



APPLICATION - SUGAR GRADING

MATERIAL CHARACTERISTICS

Sugar is mainly used for baking or sweetening. The bulk density of sugar ranges from 40 to 60 PCF (600800 kg/m³). After scalping, grading is performed in two stages: primary screening and specialty screening. The primary screeners normally produce three grades: fine granulated, -14+30M (-1.4+0.6mm), extra fine -30+80M (-0.6+0.18mm), and fine confectioners -80M (-0.18mm). Specialty screening is most often accomplished with a second set of screeners having two or more decks, and are fed from the primary screeners. Final product specifications vary widely among processors.

APPLICATION DATA

Sugar is graded from 14 to 80M and is typically concentrated in the 50M (0.3mm) range. Synthetic or stainless steel screens are normally used. A typical rate for primary screening is 700 PPH/sqft (3.4 TPH/m²).

ROTTEX Screeners are the proven standard in the sugar industry. A single ROTTEX screener handles capacities which require multiple vibratory machines. ROTTEX screeners maximize product yield and quality because their motion produces very accurate and efficient separations. Since grading requires screening of nearsize crystals, screen blinding is frequently a problem. The ROTTEX ball mesh cleaning system effectively controls blinding, thus ensuring continuous performance. Because this is a food product, sanitary designs are common for machine construction.

USER LIST (partial)

American Crystal Sugar
American Maize
Brown & Haley
Centennial Mills
Central Sugar
C&H Sugar
Domino Sugar
General Foods
Godchaux Henderson
Great Lakes Sugar
Holly Sugar
Ingenio Riopaila
Lantic Sugar
Manuelita
M&M Mars
Nabisco
Pillsbury
Refined Sugars
Revere Sugar
Spreckels Sugar
Western Sugar

ROTTEX FEATURES

- Gyratory motion sifts, rather than forces material through screen
- Gentle action minimizes screen tears from foreign objects
- Cleanable sanitary designs
- Easy disassembly for quick cleanout
- Totally enclosed - positive sealing
- Ball mesh cleaning

ROTEX design features provide reliable, high efficiency performance

ROTEX[®] SCREENERS

ROTEX Screeners are self-contained production screening machines for separating dry materials according to particle size. Through their unique gyratory motion of the near-horizontal screen surface, combined with a positive screen mesh cleaning system, ROTEX provides unusually high efficiency and capacity - all the result of continuing development for hundreds of applications throughout scores of industries.

ROTEX Screeners are made in over 100 standard models, ranging from 1 to 5 screen surfaces, for separations with openings from 1/2" to 325 mesh. They are available in Automatic-Tensioning all-metal and sanitary models, and General-Purpose models for applications not requiring all-metal construction.

ROTEX FLOW OF MATERIALS ... FAST, EFFICIENT, ACCURATE

Material enters at top where it is distributed over the entire width of the screen surface and conveyed toward the discharge end. Larger particles remain above the screen surface, while smaller particles pass through. Model shown (above right) is a typical two-surface ROTEX, which separates material into three different grades. Other ROTEX models have one to five screen surfaces, producing two to six separate grades,

TWO SEPARATE SCREENING ACTIONS

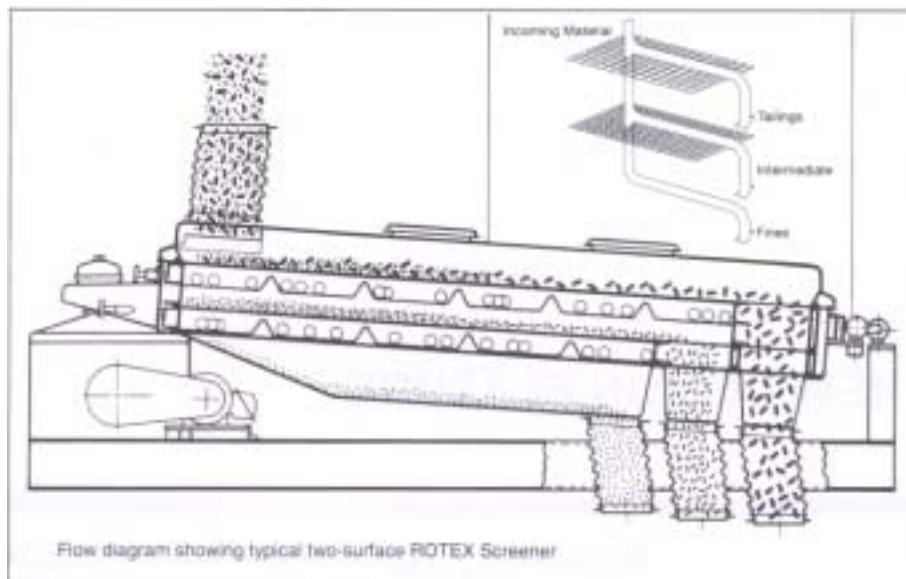
1. Gyratory Motion rapidly distributes ... stratifies ... separates.

The unique gyratory motion of the near-level screen box distributes material rapidly over the screen surfaces with practically no vertical vibration or hop. Finer particles are quickly stratified and readily pass through the screen as larger particles are gently conveyed to the discharge end.



2. Bouncing Balls control screen blinding

The bouncing action of balls confined in beveled pockets beneath each screen surface dislodges particles by direct contact. These resilient balls also keep the screen surface alive, providing agitation to aid particle stratification and to separate particles that may tend to stick together.



"QUICK-SNAP" PROVIDES AUTOMATIC SCREEN TENSIONING AND QUICK, EASY SCREEN REMOVAL

Quick-Snap is the patented design on all Automatic-Tensioning models for attaching screen clothing to the screen frame by spring tension clips. By maintaining a uniform tension across the entire screen surface, the system ensures superior screening accuracy, reduced screen blinding and increased screen life. The tension clip design also permits quick removal and replacement of screen clothing, which greatly reduces downtime.



SMOOTH COUNTERBALANCED DRIVE

The ROTEX counterbalanced drive produces a vibration-free screening motion that is never self-destructive - so smooth that ROTEX may be cable-suspended without loss of screening performance.

VARIETY OF DESIGN OPTIONS

- Sanitary designs
- Special inlets and outlets
- Manual or pneumatic top cover clamps for positive seal
- Two-deck independently fed surfaces
- High temperature modifications
- Abrasion-resistant linings
- Floor mounting or cable suspension
- And many other options to suit the application

MATERIAL TESTING SERVICE

Rotex takes the guesswork out of selecting the proper screening equipment by maintaining a fully-equipped materials testing laboratory. Here your materials are analyzed and tests conducted under simulated production conditions, to help determine the appropriate machine size, optimum screen openings and machine settings for a given application. To make use of this free testing service, first obtain a lab sample control number by contacting the ROTEX Test Lab Supervisor.

CALL ROTEX FOR ASSISTANCE ON YOUR APPLICATION

ROTEX has specialized in process screening equipment for more than 80 years, leading the way with innovations that have become the standard of the industry. For assistance with your specific application, call your ROTEX Representative or Application Engineers in our Cincinnati office.

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