



#### ACCURATE POWER INDUSTRIAL GENERAL TRADING LLC





# **STAMFORD**

# **GENERATING SET MODEL WVS 400**

Output Ratings	Prime	Standby
400 V,3 ph,50 Hz,1500 rpm	412 kVA	452 kVA
	329 kW	362 kW
480 V,3 ph,60 Hz,1800 rpm	456 kVA	501 kVA
	365 kW	401 kW

Power Factor: 0.8

# **ENGINE / TECHNICAL DATA**

Engine Make	Volvo Penta
Engine Model	TAD1344GE
Governing Type	Electronic
Number of Cylinders	6
Cylinder Arrangement	Vertical In Line
Bore and Stroke mm	131x158
Displacement / Cubic Capacity Itrs	12.78
Aspiration	Turbocharged
Cycle	4 stroke
Combustion System	Direct Injection
Compression Ratio	18.1:1

# STANDARD SPECIFICATIONS

Volvo four stroke heavy duty high performance industrial type diesel engine

#### 2. ENGINE FILTRATION SYSTEM

- Cartridge type dry air filterTwo cartridge type fuel filters
- · Full flow lube oil filter

All filters have replacable elements

# 3. COOLING RADIATOR

Radiator and cooling fan, complete with safety guards, designed to cool the engine at high ambient temperatures (con-sult your dealer for deration factors)

#### 4. EXHAUST SYSTEM

Heavy duty Industrial Exhaust Silencer

Silencer noise reduction level 14 (dB) Maximum allowable back pressure 10.0(kP)

#### 5. CIRCUIT BREAKER TYPE ABB 3 pole MCCB.(4 pole is optional)

On Generating sets upto 700kVA, the baseframe design is incorporated with an integral fuel tank with a capacity of approx. 8 hours running at full load. The tank is supplied complete with fill cap breather, fuel speed and return lines to the engine and drain plug.

# 7. ALTERNATOR

#### 7.1 INSULATION SYSTEM

- · Insulation : Class H
- · All windings are impregnated in either a triple dip thermosetting liquid, oil and acid resisting polyester varnish or vaccum pressure impregnated with a special
- polyester resin.

   Heavy coat of antitracking varnish additional protection against moisture or condenasation.

72 AUTOMATIC VOLTAGE REGULATOR (AVR) The fully sealed AVR maintains the voltage regulation at ±0.5%. Nominal adjustment by means of a trim pot incorporated on the AVR.

# 7.3 MOTOR STARTING

An overload capacity equivalent to 300% of the full load impedance at zero power factor can be sustained for 10 sec.,when AREP or PMG option

## 8. MOUNTING ARRANGEMENT

8.1 BASE FRAME

The complete generating set is mounted as a whole on a heavy duty fabricated steel baseframe.

## 8.2 COUPLING

The engine and alternator are directly coupled by means of an SAE flange. The engine flywheel is flexibly coupled to the alternator rotor.

8.3 ANTI-VIBRATION MOUNTING PADS Anti-vibration pads are affixed between the engine / alternator feet and the baseframe thus ensuring complete vibration isolation of the rotating assembly.









Frequency and Engine Speed	50Hz & 1500rpm			60Hz & 1800rpm		
	Pri	me		Prime		
Gross Engine Power kWm	354		354			392
Fuel Consumption @50%load I/hr	42.14			47.83		
@75%load l/hr	62.26			70		
@100%load l/hr	82.75			93.8		
Oil Consumption (I/hr)	0.0	)4		0.05		
Oil Sump Capacity, I	30			30		
Heat Rejection at Exhaust (Standby) kW	26	6		324		
Exhaust Temperature °C Standby	46	5		490		
Radiator Cooling Air Flow: m³/s	6.5	i		8.1		
Combustion Air Flow (Standby) : m³/min	28			33		
Exhaust Gas Flow (Standby) : m³/min	67.5			82		
Dimension (mm) & Weight (Kg) Length	Width	Height	Weight			
Open 3350	1150	1850	3470			
Soundproof 3985	1560	2450	4887	STANDARD SPECIFICATIONS		

# **ALTERNATOR DATA**

Make	Stamford	
Model	HCI444F	
No. of bearings	1	
Insulation Class	Н	
Total Harmonic Content	on load <3.5% / <2%	
Wires	6 / 12	
Ingress Protection	IP23	
Excitation System	Shunt / Self Excited	
Winding Pitch	2/3(n°6)	
AVR Model	R150 / SX440	
Overspeed	2250 mn <sup>-</sup> 1	
Voltage Regulation	±1%	
Short Circuit Capacity	-	
AREP & PMG Excitation System Available as optional		

### 8.4 SAFETY GUARDS

The fan and fan drive along with the battery charging alternator are safety guard protected for personnel protection.

# 9. FACTORY TESTS

- The generating set is load tested before dispatch.
- All protective devices control functions and site load conditions are simulated. The generator and it's systems are checked before dispatch.

# 10. EQUIPMENT FINISHING

All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

# 11. DOCUMENTATIONS

Operation and Maintenance manual, circuit wiring diagrams and commissioning/fault finding instruction leaflets are accompanied with the generator.

# **CONTROL PANEL**

Deep Sea

Model DSE4510
The DSE4510 is an Auto Start Control Module for single genset applications. It includes a backlit LCD display which clearly shows the status of the engine all the times. This module can either be programmed using the front panel or by using the DSE configuration suits PC = 21 configuration suitr PC software.

Metering and AlarmIndications:

# Generator Frequency

- Underspeed, Overspeed
- Generator volts(L-L,L-N)Generator Current
- Engine Oil Pressure
- Engine Coolant
- Temperature • Fuel Level
- Hours Run Counter
- Battery VoltsFail to start/stop
- Emergency Stop

- Failed to reach loading voltage/frequency
   Charge fail
   Loss of magnetic pick-up signal-Optional
   Low DC Voltage
   CAN disagnessing and
- CAN diagnostics and CAN fail/error



