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RIVERWELD WP-24F SR-24F

RIVERWELD WP24 WP-24GF TIG Welding Torch Head User Manual

Model: WP-24F SR-24F

1. PRODUCT OVERVIEW

The RIVERWELD WP-24GF TIG Welding Torch Head is an 80Amp air-cooled, flexible head body designed for TIG welding applications. This high-quality torch head provides excellent performance and flexibility for various welding tasks.

- **Model:** WP-24GF
- **Torch Head Style:** Flexible Head Body
- **Amperage:** 80 Amp
- **Cooling Type:** Air Cooled
- **Material:** Copper, Brass, Silicone Rubber

2. SAFETY INFORMATION

Always prioritize safety when working with welding equipment. Failure to follow safety precautions can result in serious injury or death. Refer to your welding machine's manual and local safety regulations for comprehensive safety guidelines.

- **Eye and Face Protection:** Always wear a welding helmet with appropriate shade lenses to protect against arc flash and sparks.
- **Body Protection:** Wear flame-resistant clothing, welding gloves, and safety shoes to protect against burns and electrical shock.
- **Ventilation:** Ensure adequate ventilation to remove welding fumes and gases from the work area.
- **Electrical Safety:** Never touch live electrical parts. Ensure all connections are secure and insulated.
- **Fire Prevention:** Keep a fire extinguisher nearby. Remove flammable materials from the welding area.
- **Gas Cylinders:** Handle gas cylinders with care, secure them properly, and ensure regulators are correctly installed.

3. PRODUCT COMPONENTS AND VIEWS

Familiarize yourself with the components of your WP-24GF TIG welding torch head.



Figure 3.1: Main view of the RIVERWELD WP-24GF TIG Welding Torch Head.



Figure 3.2: Side view of the WP-24GF torch head, highlighting its flexible design.



Figure 3.3: Angled view showing the ergonomic grip and flexible neck.



Figure 3.4: Disassembled view of the torch head, showing the internal components and handle.



Figure 3.5: Partially assembled view, illustrating how the handle fits over the torch body.

4. SETUP AND INSTALLATION

Proper setup is crucial for optimal performance and safety.

1. **Connect to Welding Machine:** Securely attach the torch head's power cable and gas hose (if applicable) to the appropriate ports on your TIG welding machine. Ensure all connections are tight to prevent gas leaks or electrical arcing.

2. Install Consumables:

- **Collet Body:** Screw the collet body into the torch head.
 - **Collet:** Insert the correct size collet into the collet body.
 - **Tungsten Electrode:** Insert the sharpened tungsten electrode through the collet and collet body. Adjust the stick-out length as required for your application.
 - **Nozzle (Ceramic Cup):** Screw the ceramic nozzle onto the torch head, ensuring it is snug but not overtightened.
 - **Back Cap:** Screw the back cap onto the torch head to secure the tungsten electrode. Tighten it just enough to hold the tungsten firmly.
3. **Gas Supply:** Connect your inert shielding gas (e.g., Argon) cylinder to the welding machine's gas inlet. Set the gas flow rate according to your welding parameters and material thickness.

5. OPERATING INSTRUCTIONS

The WP-24GF torch head is designed for air-cooled TIG welding. Its flexible head allows for easier access in confined spaces and comfortable torch positioning.

1. **Power On:** Turn on your TIG welding machine and ensure all settings (amperage, gas pre-flow/post-flow, pulse settings if applicable) are correctly configured for your welding task.
2. **Gas Flow Check:** Briefly activate the gas flow to ensure shielding gas is flowing correctly from the nozzle.
3. **Arc Initiation:** Use the appropriate arc initiation method (lift arc or high-frequency start) as supported by your welding machine.
4. **Welding Technique:** Maintain a consistent arc length and torch angle. The flexible head allows you to bend the torch neck to achieve optimal angles and reach difficult areas without straining your wrist.
5. **Air Cooling:** As an air-cooled torch, it relies on ambient air to dissipate heat. Be mindful of duty cycle limitations, especially during prolonged high-amperage welding. Allow the torch to cool if it becomes excessively hot.
6. **Post-Flow:** Allow the shielding gas to continue flowing for a few seconds after extinguishing the arc (post-flow) to protect the hot weld puddle and tungsten from atmospheric contamination.

6. MAINTENANCE

Regular maintenance extends the life of your TIG torch head and ensures consistent welding performance.

- **Inspect Consumables:** Regularly check the collet, collet body, tungsten, and nozzle for wear, cracks, or damage. Replace them as needed. A worn collet can lead to poor electrical contact and tungsten slippage.
- **Clean Torch Head:** Keep the torch head clean from spatter and debris. Use a soft brush or cloth. Avoid harsh chemicals that could damage the silicone rubber or other components.
- **Check Connections:** Periodically inspect all electrical and gas connections for tightness and signs of wear or corrosion.
- **Tungsten Sharpening:** Sharpen your tungsten electrodes to the appropriate angle for your application. A dull or contaminated tungsten can lead to an unstable arc and poor weld quality.
- **Flexible Neck Care:** While the head is flexible, avoid excessive or sharp bending that could damage the internal conductors or gas lines. Bend it smoothly and only as much as necessary.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your TIG torch head.

Problem	Possible Cause	Solution
Unstable or erratic arc	<ul style="list-style-type: none">• Contaminated or improperly sharpened tungsten• Loose collet or collet body• Insufficient shielding gas	<ul style="list-style-type: none">• Clean or re-sharpen tungsten; replace if necessary• Tighten collet and collet body• Check gas flow rate and connections
Torch head overheating	<ul style="list-style-type: none">• Exceeding duty cycle• Amperage too high for air-cooled torch• Poor electrical connections	<ul style="list-style-type: none">• Allow torch to cool; reduce welding time• Reduce amperage or consider a water-cooled torch for higher amps• Check and tighten all connections
Porosity in weld	<ul style="list-style-type: none">• Insufficient or contaminated shielding gas• Gas leaks• Drafts in welding area	<ul style="list-style-type: none">• Increase gas flow; check gas purity• Check all gas connections for leaks• Block drafts around welding area
Tungsten contamination	<ul style="list-style-type: none">• Tungsten touching weld puddle• Insufficient gas post-flow• Improper arc initiation	<ul style="list-style-type: none">• Maintain proper arc length• Increase gas post-flow time• Use lift arc or HF start correctly

8. SPECIFICATIONS

Specification	Detail
Manufacturer	RIVERWELDstore
Part Number	WP-24GF
Item Weight	4.8 ounces
Product Dimensions	3.54 x 1.57 x 2.36 inches
Item Model Number	WP-24F SR-24F
Color	Black
Material	Copper; Brass; Silicone Rubber
Pattern	WP-24GF Top Flexible
Power Source	AC/DC (Torch head compatible)
Item Package Quantity	1
Included Components	WP-24GF TIG Welding Torch Head Body Flexible 80Amp Air Cooled
Date First Available	July 11, 2015

9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the official RIVERWELD website or contact the seller directly through your purchase platform. Keep your proof of purchase for any warranty claims.

For additional resources and product information, you may visit the RIVERWELD Store on Amazon.