The NEW High Speed Oscillating Ultra Narrow Groove Welding technology is a significant advancement in narrow groove welding, and it builds on the mechanical oscillating narrow groove technology that was pioneered by AMI in the early 90’s. This new High Speed Oscillating technology allows users to weld in narrower grooves than ever before while achieving quality side wall fusion when welding and repairing heavy-walled components.

Among the many advantages of High Speed Oscillating Ultra Narrow Groove welding are:

► Higher productivity rates
► Reduced weld volume (80%+ vs. conventional grooves)
► Lower heat input

While traditional weld preps are 37.5 degree wide, High Speed Oscillating Ultra Narrow Groove welding uses a 0.31” to 36” (8 to 9 mm) wide groove with 2 to 5 degree sidewalls which requires much less filler metal and results in higher quality welds due to efficient heat input and shorter weld times.

**AMI High Speed Oscillating Ultra Narrow Gap Torch (UNGT)**

The Arc Machines **UNGT** torch (High Speed Oscillating) is *The Ultimate Solution* for high quality heavy-wall pipe and vessel welding.

**Benefits:**
- Reduced weld volume ➔ shorter welding time.
- Lower heat input ➔ less residual stresses.
- Less consumption of filling material and shielding gas.
- Improved weldment properties.
- Lower incidence of weld metal defects.

*Since its launch in 1994, AMI has supplied over 300 NGT Systems worldwide.*

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The Oscillating Arc of the AMI UNGT torch improves the post-weld mechanical and metallurgical properties of the weldment by reducing the heat input, the residual stresses, and the grain structure in the HAZ (Heat Affected Zone). The reduced heat input is achieved by directing the arc towards the side wall of the joint and therefore achieving the desired side wall fusion with lower amperage levels. The arc oscillates between the sidewalls of the joint and the heat (current) is efficiently delivered to the sidewalls. Conventional, non-oscillating fixed electrode, narrow gap torches require up to 40% higher current settings to achieve the desired side wall melting. In non-oscillating torches, the heat is delivered only to the center of the joint and only a fraction of the heat reaches the sidewalls of the joint.

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**KEY FEATURES OF THE AMI UNGT TORCH**

- **Oscillating Arc** - Provides high speed weld puddle stirring within the groove.
- **Maximum Groove Depth** - 6” (152.5 mm) version is available.
- **Dual Arc View** - AMI’s UNGT torch is equipped with the industry’s best vision system with servo driven illumination. AMI’s camera technology uses an “active” light frequency blocking technique and there’s no need for additional controls or interfaces between the camera system and the welding equipment.
- **Dual Sided Wire Feed**
- **Vertical Wire Feed Technology**

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Current Carrying Capacity = 350 Amp at 100% duty cycle.

Suitable for welding up to 6" (152,5 mm) wall thicknesses.

Torch thickness: 0.30" (7,6 mm) at the gas cup (on the first 2"; 50,8 mm ); 0.38" (9,65 mm) at the torch body.

The torch can operate in steady state environment of up to 300 °F (150 °C) at 350 Amps continuous duty cycle.

The torch body and electrode holder are water cooled.

Torch can be pivoted around the electrode axis in order to align it with the weld groove.

Tungsten diameter = 1/8" (3,2 mm); straight.

Programmable arc oscillation.

Cold wire welding wire feeding guide tip.

Wire can be fed from the leading or trailing edge of the weld puddle.

Gas flow rate: capable of 90 CFH of Helium and up to 100 CFH of Argon gas.

Provides superior gas shielding for the weld puddle and weld area to prevent porosity or weld metal contamination.
The Global Welding Company
For further information please visit our website or contact us at 1-818-896-9556

Available mid 2014


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Subject to change