit breaker (until 85 Kva).


AUTOMATIC CONTROL MODULE: ACP DSE 5320
DSE 5320 CONTROLLER

- The Model 5320 is an Automatic Mains Failure Control Module. The module is used to monitor a mains supply and automatically start a standby generator set..
- Operation of the module is via pushbutton controls with STOP/RESET, MANUAL, TEST, AUTO and START
- The controller has a J 1939 CANBus interface for connection to modern engine ECU's. This enables engine protection and instrumentation without requiring additional sensors. Engine diagnostic information removes the need for both service equipment and cryptic diagnostic
- Comprehensive remote communication via RS232 port connecting via modem or PC. It is also possible to monitor and control the system via PC up to 100metres (111 yards) from the controller
- Standard IV poles circuit breaker (until 85 Kva.)