

THE HAPMAN HELIX™

Flexible Screw Conveyor



- ✓ Reliable
- ✓ Low Cost
- ✓ Easy To Clean
- ✓ Simple To Operate
- ✓ Only One Moving Part
- ✓ Portable & Stationary Models
- ✓ Minimizes Segregation & Degradation
- ✓ USDA & 3-A Dairy Accepted Models



Hapman Helix™ Flexible Screw Conveyors are available in sizes and auger styles to move your powders, crystals, flakes, pellets and granules at the rates and volumes you require.



HAPMAN

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Helix™



THE HAPMAN HELIX™ FLEXIBLE SCREW CONVEYOR

The standard Hapman Helix™ flexible screw conveyor is a low cost, high capacity, heavy duty* unit for conveying flowable materials such as powders, crystals, flakes, pellets and granules. These conveyors have screw augers in flat, beveled edge, square and round wire and can operate with or without a center core. They can easily accommodate a wide range of material characteristics and sizes, including difficult to handle materials that tend to pack and smear. These cost-effective units are typically used for “batch-type” applications where the contents of bags, bulk bags, drums, boxes or hoppers must be economically fed into a overhead hopper or moved from one processing point to another. [USDA for meat & poultry and 3A-Dairy accepted versions are available.](#) A HELIX CAN MOVE PRODUCT IN ANY DIRECTION

A Hapman Helix™ will convey your product vertically up to 40 feet or horizontally up to 80 feet. By transferring material from one conveyor to a second conveyor using a transfer box - longer distances can be achieved. Because of the flexible casing and auger, you can convey around, under or over equipment or obstructions - even between floors and/or through walls. This flexibility allows a great deal of discretion in positioning the intake hopper and the discharge head.

SIMPLICITY OF DESIGN

The rotating auger inside the conveyor casing is the only moving part of the Hapman Helix™. This auger is attached to and driven by a standard electric motor and gear box assembly. The auger is fully enclosed

Standard Helix™ Specifications

Model	200	250**	300**	400**	500**	600**	800**
Casing (OD)	1.83"	2.32"	12.96"	4.20"	4.70"	6.625"	8.625"
Bend Radius	4'	6'	10'	20'	N/A	N/A	N/A
Max Capacity*	10-80/cfh	15-150/cfh	30-300/cfh	60-600/cfh	100-1000/cfh	120-1200/cfh	180-1800/cfh

* Based on free-flowing granular material. Actual capacity will vary with material characteristics.

** Consult a Hapman representative for full information on your materials specific attributes.

** Round wire augers are available.

preventing the conveyed materials from being contaminated and subsequently eliminating the possibility of loss of material during processing. Hapman offers a choice of either a flexible or rigid conveyor casing. The flexible casings are food-grade UHMW-PE which is chemical and abrasion resistant. The smooth interior surface of the casing and the boot area is designed to be free of cracks or crevices where material could accumulate. And, the Hapman flexible casing Helix™ configuration has the added benefit of “no metal-on-metal contact”, including the boot area, eliminating the possibility of metal contamination. Either carbon steel or 304 stainless steel is standard for the rigid conveyor casing. Other kinds of rigid materials for conveyor construction will be quoted on request. EASY TO CLEAN

The Hapman Helix™ can be completely disassembled with no special tools in a matter of minutes. Just remove the bottom end-cap and reverse the auger rotation to empty the casing. By removing the mechanism that connects the auger to the drive motor, it can be easily removed from the casing for thorough cleaning. For general purpose cleaning, air, water, steam or chemical cleaning solutions can be used, after the material in the casing has been removed.

*Hapman offers a full line of mechanical tubular drag conveyors for “extreme duty” applications and flexible pneumatic conveyors for complex and/or lengthy plant layouts.

HAPMAN OPTIONS MAKE THE DIFFERENCE

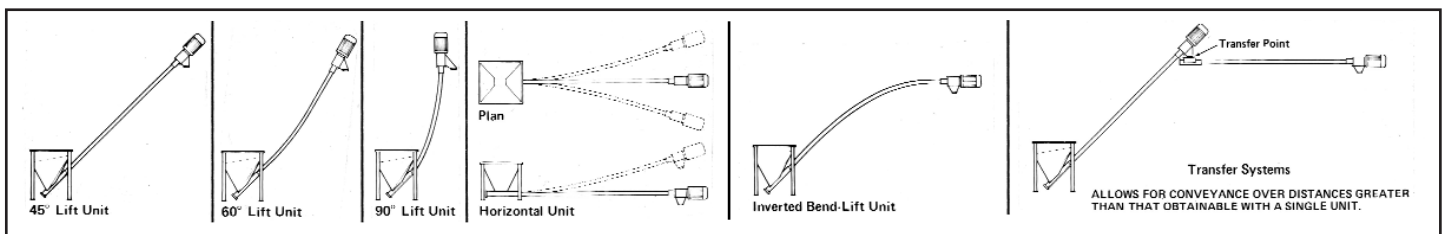
The following pages outline a diverse offering of engineered options which can be brought together to provide appropriate solutions to your specific conveying and systems needs. Hapman retains knowledgeable representatives (averaging 10 years of hands-on-experience in providing conveyor and systems solutions) to assist you in this endeavor. Where others may offer single end-all solutions in conveying, Hapman gives you choices.



There are only five components to the typical Hapman Helix

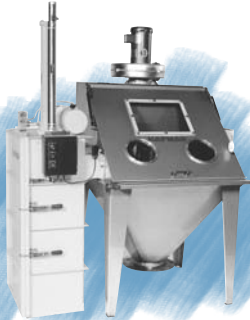
- Inlet or receiving hopper
- Flexible or rigid casing
- Helical auger
- Drive and discharge head
- Control panel / interface

Typical Helix™ configurations



Helix™ Hopper Configurations

Helix™ Batch Systems Begin With Choices In Options & Hoppers



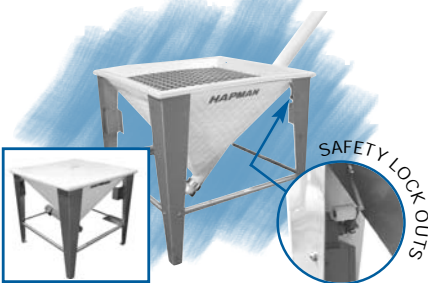
Internal cartridge filtering dust control system with glove box access and bag compactor keeps your work area clean and your product confined within the production cycle, not in external waste or storage bins.



Fluidizing conical hoppers can move difficult materials that may exhibit both adhesion and cohesion characteristics and have a tendency to rat-hole or bridge. Add agitation options to freely move products with more diverse characteristics.



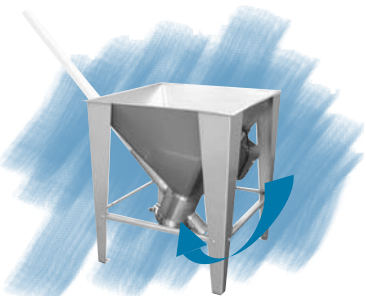
Mobile sanitary dump stations with an optional angled frame design helps to enhance the wash down process and improve sanitation. Other options include a hinged top hopper with bag shelf, level sensor warning light, vibrator and agitator.



Polyethylene sanitary hoppers are easily cleaned and come with a protective cover. As part of our standard offering all Hapman hoppers have a heavy-duty stainless steel top grate with a cut-off switch, interlocked to the motor controls, for operator safety.



Internal cartridge filtering dust control system with explosive rated control panel has enamel paint finish with the option of a durable 2-part epoxy coating. Shown with bag-shelf to expedite bag dump activities.



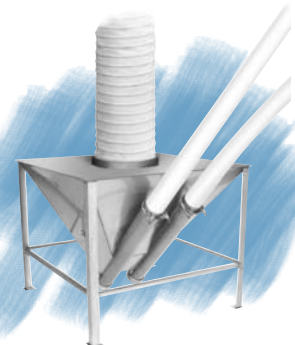
24", 30", 36" and 42" square hoppers are standard, with the option of custom flanged inlets / transfer boxes. Available in stainless, carbon steel or Polyethylene.

3-A Dairy Accepted Helix™

Meets the stringent sanitary requirements of the food, dairy and pharmaceutical industries. Features easy access for cleaning/disassembly, and all product contact surfaces have radii and polished surfaces (including welds) which conform to USDA, 3-A standards. In addition, there are no exposed threads in the contact areas. Tri-clamp connectors and modular construction allows the conveyor to be completely disassembled, using no special tools, in less than five minutes. And, these same connectors allow easy interfacing with sanitary bag unloading stations and other processing equipment. Optional items include; feed hoppers, low level sensors, a choice of augers, portable sanitary bases and power/control systems such as AC inverter duty motors for ramp acceleration/deceleration with variable speed ranges for precise control of weigh and blending processes.

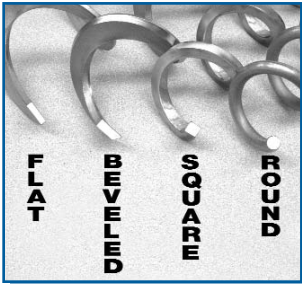


Copies available upon request



Hoppers with sealed tops and flex tube access serve as intermediary transfer points in processing. High/low level sensors along with dual boot configurations can also be employed within these units to control and/or expedite processing.

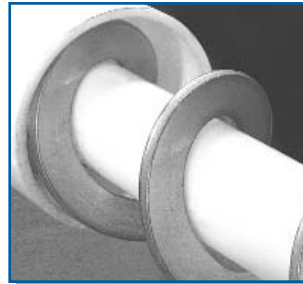
Helix™ System Components



Helix™ wire augers have varying performance characteristics when moving materials. Available in up to 40' lengths



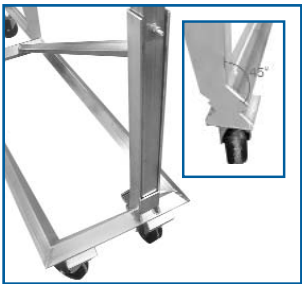
The Helix XL™ auger wire has rounded contact edges for reduced casing wear, lowered maintenance and faster speeds



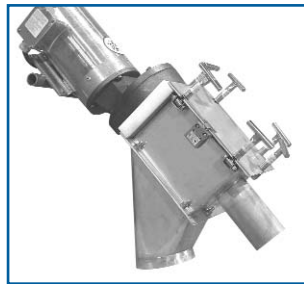
A UHMW-PE center core tube can improve conveyance on materials that aerate and also minimize segregation.



Standard NEMA 4 panels come in fixed or variable speed and are designed to optimize control of conveyor equipment.



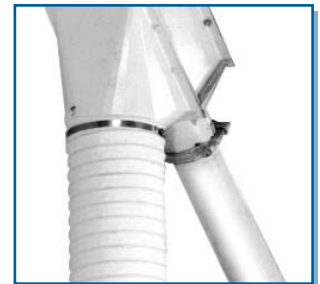
Mobile square steel tube frames have the option of being set at 45° to facilitate sanitary washdown operations.



Helix drive with in-line ratio multiplier, steel discharge head and optional T-handle quick disconnect top cover.



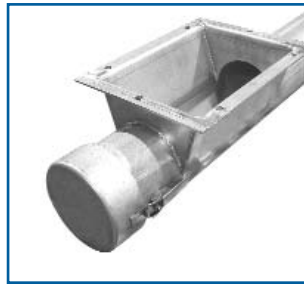
Right angle drive with gear reduction and molded polyethylene discharge head with plug-in top access cover.



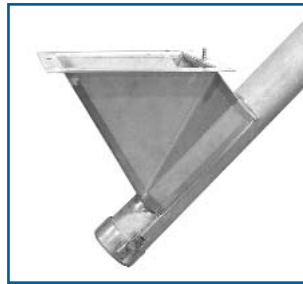
Discharge chutes are available in white neoprene, clear polyurethane lined PVC or cloth.



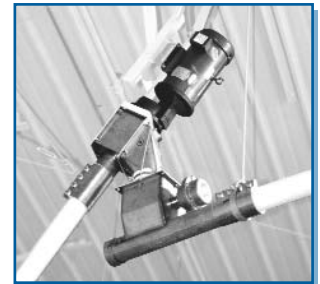
A bag slitting shelf provides an excellent pre-bag-dump staging area for heavy bags



A flanged inlet with horizontal pickup can be bolted to a hopper or existing equipment for movement of product



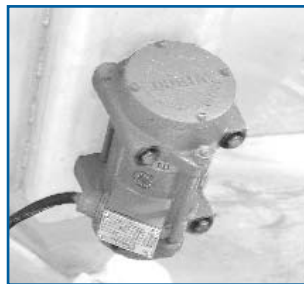
Flanged inlets with 30° and 45° pickups are available to bolt to existing hoppers and/or production equipment.



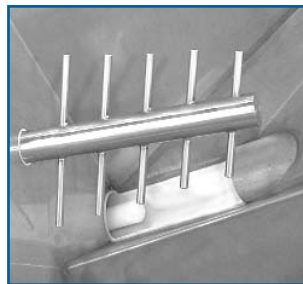
A transfer box inlet allows a conveyor to feed another conveyor - extending the length by up to an additional 40'.



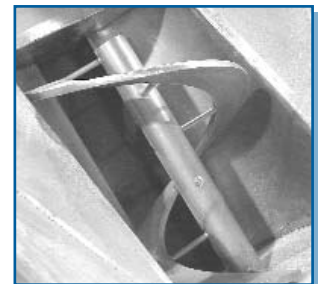
Rotary level sensors are one of the three available choices for controlling levels in batch operations.



Vibrators attached to the side of a hopper or inlet helps to assure the free flow of difficult materials



Pin agitators, positioned in close proximity to the auger, help to eliminate rat-holing and bridging of materials



Ribbon agitators, when properly incorporated into the hopper, encourage the flow of very difficult materials to the auger

When you're ready to define the parameters of your conveyor system use our "Helix™ Data Sheet" to assist in getting all of the information for an appropriate solution. It is available on our web site www.hapman.com or by fax (contact our customer service department).

*Flat auger wire is typical in most larger flexible screw conveyors. Hapman also offers the high-performance Helix XL™ auger wire, which has rounded contact edges.

Options & Accessories



Gain or loss-in-weight system controller. Used with all of Hapman's equipment for precise control of batch operations.



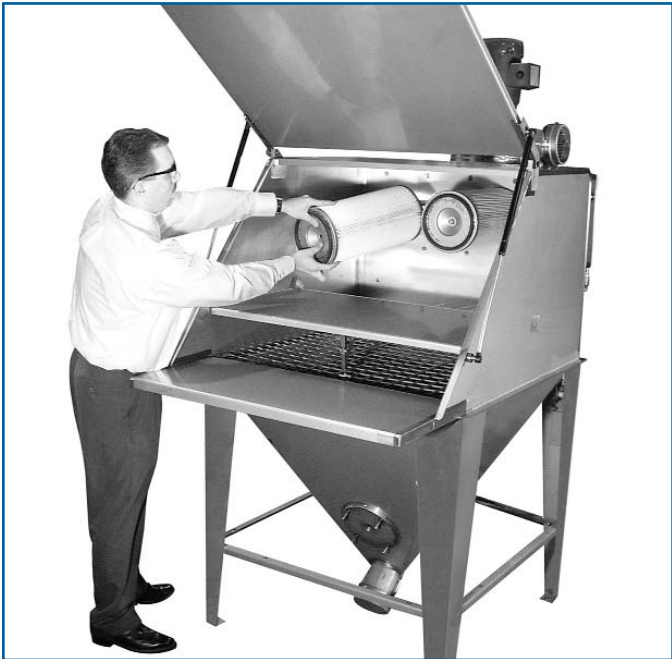
Sealed, with nitrogen purge valves, these explosion proof panels allow safe operation in hazardous environments.



Special hoppers are available to handle difficult materials that tend to rat-hole, bridge or pack.



Mobile hopper frames provide added versatility and feature lockable wheels for stationary operation.



Self contained "dust-free" cartridge filtration systems, built into Hapman bag dump stations, keeps your product confined within the production cycle. They are self clearing, with a cycled reverse air pulse, and easily accessible for service.

QUICK SHIP Hapman has a quick ship program on most parts and select conveyors!

AUGERS

- Standard flat wire
- Beveled edge wire
- H/D square wire
- Round wire
- Helix XL™ high performance wire
- With center core - as needed

CASINGS (to 40 feet in length)

- UHMW-PE
- Stainless (304, 304L, 316, 316L) or carbon steel

CONTROLS - Fixed or variable speed

- NEMA 4, NEMA 4x and NEMA 7/9
- Through the door fusible disconnect
- Options to control all level sensors, agitators, vibrators, aeration pads, and to interface with existing equipment

CONVEYOR SUPPORTS

- Bulk bag unloading frame
- Mast (stationary, floor mounted)
- Portable base (square tube or angled frame)

DISCHARGE HEAD

- Molded polyethylene plastic
- Steel (stainless or carbon)
 - Bolted on top cover
 - T-handle quick disconnect top cover

DISCHARGE CHUTES

- Cloth cuff
- Translucent polyurethane lined PVC*
- White neoprene*

*Meets FDA & USDA meat & poultry requirements

Custom metal chutes - to required specifications

DRIVES

- Standard (with in-line ratio multiplier)
- Right angle (with gear reduction)

FINISHES

- Stainless steel (Industrial, food or sanitary grade)
- Enamel paint
- 2-part epoxy coating

HOPPERS

- Polyethylene, Stainless or Carbon Steel - 3.5, 8 or 12 cu/ft std.
 - Stationary or with wheels
 - Square or conical shape

HOPPER / INLET ACCESSORIES

- Bag compactor
- Bag shelf
- Covers/tops
 - Bolted-on top
 - Hinged top
 - Removable cover (std. w/polyethylene plastic hopper)

Flow Aides

- Agitator - pin or ribbon style
- Air pad
- Vibrator - pneumatic or electric

Inlets - with receiver configurations at 0°, 30° or 45°

- Flanged inlet
- Receiving boot
- Transfer box

Level Sensors

- Capacitive
- Proximity
- Rotary

MANUAL BAG DUMP STATIONS

- With dust hood (for use with external filtering)
- With dust hood and internal cartridge filtering system
- With glove box option
- With viewing port

Batch Weigh Systems

Superior Systems Designed From A Long List Of Hapman Engineered Choices

Hapman batch systems begin with bag and bulk bag unloading of powders and bulk solids using bag dump stations or bulk bag unloaders.

We then provide 3-choices in conveyors to assure that your product is handled properly. The first, and most economical of these choices, is our Helix™ flexible screw conveyor - but, if after evaluating your product it is determine that a flexible screw conveyor will not do the job properly we can provide alternative conveyor solutions

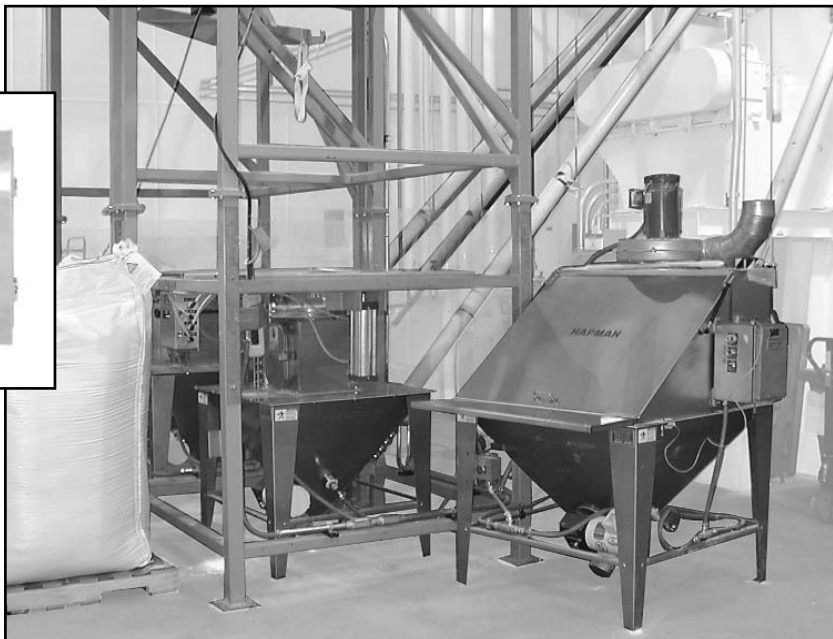
utilizing either our mechanical tubular drag or pneumatic conveyors. Hapman stands alone in the industry in being able to provide this degree of flexibility in conveyor choices. In batch applications, we provide gain-in-weight and/or loss-in-weight configurations with control systems that interface with your equipment



Helix™ fed, gain-in-weight hopper

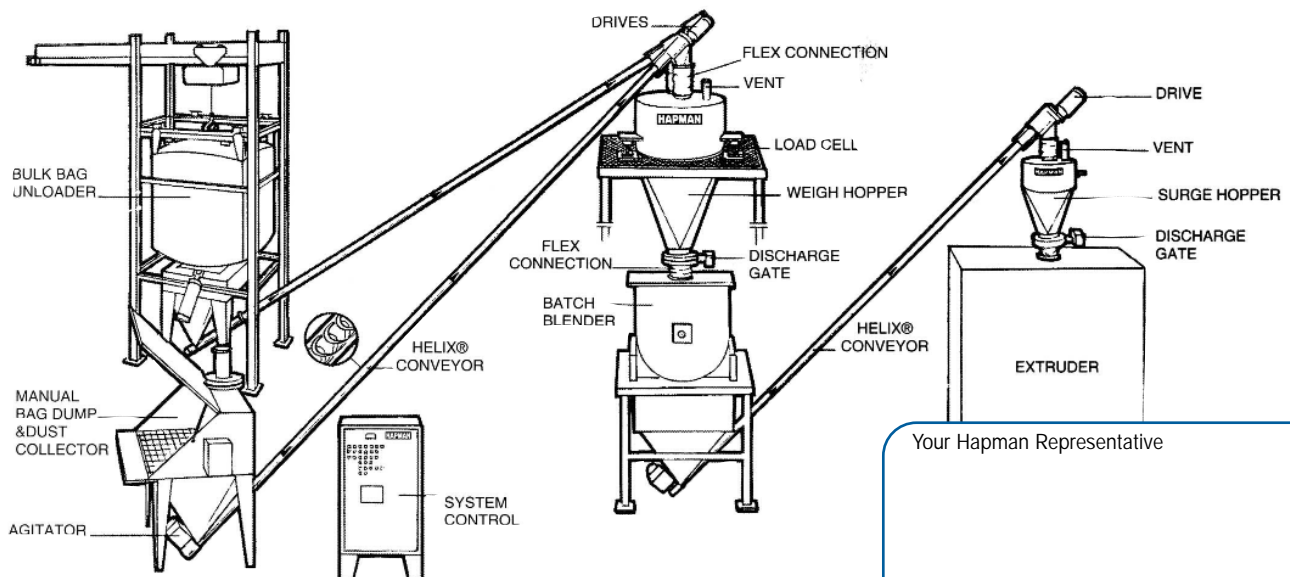


Hapman's wide selection of control panels are simple to operation, programmable, and designed to interface with your systems.



and processing needs. Many of Hapman's system components are also unique, providing notable advantages over the competitions equipment, and are worthy of consideration. A Hapman representative is available, in your area, with details on how our equipment measures up and can give you exact details on how these advantages can increase your reliability and processing rates.

Batch blending using dust-free bulk bag unloaders and a manual dump station into Helix™ conveyors



Your Hapman Representative

HAPMAN