

Features:

- Perkins engine
- STAMFORD Alternator, Class H
- Genset Canopy IP44 protection, Control panel IP56 protection
- Control module PLC-920
- Breaker: NADER 80A
- Speed governor: Mech governor
- Excitation system: Brushless
- A.V.R model: AS480
- 50°C radiator
- Fire extinguisher
- Oil pump on the engine
- ATS receptacle
- Lockable battery isolator switch
- Powder coated canopy
- Vibration isolators between the engine/Alternator and base frame
- Integrated wiring design
- High water temperature protection
- Steel base frame with forklift slots
- Big daily fuel tank



Output Ratings

Generator Set Model	Prime Power		Standby Power	
	kVA	kW	kVA	kW
WPS45S	45	36	49.5	39.6

Ratings at 0.8 power factor

Dimensions and Weights

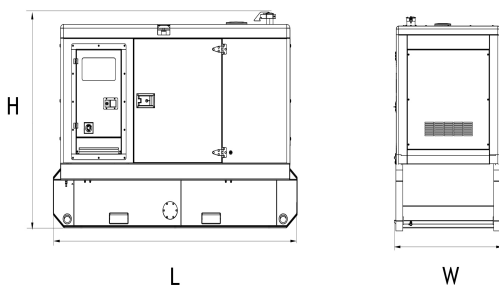
Model	L x W x H-mm	Dry Weight-kg
WPS45S	2338x 1115x 1551	1520

Notes:

***Prime Power** Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

****Standby Power** Standby duty, operation under variable load, without over load;

Standard Reference Conditions Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.



Ratings and Performance Data

Engine Brand	Perkins
Engine Model	1103A-33TG1
Alternator Brand	STAMFORD
Alternator Model	PI144K
Control System	PLC-920
Circuit Breaker Type	NADER 80A
Frequency / Phase	50Hz/3Phase
Engine Speed (RPM)	1500
Fuel Tank Capacity (L)	180
Fuel Consumption (L/h) (100%load)	10.7
Model Type	Soundproofed
Standard Package	Plastic
Noise Level@7m (dBA)	69.2
Generator set Manufacture	PowerLink
Oil Consumption (L/h)	0.01605
Volatage (V)	380/400/415/440
Silencer Noise Reduction (dBA)	10-20

Engine Model:1103A-33TG1

Engine Technical Data

Engine Model	1103A-33TG1
Engine Brand	Perkins
Number of Cylinders	3
Cylinders Arrangement	In-line
Bore/Stroke (mm)	105/127
Speed (RPM)	1500
Displacement (L)	3.3
Compression Ratio	17.25
Air Intake system	Turbocharge
Cooling Method	Water cooled
Coolant Capacity (L)	10.2
Prime Power (kWm)	41.3
Standby Power (kWm)	45.6
Governing Type	Mech
Back Pressure (mmhg)	15
Battery (V)	12

Fuel System

Fuel Tank	steel			
Fuel Tank Capacity (L)	180			
Fuel tank type	Double-layer			
Recommended Fuel Type	0# or ASTM2			
Injection System	Direct injection			
Fuel Consumption:				
WPS45S	100% Load	75% Load	50% Load	25% Load
L/h	10.7	8.2	5.7	2.622

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869,Class A2)

Lubrication System

Lube oil label	
Maximum Oil Temp. (°C)	125
Oil capacity (L)	8.3

Exhaust and silencer System

Exhaust Air Flow (m³/hr)	462
Exhaust Air Temp. (°C)	537
Maximum Allowable Back Pressure (mmhg)	10
NOx (mg/Nm³)	
Silencer Quantity	1
Silencer Type	Industrial silencer

Cooling System

Radiator	50
Coolant Capacity (L)	10.2
Coolant Change Time (Year/h)	2/10000
Coolant Intake Temp. (°C)	40
Coolant Output Temp. (°C)	112

Designed to operate in ambient conditions up to 50°C (122°F)

Air Intake system

Air Filter Type	Dry type
Intake Air Flow (m³/h)	186
Intake System	Turbocharge
Intake Air Temp. (°C)	25

Conditions

Altitude (m)	
Ambient Temp. (°C)	-5°C-50°C
Barometric Pressure (kpa)	100
Relative Humidity	< 80%

Alternator Model:PI144K

Alternator Physical Data

AVR Model	AS480
Alternator Brand	STAMFORD
Alternator Model	PI144K
Excitation System	Brushless
Housing Protection	IP23
Power Factor	0.8
Rated Stator Temp. rise (°C)	125
Rotor Insulation Class	H
Voltage Fluctuation(no load to full load)	±0.5%
Winding Pitch	2/3
Wiring Connection	Series Star

Performance Data

Time constants/400V (Ms)	T'd	0.03 s
	T''d	0.007 s
	T'do	0.68 s
	Ta	0.007 s
Short-circuit current (3 IN / 10 s)	300 % (3 IN) : 10s	
SHORT CIRCUIT RATIO	1/Xd	
Reactances (Per Unit)	Xd	
	X'd	
	X''d	

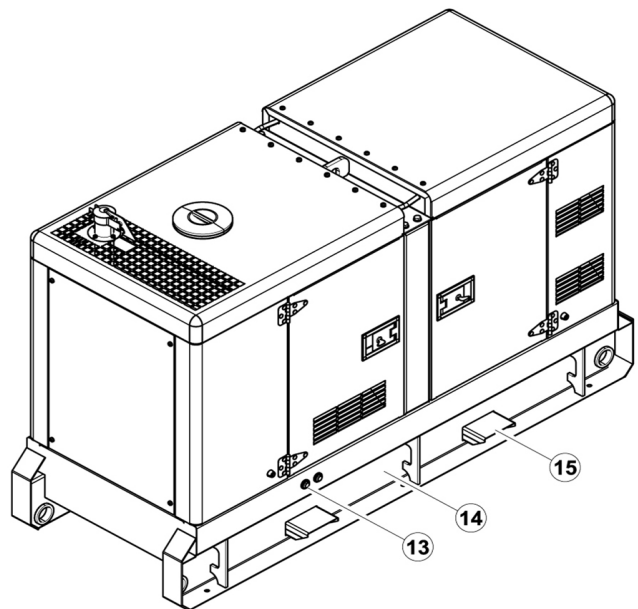
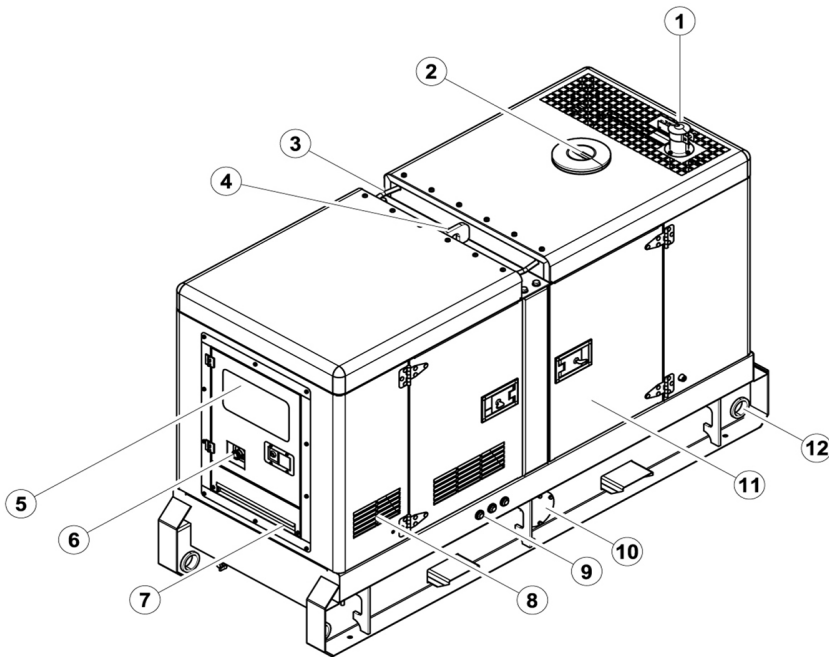
Alternator Operating Data

Overspeed (rpm)	2250
Voltage Regulation(Steady state)	± 1.0 %
THF(BS EN60034-1)	< 50
TIF(NEMA MG 1-22)	< 2%
Air Flow (m³/s) -Alternator 50Hz/60Hz	0.135
Altitude-Alternator (m)	1000

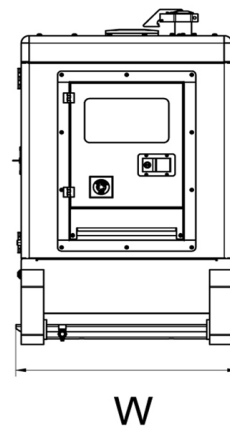
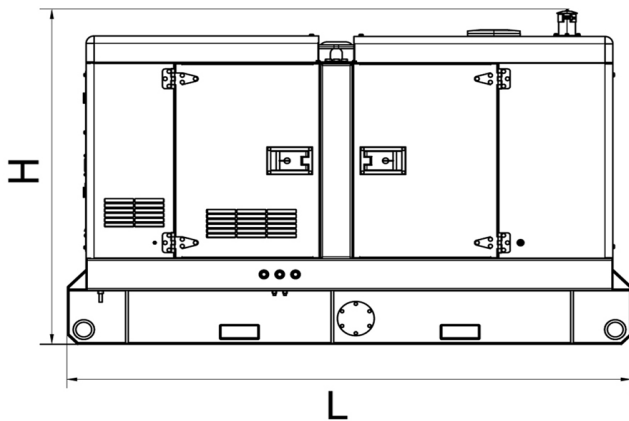
Voltage Technical Data

Voltage	Prime		Standby	
	kVA	kW	kVA	kW
380V@50Hz	42.5	34	46.75	37.4
400V@50Hz	42.5	34	46.75	37.4
415V@50Hz	42.5	34	46.75	37.4
415V@60Hz	52.5	42	57.75	46.2
440V@60Hz	52.5	42	57.75	46.2
480V@60Hz	55	44	60.5	48.4

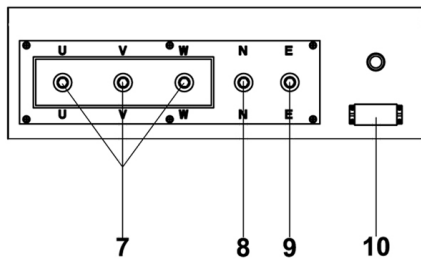
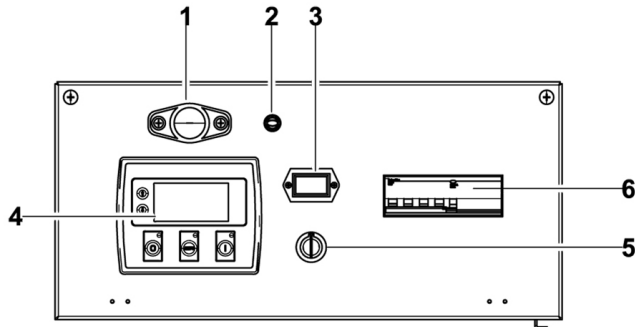
Overall Dimensions



- ⑧ Air inlet
- ⑦ Cable trench
- ⑥ Emergency stop switch
- ⑤ Control cabinet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ Fork lift channel
- ⑭ Base frame
- ⑬ External fuel inlet/return hose fitting
- ⑫ Tie down
- ⑪ Access door
- ⑩ Fuel drain
- ⑨ Oil / coolant drain hose fitting

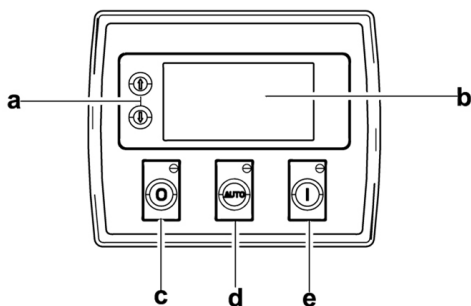


Control System



Control & field wiring cabinet

Ref.	Description
1	Control cabinet lamp
2	Control cabinet lamp switch
3	Time counter
4	Control module
5	Key switch
6	Main circuit breaker
7	Live wire terminal
8	Neutral wire terminal
9	Ground wire terminal
10	Remote control/Mains input



Control module

Ref.	Description
a	Navigation button; Accept (Configuration mode only)
b	Main status display
c	Stop/reset button; Next page (Configuration mode only)
d	Auto start button; Decrease value/next item (Configuration mode only)
e	Start button; Increase value/next item (Configuration mode only)

Product Standard Configuration

Alternator	Control System	Fuel System	Lubrication System	Cooling System
Alternator A.V.R	PLC-7420 Control System Observation Window and Control Door Air Breaker External Cable Connection Cable Line Slot	Base Fuel Tank Water Separator Fuel Prefilter Fuel Tank Drain Fuel Level Control Panel Display	Lube Oil Drain Pump	50°C Radiator External Water Inlet Supplied with Coolant Protection Mesh for Fan and Revolving Parts
Air intake system	Exhaust system	Shipment and Installation	Safety protection devices	Technical documents
Air Filter Intake Air Filter Screen Intake Air Silencer	Industrial Silencer Heat Insulation Protective Sleeve Exhaust Outlet with Flexible Heat Hand Protection	Forklift Lifting Points Lifting Lug Dragging Hole Side Collision Avoidance Design Base Mounting Hole	Earth Protection Oil Pressure Warning/Downtime Water Temperature Warning/Downtime Water Level Warning/Downtime Speed Warning/Downtime External Emergency Stop	Genset Operation Manual Engine Operation Manual Alternator Operation Manual Genset Test Report Genset Circuit Diagram Genset Installation Drawings Maintenance Manual Maintenance Records
Engine	Machine Body			
Water-Cooled Engine Battery Battery Switch Draining Oil Pump Standard Air Filter Electronic Governor Radiator Core Guard Battery Charger Air Filter with Replaceable Cartridge	Silence Cotton Inside Canopy Central Lifting Point Baseplate with Retention Tank Forklifts			

Optional Configuration

Alternator	Control System	Fuel System	Lubrication System	Cooling System
PMG Anti-condensation Heater Winding Temperature Measurement	PLC-920 Control System PLC-8610 Control System Leak Protection Device	External Fuel Filling Device Fuel Level Gauge Auto Refilling Diesel System Oil Pan Fuel Three-Way Valve	Auto Refilling Oil System Lube Oil Preheater Oil Level Gauge Lube Oil Temperature Sensor	45°C Radiator 40°C Radiator
Air intake system	Exhaust system	Voltage	Wheel Braking System	Safety protection devices
Forced Air Inlet System Intake Air Preheating System	Residential Silencer	415/240V 400/230V 380/220V 220-240V-SINGLE PHASE 220/127V 480/277V 440/254V	Trailer-Roadside Type Trailer-Off-Road Type Trailer Suspension System	RCD Protection Oil Level Warning/Downtime Imbalanced Three-phase Warning/Downtime Spark-extinguishing Device Anti-lightning Installation Secure Transportation Open the Door Shutdown Protection Extinguisher Explosion-proof Lamp No-skid Floor Rest Area
High-tech configuration	Optional configuration	Technical documents	Engine	
Remote Control Remote Communication and Diagnosis Remote Monitor Auto Start-Stop System Alert Message Notification Maintenance Cycle Notification	Three-way Catalytic Converter Engine Triple Painted Genset Parallel Installation External Fuel Tank SECC Base Frame Stainless Steel Exhaust System 4 Poles Circuit Breaker ATS Quick Connector Fuel Leaking Protection	Genset Parts Manual Engine Parts Manual Genset Tools Package	Jacket Water Heater 220/240V Oil Heater Heavy Duty Air Filter Block Heater	