AMETEK Brookfield SSA 18/13R

AMETEK Brookfield Small Sample Adapter SSA 18/13R Instruction Manual

For Viscometer Models 98945-00 and 98945-05

Introduction

This manual provides essential instructions for the proper setup, operation, and maintenance of the AMETEK Brookfield Small Sample Adapter, model SSA 18/13R. This adapter is specifically designed for use with Brookfield Viscometer Models 98945-00 and 98945-05 to accurately measure the viscosity of low fluid volumes, typically between 8 to 13 mL. Adherence to these instructions will ensure optimal performance and longevity of the equipment.

Product Overview

Figure 1: Components of the AMETEK Brookfield Small Sample Adapter SSA 18/13R. This image displays the main viscometer unit with its stand, a black cylindrical water jacket attached to the viscometer shaft, two silver cylindrical sample chambers, and four different conical spindles. The water jacket features two barbed fittings for connecting to an external circulating bath.

The Small Sample Adapter system comprises a specialized sample chamber and a set of spindles, designed to work in conjunction with compatible Brookfield viscometers. It includes a water jacket for precise temperature control, which is crucial for accurate viscosity measurements. The adapter allows for easy installation and removal of the sample chamber without disrupting the viscometer or the circulating bath.

Setup Instructions

1. **Unpacking and Inspection:** Carefully unpack all components. Verify that all parts listed in the packing list are present and undamaged. Report any discrepancies or damage to your supplier immediately.
2. **Viscometer Preparation:** Ensure your Brookfield Viscometer (Models 98945-00 or 98945-05) is securely mounted on its stand and leveled.
3. **Adapter Installation:** Attach the Small Sample Adapter's water jacket assembly to the viscometer as per the viscometer's primary instruction manual for accessory installation. Ensure it is firmly seated.
4. **Sample Chamber Placement:** Insert the appropriate sample chamber into the water jacket. Ensure it is clean and dry before use.

5. **Temperature Control Connection:** Connect an external circulating water bath (not included) to the inlet and outlet ports of the adapter's water jacket using appropriate tubing. Ensure secure connections to prevent leaks. The adapter operates within a temperature range of 5°F to 212°F (-15°C to 100°C).
6. **Spindle Selection:** Choose the appropriate spindle for your expected viscosity range. Refer to the viscometer's manual for guidance on spindle selection.

Operating Procedures

1. **Sample Preparation:** Prepare your sample fluid. The required sample volume is typically 8 to 13 mL. Ensure the sample is homogeneous and free of air bubbles.
2. **Temperature Stabilization:** Pour the prepared sample into the sample chamber. Allow sufficient time for the sample to reach the desired test temperature, as controlled by the external circulating bath. Temperature stability is critical for accurate measurements.
3. **Spindle Attachment:** Carefully attach the selected spindle to the viscometer's coupling. Lower the viscometer head until the spindle is immersed in the sample to the designated mark. Avoid trapping air bubbles under the spindle.
4. **Viscometer Operation:** Turn on the viscometer and select the appropriate speed setting. Allow the reading to stabilize before recording the viscosity value.
5. **Data Recording:** Record the viscosity reading, temperature, spindle number, and speed.
6. **Sample Chamber Removal:** The sample chamber can be easily installed or removed without disturbing the operation of the viscometer or the circulating bath, allowing for efficient sample changes.

Maintenance

- **Cleaning:** After each use, thoroughly clean the sample chamber and spindle with an appropriate solvent for your sample material. Rinse with distilled water and dry completely. The sample chamber is made of Borosilicate Glass.
- **Water Jacket:** Periodically inspect the water jacket and tubing for any signs of leaks or blockages. Flush with distilled water if necessary.
- **Storage:** Store the adapter components in a clean, dry environment when not in use. Protect spindles from damage.
- **Calibration:** Regular calibration of your viscometer and verification of the adapter's performance with certified viscosity standards are recommended to ensure accuracy.

Troubleshooting

If you encounter issues during operation, consider the following common problems and solutions:

- **Inaccurate Readings:**
  - Ensure the sample temperature is stable and uniform.
  - Verify the correct spindle is used and properly immersed.
  - Check for air bubbles in the sample.
  - Confirm the viscometer is level and calibrated.
- **Temperature Control Issues:**
  - Check connections to the external circulating bath for leaks or blockages.
  - Ensure the circulating bath is operating correctly and set to the desired temperature.

- **Spindle Not Rotating:**
  - Verify the spindle is correctly attached to the viscometer.
  - Check the viscometer's power and settings.

For persistent issues, refer to your main viscometer manual or contact AMETEK Brookfield technical support.

Specifications

Feature	Specification
Model Number	SSA 18/13R
Compatibility	Brookfield Viscometer Models 98945-00 and 98945-05
Viscosity Range	3 to 10,000 cP (3 to 10 K cp)
Minimum Sample Volume	8 mL
Typical Sample Volume	8 to 13 mL
Operating Temperature Range	5°F to 212°F (-15°C to 100°C)
Material	Borosilicate Glass (sample chamber)
Package Dimensions	5 x 5 x 5 inches
Package Weight	1 Pound

Warranty Information

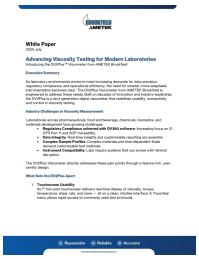
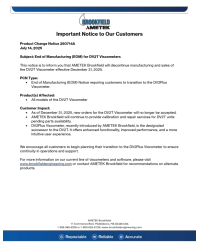
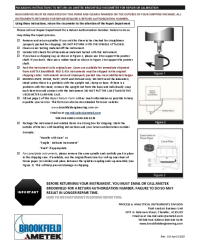
The AMETEK Brookfield Small Sample Adapter SSA 18/13R is covered by a **1-year Universal Guarantee** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. For detailed warranty terms and conditions, please refer to the documentation provided with your original purchase or contact AMETEK Brookfield customer service.

Support and Contact

For technical assistance, service, or inquiries regarding the AMETEK Brookfield Small Sample Adapter, please contact AMETEK Brookfield customer support. Please have your model number (SSA 18/13R) and viscometer model ready when contacting support.

- **Manufacturer:** AMETEK Brookfield
- **Website:** www.brookfieldengineering.com (*Note: This is a generic example, actual link may vary.*)
- **Customer Service:** Refer to the official AMETEK Brookfield website for current contact information.

Related Documents

	[DV360 Software for Viscosity Measurement | AMETEK Brookfield] Discover DV360, the advanced viscosity measurement software from AMETEK Brookfield. Enhance accuracy, efficiency, and data analysis with intuitive features and comprehensive testing capabilities. Available in Standard and Advanced Editions.
	[Advancing Viscosity Testing for Modern Laboratories with the DV2Plus Viscometer] This white paper introduces the AMETEK Brookfield DV2Plus Viscometer, a next-generation digital viscometer designed for modern laboratories. It highlights features like touchscreen usability, built-in intelligence, advanced connectivity, comprehensive software support (DV360 and DV Create), and precision control with 740 speeds. The document also details technical specifications and applications across various industries, emphasizing regulatory compliance and ease of use.
	[AMETEK Brookfield DV2T Viscometer End of Manufacturing Notice] AMETEK Brookfield announces the End of Manufacturing (EOM) for the DV2T Viscometer, effective December 31, 2025. Customers are advised to transition to the DV2Plus Viscometer. Information on support and replacement products is provided.
	[Ametek Brookfield Viscometer Repair and Calibration Packaging Instructions] Detailed instructions for packaging and returning Ametek Brookfield viscometers for repair or calibration, including required information, shipping procedures, and contact details.