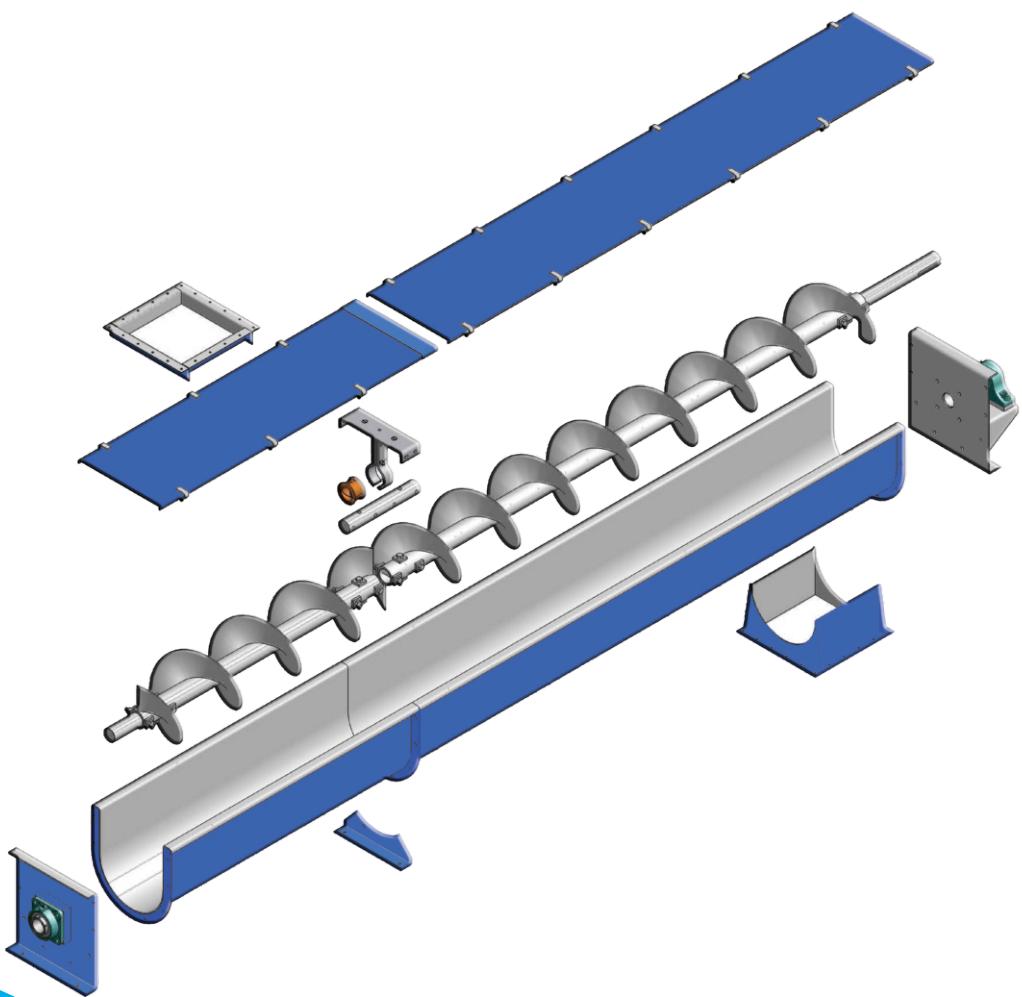


SCREW CONVEYOR



SRIVIBHAVANA ENTERPRISES

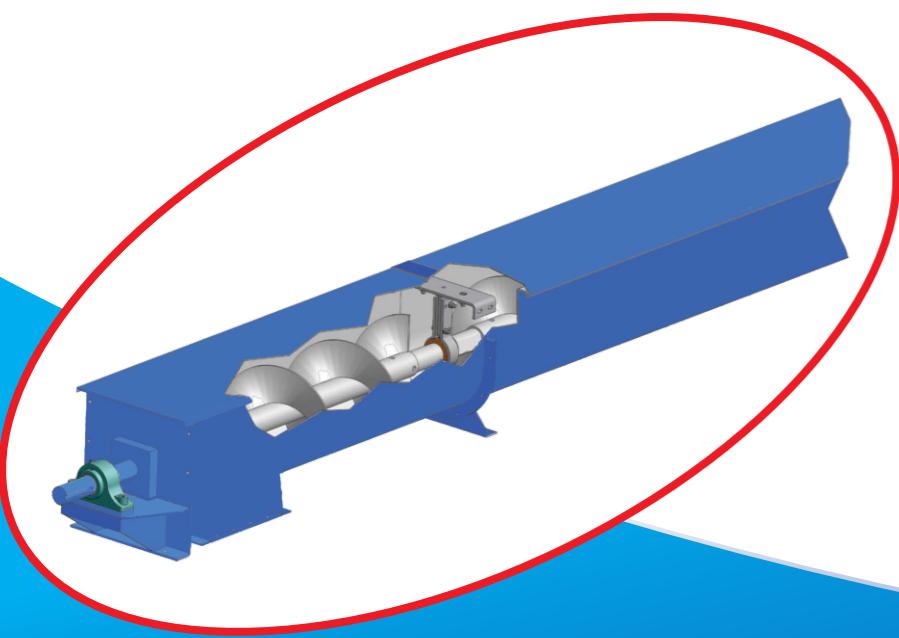
www.srivibhavana.com

Screw Conveyors are an essential part of many conveying and storage systems dealing with powdered or granular materials. Being simple and robust in design and easily maintained, they provide low cost versatile handling equipment with many applications in manufacturing and processing factories. The most popular configurations, 'U' trough and tubular, have been continuously developed over many years to provide customers with a wide range of options to suit every requirement and a design that ensures easy assembly, installation and maintenance. The modular design allows any configuration to be easily and quickly built up to suit a customer's exact requirements.

In general most free flowing materials and many materials with poor flow characteristics can be successfully handled with a screw conveyor. The specification standard is also easily tailored to suit :

- ♦ Abrasive Materials
- ♦ Materials which fluidise
- ♦ Damp wet or sticky materials
- ♦ Oily materials and their products
- ♦ Hot, Cold, Wet or aggressive environments

The rate at which material is conveyed can be fairly accurately controlled by varying the screw design, speed and through loading - useful for feeding process machinery at a predetermined rate **For example :**



Foods :

Flour, Rice, Tea, Sugar, Milk Powder, Herbs, Spices, Miscellaneous Powders, Flakes, Granules

Chemicals and Minerals :

Cement, Sand, Glass Cullet, Flyash, Limestone, Ores, Coal, Salt, Fertilisers, Acetate, Sewerage, Fine and Course Powders, Flakes, Granules

Animal Feeds and Cereals :

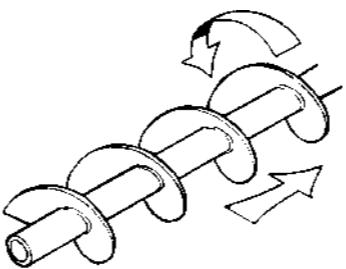
Wheat, Barley, Corn, Oil Seeds, Miscellaneous Feed Ingredients and Products, Meals, Pellets, Flakes

What are the advantages ?

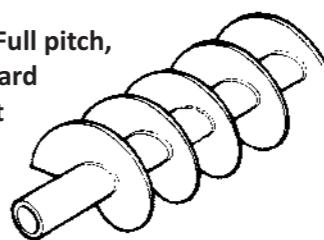
Screw Conveyors ...

- ♦ Are compact and easily adapted to congested locations.
- ♦ Can be used to control the flow of material in processing
- ♦ Operations which depend upon accurate batching.
- ♦ Are versatile and can be employed in horizontal, inclined and vertical installations.
- ♦ Can be used as a mixer or agitator to blend dry or fluid ingredients, provide crystallization or coagulant action, or maintain solutions in suspension.
- ♦ Can be sealed to prevent the escape of dust or fumes from inside the conveyor; or keep dust or moisture from entering from outside the conveyor.
- ♦ Can be jacketed to serve as a drier or cooler by running hot or cold water through the jacket.
- ♦ Can be made out of a variety of materials to resist corrosion, abrasion or heat, depending upon the product being conveyed.
- ♦ Can be outfitted with multiple discharge points.

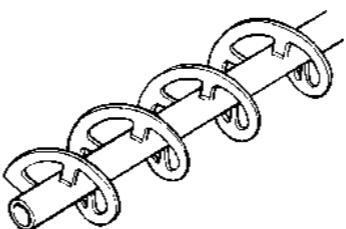
Flight Options



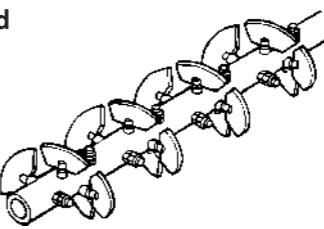
Continuous Flighting, Full pitch, Right hand - the standard Configuration for most Applications.



Continuous Flighting, Reduced Pitch - Used in flood feed Conditions

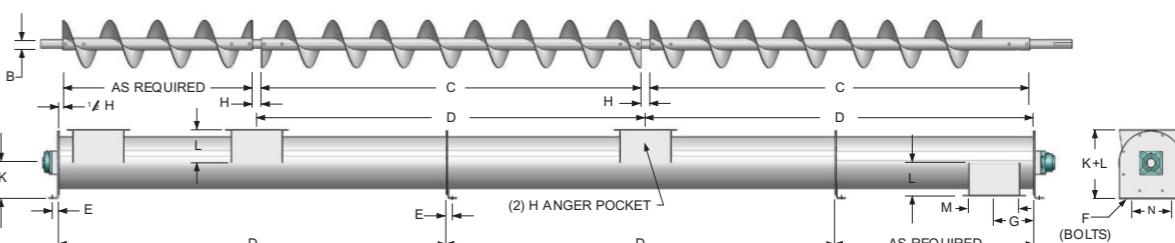
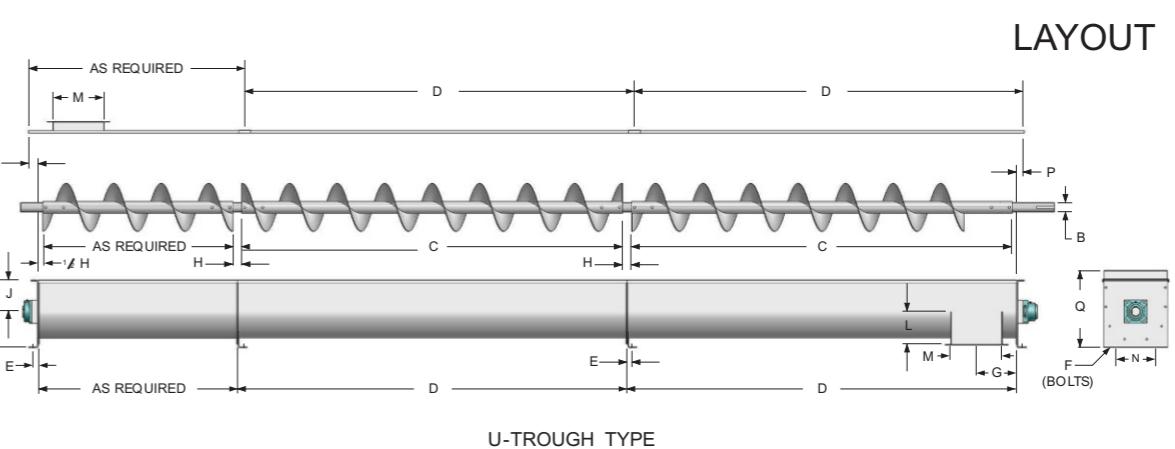
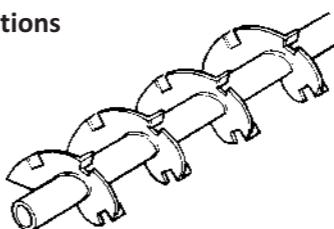


Ribbon Flighting - Used with Sticky Materials and those which exhibit poor flow Characteristics



Paddle blades - Used in Applications where a mixing action is required, the angle of incidence can be varied.

Cut & Folded Flighting - Used in Applications where a light mixing / aerating action is required.



SCREW CONVEYOR

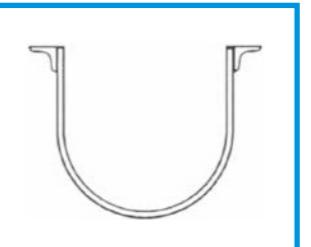
CONVEYOR CAPACITIES

Percent Trough Load	Screw Diameter	Maximum Recommended RPM	Capacity (FT ³ /HR) at MAX RPM	Capacity (FT ³ /HR) at RPM
15%	6	60	45	0.8
	9	55	150	2.7
	12	50	325	6.5
	14	50	520	10.4
	16	45	700	15.6
	18	45	1,010	22.5
	20	40	1,250	31.2
	24	40	2,180	54.6
	30	30	3,152	105.0
	36	20	3,597	184.0
30% A	6	120	180	1.5
	9	100	545	5.5
	12	90	1,160	12.9
	14	85	1,770	20.8
	16	80	2,500	31.2
	18	75	3,380	45.0
	20	70	4,370	62.5
	24	65	7,100	109.0
	30	50	10,506	210.0
	36	35	12,593	369.0
30% B	6	60	90	1.5
	9	55	295	5.7
	12	50	646	12.9
	14	47	696	14.8
	16	44	1,382	31.4
	18	41	1,834	44.7
	20	38	2,361	62.1
	24	36	3,928	109.1
	30	27	5,673	210.0
	36	19	6,836	360.0
45%	6	165	368	2.2
	9	155	1,270	8.2
	12	145	2,820	19.4
	14	140	4,370	31.2
	16	130	6,060	46.7
	18	120	8,120	67.6
	20	110	10,300	93.7
	24	100	16,400	164.0
	30	70	22,062	315.0
	36	40	21,587	540.0
95%	6	300*	1,415	4.7
	9	275*	4,832	17.6
	12	255*	10,760	42.0
	14	240*	16,342	68.0
	16	220*	22,280	101.0
	18	210*	30,529	145.0
	20	190*	37,385	196.0
	24	170*	58,858	346.0
	30	115*	76,519	665.0
	36	70*	79,754	1,139.0

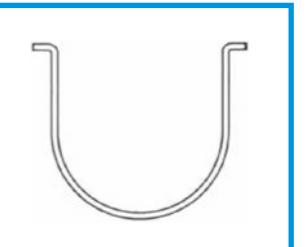
Troughs are available in size upto 1m and in gauges up to 10mm thick. They can be formed of stainless steel or other alloys. If supporting feet are needed, they are spaced at the flange joints. Trough saddles are also available.



DOUBLE FLANGED TROUGH



ANGLE TROUGH



SINGLE FLANGED TROUGH

TROUGH COVERS & SHROUDS



Barron Flanged Cover



TITE - SEAL Cover



Semi-Flanged Cover



HIP Roof Cover



SHROUD

Through End Designs



Discharge Trough End

Bolt On Shelf

Flared Trough End



The Style 226-Hanger is the most popular Since it mounts dust tight or weather tight covers.

The Style 226-Hanger bearings come in Wood, Nylon, Nylatron, Hard Iron, Manganese, Bronze, Gatke, Stellite, Bushed, Ceramic Zirconia many Others.



**FLARED
TROUGH
HANGER**

NU - WELD END FLANGE

NU - WELD END FLANGE are made of Heavy - Gauge Steel to assure close accurate fit with the conveyor trough and the trough ends of the following end flange. Bolt holes are jig-punched to assure accurate alignment

SADDLESS AND FEET



TRough END DUST SEALS



CHEVRON ROLLER
BEARING END
THRUST WITH
TROUGH END

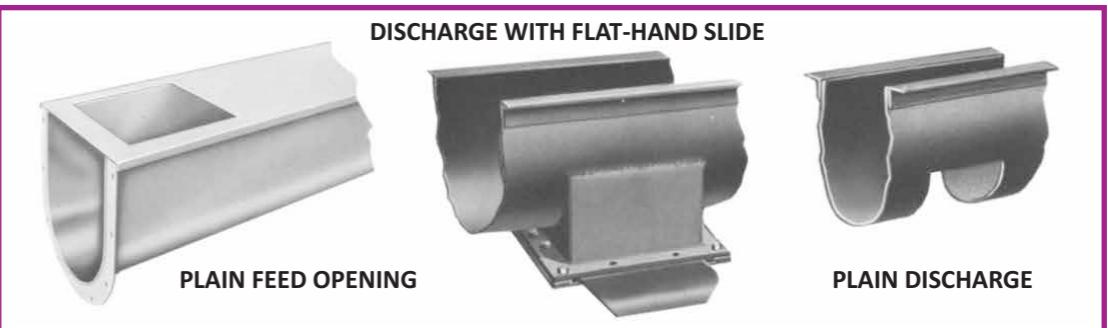


ANTI-FRICTION
Pictured
Without Seal



ANTI-FRICTION
Pictured With
Packing Seal

FEED & DISCHARGE SPOUTS

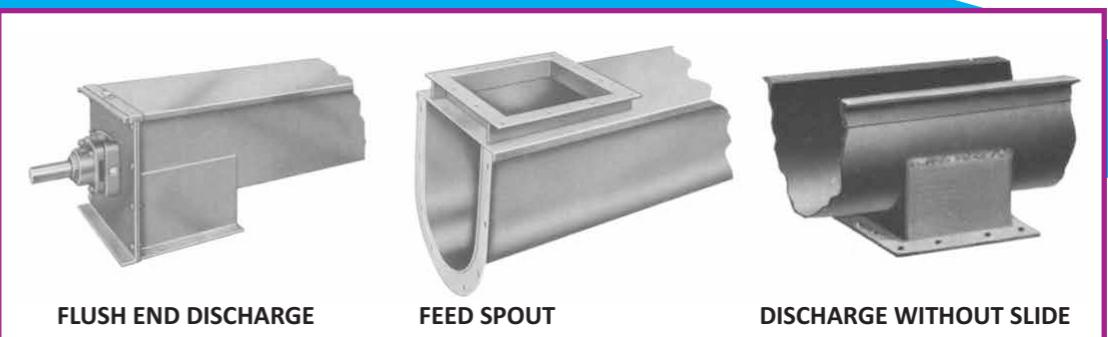


DISCHARGE WITH FLAT-HAND SLIDE



PLAIN FEED OPENING

PLAIN DISCHARGE



FLUSH END DISCHARGE



FEED SPOUT



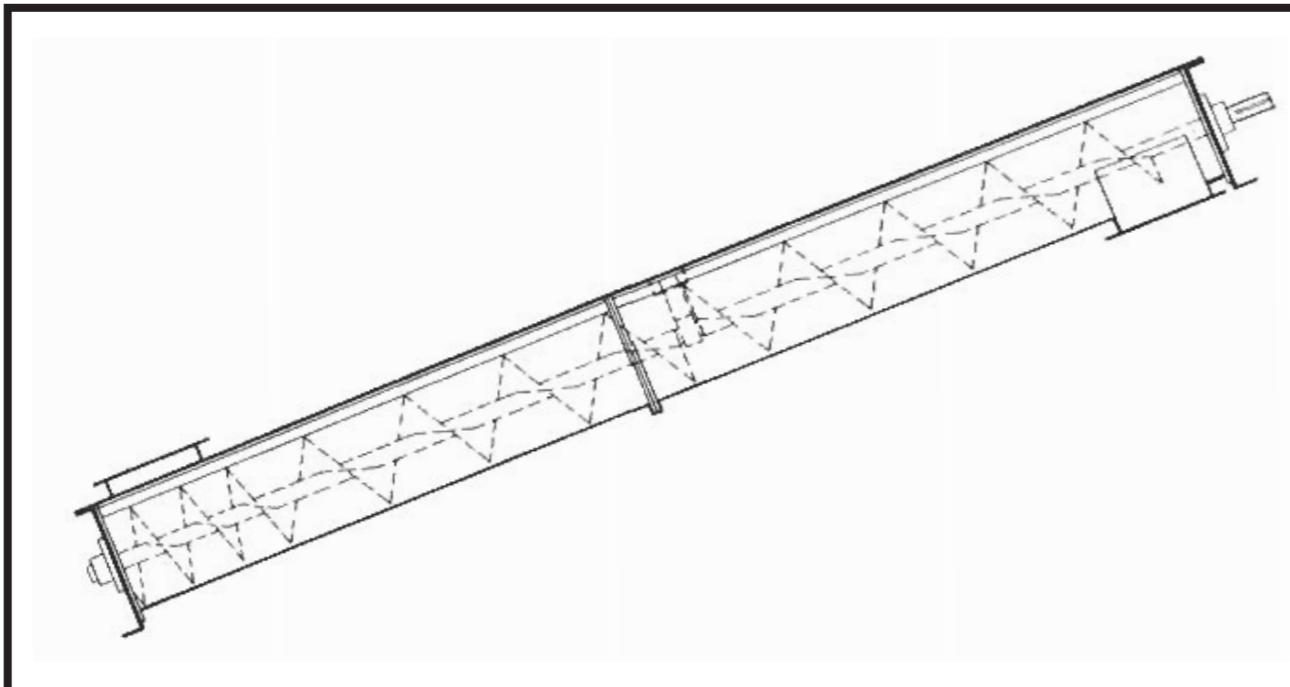
DISCHARGE WITHOUT SLIDE

INCLINED SCREW CONVEYORS

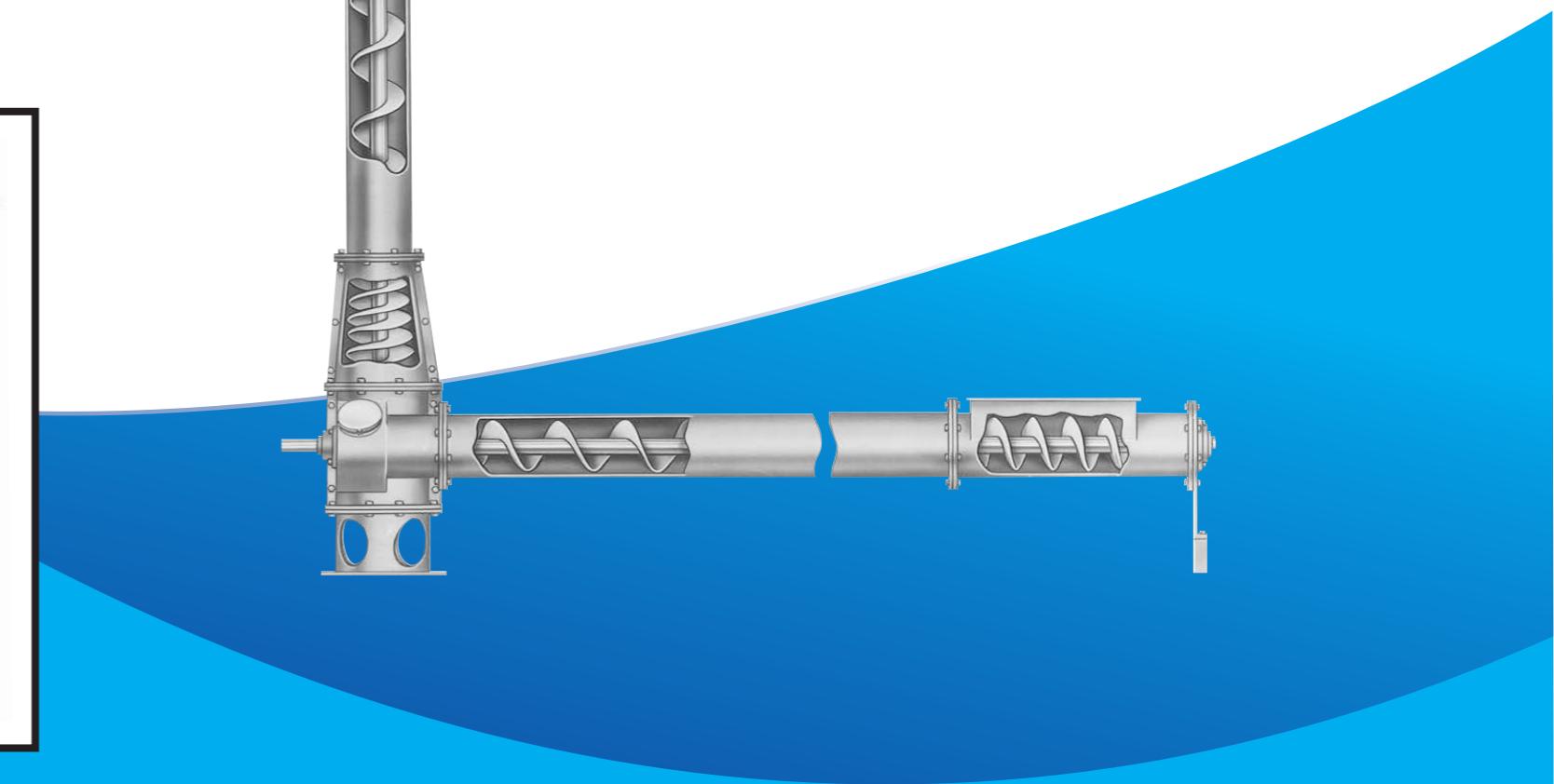
Screw Conveyors may be used in the inclined plane and when space allows, thus can be a very economical method of both elevating and conveying simultaneously. It is most important however to understand that as the angle of inclination increases, the capacity of the given unit rapidly decreases. The critical angle at which it becomes most difficult to convey material on an incline is 45 degree. As one approaches this angle capacity drops dramatically and Once past this critical point and on towards 90. The Efficiency of the Unit increases again. Numerous Methods of conveying on an incline are used among which are shorter than standard pitch, tubular housings or extended shroud covers. It is also necessary as the angle of inclination becomes greater to increase the conveyor speed in order to overcome the tendency of the material to fall back upon itself.

Inclined Conveyors can rarely be used as feeders for accurately measuring material flow. If an accurate flow rate is necessary, a separate horizontal feeder conveyor is required.

Since additional power is required to convey material on an incline and this power is a function of material density.



Vertical Screw Conveyor



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