# TEST SIEVES. APPROVED MEASURING INSTRUMENTS.

Test sieves for particle size analysis meet the requirements of sieving measuring devices.

ISO / IEC Guide 99:2007 defines a 'measuring device' as a device which is used alone or in conjunction with one or more additional measuring devices.

# Highly accurate and extremely stable.

All Haver test sieves are manufactured in accordance with current standards and are distinguished by their particularly high accuracy and stability. High-quality frame materials, an extremely stable sieve structure which has been developed in-house, and careful machining guarantee long life and trouble-free operation.







Haver & Boecker offers the right test sieve for every screening task. The particularly smooth surface of their frames prevents cross contamination, and the sieve fabric retains its tension exceedingly well even after intensive use.

#### Wire mesh

- DIN ISO 3310-1, ASTM E11, ISO 3310-1, BS ISO 3310-1, TYLER Screen Scale
- Mesh sizes from 20 microns to 125 mm
- Diameters from 50 mm to 450 mm

# Round perforation

- DIN ISO 3310-2, ISO 3310-2, BS ISO 3310-2
- Hole sizes from 1 mm to 125 mm
- Diameters from 200 mm to 450 mm

# Square-perforation

- DIN ISO 3310-2, ISO 3310-2, BS ISO 3310-2
- Hole sizes from 4 mm to 125 mm
- Diameters from 200 mm to 450 mm

### Electroformed sieve foil

- DIN ISO 3310-3, ASTM E161, ISO 3310-3
- Mesh sizes from 5 microns to 500 microns
- Diameters from 76.2 mm to 200 mm



# HAVER TEST SIEVES. PRECISION IN ALL SHAPES AND SIZES.

# IN ALL SIZES.



50 mm



76.2 mm



100 mm / 120 mm / 150 mm



200 mm / 203 mm=8"



250 mm

# IN ALL SHAPES.



Special execution for Sonic Sifter



for ALPINE® Air Jet Sieve 200 LS



Test Sieve for tobacco



for ALPINE® Air Jet Sieve 200 LS-N / AC



Test Sieve for cereals according to ISO 5223



for ALPINE® Air Jet Sieve with fully automatic sieve recognition e200 LS





















300 mm / 305 mm=12" 315 mm

350 mm

400 mm / 450 mm



Test Sieve with square hole plate



Grid Sieve according to DIN EN 933-3



Test Sieve with beechwood frame

nternational Test Sieve Comparison Table 2018 125- EST SIEVES, NOMINAL SIZES OF OPENINGS TAR							TABLE 1	Internationale Analysensieb-Vergleichstabelle 201 SIEBBÖDEN FÜR ANALYSENSIEBE (Prüfsiebe) Maschen- bzw. Lochweiten					
1	2		3	4	5	6	7	8	9	10	11	12	
Tal	ISO 3310 Table 1, Millimetre sizes		DEU	DEU	DEU		U	SA	USA	USA	TYLER®		
150	N BSI NF*		DIN	DIN	DIN	497)	490		497	4500			
ncipal sizes lauptreihe R 20/3	Nebenreihen						Standard	U.S. Alternative	Supplementary sizes Nebenreihen				
		DIN ISO 3310-1 #	DIN ISO 3310-2	DIN ISO 3310-2 ■	ASTM		ASTM E11	ASTM E323 •	ASTM E323 ■	TYLER Screen Scale			
Nominal aperture sizes acc. to ISO 565 Nennmaschenweiten nach ISO 565			125–1	125–1	125-4	125–1		125–1	125–1	125–3.35	26,5–1		
w	w		w	w	w	w	w	No.	w	w	w	Mesh	
125	125		125	125	125	125	125	5 in.		125	125		
	112		106	112 106 100	112 106 100	112 106 100	106 100	4.24 in. 4 in.	112	106 100	106 100		
90	90		90	90	90	90	90	3.1/2 in.		90	90		
	80		7,000	80	80	80	300,000		80				
	71		75	75 71	75 71	75 71	75	3 in.	71	75	75		
63	63		63	63	63	63	63	2.1/2 in.	12.01	63	63		
	56		53	56 53 50	56 53 50	56 53 50	53 50	2.12 in. 2 in.	56	53 50	53 50		
45	45		45	45	45	45	45	1.3/4 in.		45	45		
10	40		37,5	40 37.5	40 37.5	40 37,5	37.5	1.1/2 in.	40	37.5	37.5		
31,5	35,5 31,5		31,5	35,5 31,5	35,5 31,5	35,5 31,5	31.5	1.1/4 in.	35.5	31.5	31.5		
31,3	28		31,3	28	28	28	31.3	1.1/4 111.	28	31.3	31.3		
	25		26,5	26,5 25	26,5 25	26,5 25	26.5 25.0	1.06 in. 1 in.		26.5 25.0	26.5 25.0	1.05 in.	
22,4	22,4	1	22,4	22,4	22,4	22,4	22.4	7/8 in.		22.4	22.4	.883 in.	
	20		19	20 19	20 19	20 19	19.0	3/4 in.	20	19.0	19.0	.742 in.	
	18			18	18	18	66.2		18		1110	1041	
16	16 14		16	16 14	16 14	16 14	16.0	5/8 in.	14	16.0	16.0	.624 in.	
	12,5		13,2	13,2 12,5	13,2 12,5	13,2 12,5	13.2 12.5	0.530 in. 1/2 in.		13.2 12.5	13.2 12.5	.525 in.	
11,2	11,2		11,2	11,2	11,2	11,2	11.2	7/16 in.		11.2	11.2	.441 in.	
	10		9,5	10 9,5	10 9,5	10 9,5	9.5	3/8 in.	10	9.5	9.5	.371 in.	
	9		-800	9	9	9			9				
8	8		8	8	8	8	8.0	5/16 in.	7.4	8.0	8.0	2.1/2	
	7,1		6,7	7,1 6,7	7,1 6,7	7,1 6,7	6.7	0.265 in.	7.1	6.7	6.7	3	
	6,3	3		6,3	6,3	6,3	6.3	1/4 in.		6.3	6.3		
5,6	5,6	5	5,6	5,6	5,6	5,6	5.6	3.1/2		5.6	5.6	3.1/2	
	5		4,75	5 4,75	5 4,75	5 4,75	4.75	4	5	4.75	4.75	4	
4	4,5		4	4,5 4	4,5 4	4,5 4	4.00	5	4.5	4.00	4.00	5	
	3,5		3,35	3,55 3,35	3,55 3,35	4	3.35	6	3.55	3.35	3.35	6	
2,8	3,1 2,8		2,8	3,15 2,8	3,15 2,8		2.80	7	3.15	2.00		7	
2,0	2,5		2,0	2,5	2,5		2.80		2.5	2.80		,	
	2,2		2,36	2,36 2,24	2,36 2,24		2.36	8	2.24	2.36		8	
2	2		2	2	2		2.00	10		2.00		9	
	1,8		1,7	1,8 1,7	1,8 1,7		1.70	12	1.8	1.70		10	
	1,6			1,6	1,6				1.6			- 23	
1,4	1,4	455	1,4	1,4 1,25 1,18	1,4 1,25 1,18		1.40	14	1.25	1.40		12	
	1,1			1,12	1,12		1.18		1.12	1.18			
1	1	-	1	1	1		1.00	18		1.00		16	

Woven Wire Cloth # Drahtgewebe Round Holes ● Rundlochung Square Holes ■ Quadratlochung

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			rgleichstabe Maschen- bzw. Lo		900-5 μm TABLE 2	International Test Sieve Comparison Table 2018 TEST SIEVES, NOMINAL SIZES OF OPENINGS					
1	2	3	4	5	6	7	8	9	10	11	
ISO 3310 Table 2, Micrometre sizes			DEU	DEU		USA	USA		USA	TYLER®	
180	N BS	INF*	DIN	DIN		490	(	SD (II)	4979		
rincipal sizes Supplementary Hauptreihe sizes Nebenreihen							U.S.	Supplementary sizes			
R 20/3 R 20 R 40/3			DIN ISO	DIN ISO 3310-3 @		Standard ASTM E11 #	Alternative	Nebenreihen  ASTM E11 #	ASTM E161 Ø1	TYLER	
Nominal aperture sizes acc. to ISO 565 Nennmaschenweiten nach ISO 565			3310-1 <b>#</b>	500-5		850-20		900–36	500-5	Screen Scale 850–20	
w	w	w	w	w		W	No.	w	w	Moch	
	900		900	***		w	140.	900		Mesh	
	700	850	850			850	20	700		20	
	800		800				8.2	800		33	
710	710	710	710			710	25			24	
	630		630					630			
		600	600			600	30			28	
	560		560					560			
500	500	500	500	500		500	35	10000	500	32	
	450		450	450				450			
	400	425	425	425		425	40	400	425	35	
355	400 355	355	400 355	400 355		355	45	400	355	42	
333	315	333	315	315		333	43	315	333	42	
	313	300	300	300		300	50	315	300	48	
	280	555	280	280				280			
250	250	250	250	250		250	60		250	60	
	224		224	224				224			
		212	212	212		212	70		212	65	
	200		200	200				200			
180	180	180	180	180		180	80		180	80	
	160		160	160				160	100	222	
	140	150	150	150		150	100	440	150	100	
125	140 125	125	140 125	140 125		125	120	140	125	115	
123	112	123	112	112		125	120	112	123	113	
	116	106	106	106		106	140	1.76	106	150	
	100	1000	100	100				100			
90	90	90	90	90		90	170	V-94/24	90	170	
	80		80	80				80			
		75	75	75		75	200		75	200	
0.00	71	2002	71	71		200	20.00	71	1975		
63	63	63	63	63		63	230		63	250	
	56	F2	56	56		E2	270	56	F2	270	
	50	53	53 50	53 50		53	270	50	53	270	
45	45	45	45	45		45	325	50	45	325	
(45)	40	7.2	40	40			523	40	- 10	ULU .	
	,,,	38	38	38		38	400		38	400	
R'10	36	24/45	36	36			20000	36		1000000	
32			32	32		32	450		32	450	
25			25	25		25	500		25	500	
20			20	20		20	635		20	635	
				16					15		
				10					10		

Woven Wire Cloth # Drahtgewebe

5
Electroformed sheet ② Elektrogeformte Siebfolie

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\*National editions of ISO 3310. Nationale Ausgaben der ISO 3310.

Our wire cloth for test sieves complies with the standards acc. to the valid revision level. Unsere Siebböden für Analysensiebe entsprechen den Normen nach gültigem Revisionsstand.

# CERTIFIED SAFETY. SERVICE FOR SUSTAINABLE QUALITY.

#### COMPULSORY FEATURES.

### Regular monitoring

Test sieves and test sieve shakers are test and measuring devices, which, according to DIN EN ISO 9000 ff, must be certified, and regularly monitored and checked in operation. For this reason, we provide comprehensive test certificates and service for all our products for sustainable and regulation-compliant quality assurance.

#### Reproducible results

At Haver & Boecker, test sieve cloth and test sieves are manufactured to all the applicable standards, and monitored by our Quality Management System, which is certified in accordance with ISO 9001:2015. Unless otherwise agreed, we supply all test sieves with a free certificate of conformity 2.1 in accordance with DIN EN 10204.

#### EXTRA FEATURES.

#### Additional tests

If required, we can issue test certificates 3.1 in accordance with DIN EN 10204 for test sieves. The necessary tests can be carried out at two confidence levels as a certifying or calibrating measurement.

#### Certification and recertification

We use a calibrated video analysis system for certifying new test sieves and recertifying used test sieves. This can be done using either a stationary unit in our company laboratory or a mobile unit on the customer's premises.

The Haver BSA measuring system meets the current version of the ISO 3310-1 and ASTM E11 requirements for test sieves.

### Machines in top form

We can also test the operation, safety and condition of test sieve shakers on your behalf, either at our factory or directly on site. Following successful testing, we will attach a test seal to the test sieve shaker and issue an test certificate 3.1 in accordance with DIN EN 10204.

# Extended warranty for sieve shakers

The warranty period for test sieve shakers is 2 years – if an extension to 4 years is requested, the machine must be tested by us once a year. This can be done at our factory or on site.

# Commissioning and training on site

Whether on the subject of 'correct sampling', 'reproducible sieve analyses' or 'sieve cleaning', we will be glad to provide on-site training to ensure optimal performance of sieve analyses.

# IQ/OQ in accordance with GMP

Installation Qualification (IQ) is the documented proof that the equipment meets the requirements you are required to fulfil in terms of identity, installation, compliance with directives and documentation.

Operational Quality (OQ) ensures that the machines operate as designed and that they operate properly over the entire scope of the process-critical parameters.









# HAVER CALIBRATION LABORATORY. IN ACCORDANCE WITH DIN EN ISO / IEC 17025.

The calibration of test sieves with wire mesh sieve sections enhances the previous verification of test sieves with a test certificate 3.1 in accordance with DIN EN 10204.

The calibration certificates issued by Haver & Boecker for test sieves with metal wire cloth serve as proof of the relationship to national and international standards and are recognized internationally by the corresponding signatory countries within the scope of respective agreements (EA, ILAC, etc.).

Set up and operation of the Haver calibration laboratory is based on the DIN EN ISO / IEC 17025 standard, which governs the ,General requirements for the competence of testing and calibration laboratories'. The accreditation was carried out by ,Deutsche Akkreditierungsstelle GmbH' the German accreditation body (DakkS).

### Requirements for the competence of testing and calibration laboratories

- Assurance of professional competence
- Quality management in accordance at least with DIN EN ISO 9001:2000
- Transparency of the obtained measurement results
- Measurements under clean room conditions
- Professionally substantiated measurement results
- Indication of measurement uncertainties
- Tracing of the measuring equipment used back to national & international standards



Ac/cred/i/ta/tion < lat. accredere> (Business: officially accepted)







# INDUSTRIAL SIEVES. ALL REQUIREMENTS UNDER FULL CONTROL.

From quarries, sand and gravel works to the production of crude oil; from paint and powder coating manufacturers; from chemical and pharmaceutical companies to the food industry – industrial sieves from Haver & Boecker are used in virtually all areas of application. Through the continuous exchange of information with engineers, manufacturers and users of sieve shakers, we ensure that you always use the appropriate screen section.

# A partner for all sieving processes

In order to ensure reliable and efficient sieving processes, the materials, the mesh shape, weave type and sieve shaker must be optimally matched to the material being sieved.

The scope of Haver & Boecker's offer includes solutions for all sieve shaker types and applications: classic screen sections made of high-strength and stainless steel as well as special self-cleaning sieve cloths and pretensioned screen sections with and without ultrasonic support. Irrespective of the type of sieve you choose – high-quality materials and careful workmanship guarantee optimal functionality, maximum stability and durability.

# Individual process optimisation

Choosing the right wire mesh specification depends on many factors that need to be evaluated differently for each sieving process.

Our expertise includes advice on the selection of the optimum sieving medium for individual screening processes, tailored to the conditions of production, the quality requirements of the products to be sieved and the available machines. We are glad to help you to find the ideal sieving medium for your sieving process.

