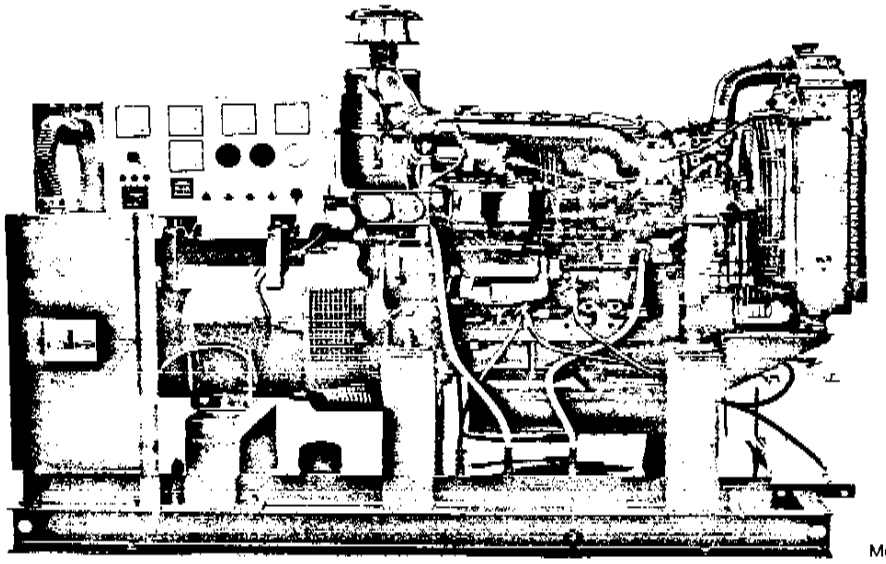
25 — 450 KVA 50 HZ CONT.
29 — 465 KVA 60 HZ CONT.

# DIESEL GENERATING SETS — IVECO (FIAT) POWERED



Model 80F35

**Standard Build Features:**

- IVECO (Fiat) diesel engine
- Starter motor
- Starting battery
- Industrial silencer
- Fuel injection pump
- Oil, air and fuel filters
- 8 hour base fuel tank (to 100 KVA)
- Safety Shutdown on low oil pressure and high water temperature
- Mounted control panel
- AC voltmeter
- AC ammeter (3)
- Charge ammeter
- Fault indicator lights
- Brushless alternator
- Charging alternator
- Tropical radiator 50°C
- BS 5514/A1 governing
- Fuel lit pump
- Engine gauges
- Heavy duty base frame
- Lub oil lamp
- Water pump
- Circuit breaker (to 100 KVA)
- Phase selector switch
- Frequency meter
- Hour recorder
- Instrument fuses

# General Specifications

## Engines

Iveco (Fiat) 4 stroke, heavy duty diesel engines specifically designed and engineered for generating set duty. They have been selected for reliability combined with competitive pricing plus worldwide spares and service coverage.

| Model | Cylinders | Bore mm | Stroke mm | Capacity litres | 1500 rpm 50 Hz | | 1800 rpm 60 Hz | | Aspiration |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Bhp | Engine KW | Bhp | Engine | |
| 8031i · 05 | 3 in line | 104 | 115 | 2.93 | 39 | 29 | 44 | 33 | Natural |
| 8041i · 05 | 4 in line | 104 | 115 | 3.91 | 48 | 36 | 58 | 43 | Natural |
| 7450i · 15 | 4 in line | 112 | 127 | 5.00 | 68 | 47 | 70 | 52 | Natural |
| 8061i · 25 | 6 in line | 104 | 115 | 5.86 | 75 | 56 | 86 | 63 | Natural |
| 7450Si · 15 | 4 in line | 112 | 127 | 5.00 | 84 | 63 | 96 | 72 | Turbocharged |
| 8061Si · 05 | 6 in line | 104 | 115 | 5.86 | 95 | 71 | 115 | 85 | Turbocharged |
| 8061Si · 15 | 6 in line | 104 | 115 | 5.86 | 120 | 88 | 144 | 106 | Turbocharged |
| 7675Si · 15 | 6 in line | 112 | 127 | 7.50 | 123 | 92 | 138 | 103 | Turbocharged |
| 8061Sri · 25 | 6 in line | 104 | 115 | 5.86 | 162 | 121 | 170 | 125 | Turbo/After |
| 8361Sri · 25 | 6 in line | 115 | 130 | 8.10 | 178 | 131 | 197 | 147 | Turbo/After |
| 8361Sri · 26 | 6 in line | 115 | 130 | 8.10 | 254 | 190 | 268 | 200 | Turbo/After |
| 8210Sri · 25 | 6 in line | 137 | 156 | 13.80 | 300 | 221 | 325 | 239 | Turbo/After |
| 8210Sri · 26 | 6 in line | 137 | 156 | 13.80 | 359 | 264 | 386 | 288 | Turbo/After |
| 8210Sri · 27 | 6 in line | 137 | 156 | 13.80 | 410 | 306 | 420 | 313 | Turbo/After |
| 8210Sri · 28 | 6 in line | 137 | 156 | 13.80 | 445 | 332 | 457 | 341 | Turbo/After |
| 8281Sri · 26 | 8 v Form | 145 | 130 | 17.17 | 472 | 348 | 524 | 391 | Turbo/After |
| 8281Sri · 27 | 8 v Form | 145 | 130 | 17.17 | 523 | 390 | 536 | 400 | Turbo/After |

Ratings to ISO 8528 / 3046. Standby ratings x 110%.

- Starter Motor
- Fuel lift pump
- Tropical radiator 50°C
- Sump with dipstick
- Air cleaner oil bath
- Direct injection
- Switch oil pressure
- Charging alternator
- Lubricating oil pump
- Radiator pusher fan
- Fuel filter
- Inlet manifold
- Gauge oil pressure
- Switch water temperature
- Fuel injection pump
- Water circulating pump
- Thermostat
- Lub oil filter
- Exhaust manifold
- Gauge water temperature
- Fuel shutdown solenoid

Safety shutdown — in event of low oil pressure or high water temperature the fuel shutdown solenoid is activated and the engine stopped.

8031/8041/8061Si · 05 and Si · 15 and 7450/7675, 12 volt DC system and mechanical governor.
8061Si · 15 and upward, 24 volt DC system and electronic governor.

| Model | Fuel consumption litre/hour 1500 rpm | | 1800 rpm | | Cooling air reqt. | Flow induction air m³/hr | | Gas flow exhaust kg/hr | |
|---|---|---|---|---|---|---|---|---|---|
| | 75% | 100% | 75% | 100% | | 1500 rpm | 1800 rpm | 1500 rpm | 1800 rpm |
| 8031i | 5.7 | 7.6 | 6.7 | 8.5 | **EXTREMELY** | 120 | 145 | 145 | 175 |
| 8041i | 7.7 | 10.3 | 9.2 | 11.9 | **IMPORTANT** | 165 | 195 | 195 | 235 |
| 8061i | 10.8 | 14.3 | 12.8 | 16.1 | Refer factory | 240 | 290 | 290 | 360 |
| 7450Si | 11.8 | 15.7 | 13.5 | 18.0 | together with full | 300 | 390 | 365 | 470 |
| 8061Si | 13.8 | 18.4 | 17.2 | 21.6 | environmental | 350 | 430 | 420 | 520 |
| 7675Si | 17.3 | 23.0 | 19.6 | 25.7 | details to ensure | 430 | 580 | 520 | 700 |
| 8061Sri | 19.6 | 26.1 | 22.7 | 30.2 | correct calculation. | 400 | 500 | 560 | 725 |
| 8361Sri | 28.7 | 38.2 | 32.3 | 43.1 | All data given | 560 | 670 | 760 | 940 |
| 8210Sri | 38.0 | 50.6 | 43.1 | 57.5 | for guide purposes | 890 | 1090 | 1110 | 1350 |
| 8210Sri | 43.7 | 58.2 | 50.4 | 67.1 | only and is not for | 850 | 1110 | 1900 | 2140 |
| 8281Sri | 54.1 | 68.9 | 60.4 | 76.9 | specific use. | 1100 | 1300 | 1730 | 2080 |

U.K. (imp.) gallons = litres x 0.22. U.S. gallons = litres x 0.264. $ft^3/min = m^3/min$ x 35.3 approx.

Diesel fuel used should comply with BS 2869 A1/A2. Lubricating oil to MIL-L-46152 or 2104C.
All above data is based on test conditions of 20°C air temperature. Barometric pressure 736 mm Hg, 60% relative humidity.

**Deration** — refer to factory for specific details on each engine.
Naturally aspirated engines as per DIN 6270 for high temperature and high altitude.

## Alternator

Brushless, single bearing alternators are fitted as standard. These are compact in design and totally reliable in all operating and environmental conditions. Designed to meet the requirements for industrial rotating electrical machines laid down in BS 5000 Part 99, IEC 34-1, VDC 0530, UTE 51100, Nema MG1-22 and CSA C22.2 No. 100. Marine versions meet the requirements of Lloyds, Germanischer Lloyd, Bureau Veritas, American Bureau of Shipping, Det Norske Veritas or R.I.N.A.

- Brushless
- 1500 rpm 50Hz
- Automatic voltage regulator
- Screen protected
- Class H insulation
- Self excited
- 1800 rpm 60Hz
- Voltage regulation ± 2%
- Drip proof to IP21 (Min)
- Impregnated windings
- 4 pole
- Sealed ball bearings
- Full range of std. voltages
- Fan ventilated
- Rotating rectifiers (diodes)
- Standby rating 110% of continuous output (in hour in 12)
- Overload capacity of 250% for 10 secs. can be sustained for motor starting.
- Application of full load — output voltage recovers to within 3% in 0.25 secs.
- Radio interference suppression to BS 800 and VDE class G and N.
- Voltage transient protection for AVR and diodes against low speed running.
- Suitable for parallel operation. They can also be paralleled with other generators of a suitable type with the addition of a quadrature droop kit.

## Control Panel

Sheet steel construction and mounted over the main alternator via anti vibration mounts. Separate wall mounting panels can be supplied.

- AC voltmeter
- Frequency (Hertz) meter
- Circuit breaker (to 100 Kva)
- Charge warning light
- Fault relays
- Phase selector switch (volts)
- DC charge ammeter
- Start/stop key switch
- Oil pressure warning light
- Current transformers
- 3 x AC ammeter
- Hour recorder
- Instrument fuses
- Temperature warning light
- Main connection terminals

## Other Equipment/Features

Our sets come complete, ready for operation with the addition of fuel oil, lubricating oil and water.

- Structural steel base frame
- Metal braided supply/return fuel lines
- Starting batteries 12 volt (24 volt 100 KVA up)
- Gloss paint finish
- 12 month guarantee from installation date
- Base fuel tank for 8hr (min) operation (100 KVA and under)
- Industrial silencer
- Battery rack and cables
- Instruction manual
- Export boxed FOB or delivery UK extra
- All sets produced to British Standard BS 5750 Part 1/ ISO 9001 and are fully tested before despatch

## Optional Extras

- Air cleaner, heavy duty
- Automatic mains failure panel
- Fuel tank (over 100Kva)
- Fuel lines – extra long
- Housing – full acoustic
- Overspeed protection
- Silencer – spark proof
- Spare parts kits
- Tool kit overhaul
- Voltage regulation ± 1%
- Alarm horns
- Automatic transfer switch
- Fuel transfer pump manual
- Governor – electronic (under 80Kva)
- Housing – low noise
- Parallelling panel
- Silencer flex exhaust pipe
- Synchronising panel
- Trailer mounted
- Anti-vibration mounts
- Circuit breaker (over 100Kva)
- Fuel transfer pump electric
- Heater water jacket
- Housing – semi-acoustic
- Silencer residential
- Skid frame
- Tool kit standard
- Trickle charger – mains

Plus many others. We will build to your specification.

# MODEL SELECTION TABLES

All ratings are continuous NPT 1500 rpm - 50 Hz, 1800 rpm - 60 Hz, 3 phase, 0.8 power factor.
All standard voltages available. Ratings are to BS 5514, ISO 8528/3046. Continuous duty is for a variable load in lieu of the mains power network. Overload of 10% is available for 1 hour in 12. Standby duty is for the duration of a utility power failure or variable load. No overload available. Baseload duty (prime power) refer to factory.
To maximise cost effectiveness, models with lower ratings are available – see price list.

| 50 Hz Models | | | | | Engine Model | 60 Hz Models | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model | Continuous | | Standby | | | Model | Continuous | | Standby | |
| | KVA | KW | KVA | KW | | | KVA | KW | KVA | KW |
| 25F35 | 25 | 20 | 27 | 22 | 8031i - 05 | 30F36 | 30 | 24 | 33 | 26 |
| 30F35 | 30 | 24 | 33 | 26 | 8031i - 05 | 36F36 | 36 | 29 | 40 | 32 |
| 40F35 | 40 | 32 | 44 | 35 | 8041i - 05 | 48F36 | 48 | 38 | 53 | 42 |
| 50F35 | 50 | 40 | 55 | 44 | 7450i - 15 | 60F36 | 60 | 48 | 66 | 53 |
| 60F35 | 60 | 48 | 66 | 53 | 8061i - 25 | 72F36 | 72 | 58 | 79 | 63 |
| 68F35 | 68 | 54 | 75 | 60 | 7450Si - 15 | 78F36 | 78 | 62 | 86 | 68 |
| 80F35 | 80 | 64 | 88 | 70 | 8061Si - 05 | 96F36 | 96 | 77 | 105 | 84 |
| 100F35 | 100 | 80 | 110 | 88 | 8061/7675Si - 15 | 117F36 | 117 | 94 | 128 | 103 |
| 125F35 | 125 | 100 | 137 | 110 | 8061SRi - 25 | 140F36 | 140 | 112 | 154 | 123 |
| 150F35 | 150 | 120 | 165 | 132 | 8361Sri - 25 | 172F36 | 172 | 138 | 189 | 151 |
| 200F35 | 200 | 160 | 220 | 176 | 8361Sri - 26 | 240F36 | 240 | 192 | 264 | 211 |
| 250F35 | 250 | 200 | 275 | 220 | 8210Sri - 25 | 295F36 | 295 | 236 | 324 | 260 |
| 300F35 | 300 | 240 | 330 | 264 | 8210Sri - 26 | 340F36 | 340 | 272 | 374 | 299 |
| 350F35 | 350 | 280 | 385 | 308 | 8210Sri - 27 | 385F36 | 385 | 308 | 423 | 339 |
| 388F35 | 388 | 310 | 427 | 343 | 8210Sri - 28 | 400F36 | 400 | 320 | 440 | 352 |
| 400F35 | 400 | 320 | 440 | 352 | 8281Sri - 26 | 450F36 | 450 | 360 | 495 | 396 |
| 450F35 | 450 | 360 | 495 | 396 | 8281Sri - 27 | 465F36 | 465 | 372 | 511 | 384 |

# WEIGHTS AND DIMENSIONS

| Based on Model (50Hz) | Set Specifications | | | | Shipping Specifications | | | |
|---|---|---|---|---|---|---|---|---|
| | Length mm | Width mm | Height mm | Weight kg | Length mm | Width mm | Height mm | Weight kg |
| 25F35 | 1750 | 720 | 1200 | 850 | 1850 | 800 | 1330 | 920 |
| 30F35 | 1900 | 720 | 1300 | 1100 | 2000 | 800 | 1430 | 1170 |
| 40F35 | 1950 | 720 | 1300 | 1150 | 2050 | 800 | 1430 | 1220 |
| 50F35 | 2200 | 750 | 1400 | 1250 | 2300 | 830 | 1530 | 1330 |
| 60F35 | 2350 | 750 | 1500 | 1400 | 2450 | 830 | 1630 | 1480 |
| 80F35 | 2400 | 750 | 1500 | 1600 | 2500 | 830 | 1630 | 1700 |
| 100F35 | 2550 | 950 | 1500 | 2000 | 2700 | 830 | 1630 | 2120 |
| 125F35 | 2650 | 950 | 1500 | 2150 | 2800 | 1050 | 1630 | 2220 |
| 150F35 | 3000 | 1000 | 1500 | 2500 | 3150 | 1100 | 1630 | 2630 |
| 200F35 | 3250 | 1100 | 1500 | 3050 | 3400 | 1200 | 1650 | 3190 |
| 250F35 | 3450 | 1200 | 1550 | 3250 | 3600 | 1300 | 1700 | 3400 |
| 300/350F35 | 3500 | 1200 | 1550 | 3400 | 3650 | 1300 | 1800 | 3550 |
| 388/400F35 | 3800 | 1200 | 1750 | 3600 | 4000 | 1350 | 2000 | 3750 |
| 450F35 | 4000 | 1200 | 1800 | 3900 | 4200 | 1400 | 2050 | 4300 |

25.4mm = 1 inch 1 kg = 2.2 lbs
All dimensions and weights based on Standard Units and are approximate.

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We manufacture a range of generating sets from 2 – 2050 Kva for industrial, Marine and Military application. Every care has been taken to correctly detail the specifications. Our policy is one of continuous improvement. We reserve the right to improve and carry out necessary modifications.