



VIBRATORY SIEVE SHAKER AS 450 CONTROL

With the Vibratory Sieve Shaker AS 450 control RETSCH have designed their first 3-D shaker for 400 mm and 450 mm sieves. It can be used for dry and wet sieving of sample amounts of up to 25 kg. The AS 450 control combines the benefits of electromagnetic sieving – controlled amplitude with highest reproducibility – with the powerful drive based on CET technology (Continuous Energy Transfer).

Even with high loads a constant vibration height of 2.2 mm and, as a result, high separation efficiency are achieved thanks to the continuous controlled energy input. Manual re-sieving is no longer required. When it comes to operating comfort, the AS 450 control meets all the requirements of a modern laboratory. All parameters such as amplitude, time and interval are digitally set, displayed and controlled via a remote operation panel



ACCURACY & EFFICIENCY

- | Sieving with 3-D effect
- | High sieve loads (up to 25 kg)
- | Suitable for dry and wet sieving
- | Measuring range 25 µm to 125 mm
- | Sieve stack up to 963 mm, for sieves up to 450 mm Ø
- | Memory for 9 Standard Operating Procedures (SOPs)
- | With remote operation panel
- | Sieve acceleration independent of power frequency
- | Test materials monitoring according to DIN EN ISO 9001

VIBRATORY SIEVE SHAKER AS 450 CONTROL

WET SIEVING WITH VIBRATORY SIEVE SHAKERS

There are many applications for which wet sieving is the best solution, e.g. when the material to be tested is a suspension or when a very fine sample ($< 45 \mu\text{m}$) that tends to agglomerate needs to be sieved. All vibratory sieve shakers from RETSCH can be used for wet sieving. There are special accessories like clamping lids with spray nozzle and collecting pans with outlet available. By placing RETSCH's venting rings between the sieves, air cushions can expand without letting liquid or sample material escape.



VIBRATORY SIEVE SHAKER AS 450 CONTROL

ACCESSORIES & OPTIONS

RETSCH's vibratory sieve shakers are ideally suited for separation, fractioning and particle size determination of cement clinker, chemicals, coal, coke, construction materials, fillers, minerals, ores, plastics, sand and soils.



| Clamping units

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 timesaving.



| Accessories for test sieves

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

| Accessories for wet sieving

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

| 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.

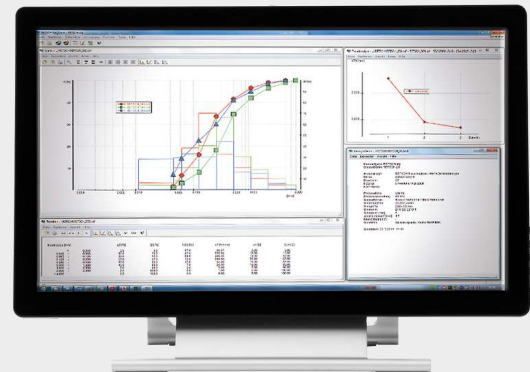
| Ultrasonic baths and dryers

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

RETSCH TEST SIEVES AND ACCESSORIES - ENGINEERED FOR SUPERIOR PERFORMANCE

EASYSIEVE / EASYSIEVE CFR EVALUATION SOFTWARE

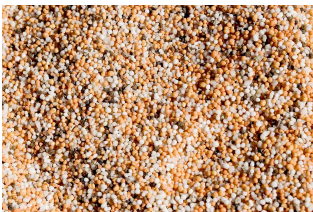
EasySieve, the software for particle size analyses, exceeds manual evaluation in many aspects. The software is able to automatically control the necessary measurement and weighing procedures – from the registration of the weight of the sieve up to the evaluation of the data. It is simple and convenient to use and is also available in an FDA 21 CFR Part 11-conform version.



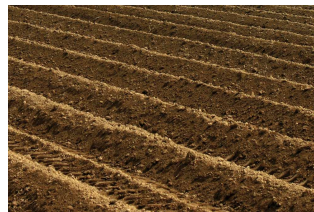
VIBRATORY SIEVE SHAKER AS 450 CONTROL

TYPICAL SAMPLE MATERIALS

RETSCH's vibratory sieve shakers are ideally suited for separation, fractioning and particle size determination of cement clinker, chemicals, coal, coke, construction materials, fillers, minerals, ores, plastics, sand and soils.



fertilizers



soil



cereals



construction materials

To find the best solution for your sample preparation task, visit our application database.

FUNCTIONAL PRINCIPLE

RETSCH has patented the Continuous Energy Transfer Technology (CET Technology) on which the drive of the AS 450 control is based. The CET Technology provides a **substantially higher energy input** than the technology used in conventional sieve shakers. The AS 450 control **achieves the highest amplitude even with maximum load** which ensures optimum separation efficiency and high reproducibility. The electromagnetic drive which lets the sieve stack vibrate **continuously** transfers its energy in a **controlled** way to the sieve plate, following the harmonic sinusoidal oscillation of alternating current.

The drive produces a 3D throwing motion that moves the product to be sieved equally over the whole sieving surface. The advantage: high stress capacity, extremely smooth operation and short sieving times with high separation efficiency.



[Click to view video](#)

VIBRATORY SIEVE SHAKER AS 450 CONTROL

TECHNICAL DATA

Applications	separation, fractioning, particle size determination
Field of application	chemistry / plastics, construction materials, engineering / electronics, environment / recycling, geology / metallurgy, glass / ceramics
Feed material	powders, bulk materials, suspensions
Measuring range*	25 µm - 125 mm
Sieving motion	throwing motion with angular momentum - 3D movement
Max. batch / feed capacity	25 kg
Max. number of fractions	13 / 9 (min. 3)*
Max. mass of sieve stack	50 kg
Amplitude	digital, 0.2 - > 2.2 mm
Sieve acceleration	1 -> 7.1 g
Time display	digital, 1 - 99 min
Interval operation	10 - 99 s
Storable SOPs	9
Suitable for dry sieving	yes
Suitable for wet sieving	yes
Serial interface	yes
Suitable sieve diameters	400 mm / 450 mm
Max. height of sieve stack	963 mm
Clamping devices	standard, "comfort", each for wet and dry sieving
Electrical supply data	different voltages
Power connection	1-phase
W x H x D	705 x 440 x 635 mm
Net weight	~ 220 kg
Standards	CE

*depending on sieve height and clamping unit

www.retsch.com/as450control

ORDER DATA

VIBRATORY SIEVE SHAKERS AS 450

Vibratory Sieve Shakers AS 450 for test sieves up to 450 mm / 18" Ø
(please order clamping device, test sieves and collecting pan separately)

30.026.0001



AS 450 control, 230 V, 50/60 Hz, incl. test report acc. to EN 10204 2.2

other electrical versions available for the same price

CLAMPING DEVICES AS 450

AS 450 CONTROL

32.662.0015



Clamping device "standard", for test sieves 400/450 mm Ø

32.662.0016



Clamping device "comfort", for test sieves 400/450 mm Ø

32.662.0017



Wet sieving clamping device "standard", for test sieves 400/450 mm Ø

32.662.0018



Wet sieving clamping device "comfort", for test sieves 400/450 mm Ø

SIEVE STACKS AS 450

60.166.000998

Sieve stack consisting of 10 test sieves (ISO 3310-1), 400 mm Ø, 65 mm height (63 µm, 125 µm, 250 µm, 500 µm, 1 mm, 2 mm, 4 mm, 8 mm, 16 mm, 31.5 mm) and collecting pan

60.168.000999

Sieve stack consisting of 7 test sieves (ISO 3310-1), 450 mm Ø, 100 mm height (63 µm, 125 µm, 250 µm, 500 µm, 1 mm, 2 mm, 4 mm) and collecting pan

60.167.000998

Sieve stack consisting of 10 test sieves (ASTM E11), 400 mm Ø, 65 mm height, (230 mesh, 120 mesh, 60 mesh, 35 mesh, 18 mesh, 10 mesh, 5 mesh, 5/16", 5/8", 1.1/4") and collecting pan

60.169.000999

Sieve stack consisting of 7 test sieves (ASTM E11), 450 mm Ø, 100 mm height (230 mesh, 120 mesh, 60 mesh, 35 mesh, 18 mesh, 10 mesh, 5 mesh) and collecting pan

ACCESSORIES AS 450 CONTROL

99.200.0030 IQ/OQ Documentation for AS 450 control

ACCESSORIES FOR CLAMPING DEVICES AS 450

CLAMPING ELEMENTS

32.737.0003	Quick-clamping elements, (2 pieces) for clamping device "comfort" AS 450 control
02.654.0011	Clamping elements, (2 pieces) for clamping device "standard" AS 450 control
02.654.0019	Clamping elements, (2 pieces) for clamping device "standard" AS 450 basic

ACCESSORIES FOR TEST SIEVES (PANS, RINGS, LIDS)

FOR TEST SIEVES 400 MM Ø

60.010.000400		Collecting pan, stainless steel, 400 mm Ø, height 65 mm
60.220.000400		Intermediate pan, stainless steel, 400 mm Ø, height 65 mm
60.935.000400		Intermediate ring, stainless steel, 400 mm Ø, height 65 mm
60.107.000400		Sieve lid, stainless steel, 400 mm Ø,
69.440.0070		Collecting pan with outlet, stainless steel, 400 mm Ø, height 70 mm
69.421.000400		Venting ring for wet sieving, stainless steel, 400 mm Ø, height 65 mm
05.114.0048		O-ring for test sieves, , 400 mm Ø,

FOR TEST SIEVES 450 MM Ø

60.010.000450		Collecting pan, stainless steel, 450 mm Ø, height 50 mm
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60.220.000450		Intermediate pan, stainless steel, 450 mm Ø, height 100 mm
60.935.000450		Intermediate ring, stainless steel, 450 mm Ø, height 100 mm
69.545.0050		Sieve lid, stainless steel, 450 mm Ø,
69.445.0084		Collecting pan with outlet, stainless steel, 450 mm Ø, height 85 mm
69.421.000450		Venting ring for wet sieving, stainless steel, 450 mm Ø, height 100 mm
05.114.0012		O-ring for test sieves, , 450 mm Ø,

TEST SIEVES Ø 450 MM - 100 MM HEIGHT - ISO 3310/1 - STAINLESS STEEL / WIRE GAUZE

	# mm	# mesh no.	Ø	height	standard
60.168.000036	36 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000038	38 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000040	40 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000045	45 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000050	50 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000053	53 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000056	56 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000063	63 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000071	71 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000075	75 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000080	80 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000090	90 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000100	100 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000106	106 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000112	112 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000125	125 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000140	140 µm	-	450 mm	100 mm	ISO 3310/1

60.168.000150	150 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000160	160 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000180	180 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000200	200 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000212	212 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000224	224 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000250	250 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000280	280 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000300	300 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000315	315 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000355	355 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000400	400 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000425	425 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000450	450 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000500	500 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000560	560 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000600	600 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000630	630 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000710	710 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000800	800 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000850	850 µm	-	450 mm	100 mm	ISO 3310/1
60.168.000900	900 µm	-	450 mm	100 mm	ISO 3310/1
60.168.001000	1.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001120	1.12 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001180	1.18 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001250	1.25 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001400	1.40 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001600	1.60 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001700	1.70 mm	-	450 mm	100 mm	ISO 3310/1
60.168.001800	1.80 mm	-	450 mm	100 mm	ISO 3310/1
60.168.002000	2.00 mm	-	450 mm	100 mm	ISO 3310/1

60.168.002240	2.24 mm	-	450 mm	100 mm	ISO 3310/1
60.168.002360	2.36 mm	-	450 mm	100 mm	ISO 3310/1
60.168.002500	2.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.002800	2.80 mm	-	450 mm	100 mm	ISO 3310/1
60.168.003150	3.15 mm	-	450 mm	100 mm	ISO 3310/1
60.168.003350	3.35 mm	-	450 mm	100 mm	ISO 3310/1
60.168.003550	3.55 mm	-	450 mm	100 mm	ISO 3310/1
60.168.004000	4.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.004500	4.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.004750	4.75 mm	-	450 mm	100 mm	ISO 3310/1
60.168.005000	5.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.005600	5.60 mm	-	450 mm	100 mm	ISO 3310/1
60.168.006300	6.30 mm	-	450 mm	100 mm	ISO 3310/1
60.168.006700	6.70 mm	-	450 mm	100 mm	ISO 3310/1
60.168.007100	7.10 mm	-	450 mm	100 mm	ISO 3310/1
60.168.008000	8.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.009000	9.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.009500	9.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.010000	10.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.011200	11.20 mm	-	450 mm	100 mm	ISO 3310/1
60.168.012500	12.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.013200	13.20 mm	-	450 mm	100 mm	ISO 3310/1
60.168.014000	14.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.016000	16.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.018000	18.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.019000	19.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.020000	20.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.022400	22.40 mm	-	450 mm	100 mm	ISO 3310/1
60.168.025000	25.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.026500	26.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.028000	28.00 mm	-	450 mm	100 mm	ISO 3310/1

60.168.031500	31.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.035500	35.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.037500	37.50 mm	-	450 mm	100 mm	ISO 3310/1
60.168.040000	40.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.045000	45.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.050000	50.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.053000	53.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.056000	56.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.063000	63.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.071000	71.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.075000	75.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.080000	80.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.090000	90.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.100000	100.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.106000	106.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.112000	112.00 mm	-	450 mm	100 mm	ISO 3310/1
60.168.125000	125.00 mm	-	450 mm	100 mm	ISO 3310/1