



Technical Specification

and

Scope of Supply

**mtu 20V4000 DS3000
DG20V4000B3N**



I. System Description

Product type	DG20V4000B3N
Application Group	mtu 20V4000 DS3000 3D - Emergency Standby power, IFN

Power as per MTU Sales Program

Power per genset (ISO 8528)	3.000	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	45	°C
Altitude	100	m

On-site Power

Power per genset (ISO 8528)	3.000	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	45	°C
Altitude	100	m

Requirements

Frequency	60 Hz
Generator voltage	13200 V
EngineType	20V4000G94S-TB



II. Selection Criteria for the Scope of Supply

<i>Criteria</i>	<i>Selection</i>	<i>for Product No.</i>
Application	Emergency Standby (3D)	1,
Frequency	60 Hz	1,
Generator Voltage	13200 V	1,
Phase	3 Phase	1,
Unit Specification	Standard Unit	1,
IBC Seismic Certification	Without IBC	1,
HCAI Certification	Without HCAI	1,
Engine Model	20V4000G94S (24volts)	1,
Exhaust Emissions (EPA)	EPA Tier 2	1,
Radiator Design Temperature	45°C	1,
Temp Rise	80°	1,
Power Output	3000 kW	1,
Full Load Amps	164	1,
Generator Frame and Wire Qty	LSA 4P9.6-2950-M (6 Wire)	1,
Generator Wire Configuration	Wye	1,
OPU/HSD	Level 0 - Open Power Unit	1,
Fuel Tank	Without Fuel Tank	1,
Control panel	Without Control Panel	1,
Circuit Breaker Options	No Circuit Breaker	1,
Breaker Wire Color Scheme	Standard Breaker Wire Color Scheme	1,
Paralleling	No Paralleling Operation	1,
Acceptance testing	Factory Acceptance Testing	1,
Country of Operation	USA / Canada	1,
Emission cert. authority	18 US EPA Agency	1,



III. Scope of Supply

	valid for product no.
1 SYSTEM CONFIGURATION	1,
1.1 System Description	1,
Model: DG20V4000B3N	1,
Application 60Hz Standby	1,
1.2 Cooling System	1,
Standard Cooling Package	1,
45 Deg C Cooling System	1,
<ul style="list-style-type: none"> • Closed loop, liquid cooled, with radiator factory mounted on engine-generator set mounting frame and integral engine-driven coolant pump with low water level probe and dual sight glasses 	
Ethylene Glycol Antifreeze	1,
1.3 Circuit Breaker	1,
No Circuit Breaker	1,
1.4 Starting Aids	1,
Battery Rack/Cables/Batteries 20V4000 - Mounted	1,
<ul style="list-style-type: none"> • 8D Batteries (Qty 6) • Battery Racks • Battery Cables • Battery Disconnect 	
Without Battery Warming Plate	1,
Battery Charger MicroGenius S2 20A	1,
<ul style="list-style-type: none"> • 20A • 24V • S2-A30-B0000000 	
Battery Charger Mounted & DC Wired	1,
Battery Charger Mounted Opposite of the Control Panel	1,
Coolant Preheater	1,
<ul style="list-style-type: none"> • -20 Deg F Coolant Preheater (480V 1PH - 12000W) 	



valid for product no.

- Model: CSM11204-000
- Qty 2

1.5	Genset Enclosure	1,
	Open Power Unit (OPU)	1,
	<ul style="list-style-type: none"> • Engine Generator Set mounted on base with no enclosure 	
1.6	Vibration Isolation	1,
	Notice: Selected springs are rated from the factory for this unit's specific configuration. If modifications are made to this unit outside of the MTU factory the rating of the springs will need to be re-evaluated and may result in additional costs.	1,
	Seismic Spring Isolators RJE-6080	1,
	<ul style="list-style-type: none"> • Freestanding, open-spring isolators designed to be used in docile environments (limited seismic activity, low wind loading) where customer wants enhanced level of vibration isolation. • Model: RJE-6080 	
2	ENGINE CONFIGURATION	1,
2.1	Engine System	1,
	EPA Certification Tier Level: Tier 2	1,
	Engine Model: MTU 20V4000	1,
	Engine Lubricant 10W-40	1,
	Oil Sampling Port	1,
	Without Oil Replenishment System	1,
	Without Oil Pre-Lube Pump	1,
	Note Emission Compliance:	1,
	The engines and/or systems, may only be certified to comply with the required country or region specific emission regulations. Where applicable, the engines and/or systems are only certified to those specific emission regulations/standards which are clearly stated in the respective RRPS/MTU defined technical specifications. It is the customer's sole responsibility to ensure that the export/import, installation and use of the engine and/or system complies with the applicable emissions regulations in the country or region where the engine and/or system will be used.	
2.2	Exhaust System	1,
	Exhaust Bellows	1,
	Without Wye Header - No Silencer	1,



	valid for product no.
Without Exhaust Thermocouple	1,
Without Exhaust Pyrometer	1,
2.3 FUEL SYSTEM	1,
Auxiliary Fuel Lift Pump:	1,
Auxiliary fuel lift pump is recommended as a standard application. Pump should be selected for 10' of vertical lift. Please reference specification sheet for standard lift capability requirements.	
Fuel Water Separator - Manual Switchable (Dual Triple)	1,
Fuel Water Separator (Wire-Braid Reinforced Hose)	1,
Water in Bowl Sensor	1,
No Fuel Cooler	1,
2.4 Air Intake System	1,
Air Filter (Standard)	1,
Air Filter (Standard)	1,
MTU Air Filter	1,
• SUA90069	
• Qty 6	
Battery Charger Mounted & DC Wired	1,
Battery Charger Mounted Opposite of the Control Panel	1,
3 GENERATOR CONFIGURATION	1,
3.1 Generator Specification	1,
<u>Kato 4P9 – Enhanced</u>	1,
Features:	
• Metering CT (3 mounted and wired)	
• PTs	
• Paralleling CT (1 mounted and wired)	
• Winding RTDs (2 per phase) and Bearing RTDs (1 per bearing)	
• Heater with thermostat	
• Qty 2 two-hole NEMA Lugs Per Phase	
DECS 150 Digital Excitation Control System	1,
Includes Winding RTD's	1,



		valid for product no.
	Includes Bearing RTD's	1,
	Bearing/Winding RTDs are not wired to Control Panel	1,
	Generator Strip Heater	1,
	<ul style="list-style-type: none"> Strip heater mounted permanently in the generator winding to prevent condensation in the generator. 	
	IP23 Ingress Protection	1,
	<ul style="list-style-type: none"> IP23 provides Ingress Protection against objects larger than 12 mm and Protection against dripping water $\pm 60^\circ$ angle. 	
	Customer Connections RH Bottom Entry	1,
	LSA 4P9.6-2950-M (6 Wire)	1,
	Customer Connections RH Bottom Entry	1,
4	CONTROL PANEL CONFIGURATION	1,
4.1	Control panel	1,
	No Control Panel	1,
	Control Panel Mounting	1,
	Control Panel Mounted LH Side	1,
		1,
	<p>Top View Right Side</p> <p>Left Side Controls</p>	
	* For technical data refer to the circuit breaker enclosure data sheets located on the Business Portal	
	Without Remote E-Stop	1,
5	SERVICES AND AFTER SALES SUPPLY	1,
5.1	Warranty	1,
	General Terms and Conditions of Sale, Warranty and After Sales Supply	1,
	Our offer is based on the attached General Terms and Conditions of Sale for MTU Products (Rev. V-601-1803 MUS & MOE) and the Warranty will be the attached Standard Two (2) Year / 3,000 Hour Basic Standby (3D), Prime (3B), and Data Center Continuous Power (DCCP) (3F) Limited	



		valid for product no.
	Warranty (SYS-M-GEN-S-026).	
6	MISCELLANEOUS	1,
6.1	Painting	1,
	Paint Color: RAL 7001 Grey	1,
6.2	Documentation	1,
	Application 60Hz Standby	1,
	<u>English</u>	1,
	1 Flash Drive	1,
	<u>English</u>	1,
	No Hard Copy	1,
	No Flash Drive	1,
	<u>French</u>	1,
	No Hard Copy	1,
	No Flash Drive	1,
	<u>Spanish</u>	1,
	No Hard Copy	1,
	No Flash Drive	1,
6.3	Additional Options	1,
	Without Convenience Receptacle	1,
	Dimensional Drawing: Genset Dimensional OPU	1,
	• XZ54900100025	
	Mechanical Drawing: Spring Installation	1,
	• XZ54900100027	
	Electrical Drawing: Engine ECU	1,
	• XZ54930900146	
	Electrical Drawing: Engine Starter	1,
	• XZ54930900140	



	valid for product no.
Electrical Drawing: Generator	1,
• XZ54930900149	
Electrical Drawing: Generator	1,
• XZ54930900148	
Electrical Drawing: No Control Panel	1,
• XZ54930900137	
Electrical Drawing: Control Panel Accessories	1,
• XZ54930900139	
Without Spare Parts Kit	1,
8 FUNCTIONAL TESTING	1,
8.1 Acceptance Testing	1,
Standard Commercial Test	1,
9 SHIPPING CONDITIONS	1,
9.1 Freight	1,
Ship unit with fluids installed	1,
Genset Unit is enclosed in a Shipping Bag	1,