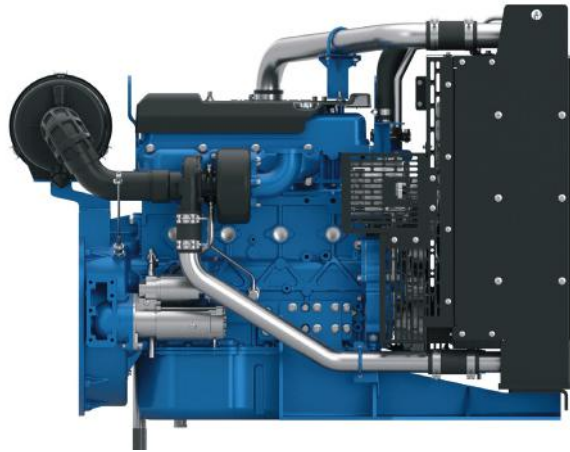




# 4M10

PowerKit ESP/PRP Diesel Engine



|                       |                              |
|-----------------------|------------------------------|
| Bore & Stroke (mm)    | 105 x 118                    |
| Displacement (L)      | 4.1                          |
| N° of Cylinders       | 4                            |
| Cylinders Arrangement | In line                      |
| Fuel System           | Mechanical Pump              |
| Governor (Gov.)       | Electronic                   |
| Aspiration (Asp.)     | Turbocharged and Aftercooled |

### Customer benefits

Warranty terms – 2 yrs unlimited PRP, 4 yrs/800h ESP  
 50°C Cooling package standard with low derating  
 Low fuel consumption across the range  
 Extended MTBO

| Diesel Engine | Speed | Gross Engine Output (kWm) |     | Typical Generator Output |     |     |     |
|---------------|-------|---------------------------|-----|--------------------------|-----|-----|-----|
|               |       |                           |     | PRP                      |     | ESP |     |
|               | RPM   | PRP                       | ESP | kWe                      | kVA | kWe | kVA |
| 4M10G70/5     | 1500  | 60                        | 66  | 50                       | 63  | 55  | 70  |
| 4M10G88/5     | 1500  | 72                        | 80  | 64                       | 80  | 70  | 88  |
| 4M10G110/5    | 1500  | 90                        | 100 | 80                       | 100 | 88  | 110 |
| 4M10G83/6     | 1800  | 85                        | 95  | 75                       | 94  | 83  | 103 |
| 4M10G100/6    | 1800  | 105                       | 115 | 90                       | 112 | 100 | 125 |

### Standard equipment

#### Engine and block

Cast iron gantry type structure block  
 One-piece forged crankshaft  
 Separate cast iron cylinder heads and wet liners  
 Aluminum alloy pistons with oil cooling gallery

#### Cooling system

Radiator and hoses supplied directly mounted on the engine  
 Thermostatically-controlled system with belt driven coolant pump and pusher fan

#### Lubrication system

Flat bottom large capacity oil pan  
 Spin-on full-flow lube oil filter

#### Fuel system

P-type fuel injection pump and injector for higher injection pressure  
 Duplex fine filter for better efficiency

#### Air intake and exhaust system

Top-mounted turbocharger optimized for gen-set application  
 Special rear-mounted air filter with restriction indicator  
 Exhaust manifold shield for heat isolation

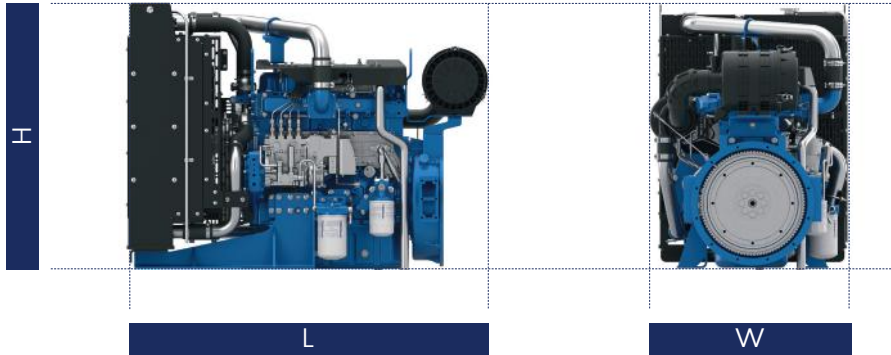
#### Electrical system

12V DC electric starter motor and battery charging alternator  
 Low oil pressure & high water temperature sensors

#### Flywheel and housing

SAE 3 flywheel housing and 11.5" flywheel

### Dimensions and dry weight (mm/kg)



| Diesel Engine | Speed<br>RPM | Dimensions and dry weights including radiator |         |         |               |
|---------------|--------------|---|---------|---------|---------------|
|               |              | L<br>mm                                       | W<br>mm | H<br>mm | Weight<br>Kg. |
| 4M10G70/5     | 1500         | 1258  | 708     | 885     | 472           |
| 4M10G88/5     | 1500         | 1258  | 708     | 885     | 472           |
| 4M10G110/5    | 1500         | 1330  | 741     | 995     | 525           |
| 4M10G83/6     | 1800         | 1258  | 708     | 885     | 472           |
| 4M10G100/6    | 1800         | 1330  | 741     | 995     | 525           |

## Ratings definitions

### Emergency Standby Power (ESP)

Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating. Typical operational hours of the engine is 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

### Unlimited Prime Rated Power (PRP)

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available, however, this is limited to 1 hour within every 12 hour period.

- 1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of  $\pm 5\%$ .
- 2) Test conditions: 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L. Derating may be required for conditions outside these; please contact the factory for details.
- 3) Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.