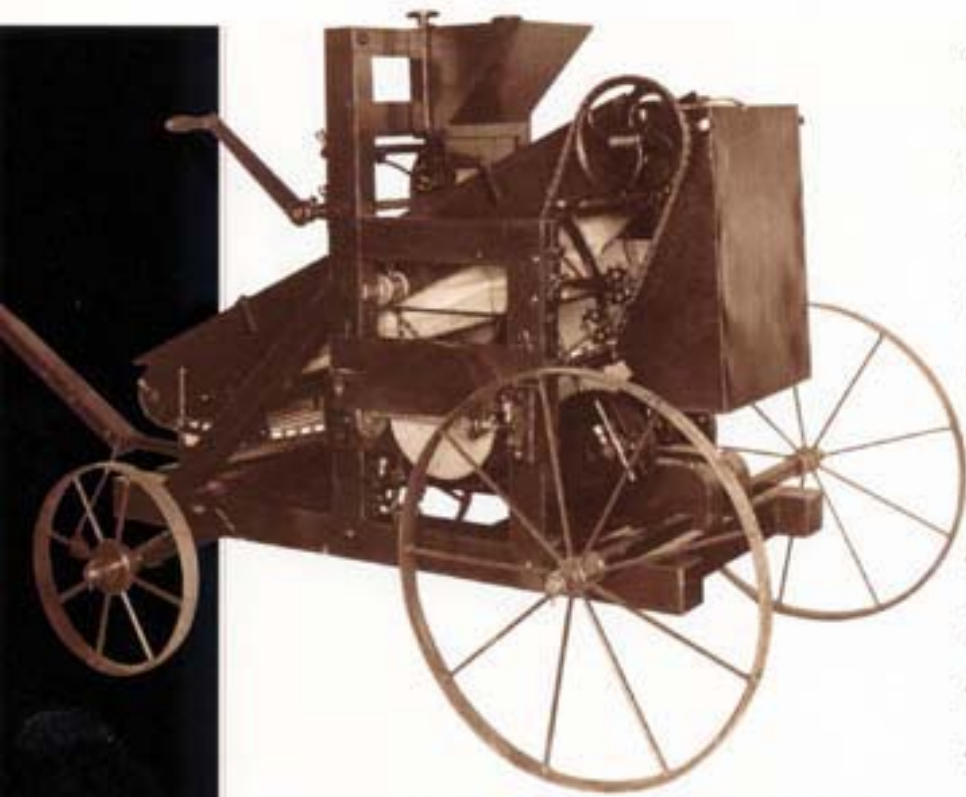


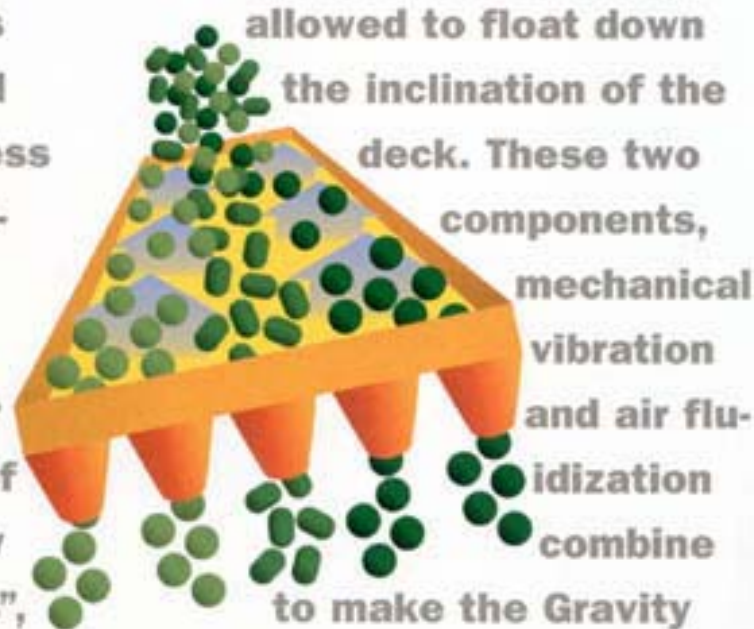
# Dry Materials Separation





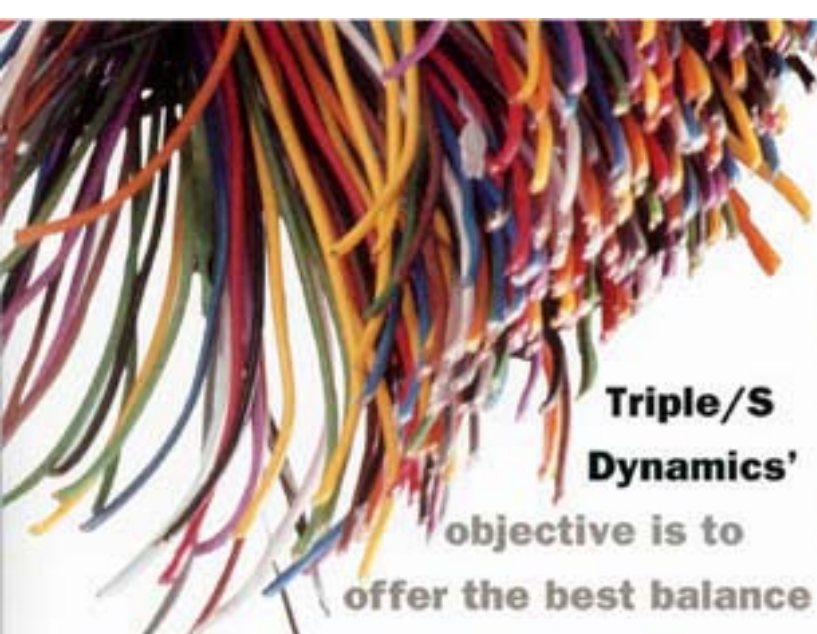
**Triple/S Dynamics**, known as Sutton, Steele & Steele until 1968, has been in the business of designing and manufacturing dry materials separation equipment since the beginning of the 20th century. Our founders invented the first of these machines that are now known as "Gravity Separators", "Air Tables", or "Fluidized Bed Separators".

All of these machines are equipped with a porous deck, which is inclined and subjected to vibration, which causes material in contact with the deck surface to be conveyed up the inclined surface of the deck. Low-pressure air is forced through the deck to fluidize the dry mixture so that the lighter materials are lifted from the deck surface and



allowed to float down the inclination of the deck. These two components, mechanical vibration and air fluidization combine to make the Gravity Separator the most selective and effective separator for many applications.





**Triple/S  
Dynamics'**

objective is to offer the best balance of product yield, product purity, capital cost and simplicity of operation to meet our customer's process requirements. Drawing on a century of experience, Triple/S has developed a wealth of knowledge about the specification and application of air separation equipment on a wide range of products. This knowledge, aligned with a proper understanding of the customer's process objectives, yields the most effective solutions to many separation challenges.

**Machine designs spanning a wide range have been developed to best fit almost any application.**



From the tiny V-135 Lab Model Gravity Separator to the PACE 30 Stoner, capable of handling over 30 tons/hour, Triple/S Dynamics offers the breadth of product line and the depth of experience to optimally fit the requirements of almost any dry materials separations application.



**The Stoner** uses the same principles of fluidization and vibration in a physical arrangement ideally suited for the separation of a smaller amount of dense material from a lighter product. This application is commonly found in the separation of contaminants from agricultural products. Also, there are many applications where the ease of operation of a strictly two-way separation is preferred.

**Test separations** are the only practical means for predicting Gravity Separator performance. Triple/S Dynamics maintains a fully equipped separations lab where size control and size reduction may also be included with trial separations to best determine what equipment and procedures are required to optimize both machine and process choices.



**Excellent applications include:**

**Cleaning grains, nuts and legumes**

**Seed and oil seed processing**

**Cleaning of leafy spices and peppercorns**

**Materials reclaim from scrap or waste**

**Materials separations**

**Filter media separations**

**In addition to material density, the relative size and shape of each component of the mixture also bear on the efficiency of the separation. Wide variations in**

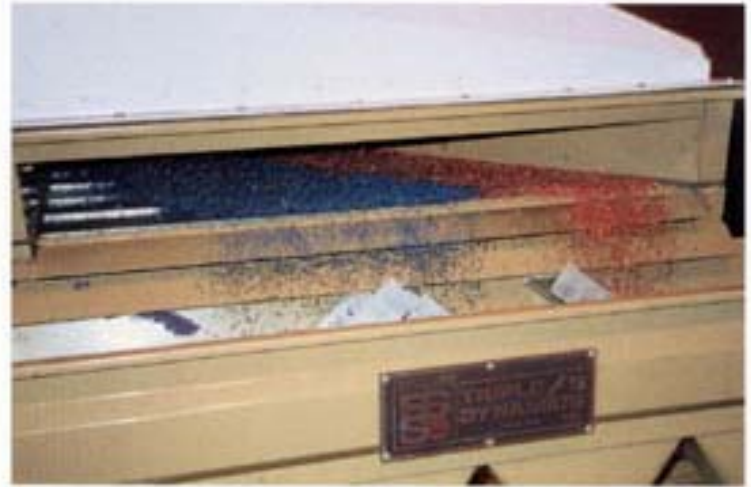
**these material characteristics can dramatically affect the separation results.**

**Where a wide range of particle sizes is present, screening may be required to segregate materials into manageable size ranges prior to separation. Where significant variations in shape are found to be detrimental to separation efficiency, size reduction may be added to the process to reduce the range of variation. These factors become more important as the densities of the materials to be separated becomes closer.**

**Triple/S Dynamics can assist with the specification and selection of screening and reduction**

**equipment, and the Company maintains the systems engineering support to provide complete process systems for material separations.**

**In operation, the Gravity Separator discharges materials separated in a continuous, graduated**



**progression from the least to most dense, smallest to largest, and least to most aerodynamic. Not all, but most successful applications are those where density plays the leading role in differentiation, and where the other two factors are held within limits.**



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