

# **Technical Data**

June 2018

Engine Alternator Generator Model

Germany MTU 18V2000G65 Leroy-Somer LSA 50.2 M6 FB1125-M / Open TMT1125C / Silent

50Hz/1500R.P.M	3-Phase	Power Factor	Emissions		
30112/1300K.F.IVI	J-Filase	Factor Cos $\Phi = 0.8$	TA-Luft		

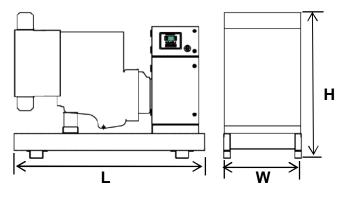
RATINGS	Prime F	ower	Standby	Power	Rated Current	Fuel Consumption	
	(PR	P)	(ES	P)	Amps	@100% Load	
Voltage (V)	kWe	kVA	kWe	kVA	(A)	L/h	
380/220	900	1125	1000	1250	1709.3	240.0	
400/230	900	1125	1000 1250		1623.8	240.0	
415/240	900	1125	1000	1250	1565.2	240.0	



#### **Key Features:**

- High efficient water cooled diesel engine.
- Single bearing with brushless alternators (Class H, with AVR).
- Radiator with pressure cap and drain point.
- Fully guarded engine-driven fan.
- Fully welded steel skid base with lifting holes and fork lift legs.
- Integral fuel tank with filler cap and gauge (≤650kVA).
- Heavy duty rubber anti-vibration mountings.
- 12V or 24V maintenance free starter battery and connecting cables.
- Separate engine-driven battery charging alternator.
- Spin on oil and fuel filters and dry type air filter element.
- Industrial silencer (15dBA reduction) supplied loose.
- Auto start control system with LCD show.
- Battery charger provided.
- Main line 3P circuit breaker.
- Rigorous factory test wiring with IEC standard.
- Operation & Maintenance manual & Wiring diagrams.
- Wide range of optional extra features available.

Photo For Reference Only



Overall Dimensions	& Weights - O	pen Set
Length (L)-mm:	4500	
Width (W)-mm:	1950	
Height (H)-mm:	2500	
Dry Weight-kg:	8000	

Ratings: All three phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor.

Prime Power: Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

Standby Power: Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27 °C.

TIDE Power reserves the right to change the design or specifications without notice and without any obligation or liability.

Engine			Germany	MTU 18V2000G65					
		Units	CP	FSP					
	Frequency	Hz	50						
	Engine Speed	r/min	1500						
	Cylinders / Type		18 cyl / 90°V angle / 4-stroke						
	Aspiration		Exhaust turbo charger and wat	ter Charge air Cooling					
0 1	Governor Type		ECM						
General Performance	Bore / Stroke	mm	130/150						
	Displacement	Litres	35.82						
	Compression Ratio		16:1						
	Engine Power	kWm	1000	1100					
	Mean Piston Speed	m/s	7.5						
	Brake Mean Effective Pressure without Fan	bar	22.3	24.6					
	Fuel Consumption at 110% Prime Power	Litres/hour	261.0						
	Fuel Consumption at 100% Prime Power	Litres/hour	240.0						
Fuel System	Fuel Consumption at 75% Prime Power	Litres/hour	174.4						
ruei System	Fuel Consumption at 50% Prime Power	Litres/hour	118.6						
	Fuel Consumption at 25% Prime Power	Litres/hour	64.5						
	Standard Fuel Tank Capacity	Hours / Litres	N/A						
	Intake Air Depression (New Filter)	mbar	ar 15						
Air System	Intake Air Depression, Max.	mbar	50						

m³/s

m³/s

°C

mbar

mbar

Litres

Litres

Litres

°C

Litres

Litres

°C

°C

kW

kW

kW

1.15

3.3

555

50

450

190

30

85

130

110

87

88~98

120

5

97~102

95

Maintenance-free

Auailable

1.25

3.60

575

N/A

N/A

N/A

Exhaust System

Oil System

Cooling

System

Electric

System

Energy

Balance

Combustion Air Volume Flow

Exhaust Gas Temperature

Exhaust Back Pressure, Max.

Maximum Oil Pan Capacity

Minimum Oil Pan Capacity

On-engine Fuel Capacity

Electrical System Voltage

Radiation and Convection Heat

Charge-Air Heat Dissipation

Heat Dissipated by Engine Coolant

Coolant Temperature

Connecting Cables

Battery

Engine Oil Capacity, Initial Filling

Engine Coolant Capacity (Engine only)

Lube Oil Operating Temp.Before Engine, from ~To

Coolant temperature after engine, alarm ~ shutdown

Exhaust Back Pressure

**Exhaust Gas Flow** 

Alternator			50Hz/1500R.P.M					
		Units						
	Manufacture / Brand		Leroy-Somer					
	Model		LSA 50.2 M6					
	Coupling / No. of Bearings		Direct / Single Bearing					
	Phase / Poles		3-Phase / 4-Pole					
	Power Factor		$Cos \Phi = 0.8$					
General Data	AVR Regulation		Yes					
Ochciai Data	Voltage Regulation		± 0,5 %					
	Insulation Class		Н					
	Drip Proof		IP23					
	Excitation		AREP					
	Altitude	m	≤1000					
	Overspeed	min <sup>-1</sup>	2250					

Controller Model / ComAp	EC 2.0 /	EC 3.0 /	EC 4.0 /	EC 5.0 /		
	Nano Plus	AMF20	AMF25	IG-NT		
Controller Photos	Trick Names" Grove	Intellite Way 20	Intellitte AFS	Inteliden"		
Standard Supply	×	×	•	0		
Viewable Parameters						
Phase Voltage	×	3	3	3		
Current	Instrumentation	•	•	•		
Frequency	•	•	•	•		
Active Power	×	•	•	•		
Reactive Power	×	•	•	•		
Apparent Power	×	•	•	•		
Power Factor	×	•	•	•		
Electric Energy Metering	×	•	•	•		
Generator Protection						
Abnormal Voltage	•	•	•	•		
Over-current Warning	X	•	•	•		
Over current Protection	•	•	•	•		
Over Frequency Protection	•	•	•	•		
Short Circuit Protection	MCCB / ●	MCCB / ●	MCCB / ●	MCCB / ●		
Engine Figure						
Oil Pressure	•	•	•	•		
Water Temperature	•	•	•	•		
Fuel Meter / Fuel Sensor	●/○	•/0	●/○	●/○		
Speed	•	•	•	•		
Battery Voltage	•	•	•	•		
Elapsed Time	•	•	•	•		
Engine Protection						
Low Oil Pressure Warning	X	•	•	•		
Low Oil Pressure Protection	•	•	•	•		
High Temperature Warning	×	•	•	•		
High Temperature Protection	•	•	•	•		
Overspeed Warning	×	•	•	•		
Overspeed Protection	×	•	•	•		
Alternator Charger	•	•	•	•		
Functions						
Remote Start	•	•	•	•		
AMF (Auto Main Failure)	•	•	•	•		
Programmable Intput	•	•	•	•		
Programmable Output	•	•	•	•		
Expand Module	×	0	0	0		
Communication Function	×	0	0	●/ RS232 / 485		
Communication Port	USB	0	0	RS232 / 485		
CAN	•	×	•	•		
Service Indicate	×	×	•	•		
Fault History	•	•	•	•		
Gen-Gen Synchronising	×	×	×	•		

 $\bigcirc$  Available as Optional

Remark:

Standard Supply

× Not Available

#### Enclosure / Containerized

"Ensure a quieter life with our sound attenuation system." Features:

#### Extremely Rugged & Highly Corrosion Resistant Construction

- ISO CSC certified container.
- Body made from 2.0mm sheet steel components marine class painting.
- Fuel tank installed inside container for your option.
- Excellent design and craftmanship
- Compact structure and longer service life
- Residential silcencer to made sure the sound level.
   (Box type internal for option)
- Stainless steel locks and cast-iron hinges to withstand corrosive conditions.

# ive conditions.

#### Easy Commissioning and Maintenance

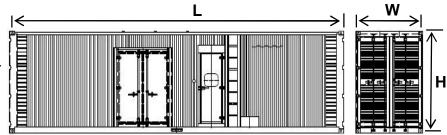
- Floor standing control panel inside, easy reachable electrical power connections board.
- Access doors either side with emergency panic release buttons .
- Radiator fill access through cover in container roof.
- Lube oil drain and radiator drain.
- Manual lube oil pump for option.
- Ladder provided to easily maintain.

#### Security and Safety

- Earth leakage protection.
- 50mm non-inflammable rock wool sound absorber.
- Skid proof plated floor.
- Control panel viewing window in a lockable access door.
- Emergency stop button mounted on either side.
- Emergency DC lighting above each door, integrated AC and DC lighting in the generator set compartment and power distribution system.
- Fuel fill and battery can only be reached via lockable access doors.
- Exhaust silencing system enclosed for operator safety
- Efficient management of cooling air to avoid high water temperature, reliable operation under harshest conditions.



• Lifting four points on top to move genset easily.



Dimensions	Weight	Noice Level	e Level Base Tank @100%						
(LxWxH)mm	kg	dB(A) at 7m	Hours	Litres					
40HQ	15300	≤80	N/A	N/A					



Tide Power offers not only a changeover switch but also an integrated mains detection and switch system for your 24 Hour Power Protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of a mains automatic re-transfer once it come back.

#### System Advantages

- Automatically transfer and re-transfer load from main power to gen-power without operator intervention.operation (Both automatic and manual).
- ATS Controller (AMF function), seamless integration with AMF25
- Available from 32 4000A, better protection for 4 pole switch.
- Available in standard, bypass isolation and service-entrance configurations.
- Configurable in open, closed and programmed transition operating modes.
- Designed to interface seamlessly with TIDE POWER generators and switchgear.
- Drip proof IP42 enclosure.
- · Easy installation: wall-mounted & floor standing
- Comes fully loaded with the technology to do the job.

#### 50/60 Hz, 32-4000 Amps



Rated Current	Amps	32	63	80	100	125	160	200	250	300	315	400	630	800	1000	1250	1600	2000	2500	3200	4000A
	Chinese	×	Α	×	Α	×	В	×	С	×	×	С	С	D	D	D	D	E	E	E	×
Breaker Type	ABB	В	В	×	В	В	В	В	В	×	С	С	D	D	D	D	D	E	E	×	×
	Socomec	×	В	В	В	В	В	×	В	×	×	С	D	D	D	D	Е	E	E	Е	Е

#### Optionals (All depends)

## Materials & Miscellaneous

- Marine class painting and other special painting
- Standard accoustic enclosure genset
- Extended warranty

Genset:

- Extended factory test
- Additional sensors
- Off road trailer type
- Standard ATS
- Mounted fire extinguisher
- Additional vibration isolation
- Wooden case packaging
- Tide Power tool kit
- Additional operation manual
- Nylon canvas wrapped packaging
- Iron shelf for double stack shipping
  - Water jacket heater
- Additional CE features selection.

#### **Custom-Made solutions**

#### Genset:

#### Materials & Miscellaneous

- On road trailer (EU) type
- Rental type genset
- Mining type genset
- Marine type genset
- High temp. Radiator for silenttype genset
- EPA series gensets

#### Optionals (All depends)

#### Custom-Made solutions

#### Diesel Engine/ Baseframe Mounted Accessories:

#### Diesel Engine/ Baseframe Mounted Accessories:

#### **Cooling System**

type genset

#### - Engine heat guards

- Low coolant level alarm & shutdown (Depends on
- engine series) - High temp. & Anti-erosion radiator upgrade for open
- 50% antifreeze @-36°C

#### **Cooling System**

- Anti-erosion radiator for silent type genset
- Remote radiator with heat exchanger
- Remote cooling tower with heat exchanger

#### **Filters**

- Extra air filters for time-maintenance
- Double heavy duty air filters
  - Extra fuel filters for time-maintenance
  - Extra oil filters for time-maintenance

#### **Filters**

Mounted heavy duty air filter

#### **Exhaust**

- Residential silencer for open type genset
- Stainless steel silencer and kits
- Heat protection guard

#### **Exhaust**

- Mounted heavy duty air filter

#### Fuel & Oil

- Separated / External fuel tank
- Water fuel separator
- 3 way fuel valve
- Manual bypass valve
- Lub oil make up tank
- Lub oil drain pump
  - Fuel level sensor
  - Fuel cooler
  - Automatic remote fuel supply with fuel level switch
- & low fuel level alarmshutdown.
- Coolant heater 220/240V
- Lub-oil heater for severe cold weather

#### Fuel & Oil

- Bulk base fuel tank
- Bunded base fuel tank

#### Starting & Charging

- Bulk starting battery -17°C below
- Battery removal switch
- Battery heater

#### Starting & Charging

- None

#### Control System & Power Termination:

## **Control System & Breakers**

- Different functional modules with
- Tide Easycon refer to other table
  - Mounted audible and visable llighting
  - Control panel cover (80kva or below)
  - Motorized circuit breaker 3 Poles
  - Motorized circuit breaker 4 Poles - ACB 3 Poles
  - MCCB 4 poles
  - Different breaker brands, like ABB etc
  - Leakage protection switch

#### Control System & Power Termination:

#### **Control System & Breakers**

Various standard sockets mounted outside the enclosure

#### Optionals (All depends)

#### Custom-Made solutions

Brushless Alternator:

#### Brushless Alternator:

#### - 12 Lead stator (change voltage depends)

- Interchangeable S.A.E flanges and drive discs
- Convenient filters on air inlets and outlets
- Coastal type [ ] Alternator painting color P.M.G or auxiliary
- AREP for Leroy-Somer only
- Shunt trip
- Exterior potentiometer
- Auxiliary contacts and double bearing
- Anti-condensation heater
- Stator thermal protection
- Quadrature droop kits

#### Enclosure & Canopy:

# Enclosure & Canopy:

### Weather protective & Sound proof

- R series
- ISO 20ft containerized
- ISO 40ft containerized
- Stainless steel locks and hinges

#### Weather protective & Sound proof

- Super silent enclosure
- Weather proof enclosure
- Flat sponge sound absorber enclosure
- Porous sheet with rockwool sound absorber enclosure

Temperature rise class F Marine type alternator IP upgrade HV

Please refer to Tide Power sales department for full details of the above options.

#### Warranty

Tide Power distributor, dealer, or authorized representative performs startup within 6 months of the date of shipment from the factory, warranty coverage will begin on the startup date (Register the startup date to Tide with in 6 month is essential and can be enforced). This warranty does not apply to malfunctions caused by damages, unreasonable use, misuse, repair or service by unauthorized persons, or normal wear and tear.

#### **Warranty Coverage**

Generators used to commercial utility source: One (1) year or 1000 hours (whichever occurs first) from date of shipment from the factory or registered startup date.