

**VOLVO  
PENTA**

**R POWER**



**MODEL**  
**RKULSTD 500VL**
**Standby**  
**500 kW**
**60**  
**Hz**
**1800**  
**RPM**
**EPA**  
**Tier2**

 Stationary **Generator**


Referential Image

**RATINGS**

Voltage (L-N/L-L)		120/208V	120/240V	277/480V
Phase		3PH	3PH	3PH
Power factor	Cos Phi	0.8	0.8	0.8
Frequency		60	60	60
Controlor	Deep Sea	7320 MKII	7320 MKII	7320 MKII
Engine	VOLVO	TAD 164IGE	TAD 164IGE	TAD 164IGE
Alternator	Stamford	S5LID-E	S5LID-E	S5LID-E
Leads Connection		12 Lead Parallel Wye	12 Lead Series Delta	12 Lead Series Wye

**STANDBY**

Power	kW	500	500	500
Power	kVA	625	625	625
Amperage	A	1735	1504	752

**PRIME**

Power	kW	450	450	450
Power	kVA	563	563	563
Amperage	A	1561	1353	677

**Certifications and Standards**

- Not all codes and standards apply to all configurations. Contact factory for details.
- EPA Tier 2 (Refers to engine emissions control)
  - IBC 2021 / ASCE/SEI 7-16 - optional (Refers to seismic and wind safety of generator)
  - UL 2200 - optional (Refers to the generator assembly)
  - UL 142 - optional (Refers to the design, construction, and testing of the tank)
  - NFPA 37, 70, 99, 110 - optional (Standards governing the installation, operation, safety and reliability of generators)
  - ISO 3046, 8528, SAE J1349 (Refers to the performance, power and measurement of the internal combustion engine and generators)
  - NEMA MG 1, UL489 - (Refers to alternators and Circuit Breakers)
  - ISO 8528-5 - optional (Refers to testing for transient response)
  - Verified product design, quality, and performance integrity
  - All generator systems are prototype and factory tested

**Warranty**

- 2 years or 2000 hours operational warranty

**Emergency Standby Power (ESP):** According to ISO 8528-1:2018, ESP is the maximum power available for use under variable loads in the event of a grid power outage or during testing conditions for a limited number of hours per year, specifically 200 hours, within the manufacturer's prescribed maintenance intervals and under the environmental conditions specified by the manufacturer. The average power consumed over a 24-hour period must not exceed 70% of the ESP.

**Prime Power (PRP):** According to ISO 8528-1:2018, PRP is the maximum power available for use under variable loads for an unlimited number of hours per year within the manufacturer's prescribed maintenance intervals and under the environmental conditions specified by the manufacturer. The average power consumed over a 24-hour period must not exceed 70% of the PRP.

**Continuous Power (COP):** According to ISO 8528-1:2018, COP is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

## Application Data

### ENGINE

Manufacturer	VOLVO	Displacement	L(in3)	16.1(984)
Model	TAD 164IGE	Bore x stroke	mm(in)	144x165(5.67x6.5)
Configuration	6 cylinders in line	Frequency	Hz	60
Governor	Electronic, Common Rail	Velocity	RPM	1800
Certification EPA	Tier 2	Compression ratio		18.1:1

### FUEL SYSTEM

Fuel suction fitting	3/8" NPT Female
Fuel return fitting	3/8" NPT Female
Injection type	Indirect
Recommended fuel	Diesel # 2 - ULSD

### AIR REQUIREMENTS

Intake airflow	m3/min(CFM)	203(7173)
Airflow for radiator	m3/min(CFM)	14.4(509)
Type aspiration		Turbocharged

### LUBRICATION SYSTEM

Total oil capacity	L (gal)	48(12.7)
Recommended oil		SAE 15W-40

### EXHAUST SYSTEM

Back pressure	kPa (in. H2 O)	10(40.1)
Exhaust Gas Flow	m3/min (CFM)	25.8(910)
Gas temp. (stack)	°C (°F)	480(896)

### COOLING SYSTEM

Coolant capacity	L (gal)	60(15.9)
Ambient Temp. Rad.	°C (°F)	50(122)
Recommended coolant		50/50

### ELECTRIC SYSTEM

Starting	Volt	24
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### FUEL CONSUMPTION

		STANDBY	PRIME
At 100% load	L/hr (gal/hr)	128(33.9)	TBD
At 75% load	L/hr (gal/hr)	96.5(25.5)	TBD
At 50% load	L/hr (gal/hr)	53(17)	TBD



## Alternator Specifications

### GENERAL INFORMATION

Manufacturer	Stamford
Models	S5LID-E
Design	4 Poles   IP23
Temp. Rise   Insulation Type	Standby 150/40°C   Class H
Exciter system   AVR	PMG   MX341 (+/-1%)

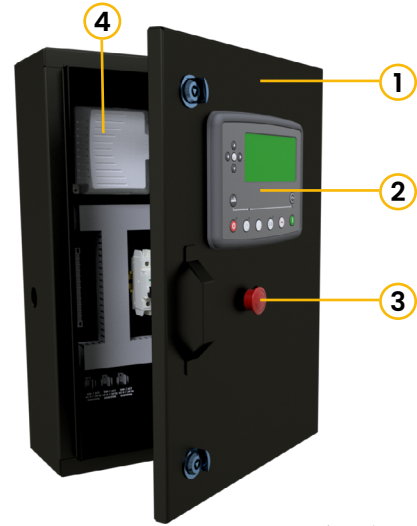


## Control Panel Specifications

**DSE7320 MKII** Auto Start Control Module and Auto Mains Failure Control Module for diesel or gas generator set applications. It features a Dual Core processor, extended memory, and data logging, providing higher speed and functionality. Monitors multiple engine and alternator parameters, displaying alarms and status on a backlit LCD screen, LEDs, remote PC, or via SMS (with external communication device). Allows programming of 4 additional LED alarms.



1. Enclosure Galvanneal
2. Control Module
3. Emergency Button
4. Battery Charger

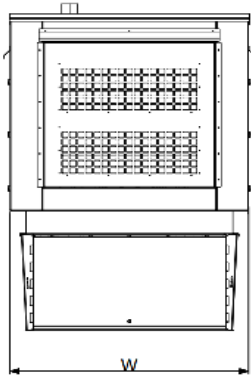


Referential Image

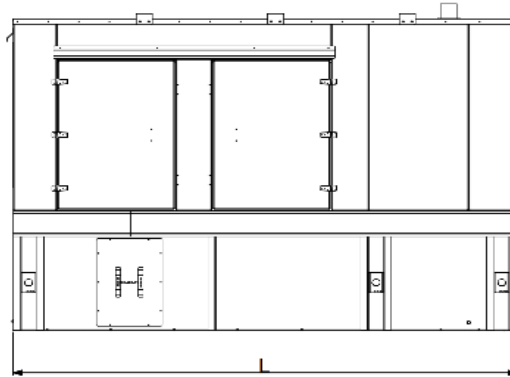
COMPARISOR	DSE4520	DSE6320	DSE7320	DSE7420	DSE8620
<b>GENERAL</b>					
<b>PIN protection / Multiple Languages</b>	Yes	Yes	Yes	Yes	Yes
<b>Generator run-time scheduler</b>	Yes	Yes	Yes	Yes	Yes
<b>GENSET AND MAIN READING</b>					
<b>Voltage between PH-PH / N-PH</b>	Yes	Yes	Yes	Yes	Yes
<b>PF, Hz, Kva, Kw, KVAR, A</b>	Yes	Yes	Yes	Yes	Yes
<b>ENGINE READING AND ALARM</b>					
<b>High coolant temperature</b>	Yes	Yes	Yes	Yes	Yes
<b>Low oil pressure, coolant level, fuel level</b>	Yes	Yes	Yes	Yes	Yes
<b>Unexpected shutdown and Stop failure</b>	Yes	Yes	Yes	Yes	Yes
<b>Low battery Voltage</b>	Yes	Yes	Yes	Yes	Yes
<b>Battery charging alternator failure</b>	Yes	Yes	Yes	Yes	Yes
<b>Over and under speed</b>	Yes	Yes	Yes	Yes	Yes
<b>Start failure and emergency stop</b>	Yes	Yes	Yes	Yes	Yes
<b>ALTERNATOR READING AND ALARM</b>					
<b>Overload, Over and Under Frequency</b>	Yes	Yes	Yes	Yes	Yes
<b>Over, Under and Unbalanced voltage</b>	Yes	Yes	Yes	Yes	Yes
<b>Short circuit and reverse power</b>	Yes	Yes	Yes	Yes	Yes
<b>CONNECTIVITY AND PARALLEL</b>					
<b>USB, ECU</b>	Yes	Yes	Yes	Yes	Yes
<b>RS232</b>	No	No	Yes	Yes	Yes
<b>RS485, DSENET</b>	No	Yes	Yes	Yes	Yes
<b>DSENET Expansion</b>	Yes	Yes	Yes	Yes	Yes
<b>USB Host, Ethernet RJ45</b>	No	No	No	Yes	Yes
<b>Parallel function</b>	No	No	No	No	Yes

## Dimensions, Weight and Sound Level

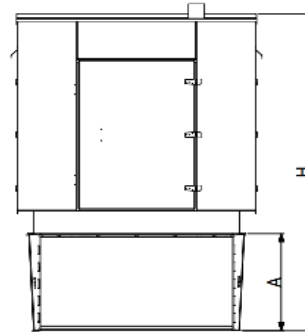
Level 3 | Back View



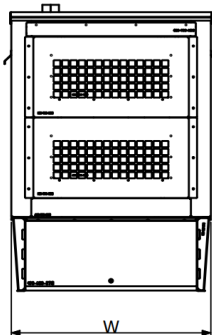
Level 3 | Lateral View



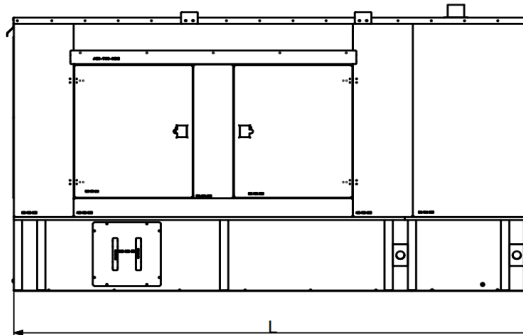
Level 3 | Front View



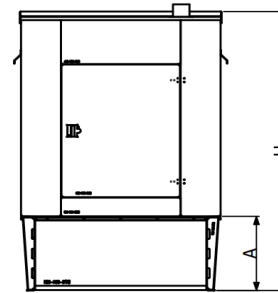
Level 2 | Back View



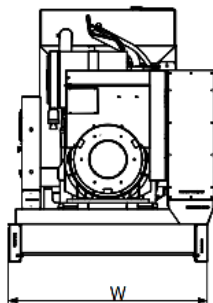
Level 2 | Lateral View



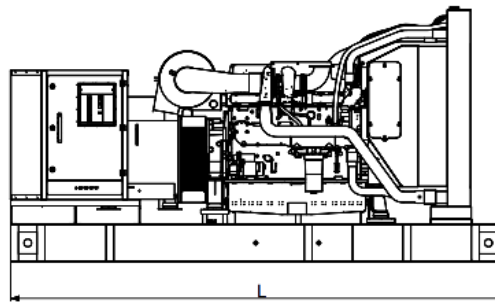
Level 2 | Front View



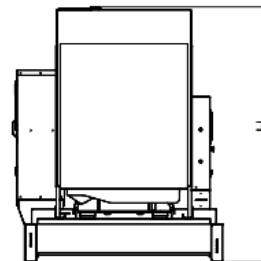
Opentype | Back View



Opentype | Lateral View



Opentype | Front View



- Level 2 enclosures include sound attenuation foam (one layer).
- Level 3 enclosures include sound attenuation foam (Two layers).
- Enclosure manufactured in **Aluminium** with a wind rating of **170 MPH**, according to **IBC 2018** and **ASCE/SEI7-16** standards

Enclosure	Fuel Tank	Autonomy (hr)	Dimensions, in					Weight lb	Sound Level dB(A)@7m
			Length (L)	Width (W)	Height (H)	Tank (A)	Exhaust (Ø)		
Level 3	1500USG	44	239	95	126	24	7	17000	76 +/-2
Level 3	2300USG	67	239	95	136	34	7	17800	76 +/-2
Level 2	1500USG	44	239	90	118	24	7	16700	84 +/-2
Level 2	2300USG	67	239	90	128	34	7	17500	84 +/-2
Opentype	200USG Daytank	5	156	64	91	-	7	10500	93 +/-2
Opentype	-	-	156	64	84	-	7	10100	93 +/-2

- All measurements are approximate and are provided for estimation purposes only. Weights do not include fuel weight.
- Sound levels are measured at **23 feet (7 meters)** in accordance with **ISO 8528-10**.
- **Double Wall** Fuel Tank manufactured in **Steel** according to **UL142 Listed**.

## Wire Connections

Voltage (Vac)	Phase	Terminal	Lug Qty per Terminal	Qty Wire x Max. Wire Size
120/208	3P	R-S-T-N	2	4x500KCMIL
120/208	3P	Ground	1	2x500KCMIL
120/240	3P	R-S-T-N	2	4x500KCMIL
120/240	3P	Ground	1	2x500KCMIL
277/480	3P	R-S-T	1	2x400KCMIL
277/480	3P	Neutral	1	2x500KCMIL
277/480	3P	Ground	1	1x600KCMIL

- Do not exceed this value - may cause damage to the equipment, voiding warranty.

## Standard Features

### ENCLOSURE

- Aluminium Material
- Stainless steel door hinges
- Stainless steel lockable handles
- Soundproofing foam
- Gasketed doors
- Rain protection visor

### EXHAUST SYSTEM

- Galvanneal Material
- Rain Cap (Exhaust outlet)
- Stainless Steel flexible exhaust connect.

### FUEL TANK

- Mild Steel Material
- Mechanical Fuel Gauge
- Fitting drainage internal wall
- Fitting drainage external wall
- Spare: 2" NPT male nipple
- Spare: 2" NPT Female Coupling

### ALTERNATOR

- Class H insulation material
- Brushless Excitation
- 2/3 Pitch

### ELECTRICAL SYSTEM

- Battery Charger 24V 5A

### GENERATOR SET

- Internal Genset Vibration Isolation
- Emergency Stop Button
- Standard Factory Test
- 2 years/2000 hours operational warranty

### ENGINE

- Oil Drain Valve
- Coolant Drain Valve
- Air Cleaner
- Flexible Fuel Line - NPT Connection
- Air cleaner

## Configurable Options

### GENERATOR SET

- Mobile Type
- Seismic isolator
- Special Testing
- Special Dimensions
- External emergency button
- Diesel Pump Transfer

### ENCLOSURE

- Stainless Steel Material
- Removable Doors
- Up to 200 MPH Wind Load Rating\*  
(Consult Factory for Availability)

### FUEL TANK

- Special Dimensions / Capacity
- Stainless Steel Material
- Digital Fuel Gauge
- Low / High Fuel Alarms
- Rupture Switch
- External Main Fuel Tank
- External Daytank

### EXHAUST SYSTEM

- Stainless Steel Material Muffler
- Critical Exhaust Muffler
- Muffler on enclosure

### ELECTRICAL SYSTEM

- Battery Charger 2 units parallel for 10A
- Battery charger NFPA110 compliance

### ENGINE

- Kit Spare Parts
- Fluid Containment Pan

### ALTERNATOR

- Upsize Alternator
- AVR Digital
- Anti-Condensation Heater
- Droop CT for Parallelism
- Topical Alternator Coating

### CIRCUIT BREAKER

- Electronic: trip unit 40-100% rated
- Motorized Circuit Breaker for Parallelism
- 2 Circuit Berakers

### CONTROL SYSTEM

- DSE8620/DSE8610 - Parallel controller
- DSE7420 - Control Module
- DSE890 - Remote Communication
- DSE855 - USB to Ethernet Adapter
- DSE2548/DSE7320 Remote Annunciator

### AUTOMATIC TRANSFER SWITCH (ATS)

- Switch 100-3000A
- Enclosure NEMA 3R / Galvanneal
- Enclosure NEMA 4X / Stainless Steel
- Enclosure NEMA 1 / Galvanneal
- Enclosure NEMA 12 / Galvanneal
- ATS + Breaker