

## **Optimizing tube-to-tube sheet welding for heat exchangers**

### ***P Series Weld Heads***

Manufacturers in the power generation, HVAC, petrochemical and food and beverage industries need both quality and ease-of-use in a tube-to-tube sheet welding gun. Our P450 and P550 welding guns were designed to exceed expectations on both counts.

The rugged design is critical in the high-volume task of sealing welding tubes-to-tube sheets in heat exchanger applications.

Experience in the field shows these guns provide consistently high weld quality, thanks to a straightforward design that makes on-the-job maintenance a practical possibility.

Our P450 is designed for outside diameters of 5/8" to 1 1/2". And the P550 extends the range to ODs as large as 3 1/2". Both models extend the benefits of portable, practical, quality welding to heat exchanger manufacturing.



**Weld Quality Starts in the Arc**

USA | tel: 1-704-230-2510 | [dimmktg@dimetrics.com](mailto:dimmktg@dimetrics.com)  
INTERNATIONAL | tel: 1-905-689-0734 | [liburdi@liburdi.com](mailto:liburdi@liburdi.com)  
EUROPE | tel: +31-6-2036-1018 | [liburdieurope@liburdi.com](mailto:liburdieurope@liburdi.com)  
[www.liburdi.com](http://www.liburdi.com)

# P Series Weld Heads

## CAPABILITIES

The P450 and P550 tube-to-tube sheet welding guns are specifically designed for seal welding of flush, recessed and slightly extended (up to 1/8") tube-to-tube sheets. Portability and ease of use, these models are typically hand-held but can also be used with a spring-loaded balancer.

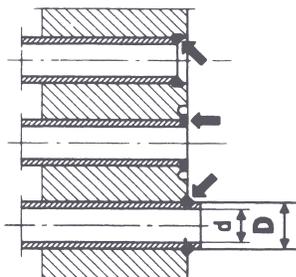
The standard configuration includes a tachometer feedback motor and a position counter for position-based programming (15 degree increments). The shroud is water-cooled but provides openings for visibility of the arc. An optional closed shroud is available when welding materials that are highly reactive to the atmosphere, such as Titanium.

A conventional GTAW torch is used for durability with limited special parts. The torch can be adjusted in or out for diameter adjustment and can be angled up to 10 degrees. The P550 can be equipped with an X-Y Cross Slide which permits adjustment of the torch by lockable knobs.

The P550 has a standard wire feeder and the P450 optional. The wire feeder mounts directly to the rear of the gun and rotates with the torch. Distance from the standard 2-pound wire spool to the wire guide is kept at a minimum length to prevent feeding problems.

We offer a complete line of mandrels and centering cartridges for positioning the tungsten relative to the weld joint. The P550 can be equipped with a mechanical locking mandrel, which is attached through the center of the gun in place of the standard mandrel. However, this mandrel is limited to larger diameter tubes over 1.5 inches.

Our welding guns can be combined with our P300™ Programmable Power Sources. The P300™ provides higher amperage output with microprocessor programming capability.



## ORDERING INFORMATION

### Description

#### Model P450 Tube-To-Tube Sheet Tachometer Feedback

Welding gun (no wire feeder)  
Welding diameter: 5/8" - 1-1/2" (16mm - 38 mm)  
Works well with P300™ Programmable Power Sources

#### Model P550 Tube-To-Tube Sheet Tachometer Feedback

Welding gun with wire feeder  
Welding diameter: 5/8" - 3-1/2" (16mm - 87 mm)  
Works well with P300™ Programmable Power Sources

#### Accessories for Model P450 Welding Gun

Titanium gas shroud for Model P450  
Wire feed unit with spool adapter and wire guide  
Protective Case

#### Accessories for Model P550 Welding Gun

Titanium gas shroud for Model P550  
Mechanical expanding mandrel (1.500 - 2.850) for Model P550  
X-Y cross slide for Model P550 only  
Protective Case

#### Mandrels for Model P450 & P550 Tube-To-Tube Sheet Welding Gun

Mandrel "A" for Cartridge "A"  
Mandrel "B" for Cartridge "B"  
Mandrel "C" for Cartridge "C"

## BENEFITS

Lightweight for greater portability, easier use.  
High productivity and weld visibility from water-cooled gas shroud.  
Simpler mechanism and fewer moving parts for added reliability.  
Easy maintenance.

## SYSTEM COMPONENTS

- Model P450 or P550 Tube-To-Tubesheet welding gun
- 25-foot cable assembly
- Designed for use with P300™ programmable controllers (not included)
- Complete range of mandrels and centering cartridges
- Optional accessories include:
  - Titanium gas shrouds
  - Mechanical expanding mandrel (on Model P550 only)
  - X-Y Cross Slide (on Model P550 only)
  - 25-foot extension cables

## SPECIFICATIONS

	P450	P550
D	5/8" - 1-1/2"	5/8" - 3-1/2"
d	3/8" - 1-1/2"	3/8" - 3"
Max. extended joint	1/16"	1/8"
Weight	5- 1/2 lbs.	9 - 3/4 lbs.
Travel speed	0.5 - 4.6 RPM	0.5 - 3.0 RPM
Wire feed speed	max 35 IPM	max 35 IPM
Position feed back	24-position, 15-degree increments	24-position, 15-degree increments
Current rating	200 amp @ 100% duty cycle	200 amp @ 100% duty cycle