

# Technical Data - Freedom Series

| DG SET                   | Model                                      | KEC-E12.5-II   | KEC-E15-II     | KEC-E20-II     | KEC-E25-II     | KEC-E30-II     | KEC-E32.5-II   |
|--------------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
|                          | Rating (kVA)                               | 12.5           | 15             | 20             | 25             | 30             | 32.5           |
|                          | Rated kW                                   | 10             | 12             | 16             | 20             | 24             | 26             |
|                          | Rated Current (Amps)                       | 17.3           | 20.9           | 27.8           | 34.8           | 41.7           | 45.2           |
|                          | Length x Width x Height (mm)               | 2000x1025x1375 | 2000x1025x1375 | 2275x1025x1425 | 2350x1100x1500 | 2350x1100x1500 | 2350x1100x1500 |
|                          | Total Dry Weight (Kgs)                     | 900            | 900            | 1100           | 1250           | 1300           | 1300           |
| ENGINE                   | Model                                      | G15-II         | G15-II         | G20-II         | G25-II         | G30-II         | G30-II         |
|                          | BHP  | 21.3           | 21.3           | 25             | 34             | 43             | 43             |
|                          | No. of Cylinders                           | 2              | 2              | 3              | 3              | 3              | 3              |
|                          | RPM  | 1500           | 1500           | 1500           | 1500           | 1500           | 1500           |
|                          | Bore (mm)                                  | 95             | 95             | 91             | 91             | 91             | 91             |
|                          | Stroke (mm)                                | 110            | 110            | 110            | 110            | 110            | 110            |
|                          | Displacement (ltrs)                        | 1.56           | 1.56           | 2.15           | 2.15           | 2.15           | 2.15           |
|                          | Compression ratio                          | 17.5:1         | 17.5:1         | 17.5:1         | 17.5:1         | 17.5:1         | 17.5:1         |
|                          | SFC (gms/BHP-hr)                           | 160            | 160            | 160            | 160            | 160            | 160            |
|                          | Governor                                   | Mechanical     | Mechanical     | Mechanical     | Mechanical     | Mechanical     | Mechanical     |
|                          | Class of Governing                         | A              | A              | A              | A              | A              | A              |
|                          | Aspiration                                 | NATURAL        | NATURAL        | NATURAL        | TCI            | TCI            | TCI            |
|                          | Air Filter                                 | Dry type       | Dry type       | Dry type       | Dry type       | Dry Type       | Dry Type       |
|                          | Fuel                                       | HSD            | HSD            | HSD            | HSD            | HSD            | HSD            |
|                          | Type of oil                                | 15W 40 CF4     | 15W 40 CF4     | 15W 40 CF4     | 15W 40 CF4     | 15W 40 CF4     | 15W 40 CF4     |
|                          | Oil sump capacity (ltrs)                   | 5              | 5              | 6              | 6              | 6              | 6              |
|                          | Lube oil consumption (gms/BHP-hr)          | < 0.1% of FC   | < 0.1% of FC   | < 0.1% of FC   | < 0.1% of FC   | < 0.1% of FC   | < 0.1% of FC   |
|                          | Cooling                                    | Liquid Cool    |                |                |                |                |                |
|                          | Bare Radiator Coolant capacity (ltrs)      | 4.3            | 4.3            | 6.40           | 10             | 10             | 10             |
|                          | Coolant Capacity with engine Jacket (ltrs) | 7.1            | 7.1            | 10.90          | 14.50          | 14.50          | 14.50          |
| Engine Dry Weight (Kgs)  | 248  | 248            | 320            | 350            | 350            | 350            |                |
| Electric Starting System | 12V  | 12V            | 12V            | 12V            | 12V            | 12V            |                |
| ALTERNATOR               | Make                                       | KEC            | KEC            | KEC            | KEC            | KEC            | KEC            |
|                          | Model                                      | 4AB 160M1      | 4AB 160M1      | 4AB 160L1      | 4AB 160L1      | 4AB 180S1      | 4AB 180M1      |
|                          | Type                                       | Brushless      | Brushless      | Brushless      | Brushless      | Brushless      | Brushless      |
|                          | kVA  | 12.5           | 15             | 20             | 25             | 30             | 32.5           |
|                          | Voltage (V)                                | 415            | 415            | 415            | 415            | 415            | 415            |
|                          | No. of Phases                              | 3              | 3              | 3              | 3              | 3              | 3              |
|                          | Power Factor                               | 0.8            | 0.8            | 0.8            | 0.8            | 0.8            | 0.8            |
|                          | Speed (rpm) / Frequency (Hz)               | 1500 / 50      | 1500 / 50      | 1500 / 50      | 1500 / 50      | 1500 / 50      | 1500 / 50      |
|                          | Voltage Regulation                         | +/- 1%         | +/- 1%         | +/- 1%         | +/- 1%         | +/- 1%         | +/- 1%         |
|                          | Enclosure                                  | SPDP           | SPDP           | SPDP           | SPDP           | SPDP           | SPDP           |
|                          | Insulation class                           | H              | H              | H              | H              | H              | H              |
|                          | Weight of ACG (Kgs)                        | 150            | 150            | 162            | 162            | 180            | 180            |