

|              |         |     |            |  |                                   | <u>Technic</u> |                                       |  |
|--------------|---------|-----|------------|--|-----------------------------------|----------------|---------------------------------------|--|
| Engine       |         |     | Alternator |  | Generator Model                   |                |                                       |  |
| Fawde CA4F2  |         |     |            |  |                                   | PC90-G /       |                                       |  |
| Frequency    | Pha     |     | _          |  |                                   |                | Emissions                             |  |
| 50Hz/1500rpm | 3-Ph    |     |            | actor Cos $\Phi = 0$ .   |                                   |                | Stage II                              |  |
| RATINGS      | Prime I |     |            | y Power  | Rated Current<br>Amps             |                | Fuel Consumption                      |  |
|              | (PF     | 1   |            | SP)  |                                   |                | @100% Load                            |  |
| Voltage (V)  | kWe     | kVA | kWe        | kVA  | (A                                | -              | L/h                                   |  |
| 380/220      | 72      | 90  | 79         | 99   | 136                               |                | 21.7                                  |  |
| 400/230      | 72      | 90  | 79         | 99   | 129.9                             |                | 21.7                                  |  |
| 415/240      | 72      | 90  | 79         | 99   | 125                               | 5.2            | 21.7                                  |  |
|              |         |     |            | <ul> <li>Radiator with pressure cap and drain point.</li> <li>Fully guarded engine-driven fan.</li> <li>Fully welded steel skid base with lifting holes and fork lift legs.</li> <li>Integral fuel tank with filler cap and gauge (≤650kVA).</li> <li>Heavy duty rubber anti-vibration mountings.</li> <li>12V or 24V maintenance free starter battery and connecting cables</li> <li>Separate engine-driven battery charging alternator.</li> <li>Spin on oil and fuel filters and dry type air filter element.</li> <li>Industrial silencer (15dBA reduction) supplied loose.</li> <li>Auto start control system with LCD show.</li> <li>Battery charger provided.</li> <li>Main line 3P circuit breaker.</li> <li>Rigorous factory test wiring with IEC standard.</li> <li>Operation &amp; Maintenance manual &amp; Wiring diagrams.</li> <li>Wide range of optional extra features available.</li> </ul> |                                   |                |                                       |  |
|              |         |     |            | Weig<br>Length (I<br>Width (W<br>Height (F   | hts<br>_)-mm:<br>/)-mm:<br>1)-mm: |                | Silent<br>2500<br>980<br>1250<br>1250 |  |
|              |         |     | ≞∟⊅∕∾      | Dry Weig   |                                   |                | 1250                                  |  |
|              |         |     |            | Fuel tar   | ,                                 |                | 8                                     |  |
|              |         |     |            | (dBA)@7m   | n no load                         |                | ≪85                                   |  |

## Ratings:

All three phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor. (1)PRP (Prime Power):

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

(2)ESP (Standby Power):

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. (3)STD:Standard Alternator.

Tide Power reserves the right to change the design or specifications without notice and without any obligation or liability.

| Engine | Fawde CA4F2-12D  |                |      |  |  |  |  |
|--------|------------------|----------------|------|--|--|--|--|
|        | Frequency        | Hz             | 50   |  |  |  |  |
|        | Engine Speed     | r/min          | 1500 |  |  |  |  |
|        | Cylinders / Type | 4 cyl 4-stroke |      |  |  |  |  |



| Г                   | Aspiration                                 | Turbo/ Intercooling     |            |  |  |  |
|---------------------|--|-------------------------|------------|--|--|--|
| F                   | Governor Type                              | Elecrtoni               | Elecrtonic |  |  |  |
| General Performance | Bore / Stroke                              | mm                      | 110*125    |  |  |  |
| F                   | Displacement                               | Litres                  | 4.75       |  |  |  |
|                     | Compression Ratio                          | 17:1                    |            |  |  |  |
| F                   | Brake Mean Effective Pressure              | MPa                     | 1.18       |  |  |  |
|                     | Rotation Direction (from flywheel)         | Anti-clockwise          |            |  |  |  |
| Γ                   | Gross Engine Power                         | kWm 92                  |            |  |  |  |
|                     | Fuel Consumption at 110% Prime Power       | Litres/hour             | 23.8       |  |  |  |
|                     | Fuel Consumption at 100% Prime Power       | Litres/hour             | 21.7       |  |  |  |
|                     | Fuel Consumption at 75% Prime Power        | Litres/hour             | 16.2       |  |  |  |
| Fuel System         | Fuel Consumption at 50% Prime Power        | Litres/hour             | 10.8       |  |  |  |
|                     | Fuel Consumption at 25% Prime Power        | Litres/hour             | 5.4        |  |  |  |
| F                   | Standard Fuel Tank Capacity                | Hours                   | 8          |  |  |  |
|                     | Total Oil System Capacity                  | Litres                  | 16         |  |  |  |
|                     | Oil consumption                            | L/h                     | 0.06       |  |  |  |
| Oil System          | Oil consumption (as % of fuel consumption) | 0.29%                   |            |  |  |  |
|                     | Maximum Oil Temperature                    | °C                      | 115        |  |  |  |
| Cooling System      | Coolant Capacity - Engine Only             | Litres                  | 6.5        |  |  |  |
|                     | Standard Thermostat (Modulating) Range     | °C                      | 82-95      |  |  |  |
|                     | Maximum Coolant Temperature - Engine Out   | °C                      | 97         |  |  |  |
|                     | Electrical System Voltage                  | V                       | 24         |  |  |  |
| Electric System     | Battery                                    | Maintenance             | e-free     |  |  |  |
|                     | Heat Rejection of Exhaust                  | kW                      | 64         |  |  |  |
| Energy Balance      | Heat Rejection from Engine                 | kW                      | 12         |  |  |  |
| Γ                   | Heat Rejection to Coolant                  | kW                      | 46         |  |  |  |
| Alternator          | 50Hz/1500rpm                               |                         |            |  |  |  |
|                     | Manufacture / Brand                        | Werrna                  |            |  |  |  |
|                     | Model                                      | WR274C                  |            |  |  |  |
|                     | Coupling / No. of Bearings                 | Direct / Single Bearing |            |  |  |  |
| -                   | Phase / Poles                              | 3-Phase / 4-Pole        |            |  |  |  |
| General Data        | Power Factor                               | $\cos \Phi = 0.8$       |            |  |  |  |
|                     | AVR Regulation                             | Yes                     |            |  |  |  |
|                     | Voltage Regulation                         | ±1 %                    |            |  |  |  |
|                     | Insulation Class                           | Н                       |            |  |  |  |
|                     | Drip Proof                                 | IP23                    |            |  |  |  |
|                     | Voltage Regulator                          | AVR                     |            |  |  |  |
|                     | Altitude ≤1000 m                           |                         | -          |  |  |  |