

GO



WITH



THE



FLOW



- No moving parts
- Maintenance free
- Reduce or eliminate product damage
- Eliminate blowback
- Convey difficult materials
- Standard and custom configurations



EDUCTORS FOR CONVEYING DRY SOLIDS

EDUCTORS FOR CONVEYING DRY SOLIDS

SCHUTTE & KOERTING, DESIGNER AND MANUFACTURER OF EQUIPMENT FOR THE PROCESS AND POWER INDUSTRIES SINCE 1876, OFFERS A COMPLETE LINE OF EDUCTORS FOR DRY SOLIDS CONVEYANCE.

Dry solids handling eductors are a maintenance-free replacement for rotary airlock valves in bulk feed applications. They employ motive air from a compressed air source or a blower to entrain and transport solids. The air source can be at pressure as low as 3 psig depending on the transport distance. The motive air is expanded across the nozzle creating a vacuum in the suction chamber drawing the product into the eductor. The motive air and entrained solids are carried through the diffuser section of the eductor and discharged into the conveying system. Some of the advantages are:

LOW MOTIVE AIR PRESSURE REQUIREMENTS
PRODUCT CAN BE CONVEYED UP TO 400 FEET
NO MOVING PARTS
REDUCE OR ELIMINATE PRODUCT DAMAGE
CONVEY IRREGULAR SHAPE PRODUCT
STANDARD AND CUSTOM CONFIGURATIONS

S&K solids handling eductors are ideal for moving almost any conveyable solid product including pellets, powders, and particulates. They are used in hundreds of applications in a host of industries.

CHEMICAL PROCESSING
FOOD AND BEVERAGE PROCESSING
PHARMACEUTICAL MANUFACTURING
POWER GENERATION
RAW MATERIAL TRANSFER

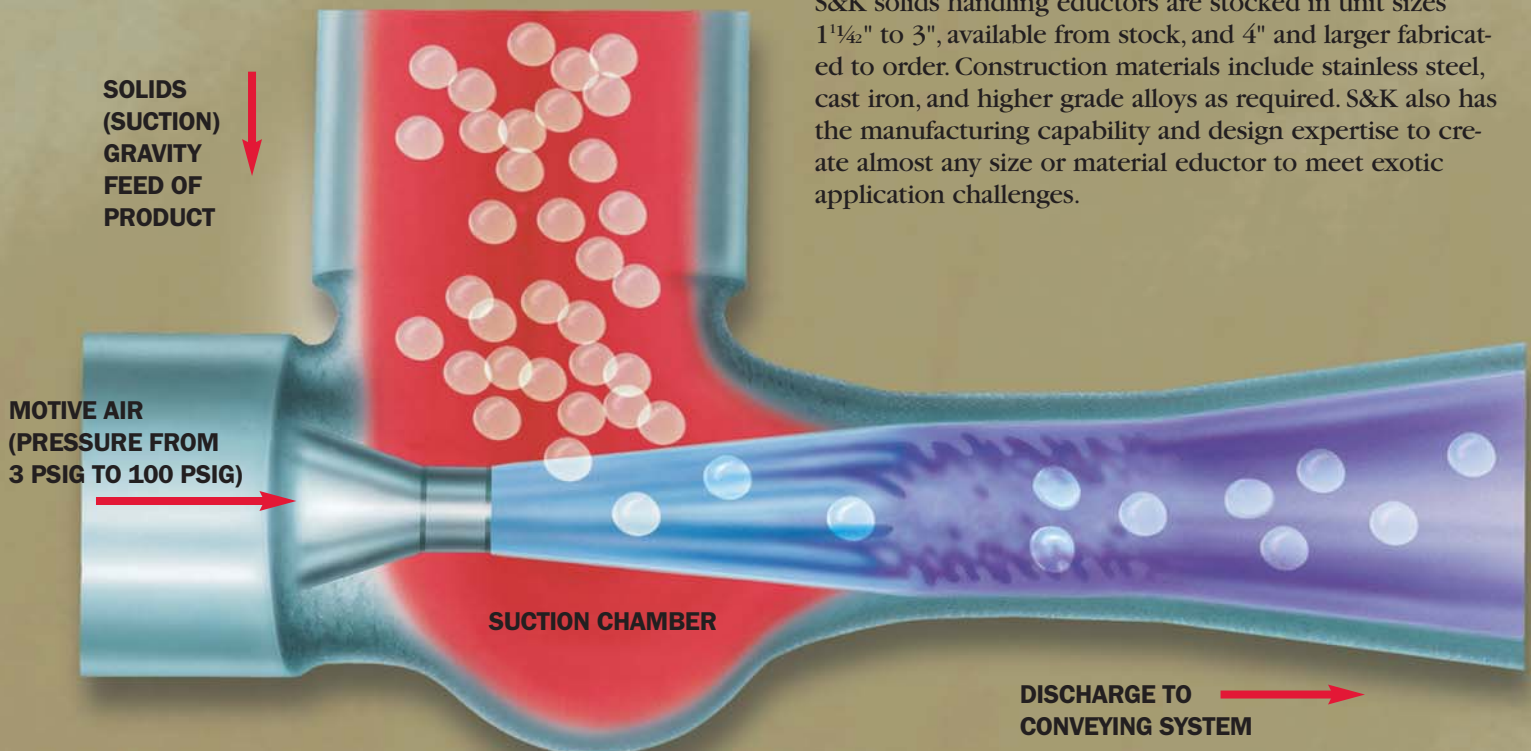
S&K solids handling eductors eliminate the high maintenance costs associated with failures, shutdowns, and service and eliminate maintenance and safety problems associated with rotary airlocks as well as the following:

FINES BLOWBACK
SEVERE AIRLOCK WEAR
AIRLOCK JAMMING
PRODUCT DAMAGE FROM MECHANICAL FEED MECHANISM

S&K solids handling eductors are extremely versatile, capable of effectively handling a wide range of materials that typically cause problems in mechanical feed devices. Because no mechanical device comes into contact with the feed product, shearing and damage is impossible. S&K solids handling eductors can be used successfully to handle the following products:

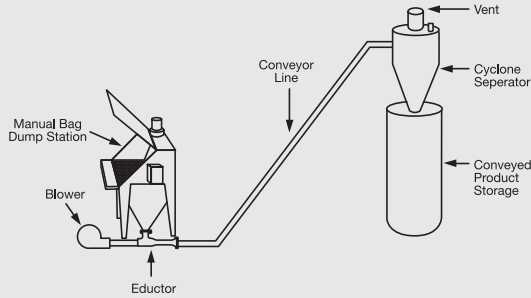
VERY FINE
ABRASIVE
FLAKEY
IRREGULAR SHAPES
SANITARY
HIGH TEMPERATURE
CORROSIVE
LOW FLOW RATES

S&K solids handling eductors are stocked in unit sizes 1½" to 3", available from stock, and 4" and larger fabricated to order. Construction materials include stainless steel, cast iron, and higher grade alloys as required. S&K also has the manufacturing capability and design expertise to create almost any size or material eductor to meet exotic application challenges.



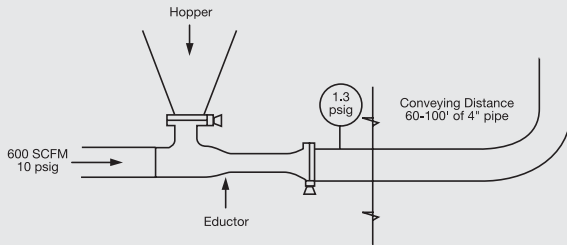
EDUCTOR APPLICATION ADVANTAGES

BAG DUMP STATIONS



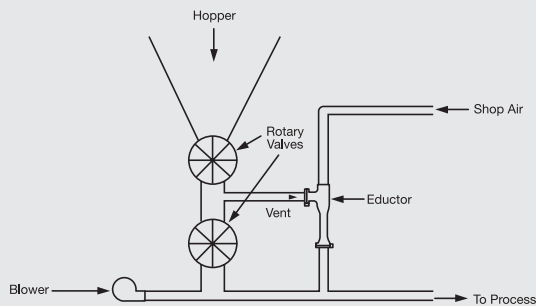
Solids handling eductors are ideal for conveying product from bag dump stations. Food additives (sanitary dump stations) and fine powders (talc, resins) are examples of bag dump applications that benefit from eductor technology. Placed below the hopper in a bag dump station, eductors eliminate blowback due to leakage and control dust clouds by creating a vacuum and drawing the product in. The result is an improved work environment.

ABRASIVE MATERIAL HANDLING



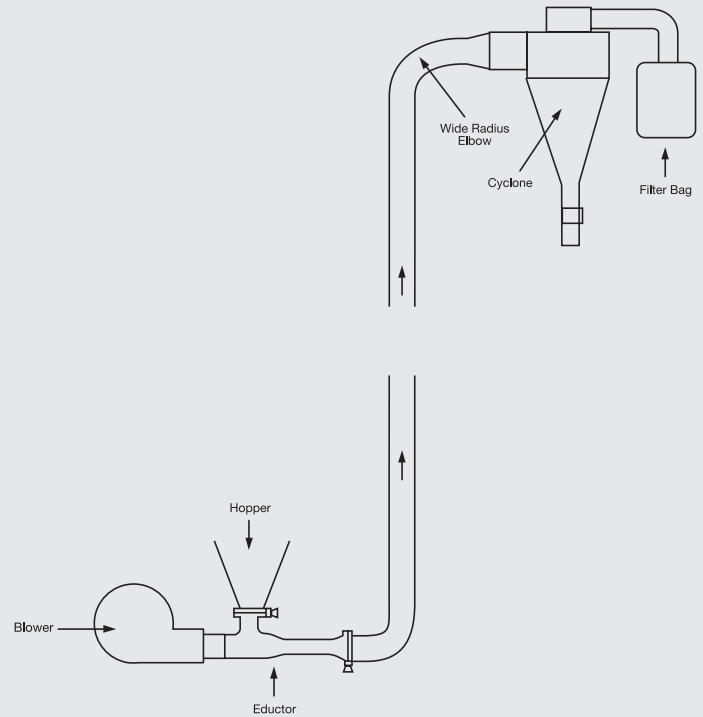
Solids handling eductors convey abrasive materials, (including coke fines, sand, metal powders, etc.) with no moving parts. The result is less downtime from close tolerance wear problems associated with rotary valve designs. A variety of options can be used to increase the strength and wear resistance of eductors to meet the exact specifications of almost any application. Cast iron solids handling eductors can be hardened to 55 Rockwell "C" throughout, carbon steel eductors can be surface hardened, and eductors with ceramic wear parts are available as well.

IMPROVE PERFORMANCE OF EXISTING ROTARY VALVE INSTALLATIONS



In existing installations that employ rotary valves, solids handling eductors have been proven to improve performance and efficiency. They deliver considerable economic benefit by venting and recovering blowback air and product using existing shop air at 50-80 psi. Solids handling eductors can recycle solids back to the feed bin or boost vent air directly into the conveyor line. They are commonly employed in both single or double airlock installations to extend air lock life.

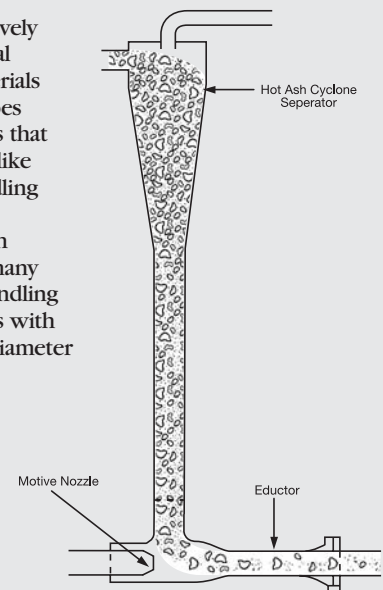
SENSITIVE MATERIAL HANDLING



The absence of moving parts creates the opportunity to convey sensitive materials with less damage. Plastic pellets suffer less chipping, activated carbon experiences less degradation, and pet foods are transported with less product loss. Additionally, solids handling eductors can be employed in sanitary installations for a fraction of the cost of rotary valve technology.

HIGH TEMPERATURE AND VARYING SIZE SOLIDS

Solids handling eductors effectively replace troublesome mechanical feed equipment to handle materials exhibiting a wide range of shapes and sizes as well as applications that employ high temperatures. Unlike mechanical devices, solids handling eductors have no moving parts and are not sensitive to the high temperatures associated with many of these applications. Solids handling eductors easily handle materials with particle sizes of up to 1/6 the diameter of the line size.



TEST FACILITIES

S&K has a 3" diameter conveying line test loop exceeding 200 feet in length for full scale, non-toxic solids handling trials. Tests for conveying capacity or product degradation can be customized to create highly accurate measurements. Capacities of eductors and line sizes can be scaled up or down to meet specific application requirements based upon test results.

- Complete test facility for full-scale testing and system evaluation
- Air capacity from 0-80 psig and up to 360 scfm
- Liquid flow testing and calibration to 8,800 gpm
- Hydro testing to 10,000 psig
- Control/observation room
- Fisher Delta V acquisition system
- Data collection up to 65 points
- 27,000 pph steam at 300 psig
- Two 630 ton cooling towers
- 3000 gpm of cooling water
- 120,000 ft² manufacturing and testing facility

As the premier process equipment manufacturer in the world today, S&K can provide exceptional service and support in system designs and retrofits. Our experience with real world challenges positions us to solve complex application problems.

Schutte & Koerting's ability to integrate technology into existing systems, design and manufacture complete systems, and to custom engineer solutions is unrivaled. S&K offers more than 50 different types of steam, liquid, and air-operated eductors and ejectors for pumping, mixing, agitating, heating, cooling and condensing, and for exhausting air and gases.

For more information on S&K Eductors for Pneumatic Conveying, contact Schutte & Koerting today.

Other Schutte & Koerting products you might be interested in:

- Packaged Scrubber Systems
- Packaged Vacuum Systems
- Steam Jet Ejectors
- Steam Heaters
- Thermocompressors
- Water Jet Eductors
- Gas Jet Compressors
- Steam & Water Jet Exhausters
- Desuperheaters
- Turbine Flowmeters



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