

**aksa** POWER  
GENERATION

# POWER YOUR FUTURE

RENTAL PACK SERIES



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# RENTAL PACK SERIES

## GEN-SET SPECIFICATIONS (CUMMINS POWERED)

Model	Engine Brand	Engine Model	Controller	Genset Power		Sound Level(dBA)		Fuel Tank Capacity(L)	Fuel Consumption (L/H)	Dimension (LxWxH)(mm)	Weight (kg)
				Standby (kVA)	Prime (kVA)	1M	7M				
APD30C	Cummins	4B3.9G2	DSE6020	30	27	77	65	330	6.7	2800x1020x1729	1500
APD43C	Cummins	4BT3.9G2	DSE6020	43	39	75	62	330	9.3	2800x1020x1729	1570
APD66C	Cummins	4BTA3.9G2	DSE6020	66	60	80	63	330	12.9	2800x1020x1729	1750
APD110C	Cummins	6BT5.9G2	DSE6020	110	100	80.1	71.5	550	22	3400x1100x1823	2100
APD200C	Cummins	6CTA8.3G2	DSE6020	200	180	80	66	1100	42	3600x1363x2103	3000
APD275C	Cummins	6LTAA8.9G2	DSE7320	275	250	TBD	TBD	1100	53	3700x1351x2103	3200
AC550	Cummins	QSX15G8	DSE7320	550	500	86.1	78.2	1500	103	5016x1696x2505	5800

## ENVIRONMENTAL & HEALTHY

### SOUND PROOF CANOPY WITH HIGH QUALITY SOUND ABSORBING MATERIAL

The interior is lined with high quality soundproof rubber and plastic material, and the door is airproof with rubber specific for car doors absorbing massive noise and heating during the operation.

### RESIDENTIAL SILENCER

Residential silencer with excellent performance reduce the noise which contribute to environmental protection.





# RENTAL PACK SERIES

## GEN-SET SPECIFICATIONS (PERKINS POWERED)

Model	Engine Brand	Engine Model	Controller	Genset Power		Sound Level(dBA)		Fuel Tank Capacity(L)	Fuel Consumption (L/H)	Dimension (LxWxH)(mm)	Weight (kg)
				Standby (kVA)	Prime (kVA)	1M	7M				
APD22PE	Perkins	404D-22G	DSE6020	22	20	69	58	150	5.4	2200x1051x1423	1150
APD33P	Perkins	1103A-33G	DSE6020	33	30	TBD	TBD	N/A	7.1	TBD	TBD
APD66P	Perkins	1103A-33TG2	DSE6020	66	60	TBD	TBD	N/A	13.9	TBD	TBD
APD110PE	Perkins	1104C-44TAG2	DSE6020	110	100	TBD	TBD	N/A	22.6	TBD	TBD
APD200P	Perkins	1106A-70TAG3	DSE6020	200	180	TBD	TBD	N/A	41.6	TBD	TBD
APD275PE	Perkins	1306A-E87TAG6	DSE7320	275	250	82	72	1100	54	3800x1350x2225	3200
APD500PE	Perkins	2506C-E15TAG1	DSE7320	500	455	TBD	TBD	N/A	99	TBD	TBD

## ENVIRONMENTAL & HEALTHY

### SOUND PROOF CANOPY WITH HIGH QUALITY SOUND ABSORBING MATERIAL

The interior is lined with high quality soundproof rubber and plastic material, and the door is airproof with rubber specific for car doors absorbing massive noise and heating during the operation.

### RESIDENTIAL SILENCER

Residential silencer with excellent performance reduce the noise which contribute to environmental protection.





# RENTAL PACK SERIES

## GEN-SET SPECIFICATIONS (VOLVO POWERED)

Model	Engine Brand	Engine Model	Controller	Genset Power		Sound Level(dBA)		Fuel Tank Capacity(L)	Fuel Consumption (L/H)	Dimension (LxWxH)(mm)	Weight (kg)
				Standby (kVA)	Prime (kVA)	1M	7M				
APD165V	Volvo	TAD731GE	DSE6020	165	150	86.5	73.5	1100	34.9	3700x1320x2103	3000
APD550V	Volvo	TAD1641GE	DSE7320	550	500	89	79.5	1350	103.2	5016x1696x2505	6300

## ENVIRONMENTAL & HEALTHY

### SOUND PROOF CANOPY WITH HIGH QUALITY SOUND ABSORBING MATERIAL

The interior is lined with high quality soundproof rubber and plastic material, and the door is airtight with rubber specific for car doors absorbing massive noise and heating during the operation.

### RESIDENTIAL SILENCER

Residential silencer with excellent performance reduce the noise which contribute to environmental protection.



## ENVIRONMENTAL & HEALTHY

- Bundled base fuel tank which can be satisfied with maximum 24 hours uninterrupted running and can be removable if necessary.
- Radiator is available to run under harsh weather conditions, and running temperature is 50oC.
- Strong mechanical construction, good antivibration function which settle for frequent moving.
- Using high quality soundproof material: rubber and plastic material which has higher anti-fire rating.
- Bundled base frame that can hold all liquids including fuel, oil and coolant.
- Mounted with safety locks avoiding unexpected opening.
- Fuel water separator can be installed as an option by customers' requirement.



Pressure Lock

## RENTAL PACK SERIES



Power Cables Port



Fuel Filler

## EASY OPERATION

- Fuel filling in port from outside.
- Three way by pass valves that enable to connect external fuel tank easily. (Not less than 110 KVA RP GEN-SET)
- Designed power cables port for customer convenient connection.

## HIGHER SECURITY

- Mounted with 3P/4P output breaker switch.
- Equipped with 30-100 mA leakage protective device, which can avoid accidents caused by unbalanced phase for maximizing the operator's safety.
- Mounted manual battery switches.
- Comply Australian cable standards AS3000:2007.



3P Output Breaker Switch



Battery Isolator Switch



Balance Points of Canopy Top



Beval Angle and Drag Holes



Beval Angle and Drag Holes

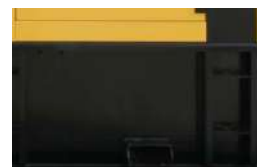
## CONVENIENT MOVING

- Be available for lifting through balance points of canopy top side.
- Angle and towing holes for moved expediently.



## GREAT MAINTAINABILITY

- Mounted with service port on the fuel tank which is easy for maintenance.
- Fork lift holes for bunded base and fuel tank base, it's easy for users to maintain or replace fuel tanks.
- There's bolt connction with fuel tank and base frame, and fuel tank and base frame can be separated by removing bolts. Fueltank side have drainage outlet, which is convenient for cleaning.



Fork Lift Hole

## ENGINE

Mounted with strong CUMMINS engine with quick start and high torque  
 Heavy duty diesel engine  
 24 V D.C. starter and charge alternator  
 Replaceable fuel filter, oil filter and dry element air filter  
 Cooling radiator and fan  
 Starter battery (with lead acid) including Rack and Cables  
 Flexible fuel connection hoses and manual oil sump drain valve  
 Jacket water heater  
 Operation manuals and circuit diagram documents



CUMMINS POWERED								
Genset Model		APD30C	APD43C	APD66C	APD110C	APD200C	APD275C	AC550
Model		4B3.9G2	4BT3.9G2	4BTA3.9G2	6BT5.9G2	6CTA8.3G2	6LTA8.9G2	QSX15G8
Engine Power Output at rated rpm	kWm	27	40	55	92	180	240	500
	HP	36	54	74	123	241	322	670
Aspiration and Cooling		Natural	Turbocharged	Turbocharged & Aftercooled	Turbocharged	Turbocharged & Aftercooled	Turbocharged and Charge Air Cooled	Turbocharged and Charge Air Cooled
Total Displacement	Litre	3.9	3.9	3.9	5.9	8.3	8.9	15
No. of Cylinders and Build		4 - Inline	4 - Inline	4 - Inline	6- Inline	6- Inline	6- Inline	6- Inline
Engine Speed	rpm	1500	1500	1500	1500	1500	1500	1500
Bord and Stroke	mmxmm	102x120	102x120	102x120	102x120	114x135	114x145	137x169
Compression Ratio		17.3:1	17.3:1	17.3:1	17.3:1	17.3:1	16.6:1	17:01
Governor		Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	ECM
Fuel Consumption at full load	L/hr	6.7	9.3	12.9	22	42	53	103
Oil Capacity	Litre	10.9	10.9	10.9	16.4	27.6	27.6	91
Coolant Capacity	Litre	19.2	19.2	19.9	32.9	41.3	41.1	42
Radiator Cooling Air	M <sup>3</sup> /min	120	120	120	136	186	475	708
Air Intake-Engine	M <sup>3</sup> /min	1.98	2.7	3.12	6.48	12.36	15.24	36.3
Exhaust Gas Flow	M <sup>3</sup> /min	4.26	6.48	8.04	16.8	34.68	38.04	82.2

PERKINS POWERED								
Genset Model		APD22PE	APD33P	APD66P	APD110PE	APD200P	APD275PE	APD500PE
Model		404D-22G	1103A-33G	1103A-33TG2	1104C-44TAG2	1106A-70TAG3	1306A-E87TAG6	2506C-E15TAG1
Engine Power Output at rated rpm	kWm	20.6	31	60.5	103	179.8	250	451
	HP	27.6	41.6	81.1	138.1	241	335	604.6
Aspiration and Cooling		Natural	Natural	Turbocharged	Turbocharged & Intercooled	Turbocharged and air charge cooled	Turbocharged & Intercooled	Turbocharged, air to air charge cooling
Total Displacement	Litre	2.216	3.3	3.3	4.4	7.01	8.7	15
No. of Cylinders and Build		4 - Inline	3 - Inline	3- Inline	4 - Inline	6 - Inline	6- Inline	6 - Inline
Engine Speed	rpm	1500	1500	1500	1500	1500	1500	1500
Bord and Stroke	mmxmm	84x100	105x127	105x127	105x127	105x135	116.6x135.9	137x171
Compression Ratio		23.3:1	19.25:1	17.25:1	18.23:1	16:1	16.9:1	16:1
Governor		Mechanical	Mechanical	Mechanical	Electronic	Mechanical	ECM	ECM
Fuel Consumption at full load	L/hr	5.4	7.1	13.9	22.6	41.6	54	99
Oil Capacity	Litre	10.6	8.3	8.3	8	16.5	28.3	62
Coolant Capacity	Litre	7	10.2	10.2	12.6	21	24.2	58
Radiator Cooling Air	M <sup>3</sup> /min	40.2	53	89	165.6	252	494	722
Air Intake-Engine	M <sup>3</sup> /min	1.45	2.16	3.9	6.27	13.87	15.4	35.8
Exhaust Gas Flow	M <sup>3</sup> /min	3.94	5.8	10.4	16.3	33.85	44.9	94



### VOLVO POWERED

Genset Model		APD165V	APD550V				
Model		TAD731GE	TAD1641GE				
Engine Power Output at rated rpm	kWm	153	484				
	HP	208	658				
Aspiration and Cooling		Turbocharged-Intercooled	Turbocharged-Aftercooled				
Total Displacement	Litre	7.15	16.12				
No. of Cylinders and Build		6 Cylinder, In-Line	6 Cylinder, In-Line				
Engine Speed	rpm	1500	1500				
Bore and Stroke	mmxmm	108 x 130	144 × 165				
Compression Ratio		18:1	16.5:1				
Governor		Heinzman / EDC4	Volvo / EMS 2				
Fuel Consumption at full load	L/hr	34.9	103.2				
Oil Capacity	Litre	20	48				
Coolant Capacity	Litre	23.8	60				
Radiator Cooling Air	M <sup>3</sup> /min	180	423				
Air Intake-Engine	M <sup>3</sup> /min	10.65	38				
Exhaust Gas Flow	M <sup>3</sup> /min	30.2	92				

## ALTERNATOR

Brushless, single bearing system, flexible disc, 4 poles

Insulation class H

Standard degree of protection IP23 (IP22 is available.)

Self-exciting and self-regulating

Impregnation with tropicalised epoxy varnish Solid state Automatic Voltage Regulator Stator winding with 2/3 pitch for improved harmonics

Design	Brushless single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	125 - 163 ° C Continuous
Exciter Type	Self Excited
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%





- c) 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

- d) LED indications**
- Mains available
  - Generator available
  - Mains on load
  - Generator on load

## CONTROL SYSTEM

### DSE6020

Control supervision and protection panel is mounted on the genset base frame.

The control panel is equipped as follows:

#### 1. Auto mains failure control panel

- Panel equipments:
- Control with AMF module
  - Static battery charger
  - Emergency stop push button

#### a) Generating set control module DSE 6020 features:

- The module is used to monitor main supply and starts and stops of a standby generating set
- Micro-processor based design
- Automatic control of main and generator contactors
- Monitors engine performance and AC power output LED alarm indication
- Front panel configuration of timers and alarm trip point
- CAN and magnetic pick-up versions(specify on ordering)
- 4 digital inputs/3 analogue inputs
- 6 outputs(4 configurable on Magnetic Pick-up, 6 configurable on CANbus version)
- Easy push button control
- STOP/RESET - MANUAL - AUTO - TEST – START

#### b) 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
  - Generator kW
  - Generator Cos (σ)



#### 2. Power outlet terminal board mounted on the genset base frame



# CONTROL SYSTEM

## DSE7320

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

Auto Mains Failure Control Panel  
 Panel equipments:  
 Control with AMF module  
 Static battery charger  
 Emergency stop push button

### a) Generating set control module DSE 7320 features:

The module is used to monitor mains supply and starts and stops of a standby generating set  
 Micro-processor based design  
 Automatic control of main 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

### b) 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 ( $\sigma$ )



### c) 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

### d) LED Indications

Four configurable LED's like:  
 Mains available  
 Generator available  
 Mains on load  
 Generator on load  
 Power Outlet Terminal Board Mounted on the Gen-set Base frame

