

EB STRIP WELDER



The S7 Electron Beam Welder is used for the high speed continuous EB welding of metal strips. The main uses of these machines are in the electronic industry for contactor materials, resistors and in the saw-blade industry where high-speed steel is welded to spring steel support strips for various saw blades. The process and parameters are continuously closed loop controlled to produce the highest quality Bi- and Tri-metal welds.

Higher welding speeds and consistent welding quality have made this welder the market leader for EB Welded Strips.

CAPABILITIES

- Bi- and Tri-metal band production
- Ideal for welding dissimilar metals
- Finish electron beam welded strip has a higher wear resistance and better flexibility
- High welding speeds up to 20 m/min can be achieved
- Continuous control of all process and welding parameters
- High-resolution optics for direct viewing of the weld
- Complete production lines can be delivered or the welding module only



EB STRIP WELDER

Bimetallic Joints: Weldability

	Ag	Al	Au	Be	Cd	Co	Cr	Cu	Fe	Mn	Mo	Nb	Ni	Pt	Re	Sn	Ta	Ti	V	W	Zr
Ag Silver		C	S		C	D	C	C	D	C	D	N	C	S	D	C		C	D	D	
Al Aluminium	C			C				C							N	C					
Au Gold	S					C	D	S	C		C	N	S	S	N		N		D	N	
Be Beryllium		C			N											D	D				
Cd Cadmium	C			N		D	D		D	D	N	N	D		N	C	N		N	N	D
Co Cobalt	D		C		D		C	C	C	C			S	S	S						
Cr Chromium	C		D		D	C		C	C	C	S		C	C	S	C		S	D	S	
Cu Copper	C	C	S			C	C		C	S	D	C	S	S	D	C	D		D	D	
Fe Iron	D		C		D	C	C	C		C	C		C	S					S		
Mn Manganese	C				D	C	C	S	C		D		C		N					D	
Mo Molybdenum	D		C		N		S	D	C			S		C		D	S	S	S	S	
Nb Niobium	N		N		N			C			S						S	S	S	S	S
Ni Nickel	C		S		D	S	C	S	C	C				S	D						
Pt Platinum	S		S			S	C	S	S		C		S		C					S	
Re Rhenium	D	N	N		N	S	S	D		N			D	C		D			D		
Sn Tin	C	C		D	C		C	C			D				D					D	
Ta Tantalum			N	D	N			D			S	S						S		S	C
Ti Titanium	C						S				S	S					S		S	C	S
V Vanadium	D		D		N		D	D	S		S	S			D			S		S	
W Tungsten	D		N		N		S	D		D	S	S		S		D	S	C	S		
Zr Zirconium					D							S					C	S			

Blue Fill = Intermediate compounds formed – undesirable combination

D = Insufficient data for proper evaluation – use with caution!

N = No data available – use with extreme caution!

S = Solid solubility exists in all alloy combinations – very desirable combination

C = Complex structures may exist – probably acceptable combination



PTR-Precision Technologies, a Global Beam Technologies Group company, specializes in the manufacture of Electron Beam Welding and Drilling equipment. For the past five decades our expertise, number of installations and combined capabilities of PTR-USA, PTR-Germany and Steigerwald-Germany have resulted in the largest global presence in the Electron Beam Welding industry. The total combined experience of our staff guarantees the best solutions, efficiently delivered.

