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RHINO D 500 K4

DIESEL ENGINE-DRIVEN WELDING SET

RHINO D 500 K4

Key Attributes

- Chopper-based Energy Efficient, Diesel Engine-Driven Welding Generator. It is intended for heavy-duty Manual Metal ARC Welding & TIG welding.
- Welding current remains constant irrespective of engine speed variation or change in welding cable length.
- Big savings in fuel and longer runs before the next refuelling.
- Specially proven with Cellulosic (6010, 7010G & 8010G types) and other special types of electrodes.
- The welding generator is protected against output short circuit and over temperature.
- The set also has a built-in 3-phase 22 KVA and 1-phase 6 KVA auxiliary power source for lighting, grinding, hand tools, and other auxiliary purposes.

Salient Features

- Suitable for cross-country, in-plant pipe, and tube welding.
- Ideal for heavy fabrication and on-site applications.
- Delivers high reliability even in harsh conditions.
- Low noise operation.
- Brushless design for minimal maintenance.

Engine

The engine is a four-cylinder air-cooled diesel engine. It is supplied with a heavy-duty dry-type air cleaner, fuel filter, fuel lift pump, mechanical governor, electric starting motor, and battery charging alternator. The engine is protected against high cylinder head temperature and low lube oil pressure.

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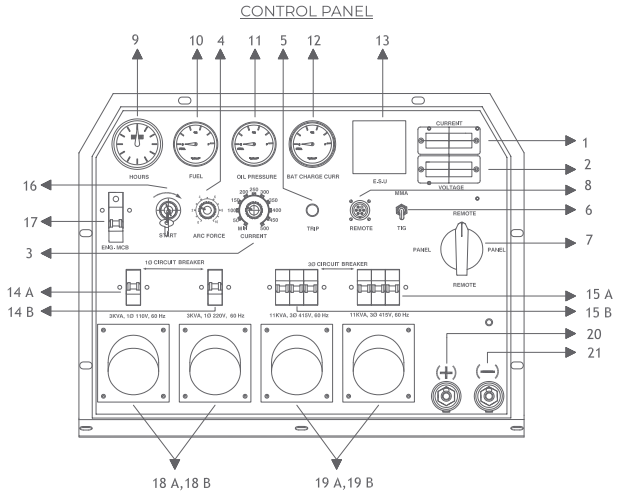
Control Panel

1 Digital Ammeter
2 Digital Voltmeter
3 Current Control Potentiometer
4 Arc Force Potentiometer
5 Trip Indicator Lamp
6 MMA / TIG Selector switches
7 Local / Remote Selector Switch
8 Remote Control Socket
9 Engine Hour Meter
10 Fuel Level Indicator
11 Lub Oil Pressure Indicator
12 Battery Charging Current Indicator
13 Engine Safety Unit
14 A, 14 B = Circuit Breakers for 1 Ø Auxiliary Supply
15 A, 15 B = Circuit Breakers for 3 Ø Auxiliary Supply
16 Engine Starting Switch



17 Engine Starting MCB
18 A, 18 B = 1 Ø Auxiliary Supply Sockets
19 A, 19 B = 3 Ø Auxiliary Supply Sockets
20 Welding Output Terminal Positive
21 Welding Output Terminal, Negative

Control Panel Selection For Engine Control (9, 10, 11, 12, 13, 16, 17)

The engine controls and instruments consist of a temperature gauge, hour meter, battery charging ammeter, oil pressure gauges, start key switch, and engine protection relay.

- **Engine Circuit Breaker:** Before starting the engine, switch on the engine circuit breaker.
- **Key Switch:** Engine Start/Stop & Ignition ON.
- **Engine Stop Solenoid:** This is a 12 V solenoid used to operate the fuel cut-off lever fitted on the fuel injection pump.
- **Engine Protection Unit:** This unit activates the engine stop solenoid in the event of low lubricant oil pressure, high cylinder head temperature, or fan belt failure.
- **Temperature Switch:** This is fitted on one of the cylinder heads and is used for sensing the temperature of the cylinder heads.
- **Pressure Switch:** This is fitted on the cylinder block through a flexible pressure pipe. It senses the lubricant oil pressure.
- **Belt Failure Switch:** This gets actuated in the event of fan belt failure.

Control Panel Selection For Auxiliary Power (14, 15, 18, 19)

There are four power sockets provided, each protected by individual MCBs.

- Two sockets rated at 3-phase, 60 Hz, 415 V, 11 KVA each (total 22 KVA).
- Two sockets rated at 1-phase, 60 Hz, 220 V, 3 KVA and 110 V, 3 KVA (Total 6 KVA).

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Technical Specification

Parameter	Value	Unit
Welding Generator	Brushless	Type
Welding Range	30-500 A	Amps
Max. Hand Welding Current at 60% D.C	500 Amps @40V	Amps
Max. Hand Welding Current at 100% D.C.	400 Amps @36V	Amps
Open circuit voltage (Max.)	90 VDC	Volts
Generally, conforms to	2635	IS
Speed	1800	RPM
Insulation	H	Type
Engine		
Make	Kirloskar	Type
Type	HA-494	-
Cylinder	4	Nos.
Engine cooling	Air Cooled	Type
Engine rating	52 @1800 RPM	BHP
Conforms to	3046	ISO
Starting (12 V)	Electric (Battery)	Type
Fuel consumption @100 %D.C. (400 A@36V)	5.5	Ltrs/hr.
Fuel tank capacity	70	Ltrs.
Battery capacity (12 V)	80 (CCA at -18° C as per IEC 420 A)	Ah

Auxiliary Panel Ratings

Mode	Weld Load Together With Auxiliary Load	Auxiliary Mode without Weld Load	Unit
Rating (3 Phase)	18 KVA (Welding Load of Maximum 500A, 40V)	22 KVA Total (11 KVA + 11 KVA From Each Socket)	KVA
Rating (Single Phase)	6 KVA (at Welding Load of Maximum 500A, 40V)	6 KVA Total (3 KVA + 3 KVA From Each Socket)	KVA
Voltages 3,1&1 Phase	415/220/110	415/220/110	VOLTS
Frequency	60	60	Hz
Phases	3/1/1	3/1/1	NO
MCB Rating	32/16/32	32/16/32	AMPS

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Control Panel Selection For Welding (1, 2, 3, 4, 5, 6, 7, 8, 20, 21)

The Welding Control section of the front panel consists of the following:

- Potentiometers for Welding Current and Arc Force Control.
- Panel / Remote and MMA / TIG Mode Selector Switches.
- Remote Control Socket.
- Digital Ammeter and Voltmeter.
- Trip Indicator Lamp.
- Welding Output Terminals (+ve, -ve).

Ordering Code

Product Code	Description
F10.33.102.0090	Diesel Engine Driven Set, Model : Rhino-D 500 K4, 3 Phase Auxiliary 415 Volts, 22 (11+11) KVA (2 Sockets); 1 Phase Auxiliary 220 Volts 3KVA (1 Socket) And 110 Volts 3KVA (1 Socket), With Hydraulic Side Doors, Skid Mounted.
F10.33.102.0091	Diesel Engine Driven Set, Model : Rhino D 500 K4, 3 Phase Auxiliary 415 Volts, 22 (11+11) KVA (2 Sockets); 1 Phase Auxiliary 220 Volts 3KVA (1 Socket) and 110 Volts 3KVA (1 Socket), with Hydraulic Side Doors, Two Wheel Undercarriage.
F10.33.102.0092	Diesel Engine Driven Set, Model : Rhino D 500 K4, 3 Phase Auxiliary 415 Volts, 22 (11+11) KVA (2 Sockets); 1 Phase Auxiliary 220 Volts 3KVA (1 Socket) And 110 Volts 3KVA (1 Socket), With Hydraulic Side Doors, Four Wheel Undercarriage.

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