PIN POWER

High-Speed Vacuum Brazing Machines

PP-S, PP-S$_{PLUS}$, PP-H

High-Speed Vacuum Brazing Machines PP-S, PP-S$_{PLUS}$, PP-H

Experience the excellence in vacuum brazing with PINPOWER's advanced PP series. Our machines are meticulously engineered to meet the diverse demands of modern industries, offering unparalleled performance and reliability.
The PP series includes three models: PP-S, PP-S$_{PLUS}$, and PP-H, each designed to provide optimal brazing solutions.

Models Overview

Function/Product No.	PP-S	PP-S$_{PLUS}$	PP-H
Vacuum Chamber Diameter (mm)	150	150	184
Human Machine Interface (HMI)	9"	10"	10"
Resolution	800 × 480	1,280 × 800	1,280 × 800
Energy Management	-	●	●
Remote Access and Data Collection*	-	●	●
Temperature Discrepancy Alert	●	●	●
Annual Maintenance Reminder	●	●	●
Cooling System Monitoring	-	●	●

*Optional

Technical Specifications

Power	380 V, 3 Phases, 60 A, 5 wires, 40 KVA
Cooling Water	50 L/min, 19,200 BTU/hr
Control System	PLC control integrated with 20 programming recipes
Vacuum Chamber	Quartz inner Ø 150 mm (PP-S and PP-S$_{PLUS}$) Ø 184 mm (PP-H)
Heating System	24 kW, heating rate of 800 °C/min, accuracy ± 3 °C maximum operating temperature 950 °C
Vacuum System	High vacuum pump 1,100 L/sec ultimate vacuum pressure < 9 x 10^{-6} torr

Features and Benefits

Vacuum Chamber Diameter
Available in 150 mm for PP-S and PP-S$_{PLUS}$, and 184 mm for PP-H, accommodating various workpiece sizes.

10" Siemens HMI
Large, high-resolution display for enhanced user interaction and precise control, with potential multilingual support.

High-Resolution Display
The 1,280 x 800 resolution ensures clear and detailed visuals, improving accuracy and user experience.

Energy Management by MID Energy Meter
Provides precise tracking of energy consumption promoting sustainability and cost savings.

Remote Access and Data Collection
Facilitates efficient internet-based diagnostics and troubleshooting, while also enabling user data collection and analysis, minimizing downtime and optimizing equipment performance.

Temperature Discrepancy Alert
Alerts for discrepancies between set and actual temperatures, ensuring precise control.

Annual Maintenance Reminder
Timely reminders for maintenance based on machine usage, ideal for both standard and intensive operations.

Cooling System Monitoring
Real-time monitoring prevents overheating, ensuring machine protection and operational efficiency.

Why Choose PINPOWER's PP Series?

Advanced Automation
Automates brazing, ensuring consistent, high-quality results without requiring skilled labor. This reduces labor costs and enhances operational efficiency, making it ideal for high-volume production.

Energy Efficiency
Equipped with MID Energy Management, the PP series precisely tracks energy consumption, promoting sustainability and delivering significant cost savings.

Comprehensive Monitoring
The PP Series offers advanced remote access, temperature discrepancy alerts, and cooling system monitoring, enabling real-time diagnostics and precise adjustments to brazing parameters. These features optimize performance, ensure consistent quality, and significantly reduce downtime.

Easy Maintenance
The PP series is designed for ease of maintenance, with features like annual maintenance reminders and accessible components. Operators can easily perform routine checks, ensuring smooth operations and reducing overall downtime.

Advantages

1. **Automation**
Minimizes the need for skilled labor, providing consistent, high-quality brazing that is independent of operator expertise, resulting in reduced labor costs and efficient operation.

2. **Consistent Quality**
Ensures consistently high-strength joints, preserving diamond integrity with minimal thermal impact.

3. **Energy Efficiency**
High throughput per brazing cycle significantly reduces energy consumption and CO_2 emissions.

4. **Environmentally Friendly**
Low noise (< 65 dB) and zero emissions provide a safe and clean working environment.

5. **Material Versatility**
Suitable for a wide range of superhard materials, including PCD, PCBN, MCD, CVD diamond, natural diamond, and potentially sintered diamond segments.

6. **Time-Saving**
Shorter brazing cycles (1-2 hours) compared to traditional methods, enhancing productivity.

7. **No Post-Brazing Cleanup**
Eliminates the need for post-brazing cleaning, saving significant time and effort.

8. **Superior Appearance**
Produces smooth and flawless braze lines with no voids or pits, enhancing product aesthetics and end-user satisfaction.

9. **High Reliability**
Built with high-quality well known brand components, ensuring durability and low maintenance.

10. **Clean and Safe**
Applying brazing paste at room temperature and moist ensures a cleaner and safer environment compared to high-temperature molten braze applications.

11. **Easy Maintenance**
Designed for ease of maintenance, allowing operators to perform routine checks and maintenance, reducing overall downtime.

Brazing Procedures of High-Speed Vacuum Brazing Machines

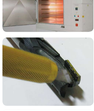
STEP 1

After ultrasonic cleaning, apply the paste

STEP 2

Set diamond tips on the shank

STEP 3



Dry the workpiece in the drying oven
Temperature: 100 ~ 120 °C
Time: 10 ~ 20 minutes approximately
Atmosphere: Air

STEP 4

Shave off excess paste as necessary

STEP 5

Place into the high-speed vacuum brazing machine

STEP 6

Complete brazing

PIN POWER CO., LTD.
10F-1, No. 872, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
TEL +886 2 2267 2869 **FAX** +886 2 2267 2870
EMAIL sales@pinpower.com.tw
www.pinpower.com.tw

Authorized Distributor
Euro Superabrasives Limited
Innovation Central, 10 John Williams Boulevard South, Central Park, Darlington, DL1 1BF, United Kingdom
TEL +44 1325 734899 **EMAIL** sales@eurosuperabrasives.com
www.eurosuperabrasives.com