

# Thermosel®

for Elevated Temperature Testing



**Compatible** with standard AMETEK Brookfield Viscometers and DV3T Rheometers  
 Note: requires optional cable DVP-141

**Provides control** of sample temperature up to +300°C

**EZ-Lock Option**  
 Thermosel is now available with special EZ-Lock spindle coupling for use on standard AMETEK Brookfield Viscometers/Rheometers already equipped with the EZ-Lock feature

**Temperature Ramping** between set points is possible if used with RheocalcT (DV3T & DV2T) Software  
 Note: Requires optional cable HT-106

**Thermo Container** (Heating Chamber)



**Computer Controlled** when used with DV2T or DV3T and RheocalcT Software (HT-106 cable required)

**Programmable Temperature Controller** offers single set point or up to 10 programmable set points.

**Direct Temperature Control Possible** with DV2T/DV3T Rheometer (p20)

## What's Included?

- Choice of one SC4 Spindle  
Specify when ordering
- Alignment Bracket
- Thermo Container with safety guard and insulating cap
- 1 Removable Sample Chamber (p47)
- 5 Disposable Sample Chambers (p47)  
Order additional chambers in quantities of 100, HT-2DB-100
- 18" Lab Stand Rod (p35)
- Extracting Tools
- Temperature Controller with an RTD probe

## Applications

Hot Melts	Asphalt (ASTM D4402)
Wax	Polymers

The difficulty with viscosity measurements of hot melts and liquids at elevated temperatures has been in maintaining accurate temperature control that is consistent from sample to sample so that meaningful data could be obtained.

The AMETEK Brookfield Thermosel solves this problem by providing a stable, precisely controlled sample environment. This, together with the inherent accuracy of the AMETEK Brookfield Viscometers, is fundamental to the Thermosel System, which produces viscosity measurements that are not only accurate but entirely reproducible.

### Several factors contribute to the stable environment:

- Non-fluctuating temperature control
- Small sample volume and insulated sample chamber which reduces temperature gradients within the sample
- The rotating spindle, which acts as a built-in stirring device

The test procedure is quite straightforward. Once familiar with the system, unskilled operators can easily produce accurate, reproducible data.

## Thermosel Viscosity Ranges cP(mPa•s)

SPINDLE SAMPLE VOLUME SHEAR RATE (sec <sup>-1</sup> )† MODEL	SC4-18 8mL 1.32N	SC4-31 10mL .34N	SC4-34 9.5mL .28N	SC4-21 8mL .93N	SC4-27* 10.5mL .34N	SC4-28 11.5mL .28N	SC4-29 13mL .25N	HT-DIN-81** 7mL 1.29N
DV3TLV	1.2-30K	12-300K	24-600K	Not applicable for historical reasons. However, it is possible to use the above spindles with any of these instruments.				1.0-10K
DV2TLV	1.5-30K	15-300K	30-600K					3.4-10K
DV1LV	3-10K	30-100K	60-200K	Digital Viscometers/Rheometers will automatically calculate viscosity. Please contact Brookfield or an authorized dealer if you require information on viscosity range.				3.4-10K
DVELV	3-10K	30-100K	60-200K					3.4-10K
LVT	5-10K	50-100K	100-200K					5.7-10K
DV3TRV				20-500K	100-2.5M	200-5M	400-10M	14.6-10K
DV2TRV				25-500K	125-2.5M	250-5M	500-10M	36.5-10K
DV1RV				50-170K	250-830K	500-1.7M	1K-3.3M	36.5-10K
DVERV	Not applicable for historical reasons.			50-170K	250-830K	500-1.7M	1K-3.3M	36.5-10K
RVT	However, it is possible to use the above spindles with any of these instruments.			50-100K	250-500K	500-1M	1K-2M	36.5-10K
DV3THA				40-1M	200-5M	400-10M	800-20M	29.2-10K
DV2THA	Digital Viscometers/Rheometers will automatically calculate viscosity. Please contact Ametek Brookfield or an authorized dealer if you require information on viscosity range.			50-1M	250-5M	500-10M	1K-20M	73.0-10K
DV1HA				100-300K	500-1.7M	1K-3.3M	2K-6.7M	73.0-10K
DVEHA				100-300K	500-1.7M	1K-3.3M	2K-6.7M	73.0-10K
HAT				100-200K	500-1M	1K-2M	2K-4M	73.0-10K
DV3THB				160-4M	800-20M	1.6K-40M	3.2K-80M	116.8-10K
DV2THB				200-4M	1K-20M	2K-40M	4K-80M	292.0-10K
DV1HB				400-1.3M	2K-6.7M	4K-13.3M	8K-26.7M	292.0-10K
DVEHB				400-1.3M	2K-6.7M	4K-13.3M	8K-26.7M	292.0-10K
HBT				400-800K	2K-4M	4K-8M	8K-16M	292.0-10K

M = 1 million K = 1 thousand N = RPM † Spindle SC4-18 1.32 x 10 (rpm) = 13.2 sec<sup>-1</sup> cP = Centipoise mPa•s = milliPascal•seconds

\*Optional disposable SC4-27D spindle is available in quantities of 100, Part No. SC4-27D-100. Requires special chuck/closer, Part No. SC4-DSY, for attachment to viscometer.

\*\*The 81 spindle, Part No. HT-DIN-81, works in an HT-2 or HT-2DB chamber.

## Additional Information



Alignment Bracket ensures concentricity of spindle and sample chamber.



Other components supplied include sample chamber holder, RTD probe, insulating cap, coupling link, coupling nut and choice of SC4 spindle.



Extracting Tool enables the sample chamber to be handled easily and safely.



Option: Disposable Sample Chamber with Optional Disposable Spindle SC4-27D\* is ideal for asphalts or any difficult-to-clean material.

Order disposable SC4-27D spindle in quantities of 100, Part No. SC4-27D-100.

Requires special chuck/closer, Part No. SC4-DSY, for attachment to viscometer.

Order disposable HT-2DB chambers in quantities of 100, Part No. HT-2DB-100.

Option: Solid shaft spindles for high viscosity materials (p47)