

MIKRO AIR JET SIEVE™

Particle Size Analyzer



HOSOKAWA
MICRON POWDER SYSTEMS

Combining the resources of

ALPINE • MIKRO • MAJAC • MICRON • VRIECO-NAUTA

ACCURATE PARTICLE SIZE ANALYSIS

THE MIKRO AIR JET SIEVE™—MODEL X

is a highly accurate and reliable particle size analyzer designed for determining the particle size distribution of dry powder ranging from 20 μm to 4,750 μm .



FEATURES:

- Economical solution to particle size analysis
- Highly accurate & reliable particle size analysis
- Suitable for Chemicals, Minerals, Pharmaceuticals, Food, Plastics & Cosmetic materials
- Determines particle size for dry powders from 20 μm to 4,750 μm
- Automatic data recording and storage with network capability
- Output graphs available in linear, logarithmic, and Rosin-Rammler formats
- Capable of calculating particle size points at 0.01 to 99.99% using the Rosin-Rammler Law
- Save completed analyses for future retrieval direct to computer
- Pneumatic sieving deagglomerates the sample while continuously cleaning test sieve
- Samples 10 to 100 grams/cycle

DESIGN:

- Integrated analysis computer with touch screen controls
- User friendly software with step by step instructions
- Automatic pressure differential gauge built in
- 100-230 volt, 50/60 Hz power
- Stainless steel sieve pan & ducting
- Rotating wand disperses the sample across the surface of the screen
- Suitable for use with ASTM Certified test sieve screens
- 16.5" wide x 10.5" deep x 7.5" tall
- Light weight - only 21 lbs
- Long life & minimal downtime
- Ergonomic & user friendly design
- Isolated inlet air & outlet air connections



ACCESSORIES & OPTIONS:

- Cyclone for 98% product recovery over 10 μm
- Sieve adaptor suitable for 200 mm and 203 mm (8 inches) test sieve screens
- Multi-screen adaptor capable of analyzing 3 samples simultaneously
- Vacuum system designed for safe, consistent and reliable performance
- HEPA vacuum available for high containment operation
- Brush, sieve cover and tapping hammer included
- Electronic balance for accurate & complete particle size analysis
- Validation services available upon request

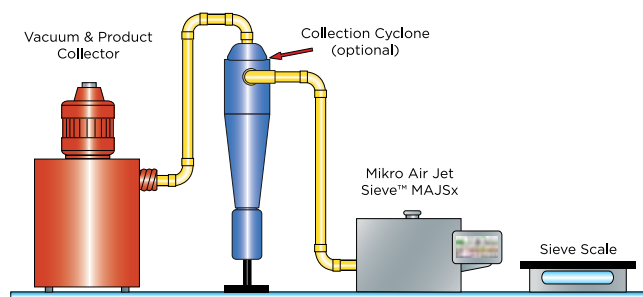
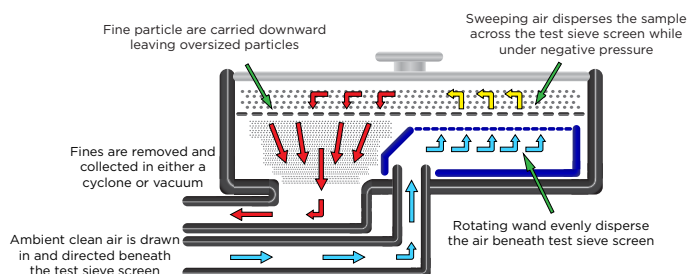


SUITABLE FOR CHEMICALS, MINERALS, FOOD & PHARMACEUTICALS

OPERATION

The Mikro Air Jet Sieve™ – Model X is easy to operate and quickly determines particle size with a short series of sieve test screens. The system utilizes the pneumatic sieving principle that enhances the accuracy and reproducibility of particle size analysis. Use of this device has become a preferred method for such tasks as quality assurance of incoming raw materials and the confirmation of final product specifications.

While negative pressure draws all the particles below a defined particle size down through a sieve screen, a positive airflow is introduced upwards through a rotating wand. This airflow deagglomerates and disperses undersized particles and carries them to the vacuum collector.



Standard MAJS_x setup with optional cyclone.

Precise particle size from 20 to 4,750 µm can quickly be determined. This unique rotating wand method also eliminates the need for tapping or brushing and increases reproducibility with controlled measurements of pressure drop and duration. Overall the system is designed to operate cleaner, quieter and requires less space than other types of similar analytical equipment.



SIMPLE & EASY OPERATION

CONTROLS & TOUCH SCREEN PLC

The MAJSx features an integrated analysis computer with touch screen controls and display. The system is easy to operate and includes step by step instructions to ensure test performance. The Mikro Air Jet Sieve™ - Model X automatically calculates particle size and data can be stored, analyzed and compared.



BODY

The Mikro Air Jet Sieve™ is an ergonomically designed to make particle analysis more efficient than ever. Constructed in durable cast aluminum, the Mikro Air Jet Sieve™ frame is lightweight and has a high polish finish, yet is tough enough to withstand frequent use in harsh environments.



WAND

The wand is a rotating slotted nozzle that focuses incoming air to continuously swipe the test sieve dispersing the sample while washing any lodged particles. Additionally, it produces a smooth, constant air flow preventing sample agglomeration.



BALANCES

Accurate sieve screen weighing is critical in determining particle size. Hosokawa can provide reliable and proven balances with your particle size analyzer that can be integrated into the process and directly networked with the Mikro Air Jet Sieve™ - Model X.



VACUUMS

Hosokawa Micron Powder Systems strongly encourages customers to purchase and utilize industrial HEPA filtered vacuums provided through Hosokawa. The vacuums offered are specifically selected to ensure performance and guaranteed results.



CYCLONE

The Hosokawa High Efficiency Cyclone is a laboratory scale particle collection device, often paired with the Mikro Air Jet Sieve™. In order to recover up to 98% of materials over 10 µm, the Mikro Air Jet Sieve™ must be installed prior to the vacuum. This option allows operators to collect materials after particle sizing for further analysis. The cyclone is constructed in stainless steel with a clear glass collection jar. The lid can easily be removed for cleaning and inspection.



MEASURE POWDERS 20 – 4,750 µm

TEST SIEVE SCREENS

Microns	Mesh Size	Inches	mm
20	635	0.0008	0.020
25	500	0.0010	0.025
32	450	0.0012	0.032
38	400	0.0015	
45	325	0.0017	0.045
50			0.050
53	270	0.0021	
63	230	0.0024	0.063
75	200	0.0029	
80			0.080
90	170	0.0035	0.090
100			0.100
106	140	0.0041	
125	120	0.0049	0.125
150	100	0.0059	
160			0.160
180	80	0.0070	0.180
200			0.200
212	70	0.0083	
250	60	0.0098	0.250
300	50	0.0117	
355	45	0.0138	0.355
425	40	0.0165	
500	35	0.0197	0.500
600	30	0.0232	
710	25	0.0280	0.710
850	20	0.0331	
1000	18	0.0394	1.0
1180	16	0.0469	
1400	14	0.0555	1.4
1700	12	0.0661	
2000	10	0.0787	2.0
2360	8	0.0937	
3350	6	0.132	
4750	4	0.187	

SIEVE SCREENS

Hosokawa Micron Powder Systems only offers spun frame test sieve screens. These screens are highly accurate, supplied with a certificate of conformance, a certified histogram, and meet ASTM-E11 standards. These sieve screens are built to the highest standards possible and are guaranteed to be at least 99.5% accurate down to 20 µm. Hosokawa has a wide selection of sieve screen mesh sizes ranging from 635 mesh up to 4 mesh.



MULTI-SIEVE ADAPTOR (MSA)

A multi-sieve adaptor is available for particle size analysis where test samples need to be smaller than traditional sieve testing or for users that prefer to run fewer test cycles to achieve results. The multi-sieve adaptor can accommodate up to three 63 mm diameter test sieve screens without affecting the particle size analysis.



LOOKING FOR SIMPLE ANALYSIS?

MICRON AIR JET SIEVE™ BASIC MODEL (MAJSb)

The Micron Air Jet Sieve™ - Basic Model (MAJSb) is an affordable, non-computerized particle size analyzer well suited for harsh environments. The Basic Model uses the same pneumatic operating principle as the MAJS_x, however this unit is not equipped with a touch screen control or integrated computer for automatic analysis. In the Basic Model, the operator manually calculates the particle size distribution using a simple formula after weighing and sieving each sample on a set of predefined test sieve screens.



Scan for a
short demonstration.



- Suitable for Chemicals, Minerals, Pharmaceuticals, Food, Plastics & Cosmetic materials
- Determines particle size for dry powders from 20 µm to 4,750 µm
- Economical to own and operate for easy, fast & accurate analysis
- Pneumatic sieving deagglomerates the sample while continuously freeing test sieve of lodged particles for repeatable results
- 110 & 220 volt models available
- Measures 12" wide x 15" deep x 13" tall
- Unit does not include computer or software for automatic calculations and can not be integrated with a computer for data analysis or a balance
- Unit requires sieve screens, vacuum and scale to perform analysis

DESIGNED, MANUFACTURED AND ASSEMBLED IN THE USA

Our air jet sieves are designed, manufactured and assembled in the USA and come with our pledge to performance and guaranteed dependability. Air Jet Sieves have the reputation for accuracy and reliability with thousands of installations worldwide. Hosokawa

developed air jet sieving technology in 1957 to quickly determine particle sizes for dry powders.



HOSOKAWA MICRON POWDER SYSTEMS



The Micron Powder Characteristics Tester PT-X identifies flowability and floodability of dry powders.

PA LABORATORY & ANALYTICAL EQUIPMENT

Hosokawa Micron Powder Systems offers a wide range of laboratory scale processing equipment and analytical devices for evaluating your materials.

- Micron Air Jet Sieve MAJSb
- Mikro Air Jet Sieve™ MAJSx
- Mikro® LPM Laboratory Pin Mill
- Micron Powder Characteristics Tester PT-X
- Micron Viblette Wet Sieve VBL
- Micron Peneto PNT - N

SR SIZE REDUCTION EQUIPMENT

- Mikro ACM® - Air Classifying Mill
- Mikro Pulverizer® Hammer & Screen Mill
- Mikro® UMP - Universal Milling System
- Mikro LGM® - Long Gap Mill
- Mikro Atomizer® - Air Classifying Mill
- Alpine® AFG - Fluidized Bed Jet Mill
- Alpine® AS - Spiral Jet Mill
- Alpine® UPZ - Pin Mill
- Alpine® SO - Ball Mill

CI CLASSIFICATION & SEPARATION

- Majac® Acucut Air Classifier
- Mikro® Classifier
- Micron Separator
- Alpine® ATP Turboplex Classifier
- Alpine® ASP Stratoplex Classifier
- Alpine® TTSP Tandem Classifier

m/b MIXING, BLENDING & DRYING

- Vrieco-Nauta™ Conical Screw Mixer
- Micron Drymeister Flash Dryer
- Vrieco-Nauta™ Cyclomix
- Vrieco-Nauta™ Vacuum Dryer
- Vrieco-Nauta™ Active Freeze Dryer
- Micron Nobilta™

c/i CONTAINMENT, FILLING & WEIGHING AND ISOLATION TECHNOLOGY

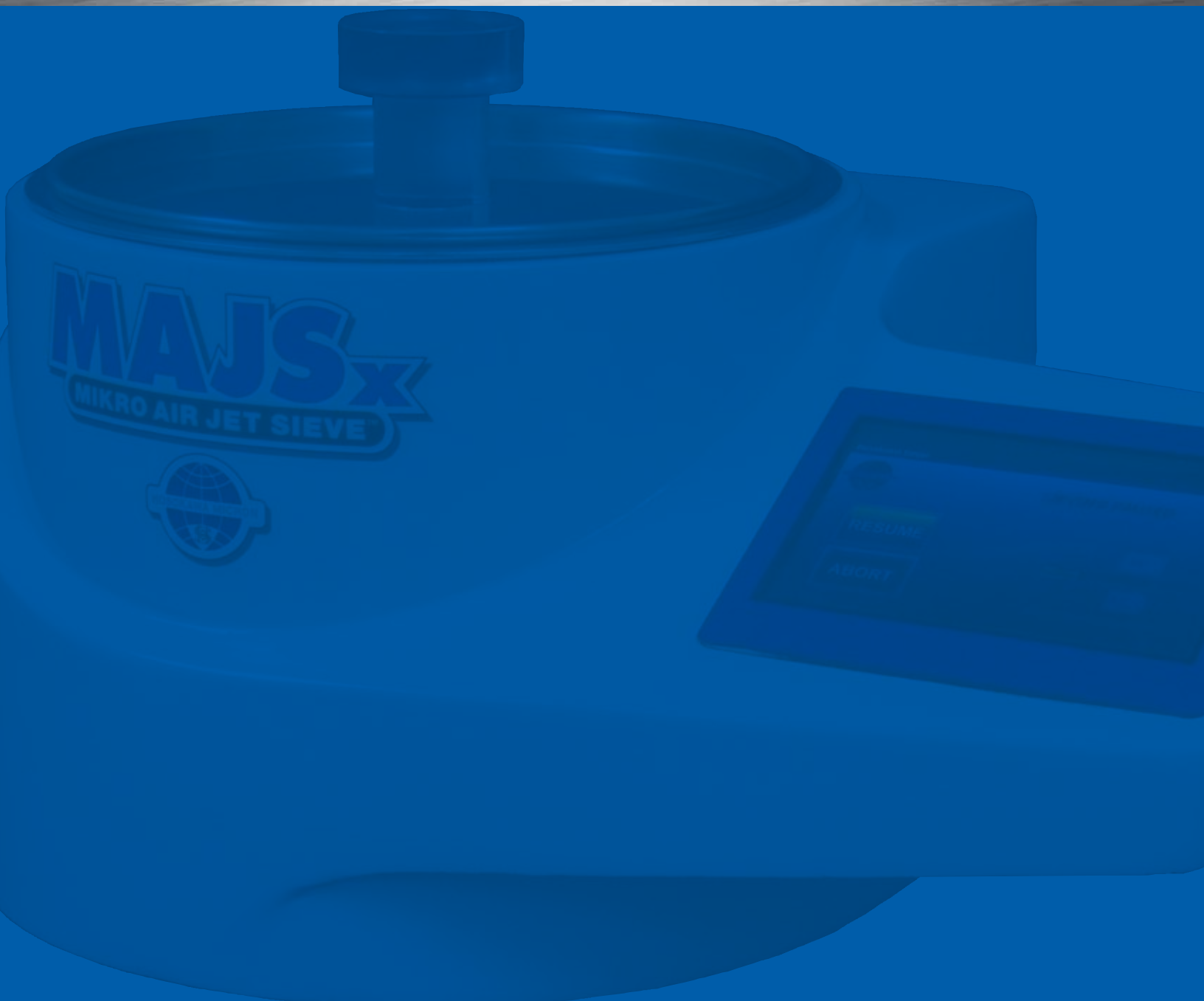
- Stott Rigid Wall Isolators
- Stott Hygienic Filling & Weighing System
- Stott Flexible Isolators
- Vitalair Downflow Booth

Services

- Hosokawa Brand Parts
- Engineering & System Design
- Custom Toll Processing
- Test Center & Analytical Laboratory
- On-site Service & Maintenance
- Pre-Owned Equipment Sales
- Equipment Validation & Surveying
- Educational Programs & Training

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HOSOKAWA **MICRON POWDER SYSTEMS**

Hosokawa Micron Powder Systems, located in Summit, New Jersey is a member of the Hosokawa Micron Group. We are a leading provider of equipment and systems for Size Reduction, Classification, Mixing/Blending, Drying, Particle Analysis, Compaction, Granulation as well as a full line of laboratory and analytical equipment. We also provide Contract Manufacturing, Complete Aftermarket Services and OEM parts, Equipment Leasing, Refurbishing, Product Development Services and Educational Programming. We serve the Chemical, Mineral, Food, Pharmaceutical, Cosmetic and Plastics processing industries.

***Disclaimer:** The content shown within this brochure may contain errors and omissions and is subject to change at anytime without notice. The data and details provided in this brochure is for promotional purposes only. The purpose of this brochure is to provide information about a specific device or service offered by Hosokawa Micron Powder Systems. This information does not constitute any equipment warranty or performance guarantee.*

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