DT66 – DT72S (1800 rpm - 60Hz)

GENERATORS GHADDAR

Gensets
Small Range

JOHN DEERE POWER

LEROY SOMER

Ratings @ 0.8 PF		Prime Rating	Stand-by Rating	
Voltage*[1]	Frequency*[2]	DT66*[3]	DT72S*[4]	Alternator
220/380 V	60 Hz	66.0 kVA	71.2 kVA	TAL042H 8S
127/220 V	60 Hz	66.5 kVA	72.0 kVA	
277/480 V	60 Hz	66.5 kVA	72.0 kVA	TAL042H 6S

The above ratings represent the generating set capability guaranteed within ± 3 % at the reference conditions equivalent to those specified in the ISO 8528/1 standard.



Pictures of gensets and canopies could vary from the actual product.

Notes

1. The applicable voltage range is 220V, 380V to 480V for 60Hz applications. For other voltages please consult the factory.

2. This generating set runs at a fixed speed of 1800 rpm.

3. DT66 is the prime rating of the generating set, where a variable load and unlimited hours are applied with an average load factor of 80% of the prime rating over each 24 hours. Note that a 10% overload is available for 1 hour in every 12 hours of operation.

4. DT72S is the stand-by rating of the generating set, where a variable load limited to an annual use of up to 500 hours is applied, of which 300 hours may be continuous running. Note that no overload is permitted.

Certifications

- The generating set is tested according to ISO 8528-8.

- The control panel is certified by an ISO17025 accredited laboratory to comply with IP55 according to IEC60355

ISO 17025 ACCREDITED LABORATORY

Quality ISO 9001 SAI GLOBAL

Engine Technical Data

Make & Model	JOHN DEERE 3029HFG20
Cylinders & Arrangement	3; Vertical in-line
Bore & Stroke (mm)	106 x 110
Induction System	Turbocharged - Aftercooled
Combustion System	Direct Injection
Cycle	4 Stroke
Compression Ratio	16.3:1
Cooling System	Water Cooled
Displacement	2.9 liters
Lube Oil Capacity	8.0 liters Max
Coolant Capacity	12 liters
Standard Governor (Optional)	Mechanical ±5% (Electronic)
Engine Speed	1800 rpm
Fuel & [Oil] Cons. (L/H) @ 100% Load	15.8 [0.031] @ 50% Load 8.65 [0.017]
Fuel & [Oil] Cons. (L/H) @ 75% Load	12.2 [0.024] @ 25% Load 4.9 [0.011]
Radiator Cooling Air Flow (m^3/s)	1.6
Emissions Regulation	For non-regulated territories
Exhaust Temperature °C (max)	515
Max. Exhaust Gas Flow (m^3/min)	12.7
Max. Allowed Back Pressure (kPa)	7.5

The above performance data are valid according to the following specifications:
- Diesel fuel must comply with EN590 or equivalent.
- Lubricating oil must comply with SAE 15W-40 API CI4 grade.
- Coolant must meet heavy-duty engine specifications according to ASTM D6210. Dilution of 50 % antifreeze and 50 % fresh water.

Dimensions

Length	1800 mm
Width	750 mm
Height	1250 mm
Weight	760 Kg

Alternator Technical Data

Make & Model	Leroy Somer TAL042H		
Frequency / No. of Poles	60Hz / 4P	Winding Pitch	2/3
Ingress Protection	IP23	AVR Model	R120
Insulation Class	H	Overspeed	2250 R.P.M.
Terminals (Optional)	6 (12)	Voltage Regulation	± 1 %
Excitation System	SHUNT	Cooling Air Flow	0.12 m^3/s

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Control Panel Specifications

The GMP260MKIII (DSE6110 MKIII) genset control panel is an auto-start, microprocessor-based design, capable of interfacing with an electronic engine via the J1939 CAN-bus. It is fully configurable from the front panel buttons and through the PC software. If the mains voltage is to be monitored, the DSE6120MKIII can be offered.

Circuit breaker: Schneider or ABB, 3-pole MCB (4-pole available as an option).



Construction

Sheet Fabrication	CNC shearing & bending
Paint Type	Heat-treated powder coating
Paint Application	Electrostatic corona spraying
Durability Tests	• IMPACT [EN ISO 6272] • Salt spray resistance [ASTM B117-73] • Humidity resistance [ASTM D2247]
Compliance	• Panel complies with [ISO8528-8] • Clearance & creepage distances [IEC60355-1] • Leakage current & electric strength [IEC60355-1] • Protection against electric shock [IEC600 364-4-41]
Degree of Protection	IP55
Wire Crimping	• Crimping force up to 20KN • Accuracy of 0.01 mm • Each crimp is checked by Komax CFA+
Wire Coding	• Wires are coded by color and cross-section • Wires are coded by printed numbers • Wires are coded by the function printed on them

Protection (standard)	(OPTIONAL Note [1,3])	Control (standard)	(OPTIONAL Note [1])	Instrumentation (standard)	(OPTIONAL Note [1,3])
Over/under AC voltage	High oil temperature	Remote start input	Battery charger: 5A, 10A, UL	AC Voltage Gen: 3ph VLL & VLN	Lube oil temperature
Over/under frequency	High exhaust temperature	Emergency stop button	Fuel pump control	Gen frequency: Hz	Exhaust temperature
Delayed overcurrent	Low fuel pressure	Common alarm volt-free contact	Extension: - *Ethernet* - *Modbus TCP RS485* - *Modbus RTU* - Webnet - GPS tracker	Gen current: 3 phase	Engine intake air pressure (boost)
Short circuit	Low coolant pressure	Event log (50)		Power: KW, KVA, KVAR & PF	Charge ammeter
KW overload	Low fuel level	Weekly exercise	Water-in-fuel detection	Energy: KWhr, KVAhr, KVARhr	Fuel pressure
High engine temperature	Low oil level	Audible alarm		Lube oil pressure	Coolant pressure
Low oil pressure	High winding temperature	Standard CANbus J1939		Engine coolant temperature	Fuel level
Maintenance alarm	High bearing temperature	Preheat control		Battery DC voltage	Lube oil level
High/low battery voltage	Low boost pressure			Charge alternator DC voltage	Winding temperature 3xRTD
Low coolant level Note 2	Fire protection by fusible link			Engine speed	Bearing temperature RTD
	Low coolant temperature			Running hours	

Note 1: Some OPTIONAL features may be standard if CANbus is established with electronic engines.
Note 2: Low coolant level protection is a standard feature for gensets above 200 KVA, otherwise it is optional.
Note 3: There is a limit to the number of protections and measurements that can be offered with the GMP260MKIII.

Other types of control panels and modules can be offered according to the required specifications (DSE 7310/20, 7410/20, 8610, 8810 and others).

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Genset Standard Features

Assembly:
Gensets are assembled at the Ghaddar Machinery factory in compliance with the ISO 8528-8 standard.

Fabrication:
- The engine/alternator assembly rests on the steel base frame with anti-vibration mounts.
- The base frame is made of durable sheets and beams exceeding the "Vibration & Torsion" strength standards.
- A base-mounted fuel tank is supplied with a fuel gauge, a filler cap, and fuel inlet and outlet pipes.
- The control panel enclosure is made of reliable sheet metal.

Paint:
The base frame and the control panel enclosure are painted with heat-treated powder coating applied by electrostatic corona spraying.

The paint has successfully passed durability tests in compliance with international quality standards.
- Impact (EN ISO 6272)
- Salt spray resistance (ASTM B117-73)
- Humidity resistance (ASTM D2247)

Testing:
- All gensets are tested before shipment.
- The test is automatically generated and verified according to ISO8528.
- A test certificate is issued for each genset.

Equipment:
- Water-cooled radiator with belt-driven blower fan and full guarding
- Electric starter with solenoid relay
- Battery charging alternator
- Energized-to-run solenoid
- Replaceable fuel, oil and air filters
- Heavy-duty lead-acid battery with matching capacity (Ah and CCA)
- Industrial exhaust silencer supplied loose - noise reduction level of 16 dB.
- Integrated fuel tank with a capacity of 117 liters.

Documentation:
- Operation, installation and maintenance manual
- Wiring diagram
- Test Report
- Engine, alternator and AVR catalogues

Genset Optional Features

- Manual and automatic transfer switches
- Synchronizing and totalizing panels
- Water-fuel separator
- Jacket water heater
- Oil heater
- Fuel heater
- Battery heater
- Anti-condensation heater
- Air shut-off valve
- Oil sampler
- Pre-lubrication oil pump

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