

- Model: **50Hz** FB165-YT (open) / FC165-YT (silent)  
**60Hz** FB170X-YT (open) / FC170X-YT (silent)

Powered by YTO



## ■ Generator Specification

### — 50Hz

Powers	PRP (1)		ESP (2)		Prime
Voltage (V)	KW	KVA	KW	KVA	Amps
380/220	132	165	145	182	250, 7
400/230	132	165	145	182	238, 2
415/240	132	165	145	182	229, 6





### — 60Hz

Powers	PRP (1)		ESP (2)		Prime
Voltage (V)	KW	KVA	KW	KVA	Amps
380/220	136	170	150	187	258, 3
400/254	136	170	150	187	245, 4
220/127	136	170	150	187	446, 1
230/132	136	170	150	187	426, 7

### Engine Data

Engine brand		YTO	
Engine model		LR6M3L-D	
Speed control type		Electronic	
Starter motor voltage		24V	
Engine speed (RPM)		1500	1800
Fuel Consumption (L/H)	standby power	40, 99	42, 24
	100% prime power	34, 16	35, 20
	75% prime power	27, 33	28, 16
	50% prime power	20, 50	21, 12

## ■ Alternator Specification

Manufacture Brand						
Model	FPA27-1407 (50HZ) &FPA27-1205 (60HZ)					
Series	LSA	TAL	STD (3)	S	STD (3)	STD (3)
Option	○	○	○	○	○	●

### Alternator Data

Frequency / Speed	60Hz / 1800rpm
Coupling / No. of Bearing	Direct / Single Bearing
Phase / Poles	3-Phase / 4-Pole
Power Factor	Cos Φ = 0.8
AVR Regulation	Yes
Voltage Regulation	± 1 %
Insulation Class	H
Drip Proof	IP23
Excitation	Shunt
Altitude	≤1000
Overspeed	2250

### 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.

#### (1)PRP (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 8528-1.

#### (2)ESP (Standby Power):

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure.

#### (3)STD:Standard Alternator.



### Standard reference Conditions

Note: Standard reference condition 25° C [77° F] air inlet temp, 1000m (328ft) A.S.L  
30%  
relative humidity. Fuel consumption data with diesel fuel with specific gravity of  
0.85 and

Dimension and Weight@50HZ/60HZ		
Dimension	Open	Silent
Length (L)	2400mm	3477mm
Width (W)	920mm	1150mm
Height (H)	1650mm	1880mm
Net Weight (KG)	1450	2250
Fuel Tank (L)	330	400
Noise(dB) at 7m no load	N/A	80dba
Super Silent	Recommended	

### ■ Engine Specification:LR6M3L-D

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Turbocharged with aia-air intercooler
Compression ratio	17:01
Bore	108mm
Stroke	125mm
Cubic capacity	6.87litres
Direction of rotation	1-5-3-6-2-4
Approximate engine weight	(dry) 640±20 kg

Cooling system	
Coolant capacity-engine	9.35litres
Maximum top tank temperature	99 ° C
Thermostat operating range	76~95 ° C
Coolant intake size	Φ52mm
Coolant outlet size	Φ52mm

Fuel system	
Injection system	DIRECT INJECTION
Governor type	Electronic
Fuel oil type	0# or 10#
Fuel injection pump	P pump

Energy Balance@50HZ/60HZ	
Maximum intake air restrictio	21970btu/min
Gross heat to power	8108btu/min
Energy to coolant and oil	6100btu/min
Energy to exhaust	6770btu/min
Heart to radiation	500btu/min

Lubrication system	
Engine oil pressure for engine	
protection devices:	
— Idle speed(Minimum )	98kPa
— Governed speed(Maximum )	490kPa
Maximum oil temperature	115° C
Lubricating oil type	L-ECD 15W/40
Lubricating oil capacity	16litres
Maximum engine operating angl	
Front up, front down/right sid	20° /15°

Electrical system	
Alternator	4volts with integral regulato
Starter motor	24volts
Recommended Battery Capacity	165A

Test Condition@50HZ/60HZ	
Air temperature	25 ° C
Barometric pressure	100kPa
Relative humidity	30%
Air inlet Restriction	
at maximum power (nominal)	≤ 5kPa
Exhaust back pressure (nomina	≤ 6 kPa




## ■ Standard configuration

Engine	Alternator	Canopy	Electrical cabinet
Radiator Standard starting motor (12V or 24V) Oil sensor Water temperature sensor Standard engine charger Standard oil drainage pump Standard air filter, oil filter, f Water/fuel separator Oil drainage pump	AVR Single bearing IP23	Low carbon steel plate Surface powder coating Flame retardant and sound attenuated foam Top lifting Stainless steel screws for canopy external	Mains floating charge Breaker (rated current $\leq$ 1250A) Maintenance free battery Control panel IP42
Base	Standard voltage	Exhaust system	Others
Rubber anti-vibration mount	380/220V 400/230V 415/240V 440/254V 220/133V 208/127V ( Single phase 230V、220V)	Open type- Industrial silencer + accessories Canopy type- Residential silencer	Engine/Alternator operation manual Generator set operational manual Generator set electrical wiring di Generator set testing report

## ■ Optional configuration

Engine	Alternator	Base
Air inlet heater Oil heater Jacket water heater Heavy duty air filter Oil automatic refilling system Enlarge radiator (suitable for high temperature) Anti corrosive radiator Heat exchanger instead of radiator Remote radiator	Winding temperature sensor PMG Space heater Anti corrosive winding IP44 Air inlet filter	Extra capacity base fuel tank Bunded base fuel tank Diesel fuel level sensor Automatic fuel refilling system Three ways valve Spring vibration absorber Marine paint for skid base
Electrical system	Exhaust system	Canopy
Synchronizing controller 4 poles switch Battery switch Nickel-cadmium battery/extra capacity battery IP44 protection Control panel Motorized switch Switch with shunt line diagram IP44 control cabinet	Open type set with Residential silencer Two poles silencer	Surface paint or marine paint Stainless steel, Galvanized Canopy Super silent design canopy Additional top lift Stainless steel locks and hinges Anti sand and dust filter for air Electrical louvre

## ■ Tide Power Easycon Function Summary

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	×	×	●	○
Viewable Parameters				
Phase Voltage	×	三	三	三
Current	Instrumentation	●	●	●
Frequency	●	●	●	●
Active Power	×	●	●	●
Reactive Power	×	●	●	●
Apparent Power	×	●	●	●
Power Factor	×	●	●	●
Electric Energy Metering	×	●	●	●
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	●/○	●/○	●/○	●/○
Speed	●	●	●	●
Battery Voltage	●	●	●	●
Runing hours	●	●	●	●
Engine Protection				
Low 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)	●	●	●	●
Service Indicate	×	×	●	●
Fault History	●	●	●	●
Gen-Gen Synchronising	×	×	×	●
Gen-Mains Synchronising	×	×	×	●

**Remark:** ● Standard Supply

○ Available as Optional

× Not Available

### ■ Automatic Transfer Switch

### A.T.S - 4 Poles

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.



ATS cabinet size (mm)	500*400*200(1)	650*500*300(1)	1000*600*600	1600*1000*800
Rated current (A)	40~100	40-250	400-630	2000-3200

(1)The actual dimension of the ATS will depend on the brand used

#### 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 within 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 for commercial use :

18 months or 1000 operating hours (for engine label with Prime power) 18 months or 200 hours for labels with standby rated gensets.