

## APD-AT56



POWER  
YOUR  
FUTURE

**Industrial Diesel  
Generator Set  
Powered by PERKINS**

## DIESEL GENERATING SET 60 Hz – 3 Phase / 1 Phase

APD-AT56		480/277V pf0.8	208/127V pf0.8	240/120V pf1
Standby	kVA	70	70	50
	kW	56	56	50
Prime	kVA	63.5	63.5	45
	kW	51	51	45

Standby : Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046 .

Prime : Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528,ISO 3046.

- High quality, reliable and complete power unit
- Compact design
- Easy start and maintenance possibility
- Every generating set is subject to a comprehensive test program which includes full load testing and testing of the control and safety shut down functions
- Full engineered with a wide range of options and accessories: Sound Attenuated Enclosure, DOT trailer, Voltage Selector Switch etc.

## ENGINE



- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged
- Direct injection fuel system
- Mechanical governor
- Replaceable fuel filter, oil filter and dry element air filter
- EPA Tier3 certified FLEX engine

- Cooling radiator and fan
- Starter battery (with lead acid) including rack and cables
- Flexible fuel connection hoses and manual oil sump drain valve
- Residential grade exhaust silencer and steel bellows
- Block jacket water heater
- Operation manuals and wiring diagram documents

## ALTERNATOR



- Brushless, single bearing system, flexible disc, 4 poles
- Insulation class H
- Standard degree of protection IP21/IP23
- Self-exciting and self-regulating

- Impregnated with tropical epoxy varnish
- Solid state Automatic Voltage Regulator
- Stator winding with 2/3 pitch for improved harmonics



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

**ENGINE**

PERKINS		
Model		1104D-44TG1
EPA Certification		TIER 3 - FLEX
Engine Power Output @ Rated rpm	bhp	85.8
	kWb	64
Aspiration and Cooling		Turbocharged
Total Displacement	cu.in.	268.5
	liter	4.4
No. of Cylinders and Build		4-Inline
Engine Speed	rpm	1800
Bore and Stroke	inches mm*mm	4.13 * 5.0 105 * 127
Compression Ratio		18.2:1
Governor		Electronic
Starter Motor Voltage		12 V
Fuel Consumption @ 100 % load	gal/hr	4.39
Fuel Consumption @ 75% load		3.38
Fuel Consumption @ 50% load		2.38
Fuel Tank Capacity	gal.	Optional
Oil Capacity	gal.	2.2
Coolant Capacity	gal.	4.4
Radiator Air Flow	scfm	2118
	m <sup>3</sup> /min	60
Air Intake – Engine	cfm	187
	m <sup>3</sup> /min	5.3
Exhaust Gas Flow	cfm	484
	m <sup>3</sup> /min	13.7

**ALTERNATOR**

Model	MP-58-4 / 361CSL1601
Prime Rating kW @ 480V /277V / @208/120V / @240/120V	70kW / 65kW / 55kW
Design	Brushless single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	125 °C Prime / 150 °C Stand by
Exciter Type	Self Excited(PMG excitation is optional)
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct drive centrifugal blower fan
AC Waveform Total Harmonic Distortion	No load < 1.5%. Non distorting balanced linear load < 5%
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<2%

\* Deration – All data based on operation to ISO3046-1:2002 & BS5514 standard reference conditions. Derate factor may apply under a typical site conditions.

## CONTROL SYSTEM

### Auto Mains Failure Control Panel

Standard Equipment in Control Panel:

- ✓ Control with AMF module
- ✓ Static battery charger
- ✓ Emergency stop push button

### Control module DSE 7320 features:

- ✓ The module is compatible with any two-wire start ATS
- ✓ NFPA110 compliant
- ✓ Micro-processor based design
- ✓ Automatic control of mains and generator contactors
- ✓ Monitors engine performance and AC power output
- ✓ LED alarm indication
- ✓ Front panel configuration of timers and alarm trip points
- ✓ Easy push button control  
STOP/RESET - MANUAL - TEST - AUTO - MUTE ALARM - START

### Metering via LED display:

- ✓ Generator Volts (L-L / L-N)
- ✓ Engine oil pressure (PSI-Bar)
- ✓ Generator Ampere (L1,L2,L3)
- ✓ Engine temperature (° C & ° F)
- ✓ Generator Frequency (Hz)
- ✓ Plant battery volts
- ✓ Engine hours run
- ✓ Mains Volts (Ph-Ph/Ph-N)
- ✓ Generator kVA, kWh
- ✓ Generator kW as % of rated kW setting
- ✓ Generator Cos ( $\sigma$ )



DSE 7320

### Alarms:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt.
- ✓ Start and Stop Failure
- ✓ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage
- ✓ Low Oil Pressure
- ✓ Emergency stop
- ✓ High engine temperature
- ✓ kW overload
- ✓ Unbalanced load
- ✓ Independent earth fault trip

### LED Indications:

Four configurable LED's like:

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

## ACCESSORIES

### \*Convenience Panel

- ✓ Two GFCI 20A, 120V Receptacles
- ✓ Three 50A, 240V Twist-Lock Receptacles
- ✓ Two 20A Single-Pole Breakers
- ✓ Three 50A Double-Pole Breakers
- ✓ Two Flanged Inlet Receptacles, 125V, 5-15A for Shore Power Connections
- ✓ Five Stud Type, Quick Connect Camlok Receptacles
- ✓ Two-Wire Start Connection Terminal Block
- ✓ Voltage adjust potentiometer

### \*Voltage Selector Switch (VSS)

- ✓ 480/277V, 208/120V Three-phase positions
- ✓ 240/120V Single-phase position
- ✓ Four position or different voltage options available on request.
- ✓ Kraus&Naimer / Salzer brand

### Adjustable Trip Breaker (MLCB) w/shunt trip



## OPTIONAL EQUIPMENT

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>✓ Oil Heater</li> <li>✓ Alternator Strip Heater</li> <li>✓ Battery Heater Blankets</li> <li>✓ Fuel Water Separator</li> <li>✓ Remote Annunciators</li> <li>✓ Remote monitoring</li> </ul> | <ul style="list-style-type: none"> <li>✓ Automatic &amp; Manual Transfer Switches</li> <li>✓ DOT Approved Trailers</li> <li>✓ Permanent Magnet Excitation (PMG)</li> <li>✓ Battery Chargers '10 amp'</li> <li>✓ *Convenience Panel &amp; *VSS</li> </ul> |
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## BASEFRAME

- ✓ The complete gen-set is mounted entirely on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator supports and the base frame
- ✓ Dial type fuel gauge and drain plug on the fuel tank
- ✓ 178 g SW tank integrated on base frame
- ✓ Single wall design
- ✓ Capacity of 24 hours at full load operation
- ✓ Lockable fuel filling cap from outside of canopy
- ✓ Forklift pockets within base frame

## SOUND ATTENUATED ENCLOSURE

- ✓ All enclosure parts are designed with modular principles without welding
- ✓ Extra large doors on each side for serviceability
- ✓ All metal canopy parts are painted by electrostatic polyester powder paint
- ✓ Exhaust silencer is protected against environmental influences and is internally mounted with the enclosure
- ✓ Thermally insulated engine exhaust system
- ✓ Emergency stop push button is externally mounted
- ✓ Enclosure designed for easy lifting and moving
- ✓ Easy maintenance and operation

## TRAILER

- ✓ DOT approved 7000lb heavy duty trailer,
- ✓ Dual axle design
- ✓ Spring axles w/electric brakes,
- ✓ Safety chains w/slip hook, 3" pintle ring adjustable
- ✓ Breakaway kit with charger
- ✓ Corner tie down breakers
- ✓ Optional tool box and spare tire available
- ✓ 5000lbs front jack
- ✓ 5000lbs rear stabilizing jacks
- ✓ Diamond plate fenders and fender steps
- ✓ DOT Lighting
- ✓ License plate holder
- ✓ 7 pin trailer plug

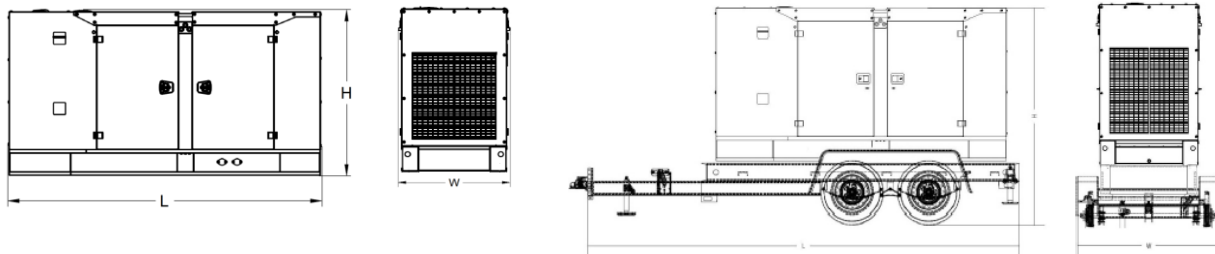
## DIMENSIONS

### SOUND ATTENUATED GENSET

DIMENSIONS (LxWxH)	inch.	122 * 42 * 75
DRY WEIGHT	Lb.	3516
SOUND LEVEL (23fr/7mt)	dBA	73

### SOUND ATTENUATED GENSET ON TRAILER

DIMENSIONS (LxWxH)	inch.	175 * 66 * 89
DRY WEIGHT	Lb.	



\*Those drawings are provided for reference only and should not be used for any planning purpose.

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