

SIEVING MACHINES AND TEST SIEVES

- Digital Sieving Machines for dry-, wet- and air jet sieving
- Stainless steel test sieves with precision wire mesh and perforated plates
- Non-Contamination plastic test sieves with nylon mesh or perforated plastic plate



Digital Sieving machine suitable for test sieves of up to 200mm / 8" diameter

The Laarmann Sieving Machine is perfectly suitable for the batch wise and continuous sieving of soft, middle hard, hard and brittle materials. The machine is designed to give precise and reproducible results. Due to the wide choice of parameter combinations it is possible to achieve fast and reliable sieving results in a short time.

Sieve analysis

A sieve analysis is a practice or procedure used (commonly used in civil engineering) to assess the particle size distribution of a granular material. The size distribution is often of critical importance to the way the material performs in practice. A sieve analysis can be performed on any type of non-organic or organic granular materials including sands, crushed rock, clays, granite, feldspars, coal, soil, a wide range of manufactured powders, grain and seeds, down to a minimum size depending on the exact method. Being such a simple technique of particle sizing, it is probably the most common.

Adjustment of sieving parameters

The required sieving time, Interval function and amplitude can be pre selected and stored in steps. This is done in a reproducible and comfortable way via the ergonomic operator keypad.

Menu Parameters

- Mode
- Selection
- Increase time and amplitude
- Decrease time and amplitude
- Run and start
- Cancel and stop
- Display sieving
- Display power

Rugged standard clamping device

Allows simple and easy fixation of the sieve stack



Vibration sieving machine

The LMSM is powered by an electromagnetic drive which has no rotating parts to wear, making it maintenance free and extremely quiet in operation. The vibratory action produced by the power unit moves the sample over the sieve in a unique way producing faster more efficient sieving, while the rapid vertical movements also help to keep the apertures clear from blinding.

The digital controller is used to set both the process time and the amplitude, while a further control enables the vibration to run continuously or intermittently. Intermittent vibration improves performance and helps to clear apertures that may have become blocked. The controller will also set the duration of both the on and off times of the vibration. Non-metallic springs and anti-vibration feet isolate vibrations from work surfaces and reduce noise levels

Features and Benefits

- Better performance due to 450 watt drive
- Optimum sieving results
- Suitable for dry and wet sieving
- Suitable for batch sieving
- For test sieves of up 203mm / 8" diameter
- CE certified
- Suitable for 20µm up to 150 mm mesh sizes
- All sieving parameters can be digitally pre-selected
- Interval mode adjustable
- Optimum operation due to ergonomic key pad



Technical data

Height including rods	850 mm
Width	300 mm
Length	450 mm
Weight	30 kgs
Electrical connection	220-240 V / 50 Hz / 300 VA
	100-110 V / 60 Hz / 300 VA
	more on request
Sieve stack (200 mm x 50 mm)	9 sieves plus collector and lid

Digital Sieving machine suitable for test sieves of up to 450mm diameter

The Laarmann Sieving Machine is perfectly suitable for the batch wise and continuous sieving of soft, medium hard, hard and brittle materials. The machine is designed to give precise and reproducible results. Due to the wide choice of operating parameters it is possible to achieve fast and reliable sieving results in a short time.

Sieve analysis

A sieve analysis is a procedure used to assess the particle size distribution of a granular material. The size distribution is often of critical importance to the way the material performs in use. A sieve analysis can be performed on any type of inorganic or organic granular material including sands, crushed rock, clays, granite, feldspars, coal, soil, a wide range of manufactured powders, grain and seeds, down to a minimum size depending on the exact method.

Being such a simple technique of particle sizing, it is probably the most common.

Adjustment of sieving parameters

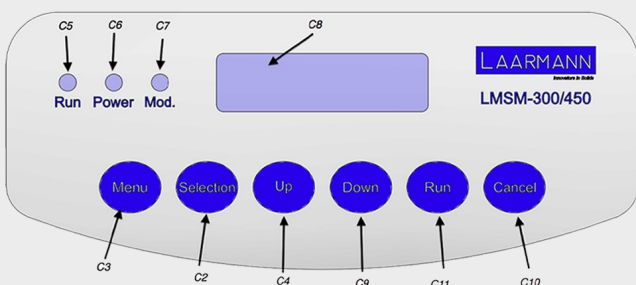
The required sieving time, Interval function and amplitude can be preselected and stored in steps. This is done in a reproducible and comfortable way via the ergonomic operator keypad.

Adjustment of sieving parameters

The required sieving time, Interval function and amplitude can be pre-selected and stored in steps. This is done in a reproducible and comfortable way via the ergonomic operator keypad.

Menu Parameters

- Mode
- Selection
- Increase Time / Amplitude
- Decrease Time / Amplitude
- Run / Start
- Cancel / Stop
- Display Sieving
- Display Power



Swift action quick clamps

Using quick clamping elements the clamping height can be adjusted quickly and easily to any height.

Vibration sieving machine

The LMSM is powered by an electromagnetic drive which has no rotating parts to wear, making it maintenance free and extremely quiet in operation. The vibratory action produced by the power unit moves the sample over the sieve in a 3D motion producing faster more efficient sieving, while the rapid vertical movements also help to keep the apertures clear from blinding. The digital controller is used to set both the process time and the amplitude, while a further control enables the vibration to run continuously or intermittently. Intermittent vibration improves performance and helps to clear apertures that may have become blocked. The controller will also set the duration of both the on and off times of the vibration. Non-metallic springs and anti-vibration feet to isolate vibrations from work surfaces and reduce noise levels.

Features and Benefits

- Better performance due to 750 watt drive
- Optimum sieving results
- Suitable for dry and wet sieving
- Suitable for batch sieving
- CE certified
- Suitable for 20µm up to 150 mm mesh sizes
- All sieving parameters can be digitally pre-selected
- Interval mode adjustable
- Optimum operation due to ergonomic key pad



Technical data

Height including rods	1150mm
Width	484 mm
Length	601 mm
Weight	90 kgs
Electrical connection	220-240 V / 50 Hz / 300 VA 100-110 V / 60 Hz / 300 VA more on request
Sieve stack (450 mm x 100 mm)	9 sieves plus collector and lid

Digital air jet sieve suitable for analytical sieves with 200mm diameter

The Laarmann Air Jet Sieving Machine is used for particle test separation of powder and dry substances. The machine is designed to work with test sieves in the range of 5µm and 4000µm.

Sieve analysis

A sieve analysis is the most common practice or procedure use (commonly used in civil engineering) to assess the particle size distribution of a granular material and part of several standards.

Working principle of an Air Jet Sieving Machine

Its working foundation is based on the use of air that tug thins particles that make them go through the sieve. This effect is created by a vacuum that provokes a controlled decrease of pressure.

Adjustment of sieving parameters

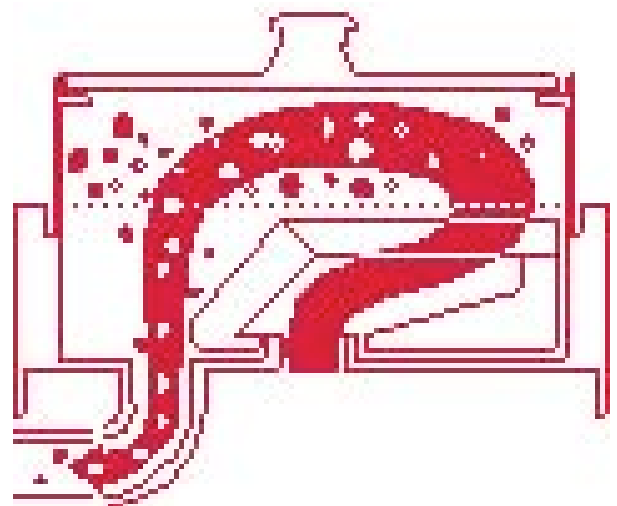
All working parameters like the required sieving time and the relevant vacuum can be comfortably and reproducibly selected and stored using the ergonomic key pad.



The air jet is rotating in a short distance close to the mesh of the test sieve. This results into a perfect Deagglomeration and dispersion of the particles.



The power cord of the aspiration unit can be connected directly to the sieving machine. According to that the aspiration unit is started and stopped simultaneously with the sieving machine.



Air jet sieving working principle visualisation

Features and benefits

Air Jet Sieving Machine

A powerful aspiration unit with variable throughput of 0-99 mBar ensures that the material is quickly

Dispersed and can pass the test sieve.

The aspiration unit is equipped with an automatic cleaning system for the filter. This allows that many

sieving procedures can be done before replacing the cartridge.

The Air Jet Sieving Machine includes the following parts:

- Air Jet Sieving Machine
- Aspiration unit
- Admission sheet
- Plexi lid
- Filter cartridge
- 5 Plastic bags
- Rubber mallet

LAARMANN air jet test sieves are delivered with an external sealing from sieve to sieving machine

by a special rubber -adapter ring Additionally we provide air jet sieves for air jet sieving machines from a variety of manufacturers.

For instance this test sieve is built to hang at the holding fixture of a special non Laarmann air jet sieving machine.



Technical data

Height including rods	850 mm
Width	300 mm
Length	450 mm
Weight	25 kgs
Electrical connection	220-240 V / 50 Hz
	100 Watt
Aspiration power	1300 Watt
Sieve stack (450 mm x 100 mm)	0 - 99 Minuten

Features of a precision test sieve

We offer qualitative advantages compared with other manufacturers in each detail. It is profitable to compare the details. Multiple advantages due to the sum of the details:

- Designed for effective usage
- Reduced maintenance required
- Less cross contamination
- Inspection certificate included
- Speed ratio (speed sun wheel : grinding jar)

1. Highest precision and accuracy.

Folded rim ensures highest stability for laboratory and industrial applications

2. Strong precision frame

Optimum fitting accuracy when used in sieve stacks

3. Inspection certificate without extra charge

Each sieve is optically measured. This inspection certificate is supplied with each test sieve

4. Fillet

Highest representativeness of the sample due to reduced adhesion behaviour of the sample at the sieve-frame

5. Optimized and permanent tension of the mesh

(Wire tension)

6. External sealing

Optimum external sealing from sieve to sieve

7. Inspection of wirecloth at each manufacturing process

The wire is permanently checked at each stage of the manufacturing process. The mesh will be permanently controlled by optical computer scanning from the weaving up to the final mounting

8. Laser marking of all individual test sieve parameters

Valid for all test sieve parameters up to 450 mm. A smooth and endless sieve frame ensures a simple and fast cleaning. Due to this laser marking technology the corrosion and cross contamination is minimized compared with traditional labelling methods



We supply test sieves with 75/100/150/200/203/250/315/390/400/450 mm sieve diameter:

- Sieve mesh made from stainless steel, 20 µm up to 150 mm aperture sizes
Perforated round hole sieves, 500 µm up to 100 mm aperture sizes
- Perforated square hole sieve, 4 mm up to 100 mm aperture sizes
- O-Ring included in scope of delivery
- Inspection certificate included in scope of delivery



Accessories for sieve analysis

We supply the following accessories for all available sieve diameters

- Sieve cover
- Collector bottom for dry sieving
- Collector bottom with outlet for wet sieving
- Intermediate bottom (for multiple sieve processes in one process)
- Intermediate rings (to enlarge the distance between sieves)



ISO		ISO		
ISO 3310-2:1999	BS410-2:2000	ISO 3310-2:1999	BS410-2:2000	
aperture sizes		aperture sizes		
µm	mm	Round & Square Holes in mm	Only Square Holes in mm	
20	1	125	18	2,5
25	1,12	112	16	2,36
32	1,18	106	14	2,24
36	1,25	100	13,2	2
38	1,4	90	12,5	1,8
40	1,6	80	11,2	1,7
45	1,7	75	10	1,6
50	1,8	71	9,5	1,4
53	2,0	63	9	1,25
56	2,24	56	8	1,18
63	2,36	53	7,1	1,12
71	2,5	50	6,7	1
75	2,8	45	6,7	
80	3,15	40	6,3	
90	3,35	37,5	5,6	
100	3,55	35,5	5	
106	4,00	31,5	4,75	
112	4,50	28	4,5	
125	4,75	26,5	4	
140	5,00	25	3,55	
150	5,60	22,4	3,35	
160	6,30	20	3,15	
180	6,70	19	2,8	
200	7,10			
212	8,00			
224	9,00			
250	10,00			
280	11,20			
300	12,50			
315	13,20			
355	14,00			
400	16,00			
425	18,00			
450	19,00			
500	20,00			
560	22,40			
600	25,00			
630	26,50			
710	28,00			
850	31,50			
900	35,50			

Digital Sieving Machine

Additionally to the test sieves we recommend our digital Vibratory Sieving Machines LSM 75/200: suitable for test sieves of up to 200/203mm test sieve diameter LSM 300/450: suitable for test sieves of up to 450mm test sieves diameter.

Both machines are suitable for dry and wet sieving analysis. The Air Jet Sieving Machine LMAJ 200 is designed to handle materials which tend to agglomerate like pharmaceuticals, pigments and for sample materials with a low density.

Sieving aids like sieving brushes, sieving balls and cubes which support the sieving process are available as well.

For further information please visit www.laarmann.eu