Small Sample Adapter

...for rheological evaluation where sample volume is limited

Standard Sample Chamber with embedded temperature probe provides direct temperature measurement of sample

Disposable Sample Chamber
(Requires SSA-DCU Water Jacket)

Complete system shows the DV-II+Pro Viscometer and Small Sample Adapter with Circulating Water Bath for temperature control.

The Small Sample Adapter provides a defined geometry system for accurate viscosity measurements at precise shear rates. Consisting of a cylindrical sample chamber and spindle, the Small Sample Adapter is designed to measure small sample volumes of 2 to 16 mL, and easily attaches to all standard Brookfield Viscometers/ Rheometers.

Removable Sample Chamber

The design of the Small Sample Adapter allows the sample chamber to be easily changed and cleaned without disturbing the set-up of the viscometer or temperature bath. This means that successive measurements can be made under identical conditions.

Temperature Control

The sample chamber fits into a water jacket so that precise temperature control can be achieved when the Brookfield circulating temperature bath is used. The stirring action of the rotating spindle, plus the small sample volume, helps to keep the temperature gradient across the sample to a minimum. Direct readout of sample temperature is provided using sample chambers with optional embedded RTD sensor connected to the DV-I Prime and DV-II+Pro Viscometers and the DV-III Ultra Rheometer. Working temperature range for the Small Sample Adapter is from –15°C to 100°C.

Cylindrical Geometry

The Small Sample Adapter's coaxial cylinder geometry provides extremely accurate viscosity measurements at defined shear rates.

Disposable Sample Chambers

Disposable 13R chambers, for hard-to-clean materials, are available in a kit that comes complete with 100 chambers and special-sized water jacket (Part No. SSA-DCU). Additional disposable chambers can be purchased in quantities of 100 (Part No. SC4-13RD-100).

BROOKFIELD ACCESSORIES

United States: T: 800.628.8139 or 508.946.6200 F: 508.946.6262 www.brookfieldengineering.com

United Kingdom: T: 01279 451774 F: 01279 451775 www.brookfield.co.uk

Sample chamber easily changed

Optional disposable chamber also available

Water jacket allows rapid and precise temperature control of sample

Simultaneous sample temperature measurement is possible by ordering embedded temperature probe in sample chamber

What's Included?

Water Jacket

Mounting Bracket with Hardware

Choice of one SC4 Spindle*

Choice of one SC4 Sample Chamber*

Storage Case

*Specify when ordering

Optional Accessories

Embedded RTD temperature Probe

SC4-13RD Disposable Sample Chambers

Temperature Bath

Viscosity Ranges (mPa•s)

MODEL	Spindle SC4-18 Sample Chamber* SC4-13R(P) Sample Volume 6.7mL Shear Rate (sec^{-1}) 1.32N	Spindle SC4-31 Sample Chamber* SC4-13R(P) Sample Volume 9.0mL Shear Rate (sec^{-1}) .34N	Spindle SC4-34 Sample Chamber* SC4-13R(P) Sample Volume 9.4mL Shear Rate (sec^{-1}) .28N	Spindle SC4-16 Sample Chamber* SC4-8R(P) Sample Volume 4.2mL Shear Rate (sec^{-1}) .29N	Spindle SC4-25 Sample Chamber* SC4-13R(P) Sample Volume 16.1mL Shear Rate (sec^{-1}) .22N
LVDV-IIIUltra	1.2-30K	12-300K	24-600K	48-1.2M	192-4.8M
LVDV-II+Pro	1.5-30K	15-300K	30-600K	60-1.2M	240-4.8M
LVDV-IPrime	3-10K	30-100K	60-200K	120-400K	800-1.6M
LVDVE	3-10K	30-100K	60-200K	120-400K	800-1.6M
LVT	5-10K	50-100K	100-200K	200-400K	800-1.6M
RVDV-IIIUltra					
RVDV-II+Pro					
RVDV-IPrime					
RVDVE	Not applicable for historical reasons.				
RVT	However, it is possible to use the				
HADV-IIIUltra	above spindle/chamber combinations				
HADV-II+Pro	with any of these instruments. Digital				
HADV-IPrime	Viscometers/Rheometers will				
HADVE	automatically calculate viscosity.				
HAT	Please contact Brookfield or an				
HBDV-IIIUltra	authorized dealer if you require				
HBDV-II+Pro	information on viscosity range.				
HBDV-Prime					
HBDVE					
HBT					

MODEL	Spindle SC4-21 Sample Chamber* SC4-13R(P) Sample Volume 7.1mL Shear Rate (sec^{-1}) .93N	Spindle SC4-27 Sample Chamber* SC4-13R(P) Sample Volume 10.4mL Shear Rate (sec^{-1}) .34N	Spindle SC4-15 Sample Chamber* SC4-7R(P) Sample Volume 3.8mL Shear Rate (sec^{-1}) .48N	Spindle SC4-28 Sample Chamber* SC4-13R(P) Sample Volume 11.0mL Shear Rate (sec^{-1}) .28N	Spindle SC4-29 Sample Chamber* SC4-13R(P) Sample Volume 13.5mL Shear Rate (sec^{-1}) .25N	Spindle SC4-14 Sample Chamber* SC4-6R(P) Sample Volume 2.1mL Shear Rate (sec^{-1}) .40N
LVDV-IIIUltra	Not applicable for historical reasons. However, it is possible to use					
LVDV-II+Pro	the above spindle/chamber combinations with any of these					
LVDV-IPrime	instruments. Digital Viscometers/Rheometers will automatically					
LVDVE	calculate viscosity. Please contact Brookfield or an authorized					
LVT	dealer if you require information on viscosity range.					
RVDV-IIIUltra	20-500K	100-2.5M	200-5M	200-5M	400-10M	500-12.5M
RVDV-II+Pro	25-500K	125-2.5M	250-5M	250-5M	500-10M	625-12.5M
RVDV-IPrime	50-170K	250-830K	500-1.7M	500-1.7M	1K-3.3M	1.25K-4.2M
RVDVE	50-170K	250-830K	500-1.7M	500-1.7M	1K-3.3M	1.25K-4.2M
RVT	50-100K	250-500K	500-1M	500-1M	1K-2M	1.25K-2.5M
HADV-IIIUltra	40-1M	200-5M	400-10M	400-10M	800-20M	1K-25M
HADV-II+Pro	50-1M	250-5M	500-10M	500-10M	1K-20M	1.25K-25M
HADV-IPrime	100-300K	500-1.7M	1K-3.3M	1K-3.3M	2K-6.7M	2.5K-8.3M
HADVE	100-300K	500-1.7M	1K-3.3M	1K-3.3M	2K-6.7M	2.5K-8.3M
HAT	100-200K	500-1M	1K-2M	1K-2M	2K-4M	2.5K-5M
HBDV-IIIUltra	160-4M	800-20M	1.6K-40M	1.6K-40M	3.2K-80M	4K-100M
HBDV-II+Pro	200-4M	1K-20M	2K-40M	2K-40M	4K-80M	5K-100M
HBDV-Prime	400-1.3M	2K-6.7M	4K-13.3M	4K-13.3M	8K-26.7M	10K-33.3M
HBDVE	400-1.3M	2K-6.7M	4K-13.3M	4K-13.3M	8K-26.7M	10K-33.3M
HBT	400-800K	2K-4M	4K-8M	4K-8M	8K-16M	10K-20M

M = 1 million K = 1 thousand N = RPM e.g. Spindle SC4-18 1.32 x 10 (rpm) = 13.2 sec-1 cP = Centipoise mPa•s = Millipascal/seconds

N/A = Not applicable for historical reasons. However, it is possible to use any spindle/chamber combination with any torque range. Digital viscometers/rheometers will automatically calculate viscosity.

* Examples SC4-13R Sample Chamber
SC4-13RP Sample Chamber with RTD temperature probe
SC4-13RPY Sample Chamber with RTD temperature probe and cable to viscometer/rheometer
SC4-13RD-100 Disposable Sample Chamber available in packages of 100

** Disposable chamber available in 13R size and requires SC4-45YD water jacket

BROOKFIELD

Brookfield Engineering Laboratories, Inc.
11 Commerce Boulevard
Middleboro, MA 02346-1031 USA
T: 800.628.8139 or 508.946.6200 F: 508.946.6262
W: www.brookfieldengineering.com