POWERED BY MTU
DIESEL GENERATOR SET

Diesel

Watercooled

50Hz Frequency

Model: ETBG3000

INDUSTRIAL RANGE

Powered by MTU

Generating Rates

POWER RATING		PRIME	STANDBY
POWER	kVA	2750	3000
	kW	2200	2400
Rated Speed	r.p.m	1500	
Standard Voltage	V	400	
Available Voltages	V	400/230 - 230/132 - 230 V	
Rated at power factor	Cos Phi	0.8	

Ambient conditions of reference: 1000 mbar, 25ºC, 30% relative humidity. Power according to ISO 3046 normative.

P.R.P. Prime Power - ISO 8528 : prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year,between stated maintenance intervals. The permissible average power output during a 24 hours period shall not exceed 80% of the prime power. 10% overload available forgoverning purposes only.

Standby Power (ISO 3046 Fuel Stop power): power available for use at variable loads for limited annual time (500h), within the following limits of maximum operating time: 100% load 25h per year – 90% load 200h per year. No overload available. Applicable in case of failure of the main in areas of reliable electrical network.

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Engine Specifications 1500 r.p.m

ENGINE		CONTINUOUS		STANDBY	
Rated Output	kW	2420		N.A	
Manufacturer		MTU			
Model		20V4000G63			
No. of Cylindirs and Build		4 Cycle; In-line; 20 Cylinder Diesel			
Aspiration and Cooling		turbo charger			
Bore/Stroke	mm	170X210			
Compress the ratio		16.5:1			
Cooling system		Water-cooled			
Engine Speed/Frequency	rpm/Hz	1500/50HZ			
Coolant Capacity	L	260			
Starting System		Electric 24 volt DC			
Displacement	L	95.4			
Lubricant system Capacity	L	390			
Battery Volatge / Capacity		24VDC			
Governing Type	Type	Electronic engine management system "ADEC"			
Air Filter	Type	Dry			
Fuel Consumption	Load	100%	75%	50%	25%
	L/h	549.0	425.0	299.0	N.A

ENGINE--Industrial 4 stroke cooled diesel engine complete with air,fuel and oil filters,electric starting and charging equipment,engine protection against low water level.

COOLING--Radiator and colling fan complete with protection guards,designed to cool engine at specified output in air temperatures upto 45 ℃,radiators suitable for higher temperatures are available.Low water level protection fitted as standard.

ELECTRICAL SYSTEM--24V upto.Axial type starter motor,battery charging alternator,high capacity lead acid battery,and battery tray mounted on the generator base frame,and heavy duty interconnecting cable with terminations.

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EXHAUST SYSTEM--Heavy duty industrial exhauset silencer with flexible piping.

Alternator Technical Specifications

ALTERNATOR BRAND		LEROY SOMER	STAMFORD
Model		LSA53M85	LVS1804T2
Exciter System		Self-excited, brushless	
Poles	Num	4	
Cooling Fan		Cast alloy aluminum	
Bearing		Single,double shielded	
Windings		100% copper	
Connection Type		Reconnectable	
Insulation Type	Class	Class H	
Pitch		2/3	
Amortisseur Winding		Full	
Voltage Regulator		A.V.R. (Electronic)	
Steady Voltage Precision		± 1%	
Underspeed Protection		Standard	
Overexcitation Protection		IP23	
TIF (1960 Weightings)		<50	

ALTERNATOR--Brushless,self exciting,self regulation,sreen protected,drip proof rated in accordance with IEC60034.Voltage regulation maintainted within ±0.5% from no load to full load.between 0.8 lagging and unity.All standard voltages available.

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Control Panel Technical Specifications

Control Panel- SMARTGEN 6110/6120

The base mounted control panel in a vibration isolated sheet steel enclosure.The control panel is equipped as follows:

a)Instruments:Analogue Volmeter,Hours Run Meter.Water pressure Meter.

b) Controls:Emergency Stop Pushbutton,Volmeter Phase Selector Switch.

c) Control module:Standard collocation is smartgen Auto start with AMF.

Smartgen®

Main Features:

ΔAutomatic mains failure
ΔEngine control,Generator protection
ΔBuilt in alarms and warnings
ΔRemote Start operation available
ΔFuel pump control
ΔMains simulation
ΔBlock heater control
ΔField adjustable parameters
ΔFree MS-Windows Remote monitoring
ΔLED displays
ΔConfigurable analogue inputs
ΔI/O expansion capability

Protection Circuits

WARNING
Battery charge failure
Low battery voltage
SHUT DOWNS
Fail to start
Emergency stop
Low oil pressure
High engine temperature
Over /Under speed
Under/over generator frequency
Failed to reach loading voltage
Electrical trip
Generator over current

Instruments

ENGINE
Engine speed
Oil pressure
Coolant temperature
Run time
Battery volts
TOR
Voltage (L-N)
Current (L1-L2-L3)
Frequency
Mains
Voltage (L-L, L-N)

50 Hz

Model: ETBG3000

INDUSTRIAL RANGE

Powered by MTU

Failed to reach loading voltage
ELECTRICAL TRIP
Generator over current

MAINS
Voltage (L-L, L-N)

Generating Sets Standard Features

Three phase four wire,output voltage 400V/230V,50HZ,between 0.8 lagging,protection capability according with the standard of NAME1 and IP23.

General Features:

ΔComposed of MTU diesel engine and Stamford or Leroy somer alternator
ΔOil and fuel filter fitted,water separator
ΔLube-oil drain valve fitted
ΔElectric Starter Charge motor 24 VD.C
ΔWater-cooled
Δ8-hours operation base tank
Δ Auto start
ΔOptional soundproof and weatherproof canopy
Δ3 pole MCCB Delixi breaker
ΔOperation & Maintenance manual
ΔSpecial Integrated Steel Base tank and sprayed overall in gloss enamel paint

Voltage Regulation:

Voltage regulation maintanined within ±0.5%
Between 0.8 and 1.0 lagging and unity
From no load to full load
At speed droop variation upto 4.5%

Frequency Adjustable Ratio:

Change load from 0-100%,within 1.0%(electric speed regulator),within 4.5%(mechanical speed regulator)

Frequency Undulation:

load from 0-100%,frequency undulation within 0.25%
No load wire volts max undulation ration\ within 1.8%
Three Phrase balanced load in the order of 5%
Effect factor of Telecom
TIF better than 50
THF to IEC60034 Part 40 better than 2%

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Generating Sets other Features

Generating Sets Optional Features

ΔLow fuel level alarm shutdown
ΔAutomatic Fuel Filling System
ΔEngine oil feeding and drain pump
ΔAuto Transfter Switch(ATS)
ΔParallel control panels
ΔCircuit Breaker MCCB & ACB
ΔRemote Control Panel
Δweatherproof/soundproof Canopy
ΔTrailer type Gensets

Quality Standards

ISO9001:2000,ISO14000,ISO3046
ISO8528 BS4999
BS5514,AS1359,ICE34
CE Compliance

Gensets Dimensions & Weight

Open type:LxWxH (mm) Net Weight Kgs

6100*2700*2800/25000

Silent type:LxWxH (mm) Net Weight Kgs

Authorized