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1. PRODUCT OVERVIEW

The Bernard NT-3800C Centerfire Nozzles are specifically engineered for use with large Centerfire diffusers in MIG welding applications. These nozzles are designed to optimize gas flow and provide a built-in spatter shield, contributing to consistent and high-quality welds. Their design facilitates precise contact tip positioning, offering flexibility for various welding requirements.



An image showing the Bernard NT-3800C Centerfire Nozzle, highlighting its tapered design and robust construction.

2. KEY FEATURES

- **Built-in Spatter Shield:** Smooths and concentrates gas flow for improved weld quality.
- **Versatile Contact Tip Positioning:** Allows fixed contact tip positioning at flush, 1/8" recess, 1/4" recess, and 1/8" extension for adaptability to different welding tasks.
- **Tool-Free Replacement:** Designed for use with non-threaded Centerfire Contact Tips, enabling quick and easy, tool-free replacement after burn back.
- **Durable Construction:** Made from stainless steel for longevity and resistance to welding environments.

3. SETUP AND INSTALLATION

Proper installation ensures optimal performance and safety. Always ensure the welding equipment is powered off and cooled before handling components.

1. **Prepare the Diffuser:** Ensure the large Centerfire diffuser is clean and free of spatter or debris.
2. **Install Contact Tip:** Insert a compatible non-threaded Centerfire Contact Tip into the diffuser. The tip

should fit securely.

3. **Attach Nozzle:** Place the NT-3800C Centerfire Nozzle over the contact tip and diffuser. Hand-tighten the nozzle until it is firmly seated. No tools are required for this step.
4. **Verify Positioning:** Check that the contact tip is positioned correctly relative to the nozzle (flush, 1/8" recess, 1/4" recess, or 1/8" extension) as required for your specific welding application.

4. OPERATING INSTRUCTIONS

The NT-3800C nozzle is designed to enhance your MIG welding process by optimizing gas flow and protecting the contact tip. Its built-in spatter shield helps maintain a clean welding environment and consistent gas coverage, which are crucial for quality welds.

- **Select Tip Positioning:** Choose the appropriate contact tip positioning (flush, 1/8" recess, 1/4" recess, or 1/8" extension) based on the welding process, material thickness, and desired arc characteristics. A recessed tip is often preferred for reducing spatter, while an extended tip can be useful for reaching into tight joints.
- **Monitor Performance:** During welding, observe the gas coverage and arc stability. The nozzle should provide a smooth, concentrated gas stream.
- **Regular Inspection:** Periodically inspect the nozzle for spatter buildup and wear during operation to ensure continuous optimal performance.

5. MAINTENANCE

Proper maintenance extends the life of your nozzle and ensures consistent welding results.

- **Cleaning:** After each welding session, inspect the nozzle for spatter. Remove any spatter buildup from the inside and outside of the nozzle using a suitable welding nozzle reamer or spatter-resistant pliers. Avoid using abrasive tools that could damage the nozzle's internal surface or spatter shield, as this can affect gas flow.
- **Replacement:** The NT-3800C nozzle is designed for quick, tool-free replacement. If the nozzle becomes damaged, excessively worn, or its performance degrades (e.g., inconsistent gas flow, excessive spatter despite cleaning), simply unscrew it by hand and replace it with a new Bernard NT-3800C nozzle.
- **Contact Tip Check:** Always ensure the contact tip is also in good condition and replaced as needed, as a worn tip can negatively impact nozzle performance and weld quality.

6. TROUBLESHOOTING

This section addresses common issues related to nozzle performance.

- **Inconsistent Gas Flow:**
 - Check for spatter buildup inside the nozzle or on the gas diffuser. Clean thoroughly.
 - Ensure the nozzle is securely hand-tightened onto the diffuser.
 - Verify that the gas supply and flow rate are correctly set on your welding machine.
- **Excessive Spatter:**
 - Ensure the contact tip is positioned correctly. A recessed tip generally helps reduce spatter.
 - Check welding parameters (voltage, wire feed speed) and gas mixture; these can significantly

impact spatter levels.

- **Poor Weld Quality:**

- Verify that the contact tip is not worn, clogged, or damaged. Replace if necessary.
- Ensure the nozzle is clean and providing consistent gas coverage.
- Confirm the correct contact tip extension/recess is used for the specific application.

7. SPECIFICATIONS

Part Number	NT-3800C
Item Model Number	360-NT-3800C
Material	Stainless Steel
Item Weight	227 g (0.5 lbs)
Product Dimensions (L x W x H)	8.48 x 7.37 x 2.54 cm (3.34 x 2.9 x 1 inches)
Compatibility	Designed for Large Centerfire Diffusers
Contact Tip Positioning Options	Flush, 1/8" Recess, 1/4" Recess, 1/8" Extension
UPC	662991302602

8. WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or to inquire about replacement parts, please refer to the official Bernard website or contact Bernard customer service directly. It is recommended to retain your purchase receipt for any warranty claims.