

AD490

POWER
YOUR
FUTURE485 kVA / 388kW
POWERED by HYUNDAI

DIESEL GENERATING SET 400/230 V - 50 Hz - 3 Phase

MODEL			AD490
Power Pf. 0.8	Standby	kVA	485
		kW	388
	Prime	kVA	425
		kW	340

Standby: According to ISO8528. Emergency StandbyPower (ESP) is defined as the maximum power available during a variable electrical power sequence.

Prime: According to ISO8528. Prime power (PRP) is defined as being the maximum power which a generating set is capable of delivering continuously while supplying a variable electrical load when operated for an unlimited number of hours per year.

- ✓ 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, checking and provision of all control and safety shut down functions testing
- ✓ Fully engineered with a wide range of options and accessories



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

ENGINE

HYUNDAI		
Model		P158LE
Engine Power Output at rated rpm	kWm	414
	HP	555
Aspiration and Cooling		Turbocharged and Intercooled
Total Displacement	Litre	14.618
No. of Cylinders and Build		8 - V
Engine Speed	rpm	1500
Bore and Stroke	mm × mm	128 × 142
Compression Ratio		15:1
Governor		Electronic
Fuel Consumption at full load	L/hr	89.3
Fuel Tank Capacity	Litre	670
Oil Capacity	Litre	21
Coolant Capacity	Litre	80
Radiator Cooling Air	m ³ /min	522
Air Intake – Engine	m ³ /min	29.1
Exhaust Gas Flow	m ³ /min	80.1

- ✓ Heavy duty diesel engine
- ✓ Direct injection fuel system
- ✓ 24Vdc starter and charge alternator
- ✓ Replaceable fuel filter, oil filter and dry element air filter

- ✓ Cooling radiator and fan
- ✓ Flexible fuel connection hoses and manual oil sump drain valve
- ✓ Standard exhaust silencer and steel bellows
- ✓ Jacket water heater(at automatic models)
- ✓ Operation manuals and circuit diagram documents

ALTERNATOR

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%

- ✓ Standard degree of protection IP23
- ✓ Impregnation with tropicalized epoxy varnish

- ✓ Solid state Automatic Voltage Regulator
- ✓ Stator winding with 2/3 pitch for improved harmonics

CONTROL SYSTEM

Control supervision and protection panel is mounted on the generating set 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) Product description:

- ✓ Single Gen-set controller for stand-by and prime power applications
- ✓ All-in-one intuitive & powerful PC tool for configuration/monitoring/control, locally or remotely
- ✓ Easy to install, configure and use

b) Product description:

- ✓ Stand-by and prime-power application in one unit
- ✓ 8 binary outputs, 8 + 1 binary inputs, 3 analog inputs (U/I/R)
- ✓ +5 V output reference for analog inputs
- ✓ 2 high-current E-Stop binary outputs
- ✓ 1 slot for extension plug-in module (Modbus, Internet, SMS, inputs/outputs)
- ✓ Extension CAN modules
- ✓ ECU support (Tier 4 Final, Stage V)
- ✓ RTC with battery back-up (full calendar)
- ✓ Power over USB for controller configuration
- ✓ Zero power mode
- ✓ True RMS measurement
- ✓ In-built PLC, complemented with a PLC monitoring tool in IntelliConfig
- ✓ Full remote communications support (AirGate 2.0, WSV)
- ✓ Internet access using Ethernet / 4G, Modbus TCP/RTU, SNMP v1/v2c
- ✓ Active SMS and emails
- ✓ Detailed history log with up to 150 records
- ✓ Dual Mutual Standby application support
- ✓ Remote display



IntelLite 4 AMF 25

- ✓ User setpoints and protections
- ✓ 5 languages in the controller & Translator functionality
- ✓ User Access Management
- ✓ Cyber security improvement
- ✓ Alternative configurations
- ✓ Multi-purpose schedulers
- ✓ 3 maintenance timers
- ✓ Modbus register mapping possibility
- ✓ Fuel pump management
- ✓ Run Hours source selector
- ✓ Cut-out: 172 × 112 mm

2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

OPTIONAL EQUIPMENTS

Diesel Engine

- ✓ Oil heater

Alternator

- ✓ Anti-condensation Heater

Battery

- ✓ Starting battery including rack and cables:
 - Model: H8 AGM
 - Voltage: 12Vdc
 - Capacity: 92Ah
 - CCA: 850A
 - Quantity: 2

Panel

- ✓ Charge ammeter
- ✓ Transfer Switch 3Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault, single set
- ✓ 3/4 Pole Output Circuit Breaker

Accessories

- ✓ Bulk fuel tank
- ✓ Automatic filling system
- ✓ Fuel-water separator filter
- ✓ Low fuel level alarm
- ✓ Residential silencer
- ✓ Enclosure or sound proof canopy
- ✓ Manual oil drain pump
- ✓ Tool kit for maintenance

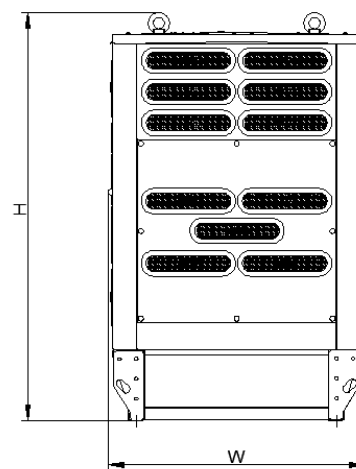
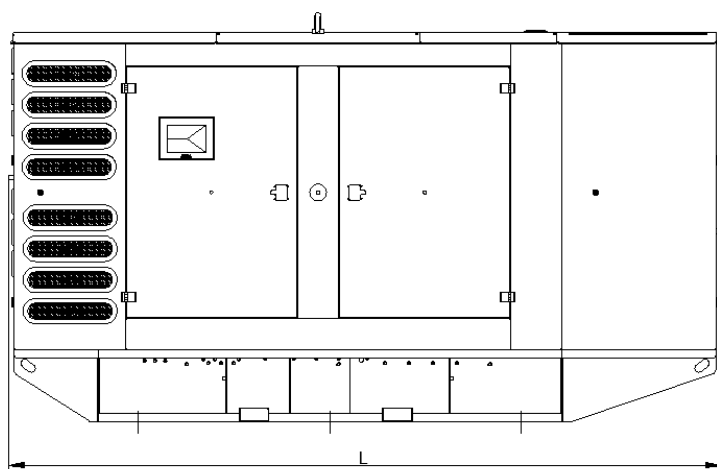
CHASSIS

- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates a double wall 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
- ✓ Forklift pockets within base frame (up to 500kVA)

DIMENSIONS

OPEN TYPE		
DIMENSIONS (L×W×H)	mm	-
DRY WEIGHT	kg	-
SOUND ATTENUATED TYPE		
DIMENSIONS (L×W×H)	mm	4463×1606×2559
DRY WEIGHT	kg	4000

CANOPY MS70 UK (RAL-1015)



- ✓ Noise Level (@ 1m. / @ 7m.) (dB(A)): 88 / 81 ,according to ISO8528-10
- ✓ The steel plates which thickness less than 3mm are made of galvanized steel
- ✓ All canopy parts are designed with modular principles
- ✓ Without welding assembly
- ✓ Doors on each side
- ✓ All metal canopy parts are painted by electrostatic polyester powder paint
- ✓ Exhaust silencer is protected against environment influences
- ✓ Thermally insulated engine exhaust system
- ✓ Emergency stop push button is installed outside of the canopy
- ✓ Easy lifting and moving
- ✓ Easy maintenance and operation