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# INTERNAL WELDING MACHINE IWM



The RMS Welding Systems Internal Welding Machine (IWM) is a combination internal line up clamp and mechanized multi head internal welding machine.

The IWM produces the root pass weld from the inside; utilizing four to eight welding heads, depending on the pipe diameter, which are located symmetrically around a rotating ring. Welding is carried out in the vertical down position.

The machine relies on pneumatic and electrical systems and is controlled by a single operator via the control box at the end of a reach rod. The reach rod tube contains communication, gas, welding and air charging leads.

Move and set-up time for the machine varies with operator skills but is generally 1.5 to 2 minutes. Arc time is approximately 1 minute for 30" – 42" pipe, which leads to a weld-to-weld cycle time of 2.5 to 3.0 minutes.

## Sample Arc Times

Pipe Diameter	Welding Heads	Arc Time
24"	4	1.2 min
30"	6	1.0 min
36"	8	0.9 min
42"	8	1.1 min
48"	8	1.2 min

Feature	Benefit
<ul style="list-style-type: none"> <li>• Single operator</li> </ul>	<ul style="list-style-type: none"> <li>• Less skilled labour</li> </ul>
<ul style="list-style-type: none"> <li>• Mechanized welding</li> </ul>	<ul style="list-style-type: none"> <li>• Less potential for weld error</li> </ul>
<ul style="list-style-type: none"> <li>• Multiple welding heads</li> </ul>	<ul style="list-style-type: none"> <li>• Higher production rates</li> </ul>
<ul style="list-style-type: none"> <li>• Internal root pass</li> </ul>	<ul style="list-style-type: none"> <li>• More tolerant of high/low</li> </ul>
<ul style="list-style-type: none"> <li>• No root gap</li> </ul>	<ul style="list-style-type: none"> <li>• Quick &amp; accurate alignment</li> </ul>



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Internal Welding Machine				
General Specifications				
<b>Welding Head</b>				
Welding Wire Spool Size	3.5 lbs	1.59 kg		
Welding Wire Speed	200 - 500 ipm	5,085 - 12,700 mm per min		
<b>Rotating Ring Travel Speed</b>	20 - 35 ipm	508 - 890 mm per min		
<b>Travel Speed</b>	5' - 6.5' per sec	1.5 - 2 meters per sec		
<b>Air System</b>				
Maximum System Pressure	220 psi	16 bar		
Air System Operating Pressure	140 - 170 psi	10 - 12 bar		
Drive Motors	4 - Drive Motors			
<b>Electrical System</b>	24 (VDC)			
Size Dependent Specification				
<b>Internal Welding Machine Size</b>	22" - 26"	28" - 32"	34" - 50"	
<b>Number of Weld Heads</b>	4	6	8	

Machine Dimensions					
Pipe Diameter	Length			Weight	
22" - 26"	168"	4,300 mm		1,800 lbs	800 kg
28" - 32"	168"	4,300 mm		2,300 lbs	1,050 kg
34" - 38"	188"	4,800 mm		3,200 lbs	1,450 kg
40" - 44"	178"	4,500 mm		4,800 lbs	2,200kg
46" - 50"	206"	5,250 mm		5,800 lbs	2,650 kg