

DIESEL GENERATOR SET

TYPE ADG102D

99 kVA/Prime/50Hz
(109 kVA/LTP/50Hz)



Optional equipment shown. Standard equipment may vary.

BENEFITS

- // Most compact design
- // Air cooled engine – trouble-free cooling system
- // Lowest maintenance cost
- // High user-friendliness

SYSTEM RATINGS^①

| Prime (LTP) ^② | ADG102D | ADG102D | ADG102D |
|--------------------------|----------------|----------------|----------------|
| Voltage (L-L) | 380V | 400V | 415V |
| Phase | 3 | 3 | 3 |
| PF | 0.8 | 0.8 | 0.8 |
| Hz | 50 | 50 | 50 |
| kWe | 79.2 (87.2) | 79.2 (87.2) | 79.2 (87.2) |
| kVA | 99 (109) | 99 (109) | 99 (109) |
| AMPS | 150 | 143 | 138 |
| Generator model | ACG-0102-4-400 | ACG-0102-4-400 | ACG-0102-4-400 |
| Temp rise | 125°C (150°C) | 125°C (150°C) | 125°C (150°C) |
| Load acceptance | 66% | 66% | 66% |

① Power available up to 25°C/100 m

② Technical data for prime power

CERTIFICATIONS AND STANDARDS

// Engine-generator set is designed and manufactured in facilities certified to standards ISO 9001:2008

- // Performance Assurance Certification (PAC)
- Engine-generator set tested to ISO 8528-5 for transient response
 - Verified product design, quality and performance integrity
 - All generator sets are type and factory tested

// Power rating

- Permissible average power output during 24 hours of operation is approved up to 75% for prime power rating
- Permissible average power output during 24 hours of operation is approved up to 100% for limited time power rating. Operating hours are limited to 500 hours per year.

STANDARD EQUIPMENT^①

// Engine

.....
 Air cleaners

 Oil pump

 Oil drain extension & S/O valve

 Full pre-filter with water separator

 Full flow oil filters

 Exhaust manifold – dry

 Blower fan & fan drive

 Electric starting motor – 12V

 Governor – mechanical

 SAE flywheel

 Flexible fuel connectors

// Generator

.....
 NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor starting

 VDE 0530, IEC 34.1, BS5000, CSA C22.2-100, AS1359

 Self-ventilated

 Superior voltage waveform

 No load to full load regulation

 125°C prime temperature rise (insulation class H)

 1 bearing, sealed

 Full amortisseur windings

 125% rotor balancing

 3-phase voltage sensing

 Automatic voltage regulator $\pm 0,5\%$

^① Represents standard product only. Consult Factory/MTU Onsite Energy distributor for additional configurations.

STANDARD FEATURES^①

- // The generator set complies to G2
- // Engine-generator set tested to ISO 8528-5 for transient response
- // MTU Onsite Energy is a single source supplier
- // Global product support
- // 2 year standard warranty
- // BF6L 914 diesel engine – 4-cycle
- // Engine-generator resilient mounted
- // Self-excited generator
 - Brushless, rotating field generator
 - 300% short circuit capability
 - 2/3 pitch windings
- // Cooling system 50°C
 - Integral set-mounted
 - Engine driven fan

APPLICATION DATA

// Engine

| | |
|-------------------------------|---------------|
| Manufacturer | Deutz |
| Model ^② | BF6L 914 |
| Type | 4-cycle |
| Arrangement | 6/in-line |
| Displacement | 6.47 l |
| Bore: cm | 10.2 |
| Stroke: cm | 13.2 |
| Compression ratio | 18 : 1 |
| Rated RPM (Speed) | 1,500 |
| Engine governor | Mechanical |
| Gross power: kWm ^② | 93.1 kW |
| Aspiration | Turbo charged |

// Lubrication System

| | |
|---|------|
| Oil capacity (sump) min./max. | 16 l |
| Lube oil consumption (in % of fuel cons.) | 0.5 |
| Oil pressure min. (warning): bar | 1.5 |
| Oil pressure min. (shut-down): bar | 1.5 |
| Max. oil temperature: °C | 135 |

// Fuel System

| | |
|------------------|------------------------------------|
| Recommended fuel | see MTU fluids & lubrication spec. |
|------------------|------------------------------------|

// Heat Rejection

| | |
|-------------------------------------|--------------------|
| | PRIME ^② |
| Engine radiation and convection: kW | approx. 81 |
| Heat rejection of generator: kW | approx. 8.9 |

// Fuel Consumption and Fuel Tank Capacity

| | |
|--|----------------------|
| | PRIME ^② |
| At 100% load | 22.1 l/h (208 g/kWh) |
| At 75% load | 16.4 l/h (205 g/kWh) |
| At 50% load | 11.4 l/h (213 g/kWh) |
| At 25% load | 6.9 l/h (260 g/kWh) |
| Capacity of base frame fuel tank (open set) | 240 l |
| Capacity of base frame fuel tank (sound proof) | 240 l |

// Cooling System

| | |
|-------------------------------------|--------------------|
| | PRIME ^② |
| Max. ambient temperature: °C | 50 |
| Fan power consumption: kW | 1.1 |
| Cooling air flow: m ³ /h | 3655 |
| Air pressure loss: mbar | 10 |

// Combustion Air

| | |
|--|--|
| | PRIME ^② |
| Combustion air volume: m ³ /h | 374 |
| Max. air intake restriction: mbar | 20 |
| Air cleaner type | Dry, replaceable element with safety cartridge |

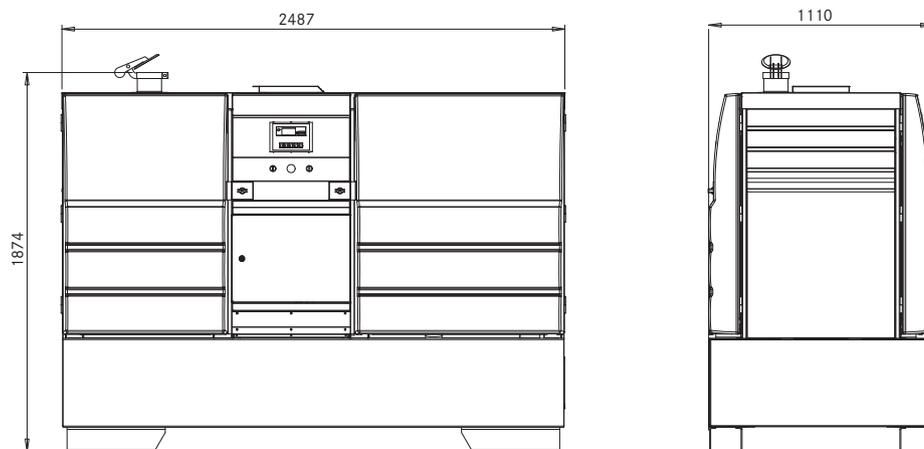
// Exhaust System

| | |
|-------------------------------------|--------------------|
| | PRIME ^② |
| Max. exhaust gas temperature: °C | 610 |
| Max. exhaust back pressure: mbar | 30 |
| Exhaust gas flow: m ³ /h | 1058 |

① Represents standard product only. Consult Factory/MTU Onsite Energy distributor for additional configurations.

② Technical data for prime power

WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard sound proof 400 volt engine-generator set. Do not use for installation design. See website for unit specific template drawings.

| System | Dimensions (L x W x H) | Weight (dry/less tank) |
|------------------------|------------------------|------------------------|
| Sound Proof Unit (SPU) | 2487 x 1110 x 1874 mm | approx. 1662 kg |

NOISE EMISSION (SOUND PROOF)

| | |
|---------------------------------|----|
| Sound power L_{WA} : dB(A) | 95 |
| Sound power $L_{PA@1m}$: dB(A) | 77 |
| Sound power $L_{PA@7m}$: dB(A) | 66 |

RATING DEFINITIONS AND CONDITIONS

- // Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789, and DIN 6271.
- // Limited time power ratings apply to installations served by a reliable utility source. The standby rating is applicable to constant or varying loads for the duration of a power outage. No overload capability for this rating. Ratings are in accordance with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789 and DIN 6271.
- // Deration factor:
 - Altitude: Consult your local MTU Onsite Energy distributor for altitude derations.
 - Temperature: Consult your local MTU Onsite Energy distributor for temperature derations.

Materials and specifications subject to change without notice.