

## STURTEVANT: QUALITY FOR GENERATIONS.

For over a century, Sturtevant has been a leader in the powder processing industry. In the 1920s we pioneered much of the air classification technology that is still in use. Today, with more than 3,100 installations and over 70 years of proven performance in separating dry powders into fine and coarse fractions, our experience is unsurpassed.

In response to the variety of applications requiring particle classification through air separation, Sturtevant now offers three separators, providing high-performance equipment that delivers efficiency, accuracy and dependability all over the world in the food, chemical and minerals industries:

- **The Whirlwind®** - Completely self-contained, requires no process dust collection equipment.
- **The SuperFine®** - Ideal for separations at 44-5 microns.
- **The Side Draft (SD)** - High-efficiency separations. Versatile, variable-speed control to change fineness online.

Each provides unique benefits, backed by maximum performance and Sturtevant durability, to deliver customized solutions for your most exacting needs.



SD fit being checked prior to shipment



16-foot Whirlwind installed in grinding circuit producing 325 mesh product

## SUPERIOR PERFORMANCE FROM STURTEVANT.

Sturtevant air separators balance the physical principles of centrifugal force, drag force and gravity to generate a high-precision method of classifying particles according to size or density. For dry materials of 100 mesh and smaller, air classification provides the most effective and efficient means for separating a product from a feed stream, for dedusting, or, when used in conjunction with grinding equipment, for increasing productivity. All three Sturtevant air classifiers offer durable construction and other time- and energy-saving advantages, including:

- Capability to process an extensive range of dry materials
- Higher capacity and finer separations than screeners
- Simple construction, low maintenance, easy-to-use controls
- Dial-in, external fineness controls; no system shutdown to change products
- Maximized wear-resistance for abrasive materials in special applications
- Easily modified for water cooling, air cooling or drying of product
- Safe classification for heat-sensitive materials

# THE WHIRLWIND CLASSIFIER

The **Whirlwind Classifier** offers an exceptional ability to achieve a wide range of separations. Its features allow precise definition and delivery of the desired size product while delivering the following benefits:

- Fine classification of 100 to 400 mesh materials
- Lowest capital cost: no auxiliary equipment, such as cyclones, process dust collectors, air locks, and system fans, are needed
- Consistent, high-quality product: external adjustment for variation in feed material
- Saves on operating expenses:
  - Low energy consumption
  - Reduced maintenance; durable, wear-resistant liners
- Processes abrasive materials; long-wearing, ceramic liners and inexpensive, steel replaceable liners

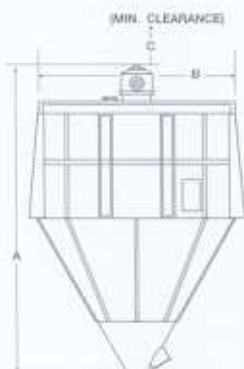
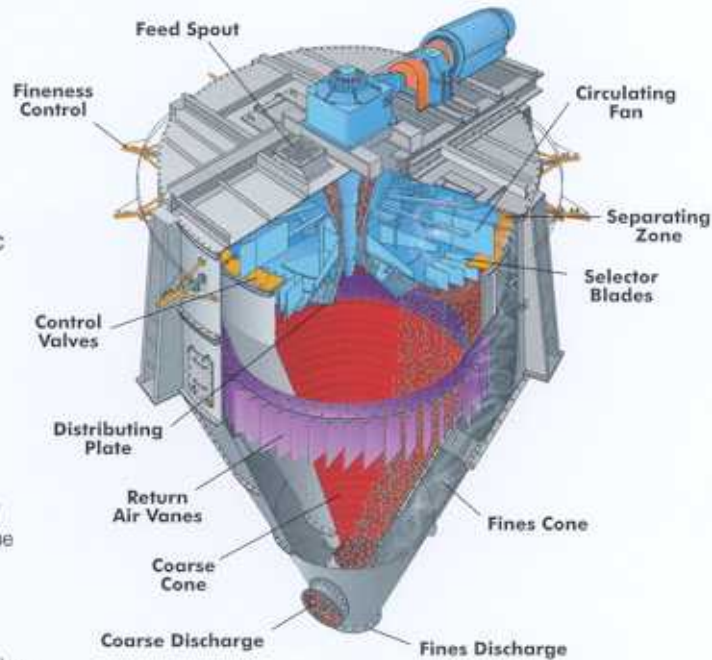


Whirlwind installation requires no process dust collector

## APPLICATIONS

- Aggregates, crushed stone
- Cement
- Ceramics
- Chemicals
- Coal
- Diatomaceous earth
- Fly ash
- Food products
- Gypsum
- Hydrated lime
- Minerals
- Plastics
- Silica sand
- Soda ash, bicarbonate

Material entering through the feed spout is subjected to centrifugal force, throwing coarse particles away from the distributing plate and into the air flow. Due to gravity, large particles settle into the coarse cone. Finer particles are swept upward where selector blades generate further classification. During this secondary separation, oversized particles are spun out of the air flow and drop down into the coarse cone. The selected fines continue through the circulating fan and into the fines cone. Fines drop out of the recirculated air flow at the fixed return air vanes.



## WHIRLWIND AIR CLASSIFIERS

SIZE	A	B	C	WEIGHT (lbs.)	H.P.	AIR FLOW Vent (CFM)	FEED RATE (tons/hr.)
20"	3' 9"	2' 5"	1' 9"	650	5-7.5	25-50	1
3'	6' 7"	3' 3"	3' 0"	1,500	7.5-10	65-125	3
4.5'	8' 8"	4' 10"	3' 0"	2,400	10-15	75-150	8
6'	10' 9"	6' 4"	3' 8"	6,800	15-25	90-175	14
8'	13' 0"	8' 4"	4' 8"	9,500	20-30	150-300	25
10'	15' 8"	10' 4"	4' 8"	13,000	30-40	190-375	40
12'	19' 1"	12' 4"	5' 6"	18,500	40-50	275-550	56
14'	21' 1"	14' 5"	5' 6"	21,500	50-75	400-800	77
16'	24' 5"	16' 5"	6' 3"	31,000	100-150	675-1,350	125
18'	27' 7"	18' 5"	8' 9"	50,000	250-300	1,000-2,000	200
20'	30' 9"	20' 5"	9' 0"	68,000	350-400	1,500-3,000	300
22'	33' 0"	22' 5"	9' 0"	87,000	450-500	2,000-4,000	450
24'	35' 10"	24' 5"	10' 9"	117,000	600-700	2,500-5,000	600
26'	38' 9"	26' 5"	10' 9"	125,000	600-800	3,000-6,000	800