

Features:

- Perkins engine
- STAMFORD Alternator, Class H
- Genset Canopy IP44 protection, Control panel IP56 protection
- Control module PLC-920
- Breaker: NADER 700A
- Speed governor: ECM governor
- Excitation system: Brushless
- A.V.R model: AS440
- 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 forkslots
- Big daily fuel tank



Output Ratings

Generator Set Model	Prime Power		Standby Power	
	kVA	kW	kVA	kW
WPS450S	450	360	495	396

Ratings at 0.8 power factor

Dimensions and Weights

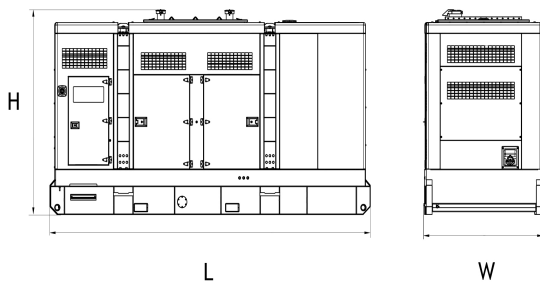
Model	L x W x H-mm	Dry Weight-kg
WPS450S	4592x 1523x 2459	5113

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	2506C-E15TAG1
Alternator Brand	STAMFORD
Alternator Model	HCI544C
Control System	PLC-920
Circuit Breaker Type	NADER 700A
Frequency / Phase	50Hz/3Phase
Engine Speed (RPM)	1500
Fuel Tank Capacity (L)	1020
Fuel Consumption (L/h) (100%load)	99
Model Type	Soundproofed
Standard Package	Plastic
Noise Level@7m (dBA)	68
Generator set Manufacture	PowerLink
Oil Consumption (L/h)	0.099
Volatage (V)	380/400/415/440
Silencer Noise Reduction (dBA)	10-20

WPS450S/ 1000008563

450kVA, Soundproofed, 2506C-E15TAG1, HCI544C, 3phase,
AutoGen

Engine Model:2506C-E15TAG1

Engine Technical Data

Engine Model	2506C-E15TAG1
Engine Brand	Perkins
Number of Cylinders	6
Cylinders Arrangement	In-line
Bore/Stroke (mm)	137/171
Speed (RPM)	1500
Displacement (L)	15.2
Compression Ratio	16
Air Intake system	Turbocharge aftercooler
Cooling Method	Water cooled
Coolant Capacity (L)	58
Prime Power (kWm)	396
Standby Power (kWm)	435
Governing Type	ECM
Back Pressure (mmhg)	6.8
Battery (V)	24

Fuel System

Fuel Tank	steel			
Fuel Tank Capacity (L)	1020			
Fuel tank type	Double-layer			
Recommended Fuel Type	0# or ASTM2			
Injection System	Direct injection			
Fuel Consumption:				
WPS450S	100% Load	75% Load	50% Load	25% Load
L/h	99	73	51	23.46

(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)	114
Oil capacity (L)	62

Exhaust and silencer System

Exhaust Air Flow (m ³ /hr)	5640
Exhaust Air Temp. (°C)	550
Maximum Allowable Back Pressure (mmhg)	6.8
NOx (mg/Nm ³)	
Silencer Quantity	1
Silencer Type	Industrial silencer

Cooling System

Radiator	50
Coolant Capacity (L)	58
Coolant Change Time (Year/h)	2/10000
Coolant Intake Temp. (°C)	40
Coolant Output Temp. (°C)	107

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

Air Intake system

Air Filter Type	Dry type
Intake Air Flow (m ³ /h)	2148
Intake System	Turbocharge aftercooler
Intake Air Temp. (°C)	25

Conditions

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

WPS450S/ 1000008563

450kVA, Soundproofed, 2506C-E15TAG1, HCI544C, 3phase, AutoGen

Alternator Model:HCI544C

Alternator Physical Data

AVR Model	AS440
Alternator Brand	STAMFORD
Alternator Model	HCI544C
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	0.08s
T''d	0.012s
T'do	2s
Ta	0.017s
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 (m ³ /s) -Alternator 50Hz/60Hz	1.035
Altitude-Alternator (m)	1000

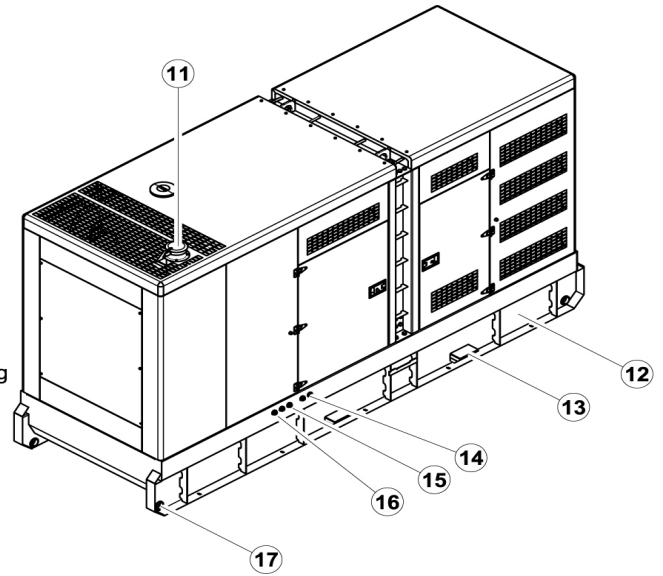
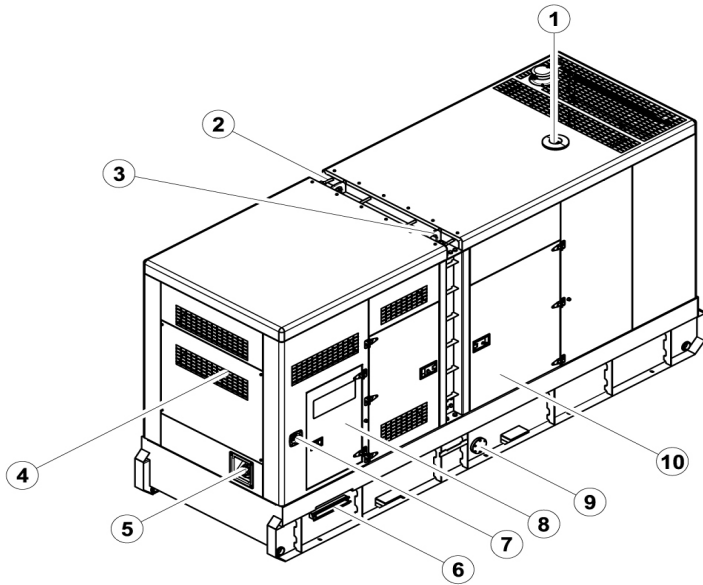
Voltage Technical Data

Voltage	Prime		Standby	
	kVA	kW	kVA	kW
380V@50Hz	455	364	500	400
400V@50Hz	500	400	550	440
415V@50Hz	455	364	500	400
415V@60Hz	550	440	605	484
440V@60Hz	581	464.8	639	511
480V@60Hz	594	475.2	653	522

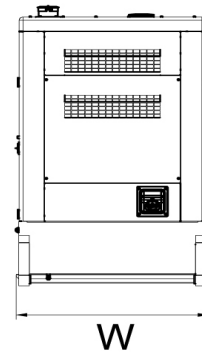
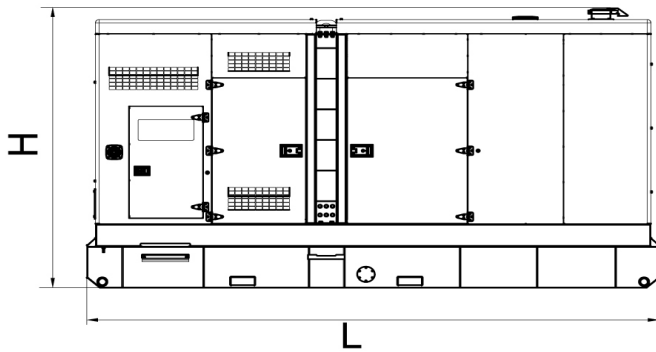
WPS450S/ 1000008563

450kVA, Soundproofed, 2506C-E15TAG1, HCI544C, 3phase, AutoGen

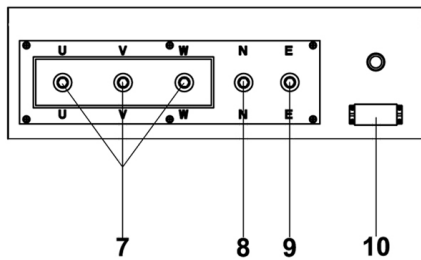
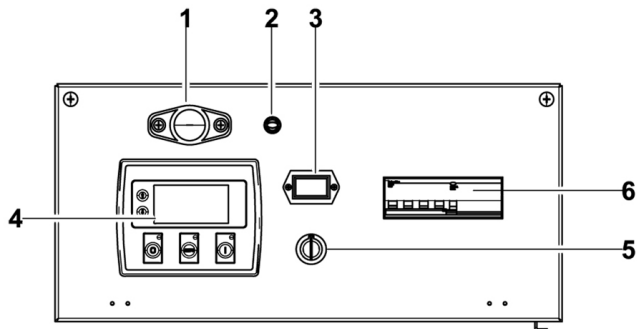
Overall Dimensions



- | | |
|-------------------------|--|
| 9 Fuel drain | 17 Tie down |
| 8 Control cabinet | 16 External fuel inlet/return hose fitting |
| 7 Emergency stop switch | 15 Coolan drain hose fitting |
| 6 Cable trench | 14 Oil drain hose fitting |
| 5 Fuel inlet | 13 Fork lift channel |
| 4 Air inlet | 12 Base frame |
| 3 Lifting lug | 11 Exhaust gas outlet |
| 2 Roping lug | 10 Access door |
| 1 Coolant inlet | |

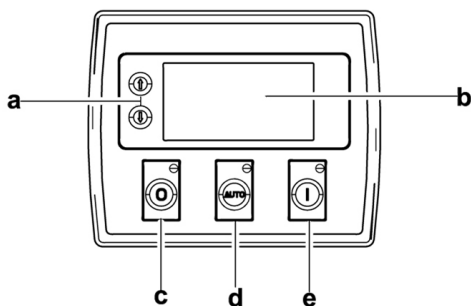


Control System



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			

