

## TYPES OF CONVEYING SYSTEMS

### Dilute Phase Pressure

Frequently the most economical concept and has its greatest advantage when using a single intake point and conveying to multiple discharge points. Infeed device is generally a rotary airlock feeder. Termination of the system usually requires a cyclone, bin vent or receiver filter. A positive displacement blower is generally used to convey at high speeds using higher air flows and pressures under 15 psig.

### Dilute Phase Vacuum

This type of system is most suitable for applications requiring multiple intake points, railcar unloading, blending or bag dumping. These systems are considered to be the cleanest design, and with certain variations, can handle friable and temperature sensitive materials economically. System termination is usually into a receiver filter. Material is conveyed using a vacuum producing displacement blower to transport the material at low material to air ratios with vacuums under 14" hg and speeds less than in a positive pressure system. This type of system can become distance constrained.

### Dilute Phase Vacuum/Pressure

This system is versatile in that it uses one positive displacement blower to convey material. It is most advantageous in railcar unloading to storage silo or where multiple intake points and multiple discharge points need to be served. This type of system is limited in the distance it can convey.

### Dense Phase Pressure

For use with materials that are abrasive, friable or conveyed long distances. This system will move material at slow speeds, using smaller amounts of air in relationship to the material being conveyed at pressures generally higher than 20 psig. The system reduces equipment wear from abrasion and/or product degradation. It requires compressed air to convey material. System infeed is to a pressure tank in most cases or to a specially designed high pressure rotary airlock feeder for product specific granular and powder application.

