



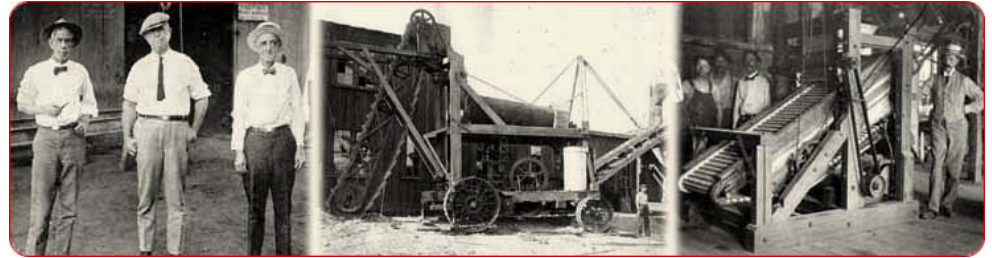
Triple/S Dynamics Slipstick Horizontal Motion Conveyor

REST EASY
WORK SAFE





Our History



- Established in 1888 as Sutton, Steele & Steele
- Offered the first horizontal motion conveyor in 1973
- Acquired FEC material handling line including X-Force in 2002
- Over 2000 Slipstick and X-Force conveyors in operation
- Largest assortment of HMC drive sizes, arrangements and conveyor sizes
- Unparalleled experience in horizontal motion conveying
- Worldwide acceptance



Slipstick®



About Us



Food Equipment Manufacturing Plant, Cibolo Texas



Industrial Manufacturing Plant, Breckenridge, Texas

- More than 150,000 square feet of manufacturing space
- Fully equipped test lab at our Dallas Corporate headquarters
- AutoCAD, Inventor and ANSYS FEA capabilities
- Reputation for proven reliability and on-time delivery





Material Handling Challenges



- Product breakage, segregation & coating loss
- Product buildup on conveying surfaces
- Fines generation & dust containment
- Food safety & allergens concerns
- Operator safety





Advantages of Slipstick Non-Impact Horizontal Motion

- Handles a wide range of products including flaked and extruded cereals and snacks, powders, link meat products, pet foods, grains, rocks and scrap steel
- No breakage or fines generation during conveyance
- No product segregation or stratification of products with additives or multiple size fractions
- Smooth self-cleaning motion does not promote buildup of coated or seasoned products on conveying surface reducing cleaning and changeover time
- Simple formed conveyor pan has no moving parts to clean and maintain improving sanitation and safety



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Slipstick Features



- Conveyor has no frame or counterweight which significantly reduces equipment stack-up height
- Conveyor pan lengths of over 200 feet with single drive unit minimizes transfer points
- Multiple inlets and outlets can be provide anywhere along the length of the conveyor pan
- Conveyor pan can be sized to accommodate in-line product accumulation eliminating the need for off-line storage devices

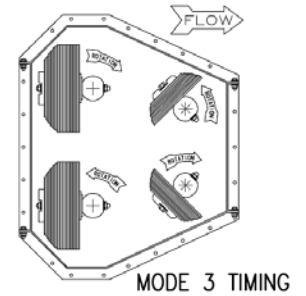




Basics of Slipstick Differential Horizontal Motion



- Gentle slow-forward/quick-return “Slip-Stick” motion is generated by inertia of four counter rotating eccentrically weighted shafts
- Product travel rate can be varied on-line by changing speed of drive motor with VFD
- Product travel direction can be reversed on-line or off-line

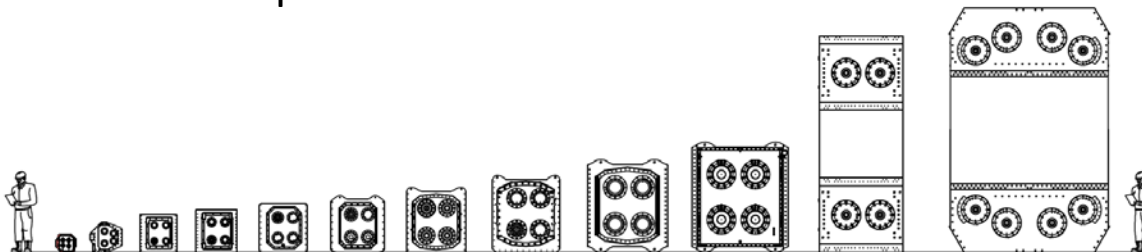




Slipstick Drive Construction



- Designed for long life & low maintenance
- Fully enclosed drive housing of painted carbon steel, aluminum or optional stainless steel
- Hardened steel weight shafts driven by gears in oil bath or double sided HTD timing belt
- Shaker duty shaft bearings
- Drive can be mounted at either end of pan or above or below the pan



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Slipstick Pan Options



- Rectangular or flared formed pans
- Single or multiple lane formed pans
- Round, rectangular or square tubes
- 304 or 316 Stainless steel
- Carbon & AR steel
- UHMW





Slipstick Cover Options



- Pan mounted – hinged and clamped or bolted
- Suspended – stationary or frame mounted
- Viewports and inspection/cleanout doors
- Stainless steel, carbon steel, clear polycarbonate or UHMW





Slipstick Gate Options

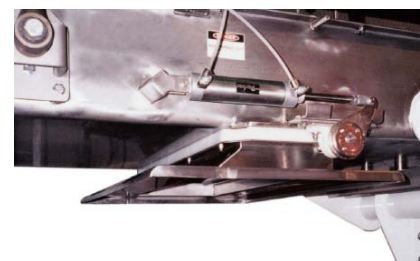


- Easy clean slide gate
 - Swings down for cleaning

- Pivot gate
 - Spring loaded UHMW seals

- Proportioning gate
 - Variable output

- Dairy gate
 - Demountable for USDA applications



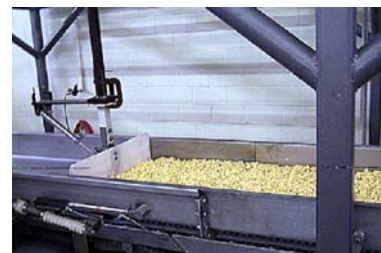


Slipstick Flow Control Options



- Product Dam
 - Stationary
 - Pan mounted

- Flow Baffle
 - Demountable for USDA applications





Slipstick Support Options



- Ceiling or floor mounted
- Stainless steel suspension rods
- X-Force linkage
- Casters





Slipstick Pan Cleaning Options



- CIP Ferrules
- Demountable pan sections for COP
- Quick release access doors





Slipstick Pan Insert Options



- UHWM pan sections for metal detectors



- Screening sections



- Aligning sections





Slipstick Pan Sizing Charts



Square/Rectangular Pan Section		Pan Capacity @ 50% Fill 25 FPM @ 1" Stroke
Width (in)	Depth (in)	Cubic Feet per Hour (CFH)
6	6	188
8	8	333
12	6	375
18	6	563
24	8	1000
30	8	1250
36	10	1875
48	10	2500

Custom pan widths & depths available

Tubular Pan Section	Pan Capacity @ 33% Fill 25 FPM @ 1" Stroke
Diameter (in)	Cubic Feet per Hour (CFH)
6	79
8	140
10	218
12	314
18	707
24	1257



Slipstick Rectangular & Square Pan Sizing Calculation



$$\text{Bed depth (in)} = \frac{\text{flow rate (lb/hr)} \times 144 \text{ sq in/sq ft}}{\text{bulk density (lb/cu ft)} \times \text{travel rate (ft/min)} \times \text{pan width (in)} \times 60 \text{ min/hr}}$$

- Flow rate: feed rate to conveyor in pounds per hour
- Bulk density: product density in pounds per cubic foot
- Travel rate: product travel rate in pan, use nominal rate of 25 ft/min, range is 20 – 40 ft/min
- Pan width: standard pan widths 6", 12", 18", 24", 30", 36" & 48"
- Bed depth: 3" – 5" for conveying applications, up to 60" for accumulating applications



Slipstick Tubular Pan Sizing Calculation



$$\text{Product area (sq in)} = \frac{\text{flow rate (lb/hr)} \times 144 \text{ sq in/sq ft}}{\text{bulk density (lb/cu ft)} \times \text{travel rate (ft/min)} \times 60 \text{ min/hr}}$$

- Flow rate: feed rate to conveyor in pounds per hour
- Bulk density: product density in pounds per cubic foot
- Travel rate: product travel rate in tube, use nominal rate of 20 ft/min

$$\text{Minimum tube diameter (in)} = \sqrt{\frac{4 \times \text{product area (sq in)}}{\text{Pi} \times 33\% \text{ tube fill}}}$$

- Use standard tube size of 6", 8", 10", 12", 18" & 24" diameter



Slipstick Conveyor Online Worksheets


Triple/S Dynamics
 1031 S. Haskell, Dallas, TX 75223 Phone: 800-527-2116
 E-Mail: sales@sssdynamics.com Fax: 214-828-8688

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Conveyor Worksheet

Company Information

Company Name Contact Name
 Address Phone
 Email

Material Data

Product Material Description
 Capacity (lbs/hr) Bulk Density (lbs/cu ft.)
 Expected Travel Rate (ft/min) Calculated or max. Bed Depth (in)
 Dry Moisture % Temp (F) Free-flowing
 Angle of Repose (Deg) Compactable

Special note regarding material characteristics. It is important for Triple/S Dynamics to know if the material to be conveyed is at all wet, sticky, compacting, hygroscopic or otherwise likely to adhere to the conveyor surfaces.

Conveyor Specifications

Pan Width (in) Pan Depth (in) Pan Length (in)
 Pan Material/Finish Installation suspended from
 Installation mounted on Special Paint
 Motor specifications Special Construction Requirements
 Conveyor Performance Objectives

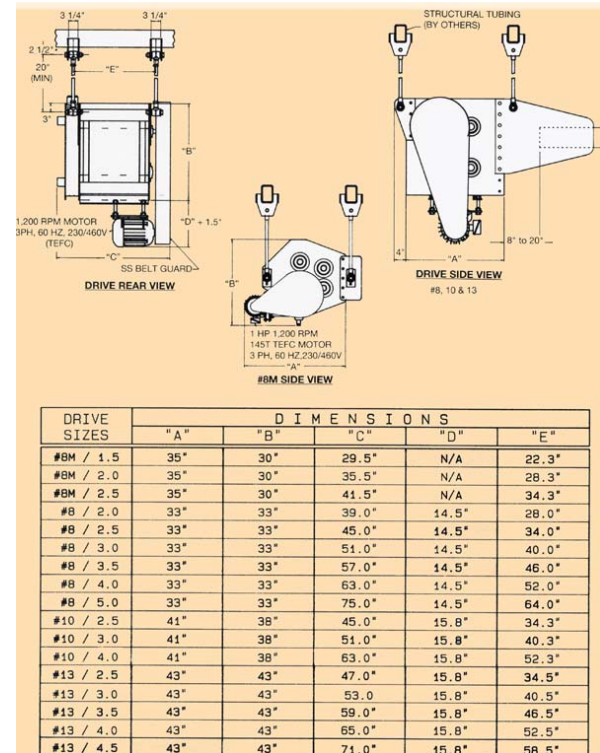
Conveyor Type

Natural Frequency Vibrating Conveyor
 Slipstick Horizontal Motion Conveyor

Please Choose:

Additional Comments

Notes:



Instructions to submit.
 Please save this document for your records. Attach and Email completed form to sales@sssdynamics.com
 Or fax form to 214-828-8688

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Examples of Slipstick FDA / USDA Applications



Tube Conveyor for nutraceutical powder



Tube Conveyor for freeze dried fruit



Conveyors for dairy powder

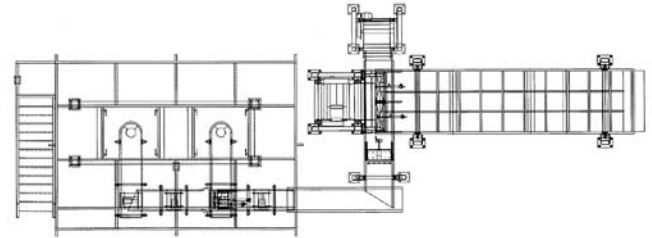


Accumulator for link meat products



Other Products Offered by Triple/S Dynamics

- X-Force horizontal motion conveyors
- Vibratory conveyors & screeners
- Gravity separators and stoners
- Texas Shaker screeners
- Non-ferrous recycling systems
- Sanitary belt & slat conveyors
- Product infeed distributors
- Spiral bin fillers
- Distribution systems
- Support structures and platforms
- Control systems
- Installation & start-up support services





Triple/S Dynamics Contact Information

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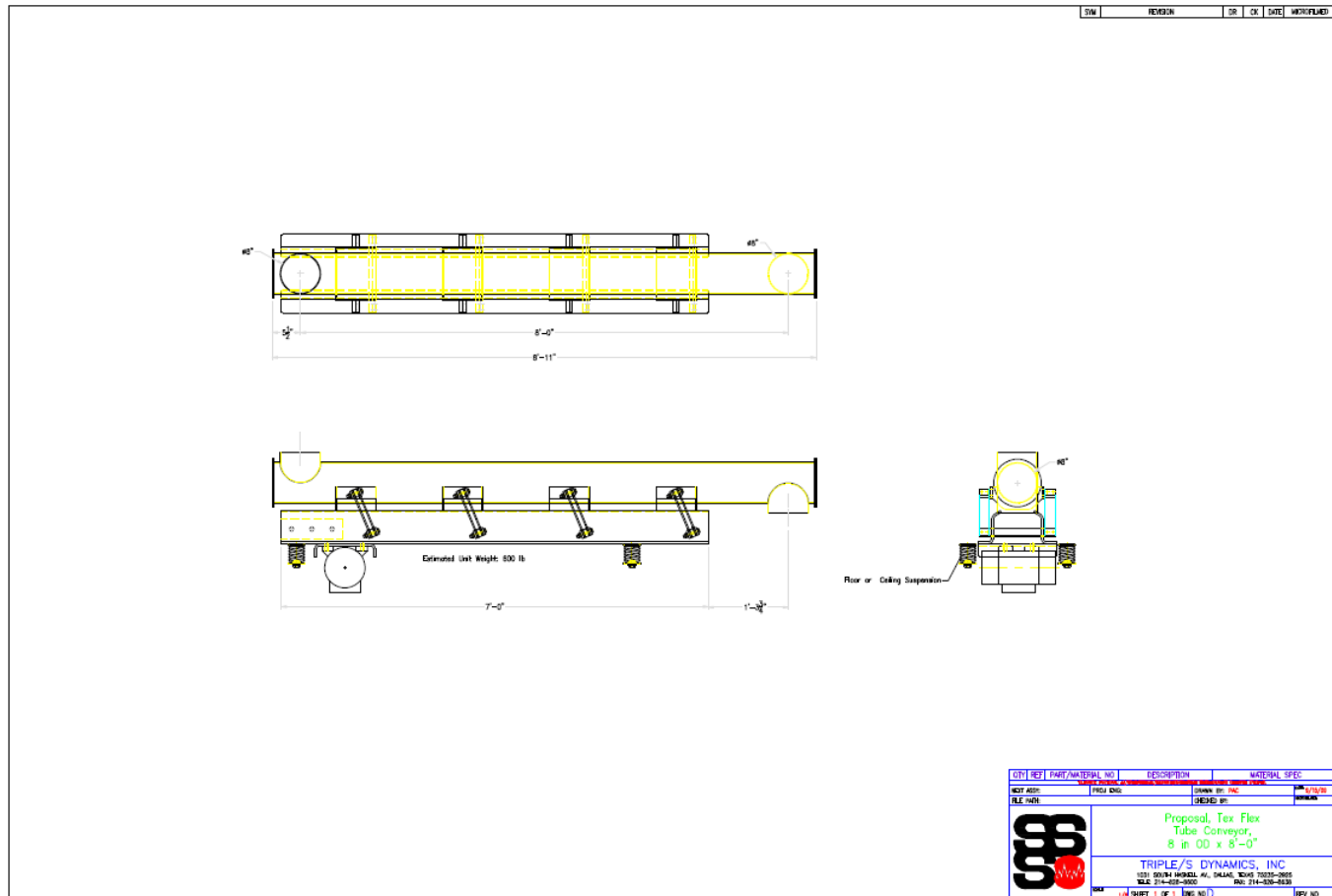
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Tex-Flex Vibrating Tube





Gravity Separator for Baby Food Cereal



