

# AFC

**POWDER HANDLING SOLUTIONS**



**Automated Flexible Conveyors, Inc.**



## AFC SPIRALFEEDER®

The right choice for conveying powders and bulk solids

### WHAT IT IS

The **SPIRALFEEDER®** is an enclosed tubular conveyor designed for conveying powders, granules, blends, crystals, flakes and a wide range of other materials. Typical applications include the conveying of bulk solids into overhead surge hoppers or the conveying of materials from one processing point to another, efficiently, quietly and dust-free.

### HOW IT WORKS

The spiral (round/flat/knife) coupled directly to a motor/drive, rotates concentrically within the stationary outer tube. Both the pitch and rpm of the spiral creates a positive directional displacement of the material within the outer tube, propelling the material towards the outlet. The material is conveyed in an "en masse" fashion from point of entry (inlet) to point of discharge (outlet).

### ADVANTAGES

- Low Cost
- Low Maintenance
- Only (1) Moving Part
- Easily Installed
- Easily Cleaned
- Dust-Tight
- Flexible
- Quiet
- Rugged Construction
- Quick Disassembly
- No Air
- No Vacuum
- No Internal Bearings

### CONSTRUCTION FEATURES

- The **SPIRALFEEDER®** is available in carbon steel with durable industrial coatings or in stainless steel with industrial or sanitary finish
- F.D.A./U.S.D.A. Approved abrasion resistant U.H.M.W. polyethylene outer tubes
  - Heat treated spirals (round/flat/knife) Heavy duty construction

### AUTOMATIC OPERATION

The **SPIRALFEEDER®** can be interlocked with a wide variety of controls to automate your process operation, in addition to factory engineered/pre-wired controls to suit your exact process requirements.

### FACILITIES

**AFC** manufactures a complete line of tubular **SPIRALFEEDER®** systems and related material handling equipment for the chemical, food pharmaceutical, plastic and other industries. We offer both standard and custom engineered systems to meet your specific needs. When your design parameters must be met...Contact the experts...Contact **AFC**.

### SERVICE

**AFC** delivers top-quality service to match top quality equipment. From first survey to installation, **AFC** is "on call" to serve your needs.



### TEST FACILITY

**AFC** offers free product testing and process analysis in our modern, fully equipped test facility. Most applications can be replicated and demonstrated to insure a higher level of application reliability in advance of a purchase decision. Customer participation is always welcomed.



AFC offers six (6) standard **SPIRALFEEDER**® model sizes 1½" through 6" diameter for conveying rates up to 950 cubic feet per hour.

### SPIRAL TYPES

Due to the wide range of materials and applications, the **SPIRALFEEDER**® is available with either a round, flat, or knife-edge type spiral.

**The round spiral** provides maximum flexibility and strength, due to the round cross sectional design.



**The flat spiral** with a rectangular cross sectional design provides greater conveying performance at a reduced rpm.

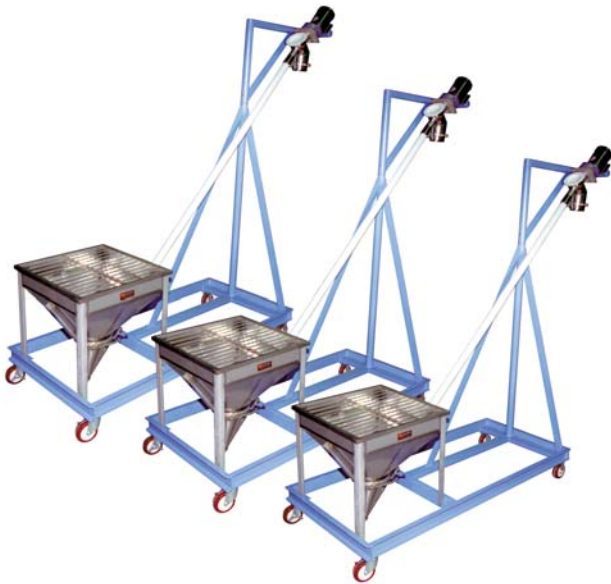


**The knife-edge spiral** was developed by AFC to handle difficult materials which tend to cake, pack or smear which typically challenges most traditional mechanical conveyors.



In addition, AFC offers a heavy-duty series of spirals designed specifically for the most severe application, i.e. high temperature, cryogenic, abrasive and high density materials.

AFC offers the most diverse range of spiral designs in the Industry!



### A SPIRALFEEDER® ON WHEELS

The Portable **SPIRALFEEDER**® offers mobility and versatility for a multitude of in-plant conveying requirements. Completely self-contained, the Portable **SPIRALFEEDER**® is adaptable to numerous day to day tasks. Available in either caster or forklift channel mounted styles including factory pre-wired for turn-key operation.



Portable **SPIRALFEEDER**® with forklift channel base and explosion proof compliant electrical controls.



Typical **SPIRALFEEDER**® Incline to Horizontal Transfer System. Offers unlimited layout possibilities and maximum versatility.

**AFC SPIRALFEEDER**® Model #25 (2½" diameter) with 2 cubic foot capacity hopper. The flexible design of the **SPIRALFEEDER**® will convey materials vertically, horizontally, or at almost any angle – over, under or around equipment, obstructions or through walls or floors!

# Optional Equipment

## TRUE-FLOW® HOPPERS



Truly designed for the **SPIRALFEEDER®** System. Maximum unrestricted flow of most powders and granules with our unique multi-angle hopper. The combination of the True-Flow® Hopper and **SPIRALFEEDER®** Conveyor provides uncompromised conveying performance. Available in 2 and 8.5 cu. ft. capacity (standard) or custom engineered to your exact requirements.

## DUMPCLEAN® BAG DUMP

A self-contained combination bag dump and dust collector. The **AFC** Dumpclean® provides a clean/efficient method of dumping fine (dusty) powders. Engineered for optimum filter efficiency, incorporating the latest in cartridge filter technology. Each unit incorporates automatic pulse jet filter cleaning and full factory wired controls to insure continued operating efficiency and trouble-free installation. Available as an addition to the **AFC** True-Flow® Hopper or custom designed for direct mounting to your existing process equipment.



## CONTROLS



**AFC** offers a full compliment of electrical controls and the in-house design capabilities to suit all your control requirements. Standard or custom engineered controls are available in Nema-4 thru Nema-7/9. Factory pre-wired controls are available for turn-key operation. All controls are UL and CSA Approved.

## LEVEL CONTROLS

**AFC** offers a full line of level controls to facilitate automatic operation of the **SPIRALFEEDER®** System. Standard level switches include: rotary, proximity and RF types, available in Nema-4 thru Nema-7/9.



## TRANSFER/CHARGING ADAPTERS



Bolts directly to the conveyor's discharge outlet for continuation of a tandem/in-series **SPIRALFEEDER®** System. May also be utilized as the primary inlet bolting directly to the outlet of your existing process equipment. Angular or horizontal standard configurations are available including custom designed inlets to meet your exact process requirements.

## BULK BAG ACCESS HOUSING

A simple, yet effective way to open or close bulk bags. Minimizes dust and operator's direct contact with potentially hazardous materials. The **AFC** design incorporates a flanged access housing with hinged/gasketed door, dual latches and a manual flow control iris valve. Available as an addition to the **AFC** True-Flow® Hopper or for direct mounting to your existing process equipment.



## FLOW-AIDS



**AFC** offers a full line of Flow-Aid Accessories and application experience in the conveying of difficult non free-flowing materials. Standard Flow Aid Accessories include: vibrators, air pads and agitators.

## INVERTED "Y" DISCHARGE

Bolts directly to the conveyor's discharge outlet enabling a single **SPIRALFEEDER®** System to fill two (2) receiving vessels simultaneously or individually.

Available with either a manual or automatic (air) actuated diverter.



# Other AFC Products

In addition to the **SPIRALFEEDER**® System, **AFC** manufactures a full line of bulk solids handling equipment as noted below. For more information on any of these products, please contact **AFC**.



## **BAG DUMP STATIONS**

The **AFC DumpClean**® is a self contained high efficiency combination bag dump/dust collector. Automatic pulse jet cleaning and current cartridge filter technology provides effective control of dust typically generated when dumping powders.



## **BULK BAG UNLOADERS (F/L STYLE)**

The **AFC Forklift Style Bulk Bag Unloader** is designed for handling and discharging bags up to 4000 lbs. Typical options include: automatic bag tensioner, pneumatic bag massager and dust-tight bag access housing.



## **BULK BAG UNLOADERS (C/H STYLE)**

The **AFC Chain Hoist Style Bulk Bag Unloader** incorporates an integral I beam, powered hoist/trolley and 4 point heavy duty lifting frame. Designed for handling and discharging bags up to 4000 lbs. Typical options include: pneumatic bag massager, dust-tight bag access housing and (as shown) load cells for accurate de-weighing.



## **BAG COMPACTORS**

The **AFC Bag Compactor** provides a clean and effective means of containment of empty bag refuse. Bags are compacted into a removable plastic lined container via a self-contained hydraulic powered system. Offered as a companion option to the **AFC DumpClean**® providing a total approach to dust/refuse control.



## **BATCH WEIGH SYSTEMS**

The **AFC Batch Weigh System** is designed for single or multi-ingredient batches. A typical system consists of three (3) load cells, bin vibrator, automatic slide gate and a "user friendly" programmable batch weigh controller. The weigh system can be designed to operate in almost any environment, including hazardous locations.



## **BULK BAG UNLOADERS (PORTABLE STYLE)**

An exclusive **AFC** design, combining the **AFC Bulk Bag Unloader** and the **AFC SPIRALFEEDER**® Conveyor for maximum in-plant versatility and conveying performance. This system is designed for either forklift or powered chain hoist loading style. Typical options include: pneumatic bag massager and dust-tight bag access housing.



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