PASSAGE®/DEM software is for predicting the flow particles under a variety of forces while traveling in electrostatic, magnetic or gravitational field.

- Particles can be of
  - different shape and size with given distributions,
  - solid, liquid, and gas with surface tension,
  - charged individually,
- Particles can grow, shrink, deform, divide, join other particles and be charged,
- Capabilities include,
  - Full coupling of Particle and Flow Models for Multi-Phase Flows,
  - Coupling with flow, structure, magnetic and electric Fields
  - Multiple Sliding and Overset Grid Algorithms for stationary or moving boundary surfaces.

**INDUSTRIES**

Product:
- Digital Imaging, Computers and Printers
- Construction, Mining and Agricultural Machinery

Process:
- Pharmaceutical and Chemical
- Food
- Bulk Powder
- Materials
- Mining, Minerals
- Metals

**OVERVIEW**

**Transport of Particles**
- Tablets
- Bulk Powder

**Mixing of Particles**
- Blender
- V-Mixer

**Printing of Toners - Development Process**
- Toner Voltage
- Print Pattern
**Tablet Coating**

**Spray Coating**

**Wurster Coating**

**Granulation of Tablets**

**Fluidized Bed**

**High Shear**

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**FEATURES**

- Coupled equations of motion, transport of particle properties, electrostatic and magnetic fields, are calculated.
- Structural deformations of boundaries such as rollers, belts driving the particles are also included in the models.
- A user friendly pre- and post-processor is provided to input the geometry of the boundaries and the particles, as well as the display of the motion and other properties of the particles.
- Graphical user interface enables review of complex unsteady flow fields in detail.

**PASSAGE®/DEM** runs on PC based workstations

**PASSAGE®/DEM** software was developed and is offered exclusively by Technalysis, Inc.

- Software has been validated and utilized for the design of many real world problems. It is supported by numerous case studies.
- Technalysis provides design experience complementing the software.

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**BENEFITS**

**PASSAGE®/DEM** software can minimize the cost and time of traditional prototype building and testing, thus shortening product design cycles.
- Designs can be analyzed and modified on the computer before expensive and time consuming design decisions are finalized.
- Technanalysis offers software customization of **PASSAGE®/DEM** software can be customized to meet specific customer needs.
- Designs can be analyzed and modified on the computer before prototypes are built or decisions are finalized when design changes become costly and time consuming.
- Technalysis has extensive experience since 1985 for incorporating simulation tools to design process.