

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+ 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



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 (p42)
- Temperature Bath (p27)

Small Sample Adapter Viscosity Ranges cP(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	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-IIIU	1.2-30K	12-300K	24-600K	48-1.2M	192-4.8M	Not applicable for historical reasons. However, it is possible to use						
LVDV-II+P	1.5-30K	15-300K	30-600K	60-1.2M	240-4.8M	the above spindle/chamber combinations with any of these						
LVDV-I+	3-10K	30-100K	60-200K	120-400K	800-1.6M	instruments. Digital Viscometers/Rheometers will automatically						
LVDVE	3-10K	30-100K	60-200K	120-400K	800-1.6M	calculate viscosity. Please contact Brookfield or an authorized						
LVT	5-10K	50-100K	100-200K	200-400K	800-1.6M	dealer if you require information on viscosity range.						
RDV-IIIU						20-500K	100-2.5M	200-5M	200-5M	400-10M	500-12.5M	
RDV-II+P						25-500K	125-2.5M	250-5M	250-5M	500-10M	625-12.5M	
RDV-I+						50-170K	250-830K	500-1.7M	500-1.7M	1K-3.3M	1.25K-4.2M	
RDVE		Not applicable for historical reasons.					50-170K	250-830K	500-1.7M	500-1.7M	1K-3.3M	1.25K-4.2M
RVT		However, it is possible to use the					50-100K	250-500K	500-1M	500-1M	1K-2M	1.25K-2.5M
HADV-IIIU		above spindle/chamber combinations					40-1M	200-5M	400-10M	400-10M	800-20M	1K-25M
HADV-II+P		with any of these instruments. Digital					50-1M	250-5M	500-10M	500-10M	1K-20M	1.25K-25M
HADV-I+		Viscometers/Rheometers will					100-300K	500-1.7M	1K-3.3M	1K-3.3M	2K-6.7M	2.5K-8.3M
HADVE		automatically calculate viscosity.					100-300K	500-1.7M	1K-3.3M	1K-3.3M	2K-6.7M	2.5K-8.3M
HAT		Please contact Brookfield or an					100-200K	500-1M	1K-2M	1K-2M	2K-4M	2.5K-5M
HBV-IIIU		authorized dealer if you require					160-4M	800-20M	1.6K-40M	1.6K-40M	3.2K-80M	4K-100M
HBV-II+P		information on viscosity range.					200-4M	1K-20M	2K-40M	2K-40M	4K-80M	5K-100M
HBV-I+						400-1.3M	2K-6.7M	4K-13.3M	4K-13.3M	8K-26.7M	10K-33.3M	
HBVE						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

SC4-13RPY Sample Chamber with RTD temperature probe and cable to viscometer/rheometer

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

SC4-13RP Sample Chamber with RTD temperature probe

SC4-13RD-100 Disposable Sample Chamber available in packages of 100