



ARC - 400

HEAVY DUTY POWER SOURCE SERIES

Stronger bonds begin with stronger welds.
Find the perfect equipment here.

A Sai Arc Group Of Companies .

**FIRST TIME
IN
INDIA !**



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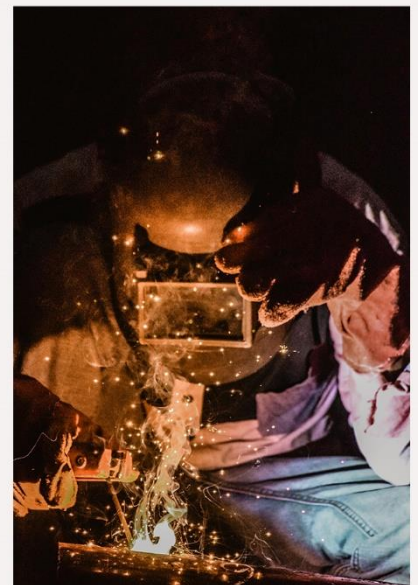
Heavy Duty ARC Series: Uncompromising Performance

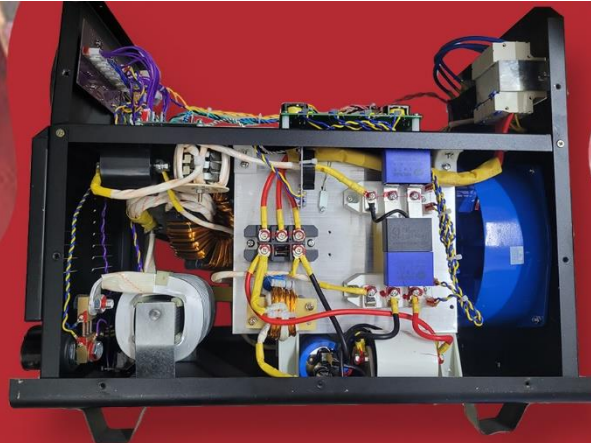


A high-capacity inverter-based welding machine. The features and functions of such machines typically include:

The Sai ARC 400 Welding Machine is a robust, industrial-grade inverter designed for heavy-duty welding tasks. Equipped with 5 heavy-duty capacitors, a 10-inch powerful cooling fan, and a multi-module IGBT system, 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 Sai ARC 400 delivers consistent welding performance you can trust.

**Durable. Powerful.
Precision Engineered.**





LATEST TECHNOLOGY FROM JAPAN

5 High Powered Heavy-Duty Capacitors

FIRST TIME IN INDIA



- 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 Fan (10-Inch Diameter)



- 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.

Multi-Module IGBT

(Insulated-Gate Bipolar Transistor)



- 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 :

Generator Compatibility:

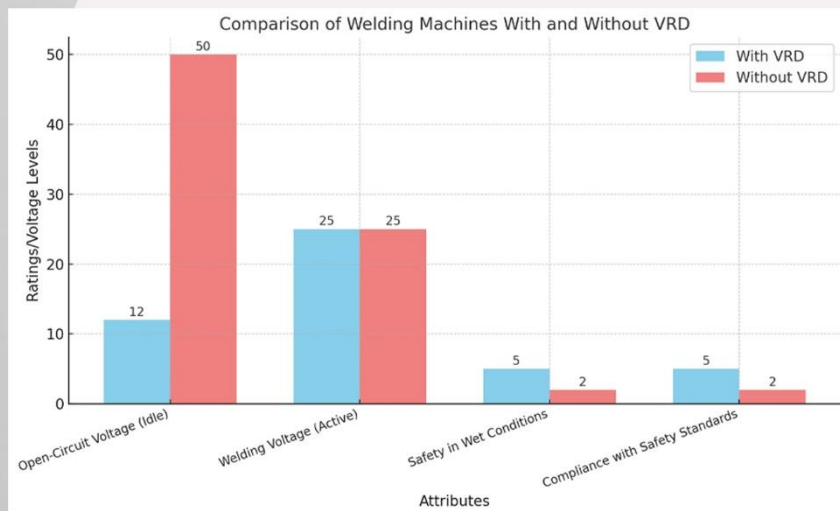
The **ARC 400** is built for versatility and reliability, offering seamless **generator compatibility** for use in remote locations and areas with unstable power supply. Its advanced **F.A system inbuilt** and **IGBT Inverter Technology** ensures stable performance by adapting to fluctuating power inputs from generators, while the built-in **circuit breaker** provides protection against overloads and voltage surges. Designed to handle the demands of heavy-duty applications, the machine's durable components and efficient **forced air cooling system** ensure consistent operation even during prolonged use. Whether on construction sites, in workshops, or for field repairs, the Sai ARC 400 delivers uninterrupted, powerful performance, making it an ideal choice for welders needing flexibility and portability without compromising efficiency.

VRD (Voltage Reduction Device) :

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 Sai ARC 400, comply with industry safety standards and are ideal for use in construction, shipbuilding, and other high-risk industries.



Front Panel



Differences between welding machines with VRD and without VRD

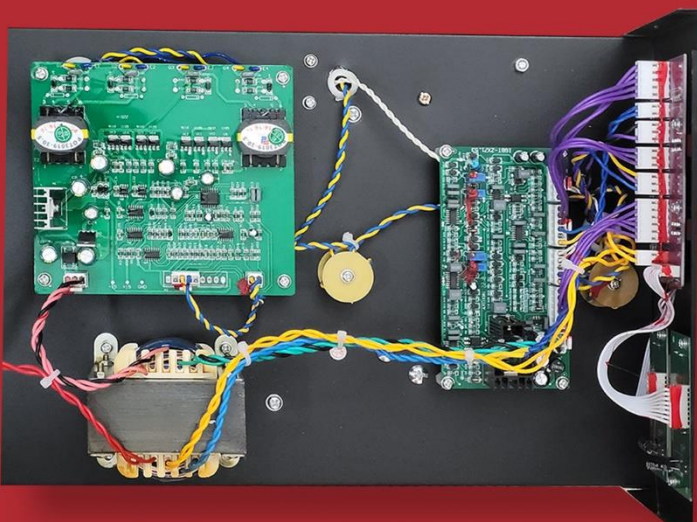


ARC WELDING

****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 Sai ARC 400 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

REM (REMOTE)

The REM function in the Sai ARC 400 welding machine refers to its Remote Control Functionality, enabling operators to adjust key welding parameters, such as current and voltage, from a distance. This feature enhances convenience by eliminating the need to repeatedly approach the machine during operation, saving time and effort. It also improves precision by allowing on-the-spot adjustments to ensure consistent weld quality. Additionally, the REM function enhances safety by reducing the need for operators to work near high-temperature or hazardous areas. This functionality is particularly valuable in large-scale projects, confined spaces, or challenging environments, making the Sai ARC 400 an efficient and user-friendly choice for professional welders.

*Supports All Standard Electrodes



saiweldingmachines.com

TECHNICAL PARAMENTERS	ARC 400
Model	ARC 400
Input Voltage (V)	AC 380V \pm 10%
Rated Input	13.0 / 6.5
Power (KVA)	19
No-load Voltage (V)	65-75
Output Current Range	20A – 400A
Rated Output Voltage (V)	35-40
Duty Cycle (%)	60% @ 400A
No-load Loss (W)	50
Efficiency (%)	85
Power Factor	0.93
Pre-flow (s)	0
Post-flow (Sec.)	2.5
Arcing Way	High Frequency
Net Weight (Kg)	26
VRD	Yes
MMA Facility	Available
Insulation Grade	F
Protection Grade	IP 21