

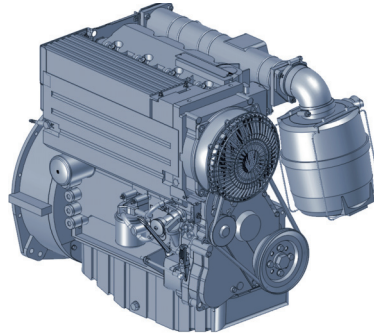
BFL 2011

for generator sets

12 - 46 kW | 15 - 62 hp at 1500/1800 min⁻¹ | rpm

EU Stage II / US EPA Tier 2

- Oil-cooled 2, 3 and 4-cylinder aspirated engine in inline construction with integrated cooling system.
- 4-cylinder also with turbocharging.
- Direct injection with single injection pumps and optional electronic governor.
- Low fuel consumption due to optimised combustion.



- Long oil change intervals of up to 1000 hours.
- Minimised running costs due to low maintenance need and little wear.
- High reliability combined with durability. No corrosion or cavitation due to oil cooling and lubrication.
- A very good load response ensures an immediate power supply.

Technical data

| Engine type | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
|----------------------------------|-----------|------------------|------------------|------------------|------------------|
| No. of cylinders | | 2 | 3 | 4 | 4 |
| Bore/stroke | mm in | 94/112 3.7/4.4 | 94/112 3.7/4.4 | 94/112 3.7/4.4 | 94/112 3.7/4.4 |
| Displacement | l cu in | 1.6 95 | 2.3 142 | 3.1 190 | 3.1 190 |
| Weight (incl. cooler and fan) | kg lb | 212 468 | 254 560 | 293 646 | 295 649 |
| Governing standard ¹⁾ | | G2 | G2 | G2 | G2 |

50 Hz / 1500 min⁻¹

| Power | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
|--|---------|-----------|-----------|-----------|-----------|
| Continuous Power (COP) ²⁾ | kW hp | 12 15 | 18 24 | 26 35 | 35 47 |
| Prime Power (PRP) ³⁾ | kW hp | 12 16 | 19 26 | 28 37 | 37 49 |
| Limited Time Power (LTP) ⁴⁾ | kW hp | 13 17 | 20 27 | 29 39 | 38 52 |
| Fan power consumption | kW hp | 0.1 0.1 | 0.1 0.1 | 0.2 0.2 | 0.3 0.3 |
| Typical Generator Output COP ⁵⁾ | kVA | 13 | 20 | 30 | 39 |
| Typical Generator Output PRP ⁵⁾ | kVA | 13 | 21 | 31 | 41 |
| Typical Generator Output LTP ⁵⁾ | kVA | 14 | 22 | 33 | 43 |

60 Hz / 1800 min⁻¹

| Power | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
|--|---------|-----------|-----------|-----------|-----------|
| Continuous Power (COP) ²⁾ | kW hp | 14 18 | 22 30 | 31 42 | 42 56 |
| Prime Power (PRP) ³⁾ | kW hp | 14 19 | 23 31 | 33 44 | 44 59 |
| Limited Time Power (LTP) ⁴⁾ | kW hp | 15 20 | 25 33 | 35 47 | 46 62 |
| Fan power consumption | kW hp | 0.1 0.1 | 0.1 0.1 | 0.3 0.3 | 0.4 0.4 |
| Typical Generator Output COP ⁵⁾ | kWe | 12 | 20 | 28 | 37 |
| Typical Generator Output PRP ⁵⁾ | kWe | 13 | 21 | 30 | 39 |
| Typical Generator Output LTP ⁵⁾ | kWe | 13 | 22 | 31 | 41 |

1) According to ISO 8528-5.

2) Continuous Power: No time limitation, plus 10% additional power for governing purpose only.

3) Prime Power: Average power output ≤ 80%, no time limitation, plus 5% additional power for governing purpose only.

4) Limited Time Running Power: For up to 500 h/year, thereof a maximum of 300 h/year continuous running.

5) In consideration of a generator efficiency level of 89 - 90 % and a power factor of 0.8.

The data on this data sheet are for information purposes only and are not binding values. The data in the quotation is definitive.

The engine company.



50 Hz / 1500 min⁻¹

| Fuel Consumption (PRP) ¹⁾ | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
|--|-------------------------|------------|-------------|-------------|-------------|
| Fuel consumption 25% load | g/kWh lb/hph | 301 0.49 | 299 0.49 | 264 0.43 | 259 0.43 |
| Fuel consumption 50% load | g/kWh lb/hph | 246 0.40 | 236 0.39 | 226 0.37 | 223 0.37 |
| Fuel consumption 75% load | g/kWh lb/hph | 235 0.39 | 224 0.37 | 216 0.36 | 226 0.37 |
| Fuel consumption 100% load | g/kWh lb/hph | 244 0.40 | 233 0.38 | 222 0.36 | 237 0.39 |
| Heat balance & cooling system | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
| Heat dissipation (engine radiator) ²⁾ | kW hp | 7.2 9.7 | 10.5 14.1 | 17.3 23.2 | - |
| Heat dissipation (convection) | kW hp | - | - | - | - |
| Cooling air flow | m ³ /h cfm | 1065 627 | 1075 633 | 1490 877 | 1885 1109 |
| Inlet & exhaust data | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
| max. intake depression | mbar psi | 20 0.29 | 20 0.29 | 20 0.29 | 20 0.29 |
| Combustion air volume | m ³ /h cfm | - | - | - | - |
| max. exhaust gas temperature | °C °F | 510 950 | 510 950 | 510 950 | 510 950 |
| Exhaust gas flow | m ³ /h cfm | - | - | - | - |

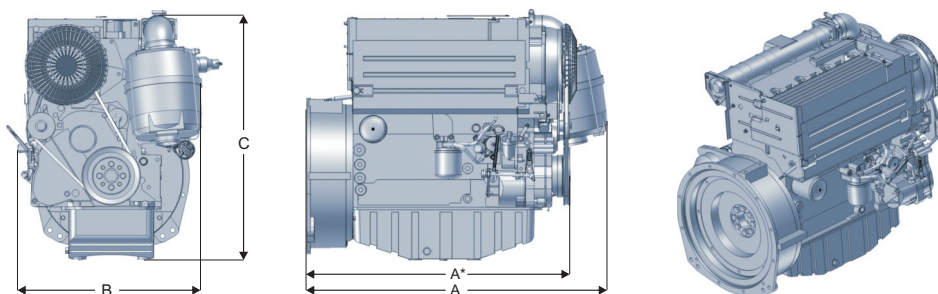
60 Hz / 1800 min⁻¹

| Fuel Consumption (PRP) ¹⁾ | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
|--|-------------------------|------------|------------|-------------|-------------|
| Fuel consumption 25% load | g/kWh lb/hph | 304 0.50 | 294 0.48 | 280 0.46 | 265 0.44 |
| Fuel consumption 50% load | g/kWh lb/hph | 249 0.41 | 237 0.39 | 230 0.38 | 221 0.36 |
| Fuel consumption 75% load | g/kWh lb/hph | 237 0.39 | 225 0.37 | 220 0.36 | 219 0.36 |
| Fuel consumption 100% load | g/kWh lb/hph | 245 0.40 | 236 0.39 | 230 0.38 | 224 0.37 |
| Heat balance & cooling system | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
| Heat dissipation (engine radiator) ²⁾ | kW hp | - | - | - | - |
| Heat dissipation (convection) | kW hp | 2.5 3.4 | 3.4 4.6 | 5.0 6.7 | 6.5 8.7 |
| Cooling air flow | m ³ /h cfm | 1275 750 | 1290 759 | 1790 1054 | 2265 1333 |
| Inlet & exhaust data | | F2L 2011 | F3L 2011 | F4L 2011 | BF4L 2011 |
| max. intake depression | mbar psi | 20 0.29 | 20 0.29 | 20 0.29 | 20 0.29 |
| Combustion air volume | m ³ /h cfm | 68.4 40 | 104 61 | 137 81 | 191 112 |
| max. exhaust gas temperature | °C °F | 510 950 | 520 968 | 540 1004 | 560 1040 |
| Exhaust gas flow | m ³ /h cfm | 199 117 | 295 174 | 400 235 | 531 313 |

1) Refers to diesel with a density of 0.835 kg/dm³ at 15°C | 6.96 lb/US gallon at 60°F.

2) The heat quantities are valid for the dimensioning of the cooling system.

Dimensions



| | | A | A* | B | C |
|-----------|---------|----------|----------|----------|----------|
| F2L 2011 | mm in | 645 25 | 540 21 | 590 23 | 705 28 |
| F3L 2011 | mm in | 755 30 | 650 26 | 590 23 | 700 28 |
| F4L 2011 | mm in | 870 34 | 760 30 | 590 23 | 720 28 |
| BF4L 2011 | mm in | - | 780 31 | 530 21 | 705 28 |

Note: The engine dimensions and weights vary depending on the scope of delivery.

For more information please contact the DEUTZ AG Köln or the responsible sales partner.

