



-  WATER COOLED
-  THREE PHASE
-  50 Hz
-  DIESEL

Generating Rates		PRIME	STANDBY
Power	kVA	23	25
Power	kW	18,5	20
Current	(cos Phi=0,8) A	33	36
Standard Voltage	V	400/230	
Revolution Per Minute	r.p.m.	1500	
Rated at power factor	Cos Phi	0,8	

#### Standard Features

- 4 Stroke, 1500 RPM, water cooled heavy duty diesel engine
- Protection system on manual run
- Flexible oil pipes and oil draining valve
- Pre-heater
- Lubrication oil and anti-freeze
- 4 Poles, synchrotype, single bearing, brushless alternator
- Batteries and cables
- Electrostatic paint coated, steel, welded chassis
- Fuel tank housed in the chassis
- Industrial type silencer
- Electronic battery charger
- Electrical wiring diagram
- User manual and operating manual

#### Optional Equipments

- Soundproof canopy
- Automatic transfer switch
- Circuit breaker
- Trailer
- External fuel tank
- Electronic governor
- Heating system for fuel tank
- Oil heater
- Fuel filling system ( Automatic / Manuel )
- Analog indicators
- 1 Phase - 3 Phase switch plugs
- Alarm system for fuel level
- Remote control and monitoring

**Stand By Power** : Supplying of emergency electrical power at variable load, in the event of normal utility power failure. This rating is maximum power, no overload capability is available.

**Prime Power** : Supplying of electrical power at variable load for an unlimited number of hours in the event of normal utility power failure. 10% over load capability is available.

Engine Specifications		
Brand		DIAMOND DIESEL
Model		490 D
Engine Power Stand BY	(kWm / hp)	21,3/28,5
Revolution Per Minute	(r.p.m.)	1500
Total Displacement	(L)	2.54
Cylinders Orientation		4 SINGLE LINE
Bore x Stroke	(mm x mm)	90 x 100
Compression Orientation		18;1
Governor Type		MECHANIC
Aspiration System		NATURAL
Injection		DIRECT
Cooling		WATER COOLED
Electrical System	(VDC)	12
Lub-Oil Capacity	(L)	9
Engine Coolant Capacity	(L)	14
Fuel Tank Capacity	(L)	83
Maximum Exhaust Temperature	(°C)	550
Maximum Exhaust Gas Flow	(m3/h)	146
Maximum Allowed Back Pressure	(kPa)	6
Cooling Air Flow	(m3/min)	7
Fuel Consumption 50 %	(L/h)	3.12
Fuel Consumption 75 %	(L/h)	4.8
Fuel Consumption 100 %	(L/h)	6.48

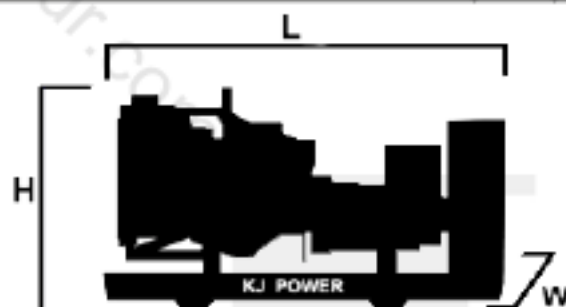
•• Replacable cylinder jacket •• Dry type replacable oil filter •• Heat-resistant radiator for 50 °C

Alternator Specifications		
Output Voltage	(V)	400/230
Frequency	(Hz)	50
Stationary Voltage Regulation	(±)	1 %
Short Circuit Current		> 300 %
Insulation		H
Protection		IP 23
Efficiency	(%)	86,5
Overloading		110 % FOR 1 HOUR
Power Factor	(cos Phi)	0.8
Total Harmonic Distortion Rate		THF < 2 %
Connection Type		STAR
Number Of Pole		4
Number Of Bearing		SINGLE

•• 4 Poles, Self-Excitation, Brushless, Synchronotype alternator  
 •• Electronic type automatic voltage regulator (AVR)  
 •• Self-Cooled

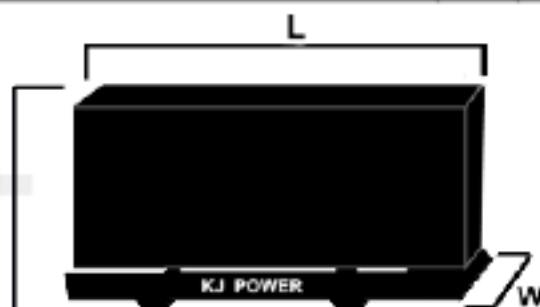
#### ■ Dimensions **Without** Canopy

Dimensions and Weight		
Length ( L )	mm	1780
Height ( H )	mm	1300
Width ( W )	mm	950
Wet weight	kg	600
Fuel Tank Capacity	L	83



#### ■ Dimensions **With** Canopy

Dimensions and Weight		
Length ( L )	mm	2000
Height ( H )	mm	1450
Width ( W )	mm	950
Wet weight	kg	820
Fuel Tank Capacity	L	83



#### ■ Control Panel Features

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable language
- Waveform display of V & I
- Harmonic analysis of V & I
- Synchroscope & check synch
- Allows closed transfers
- 16Amp MCB & GCB outputs
- 8 configurable digital outputs
- Outputs expandable to 40
- 4 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple nominal conditions
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual "speed fine adjust" on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Battery back-up real time clock
- Idle speed control
- Battery charge0 run enabled
- Combat mode support
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem & Ethernet diagnostics
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring Ethernet and GPRS
- Mobile genset support
- Automatic GSM geo-location
- GPS connectivity ( USB & RS232 )
- Dynamic DNS support
- Easy USB firmware upgrade
- IP65 rating with standard gasket

