

# IKA

designed for scientists

**SAS-1**  
**(Spiral adapter set for IKA Rotavisc)**



5

/// ENGLISH

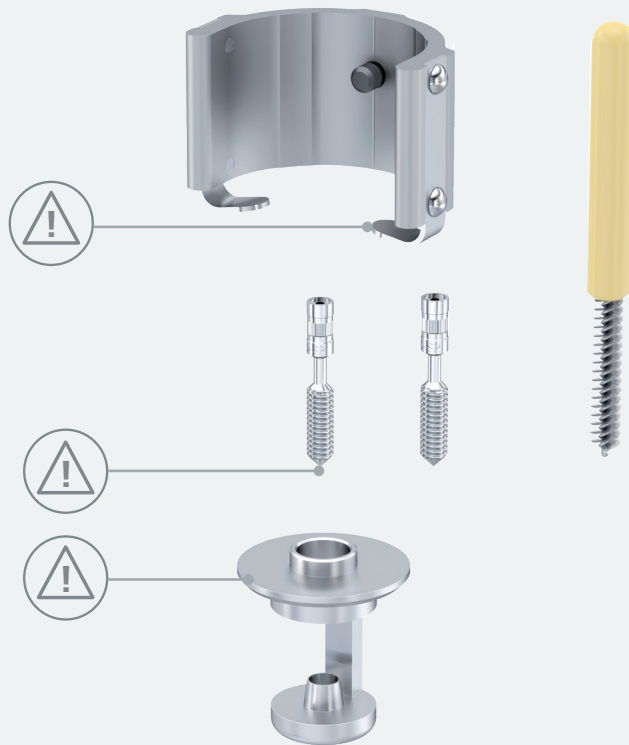









Fig. 1







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## Explication of warning symbols




### /// Warning symbols

-  **Danger!** Indicates an (extremely) hazardous situation, which, if not avoided, will result in death, serious injury.
-  **Warning!** Indicates a hazardous situation, which, if not avoided, can result in death, serious injury.
-  **Caution!** Indicates a potentially hazardous situation, which, if not avoided, can result in injury.
-  **Notice!** Indicates practices which, if not avoided, can result in equipment damage.

## /// General Symbols

**A** — Position number  
Indicates device components relevant to actions.

 Note  
Indicates steps of actions that require particular attention.



## Safety instructions

### /// General information

- › **Read the operating instructions in its entirety before using the device and follow the safety instructions.**
- › Keep the operating instructions in a place where it can be accessed by everyone.
- › Ensure that only trained staff work with the device.
- › Follow the safety instructions, guidelines, occupational health and safety and accident prevention regulations.

#### **Notice!**

- › Pay attention to the marked sites in Fig. 1.
- › Read the operating instructions of the IKA Rotavisc and the IKA Rotastand before starting.



## Intended use

### /// Use

- › IKA SAS-1 spindle set measures the viscosity of very sticky paste-like sample. The combination of the concentric spiral spindle and the cylindroid chamber allows the continuous pumping of the sample into the measuring gap, and thus achieves steady flowing state during the testing cycle. Additionally, this allows to analyse the fluid thixotropic behavior at different shear rates.

### /// Area of use (only indoors)

- › Indoor environments similar to that of a laboratory in research, teaching or industry.
- › The safety of the user cannot be guaranteed:
  - If the device is operated with accessories that are not supplied or recommended by the manufacturer.
  - If the device is operated improperly or contrary to the manufacturer's specifications.
  - If the device is modified by the third parties.

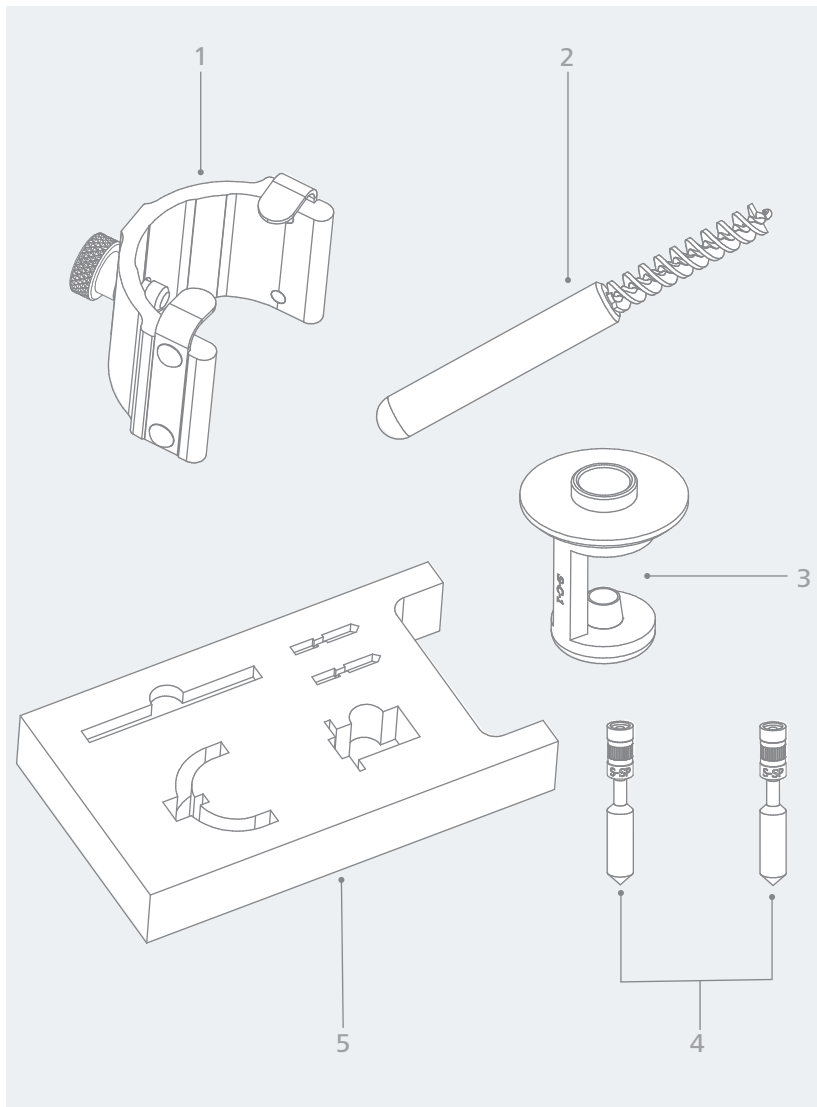


## Unpacking

### /// Unpacking

- › Unpack the device carefully. Any damage should immediately be reported to the carrier (mail, rail or freight forwarding company).

### /// Scope of delivery

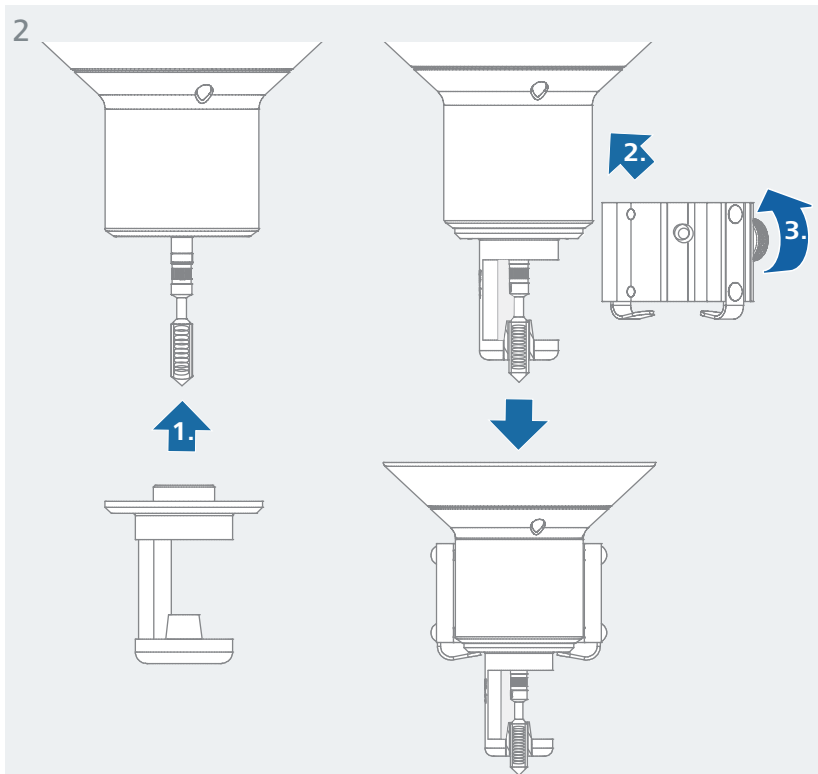
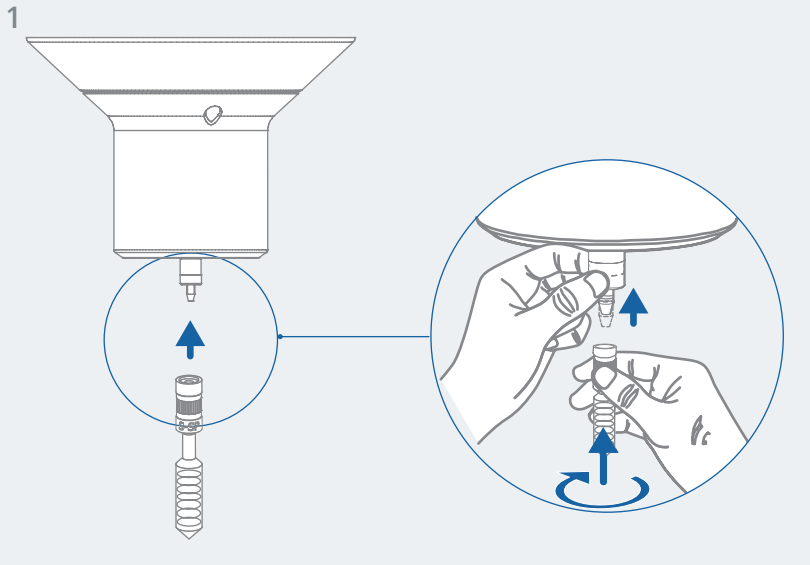


<b>1</b>	Spiral holder SAS 1.1
<b>2</b>	Cleaning brush SCB (for Spindle S-SP)
<b>3</b>	Chamber S-C-1

<b>4</b>	Spindle S-SP (2x)
<b>5</b>	Carrying case

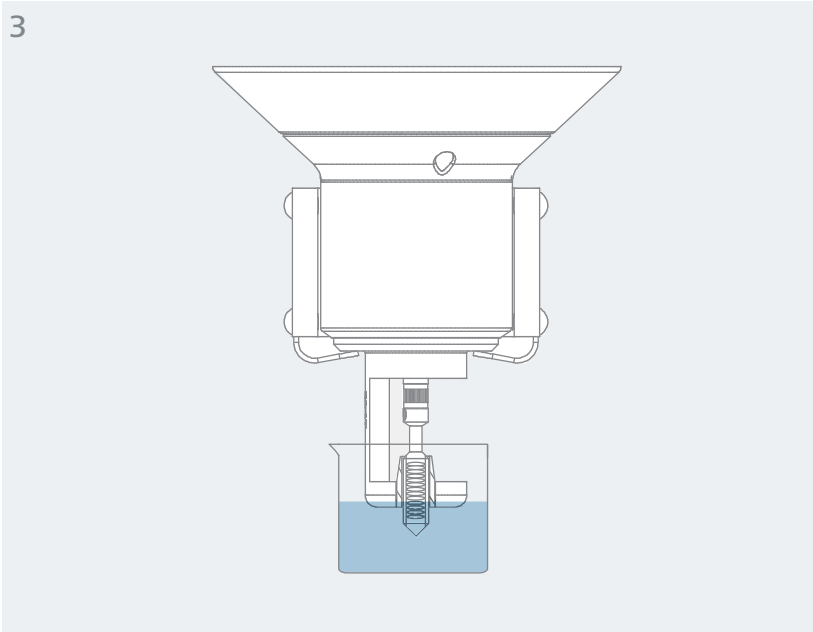


## Assembly





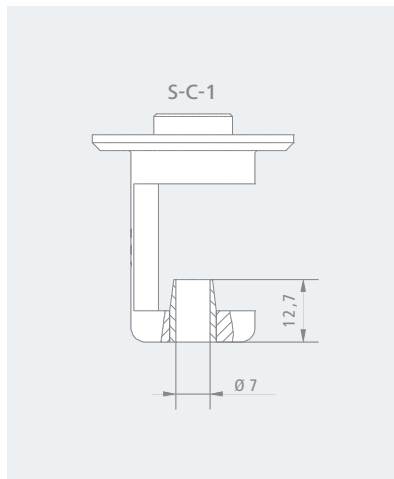
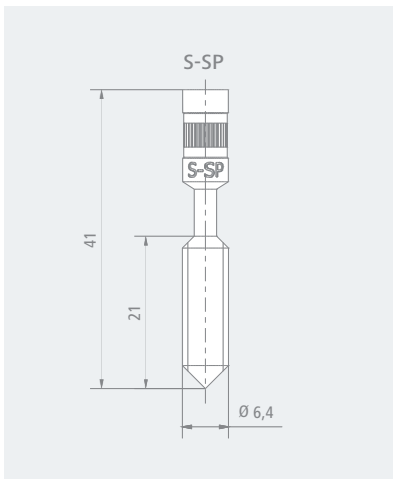
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## Spindle information

/// Spindle dimensions (mm)

/// Chamber dimensions (mm)



///  
Full-scale range based on speed: 1... 200 rpm

Spindle	lo-vi		me-vi		hi-vi I		hi-vi II	
	<i>M%</i>		<i>M%</i>		<i>M%</i>		<i>M%</i>	
	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
S-SP	492.1	98417	5250	1050000	10500	2100000	42000	8400000
<i>rpm</i>	<i>200</i>	<i>1</i>	<i>200</i>	<i>1</i>	<i>200</i>	<i>1</i>	<i>200</i>	<i>1</i>

///  
Measuring range base on speed: 1 rpm

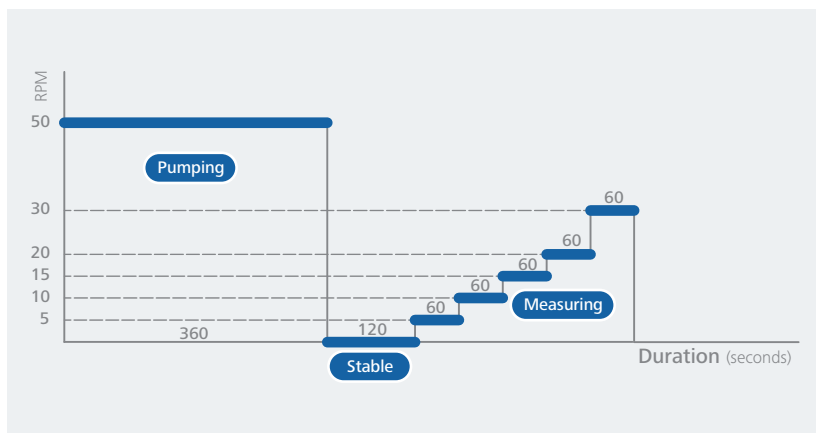
Spindle	lo-vi		me-vi		hi-vi I		hi-vi II	
	<i>M%</i>		<i>M%</i>		<i>M%</i>		<i>M%</i>	
	<i>10</i>	<i>100</i>	<i>10</i>	<i>100</i>	<i>10</i>	<i>100</i>	<i>10</i>	<i>100</i>
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
S-SP	9841.7	98417	105000	1050000	210000	2100000	840000	8400000
<i>rpm</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>

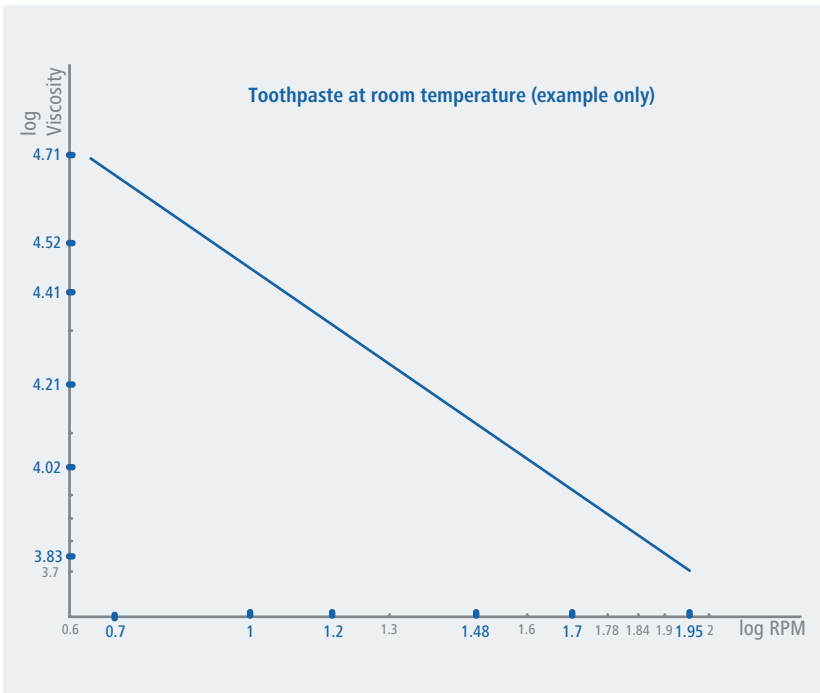
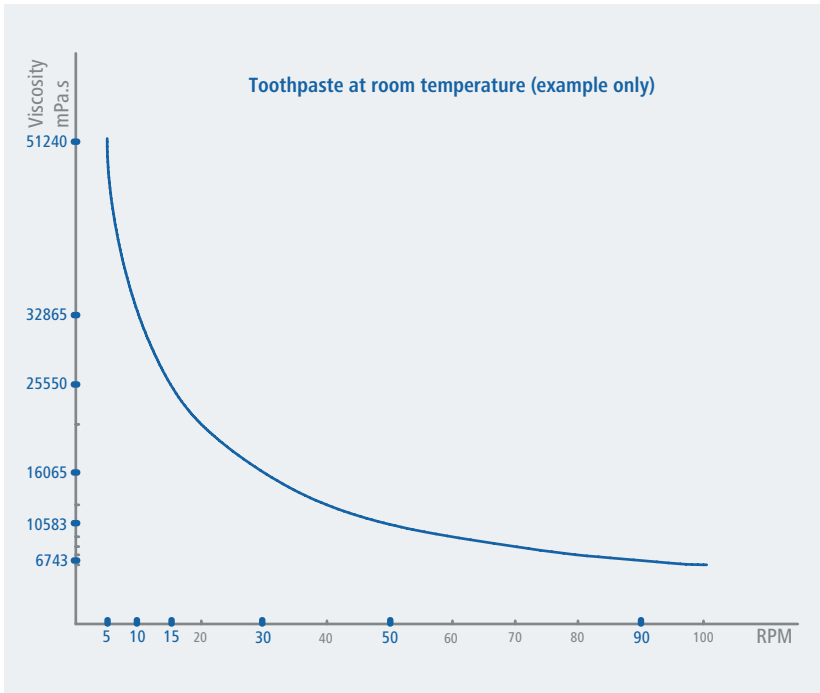
- › If the spindle rotates at lower speed, the pumping action within the chamber might fail to provide meaningful viscosity measuring data.

///  
Example test procedure

Speed (rpm)	50	0	5	10	15	20	30
Duration (seconds)	360	120	60	60	60	60	60
Remark	Run at high speed to quickly flood the chamber.	Stop Rotavisc for a settling period.	Measure.				

- › IKA Rotavisc has “Programs” function for easily operation in such a procedure. Refer to Rotavisc operating instructions for details on how to program with different speeds and duration parameters.





# Maintenance and cleaning

- › The device is maintenance-free.

## /// Cleaning

Dirt	Cleaning agent
Dyes	Isopropyl alcohol
Building materials	Water containing detergent / isopropyl alcohol
Cosmetics	Water containing detergent / isopropyl alcohol
Food	Water containing detergent
Fuels	Water containing detergent
Other materials	Please consult IKA

- › Wear protective gloves during cleaning the devices.
- › Before using another than the recommended method for cleaning or decontamination, the user must ascertain with IKA that this method does not destroy the device.

## /// Spare parts order

- › When ordering spare parts, please give:
  - device type.
  - serial number, see type plate.
  - position number and description of spare part, see [www.ika.com](http://www.ika.com).

## /// Repair

- › Please only send devices in for repair that have been cleaned and are free of materials which might present health hazards.
- › For repair, please request the “**Safety Declaration (Decontamination Certificate)**” from IKA or use the download printout of it from IKA website at [www.ika.com](http://www.ika.com).
- › If your appliance requires repair, return it in its original packaging. Storage packaging is not sufficient when sending the device - also use appropriate transport packaging.

## Technical data



Spindle geometry		Spiral
Connection		Thread M2.5 LH
Diameter	<b>mm</b>	6.35
Spindle length	<b>mm</b>	41.2
Mounting bracket		yes
Working temperature max.	<b>°C</b>	300
Viscosity accuracy	<b>%</b>	± 2 of full scale range
Viscosity repeatability	<b>%</b>	± 0.2 of full scale range
Dimensions (W x H x D)	<b>mm</b>	160 x 82 x 270
Weight	<b>kg</b>	0.527
Material in contact with sample		Stainless steel 1.4404

› *Subject to technical changes!*

## Warranty

- › In accordance with IKA warranty conditions, the warranty period is 24 months. For claims under the warranty please contact your local dealer. You may also send the machine direct to our factory, enclosing the delivery invoice and giving reasons for the claim. You will be liable for freight costs.
- › The warranty does not cover worn out parts, nor does it apply to faults resulting from improper use, insufficient care or maintenance not carried out in accordance with the instructions in this operating manual.







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Technical specifications may be changed without prior notice.

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