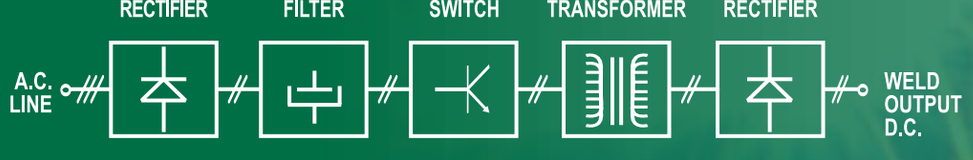
MFDC

Medium Frequency (MFDC) Spot and Projection Welding Machines

Medium Frequency Direct Current machines use an inverter, powered from a 3 phase supply in which the current is rectified using diodes and then chopped by means of IGBT's into high frequency alternating current. This alternating current is then transformed by the welding transformer and again rectified.
DC current is thus obtained at the secondary side in to the parts to be welded.



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Advantages of Medium Frequency Direct Current

Energy Savings

The MFDC machines require approximately 30% less power as compared to conventional AC welding machines.

Balanced load distribution

The MFDC welding machine load is evenly distributed across all three phases. This allow equal load to be drawn from each line, thus reducing peak draw on any one line.

Improved and Consistent Power Factor

The MFDC welder load appears to have unity power factor, which reduces the overall plant load and avoids possible penalties assessed by power companies.

Attains Welding Current Immediately

Standard DC welding utilizes SCRs that have a rise time prior to steady state. With MFDC welding, rise time is immediate. It is possible to create full – phase firing during the natural rise time to lessen the rise time. Control of upslope and post weld cycle is easily possible in these machines.

Precise Weld Current Control

MFDC welding utilizes IGBTs for current switching. These units are turned on and off of 400 – 2000 times per second. By controlling this rate, you can get a wave form consisting of several individually shaped current impulses. This results in virtually splashless welding of components.

Suitable for variety of applications

These machines are suitable for projection and spot welding of variety of applications, eg. Welding of coated sheets and dissimilar metal welding.

	MF - 1	MF - 2	MF - 3
Throat Depth (A) mm	250	350	600
Daylight (B) mm	280	280	280
Working Height (C) mm	1050	1050	1050
Max. Cyl. Stroke mm	90	90	90
Air Pressure (Bar)	6	6	6
Max. Electrode Force (At 5 bar)	3920 (N)	3920 (N)	3920 (N)
Cooling	Chilled Water 9 LPM	Chilled Water 9 LPM	Chilled Water 9 LPM

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