

## GRADEX® 2000 Particle Size Analyzer

The GRADEX 2000 is a patented PC-controlled device which fully automates the sieve analysis process. The GRADEX 2000 provides analysis and complete data printout automatically—in the lab or on the plant floor—making SPC a reality for today's quality-conscious processor.

- The GRADEX 2000 is designed to utilize a stack of standard 8" (or 200 mm) round test sieves, either full or half-height size. These test sieves can be easily changed to suit specific test requirements.
- Sieving action is provided by the same rotary shaking/tapping motion used on typical manual sieve shakers.
- The samples to be tested are loaded individually by the operator—or multiple samples may be loaded for continuous testing.
- The GRADEX 2000 automatically classifies and weighs each sieve fraction, calculates and stores weight values and reports the data to a PC or controller. The data is stored in a format compatible with most QC/SPC software.

Fully automating the entire sieve analysis process, GRADEX 2000 enables the user to analyze product on a more frequent and timely basis – permitting closer control of raw material receipts, materials in process and finished product. Further, it frees technicians to perform other work, while at the same time it improves test accuracy and repeatability over manual methods by eliminating operator error and bias.

### Typical GRADEX 2000 Applications

- Chemical Processing
- Stone, Clay, Glass
- Food Processing
- Plastics
- Mineral/Mining Processing

### GRADEX 2000 Reduces Costs and Frees Manpower Through Automatic, Frequent and Timely Analysis

- Frees technicians to perform other work
- Increases testing capacity without additional manpower
- Enables testing to move to point of sample, so line operators can conduct the testing
- The ability to test more frequently decreases quantity of off-spec product

### Elevates Test Quality by Eliminating Operator Error

- Eliminates manual steps where errors often occur
- Improves repeatability by avoiding sieve damage due to overbrushing, because GRADEX 2000 brushes the sieves evenly and consistently
- Electronic data transfer eliminates transposition and calculation errors



Automatic Sample Feeder The GRADEX 2000 "AutoFeed" enables staging up to seven samples for uninterrupted testing.

## Control Options

### PC-Control

The GRADEX® 2000 software is Windows® based and provides the greatest operational flexibility. It can be set up in the test lab or any other environment where a standard PC can be used.

### Computer Control Cabinet

The GRADEX 2000 control systems can be housed in a free-standing console, complete with dual fans that keep your machine dust free. The console serves as an operator work station, housing the PC keyboard, monitor and printer.

## Operating Benefits

- Mettler Balance with capacity of 5100 grams
- Accepts any manufacturer's sieves
- Enhanced GRADEX 2000 software with customized reports and flexible reporting

### GRADEX 2000 Technical Data

#### General Specifications

Dimensions – Manual	27" wide, 52" deep, 60" height
– AutoFeed	32" wide, 52" deep, 65" height
Weight	810 lbs. (368 kg)
Power – Electrical	110 v, 60 hz, 1ø-10 amp.
Air	90 psi, 1 cfm
Balance Capacity	5100 grams
Balance Resolution	0.1 grams

## Over 10 Years of GRADEX 2000 Experience

GRADEX 2000 is now being used to automate sieve analysis and augment quality control programs in scores of applications worldwide. More than ten years of in-use experience has demonstrated that GRADEX 2000 provides consistent, reliable performance with extremely low maintenance. Every aspect of design is engineered to provide dependability and low maintenance operation typical of the screening equipment manufactured by ROTEX for over 90 years. When maintenance is required, all components are easily accessed and serviced.

### Aggregate Gradation with the GRADEX® 3000

The GRADEX 3000 Particle Size Analyzer improves or expands quality control programs by providing reliable, fully automatic sieve analysis for the gradation of aggregate material.

The GRADEX 3000 offers the same benefits as the GRADEX 2000, but is designed to classify larger samples and particle sizes for materials such as gravel and crushed rock. The GRADEX 3000 analyzes up to 13 fractions utilizing a stack of standard, 12" diameter, half-height, round test sieves that can be easily changed to meet specific test requirements.



## Sequence of Operation

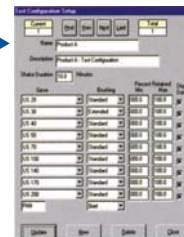


### Standard Test Sieves GRADEX

2000 uses standard 8" (or 200 mm) round test sieves, either full or half-height size, which can be easily inserted and changed to suit specific test requirements.

### Preset Test Configuration Files

GRADEX 2000 uses standard 8" (or 200 mm) round test sieves, either full or half-height size, which can be easily inserted and changed to suit specific test requirements.



### Easy Loading of Material

Operator simply pours sample into machine onto the sieve stack, and initiates test with a single keystroke.

### Duplicates Common, Accepted Manual Sieving

Process GRADEX 2000 shakes and tap for a preset time, using the same stroke and frequency as typical manual shakers.



### Automates Dumping, Weighing, & Brushing

Each fraction is dumped into a collection tray which rests on a digital electronic balance. Each sieve is brushed prior to the material being weighted. Data is recorded for all fractions and electronically transferred to the PC.

### Customized Data Presentations

Operator can view data one test at a time, or create custom reports to view groups of results, data vs. time, lot summaries, etc.

