Medium frequency direct current (MFDC) inverter technology guarantees considerable advantages compared to traditional low frequency alternating current systems:

• Lower absorption: DC current allows for an increase in the power factor and hence a noticeable reduction in current absorption from the power supply line.
• Excellent appearance and strength of spot welds: the inverter dynamic ensures much lower working times (1ms) compared to traditional systems (20ms); DC current gives efficient heat transfer.
• High power and compactness: inverter technology allows systems to be structured with high available currents, but with reduced overall dimensions.
• Constant control of the spot-welding process: inverter technology makes it possible to achieve strict control of all welding parameters and extremely rapid reaction times in restoring optimal working conditions.
• Reduced ejection of melted material: DC current ensures that regular heat transfer (Fig.1) is reached in a much shorter time compared to AC systems (Fig.2); this reduces the ejection of melted material.

Inverter Spot Welding
Innovative technology and excellent results

Heat transfer “Q” of a three-phase inverter welding machine (DCMF), see Fig.1, and of a traditional single-phase spot welding machine (ACLF), see Fig.2.
The heat (Q) necessary to perform the spot is delivered by the DC inverter spot welding machine in a much shorter time in comparison with an AC traditional spot welding machine.

Types of spots

Inverter Spot: HSS Steel 2+2 mm
Inverter Spot: Stainless Steel 2+2mm
Inverter Spot: Steel 3+3 mm
Traditional Spot: Steel 3+3 mm