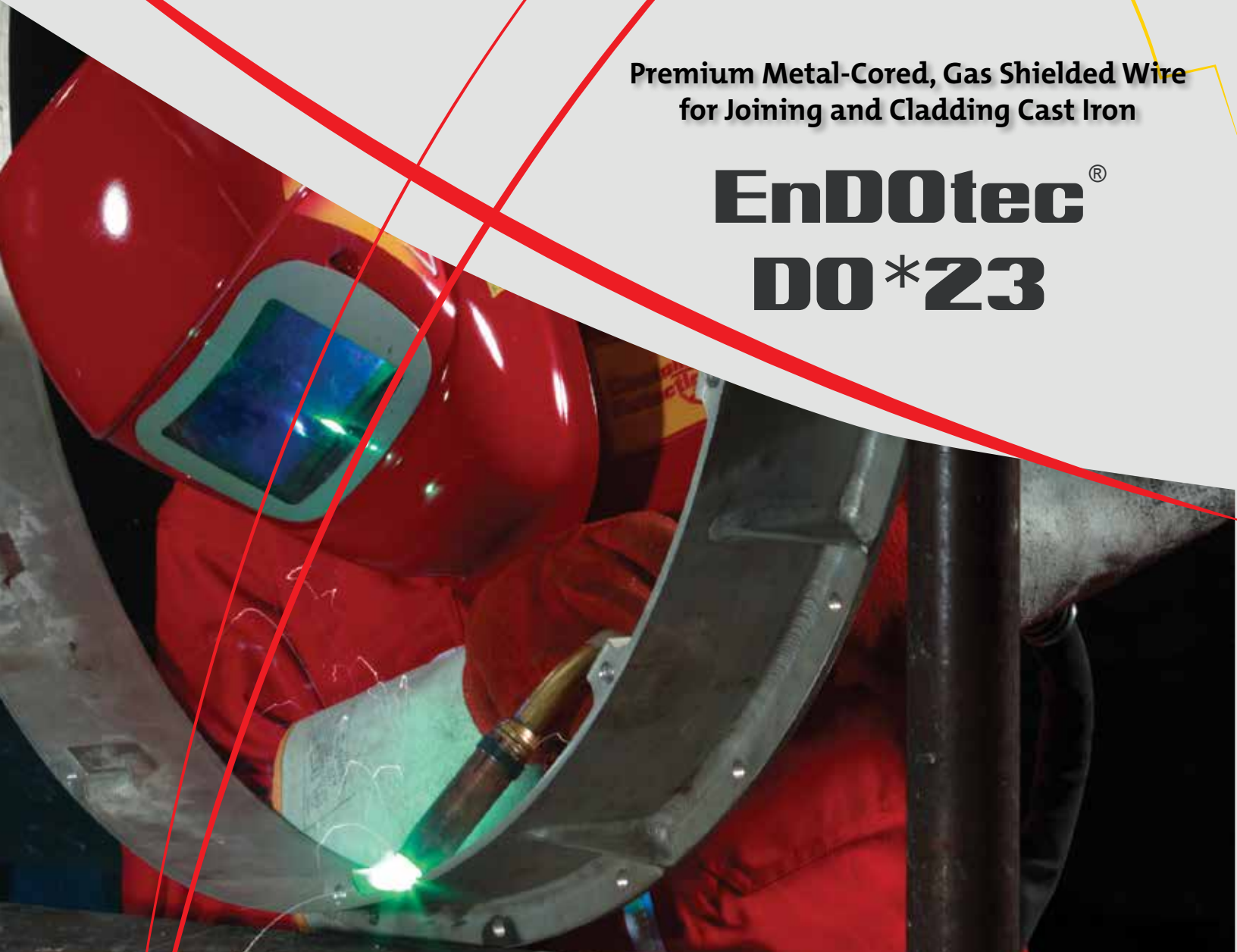




Premium Metal-Cored, Gas Shielded Wire  
for Joining and Cladding Cast Iron

**EnD0tec<sup>®</sup>**  
**D0\*23**



- Excellent weldability on cast iron
- Formulated to weld virtually all cast iron grades
- Superior mechanical properties

# EnDotec® DO\*23

EnDotec® DO\*23 is designed for joining and build-up of a wide range of cast irons and for joining cast iron to mild steel and low alloy steel. It is particularly useful for joints in cast iron which are under restraint; which are of substantial thickness (over 2") and which have variable cross-sectional thickness.

Deposits provide an excellent mechanical property match to gray, ductile, and malleable irons. Weld deposits are also highly tolerant of the expansion and contraction stresses caused by the heat of welding.

## TECHNICAL DATA

Typical Values	
Hardness as-deposited:	HRB 90
Typical yield strength:	51,000 psi (350 N/mm <sup>2</sup> )
Typical tensile strength:	68,000 psi (470 N/mm <sup>2</sup> )
Elongation (1=5d):	15%
Current & Polarity:	DC (+) electrode positive
Power Source Type:	Constant voltage & Integrated Wire Drive
Shielding Gases:	Ar 98% + 2% O <sub>2</sub> (1st) Ar 100% (2nd)

0.045" (1.2mm)	VOLT	AMP	STICK-OUT
Spray Arc	25-30	200-250 (Large parts)	5/8" ± 1/8" (Short nozzle)
Short Arc	23-27	90-150 (Lighter parts)	9/16" ± 1/8" (Long nozzle)

## PROCEDURE FOR USE

**Caution:** Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent & smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

**Step 1:** Remove all "old" cracked or spalled weld metal down to a sound base. Joints below 1" should be beveled to a V-profile; Over 1" can be beveled to either a single or double J-profile. Lightly grind and brush joint to remove debris and superficial oxides.

**Step 2:** Preheat the part to be built-up, for most cast iron a nominal preheat of 400°F (250°C) is suggested.

**Step 3:** Apply DO\*23 in short (2-3") stringer beads in backstep, block or cascade sequences. For thicker sections, peening passes while they are still hot is recommended to reduce residual stresses in and around the weld.

*Note: If welding is interrupted and the part being welded cools to room temperature, make sure to reheat to the original preheat temperature. Slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.*

## TYPICAL APPLICATIONS

### APPLICATIONS

Cast Iron Cylinder Blocks  
Machine Bases  
Pump Housings  
Gear Boxes  
Compressor Castings  
Cast Iron to Mild Steel  
or Low Alloy Steel

### INDUSTRY

Transportation  
Iron and Steel Works  
Pulp & Paper  
Open Cast Mining  
Open Cast Mining  
General Maintenance

