

TS 8/75

TIG - With or without filler wire, AVC

Open welding head
for welding of tube-to-tubesheet joints



THE ART OF WELDING

TS 8/75 **Open welding head**

for welding of tube-to-tubesheet joints

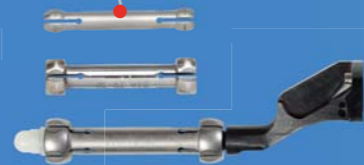
Cutting-edge design using the latest materials and engineering technologies

Advantages

- ▶ **More compact:** reduced space and weight
- ▶ **More ergonomic:** double handle with integrated remote control for clamping and welding
- ▶ **More productive:** simultaneous use of multiple welding heads with pneumatic clamping by one operator
- ▶ **More automatic:** standard version with AVC (Arc Voltage Control)
- ▶ **More simple:** simplified mechanical adjustments, in particular, filler wire positioning
- ▶ **More precise:** on-board filler wire for constant wire feeding and accurate wire impact position

Resulting from 60 years' experience in mastering of welding technologies

Optional: Centering shafts and mandrels for specific tube diameters



Designed for high duty cycle applications with high temperature resistant materials and closed loop water cooling

A wide variety of tooling is available to accommodate all existing tubesheet joint designs

Clamping/ centering mandrel for all tube I.D.'s

Standard version with pneumatic clamping/ centering system



Torch with ceramic nozzle and diffuser for laminar gas protection

Return-to-home feature: the electrode automatically returns to its initial position

Simplified wire guide



Adjustable stand-off legs for every pitch

General characteristics



Optional: Pneumatic clamping and centering tooling dedicated for low protruding tubes

Unique rotating collector for welding current, shielding gas and cooling liquid

Motorised Arc Voltage Control (AVC) or programmable electrode height

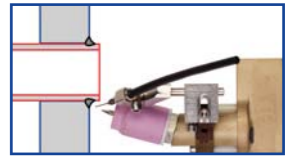
Rotating on-board wire feeder

Closed loop regulation to ensure precise, constant or pulsed welding speed

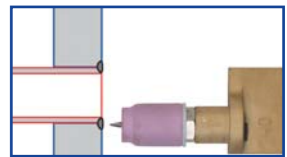
Encoder for position based control of the welding program

Integrated remote control, for clamping and welding

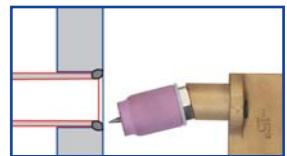
Different types of weld joint configurations:



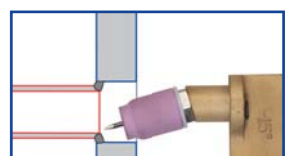
Protruding tube welding



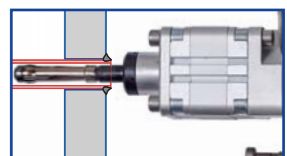
Flush tube welding



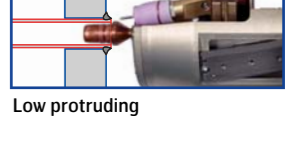
Recessed tube welding



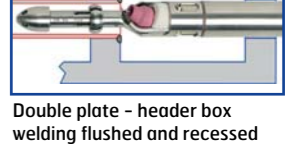
Back plate tube welding



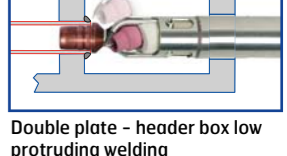
Low protruding



Double plate - header box welding flushed and recessed



Double plate - header box low protruding welding



Internal tube welding

Associated power sources



▶ **P6**
300A, "all applications", programming by PC or touchscreen, with Arc Voltage Control (AVC), three-phase power supply

Wire feeders



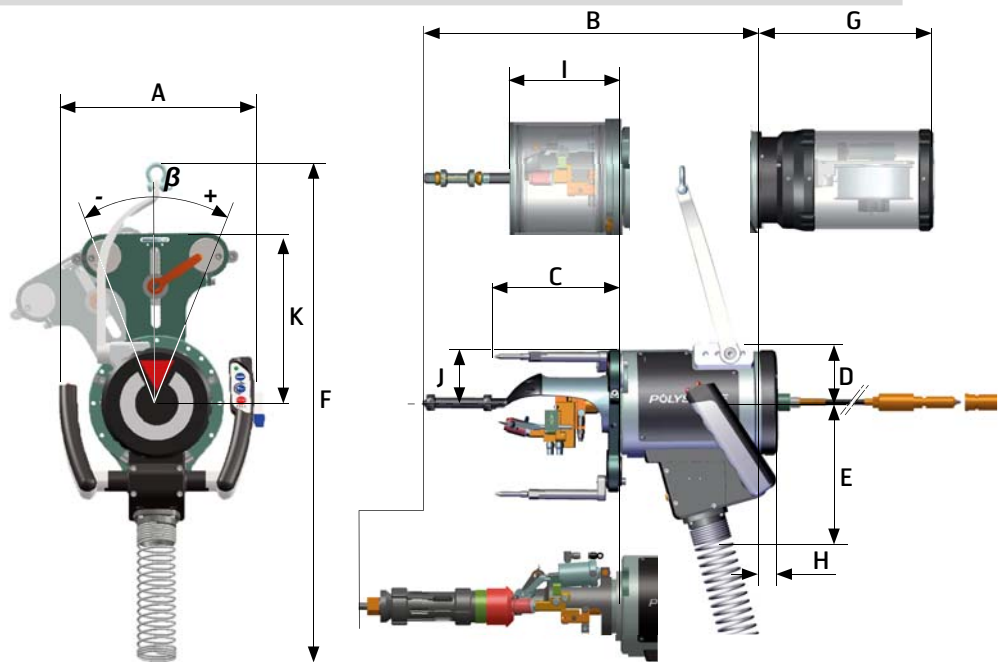
▶ **Polyfil Series**
External portable wire feeders with spool protection



Technical specifications

Min. tube I.D.	8 mm (0.315")
Max. tube O.D.	75 mm (2.95") [O.D.s > 60 mm (2.36") on request]
Duty cycle	250 A / 60% - 190 A / 100%
Cooling of welding head	Closed loop, water with Glycol
Arc Voltage Control (AVC)	Stroke 20 mm (0.79")
Centring system with 2 ball-centring mandrel	10.5 mm (0.41") ≤ I.D. ≤ 60 mm (2.36")
Pneumatic centring and clamping system	15 mm (0.59") ≤ I.D. ≤ 40 mm (1.57")
Reinforced pneumatic centring and clamping device	40 mm (1.57") ≤ I.D. ≤ 60 mm (2.36")
Wire feeder	
• external	POLYFIL Compact or POLYFIL-3
• on-board	Rotating
Wire feed speed - max	1154 mm/min (PC series) or 2085 mm/min (P6 series)
Wire spool compatibility	
• on-board	1.5 kg (3.3 lbs) / Ø100 mm (4")
• floor mounted	15 kg (33 lbs) / Ø300 mm (11.81")
Tube joint designs:	
• flush	Standard
• recessed	-2 mm (0.08") max
• low protruding	3 to 4 mm (0.16") max
• protruding	5 to 13 mm (0.51") max
• internal bore welding	Option
• back plate - header box welding	Option
Weight	7.5 kg (15.43 lbs) – without bundle and wire spool
Cable length	9 m (29.53 ft)

Dimensions in mm (in)		
A	205 (8.07")	
B	218 (8.58")	Centring shaft with centring mandrel
	244 (9.60")	Pneumatic centring / clamping mandrel
B	323 (12.70")	Reinforced pneumatic centring / clamping mandrel
	C	148 (5.83")
D	75 (2.95")	
E	202 (7.95")	
F	583 (22.95")	
G	223 (8.78")	
H	20 (0.79")	
I	139 (5.47")	
J	66 (2.60")	
K	210 (8.27")	
β	± 0, 30, 45, 60, 90, 120°	



Options and accessories

- Clamping / centering mandrels for all tube I.D.'s
- Rotating on-board wire feeder for precise and constant wire feeding
- Pneumatic clamping / centering system for improved quality and productivity
- Accessories for all types of applications
- Extension cable (15m/49.2 ft)
- Compact shipping-case for transport and storage
- Pre-sharpened and pre-cut tungsten electrodes
- Tooling

 Adapted for all your applications!



*« The most efficient and fastest way
to produce all your tubesheet welds! »*

POLYSOUDE : Related services

► Guidance and technical support

A welding application specialist in your area will advise you on the welding process and appropriate equipment for your application.

► Commissioning / Training

A complete training program will enable you to start using the equipment immediately and in the best way possible.

► Maintenance / Repair

Maintenance and repair operations can be carried out at the Polysoude plant as well as on site by our service network.

► Rental service

Increase the flexibility of your production! A large range of equipment is available for rental from our hire fleet.

Your partners worldwide

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