

## Innovative Technology Sets Standards Worldwide

RETSCH analytical vibratory sieve shakers are used in research & development, quality control of raw materials, semi finished and finished products as well as in production monitoring. The AS 200 series provides a suitable instrument for every requirement and budget. While the AS 300 control is designed for large feed quantities up to 6 kg, the AS 450 control is the ideal sieve shaker for big loads up to 25 kg.

All shakers are suitable for dry and wet sieving. Their patented electromagnetic drive produces a 3-D throwing motion which ensures optimum use of the open sieve area and lets the sample move equally over the whole sieving surface. All electromagnetic sieve shakers feature individual amplitude setting which allows adaptation to the sample characteristics and therefore sharp fractionizing even after very short sieving times. The "control" models can be used as measuring instruments according to DIN EN ISO 9000 ff.

### AS 200 basic – The Budget-Priced Basic Model

**The economical alternative of the series with familiar RETSCH quality and reliability. With digital adjustment of power and sieving time.**



Vibratory Sieve Shaker AS 200 basic with clamping device "economy" and sieve stack

### AS 200 digit cA – The All-Purpose Standard Model

**The AS 200 digit cA is recommended whenever digital time display, interval operation and adjustment along the vibration height are required.**



Vibratory Sieve Shaker  
AS 200 digit cA with  
clamping device "standard"  
and sieve stack

## AS 200 control – Meeting the Highest Standards for Quality Control

The microprocessor-controlled measuring and control unit of this model ensures a constant vibration height, allowing for 100% reproducibility of results even among different AS 200 control shakers. One particular characteristic makes this RETSCH product stand out from others: Instead of the vibration height, it is possible to set the sieve acceleration which is independent of the power frequency. Together with the possibility of calibration, this ensures comparable and reproducible sieving results worldwide. Thus, all requirements for the test materials monitoring according to DIN EN ISO 9000 ff are met.

All sieving parameters – vibration height, time, and interval – are set, displayed and monitored digitally which makes operation of the AS 200 control very convenient and quick. Up to 99 standard operating procedures (SOPs) may be stored for routine analyses.



Vibratory Sieve Shaker AS 200 control with clamping device "comfort" and sieve stack

### Benefits

- Sieving with 3-D effect
- For sieves up to 203 mm (8") Ø
- Suitable for dry and wet sieving
- Measuring range 20 µm to 25 mm
- Memory for 99 Standard Operating Procedures (SOPs)
- Digital setting and control of sieving parameters
- Sieve acceleration independent of power frequency
- Patented electromagnetic drive (EP 0642844)
- Test materials monitoring according to DIN EN ISO 9000 ff

Video on [www.retsch.com/as200](http://www.retsch.com/as200)

Through the integrated interface the instrument can be connected to a PC and controlled with the evaluation software EasySieve®. This program enables the user to carry out the whole sieving process and its subsequent documentation with convenience, accuracy and conforming to standards.

## The perfect solution for each measuring range

	1 nm	1 µm	1 mm	1 m
<b>Sieve Analysis</b>				
AS 200			20 µm	25 mm
AS 300			20 µm	40 mm
AS 450			25 µm	125 mm
AS 400			45 µm	63 mm
AS 200 tap			20 µm	25 mm
AS 200 jet			10 µm	4 mm
<b>Dynamic Image Analysis</b>				
CAMSIZER P4			20 µm	30 mm
CAMSIZER X2		0.8 µm	8 mm	
<b>Static Image Analysis</b>				
CAMSIZER M1		0.5 µm	1500 µm	

■ Dry measurement ■ Wet measurement

## Accessories and Options

**A wide selection of accessories and options for sieve shakers completes RETSCH's portfolio for optimum sieve analysis results.**

### • Clamping devices

With the RETSCH clamping devices the sieves are clamped safely, quickly and conveniently on the sieve shaker. The clamping devices "comfort" are particularly user-friendly and time-efficient. Special versions are available for sieving wet materials. The picture below shows clamping devices of the AS 200 which can also be used with models AS 300 and AS 400.



clamping device  
„comfort“



clamping device  
„standard“



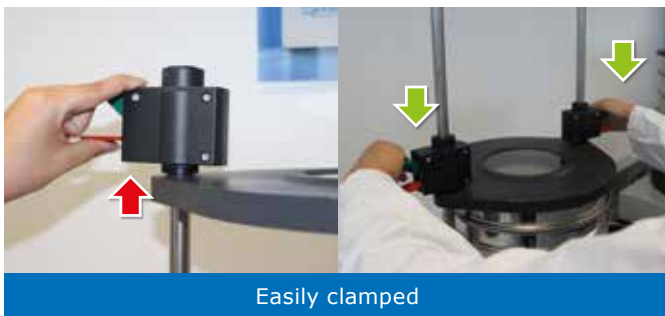
clamping device  
„economy“



universal wet sieve  
clamping device "comfort"



universal sieve clamping  
device "standard"



### Clamping device „comfort“

A sieve analysis starts as early as loading the sieve shaker and clamping the lid on the sieve stack. Especially when many samples need to be sieved each day, easy and quick handling of the clamping device is a great benefit. RETSCH's clamping device "comfort" was developed with this in mind. Loading the sieves or changing the height of the sieve stack is done easily without the need to loosen screws or take off the clamp. The "comfort" clamping devices are available for all vibratory and horizontal sieve shakers.

### • Test sieves

Standard-compliant and manufactured on the basis of the latest production technology. Standard sieve stacks available.

### • Accessories for test sieves

Collecting pans, intermediate pans, intermediate rings and sieve lids.

### • Accessories for wet sieving

Clamping lid with nozzles, collecting pans with outlet, venting rings.

### • Software EasySieve® and EasySieve® CFR

For control, evaluation and documentation of sieve analyses according to relevant standards.

### • Sieving aids

Chain rings, brushes, cubes, balls (e.g. for reducing agglomerations when sieving particles < 100 µm and keeping the mesh free).

### • IQ/OQ Documents

We provide IQ/OQ documentation for the „control“ sieve shakers to support IQ/OQ certification by our customers.

### • Sample dividers



Meaningful results can only be obtained if the sample represents the original material. Sample dividers produce representative part samples, thus ensuring reproducibility of the analysis.

### • Ultrasonic baths and dryers

Suitable for thorough cleaning of test sieves and for quick, gentle drying of samples and sieves.



## Vibratory Sieve Shakers at a Glance

Vibratory Sieve Shakers						
						
Model	AS 200 basic	AS 200 digit cA	AS 200 control	AS 300 control	AS 450 basic	AS 450 control

<b>Applications</b>	separation, fractioning, particle size determination
<b>Feed material</b>	powders, bulk materials, suspensions

### Performance data

<b>Measuring range*</b>	20 µm – 25 mm	20 µm – 25 mm	20 µm – 25 mm	20 µm – 40 mm	25 µm – 125 mm	25 µm – 125 mm
<b>Max. batch / feed capacity*</b>	3 kg	3 kg	3 kg	6 kg	15 kg	25 kg
<b>Max. number of fractions**</b>	9/17	9/17	11/23	9/17	12/8	13/9 (min. 3)
<b>Max. mass of sieve stack</b>	4 kg	4 kg	6 kg	10 kg	50 kg	50 kg
<b>Adjustment of sieving parameters</b>						
Amplitude	digital 1–100 % (~3 mm)	digital 0.2–3 mm	digital 0.2–3 mm	digital 0.2–>2.2 mm	digital 0–>2 mm	digital 0.2–>2.2 mm
Sieve acceleration***	–	–	1.0–>15.1 g	1.0–>10.0 g	–	1.0–>11.0 g
Time	digital 1–99 min	digital 1–99 min	digital 1–99 min	digital 1–99 min	digital 1–99.9 min	digital 1–99 min
Interval operation	–	10 s (fixed)	1–99 s	1–99 s	10 s (fixed)	10–99 s
<b>Storable Standard Operating Procedures (SOPs)</b>	–	–	99	99	1	9
<b>Sieving motion</b>	throwing motion with angular momentum					
<b>Suitable for wet sieving</b>	✓	✓	✓	✓	✓	✓
<b>Serial interface</b>	–	–	✓	✓	–	✓
<b>Including test certificate / calibration possible</b>	–	–	✓	✓	–	✓

### Technical data

<b>Suitable sieve diameters</b>	100 mm – 203 mm		100 mm – 315 mm	400 mm – 450 mm	
<b>Height of sieve stack</b>	up to 510 mm	up to 620 mm	up to 510 mm	up to 830 mm	up to 963 mm
<b>W x H x D</b>	417 x 212 x 384 mm		417 x 222 x 384 mm	680 x 280 x 680 mm	714 x 435 x 658 mm
<b>Net weight</b>	approx. 35 kg		approx. 42 kg	approx. 140 kg	approx. 200 kg
<b>More information on</b>	<a href="http://www.retsch.com/as200">www.retsch.com/as200</a>	<a href="http://www.retsch.com/as200">www.retsch.com/as200</a>	<a href="http://www.retsch.com/as200">www.retsch.com/as200</a>	<a href="http://www.retsch.com/as300">www.retsch.com/as300</a>	<a href="http://www.retsch.com/as450">www.retsch.com/as450</a>

\*depending on feed material and used sieve set \*\*depending on sieve height and clamping unit \*\*\*( $1\text{ g} = 9.81\text{ m/s}^2$ )

## Typical Sample Materials

Vibratory sieve shakers are used for particle size analysis of products such as construction and filling materials, soil, chemicals, sand, coffee, coal, fertilizers, flour, metal powders, minerals, seeds, washing powder, cement clinker and many more.

