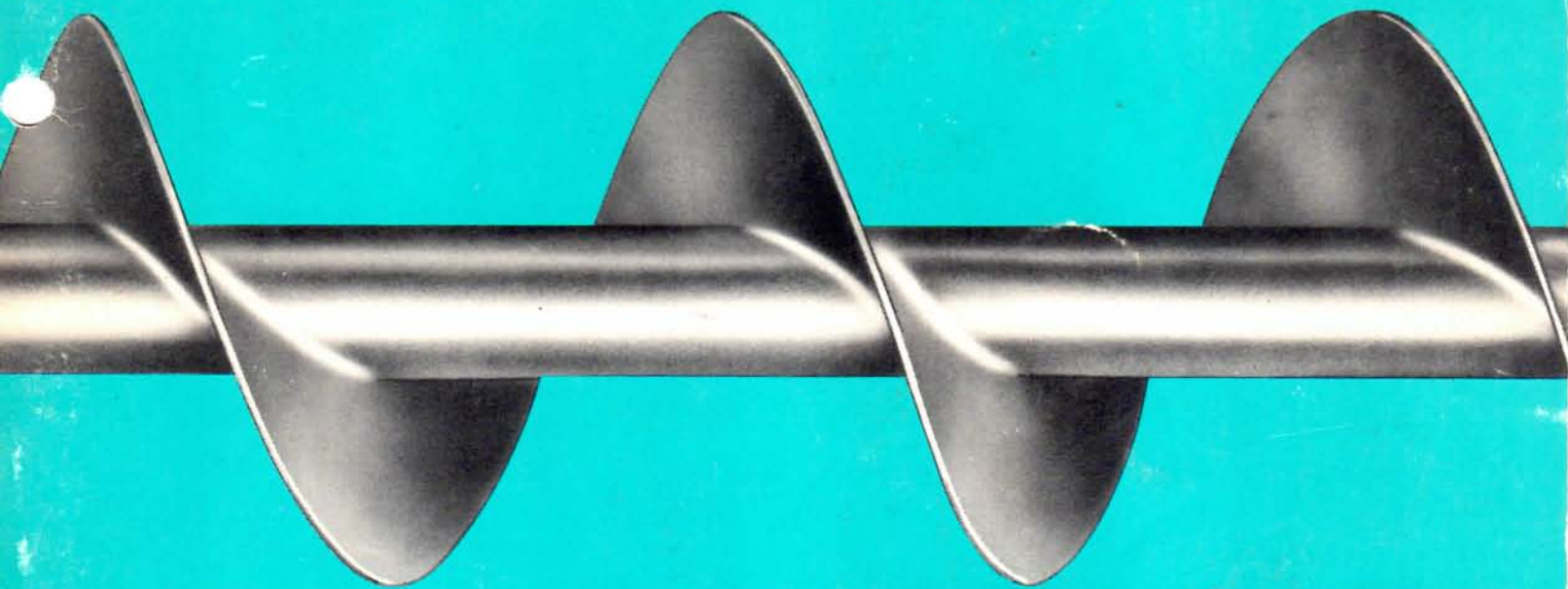
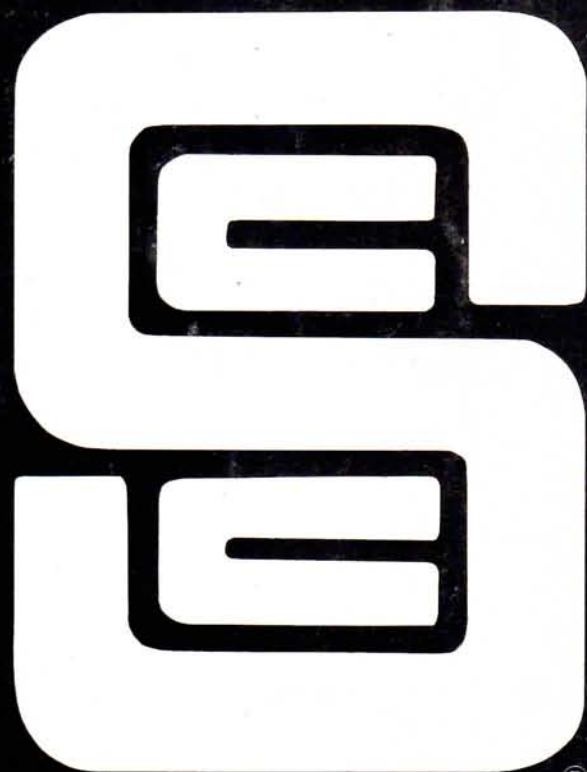


Screw Conveyor Corporation

Catalog No. 575C



Screw Conveyor
Catalog
and Engineering
Manual



®



Manufacturing Plants and Sales Offices:

Screw Conveyor Corporation

700 Hoffman Street
Hammond, Indiana 46327
Telephones: Hammond (219) 931-1450
Chicago (312) 221-3344

Screw Conveyor Corporation

700 Conveyor Avenue
Winona, Mississippi 38967
Telephone: (601) 283-3142

Screw Conveyor Pacific Corporation

7807 Doe Avenue
Visalia, California 93277
Telephone: (209) 733-2080

Screw Conveyor Mid-States Corporation, Inc.

915 West Ash Street
Chanute, Kansas 66720
Telephone: (316) 431-0440

Sales Offices:

Teaneck, New Jersey
Telephone: (201) 836-1803

Atlanta, Georgia
Telephone: (404) 294-5189

English Affiliate:

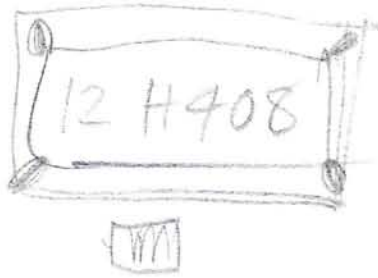
Simon-Solitec Ltd.

Bristol Road
Gloucester, England



Special Note

For illustrative purposes many photographs, diagrams or sketches contained in this catalog show the conveyor top open, without a cover. This is for the sake of clarity only. Conveyors should never be installed, placed ready for operation, or operated without all covers, spouts and drive guards properly installed and secured.



Screw Conveyor Catalog and Engineering Manual

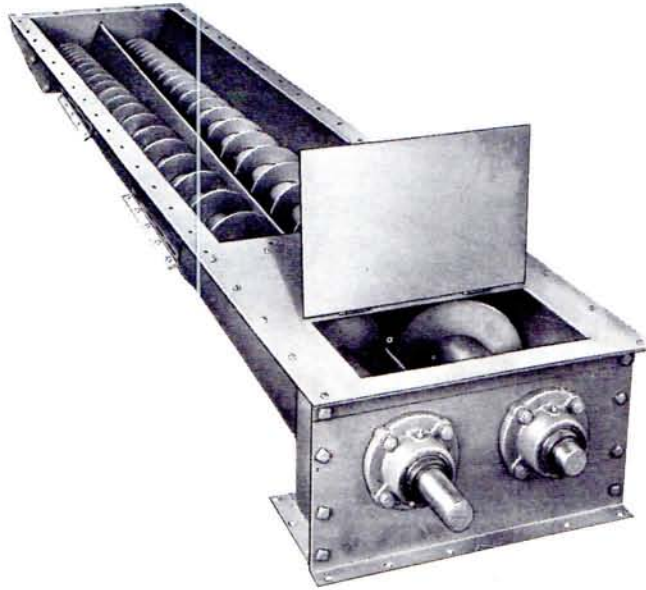
This Screw Conveyor Catalog and Engineering Manual consolidates all pertinent engineering data with completely cataloged product descriptions of components making up the Screw Conveyor Corporation line of Horizontal Screw Conveyors, Inclined Screw Conveyors, Vertical Screw-Lift and Screw Conveyor Feeders.

These units are now used in virtually all industries as well as providing Original Equipment Manufacturers with specialized components to fit their design requirements.

It is sincerely hoped that you will find this manual complete in detail, easy to use and extremely helpful in fulfilling your conveying needs.

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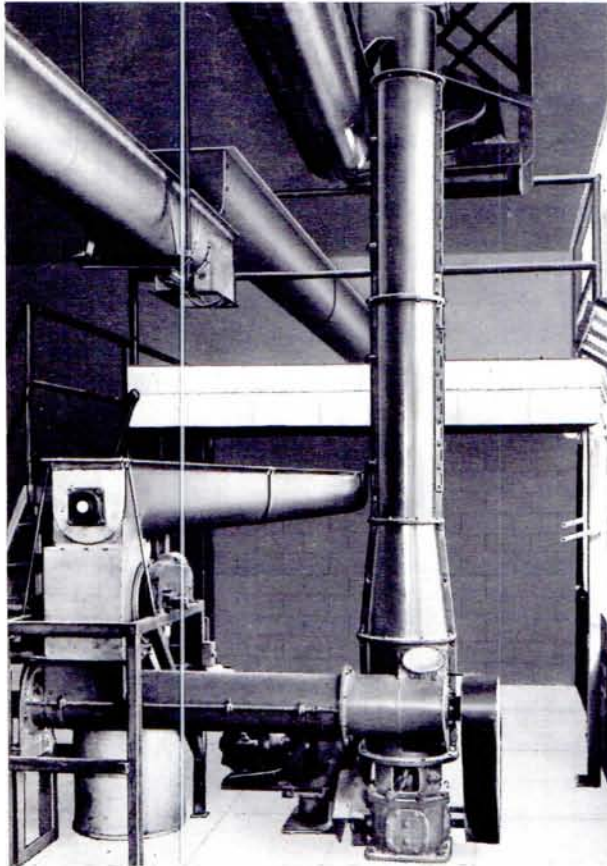
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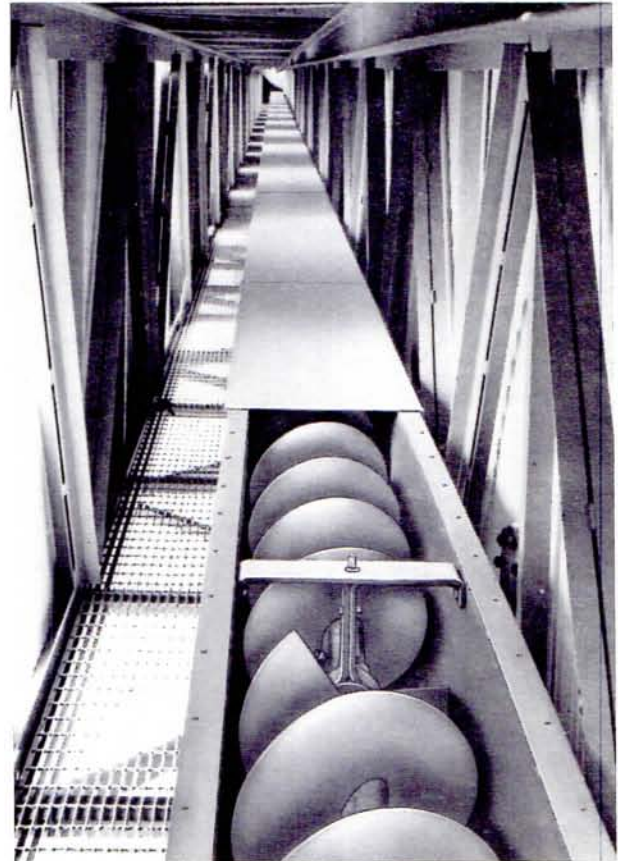
Screw conveyors move materials either horizontally, on an incline or vertically. They are used to feed, distribute, collect or mix and can be equipped to either heat or cool while performing this transfer. With the proper cover and gasketing, they are easily made dust or weather tight and rodent proof. Their clean compact design saves valuable space since no return run is required. Screw Conveyors fit in cramped quarters, are simple to support and easy to install . . . and they cost less than most other types of conveyors.

Screw Conveyor Corporation's performance-proved Screw Conveyors are ruggedly built and accurately manufactured to assure complete dependability as well as the versatility required to meet a wide range of job assignments.

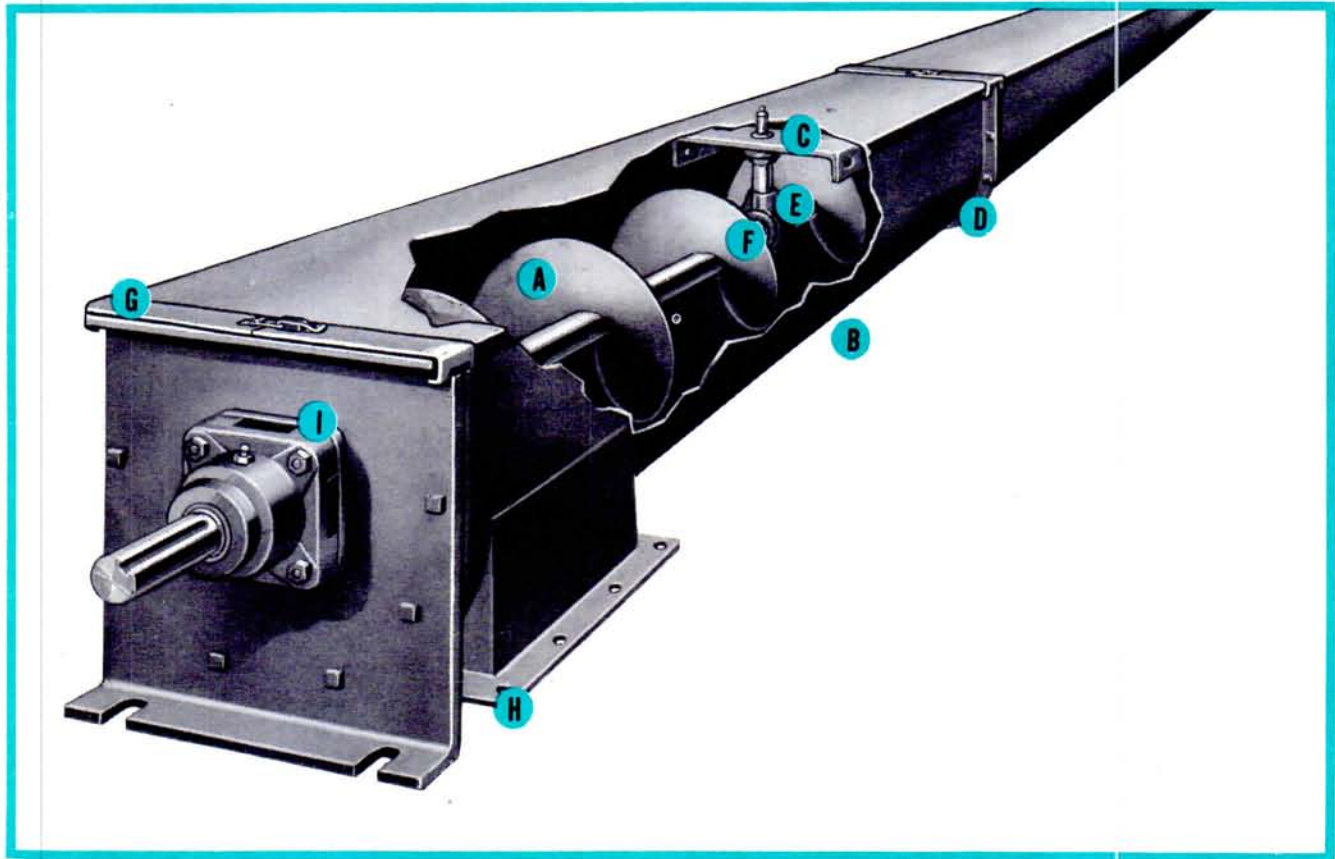
Screw Conveyors are performing their assigned tasks in virtually all types of industries and, in addition, special designs are being developed for use as components in machinery and equipment.



Screw Conveyors are performing their assigned tasks in virtually all types of industries and, in addition, special designs are being developed for use as components in machinery and equipment.



Screw Conveyor Corporation's performance-proved Screw Conveyor systems are ruggedly built and accurately manufactured to assure complete dependability as well as the versatility required to meet a wide range of job assignments.



A wide choice of standard parts

You get the system you need to solve your problem—yet keep cost at a minimum. Select the type of component, from our standard line, that fits your needs. For special flighting designs to solve a particular problem, please consult our Engineering Department.

(A) Conveyor Screw: Compact, manufactured straight and accurate in helicoid, sectional, ribbon and special designs to meet your requirements.

(B) Job-rated Components: Selected to meet the performance required. Precisely worked to insure a longer lasting, truer running unit.

(C) Hangers and Bearings: Various styles and bearing materials selected to meet your needs

(D) Nu-Weld® Flange: Continuously welded steel flange holds trough in alignment.

(E) Jig-Drilled Couplings: Assure easy shaft alignment and assembly. Available with "Redi-Change" clamping key for quick disassembly of conveyor screw.

(F) Tem-U-Lac Self-Locking Coupling Bolts: Guards against system damage and costly down-time caused by coupling bolts or nuts working loose.

(G) Troughs, Covers and Fasteners: Ruggedly constructed "U", flared and tubular troughs with covers, trough ends and fasteners ideally matched to your needs.

(H) Discharge Spouts: All types available . . . located where you need them . . . with hand, electric, hydraulic or pneumatic power.

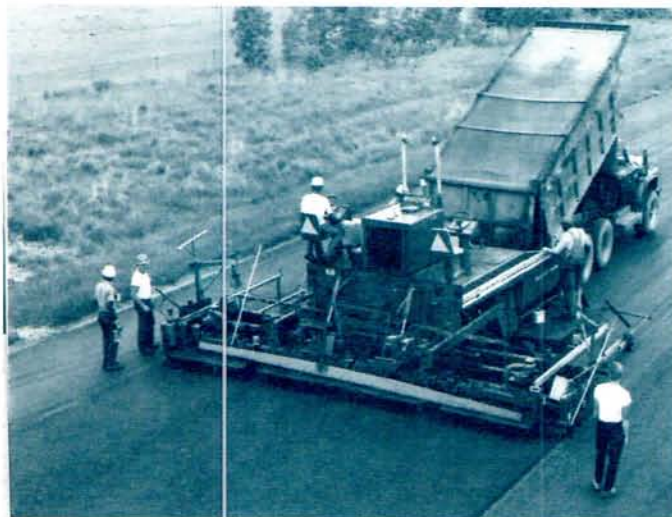
(I) Thrust Bearings: Long life, heavy duty bearings for every type of service.



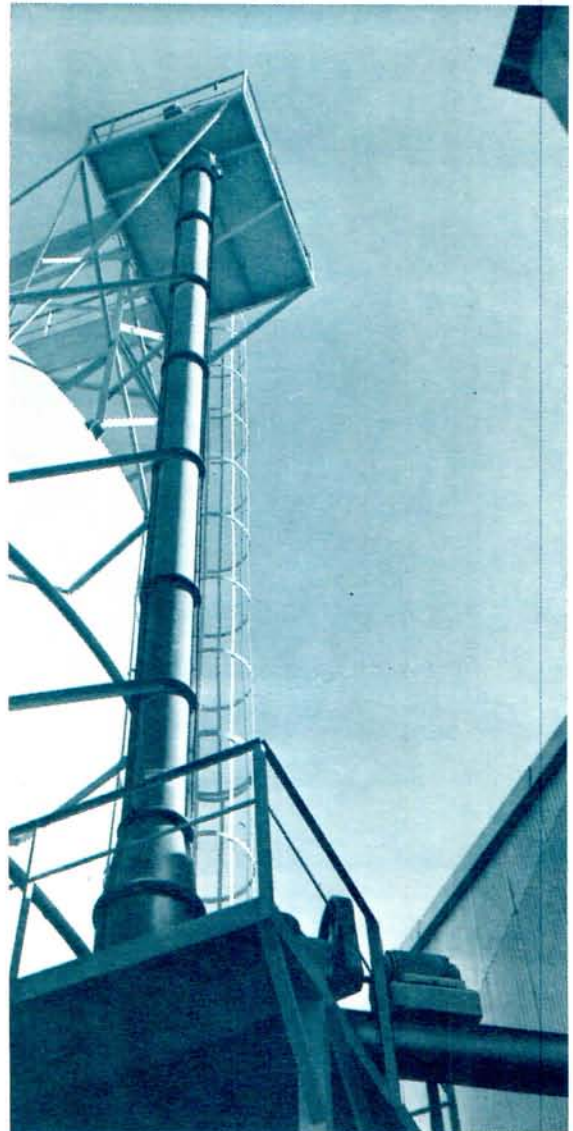
Applications



This Screw Conveyor in a tunnel installation illustrates the compact arrangement possible when space is at a premium.



This Matmaker asphalt finisher uses a Screw Conveyor at the back of the tractor unit to move material outward in both directions and spread it uniformly across the entire paving width.

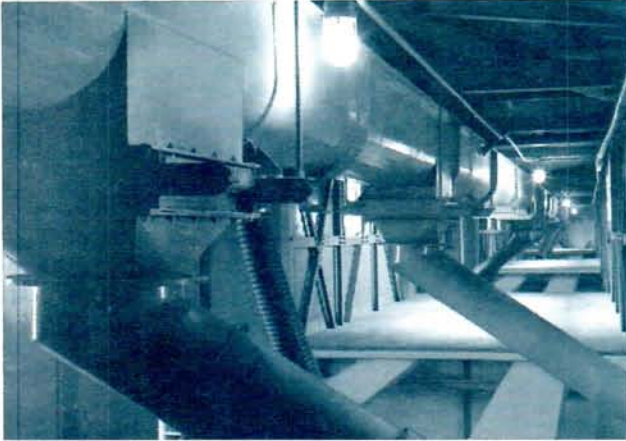


The Screw-Lift does an efficient elevating job as part of a complete Screw Conveyor system.



Screw Conveyor system and SCC Bucket Elevators speed grain handling for large facility. Two screw conveyors, running over two rows of tanks, are 494 feet long. Has double hanger in center so each half is powered independently. Between the two rows of tanks, a collecting screw conveyor, also with double hanger at center, is 528 feet long. System handles whole grains at approximately 100 tons per hour.

Applications



A Screw Conveyor installed in a large overhead operation. Space-saving features are apparent here. All parts of the system are enclosed yet readily accessible.



Special flighting provides fast, clean snow removal.



This asphalt fabric filter type dust collector uses Screw Conveyor flighting in the hoppers which return collected fines to the mix.



Partial view of a large outdoor installation employing Screw-Lifts to elevate material to fill storage silos.

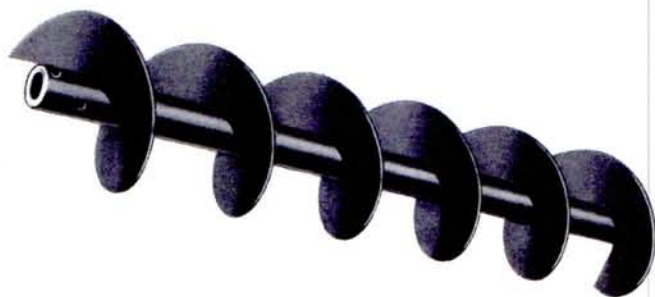


Rubber reclaiming operation uses high capacity, compact Screw-Lift and screw conveyor system to transport rubber back and forth between mills and screeners.

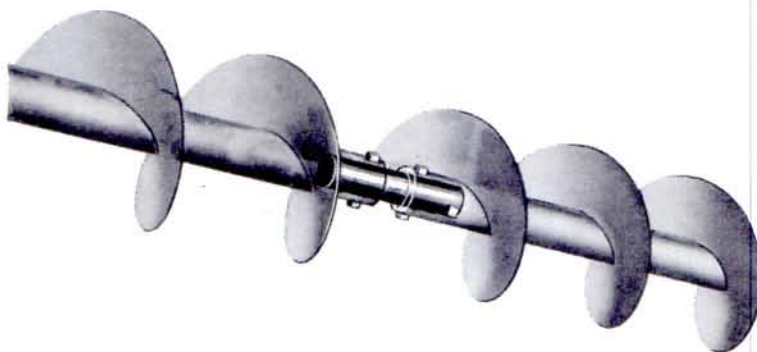


Components of a Screw Conveyor System

The Conveyor Screw imparts a smooth positive motion to the material as it rotates within the trough.



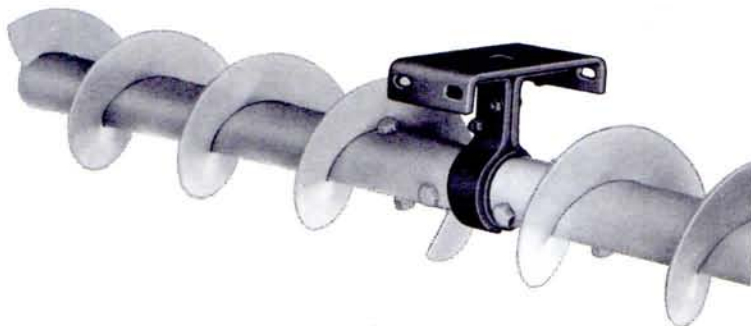
Couplings and Shafts connect and transmit motion to subsequent screw conveyors. Held in place by self-locking Tem-U-Lac bolts.



Redi-Change Sections allow an individual conveyor section to be lifted out without dismantling adjacent parts or components. An optional feature available at extra cost.



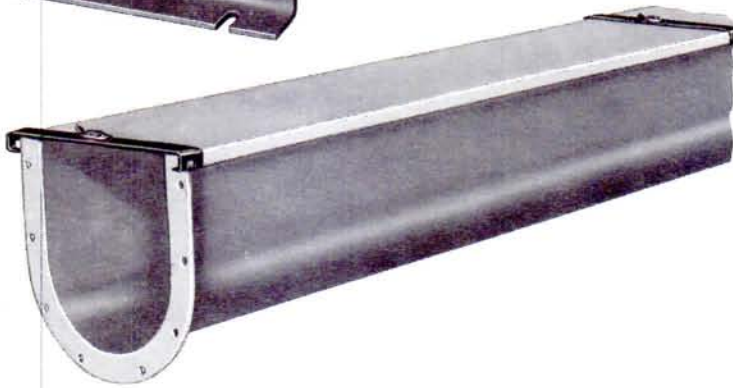
Hangers provide support, maintain alignment and serve as bearing surfaces.



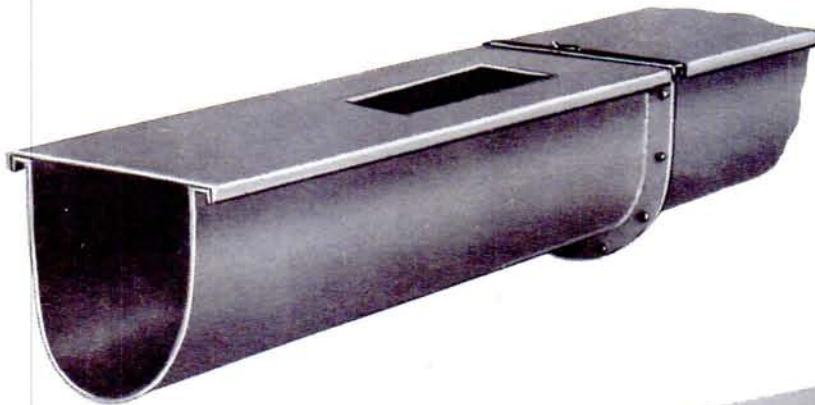
Components of a Screw Conveyor System



Trough Ends support the conveyor drive and end shafts, maintain trough alignment. May be furnished with choice of bearings or thrust bearings.

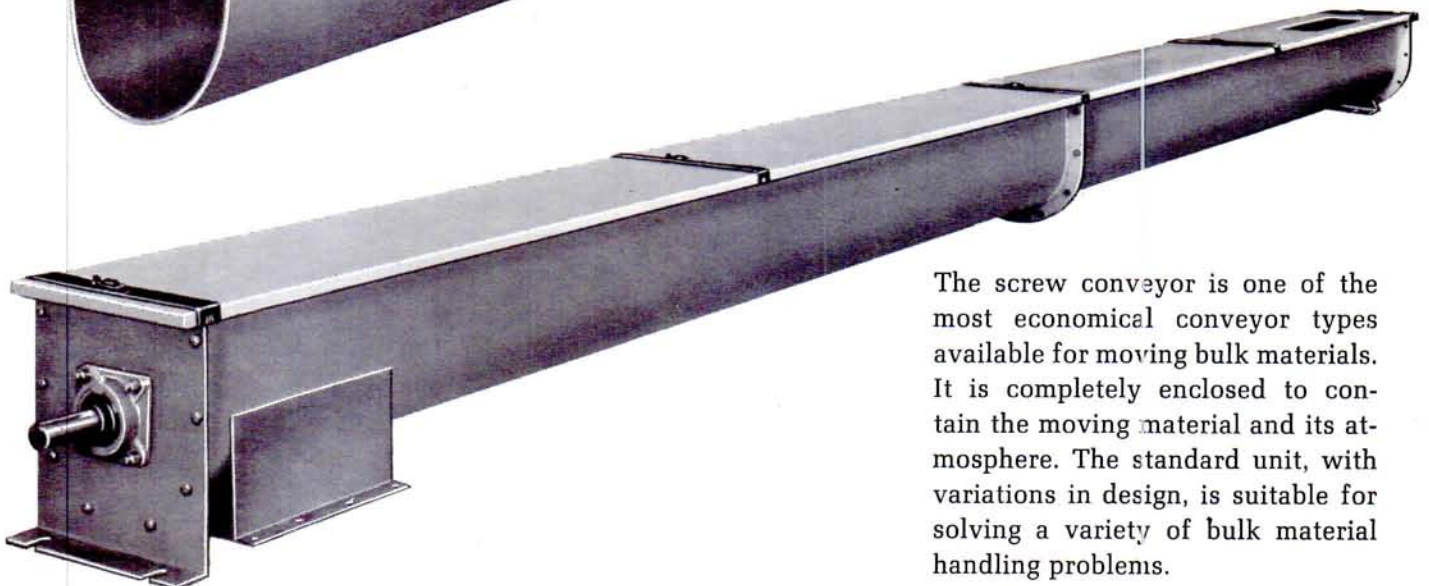


Troughs and Covers completely enclose the material being conveyed and the rotating parts. Covers are available in various types and are secured to the trough by Spring, Screw, Tite-Seal or quick-acting Barron Clamps depending on the trough cover combination used.



Inlet and Discharge Openings may be located wherever needed, discharge spouts may be without slides or fitted with either flat or curved slides. These slides may be operated by hand, rack and pinion gears, or by power.

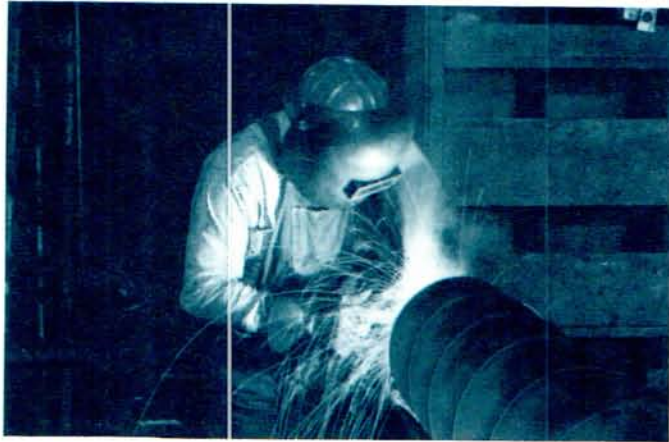
The Complete Screw Conveyor Unit is supported by the trough end and by either Feet or Saddles at intermediate locations.



The screw conveyor is one of the most economical conveyor types available for moving bulk materials. It is completely enclosed to contain the moving material and its atmosphere. The standard unit, with variations in design, is suitable for solving a variety of bulk material handling problems.



Design Data



Engineering and Layout

This section contains all pertinent engineering data and procedures for prescribing and specifying the important features and details of most conveyor installations, however, Screw Conveyor Corporation staff engineers have considerable experience in the proper and successful application of Screw Conveyor design. Please feel free to contact our offices for case studies of your particular problem.

Material Analysis

The initial step in engineering a Screw Conveyor is to analyze the physical characteristics of the material and the rate at which it is to be handled.

The capacity of a Screw Conveyor should be defined in terms of cubic feet per hour. It is also important to determine the maximum capacity the conveyor will be required to handle. This capacity is very often stated in terms of tons or pounds per hour. However, the material to be handled often varies in density. Therefore, the maximum volume or capacity in cubic feet per hour is the maximum pounds per hour of material divided by the minimum possible density of the material. It is volume to be conveyed which determines a conveyor's size and speed. Physical properties of the material to be thoroughly understood are the following:

1. Maximum lump size and the percentage of lumps to the total volume along with the minimum particle size and, if possible, a screen analysis.
2. Flowability characteristics. This is a term related to the angle of repose. See Material Classification, table No. 4, page 11.
3. The abrasive quality of a material can be defined by knowing its hardness on a Moh's scale. If this is not available, compare your material with another known abrasive material.
4. Additional factors which affect conveyor operation and design are further discussed on page 10 and are shown in the Material Classification table, page 11.

Please also note that moisture content, while not accounted for in the material tables, will affect the flow characteristics and density of a material. Some materials, when very dry or very wet will tend to have favorable flowability characteristics. Where the moisture content is between these extremes such a material may be quite sluggish and have a high angle of repose. Where this is a possibility, the material should be re-classified. Conveyor design and selection should proceed with the full knowledge of all conditions that can prevail.



Design Data

No machinery design is complete without considering its usage. A conveyor that will be used intermittently for two hours a day does not have to be built as heavily as one that will operate twenty-four hours per day. Likewise, shock loads will effect the consideration given on gauge of steel used as well as drive equipment. Treatment of these factors and their affect on conveyor design are not discussed here in sufficient detail to prescribe. As mentioned previously, our engineers are available to assist you in every way possible to determine your best conveyor design.

Since the Screw Conveyor selected is based on a maximum volume control of material to be handled, surge loads, overloads and choke feeding must be accounted for in the conveyor design. Screw feeders are popularly used for this control and are discussed in other pages of this catalog.

CLASSIFY YOUR MATERIAL

Materials are classified in table No. 6 on pages 12 and 13. If your material is not listed, it can be classified by comparing it with similar materials that do appear in the table. If necessary, your material can be classified by referring to table No. 4 "Material Classifications", page 11.

ESTABLISH REQUIRED DIAMETER AND SPEED

Knowing your material classification and maximum required capacity, refer to the proper Capacity Chart, page 14 or 15. Your material classification indicates which chart applies. Follow the vertical line from the desired capacity point upwards to the intersecting point with the smallest diameter conveyor that is below the Maximum Recommended Speed Line. Consult our Engineering Department if exceeding the Maximum Recommended Speed. Follow the intersecting horizontal line to the left-hand edge of the chart and read the recommended speed in RPM.

Note: If handling a material with hard lumps (lumps that will not break up in the Screw Conveyor) refer below to table No. 1, "Size of Lumps to Diameter". If the required diameter (as found above) is smaller than the recommended size given in the Lump Chart, use the diameter from the chart. To revise the speed, turn to the proper Capacity Chart and follow the vertical line from the desired capacity point upwards to the intersecting point with the new diameter. Now follow the intersecting horizontal line back to the left-hand edge of the chart and read the revised recommended speed.

Table No. 1 MAXIMUM SIZE OF LUMPS, INCHES

RATIO Lumps to Total Volume	Diameter of Conveyor, Inches									
	4	6	9	10	12	14	16	18	20	24
Lumps 10% or less.....	1	1½	2½	2½	3	3½	4	4½	5	6
Lumps 20% to 25%.....	½	¾	1½	1½	2	2½	3	3	3½	3¾
All Lumps.....	¼	½	¾	¾	1	1¼	1½	2	2	2½

COMPONENT GROUP CLASSIFICATION

As shown in the Material table No. 6, pages 12 and 13, each material is assigned to a Component Group. These groups take into account the material's physical characteristics and then match these with the proper conveyor components. A description of these components in each group can be found on page 11, table No. 5.

Please note that Babbitted bearings are considered standard where contamination from the required lubricants is not a factor. Oil impregnated wood or nylon bearings are often recommended where lubricant contamination is a factor. Ball bearings are not recommended for use in conveying gritty or very fine materials which might penetrate the oil seal. For abrasive or applications involving high temperatures, hard iron bearings are normally used. Other types of bearing materials furnished upon request.

ESTABLISH THE "D" FACTOR

The "D" Factor is a constant applied to the particular Component Group of a given conveyor. To establish the "D" Factor, locate your conveyor diameter and bearing material in table No. 2. The figure appearing at this intersection is to be used as "D" in the horsepower formula.

Table No. 2 TABLE OF FACTORS "D"

Size of Conveyor, Inches	TYPE OF HANGER BEARINGS			
	Ball or Roller	Wood, Babbitt, Nylon or Molded Fabric	Self- Lubricating Bronze	White Iron or Man- ganese Steel
3	10	15	24	35
4	12	21	33	50
6	18	33	54	80
9	32	54	96	130
10	38	66	114	160
12	55	96	171	250
14	78	135	255	350
16	106	186	336	480
18	140	240	414	600
20	165	285	510	700
24	230	390	690	950

ESTABLISH THE REQUIRED HORSEPOWER

The formula stated below gives the horsepower (HP) required at the conveyor drive shaft for a standard conveyor.

Additional power will be required for starting under load, overcoming choke loads or other unusual conditions. There is also a loss of power through the drive machinery of from 10% to 15%. To compensate for these factors, the formula for the required motor horsepower is divided by .90.

Step No. 1

$$H = \frac{L (DS \text{ plus } QF)}{1,000,000}$$

where

L = Overall length in feet

D = Bearing Factor (see "D" Factor table)

S = Speed in RPM (see Capacity Charts)

Q = Quantity of material being conveyed in lbs./hr.

F = Horsepower factor "F" (see Material Tables)

Step No. 2

Motor Horsepower = H x P

P = 2 when H is less than 1

P = 1.5 when H is between 1 and 2

P = 1.25 when H is between 2 and 4

P = 1.1 when H is between 4 and 5

P = 1 when H is greater than 5

Step No. 3

$$\frac{HP}{.90} = \text{Minimum Recommended Horsepower}$$

CONVEYOR HORSEPOWER RATINGS

One of the factors that must be considered now is to check the required horsepower from the above formula against the torque and horsepower capacity limitation for each conveyor pipe and shaft size.

Use table 3, page 10 which shows the maximum allowable horsepower at various conveyor speeds.

Example: a 9" conveyor mounted on 2" standard pipe, bushed for 1½" diameter couplings, is limited to a maximum of 5 HP at 100 RPM. If, in a given application, a larger motor is required, it is then necessary to use a 9" conveyor mounted on 2½" pipe, bushed for 2" diameter couplings. You will see that this arrangement is rated at 12 HP at 100 RPM or 6 HP at 50 RPM. These ratings are on the basis of two coupling bolts at each end of the conveyor pipe. In some sizes three bolts can be used to increase the drive limitation shown. Consult our Engineering Department for specific recommendations if in doubt.



Table No. 3 HORSEPOWER RATINGS

Size of Conveyor, Inches	Pipe Size Inches	Coupling Dia.	Max. HP @ 125 RPM	Max. HP @ 100 RPM	Max. HP @ 75 RPM	Max. HP @ 50 RPM
6, 9 and 10	2	1½	6.25	5	3.75	2.5
9, 10 and 12	2½	2	15.0	12	9.0	6.0
12 and 14	3	2¾	18.75	15.0	11.25	7.5
12, 14, 16, 18 and 20	3½	3	32.5	26.0	19.5	13.0
20 and 24	4	3¾	51.25	41.0	30.75	20.5

SAMPLE PROBLEM

Establish the conveyor size, speed, horsepower and other specifications necessary for conveying 1,800 bushels of dry, clean wheat per hour for a distance of 50 feet.

SOLUTION

Refer to the Material table No. 6, pages 12 and 13. Note: Average weight/cu. ft. of wheat is 45-48 lbs.

The material classification is C16S

The recommended types of conveyors are 1A, 1B, 1C

The "F" Factor is .4

The material classification, C16S indicates the material is granular—½ inch and under, very free flowing—angle of repose up to 30°, non-abrasive and contains explosive dust. The recommended types of conveyors, 1A, 1B, 1C indicate the group that is designed for normal service. (See table 5a, page 11 and Capacity table 7a, page 14.)

Convert the given capacity from bushels per hour to cubic feet per hour. Known: there are 1.25 cubic feet in a bushel of wheat. Therefore, 1,800 x 1.25 equals 2,250 cubic feet per hour. Now, 2,250 cu. ft. per hour x 48 lbs. equals 108,000 lbs./hr. This will be assumed to be the maximum desired capacity.

Turn to the Capacity Chart No. 7a, page 14 and establish the conveyor diameter and proper speed. As you will note, a capacity of 2,250 cu. ft./hr. requires a 12" diameter screw conveyor operating at 120 RPM. Remember, do not exceed the maximum recommended speed line without first consulting with our staff engineers. If hard lumps had been present, we would now consult table No. 1, page 9.

We now know that:

L = 50 feet

D = 96 (see "D" Factor table, 12" conveyor with babbitted bearings)

S = 120 RPM (see Capacity Chart)

Q = 108,000 lbs./hr.

F = .4 (see Material Tables)

Now, inserting these figures in the formula:

$$H = \frac{50 (96 \times 120 + 108,000 \times .4)}{1,000,000}$$

Therefore: H = 2.8

Motor Horsepower equals H x P (see value of P under formula)

Therefore: 2.8 x 1.25 = 3.5

To be assured of having sufficient power, divide the HP by .90. This gives you a minimum recommended horsepower of 3.9. Your minimum choice of motor size would, therefore, be 5 HP.

Now, refer to the Torque Capacity table No. 3 and note the minimum pipe size for a 12" conveyor is 2½". Maximum allowable horsepower for this conveyor's specifications is 15 HP. Since this figure is in excess of our requirements, we can use the computed 5 HP motor.

Additional Screw Conveyor specifications for indoor operation will be:

Group Classification: 1A

Conveyor Size and Speed: 12" at 120 RPM

Conveyor Screw: 12" Standard Helicoid

Conveyor Trough: 12" No. 12 gauge steel, Double Flange Construction, Flanged Cover and Barron Clamps

Type of hanger bearings: 12" x 2" bore, intermediate hanger with babbitted bearings

Refer to page 17 for additional Layout Data and Details.

SPECIAL APPLICATIONS AND SPECIFICATIONS

The selection procedure, outlined above, takes into account the material's physical characteristics, provides for the proper cross-section loading of a conveyor and specifies, through the component tables, the type of conveyor components to be used. Some material's physical characteristics will require additional special features.

ABRASIVE MATERIALS

Abrasive materials tend to cause excessive wear on Screw Conveyor components and should be carried at low cross-sectional loads and at relatively slow conveyor speeds. For conveyors which will handle extremely abrasive materials or will be subjected to heavy or continuous service, heavy-duty components should be specified. Heavier than standard, surface-hardened or abrasive resistant steels are available for this application.

There are also some materials that are normally considered abrasive which may easily become aerated, thus reflecting a minimum density and greater flowability. Here it is possible to use higher speeds and in some cases, higher cross-sectional loads. Judgment and experience, however, will dictate the conditions when this can occur.

CONTAMINABLE MATERIALS

When handling easily contaminable materials, such as food products or some chemicals, it is possible to specify components and other features of construction which were not necessarily included and made a part of the conveyor selection process. These features would include non-lubricating type intermediate hanger bearings, seals under the end bearings, easily removable trough covers and, possibly, drop bottom conveyor trough construction. Accessibility to the internal parts of the conveyor through the use of some of these features means the conveyor can be easily inspected and cleaned out.

Conveyor Flighting may be continuously welded to the conveyor pipe on either/or both sides of the flight. Grinding and cleaning of the welds can remove scale and/or roughness that could contribute to contamination.

CORROSIVE MATERIALS

When handling bulk materials which are corrosive, conveyor components manufactured from stainless steel, aluminum or other special alloys are available, also hot dipped galvanized carbon steel components may be used in non-abrasive applications.

DEGRADABLE MATERIALS

Materials which tend to break or separate easily, affecting quality, may be handled in larger diameter, slower turning Screw Conveyors to reduce agitation.

EXTREME TEMPERATURES

Materials may be heated or cooled while being conveyed in a jacketed conveyor. When handling materials in extreme temperatures, specify Screw Conveyor components of metal alloys designed to meet these conditions.

FLUIDIZING MATERIALS

When agitated, some materials tend to "aerate" and react similar to a liquid. When handling these materials, it is

Design Data

important to know the aerated density so that conveyor size and speed will be based on the larger aerated volume. When a volumetric type feeder is used, the horsepower should be based on the design volume and maximum material density.

MIXING MATERIALS

If the materials are to be mixed or agitated while being conveyed, ribbon flights, cut flights, cut and folded flight or one of the above in combination with paddles, may be used.

MATERIALS WHICH PACK AND RESIST DIGGING

Some materials have very strong resistance to digging which means that it is difficult, and in some cases, impossible to shear a pile of this material or to penetrate it with a sharp edge such as in a conveyor flight. Offsetting the conveyor screw and placement of an angle inside the trough on the carrying side will enable some of these materials to be handled.

Occasionally, materials tend to pack under pressure and become hard in the clearance between the conveyor screw and trough. Some of these materials can then be conveyed satisfactory if the Screw Conveyor is operated at low speeds and the edge of the flight is used as a cutting edge.

HYGROSCOPIC MATERIALS

Materials which readily absorb moisture are hygroscopic. Such materials become less free flowing as they absorb moisture. This factor must be taken into account when determining conveyor size, HP and speed. Some hygroscopic materials can, as they absorb moisture, change in density and angle of repose and thus, effect the material classification number.

TOXIC MATERIALS

If harmful vapors or dust are released by agitation and conveying, the system should be of sealed construction.

VISCOUS OR STICKY MATERIALS

Viscous materials can best be handled by Ribbon Conveyors because they usually have a tendency to stick and adhere to the joint of the conveyor pipe and flight on a standard conveyor.

Table No. 4 MATERIAL CLASSIFICATION

	Material Characteristic	Class
Size	Very fine—100 mesh and under	A
	Fine— $\frac{1}{8}$ -inch mesh and under	B
	Granular— $\frac{1}{2}$ -inch and under	C
	Lumpy—containing lumps over $\frac{1}{2}$ inch	D
	Irregular—being fibrous, stringy, or the like	H
Flowability	Very free flowing—angle of repose up to 30°	1
	Free flowing—angle of repose 30° to 45°	2
	Sluggish—angle of repose 45° and up	3
Abrasiveness	Nonabrasive	6
	Mildly abrasive	7
	Very abrasive	8
Other characteristics	Contaminable, affecting use or saleability	K
	Hygroscopic	L
	Highly corrosive	N
	Mildly corrosive	P
	Gives off dust or fumes harmful to life	R
	Contains explosive dust	S
	Degradable, affecting use or saleability	T
	Very light and fluffy	W
	Interlocks or mats to resist digging	X
	Aerates and becomes fluid	Y
	Packs under pressure	Z

Table No. 5 COMPONENT GROUP SPECIFICATIONS

Screw Size Inches	Coupling Diameter Inches	Screw Number	Trough Thickness	Cover Thickness
Normal Service [■]				
Component group 1A			• babbitted bearing hangers	
Component group 1B			• wood bearing hangers	
Component group 1C			• ball bearing hangers	
regular trough regular flights cold rolled steel couplings				
6	1½	6H304	16 ga.	16 ga.
9	1½ 2	9H306	14 ga.	14 ga.
		9H406	14 ga.	14 ga.
12	2 2¾	12H408	12 ga.	14 ga.
		12H508	12 ga.	14 ga.
14	2¾	14H508	12 ga.	14 ga.
16	3	16H610	12 ga.	14 ga.
18	3	18S612	10 ga.	12 ga.
20	3	20S612	10 ga.	12 ga.
24	3¾	24S712	10 ga.	14 ga.
Heavy service				
Component group 2A [□]			• babbitted bearing hangers	
Component group 2B [□]			• wood bearing hangers	
Component group 2C [□]			• cold rolled steel couplings	
Component group 2D [▲]			• ball bearing hangers	
			• cold rolled steel couplings	
			• hard iron bearing hangers	
			• hardened steel couplings	
heavy trough heavy flights				
6	1½	6H308	14 ga.	16 ga.
9	1½ 2	9H312	10 ga.	14 ga.
		9H412	10 ga.	14 ga.
12	2 2¾ 3	12H412	¾	14 ga.
		12H512	¾	14 ga.
		12H614	¾	14 ga.
14	2¾ 3	14S512	¾	14 ga.
		14H614	¾	14 ga.
16	3	16H614	¾	14 ga.
18	3	18S616	¾	12 ga.
20	3	20S616	¾	12 ga.
24	3¾	24S716	¾	12 ga.
Extra heavy service				
Component group 3A [▲]			• babbitted bearing hangers	
Component group 3D [◎]			• cold rolled steel couplings	
			• hard iron bearing hangers	
			• hardened steel couplings	
extra-heavy trough extra-heavy flights				
6	1½	6H312	10 ga.	16 ga.
9	1½ 2	9H312	¾	14 ga.
		9H414	¾	14 ga.
12	2 2¾ 3	12H412	¾	14 ga.
		12H512	¾	14 ga.
		12H614	¾	14 ga.
14	3	14H614	¾	14 ga.
16	3	16H614	¾	14 ga.
18	3	18S624	¾	12 ga.
20	3	20S624	¾	12 ga.
24	3¾	24S724	¾	12 ga.

■ For use with nonabrasive materials.

□ For use with nonabrasive irregular material or lumpy material containing lumps over $\frac{1}{2}$ ".

▲ For use with mildly abrasive material.

△ For use with mildly corrosive materials.

◎ For use with very abrasive materials.



Material Table

Table No. 6

MATERIAL	AV. WT. PER CU. FT.	MAT'L CLASS	COMPONENT GROUP	H.P. FACTOR F	MATERIAL	AV. WT. PER CU. FT.	MAT'L CLASS	COMPONENT GROUP	H.P. FACTOR F
Alfalfa meal	14-22	B37W	2D	0.6	Coke—breeze ¼"	25-35	C38	3D	1.2
Alfalfa pellets	41-43	C27	2D	0.6	Coke—loose	23-32	D38TX	3D	1.2
Almonds—broken or whole	28-30	C27T	2D	0.9	Coke petroleum	35-45	D28X	3D	1.3
Alum—lumpy	50-60	D26	2A, 2B	1.4	Copper sulphate (bluestone)	75-95	D26	3A, 2B	1.0
Alum—pulverized	45-50	B26	1A, 1B	0.6	Copra	22-33	D26	2A, 2B, 2C	1.0
Alumina	60-120	B28	3D	1.8	Copra, lump	22-30	D26	2A, 2B, 2C	0.8
Aluminum hydrate	13-18	C26	1A, 1B, 1C	1.4	Copra—ground or meal	40-45	B26	1A, 1B, 1C	0.7
Ammonium chloride	52	B26	1A, 1B, 1C	0.8	Cork—½"	5-15	B36WY	1A, 1B, 1C	0.5
Ammonium nitrate—prilled ^Δ	45-60	B27LPS	3D	1.3	Corn—cracked	45-50	C26	1A, 1B, 1C	0.7
Ammonium sulphate ^Δ	45	C27LPZ	1A, 1B	1.0	Corn, germs	21	B26	1A, 1B, 1C	0.4
Asbestos shred	20-40	H37WZ	2D	1.0	Corn, grits	40-45	B26	1A, 1B, 1C	0.5
Ashes—dry	35-40	D37	2D	2.5	Corn—shelled	45	C16S	1A, 1B, 1C	0.6*
Ashes—wet	45-50	D37P	3D	3.0	Corn, meal	32-40	B27K	1A, 1B	0.5
Asphalt—crushed	45	C26	1A, 1B	2.0	Corn, sugar	30-35	B26	1A, 1B, 1C	1.0
Bagasse	7-10	H36WXZ	2A, 2B	1.5	Cottonseed—dry delinted	22-40	C26Z	1A, 1B	0.6
Bakelite and similar plastics ⅜"	30-40	A36	1A, 1B, 1C	1.4	Cottonseed—dry undelinted	18-25	C36Z	1A, 1B	0.9
Baking powder	41	A26	1A, 1B, 1C	0.6	Cottonseed, cake	40-45	D26	2A, 2B, 2C	1.0
Bark wood refuse	10-18	H37	3D	2.0	Cottonseed, hulls	12	B36W	1A, 1B, 1C	0.9
Barley	37-40	B16S	1A, 1B, 1C	0.4	Cottonseed, meal	35-40	B26	1A, 1B, 1C	0.5
Bauxite—crushed 3"	75-85	D28	3D	2.5	Cottonseed, meats	40	B26	1A, 1B, 1C	0.6
Beans, castor	36	C16	1A, 1B, 1C	0.5	Cracklings—3"	40-50	D36	2A, 2B, 2C	1.3
Beans, navy	48	C16	1A, 1B, 1C	0.5	Cullet, glass	80-120	D28	3D	2.0
Bentonite	50-60	A27Y	2D	0.7	Dicalcium phosphate	40-45	A36	1A, 1B, 1C	1.6
Bicarbonate of soda	40-45	A26	1A, 1B, 1C	0.6	Distillers grain, spent dry	20-30	C36	1A, 1B, 1C	0.5
Blood dried meal	35-45	D37L	2D	1.7	Distillers grain, spent wet	40-60	C36P	3A	0.8
Bones—crushed ½"	35-40	C27	2D	2.0	Dolomite—granular	80-100	D27	2D	2.0
Bonemeal	50-60	B27	2D	1.7	Ebonite	65-70	C26	1A, 1B, 1C	0.8
Borax—powdered	50-55	B26	1A, 1B, 1C	0.7	Epsom Salts	40-50	B26	1A, 1B, 1C	0.8
Boric Acid—powdered	55	B26	1A, 1B, 1C	0.8	Egg powder	16	B37KYW	1B	1.0
Bran	10-20	B26SW	1A, 1B, 1C	0.5	Feed,				
Brewers grain spent dry	14-30	C36	1A, 1B, 1C	0.5	Bulk mash	35-40	B26	1A, 1B, 1C	0.6
Brewers grain spent wet	50-60	C36P	2A, 2B	0.8	Molasses (5 to 8%)	20-25	B36	1A, 1B, 1C	3.0
Buckwheat	40-42	B16S	1A, 1B, 1C	0.4	Pellets & Crumbles	36-40	C36	1A, 1B, 1C	0.6
Calcium Carbide	70-80	D27	2D	2.0	Feldspar minus ⅛"	65-75	B27	2D	2.0
Carbon black pellets	20-25	B16TZ	1A, 1B, 1C	1.0	Fertilizer (bulk)	70	C36	2D	2.0
Carbon black powder	4-6	A16WY	1A, 1B, 1C	0.4	Fishmeal	30-40	B36	1A, 1B, 1C	1.0
Casein, dried milk	36	B27L	2D	1.6	Flax seed	45	B16S	1A, 1B, 1C	0.4
Cast Iron chips ^Δ	130-200	C37	2D	4.0	Flax seed cake (expelled)	48-50	D26	2A, 2B	0.7
Cement clinker	75-80	D28	3D	1.8	Flax seed meal	25	B26	1A, 1B, 1C	0.4
Cement Portland	60-85	A27Y	2D	1.0	Flour—wheat	33-40	A36K	1A, 1B, 1C	0.6
Chalk, pulverized	70-75	A37YZ	2D	1.4	Flue dust—boiler, dry	30-45	A28Y	3D	2.0
Charcoal	18-25	D37T	2D	1.4	Flourspar	82-110	C37	2D	2.0
Cinders—coal	40	D28	3D	1.8	Fly ash	35-45	A17Y	3D	2.0
Clay—see bentonite fullers earth, Kaolin, Marl					Fullers earth raw	35-40	B27	2D	2.0
Clover seed	48	B16S	1A, 1B, 1C	0.4	Fullers earth spent (35% oil)	60-65	B27	3D	0.9
Coal, anthracite sized	60	C27P	2D	1.0	Gelatin, granulated	32	C26T	1A, 1B, 1C	0.8
Coal—bituminous ½"	50	C36P	3A	0.9	Gluten, meal	40	B26	1A, 1B, 1C	0.6
Coal—bituminous sized	50	D26P	3A	0.6	Graphite, flake	40	C26	1A, 1B, 1C	0.5
Cocoa beans	30-40	C27T	1A, 1B	0.5	Graphite, flour	28	A16KY	1A, 1B, 1C	0.5
Cocoa—powdered	30-35	A36Z	1A, 1B, 1C	0.9	Grape pomace	15-20	C37W	2D	1.0
Coconut—shredded	20-22	H36	2B, 2C	1.5	Grass seed	10-15	B26SW	1A, 1B, 1C	0.4
Coffee—green bean	32-45	C26T	1A, 1B, 1C	0.5	Gypsum calcinid ½"	55-60	C27	2D	1.6
Coffee—ground	25	B26	1A, 1B, 1C	0.6	Gypsum—crushed 1"	70-80	D27	2D	2.0
Coffee—roasted bean	22-26	C16	1A, 1B, 1C	0.4	Ice, crushed	35-45	D16	2A, 2B, 2C	0.4
					Ice, flakes	30-40	D16	1B	0.6

^ΔConsult Eng'r. Dept., special consideration required.

*0.4 if well dried and cleaned.

Material Table

Table No. 6

MATERIAL	AV. WT. PER CU. FT.	MAT'L. CLASS	COMPONENT GROUP	H.P. FACTOR F	MATERIAL	AV. WT. PER CU. FT.	MAT'L. CLASS	COMPONENT GROUP	H.P. FACTOR F
Iron oxide dust ^Δ	110-125	B28Y	3D	3.5	Salt—dry, coarse ¼"	45-50	C37PL	2D	1.0
Kaolin clay ^Δ	65	D27	2D	2.0	Salt—dry, fine	70-80	B27PL	2D	1.7
Lead oxide ^Δ	30-150	A27K	2D	1.2	Salt—cake, dry and coarse	85	D27LP	3D	2.1
Lignite, coal 3"	45	D26P	2D	1.0	Salt cake—dry, pulverized	65-85	B27	2D	1.7
Lime, ground ½"	60	B36Z	1A, 1B, 1C	0.6	Saltpeter (potassium nitrate)	80	B26S	1A, 1B, 1C	1.2
Lime, hydrated ½"	35-40	B26YZ	1A, 1B, 1C	0.8	Sand silica—dry	90-100	B28	3D	2.0
Lime, pulverized	32-40	A26YZ	1A, 1B, 1C	0.6	Sand—foundry	90	B28	3D	2.6
Lime, pebble	56	D36	2A, 2B	2.0	Sawdust (dry)	10-13	B36LZ	1A, 1B, 1C	0.7
Limestone, agricultural ½"	68	B27	2D	2.0	Shale—crushed	85-90	C27	2D	2.0
Limestone—crushed	85-90	D27	2D	2.0	Slag—furnace, granulated	60-65	C28	3D	2.2
Limestone, dust	55-95	A37Y	2D	2.0	Slate—crushed ½"	80-90	C27	2D	2.0
Linseed (see flaxseed)					Slate—ground ½"	80-85	B27	2D	1.6
Maize (see milo)					Sewage sludge—dry	40-50	H38P	3D	0.8
Malt—dry ground ½"	22-40	B26SW	1A, 1B, 1C	0.5	Soap granules	15-35	B26T	1A, 1B, 1C	0.6
Malt—dry whole	27-30	C26S	1A, 1B, 1C	0.5	Soap chips	15-25	C26T	1A, 1B, 1C	0.6
Malt—wet or green	60-65	C36	1A, 1B, 1C	0.4	Soap (detergent type)	15-50	B26TZ	1A, 1B	0.8
Manganese sulphate	70	C28	3D	2.4	Soap flake	5-20	B26T	1A, 1B, 1C	0.6
Marl	80	D27	2D	1.6	Soap powder	20-25	B26	1A, 1B, 1C	0.9
Meat, ground	50-55	H36PTZ	2A, 2B	1.5	Soda ash—heavy	55-65	B27	2D	1.0
Meat—meal	37-40	B26	1A, 1B, 1C	1.0	Soda ash—light	20-35	A27W	2D	0.8
Mica, ground	13-15	B27	2D	0.9	Sodium bicarbonate	70-80	A36	1A, 1B, 1C	1.0
Mica, pulverized	13-30	A27Y	2D	1.0	Sodium nitrate	70-80	D27NS	2A, 2B	1.2
Mica, flake	17-22	B17WY	2D	1.0	Sodium phosphate (see trisodium phosphate)				
Milk—dried flake	5-6	B26K	1A, 1B, 1C	0.4	Sodium sulphate (see salt cake)				
Milk—malted	27-35	A36KZ	1B	0.9	Soybean cake	40-43	D26	2A, 2B, 2C	1.0
Milk—powdered	20	B36KLZ	1A, 1B, 1C	0.5	Soybean—cracked	30-40	C27S	2A, 2B	0.5
Milo—maize	56	C16S	1A, 1B, 1C	0.4	Soybean flakes (raw or spent)	18-26	C26W	1A, 1B, 1C	0.8
Muriate of potash	77	B28	3D	1.8	Soybean meal, cold	40	B26	1A, 1B, 1C	0.5
Oats	26	C16S	1A, 1B, 1C	0.4	Soybean, whole	45-50	C18S	3A	0.6*
Oats—flour	35	A36S	1A, 1B, 1C	0.5	Starch	25-50	A16Y	1A, 1B, 1C	0.7
Oats—rolled	19-26	C26SW	1A, 1B, 1C	0.6	Steel chips or turnings—crushed	100-150	D38	3D	3.0
Orange peels—dry	15	H36	2A, 2B	1.5	Sugar, cane or beet—refined	50-55	B26KT	1A, 1B, 1C	1.2
Oxalic acid crystals	60	B36L	1A, 1B, 1C	1.0	Sugar, beet—pulp dry	12-15	C27	2B, 2D	0.9
Oyster shells—ground	50-60	C27	2D	0.9	Sugar, beet—pulp wet	25-45	C27Z	1A, 1B	1.2
Paper pulp ^Δ					Sugar, corn (see corn sugar)				
Peanuts—shelled	35-45	C26T	1A, 1B, 1C	0.4	Sugar—raw—cane or beet	55-65	B36Z	1A, 1B, 1C	1.5
Peanuts—unshelled	15-20	D26T	2A, 2B	0.6	Sulphur—½"	50-60	C26S	1A, 1B, 1C	0.8
Peas—dried	45-50	C16ST	1A, 1B, 1C	0.5	Sulphur—3"	80-85	D26S	2A, 2B	0.8
Phosphate rock	75-85	D27	2D	2.1	Sulphur—powdered	50-60	B26SY	1A, 1B	0.6
Phosphate sand	90-100	B28	3D	2.0	Tanbark, ground	55	B37	1A, 1B, 1C	0.8
Plaster of Paris (see gypsum)	60-80	A26L	2D	2.0	Tobacco—scraps and stems	15-25	D36	2A, 2B	0.5
Polyethylene pellets ¾"	30-40	C17	1B	0.4	Tri Poly phosphate	60	B27	2D	1.0
Polystyrene pellets	30-40	C17	1B	0.4	Tri-sodium phosphate	50-60	B27	2D	1.7
Polyvinyl chloride (pvc) ¾"	35-40	C17P	1B	0.6	Urea	10-30	B27	2D	1.0
Potash	77	B28	3D	2.0	Urea Prills	45	C27	1A, 1B, 1C	1.2
Pumice—ground ½"	42-45	B38	3D	1.6	Vermiculite—expanded	16	C37W	2D	0.5
Quartz—pulverized or ground	110	B38	3D	2.5	Vermiculite, ore	80	D27	2D	1.0
Rice—hulled & polished	45-48	B16	1A, 1B, 1C	0.4	Wheat	45-48	C16S	1A, 1B, 1C	0.6*
Rice—rough or paddy	36	B26S	1A, 1B, 1C	0.6	Wheat—cracked	40-45	B26S	1A, 1B, 1C	0.4
Rice—bran (see bran)					Wheat, germ	18-28	B26	1A, 1B, 1C	0.4
Rice grits	42-45	B26	1A, 1B, 1C	0.4	Wood chips	10-30	H37X	2A, 2B	1.0
Rubber—ground ½"	20-50	C26	1A, 1B, 1C	0.8	Wood shavings	15	H36WX	2A, 2B	1.5
Rye	44	B16S	1A, 1B, 1C	0.4	Wood flour	16-36	B26S	1A, 1B	0.4
Safflower	45	C16S	1A, 1B, 1C	0.4	Zinc oxide, light	10-15	A36WZ	1A, 1B	1.0
Safflower—cake	50	D27	2D	0.6					
Safflower—meal	50	B26	1A, 1B, 1C	0.6					

^ΔConsult Eng'r. Dept., special consideration required.

*0.4 if well dried and cleaned.



Capacity Charts

Commins

Jim Smith - Applications Eng.
601-869-5711 F.M.C.

Table No. 7A

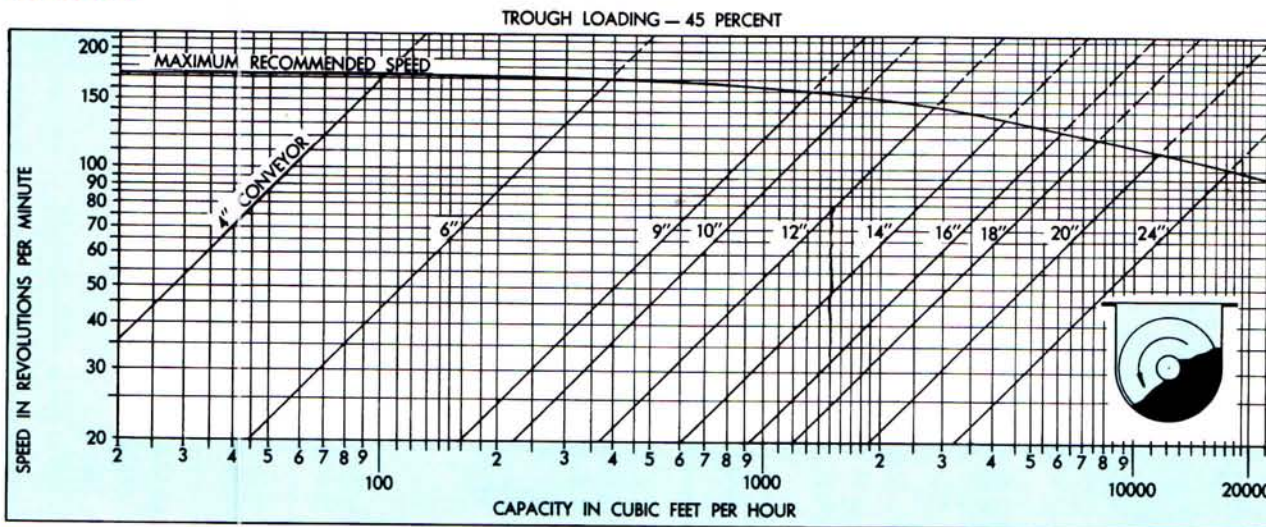
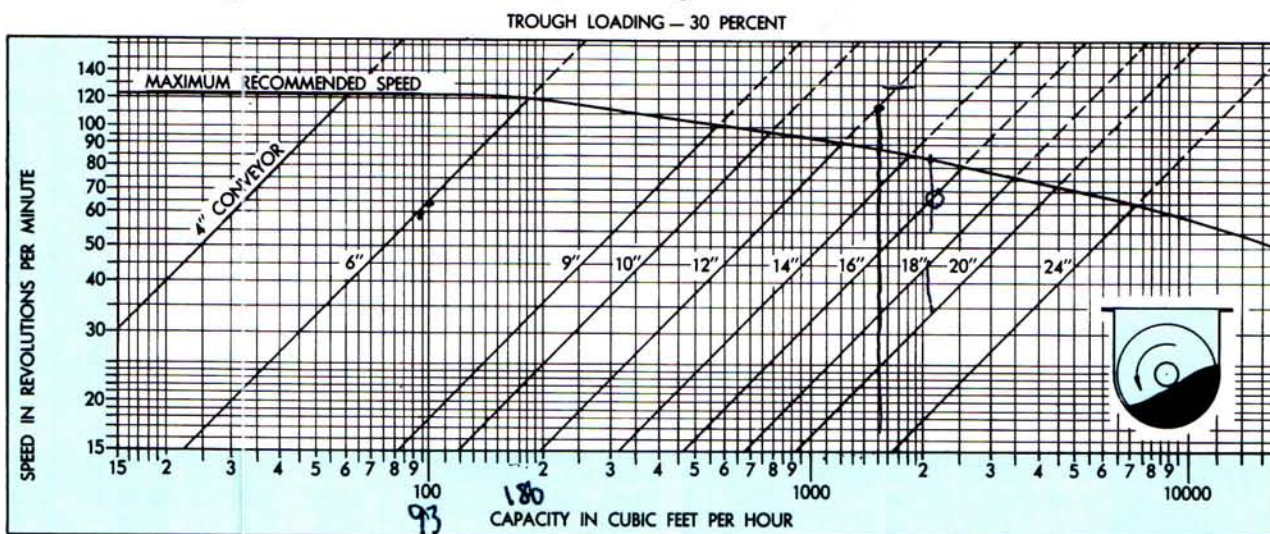


Table No. 7B



How to use Capacity Charts

1. Find your Material Classification number beside the proper Capacity Chart.
2. Using this chart only, locate the desired capacity in cubic feet/hour along the bottom edge of chart.
3. Follow the vertical line from this point upwards to the intersecting angle line of the smallest diameter conveyor that is below the Maximum Recommended Speed Line. Do not exceed this line.
4. With the required diameter of your conveyor now known, project a horizontal line from the point of intersection over to the left hand edge of the chart.
5. Read the speed in RPM that is required for your conveyor to successfully handle desired capacity.

$\frac{16}{65} = 2100$

$\frac{16}{65}$

$\frac{6}{65} = 100$

1365 RPM
6"

120 - 180

$\frac{120}{180} = \frac{x}{2125}$

12" (413.69)

6" 267.84 x 2 = 536



Capacity Charts

Table No. 7C

TROUGH LOADING - 30 PERCENT

MATERIAL CLASS
A17, A27, A37
B17, B27, B37
C17, C27, C37
D17, D27, D37
H17, H27, H37

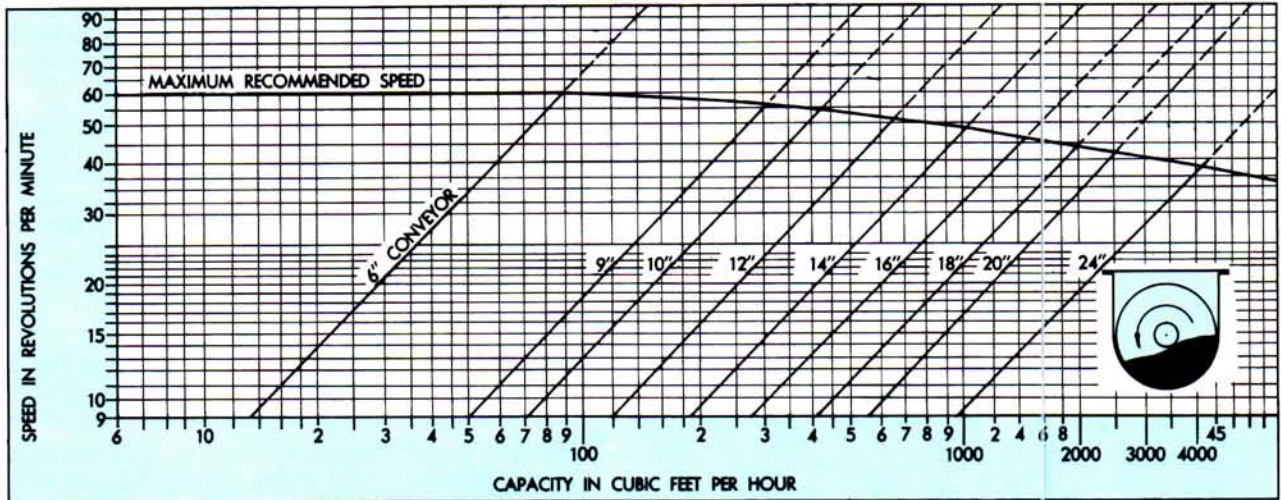
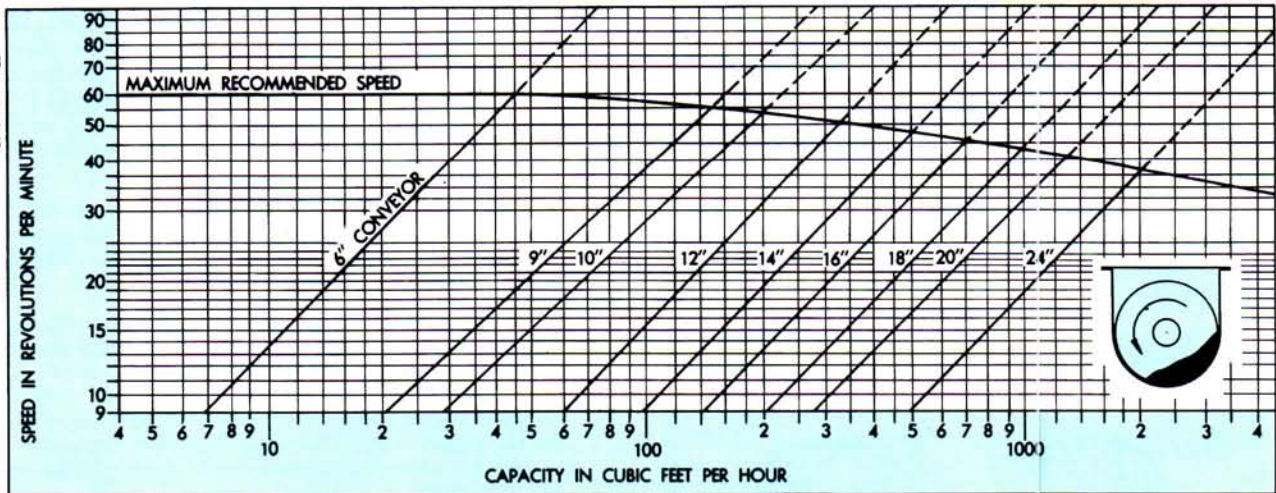


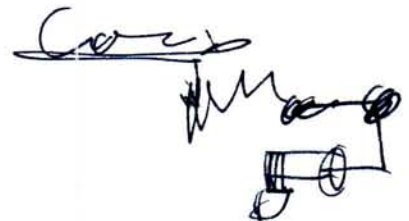
Table No. 7D

TROUGH LOADING - 15 PERCENT

MATERIAL CLASS
A18, A28, A38
B18, B28, B38
C18, C28, C38
D18, D28, D38
H18, H28, H38



- Refer to table No. 1, Size of Lumps to Diameter, page 9. If the required diameter shown on the Capacity Chart is smaller than the recommended size given in table No. 1, both the diameter and speed must be refigured.
- Refer back to the Capacity Chart and follow the vertical line from the desired capacity point upwards to the intersection with the new diameter. Proceed as before to compute the new required speed.



NOTE: Data shown on these charts is for general information only. If in doubt consult our engineers for specific recommendations.



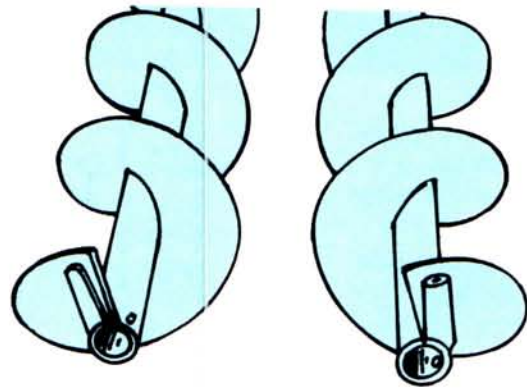
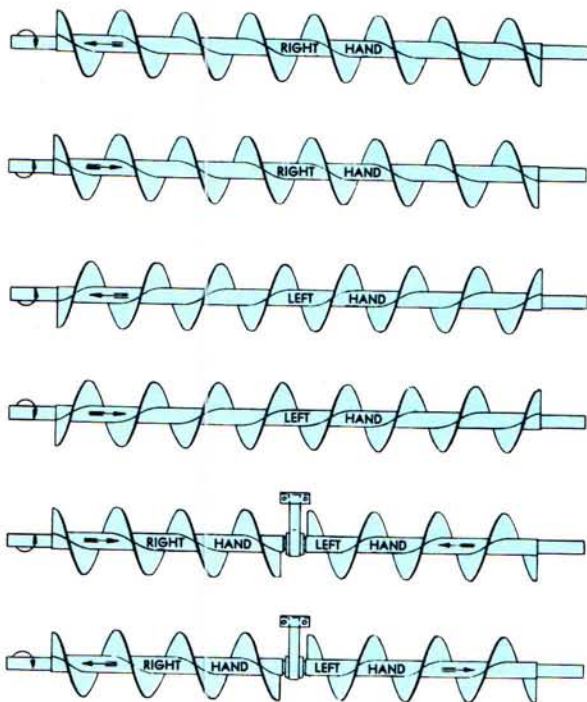
Design Data

When selecting components for your Screw Conveyor, please refer to the basic layout diagram and accompanying table on page 17 for dimensional standards and recommended arrangements.

SCREW CONVEYOR

Available as either right or left-hand. Right-hand conveyor screws will be supplied unless otherwise specified. See "HAND" OF CONVEYOR, Table No. 8. Use standard length conveyor screws wherever possible. The carrying side of the flighting surface that does the actual job of conveying is free of lugs. The back or non-carrying side of the flight is reinforced at the ends to guard against the flight folding back.

Table No. 8 "HAND" OF CONVEYOR



LEFT HAND

RIGHT HAND

COUPLINGS AND SHAFTS

Coupling, Drive and End shafts connect and transmit the rotary motion to the following conveyor screws.

It is of prime importance that the shafts selected be of sufficient strength to handle the expected horsepower load. See "Horsepower Rating", page 10.

Most conveyor systems are made of standard components, and, in order to replace or renew an intermediate section of conveyor, it is necessary to dismantle the conveyor unit from one end. By incorporating the Redi-Change feature (see page 30) a section can be easily removed from the center of the conveyor without starting from one end and dismantling the entire unit. This saves both time and labor.

HANGERS

Hangers are used as an intermediate support between two sections of conveyor screw. They help maintain alignment and provide a bearing surface for the coupling shaft.

Hangers should be placed clear of inlet openings. They can be placed at trough joints and are designed with spacer bars wide enough for this purpose. Hangers may be fitted with a variety of bearing materials to suit many application requirements.

TROUGH ENDS

Trough Ends support the conveyor screw and the trough and should utilize a thrust bearing. This bearing will hold the rotating conveyor screw in position. This provides for smoother operation, less required power and less wear on the hangers, bearings and other components. The standard duty "Chevron" or the heavy-duty "Hammond" will absorb thrust in either direction, although the preferred location of the drive is on the discharge end.

Seals are used in the trough ends to prevent leakage into or out of the trough. They also give added protection to the end bearings and shafts if abrasive or corrosive materials are being handled.

The shelf-type trough end is very often used when handling hot materials, so that the bearing and drive can be separated by some distance from the heated trough. They are also used for the handling of abrasive or very fine materials which require more effective seals than can be installed under flange bearings. The seal generally used is the split type or for more extreme applications, the pump type (page 45).

TROUGHS AND COVERS

Troughs are available in several standard designs. Standard lengths should be used wherever possible. Differing styles are available for specific applications. When planning a conveyor which will use either "Barron" or "Tite-Seal" clamps, place the cover ends at points other than directly over the hangers. This will allow the grease fittings to be brought up through the cover without interfering with the cover clamps. Gasketing between the trough and the cover is available for dust-tight operation and is standard with either Barron or Tite-Seal covers.



Design Data

Material Input and Discharge

Care should be exercised in controlling the loading of the conveyor since it is designed to handle a specific maximum volume of material. Problems arise when the conveyor is charged from storage without the benefit of input volume controls. If the rate of material flow is not inherently self-regulating or cannot be regulated by other controls, it is advisable to incorporate a Screw Feeder into the system for handling the surge loads and to deliver a smooth, measured input to the Screw Conveyor.

Input is normally through a square opening cut in the cover but may be through specially built flared spouts designed to fit the bottom of a bin or other machinery. The opening should be kept well back from the nearest hanger to eliminate any possible choking at that point.

Discharge spouts may also be built to fit special machinery and may be flared or longer than standard.

The flighting is usually eliminated beyond the midpoint of the last discharge opening to affect complete discharge and reduce the possibility of material carryover. When conveying materials which roll easily, such as soy beans or easily aerated materials such as flour, it may be advisable to install longer than standard discharge spouts. Intermediate trough discharge spouts may be fitted with a variety of discharge control gates or slides. These slides are very often manually operated, although they can also be actuated by rack and pinion gates, hydraulic or pneumatic cylinders, or can be operated with a special electric gear motor complete with limit switches. It is recommended that the discharge spout of units with only one discharge, or the final discharge spout of units with multiple discharges be furnished without slide of any kind.

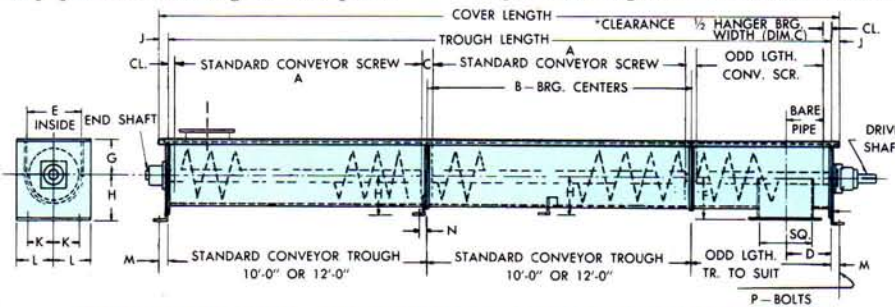


Table No. 9

ASSEMBLY DATA AND RECOMMENDED ARRANGEMENTS

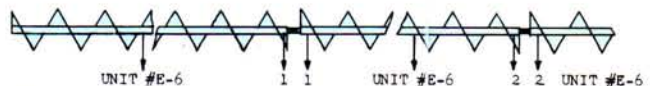
Conveyor Diameter Inches	Shaft and Coupling Diameter Inches	A	B	C	D	E	F	G	H	J	K	L	M	N	P
6	1½	9'-10	10'-0	2	6	7	5	4½	5½	1½	4¼	4¾	1	¾	¾
9	1½	9'-10	10'-0	2	8	10	7½	6½	7½	1½	4¼	6¼	1½	1¾	½
	2	9'-10	10'-0	2	8	10	7½	6½	7½	1½	4¼	6¼	1½	1¾	½
10	1½	9'-10	10'-0	2	9	11	7½	6½	8½	1¾	4¾	7¼	1¾	1¾	½
	2	9'-10	10'-0	2	9	11	7½	6½	8½	1¾	4¾	7¼	1¾	1¾	½
12	2	11'-10	12'-0	2	10½	13	8½	7¾	9½	2	6½	8½	1½	1¾	½
	2½	11'-9	12'-0	3	10½	13	8½	7¾	9½	2	6½	8½	1½	1¾	½
	3	11'-9	12'-0	3	10½	13	8½	7¾	9½	2	6½	8½	1½	1¾	½
14	2½	11'-9	12'-0	3	11½	15	10½	9¼	10½	2	6¼	9½	1½	1¾	½
	3	11'-9	12'-0	3	11½	15	10½	9¼	10½	2	6¼	9½	1½	1¾	½
16	3	11'-9	12'-0	3	13½	17	11½	10½	12	2½	7¼	10½	2	1¾	½
18	3	11'-9	12'-0	3	14½	19	12½	12½	13½	2½	8	12½	2	1¾	½
	3½	11'-8	12'-0	4	14½	19	12½	12½	13½	2½	8	12½	2	1¾	½
20	3	11'-9	12'-0	3	15½	21	13½	13½	15	2½	9½	13½	2¼	2	¾
	3½	11'-8	12'-0	4	15½	21	13½	13½	15	2½	9½	13½	2¼	2	¾
24	3½	11'-8	12'-0	4	17½	25	15½	16½	18½	2½	10	15½	2½	2¼	¾

Conveyor Match Marking

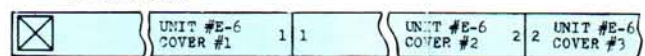
The term "Assemble, Fit and Match Mark" is commonly used when specifying individual conveyor assembly. It means that the subject conveyor will be assembled in our shop with all parts match marked before disassembly, painting and shipment. Assembly consists of putting together all conveyor parts and components to make a complete operable unit. The diagram below illustrates the method used to match mark a standard horizontal conveyor unit. Note that all major parts consisting of screws, troughs and covers are marked with the unit number. The assembly part numbers start at the feed or input end of the conveyor and run consecutively to the discharge end. All part numbers are placed at the joint connection of successive parts. Note also that all intermediate hangers are located and bolted in place. Otherwise this must be done in the field.

The conveyor unit is then disassembled and shipped with all couplings and coupling bolts in place in the screw. In

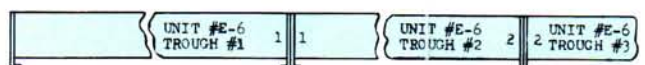
some instances, the screws are shipped in their troughs, although it is usually more practical to ship screws, troughs and covers as individual components. Smaller parts, such as hangers, conveyor trough assembly bolts and trough ends are marked with the unit number and separately bundled or boxed.



NOTE: MARKINGS ARE PLACED ON PIPE SIDES

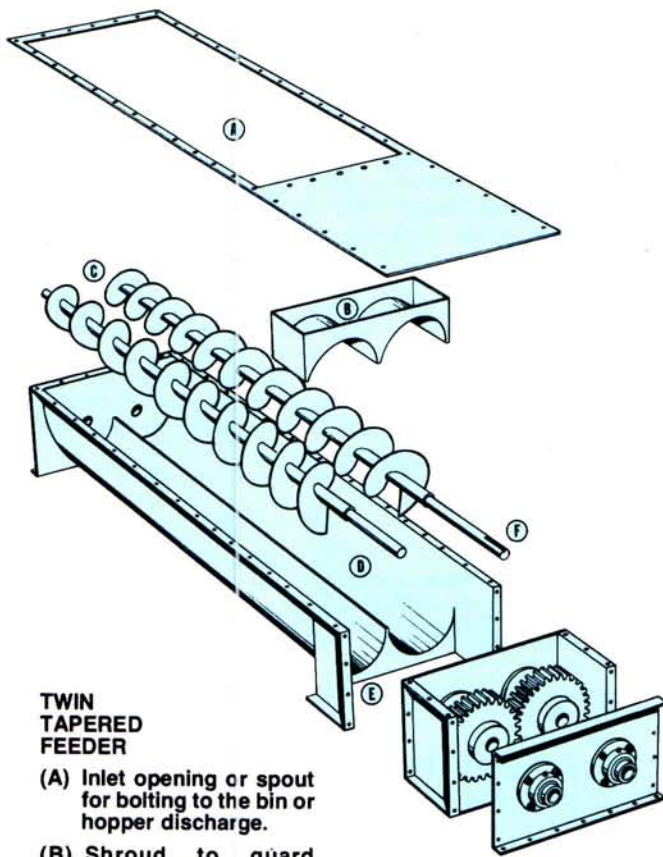


MATCH-MARK AND ASSEMBLY



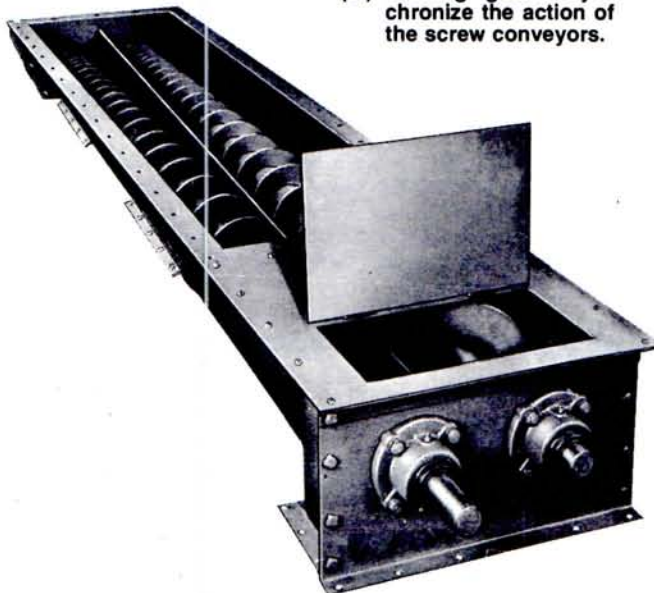
NOTE: MARKINGS BEGIN AT FEED END

Selecting a Screw Feeder



TWIN TAPERED FEEDER

- (A) Inlet opening or spout for bolting to the bin or hopper discharge.
- (B) Shroud to guard against material flooding.
- (C) Twin tapered screw conveyor permits even draw off of material for the length of the opening.
- (D) Twin-tapered trough.
- (E) Discharge spout.
- (F) Solid shafting transmits rotary motion to driving gears.
- (G) Driving gears synchronize the action of the screw conveyors.



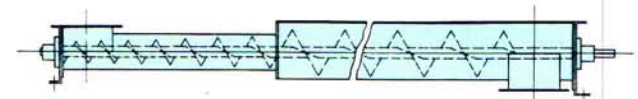
Normally short in length, Screw Feeders are designed to regulate the volumetric rate of material flow from a hopper, bin or storage unit.

The inlet must be flooded with material (100% load capacity) by incorporating changes in the construction of the flighting (diameter, pitch, etc.) and the speed of the feeder screw, the material discharge can be governed to the desired rate. Feeders can be built with variable diameter or stepped pitch or both in units composed of one, two or a multiple number of screws (ie., Live Bottom Bin) depending on the application. Long conveyors may be designed with special flights at the feed end for controlling the depth of the material to conform with the recommendations made in the Material Tables, pages 12 and 13.

Screw Feeders are normally equipped with a shroud for a short distance beyond the inlet opening. This guards against flooding of the conveyor with material. When handling very free flowing materials, extended shroud covers, tubular housing construction or short pitch flights are occasionally required for positive control.

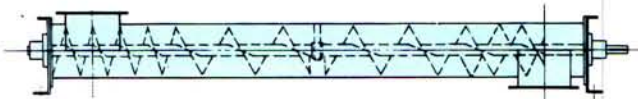
When under a choke load, screw feeders with uniform diameter and pitch normally convey the material from the rear of the inlet opening first. To draw off material evenly across the full length of the inlet, a tapered screw or stepped pitch conveyor screw is required.

While Screw Feeders are available in many designs to fit your particular requirements, several commonly used types are described below.



Multiple Diameter Feeder

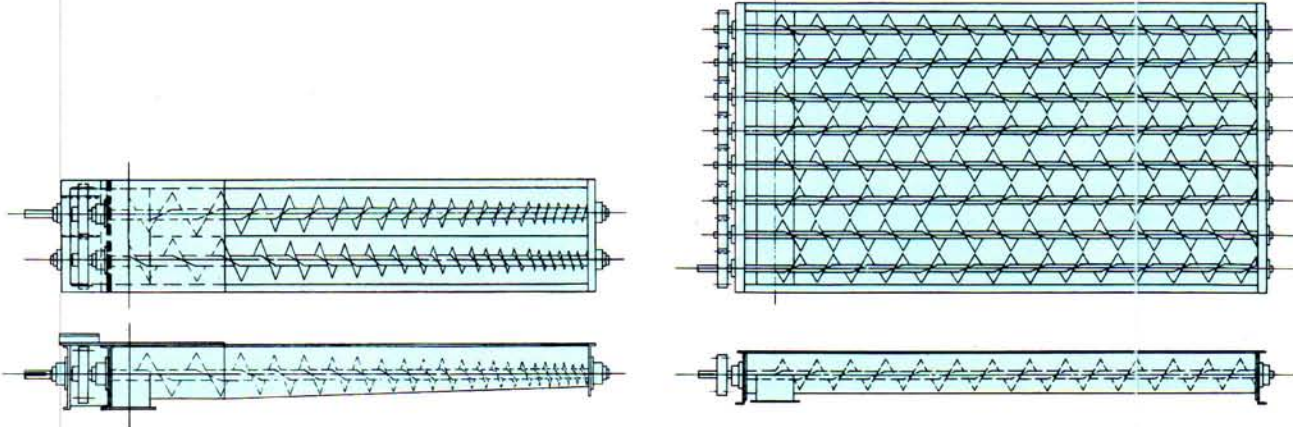
This is a combination feeder and conveyor and the physical dimensions are variable on each. The small diameter feed end will operate at a full cross-sectional load. When the material reaches the larger section, the cross-sectional load will reduce to a safe level.



Short Pitch Feeder

This is also a combination feeder and conveyor. The short pitch end will handle full cross-sectional loads. The material is then discharged into the standard section where the cross-sectional load is reduced in proportion to the increase in screw pitch. A section of double flight is pictured on the discharge end of this feeder. This creates a more even discharge from the conveyor.

Selecting a Screw Feeder



Variable Pitch Twin-Tapered Feeder

This feeder is popularly used to unload bins or hoppers at a controlled rate. The feed opening under the bin is designed large enough to prevent material bridging and accepts materials uniformly across the length and width of the opening. This eliminates dead areas in the bin and reduces the chance of material bridging or spoiling.

Live Bottom Feeder

Designed for use on straight sided bins, this feeder is composed of a number of feeder screws in tandem which serve as the bottom of the bin. Material is, therefore, drawn out equally from the full width. The Live Bottom Feeder is used to its best advantage on materials which tend to pack or bridge easily.

CAPACITY OF SCREW FEEDERS

Table No. 10

Figures shown are theoretical capacities in cubic feet per hour per R.P.M. for standard pitch screws.

Conveyor Diameter	Standard Pipe Sizes									
	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"
4"	1.56	1.44	1.35							
6"			5.30	4.97	4.41					
9"			18.99	18.49	17.85	16.25				
10"			26.28	25.73	25.02	23.49				
12"				45.28	44.42	42.99	41.89			
14"					71.67	70.15	68.73	67.10		
16"						106.35	104.72	102.86		
18"						153.06	151.20	149.10	146.5	
20"							209.50	204.00	201.0	197.5
24"							366.40	363.60	356.4	348.6

The above figures are based on 100% of cross section of actual screw capacity and may be more or less depending upon the material. These figures must be corrected for pitches other than standard.

Screw Feeder Capacity

The accompanying table No. 10 shows Screw Feeder capacities in cubic feet per hour per RPM. This table relates to full pitch or standard conveyors only. Shorter pitch flighting will convey a capacity in direct ratio to the capacity of the full pitch. For instance, a 9" conveyor with standard pitch (9") flighting on a 2 1/2" standard pipe will convey 17.85 cu. ft./hr./RPM. The same conveyor, but with 3" pitch, will convey 1/3 this amount, or 5.95 cu. ft./hr./RPM. The capacity figure is theoretical. Actual capacity will often vary due to variation in material characteristics as well as variations in diameter and pitch resulting from manufacturing tolerances.

Screw Feeder Speed

The speed of the feeder screw can be determined by dividing the desired capacity in cu. ft./hr. by the figure found

in table No. 10. For maximum efficiency, feeder screw speeds should be slower than standard screw conveyor speeds and allowances must be made for slippage of the material in the screw.

Factors Affecting The Design Of A Screw Feeder

1. The material class
2. The material physical characteristics, see page 11
3. The capacity required
4. Material Factor "F"
5. Weight of material resting on the Feeder Screw
6. The dimensions of the feeder opening

In designing a Screw Feeder, virtually every situation is unique in one respect or another. For this reason, we recommend that you consult our staff engineers for proper recommendations concerning your particular needs.



Inclined Screw Conveyors

Screw Conveyors can be operated with the flow of material inclined upward. When space allows, this is a very economical method of elevating and conveying. It is important to understand, however, that as the angle of inclination increases, the allowable capacity of a given unit rapidly decreases.

A standard Screw Conveyor inclined 15° upward may only carry 75% of its rated horizontal capacity. At an inclination of 25° , a standard conveyor may only handle 50% of its horizontal capacity. These are estimated figures and will vary with the characteristic of the material being handled. Inclined Screw Conveyor capacities can be increased over short distances if no intermediate hangers are required.

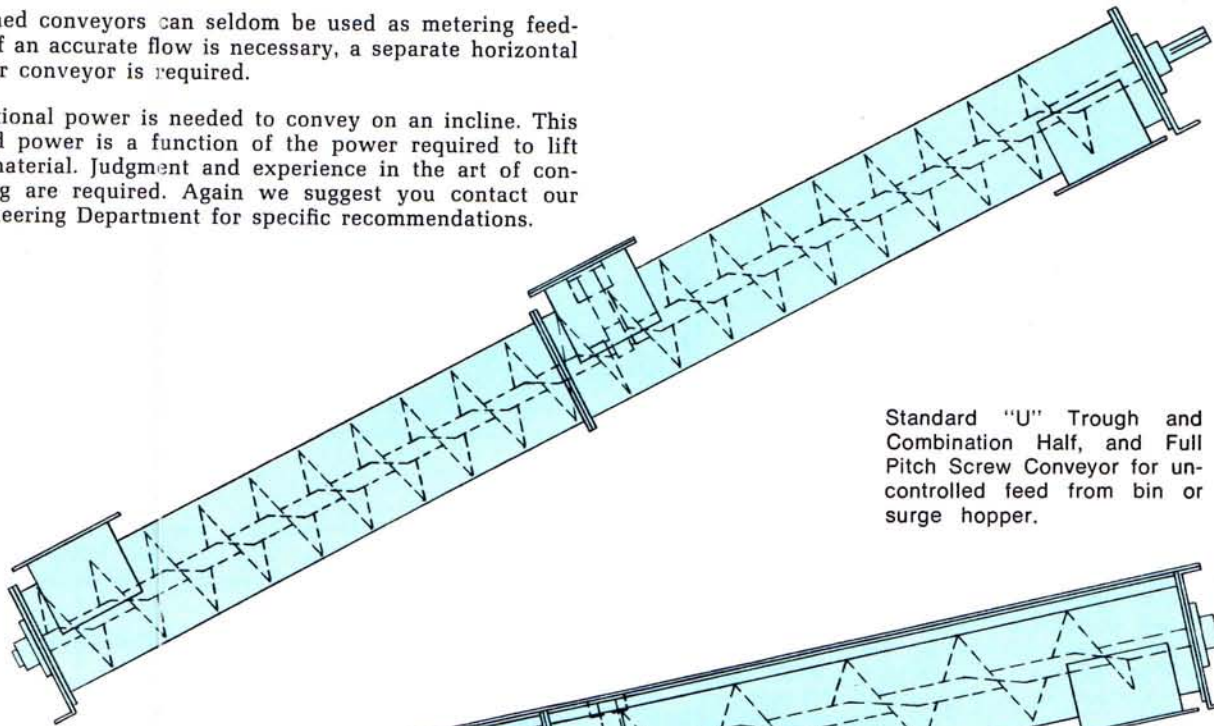
Other aids in conveying on an incline are the use of shorter than standard pitch and/or tubular housings or shrouded conveyor trough covers. Very often it becomes necessary to use high speed to overcome the tendency of material to fall back.

The above aids are resorted to in order to overcome the tendency of a screw conveyor to become less efficient as the angle of incline increases. Vertical conveying by Screw Conveyor, on the other hand, is quite successful and it remains that a 45° incline or angles approaching this figure are the most difficult on which to achieve successful conveying.

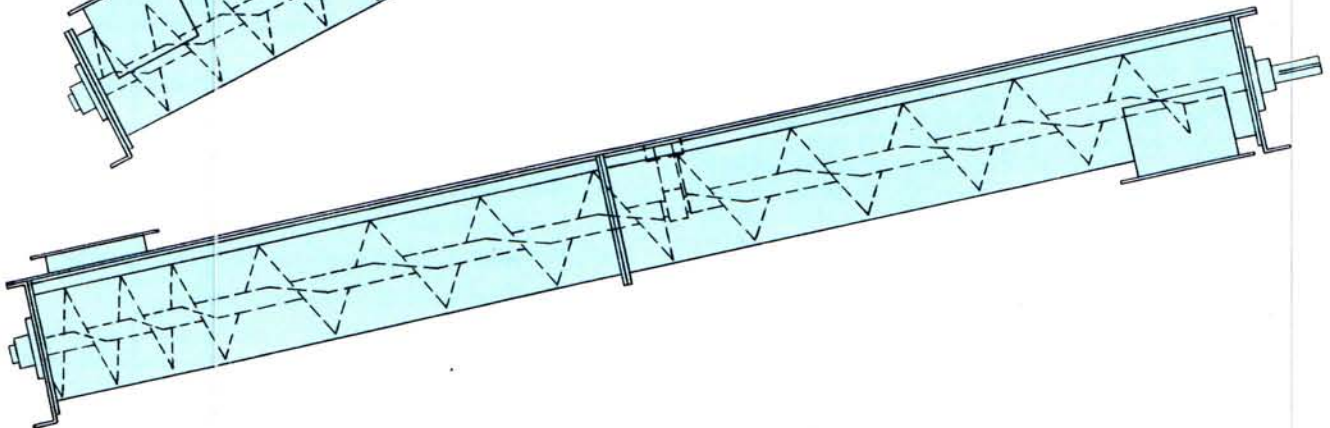
Inclined conveyors can seldom be used as metering feeders. If an accurate flow is necessary, a separate horizontal feeder conveyor is required.

Additional power is needed to convey on an incline. This added power is a function of the power required to lift the material. Judgment and experience in the art of conveying are required. Again we suggest you contact our Engineering Department for specific recommendations.

Tubular Trough and Half Pitch Screw Conveyor.



Standard "U" Trough and Combination Half, and Full Pitch Screw Conveyor for uncontrolled feed from bin or surge hopper.



Typical Drive Assemblies

Screw conveyor drives are available in a wide variety for use in transmitting the necessary rotary motion to the screw. Integral or fractional horsepower motors can be coupled with many different types of gear reducers which, in turn, are directly connected to the screw through a coupling, roller chain or Vee belt. Most types of drives provide a constant output speed but variable speed designs may be utilized for particular applications. Both constant or variable speed hydraulic drives are also available.

The typical drive arrangement pictured utilizes a modified shaft mount reducer complete with Vee-belt drive and motor mount. In this assembly, the reducer output shaft, conveyor thrust bearing, end seal and trough end are combined into one complete screw conveyor drive unit. Four different mounting assemblies are available (see below) and variations on these are available to fit virtually all possible requirements. The reducer output shaft bearings, in this case, take the place of the conveyor thrust bearing. A shaft seal adequate for most dust applications between the conveyor and the reducer is also provided.

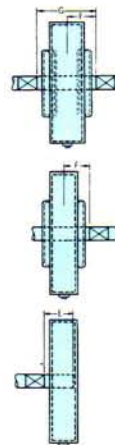
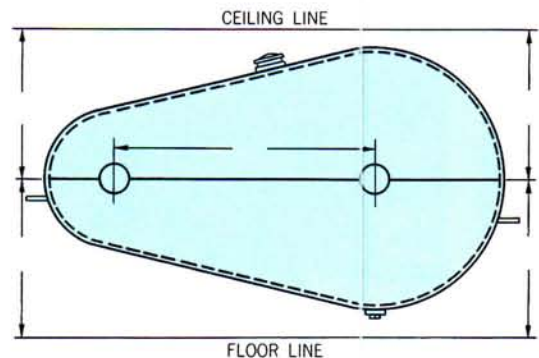
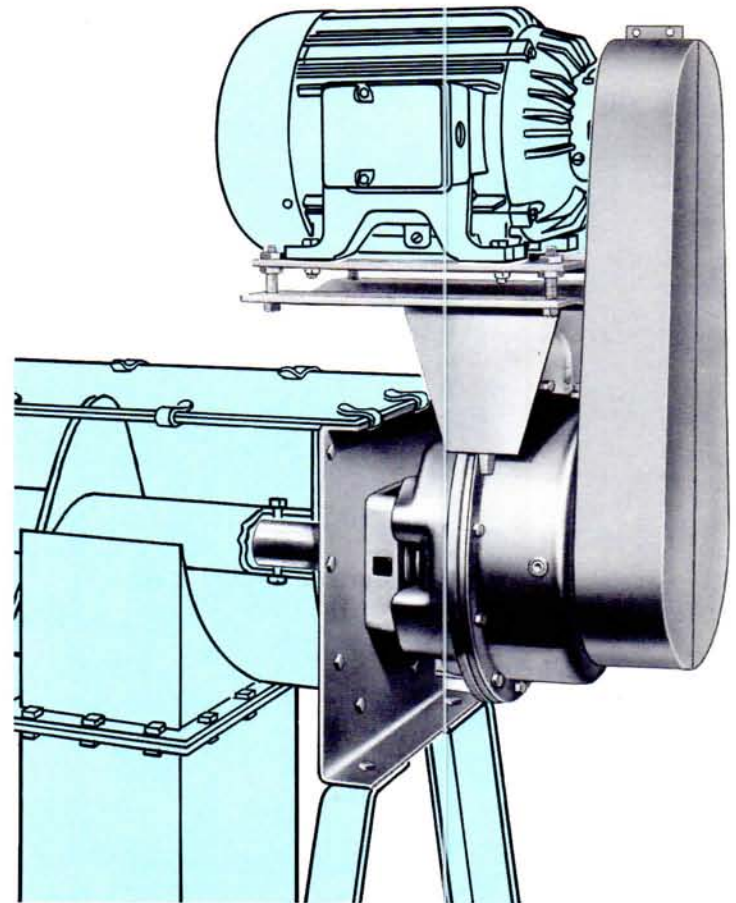
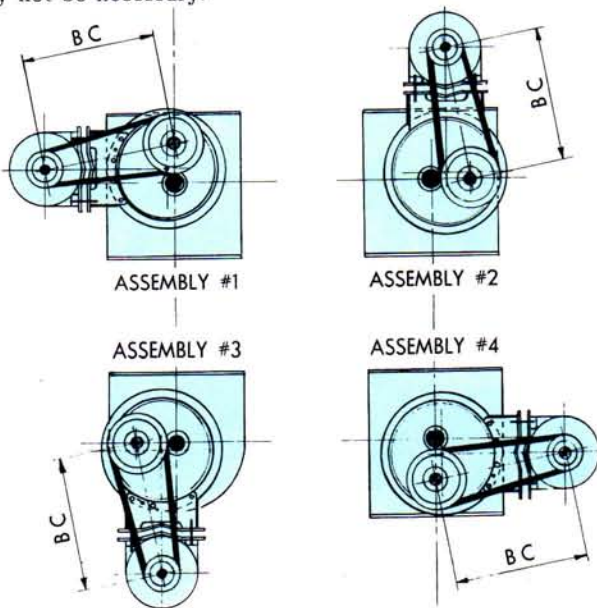
Other types of drives available are:

1. Electric gearmotor combination with roller chain drive.
2. Gear reducer connected through roller chain to the screw conveyor. Vee belts or couplings connect the reducer input shaft and the motor.
3. Variable speed controlled D.C. motors with any of several types of reducers.
4. Hydraulic drives.
5. Variable pitch pulleys between motor and reducer including the flange mount type pictured.

We do not recommend a direct coupling connection motor to reducer to conveyor. This allows no adjustment in conveyor speed which may sometimes be necessary due to manufacturing tolerances or changes in requirements.

Guards and Chain Casings

Chain casings and guards are fabricated of heavy gauge steel and then are split and hinged for ease of access and installation. All moving parts are totally enclosed to protect both workmen and equipment. When drives are located out of reach of personnel they can often be considered "guarded by location" and complete enclosures may not be necessary.



Type A casing is recommended for use on unusual operations where the extra precautions are required, such as on outdoor installations where water, dust or dirt are a problem. The double oil seals at all shaft openings insure the retention of the lubricant even under high speeds.

Type B casing is recommended for general drive installations involving moderate speeds. Single oil seals are provided at all shaft openings and are suitable for drip type lubrication.

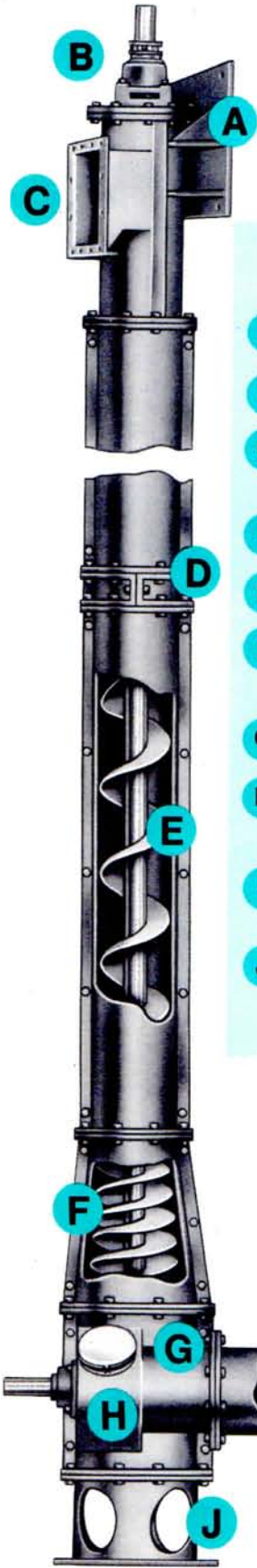
Type C casing serves mainly as a safety guard. In addition, it provides the moving parts with protection against dirt and foreign objects.

Type A and B casings are usually considered roller chain guards.

Type C casing is usually considered as a V-belt guard.



The Screw-Lift®



- A** Motor Mount
- B** High Capacity Thrust Bearing
- C** Discharge Head can be assembled at any angle
- D** Stabilizer Bearing
- E** High Speed Vertical Screw
- F** Special Pitch Tapered Double Flighting
- G** Expanded Feeder Junction
- H** Synchronized (horizontal-vertical) Material Transfer
- I** Horizontal Feeder Screw for Metering
- J** Bottom Base

The Screw-Lift is ideal for elevating, distributing and reclaiming bulk materials efficiently in a minimum of costly floor space. Generally speaking, if your material can be conveyed in a Screw Conveyor, it can be elevated in a Screw-Lift . . . and without the many problems inherent in other types of elevating equipment.

The Screw-Lift is also extremely flexible in design and arrangements. There are five basic models and four different sizes available to maximum capacity of 6000 cu. ft. per hr. Besides being flexible to work with your other processing equipment, the Screw-Lift also offers the advantages of:

1. The minimum of stagnant material as often found in a bucket elevator boot.
2. A highly efficient transfer of materials from horizontal to vertical conveying.
3. The savings of valuable floor space and less overall height required.
4. Practical conveying to heights of 70 ft. or even more depending on weight of material being conveyed and the resulting drive requirement.
5. Positive material discharge in any desired direction.
6. No material segregation or significant degradation throughout the continuing process.

The Screw-Lift can handle a wide variety of materials (from 4 lbs./cu. ft. to 150 lbs./cu. ft.). If the material can be handled in a standard Screw Conveyor it can probably be elevated in a Screw-Lift.

For complete dimension data and description, refer to Catalog No. 973.

The Screw-Lift Principle

The Screw-Lift is not just a Screw Conveyor turned on end; it is a combination of standard design parts integrated into one machine for a particular application. This machine operates as a completely closed system carrying a relatively low cross-sectional load of material. It utilizes the centrifugal force generated by the high speed of its vertical screw to actually elevate the material. It does not merely extrude the material upwards by jamming more material in behind. In fact, it is designed to insure against jamming, choking and back-pressure. This provides highly efficient operation and minimizes crushing or degradation of friable materials.

STANDARD DESIGN

Inside the expanded feeder junction, the material flow is changed from the horizontal to the vertical direction. The lower portion of the vertical Screw is a special pitch tapered double flight which starts the material moving upwards away from the feeder. These features eliminate back-pressure, choking and material degradation and are standard on all Screw-Lifts.

Also standard on all Screw-Lifts is the use of conveyor screw with precision internal collars fitted in each end. Coupling bolt holes are jig-drilled to assure positive alignment. Split Stabilizer Bearings keep the conveyor and its housing concentric at all times while offering a minimum of resistance to material flow. This provides for a smooth, quiet running unit—even when empty. The standard design of the stabilizer bearing incorporates high density polyethylene. Special bushing material such as canvas base phenolic, self-lubricating bronze with graphite inserts, graphited cast iron, nylon or standard bronze is available.

The Screw-Lift housing is made in four to six foot lengths for ease of assembly and maintenance. It is then split and flanged vertically for accessibility as well as strength and rigidity. The closely held tolerance of 1/4" clearance between the inside of the housing and the screw minimizes material build-up and facilitates clean-out.

Although normally made of carbon steel, Screw-Lifts that handle corrosive materials may be made of stainless steels or other highly resistant metal, or may be hot dipped galvanized. Surface-hardening (fusing an alloy to the fighting surface for protection against abrasion) is also available.

Where sanitation or change of product requires frequent cleaning, the Quick-Opening type Screw-Lift is recommended. Heavy-duty, quick-release clamps make opening the casing fast and easy while gaskets seal the unit for commercially dust-tight operation.

ESTABLISH THE REQUIRED CAPACITY

Under normal conditions, the Screw-Lift will handle the capacities shown at the given speeds.

Table No. 11

Screw-Lift Diameter, Inches	Nominal Rated Capacity Cu. Ft. Per Hour	Screw-Lift Input Speed RPM
6"	300	300
9"	1000	250
12"	2500	250
16"	6000	190

ESTABLISH THE REQUIRED HORSEPOWER

The formula listed below gives the basic horsepower (HP) required for an operating Screw-Lift. Additional power will be required for starting under load and for overcoming any power loss in the drive assembly or in erection misalignment.

$$HP = \frac{7 QLF}{1,000,000} + C$$

Q = Pounds per hour at maximum capacity

L = Screw-Lift height in feet

F = Material factor from table, pages 14 and 15

C = 1.0 for Types "E", "G" and "H"

1.3 for Types "C" and "J"

SAMPLE PROBLEM

Establish the Screw-Lift specifications for elevating 25,000 lbs. of soybean meal per hour. The required lift height is 45' and the horizontal feeder length required is 10'.

SOLUTION

Refer to the material table No. 6, pages 12 and 13. Note: Soybean Meal average weight per cu. ft. = 40 lbs.

Material class = B26 = (Fine — 1/8 inch mesh and under,

Free-flowing — angle of repose 30° to 45° Non-abrasive).

HP Factor .5

Now, dividing 25,000 lbs. per hour, by 40 lbs. per cu. ft., we find the required capacity is 625 cu. ft. per hour. Referring to the Screw-Lift Capacity Chart, we find that a 9" diameter unit will handle this load. By using a horizontal feeder screw under the bottom of the mixer, we will be able to exercise control and so limit the capacity to 625 cu. ft./hr. rather than the maximum that a 9" unit can handle (1,000 cu. ft./hr.). The power requirements can now be figured:

$$HP = \frac{7.0 \times 25,000 \times 45 \times .5}{1,000,000} + 1.3 = 5.3$$

A 7½ HP 900 RPM motor with Vee Belt reduction to 250 RPM screw speed is suggested.

Presuming the popular Type G unit (as pictured) is being used, the feeder is driven separately. The feeder drive is calculated as a normal horizontal Screw Conveyor from the formula shown on page 9.



Dimensional Data and Descriptions

The component section which follows is designed to give you complete dimensional data as well as individual product descriptions so that you may select the exact components to fit your particular needs.

In addition, this section augments the Engineering and Layout sections of this catalog. It is recommended that the basic layout diagram and accompanying table be referred to when selecting components for complete units. See page 17.

We have all the pieces to put together an answer to your bulk material conveying problem. Screw conveyors handle almost any bulk material efficiently and they do it economically compared to other methods. Compact, they fit into tight places, with moving parts inclosed. They're easy to install and simple to maintain. You can run them horizontally, on an incline, and, with our Screw-Lift, straight up.

We will furnish screw conveyors for you, in component parts or complete systems, with features such as automatic lock nuts at conveyor screw connections, jig-drilling of component parts for easy assembly, double flange troughs, latest designs in cover clamps, bearing materials most suitable to your application and many more Screw Conveyor specialties.

We can meet your application needs in helicoid and sectional flight types with adaptations including ribbon, special pitches and tapered — in various gauges of steel, stainless steel and other alloys, including hardened flight surfaces.

Whether your need is for components or a complete system, you can rely on our years of experience as specialists in the engineering and manufacturing of screw conveyors. Consult our specialist engineers without obligation.

Safety Precautions

Since in its usual application a screw conveyor is enclosed, it is fundamentally a "safe machine". However, as with any power operated equipment, certain precautions should be exercised to insure that the natural safety provisions of a conveyor assembly are utilized. A conveyor assembly and drive is for the most part custom designed to fulfill its application, therefore, the provisions to insure a safe installation will differ from transaction to transaction.

(1) A conveyor must not be put under power until the trough and cover is in place and secured and power transmission guards in place and closed.

(2) If the conveyor cover or housing is to be opened, the motor must first be locked out electrically in such a way that it can not be restarted by anyone either in the vicinity or remote from the conveyor.

(3) If, because of its application, the conveyor must have open housing, then the entire conveyor must be separated from personnel areas by a fence and warning signs posted.

(4) Open feed hoppers or spouts for shovel, front end loader or other manual or mechanical loading must incorporate a grating. If the characteristics of the material being handled is such that a grating can not be used, then the exposed portion of the conveyor must be guarded by a fence and warning signs posted.

(5) Electrical controls, machinery guards, walkways, machinery arrangement, training of personnel, etc., are all necessary considerations in the creation of a safe, practical installation and are generally not a part of our services. It is the responsibility of the Contractor, Installer, Owner, and User to supplement the materials furnished by Screw Conveyor Corporation to result in a safe conveyor installation and to comply with the Williams-Steiger Occupational Safety and Health Act, state or local laws and ordinances, and the American National Standard Institute Safety Code.

This is a full size facsimile of the adhesive sticker attached at time of shipment to all Screw Conveyor troughs.

⚠ WARNING



Lock out power before removing cover or guard.

Do not step on cover or guard.



Helicoid Conveyor Screws

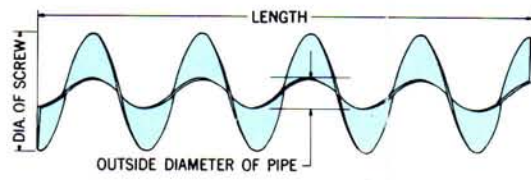
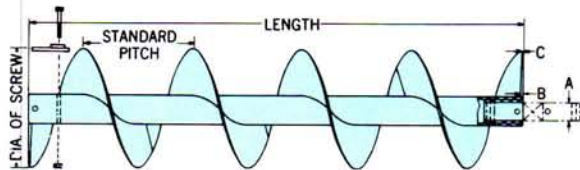
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS												
Diameter of Screw Conveyor	* † Part Number	* † Redi-Change Part Number	Mounted Conveyor		Diameter of Couplings "A"	Thickness of Flights		Outside Diameter of Pipe	Inside Diameter of Pipe	Length of Standard Section	Length Hanger Bearings	* Maximum Motor Size at 100 R.P.M.
			Weight per Section	Flighting Only Weight per Section		Next to Pipe "B"	Outer Edge "C"					
4 Standard	4H204	.....	31	9.0	1	1/8	1/16	1 3/8	1 1/4	9'10 1/2"	1 1/2	1.5
4 X	4H206	.....	38	16.0	1	3/16	3/32	1 3/8	1 1/4	9'10 1/2"	1 1/2	1.5
6 Standard	6H304	6CH304	50	14.0	1 1/2	1/8	1/16	2 3/8	2	9'10"	2	5
6X	6H308	6CH308	64	28.0	1 1/2	1/4	1/8	2 3/8	2	9'10"	2	5
6 XX	6H312	6CH312	78	42.0	1 1/2	3/8	3/16	2 3/8	2	9'10"	2	5
9 Standard	9H306	9CH306	70	31.0	1 1/2	3/16	3/32	2 3/8	2	9'10"	2	5
9 X	9H312	9CH312	101	62.0	1 1/2	3/8	3/16	2 3/8	2	9'10"	2	5
9 Special	9H406	9CH406	91	30.0	2	3/16	3/32	2 3/8	2 1/2	9'10"	2	10
9 XX	9H412	9CH412	121	60.0	2	3/8	3/16	2 3/8	2 1/2	9'10"	2	10
9 XXX	9H414	9CH414	131	70.0	2	7/16	7/32	2 3/8	2 1/2	9'10"	2	10
10 Standard	10H306	10CH306	81	42.0	1 1/2	3/16	3/32	2 3/8	2	9'10"	2	5
10 XX	10H412	10CH412	130	69.0	2	3/8	3/16	2 3/8	2 1/2	9'10"	2	10
12 Standard	12H408	12CH408	140	67.0	2	1/4	1/8	2 3/8	2 1/2	11'10"	2	10
12 X	12H412	12CH412	175	102.0	2	3/8	3/16	2 3/8	2 1/2	11'10"	2	10
12 Special	12H508	12CH508	168	64.0	2 3/16	1/4	1/8	3 1/2	3	11' 9"	3	15
12 XX	12H512	12CH512	200	96.0	2 3/16	3/8	3/16	3 1/2	3	11' 9"	3	15
12 XXX	12H614	12CH614	216	112.0	3	7/16	7/32	4	3 1/2	11' 9"	3	25
14 Standard	14H508	14CH508	170	84.0	2 3/16	1/4	1/8	3 1/2	3	11' 9"	3	15
14 XX	14H614	14CH614	236	132.0	3	7/16	7/32	4	3 1/2	11' 9"	3	25
16 Standard	16H610	16CH610	228	120.0	3	3/16	3/32	4	3 1/2	11' 9"	3	25
16 XXX	16H614	16CH614	267	163.0	3	7/16	7/32	4 1/2	4	11' 9"	3	25
18 Standard	18H610	18CH610	292	144.0	3	3/16	3/32	4 1/2	4	11' 9"	3	25

⊕ The pitch of flighting approximately equals conveyor diameter.
 * For convenience in specifying listed Helicoid Conveyor Screw, Part Numbers have been established to designate the type of Conveyor Screw and flighting, pipe and gudgeon specifications. The figure at the left of the letter indicates the diameter of the Conveyor Screw, the letter H (for Helicoid) designates the type; the first figure following the letter is twice the coupling diameter and the last two figures the nominal thickness of the flighting at the outer edge in 1/64".

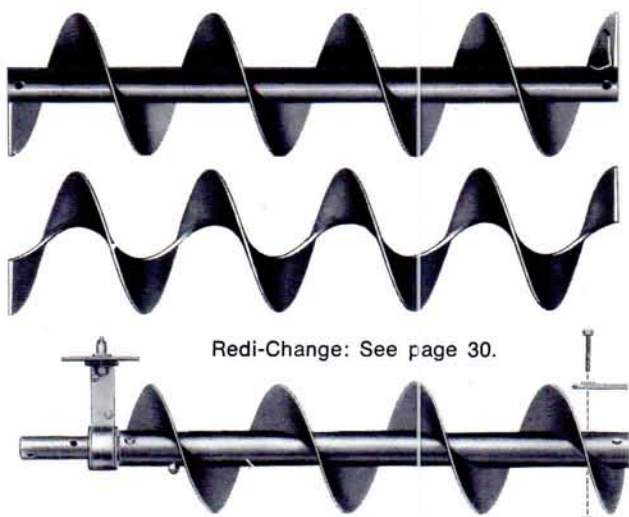
† When ordering, specify Part Numbers and whether right or left hand, also length desired. Example: 9H306 RH—9'10" or 9H306 RH—5'6".

* Horsepower is directly proportional to speed, predicated upon specified couplings and bolts.

Consult us for Helicoid Conveyor Screws with heavy shaft or special coupling diameters.



Cold rolling of special analysis strip steel into a continuous helix produces a work-hardened, smoothly finished flighting surface. Helicoid flighting is of superior strength with its diameter, pitch and thickness closely controlled. The flighting is then normally fastened to the pipe by intermittent welds and welded steel end lugs. They may be continuously welded on either one or both sides. The pipe has seamless internal collars inserted in both ends of the pipe to accommodate the shafts. Helicoid and Sectional flighting of the same diameter and shaft size are interchangeable. Refer to pages 30 through 33 for special features available on helicoid conveyor screws.



Redi-Change: See page 30.



Sectional Flight Conveyor Screws

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
⊕ Diameter of Conveyor	* † Part Number	* † Redi-Change Part Number	⊕ Diameter of Coupling "A"	Gauge or Thickness of Flights "B"	Pipe Size Standard Weight	Weight Per Section	Length of Standard Section	Length of Hanger Bearings	▲ Maximum Motor Size at 100 R.P.M.
⊕6	6S307	6CS307	1½	12	2	61	9'-10"	2	5
⊕6	6S309	6CS309	1½	10	2	64	9'-10"	2	5
⊕6	6S312	6CS312	1½	¾	2	73	9'-10"	2	5
6	6S316	6CS316	1½	¼	2	84	9'-10"	2	5
⊕9	9S307	9CS307	1½	12	2	69	9'-10"	2	5
⊕9	9S309	9CS309	1½	10	2	77	9'-10"	2	5
⊕9	9S312	9CS312	1½	¾	2	89	9'-10"	2	5
9	9S316	9CS316	1½	¼	2	107	9'-10"	2	5
⊕9	9S407	9CS407	2	12	2½	89	9'-10"	2	10
⊕9	9S409	9CS409	2	10	2½	98	9'-10"	2	10
⊕9	9S412	9CS412	2	¾	2½	109	9'-10"	2	10
⊕9	9S416	9CS416	2	¼	2½	123	9'-10"	2	10
9	9S424	9CS424	2	⅜	2½	151	9'-10"	2	10
⊕10	10S309	10CS309	1½	10	2	84	9'-10"	2	5
10	10S312	10CS312	1½	¾	2	100	9'-10"	2	5
⊕10	10S412	10CS412	2	¾	2½	118	9'-10"	2	10
⊕12	12S409	12CS409	2	10	2½	135	11'-10"	2	10
⊕12	12S412	12CS412	2	¾	2½	158	11'-10"	2	10
12	12S416	12CS416	2	¼	2½	185	11'-10"	2	10
⊕12	12S509	12CS509	2⅞	10	3	160	11'-9"	3	15
⊕12	12S512	12CS512	2⅞	¾	3	180	11'-9"	3	15
12	12S516	12CS516	2⅞	¼	3	205	11'-9"	3	15
12	12S524	12CS524	2⅞	⅜	3	260	11'-9"	3	15
⊕12	12S612	12CS612	3	¾	3½	195	11'-9"	3	25
⊕12	12S616	12CS616	3	¼	3½	218	11'-9"	3	25
12	12S624	12CS624	3	⅜	3½	269	11'-9"	3	25
⊕14	14S509	14CS509	2⅞	10	3	173	11'-9"	3	15
14	14S512	14CS512	2⅞	¾	3	200	11'-9"	3	15
⊕14	14S612	14CS612	3	¾	3½	213	11'-9"	3	25
⊕14	14S616	14CS616	3	¼	3½	245	11'-9"	3	25
14	14S624	14CS624	3	⅜	3½	308	11'-9"	3	25
⊕16	16S609	16CS609	3	10	3½	195	11'-9"	3	25
⊕16	16S612	16CS612	3	¾	3½	222	11'-9"	3	25
⊕16	16S616	16CS616	3	¼	3½	258	11'-9"	3	25
16	16S624	16CS624	3	⅜	3½	326	11'-9"	3	25
16	16S632	16CS632	3	½	3½	398	11'-9"	3	25
18	18S612	18CS612	3	¾	3½	244	11'-9"	3	25
18	18S616	18CS616	3	¼	3½	286	11'-9"	3	25
18	18S624	18CS624	3	⅜	3½	370	11'-9"	3	25
18	18S632	18CS632	3	½	3½	454	11'-9"	3	25
18	18S712	18CS712	3⅞	¾	4	264	11'-8"	4	40
18	18S716	18CS716	3⅞	¼	4	303	11'-8"	4	40
18	18S724	18CS724	3⅞	⅜	4	380	11'-8"	4	40
18	18S732	18CS732	3⅞	½	4	460	11'-8"	4	40



Sectional Flight Conveyor Screws

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS (Continued)									
⊕ Diameter of Conveyor	* † Part Number	* † Redi-Change Part Number	Diameter of Coupling "A"	Gauge or Thickness of Flights "B"	Pipe Size Standard Weight	Weight Per Section	Length of Standard Section	Length of Hanger Bearings	▲ Maximum Motor Size at 100 R.P.M.
20	20S612	20CS612	3	3/16	3 1/2	258	11'-9"	3	25
20	20S616	20CS616	3	1/4	3 1/2	314	11'-9"	3	25
20	20S624	20CS624	3	3/8	3 1/2	398	11'-9"	3	25
20	20S632	20CS632	3	1/2	3 1/2	489	11'-9"	3	25
20	20S712	20CS712	3 7/16	3/16	4	277	11'-8"	4	40
20	20S716	20CS716	3 7/16	1/4	4	323	11'-8"	4	40
20	20S724	20CS724	3 7/16	3/8	4	410	11'-8"	4	40
20	20S732	20CS732	3 7/16	1/2	4	500	11'-8"	4	40
24	24S712	24CS712	3 7/16	3/16	4	325	11'-8"	4	40
24	24S716	24CS716	3 7/16	1/4	4	385	11'-8"	4	40
24	24S724	24CS724	3 7/16	3/8	4	505	11'-8"	4	40
24	24S732	24CS732	3 7/16	1/2	4	625	11'-8"	4	40

⊕ The pitch of flights is approximately equal to the conveyor diameter on all listed specifications see page 32 for special pitch suggestions.

* For convenience in specifying listed Sectional Flight conveyor screw Part Numbers have been established to designate the type of conveyor screw, flights, pipe and gudgeon specifications. The figure to the left of the letter indicates the diameter of the conveyor screw, the letter "S" (for Sectional Flight) designates the type; the first figure following the letter is twice the coupling diameter and the last two figures the thickness of the flights.

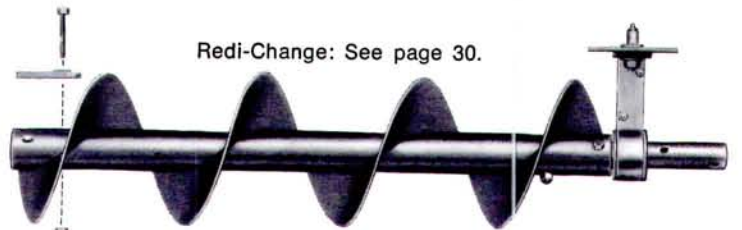
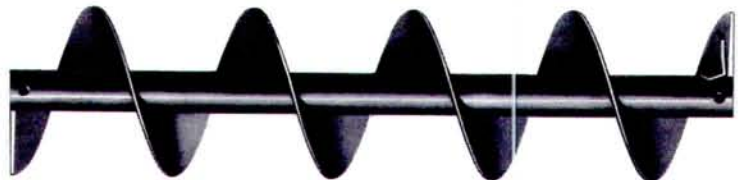
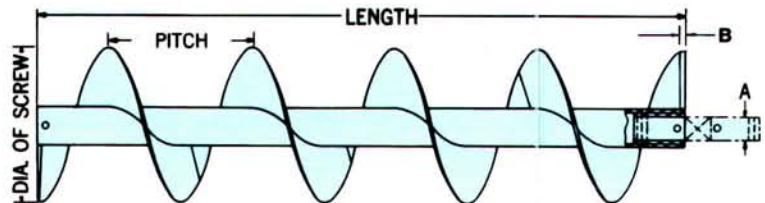
† When ordering, specify Part Numbers and whether right or left hand, also length desired. Example: 12S624 RH-11' 9" or 12S624 RH-13' 3 1/2".

▲ Horsepower is directly proportional to speed, predicted or specified couplings and bolts.

△ We suggest use of corresponding specifications in Helicoid Conveyor, which can be supplied from stock. We can manufacture Sectional Flight conveyor screws with any special feature desired, such as special diameter, pitch, thickness of flight, pipe size, tubing, solid shaft, etc. Consult us.

Each flight is blanked from a steel plate, formed into a helix and then butt welded together. Sectional flights are formed with a lead longer than their pitch to assure a tight gripping action along the pipe. The flights are then normally fastened to the pipe by intermittent welds and welded steel end lugs. They may be continuously welded on either one or both sides. The pipe has seamless internal collars in each end to accommodate the shafts. Sectional Flight conveyor screws are available in special diameters, thicknesses, pitches and pipe sizes. They also can be obtained in stainless steel, Monel, brass, copper and other metals.

See pages 30 through 33 for special features available on all conveyor screws.





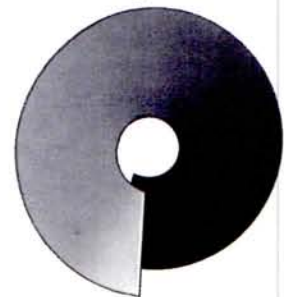
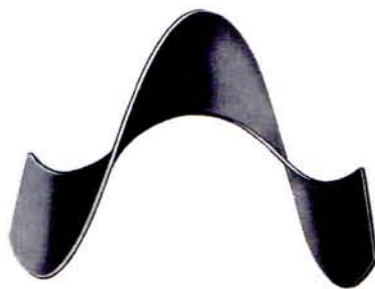
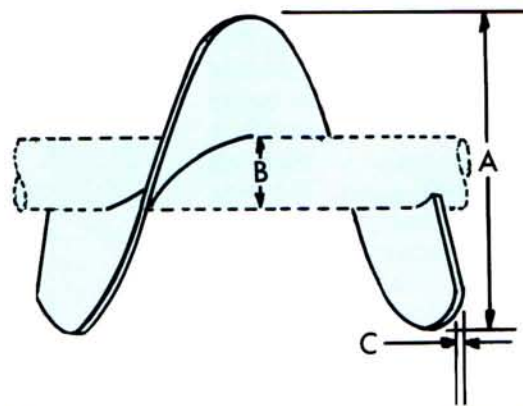
Flights for Sectional Conveyor Screws

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS

Dia. "A"	Pipe Size	Pipe O.D. "B"	Gauge "C"	STANDARD PITCH						HALF PITCH									
				STANDARD PITCH			HALF PITCH			STANDARD PITCH			HALF PITCH						
				*Part No.	Pitch	Wgt.	*Part No.	Pitch	Wgt.	*Part No.	Pitch	Wgt.	*Part No.	Pitch	Wgt.				
6	2	2 3/8	12	6F307	6	1.0	6F307H	3	.9	14	3 1/2	4	3/16	14F612	14	9.5	14F612H	7	7.8
6	2	2 3/8	10	6F309	6	1.3	6F309H	3	1.1	14	3 1/2	4	1/4	14F616	14	12.7	14F616H	7	10.5
6	2	2 3/8	3/16	6F312	6	1.8	6F312H	3	1.6	14	3 1/2	4	3/8	14F624	14	19.0	14F624H	7	15.7
6	2	2 3/8	1/4	6F316	6	2.4	6F316H	3	2.1										
9	2	2 3/8	12	9F307	9	2.5	9F307H	4 1/2	2.0	16	3 1/2	4	10	16F609	16	9.7	16F609H	8	8.3
9	2	2 3/8	10	9F309	9	3.3	9F309H	4 1/2	2.7	16	3 1/2	4	3/16	16F612	16	13.0	16F612H	8	11.0
9	2	2 3/8	3/16	9F312	9	4.4	9F312H	4 1/2	3.6	16	3 1/2	4	1/4	16F616	16	17.5	16F616H	8	15.0
9	2	2 3/8	1/4	9F316	9	6.0	9F316H	4 1/2	5.0	16	3 1/2	4	3/8	16F624	16	26.0	16F624H	8	22.5
										16	3 1/2	4	1/2	16F632	16	35.0	16F632H	8	30.0
9	2 1/2	2 3/8	12	9F407	9	2.4	9F407H	4 1/2	1.9	18	3 1/2	4	3/16	18F612	18	18.0	18F612H	9	14.1
9	2 1/2	2 3/8	10	9F409	9	3.2	9F409H	4 1/2	2.6	18	3 1/2	4	1/4	18F616	18	24.0	18F616H	9	18.8
9	2 1/2	2 3/8	3/16	9F412	9	4.2	9F412H	4 1/2	3.4	18	3 1/2	4	3/8	18F624	18	36.0	18F624H	9	28.2
9	2 1/2	2 3/8	1/4	9F416	9	5.5	9F416H	4 1/2	4.5	18	3 1/2	4	1/2	18F632	18	48.0	18F632H	9	37.6
9	2 1/2	2 3/8	3/8	9F424	9	8.4	9F424H	4 1/2	6.8										
10	2	2 3/8	10	10F309	10	3.9	10F309H	5	3.3	18	4	4 1/2	3/16	18F712	18	17.0	18F712H	9	13.0
10	2	2 3/8	3/16	10F312	10	5.3	10F312H	5	4.5	18	4	4 1/2	1/4	18F716	18	22.5	18F716H	9	17.5
10	2 1/2	2 3/8	3/16	10F412	10	5.0	10F412H	5	4.2	18	4	4 1/2	3/8	18F724	18	33.5	18F724H	9	27.0
										18	4	4 1/2	1/2	18F732	18	45.0	18F732H	9	38.0
12	2 1/2	2 3/8	10	12F409	12	5.6	12F409H	6	4.7	20	3 1/2	4	3/16	20F612	20	20.0	20F612H	10	17.5
12	2 1/2	2 3/8	3/16	12F412	12	7.5	12F412H	6	6.4	20	3 1/2	4	1/4	20F616	20	28.0	20F616H	10	23.0
12	2 1/2	2 3/8	1/4	12F416	12	10.0	12F416H	6	8.7	20	3 1/2	4	3/8	20F624	20	40.0	20F624H	10	34.5
										20	3 1/2	4	1/2	20F632	20	53.0	20F632H	10	46.0
12	3	3 1/2	10	12F509	12	5.4	12F509H	6	4.6	20	4	4 1/2	3/16	20F712	20	19.0	20F712H	10	17.0
12	3	3 1/2	3/16	12F512	12	7.2	12F512H	6	6.2	20	4	4 1/2	1/4	20F716	20	25.5	20F716H	10	20.5
12	3	3 1/2	1/4	12F516	12	9.6	12F516H	6	8.5	20	4	4 1/2	3/8	20F724	20	38.0	20F724H	10	32.5
12	3	3 1/2	3/8	12F524	12	14.4	12F524H	6	12.8	20	4	4 1/2	1/2	20F732	20	51.0	20F732H	10	44.0
12	3 1/2	4	3/16	12F612	12	7.0	12F612H	6	6.0	24	4	4 1/2	3/16	24F712	24	30.0	24F712H	12	26.0
12	3 1/2	4	1/4	12F616	12	9.1	12F616H	6	8.0	24	4	4 1/2	1/4	24F716	24	40.0	24F716H	12	34.0
12	3 1/2	4	3/8	12F624	12	13.7	12F624H	6	12.1	24	4	4 1/2	3/8	24F724	24	60.0	24F724H	12	51.0
										24	4	4 1/2	1/2	24F732	24	80.0	24F732H	12	68.0
14	3	3 1/2	10	14F509	14	7.3	14F509H	7	6.5										
14	3	3 1/2	3/16	14F512	14	9.9	14F512H	7	8.5										

*Part Numbers follow those indicated for Sectional Flight Screw Conveyor on pages 27 and 28, except the first letter "F" indicates "Flight" and the suffix letter "H" indicates "Half-Pitch." Example: 12F62 RH or 12F624H RH. The "RH" indicates Right Hand Flights.

Sectional flights are formed from steel plate with a lead slightly longer than their pitch. This assures a tight gripping action when mounted on your pipe. When ordering flights from the table above please specify part number and hand of screw. See page 16. When ordering special flights, please specify pipe or shaft size, pitch, diameter, hand and thickness.





Ribbon Conveyor Screws

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS										
Size of Conveyor	Part Number	Diameter of Coupling	Thickness of Flight	Width of Flight	Pipe Size Standard Weight	MOUNTED CONVEYOR	FLIGHTING ONLY	Length of Standard Section	Length of Hanger Bearings	Maximum Motor Size at 100 R.P.M.
						Weight per Foot	Weight per Foot			
		"A"	"C"	"D"						
6	6R312	1½	¾	1	2	6	2	9'10"	2	5
9	9R316	1½	¼	1½	2	10	5	9'10"	2	5
10	10R316	1½	¼	1½	2	11	6	9'10"	2	5
12	12R416	2	¼	2	2½	15	8	11'10"	2	10
12	12R424	2	¾	2½	2½	17	10	11'10"	2	10
12	12R524	2¾	¾	2½	3	20	10	11'9"	3	15
14	14R524	2¾	¾	2½	3	22	12	11'9"	3	15
14	14R624	3	¾	2½	3½	24	12	11'9"	3	25
16	16R616	3	¼	2½	3½	22	10	11'9"	3	25
16	16R624	3	¾	2½	3½	27	15	11'9"	3	25
18	18R624	3	¾	3	3½	30	18	11'9"	3	25
20	20R724	3¾	¾	3	4	34	21	11'8"	4	40
24	24R724	3¾	¾	3	4	39	26	11'8"	4	40

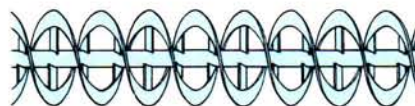
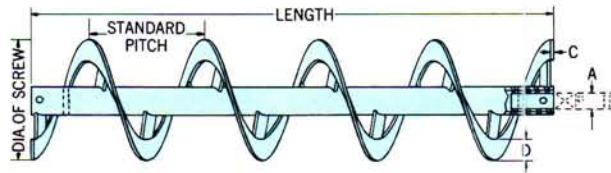
*For convenience in specifying, listed Ribbon Flight Conveyor Screw Part Numbers have been established to designate the type of Conveyor Screw flights, pipe and gudgeon specifications.

†When ordering Ribbon Flight Conveyor Screw specify Part Number, whether right or left hand and length desired. Example: 16R616 RH-11'9" or 16R616 RH-3'4".

When ordering Ribbon Conveyor Screw Flighting specify as above except add "Flighting Only."

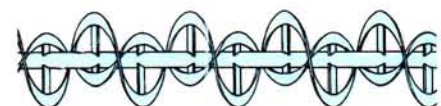
▲Horsepower is directly proportional to speed predicated on specified coupling and bolts.

Ribbon conveyor screws are often used in mixing applications, however, their prime application is handling sticky or gummy materials which normally collect where the flights join the pipe. The open design of a ribbon conveyor screw minimizes this problem. When handling dry materials, mixing action results if the cross-sectional load is larger than the face of the flight (dimension D). The ribbon flights are fastened to the pipe by "Nu-Weld" lugs which eliminate the necessity of drilling fastening holes in the mounting pipe and, therefore, assure you of a stronger unit. The pipe has seamless internal collars in each end. Ribbon flight conveyor screws are available in many sizes and specifications other than listed in the table and are available in various materials, stainless steel, Monel, etc. See pages 30 through 33 for special features available on all conveyor screws.



Double Flight Ribbon Conveyor Screw

Used to handle sticky materials, the double flight ribbon conveyor screw also provides a more even discharge.



Double Flight Ribbon Mixing Conveyor Screw

Double flight ribbon mixing conveyor screws consist of an outer ribbon conveyor screw with a smaller diameter inner ribbon of the opposite hand. The pitch of the inner and outer screws is the same. This design moves the material back and forth imparting a thorough mixing action while conveying.



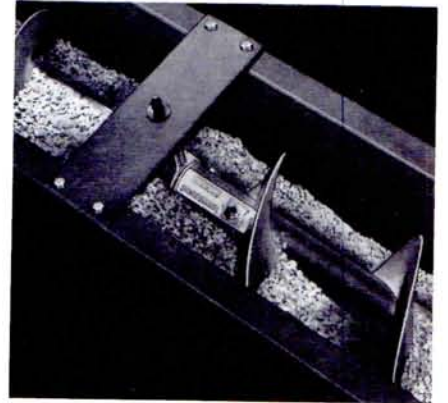
Special Designs Available on All Conveyor Screws



Simply disconnect the REDI-CHANGE section — clamping keys and hanger.



Lift the conveyor section out and perform necessary replacement or repairs.

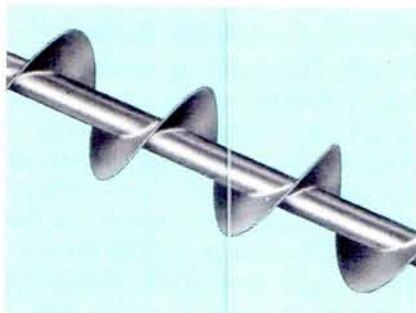
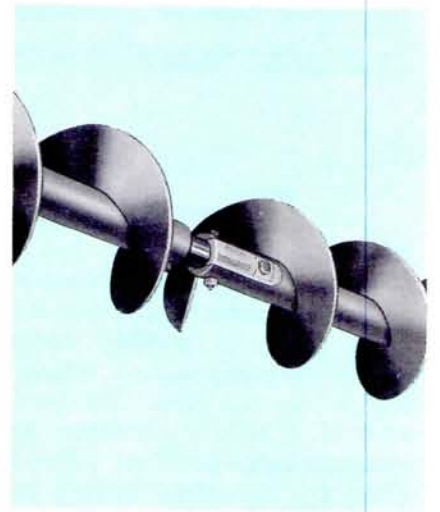


Replace the conveyor section, bolt the REDI-CHANGE clamping key in place and you are back in production with minimum downtime and expense!

Redi-Change Quick Disconnect Conveyor Screws

The Redi-Change feature allows you to perform conveyor screw changes and repairs without dismantling the entire conveyor. The Redi-Change clamping key is bolted to one end of the conveyor pipe. By disconnecting the Redi-Change section — unbolting the clamping keys and hanger — a complete conveyor section can be lifted out without disturbing any preceding sections. To replace the section, bolt the Redi-Change clamping keys and the hanger in place and you are back in production.

The Redi-Change feature is available on all types of conveyor screws. Although normally supplied with the Redi-Change clamping key in only one end, conveyor sections with a clamping key in both ends are available on request. When assembling the conveyor, place the end with the Redi-Change clamping key nearest the drive end. This will eliminate any need to remove the drive unit for conveyor repairs. When ordering a screw conveyor with the Redi-Change quick disconnect coupling, specify Redi-Change part numbers (pages 25-27).



Stainless Steel Conveyor Screws

Stainless steel screw conveyors are ideal for use in the food, drug, chemical and virtually all other industries where either sanitation, corrosion or extreme temperatures are a problem. Stainless steel conveyor screws and parts are manufactured to the same specifications as are standard mild steel. The

flights can be welded continuously to one or both sides of the pipe and the weld may then be ground to your specifications. Any analysis of stainless steel may be used in the construction of your screw conveyor. Stainless accessories such as hangers, troughs, etc., are also available.



Special Designs Available on All Conveyor Screws

Hammond Hard-Surfaced Conveyor Screws



Hammond Hard-Surfaced conveyor screws are designed to prolong the life of flights while handling abrasive materials. An alloy is permanently fused to the carrying side (of a width in relation to the cross-

sectional load, see chart) of the fighting face. As shown in the photo, the alloy is also applied along the ends of the fighting up to the pipe to reduce wear at the hanger joints where some material build-up generally occurs.

Additional Types of Abrasion Resistant Conveyor Screws and Accessories

If desired, conveyor screws may be furnished in abrasion resistant metals, such as 40/50 carbon, T-I, nickel steel or may be coated with Stellite, Hardex, Airco, etc.

When handling abrasive materials, consideration should be given to

protecting conveyor accessories. Hardened couplings, outboard bearings, trough ends and hangers with white iron or hardened surface bearings can be furnished. Troughs of heavy abrasion resistant metals are also available.

Corrosion Resistant Conveyor Screws

Conveyor screws which must handle corrosive materials may be made of special resistant metals such as stainless steel, Monel, Inconel, Corten, etc. In addition, they may be hot dip galvanized for protection against mild corrosion.

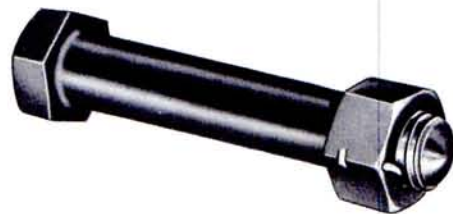
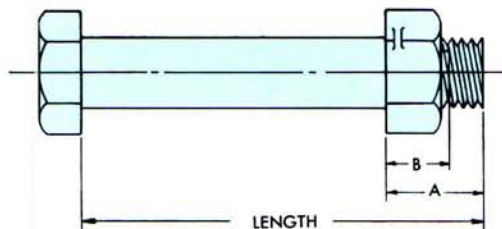
Conveyor Diameter	Width of Hard Surface	Applicable Conveyor Screw ▲
6	1 "	6H304, 6H308, 6H312 6S307, 6S309, 6S312
9	1½"	9H306, 9H312, 9H406, 9H412 9S307, 9S309, 9S312, 9S407, 9S409, 9S412
10	1½"	10H306, 10H412 10S309, 10S312, 10S412
12	2 "	12H408, 12H412, 12H508, 12H512 12S409, 12S412, 12S509, 12S512, 12S612
14	2 "	14H508 14S509, 14S512, 14S612
16	2½"	16H610 16S609, 16S612
18	2½"	18S612, 18S712
20	3 "	20S612, 20S712
24	3 "	24S712

▲ For Heavier Flight Thickness We Recommend An Overlay Process Such As Stellite, Hardex or Airco.



Bolts and Coupling Shafts

Tem-U-Lac Coupling Bolts

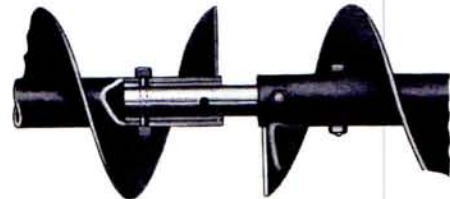
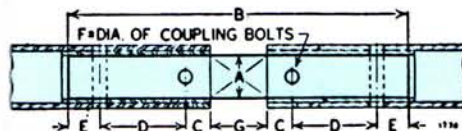


The Tem-U-Lac is a special bolt and nut forged of high analysis steel to give the required toughness for the severe service encountered. It has a hex head and the thread is cut to the proper length so that it does not project into and cut or wear the pipe walls. The self-locking hexagon nut features a stainless steel pin which follows the bolt thread while the nut is being tightened down. This prevents the nut from vibrating or working loose, causing damage and downtime, yet it loosens easily when pressure is applied by an ordinary wrench.

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS

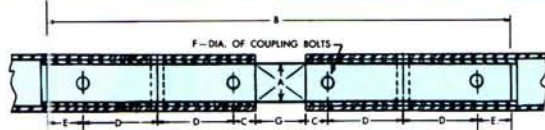
Shaft Diameter	Pipe Size	Bolt Size	Part Number	Weight Per 100	Dimensions A	B
1"	1 1/4	3/8 x 2 1/4	433333	10	1/2	3/8
1 1/2"	2	1/2 x 3	433448	25	3/4	1/2
2"	2 1/2	5/8 x 3 3/4	433558	45	7/8	5/8
2 1/2"	3	3/4 x 4 1/4	433570	52	1	3/4
3"	3 1/2	3/4 x 5	433680	86	1 1/4	3/4
3"	4	3/4 x 5 1/2	433688	88	1 3/8	3/4
3 1/2"	4	3/4 x 5 1/2	433788	92	1 3/8	3/4

Screw Conveyor Couplings



Made from selected cold rolled steel shafting, coupling shafts are jig-drilled to assure a match with the jig-drilled conveyor pipe. When handling non-abrasive materials, standard cold rolled steel couplings are recommended. Hardened steel couplings are recommended when handling abrasives and are case-hardened with a tough ductile core.

Shaft Size A	PART NUMBER		B	C	D	E	F	G	Wgt.
	Cold Rolled Steel Couplings	Hardened Steel Couplings							
1	434002	434002H	7 1/2	1/2	2	1/2	3/8	1 1/2	1.5
1 1/2	434003	434003H	11 1/2	3/8	3	3/8	1/2	2	5.6
2	434004	434004H	11 1/2	3/8	3	3/8	3/8	2	9.6
2 1/2	434005	434005H	12 3/4	1 1/16	3	1 1/16	3/8	3	16.2
3	434006	434006H	13	1	3	1	3/4	3	24.7
3 1/2	434007	434007H	17 1/2	1 1/2	4	1 1/4	3/8	4	44.5



Shaft Size A	B	C	D	E	F	G	Wgt.
1 1/2	17 1/2	3/8	3	3/8	1/2	2	8.5
2	17 1/2	3/8	3	3/8	3/8	2	14.5
2 1/2	18 3/4	1 1/16	3	1 1/16	5/8	3	23.8
3	19	1	3	1	3/4	3	36
3 1/2	25 1/2	1 1/2	4	1 1/4	3/8	4	65

High Torque Construction

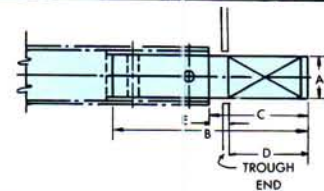
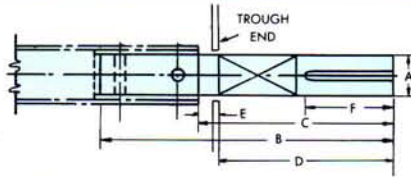
The motor size limitations specified on pages 10, 25, 26, 27 and 29 can often be increased considerably through the use of three coupling bolts in the end of the conveyor pipe rather than the standard two bolts. The conveyor drive, tail and coupling shafts are jig-drilled to match the three holes in the conveyor pipe. Consult our engineering department for maximum drive sizes.



Drive and End Shafts

Shaft Diameter	DRIVE SHAFTS			
	Without End Seal		With End Seal	
	For #100, #101 Trough End	For #102, #103 Trough End	For #100, #101 Trough End	For #102, #103 Trough End
1	382033K	382031K		
1½	383053K	383046K	383057K	383053K
2	384059K	384052K	384066K	384059K
2½	385069K	385060K	385076K	385067K
3	386076K	386066K	386083K	386074K
3½	387094K	387082K	387103K	387091K

END SHAFTS			
Without End Seal		With End Seal	
For #100, #101 Trough End	For #102, #103 Trough End	For #100, #101 Trough End	For #102, #103 Trough End
375224	375222		
375337	375333	375344	375340
375440	375434	375448	375441
375547	375538	375554	375545
375652	375642	375659	375649
375765	375753	375774	375762



DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS

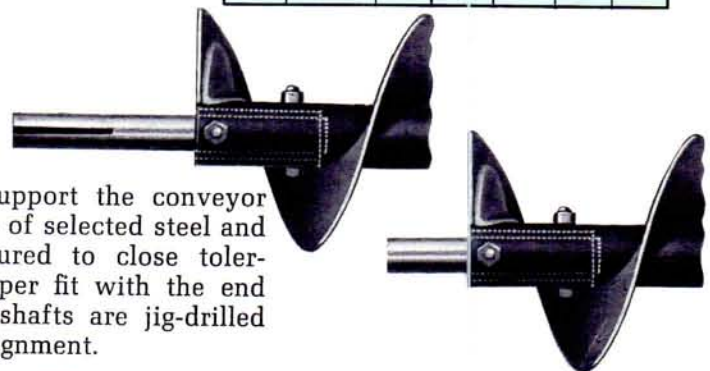
Shaft Size "A"	DRIVE SHAFTS							
	Part Number	B	C	D	E	F	Key Seat	Wgt.
1"	382031K	7⅞	4⅞	3⅛	⅝	2¼	¼ x ⅝	1.8
1"	382033K	8⅞	5⅞	4⅞	⅝	2¼	¼ x ⅝	1.9
1½"	383046K	11½	6¾	5½	1¼	3¼	⅜ x ⅜	5.8
1½"	383053K	13¼	8½	7¼	1¼	3¼	⅜ x ⅜	6.7
1½"	383057K	14¼	9½	8¼	1¼	3¼	⅜ x ⅜	7.2
2"	384052K	13⅞	8⅞	7⅞	1¼	4½	½ x ¼	11.7
2"	384059K	14⅞	10⅞	8⅞	1¼	4½	½ x ¼	13.3
2"	384066K	16½	11¾	10½	1¼	4½	½ x ¼	14.7
2½"	385060K	15⅞	10¼	8⅞	1⅜	5½	⅝ x ⅝	20.0
2½"	385067K	16⅞	12	10⅞	1⅜	5½	⅝ x ⅝	22.0
2½"	385069K	17⅞	12½	10⅞	1⅜	5½	⅝ x ⅝	23.0
2½"	385076K	19⅞	14¼	12⅞	1⅜	5½	⅝ x ⅝	25.4
3"	386066K	16⅞	11⅞	9¾	1⅞	6	¾ x ⅜	33.3
3"	386074K	18⅞	13⅞	11½	1⅞	6	¾ x ⅜	37.0
3"	386076K	19⅞	14⅞	12¼	1⅞	6	¾ x ⅜	38.3
3"	386083K	20⅞	15⅞	14	1⅞	6	¾ x ⅜	41.8
3½"	387082K	20⅞	13⅞	11½	2⅞	7¼	⅞ x ⅞	60.0
3½"	387091K	22⅞	16⅞	13¼	2⅞	7¼	⅞ x ⅞	66.0
3½"	387094K	23⅞	16⅞	14½	2⅞	7¼	⅞ x ⅞	68.0
3½"	387103K	25⅞	19⅞	16¾	2⅞	7¼	⅞ x ⅞	75.0

Shaft Size "A"	END SHAFTS					
	Part Number	B	C	D	E	Wgt.
1"	375222	5⅞	2⅞	1⅛	⅝	1.2
1"	375224	6⅞	3⅞	2⅞	⅝	1.4
1½"	375333	8¾	3½	2¼	1¼	4.2
1½"	375337	9¾	4½	3¼	1¼	4.7
1½"	375340	10	5¼	4	1¼	5.0
1½"	375344	11	6¼	5	1¼	5.5
2"	375434	8⅞	3⅞	2⅞	1¼	7.6
2"	375440	10¼	5½	4¼	1¼	9.1
2"	375441	10⅞	5⅞	4⅜	1¼	9.2
2"	375448	12	7¼	6	1¼	10.7
2½"	375538	9⅞	4¼	2⅞	1⅜	13.0
2½"	375545	11⅞	6½	4⅞	1⅜	15.1
2½"	375547	11⅞	7	5⅞	1⅜	15.8
2½"	375554	13⅞	8¼	6⅞	1⅜	18.2
3"	375642	10⅞	5⅞	3¼	1⅞	21.0
3"	375649	12⅞	7⅞	5½	1⅞	24.5
3"	375652	13⅞	8⅞	6¼	1⅞	26.0
3"	375659	14⅞	9⅞	8	1⅞	29.0
3½"	375753	13⅞	6⅞	4¼	2⅞	39.2
3½"	375762	15⅞	8⅞	6½	2⅞	45.8
3½"	375765	16⅞	9⅞	7¼	2⅞	48.0
3½"	375774	18⅞	11⅞	9½	2⅞	54.0

All shafts normally drilled and keyseated. Keys are not included. If shafts are required with other than standard projection and keyway or with other special specifications details should accompany order.

The conveyor drive shaft transmits the rotary motion from the drive unit to the conveyor screw. They are, therefore, of high-quality, cold-rolled steel and are manufactured to closely controlled tolerances to fit the bearing clearances. Drive shaft keyways are accurately cut to transmission specifications and coupling bolt holes are jig-drilled to assure perfect alignment with the jig-drilled conveyor pipe.

End Shafts support the conveyor screw and are of selected steel and are manufactured to close tolerances for proper fit with the end bearing. End shafts are jig-drilled for perfect alignment.





Hangers

Styles No. 216 and 230

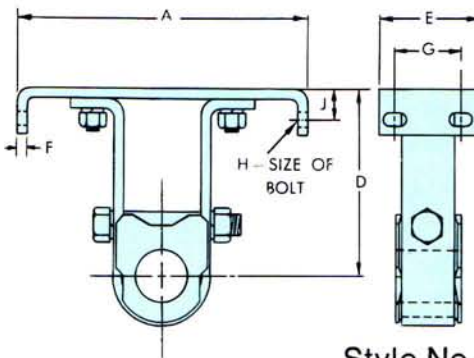
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS														
Diameter of Conveyor	Style 216 Part Number	Style 230 Part Number	Bearing Bore	Bearing Length Δ	A	B	C	D	E	F	G	H	J	Weight
6	16063	30063	1½	2	7	9¾	8¾	4½	4	¼	2½	¾	¾	6
9	16093	30093	1½	2	10	13½	12¼	6½	4	¼	2½	¾	1	9
9	16094	30094	2	2	10	13½	12¼	6½	4	¼	2½	¾	1	10
10	16103	30103	1½	2	11	14½	13¾	6¾	4	¼	2½	¾	1	10
10	16104	30104	2	2	11	14½	13¾	6¾	4	¼	2½	¾	1	11
12	16124	30124	2	2	13	17½	15¾	7¾	4	¾	2½	½	1¼	12
12	16125	30125	2¾	3	13	17½	15¾	7¾	4	¾	2½	½	1¼	18
12	16126	30126	3	3	13	17½	15¾	7¾	4	¾	2½	½	1¼	20
14	16145	30145	2¾	3	15	19½	17¾	9¼	4	½	2½	½	1¾	22
14	16146	30146	3	3	15	19½	17¾	9¼	4	½	2½	½	1¾	24
16	16166	30166	3	3	17	21½	19¾	10¾	4	½	2½	½	1¾	26
18	16186	30186	3	3	19	24½	22¼	12¾	5	½	3½	¾	1¾	28
18	16187	30187	3¾	4	19	24½	22¼	12¾	5	½	3½	¾	1¾	30
20	16206	30206	3	3	21	26½	24¼	13½	5	½	3½	¾	1¾	30
20	16207	30207	3¾	4	21	26½	24¼	13½	5	½	3½	¾	1¾	32
24	16247	30247	3¾	4	25	30½	28¼	16½	5	½	3½	¾	1¾	36

*Part numbers shown signify hangers with hard iron bearings only. For hangers with Oil Impregnated Wood Bearing; add suffix WB.

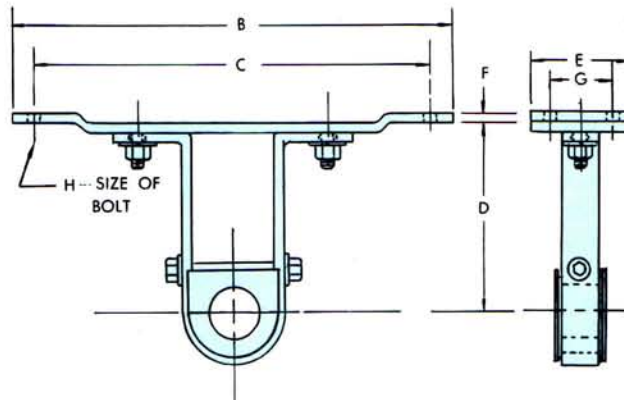
Δ Actual bearing length is 1/16 less than nominal dimension shown here.

These are hangers designed for the most severe abrasive service. The Style 216 is the most popular since it will mount on the inside of the trough and therefore is most suitable for use with dust-tight or weather-tight covers. Both hangers have wide top bars for greater stability and to permit their mounting across trough flange joints. Because of the usual application of these hangers hard iron bearings are standard, however, Oil Impregnated Wood bearings are readily available.

Style No. 216



Style No. 230





Hangers

Styles No. 220 and 226

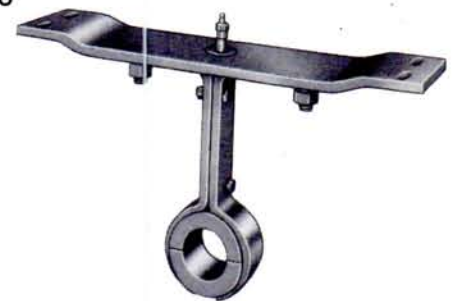
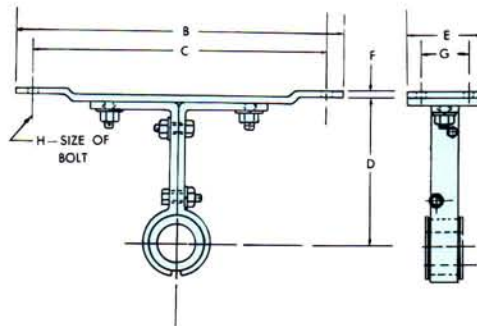
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS														
Diameter of Conveyor	Style 220 Part Number	Style 226 Part Number	Bearing Bore	Bearing Length Δ	A	B	C	D	E	F	G	H	J	Weight
4	20042	26042	1	1½	5	7¾	6¾	3⅝	3	¼	2	⅜	¾	4
6	20063	26063	1½	2	7	9¾	8¾	4½	4	¼	2½	⅜	¾	6
9	20093	26093	1½	2	10	13½	12¼	6⅞	4	¼	2½	⅜	1	8
9	20094	26094	2	2	10	13½	12¼	6⅞	4	¼	2½	⅜	1	9
10	20103	26103	1½	2	11	14½	13¼	6⅞	4	¼	2½	⅜	1	9
10	20104	26104	2	2	11	14½	13¼	6⅞	4	¼	2½	⅜	1	10
12	20124	26124	2	2	13	17½	15¼	7¾	4	⅜	2½	½	1¼	14
12	20125	26125	2⅞	3	13	17½	15¼	7¾	4	⅜	2½	½	1¼	20
12	20126	26126	3	3	13	17½	15¼	7¾	4	⅜	2½	½	1¼	22
14	20145	26145	2⅞	3	15	19½	17¾	9¼	4	½	2½	½	1⅜	23
14	20146	26146	3	3	15	19½	17¾	9¼	4	½	2½	½	1⅜	25
16	20166	26166	3	3	17	21½	19¾	10⅞	4	½	2½	½	1⅜	28
18	20186	26186	3	3	19	24½	22¼	12⅞	5	½	3½	⅝	1⅞	29
18	20187	26187	3⅞	4	19	24½	22¼	12⅞	5	½	3½	⅝	1⅞	31
20	20206	26206	3	3	21	26½	24¼	13½	5	½	3½	⅝	1⅞	32
20	20207	26207	3⅞	4	21	26½	24¼	13½	5	½	3½	⅝	1⅞	34
24	20247	26247	3⅞	4	25	30½	28¼	16½	5	½	3½	⅝	1⅞	40

*Part numbers shown signify hangers with hard iron bearings only. For hangers with Babbitt Bearings add suffix SB, with Oil Impregnated Bearings add suffix WB, with Bronze Bearings add suffix BR, with Nylon Bearings add suffix NY. Lubrication pipes with Alemite Fittings are furnished for use with Babbitt, Bronze and Nylon Bearings only.

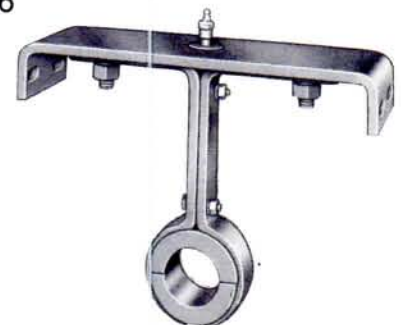
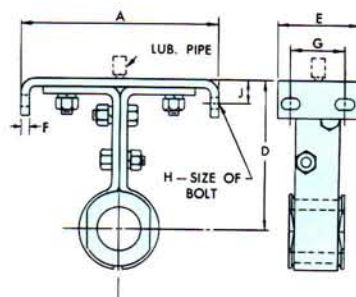
Δ Actual bearing length is ⅛ less than nominal dimension shown here.

These hangers are the most popular styles for the usual conveyor application as they offer the least possible obstruction to the flow of material. The Style 226 is the most popular since it mounts completely inside the trough and, therefore, is more suitable for use with dust-tight or weather-tight covers. Both hangers have wide top bars for greater stability and to permit their mounting across trough flange joints. The standard bearings used are Babbitt, Hard Iron, Oil Impregnated Wood, Bronze and Nylon or Nylatron; also available on special order is Bronze Oilite, Gatke, Stellite, Teflon or practically any conceivable bearing material.

Style No. 220



Style No. 226



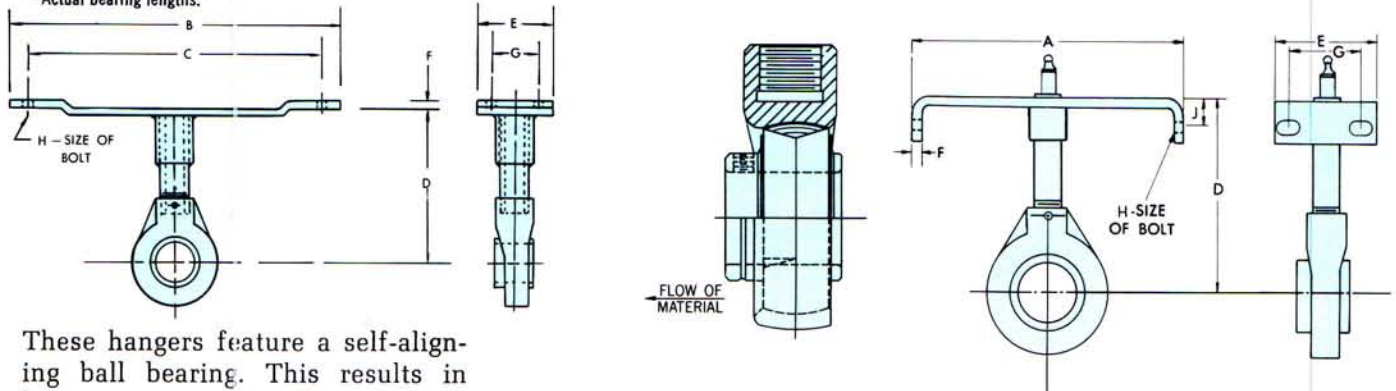


Hangers

Styles No. 260 and 270

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS														
Diameter of Conveyor	Style 260 Part Number	Style 270 Part Number	Bearing Bore	Bearing Length	A	B	C	D	E	F	G	H	J	Weight
6	60063	70063	1½	1¾	7	9¾	8¾	4½	4	¼	2½	¾	¾	7
9	60093	70093	1½	1¾	10	13½	12¼	6½	4	¼	2½	¾	1	8
9	60094	70094	2	2	10	13½	12¼	6½	4	¼	2½	¾	1	10
10	60103	70103	1½	1¾	11	14½	13¾	6¾	4	¼	2½	¾	1	9
10	60104	70104	2	2	11	14½	13¾	6¾	4	¼	2½	¾	1	11
12	60124	70124	2	2	13	17½	15¾	7¾	4	¾	2½	½	1¼	13
12	60125	70125	2¾	2¾	13	17½	15¾	7¾	4	¾	2½	½	1¼	18
12	60126	70126	3	3	13	17½	15¾	7¾	4	¾	2½	½	1¼	26
14	60145	70145	2¾	2¾	15	19½	17¾	9¾	4	½	2½	½	1¾	22
14	60146	70146	3	3	15	19½	17¾	9¾	4	½	2½	½	1¾	30
16	60166	70166	3	3	17	21½	19¾	10¾	4	½	2½	½	1¾	31
18	60186	70186	3	3	19	24½	22¼	12¾	5	½	3½	¾	1¾	36
20	60206	70206	3	3	21	26½	24¼	13¾	5	½	3½	¾	1¾	37

*Actual bearing lengths.



These hangers feature a self-aligning ball bearing. This results in lower power requirements and quieter operation. They are, therefore, particularly desirable for use in extremely long conveyors or conveyors operating at higher speeds. The Style 260 or 270 hangers are, however, not recommended for use in handling "dirty", gritty or abrasive materials. Alemite bearings are generally furnished although the bearings can also be considered as "Sealed for Life". The Style 270 hanger is the more popular as it mounts completely inside the trough and is, therefore, more suitable for use with dust-tight or weather-tight covers. Both hangers have wide top bars to permit their mounting across trough joints and to provide greater stability which is particularly important when using self-aligning bearings.

Style No. 260

Style No. 270



Note: Style 260 and 270 hangers should be mounted as shown by the "Flow of Material" arrow.

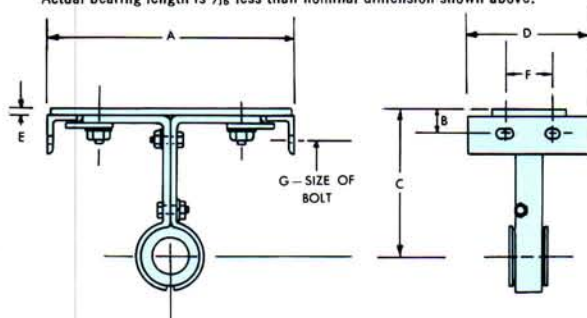


Hangers

Style No. 326

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS											
Diameter of Conveyor	Part Number	Bearing Bore	Bearing Length	A	B	C	D	E	F	G	Weight
6	36063	1½	2	7	1¼	4½	6	¼	2½	¾	6
9	36093	1½	2	10	1¼	6⅞	6	¼	2½	¾	8
9	36094	2	2	10	1¼	6⅞	6	¼	2½	¾	9
10	36103	1½	2	11	1¼	6⅞	6	¼	2½	¾	9
10	36104	2	2	11	1¼	6⅞	6	¼	2½	¾	10
12	36124	2	2	13	1½	7¾	6½	⅜	2½	½	13
12	36125	2⅞	3	13	1½	7¾	6½	⅜	2½	½	19
12	36126	3	3	13	1½	7¾	6½	⅜	2½	½	21
14	36145	2⅞	3	15	1⅝	9¼	6½	½	2½	½	23
14	36146	3	3	15	1⅝	9¼	6½	½	2½	½	25
16	36166	3	3	17	1⅝	10⅝	6½	½	2½	½	27
18	36186	3	3	19	1⅝	12⅝	6½	½	3½	⅝	29
18	36187	3⅞	4	19	1⅝	12⅝	7	½	3½	⅝	31
20	36206	3	3	21	1⅝	13½	6½	½	3½	⅝	31
20	36207	3⅞	4	21	1⅝	13½	7	½	3½	⅝	33
24	36247	3⅞	4	25	1⅝	16½	7	½	3½	⅝	40

*Actual bearing length is ⅛ less than nominal dimension shown above.



Expansion Style No. 326



Style No. 326 hanger is designed for use where hot materials are being conveyed and the length requires three or more sections of screw conveyor. The hanger top bar is free to slide on the angle guides to compensate for any unequal expansion between the trough and the screw conveyor. The 326 fits inside the trough beneath the cover and is suitable for use with a dust-tight or weather-proof cover. Its design offers a minimum of resistance to material flow and removable bearings made of special materials can be furnished to meet specific requirements. Hard-iron bearings, normally used with hardened steel conveyor couplings, are standard and will be furnished unless otherwise specified.

Flared Trough Hanger



Hangers for use in flared troughs may be furnished in any of the fabricated hanger styles shown on pages 36 through 39. A Style 226 modified for a flared trough is pictured. Special hanger designs may be furnished to meet your requirements. Please refer to page 52 for additional information concerning flared troughs. Although normally supplied with babbitted, bronze or hard-iron bearings, Oil Impregnated, Micarta, Synthane, Nylon, Bronze Oilite or other types of bearings are available.

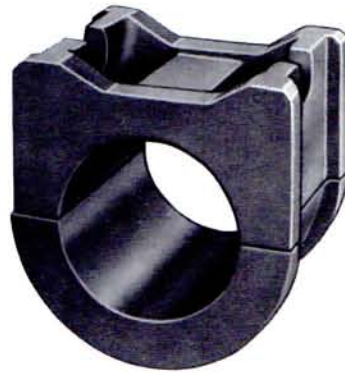


Replacement Bearings

Hanger Bearings



Bearing for
Style 220, 226, 326 Hangers



Bearing for
Style 216, 230 Hangers



Bearing for
Style 260, 270 Hangers

When ordering bearings for screw conveyor hangers, it is only necessary to specify the bore diameter, style of hanger and kind of bearing material.

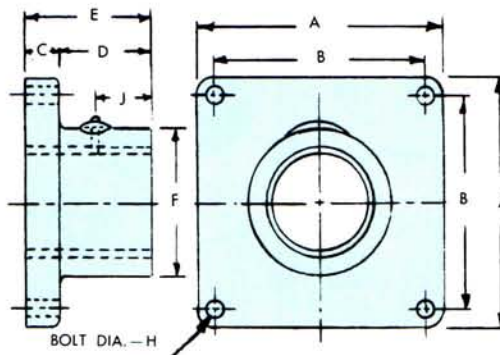
Transmission Flange Bearings

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS											
*Shaft Size	Babbitt Bearing Part Number	Bronze Bearing Part Number	A	B	C	D	E	F	H	J	Weight
1"*	TDH100WB*	—	4*	3 ³ / ₁₆ *	³ / ₁₆	1 ¹ / ₁₆	1 ³ / ₈	2	³ / ₈	—	1.0
1 ¹ / ₁₆ "	TDH107SB	TDH107BR	5 ¹ / ₈	4	³ / ₁₆	2 ¹ / ₁₆	3	2 ³ / ₈	⁷ / ₁₆	1 ¹ / ₁₆	6.5
1 ¹ / ₂ "	TDH108SB	TDH108BR	5 ¹ / ₈	4	³ / ₁₆	2 ¹ / ₁₆	3	2 ³ / ₈	⁷ / ₁₆	1 ¹ / ₁₆	6.5
1 ¹ / ₁₆ "	TDH115SB	TDH115BR	6 ³ / ₈	5 ¹ / ₈	³ / ₈	3 ³ / ₈	4	2 ³ / ₈	⁹ / ₁₆	1 ¹ / ₈	13.0
2"	TDH200SB	TDH200BR	6 ³ / ₈	5 ¹ / ₈	³ / ₈	3 ³ / ₈	4	2 ³ / ₈	⁹ / ₁₆	1 ¹ / ₈	13.0
2 ⁷ / ₁₆ "	TDH207SB	TDH207BR	6 ³ / ₈	5 ⁵ / ₈	³ / ₈	4 ⁵ / ₈	5	3 ¹ / ₂	⁹ / ₁₆	2 ³ / ₈	20.0
2 ¹ / ₁₆ "	TDH211SB	TDH211BR	7 ³ / ₄	6	¹ / ₂	5	5 ¹ / ₂	4	³ / ₄	2 ³ / ₄	28.0
2 ¹ / ₁₆ "	TDH215SB	TDH215BR	7 ³ / ₄	6	¹ / ₂	5 ¹ / ₂	6	4	³ / ₄	3	32.0
3"	TDH300SB	TDH300BR	7 ³ / ₄	6	¹ / ₂	5 ¹ / ₂	6	4	³ / ₄	3	32.0
3 ¹ / ₁₆ "	TDH307SB	TDH307BR	8 ⁷ / ₁₆	6 ³ / ₄	¹ / ₂	6	6 ¹ / ₂	4 ¹ / ₂	³ / ₄	3 ¹ / ₁₆	39.0

*Bores not listed — on application.

*1" Size available with 2-hole oil impregnated wood bearing only.

Transmission Flange Bearings are fabricated of steel with the backing and end faces machine finished. Additional clearance is provided at the base of the bolt holes for ease of assembly. The bearings are accurately broached to "transmission" tolerances and the bore is concentric to the flange back. ¹/₈" Alemite fittings (No. 1610 hydraulic type) are furnished and the bearings are grooved to distribute the lubricant uniformly.





Trough Ends

Styles No. 100 and 101

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS																					
Diameter of Conveyor	Bearing Bore	Style 100		Style 101		A	B		C	D	E	F	G	H	J	K	L	M	N	Style 101 Weight with Bearing	
		With Bearing	Without Bearing	With Bearing	Without Bearing		Without Seal xx	With Seal xx													
4	1	100042	100042P	101042	101042P	8	1 13/16	—	1 1/16	3 3/8	4 3/8	1	1 1/8	3/8	5 1/4	3/16	3 3/8	1 1/8	7/16	8	
6	1 1/2	100063	100063P	101063	101063P	9 3/4	3 1/8	4 1/16	1 1/2	4 1/2	5 1/8	1	1 1/4	3/8	8 3/8	3/16	4	1 1/4	7/16	13	
9	1 1/2	100093	100093P	101093	101093P	13 1/2	3 3/4	5	1 3/8	6 3/8	7 3/8	1 1/2	2 1/8	1/2	9 3/8	1/4	4	1 1/4	7/16	23	
9	2	100094	100094P	101094	101094P	13 1/2	4 1/4	6	1 3/8	6 3/8	7 3/8	1 1/2	2 1/8	1/2	9 3/8	1/4	5 1/8	1 1/4	7/16	29	
10	1 1/2	100103	100103P	101103	101103P	14 1/2	3 3/4	5	1 3/8	6 3/8	8 3/8	1 3/4	2 1/8	1/2	9 3/8	1/4	4	1 1/4	7/16	26	
10	2	100104	100104P	101104	101104P	14 1/2	4 1/4	6	1 3/8	6 3/8	8 3/8	1 3/4	2 1/8	1/2	9 3/8	1/4	5 1/8	1 1/4	7/16	32	
12	2	100124	100124P	101124	101124P	17 3/4	4 1/4	6	2	7 3/4	9 3/8	1 3/4	2 3/8	3/8	12 3/4	1/4	5 1/8	1 3/8	9/16	39	
12	2 1/16	100125	100125P	101125	101125P	17 3/4	5 1/4	7	2	7 3/4	9 3/8	1 3/4	2 3/8	3/8	12 3/4	1/4	5 1/8	1 3/8	9/16	50	
12	3	100126	100126P	101126	101126P	17 3/4	6 3/4	8	2	7 3/4	9 3/8	1 3/4	2 3/8	3/8	12 3/4	1/4	6	2	3/4	64	
14	2 1/16	100145	100145P	101145	101145P	19 3/4	5 1/8	7 1/16	2	9 3/4	10 3/8	1 3/4	2 3/8	3/8	13 3/4	3/16	5 1/8	1 3/8	9/16	65	
14	3	100146	100146P	101146	101146P	19 3/4	6 3/16	8 1/16	2	9 3/4	10 3/8	1 3/4	2 3/8	3/8	13 3/4	3/16	6	2	3/4	79	
16	3	100166	100166P	101166	101166P	21 3/4	6 3/16	8 1/16	2 1/2	10 3/8	12	2	3 3/4	3/8	14 3/8	3/16	6	2	3/4	90	
18	3	100186	100186P	101186	101186P	24 3/4	6 3/8	8 3/8	2 1/2	12 3/8	13 3/8	2	3 3/4	3/8	16	3/8	6	2	3/4	117	
18	3 1/16	100187	100187P	101187	101187P	24 3/4	7 3/8	9 3/8	2 1/2	12 3/8	13 3/8	2	3 3/4	3/8	16	3/8	6 3/8	2	3/4	135	
20	3	100206	100206P	101206	101206P	26 1/4	6 3/8	8 3/8	2 1/2	13 3/8	15	2 1/4	3 3/4	3/8	19 3/8	3/8	6	2	3/4	133	
20	3 1/16	100207	100207P	101207	101207P	26 1/4	7 3/8	9 3/8	2 1/2	13 3/8	15	2 1/4	3 3/4	3/8	19 3/8	3/8	6 3/8	2	3/4	150	
24	3 1/16	100247	100247P	101247	101247P	30 3/4	7 3/8	9 3/8	2 1/2	16 1/2	18 3/8	2 1/2	4 1/8	3/8	20	3/8	6 3/8	2	3/4	187	

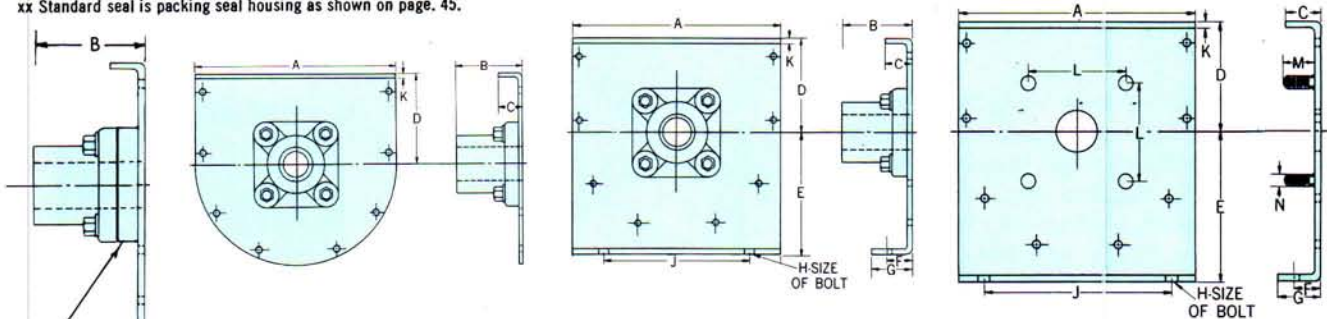
○ Babbitt bearings are standard and furnished unless otherwise specified, except 4" size is supplied with two bolt oil impregnated selfaligning bearing only.

△ Standard stud centers will be furnished unless otherwise specified.

★ Length for trough end without seals will be furnished unless otherwise specified.

Bearings are furnished with 1/4" (no. 1610 Hydraulic type) Alemite Fitting.

xx Standard seal is packing seal housing as shown on page. 45.



Style No. 100

Style No. 101



These are steel plate trough ends generally fitted with Babbitted Transmission Flange Bearings, although any bearing material may be used such as Bronze, Bronze Oilite, Oil Impregnated Wood, Nylon, etc. (for antifriction ball bearing trough ends, see page 42). Replacement Babbitt Bearings are pictured on page 40. In each type the top flange supports the cover of the conveyor. The bottom flange of the Style 101 is for support of the conveyor. When using the style 100 the conveyor must be supported either from above or from a foot on the trough end flange.



Trough Ends

Styles No. 102 and 103

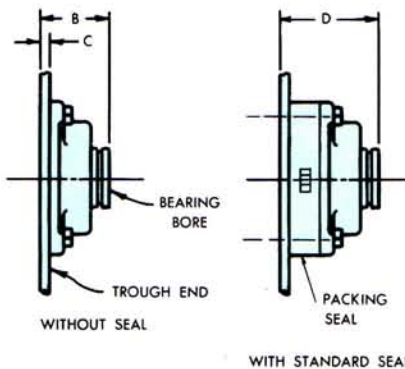
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS								
Diameter of Conveyor	Bearing Bore	WITHOUT FEET		WITH FEET		DIMENSIONS		
		Part † Number	*Weight	Part † Number	*Weight	B	C	D
4	1	102042	6	103042	7	1 5/8	3/16	-
6	1 1/2	102063	10	103063	12	2 1/4	3/16	4
9	1 1/2	102093	18	103093	23	2 5/16	1/4	4 1/16
9	2	102094	20	103094	25	2 9/16	1/4	4 5/16
10	1 1/2	102103	20	103103	26	2 5/16	1/4	4 1/16
10	2	102104	22	103104	28	2 9/16	1/4	4 5/16
12	2	102124	27	103124	34	2 9/16	1/4	4 5/16
12	2 7/16	102125	32	103125	39	2 5/8	1/4	4 11/16
12	3	102126	41	103126	48	3 1/4	1/4	5 1/2
14	2 7/16	102145	44	103145	54	3	5/16	4 3/4
14	3	102146	53	103146	63	3 13/16	5/16	5 9/16
16	3	102166	61	103166	74	3 13/16	5/16	5 9/16
18	3	102186	85	103186	100	3 7/8	3/8	5 5/8
18	3 7/16	102187	92	103187	107	4 3/8	3/8	6 5/8
20	3	102206	97	103206	117	3 7/8	3/8	5 5/8
20	3 7/16	102207	104	103207	124	4 3/8	3/8	6 5/8
24	3 7/16	102247	127	103247	160	4 3/8	3/8	6 5/8

† Flange bearings are furnished with 1/8" (No. 1610 Hydraulic type) Alemite Fittings.

* Weights do not include seal.

△ Standard seal is packing seal shown on page 45.

Anti-friction trough ends No. 102 and No. 103 are equipped with self-aligning ball bearings which allow for several degrees of end shaft mis-alignment. Unless for very light duty, these units are not recommended for use with the drive shaft. Chevron end thrusts or another type of rigid bearing support is normally recommended for use with the drive shaft. The ball bearing is attached to the end plate by studs. These studs eliminate the need for countersunk bolt heads inside the trough and eliminate the possibility of material leakage or infestation. Refer to page 41 for dimensional data on these style trough ends.



Anti-Friction Style No. 102 pictured without seal



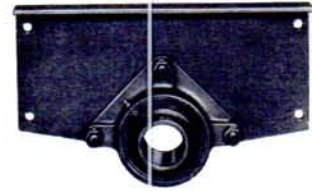
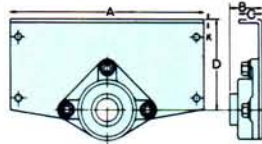
Anti-Friction Style No. 103 pictured with packing seal





Trough Ends

Styles No. 104, 107, 114 and 115



DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS

Diameter or Conveyor	Bearing Bore	Style 104 †Part Number	Style 107 †Part Number	A	B		C	D	K	Wgt. Style 104
					Style 104	Style 107				
6	1½	104063	107063	9¾	2¼	3¾	1½	4½	¾	9
9	1½	104093	107093	13½	2½	3¼	1½	6½	¾	14
9	2	104094	107094	13½	2½	4¼	1½	6½	¾	16
10	1½	104103	107103	14½	2½	3¼	1¾	6¾	¾	15
10	2	104104	107104	14½	2½	4¼	1¾	6¾	¾	17
12	2	104124	107124	17¼	2½	4¼	2	7¾	¾	22
12	2½	104125	107125	17¼	2½	5¼	2	7¾	¾	27
12	3	104126	107126	17¼	3¾	6¼	2	7¾	¾	36
14	2½	104145	107145	19¼	3	5½	2	9¼	¾	32
14	3	104146	107146	19¼	3¾	6½	2	9¼	¾	41
16	3	104166	107166	21¼	3¾	6½	2½	10½	¾	50
18	3	104186	107186	24¼	3¾	6¾	2½	12¼	¾	57
18	3½	104187	107187	24¼	4¾	7¾	2½	12¼	¾	66
20	3	104206	107206	26¼	3¾	6¾	2½	13½	¾	63
20	3½	104207	107207	26¼	4¾	7¾	2½	13½	¾	70
24	3½	104247	107247	30¼	4¾	7¾	2½	16½	¾	100

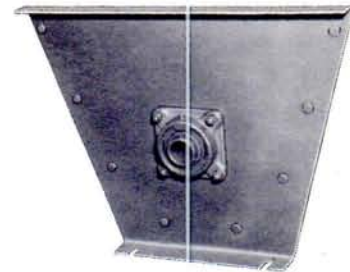
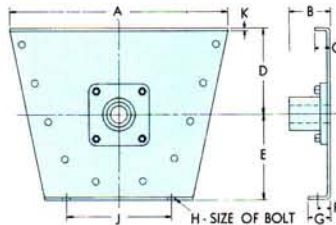
Discharge Trough End

Style No. 104 and Style No. 107

Discharge trough ends are designed for use when the material is to flow out the end of the trough and when the material loading does not exceed 45%.

The Style 104 (pictured above) is fitted with a self-aligning ball bearing. Also available is Style 107 which is fitted with a Babbitted Flange Bearing similar to trough end 100-101 except with a two or three bolt flange depending on bore size. The Style 104 of 1½" or 2" bore is a two bolt flange, other sizes are three bolt flanges.

† Flange bearings are furnished with ¼" (No. 1610 Hydraulic type) Alemite Fittings.



Diameter of Conveyor	Bearing Bore	Babbitt Bearing Part Number	Ball Bearing* Part Number	B		C	D	E	F	G	H	J	K	Wgt.		
				Style 114	Style 115											
6	1½	114063	115063	16¾	3¾	2¼	2¾	1½	7	5%	1	1¾	¾	8¾	¾	30
9	1½	114093	115093	21¼	3¾	2½	3¼	1½	9	7%	1½	2½	½	9¾	¾	41
9	2	114094	115094	21¼	4¾	2½	4¼	1½	9	7%	1½	2½	½	9¾	¾	55
12	2	114124	115124	26¾	4¾	2¾	4¾	2	10	9%	1¾	2¾	¾	12¼	¾	75
12	2½	114125	115125	26¾	5¾	3	5½	2	10	9%	1¾	2¾	¾	12¼	¾	86
12	3	114126	115126	26¾	6¾	3¾	6½	2	10	9%	1¾	2¾	¾	12¼	¾	100
14	2½	114145	115145	28¾	5¾	3	5½	2	11	10%	1¾	2¾	¾	13½	¾	96
14	3	114146	115146	28¾	6¾	3¾	5½	2	11	10%	1¾	2¾	¾	13½	¾	110
16	3	114166	115166	32½	6¾	3¾	6¾	2½	11½	12	2	3¼	¾	14¾	¾	146
18	3	114186	115186	36½	6¾	3¾	6¾	2½	12½	13¾	2	3¼	¾	16	¾	167
18	3½	114187	115187	36½	7¾	4¾	7¾	2½	12½	13¾	2	3¼	¾	16	¾	185
20	3	114206	115206	39½	6¾	3¾	6¾	2½	13½	15	2¼	3¼	¾	19¼	¾	179
20	3½	114207	115207	39½	7¾	4¾	7¾	2½	13½	15	2¼	3¼	¾	19¼	¾	197
24	3½	114247	115247	45½	7¾	4¾	7¾	2½	16½	18½	2¼	4¾	¾	20	½	292

Flared Trough End

Style No. 114 and Style No. 115

Flared Trough Ends are formed with a top flange to support the cover and a bottom flange which serves as feet. Its design fits the contour of the Flared Trough (see page 52). A Flared Trough End can be fitted with a babbitted transmission flange bearing (Style No. 114) or an anti-friction self-aligning ball bearing (as shown above, Style No. 115). Flange bearings of Bronze, Oil Impregnated Wood, Nylon, Bronze Oilite, etc., are also available. The end plate could also be fitted with a Chevron or Hammond end thrust.

* Transmission quality babbitt of our own specification is used and provides a bearing that has the ability go give excellent service with minimum up-keep. The bearings are accurately broached to "transmission" tolerances and the bore is concentric to the flange back. The babbitt is grooved to distribute the lubricant uniformly.

† Flange bearings are furnished with ¼" (No. 1610 Hydraulic type) Alemite fittings.

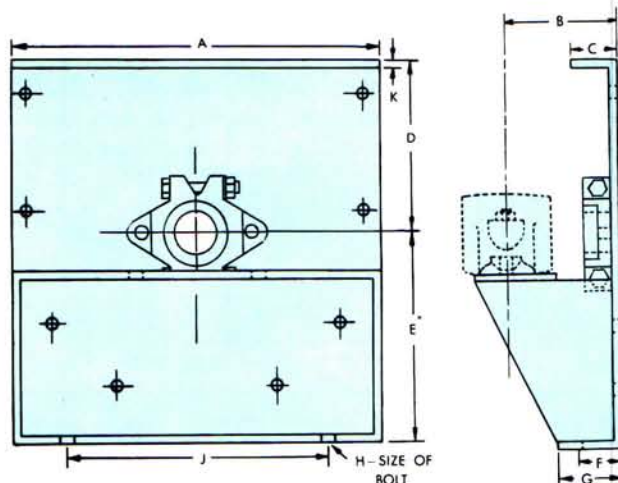


Shelf Type Trough Ends

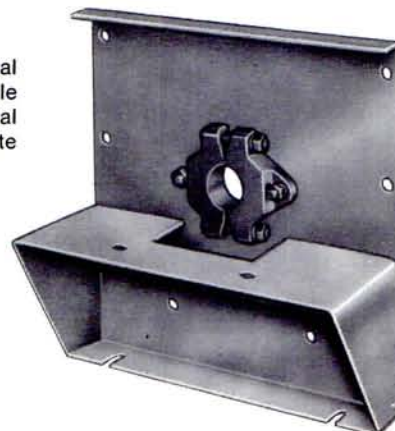
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS													
Size of Conveyor	Shaft Size	Part Number X	A	B	C	D	E	F	G	H	J	K	Wgt.
6	1½	113063	9¾	5	1½	4½	5⅝	1	1¾	⅜	8⅝	⅜	10
9	1½	113093	13½	5	1⅝	6⅝	7⅞	1½	2⅞	½	9⅝	¼	25
9	2	113094	13½	5½	1⅝	6⅝	7⅞	1½	2⅞	½	9⅝	¼	25
10	1½	113103	14½	5	1¾	6⅞	8⅞	1¾	2¾	½	9½	¼	29
10	2	113104	14½	5½	1¾	6⅞	8⅞	1¾	2¾	½	9½	¼	29
12	2	113124	17¼	5½	2	7¾	9⅞	1⅝	2¾	⅝	12¼	¼	36
12	2⅞	113125	17¼	6	2	7¾	9⅞	1⅝	2¾	⅝	12¼	¼	36
12	3	113126	17¼	6½	2	7¾	9⅞	1⅝	2¾	⅝	12¼	¼	36
14	2⅞	113145	19¼	6¼	2	9¼	10⅞	1⅝	2⅞	⅝	13½	⅜	65
14	3	113146	19¼	6¼	2	9¼	10⅞	1⅝	2⅞	⅝	13½	⅜	65
16	3	113166	21¼	6¼	2½	10⅞	12	2	3¼	⅝	14⅞	⅜	80
18	3	113186	24¼	6⅞	2½	12⅞	13⅞	2	3¼	⅝	16	⅜	90
18	3⅞	113187	24¼	7¼	2½	12⅞	13⅞	2	3¼	⅝	16	⅜	90
20	3	113206	26¼	6⅞	2½	13½	15	2¼	3¼	¾	19¼	⅜	120
20	3⅞	113207	26¼	7⅞	2½	13½	15	2¼	3¼	¾	19¼	⅜	120
24	3⅞	113247	30¼	7⅞	2½	16½	18⅞	2½	4⅞	¾	20	⅜	202

X Furnished standard with split seal glands.

The shelf type trough end is of steel plate construction with an outboard bearing pedestal for mounting babbit, bronze, ball or roller bearing pillow blocks. Seal Glands over the shaft opening protect the bearing and guard against dusting out of material. For extremely severe service, a pump type seal can be used. The shelf type trough end is interchangeable with other outside pattern trough ends and is particularly applicable for units conveying abrasive or hot materials.



Shown with split seal gland. Also available with pump type seal as shown on opposite page.



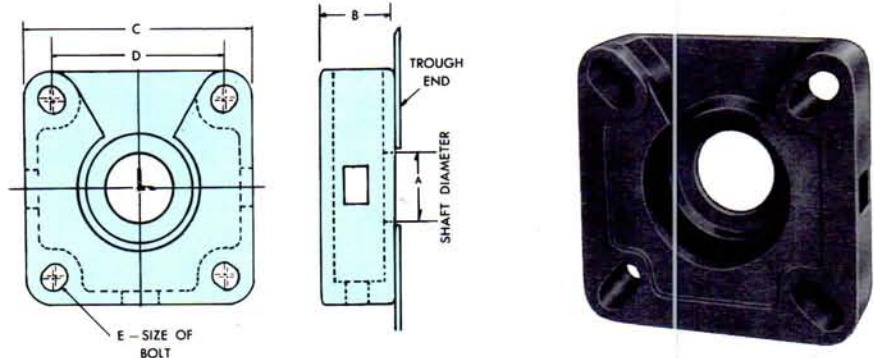


Trough End Dust Seals

Packing Seals

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS							
Shaft Size A	Part Number	Wgt.	B	C	D	E	
1½	WPS-3	5.2	1¾	5½	4 to 4½	7/16 to 9/16	
2	WPS-4	6.7	1¾	6¾	4¾ to 5½	7/16 to 9/16	
2¾	WPS-5	8.0	1¾	7¾	5¾ to 6½	7/16 to 9/16	
3	WPS-6	12.0	1¾	7¾	6 to 6½	¾	
3¾	WPS-7	17.0	2¼	9¼	6¾ to 7½	¾	

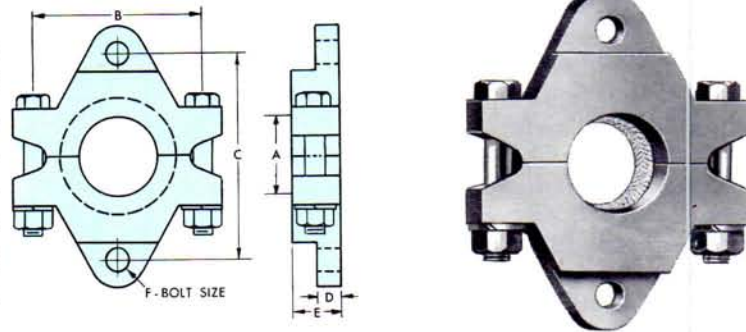
The Packing Seal housing is designed to protect the trough end bearings from material leakage and to protect the material being conveyed from the bearing lubricant. They can be provided with either lip-type or waste pack seals or combination of both. Waste packing is our standard and will be supplied unless otherwise specified.



Split Seal Glands

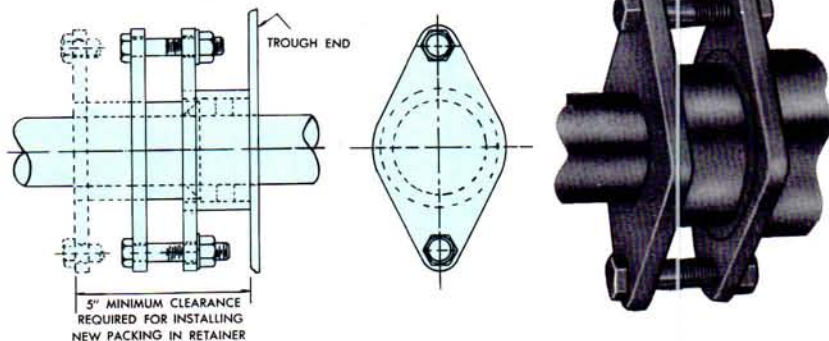
Shaft Size A	Part Number	B	C	D	E	F	Wgt.
1½	S3SS	3¾	4½	¾	1¼	½	4
2	S4SS	4¾	5¼	¾	1¼	½	5
2¾	S5SS	5	6¼	¾	1¼	¾	6
3	S6SS	5¾	7¼	¾	1¼	¾	8
3¾	S7SS	6¾	8¼	¾	1¼	¾	10

Split seal glands utilize twisted asbestos packing to prevent leakage of material being conveyed and to protect the material from bearing lubricant, moisture or dirt contamination. Generally used on shelf type trough ends, the seal glands are split to facilitate assembly and repacking.



Pump Type Seals

The pump seal is intended for the most severe service, particularly when a positive or negative pressure must be maintained. It may also be fitted with lantern rings and air or gas purge fittings. It can be used only with an outboard shelf type trough end.





Chevron Roller Bearing End Thrust with Trough End

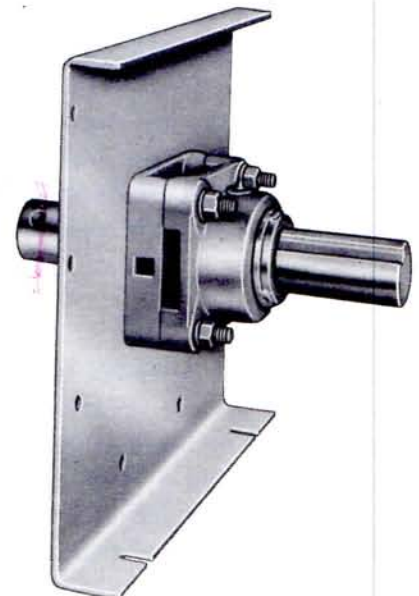
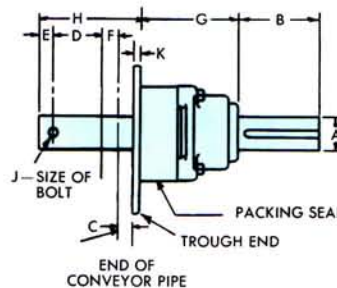
Styles No. 109 and 110

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
Diameter of Conveyor	Shaft Size A	Dimension		STYLE No. 109 OUTSIDE PATTERN FOR STEEL TROUGH Without Feet			STYLE No. 110 OUTSIDE PATTERN FOR STEEL TROUGH With Feet		
		C	K	Part Number With Drive Shaft	Part Number With End Shaft	Weight With Drive Shaft	Part Number With Drive Shaft	Part Number With End Shaft	Weight With Drive Shaft
6	1½	1¼	¾	109063D	109063T	26	110063D	110063T	30
9	1½	1	¾	109093D	109093T	35	110093D	110093T	40
9	2	1	¾	109094D	109094T	45	110094D	110094T	50
10	1½	1	¾	109103D	109103T	37	110103D	110103T	43
10	2	1	¾	109104D	109104T	47	110104D	110104T	53
12	2	1	¾	109124D	109124T	52	110124D	110124T	60
12	2¾/16	1¼	¾	109125D	109125T	71	110125D	110125T	79
12	3	1½	¾	109126D	109126T	97	110126D	110126T	105
14	2¾/16	1½	¾	109145D	109145T	83	110145D	110145T	94
14	3	1¾	¾	109146D	109146T	109	110146D	110146T	120
16	3	1¾	¾	109166D	109166T	124	110166D	110166T	131
18	3	1½	¾	109186D	109186T	133	110186D	110186T	158
18	3¾/16	2	¾	109187D	109187T	180	110187D	110187T	205
20	3	1½	¾	109206D	109206T	161	110206D	110206T	174
20	3¾/16	2	¾	109207D	109207T	208	110207D	110207T	221
24	3¾/16	2	¾	109247D	109247T	240	110247D	110247T	257

Shaft Size A	B	D	E	F	G	H	J	STANDARD KEYSEAT		
								Width	Depth	Length
1½	5	3	¾	¾	5¼	6	½	¾	¾	4¾
2	5	3	¾	¾	5½	6	¾	½	¼	4¾
2¾/16	5	3	1¼/16	1¼/16	5¾/16	6¼/16	¾	¾	¾	4¾
3	6	3	1	1	6¾/16	6¾	¾	¾	¾	5¾
3¾/16	7	4	1¼	1½	7½	9¼	¾	¾	¾	6¾

General dimensions of the trough end are shown on page 41.

Designed to handle medium to heavy thrust loads, the Chevron End Thrust has adequate radial and thrust capacity for practically any application and can absorb thrust in either direction. When starting a Screw Conveyor, thrust is created in the direction opposite to the flow of material. If this thrust is not contained, the hanger bearings, trough end and screw will wear at an increased rate. The Chevron can be furnished with either a drive or end shaft and it is recommended that the Screw Conveyor be driven through this type of thrust unit rather than a ball bearing (self-aligning) type. See page 41 for trough end dimensional data.



Style No. 110 shown. Style No. 109 is identical except without supporting feet.

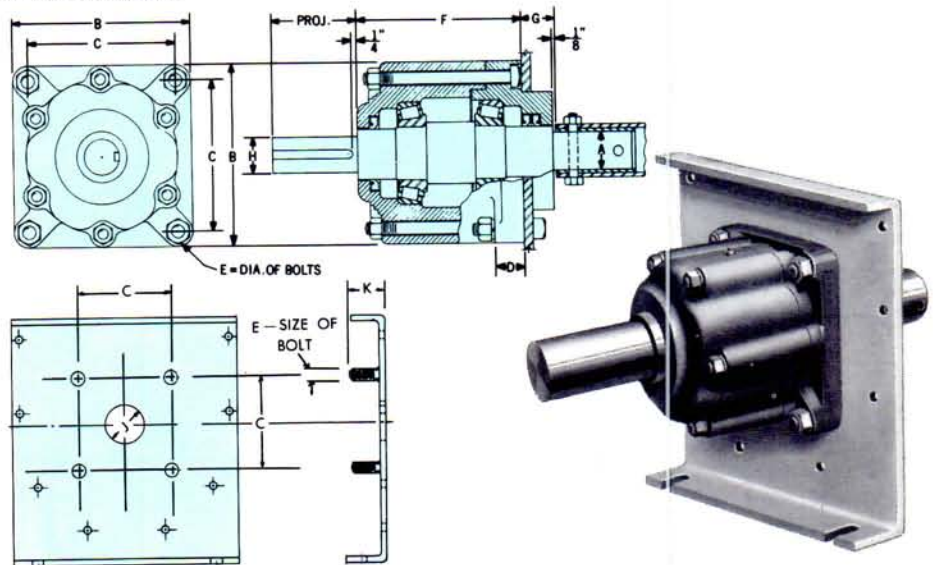


Hammond Roller Bearing End Thrust with Trough End

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS														
Diameter of Shaft A	WITH DRIVE END SHAFT			WITH END SHAFT		B	C	D	E	F	G	H	J	K
	Std. Proj.	*Part Number	Weight Δ	*Part Number	Weight Δ									
1½	4	540003	60	541003	52	7¼	5¾	1¼	¾	6¾	1¾	17/16	4¾	17/16
2	4½	540004	65	541004	56	7¼	5¾	1¼	¾	6¾	1¾	17/16	4¾	17/16
27/16	5½	540005	80	541005	66	8	6¼	1¼	7/8	6¼	1¾	27/16	5¾	17/16
3	6	540006	145	541006	119	10	8	1¾	1	8¼	1½	25/16	6¾	2 5/16
37/16	7	540007	170	541007	140	10	8	1¾	1	8¼	1½	37/16	6¾	2¾

* Includes Roller Bearing End Thrust with keyseated drive shaft or standard end shaft and 1/8" Alemite Fitting, No. 1610 Hydraulic type.
 Δ Weight does not include trough end. See page 41 for trough end only specifications.

This dual tapered roller bearing end thrust is designed for extra-heavy radial and thrust loads in either direction. Although the Hammond Roller Bearing Thrust Bearing is normally mounted on a steel plate trough end, the trough end is not furnished unless specified on the order. See pages 41-43 for trough end style and dimension data.



Bronze Washer Type End Thrust

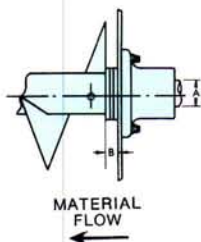
Shaft Size A	STYLE No. BW-1		STYLE No. BW-2		B	C	Washer Thickness Each
	*Part Number	Weight Per Set	Part Number	Weight Per Set			
1	BW12	¾	BW22	½	.75	.549	¼
1½	BW13	1	BW23	¾	.75	.560	¼
2	BW14	1½	BW24	1	.75	.572	¼
27/16	BW15	2¼	BW25	1½	.75	.591	¼
3	BW16	3	BW26	2	.75	.608	¼
37/16	BW17	3	BW27	2	.75	.608	¼

* The assembly consists of one bronze and two steel washers.
 @ This assembly consists of one machined bronze washer, one steel washer, the Truarc Ring and precision machined ring groove in shaft.

For drive and end shaft dimensions see page 13.
 ▲ This dimension is from the face of trough end hub bearing to the outside of thrust ring groove on the end shaft.

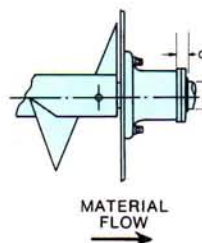
Inside Style No. BW-1

Mounted inside the conveyor trough at the inlet end, this inexpensive assembly handles light to moderate compression thrust loads. It consists of a transmission bronze washer flanked on each side by a machined steel washer.



Outside Style No. BW-2

Mounted at the discharge end of the conveyor, this assembly handles light tension thrust loads. The transmission bronze washer is held in place, between the faced trough end bearing hub and a machined steel washer, by a Tru-Arc Thrust Ring.

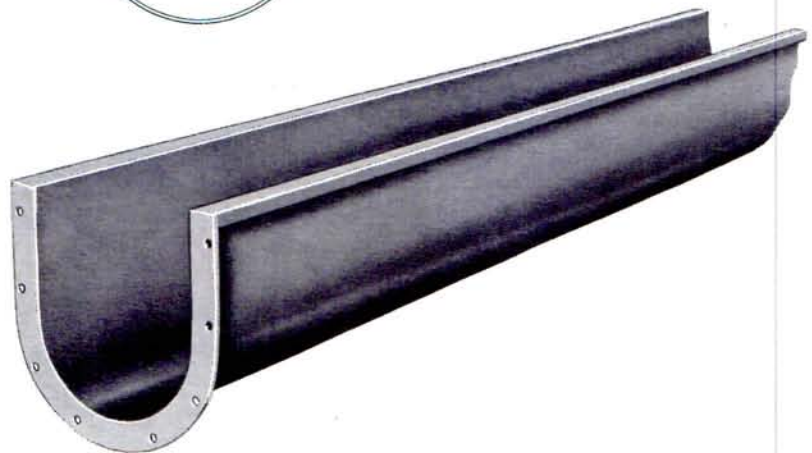
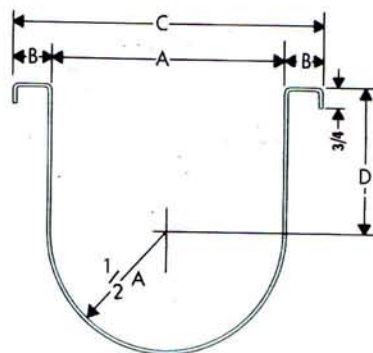




Double Flanged Trough

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS							
Diameter of Conveyor	Trough Thickness	Part Number	A	B	C	D	Wgt. Per Foot
4	16	4DF16C	5	1 $\frac{1}{16}$	8 $\frac{1}{8}$	3 $\frac{3}{8}$	4
4	14	4DF14C	5	1 $\frac{1}{16}$	8 $\frac{1}{8}$	3 $\frac{3}{8}$	5
6	16	6DF16C	7	1 $\frac{1}{16}$	9 $\frac{1}{8}$	4 $\frac{1}{2}$	5
6	14	6DF14C	7	1 $\frac{1}{16}$	9 $\frac{1}{8}$	4 $\frac{1}{2}$	6
6	10	6DF10C	7	1 $\frac{1}{16}$	9 $\frac{1}{8}$	4 $\frac{1}{2}$	11
9	14	9DF14C	10	1 $\frac{3}{16}$	13 $\frac{3}{8}$	6 $\frac{1}{8}$	9
9	12	9DF12C	10	1 $\frac{3}{16}$	13 $\frac{3}{8}$	6 $\frac{1}{8}$	12
9	10	9DF10C	10	1 $\frac{3}{16}$	13 $\frac{3}{8}$	6 $\frac{1}{8}$	15
10	14	10DF14C	11	1 $\frac{3}{16}$	14 $\frac{3}{8}$	6 $\frac{3}{8}$	9
10	12	10DF12C	11	1 $\frac{3}{16}$	14 $\frac{3}{8}$	6 $\frac{3}{8}$	13
12	12	12DF12C	13	2 $\frac{1}{4}$	17 $\frac{1}{2}$	7 $\frac{3}{4}$	15
12	10	12DF10C	13	2 $\frac{1}{4}$	17 $\frac{1}{2}$	7 $\frac{3}{4}$	19
14	12	14DF12C	15	2 $\frac{1}{4}$	19 $\frac{1}{2}$	9 $\frac{1}{4}$	18
14	10	14DF10C	15	2 $\frac{1}{4}$	19 $\frac{1}{2}$	9 $\frac{1}{4}$	23
16	12	16DF12C	17	2 $\frac{1}{4}$	21 $\frac{1}{2}$	10 $\frac{5}{8}$	20
16	10	16DF10C	17	2 $\frac{1}{4}$	21 $\frac{1}{2}$	10 $\frac{5}{8}$	25
18	10	18DF10C	19	2 $\frac{3}{4}$	24 $\frac{1}{2}$	12 $\frac{1}{8}$	28
20	10	20DF10C	21	2 $\frac{3}{4}$	26 $\frac{1}{2}$	13 $\frac{1}{2}$	31
24	10	24DF10C	25	2 $\frac{3}{4}$	30 $\frac{1}{2}$	16 $\frac{1}{2}$	37

The unique design of the Double Flanged Trough adds considerably to its strength and structural rigidity without adding to its weight. In addition, this construction provides an effective dust-tight seal when used with the "Barron" Flanged Cover. Double Flanged Troughs are available in sizes up to 24" and in gauges up to 10. They can be formed of stainless steel or other alloys. Nu-Weld end flanges are continuously jig-welded on each end to assure alignment and tight connecting joints. If supporting feet are needed, they are spaced at the flange joints. Trough saddles are also available, see page 56.

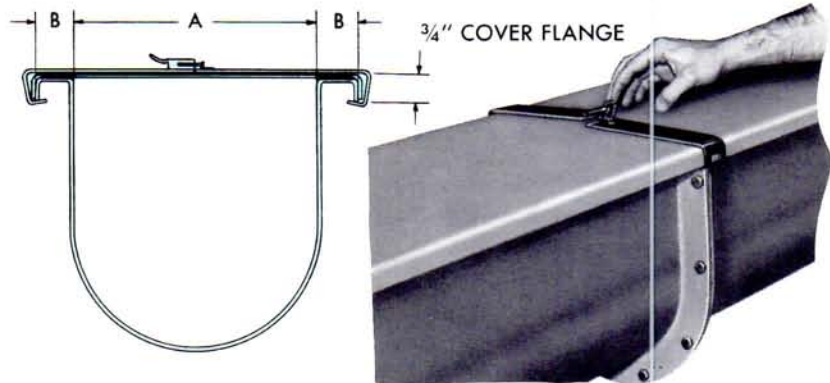




Barron Flanged Covers

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS							
Size of Conveyor	"BARRON" COVER COMPLETE WITH CLAMPS AND GASKET						"BARRON" CLAMPS ONLY
	Gauge of Steel	Part Number	A	B	Wgt. per Ft.	Part Number	
4	16	4BC16	5	1 $\frac{5}{8}$	2	4BCC	
6	16	6BC16	7	1 $\frac{1}{2}$	2.5	6BCC	
9	14	9BC14	10	1 $\frac{7}{8}$	4	9BCC	
10	14	10BC14	11	1 $\frac{7}{8}$	4.2	10BCC	
12	14	12BC14	13	2 $\frac{5}{16}$	5	12BCC	
14	14	14BC14	15	2 $\frac{5}{16}$	5.5	14BCC	
16	14	16BC14	17	2 $\frac{5}{16}$	6	16BCC	
18	12	18BC12	19	2 $\frac{13}{16}$	9.5	18BCC	
20	12	20BC12	21	2 $\frac{13}{16}$	10.2	20BCC	
24	12	24BC12	25	2 $\frac{13}{16}$	11.2	24BCC	

The Barron Cover is designed for use with a double flanged trough. It is not weather-tight but the gaskets between the cover and trough and under the Barron clamps do provide a degree of weather protection. For greater protection battens can be mounted lapping the cover joints. The cover should then be bolted or screw clamped. Flanged covers can also be used with angle troughs in which case they should be bolted or screw clamped.

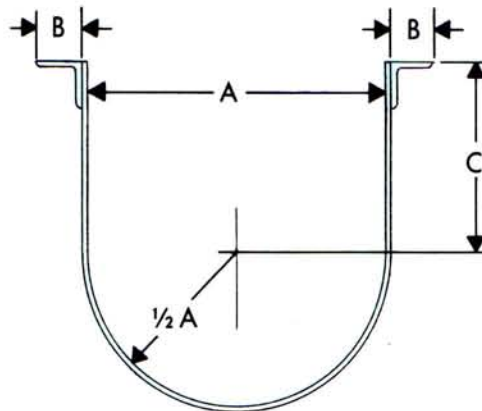




Angle Trough

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS													
Size of Conveyor	Trough Thickness	Part Number	Wgt. Per Ft.	A	B Size of Angles	C	Size of Conveyor	Trough Thickness	Part Number	Wgt. Per Ft.	A	B Size of Angles	C
4	16	4AT16	6	5	1 1/4 x 1 1/4 x 3/16	3 3/8	14	12	14AT12	21	15	2 x 2 x 3/16	9 1/4
	14	4AT14	7					10	14AT10	25			
6	16	6AT16	8	7	1 1/4 x 1 1/4 x 3/16	4 1/2	16	3/16	14AT07	32	17	2 x 2 x 3/16	10 5/8
	14	6AT14	9					1/4	14AT03	41			
	10	6AT10	12					12	16AT12	23			
9	14	9AT14	11	10	1 1/2 x 1 1/2 x 3/16	6 3/8	18	10	16AT10	28	19	2 1/2 x 2 1/2 x 1/4	12 1/2
	12	9AT12	14					3/16	16AT07	36			
	10	9AT10	17					1/4	16AT03	46			
	3/16	9AT07	22					10	18AT10	34			
10	14	10AT14	12	11	1 1/2 x 1 1/2 x 3/16	6 3/8	20	3/16	18AT07	43	21	2 1/2 x 2 1/2 x 1/4	13 1/2
	12	10AT12	15					1/4	18AT03	54			
	3/16	10AT07	23					10	20AT10	37			
12	12	12AT12	19	13	2 x 2 x 3/16	7 1/4	24	3/16	20AT07	47	25	2 1/2 x 2 1/2 x 1/4	16 1/2
	10	12AT10	22					1/4	20AT03	60			
	3/16	12AT07	28					10	24AT10	42			
	1/4	12AT03	36					3/16	24AT07	55			
								1/4	24AT03	70			

Angle Trough is fitted with structural steel angles along the top edge of the trough to provide excellent strength and rigidity in all trough sizes and gauges. "Nu-Weld" end flanges are continuously jig-welded to each end to assure alignment and tight connecting joints. Angle Trough can be formed of hot rolled steel, stainless steel or other alloys in all sizes and gauges, and may be hot dip galvanized. Trough modification such as a perforated bottom, a drop bottom for sanitary installations, jacketing for heating or cooling, etc., are available. Although normally furnished with a Tite-Seal Cover other types such as the Dome, Flanged, Hip Roof, etc., are available (see page 54). If supporting feet are needed, they are mounted at the flange joints. Trough saddles are also available, see page 56.



Tite-Seal Covers

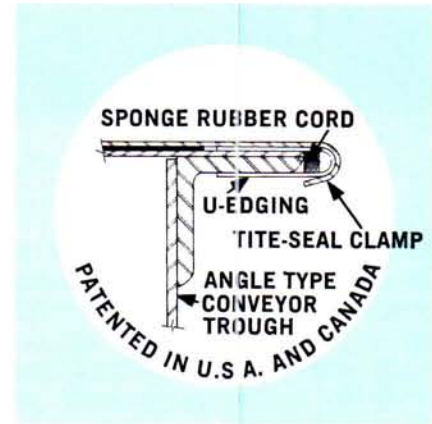
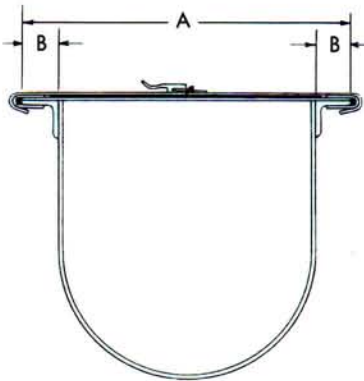
Components



DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
Size of Conveyor	TITE-SEAL COVER WITH CLAMPS AND "U" EDGING					TITE-SEAL CLAMPS ONLY		"U" EDGING ONLY	
	Gauge of Steel	Part Number	A*	B	Wgt. per Ft.	Part Number	Size Number	Part Number	
4	16	4TS16	7 $\frac{1}{4}$	1 $\frac{1}{4}$	1.6	4TSC	1	UE1	
6	16	6TS16	9 $\frac{1}{4}$	1 $\frac{1}{4}$	2.0	6TSC	1	UE1	
9	14	9TS14	13 $\frac{1}{4}$	1 $\frac{1}{2}$	3.4	9TSC	1	UE1	
10	14	10TS14	14 $\frac{1}{4}$	1 $\frac{1}{2}$	3.7	10TSC	1	UE1	
12	14	12TS14	17 $\frac{1}{4}$	2	4.6	12TSC	1	UE1	
14	14	14TS14	19 $\frac{1}{4}$	2	5.2	14TSC	1	UE1	
16	14	16TS14	21 $\frac{1}{4}$	2	5.8	16TSC	1	UE1	
18	12	18TS12	24 $\frac{1}{4}$	2 $\frac{1}{2}$	8.7	18TSC	2	UE2	
20	12	20TS12	26 $\frac{1}{4}$	2 $\frac{1}{2}$	9.5	20TSC	2	UE2	
24	12	24TS12	30 $\frac{1}{4}$	2 $\frac{1}{2}$	11.1	24TSC	2	UE2	

* For trough thickness 16 Ga. through 10 Ga. For use with trough thickness of $\frac{3}{16}$ " through $\frac{1}{4}$ " increase $\frac{1}{4}$ ".

Tite-Seal Covers are designed for use with Angle Trough. They provide a high degree of dust protection. The flat cover is held securely in place by a continuous formed steel "U" edging along both sides of the trough. This "U" edging is fitted with sponge rubber and seals the cover to the trough. Tite-Seal quick-release cover clamps hold the entire assembly in place and yet allow quick access to the trough interior. A gasket attached to the underside of the cover clamp seals the joint between lengths of cover.

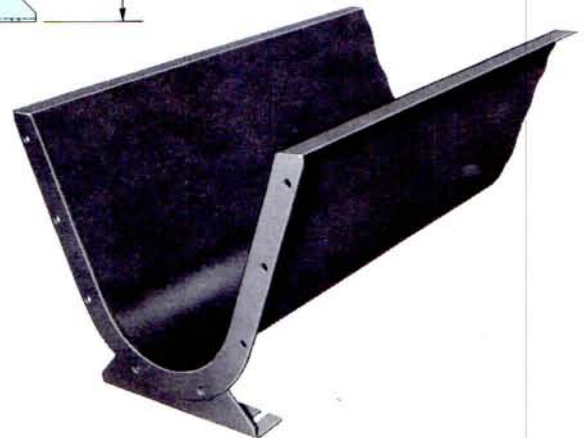
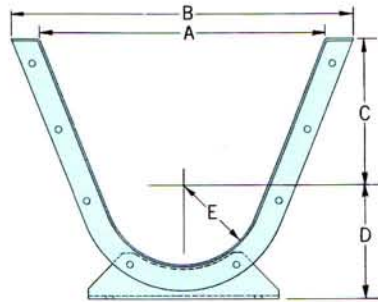




Flared Trough

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS								
Size of Conveyor	Trough Thickness	Part Number	A	B	C	D	E	Weight Per Foot
6	14	6FT14	14	16 $\frac{3}{8}$	7	5 $\frac{5}{8}$	3 $\frac{1}{2}$	8
	$\frac{3}{16}$	6FT07	14	16 $\frac{3}{8}$	7	5 $\frac{5}{8}$	3 $\frac{1}{2}$	19
9	14	9FT14	18	21 $\frac{1}{2}$	9	7 $\frac{7}{8}$	5	11
	10	9FT10	18	21 $\frac{1}{2}$	9	7 $\frac{7}{8}$	5	19
	$\frac{3}{16}$	9FT07	18	21 $\frac{1}{2}$	9	7 $\frac{7}{8}$	5	26
	$\frac{1}{4}$	9FT03	18	21 $\frac{1}{2}$	9	7 $\frac{7}{8}$	5	34
12	12	12FT12	22	26 $\frac{1}{2}$	10	9 $\frac{5}{8}$	6 $\frac{1}{2}$	21
	10	12FT10	22	26 $\frac{1}{2}$	10	9 $\frac{5}{8}$	6 $\frac{1}{2}$	27
	$\frac{3}{16}$	12FT07	22	26 $\frac{1}{2}$	10	9 $\frac{5}{8}$	6 $\frac{1}{2}$	37
	$\frac{1}{4}$	12FT03	22	26 $\frac{1}{2}$	10	9 $\frac{5}{8}$	6 $\frac{1}{2}$	49
14	12	14FT12	24	28 $\frac{1}{2}$	11	10 $\frac{7}{8}$	7 $\frac{1}{2}$	23
	10	14FT10	24	28 $\frac{1}{2}$	11	10 $\frac{7}{8}$	7 $\frac{1}{2}$	30
	$\frac{3}{16}$	14FT07	24	28 $\frac{1}{2}$	11	10 $\frac{7}{8}$	7 $\frac{1}{2}$	41
	$\frac{1}{4}$	14FT03	24	28 $\frac{1}{2}$	11	10 $\frac{7}{8}$	7 $\frac{1}{2}$	55
16	12	16FT12	28	32 $\frac{1}{2}$	11 $\frac{1}{2}$	12	8 $\frac{1}{2}$	26
	10	16FT10	28	32 $\frac{1}{2}$	11 $\frac{1}{2}$	12	8 $\frac{1}{2}$	33
	$\frac{3}{16}$	16FT07	28	32 $\frac{1}{2}$	11 $\frac{1}{2}$	12	8 $\frac{1}{2}$	44
	$\frac{1}{4}$	16FT03	28	32 $\frac{1}{2}$	11 $\frac{1}{2}$	12	8 $\frac{1}{2}$	59
18	10	18FT10	31	36 $\frac{1}{2}$	12 $\frac{3}{8}$	13 $\frac{3}{8}$	9 $\frac{1}{2}$	36
	$\frac{3}{16}$	18FT07	31	36 $\frac{1}{2}$	12 $\frac{1}{8}$	13 $\frac{3}{8}$	9 $\frac{1}{2}$	49
	$\frac{1}{4}$	18FT03	31	36 $\frac{1}{2}$	12 $\frac{1}{8}$	13 $\frac{3}{8}$	9 $\frac{1}{2}$	65
20	10	20FT10	34	39 $\frac{1}{2}$	13 $\frac{1}{2}$	15	10 $\frac{1}{2}$	38
	$\frac{3}{16}$	20FT07	34	39 $\frac{1}{2}$	13 $\frac{1}{2}$	15	10 $\frac{1}{2}$	52
	$\frac{1}{4}$	20FT03	34	39 $\frac{1}{2}$	13 $\frac{1}{2}$	15	10 $\frac{1}{2}$	69
24	10	24FT10	40	45 $\frac{1}{2}$	16 $\frac{1}{2}$	18 $\frac{3}{8}$	12 $\frac{1}{2}$	44
	$\frac{3}{16}$	24FT07	40	45 $\frac{1}{2}$	16 $\frac{1}{2}$	18 $\frac{3}{8}$	12 $\frac{1}{2}$	60
	$\frac{1}{4}$	24FT03	40	45 $\frac{1}{2}$	16 $\frac{1}{2}$	18 $\frac{3}{8}$	12 $\frac{1}{2}$	79

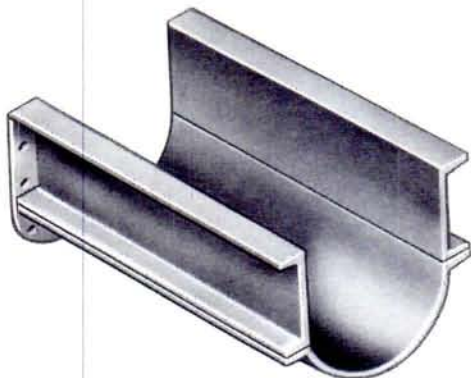
The Flared Trough is designed to allow the standard $\frac{1}{2}$ " clearance between the screw and the trough bottom. The flared sides of the trough improve the feeding and conveying action particularly on materials that are not entirely free-flowing or material in large slabs or pieces. The top edges are flanged to provide cover support and Nu-Weld steel end flanges are continuously jig-welded to each end to assure alignment and tight joints. Where conditions require special construction, Flared Troughs may be furnished in stainless steel, Monel or other alloys. Covers are usually bolted on or furnished with screw or spring clamps and may be flat for interior or hip roof for exterior installations.





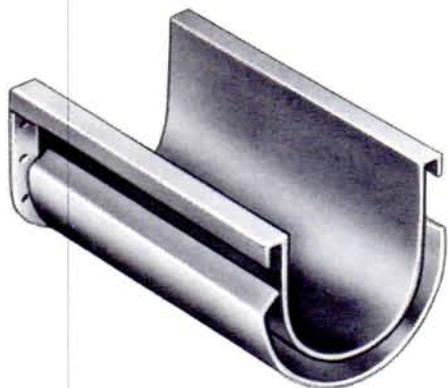
Special Trough Designs

Channel Trough



Channel Trough is made with a separate rolled or formed steel bottom for use where severe abrasion or corrosion factors require frequent trough replacements. The bottom is bolted to the structural steel side channels making a very rigid unit that can be used where trough supports are necessarily widely spaced.

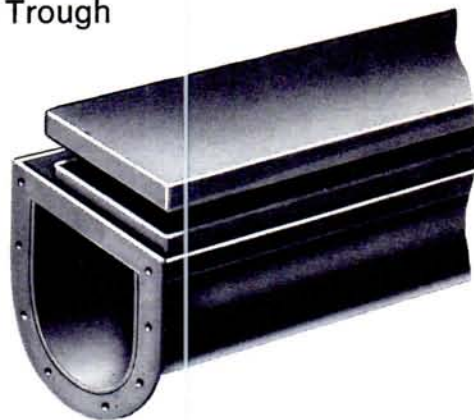
Jacketed Trough



The Jacketed Trough is used to carry an agent for heating, cooling or drying the material while it is being conveyed. A formed jacket is continuously welded to a standard trough. This trough may be built to various standards; therefore, please consult our staff engineers before ordering.

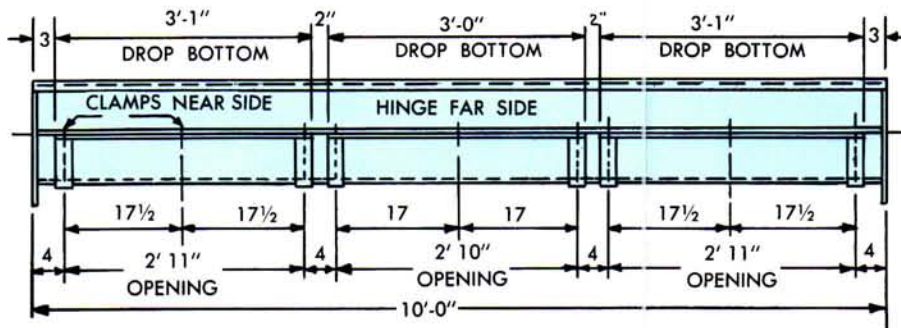
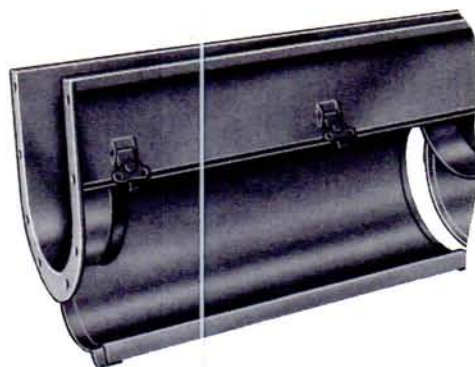
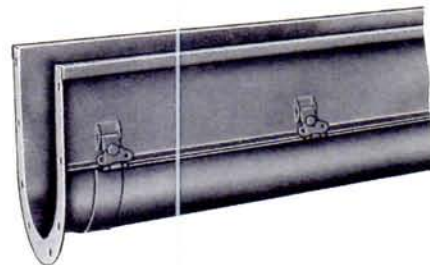
Dust Seal Trough

Dust Seal Troughs are formed with "Z" bars along the top sides and channels across the top width. This forms a continuous pocket into which the flanged (all four sides) cover fits. This pocket can then be filled with sand, sponge rubber or the material being conveyed, to provide a dust-tight seal that will allow quick access to the trough interior.



Drop Bottom Trough

The Drop Bottom Trough is designed to facilitate quick access to the Screw Conveyor and trough interior where frequent cleaning is required to combat infestation and contamination or build-up of some materials. The trough is equipped with a hinged bottom section that swings open when the clamps are disengaged. The edges of the opening are gasketed to seal when closed. The Drop Bottom Trough may be of double flanged or angle type construction and fitted with your choice of cover.

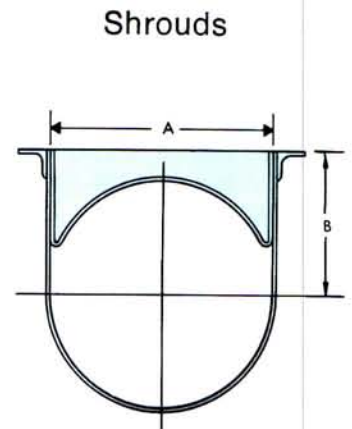
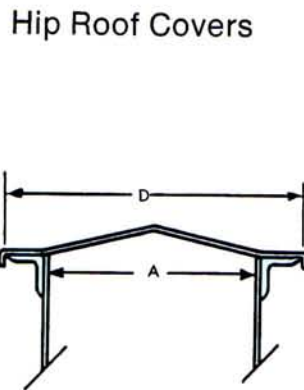
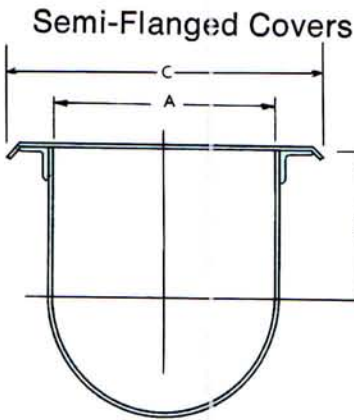


Typical layout of a length of drop bottom trough.



Trough Covers

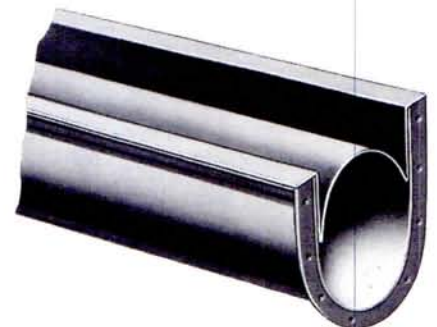
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS													
Diameter of Conveyor	SEMI-FLANGED FLAT COVER			HIP ROOF COVER			SHROUD COVER			A	B	C	D
	Gauge of Steel	Part Number	Weight 10 Ft.	Gauge of Steel	Part Number	Weight 10 Ft.	Gauge of Steel	Part Number	Weight 5 Ft.				
4	16	4SFC16	18	16	4HR16	21	10	4SC10	27	5	3½	8¾	8¼
6	16	6SFC16	23	16	6HR16	25	10	6SC10	35	7	4½	10½	10
9	14	9SFC14	38	14	9HR14	41	10	9SC10	47	10	6½	14½	13¾
10	14	10SFC14	41	14	10HR14	44	10	10SC10	50	11	6¾	15¼	14¾
12	14	12SFC14	47	14	12HR14	51	10	12SC10	59	13	7¾	18¾	17¾
14	14	14SFC14	53	14	14HR14	57	10	14SC10	70	15	9¼	20½	19¾
16	14	16SFC14	57	14	16HR14	63	10	16SC10	82	17	10¾	22½	21¾
18	12	18SFC12	92	12	18HR12	97	10	18SC10	94	19	12½	25½	24¾
20	12	20SFC12	98	12	20HR12	104	10	20SC10	106	21	13½	27½	26¾
24	12	24SFC12	113	12	24HR12	118	10	24SC10	130	25	16½	31½	30¾



Semi-Flanged covers are flat covers with a slight crimp on both sides for greater strength and rigidity. They can be fastened by bolts, spring or screw clamps. They are not considered weather-proof but through the addition of gaskets and battens at the cover joints a reasonably tight construction can be obtained.

Hip Roof covers are intended for outdoor applications requiring a high degree of weather tightness. The cover is flanged down on both sides and fitted with battens at the cover joints. Rubber gaskets are usually furnished all around. Fastening is usually by bolting but screw clamps can also be supplied.

Shrouds are designed to fit inside a standard trough to create a tubular effect for inclined operation of short units requiring no intermediate hanger bearings. A short section of shroud is also incorporated in feeder conveyors to baffle the flow of material. In this application it would be used in addition to any other cover construction.

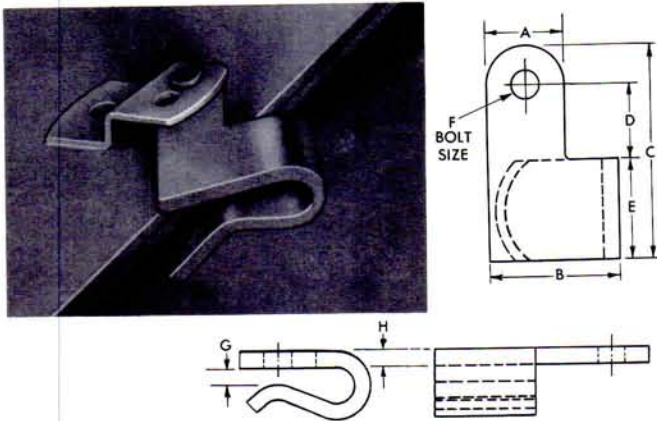




Trough Cover Clamps

Spring Cover Clamp

Steel Spring Cover Clamps are commonly used to fasten flat or semi-flanged covers to the conveyor trough. For dust-tight applications, they may also be fitted over a gasketed cover. Spring Cover Clamps are usually located on 2'6" centers, if gasketed, 15" centers, or closer to suit.

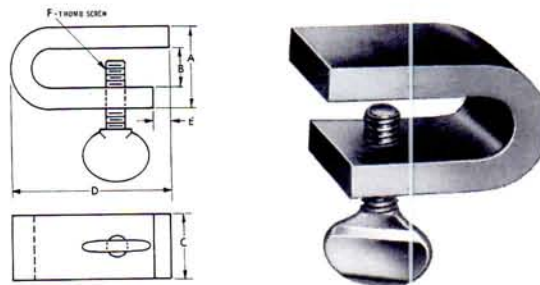


PART NUMBER		A	B	C	D	E	F	G	H	Wgt. Per C
Right Hand	Left Hand									
1SCR	1SCL	3/4	1 1/2	2 1/16	1 1/4	1 1/4	5/32	3/32	3/16	34
2SCR	2SCL	1 1/4	2	3 3/16	1 1/2	1 1/2	13/32	1/4	3/16	51

Part Numbers shown are for clamps for riveting to side angle of trough, if to include bracket for welding to cover as pictured add suffix "B".

Screw Cover Clamp

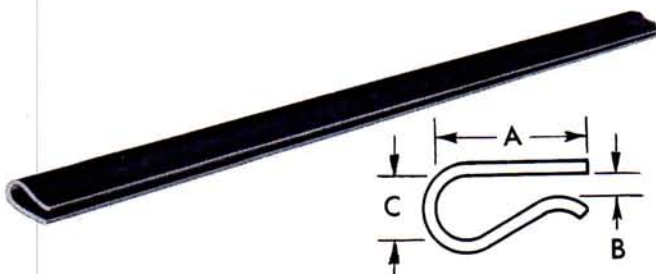
Screw Clamps may be used for flat or other special trough covers and are usually located on 30" centers or if gasketed, 15" centers, or closer to suit. Screw Clamps are also often used to clamp the bottom of drop bottom troughs.



Dimensions in Inches and Average Weight in Pounds							
Part Number	A	B	C	D	E	F	Weight Per C
3SC	1 1/4	3/4	1	2 1/16	1/4	3/8	43
4SC	2	1 1/4	1	2 1/4	3/16	3/8	50

Continuous Cover Clamps

The Continuous Cover Clamp is a heavy-gauge spring clamp furnished in 5' lengths. It is ideally suited to fastening a flat cover to the conveyor trough or for fastening a drop-bottom or quick-opening trough or casing section. The Continuous Clamp can be supplied in black iron or stainless steel, with or without locking pins on the ends.



Part Number	A	B	C	Weight Each
4CC	1 1/4	3/16	1/2	6

Quick-Release Clamps

See pages 49 and 51 for "Barron" and "Tite-Seal" cover clamps.



"BARRON" Cover Clamp



"TITE-SEAL" COVER CLAMP

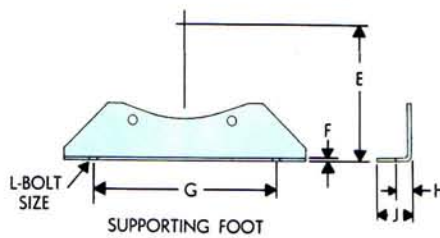


Supporting Feet and Saddles

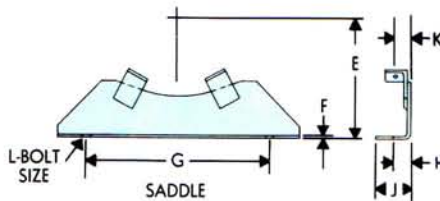
DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS																			
Diameter of Conveyor	NU-WELD END FLANGE		SUPPORTING FOOT		SADDLE		A	B	C	D	E	F	G	H	J	K	L	M	
	*Part Number	Wgt.	Part Number	Wgt.	Part Number	Wgt.												Size	No.
4	4NWF	1½	4SF	1½	4S	1½	5¼	8	3⅝	¾	4⅝	¾	5¼	⅞	1½	1⅝	¾	¾	6
6	6NWF	2	6SF	2	6S	2	7¼	9¼	4½	¾	5⅝	¾	8⅞	⅞	1½	1⅝	¾	¾	6
9	9NWF	3	9SF	4½	9S	4½	10¼	13½	6⅞	¾	7⅞	¾	9⅞	1⅝	2½	1⅝	½	¾	8
10	10NWF	4	10SF	5	10S	5	11¼	14½	6⅞	¾	8⅞	¾	9½	1⅝	2⅛	1⅝	½	¾	8
12	12NWF	5	12SF	6	12S	6	13¼	17¼	7¾	¾	9⅝	¾	12¼	1⅝	2½	1⅝	⅝	½	8
14	14NWF	6½	14SF	7	14S	7	15¼	19¼	9¼	¾	10⅞	¾	13½	1⅝	2½	1⅝	⅝	½	8
16	16NWF	7½	16SF	7½	16S	8	17¼	21¼	10⅞	¾	12	¾	14⅞	1⅝	3	1⅝	⅝	⅝	8
18	18NWF	10½	18SF	9½	18S	10	19¼	24¼	12⅞	¾	13⅞	¾	16	1⅝	3	1⅝	⅝	⅝	10
20	20NWF	11½	20SF	12½	20S	13	21¼	26¼	13½	¾	15	¾	19¼	2	3½	1⅝	¾	⅝	10
24	24NWF	13½	24SF	14½	24S	15	25¼	30¼	16½	¾	18⅞	¾	20	2¼	4	1⅝	¾	⅝	12

* When ordering conveyor trough ⅝" thick or heavier, show part number and specify "for heavy trough."

Supporting feet provide the means of aligning and fastening the trough to the floor or existing structure at the trough joints. The trough end height is accurately maintained and the feet permit the removal of a trough end without disturbing the entire unit.

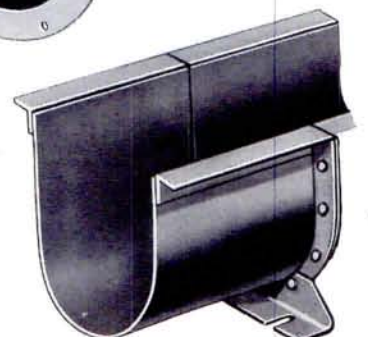
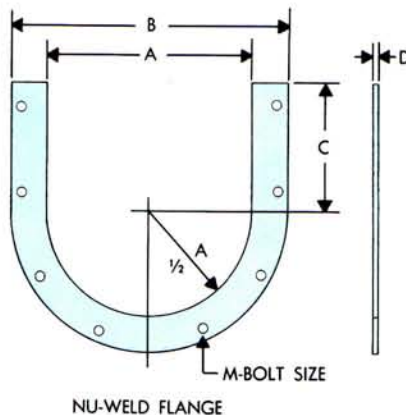


Saddles are used to support the trough between the trough sections and fasten to the floor or existing structures. The total height from the floor is the same as for a trough end with feet.



Flanges

Nu-Weld End Flanges are made of heavy-gauge steel to assure a close accurate fit with the conveyor trough and the trough ends or the following end flange. Bolt holes are jig-punched to assure accurate alignment.

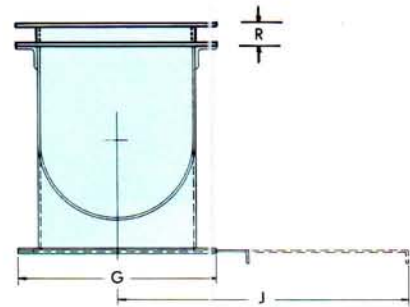
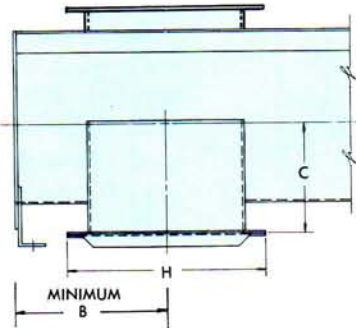
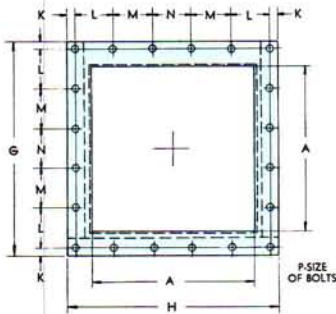




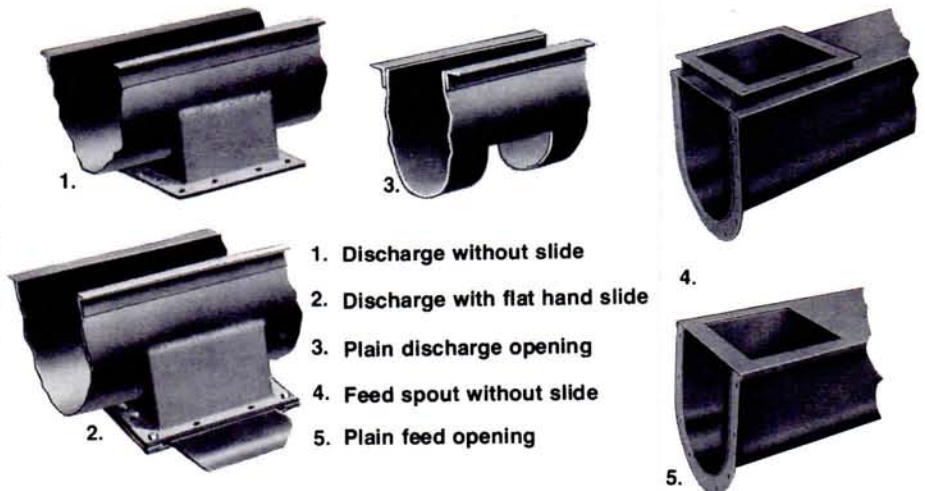
Feed and Discharge Spouts

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS																	
Diameter of Conveyor	Gauge of Steel	Without SLIDE GATE		With SLIDE GATE		A	B		C	G-H	J	K	L	M	N	P	R
		△ Part Number	Wgt.	△ Part Number	Wgt.		Flange With Feet*	Flange Without Feet*									
4	14	4DS14	2	4DS14S	6	5	6	4½	3¼	7½	11½	¾	2¼		2¼	¼	1½
6	14	6DS14	4	6DS14S	10	7	7½	6	5	10	14½	1¼	2¼		3	¾	1¾
9	14	9DS14	7	9DS14S	16	10	10	8	7½	13	18¾	½	4		4	¾	2
	10	9DS10	12	9DS10S	21	10	10	8	7½	13	18¾	½	4		4	¾	2
10	14	10DS14	8	10DS14S	19	11	11	9	7½	14¼	20½	⅝	4⅝		4¾	¾	2¼
	10	10DS10	14	10DS10S	25	11	11	9	7½	14¼	20½	⅝	4⅝		4¾	¾	2¼
12	12	12DS12	15	12DS12S	33	13	12½	10½	8½	17¼	24½	⅞	5½		5¼	¾	2¼
	¾	12DS07	27	12DS07S	45	13	12½	10½	8½	17¼	24½	⅞	5½		5¼	¾	2¼
14	12	14DS12	19	14DS12S	41	15	13½	11½	10½	19¼	27½	⅞	3½	3½	3½	¾	2½
	¾	14DS07	34	14DS07S	56	15	13½	11½	10½	19¼	27½	⅞	3½	3½	3½	¾	2½
16	12	16DS12	23	16DS12S	49	17	14½	13½	11½	21¼	30¾	⅞	3¾	4	4	¾	2½
	¾	16DS07	38	16DS07S	64	17	14½	13½	11½	21¼	30¾	⅞	3¾	4	4	¾	2½
18	12	18DS12	30	18DS12S	64	19	16½	14½	12¾	24¼	33¾	1	4¾	4¾	4¾	½	2¾
	¾	18DS07	52	18DS07S	86	19	16½	14½	12¾	24¼	33¾	1	4¾	4¾	4¾	½	2¾
20	12	20DS12	34	20DS12S	84	21	17½	15½	13¾	26¼	36¾	1	4¾	4¾	4¾	½	2¾
	¾	20DS07	59	20DS07S	109	21	17½	15½	13¾	26¼	36¾	1	4¾	4¾	4¾	½	2¾
24	12	24DS12	44	24DS12S	108	25	20	17½	15¾	30¼	42¾	1	5¾	5¾	5½	½	3
	¾	24DS07	76	24DS07S	140	25	20	17½	15¾	30¼	42¾	1	5¾	5¾	5½	½	3

* Applicable to discharge spout only.
 △ Part Numbers shown apply to discharge spouts only.
 For feed spout, substitute "FS" instead of "DS", for example: "4FS14" or "6FS14".



Stub spouts with or without slide gates are fitted to conveyor trough or cover openings. The slide may be mounted on either a feed or discharge spout and may be operated parallel to the trough or at right angles, as required. Spouts of special dimensions, gauges and materials can be supplied to suit installation needs.



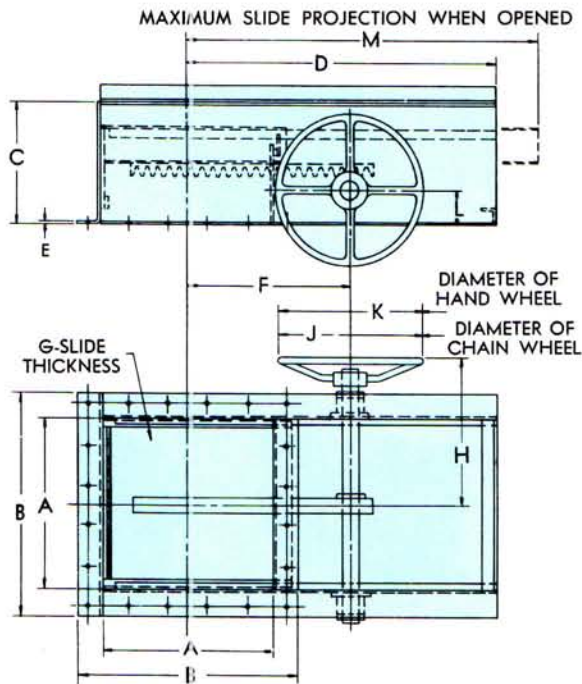


Rack and Pinion Gates

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS															
Diameter of Conveyor	Gauge of Spout	Curved Slide Part Number	Wgt.	A	B	C	D	E	F	G (Ga.)	H	J	K	L	M
6	14	6RP14C	38	7 $\frac{1}{4}$	10 $\frac{1}{4}$	8	11 $\frac{1}{8}$	14	7 $\frac{7}{8}$	12	11 $\frac{3}{8}$	12	12	27 $\frac{1}{16}$	15 $\frac{5}{8}$
	12	6RP12C	40	7 $\frac{1}{4}$	10 $\frac{1}{4}$	8	11 $\frac{1}{8}$	12	7 $\frac{7}{8}$	12	11 $\frac{3}{8}$	12	12	27 $\frac{1}{16}$	15 $\frac{5}{8}$
9	12	9RP12C	48	10 $\frac{1}{4}$	13 $\frac{1}{4}$	9 $\frac{1}{2}$	13 $\frac{3}{8}$	12	9 $\frac{1}{8}$	12	12 $\frac{1}{2}$	12	12	27 $\frac{1}{16}$	20 $\frac{3}{8}$
	10	9RP10C	53	10 $\frac{1}{4}$	13 $\frac{1}{4}$	9 $\frac{1}{2}$	13 $\frac{3}{8}$	10	9 $\frac{1}{8}$	12	12 $\frac{1}{2}$	12	12	27 $\frac{1}{16}$	20 $\frac{3}{8}$
10	12	10RP12C	61	11 $\frac{1}{4}$	14 $\frac{1}{4}$	10	13 $\frac{3}{8}$	12	9 $\frac{1}{8}$	10	13 $\frac{7}{16}$	12	12	27 $\frac{1}{16}$	21 $\frac{5}{8}$
	10	10RP10C	66	11 $\frac{1}{4}$	14 $\frac{1}{4}$	10	13 $\frac{3}{8}$	10	9 $\frac{1}{8}$	10	13 $\frac{7}{16}$	12	12	27 $\frac{1}{16}$	21 $\frac{5}{8}$
12	10	12RP10C	81	13 $\frac{1}{4}$	17 $\frac{1}{4}$	11	15 $\frac{3}{8}$	10	10 $\frac{1}{8}$	10	14 $\frac{7}{16}$	12	12	27 $\frac{1}{16}$	24 $\frac{3}{8}$
	$\frac{3}{16}$	12RP07C	94	13 $\frac{1}{4}$	17 $\frac{1}{4}$	11	15 $\frac{3}{8}$	$\frac{3}{16}$	10 $\frac{1}{8}$	10	14 $\frac{7}{16}$	12	12	27 $\frac{1}{16}$	24 $\frac{3}{8}$
*14	10	14RP10C	99	15 $\frac{1}{4}$	19 $\frac{1}{4}$	10 $\frac{13}{16}$	17 $\frac{3}{8}$	10	11 $\frac{1}{8}$	10	15 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	27 $\frac{3}{8}$
	$\frac{3}{16}$	14RP07C	118	15 $\frac{1}{4}$	19 $\frac{1}{4}$	10 $\frac{13}{16}$	17 $\frac{3}{8}$	$\frac{3}{16}$	11 $\frac{1}{8}$	10	15 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	27 $\frac{3}{8}$
*16	10	16RP10C	115	17 $\frac{1}{4}$	21 $\frac{1}{4}$	11 $\frac{13}{16}$	20 $\frac{3}{8}$	10	12 $\frac{1}{8}$	10	16 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	30 $\frac{3}{8}$
	$\frac{3}{16}$	16RP07C	138	17 $\frac{1}{4}$	21 $\frac{1}{4}$	11 $\frac{13}{16}$	20 $\frac{3}{8}$	$\frac{3}{16}$	12 $\frac{1}{8}$	10	16 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	30 $\frac{3}{8}$
*18	10	18RP10C	150	19 $\frac{1}{4}$	24 $\frac{1}{4}$	12 $\frac{13}{16}$	22 $\frac{3}{8}$	10	13 $\frac{1}{8}$	10	17 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	33 $\frac{3}{8}$
	$\frac{3}{16}$	18RP07C	170	19 $\frac{1}{4}$	24 $\frac{1}{4}$	12 $\frac{13}{16}$	22 $\frac{3}{8}$	$\frac{3}{16}$	13 $\frac{1}{8}$	10	17 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	33 $\frac{3}{8}$
*20	10	20RP10C	160	21 $\frac{1}{4}$	26 $\frac{1}{4}$	13 $\frac{3}{8}$	24 $\frac{3}{8}$	10	14 $\frac{3}{8}$	$\frac{3}{16}$	18 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	36 $\frac{3}{8}$
	$\frac{3}{16}$	20RP07C	183	21 $\frac{1}{4}$	26 $\frac{1}{4}$	13 $\frac{3}{8}$	24 $\frac{3}{8}$	$\frac{3}{16}$	14 $\frac{3}{8}$	$\frac{3}{16}$	18 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	36 $\frac{3}{8}$
*24	10	24RP10C	202	25 $\frac{1}{4}$	30 $\frac{1}{4}$	15 $\frac{3}{8}$	29 $\frac{3}{8}$	10	16 $\frac{3}{8}$	$\frac{3}{16}$	20 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	42 $\frac{3}{8}$
	$\frac{3}{16}$	24RP07C	235	25 $\frac{1}{4}$	30 $\frac{1}{4}$	15 $\frac{3}{8}$	29 $\frac{3}{8}$	$\frac{3}{16}$	16 $\frac{3}{8}$	$\frac{3}{16}$	20 $\frac{7}{16}$	12	12	2 $\frac{5}{8}$	42 $\frac{3}{8}$

* These sizes furnished with double rack and pinions.

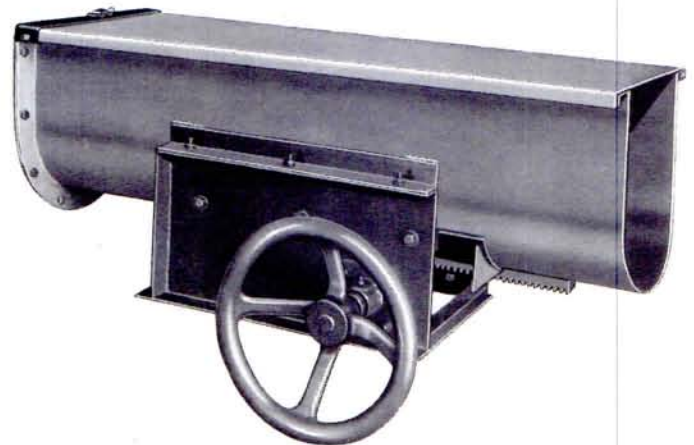
Curved Slide



See page 57 for flange punching.

Rack and Pinion discharge gates with curved slides have cut tooth racks welded to the curved slide plate. This engages a cut tooth pinion mounted on a pinion shaft. Operation of the gate is by means of a hand wheel as illustrated. Chain wheels with chain can be supplied if desired. Curved slides conform with the contour of the trough and eliminate all pockets that might trap the material in a spout above a flat slide.

These slides can also be power operated through electric motors or air or hydraulic cylinders. Consult our engineering department for details.





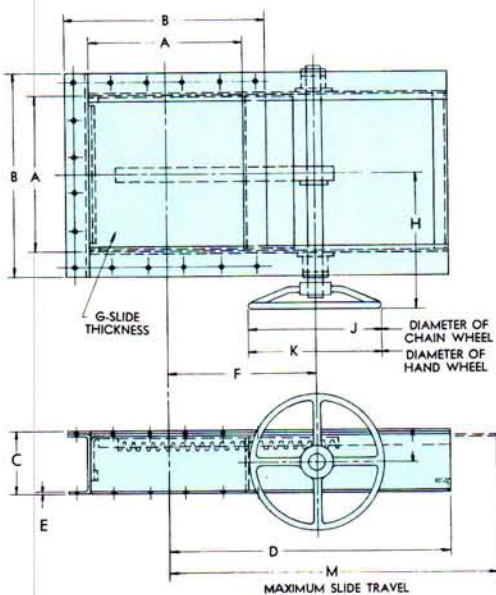
Rack and Pinion Gates

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS															
Diameter of Conveyor	Gauge of Spout	Flat Side Gate		A	B	C	D	E	F	G (Ga.)	H	J	K	L	M
		Part Number	Wgt.												
4	14	4RP14F	35	5	7½	5	10½	14	6½	10	10⅞	12	12	2	12½
6	14	6RP14F	41	7	10	5	11½	14	7½	10	11⅜	12	12	2	15½
9	14	9RP14F	52	10	13	5	13	14	9	10	10⅝	12	12	2	20
	10	9RP10F	64	10	13	5	13	10	9	10	10⅝	12	12	2	20
10	14	10RP14F	56	11	14¼	5	13½	14	9½	10	13⅞	12	12	2	21½
	10	10RP10F	70	11	14¼	5	13½	10	9½	10	13⅞	12	12	2	21½
12	12	12RP12F	79	13	17¼	5	15½	12	10½	¾	14⅞	12	12	2	24½
	¾	12RP07F	105	13	17¼	5	15½	¾	10½	¾	14⅞	12	12	2	24½
*14	12	14RP12F	94	15	19¼	5	17½	12	11½	¾	15⅞	12	12	2	27½
	¾	14RP07F	125	15	19¼	5	17½	¾	11½	¾	15⅞	12	12	2	27½
*16	12	16RP12F	106	17	21¼	5	20½	12	12½	¾	16⅞	12	12	2	30½
	¾	16RP07F	150	17	21¼	5	20½	¾	12½	¾	16⅞	12	12	2	30½
*18	12	18RP12F	131	19	24¼	5	22½	12	13½	¾	17⅞	12	12	2	33½
	¾	18RP07F	147	19	24¼	5	22½	¾	13½	¾	17⅞	12	12	2	33½
*20	12	20RP12F	152	21	26¼	5	24½	12	14½	¾	18⅞	12	12	2	36½
	¾	20RP07F	202	21	26¼	5	24½	¾	14½	¾	18⅞	12	12	2	36½
*24	12	24RP12F	176	25	30¼	5	29½	12	16½	¾	20⅞	12	12	2	42½
	¾	24RP07F	240	25	30¼	5	29½	¾	16½	¾	20⅞	12	12	2	42½

* These sizes furnished with double racks and pinions.

Flat Slide

Rack and Pinion discharge gates with flat slides have cut tooth racks welded to the slide plate. This engages a cut tooth pinion which is mounted on a pinion shaft. Operation of the gate is by means of a hand wheel, as illustrated, but chain wheels with chain can be supplied if desired. Flat slides allow operation in any one of the four positions if clearance is adequate. These slides can also be power operated through electric motors, air or hydraulic cylinders. Consult our engineering department for details.



See page 57 for flange punching.

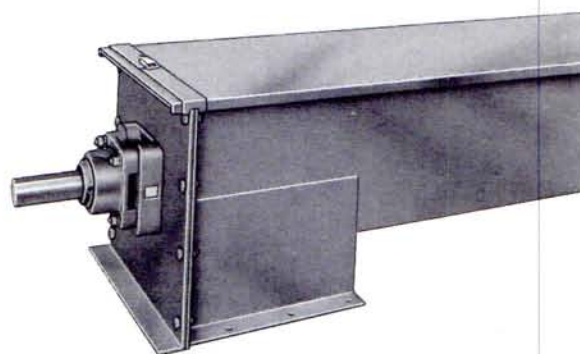
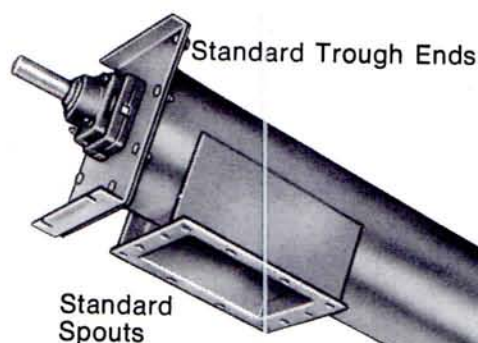
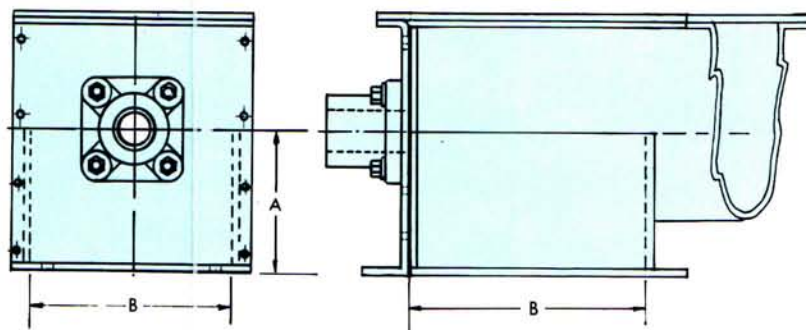




Flush End Discharge

DIMENSIONS IN INCHES					
Diameter of Conveyor	A	B	Diameter of Conveyor	A	B
4	3 $\frac{3}{4}$	5	14	10 $\frac{5}{8}$	15
6	5	7	16	11 $\frac{1}{8}$	17
9	7 $\frac{1}{8}$	10	18	12 $\frac{3}{8}$	19
10	7 $\frac{3}{8}$	11	20	13 $\frac{3}{8}$	21
12	8 $\frac{1}{8}$	13	24	15 $\frac{3}{8}$	25

A discharge assembly as shown on page 57 can be undesirable, if material has a tendency to build up between the edge of the discharge opening and the inside of the trough end plate at the extreme end of the conveyor. To overcome this, the spout can be mounted flush with the end of the trough and the trough end modified to act as the fourth side of the discharge spout. The trough end may be any of the types shown on pages 41 through 44 and the spout plain, with flat hand slide, or with rack and pinion operated flat slide, pages 57 and 59.



Tubular Conveyors

As mentioned on page 20, tubular conveyors are usually used in incline operations for the round trough shape results in greater efficiency on the incline. They are also used when greater air tightness is desired as the cover joints are completely eliminated. The design pictured utilizes standard conveyor screw, hangers, trough ends, and spouts as shown in this catalog for

the greatest possible economy and availability. The housing, just as a "U" trough, is available in a wide range of steel thicknesses and can be made split for accessibility and drop bottom or top for cleaning.



Assembly Bolts

Coupling Bolts are normally "Tem-U-Lac" as pictured on page 34.

Assembly Bolts for hangers, trough flanges, trough ends, bolted covers and supporting feet are normally hex head machine bolts with lock washers and hex nuts.

CONVEYOR PART	CONVEYOR AND BOLT SIZES															
	4 x 1		6 x 1 1/2		9 x 1 1/2		9 x 2		10 x 1 1/2		10 x 2		12 x 2		12 x 2 7/16	
	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.
Conveyor Coupling	3/8 x 2 1/8	4	1/2 x 3	4	1/2 x 3	4	5/8 x 3 3/8	4	1/2 x 3	4	5/8 x 3 3/8	4	5/8 x 3 3/8	4	5/8 x 4 3/8	4
326 Hanger	3/8 x 1	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4
216 Hanger	3/8 x 1	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/4	4
220 Hanger	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	1/2 x 1 1/4	4	1/2 x 1 1/4	4
226 Hanger	3/8 x 1	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4
230 Hanger	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	1/2 x 1 1/4	4	1/2 x 1 1/4	4
260 Hanger	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	3/8 x 1	4	1/2 x 1 1/4	4	1/2 x 1 1/4	4
270 Hanger			3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	3/8 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4
Trough Flange	3/8 x 1	6	3/8 x 1	6	3/8 x 1	8	3/8 x 1	8	3/8 x 1	8	3/8 x 1	8	1/2 x 1 1/4	8	1/2 x 1 1/4	8
Trough End	3/8 x 1	6	3/8 x 1	6	3/8 x 1 1/4	8	3/8 x 1 1/4	8	3/8 x 1 1/4	8	3/8 x 1 1/4	8	1/2 x 1 1/2	8	1/2 x 1 1/2	8
Bolted Cover	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10
Supporting Foot	3/8 x 1 1/4	2	3/8 x 1 1/4	2	3/8 x 1 1/4	2	3/8 x 1 1/4	2	3/8 x 1 1/4	2	3/8 x 1 1/4	2	1/2 x 1 1/2	2	1/2 x 1 1/2	2

CONVEYOR PART	CONVEYOR AND BOLT SIZES															
	12 x 3		14 x 2 7/16		14 x 3		16 x 3		18 x 3		20 x 3		20 x 3 7/16		24 x 3 7/16	
	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.	Bolt	No.
Conveyor Coupling	3/4 x 5	4	5/8 x 4 3/8	4	3/4 x 5	4	3/4 x 5	4	3/4 x 5	4	3/4 x 5	4	7/8 x 5 1/2	4	7/8 x 5 1/2	4
326 Hanger	1/2 x 1 1/2	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4
216 Hanger	1/2 x 1 1/2	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4
220 Hanger	1/2 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4
226 Hanger	1/2 x 1 1/2	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4
230 Hanger	1/2 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4
260 Hanger	1/2 x 1 1/4	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	1/2 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4	5/8 x 1 1/2	4
270 Hanger	1/2 x 1 1/2	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	1/2 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4	5/8 x 1 3/4	4
Trough Flange	1/2 x 1 1/4	8	1/2 x 1 1/4	8	1/2 x 1 1/4	8	5/8 x 1 3/4	8	5/8 x 1 3/4	10	5/8 x 1 3/4	10	5/8 x 1 3/4	10	5/8 x 1 3/4	12
Trough End	1/2 x 1 1/2	8	1/2 x 1 1/2	8	1/2 x 1 1/2	8	5/8 x 1 3/4	8	5/8 x 1 3/4	10	5/8 x 1 3/4	10	5/8 x 1 3/4	10	5/8 x 1 3/4	12
Bolted Cover	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10	5/16 x 1	10
Supporting Foot	1/2 x 1 1/2	2	1/2 x 1 1/2	2	1/2 x 1 1/2	2	5/8 x 1 3/4	2	5/8 x 1 3/4	2	5/8 x 1 3/4	2	5/8 x 1 3/4	2	5/8 x 1 3/4	2



Weights & Dimensions

PIPE SIZES NORMALLY USED IN ASSEMBLY OF CONVEYOR SCREW

STANDARD WEIGHT STEEL PIPE

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot	Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot
	OD	ID				OD	ID		
1/8	.405	.269	.068	.244	5	5.563	5.047	.258	14.617
1/4	.540	.364	.088	.424	6	6.625	6.065	.280	18.974
3/8	.675	.493	.091	.567	*7	7.625	7.023	.301	23.544
1/2	.840	.622	.109	.850	8	8.625	8.071	.277	24.696
3/4	1.050	.824	.113	1.130	8	8.625	7.981	.322	28.554
1	1.315	1.049	.133	1.678	*9	9.625	8.941	.342	33.907
1 1/4	1.660	1.380	.140	2.272	10	10.750	10.192	.279	31.201
1 1/2	1.900	1.610	.145	2.717	10	10.750	10.136	.307	34.240
2	2.375	2.067	.154	3.652	10	10.750	10.020	.365	40.483
2 1/2	2.875	2.469	.203	5.793	*11	11.750	11.000	.375	45.557
3	3.500	3.068	.216	7.575	12	12.754	12.090	.330	43.773
3 1/2	4.000	3.548	.226	9.109	12	12.750	12.000	.375	49.562
4	4.500	4.026	.237	10.790					
*4 1/2	5.000	4.506	.247	12.538					

EXTRA HEAVY STEEL PIPE

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot	Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot
	OD	ID				OD	ID		
1/8	.405	.215	.095	.314	5	5.563	4.813	.375	20.778
1/4	.540	.302	.119	.535	6	6.625	5.761	.432	28.573
3/8	.675	.423	.126	.738	*7	7.625	6.625	.500	38.048
1/2	.840	.546	.147	1.087	8	8.625	7.625	.500	43.388
3/4	1.050	.742	.154	1.473	*9	9.625	8.625	.500	48.728
1	1.315	.957	.179	2.171	10	10.750	9.750	.500	54.735
1 1/4	1.660	1.278	.191	2.996	*11	11.750	10.750	.500	60.075
1 1/2	1.900	1.500	.200	3.631	12	12.750	11.750	.500	65.415
2	2.375	1.939	.218	5.022					
2 1/2	2.875	2.323	.276	7.661					
3	3.500	2.900	.300	10.252					
3 1/2	4.000	3.364	.318	12.505					
4	4.500	3.826	.337	14.983					
*4 1/2	5.000	4.290	.355	17.611					

*These sizes are listed but not commonly used.
△Subject to standard mill tolerance variations

†Permissible variations in weight is plus or minus 5%.

DOUBLE EXTRA HEAVY STEEL PIPE

DIMENSIONS IN INCHES AND AVERAGE WEIGHTS IN POUNDS									
Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot	Nominal Pipe Size	△ACTUAL SIZE		Wall Thickness	†Weight Per Foot
	OD	ID				OD	ID		
1/2	.840	.252	.294	1.714	4	4.500	3.152	.674	27.541
3/4	1.050	.434	.308	2.440	*4 1/2	5.000	3.580	.710	32.530
1	1.315	.599	.358	3.659	5	5.563	4.063	.750	38.552
1 1/4	1.660	.896	.382	5.214	6	6.625	4.897	.864	53.160
1 1/2	1.900	1.100	.400	6.408	*7	7.625	5.875	.875	63.079
2	2.375	1.503	.436	9.029	8	8.625	6.875	.875	72.424
2 1/2	2.875	1.771	.552	13.695					
3	3.500	2.300	.600	18.583					
3 1/2	4.000	2.728	.636	22.850					

*These sizes are listed but not commonly used.
△Subject to standard mill tolerance variations

†Permissible variations in weight is plus or minus 5%.

Weights & Dimensions

STANDARD SHEET GAUGES

DIMENSIONS IN INCHES AND WEIGHTS IN POUNDS PER SQUARE FOOT									
Gauge	MFR'S STD.—STEEL SHEETS U.S. STD.—REVISED			BIRMINGHAM WIRE (BWG) STUBS IRON WIRE		Galvanized Sheet	STAINLESS SHEETS OLD U.S. STD.		
	Fractional	Decimal	Weight	Decimal	Weight		Decimal	Chr. Iron	Chr. Nickel
8	11/64	.1644	6.875	.165	6.7320				
9	5/32	.1495	6.250	.148	6.0384				
10	9/64	.1345	5.625	.134	5.4672	5.781	.1406	5.794	5.906
11	1/8	.1196	5.000	.120	4.8960	5.156	.1250	5.150	5.250
12	7/64	.1046	4.375	.109	4.4472	4.531	.1094	4.506	4.594
13	3/32	.0897	3.750	.095	3.8760	3.906	.0938	3.863	3.938
14	5/64	.0747	3.125	.083	3.3864	3.281	.0781	3.219	3.281
15	9/128	.0673	2.812	.072	2.9376	2.969	.0703	2.897	2.953
16	1/16	.0598	2.500	.065	2.6510	2.656	.0625	2.575	2.625
17	9/160	.0538	2.250	.058	2.3664	2.406	.0563	2.318	2.363
18	1/20	.0478	2.000	.049	1.9992	2.156	.0500	2.060	2.100
19	7/160	.0418	1.750	.042	1.7126	1.906	.0438	1.803	1.838
20	3/80	.0359	1.500	.035	1.4280	1.656	.0375	1.545	1.575
21	11/320	.0329	1.375	.032	1.3056	1.531	.0344	1.416	1.444
22	1/32	.0299	1.250	.028	1.1424	1.406	.0313	1.288	1.313
23	9/320	.0269	1.125	.025	1.0206	1.281	.0281	1.159	1.181
24	1/40	.0239	1.000	.022	.8970	1.156	.0250	1.030	1.050
25	7/320	.0209	.875	.020	.8160	1.031	.0219	.901	.919
26	3/160	.0179	.750	.018	.7344	.906	.0188	.773	.788
27	11/640	.0164	.687	.016	.6528	.844	.0172	.708	.722
28	1/64	.0149	.625	.014	.5712	.781	.0156	.644	.656
29	9/640	.0135	.562	.013	.5304	.719	.0141	.579	.591
30	1/80	.0120	.500	.012	.4896	.656	.0125	.515	.525

WEIGHTS OF STEEL PLATES

DIMENSIONS IN FRACTIONAL INCHES AND WEIGHTS IN POUNDS PER SQUARE FOOT							
STEEL PLATES				STAINLESS STEEL PLATES			
Thickness	Weight	Thickness	Weight	Thickness	Weight	Thickness	Weight
3/16	7.65	1 1/4	45.90	3/16	8.295	7/16	18.810
1/4	10.20	1 1/2	51.00	13/64	8.984	15/32	20.155
5/16	12.75	1 3/4	56.10	1/2	9.677	1/2	21.498
3/8	15.30	1 1/2	61.20	5/8	10.369	5/8	24.185
7/16	17.85	1 1/2	66.30	3/4	10.956	3/4	26.614
1/2	20.40	1 3/4	71.40	7/8	11.641	7/8	29.276
9/16	22.95	2	81.60	15/64	12.442	15/64	31.937
5/8	25.50	2 1/4	91.80	1/2	13.437	1/2	34.599
3/4	30.60	2 1/2	102.00	11/32	14.779	11/32	37.260
7/8	35.70	2 3/4	112.20	3/8	16.123	3/8	39.922
1	40.80	3	122.40	13/32	17.467	13/32	42.582

WEIGHTS OF ROUND AND SQUARE STEEL BARS

Size in Inches	Round Weight in Lbs.	Square Weight in Lbs.	Size in Inches	Round Weight in Lbs.	Square Weight in Lbs.	Size in Inches	Round Weight in Lbs.	Square Weight in Lbs.
3/16	.094	.120	1 1/4	3.380	4.303	3	24.03	30.60
1/8	.1277	.1620	1 1/2	3.766	4.795	3 1/4	28.21	35.91
5/16	.167	.213	1 3/4	4.172	5.313	3 1/2	32.71	41.65
3/8	.2133	.2676	1 1/2	4.600	5.857	3 3/4	37.55	47.81
7/16	.261	.332	1 1/2	5.049	6.428	4	42.73	54.40
11/32	.3137	.3992	1 1/2	5.518	7.026	4 1/4	48.23	61.41
1/2	.376	.478	1 1/2	6.008	7.650	4 1/2	54.07	68.85
13/32	.4377	.5562	1 1/2	6.519	8.301	4 3/4	60.25	76.71
7/16	.511	.651	1 3/4	7.051	8.978	5	66.76	85.00
1/2	.668	.850	1 3/4	8.178	10.413	5 1/4	73.60	93.71
9/16	.845	1.076	1 3/4	9.388	11.953	5 1/2	80.78	102.85
5/8	1.043	1.328	2	10.681	13.600	5 3/4	88.29	112.41
11/16	1.262	1.607	2 1/8	12.058	15.353	6	96.13	122.40
3/4	1.502	1.913	2 1/4	13.519	17.213	6 1/2	112.82	143.65
13/16	1.763	2.245	2 1/2	15.062	19.178	7	130.85	166.60
7/8	2.044	2.603	2 1/2	16.690	21.250	7 1/2	150.21	191.25
15/16	2.347	2.988	2 3/4	18.400	23.428	8	170.90	217.60
1	2.670	3.400	2 3/4	20.195	25.713	8 1/2	192.93	245.65
1 1/16	3.015	3.838	2 3/4	22.072	28.103	9	216.30	275.40

AREAS AND VOLUMES

- Circumference of circle = 3.1416 × diameter
 - Diameter of circle = 0.3183 × circumference
 - Side of a square of equal area = 0.8862 × diameter
 - Diameter of a circle of equal area = 1.1284 × side of square
 - Area of a circle = 0.7854 × square of the diameter
 - Diameter of a circle = 1.1284 × square root of the area
 - Surface area of a sphere = 3.1416 × square of the diameter
 - Volume of a sphere = 0.5236 × cube of diameter
 - Volume of cylinder or prism = area of base × height
 - Volume of cone or pyramid = 1/3 × area of base × height
 - Volume of the frustum of a cone or pyramid = 1/3 × height × (area of upper base + area of lower base + √area of upper base × area of lower base.)
- Doubling the diameter of a pipe increases its volume four times; generalizing, increasing the diameter "n" times increases the volume "n²" or "n × n" times.



Conversion Factors

CUBIC OR SOLID MEASURE

Cubic inches	16.39	Cubic centimeters
Cubic foot	0.02832	Cubic meters
Cubic feet	28.32	Liters
Cubic yard	0.7646	Cubic meter
Cubic meter	61.023	Cubic inches
Cubic meter	35.31	Cubic feet
Cubic meter	1.308	Cubic yards
Cubic meter	264.2	Gallons, U.S.

LINEAR MOVEMENT

Feet/min.	0.3048	Meters/min.
Meters/min.	1.667	Centimeters/sec.
Meters/min.	3.281	Feet/min.
Cubic feet/min.	0.4720	Liters/sec.

WEIGHT MEASURE

Kgs./meter	0.6720	Pounds/foot
Kgs./square meter	0.2048	Pounds/sq. foot
Tons (net or short)	0.90718	Tons (metric)
Tons (metric)	2205	Pounds

CAPACITY MEASURE

Gallons, U.S.	3.785	Liters
Liters	0.03531	Cubic feet

POWER MEASURE

Horsepower	1.014	Horsepower (metric)
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LINEAR MEASUREMENT

Centimeters	0.3937	Inches
Centimeters	0.01	Meters
Inches	2.540	Centimeters
Feet	30.48	Centimeters
Feet	0.3048	Meters
Feet	0.333	Yards
Yards	91.44	Centimeters
Yards	0.9144	Meters
Meters	100.0	Centimeters
Meters	39.37	Inches
Meters	3.281	Feet
Meters	1.094	Yards
Kilometers	3281	Feet
Kilometers	1094	Yards
Miles	1.609	Kilometers

SQUARE MEASURE

Square feet	0.0929	Square meters
Square yard	0.8361	Square meters
Square meter	10.76	Square feet
Square meter	1.196	Square yards

Feet	0	1	2	3	4	5	6	7	8	9
0	.....	0.305	0.610	0.914	1.219	1.524	1.829	2.134	2.438	2.743
10	3.048	3.353	3.658	3.962	4.267	4.572	4.877	5.182	5.486	5.791
20	6.096	6.401	6.706	7.010	7.315	7.620	7.925	8.229	8.534	8.839
30	9.144	9.449	9.753	10.058	10.363	10.668	10.972	11.277	11.582	11.887
40	12.192	12.496	12.801	13.106	13.411	13.716	14.020	14.325	14.630	14.935
50	15.239	15.544	15.849	16.154	16.459	16.763	17.068	17.373	17.678	17.983
60	18.287	18.592	18.897	19.202	19.507	19.811	20.116	20.421	20.726	21.031
70	21.335	21.640	21.945	22.250	22.555	22.859	23.164	23.469	23.774	24.079
80	24.383	24.688	24.993	25.298	25.602	25.907	26.212	26.517	26.822	27.126
90	27.431	27.736	28.041	28.346	28.651	28.955	29.260	29.565	29.870	30.174
100	30.479	30.784	31.089	31.394	31.698	32.003	32.308	32.613	32.918	33.222

Meters	0	1	2	3	4	5	6	7	8	9
0	.....	3.281	6.562	9.842	13.123	16.404	19.685	22.966	26.247	29.527
10	32.808	36.089	39.370	42.651	45.932	49.212	52.493	55.774	59.055	62.336
20	65.617	68.897	72.178	75.459	78.740	82.021	85.302	88.582	91.863	95.144
30	98.425	101.71	104.99	108.27	111.55	114.83	118.11	121.39	124.67	127.95
40	131.23	134.51	137.79	141.08	144.36	147.64	150.92	154.20	157.48	160.76
50	164.04	167.32	170.60	173.88	177.16	180.45	183.73	187.01	190.29	193.57
60	196.85	200.13	203.41	206.69	209.97	213.25	216.53	219.82	223.10	226.38
70	229.66	232.94	236.22	239.50	242.78	246.06	249.34	252.62	255.90	259.19
80	262.47	265.75	269.03	272.31	275.59	278.87	282.15	285.43	288.71	291.99
90	295.27	298.56	301.84	305.12	308.40	311.68	314.96	318.24	321.52	324.80
100	328.08	331.36	334.64	337.93	341.21	344.49	347.77	351.05	354.33	357.61

Square Feet	0	1	2	3	4	5	6	7	8	9
0	.....	0.0929	0.1858	0.2787	0.3716	0.4645	0.5574	0.6503	0.7432	0.8361
10	0.9290	1.0219	1.1148	1.2077	1.3006	1.3936	1.4865	1.5794	1.6723	1.7652
20	1.8581	1.9510	2.0439	2.1368	2.2297	2.3226	2.4155	2.5084	2.6013	2.6942
30	2.7871	2.8800	2.9739	3.0668	3.1597	3.2526	3.3455	3.4384	3.5313	3.6242
40	3.7161	3.8090	3.9019	3.9948	4.0877	4.1807	4.2736	4.3665	4.4594	4.5523
50	4.6452	4.7381	4.8310	4.9239	5.0168	5.1097	5.2026	5.2955	5.3884	5.4813
60	5.5742	5.6671	5.7600	5.8529	5.9458	6.0387	6.1316	6.2245	6.3174	6.4103
70	6.5032	6.5961	6.6890	6.7819	6.8748	6.9677	7.0606	7.1535	7.2464	7.3393
80	7.4323	7.5252	7.6181	7.7110	7.8039	7.8968	7.9897	8.0826	8.1755	8.2684
90	8.3613	8.4542	8.5471	8.6400	8.7329	8.8258	8.9187	9.0116	9.1045	9.1974
100	9.2903	9.3832	9.4761	9.5690	9.6619	9.7548	9.8477	9.9406	10.0335	10.1264

Square Meters	0	1	2	3	4	5	6	7	8	9
0	.....	10.76	21.53	32.29	43.06	53.82	64.58	75.35	86.11	96.88
10	107.64	118.40	129.17	139.93	150.69	161.46	172.22	182.99	193.75	204.51
20	215.28	226.04	236.81	247.57	258.33	269.10	279.86	290.62	301.39	312.15
30	322.92	333.68	344.44	355.21	365.97	376.74	387.50	398.26	409.03	419.79
40	430.55	441.32	452.08	462.85	473.61	484.37	495.14	505.90	516.67	527.43
50	538.19	548.96	559.72	570.48	581.25	592.01	602.78	613.54	624.30	635.07
60	645.83	656.60	667.36	678.12	688.89	699.65	710.42	721.18	731.94	742.71
70	753.47	764.23	775.00	785.76	796.53	807.29	818.05	828.82	839.58	850.35
80	861.11	871.87	882.64	893.40	904.16	914.93	925.69	936.46	947.22	957.98
90	968.75	979.51	990.28	1001.04	1011.80	1022.57	1033.33	1044.10	1054.86	1065.62
100	1076.39	1087.15	1097.92	1108.68	1119.44	1130.21	1140.97	1151.74	1162.50	1173.26

Cubic Feet	0	1	2	3	4	5	6	7	8	9
0	.....	0.0283	0.0566	0.0850	0.1133	0.1416	0.1699	0.1982	0.2265	0.2549
10	0.2832	0.3115	0.3398	0.3681	0.3964	0.4248	0.4531	0.4814	0.5097	0.5380
20	0.5663	0.5947	0.6230	0.6513	0.6796	0.7079	0.7362	0.7646	0.7929	0.8212
30	0.8495	0.8778	0.9061	0.9345	0.9628	0.9911	1.0194	1.0477	1.0760	1.1044
40	1.1327	1.1610	1.1893	1.2176	1.2459	1.2743	1.3026	1.3309	1.3592	1.3875
50	1.4159	1.4442	1.4725	1.5008	1.5291	1.5574	1.5858	1.6141	1.6424	1.6707
60	1.6990	1.7273	1.7557	1.7840	1.8123	1.8406	1.8689	1.8972	1.9256	1.9539
70	1.9822	2.0105	2.0388	2.0671	2.0955	2.1238	2.1521	2.1804	2.2087	2.2370
80	2.2654	2.2937	2.3220	2.3503	2.3786	2.4069	2.4352	2.4635	2.4918	2.5202
90	2.5485	2.5768	2.6052	2.6335	2.6618	2.6901	2.7184	2.7468	2.7751	2.8034
100	2.8317	2.8600	2.8884	2.9167	2.9450	2.9733	3.0016	3.0300	3.0583	3.0866

Cubic Meters	0	1	2	3	4	5	6	7	8	9
0	.....	35.3	70.6	105.9	141.3	176.6	211.9	247.2	282.5	317.8
10	353.1	388.5	423.8	459.1	494.4	529.7	565.0	600.3	635.7	671.0
20	706.3	741.6	776.9	812.2	847.5	882.9	918.2	953.5	988.8	1024.1
30	1059.4	1094.7	1130.1	1165.4	1200.7	1236.0	1271.3	1306.6	1341.9	1377.3
40	1412.6	1447.9	1483.2	1518.5	1553.8	1589.2	1624.5	1659.8	1695.1	1730.4
50	1765.7	1801.0	1836.4	1871.7	1907.0	1942.3	1977.6	2012.9	2048.2	2083.5
60	2118.9	2154.2	2189.5	2224.8	2260.1	2295.4	2330.7	2366.0	2401.3	2436.6
70	2472.0	2507.3	2542.6	2577.9	2613.2	2648.5	2683.8	2719.1	2754.4	2789.7
80	2825.2	2860.5	2895.8	2931.1	2966.4	3001.7	3037.0	3072.3	3107.6	3143.0
90	3178.3	3213.6	3248.9	3284.2	3319.5	3354.8	3390.1	3425.4	3460.7	3496.0
100	3531.4	3566.7	3602.0	3637.3	3672.6	3707.9	3743.2	3778.5	3813.8	3849.1



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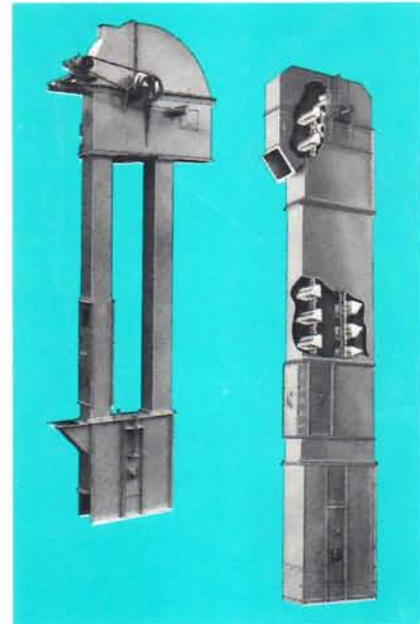
Screw Conveyor Systems



Super-Flo Conveyors



Screw-Lift Vertical Conveyors



Bucket Elevators



Screw Conveyor Components



Elevator Buckets and Bolts



Kewanee Hydraulic Truck Dumpers

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Screw Conveyor Corporation

700 HOFFMAN STREET, HAMMOND, INDIANA 46327 PHONE 219-931-1450
 Manufacturing Plants and Sales Offices: Winona, Mississippi; Visalia, California; Chanute, Kansas; Hammond, Indiana. Sales Offices: Teaneck, New Jersey; Atlanta, Georgia.