

# P3 UHP

TIG - Without filler wire

**Smart Welding Station High Purity**  
for orbital tube welding

Ready  
4.0 - Smart factory



**POLYSOUDE**

**60 YEARS**  
ANNIVERSARY

# P3 UHP

## Smart Welding Station High Purity

for orbital tube welding

Compatible with all Polysoude™ closed chamber welding heads without filler wire - dedicated to High Purity industries

### Advantages

- **Ultra-compact:** With optimal space-saving dimensions and lightest weight of only 17kg, it provides the best combination of power density and features available in an automatic welding power source on the market today
- **High Purity Mission:** While primarily conceived for the Semiconductor market, the P3 UHP's high precision capabilities and impeccable quality make it equally well designed for the most demanding UHP industries and applications
- **Ergonomically Intelligent:** Intuitive interface with automatic welding head detection and WPS library for a wide variety of welding applications and materials
- **Ultra-precise:** The P3 UHP's control and programming of the welding current in steps of 1/10 Amperes provides unrivalled precision and exquisite quality
- **State-of-the-art Capabilities:** The industry leading WiFi connection and functionality allows the Smart Welding Station to interface perfectly with the Industry 4.0 process and the OPC-UA protocol
- **Modern and scalable:** the installations can be completed with numerous accessories like a wireless barcode scanner, an intuitive remote control pendant and a responsive wireless touchscreen

Resulting from 60 years' experience in mastering welding technologies

\* IIoT: Industrial Internet of Things



### General characteristics

LAN and WLAN compatible

Built-in printer for welding procedure archiving and documentation

Automatic welding head detection

Closed loop regulation of torch rotation

Adjustable mass flowmeters for welding gas control and backing gas with safety valve

Air-cooling; optional closed loop water cooling system with safety valve for welding head and torch

Auto-range 115 - 230 V single phase  
±10% compatible with field power generators



Barcode scanner: automatic selection of the welding programme, improved documentation, etc.



Wireless touchscreen controller LAN/WLAN based programming by free-of-charge "Plug & Play" software or Windows® PC



USB memory stick for saving, loading and archiving of welding programs and monitored welding data



Gas flow control by a mass flow sensor adjustable by a button, the set flow rate is shown on a display

### Associated Welding Heads



#### ► UHP Series

Closed chamber welding heads, dedicated Ultra High Purity, for TIG tube-to-tube welding without filler wire



#### ► Cooling

External cooling unit with water flow safety for high duty-cycle welding heads

### Accessories



#### ► Switch box

Alternate use of two welding heads including automatic selection of the corresponding welding programme



#### ► Remote control pendant

Full function remote control with welding program selection

#### ► Compatibility

with standard peripheral equipment: printer, DAQbox data acquisition, oxygen indicator, etc.





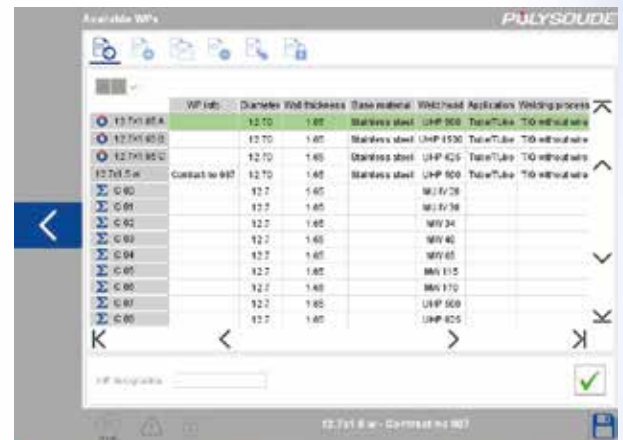
# Graphical User Interface (GUI): Just follow the instructions!

## ► Intuitive graphical interface

With multilingual “Help” menu for optimised welding programs



## ► Synergic mode auto-programming



# They trust us

Our customers are our best references





## Technical specifications

|                                                                  |                                                                                              |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Welding process                                                  | TIG - DC, constant or pulsed                                                                 |
| Input power<br>(Auto-range)                                      | Single phase<br>115 V / 230 V $\pm$ 10%<br>50 / 60 Hz                                        |
| Open circuit voltage                                             | < 113 V                                                                                      |
| Insulation class                                                 | H                                                                                            |
| Protection class                                                 | IP 21                                                                                        |
| Welding current standard (steps of 1 A)                          | Range 125 A: 5 to 125 A (230 V)<br>5 to 95 A (115 V)                                         |
| High precision (steps of 1/10 A)                                 | Range 50 A: 5 to 50 A (115 V/ 230 V)                                                         |
| Welding current precision                                        | $\pm$ 1 A when $I \leq 100$ A and $\pm$ 1% when $I > 100$ A                                  |
| Duty cycle                                                       | 140 A / 25% (230 V) • 100 A / 40% (115 V)<br>95 A / 100% (230 V) • 75 A / 100% (115 V)       |
| Motion controls                                                  | Torch rotation constant or pulsed                                                            |
| Shielding gas control                                            | Welding gas and backing gas with adjustable mass flow meters and flow safety valve           |
| Power source cooling                                             | Forced ventilation                                                                           |
| Welding torch cooling                                            | Air-cooled system. Option : external closed loop water cooling system with flow safety valve |
| Display / recording (non-volatile) of real values during welding | Arc Voltage, welding current, electrode position in angular degrees, welding speed           |
| Welding program storage / transfer                               | Hard disc / USB memory stick                                                                 |
| Dimensions L x W x H                                             | 575 x 224 x 455 mm                                                                           |
| Net weight                                                       | 17 kg                                                                                        |
| Standards                                                        | EN 60974-1 / EN 60974-10                                                                     |



## Options and accessories

- Wireless touchscreen controller or laptop with free "Plug & Play" intuitive and multilingual software
- 10,4" quick release colour touchscreen
- Full function remote control
- Dual welding head switch box
- Mass flow meter for backing gas
- Wireless digital barcode-scanner with cradle and USB cable
- Kit for continuous gas flow
- Control kit for welding heads fitted with tachometer from POLYSOUDE™ or other manufacturers
- External cooling unit 115/230 V with flow safety valve when using high duty-cycle welding heads



# 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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