LOCO SCIENCE 4 Inch x 1 Micron

LOCO SCIENCE Stainless Steel Tri-Clamp Sintered Disc Filter Plate

4 Inch x 1 Micron - Instruction Manual

1. Introduction

This manual provides essential information for the safe and effective use of your LOCO SCIENCE Stainless Steel Tri-Clamp Sintered Disc Filter Plate. Please read these instructions thoroughly before installation and operation. Proper understanding and adherence to these guidelines will ensure optimal performance and longevity of the product.

2. Product Overview

The LOCO SCIENCE 4 Inch x 1 Micron Sintered Disc Filter Plate is designed for efficient filtration in various industrial and scientific applications. It is particularly effective for removing lipids, fats, waxes, and other unwanted materials from process streams.

- **Construction:** The filter spool is constructed from durable 304 stainless steel, while the sintered disc is made from high-grade 316 stainless steel, ensuring chemical resistance and longevity.
- **Filtration Efficiency:** Features a 1-micron sintered disc for fine particulate removal.
- **Connection:** Equipped with Tri-Clamp fittings on both ends to facilitate secure and leak-free integration into existing systems.

Figure 1: LOCO SCIENCE 4 Inch x 1 Micron Sintered Disc Filter Plate. This image shows the complete filter plate assembly, highlighting its stainless steel construction and tri-clamp connections.

Figure 2: Close-up view of the LOCO SCIENCE sintered disc. This image provides a detailed look at the intricate mesh pattern of the 1-micron sintered filter media.

3. Safety Information

- Always wear appropriate personal protective equipment (PPE) when handling the filter plate and

working with filtration systems.

- Ensure all connections are properly secured with Tri-Clamps and gaskets to prevent leaks, especially when operating under pressure.
- Do not exceed the maximum operating pressure or temperature specified for your system components.
- Handle the sintered disc with care to avoid damage to the delicate filter media.
- Depressurize the system completely before attempting any maintenance or disassembly.

4. Setup

1. **Inspection:** Before installation, carefully inspect the filter plate for any signs of damage, such as dents, scratches, or deformities. Ensure the sintered disc is intact and free from debris.
2. **Gasket Placement:** Place appropriate Tri-Clamp gaskets (not included) into the grooves of the Tri-Clamp fittings on both ends of the filter plate.
3. **System Integration:** Align the filter plate with the corresponding Tri-Clamp connections in your filtration system.
4. **Secure Connections:** Use Tri-Clamps (not included) to firmly secure the filter plate to your system. Ensure a tight, leak-free seal by evenly tightening the clamps.
5. **Pre-Rinse (Optional):** For critical applications, a pre-rinse with a compatible solvent or purified water may be performed to remove any manufacturing residues.

5. Operating Instructions

The sintered disc filter plate is designed for inline filtration. It can be used independently or in conjunction with other filtration media.

1. **Flow Direction:** Ensure the fluid flows through the filter plate in the intended direction. While sintered discs generally filter bi-directionally, specific system designs may require a particular flow path.
2. **Media Integration (Optional):** If using with filter paper or other filtration media, ensure they are correctly positioned upstream of the sintered disc for multi-stage filtration.
3. **Start Filtration:** Gradually introduce the fluid to be filtered into the system. Monitor pressure differentials across the filter plate. A significant increase in pressure indicates clogging and necessitates cleaning or replacement.
4. **Monitoring:** Regularly monitor the clarity of the filtered product and the pressure drop across the filter to determine filtration efficiency and when maintenance is required.

6. Maintenance

Regular cleaning and inspection are crucial for maintaining the performance and lifespan of your sintered disc filter plate.

1. **Disassembly:** Depressurize the system. Carefully remove the Tri-Clamps and disassemble the filter plate from the system.
2. **Initial Rinse:** Rinse the filter plate with clean water to remove loose debris.
3. **Cleaning:** For thorough cleaning, use a compatible solvent or a mild detergent solution. Ultrasonic cleaning is highly effective for sintered media. Backflushing with clean fluid can also help dislodge trapped particles.
4. **Drying:** After cleaning, rinse thoroughly with purified water and allow the filter plate to air dry completely or use a clean, dry air stream.

5. **Inspection:** Before reassembly, inspect the sintered disc for any damage, cracks, or permanent clogging. Replace if necessary.
6. **Storage:** Store clean and dry filter plates in a protective environment to prevent contamination or damage.

7. Troubleshooting

- **Reduced Flow Rate / Increased Pressure Drop:** This typically indicates that the sintered disc is becoming clogged. Perform a thorough cleaning as described in the Maintenance section.
- **Leaks at Connections:** Ensure Tri-Clamps are properly tightened and that gaskets are correctly seated and undamaged. Replace worn or damaged gaskets.
- **Poor Filtration Quality:** Verify that the correct micron rating filter is being used for the application. Ensure the filter disc is not damaged or bypassed. Consider adding pre-filtration stages if the fluid contains a high load of larger particles.

8. Specifications

Feature	Specification
Model	4 Inch x 1 Micron Sintered Disc Filter Plate
Filter Spool Material	304 Stainless Steel
Sintered Disc Material	316 Stainless Steel
Filtration Rating	1 Micron
Connection Type	Tri-Clamp
Item Weight	1.25 pounds
Manufacturer	LOCO SCIENCE
ASIN	B08NF84PL8

9. Warranty and Support

For warranty information, technical support, or inquiries regarding your LOCO SCIENCE product, please refer to the seller's policies or contact LOCO SCIENCE directly through their official channels. Keep your purchase receipt for any warranty claims.

You can visit the LOCO SCIENCE Store for more information:LOCO SCIENCE Store