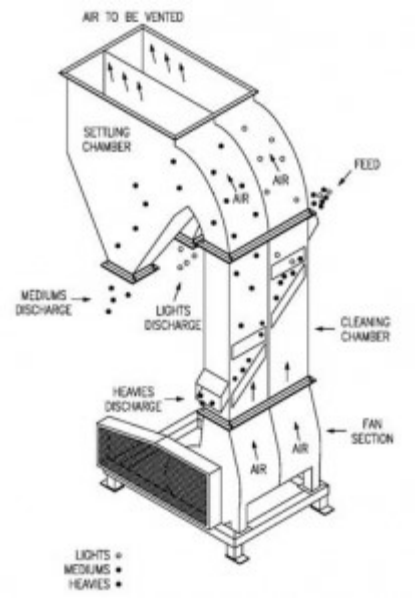
Cascade Pneumatic Separator

The AIM Cascade Pneumatic Separator, or Cascade Airleg, provides high efficiency cleaning and separating for scores of agricultural and industrial products. The Cascade Airleg combines two separators in a single unit with a simple and efficient design. Because the unit can be set for two different air flow settings at once, it is possible to achieve three separations with one machine in a single pass. The Cascade Airleg can also be custom designed to accommodate four separations simultaneously.

DOWNLOAD DIMENSION SHEETS:

Cascade Pneumatic Separator Dimensions

PHOTOS: (click photos to open)



SPECIFICATIONS:

- 3 Phase 230/460V TEFC Motors
- Cleaning Velocities to 2,500 fpm
- HP Requirements: 1 1/2 to 25 HP, depending on model and air requirements
- Production Models 20-4-C, 26-8-C, 32-10-C, 48-12-C, and 50-16-C
- Mini lab model 14-4-C

OPTIONS:

- Stainless Sanitary Construction
- Feed System
- Ducting System
- Dual Motors with Speed Controls
- Four Way Sorting

ADVANTAGES:

- Easy to install and adjust
- Uniform air distribution throughout to prevent chamber ”slow spots”
- Few moving parts for longevity and easy maintenance
- Energy efficient
- No airlocks that can cause damage to product or personnel
- Constructed in sizes to meet production needs
- Economical

Our Cascade Airleg is used to remove light weight debris such as hulls, husks, broken pieces, chaff, dust and other waste material in agricultural and food products. In this scenario, the “good” product exits the cleaning chamber and continues through processing. Conversely, our

Cascade Airleg can be used to remove heavier material from the process. In this application, the "good" product blows over and continues through processing.

Typical Applications:

Nuts

The Cascade Airleg is especially valuable for producing two simultaneous, clean separations of meats and shells with a small fraction remaining in a mixture as a rerun product. This machine is effective for: Walnuts, Pecans, Peanuts, Cashews, Almonds, Pistachios, and Macadamias.

Seeds

The Cascade Airleg is used to separate seeds, large and small, according to density to ensure uniform germination and improve harvest efficiency.

Cereals

The Cascade Airleg removes sugar lumps, doubles, and heavy particles from flakes biscuit and puff cereals. Our Cascade Airleg can replace some gravity machines. Special sanitary stainless steel construction is available to fill your needs.

Plastics

Finished product can be separated by aerodynamic weight. Regrind plastic can be cleaned to remove paper and fines prior to remolding.

Also Effective For:

The Cascade Airleg can help clean Spices, Beans, Soybeans, Candy, Dried Fruits, Assorted Foodstuffs, and an infinite array of Industrial Products.

The airleg consists of three sections:

- The lower fan section, in which the air flow is created and controlled
- The middle cleaning chamber, where the feeding, separation and "heavy" discharge occur
- The settling chamber, in which the lifted or lightweight particles are collected.

Our Cascade Airleg can be manufactured for various capacities, ranging from laboratory models to high-volume scalping units. The model numbers are derived from the size of the cleaning chamber. For example, model number 26-8-C measures 26" wide x 8" deep and model number 32-10-C measures 32" wide x 10" deep. Different separations are accomplished simply by changing the horsepower and cleaning chamber screen.

The Cascade Airleg combines two sorters in a single unit. The sorter can be set at two different air flows simultaneously, achieving three separations or cuts on a single pass. This feature is

useful for separating mixes containing three products, dividing into three grades, or – for difficult-to-separate mixtures—creating a mixed or resorted product while leaving the other two products clean.

The operation of the Cascade Pneumatic Separator is similar to that of the standard two-way sorter except that the unit is divided in the middle, with two air gates and two settling chamber discharges. The material is fed into the side of the cleaning chamber with the lighter weight material lifted into the first settling section. The remaining material is transferred internally to the second chamber, where the medium weight material is lifted to the second settling chamber discharge. The heaviest material falls and discharges from the opposite side of the cleaning chamber.

Feeding and venting are important features to consider when purchasing a pneumatic separator. For best results, product feeding is continuous, without added velocity as the product enters. This is especially important for products that are difficult to sort or mixtures with little differential in the lifting velocity. When product feeding is intermittent, variations in the feed rates require only small airflow adjustments.

Mixtures that include dust-size particles can be problematic unless diverted outside or collected in a cyclone or baghouse. This requires an additional fan to remove the airleg exhaust air. Delicate products, such as cereals, may be lifted into the settling chamber as lightweight debris and can be damaged in the process. Modifications can easily be made to our airleg to prevent such damage.

For added versatility, cleaning chamber extensions can be added and leg heights can be adjusted to best suit the requirements. When low vertical clearance is a consideration, special configurations are available to produce a lower profile, and still provide adequate space to vent the discharge.

Some special features of the Cascade Airleg include the ability to reverse the cleaning and settling chambers to allow feeding from the right or left, and the flexibility to adjust the settling chamber to discharge over or opposite the fan.

If desired, the Cascade Airleg can be custom-designed for four-way sorting. A divided unit can also be used as a dual-feed unit in which two two-way sorts can be made on a single machine.