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| Diesel Generator Set | | |
| 电子仪器  低可信度描述已自动生成 | | |
| **Economic** |  |  |
| Benefits   * Low fuel consumption * Optimized system integration ability * High reliability and availability of power * Long maintenance intervals * Optimized ratio between size and power * Wide operating range without derating   Support   * Global product support offered   Standards   * Engine-generator set is designed and manufactured in facilities certified to standards ISO 2008:9001 and ISO 2004:14001 * Generator set complies to G3 according to ISO 8528 * Generator meets NEMA MG1, BS5000, ISO, DIN EN and IEC standards * NFPA 110 | Power rating   * System rating: 1250 kVA * Accepts rated load in one step per NFPA 110 * Generator set complies to G3 according to ISO 8528-5 * Generator set exceeds load steps according to ISO 8528-5   Performance assurance certification (PAC)   * Engine-generator set tested to ISO 8528-5 for transient response * 100% load factor for continuous power applications * Verified product design, quality and performance integrity * All engine systems are prototype and factory tested | Complete range of accessories available   * Control panel * Power panel * Fuel system * Fuel connections with shut-off valve mounted to base frame * Starting/charging system * Exhaust system * Mechanical radiator * Oversized voltage alternators   Emissions   * Fuel consumption optimized * TA-Luft, Tier 2 compliant and NEA (ORDE) optimization optionally available   Certifications   * CE certification option * VDE4110 Certification |

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| Application data1) | |
| Engine | Combustion air requirements |
| Manufacturer……………………………………………………………………MTU | Combustion air volume…………………………………………………………1.34 m3/s |
| Model…………………………………………………………………18V2000G26F | Max. air intake restriction………………………………………………………40 mbar |
| Type………………………………………………………………………………4-cycle |  |
| Arrangement………………………………………………………………………18V | Cooling/radiator system |
| Displacement…………………………………………………………………40.2 L | Coolant flow rate (HT circuit)…………………………………………………46.3 m3/h |
| Bore……………………………………………………………………………135 mm | Heat rejection to coolant……………………………………………………… 430 kW |
| Stroke…………………………………………………………………………156 mm | Heat radiated to charge air cooling…………………………………………215 kW |
| Compression ratio………………………………………………………………17.5 | Heat radiated to ambient……………………………………………………………45 kW |
| Rated speed………………………………………………………………1500 rpm | Fan power for mech. radiator (40℃)…………………………………………43.4 kW |
| Engine governor……………………………………………………ADEC (ECU9) | Fan power for mech. radiator (40℃)…………………………………………55.6 kW |
| Max power………………………………………………………………1102 kWm | Air flow required for mech. radiator (40℃) cooled unit……1462 m3/min |
| Air cleaner……………………………………………………………………………dry | Air flow required for mech. radiator (40℃) cooled unit……1776 m3/min |
|  | Engine coolant capacity without cooling equipment) …………………73 L |
| Fuel system | Radiator coolant capacity (40℃)……………………………………………………83 L |
| Maximum fuel lift…………………………………………………………………5 m | Radiator coolant capacity (50℃)…………………………………………………106 L |
| Total fuel flow………………………………………………………………30 L/min | Max. coolant temperature (warning)…………………………………………102 ℃ |
|  | Max. coolant temperature (shutdown)………………………………………105 ℃ |
| Fuel Consumption2)………………………L/hr……………………g/kWh |  |
| At 100% of power rating……………………251……………..……………189 | Exhaust system |
| At 75% of power rating……………………188……………………………189 | Exhaust gas temp. (after turbocharger)……………………………………485 ℃ |
| At 50% of power rating……………………130……………………………196 | Exhaust gas volume………………………………………………………………3.44 m3/s |
|  | Maximum allowable back pressure…………………………………………50 mbar |
| Lube oil system | Minimum allowable back pressure…………………………………………30 mbar |
| Total oil system capacity……………………………………………………110 L |  |
| Max. lube oil temp. (alarm)……………………………………………103 ℃ | Alternator(另起一行) |
| Max. lube oil temp. (shutdown) ……………………………………105 ℃ | Protection class……………………………………………………………………………IP23 |
| Min. lube oil pressure (alarm)…………………………………………4.5 bar | Insulation class………………………………………………………………………………H |
| Min. lube oil pressure (shutdown)………………………………………4 bar | Voltage regulation (steady state)……………………………………………± 0.25% |
|  | Radio interference class…...……………...………………………………………………N |

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|  | | | System ratings (kW/kVA) | | | |
| Alternator model | Voltage | Without mechanical radiator | | With mechanical radiator\*\* | | |
|  |  |  | | kWel | kVA | AMPS |
| Marathon 742RSL7185 (Low voltage Marathon standard) | 380 V |  | | 1000 | 1250 | 1899 |
| 400 V |  | | 1000 | 1250 | 1804 |
| 415 V |  | | 1000 | 1250 | 1739 |
| Marathon 743RSL7187 (Low voltage Marathon standard)\* | 380 V |  | | 1000 | 1250 | 1899 |
| 400 V |  | | 1000 | 1250 | 1804 |
| 415 V |  | | 1000 | 1250 | 1739 |

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| Standard and optional features |

Engine

* 4-Cycle
* Standard single stage air filter
* Oil drain extension & shut-off valve
* Full flow oil filters
* Closed crankcase ventilation
* Governor-electronic isochronous ADEC/ECU9
* Common rail fuel injection
* Dry exhaust manifold
* Electric starting motor (24V)
* Fuel consumption optimized engine
* TA-Luft optimized engine
* Tier 2 optimized engine
* NEA (ORDE) optimized engine

Alternator

* Marathon low voltage generator
* Meets NEMA MG1, BS5000, IEC 60034-1, VDE 0530, DIN EN 12601, AS1359 and ISO 8528 requirements
* Superior voltage waveform
* Solid state, volts-per-Hertz regulator
* 4 pole three-phase synchronous generator
* Brushless, self-excited, self-regulating, self-ventilated
* Digital voltage regulator
* Anti condensation heater
* Stator winding Y-connected, accessible neutral (brought out)
* Protection IP 23
* less than 5% harmonic distorsion
* 2/3 pitch stator windings
* No load to full load regulation
* ± 0.25% voltage regulation no load to full load
* Insulation class H, utilization acc. to H
* Radio suppression EN55011, group 1, cl. B
* Short circuit capability 3xIn for 10sec
* Sustained short circuit current of up to 250% of the rated current for up to 10 seconds (Marathon generator)
* Excitation by AREP + PMI
* Mounting of CT´s: 3x 2 core CT´s
* Voltage setpoint adjustment ±10V
* Sustained short circuit current of up to 300% of the rated current for up to 10 seconds (Leroy Somer generator)
* Leroy Somer low voltage generator
* Oversized generator
* Winding and bearing RTDs
* Freeside with low voltage alternator (30-80kW)

Cooling system

* Jacket water pump
* Thermostat(s)
* Air charge air cooling
* Mechanical radiator
* Jacket water heater

Control plane

* Pre-wired control cabinet for easy
* application of customized controller (V1+)
* Island operation (V2)
* Automatic mains failure operation with ATS (V3a)
* Automatic mains failure operation incl. control of generator and mains breaker (V3b)
* Island parallel operation of multiple gensets (V4)
* Automatic mains failure operation with short (< 10s) mains parallel
* overlap synchronization (V5)
* Mains parallel operation of a single genset (V6)
* Mains parallel operation of multiple gensets (V7)
* Basler controller
* Deif controller
* Complete system metering
* Digital metering
* Engine parameters
* Generator protection functions
* Engine protection
* SAE J1939 engine ECU communications
* Parametrization software
* Multilingual capability
* Multiple programmable contact inputs
* Multiple contact outputs
* Event recording
* IP 54 front panel rating with integrated gasket
* Different expansion modules
* Remote annunciator
* Daytank control
* Generator winding temperature monitoring
* Generator bearing temperature monitoring
* Differential protection with multi-function protection relay
* Modbus RTU-TCP gateway

Power panel

* Available in 600x600
* Phase monitoring relay 230V/400V
* Supply for battery charger
* Supply for jacket water heater
* Plug socket cabinet for 230V compatible Euro

Fuel system

* Flexible fuel connectors mounted to base frame
* Fuel filter with water separator
* Switchable fuel filter with water separator
* Fuel cooler

Starting/charging system

* 24V starter
* Starter batteries, cables, rack, disconnect switch
* Battery charger
* Redundant starter 2x7.5KW

Mounting system

* Welded base frame
* Resilient engine and generator mounting
* Modular base frame design

Exhaust system

* Exhaust bellows with connection flange
* Exhaust silencer with 10 sound attenuation(residential 住宅级别噪音)
* Y-connection-pipe

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| Weights and dimensions | |
| Drawing above for illustration purposes only, based on a standard open power 400 Volt engine-generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.   |  |  |  | | --- | --- | --- | | System | Dimensions (L×W×H) | Weight (dry) | | Open power unit (OPU) | 4720 x 1990 x 2200 mm | 7700 kg |   Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific engine-generator set. | |
| Sound data | Emissions data |
| * Consult your local MTU distributor for sound data. | * Consult your local MTU distributor for emissions data. |
| Rating definitions and conditions |  |
| * Peak Power ratings apply to installations serving electric utility programs. At constant or varying load, the number of generator set operating hours is limited to 1000 hours per year with no more than 500 hours per year at 100% load without interruption. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO 8528-1, ISO 3046-1, BS 5514 and AS 2789. Average load factor: ≤ 100%. * Consult your local MTU distributor for derating information. |  |