Tide Power

Tide Powe

Photo For Reference Only

Technical Data

May 2017

Engine		Alternator			Generato	or Model	
Germany MTU 8V1600G10F Leroy-Some			er LSA 47.2 VS	52	TMT365 / Open	TMT365C / Silent	
50Hz/1500R.P.M 3-Phase				Power Facto ctor Cos Φ =		Emissions Stage IIIA	
			Fa	$c(0) \ c(0) \ \Psi =$	0.0	Stage IIA	
DATINGS	Prime	e Power	Standb	y Power	Rated Current	Fuel Consumption @100% Load	
RATINGS	(F	PRP)	(E	SP)	Amps		
Voltage (V)	kWe	kVA	kWe	kVA	(A)	L/h	
380/220	292	365	320 400		554.6	78.0	
400/230	292	365	320	400	526.8	78.0	
415/240	292	365	320	400	507.8	78.0	
ł							
				Key Featu	res:		
				-	nt water cooled diesel engine		
				- Single bear	ing 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 (\leq 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.

Overall Dimensions	& Weights - Open Set	
Length (L)-mm:	2840	
Width (W)-mm:	1660	
Height (H)-mm:	1980	
Dry Weight-kg:	3250	

 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.

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Engine			Germany	MTU 8V1600G10F			
		Units	СР	FSP			
	Frequency	Hz	50				
General	Engine Speed	r/min	1500				
	Cylinders / Type		8 cyl / 90° V angle /	4-stroke			
	Aspiration		Exhaust turbo charger and wate	er Charge air Cooling			
	Governor Type		ECM				
	Bore / Stroke	mm	122/150				
Performance	Displacement	Litres	14				
	Compression Ratio		17.5:1				
	Engine Power	kWm	325	358			
	Mean Piston Speed	m/s	7.5				
	Brake Mean Effective Pressure without Fan	bar	18.2	20.5			
	Fuel Consumption at 110% Prime Power	Litres/hour	85.8				
	Fuel Consumption at 100% Prime Power	Litres/hour	78.0				
Evel Overteen	Fuel Consumption at 75% Prime Power	Litres/hour	61.5				
Fuel System	Fuel Consumption at 50% Prime Power	Litres/hour	44.2				
	Fuel Consumption at 25% Prime Power	Litres/hour	25.8				
	Standard Fuel Tank Capacity	Hours / Litres	8 / 620				
	Intake Air Depression (New Filter)	mbar	25				
Air System	Intake Air Depression, Max.	mbar	50				
	Combustion Air Volume Flow	m³/s	0.42	0.43			
	Exhaust Gas Flow	m³/s	1.2	1.3			
Exhaust	Exhaust Gas Temperature	°C	490	499			
System	Exhaust Back Pressure	mbar	85				
	Exhaust Back Pressure, Max.	mbar	150				
	Engine Oil Capacity, Initial Filling	Litres	46				
	Maximum Oil Pan Capacity	Litres	43				
Oil System	Minimum Oil Pan Capacity	Litres	36				
	Lube Oil Operating Temp.Before Engine, from \sim To	°C	87~100				
	Engine Coolant Capacity (Engine only)	Litres	50				
Cooling	On-engine Fuel Capacity	Litres	3				
System	Coolant temperature after engine, alarm \sim shutdown	°C	105~109				
	Coolant Temperature	°C	95				
F lastria	Electrical System Voltage	V	24				
Electric System	Battery		Maintenance-	free			
System	Connecting Cables		Auailable				
Energy	Radiation and Convection Heat	kW	16	16			
Energy Balance	Heat Dissipated by Engine Coolant	kW	170	175			
Dalance	Charge-Air Heat Dissipation	kW	50	60			

Alternator

50Hz/1500R.P.M

		Units	
	Manufacture / Brand		Leroy-Somer
	Model		LSA 47.2 VS2
	Coupling / No. of Bearings		Direct / Single Bearing
	Phase / Poles		3-Phase / 4-Pole
	Power Factor		Cos Φ = 0.8
General Data	AVR Regulation		Yes
General Data	Voltage Regulation		± 0,5 %
	Insulation Class		н
	Drip Proof		IP23
	Excitation		Shunt
	Altitude	m	≤1000
	Overspeed	min ⁻¹	2250

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Controller Model / ComAp	EC 2.0 / Nano Plus	EC 3.0 / AMF20	EC 4.0 / AMF25	EC 5.0 / IG-NT	
Controller Photos					
Standard Supply	х	×	•	0	
Viewable Parameters					
Phase Voltage	×	3	3	3	
Current	Instrumentation	•	•	٠	
Frequency		•	•	٠	
Active Power	×	•	•	•	
Reactive Power	×	•	•	•	
Apparent Power	×	•	•	•	
Power Factor	×	•	•	•	
Electric Energy Metering	×	٠	•	٠	
Generator Protection					
Abnormal Voltage	•	•	•	•	
Over-current Warning	×	•	•	•	
Over current Protection	•	•	•	•	
Over Frequency Protection	•	•	•	•	
Short Circuit Protection	MCCB / ●	MCCB / ●	MCCB / ●	MCCB / ●	
Engine Figure					
Oil Pressure	•	•	•	•	
Water Temperature	•	•	•	•	
Fuel Meter / Fuel Sensor		•		•	
	●/○	•/0	●/○	•/0	
Speed	•	•	•	•	
Battery Voltage	•	•	•	•	
Elapsed Time	•	•	•	•	
Engine Protection					
_ow Oil Pressure Warning	×	•	•	•	
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	×	×	×	•	
Gen-Mains Synchronising	×	×	×	•	

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

Extremely Rugged & Highly Corrosion Resistant Construction

- Body made from 2.0mm sheet steel components with powder coating
- Built-in fuel tank integrated into the skid-mount base for your option.
- Excellent design and craftmanship
- Compact structure and longer service life
- Residential silcencer to make sure the sound level and installed on top.
- Zinc alloy with black powder coated locks and hinges and proven to withstand corrosive conditions.

Easy Commissioning and Maintenance

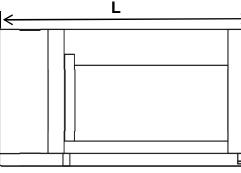
- Separate & Standing control room at end side, easy reachable electrical power connections to the inside busbar.
- Side doors allowing 180° opening rotation .
- Radiator fill access through cover in canopy roof.
- Lube oil drain and radiator drain.
- Manual lube oil pump for your option.

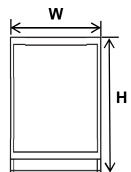
Security and Safety

- Earth leakage protection.
- 60mm non-inflammable sponge inside.
- Control panel viewing window in a lockable access door.
- Emergency stop button mounted on canopy exterior.
- Fuel fill and battery can only be reached via lockable access doors.
- Exhaust piping enclosed by aluminum silicate cotton for operator safety
- Efficient management of cooling air to avoid high water temperature, reliable operation under harshest conditions.

Transportability

- Lifting points on top to move genset easily.
- Fork lift legs provided and easy to loose to fix the genset.





Dimensions	Weight	Noice Level	Base Tank @100% Load				
(L x W x H) mm	kg	dB(A) at 7m	Hours	Litres			
4500x1800x2340	5210	≤78	8	620			



Automatic Transfer Switch

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	E	E	E	E	E

Dimensions : mm

A: 400×200×500	B: 500×300×650	C: 600×400×1200	D: 800×600×1400	E: 1000×800×1600

Optionals (All depends)

Genset:

Materials & Miscellaneous

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



A.T.S - 4 Poles

Optionals (All depends)

Diesel Engine/ Baseframe Mounted Accessories:

Cooling System

- Engine heat guards

- Low coolant level alarm & shutdown (Depends on engine series)

- High temp. & Anti-erosion radiator upgrade for open type genset
- 50% antifreeze @-36°C

Filters

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

Exhaust

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

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

Starting & Charging

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

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

Custom-Made solutions

Diesel Engine/ Baseframe Mounted Accessories:

Cooling System

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

Filters

- Mounted heavy duty air filter

Exhaust

- Mounted heavy duty air filter

Fuel & Oil

- Bulk base fuel tank
- Bunded base fuel tank

Starting & Charging

- None

Control System & Power Termination:

Control System & Breakers

Various standard sockets mounted outside the enclosure

Optionals (All depends)

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:

Weather protective & Sound proof

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

Custom-Made solutions

Brushless Alternator:

- Temperature rise class F Marine type alternator IP upgrade H

Enclosure & Canopy:

Weather protective & Sound proof

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

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.