

IKA

designed for scientists

VAN-1
(Vane spindle set for IKA Rotavisc)

ENGLISH

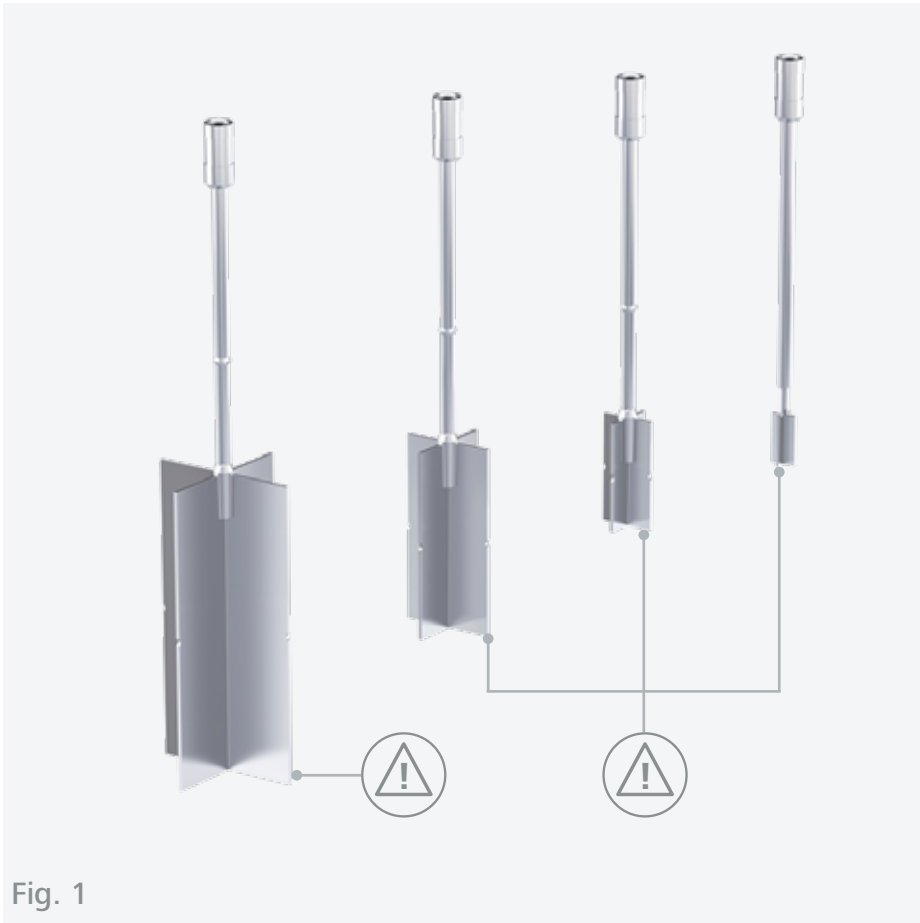













Fig. 1

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Source language: German

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 VAN-1 spindle set allows the viscosity measurement of pasty fluids, colloid and gel fluids that are having solid suspensions. The vane zone keeps the suspended particles within the measuring surface during the testing cycle and thus reduces the risk of disruption if using the standard cylinder or the disk spindle.

/// Area of use (only indoors)

- › Indoor environments similar to that a laboratory of research, teaching, trade or industry area.
- › 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.

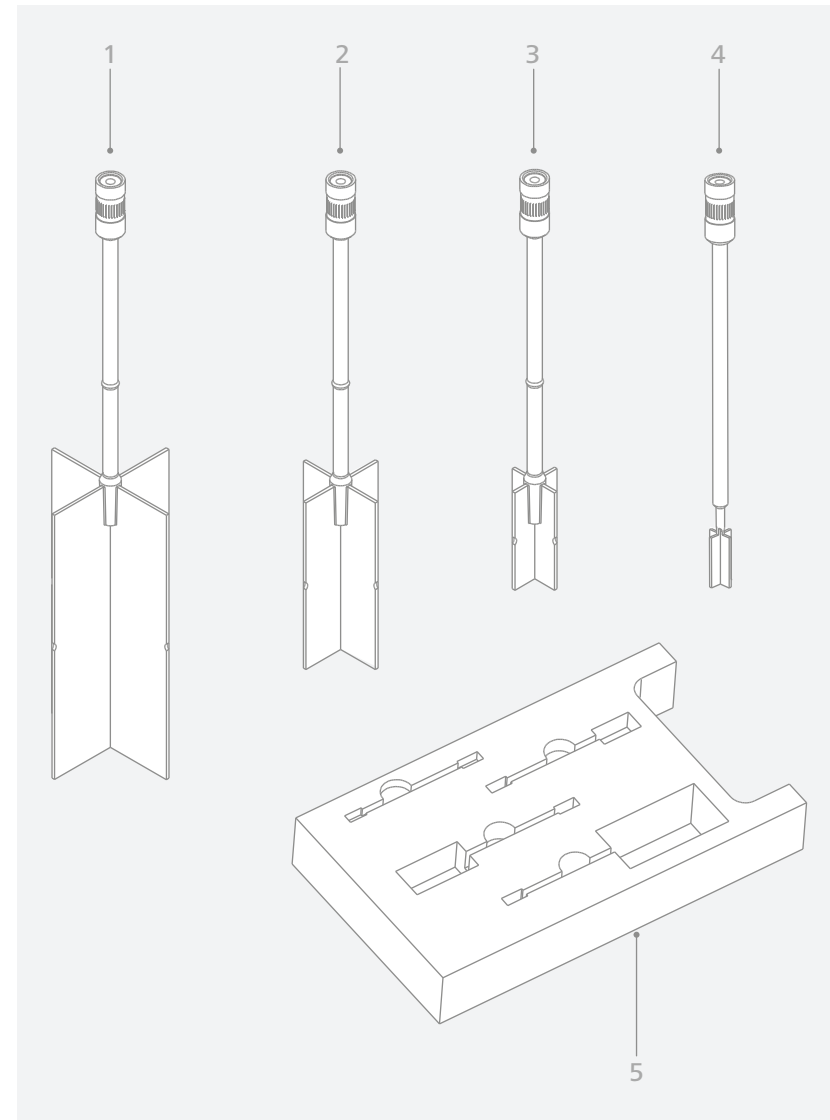


Unpacking

/// Unpacking

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

/// Scope of delivery



1 Spindle VAN-SP-1

2 Spindle VAN-SP-2

3 Spindle VAN-SP-3

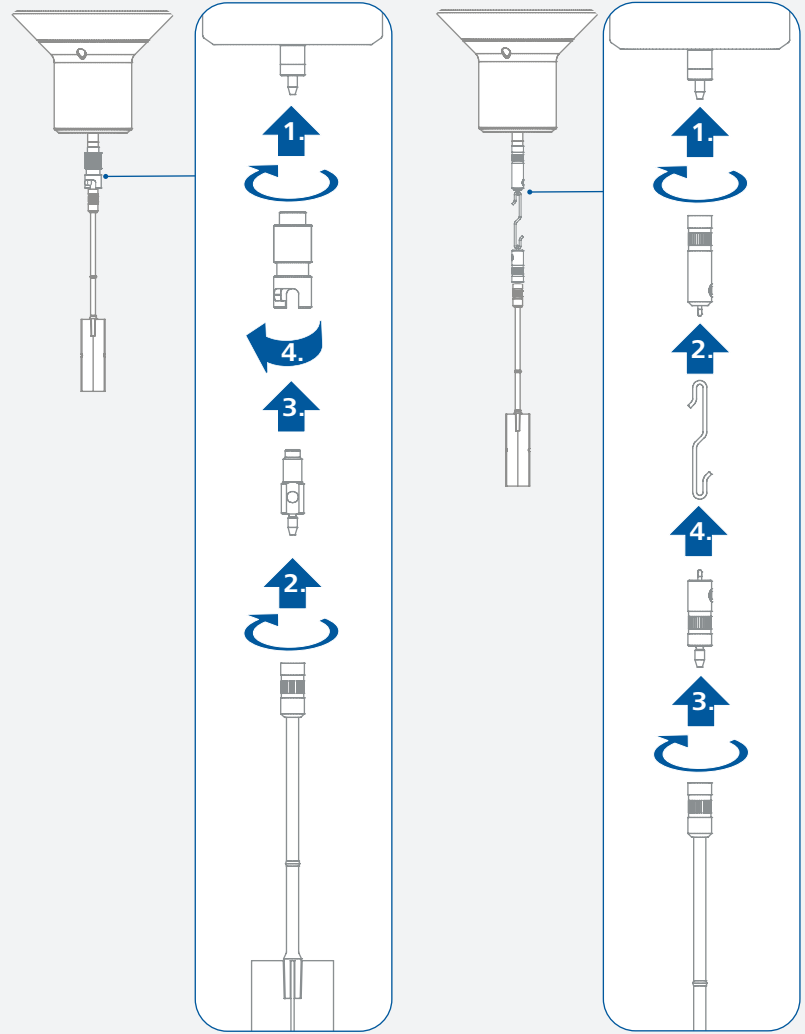
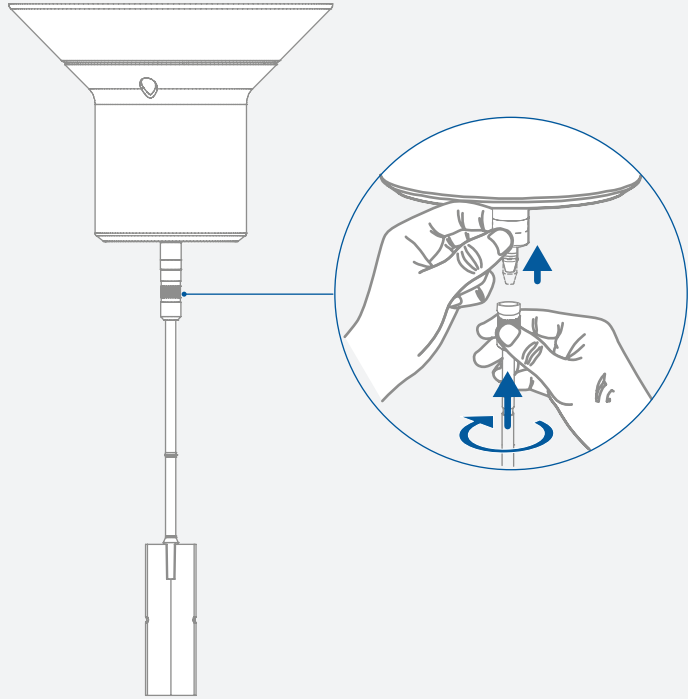
4 Spindle VAN-SP-4

5 Carrying case

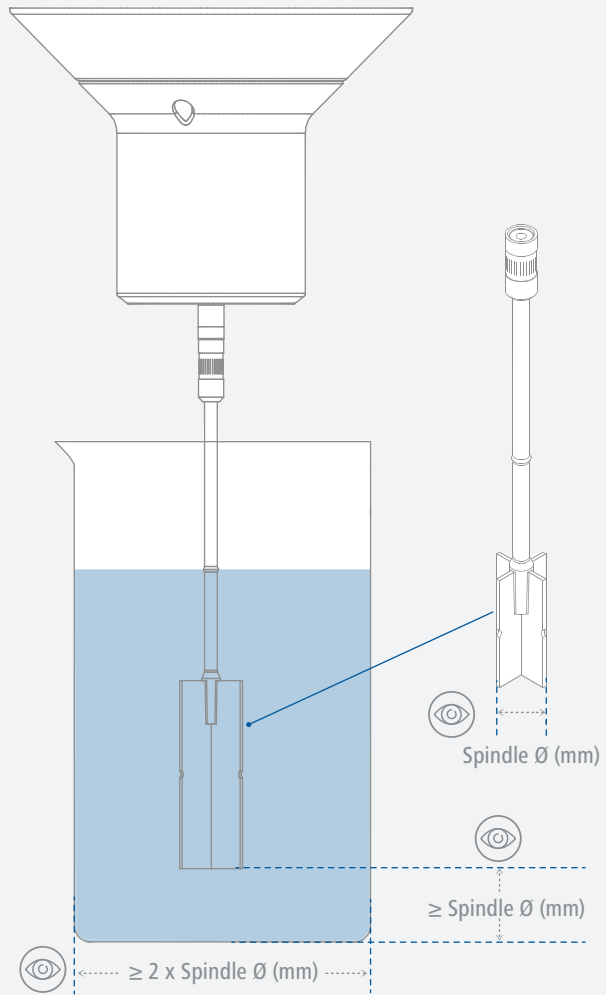


Assembly

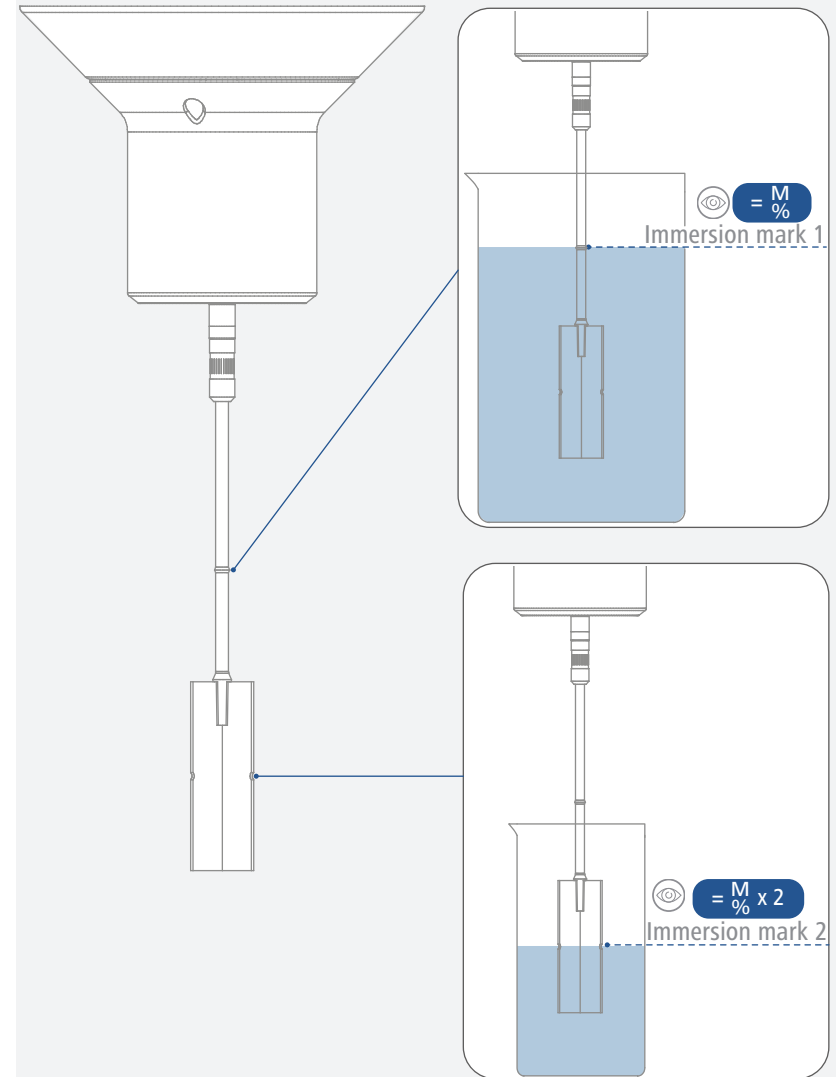
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2



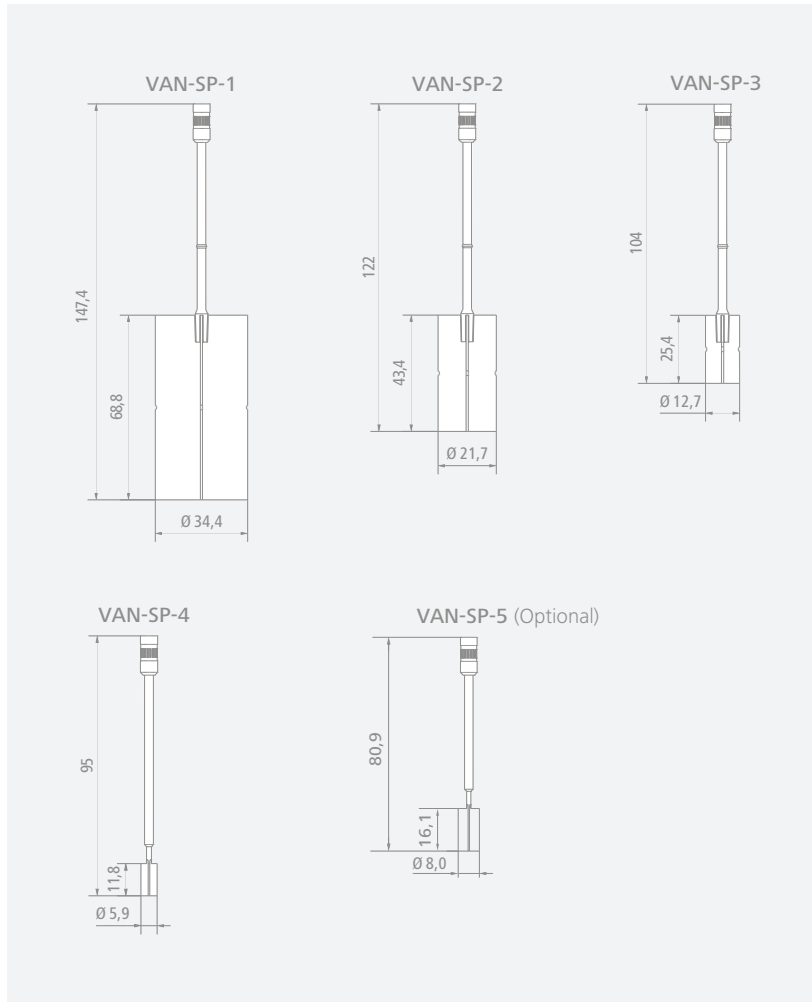
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Spindle information

/// Spindle dimensions (mm)



› The VAN-SP-4 is specially suitable for testing small-size sample or using sample containers of small openings.

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

Spindle	lo-vi		me-vi		hi-vi I		hi-vi II	
	M%		M%		M%		M%	
	100	100	100	100	100	100	100	100
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
VAN-SP-1	12.3	2456	131	26200	262	52400	1048	209600
VAN-SP-2	52	10404	555	111000	1110	222000	4440	888000
VAN-SP-3	250.7	50146	2675	535000	5350	1070000	21400	4280000
VAN-SP-4	2544.8	508954	27150	5430000	54300	10860000	217200	43440000
VAN-SP-5	998.2	199645	10650	2130000	21300	4260000	85200	17040000
<i>rpm</i>	200	1	200	1	200	1	200	1

- › VAN-SP-1 does not fit for lo-vi device in accuracy measuring as it may easily result in laminar-turbulent transition for low viscosity.
- › Artificially higher viscosity readings may be introduced by turbulence at speeds above 10 rpm.

/// Measuring range base on speed: 0.1... 10 rpm

Spindle	lo-vi		me-vi		hi-vi I		hi-vi II	
	M%		M%		M%		M%	
	10	100	10	100	10	100	10	100
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
VAN-SP-1	24.6	24557	262	262000	524	524000	2096	2096000
VAN-SP-2	104	104040	1110	1110000	2220	2220000	8880	8880000
VAN-SP-3	501.5	501456	5350	5350000	10700	10700000	42800	42800000
VAN-SP-4	5089.5	5089539	54300	54300000	108600	108600000	434400	434400000
VAN-SP-5	1996.4	1996449	21300	21300000	42600	42600000	170400	170400000
<i>rpm</i>	10	0.1	10	0.1	10	0.1	10	0.1

Maintenance and cleaning

- › The device is maintenance-free.

/// Cleaning

- › Use only cleaning agents which have been approved by IKA to clean IKA devices. These are water (with tenside) and isopropanol.
- › 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.

/// 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.
- › 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

Geometry		Vane
Connection		Thread M2.5 LH
Quick plug connector		yes
Hook connector		yes
Sample volume min.	ml	500
Sample container	ml	600 (low form beaker)
Working temperature max.	°C	300
Viscosity accuracy: VAN-SP-1, VAN-SP-2 & VAN-SP-3 VAN-SP-4	%	± 2 of full scale range ± 5 of full scale range
Viscosity repeatability	%	± 0.2 of full scale range
Dimensions (W x H x D)	mm	160 x 82 x 270
Weight	kg	0.432
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.





designed for scientists

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Technical specifications may be changed without prior notice.