

**VOLVO  
PENTA**

**DIESEL POWERED  
GENERATING  
SETS**

**505  
700** kVA

**404  
560** kW



**aksa** POWER GENERATION

Generating Set Model	Power Pf.0,8 400 / 230 V - 50 Hz	
	Standby kVA	Prime kVA
	AVP 505	505
AVP 550	550	500
AVP 655	655	595
AVP 700	700	636

**Standby:** Continuous running at variable load for duration of an emergency.No overload is permitted on these ratings.  
**Prime:** Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. Contact us for the other running periods.

**STANDARD GENSET SPECIFICATIONS**

**ENGINE**

- VOLVO heavy duty diesel engine
- Four cycle water cooled, turbo charged
- Direct injection fuel system
- Electronic governor control system
- Replaceable wet type cylinder liners
- 24 V.D.C.starter and charge alternator
- Replaceable fuel filter, oil filter and dry element air filter
- Cooling radiator and fan
- Flexible fuel connection hoses and manual sump oil drain valve
- Industrial capacity exhaust silencer and steel bellows
- Starter battery (with lead acid) including Rack and Cables
- Jacket water heater
- Manual for application and installation

**ALTERNATOR**

- Brushless, single bearing system, 4 poles, flexibel disc
- Insulation class H
- Standard degree of protection IP21
- Self-exciting and self-regulating
- Solid state automatic voltage regulator
- Screen protected and drip proof
- Impregnation with tropicalized epoxy varnished
- Stator winding with 2/3 pitch for improved harmonics
- Close voltage regulation

**CHASSIS**

- Steel chassis and antivibration pads
- Base frame design incorporates an integral fuel tank
- The generating set can be lifted or carefully pushed / pulled by the base frame
- Dial type fuel gauge and drain plug on the fuel tank

**CANOPY**

- All canopy parts are designed with modular principles
- Without welding assembly
- All metal canopy parts are painted by electrostatic polyester powder paint
- Panel window
- Lockable doors on each side.
- Easy maintenance and operation
- Easy lifting and moving, central lifting
- Thermally insulated engine exhaust system
- Exterior emergency stop push button.

**QUALITY STANDARDS**

ISO 9001:2008, TS ISO 8528-4 , TS ISO 8528-5, TS ISO 8528-8, BS EN ISO 14001:2004, BS OHSAS 18001:2007, TS 12650

**CONTROL SYSTEM**

**1) Auto. Mains Failure control panel - P732**

Control, supervision and protection panel is mounted on the gen-set base frame. The control panel is equipped as follows:

**Equipments:**

- Control with DSE, model 7320 module
- Static battery charger
- Emergency stop push button.

**a) Control Module DSE 7320 Features**

- The module monitors a mains supply and controls a standby generating set with automatic transfer switch
- Module indicates operational status and fault conditions by means of its LCD display
- Microprocessor controlled
- 132 x 64 pixel LCD display makes information easy to read
- Front panel programming and also via PC software
- Soft touch membrane keypad and five key menu navigation
- Remote communication via RS 232, RS 485 and Ethernet and SMS messaging
- Event logging (50) showing date and time
- Multiple date and time engine exercise mode and maintenance scheduler

**Controls**

Stop - Manual - Auto - Test - Start - Mute/Lamp test - Transfer to generator - Transfer to mains - Menu navigations buttons

**b) Instruments via LCD display**

**Engine**

- Oil pressure (PSI & Bar)
- Temperature (°C & °F )
- Speed RPM
- Run time
- Battery volts
- Maintenance due

**Mains**

- Volts (L-L / L-N)
- Frequency (Hz)

**c) Protections**

**Warning**

- Charge failure
- Battery under voltage
- Fail to stop
- Low fuel level (opt.)
- kW over load
- Negative phase sequence
- Loss of speed signal

**Pre-alarms**

- Low oil pressure
- High engine temperature
- Low engine temperature
- Over/Under speed
- Under/over generator frequency
- Under/over generator voltage
- ECU warning

**d) Led Indication**

- Mains available
- Mains on load
- Generator available
- Generator on load

**Generator**

- Volts (L-L / L-N)
- Currents (L1, L2, L3)
- Frequency (Hz)
- kW
- Cosφ
- kVA, kVAR,
- kWh, kVAh, kVArh
- Phase sequence

**Shut Downs**

- Fail to start
  - Emergency stop
  - Low oil pressure
  - High engine temperature
  - Low coolant level
  - Over/under speed
  - Under/over generator frequency
  - Under/over generator voltage
  - Oil pressure sensor open
  - Phase rotation
- Electrical trip**
- Earth fault
  - kW over load
  - Generator over current
  - Negative phase sequence

**2) Power Outlet Terminal Board Mounted on the Genset Base frame**



**DSE 7320**

**DIESEL GENERATING SETS**  
**400 / 230 V - 50Hz**
**GROUP**
**DIESEL ENGINE**

Model			AVP 505	AVP 550	AVP 655	AVP 700
Power	Standby	kVA	505	550	655	700
		kW	404	440	524	560
Pf. 0,8	Prime	kVA	455	500	595	636
		kW	364	400	476	508,8
Engine Make			Volvo			
Model			TAD1345GE	TAD1641GE	TAD1642GE	TWD1643GE
Gross Engine Power Output		kW	441	484	565	613
(at rated rpm)		Hp	600	658	768	834
Aspiration and Cooling			Turbocharged & IC			Turbocharged & AC
Total Displacement		Liter	12,78	16,12		
No. of Cylinders and Build			6 - Inline			
Engine Speed		rpm	1500			
Bore ve Stroke		mmxmm	131 x 158	144 x 165		
Compression Ratio			18,1:1	16,5:1		
Governor Type			Electronic			
Fuel Consumption	L/h	1/2 Load	46,6	51,6	59	63,8
		3/4 Load	69,2	76,3	88,4	95,6
		Full	91,8	103,2	119,7	129,5
Fuel Tank Capacity		Liter	700	850	850	1000
Total Oil Capacity		Liter	36	48	48	48
Coolant Capacity (Engine and radiator)		Liter	44	60	60	128
Radiator Cooling Air		m <sup>3</sup> /min	402	505	600	650
Air intake - Engine		m <sup>3</sup> /min	27,6	38	41,2	46,96
Exhaust Gas Flow		m <sup>3</sup> /min	58,3	92	102,5	111,8
Exhaust Gas Temperature		°C	570	455	482	463

IC: Ara sogutuculu (Inter Cooler)  
 AC: Son Sogutuculu (After Cooler)

**Open Types**

Dimensions (Lenght x Width x Height)	m	3,21 x 1,55 x 1,86	3,34 x 1,55 x 2,2	3,54 x 1,55 x 2,25
Dry Weight	kg.	3170	3200	4200

**Sound Attenuated Types**

Canopy Model		MS 70	MS 80	MS 85
Dimensions (Lenght x Width x Height)	m	4,46 x 1,61 x 2,48	4,81 x 1,61 x 2,62	5,3 x 1,61 x 2,66
Dry Weight	kg.	4205	4700	4970

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

**Optional Equipments**
**Diesel Engine**

- Oil heater

**Alternator**

- 3 pole output circuit breaker
- Anti-condensation heater
- Oversized alternator

**Panel**

- Charge ammeter
- Transfer switch 3 pole
- Transfer switch 4 pole
- Earth fault, single set
- Automatic synchronising and power control

**Accessories**

- Bulk fuel tank
- Automatic or manual fuel filling system
- Fuel - water separator filter
- Low fuel level alarm
- Residential silencer
- Enclosure or soundproof canopy
- Trailer
- Tool kit for maintenance



Aksa makes its sound attenuated generator sets sound pressure level tests in accordance with Directive 2000/14/EC validation of the sound level test has been approved by the notified body szutest

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