



# MMA - 320 H

## HEAVY DUTY POWER SOURCE SERIES

Stronger bonds begin with stronger welds.

Find the perfect equipment here.

A Sai Arc Group Of Companies .

**HEAVY DUTY  
MACHINE  
WORKS IN  
220V/415V**

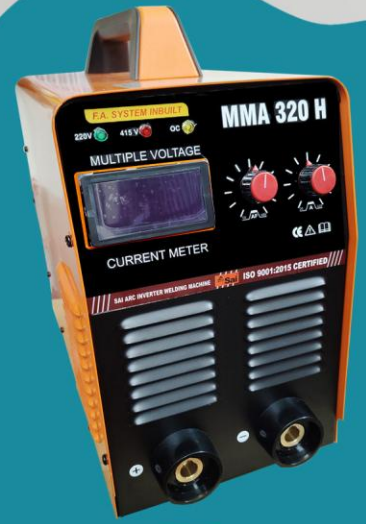


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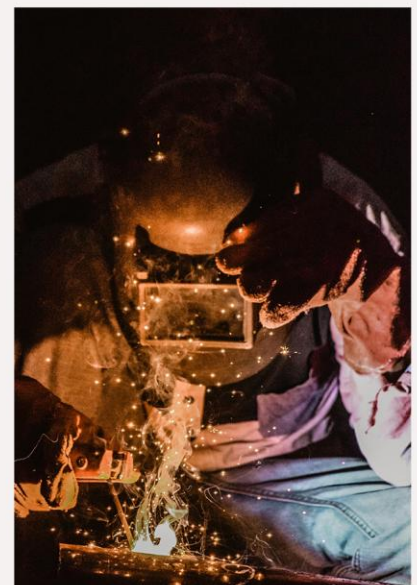
# Heavy Duty ARC Series: Uncompromising Performance



A high-capacity inverter-based welding machine. The features and functions of such machines typically include:

The MMA 320 H Welding Machine is a robust, industrial-grade inverter welding machine designed for heavy-duty welding tasks. Equipped with high quality capacitors, it ensures stable performance, energy efficiency, and long-term reliability. Its forced air cooling system and high-quality circuit breaker provide superior safety and thermal management, and F A System inbuilt, making it ideal for demanding industrial and construction environments. Built for precision, durability, and power. The MMA 320 H delivers consistent welding performance you can trust.

**Durable. Powerful.  
Precision Engineered.**





### LATEST TECHNOLOGY FROM JAPAN

## High Quality Capacitors



- Purpose: These capacitors help stabilize the welding current, reducing fluctuations and ensuring a smooth and consistent arc
- Benefit: Improves welding quality, especially when working with sensitive materials or at high amperages.

## Heavy Duty Cooling Fan



- Purpose: Ensures efficient cooling of the internal components, preventing overheating during prolonged use.
- Benefit: Extends the lifespan of the machine and enhances performance reliability in heavy-duty operations.

## Premium Grade IGBT



- Purpose: The use of IGBT technology increases the efficiency and precision of the machine by enabling high-speed switching and minimizing power loss.
- Benefit: Reduces energy consumption, provides a stable output, and supports heavy-duty operations.



## ECONOMICAL AND SUSTAINABLE

### Energy Efficiency:

Powered by IGBT inverter technology, it consumes significantly less electricity compared to traditional welding machines, reducing energy costs and environmental impact.

### Durable Components:

Built with heavy-duty and long-lasting parts (capacitors, PCB, and cooling systems), it reduces waste by minimizing the need for frequent repairs or replacements.



## Featurers :

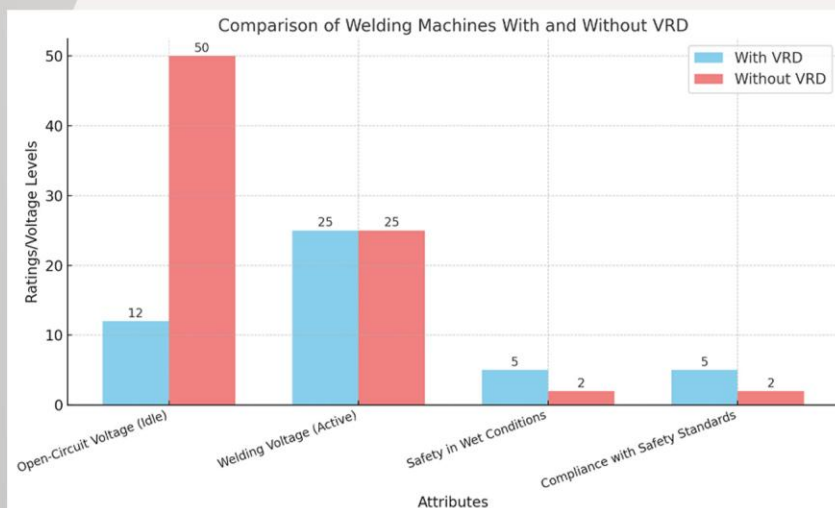
### Dual Power Compatibility:

The MMA 320 H welding machine is designed for flexible operation and is fully compatible with both 220V and 415V power supplies. This dual-voltage capability ensures that the machine can be used in a wide range of environments, from residential settings with standard 220V outlets to industrial sites with 415V three-phase (two line) connections. Its adaptability allows for reliable performance and consistent welding output regardless of the available power source, making it a versatile choice for professionals and workshops alike.

### VRD (Voltage Reduction Device) :

(\*on selected models)

VRD (Voltage Reduction Device) is a crucial safety feature integrated into modern welding machines to protect operators from electric shocks, especially in hazardous environments. It works by automatically reducing the open-circuit voltage (OCV) to a much lower and safer level, typically below 12-15 volts, when the machine is idle and not actively welding. Once welding begins, the device allows the machine to switch back to the higher voltage required to sustain the arc. This feature is particularly valuable in wet, damp, or confined spaces, such as pipelines or tanks, where the risk of electric shock is higher. By ensuring operator safety while maintaining optimal performance, VRD-equipped machines, like the MMA 320 H, comply with industry safety standards and are ideal for use in construction, shipbuilding, and other high-risk industries.



Differences between welding machines with VRD and without VRD



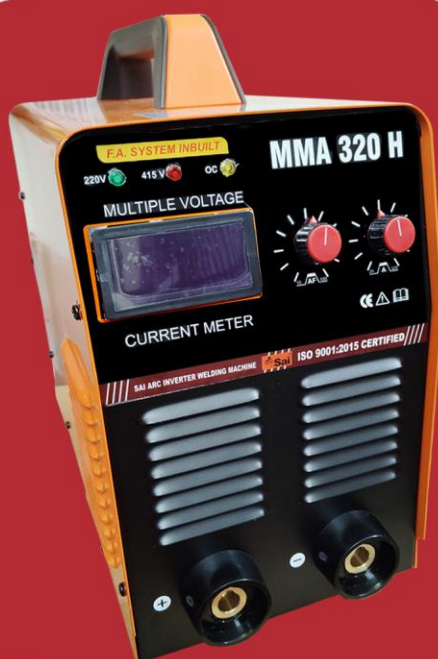


## **ARC WELDING**

Arc welding is a versatile and widely used welding process that joins metals by creating an electric arc between an electrode and the workpiece. The intense heat generated by the arc melts the metals at the joint, forming a molten pool that solidifies into a strong, durable bond as it cools. This process can utilize either consumable electrodes, which melt to form the weld, or non-consumable electrodes, such as tungsten. Depending on the method, shielding is provided by flux coatings or inert gases to protect the weld from contamination. Arc welding encompasses various techniques, including Shielded Metal Arc Welding (SMAW) suited for specific applications. However, it requires skilled operators and proper safety precautions due to the intense heat, fumes, and potential hazards involved.

## **The Heavy-Duty Control System (PCB)**

The Heavy-Duty Control System (PCB) in the MMA 320 H welding machine is designed for optimal performance and durability, making it ideal for demanding industrial tasks. This advanced Printed Circuit Board (PCB) ensures precise control over welding parameters such as current and voltage, resulting in consistent and high-quality welds. Built with latest Japan technology with industrial-grade components, the control system is engineered to withstand high temperatures, electrical surges, and long operational hours, offering excellent reliability. Additionally, it integrates safety features like protection against overheating, short circuits, and overloading. The heavy-duty PCB enhances the machine's longevity, ensuring it delivers outstanding performance with minimal maintenance requirements, making it a trustworthy choice for professional welders.



**LATEST  
TECHNOLOGY  
FROM JAPAN**

contact us :  
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TECHNICAL PARAMERTERS	MMA 320 H
Model	320 H
Rated Input	13.0/6.5
Input Voltage (V)	220V / 415V AC +/- 15%
Power Consumption (KVA)	17
No Load Voltage	75 V
Frequency(Hz)	50/60
Output Current range	20 A – 320 A
Digital Display	30 – 420
Rated Output Voltage	35
Duty Cycle (%)	60
Efficiency	80%
F.A System Inbuilt	Yes
Power Factor	0.93
Insulation Grade	F
Protection Grade	IP 21
Welding Method	MMA
Welding Output (A)	250 A @ 100% duty cycle 320 A @ 60 % duty cycle

\*Supports All Standard Electrodes :  
2.5mm , 3.5mm , and 4mm

