



**SCREW CONVEYOR
CATALOG
&
ENGINEERING
MANUAL**



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WARNING AND SAFETY REMINDERS FOR SCREW , DRAG , AND BUCKET ELEVATOR CONVEYORS

APPROVED FOR DISTRIBUTION BY THE SCREW CONVEYOR SECTION OF THE
CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION (CEMA)

It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the conveyor, components and, conveyor assemblies in such a manner as to comply with the Williams-Steiger Occupational Safety and Health Act and with all state and local laws and ordinances and the American National Standards Institute (ANSI) B20.1 Safety Code.

In order to avoid an unsafe or hazardous condition, the assemblies or parts must be installed and operated in accordance with the following minimum provisions.

1. Conveyors shall not be operated unless all covers and/or guards for the conveyor and drive unit are in place. If the conveyor is to be opened for inspection cleaning, maintenance or observation, the electric power to the motor driving the conveyor must be LOCKED OUT in such a manner that the conveyor cannot be restarted by anyone; however remote from the area, until conveyor cover or guards and drive guards have been properly replaced.
2. If the conveyor must have an open housing as a condition of its use and application, the entire conveyor is then to be guarded by a railing or fence in accordance with ANSI standard B20.1. (Request current edition and addenda)
3. Feed openings for shovel, front loaders or other manual or mechanical equipment shall be constructed in such a way that the conveyor opening is covered by a grating. If the nature of the material is such that a grating cannot be used, then the exposed section of the conveyor is to be guarded by a railing or fence and there shall be a warning sign posted.
4. Do not attempt any maintenance or repairs of the conveyor until power has been LOCKED OUT.
5. Always operate conveyor in accordance with these instructions and those contained on the caution labels affixed to the equipment.

6. Do not place hands, feet, or any part of your body, in the conveyor.

7. Never walk on conveyor covers, grating or guards.

8. Do not use conveyor for any purpose other than that for which it was intended.

9. Do not poke or prod material into the conveyor with a bar or stick inserted through the openings.

10. Keep area around conveyor drive and control station free of debris and obstacles.

11. Eliminate all sources of stored energy (materials or devices that could cause conveyor components to move without power applied) before opening the conveyor

12. Do not attempt to clear a jammed conveyor until power has been LOCKED OUT.

13. Do not attempt field modification of conveyor or components.

14. Conveyors are not normally manufactured or designed to handle materials that are hazardous to personnel. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Conveyors may be designed to handle these materials. Conveyors are not manufactured or designed to comply with local, state or federal codes for unfired pressure vessels. If hazardous materials are to be conveyed or if the conveyor is to be subjected to internal or external pressure, manufacturer should be consulted prior to any modifications.

CEMA insists that disconnecting and locking out the power to the motor driving the unit provides the only real protection against injury. Secondary safety devices are available; however, the decision as to their need and the type required must be made by the owner-assembler as we have

no information regarding plant wiring, plant environment, the interlocking of the screw conveyor with other equipment, extent of plant automation, etc. Other devices should not be used as a substitute for locking out the power prior to removing guards or covers. We caution that use of the secondary devices may cause employees to develop a false sense of security and fail to lock out power before removing covers or guards. This could result in a serious injury should the secondary device fail or malfunction.

There are many kinds of electrical devices for interlocking of conveyors and conveyor systems such that if one conveyor in a system or process is stopped other equipment feeding it, or following it can also be automatically stopped.

Electrical controls, machinery guards, railings, walkways, arrangement of installation, training of personnel, etc., are necessary ingredients for a safe working place. It is the responsibility of the contractor, installer, owner and user to supplement the materials and services furnished with these necessary items to make the conveyor installation comply with the law and accepted standards.

Conveyor inlet and discharge openings are designed to connect to other equipment or machinery so that the flow of material into and out of the conveyor is completely enclosed.

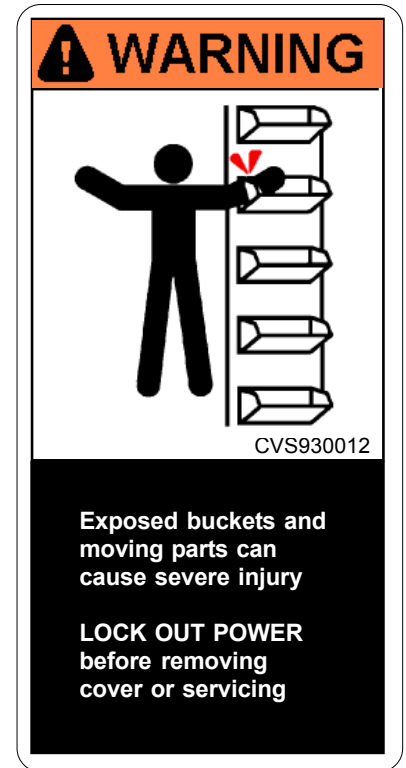
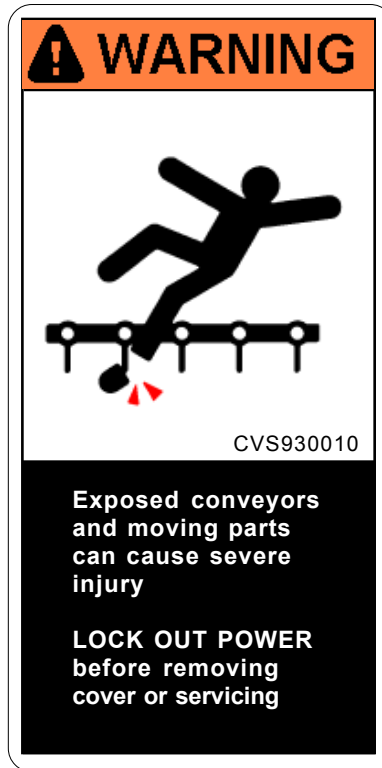
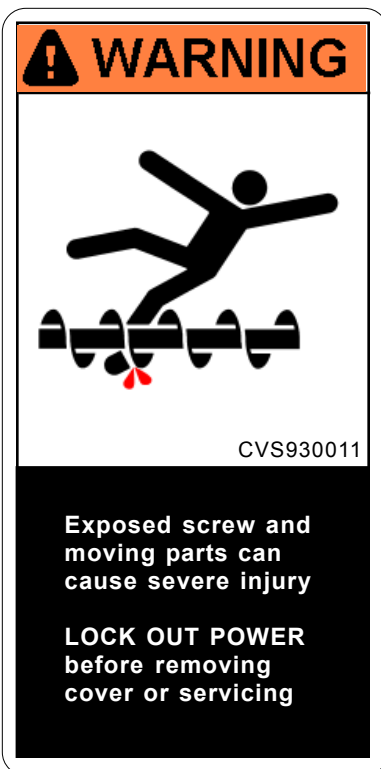
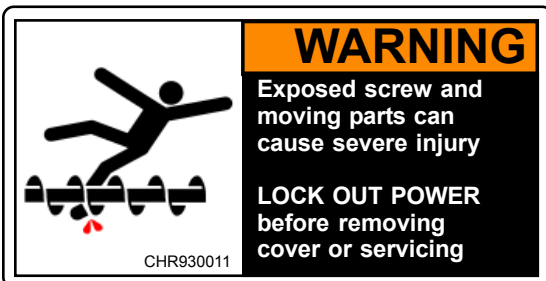
One or more warning labels should be visible on conveyor housings, conveyor covers and elevator housings. If the labels attached to the equipment become illegible, please order replacement warning labels from the OEM or CEMA.

The Conveyor Equipment Manufacturers Association (CEMA) has produced an audio-visual presentation entitled "Safe Operation of Screw Conveyors, Drag Conveyors, and Bucket Elevators." CEMA encourages acquisition and use of this source of safety information to supplement your safety program.

**SEE OTHER SIDE FOR
SAFETY LABELS**

CEMA Safety Labels

The CEMA safety labels shown below should be used on screw conveyors, drag conveyors, and bucket elevators. Safety labels should be placed on inlets, discharges, troughs, covers, inspection doors & drive guards. See CEMA Safety Label Placement Guidelines on CEMA Web Site: <http://www.cemanet.org/safety/guidelines.html>



PROMINENTLY DISPLAY THESE SAFETY LABELS ON INSTALLED EQUIPMENT

SEE OTHER SIDE FOR SAFETY REMINDERS

Note: Labels alone do not substitute for a thorough in-plant safety training program centered on the hazards associated with operating your installed equipment.

Contact CEMA or Your Equipment Manufacturer for Replacement Labels

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION

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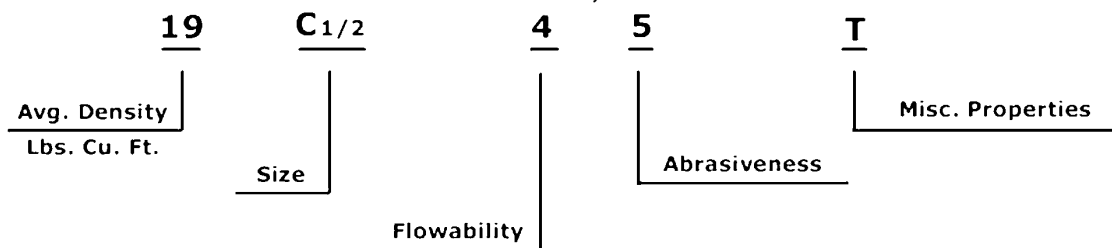
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Material Classification Code Chart

Major Class	Material Characteristics Included	Code Designation
Density	Bulk Density, Loose	Actual Lbs/cu. ft.
Size	Very Fine No. 200 Sieve (.0029") And Under No. 100 Sieve (.0059") And Under No. 40 Sieve (.016") And Under Fine No. 6 Sieve (.132") And Under Granular ½" And Under 3" And Under 7" And Under *Lumpy 16 " And Under Over 16" To Be Specified X = Actual Maximum Size Irregular Stringy, Fibrous, Cylindrical, Slabs, Etc.	A ₂₀₀ A ₁₀₀ A ₄₀ B ₆ C _½ D ₃ D ₇ D ₁₆ D _X E
Flowability	Very Free Flowing – Flow Function > 10 Free Flowing – Flow Function > 4 But < 10 Average Flowability – Flow Function > 2 But < 4 Sluggish – Flow Function < 2	1 2 3 4
Abrasiveness	Mildly Abrasive – Index 1-17 Moderately Abrasive – Index 18-67 Extremely Abrasive – Index 68-416	5 6 7
Miscellaneous Properties Or Hazards	Builds Up and Hardens Generates Static Electricity Decomposes --- Deteriorates in Storage Flammability Becomes Plastic or Tends to Soften Very Dusty Aerates and Becomes Fluid Explosiveness Stickiness-Adhesion Contaminable, Affecting Use Degradable, Affecting Use Gives Off Harmful or Toxic Gas or Fumes Highly Corrosive Mildly Corrosive Hygroscopic Interlocks, Mats or Agglomerates Oils Present Packs Under Pressure Very Light and Fluffy – May Be Windswept Elevated Temperature	F G H J K L M N O P Q R S T U V W X Y Z

**HOW TO READ THE MATERIAL CODE FROM MATERIAL CHARACTERISTICS TABLE.
MATERIAL: CHIPS, PULPWOOD**



Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Acetylenogen (See Calcium Carbide)					
Adipic Acid	45	45A ₁₀₀ 35	30A	0.8	2B
Alfalfa Meal	14-22	18B ₆ 45WY	30A	0.6	2D
Alfalfa Pellets	41-33	42C ¹ / ₂ 25	45	0.5	2D
Alfalfa Seeds	10-15	13B ₆ 15N	30B	0.4	1A-8-C
Almonds, Broken	27-30	29C ¹ / ₂ 35Q	30B	0.9	2D
Almonds, Whole Shelled	28-30	29C ¹ / ₂ 35Q	30B	0.9	2D
Alum, Fine	45-50	48B ₆ 35U	30A	0.6	1A-B-C
Alum, Lumpy	50-60	55B ₆ 25	30A	1.4	2A-B
Alumina	55-65	58B ₆ 27MY	15	1.8	3D
Alumina, Fines	35	35A ₁₀₀ 27MY	15	1.6	3D
Alumina, Seed or Briquette	65	65D ₃ 37	15	2.0	3D
Aluminate Gel (Aluminate Hydroxide)	45	45B ₆ 35	30B	1.7	2D
Aluminum Chips, Dry	7-15	11E45V	30A	1.2	2D
Aluminum Chips, Oily	7-15	11E45V	30A	0.8	2D
Aluminum Hydrate	13-20	17C ¹ / ₂ 35	30A	1.4	1A-B-C
Aluminum Ore (See Bauxite)					
Aluminum Oxide	60-120	90A ₁₀₀ 17M	15	1.8	3D
Aluminum Silicate	49	49C ¹ / ₂ 35S	45	0.8	3A-B
Aluminum Sulfate	45-58	52C ¹ / ₂ 25	30A	1.0	1A-B-C
Amianthus (See Asbestos-Shredded)					
Ammonium Chloride, Crystalline	45-52	49A ₁₀₀ 45FRS	30A	0.7	3A-B
Ammonium Nitrate	45-62	54A ₄₀ 35NTU	30A	1.3	3D
Ammonium Sulfate	45-58	52C ¹ / ₂ 35FOTU	30A	1.0	1A-B-C
Andalvsite (Aluminum Silicate)	49	49C ¹ / ₂ 35	45	0.8	3A-B
Antimony Powder		A ₁₀₀ 35	30B	1.6	2D
Apple Pomace, Dry	15	15C ¹ / ₂ 45Y	30B	1.0	2D
Arsenate of Lead (See Lead Arsenate)					
Arsenic Oxide (Arsenolite)	100-120	110A ₁₀₀ 35R			
Arsenic Pulverized	30	30A ₁₀₀ 25R	45	0.8	2D
Asbestos-Rock (Ore)	81	81D ₃ 37R	15	1.2	3D
Asbestos-Shredded	20-40	30E46XY	30B	1.0	2D
Ash, Black, Ground	105	105B ₆ 35	30A	2.0	1A-B-C
Ashes, Coal - Dry - 1/2	35-45	40C ¹ / ₂ 46TY	30B	3.0	3D
Ashes, Coal - Dry - 3	35-40	38D ₃ 46T	15	2.5	3D
Ashes, Coal - Wet - 1/2	45-50	48C ¹ / ₂ 46T	30B	3.0	3D
Ashes, Coal - Wet - 3	45-50	48D ₃ 46T	15	4.0	3D
Asphalt, Crushed - 1/2	45	45C ¹ / ₂ 45	30A	2.0	1A-B-C
Bagasse, Dry	7-10	9E45R/XY	30A	1.5	2A-B-C
Bakelite, Fine	30-45	38B ₆ 25	30A	1.4	1A-B-C
Baking Powder	40-55	48A ₁₀₀ 35	30A	0.6	1B
Baking Soda (Sodium Bicarbonate)	40-55	48A ₁₀₀ 25	30A	1.0	1B
Barite (Barium Sulfate) + 1/2 - 3	120-180	150D ₃ 36	15	2.6	3D
Barite, Powder	120-180	150A ₁₀₀ 35X	30B	2.0	2D
Barium Carbonate	72	72A ₁₀₀ 45R	30B	2.0	3D
Bark, Wood, Refuse	10-20	15E45TYY	30B	2.0	3D

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Barley, Fine Ground	24-38	31B ₆ 35	45	0.4	1A-B-C
Barley, Malted	31	31C $\frac{1}{2}$ 35	30A	0.4	1A-B-C
Barley, Meal	28	28C $\frac{1}{2}$ 35	30A	0.4	1A-B-C
Barley, Whole	36-48	42B ₆ 25N	45	0.5	1A-B-C
Baryte (See Barite)					
Basalt	80-105	93B ₆ 27	15	1.8	3D
Bauxite, Dry, Ground	68	68B ₆ 25	45	1.8	1A-B-C
Bauxite, Crushed – 3"	75-80	80D ₃ 36	15	2.5	3D
Beans, Castor	36	36C $\frac{1}{2}$ 15W	30A	0.8	1A-B-C
Beans, Castor, Meal	35-40	38B ₆ 35W	30A	0.8	1A-B-C
Beans, Navy – Dry	48	48C $\frac{1}{2}$ 15	45	0.5	1A-B-C
Beans, Navy – Steeped	60	60C $\frac{1}{2}$ 25	45	0.8	1A-B-C
Beans, Soy (See Soybeans)					
Beet Pulp – Dry	11-16				
Beet Pulp – Wet	25-45				
Bentonite, Crude	34-40	37D ₃ 45X	30B	1.2	2D
Bentonite, -100 Mesh	50-60	55A ₁₀₀ 25MXY	30B	0.7	2D
Benzene Hexachloride	56	56A ₁₀₀ 45R	30A	0.6	1A-B-C
Bicarbonate of Soda	40-45	45A ₂₀₀ 25Y	30A	0.6	1A-B-C
Blood, Dried	35-45	40D ₃ 45U	30A	2.0	2D
Blood, Ground, Dried	30	30A ₁₀₀ 35U	30A	1.0	1A-B
Bluestone (See Copper Sulfate)					
Bone Ash (Tricalcium Phosphate)	40-50	45A ₁₀₀ 45	30A	1.6	1A-B
Bone Black	20-25	23A ₁₀₀ 25Y	30B	1.5	1A-B
Bone Char	27-40	34B ₆ 35	30B	1.6	1A-B
Bones, Crushed	35-50	43D ₃ 35	30B	2.0	2D
Bones, Ground	50	50B ₆ 45	30B	1.7	2D
Bones, Whole	35-50	43E45V	30A	3.0	D2
Bonemeal	50-60	55B ₆ 35	30B	1.7	2D
Borate of Lime	60	60A ₁₀₀ 35	30A	0.6	1A-B-C
Borax, Fine	45-55	50B ₆ 25T	30B	0.7	3D
Borax, Screening- $\frac{1}{2}$	55-60	58C $\frac{1}{2}$ 35	30B	1.5	2D
Borax, 1 $\frac{1}{2}$ - 2 Lump	55-60	58D ₃ 35	30B	1.8	2D
Borax, 2-3 Lump	60-70	65D ₃ 35	30B	2.0	2D
Boric Acid, Fine	55	55B ₆ 25T	30A	0.8	3D
Boron	75	75A ₁₀₀ 37	15	1.0	2D
Bran, Rice-Rye-Wheat	16-20	18B ₆ 35NY	30A	0.5	1A-B-C
Braunite (Manganese Oxide)	120	120A ₁₀₀ 36	30B	2.0	2D
Bread Crumbs	20-25	23B35PQ	30A	0.6	1A-B-C
Brewer's Grain, Spent – Dry	14-30	22C $\frac{1}{2}$ 45	30A	0.5	1A-B-C
Brewer's Grain, Spent – Wet	55-60	58C $\frac{1}{2}$ 45T	30A	0.8-4.0	2A-B
Brick, Ground- $\frac{1}{8}$	100-120	110B ₆ 37	15	2.2	3D
Bronze Chips	30-50	40B ₆ 25N	15	2.0	2D

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Buckwheat	37-42	40B ₆ 25N	45	0.4	1A-B-C
Calcine, Flour	75-85	80A ₁₀₀ 35	30A	0.7	1A-B-C
Calcium Carbide	70-90	80D ₃ 25N	30B	2.0	2D
Calcium Carbonate (See Limestone)					
Calcium Fluoride (See Fluospar)					
Calcium Hydrate (See Lime Hydrated)					
Calcium Hydroxide (See Lime Hydrated)					
Calcium Lactate	26-29	28D ₃ 45QTR	30A	0.6	2A-B
Calcium Magnesium Carbonate	90-100		30B	2.0	2D
Calcium Oxide (See Lime, Unflaked)					
Calcium Phosphate	40-50	45A ₁₀₀ 45	30A	1.6	1A-B-C
Calcium Sulfate (See Gypsum)					
Carbon, Activated - Dry	8-20	14A ₂₀₀	30B	1.2	2D
Carbon Black – Fine	4-6	5A ₂₀₀	30A	0.4	1A-B-C
Carbon Black – Pelleted	20-40				
Carborundum	100	100D ₃ 27	15	3.0	2D
Casein	36	36B ₆ 35	30B	1.6	3D
Cashew Nuts	32-37	35C ¹ / ₂ 45	30A	0.7	2D
Cast Iron, Chips	130-200	165C ¹ / ₂ 45	30B	4.0	2D
Caustic Soda	88	88B ₆ 35RSU	30B	1.8	2D
Caustic Soda, Flakes	47	47C ¹ / ₂ 45RSUX	30A	1.5	3D
Celite (Diatomaceous Earth)	11-17	14A ₄₀ 36Y	15	1.6	2D
Cement, Clinker	75-95	85D ₃ 36	15	1.8	3D
Cement, Mortar	133	133B ₆ 35Q	30A	3.0	3D
Cement, Portland	94	94A ₁₀₀ 26M	30B	1.4	2D
Cement, Aerated (Portland)	60-75	68A ₁₀₀ 16M	30B	1.4	2D
Cerrusite (See Lead Carbonate)					
Chalk, Crushed	75-95	85D ₃ 25	30B	1.9	2D
Chalk, Pulverized	67-75	71A ₁₀₀ 25MXY	30B	1.4	2D
Charcoal, Ground	18-28	23A ₁₀₀ 45	30B	1.2	2D
Charcoal, Lumps	18-28	23D ₃ 45Q	30B	1.4	2D
Chips, Pulpwood	12-25	19C ¹ / ₂ 45T	30A	1.0	2B
Chocolate, Cake Pressed	40-45	45D ₃ 25	30A	1.5	2B
Chrome Ore	125-140	133D ₃ 36	15	2.5	3D
Cinders, Blast Furnace	57	57D ₃ 36T	15	1.9	3D
Cinders, Coal	40	40D ₃ 36T	15	1.8	3D
Clay, Ceramic – Dry	60-80	70A ₁₀₀ 35P	30A	1.5	1A-B-C
Clay, Calcined	80-100	90B ₆ 36	30B	2.4	3D
Clay, Brick – Dry, Fine	100-120	110C ¹ / ₂ 36	30B	2.0	3D
Clay – Dry, Lumpy	60-75	68D ₃ 35	30A	1.8	2D
Clinker, Cement (See Cement, Clinker)					

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Coal, Anthracite (River & Culm)	55-61	60B ₆ 35TY	30A	1.0	2A-B
Coal, Anthracite, - ½	49-61	55C½25	30A	1.0	2A-B
Coal, Bituminous Mined	40-60	50D ₃ 35LNXY	30A	0.9	1A-B
Coal, Bituminous, Mined, Sized	45-50	48D ₃ 35QV	30A	1.0	1A-B
Coal, Bituminous, Mined, Slack	43-50	47C½45T	30A	0.9	2A-B
Coal, Lignite	37-45	41D ₃ 35T	30A	1.0	2D
Cocoa, Beans	30-45	38C½25Q	30A	0.5	1A-B
Cocoa Nibs	35	35C½25	30A	0.5	1A-B
Cocoa, Powdered	30-35	33A ₁₀₀ 45XY	30A	0.9	1A-B
Coconut, Shredded	20-22	21E45	30A	1.5	2B
Coffee, Chaff	20	20B ₆ 25MY	30A	1.0	1A-B
Coffee, Green Bean	25-32	29C½25PQ	30A	0.5	1A-B
Coffee, Ground Dry	25	25A ₄₀ 35P	30A	0.6	1A-B
Coffee, Ground Net	35-45	40A ₄₀ 45X	30A	0.6	1A-B
Coffee, Roasted Bean	20-30	25C½PQ	45	0.4	1B
Coffee, Soluble	19	19A ₄₀ 35PUY	15	0.8	1B
Coke, Breeze	25-35	30C½37	15	1.2	3D
Coke, Loose	23-35	30D ₇ 37	15	1.2	3D
Coke, Calcined	35-45	40D ₇ 37	15	1.3	3D
Compost	30-50	40D ₇ 45TV	30A	1.0	3A-B
Concrete, Pre Mix Dry	85-120	103C½36V	30B	3.0	3D
Copper Ore	120-150	135Cx36	15	4.0	3D
Copper Ore, Crushed	100-150	125D ₃ 36	15	4.0	3D
Copper Sulphate (Bluestone)	60-70	65C½35	30A	1.0	2A-B-C
Copperas (See Ferrous Sulfate)					
Copra Cake Ground	40-45	43B ₆ 45HW	30A	0.7	1A-B-C
Copra, Cake Lumpy	25-30	28D ₃ 35HW	30A	0.8	2A-B-C
Copra, Lumpy	22	22E35HW	30A	1.0	2A-B-C
Copra, Meal	40-45	42B ₆ 35HW	30A	0.7	2D
Cork, Ground Fine	5-15	10B ₆ 35JNY	30A	0.5	1A-B-C
Cork, Granulated	12-15	14C½35JY	30A	0.5	1A-B-C
Corn, Cracked	40-50	45B ₆ 25P	30A	0.7	1A-B-C
Corn Cobs, Ground	17	17C½25Y	30A	0.6	1A-B-C
Corn Cobs, Whole	12-15	14E35	30A		2A-B
Corn Ear	56	56E35	30A		2A-B
Corn Germ	21	21B ₆ 35PY	30A	0.4	1A-B-C
Corn/Grits	40-45	43B ₆ 35P	30A	0.5	1A-B-C
Cornmeal	32-40	43B ₆ 35P	30A	0.5	1A-B
Corn Oil, Cake	25	25D ₇ 45HW	30A	0.6	1A-B
Corn Seed	45	45C½25PQ	45	0.4	1A-B-C

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Corn, Shelled	45	45C $\frac{1}{2}$ 25	45	0.4	1A-B-C
Corn Sugar	30-35	33B $\frac{6}{35}$ PU	30A	1.0	1B
Cottonseed, Cake, Crushed	40-45	43C $\frac{1}{2}$ 45HW	30A	1.0	1A-B
Cottonseed, Cake, Lumpy	40-45	43D $\frac{7}{45}$ HW	30A	1.0	2A-B
Cottonseed – Dry, Delinted	22-40	31C $\frac{1}{2}$ 25X	30A	0.6	1A-B
Cottonseed – Dry, Undelinted	18-25	22C $\frac{1}{2}$ 35XY	30A	0.8	1A-B
Cottonseed, Flakes	20-25	23C $\frac{1}{2}$ 35HWY	30A	0.8	1A-B
Cottonseed, Hulls	12	12B $\frac{6}{45}$ HW	30A	0.5	3A-B
Cottonseed, Meal, Expeller	25-30	28B $\frac{6}{45}$ HW	30A	0.5	3A-B
Cottonseed, Meal, Extracted	35-40	37B $\frac{6}{35}$ HW	30A	0.5	1A-B
Cottonseed, Meats – Dry	40	40B $\frac{6}{35}$ HW	30A	0.6	1A-B
Cottonseed, Meats – Rolled	35-40	45D $\frac{3}{45}$ HW	30A	1.3	2A-B-C
Cracklings, Crushed	40-50	45D $\frac{3}{45}$ HW	30A	1.3	2A-B-C
Cryolite, Dust	75-90	83A $\frac{100}{36}$	30B	2.0	2D
Cryolite, Lumpy	90-110	100D $\frac{16}{36}$	30B	2.0	2D
Cullet, Fine	80-120	100C $\frac{1}{2}$ 37	15	2.0	3D
Cullet, Lump	80-120	100D $\frac{16}{37}$	15	2.5	3D
Cupric Sulphate (See Copper Sulfate)					
Diatomaceous Earth	11-17	14A $\frac{40}{36}$ Y	30B	1.6	3D
Dicalcium Phosphate	40-50	45A $\frac{40}{35}$	30A	1.6	1A-B-C
Disodium Phosphate	25-31	28A $\frac{40}{35}$	30B	0.5	3D
Dolomite (Calcium Magnesium Carbonate), Crushed					
	80-100	90C $\frac{1}{2}$ 26T	30B	2.0	2D
Dolomite (Cal. Mag. Carbonite)	90-100	95Dx36	30B	2.0	2D
Earth, Loam, Dry Loose	76	76C $\frac{1}{2}$ 36	30B	1.2	2D
Ebonite, Crushed	63-70	67CY $\frac{2}{35}$	30A	0.8	1A-B-C
Egg Powder	16	16A $\frac{40}{35}$ MPY	30A	1.0	1B
Epsom Salt (Mag. Sulfate)	40-50	45A $\frac{40}{35}$ U	30A	0.8	1A-B-C
Ethanedioic Acid (See Oxalic Acid)					
Feldspar, Ground	65-80	73A $\frac{100}{37}$	30B	2.0	2D
Feldspar, Powder	100	100A $\frac{200}{36}$	30B	2.0	2D
Feldspar, Lumps	90-100	95D $\frac{7}{37}$	30B	2.0	2D
Feldspar, Screenings	75-80	78C $\frac{1}{2}$ 37	30B	2.0	2D
Ferrous Sulfide – $\frac{1}{2}$	120-135	128C $\frac{1}{2}$ 26	30B	2.0	1A-B-C
Ferrous Sulfide – 100M	105-120	113A $\frac{100}{36}$	30B	2.0	1A-B-C
Ferrous Sulfate	50-75	63C $\frac{1}{2}$ 35U	30B	1.0	2D
Fish Meal	35-40	38C $\frac{1}{2}$ 45HP	30A	1.0	1A-B-C
Fish Scrap	40-50	45D $\frac{7}{45}$ H	30A	1.5	2A-B-C
Flaxseed	43-45	44B $\frac{6}{35}$ X	45	0.4	1A-B-C
Flaxseed Cake (Linseed Cake)	48-50	49D $\frac{7}{45}$ W	30A	0.7	2A-B

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Flaxseed Meal (Linseed Meal)	25-45	35B ₆ 45W	30A	0.4	1A-B
Flour, Wheat	33-40	37A ₄₀ 45LP	30A	0.6	1B
Flue Dust, Basic Oxygen Furnace	45-60	53A ₄₀ 36LM	15	3.5	3D
Flue Dust, Blast Furnace	110-125	118A ₄₀ 36	15	3.5	3D
Flue Dust, Boiler H. Dry	30-45	38A ₄₀ 36LM	15	2.0	3D
Fluorspar, Fine	80-100	90B ₆ 36	30B	2.0	2D
Fluorspar, Lumps	90-110	100D ₇ 36	30B	2.0	2D
Flyash – Dry	30-45	38A ₄₀ 36M	15	3.5	3D
Foundry Sand – Dry (See Sand)					
Fuller's Earth – Dry Raw	30-40	35A ₄₀ 25	30B	2.0	2D
Fuller's Earth, Oily, Spent	60-65	63C _{1/2} 45OW	15	2.0	3D
Fuller's Earth Calcined	40	40A ₁₀₀ 25	15	2.0	3D
Galena (See Lead Sulfide)					
Gelatin, Granulated	32	32B ₆ 35PU	30A	0.8	1B
Gilsonite	37	37C _{1/2} 35	30B	1.5	3D
Glass, Batch	80-100	90C _{1/2} 35	30B	1.5	3D
Glue, Ground	40	40B ₆ 45U	30B	1.7	2D
Glue, Pearl	40	40C _{1/2} 35U	45	0.5	1A-B-C
Glue, Veg. Powdered	40	40A ₄₀ 45U	30A	0.6	1A-B-C
Gluten, Meal	40	40B ₆ 35P	30A	0.6	1B
Grains, Distillery, Spent Dry	30	30D ₃ 35	30A	0.5	2D
Grains, Distillery, Spent Wet	40-60	50C _{1/2} 45V	30A	0.8	3A-B
Graphite Flake	40	40B ₆ 25LP	30A	0.5	1A-B-C
Graphite Flour	28	28A ₁₀₀ 35LMP	45	0.5	1A-B-C
Graphite Ore	65-75	70D35L	30A	1.0	2D
Granite, Fine	80-90	85C _{1/2} 27	15	2.5	3D
Grape Pomace	15-20	18D ₃ 45U	30B	1.4	2D
Grass Seed	10-32	11B ₆ 25PY	30A	0.4	1A-B-C
Guano – Dry	70	70C _{1/2} 35	30	2.0	3A-B
Gypsum, Calcined	55-60	58B ₆ 35U	30B	1.6	2D
Gypsum, Calcined, Powdered	60-80	70A ₁₀₀ 35U	30B	2.0	2D
Gypsum, Raw – 1	70-80	75D ₃ 25	30B	2.0	2D
Hay, Chopped	8-12	10C _{1/2} 35JY	30A	1.6	2A-B
Hexanedioic Acid	45	45A ₁₀₀ 35	30A	0.8	2B
Hominy	35-50	43C _{1/2} 25D	30A	0.4	1A-B-C
Hops, Spent – Dry	35	35D ₃ 35	30A	1.0	2A-B-C
Hops, Spent – Wet	50-55	53D ₃ 45V	30A	1.5	2A-B
Ice, Crushed	35-45	40D ₃ 35Q	30A	0.4	2A-B
Ice, Flaked	40-45	43C _{1/2} 35Q	30A	0.6	1B
Ice Cubes	33-35	34D ₃ 35Q	30A	0.4	1B

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Ice, Shell	33-35	34D ₃ 45Q	30A	0.4	1B
Ilmenite Ore	140-160	150D ₃ 37	15	2.0	3D
Iron Ore Concentrate	120-180	150A ₄₀ 37	15	2.2	3D
Iron Oxide, Pigment	25	25A ₁₀₀ 36LMP	30B	1.0	1A-B-C
Iron Oxide, Millscale	75	75C $\frac{1}{2}$ 36	30B	1.6	2D
Iron Pyrites (See Ferrous Sulfide)					
Iron Sulphate (See Ferrous Sulphate)					
Iron Sulfide (See Ferrous Sulfide)					
Iron Vitriol (See Ferrous Sulphate)					
Kafir (Corn)	40-45	43C $\frac{1}{2}$ 25	30A	0.5	3D
Kaolin Clay	63	63D ₃ 25	30A	2.0	2D
Kaolin Clay – Tale	42-56	49A ₄₀ 35LMP	30B	2.0	2D
Kryalith (See Cryolith)					
Lactose	32	32A ₄₀ 35PU	30A	0.6	1B
Lamp Black (See Carbon Black)					
Lead Arsenate	72	72A ₄₀ 35R	30A	1.4	1A-B-C
Lead Arsenite	72	72A ₄₀ 35R	30A	1.4	1A-B-C
Lead Carbonate	240-260	250A ₄₀ 35R	30B	1.0	2D
Lead Ore – $\frac{1}{8}$	200-270	235B ₆ 36	15	1.4	3D
Lead Ore – $\frac{1}{2}$	180-230	205C $\frac{1}{2}$ 36	15	1.4	3D
Lead Oxide (Red Lead)	30-150	90A ₁₀₀ 35P	30B	1.2	2D
Lead Oxide (Red Lead)	30-180	105A ₂₀₀ 35LP	30B	1.2	2D
Lead Sulfide	240-260	250A ₁₀₀ 35R	30B	1.0	2D
Lignite (See Coal Lignite)					
Limanite, Ore, Brown	120	120C $\frac{1}{2}$ 47	15	1.7	3D
Lime, Ground, Unflaked	60-65	63B ₆ 35U	30A	0.6	1A-B-C
Lime Hydrated	40	40B ₆ 35LM	30A	0.8	2D
Lime, Hydrated, Pulverized	32-40	36A ₄₀ 35LM	30A	0.6	1A-B
Lime, Pebble	53-56	55C $\frac{1}{2}$ 25HU	30A	2.0	2A-B
Limestone, Agricultural	68	68B ₆ 35	30B	2.0	2D
Limestone, Crushed	85-90	88Dx36	30B	2.0	2D
Limestone Dust	55-95	75A ₄₀ 46MY	30B	2.0	2D
Lindane (See Benzene Hexachloride)					
Linseed (See Flaxseed)					
Litharge (See Lead Oxide)					
Lithopone	45-50	48A ₃₂₅ 35MR	30A	1.0	1A-B
Maize (See Milo)					
Malt, Dry, Ground	20-30	25C ₆ 35NP	30A	0.5	1A-B-C
Malt, Dry, Whole	20-30	25C $\frac{1}{2}$ 35N	30A	0.5	1A-B-C
Malt, Meal	36-40	38B ₆ 25P	30A	0.4	1A-B-C

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Malt, Sprouts	13-15	14C½35P	30A	0.4	1A-B-C
Magnesium Chloride (Magnesite)	33	33C½45	30A	1.0	1A-B
Manganese Dioxide	70-85	78A ₁₀₀ 35NRT	30A	1.5	2A-B
Manganese Ore	125-140	133Dx37	15	2.0	3D
Manganese Oxide	120	120A ₁₀₀ 36	30B	2.0	2D
Manganese Sulfate	70	70C½37	15	2.4	3D
Marble, Crushed	80-95	88B ₆ 37	15	2.0	3D
Marl, (Clay)	80	880Dx36	30B	1.6	2D
Meat, Ground	50-55	53E45HQTX	30B	1.5	2A-B
Meat, Scrap (w/bone)	40	40E46H	30B	1.5	2D
Mica, Flakes	17-22	20B ₆ 16MY	30B	1.0	2D
Mica, Ground	13-15	14B ₆ 36	30B	0.9	2D
Mica, Pulverized	13-15	14A ₁₀₀ 36M	30B	1.0	2D
Milk, Dried, Flake	5-6	6B ₆ 35PUY	30A	0.4	1B
Milk, Malted	27-30	29A ₄₀ 45PX	30A	0.9	1B
Milk, Powdered	20-45	33B ₆ 25PM	30A	0.5	1B
Milk Sugar	32	32A ₁₀₀ 35PX	30A	0.6	1B
Mill Scale (Steel)	120-125	123E46T		3.0	3D
Milo, Ground	32-36	34B ₆ 25	30A	0.5	1A-B-C
Milo, Maize (Kafir)	40-45	43B ₆ 15N	30A	0.4	1A-B-C
Molybdenite Powder	107	107B ₆ 26	30B	1.5	2D
Monosodium Phosphate	50	50B ₆ 36	30B	0.6/2.0	2D
Mortar, Wet	150	150E46T	30B	3.0	3D
Mustard Seed	45	45B ₆ 15N	45	0.4	1A-B-C
Naphthalene Flakes	45	45B ₆ 35	30B	0.7	1A-B-C
Niacin (Nicotinic Acid)	35	35A ₄₀ 35P	30B	0.8	2D
Oat Hulls	8-12	10B ₆ 35NY	30A	0.5	1A-B-C
Oats	26	26C½25MN	45	0.4	1A-B-C
Oats, Crimped	19-26	23C½35	45	0.5	1A-B-C
Oats, Crushed	22	22B ₆ 45NY	30A	0.6	1A-B-C
Oats, Flour	35	35A ₁₀₀ 35	30A	0.5	1A-B-C
Oats, Rolled	19-24	22C½35NY	30A	0.6	1A-B-C
Oleo Margarine	59	59E45HKPWZ	30A	0.4	2A-B
Orange, Peel, Dry	15	15E45	15	1.5	2A-B
Oxalic Acid	60	60B ₆ 35QS	30A	1.0	1A-B
Oyster Shells, Ground	50-60	55C½36T	30B	2.0	3D
Oyster Shells, Whole	80	80D ₃ 36TV	30B	2.5	3D
Paper Pulp (4% or less)	62	62E45	30A	2.0	2A-B
Paper Pulp (6% to 15%)	60-62	61E45	30A	2.0	2A-B
Paraffin Cake -- ½	45	45C½45K	30A	0.6	1A-B
Peanuts, Clean, In Shell	15-20	18D ₃ 35Q	30A	0.6	2A-B

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Peanut Meal	30	30B ₆ 35P	30A	0.6	1B
Peanuts, Raw, Unshelled	15-20	18D ₃ 36Q	30A	0.7	3D
Peanuts, Shelled	35-45	40C $\frac{1}{2}$ 35Q	30A	0.4	1B
Peas, Dried	45-50	48C $\frac{1}{2}$ 15NQ	45	0.5	1A-B-C
Perlite, Expanded	8-12	10C $\frac{1}{2}$ 36	30B	0.6	2D
Phosphate Acid Fertilizer	60	60B ₆ 25T	30A	1.4/2.5	2A-B
Phosphate Disodium (See Sod. Phosphate)					
Phosphate Rock, Broken	75-85	80D36	30B	2.5	2D
Phosphate Rock, Pulverized	60	60B ₆ 36	30	1.7	2D
Phosphate Sand	90-100	95B ₆ 37	15	2.5	3D
Plaster of Paris (See Gypsum)					
Plumbago (See Graphite)					
Polystyrene Beads	40	40B ₆ 35PQ	30A	0.4	1B
Polyvinyl, Chloride Powder	20-30	25A ₁₀₀ 45KT	30A	1.0	2B
Polyvinyl, Chloride Pellets	20-30	25E45KT	30A	1.0	2B
Polyethylene, Resin Pellets	30-35	33C $\frac{1}{2}$ 45Q	30A	0.4	1A-B
Potash (Muriate of Potash)	70	70B ₆ 37	15	2.0	3D
Potash (Muriate Mine Run)	75	75D _x 37	15	2.0	3D
Potassium Carbonate	51	51B ₆ 36	30B	1.0	2D
Potassium Chloride, Pellets	120-130	125C $\frac{1}{2}$ 25TU	30B	1.6	3D
Potassium Nitrate - $\frac{1}{2}$	76	76C $\frac{1}{2}$ 16NT	30B	1.2	3D
Potassium Nitrate - $\frac{1}{8}$	80	80B ₆ 26NT	30A	1.2	3D
Potassium Sulfate	42-48	45B ₆ 46X	30B	1.0	2D
Potato Flour	48	48A ₂₀₀ 35MNP	30A	0.5	1A-B
Pumice - $\frac{1}{8}$	42-48	45B ₆ 46	15	1.5	3D
Pyrite, Pellets	120-130	125C $\frac{1}{2}$ 26	30B	2.0	3D
Quartz - 100 Mesh	70-80	75A ₁₀₀ 27	15	1.7	3D
Quartz - $\frac{1}{2}$	80-90	85C $\frac{1}{2}$ 27	15	2.0	
Rice, Bran	20	20B ₆ 35NY	30A	0.4	1A-B-C
Rice, Grits	42-45	44B ₆ 35P	30A	0.4	1A-B-C
Rice, Polished	30	30C $\frac{1}{2}$ 15P	30A	0.4	1A-B-C
Rice, Hulled	45-49	47C $\frac{1}{2}$ 25P	45	0.4	1A-B-C
Rice, Hulls	20-21	21B ₆ 35NY	45	0.4	1A-B-C
Rice, Rough	32-36	34C $\frac{1}{2}$ 35N	30A	0.6	1A-B-C
Rosin - $\frac{1}{2}$	65-68	67C $\frac{1}{2}$ 45Q	30A	1.5	1A-B-C
Rubber, Reclaimed, Ground	23-50	37C $\frac{1}{2}$ 45Q	30A	0.8	1A-B-C
Rubber, Pelleted	50-55	53D ₃ 45	30A	1.5	2A-B-C
Rye	42-48	45B ₆ 15N	45	0.4	1A-B-C
Rye Bran	15-20	18B ₆ 35Y	45	0.4	1A-B-C
Rye Feed	33	33B ₆ 35	30A	0.5	1A-B-C
Rye Meal	45-50	38B ₆ 35	30A	0.5	1A-B-C
Rye, Middlings	42	42B ₆ 35	30A	0.5	1A-B-C

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Rye, Shorts	32-33	33C $\frac{1}{2}$ 35	30A	0.5	2A-B
Safflower, Cake	50	50D $\frac{3}{4}$ 26	30A	0.6	2D
Safflower, Meal	50	50B $\frac{6}{8}$ 35	30A	0.6	1A-B-C
Safflower, Seed	45	45B $\frac{6}{8}$ 15N	45	0.4	1A-B-C
Saffron (See Safflower)					
Salt Ammoniac (See Ammonium Chloride)					
Salt Cake, Dry, Coarse	85	85B $\frac{6}{8}$ 36TU	30B	2.1	3D
Salt Cake, Dry, Pulverized	65-85	75B $\frac{6}{8}$ 36TU	30B	1.7	3D
Salicylic Acid	29	29B $\frac{6}{8}$ 37U	30A	0.6	3D
Salt, Dry, Coarse	45-60	53C $\frac{1}{2}$ 36TU	30B	1.0	3D
Salt, Dry, Fine	70-80	75B $\frac{6}{8}$ 36TU	30B	1.7	3D
Salt peter (See Potassium Nitrate)					
Sand, Dry Bank (Damp)	110-130	120B $\frac{6}{8}$ 47	15	2.8	3D
Sand, Dry Bank (Dry)	90-110	100B $\frac{6}{8}$ 37	15	1.7	3D
Sand, Dry Silica	90-100	95D $\frac{3}{4}$ 37Z	15	2.6	3D
Sand, Foundry (Shake Out)	90-100	95D $\frac{3}{4}$ 37Z	15	2.6	3D
Sand (Resin Coated) Silica	104	104B $\frac{6}{8}$ 27	15	2.0	3D
Sand (Resin Coated) Ziron	115	115A $\frac{100}{100}$ 27	15	2.3	3D
Sawdust, Dry	10-13	12B $\frac{6}{8}$ 45UX	30A	0.7	1A-B-C
Sea-Coal	65	65B $\frac{6}{8}$ 36	30B	1.0	2D
Sesame Seed	27-41	34B $\frac{6}{8}$ 26	30B	0.6	2D
Shale, Crushed	85-90	88C $\frac{1}{2}$ 36	30B	2.0	2D
Shellac, Powdered or Granulated	31	31B $\frac{6}{8}$ 35P	30A	0.6	1B
Silicon Dioxide (See Quartz)					
Silica, Flour	80	80A $\frac{40}{40}$ 46	30B	1.5	2D
Silica, Gel	45	45D $\frac{3}{4}$ 37HKQU	15	2.0	3D
Slag, Blast Furnace	130-180	155D $\frac{3}{4}$ 37Y	15	2.4	3D
Slag, Furnace, Granular-Dry	60-65	63C $\frac{1}{2}$ 37	15	2.2	3D
Slate, Crushed - $\frac{1}{2}$	80-90	85C $\frac{1}{2}$ 36	30B	2.0	2D
Slate, Ground - $\frac{1}{8}$	82-85	84B $\frac{6}{8}$ 36	30B	1.6	2D
Sludge, Sewage, Dried	40-50	45E47TW	30B	0.8	3D
Soap, Beads or Granules	15-35	25B $\frac{6}{8}$ 35Q	30A	0.6	2D
Soap, Chips	15-25	20C $\frac{1}{2}$ 35Q	30A	0.6	1A-B-C
Soap, Detergent	15-50	33B $\frac{6}{8}$ 35FQ	30A	0.8	1A-B-C
Soap, Flakes	5-15	10B $\frac{6}{8}$ 35QXY	30A	0.6	1A-B-C
Soap, Powder	20-25	23B $\frac{6}{8}$ 25X	30A	0.9	1A-B-C
Soapstone, Talc, fine	40-50	45A $\frac{200}{200}$ 45XY	30B	2.0	1A-B-C
Soda Ash, Heavy	55-65	60B $\frac{6}{8}$ 36	30B	1.0	2D
Soda Ash, Light	20-35	28A $\frac{40}{40}$ 36Y	30B	0.8	2D
Sodium Aluminate, Ground	72	72B $\frac{6}{8}$ 36	30B	1.0	2D
Sodium Aluminate Fluoride (See Cryolite)					
Sodium Aluminum Sulphate	75	75A $\frac{100}{100}$ 36	30B	1.0	2D
Sodium Bentonite(See Bentonite)					
Sodium Bicarbonate (See Baking Soda)					

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Sodium Chloride (See Salt)					
Sodium Carbonate (See Soda Ash)					
Sodium Hydrate (See Caustic Soda)					
Sodium Hydroxide (See Caustic Soda)					
Sodium Borate (See Borax)					
Sodium Nitrate	70-80	75D ₃ 25NS	30A	1.2	2A-B
Sodium Phosphate	50-60	55A35	30B	0.9/2.0	1A-B
Sodium Sulfate (See Salt Cake)					
Sodium Sulfite	96	96B ₆ 46X	30B	1.5	2D
Sorghum, Seed (See Kafir or Milo)					
Soybean Cake	40-43	42D ₃ 35W	30A	1.0	2A-1B-1C
Soybean, Cracked	30-40	35C ¹ / ₂ 36NW	30B	0.5	2D
Soybean, Flake, Raw	18-25	22C ¹ / ₂ 35Y	30A	0.8	1A-B-C
Soybean, Flour	27-30	29A ₄₀ 35MN	30A	0.8	1A-B-C
Soybean, Meal – Cold	40	40B ₆ 35	30A	0.5	1A-B-C
Soybean, Meal – Hot	40	40B ₆ 35T	30A	0.5	1A-B-C
Soybean, Whole	45-50	48C ¹ / ₂ 26NW	15	1.0	3D
Starch	25-50	38A ₄₀ 15M	45	1.0	1A-B-C
Steel Turnings, Crushed	100-150	125D ₃ 46WY	15	3.0	3D
Sugar Beet, Pulp – Dry	12-15	14C ¹ / ₂ 26	30B	0.9	2D
Sugar Beet, Pulp – Wet	25-45	35C ¹ / ₂ 35X	30B	1.2	1A-B-C
Sugar, Refined, Granulated – Dry	50-55	53B ₆ 35PU	30A	1.2	1B
Sugar, Refined, Granulated – Wet	55-65	60C ¹ / ₂ 35X	30A	2.0	1B
Sugar, Powdered	50-60	55A ₁₀₀ 35PX	30A	0.8	1B
Sugar, Raw	55-65	60B ₆ 35PX	30A	2.0	1B
Sulphur, Crushed – ½	50-60	55C ¹ / ₂ 35N	30A	0.8	1A-B
Sulphur, Lumpy – 3”	80-85	83D ₃ 35N	30A	0.8	2A-B
Sulphur, Powdered	50-60	55A ₄₀ 35MN	30A	0.8	1A-B
Sunflower Seed	19-38	29C ¹ / ₂ 15	30	0.5	1A-B-C
Talcum – ½	80-90	85C ¹ / ₂ 36	30B	0.9	2D
Talcum Powder	50-60	55A ₂₀₀ 36M	30B	0.9	2D
Tanbark, Ground	55	55B ₆ 45	30A	0.6	1A-B-C
Timothy Seed	36	36B ₆ 35NY	30A	0.6	1A-B-C
Titanium Dioxide (See Ilmenite Ore)					
Tobacco, Scraps	15-25	20D ₃ 45Y	30A	0.8	2A-B
Tobacco Snuff	30	30B ₆ 45MQ	30B	0.9	1A-B-C
Tricalcium Phosphate	40-50	45A ₄₀ 45	30A	1.6	1A-B
Triple Super Phosphate	50-55	53B ₆ 36RS	30B	2.0	3D
Trisodium Phosphate, Granular	60	60B ₆ 36	30B	1.7	2D
Trisodium Phosphate, Pulverized	50	50A ₄₀ 36	30B	1.6	2D

Material Characteristics

Material	Weight Lbs per Cu. Ft.	Material Code	% Trough Loading	Mat'l Factor FM	Comp. Series
Tung Nut Meats, Crushed	28	28D ₃ 25W	30A	0.8	2A-B
Tung Nuts	25-30	28D ₃ 15	30A	0.7	2A-B
Urea Prills, Coated	43-46	45B ₆ 25	45	1.2	1A-B-C
Vermiculite, Expanded	16	16C ¹ / ₂ 35Y	30B	0.5	1A-B
Vermiculite, Ore	80	80D ₃ 36	30B	1.0	2D
Vetch	48	48B ₆ 16N	30B	0.4	1A-B-C
Walnut Shells, Crushed	35-45	40B ₆ 36	15	1.0	2D
Wheat	45-48	47C ¹ / ₂ 25N	45	0.4	1A-B-C
Wheat, Cracked	40-45	43B ₆ 25N	30A	0.4	1A-B-C
Wheat, Germ	18-28	23B ₆ 25N	30A	0.4	1A-B-C
White Lead, Dry	75-100	88A ₄₀ 36MR	30B	1.0	2D
Wood Chips, Screened	10-30	20D ₃ 45VY	30A	0.6	2A-B
Wood Flour	16-36	25B ₆ 35N	30A	0.4	1A-B
Wood Shavings	8-16	12E45VY	30B	1.5	2A-B
Zinc Concentrate Residue	75-80	78B ₆ 37	15	1.0	3D
Zinc Oxide, Heavy	30-35	33A ₁₀₀ 45X	30A	1.0	1A-B
Zinc Oxide, Light	10-15	13A ₁₀₀ 45XY	30A	1.0	1A-B

Screw Conveyors – Capacity Table

Trough Loading	Screw Dia.	Pipe Size (Nom. Dia.) Used for Capacity Tables	Maximum RPM	Capacity in Cu. Ft. Per Hr.*	
				At Maximum RPM	At 1 RPM
45%	6	2	165	368	2.23
	9	2 ½	155	1240	8.00
	12	3	145	2813	19.40
	14	3 ½	140	4330	30.93
	16	3 ½	130	6126	47.12
	18	4	120	8052	67.10
	20	4	110	10253	93.21
	24	4	100	16368	163.68
	30	4	90	29150	323.89
30%_A	6	2	120	180	1.50
	9	2 ½	100	536	5.36
	12	3	90	1164	12.93
	14	3 ½	85	1753	20.62
	16	3 ½	80	2514	31.42
	18	4	75	3355	44.73
	20	4	70	4350	62.14
	24	4	65	7093	109.12
	30	4	60	12955	215.92
30%_B	6	2	60	90	1.50
	9	2 ½	55	295	5.36
	12	3	50	647	12.93
	14	3 ½	50	1031	20.62
	16	3 ½	45	1414	31.42
	18	4	45	2013	44.73
	20	4	40	2486	62.14
	24	4	40	4365	109.12
	30	4	35	7557	215.92
15%	6	2	60	45	.75
	9	2 ½	55	147	2.68
	12	3	50	323	6.46
	14	3 ½	50	516	10.31
	16	3 ½	45	707	15.70
	18	4	45	1006	22.36
	20	4	40	1242	31.06
	24	4	40	2182	54.56
	30	4	35	3779	107.96

*Capacities shown are for full pitch screws. Consult factory for inclined conveyors.
Dimensions are in inches.
See Page 18 for Lump Size Limitations

Screw Conveyors – Capacity

Screw Conveyor Speed

Conveyor speed may be determined by reviewing your selection or the capacity table and obtaining the ft³ conveyed at 1 RPM.

The speed is then:

$$N = \frac{C}{\text{CFH @ 1 RPM}}$$

N = Conveyor Speed

C = Required Capacity in ft³/Hr

When hard iron bearings are used with hardened shafts, then the following limitations will apply:

$$N = \frac{120}{\text{Shaft Diameter in Inches}}$$

Shaft size to be equal or smaller than calculated size. Check torsional ratings.

Sample Screw Conveyor Calculation

A horizontal screw conveyor is required to move 8 TPH of Potassium Carbonate over a 36' length.

*From the material table the weight is 51 PCF, component series is 2D, trough loading 30%B.

A nominal amount of other additives are to be added and require some mixing as well as conveying. For this purpose, cut and folded flights are to be used.

The required capacity is:

$$C = \frac{16,000 \text{ lbs/hr}}{51 \text{ PCF}} = 314 \text{ ft}^3$$

Sizing Capacity B:

$$SC = 314 \cdot 3.75 = 1178 \text{ ft}^3$$

The 3.75 is from Table (CF₂)

The conveyor size selected is a 16" from the capacity table based on a sizing capacity of 1178 ft³ with a 30%B trough load.

Actual conveyor speed required is:

$$N = \frac{1178 \text{ ft}^3}{31.42 \text{ ft}^3/\text{hr at 1RPM}} = 37.49 \text{ RPM}$$

The lump size from the material table and the lump size chart:

(B6 = five material)

indicate no adjustments are necessary.

Maximum Shaft Diameter Is:

$$\text{Shaft Dia.} = \frac{120}{37.49 \text{ RPM}} = 3.20''$$

The closest standard shaft often used that is smaller than 3.2" is a 3" shaft.

HORIZONTAL SCREW CONVEYORS – Capacity

Sizing a normal horizontal screw conveyor requires:

1. Required capacity in cubic feet per hour based on material as it is conveyed.
2. Percentage of trough loading
3. Maximum lump size

DETERMINATION OF CONVEYOR SIZE

Review the material in the materials table to obtain the suggested trough loading. Referring to the capacity table, locate the size of screw conveyor at the maximum RPM that will exceed your requirements.

If your process has surges of material from time to time, it may be better to upsize your conveyor to accommodate these surges.

Finally, review the lump size chart after you have made your selection to see if it offsets your choice. **This should be the minimum size selected.**

MODIFIED FLIGHT CAPACITIES

Screw Conveyor flights can be modified in several ways that will affect the capacity. The modifications must be taken into account when sizing a screw conveyor.

SC = C x CF

SC = Selection Capacity (Cu. Ft. Per Hour)
Also Referred to as Equivalent Capacity

C = Required Capacity in Cubic Feet Per Hour

CF = Capacity Factor ($CF_1 \times CF_3 \times CF_4$)

SPECIAL SCREW PITCH CAPACITY FACTORS (CF₁)

Pitch	Description	Capacity Factor
Standard	Pitch = Diameter	1.00
Short	Pitch = $\frac{2}{3}$ Diameter	1.50
Half	Pitch = $\frac{1}{2}$ Diameter	2.00
Long	Pitch = $1\frac{1}{2}$ Diameter	0.67

SPECIAL SCREW FLIGHT CAPACITY FACTORS (CF₂)

Type	Conveyor Loading		
	15%	30%	45%
Cut Flight	1.95	1.57	1.43
Cut-and-folded flight	N.R. ♦	3.75	2.54

♦ NOT RECOMMENDED

RIBBON SCREW CAPACITY FACTORS (CF₃)

Screw Dia.	Ribbon Width	Conveyor Loading		
		15%	30%	45%
6	1	1.03	1.32	1.85
9	1 ½	1.06	1.40	1.76
12	2	1.06	1.41	1.75
	2 ½	1.00	1.20	1.55
14	2 ½	1.02	1.32	1.67
16	2 ½	1.09	1.47	1.85
18	3	1.06	1.41	1.75
20	3	1.12	1.52	1.90
24	3	1.42	1.77	2.20

Factors for Screws with Paddles[♦] (CF₄)

Factor	Paddles per Pitch			
	1	2	3	4
	1.08	1.16	1.24	1.32

♦ Standard paddles at 45° reverse pitch.

LUMP SIZE LIMITATIONS

When sizing a screw conveyor, the lump size of the material and percentages of the lumps as a proportion to the total amount of material conveyed may be a consideration in the final size selection of a screw conveyor. When figuring the lump size the largest dimension should be used.

If the material lumps are friable, that is, easily crumbled, then they would not pose any serious limitation to the screw conveyor and could usually be discounted in calculating the conveyor size.

Three classes of lump sizes apply as follows:

Class 1. A mixture of lumps and fines in which not more than 10% are lumps ranging from maximum size to one half of the maximum; and 90% are lumps smaller than one half of the maximum size.

Class 2. A mixture of lumps and fines in which not more than 25% are lumps ranging from the maximum size to one half of the maximum; and 75% are lumps smaller than one half of the maximum size.

Class 3. A mixture of lumps only in which 95% or more are lumps ranging from maximum size to one half of the maximum size; and 5% or less are lumps less than one tenth of the maximum size.

The lump ratio, LR, is indicated to show the usual screw conveyor sizes and may be used as a guide in sizing conveyors. Unusual products and sizes should be referred to **Orthman Conveying Systems** for evaluation.

MAXIMUM LUMP SIZE TABLE					
Screw Dia. (in.)	Pipe OD (in.)	*Radial Clearance (in.)	Class 1 10% lumps Ratio R = 1.75 Max lump (in.)	Class 2 25% lumps Ratio R = 2.5 Max lump (in.)	Class 3 95% lumps Ratio R = 4.5 Max lump (in.)
6	2 ³ / ₈	2 ⁵ / ₁₆	1 ¹ / ₄	³ / ₄	¹ / ₂
9	2 ³ / ₈	3 ¹³ / ₁₆	2 ¹ / ₄	1 ¹ / ₂	³ / ₄
	2 ⁷ / ₈	3 ⁹ / ₁₆			
12	2 ⁷ / ₈	5 ¹ / ₁₆	2 ³ / ₄	2	1
	3 ¹ / ₂	4 ³ / ₄			
	4	4 ¹ / ₂			
14	3 ¹ / ₂	5 ³ / ₄	3 ¹ / ₄	2 ¹ / ₂	1 ¹ / ₄
	4	5 ¹ / ₂			
16	4	6 ¹ / ₂	3 ³ / ₄	2 ³ / ₄	1 ¹ / ₂
	4 ¹ / ₂	6 ¹ / ₂			
18	4	7 ¹ / ₂	4 ¹ / ₄	3	1 ³ / ₄
	4 ¹ / ₂	7 ¹ / ₂			
20	4	8 ¹ / ₂	4 ³ / ₄	3 ¹ / ₂	2
	4 ¹ / ₂	8 ¹ / ₂			
24	4 ¹ / ₂	10 ¹ / ₄	6	3 ³ / ₄	2 ¹ / ₂
30	4 ¹ / ₂	13 ¹ / ₄	7 ¹ / ₂	5	3

*Radial clearance is distance between bottom of the trough and the bottom of screw pipe.

Horizontal Screw Conveyors – Horsepower Calculation

HORIZONTAL SCREW CONVEYORS

This formula for horizontal screw conveyors is based on a uniformly fed screw conveyor that has been properly sized and installed.

- C = Capacity in cubic feet per hour. (Required capacity)
- e = Drive efficiency. See Table.
- F_b = Hanger bearing factor. See Table.
- F_d = Conveyor diameter factor. See Table.
- F_f = Flight factor. See Table. *Use 1.0 for standard flights.
- F_m = Material factor. See Material Characteristics Table.
- F_o = Overload factor. See graph.
- F_p = Paddle factor. See Table.
- L = Total length of conveyor, feet.
- N = Operating speed, RPM (revolutions per minute).
- W = Weight of the material AS CONVEYED, lbs. per cubic foot.
- HP_f = Frictional horsepower
- HP_m = Material horsepower
- HP = Total horsepower

$$HP_f = \frac{LN F_d F_b}{1,000,000} = \text{(Horsepower to run an empty conveyor)}$$

$$HP_m = \frac{CLW F_f F_m F_p}{1,000,000} = \text{(Horsepower to move the material)}$$

$$\text{Total HP} = \frac{(HP_f + HP_m) F_o}{e} \quad (\text{If } HP_f + HP_m \text{ is greater than } 5.2, \text{ use } 1.0 \text{ for } F_o)$$

Hanger Bearing Factor, F_b

Bearing Type	Bearing Factor, F _b
Ball	1.0
Babbitt Bronze, Plain *Bronze, Graphite *Bronze, Oil-Impregnated *Canvas Base Phenolic *Wood, Oil Impregnated	1.7
*Nylon •UHMW	2.0
*Hard Iron *Hard Surfaced	4.4

*Non-lubricated, or bearings not additionally lubricated.

•Ultra-High Molecular Weight Polymer
Dimensions in inches

Horizontal Screw Conveyors – Horsepower Calculation

Calculation Tables (Cont'd)

Diameter Factor, F_d

Diameter	Factor, F_d
6	18
9	31
12	55
14	78
16	106
18	135
20	165
24	235
30	360

Modified Flight Factor, F_f

Flight Type	Conveyor Loading			
	15%	30%	45%	95%
Cut Flight	1.10	1.15	1.20	1.3
Cut-and-Folded Flight	NR*	1.5	1.7	2.2
Ribbon Flight	1.05	1.14	1.20	—

*Not Recommended

Paddle Factor, F_p

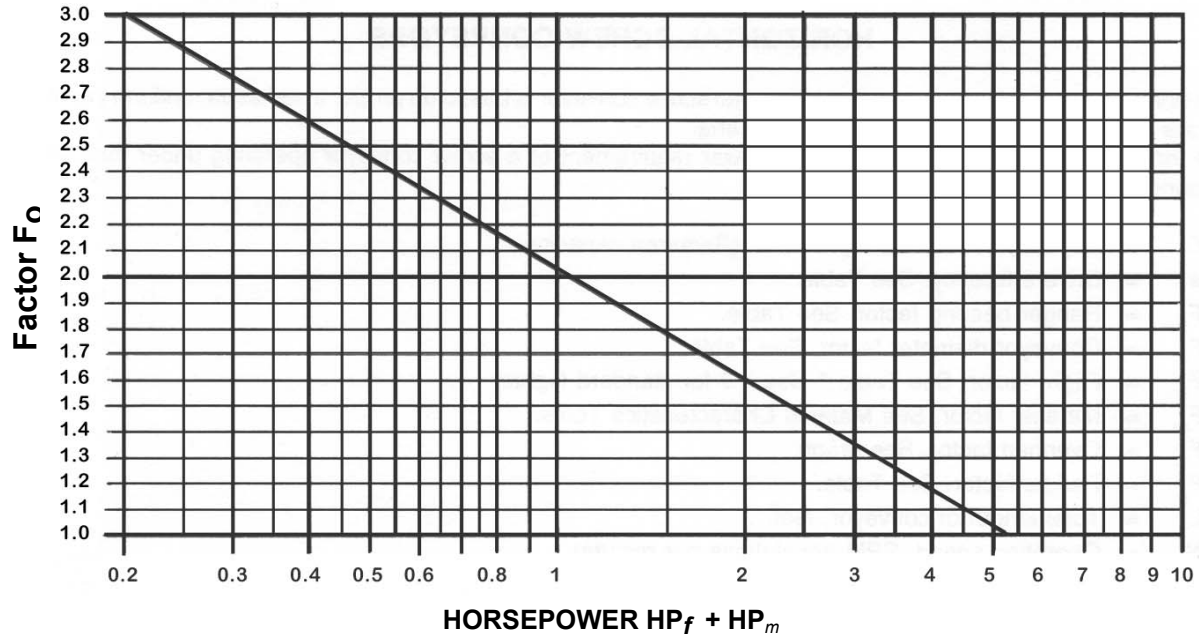
Factor, F_p	*Paddles per Pitch			
	1	2	3	4
	1.29	1.58	1.87	2.16

*Standard paddles at 45° reverse pitch
If no paddles, $F_p = 1.0$

Drive Efficiency Factor, e

Screw Drive or Shaft Mount With V-Belt	V-Belt to Helical Reducer With Coupling	Motor Reducer With Chain Drive	Motor Reducer With Coupling
0.85	0.85	0.85	0.95

F_o — OVERLOAD FACTOR



FOR VALUES OF HP_f + HP_m GREATER THAN 5.2, F_o IS 1.0
TRACE THE VALUE OF HP_f + HP_m VERTICALLY TO THE DIAGONAL LINE,
THEN ACROSS TO THE LEFT WHERE THE F_o VALUE IS LISTED.

EXAMPLE FOR HORSEPOWER CALCULATION

Use same example problem from pg. 16
operating Cut-and-Fold flights.
Known data from problem:

- C = Capacity: 314 Ft³
- e = Drive efficiency: 0.85
- F_b = Hanger bearing factor: 4.4
- F_d = Conveyor diameter factor: 106
- F_f = Flight factor: 1.5
- F_m = Material factor: 1.0
- F_p = Paddle factor: 1.0
- L = Total length of conveyor: 36
- N = Conveyor speed: 37.49
- W = Wt of potassium carbonate as conveyed: 51

Frictional Horsepower is:

$$HP_f = \frac{36 \times 37.49 \times 106 \times 4.4}{1,000,000} = .63$$

Material Horsepower is:

$$HP_m = \frac{314 \times 36 \times 51 \times 1.5 \times 1.0 \times 1.0}{1,000,000} = .86$$

Total Horsepower is:

$$HP_f + HP_m = .63 + .82 = 1.45HP$$

Since this total is less than 5.2, the overload factor of F_o must be used.

Total Horsepower is:

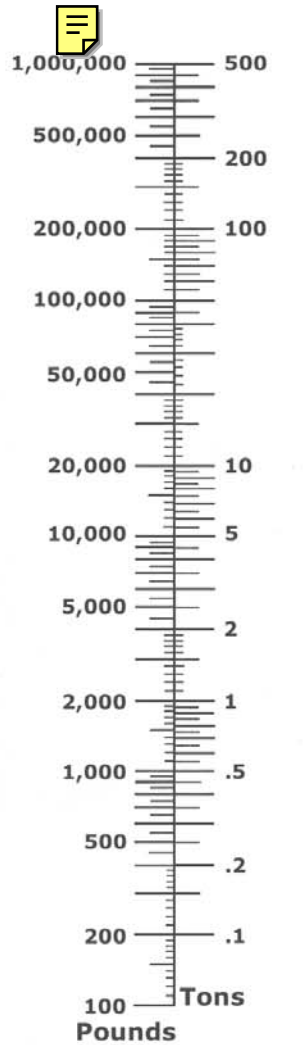
$$(HP_f + HP_m) \times 1.75 = (.63 + .82) \times 1.75 = 2.53 HP$$

Consider drive efficiency:

$$\text{Motor horsepower: } \frac{2.53}{.85} = 2.97$$

A 3 HP motor could be used for the example. However, actual plant conditions and operations might warrant the use of a 5 HP motor to insure operation of the conveyor under adverse conditions.

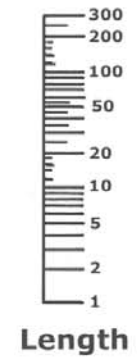
Material Horsepower Nomograph



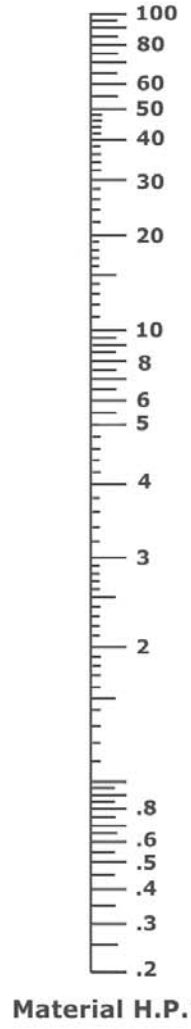
Capacity Per Hour



Material H.P. Factor



Length



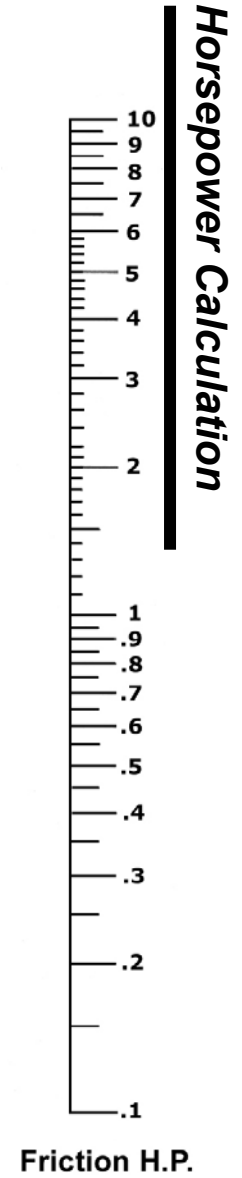
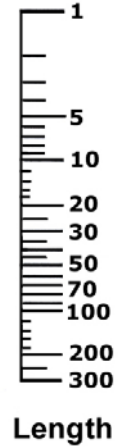
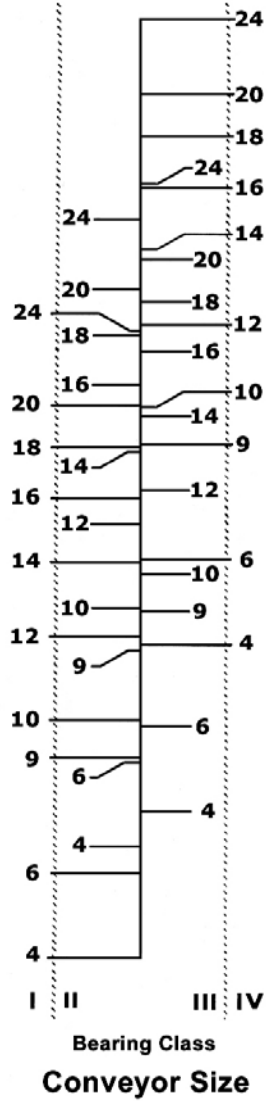
Material H.P.*

Horsepower Calculation

*Overload correction included



Frictional Horsepower Nomograph



Screw Conveyor Deflection

Screw conveyor deflection is usually kept to 1/4" (.25) or less. Standard length screws are normally within this measurement. When longer than standard length screws are needed then deflection must be checked.

Deflection can be calculated at mid-point by use of the following formula:

$$DEF = \frac{5WL^3}{384EI}$$

Example:

Calculate the deflection of a 16" diameter screw mounted on a 3 1/2" Schedule 40 pipe with full pitch flights and length of 15'- 0".

Where:

- DEF** = Deflection at mid-span, inches
- W** = Total weight of screw & pounds.
- L** = Screw length, inches
- I** = Moment of inertia for pipe or shaft, inches⁴. Table below list values for commonly used pipe sizes.
- E** = Modulus of elasticity.
Use 28,000,000 for stainless steel pipe.

$$W = 325 \#$$

$$L = 180"$$

$$I = 4.788$$

$$DEF = \frac{5 \times 325 \times 180^3}{384 \times 29,000 \times 4.788} = .178"$$

This deflection of .178 would be acceptable. Usually a larger pipe will reduce the deflection much better than a heavier pipe.

Very often the problem of excessive deflection can be solved by using a conveyor screw section with a larger diameter pipe or a thicker wall pipe (Sch. 80). Usually the larger diameter pipe is more effective than thicker wall pipe in reducing deflection and is usually more cost effective.

Applications where the calculated deflection of screw exceeds .25 inches and correction is not apparent can be referred to Orthman Conveying Systems for further recommendations.

CONVEYOR SCREW PIPES

NOM. PIPE SIZE	NOM. O.D.	SCHEDULE 40			SCHEDULE 80		
		NOM. I.D.	WT #/FT	I IN ⁴	NOM. I.D.	WT #/FT	I IN ⁴
1 1/4	1.660	1.380	2.27	.1947	1.278	3.0	.2418
2	2.375	2.067	3.65	.666	1.939	5.02	.8769
2 1/2	2.875	2.469	5.79	1.53	2.323	7.66	1.924
3	3.5	3.068	7.58	3.017	2.9	10.25	3.894
3 1/2	4.0	3.548	9.11	4.788	3.364	12.51	6.28
4	4.5	4.026	10.79	7.233	3.826	14.98	9.61
5	5.563	5.047	14.62	15.16	4.813	20.78	20.67
6	6.625	6.065	18.97	28.14	5.761	28.57	40.49
8	8.625	8.071	28.70	72.49	7.625	43.39	105.7
10	10.75	10.02	161.00				212.0

Torque and Screw Conveyor Components

After all size selections have been made the actual ability of the components to handle the motor horsepower must be considered. This additional consideration takes the form of torque.

$$\text{TORQUE} = \frac{63025 \times \text{Motor Horsepower}}{N (\text{Speed of Conveyor})}$$

When reviewing the torque table, the smallest value of all components (in parenthesis) must be compared to the torque that your conveyor will experience.

In our example, we have:

$$\text{TORQUE} = \frac{63025 \times 3 \text{ HP}}{37.49} = 5043 \text{ in. lbs}$$

Selecting a 16" screw with a 3" shaft and 3 1/2" pipe shows that our limitation is 15,435 in. lbs., which is 2 coupling bolts in bearing. There would be no torsional problem with this selection.

Other methods can be used to increase torsional values. Consult with Orthman Conveying Systems for these methods.

SHAFT DIA. ④	PIPE DIAMETER ①	BOLT DIAMETER	TORQUE RATINGS IN INCH – POUNDS									
			BOLTS						PIPE ⑤		SHAFTS	
			BEARING		SHEAR						③	②
			2 BOLT	3 BOLT	STANDARD SAE GRADE 2		HIGH TORQUE SAE GRADE 5		SCH 40	SCH 80	GCC STD (C1045)	CEMA STD (C1018)
1	1 1/4	3/8	1915	2873	1369	2054	2945	4417	3143	3903	(1031)	822
1 1/2	2	1/2	4970	7454	(3652)	5478	7852	11778	7512	9794	3852	3069
2	2 1/2	5/8	7815	11723	(7609)	11413	16358	24538	14258	17937	9542	7603
2 7/16	3	5/8	11606	17409	(9273)	13909	19937	29905	23103	29819	18858	15026
3	3 1/2	3/4	(15435)	23152	16434	24652	35334	53001	32078	42076	35580	28351
3	4	3/4	24975	37463	(16434)	24652	35334	53001	43074	57236	35580	28351
3 7/16	4	7/8	(21721)	32582	25631	38447	55107	82661	43074	57236	53296	42467
3 15/16	5	1	45759	68639	(38347)	57521	82446	123670	73044	99582	80286	63973
4 7/16	6	1 1/4	89917	134876	(67526)	101289	140181	217771	113843	163796	110706	88212
4 15/16	6	1 1/4	(72302)	108453	73135	112702	161539	242309	113843	163796	158818	126548

① Nominal Pipe Size

② Includes Coupling & Drive Shafts

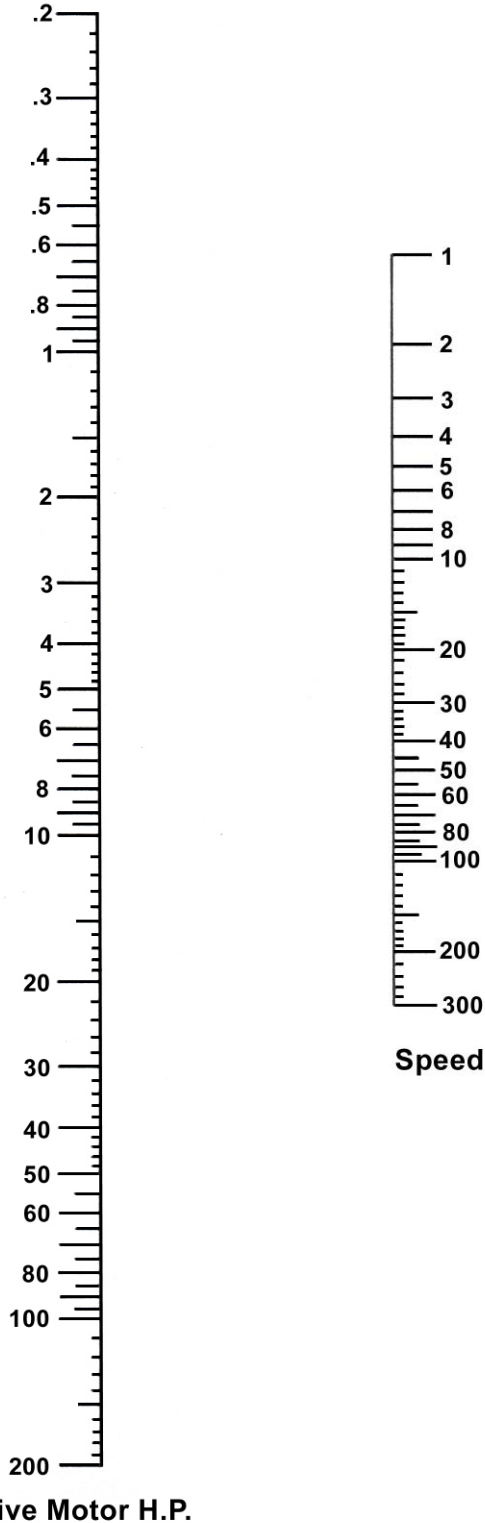
③ Hardened shafts should be selected for wear characteristics. Use OCS standard C-1045 for torque values.

④ Shaft dia. 1" thru 3 7/16" are standard CEMA sizes. Larger sizes shown for special screws exceeding CEMA standards.

⑤ CEMA standard is sch. 40 pipe. Sch. 80 shown for special screw applications.

Torque Capacities

For Stainless Steel

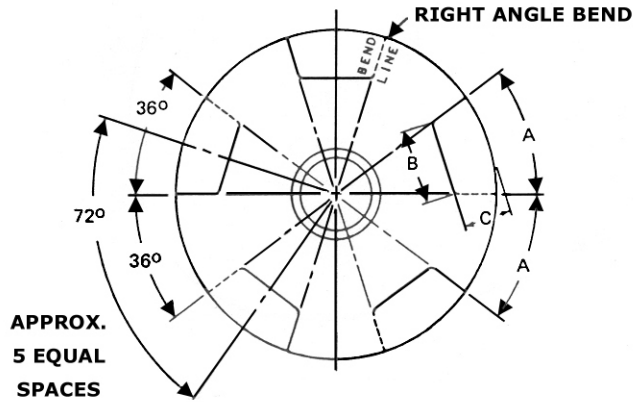


	$3 \frac{7}{16}$	4	$3 \frac{1}{2}$
$3 \frac{7}{16}$	3	$3 \frac{1}{2}$	3
3	$2 \frac{7}{16}$	3	$2 \frac{1}{2}$
$2 \frac{7}{16}$	$2 \frac{7}{16}$	$2 \frac{1}{2}$	$2 \frac{1}{2}$
2	2	2	2
$1 \frac{1}{2}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$
1	1	$1 \frac{1}{4}$	$1 \frac{1}{4}$
Coupling Bolts	Conv. Shafts	40s	80s
Conveyor Pipe			

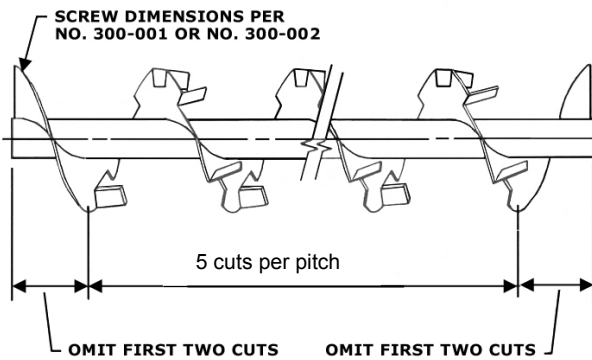
Component Size Δ

Δ Coupling bolt sizes based on conveyor shaft diameters.
 Conveyor pipe listed as nominal pipe size.

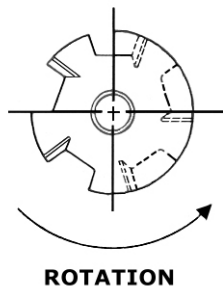
SCREW WITH CUT AND FOLDED FLIGHTS



Flights are cut to a depth of $\frac{1}{2}$ of the flight width. There are 5 cuts per pitch on each flight.

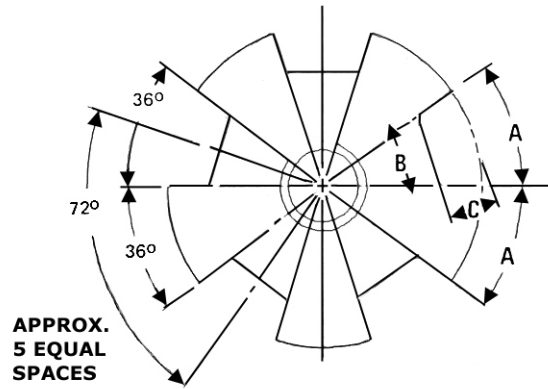


First two cuts eliminated each end of crew.

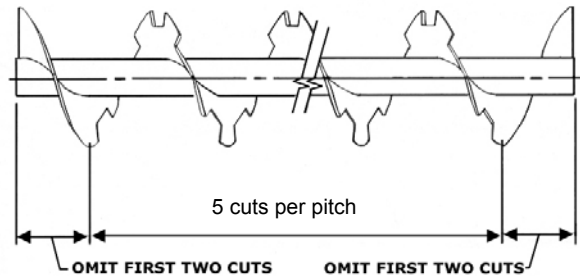


Screw Dia. & Pitch	A	B	C
Inches			
6	2	1 1/2	7/8
9	3	2 1/8	1 1/2
10	3 3/8	2 1/4	1 3/4
12	4	2 3/4	2
14	4 5/8	3 1/8	2 1/2
16	5 1/4	3 1/2	3
18	6	3 7/8	3 3/8
20	6 5/8	4 1/4	3 7/8
24	7 7/8	4 7/8	4 7/8

SCREW WITH CUT FLIGHTS



Flights are cut to a depth of $\frac{1}{2}$ of the flight width. There are 5 cuts per pitch on each flight.



First two cuts eliminated each end of screw.

Screw Dia. & Pitch	A	B	C
Inches			
6	2	1 1/2	7/8
9	3	2 1/8	1 1/2
10	3 3/8	2 1/4	1 3/4
12	4	2 3/4	2
14	4 5/8	3 1/8	2 1/2
16	5 1/4	3 1/2	3
18	6	3 7/8	3 3/8
20	6 5/8	4 1/4	3 7/8
24	7 7/8	4 7/8	4 7/8

SCREW CONVEYOR WELD FINISH CLASSIFICATIONS

Screw conveyor welds are frequently required to be “ground smooth”, particularly for applications in the food industry. Since the term *ground smooth* can have various interpretations, the following classifications are used to define *ground smooth*:

- 1A — Weld spatter and Slag removed (CEMA I)
- 1B — Weld Spatter and Slag removed and Sand Blasted
- 2A — Weld Spatter and Slag removed and rough grind welds to remove heavy weld ripple or unusual roughness (equivalent to a 40-50 grit finish) (CEMA II)
- 2B — Weld Spatter and Slag removed and rough grind welds to remove heavy weld ripple or unusual roughness (equivalent to a 40-50 grit finish) and sandblasted.
- 3A — Weld Spatter and Slag removed and medium grind welds — leaving some pits and crevices (equivalent to an 80-100 grit finish) (CEMA III)
- 3B — Weld Spatter and Slag removed and medium grind welds — leaving some pits and crevices (equivalent to an 80-100 grit finish) and sandblasted
- 4 — Weld Spatter and Slag removed and fine grind welds — no pits or crevices permissible (equivalent to a 140-150 grit finish) (CEMA IV)
- 5 — Weld Spatter and Slag removed and fine grind weld — no pits or crevices permissible (equivalent to a 140-150 grit finish) and polish to a bright uniform finish (CEMA V).

THERMAL EXPANSION OF SCREW CONVEYORS FOR HOT MATERIALS

Screw conveyors are often used to convey hot materials. When they are employed in this manner, allowances must be made for the expansion of the trough and screws. Allowances must also be made for the different expansion *between* the troughs and screws.

The recommended method is to provide supports for the trough sections that will allow movement of the trough end feet during the expansion and contractions. The drive end of the conveyor is usually fixed, allowing the movement in the balance of the conveyor. If multiple discharge spouts are in a fixed position, the expansion type of trough may be required.

The following formula can be used to determine the change in length of the conveyor:

$$\Delta L = L (t1 - t2) C$$

Where: ΔL = increment of change in length, inch

L = overall conveyor length in inches

t1 = upper limit of temperature, degrees Fahrenheit

t2 = lower limit of temperature, degrees Fahrenheit,
(or lowest ambient temperature expected)

C = coefficient of linear expansion, inches per inch per degree

Fahrenheit. This coefficient has the following values for various metals:

(a) Hot rolled carbon steel — 6.5×10^{-6} (.0000065)

(b) Stainless steel — 9.9×10^{-6} (.0000099)

(c) Aluminum — 12.8×10^{-6} (.0000128)

Example Problem:

A 60-foot screw conveyor is to convey hot ash at a temperature of 450° F that will raise the metal temperature to 400° F from an original 90° F.

$$t1 = 400$$

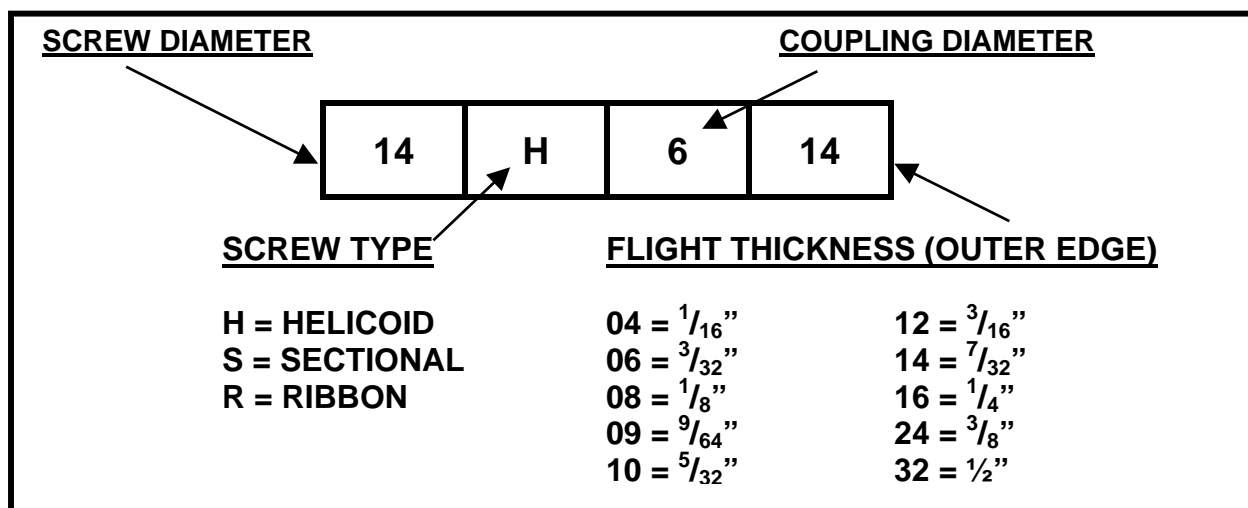
$$t2 = 90$$

$$t1 - t2 = 310^\circ$$

$$\begin{aligned} \Delta L &= (720) (310) (6.5 \times 10^{-6}) \\ &= 1.45'' \end{aligned}$$

In this example, the use of expansion hangers would be required and provisions made for trough movement.

DESCRIPTIVE PART NUMBERS FOR STANDARD SCREWS



COMPARISON TABLE – HELICOID AND SECTIONAL SCREWS

SCREW DIAMETER	COUPLING SIZE	PIPE SIZE		HELICOID			SECTIONAL	
		NOMINAL	O.D.	SIZE DESIGNATION	FLIGHT THICKNESS		SIZE DESIGNATION	FLIGHT THICKNESS 10 GAUGE
					ROOT	TIP		
6	1 ½	2	2 ¾	6H304	1/8	1/16	—	—
				6H308	¼	1/8	6S309	3/16
				6H312	3/8	3/16	6S312	3/16
9	1 ½	2	2 ¾	9H306	3/16	3/32	9S312	3/16
				9H312	3/8	3/16	9S316	¼
	2	2 ½	2 7/8	9H406	3/16	1/32	9S412	3/16
				9H412	3/8	3/16	9S412	3/16
				9H414	7/16	7/32	9S416	¼
12	2	2 ½	2 7/8	12H408	¼	1/8	12S412	3/16
				12H412	3/8	3/16	12S412	3/16
	2 7/16	3	3 ½	12H508	¼	1/8	12S512	3/16
				12H512	3/8	3/16	12S512	3/16
				12H614	7/16	7/32	12S616	¼
14	2 7/16	3	3 ½	14H508	¼	1/8	14S512	3/16
	3	3 ½	4	14H614	7/16	7/32	14S616	¼
16	3	3 ½	4	16H610	5/16	5/32	16S612	3/16
		4	4 ½	16H614	7/16	7/32	16S616*	¼
18	3	3 ½	4	18H610	5/16	5/32	18S612	3/16

Component Selection

The chart, along with the material table, illustrates suggested screw conveyor components. They may be used as a guide.

Recommendations for highly abrasive, corrosive, explosive, and/or unusual materials should be referred to Orthman Conveying Systems for evaluation.

Bearing and Coupling Shaft Series

Series	Coupling Shaft	Bearing Material
A	Standard	Ball
B	Standard	Babbitt, Bronze, *Graphite bronze, *Canvas base phenolic, *Oil impregnated bronze, *Oil impregnated wood
C	Standard	*Plastic, *Nylon, *Teflon
D	Hardened Or Hard Surfaced	*Chilled hard iron, *Hardened alloy sleeve

*Non-lubricated bearings, or bearings not additionally lubricated.

Component Series Table

Screw Diameter	Shaft Diameter	Cover Thickness (Ga)	Series 1			Series 2			Series 3		
			Screw Number		Tube or Trough Thickness (Ga)	Screw Number		Tube or Trough Thickness	Screw Number		Tube or Trough Thickness
			Helicoid	Sectional		Helicoid	Sectional		Helicoid	Sectional	
6	1 ½	16	6H304	6S309	16	6H308	6S309	14 ga	6H312	6S316	10 ga
9	1 ½	16	9H306		14	9H312		10 ga	9H312	9S316	3/16
	2		9H406			9H412			9H414	9S416	
12	2	14	12H408		12	12H412	12S412	3/16	12H412	12S524	1/4
	2 7/16		12H508			12H512	12S512		12H512	12S624	
	3		12H614			12H614	12S612		12H614		
14	2 7/16	14	14H508		12	14H508	14S512	3/16	14H508	14S624	1/4
	3		14H614			14H614	14S612		14H614		
16	3	14	16H610	16S612	12	16H614	16S616	3/16	16H614	16S624	1/4
18	3	14	18H610	18S612	12		18S616	3/16		18S624	1/4
	3 7/16									18S724	
20	3	14			10		20S616	3/16		20S624	1/4
	3 7/16						20S716			20S724	
24	3 7/16	12			10		24S716	3/16		24S724	1/4

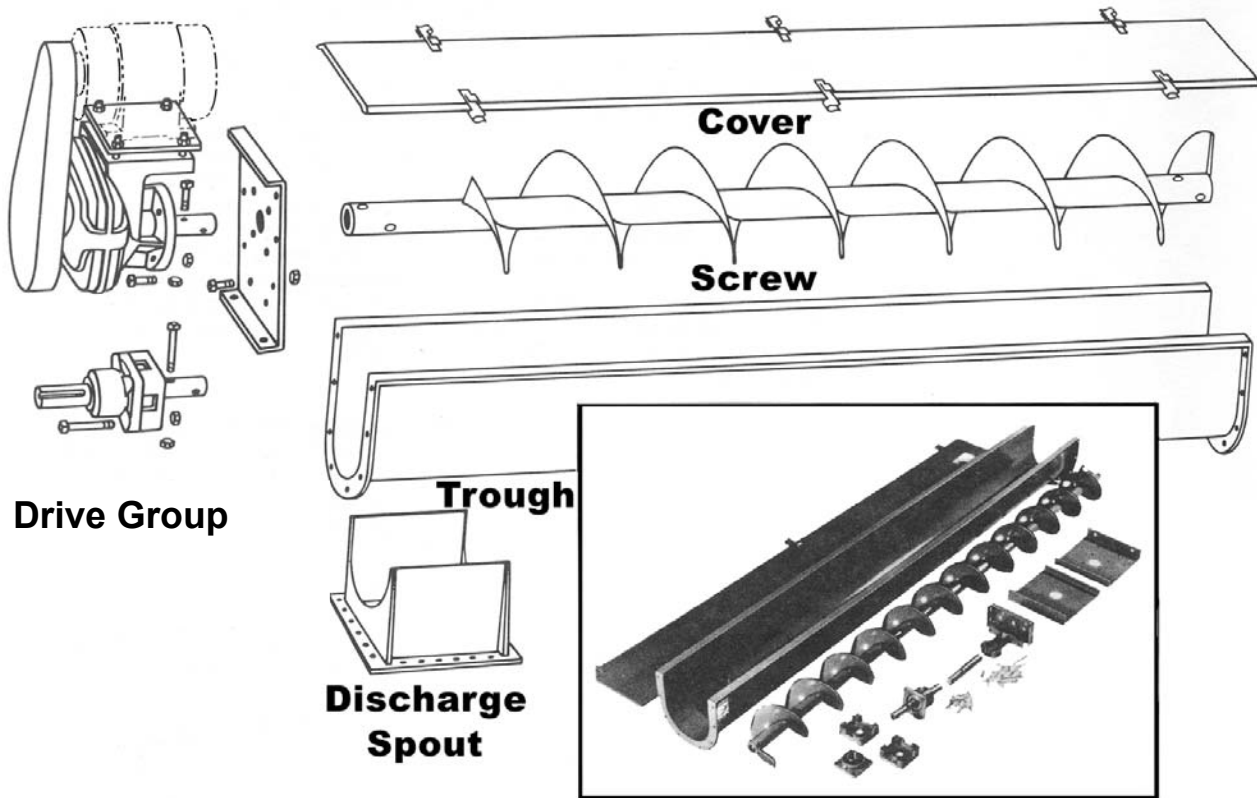
Section Two

Conveyor Components

Orthman Conveying Systems Screw Conveyors

The fastest way to put a screw conveyor to work for you.

➤ Quickly ➤ Easily ➤ Completely
Equipment that pays its own way.



Unmatched Versatility

You'll find reliable **ORTHMAN CONVEYING SYSTEMS'** screw conveyors hard at work in a broad range of applications, handling everything from alfalfa meal to zinc oxide – over 250 types of materials **ORTHMAN CONVEYING SYSTEMS'** screw conveyors can handle it effectively and economically.

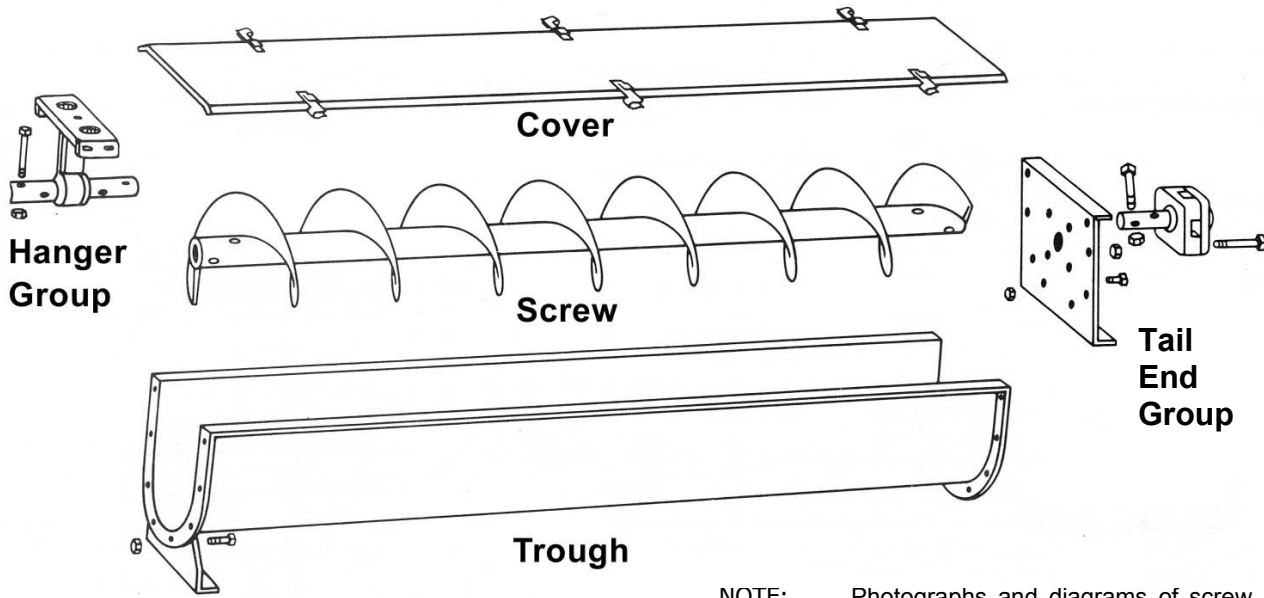
ORTHMAN delivers more than products – it's a total program. Standardized dimensions, simplified selection, prompt ordering and delivery all play a part. Efficiencies all down the line combine to make our conveyors your company's best investment.

Engineering for Every Type of Service

No one can match our ability to give you the right equipment for your application. **ORTHMAN CONVEYING SYSTEMS'** screw conveyors serve industry in a wide variety of applications: conveying, distributing, collecting, mixing, heating, cooling, elevating, batching, blending, aerating and providing crystallization or coagulant action.

Screw conveyor hangers are precision formed and have slotted mounting holes. Wide top-bars support the cover at trough joints, and the semi-flanged trough covers have spring clamps attached.

ORTHMAN screw conveyors and components are accurately and ruggedly built. All components meet CEMA specifications and are interchangeable for fast, easy assembly, and don't require special tools or specially trained personnel.



NOTE: Photographs and diagrams of screw conveyors in this catalog are shown without covers or have exposed screws or shafting and are shown for illustration purposes only. Screw conveyors should never be used without covers, guards, or protective equipment.

Orthman screw conveyors can be furnished with all your necessary power transmission components – V-belts, sheaves, motors and guards, all precision designed to work with the screw conveyor drive.

Reliable Service When You Need It

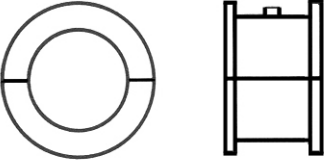
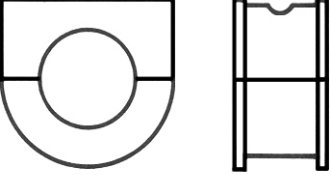
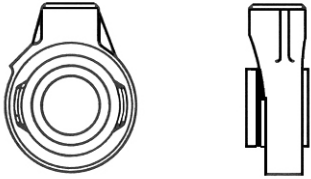
The productivity of your bulk material handling operations could ultimately depend on the speed and efficiency of your equipment supplies. That's why so many companies rely on **Orthman Conveying Systems'** screw conveyors and components. We understand that quality products must be supported by a responsive service network

Our experienced Material Handling Specialists welcome the opportunity to assist you and to provide solutions to your bulk material handling requirements. Start improving the productivity of your operation with **Orthman Conveying Systems** conveyors and components.

**Equipment that
pays
its own way.**

HANGER BEARINGS

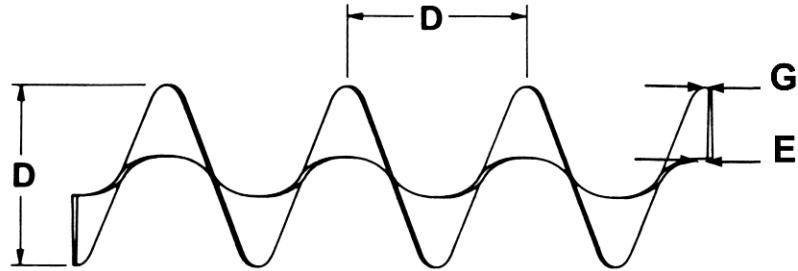
HANGER BEARING SELECTION

DIAGRAM	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHB3	W = WOOD HI = HARD IRON B = BABBITT BZ = BRONZE BZG = BRONZE W/ GRAPHITE N = NYLATRON	220 226 326
	2	SHB4		
	2 7/16	SHB5		
	3	SHB6		
	3 7/16	SHB7		
	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHBX3	W = WOOD HI = HARD IRON B = BABBITT BZ = BRONZE UHMW = UHMW	226 326 216 316
	2	SHBX4		
	2 7/16	SHBX5		
	3	SHBX6		
3 7/16	SHBX7			
	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHBB-3	BALL BEARING	270
	2	SHBB-4		
	2 7/16	SHBB-5		
	3	SHBB-6		
3 7/16	SHBB-7			

CONVEYOR SCREWS

REPLACEMENT FLIGHTING

HELICOID CONVEYOR FLIGHTING



Right Hand Shown

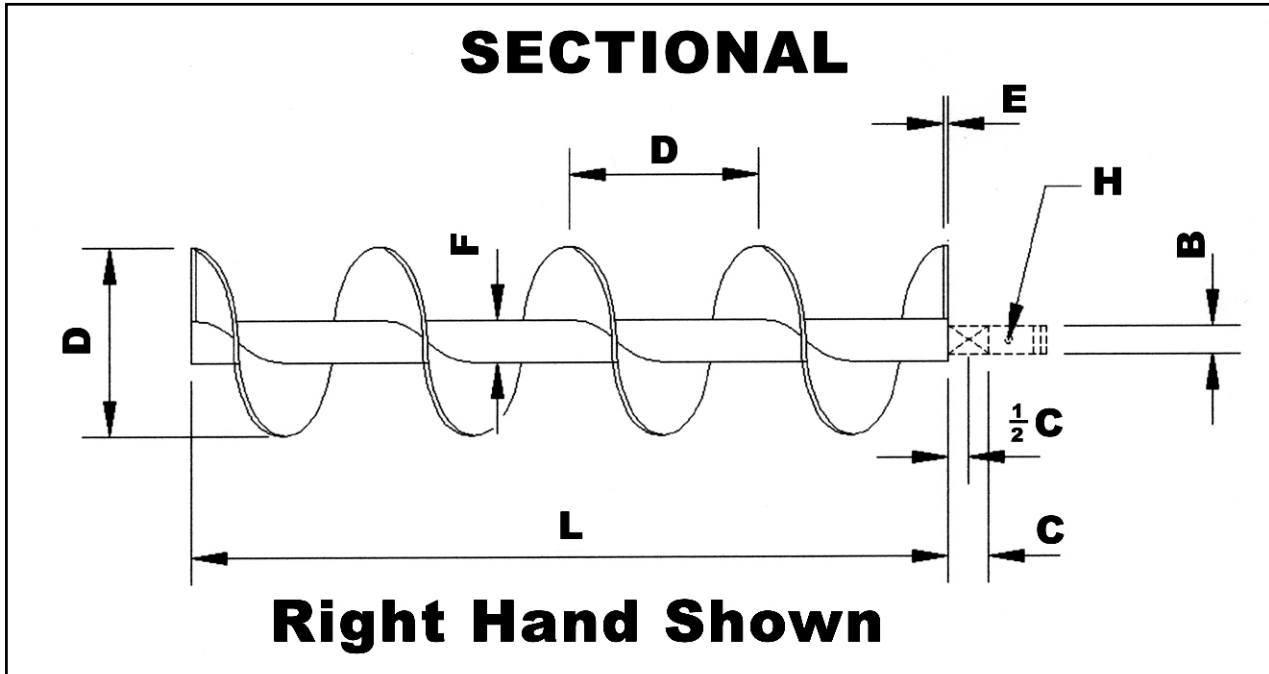
DIMENSIONS

D SCREW DIA. & PITCH	CPLG. DIA.	PART #	STD SECTIONS		FLIGHT THICKNESS		PIPE O.D.
			STD LENGTH	WT. EACH	E ROOT	G TIP	
6	1 1/2	6H304	9' 10"	14	1/8	1/16	2 3/8
		6H308		27	1/4	1/8	
		6H312		34	3/8	3/16	
9	1 1/2	9H306	9' 10"	33	3/16	3/32	2 3/8
		9H312		60	3/8	3/16	
	2	9H406	9' 10"	33	3/16	3/32	2 7/8
		9H412		68	3/8	3/16	
12	2	12H408	11' 10"	75	1/4	1/8	2 7/8
		12H412		108	3/8	3/16	
	2 7/16	12H508	11' 9"	78	1/4	1/8	3 1/2
		12H512		110	3/8	3/16	
		12H614		113	7/16	7/32	
14	2 7/16	14H508	11' 9"	80	1/4	1/8	3 1/2
	3	14H614		140	7/16	7/32	
16	3**	16H610	11' 9"	120	5/16	5/32	4
	3	16H614	11' 9"	160	7/16	7/32	4 1/2
18	3	18H610	11' 9"	149	5/16	5/32	4

*STANDARD-MOUNTED TO SCHEDULE 40 PIPE

**RIGHT HAND FLIGHTING IS STANDARD

CONVEYOR SCREWS



DIMENSIONS

SCREW DIA. & PITCH	COUPLING DIA.	CONV. SIZE DESIGNATION	MTD. CONVEYOR- STD SECTIONS		FLIGHT THICKNESS	PIPE SIZE		BEARING LENGTH	COUPLING BOLTS
			STD LENGTH	AVE. WEIGHT EACH		INSIDE	OUTSIDE		
			L	E		*	F		
6	1 1/2	6S309	9' 10"	63	10 GA	2	2 3/8	2	1/2 X 3
		6S312		70	3/16				
		6S316		80	1/4				
9	1 1/2	9S312	9' 10"	89	3/16	2	2 3/8	2	1/2 X 3
		9S316		106	1/4				
	2	9' 10"	9S412	109	3/16	2 1/2	2 7/8	2	5/8 X 3 5/8
			9S416	124	1/4				
			9S424	155	3/8				
			12S524	249	3/8				
12	2 7/16	12S612	11' 9"	189	3/16	3 1/2	4	3	3/4 X 5
		12S616		212	1/4				
	3	12S624		260	3/8				

*STANDARD-MOUNTED 40 SCHEDULE 40 PIPE

**RIGHT HAND FLIGHTING IS STANDARD

CONVEYOR SCREWS

SECTIONAL (CONT'D)

SCREW DIA. & PITCH	COUPLING DIA.	CONV. SIZE DESIGNATION	MTD CONVEYOR STD SECTIONS		FLIGHT THICKNESS	PIPE SIZE		BEARING LENGTH	COUPLING BOLTS
			STD LENGTH	AVE. WT. EACH		INSIDE	OUTSIDE		
			L			*	F		
D	B			E			C	H	
14	2 7/16	14S512	11' 9"	191	3/16	3	3 1/2	3	5/8 X 4
		14S516		222	1/4				
	3	14S612	11' 9"	207	3/16	3 1/2	4	3	3/4 X 5
		14S616		236	1/4				
		14S624		295	3/8				
16	3	16S612	11' 9"	220	3/16	3 1/2	4	3	3/4 X 5
		16S616		254	1/4				
		16S624		321	3/8				
		16S632		402	1/2				
18	3	18S612	11' 9"	239	3/16	3 1/2	4	3	3/4 X 5
		18S616		279	1/4				
		18S624		359	3/8				
		18S632		450	1/2				
	3 7/16	18S724	11' 8"	376	3/16	4	4 1/2	4	7/8 X 5 1/2
		18S732		456	1/4				
20	3	20S612	11' 9"	258	3/16	3 1/2	4	3	3/4 X 5 1/2
		20S616		306	1/4				
		20S624		104	3/8				
		20S632		496	1/2				
	3 7/16	20S712	11' 8"	274	3/16	4	4 1/2	4	7/8 X 5 1/2
		20S716		320	1/4				
		20S724		412	3/8				
		20S732		503	1/2				
24	3 7/16	24S712	11' 8"	309	3/16	4	4 1/2	4	7/8 X 5 1/2
		24S716		367	1/4				
		24S724		482	3/8				
		24S732		597	1/2				

*STANDARD MOUNTED TO SCHEDULE 40 PIPE

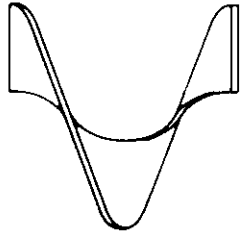
ALL SECTIONAL CONVEYOR SCREWS MADE TO ORDER.

ALL SECTIONAL CONVEYOR SCREWS AVAILABLE IN STAINLESS STEEL, AR STEEL, ALUMINUM, OR TITANIUM.

SECTIONAL FLIGHT CONVEYOR REGULARLY FURNISHED BUTT WELDED.

RH FLIGHTING WILL BE FURNISHED UNLESS OTHERWISE SPECIFIED.

CONVEYOR SCREWS



RIGHT HAND SHOWN

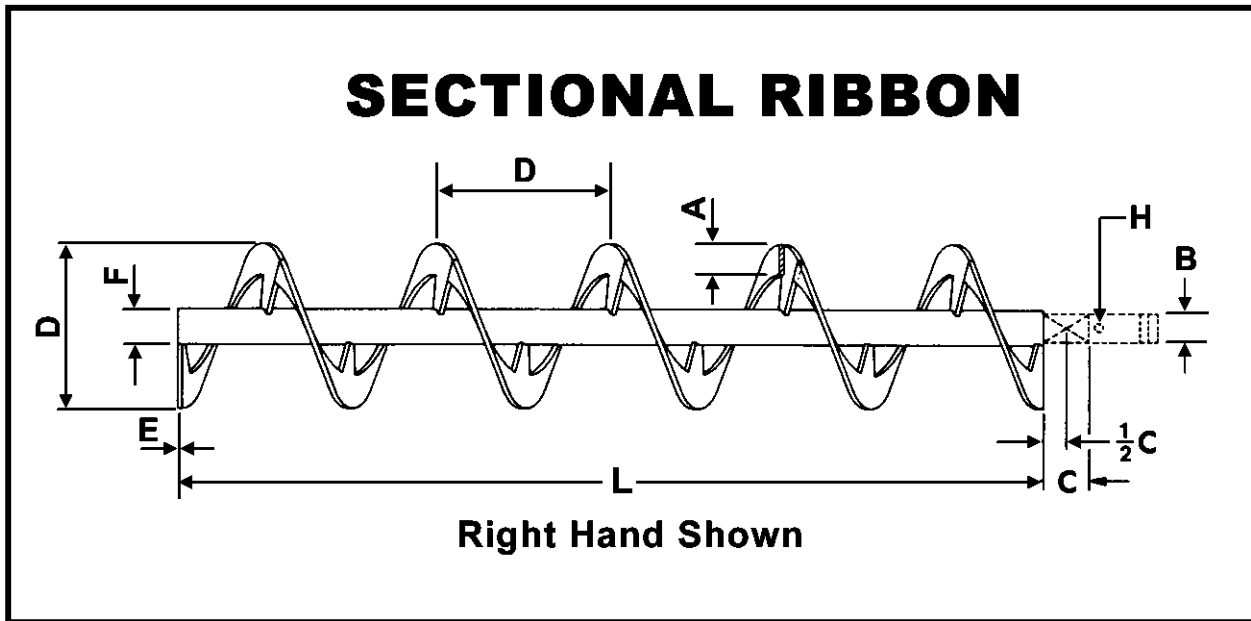
REPLACEMENT FLIGHTING

Sectional Conveyor Flights

SCREW DIA. & PITCH	COUPLING DIAMETER	PART #	FLIGHT THICKNESS	WT PER FLIGHT	FLIGHTING I.D.
6	1 1/2	6S309	10 GA	1.2	2 3/8
		6S312	3/16	1.6	
		6S316	1/4	2.1	
9	1 1/2	9S312	3/16	4.0	2 3/8
		9S316	1/4	5.4	
	2	9S412	3/16	3.9	2 7/8
		9S416	1/4	5.1	
		9S424	3/8	7.7	
12	2	12S412	3/16	7.3	2 7/8
		12S416	1/4	9.7	
	2 7/16	12S512	3/16	6.9	3 1/2
		12S516	1/4	9.2	
		12S524	3/8	13.8	
	3	12S612	3/16	6.7	4
		12S616	1/4	8.9	
12S624		3/8	13.4		
14	2 7/16	14S512	3/16	14.4	3 1/2
		14S516	1/4	19.2	
	3	14S612	3/16	9.6	4
		14S616	1/4	12.8	
		14S624	3/8	19.2	
16	3	16S612	3/16	12.8	4
		16S616	1/4	17.1	
		16S624	3/8	25.5	
		16S632	1/2	34.0	
18	3	18S612	3/16	16.8	4
		18S616	1/4	22.4	
		18S624	3/8	33.6	
		18S632	1/2	44.8	
	3 7/16	18S724	3/8	32.5	4 1/2
		182732	1/2	43.4	
20	3	20S612	3/16	21.1	4
		20S616	1/4	28.1	
		20S624	3/8	42.2	
		20S632	1/2	56.3	
	3 7/16	20S712	3/16	20.3	4 1/2
		20S716	1/4	27.0	
		20S724	3/8	40.6	
		20S732	1/2	54.1	
24	3 7/16	24S712	3/16	31.0	4 1/2
		24S716	1/4	41.3	
		24S724	3/8	62.1	
		24S732	1/2	82.7	

*Sectional flights constructed from a variety of materials, including stainless steel, abrasion-resistant steel, aluminum & titanium.

CONVEYOR SCREWS

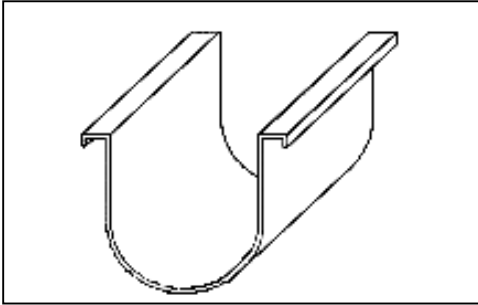


DIMENSIONS

SCREW DIA. & PITCH	COUPLING DIAMETER	PART NUMBER	STD SECTIONS		FLIGHT		PIPE SIZE		BEARING WIDTH	COUPLING BOLTS
			STD LENGTH	AVE. WT EACH	WIDTH	THICK.	INSIDE	OUTSIDE		
D			L		A	E	F	C	H	
6	1 1/2	6SR312	9' 10"	65	1	3/16	2	2 3/8	2	1/2 X 3
9	1 1/2	9SR316	9' 10"	100	1 1/2	1/4	2	2 3/8	2	1/2 X 3
12	2	12SR416	11' 10"	180	2	1/4	2 1/2	2 7/8	2	5/8 X 3 5/8
		12SR424		216						
	2 7/16	12SR524	11' 9"	240	2 1/2	3/8	3	3 1/2	3	5/8 X 4 3/8
14	2 7/16	14SR516	11' 9"	224	2	1/4	3	3 1/2	3	5/8 X 4 3/8
		14SR524		264						
		14SR624		288						
16	3	16SR616	11' 9"	276	2 1/2	1/4	3 1/2	4	3	3/4 X 5
		16SR624	11' 9"	324						
18	3	18SR624	11' 9"	384	3	3/8	4	4 1/2	3	3/4 X 5
20	3 7/16	20SR724	11' 8"	408	3	3/8	4	4 1/2	4	7/8 X 5 1/2

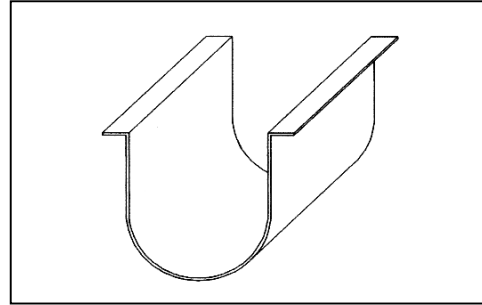
TROUGHS

U-TROUGH



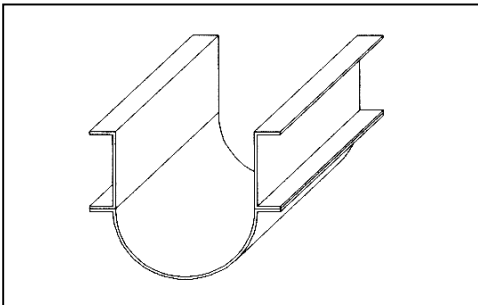
Double Formed Flange

The top flange of the double-formed flange trough is formed from the same sheet as the trough, and its unique design adds considerable strength and rigidity to the trough. The double-formed flange provides an effective dust-tight seal when used in conjunction with flange type covers and appropriate gasket material.



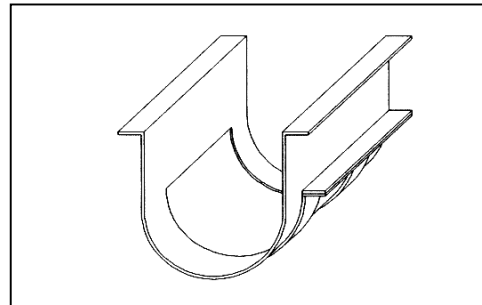
Formed Flange

The top flange is formed from the same sheet as the trough, resulting in a lightweight, yet rigid housing section. End flanges are jig-welded for perfect alignment with other sections.



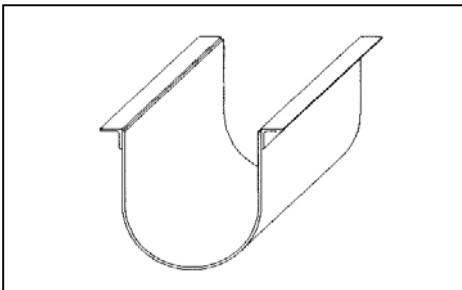
Channel

The channel U-Trough is well suited for applications requiring long distances between trough supports. Upper trough sides are fabricated with structural steel channels to which the lower contoured section may be bolted or spring clamped. Is useful for abrasive applications where frequent replacement of the lower formed section is anticipated.



Drop Bottom

Intended for applications where quick, convenient access to the conveyor interior is required. The drop bottom trough consists of rigid upper sections to which a lower contoured section is attached. One side of the lower formed section is hinged while the other is attached by use of spring clamps or other type of quick opening device.



Angle Flanged

The top flange is fabricated with heavy-duty structural steel angles welded to the top trough edge. End flanges are jig-welded to insure proper alignment with the other trough sections.

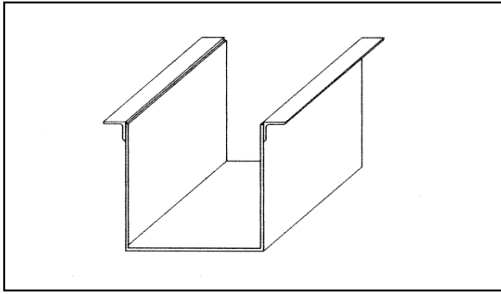
All Orthman Conveying Systems' conveyor troughs are available in stainless steel.

All troughs may also be furnished in hot dipped galvanized.

For specific alloy materials available, consult Orthman Conveying Systems.

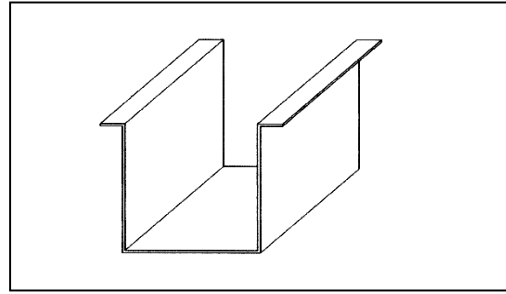
TROUGHS

RECTANGULAR TROUGH



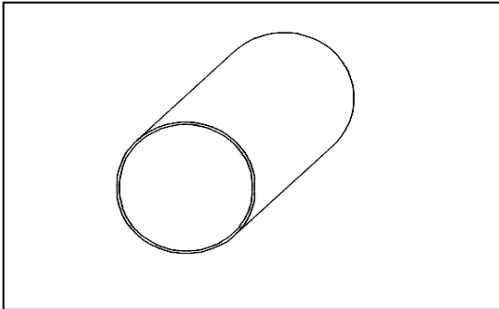
Angle Flanged

Rectangular Troughs are well suited for highly abrasive applications. The material is allowed to form on the trough bottom, thus preventing abrasion directly against the trough wall. Top flanges are fabricated of structural steel angle, welded flush with the top trough edges.



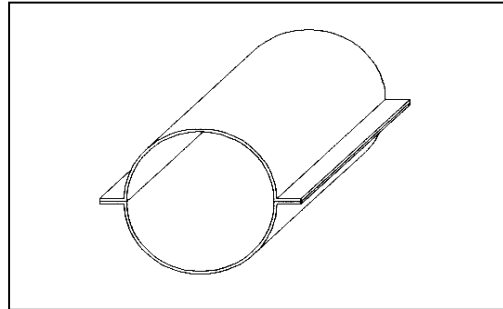
Formed Flange

The top flange for this type trough is formed from the same sheet as the trough, providing a rigid yet lighter trough.



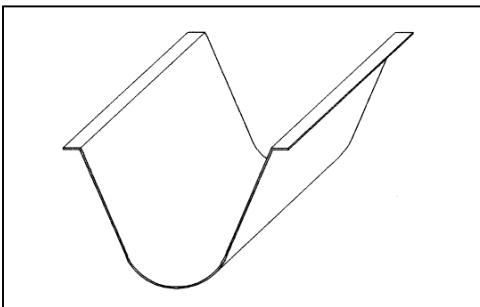
Standard

Tubular troughs are inherently dust and weather-tight, rigid and may be readily loaded to a full cross section. The standard tubular trough is rolled from a single sheet and continuously welded at the seam.



Formed Flange

This type is similar to the angle flange except the flanges are formed from the same sheet as the contoured half sections, resulting in a rigid lightweight tubular section. The halves are bolted together to form the complete housing.



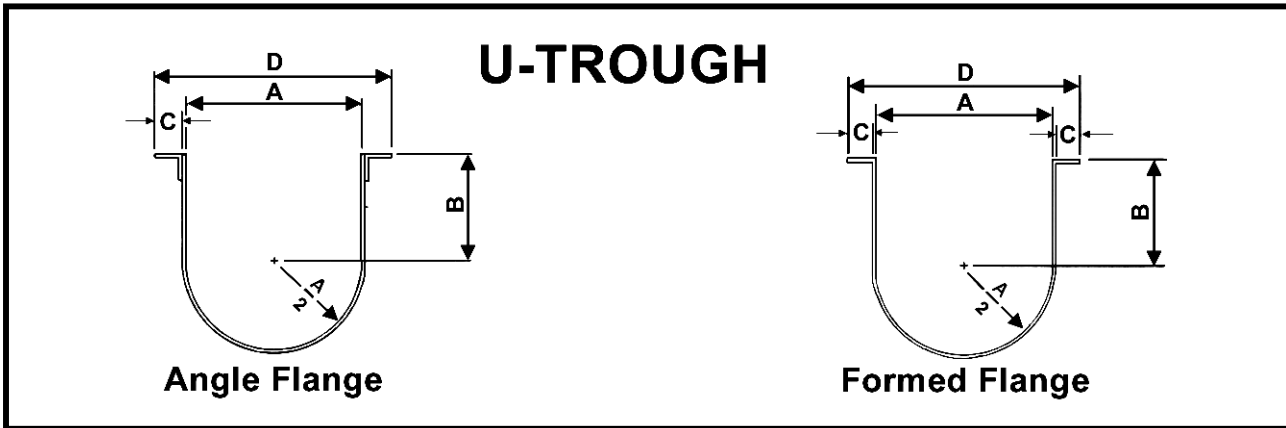
Formed Flange

Intended primarily for sticky or slightly viscous materials, the flared trough is most often employed with ribbon screws. Top flanges are formed from the same sheet as the trough. End flanges are jig-welded for perfect alignment with other sections.

All Orthman Conveying Systems' conveyor troughs are available in stainless steel. All troughs may also be furnished as hot dipped galvanized.

For specific alloy materials available, consult Orthman Conveying Systems.

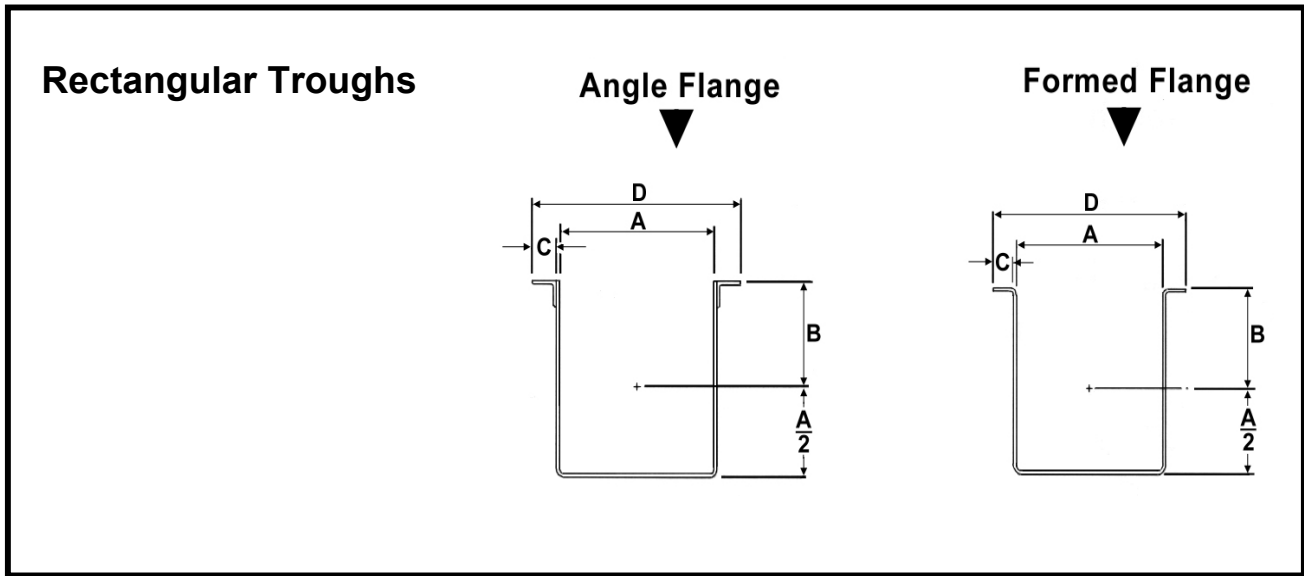
CONVEYOR TROUGHS



SCREW DIA.	TROUGH THICK.	ANGLE FLANGE		FORMED FLANGE		A	B	C	D
		PART #	*WT	PART #	*WT				
6	16	6TU16A	67	6TU16F	55	7	4 1/2	1 1/4	9 5/8
	14	6TU14A	78	6TU14F	67				9 11/16
	12	6TU12A	123	6TU12F	91				9 3/4
	10	6TU10A	127	6TU10F	110				9 1/4
	3/16	6TU7A	159	6TU7F	145				9 3/8
9	12	9TU12A	156	9TU12F	132	10	6 1/8	1 1/2	13 3/16
	10	9TU10A	176	9TU10F	164				13 1/4
	3/16	9TU7A	230	9TU7F	214				13 3/8
	1/4	9TU3A	281	9TU3F	270				13 1/2
12	12	12TU12A	256	12TU12F	215	13	7 3/4	2	17 3/16
	10	12TU10A	305	12TU10F	266				17 1/4
	3/16	12TU7A	371	12TU7F	342				17 3/8
	1/4	12TU3A	462	12TU3F	443				17 1/2
14	12	14TU12A	276	14TU12F	234	15	9 1/4	2	19 3/16
	10	14TU10A	330	14TU10F	292				19 1/4
	3/16	14TU7A	407	14TU7F	378				19 3/8
	1/4	14TU3A	515	14TU3F	496				19 1/2
16	12	16TU12A	320	16TU12F	277	17	10 5/8	2	21 3/16
	10	16TU10A	373	16TU10F	334				21 1/4
	3/16	16TU7A	458	16TU7F	428				21 3/8
	1/4	16TU3A	580	16TU3F	559				21 1/2
18	12	18TU12A	373	18TU12F	334	19	12 1/8	2 1/2	24 3/16
	10	18TU10A	443	18TU10F	408				24 1/4
	3/16	18TU7A	558	18TU7F	534				24 3/8
	1/4	18TU3A	684	18TU3F	672				24 1/2
20	10	20TU10A	503	20TU10F	463	21	13 1/2	2 1/2	26 1/4
	3/16	20TU7A	622	20TU7F	587				26 3/8
	1/4	20TU3A	763	20TU3F	751				26 1/2
24	10	24TU10A	529	24TU10F	461	25	16 1/2	2 1/2	30 1/4
	3/16	24TU7A	702	24TU7F	702				30 3/8
	1/4	24TU3A	899	24TU3F	899				30 1/2

*Standard Lengths: 6" and 9" diameter – 10'-0" 12" through 24" diameter – 12'-0"
 ALL SIZES MADE TO ORDER

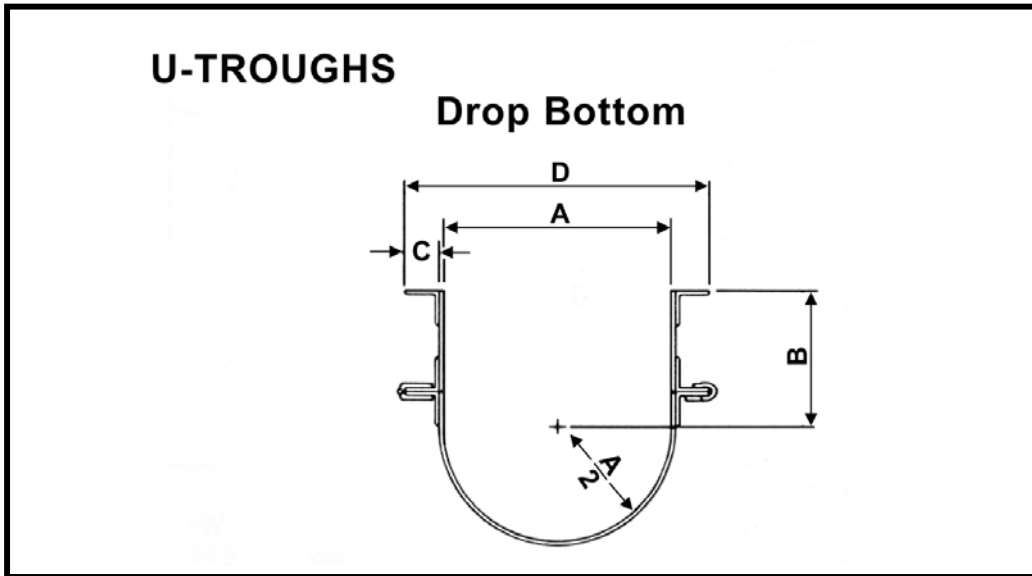
CONVEYOR TROUGHS



SCREW DIA.	TROUGH THICK. (Ga)	ANGLE FLANGE		FORMED FLANGE		A	B	C	D
		PART #	*WT	PART #	*WT				
6	16	6TR16A	89	6TR16F	51	7	4 1/2	1 1/4	9 ^{5/8}
	14	6TR14A	103	6TR14F	66				9 ^{11/16}
9	14	9TR14A	130	9TR14F	98	10	6 1/8	1 1/2	13 ^{11/16}
	12	9TR12A	161	9TR12F	134				13 ^{3/16}
12	12	12TR12A	262	12TR12F	204	13	7 3/4	2	17 ^{3/16}
	10	12TR10A	312	12TR10F	270				17 1/4
	3/16	12TR7A	387	12TR7F	343				17 ^{3/8}
14	12	14TR12A	288	14TR12F	230	15	9 1/4	2	19 ^{3/16}
	10	14TR10A	346	14TR10F	294				19 1/4
	3/16	14TR7A	434	14TR7F	406				19 ^{3/8}
16	12	16TR12A	314	16TR12F	257	17	10 5/8	2	21 ^{3/16}
	10	16TR10A	379	16TR10F	328				21 1/4
	3/16	16TR7A	493	16TR7F	450				21 ^{3/8}
18	12	18TR12A	373	18TR12F	298	19	12 1/8	2 1/2	24 ^{3/16}
	10	18TR10A	448	18TR10F	378				24 1/4
	3/16	18TR7A	578	18TR7F	518				24 ^{3/8}
20	12	20TR12A	415	20TR12F	340	21	13 1/2	2 1/2	26 ^{3/16}
	10	20TR10A	502	20TR10F	432				26 1/4
	3/16	20TR7A	653	20TR7F	594				26 ^{3/8}
24	12	24TR12A	521	24TR12F	449	25	16 1/2	2 1/2	30 ^{3/16}
	10	24TR10A	636	24TR10F	570				30 1/4
	3/16	24TR7A	838	24TR7F	784				30 ^{3/8}

*Standard lengths: 6" and 9" diameter – 10'-0"
 12" through 24" diameter – 12' 0"
 ALL SIZES MADE TO ORDER.

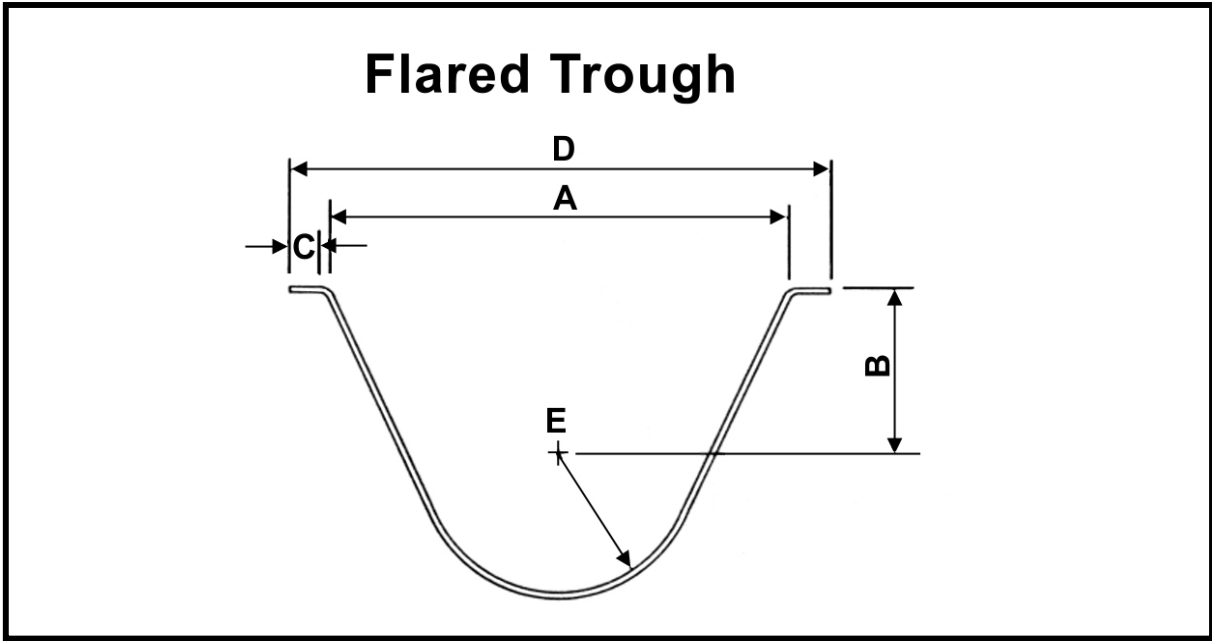
CONVEYOR TROUGHS



Screw Diameter	Trough Thickness	Drop Bottom		A	B	C	D
		Part #	*WT				
6	16	6TU16DB	106	7	4 1/2	1 1/4	9 5/8
	14	6TU14DB	117				9 11/16
	12	6TU12DB	140				9 3/4
9	12	9TU12DB	203	10	6 1/8	1 1/2	13 3/16
	10	9TU10DB	223				13 1/4
	3/16	9TU7DB	277				13 1/8
12	12	12TU12D	332	13	7 3/4	2	17 3/16
	10	12TU10D	382				17 1/4
	3/16	12TU7DB	448				17 3/8
	1/4	12TU3DB	539				17 1/2
14	12	14TU12D	353	15	9 1/4	2	19 3/16
	10	14TU10D	407				19 1/4
	3/16	14TU7DB	484				19 3/8
	1/4	14TU3DB	593				19 1/2
16	12	16TU12D	397	17	10 5/8	2	21 3/16
	10	16TU10D	450				21 1/4
	3/16	16TU7DB	535				21 3/8
	1/4	16TU3DB	656				21 1/2
18	12	18TU12D	472	19	12 1/8	2 1/2	24 3/16
	10	18TU10D	541				24 1/4
	3/16	18TU7DB	656				24 3/8
	1/4	18TU3DB	782				24 1/2
20	10	20TU10D	601	21	13 1/2	2 1/2	26 1/4
	3/16	20TU7DB	720				26 3/8
	1/4	20TU3DB	862				26 1/2
24	3/16	24TU7DB	800	25	16 1/2	2 1/2	30 3/8
	1/4	24TU3DB	997				30 1/2

*Standard Lengths: 6" and 9" diameter – 10'-0" *12" through 24" diameter – 12'-0"
ALL SIZES MADE TO ORDER

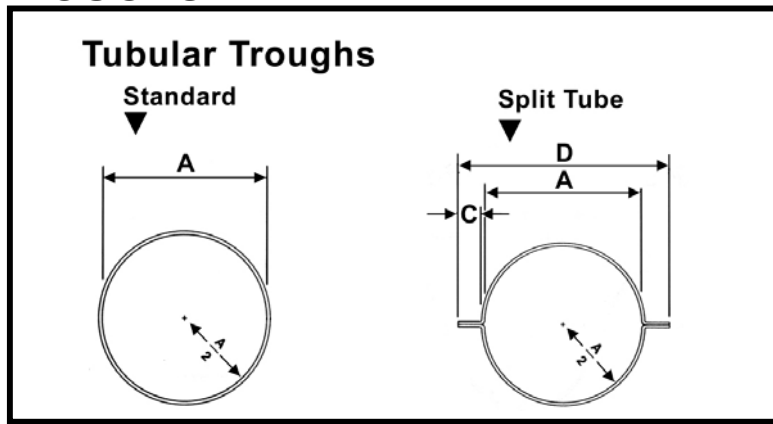
CONVEYOR TROUGHS



Screw Diameter	Trough Thick. (Ga)	Part #	*WT	A	B	C	D	E
6	14	6TV14	81	14	7	1 ¼	16 ⁹ / ₁₆	3 ½
	12	6TV12	111				16 ⁵ / ₈	
9	12	9TV12	148	18	9	1 ½	21 ¹ / ₈	5
	10	9TV10	188				21 ³ / ₁₆	
12	10	12TV10	215	22	10	2	26 ³ / ₁₆	6 ½
	³ / ₁₆	12TV7	273				26 ¼	
	¼	12TV3	360				26 ⁵ / ₁₆	
14	10	14TV10	238	24	11	2	28 ³ / ₁₆	7 ½
	³ / ₁₆	14TV7	302				28 ¼	
	¼	14TV3	398				28 ⁵ / ₁₆	
16	10	16TV10	310	28	11 ½	2	32 ³ / ₁₆	8 ½
	³ / ₁₆	16TV7	436				32 ¼	
	¼	16TV3	587				32 ⁵ / ₁₆	
18	10	18TV10	369	31	12 1/8	2 ½	36 ³ / ₁₆	9 ½
	³ / ₁₆	18TV7	486				36 ¼	
	¼	18TV3	653				36 ⁵ / ₁₆	
20	10	20TV10	405	34	13 ½	2 ½	39 ³ / ₁₆	10 ½
	³ / ₁₆	20TV7	533				39 ¼	
	¼	20TV3	717				39 ⁵ / ₁₆	
24	10	24TV10	481	40	16 ½	2 ½	45 ³ / ₁₆	12 ½
	³ / ₁₆	24TV7	633				45 ¼	
	¼	24TV3	851				45 ⁵ / ₁₆	

*Standard lengths: 6" and 9" diameter – 10'-0" 12" through 24" diameter – 12'-0"
ALL SIZES MADE TO ORDER.

CONVEYOR TROUGHS

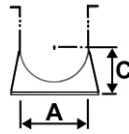
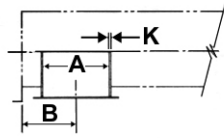


Screw Dia.	Trough Thick.	Std. Housing		Split Tube		A Inside	C	D
		Part #	*WT	Part #	*WT			
6	16	6TO16	50	6TO16ST	60	7	1 1/4	9 5/8
	14	6TO14	62	6TO14ST	75			9 11/16
	12	6TO12	85	6TO12ST	103			9 11/16
	10	6TO10	110	6TO10ST	133			9 3/4
	3/16	6TO7	—	6TO7ST	168			9 7/8
9	14	9TO14	89	9TO14ST	104	10	1 1/2	13 3/16
	12	9TO12	122	9TO12ST	143			13 3/16
	10	9TO10	155	9TO10ST	182			13 1/4
	3/16	9TO7	208	9TO7ST	245			13 3/8
	1/4	9TO3	—	9TO3ST	324			13 1/2
12	12	12TO12	196	12TO12ST	232	13	2	17 3/16
	10	12TO10	250	12TO10ST	296			17 1/4
	3/16	12TO7	330	12TO7ST	394			17 3/8
	1/4	12TO3	434	12TO3ST	518			17 1/2
14	12	14TO12	224	14TO12ST	260	15	2	19 3/16
	10	14TO10	283	14TO10ST	330			19 1/4
	3/16	14TO7	379	14TO7ST	443			19 3/8
	1/4	14TO3	499	14TO3ST	523			19 1/2
16	12	16TO12	254	16TO12ST	290	17	2	21 3/16
	10	16TO10	321	16TO10ST	368			21 1/4
	3/16	16TO7	430	16TO7ST	493			21 3/8
	1/4	16TO3	566	16TO3ST	650			21 1/2
18	12	18TO12	290	18TO12ST	336	19	2 1/2	24 3/16
	10	18TO10	365	18TO10ST	424			24 1/4
	3/16	18TO7	486	18TO7ST	566			24 3/8
	1/4	18TO3	640	18TO3ST	746			24 1/2
20	10	20TO10	402	20TO10ST	458	21	2 1/2	26 1/4
	3/16	20TO7	535	20TO7ST	612			26 3/8
	1/4	20TO3	703	20TO3ST	806			26 1/2
24	10	24TO10	479	24TO10ST	535	25	2 1/2	30 1/4
	3/16	24TO7	637	24TO7ST	714			30 3/8
	1/4	24TO3	839	24TO3ST	942			30 1/2

*Standard Lengths: 6" and 9" diameter – 10' 0" *12" through 24" diameter – 12' 0" *ALL SIZES MADE TO ORDER.

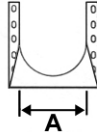
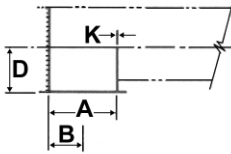
DISCHARGES

Discharge Spouts

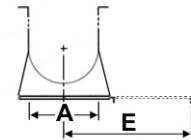
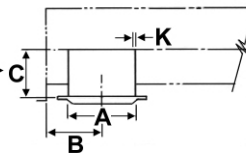


◀ Standard Discharge Spouts

Flush End Discharge ▼



Standard Spout With Hand Slide ▶

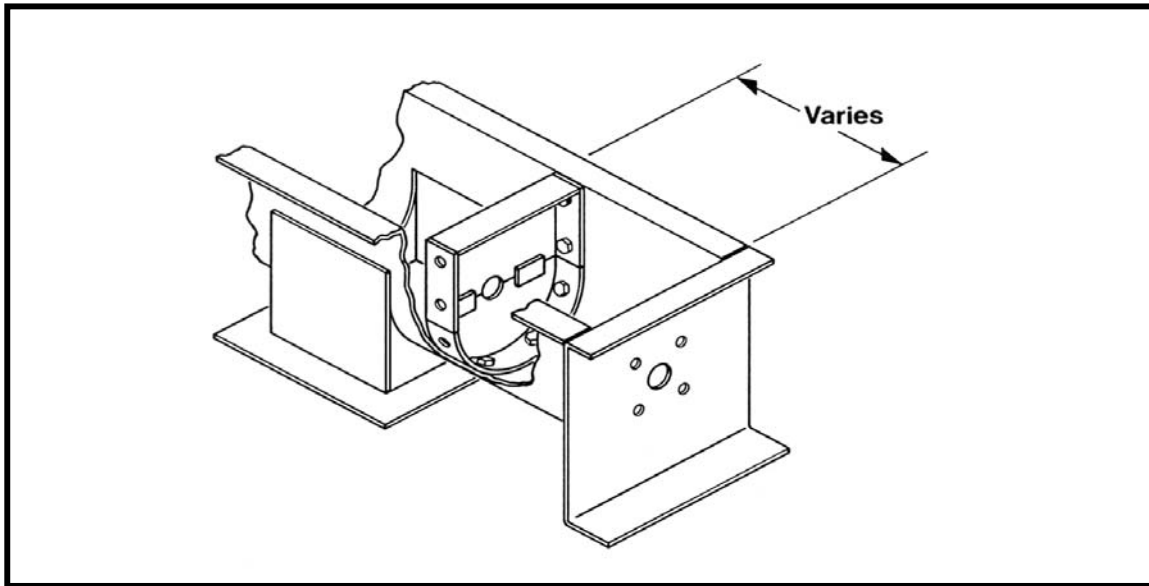


Screw Diameter	B Dimension		C	D	E	K (Ga)
	A	*Flush End Spout				
6	7	3 1/2	6	5	5 5/8	14 3/8
9	10	5	8	7 1/8	7 1/8	19 1/16
12	13	6 1/2	10 1/2	8 7/8	9	24 7/8
14	15	7 1/2	11 1/2	10 1/8	10	27 3/4
16	17	8 1/2	13 1/2	11 1/8	12	30 11/16
18	19	9 1/2	14 1/2	12 3/8	13 3/8	33 5/8
20	21	10 1/2	15 1/2	13 3/8	15	36 5/8
24	25	12 1/2	17 1/2	15 3/8	18 1/8	42 5/8

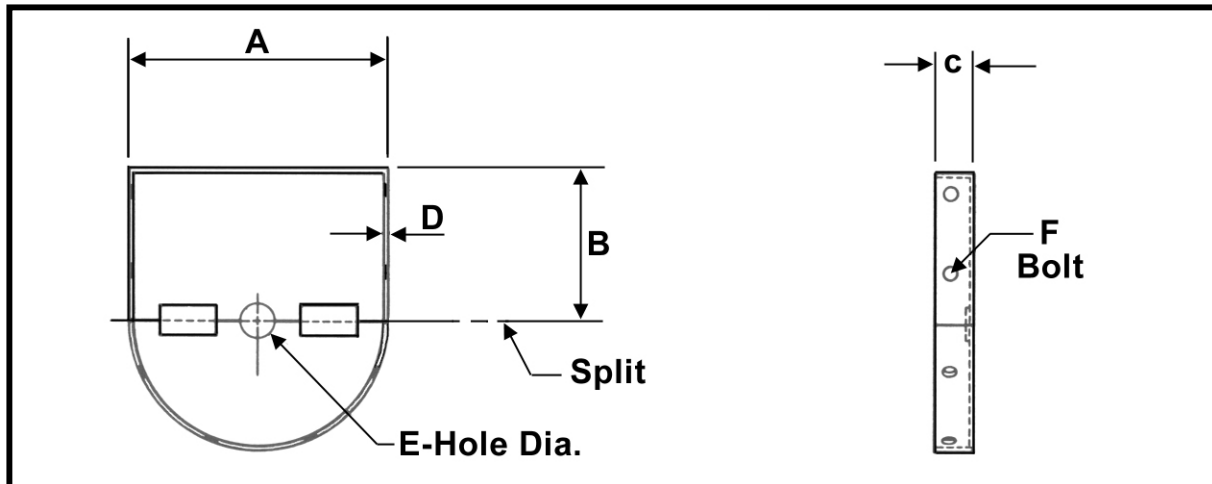
Screw Dia.	Trough Thickness	Discharge Thickness	Flush End Spout		Spout Less Slide		Spout With Slide	
			Part #	WT	Part #	WT	Part #	WT
6	16-14-12	14	6DC14F	3	6DC14	4	6DC14S	11
	10- 3/16	12	6DC12F	5	6DC12	6	6DC12S	13
9	16-14-12-10	14	9DC14F	6	9DC14	8	9DC14S	18
	3/16 - 1/4	10	9DC10F	10	9DC10	13	9DC10S	22
12	12-10	12	12DC12F	13	12DC12	17	12DC12S	36
	3/16 - 1/4	3/16	12DC7F	22	12DC7	29	12DC7S	48
14	12-10	12	14DC12F	17	14DC12	22	14DC12S	46
	3/16 - 1/4	3/16	14DC7F	29	14DC7	38	14DC7S	62
16	12-10	12	16DC12F	16	16DC12	21	16DC12S	49
	3/16 - 1/4	3/16	16DC7F	30	16DC7	40	16DC7S	68
18	12-10	12	18DC12F	23	18DC12	32	18DC12S	69
	3/16 - 1/4	3/16	18DC7F	45	18DC7	60	18DC7S	97
20	10	12	20DC12F	30	20DC12	40	20DC12S	91
	3/16 - 1/4	3/16	20DC7F	50	20DC7	67	20DC7S	118
24	10	12	24DC12F	39	24DC12	52	24DC12S	116
	3/16 - 1/4	3/16	24DC7F	65	24DC7	87	24DC7S	151

*Flush End Discharges should be same gauge as trough for uniform fit.

Bulkheads



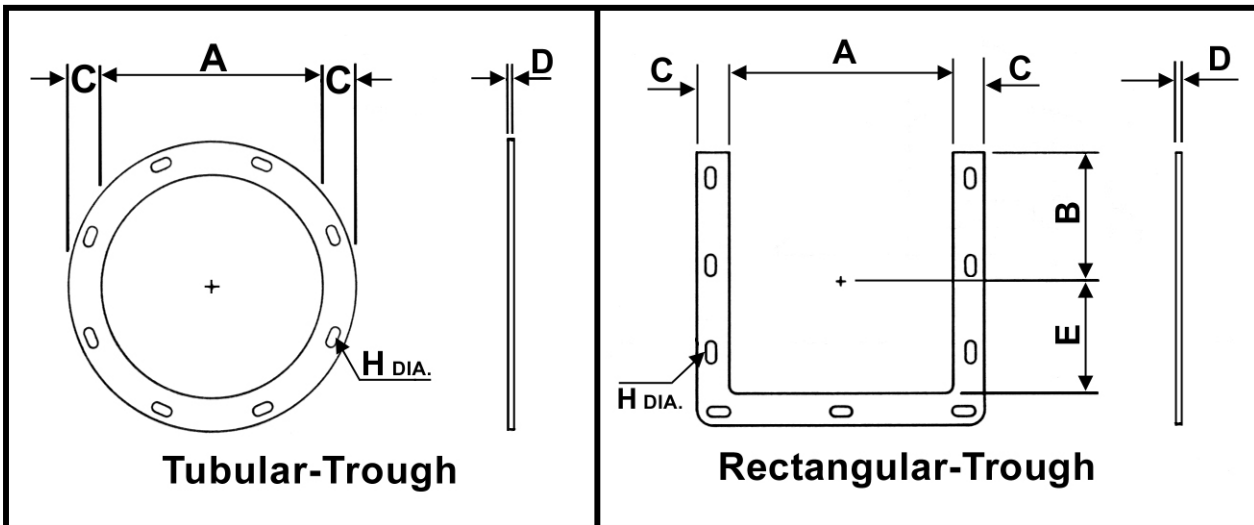
BULKHEADS MAY BE USED WHEN CONVEYING HIGH-TEMPERATURE MATERIALS. THE VOID AREA SHOULD BE PACKED WITH NON-COMBUSTIBLE MATERIAL TO DISSIPATE HEAT FROM THE BEARING OR DRIVE.



SCREW DIA (")	PART #	A	B	C	D (GA)	E	F BOLT
6	6SBH	6 ¹⁵ / ₁₆	4 1/2	2	10	*	3/8
9	9SBH	9 ¹⁵ / ₁₆	6 1/8	2	3/16	*	3/8
12	12SBH	12 ¹⁵ / ₁₆	7 3/4	2	3/16	*	1/2
14	14SBH	14 ¹⁵ / ₁₆	9 1/4	2	3/16	*	1/2
16	16SBH	16 ¹⁵ / ₁₆	10 5/8	2	3/16	*	5/8
18	18SBH	18 ¹⁵ / ₁₆	12 1/8	2	3/16	*	5/8
20	20SBH	20 ¹⁵ / ₁₆	13 1/8	2 1/2	1/4	*	5/8
24	24SBH	24 ¹⁵ / ₁₆	16 1/8	2 1/2	1/4	*	5/8

*VARIES WITH PIPE SIZE

END FLANGES



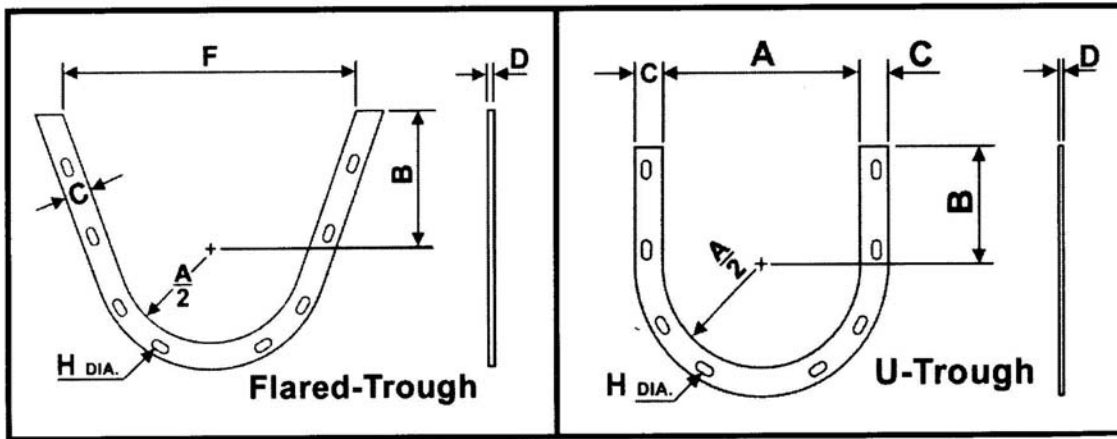
TUBULAR-TROUGH

Screw Diameter	Part #	A Trough Thickness		C	D	H BOLTS	WT.
		THRU 10 GA	$\frac{3}{16}$ - $\frac{1}{4}$				
6	6EF-O	7 $\frac{1}{4}$	7 $\frac{3}{8}$	1 $\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	1.8
9	9EF-O	10 $\frac{1}{4}$	10 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{8}$	3
12	12EF-O	13 $\frac{1}{4}$	13 $\frac{1}{2}$	2	$\frac{1}{4}$	$\frac{1}{2}$	6.9
14	14EF-O	15 $\frac{1}{4}$	15 $\frac{1}{2}$	2	$\frac{1}{4}$	$\frac{1}{2}$	7.8
16	16EF-O	17 $\frac{1}{4}$	17 $\frac{1}{2}$	2	$\frac{1}{4}$	$\frac{5}{8}$	8.7
18	18EF-O	19 $\frac{1}{4}$	19 $\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{8}$	12.3
20	20EF-O	21 $\frac{1}{4}$	21 $\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{8}$	13.4
24	24EF-O	25 $\frac{1}{4}$	25 $\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{8}$	15.6

RECTANGULAR-TROUGH

SCREW DIA.	PART #	B	C	D	A TROUGH THICK.		E TROUGH THICK.		H BOLT	WT
					THRU 10 GA	$\frac{3}{16}$ - $\frac{1}{4}$	THRU 10 GA	$\frac{3}{16}$ - $\frac{1}{4}$		
6	6EF-R	7 $\frac{1}{4}$	1 $\frac{1}{4}$	$\frac{1}{4}$	7 $\frac{1}{4}$	7 $\frac{3}{8}$	3 $\frac{5}{8}$	3 $\frac{11}{16}$	$\frac{3}{8}$	1.7
9	9EF-R	10 $\frac{1}{4}$	1 $\frac{1}{2}$	$\frac{1}{4}$	10 $\frac{1}{4}$	10 $\frac{1}{2}$	5 $\frac{1}{8}$	5 $\frac{1}{4}$	$\frac{3}{8}$	2.9
12	12EF-R	13 $\frac{1}{4}$	2	$\frac{1}{4}$	13 $\frac{1}{4}$	13 $\frac{1}{2}$	6 $\frac{5}{8}$	6 $\frac{3}{4}$	$\frac{1}{2}$	6.6
14	14EF-R	15 $\frac{1}{2}$	2	$\frac{1}{4}$	15 $\frac{1}{4}$	15 $\frac{1}{2}$	7 $\frac{5}{8}$	7 $\frac{3}{4}$	$\frac{1}{2}$	7.6
16	16EF-R	17 $\frac{1}{4}$	2	$\frac{1}{4}$	17 $\frac{1}{4}$	17 $\frac{1}{2}$	8 $\frac{5}{8}$	8 $\frac{3}{4}$	$\frac{5}{8}$	8.5
18	18EF-R	19 $\frac{1}{4}$	2 $\frac{1}{2}$	$\frac{1}{4}$	19 $\frac{1}{4}$	19 $\frac{1}{2}$	9 $\frac{5}{8}$	9 $\frac{3}{4}$	$\frac{5}{8}$	12.1
20	20EF-R	21 $\frac{1}{4}$	2 $\frac{1}{2}$	$\frac{1}{4}$	21 $\frac{1}{4}$	21 $\frac{1}{2}$	10 $\frac{5}{8}$	10 $\frac{3}{4}$	$\frac{5}{8}$	13.3
24	24EF-R	25 $\frac{1}{4}$	2 $\frac{1}{2}$	$\frac{1}{4}$	25 $\frac{1}{4}$	25 $\frac{1}{2}$	12 $\frac{5}{8}$	12 $\frac{5}{8}$	$\frac{5}{8}$	15.8

END FLANGES



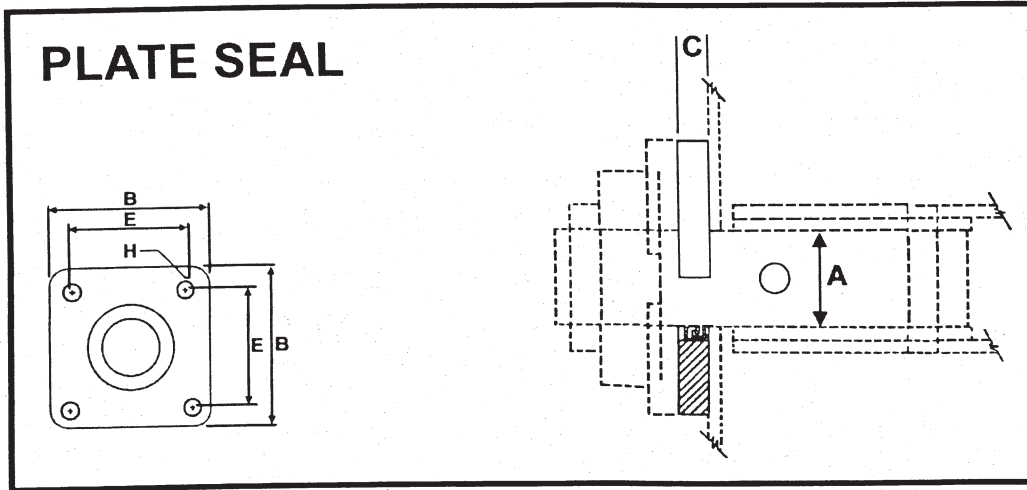
U-TROUGH

Screw Diameter	Part #	A Trough Thickness		B	C	D	H BOLTS	WT.
		THRU 10 GA	$3/16$ - $1/4$					
6	6EF-U	7 1/4	7 3/8	4 1/2	1 3/8	1/4	3/8	1.5
9	9EF-U	10 1/4	10 1/2	6 1/8	1 11/16	1/4	3/8	2.4
12	12EF-U	13 1/4	13 1/2	7 3/4	2	1/4	1/2	5.5
14	14EF-U	15 1/4	15 1/2	9 1/4	2	1/4	1/2	6.5
16	16EF-U	17 1/4	17 1/2	10 5/8	2	1/4	5/8	7.4
18	18EF-U	19 1/4	19 1/2	12 1/8	2 1/2	1/4	5/8	10.4
20	20EF-U	21 1/4	21 1/2	13 1/2	2 1/2	1/4	5/8	11.5
24	24EF-U	25 1/4	25 1/2	16 1/2	2 1/2	1/4	5/8	13.5

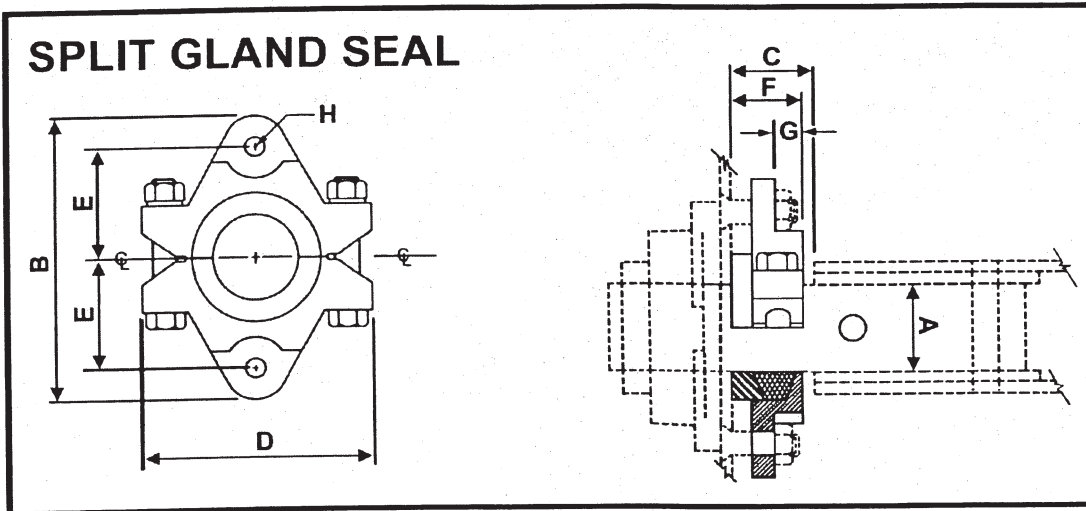
FLARED-TROUGH

SCREW DIA.	PART#	B	C	D	F TROUGH THICK.		A/2		H BOLT	WT
					THRU 10 GA	$3/16$ - $1/4$	THRU 10 GA	$3/16$ - $1/4$		
6	6EF-F	7	1 3/8	1/4	14 1/4	14 1/2	3 5/8	3 11/16	3/8	1.9
9	9EF-F	9	1 11/16	1/4	18 1/4	18 1/2	5 1/8	5 1/4	3/8	3
12	12EF-F	10	2	1/4	22 1/4	22 1/2	6 5/8	6 3/4	1/2	6.4
14	14EF-F	11	2	1/4	24 1/4	24 1/2	7 5/8	7 3/4	1/2	7.3
16	16EF-F	11 1/2	2	1/4	28 1/4	28 1/2	8 5/8	8 3/4	5/8	7.9
18	18EF-F	12 3/8	2 1/2	1/4	31 1/4	31 1/2	9 5/8	9 3/4	5/8	11
20	20EF-F	13 1/2	2 1/2	1/4	34 1/4	34 1/2	10 5/8	10 3/4	5/8	11
24	24EF-F	16 1/2	2 1/2	1/4	40 1/4	40 1/2	12 5/8	12 5/8	5/8	13

SEALS



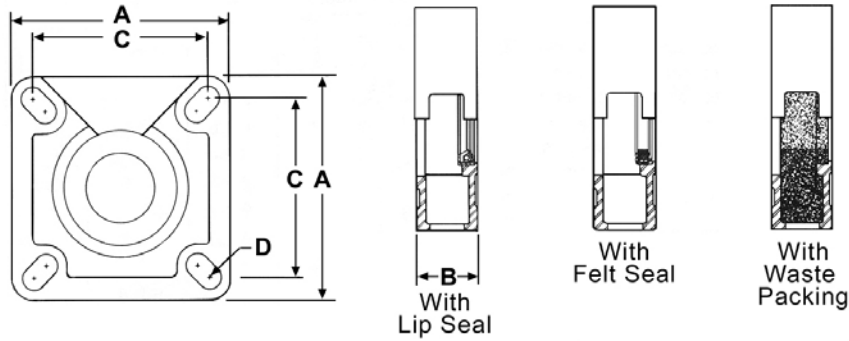
A SHAFT DIA. (")	PART #	B	C	E		H BOLTS		WT
				BALL	ROLLER	BALL	ROLLER	
1 1/2	SP3	5 3/8	1/2	4	4 1/8	1/2	1/2	2
2	SP4-B	6 1/2	1/2	5 1/8	—	5/8	—	3
	SP4-R	6 1/2	1/2	—	4 3/8	—	1/2	3
2 7/16	SP5	7	1/2	5 5/8	5 3/8	5/8	5/8	4
3	SP6	7 3/4	1/2	6	6	3/4	3/4	5
3 7/16	SP7	9 1/4	5/8	6 3/4	7	3/4	3/4	8



A SHAFT DIA. (")	PART #	B	C	D	E	F	G	H BOLTS	WT
1 1/2	SGS3	5 5/8	2	4 1/2	2 3/16	1 7/16	1/2	1/2	5
2	SGS4	6	2	5 3/8	2 5/8	1 1/2	5/8	1/2	10
2 7/16	SGS5	7 5/8	2	6 1/8	3 1/16	1 5/8	5/8	5/8	15
3	SGS6	8 5/8	2	6 3/4	3 9/16	1 5/8	5/8	5/8	22
3 7/16	SGS7	10	3	8 3/4	4 1/8	2 1/8	7/8	3/4	30

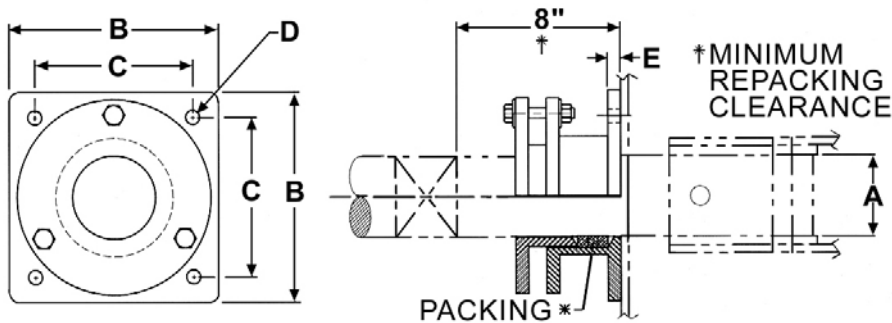
SEALS

WASTE PACK SEAL



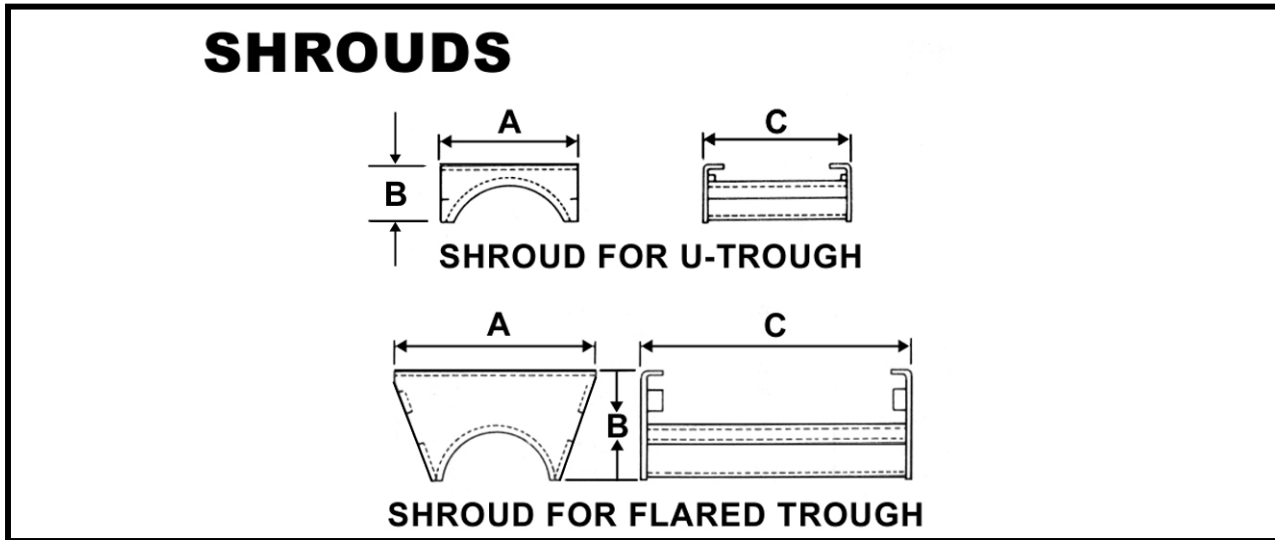
SHAFT DIA. ("")	PART #			A	B	C		D BOLTS	WT
	LIP	WASTE PACK	FELT			MIN.	MAX.		
1	SWP2-L	SWP2	SWP2-F	3 3/4	1 3/4	2 3/4	2 3/4	3/8	4
1 1/2	SWP3-L	SWP3	SWP3-F	5 3/8	1 3/4	4	4 1/8	1/2	6
2	SWP4-L	SWP4	SWP4-F	6 1/2	1 3/4	4 3/8	5 1/8	5/8	8
2 7/16	SWP5-L	SWP5	SWP5-F	7 3/8	1 3/4	5 3/8	5 5/8	5/8	9
3	SWP6-L	SWP6	SWP6-F	7 3/4	1 3/4	6	6	3/4	13
3 7/16	SWP7-L	SWP7	SWP7-F	9 1/4	2 1/4	6 3/4	7	3/4	17

PACKING GLAND SEAL



A SHAFT DIA. ("")	PART #		B	C	D BOLTS	E	WT
	GRAPHITE	AIR PURGED SEAL					
1	SPG2	SPG2-A	4	2 3/4	1/2	3/8	10
1 1/2	SPG3	SPG3-A	5 3/8	4	1/2	3/8	14
2	SPG4	SPG4-A	6 1/2	5 1/8	1/2	3/8	18
2 7/16	SPG5	SPG5-A	7 3/8	5 5/8	1/2	3/8	21
3	SPG6	SPG6-A	7 3/4	6	1/2	3/8	27
3 7/16	SPG7	SPG7-A	9 1/4	6 3/4	5/8	1/2	30
3 15/16	SPG8	SPG8-A	10 1/4	7 3/4	5/8	1/2	35
4 7/16	SPG9	SPG9-A	10 3/4	8 1/4	5/8	1/2	40
4 15/16	SPG10	SPG10-A	11 1/2	9	5/8	1/2	45
5 7/16	SPG11	SPG11-A	11 1/2	9	5/8	1/2	50

COMPONENT SELECTION

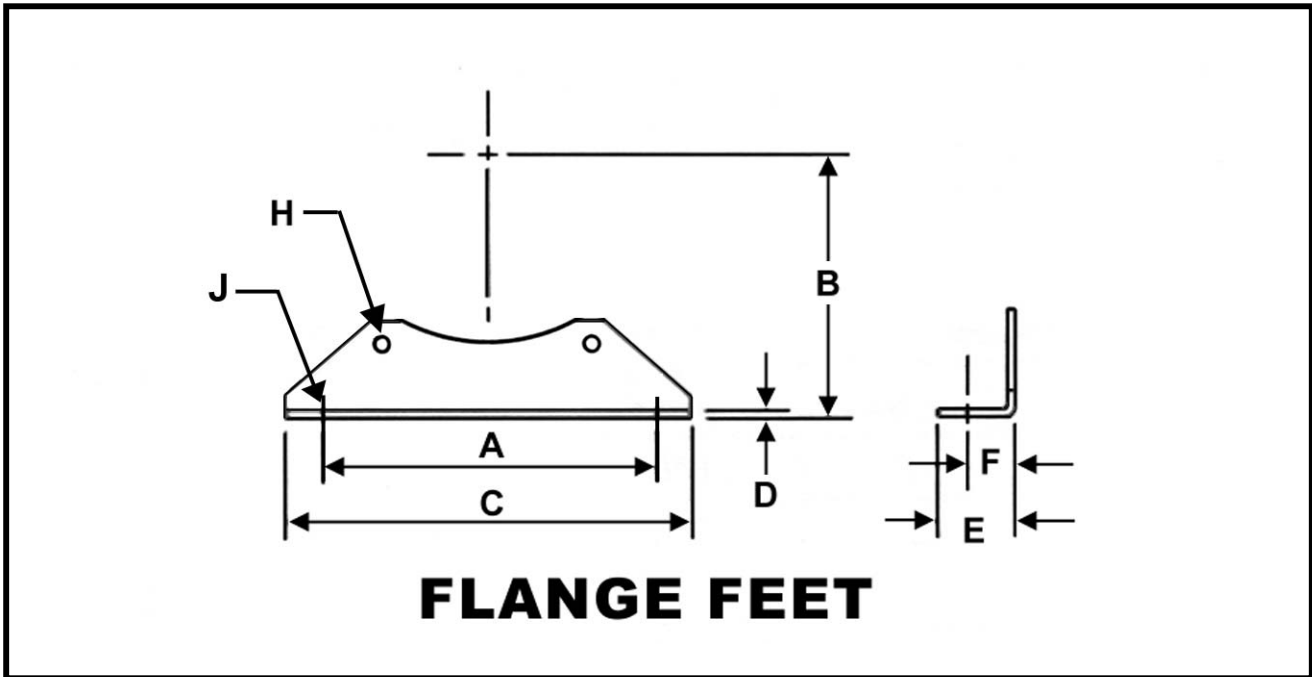


Shrouds are used in trough sections of screw feeders to decrease the clearance between the cover and feeder screw to obtain proper feed regulation. Lengths are sufficient to prevent flushing of the majority of materials being handled and gauges are proportioned to trough size and gauge.

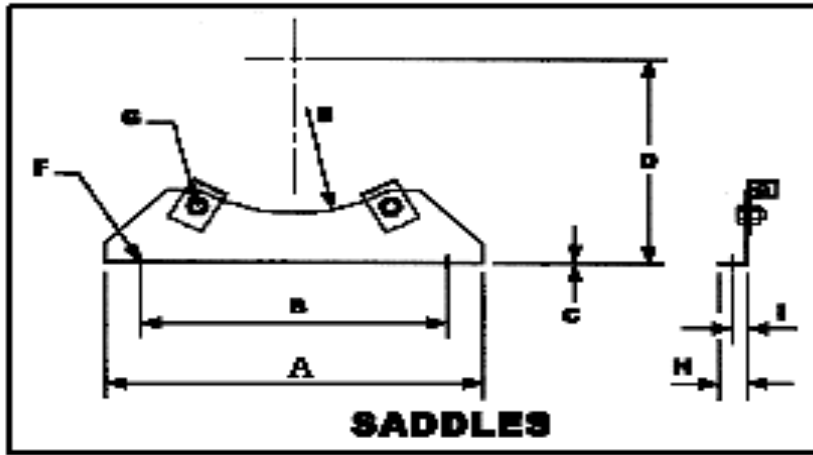
SHROUDS

Screw Dia (")	Shroud Thick. (GA)	Part Number		Wt. (lbs)		A		B		C
		U-Trough	Flared	U-Trough	Flared	U-Trough	Flared	U-Trough	Flared	
6	12	6SHD12U	6SHD12V	11	16	7	13 3/4	2 11/16	6 3/4	14
	7	6SHD7U	6SHD7V	7	13	7	13 1/4	2 11/16	6 3/4	14
9	12	9SHD12U	9SHD12V	17	28	10	17 3/4	3 13/16	8 9/16	18
	7	9SHD7U	9SHD7V	13	23	10	17 3/4	3 13/16	8 9/16	18
10	12	10SHD12U	10SHD12V	19	—	11	—	3 13/16	—	20
	7	10SHD7U	10SHD7V	14	—	11	—	3 13/16	—	20
12	12	12SHD12U	12SHD12V	28	41	13	21 3/4	4 3/4	9 1/2	24
	7	12SHD7U	12SHD7V	20	32	13	21 3/4	4 3/4	9 1/2	24
14	12	14SHD12U	14SHD12V	37	54	15	23 3/4	5 13/16	10 5/16	28
	7	14SHD7U	14SHD7V	30	42	15	23 3/4	5 13/16	10 5/16	28
16	12	16SHD12U	16SHD12V	47	68	17	27 3/4	6 13/16	11 1/8	32
	7	16SHD7U	16SHD7V	35	52	17	27 3/4	6 13/16	11 1/8	32
18	12	18SHD12U	18SHD12V	60	82	19	30 3/4	7 7/8	11 7/8	36
	7	18SHD7U	18SHD7V	45	63	19	30 3/4	7 7/8	11 7/8	36
20	7	20SHD7U	20SHD7V	71	100	21	33 3/4	8 11/16	13 1/8	40
24	7	24SHD7U	24SHD7V	100	142	25	39 3/4	10 7/8	15 15/16	48

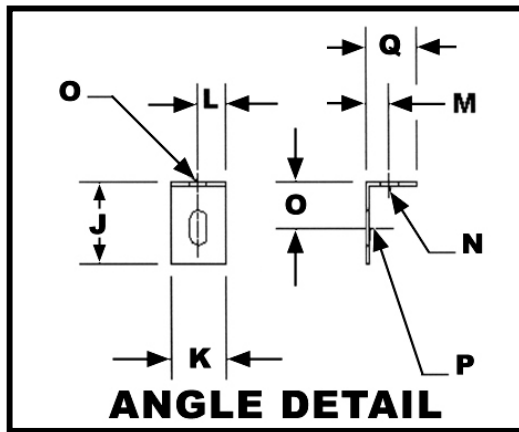
SADDLES & FEET



SCREW DIA. (")	PART #	A	B	C	D	E	F	H BOLTS	J BOLTS	WT
6	6SFF	8 1/8	5 5/8	10	3/16	1 3/4	1	3/8	3/8	2.0
9	9SFF	9 3/8	7 7/8	12	3/16	2 5/8	1 1/2	3/8	1/2	3.0
12	12SFF	12 1/4	9 5/8	15	3/16	2 3/4	1 5/8	1/2	5/8	6.0
14	14SFF	13 1/2	10 7/8	16 1/2	1/4	2 7/8	1 5/8	1/2	5/8	7.0
16	16SFF	14 7/8	12	18	1/4	3 1/4	2	5/8	5/8	7.5
18	18SFF	16	13 3/8	19 1/8	1/4	3 1/4	2	5/8	5/8	9.5
20	20SFF	19 1/4	15	22 3/4	5/16	3 1/4	2 1/4	5/8	3/4	12.5
24	24SFF	20	18 1/8	24	5/16	4 1/8	2 1/2	5/8	3/4	14.5

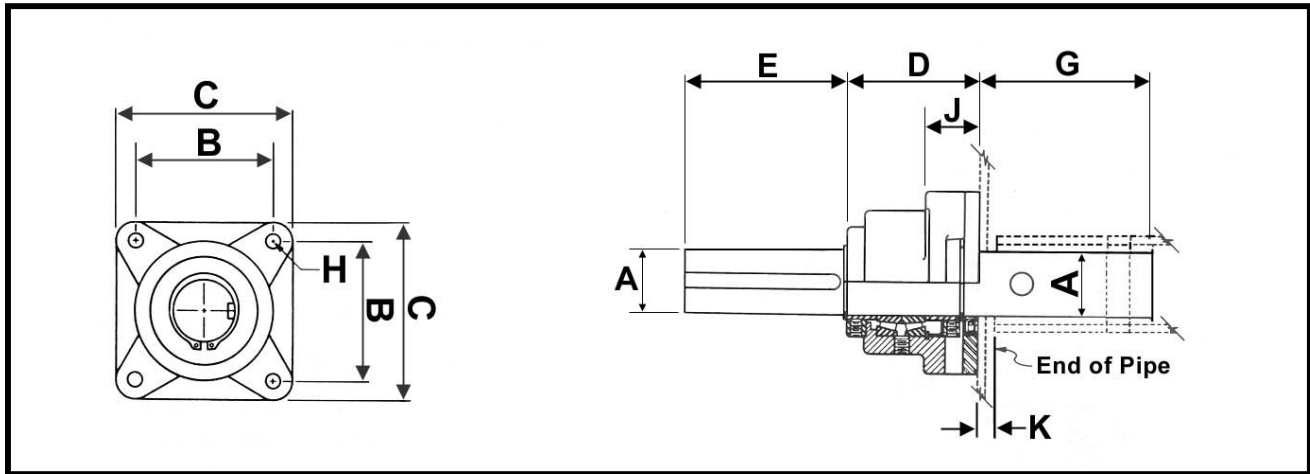


SCREW DIA. (")	PART #	A	B	C	D	E	F*	G*	H	I	J
6	6FF-S	10	8 1/8	3/16	5 5/8	3 13/16	3/8	3/8	1 3/4	1	1 1/2
9	9FF-S	12	9 3/8	3/16	7 7/8	5 5/16	1/2	3/8	2 5/8	1 1/2	2
12	12FF-S	15	12 1/4	3/16	9 5/8	6 7/8	5/8	1/2	2 3/4	1 5/8	2
14	14FF-S	16 1/2	13 1/2	1/4	10 7/8	7 7/8	5/8	1/2	2 7/8	1 5/8	2
16	16FF-S	18	14 7/8	1/4	12	8 7/8	5/8	5/8	3 1/4	2	2 1/2
18	18FF-S	19 1/8	16	1/4	13 3/8	9 7/8	5/8	5/8	3 1/4	2	2 1/2
20	20FF-S	22 3/4	19 1/4	5/16	15	10 7/8	3/4	5/8	3 3/4	2 1/4	2 1/2
24	24FF-S	24	20	5/16	18 1/8	12 7/8	3/4	5/8	4 1/8	2 1/2	2 1/2



SCREW DIA. (")	PART #	K	L	M	N	O	P	Q	DETAIL "A"
6	6FF-S	1 1/4	5/8	13/16	9/32	7/8	7/16 X 9/16	1 1/2	1 1/2 X 1 1/2 X 3/16
9	9FF-S	1 1/2	3/4	1	3/8	1 1/8	7/16 X 7/8	1 1/2	2 X 1 1/2 X 3/16
12	12FF-S	1 1/2	3/4	1	3/8	1 5/16	9/16 X 7/8	1 1/2	2 X 1 1/2 X 3/16
14	14FF-S	1 1/2	3/4	1	3/8	1 5/16	9/16 X 7/8	1 1/2	2 X 1 1/2 X 3/16
16	16FF-S	1 1/2	3/4	1 1/4	7/16	1 5/16	11/16 X 11/16	2	2 X 1 1/2 X 3/16
18	18FF-S	1 1/2	3/4	1 1/4	7/16	1 5/16	11/16 X 11/16	2	2 X 1 1/2 X 3/16
20	20FF-S	1 1/2	3/4	1 1/4	7/16	1 5/16	11/16 X 11/16	2	2 X 1 1/2 X 3/16
24	24FF-S	1 1/2	3/4	1 1/4	7/16	1 5/16	11/16 X 11/16	2	2 X 1 1/2 X 3/16

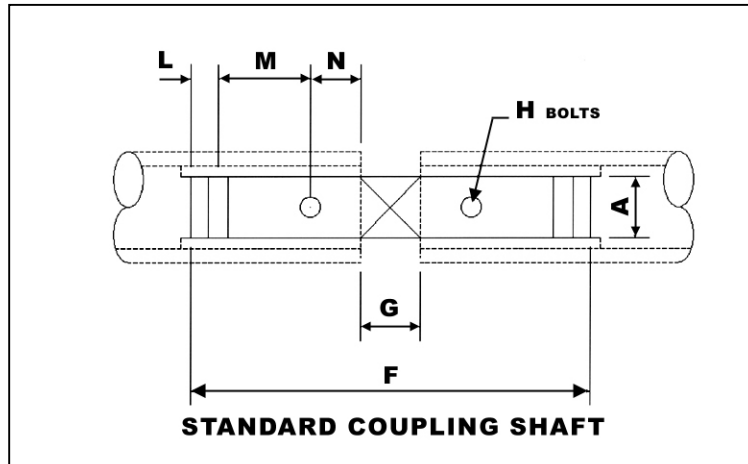
DRIVE SHAFTS



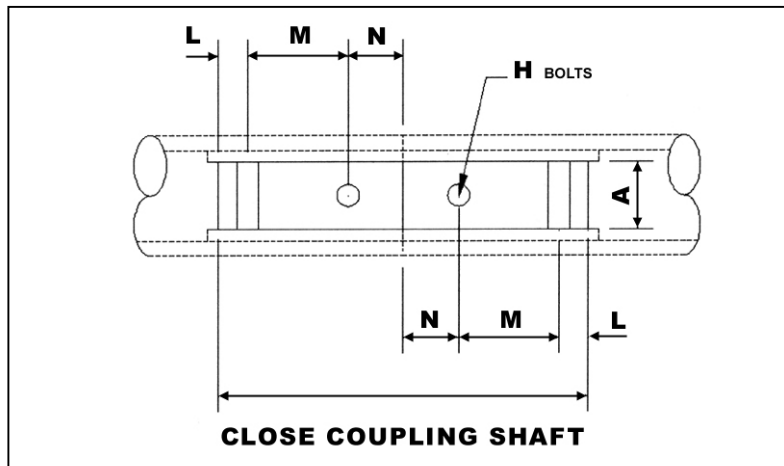
SHAFT DIAMETER	A Dimension		Part Number		B	C	D	E	F	G	H BOLTS	I	J
	With Seal	Without Seal	With Seal	Without Seal									
1 1/2	13 1/2	11 1/2	DS3-D	DS3-E	4 1/8	5 3/8	4	3 1/4	3	5 15/16	1/2	1 3/4	1 3/16
2	15	13 1/4	DS4-D	DS4-E	4 3/8	5 5/8	4 1/8	4 1/4	4	6	1/2	1 3/4	1 1/4
2 7/16	17	15 1/4	DS5-D	DS5-E	5 3/8	6 7/8	4 11/16	5 1/4	5	6 1/8	5/8	2	1 3/4
3	18 1/2	16 3/4	DS6-D	DS6-E	6	7 3/4	5 3/16	6 1/4	6	6 13/16	3/4	2 1/8	1 13/16
3 7/16	23	20 3/4	DS7-D	DS7-E	7	9 1/4	5 7/8	7 1/4	7	9 1/8	3/4	2 1/2	2 3/8

Shaft Diameter (inches)	WEIGHT	
	WITH SEAL	WITHOUT SEAL
1 1/2	19	16
2	28	24
2 7/16	46	40
3	69	58
3 7/16	109	93

COUPLING SHAFTS

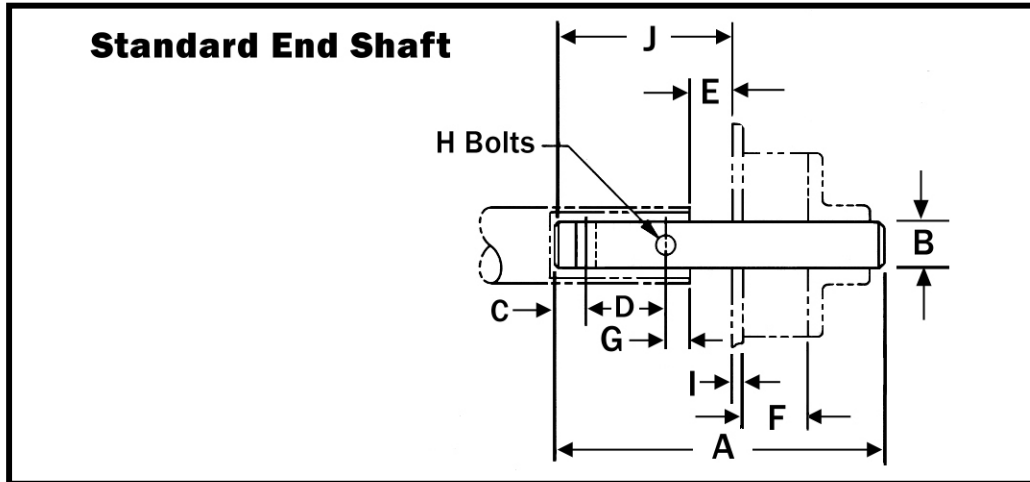


A SHAFT DIA.	PART #		F	G	H BOLTS	L	M	N	WT
	STD #	HRD #							
1 1/2	CS3	CS3H	11 1/2	2	1/2	7/8	3	7/8	5.8
2	CS4	CS4H	11 1/2	2	5/8	7/8	3	7/8	10.3
2 7/16	CS5	CS5H	12 3/4	3	5/8	15/16	3	15/16	15.6
3	CS6	CS6H	13	3	3/4	1	3	1	26
3 7/16	CS7	CS7H	17 1/2	4	7/8	1 1/2	4	1 1/2	47

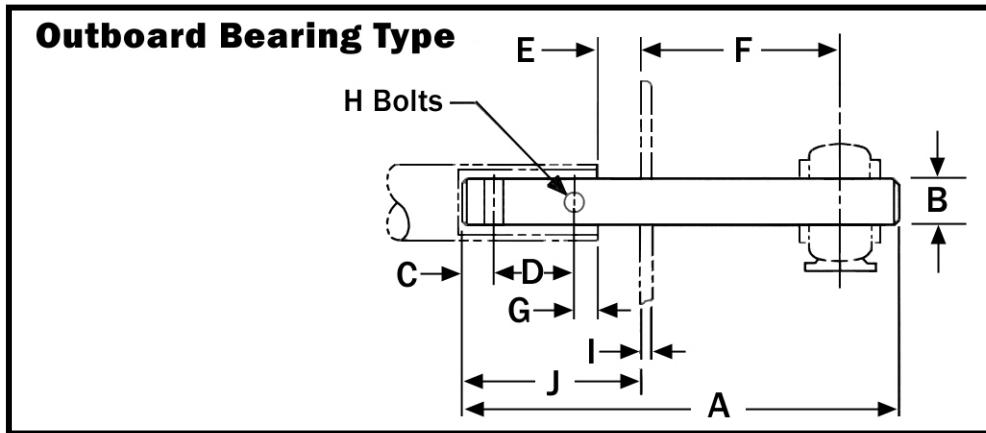


A SHAFT DIA	PART #	F	H BOLTS	L	M	N	WT
1 1/2	CCS3	9 1/2	1/2	7/8	3	7/8	4.8
2	CCS4	9 1/2	5/8	7/8	3	7/8	8.5
2 7/16	CCS5	9 3/4	5/8	15/16	3	15/16	12.9
3	CCS6	10	3/4	1	3	1	20
3 7/16	CCS7	13 1/2	7/8	1 1/4	4	1 1/2	37
3 15/16	CCS8	13 1/2	1	1 1/4	4	1 1/2	48

SHAFTS

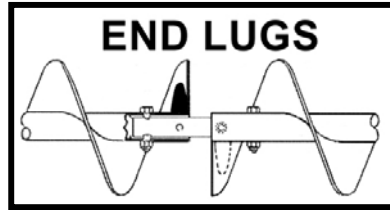


B Shaft Dia.	A Dimensions				C	D	E	F	H Bolts	G	I	J
	Ball Bearing		Ball Bearing									
	With Seal	Part #	Without Seal	Part #								
1 1/2	10	ES3-S	8 1/2	ES3	7/8	3	1	1 3/4	1/2	7/8	3/16	5 3/4
2	10 1/2	ES4-S	8 3/4	ES4	7/8	3	1	1 3/4	5/8	7/8	1/4	5 3/4
2 7/16	11 1/2	ES5-S	9 3/4	ES5	15/16	3	1 1/2	1 3/4	5/8	15/16	1/4	6 3/8
3	12 1/2	ES6-S	10 3/4	ES6	1	3	1 1/2	1 3/4	3/4	1	5/16	6 1/2
3 7/16	15 3/4	ES7-S	13 1/2	ES7	1 1/4	4	2	2 1/4	7/8	1 1/2	3/8	8 3/4

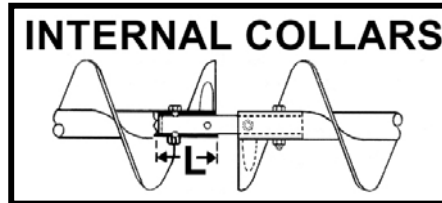


B Shaft Dia.	A Dimensions		C	D	E	H Bolts	F	G	I	J
	Ball Bearing									
	With Seal	Part #								
1 1/2	16 3/4	ES3-O	7/8	3	1	1/2	5	7/8	3/16	5 3/4
2	16 7/8	ES4-O	7/8	3	1	5/8	5 1/2	7/8	1/4	5 3/4
2 7/16	17 3/4	ES5-O	15/16	3	1 1/2	5/8	6 1/2	15/16	1/4	6 3/8
3	18 7/8	ES6-O	1	3	1 1/2	3/4	7	1	5/16	6 1/2
3 7/16	23	ES7-O	1 1/4	4	2	7/8	7 3/4	1 1/2	3/8	8 3/4

End Lugs, Internal Collars, Coupling Bolts

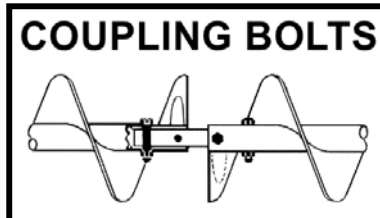


Screw Dia.	Part Numbers Intake End Lug		Part Numbers Discharge End Lug		Weight Each (LBS)
	Right Hand	Left Hand	Right Hand	Left Hand	
6	EL6RI	EL6LI	EL6RD	EL6LD	.06
9	EL9RI	EL9LI	EL9RD	EL9LD	.15
12	EL12RI	EL12LI	EL12RD	EL12LD	.43
14	EL14RI	EL14LI	EL14RD	EL14LD	.43
16	EL16RI	EL16LI	EL16RD	EL16LD	.68
18	EL18RI	EL18LI	EL18RD	EL18LD	.68
20	EL20RI	EL20LI	EL20RD	EL20LD	.68
24	EL24RI	EL24LI	EL24RD	EL24LD	.68



Coupling Dia.	Nominal Pipe Size*	Part Number	L	Weight Each (LBS)
1 1/2	2	IC3	4 3/4	2.2
2	2 1/2	IC4	4 3/4	2.4
2 7/16	3	IC5	5	4.1
3	3 1/2	IC6	5	4.3
3	4	IC6A	5	8.3
3 7/16	4	IC7	6 3/4	7.3

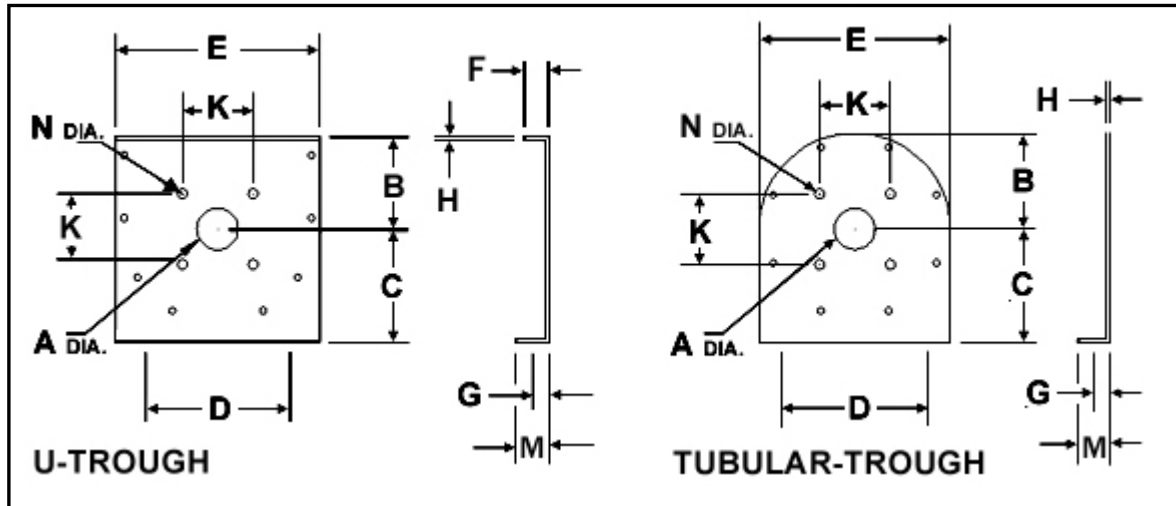
* Schedule 40 Pipe



Coupling Dia.	Outside Pipe Dia.	Nominal Pipe Size*	Bolt Size	Part No. Standard	Part No. High Torque	Weight Each (LBS)
1 1/2	2 3/8	2	1/2 X 3	CB3-x.xx	CB3HT	.25
2	2	2 1/2	5/8 X 3 5/8	CB4-x.xx	CB4HT	.50
2 7/16	3	3 1/2	5/8 X 4 1/4	CB5-x.xx	CB5HT	.56
3	3 1/2	4	3/4 X 5	CB6-x.xx	CB6HT	.75
3	4	4 1/2	3/4 X 5 1/2	CB6A-x.xx	CB6AHT	.88
3 7/16	4	4 1/2	7/8 X 5 1/2	CB7-x.xx	CB7HT	1.25

* Schedule 40 Pipe

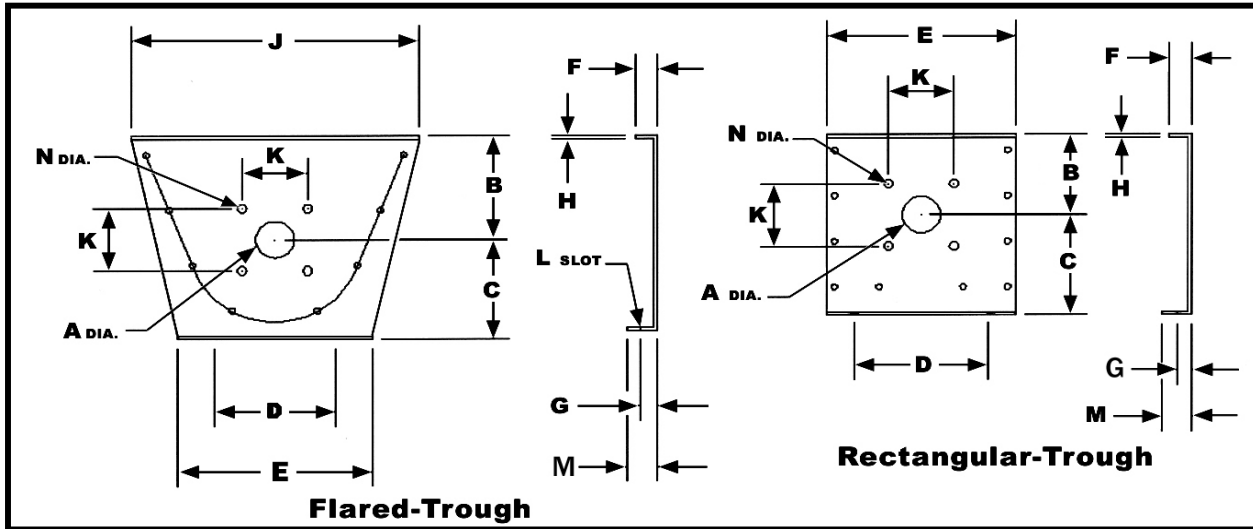
TROUGH ENDS – WITH FEET



SCREW DIA (")	PART NUMBER		A	B		C	D	E
	U-TROUGH	TUBULAR		U-TROUGH	TUBULAR			
6	6EP3-U	6EP3-O	1 3/4	4 1/2	4 7/8	5 5/8	8 1/8	9 3/4
9	9EP3-U	9EP3-O	1 3/4	6 1/8	6 3/4	7 7/8	9 3/8	13 1/2
	9EP4-U	9EP4-O	2 1/4					
12	12EP4-U	12EP4-O	2 1/4	7 3/4	8 5/8	9 5/8	12 1/4	17 1/4
	12EP5-U	12EP5-O	2 5/8					
	12EP6-U	12EP6-O	3 1/4					
14	14EP5-U	14EP5-O	2 5/8	9 1/4	9 5/8	10 7/8	13 1/2	19 1/4
	14EP6-U	14EP6-O	3 1/4					
16	16EP6-U	16EP6-O	3 1/4	10 5/8	10 5/8	12	14 7/8	21 1/4
18	18EP6-U	18EP6-O	3 1/4	12 1/8	12 1/8	13 3/8	16	24 1/4
	18EP7-U	18EP7-O	3 5/8					
20	20EP6-U	20EP6-O	3 1/4	13 1/2	13 1/8	15	19 1/4	26 1/4
	20EP7-U	20EP7-O	3 5/8					
24	24EP7-U	24EP7-O	3 5/8	16 1/2	15 1/8	18 1/8	20	30 1/4

SCREW DIA (")	F	G	H	K-BOLT PATTERN		M	N HOLE DIA (")	WEIGHT	
	U-TROUGH			BALL BEARING	ROLLER BEARING			U	TUB.
6	1 1/2	1	3/16	4	4 1/8	1 3/4	9/16	12	11
9	1 1/2	1 5/8	1/4	4	4 1/8	2 5/8	9/16	18	15
	2			5 1/8	4 3/8			21	18
12	2	2	1/4	5 1/8	4 3/8	2 3/4	9/16	36	29
	2 7/16			5 7/8	5 3/8			38	31
	3			6	6			50	43
14	2 7/16	2	5/16	5 7/8	5 3/8	2 7/8	9/16	45	39
	3			6	6			57	51
16	3	2 1/2	5/16	6	6	3 1/4	11/16	75	65
18	3	2 1/2	3/8	6	6	3 1/4	11/16	89	78
	3 7/16			6 3/4	7			99	89
20	3	2 1/2	3/8	6	6	3 3/4	11/16	126	115
	3 7/16			6 3/4	7			132	127
24	3 7/16	2 1/2	3/8	6 3/4	7	4 1/8	11/16	169	157

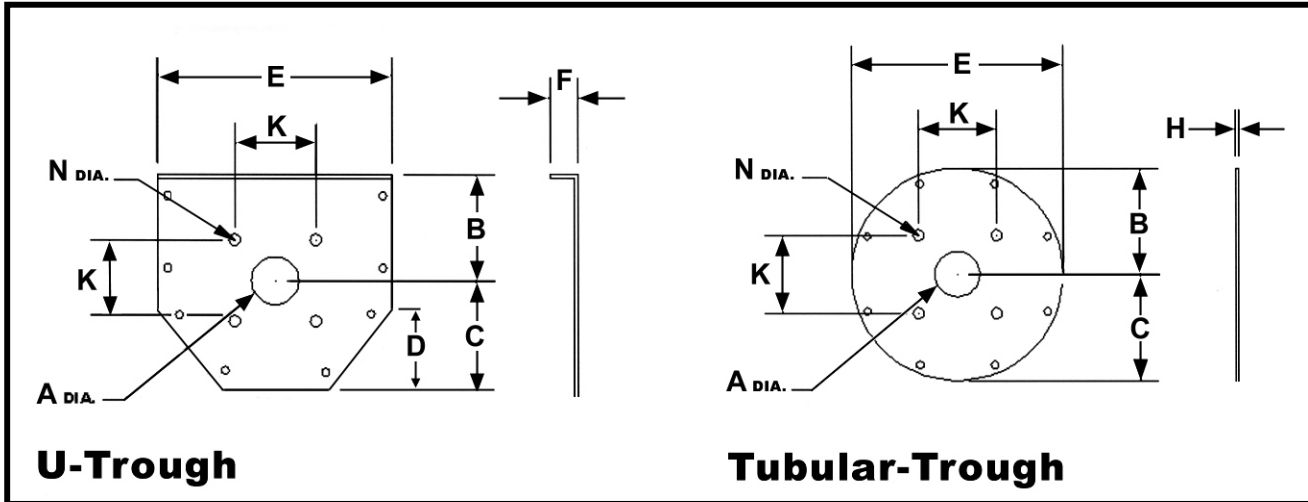
TROUGH ENDS – WITH FEET



SCREW DIA (")	PART NUMBER		A	B		C	D		E		F	
	FLARED	RECT.		FLARE	RECT		FLARE	RECT	FLARE	RECT	FLARE	RECT
6	6EP3-F	6EP3-R	1 3/4	7	4 1/2	5 5/8	8 1/8	8 1/8	9 3/4	9 3/4	1 1/2	1 1/2
9	9EP3-F	9EP3-R	1 3/4	9	6 1/8	7 7/8	9 3/8	9 3/8	13 1/2	13 1/2	1 5/8	1 5/8
	9EP4-F	9EP4-R	2 1/4									
12	12EP4-F	12EP4-R	2 5/8	10	7 3/4	9 5/8	12 1/4	12 1/4	17 1/4	17 1/4	2	2
	12EP5-F	12EP5-R	2 5/8									
	12EP6-F	12EP6-R	3 1/4									
14	14EP5-F	14EP5-R	3 1/4	11	9 1/4	10 7/8	13 1/2	13 1/2	19 1/4	19 1/4	2	2
	14EP6-F	14EP6-R	3 1/4									
16	16EP6-F	16EP6-R	3 1/4	11 1/2	10 5/8	12	14 7/8	14 7/8	21 1/4	21 1/4	2 1/2	2 1/2
18	18EP6-F	18EP6-R	3 1/4	12 1/8	12 1/8	13 3/8	16	16	24 1/4	24 1/4	2 1/2	2 1/2
	18EP7-F	18EP7-R	3 5/8									
20	20EP6-F	20EP6-R	3 1/4	13 1/2	13 1/2	15	19 1/4	19 1/4	26 1/4	26 1/4	2 1/2	2 1/2
	20EP7-F	20EP7-R	3 5/8									
24	24EP7-F	24EP7-R	3 5/8	16 1/2	16 1/2	18 1/8	20	20	30 1/4	30 1/4	2 1/2	2 1/2

SCREW DIA (")	PART NUMBER		G	H	J	K-BOLT PTRN		L-SLOT	M	N	SHAFT DIA (")	WEIGHT	
	FLARED	RECT				RLLR	BALL					FLARE	RECT
6	6EP3-F	6EP3-R	1	3/16	16 5/8	4	4 1/8	7/16 X 1	1 3/4	7/16	1 1/2	15	13
9	9EP3-F	9EP3-R	1 1/2	1/4	21 1/4	5 1/8	4 1/8	9/16 X 1	2 5/8	7/16	1 1/2	22	19
	9EP4-F	9EP4-R				6	4 3/8					27	24
12	12EP4-F	12EP4-R	1 5/8	1/4	26 3/8	5 1/8	4 3/8	1/16 X 1 1/8	2 3/4	9/16	2 7/16	43	39
	12EP4-F	12EP5-R				5 5/8	5 3/8					33	40
	12EP5-F	12EP6-R				6	6					56	58
14	14EP5-F	14EP5-R	1 5/8	5/16	28 3/8	5 5/8	5 3/8	1/16 X 1 1/8	2 7/8	9/16	2 7/16	52	48
	14EP6-F	14EP6-R				6	6					64	66
16	16EP6-F	16EP6-R	2	5/16	32 1/2	6	6	1/16 X 1 1/8	3 3/4	11/16	3	85	85
18	18EP6-F	18EP6-R	2	3/8	36 1/2	6	6	1/16 X 1 1/8	3 3/4	11/16	3	98	94
	18EP7-F	18EP7-R				6 3/4	7					104	101
20	20EP6-F	20EP6-R	2 1/4	3/8	39 1/2	6	6	13/16 X 1 1/8	3 3/4	11/16	3	133	134
	20EP7-F	20EP7-R				6 3/4	7					139	140
24	24EP7-F	24EP7-R	2 1/2	3/8	45 1/2	6 3/4	7	13/16 X 1 1/8	4 1/8	11/16	3 7/16	173	179

TROUGH ENDS WITHOUT FEET



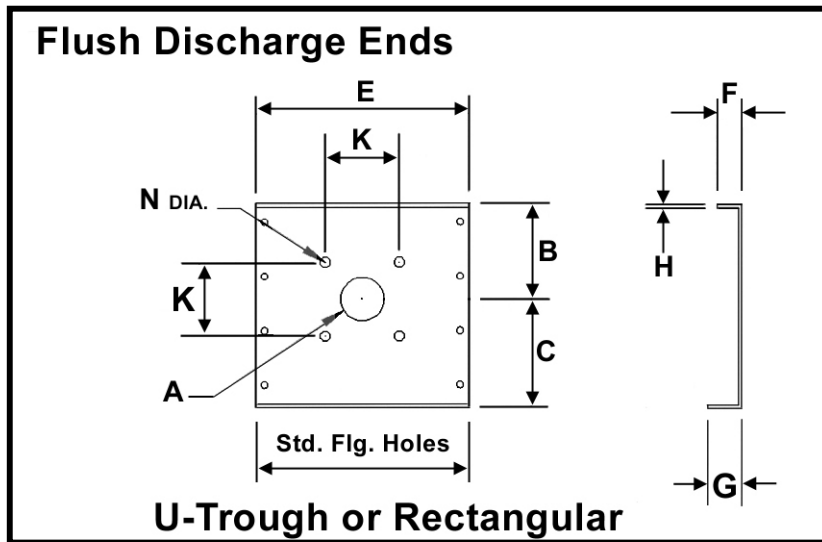
U-Trough

Tubular-Trough

SCREW DIA. (")	PART NUMBER		A	B		C	D	E
	U-TROUGH	TUBULAR		U-TROUGH	TUBULAR			
6	6EP3-U	6EP3-O	1 3/4	4 1/2	4 7/8	4 7/8	2 27/32	9 3/4
9	9EP3-U	9EP3-O	1 3/4	12 1/8	6 3/4	6 3/4	3 15/16	13 1/2
	9EP4-U	9EP4-O	2 1/4					
12	12EP4-U	12EP4-O	2 1/4	7 3/4	8 5/8	8 5/8	5 1/16	17 1/4
	12EP5-U	12EP5-O	2 5/8					
	12EP6-U	12EP6-O	3 1/4					
14	14EP5-U	14EP5-O	2 5/8	9 1/4	9 5/8	9 5/8	5 1/8	19 1/4
	14EP6-U	14EP6-O	3 1/4					
16	16EP6-U	16EP6-O	3 1/4	10 5/8	10 5/8	10 5/8	6 7/32	21 1/4
18	18EP6-U	18EP6-O	3 1/4	12 1/8	12 5/8	12 1/8	7 3/32	24 1/4
	18EP7-U	18EP7-O	3 5/8					
20	20EP6-U	20EP6-O	3 1/4	13 1/2	13 5/8	13 1/8	7 11/16	26 1/4
	20EP7-U	20EP7-O	3 5/8					
24	24EP7-U	24EP7-O	3 5/8	15 1/8	15 5/8	15 1/8	8 27/32	30 1/4

SCREW DIA. (")	F	H	K-BOLT PATTERN		N-HOLE DIA.	WEIGHT	
	U-TROUGH		BALL BEARING	ROLLER BEARING		U-TROUGH	TUBULAR
6	1 1/2	3/16	4	4 1/8	9/16	10	9
9	1 5/8	1/4	5 1/8	4 1/8	9/16	15	12
		1/4	6	4 3/8	9/16	18	15
12	2	1/4	5 1/8	4 3/8	11/16	29	22
		1/4	5 5/8	5 3/8	11/16	31	24
		1/4	6	6	11/16	43	36
14	2	5/16	5 5/8	5 3/8	11/16	36	30
		5/16	6	6	11/16	48	42
16	2 1/2	5/16	6	6	13/16	62	52
18	2 1/2	3/8	6	6	13/16	74	63
		3/8	6 3/4	7	13/16	84	74
20	2 1/2	3/8	6	6	13/16	96	85
		3/8	6 3/4	7	13/16	102	97
24	2 1/2	3/8	6 3/4	7	13/16	128	116

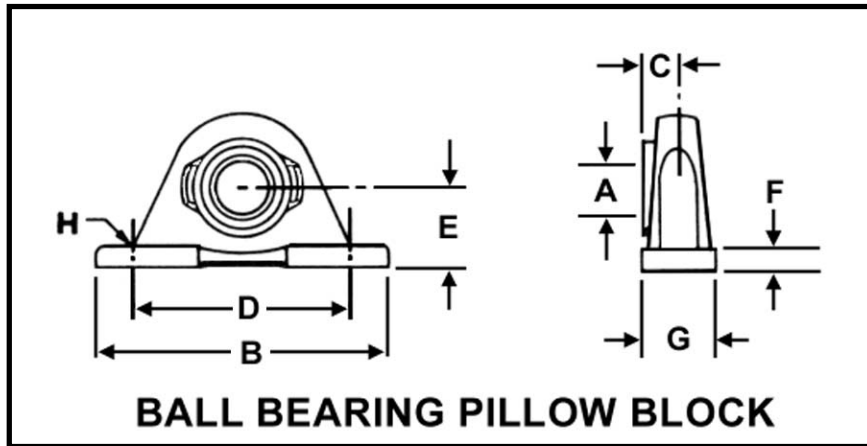
Trough Ends



SCREW DIA (")	SHAFT DIA.	PART NUMBER		A DIA.	B	C	E	F	G
		U-TROUGH	RECT						
6	1 1/2	6EPF3-U	6EPF3-R	1 3/4	4 1/2	5 5/8	10	1 1/2	1 1/2
9	1 1/2	9EPF3-U	9EPF3-R	1 3/4	6 1/8	7 7/8	13	1 5/8	1 1/2
	2	9EPF4-U	9EPF4-R	2 1/4					
12	2	12EPF4-U	12EPU4-R	2 1/4	7 3/4	9 5/8	17 1/4	2	2
	2 7/16	12EPF5-U	12EPF5-R	2 5/8					
	3	12EPF6-U	12EPF6-R	3 1/4					
14	2 7/16	14EPF5-U	14EPF5-R	2 5/8	9 1/4	10 7/8	19 1/4	2	2
	3	14EPF6-U	14EPF6-R	3 1/4					
16	3	16EPF6-U	16EPF6-R	3 1/4	10 5/8	12	21 1/4	2 1/2	2
18	3	18EPF6-U	18EPF6-R	3 1/4	12 1/8	13 3/8	24 1/4	2 1/2	2 1/2
	3 7/16	18EPF7-U	18EPF7-R	3 5/8					
20	3	20EPF6-U	20EPF6-R	3 1/4	13 1/2	15	26 1/4	2 1/2	2 1/2
	3 7/16	20EPF7-U	20EPF7-R	3 5/8					
24	3 7/16	24EPF7-U	24EPF7-R	3 5/8	16 1/2	18 1/8	30 1/4	2 1/2	2 1/2

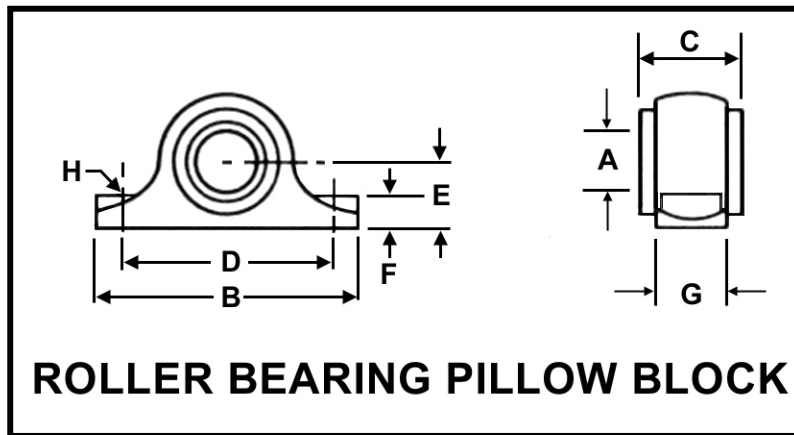
SCREW DIA (")	SHAFT DIA.	H	K		N DIA.	WEIGHT	
			BALL REARING	ROLLER REARING		U-TROUGH	RECT.
6	1 1/2	3/16	4	4 1/8	9/16	12	13
9	1 1/2	1/4	4	4 1/8	9/16	18	19
	2	1/4	5 1/8	4 3/8	9/16	21	24
12	2	1/4	5 1/8	4 3/8	11/16	36	39
	2 7/16	1/4	5 5/8	5 3/8	11/16	38	40
	3	1/4	6	6	11/16	50	58
14	2 7/16	5/16	5 5/8	5 3/8	11/16	45	48
	3	5/16	6	6	11/16	57	66
16	3	5/16	6	6	13/16	75	85
18	3	3/8	6	6	13/16	89	94
	3 7/16	3/8	6 3/4	7	13/16	99	101
20	3	3/8	6	6	13/16	126	134
	3 7/16	3/8	6 3/4	7	13/16	132	140
24	3 7/16	3/8	6 3/4	7	13/16	169	179

TROUGH END BEARINGS



BALL BEARING PILLOW BLOCK

A BORE	PART #	B	C	D	E	F	G	H BOLTS	WEIGHT
1 1/2	BBPB-3	7 3/4	1 5/16	5 7/8	2 1/8	1 5/16	2 1/8	1/2	5.6
2	BBPB-4	8 7/8	1 1/2	6 7/8	2 1/2	1 9/16	2 3/8	5/8	8
2 7/16	BBPB-5	10 3/4	1 3/16	8	3	1 7/8	2 7/8	3/4	13.5
3	BBPB-6	12	1 7/8	9	3 1/2	2 3/16	3 1/4	7/8	18.4
3 7/16	BBPB-7	14	2 1/16	11	4	2 1/2	3 7/16	7/8	28.4

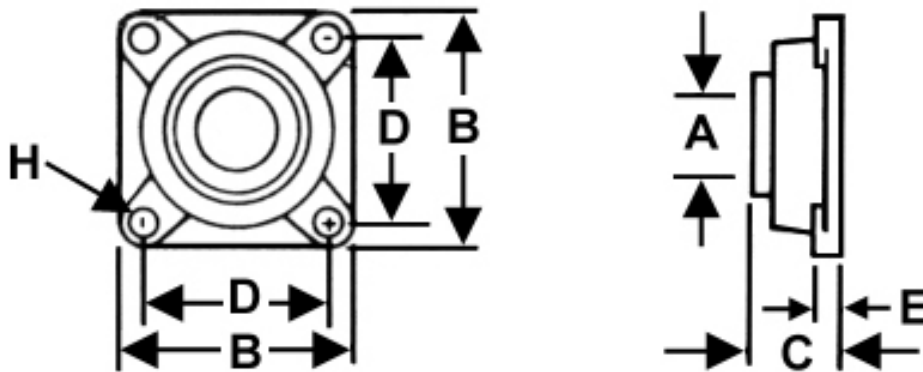


ROLLER BEARING PILLOW BLOCK

A BORE	PART #	B	C	D	E	F	G	H BOLTS	WEIGHT
1 1/2	RBPB-3	7 7/8	3 3/8	6 1/4	2 1/8	1 1/4	2 3/8	1/2	9.5
2	RBPB-4	8 7/8	3 1/2	7	2 1/4	1 3/8	2 1/2	5/8	11
2 7/16	RBPB-5	10 1/2	4	8 1/2	2 3/4	1 5/8	2 7/8	5/8	19
3	RBPB-6	12	4 1/2	9 1/2	3 1/8	1 7/8	3 1/8	3/4	26
3 7/16	RBPB-7	14	5	11	3 5/8	2 1/4	3 5/8	7/8	44

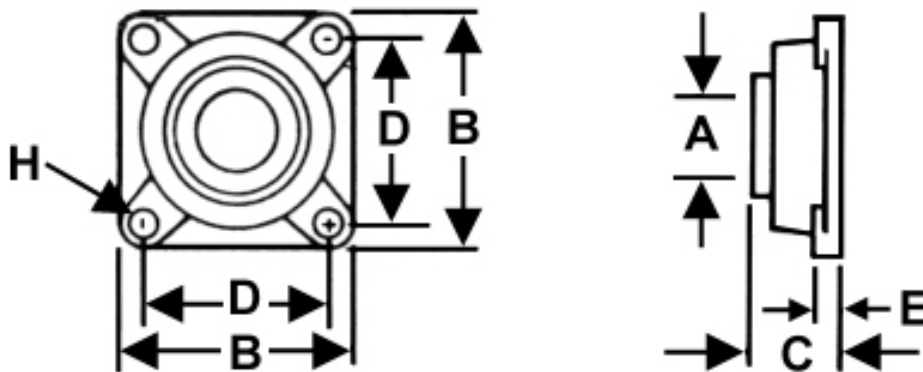
BRONZE AVAILABLE UPON REQUEST

BALL BEARING, FLANGED



A BORE	PART #	B	C	D	E	H BOLTS	WEIGHT
1 1/2	BBF-3	5 1/8	2	4	9/16	1/2	4.8
2	BBF-4	6 1/2	2 3/8	5 1/8	11/16	5/8	9.6
2 7/16	BBF-5	7	2 1/2	5 5/8	11/16	5/8	11
3	BBF-6	7 3/4	3 3/8	6	7/8	3/4	23
3 7/16	BBF-7	8 1/2	3 7/8	6 3/4	1	3/4	29

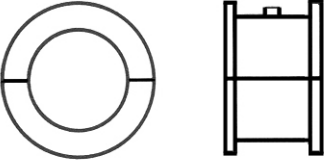
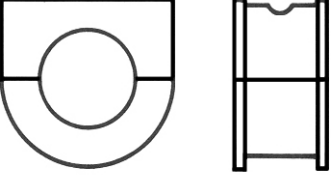

ROLLER BEARING, FLANGED



A BORE	PART #	B	C	D	E	H BOLTS	WEIGHT
1 1/2	RBF-3	5 3/8	3 1/2	4 1/8	1 1/4	1/2	10
2	RBF-4	5 5/8	3 5/8	4 3/8	1 1/4	1/2	12
2 7/16	RBF-5	6 7/8	4 1/4	5 3/8	1 1/2	5/8	21
3	RBF-6	7 3/4	4 3/4	6	1 5/8	3/4	28
3 7/16	RBF-7	9 1/4	5 1/4	7	1 7/8	3/4	46

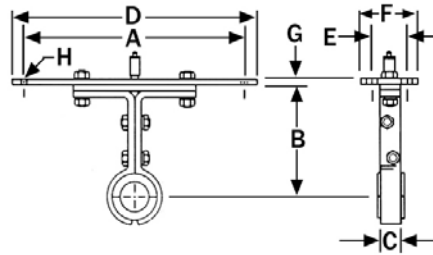
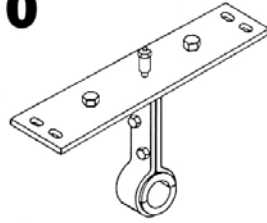
HANGER BEARINGS

HANGER BEARING SELECTION

DIAGRAM	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHB3	W = WOOD HI = HARD IRON B = BABBITT BZ = BRONZE BZG = BRONZE W/ GRAPHITE N = NYCATRON	220 226 326
	2	SHB4		
	2 7/16	SHB5		
	3	SHB6		
	3 7/16	SHB7		
	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHBX3	W = WOOD HI = HARD IRON B = BABBITT BZ = BRONZE UHMW = UHMW	226 326 216 316
	2	SHBX4		
	2 7/16	SHBX5		
	3	SHBX6		
3 7/16	SHBX7			
	BORE	PART #	MATERIALS	HANGER STYLE
	1 1/2	SHBB-3	BALL BEARING	270
	2	SHBB-4		
	2 7/16	SHBB-5		
	3	SHBB-6		
3 7/16	SHBB-7			

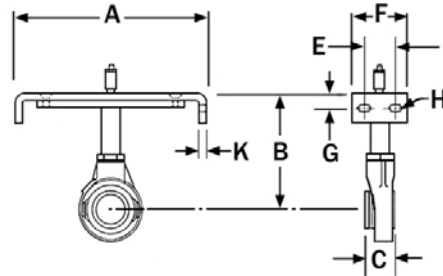
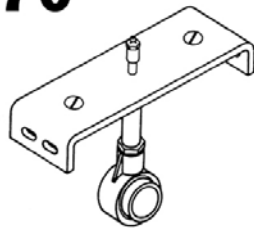
HANGERS

No. 220



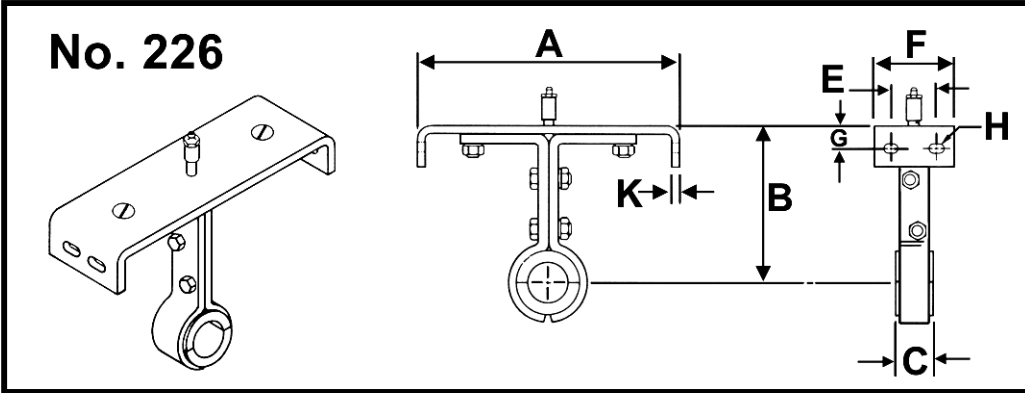
Screw Dia.	Part #	Shaft Dia.	A	B	C	D	E	F	G	H BOLTS	WT
6	6SH2203	1 1/2	8 3/4	4 1/2	2	9 3/4	2 1/2	4	1/4	3/8	7
9	9SH2203	1 1/2	12 3/4	6 1/8	2	13 1/2	2 1/2	4	1/4	3/8	10
	9SH2204	2									12
12	12SH2204	2	15 3/4	7 3/4	2	17 1/2	2 1/2	4	3/8	1/2	20
	12SH2204	2 7/16			3						25
	12SH2206	3			3						26
14	14SH2205	2 7/16	17 3/4	9 1/4	3	19 1/2	2 1/2	4	1/2	1/2	28
	14SH2206	3									30
16	16SH2206	3	19 3/4	10 5/8	3	21 1/2	2 1/2	4	1/2	1/2	33
18	18SH2206	3	22 1/4	12 1/8	3	24 1/2	3 1/2	5	5/8	5/8	45
	18SH2207	3 7/16			4						53
20	20SH2206	3	24 1/4	13 1/2	3	26 1/2	3 1/2	5	5/8	5/8	52
	20SH2207	3 7/16			4						66
24	24SH2207	3 7/16	28 1/4	16 1/2	4	30 1/2	3 1/2	5	5/8	5/8	81

No. 270



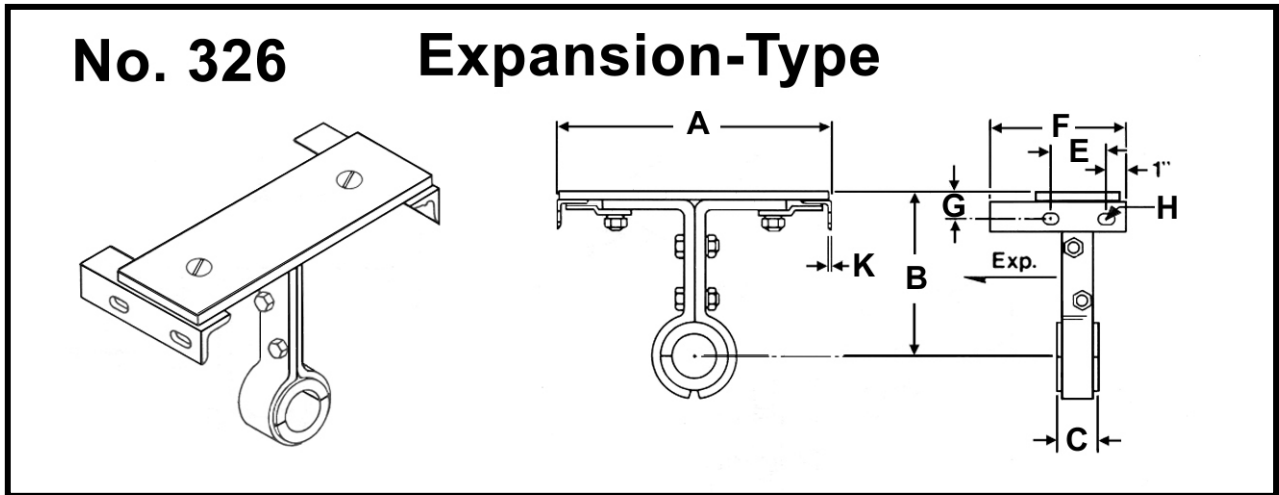
Screw Dia.	Part #	Shaft Dia.	A	B	C	D	E	F	G	H BOLTS	K	WT
6	6SH2703	1 1/2	7	4 1/2	2	9 3/4	2 1/2	4	3/4	3/8	1/4	6
9	9SH2703	1 1/2	10	6 1/8	2	13 1/2	2 1/2	4	1	3/8	1/4	7
	9SH2704	2										8
12	12SH2704	2	13	7 3/4	2	17 1/2	2 1/2	4	1 1/4	1/2	3/8	13
	12SH2705	2 7/16			3							19
	12SH2706	3			3							24
14	14SH2705	2 7/16	15	9 1/4	3	19 1/2	2 1/2	4	1 3/8	1/2	1/2	20
	14SH2706	3										25
16	16SH2706	3	17	10 5/8	3	21 1/2	2 1/2	4	1 3/8	5/8	1/2	31
18	18SH2706	3	19	12 1/8	3	24 1/2	3 1/2	5	1 5/8	5/8	1/2	33 1/2
	18SH2707	3 7/16			4							47
20	20SH2706	3	21	13 1/2	3	26 1/2	3 1/2	5	1 5/8	5/8	1/2	39
	20SH2707	3 7/16			4						3/4	52
24	24SH2707	3 7/16	25	16 1/2	4	30 1/2	3 1/2	5	1 5/8	5/8	3/4	60

HANGERS



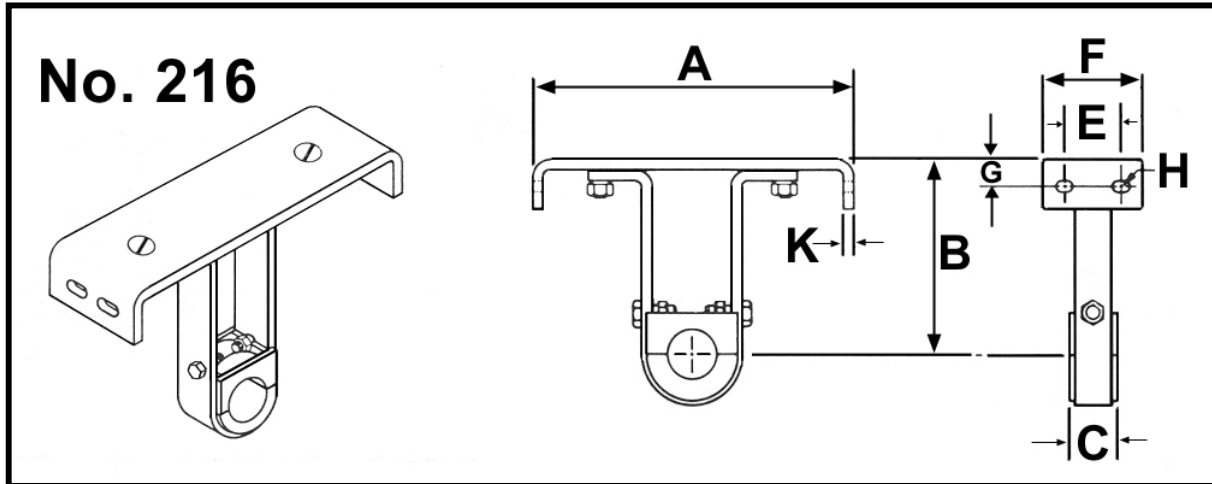
SCREW DIA. (")	PART NUMBER	SHAFT DIA. (")	A	B	C	E	F	G	H BOLTS	K	WT
6	6SH2263	1 1/2	7	4 1/2	2	2 1/2	4	3/4	3/8	1/4	7
9	9SH2263	1 1/2	10	6 1/8	2	2 1/2	4	1	3/8	1/4	9
	9SH2264	2			2						11
12	12SH2264	2	13	7 3/4	2	2 1/2	4	1 1/2	1/2	3/8	15
	12SH2265	2 7/16			3						23
	12SH2266	3			3						24
14	14SH2265	2 7/16	15	9 1/4	3	2 1/2	4	1 3/8	1/2	1/2	24
	14SH2266	3			3						26
16	16SH2266	3	17	10 5/8	3	2 1/2	4	1 3/8	1/2	1/2	29
18	18SH2266	3	19	12 1/8	3	3 1/2	5	1 5/8	5/8	1/2	39
	18SH2267	3 7/16			4						52
20	20SH2266	3	21	13 1/2	3	3 1/2	5	1 5/8	5/8	3/4	42
	20SH2267	3 7/16			4						55
24	24SH2267	3 7/16	25	16 1/2	4	3 1/2	5	1 5/8	5/8	3/4	65

HANGERS



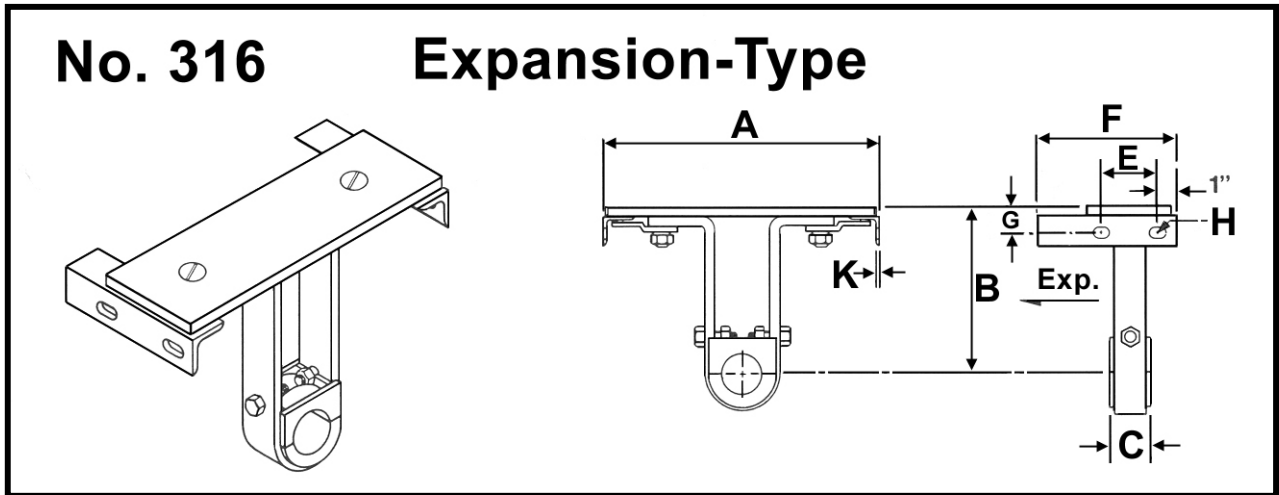
SCREW DIA (")	PART #	SHAFT DIA (")	A	B	C	E	F	G	H BOLTS	K	WT
6	6SH3263	1 1/2	7	4 1/2	2	2 1/2	6	3/4	3/8	1/8	7
9	9SH3263	1 1/2	10	6 1/8	2	2 1/2	6	1	3/8	3/16	9
	9SH3264	2			2						10
12	12SH3264	2	13	7 3/4	2	2 1/2	6 1/2	1 1/4	1/2	3/16	14
	12SH3265	2 7/16			3						19
	12SH3266	3			3						25
14	14SH3265	2 7/16	15	9 1/4	3	2 1/2	6 1/2	1 3/8	1/2	3/16	23
	14SH3266	3			3						31
16	16SH3266	3	17	10 5/8	3	2 1/2	8	1 3/8	1/2	1/4	36
18	18SH3266	3	19	12 1/8	3	3 1/2	8	1 5/8	5/8	1/4	36
	18SH3267	3 7/16			4						48
20	20SH3266	3	21	13 1/2	3	3 1/2	8	1 5/8	5/8	1/4	38
	20SH3267	3 7/16			4						51
24	24SH3267	3 7/16	25	16 1/2	4	3 1/2	8	1 3/4	5/8	3/8	58

HANGERS



SCREW DIA. (")	PART #	SHAFT DIA. ("	A	B	C	E	F	G	H BOLTS	K	WT
6	6SH2163	1 1/2	7	4 1/2	2	2 1/2	4	3/4	3/8	1/4	5
9	9SH2163	1 1/2	10	6 1/8	2	2 1/2	4	1	3/8	1/4	7
	9SH2164	2			2						9
12	12SH2164	2	13	7 3/4	2	2 1/2	4	1 1/2	1/2	3/8	14
	12SH2165	2 7/16			3						18
	12SH2166	3			3						21
14	14SH2165	2 7/16	15	9 1/4	3	2 1/2	4	1 3/8	1/2	1/2	23
	14SH2166	3			3						25
16	16SH2166	3	17	10 5/8	3	2 1/2	4	1 3/8	1/2	1/2	28
18	18SH2166	3	19	12 1/8	3	3 1/2	5	1 5/8	5/8	1/2	34
	18SH2167	3 7/16			4						44
20	20SH2166	3	21	13 1/2	3	3 1/2	5	1 5/8	1 5/8	3/4	36
	20SH2167	3 7/16			4						47
24	24SH2167	3 7/16	25	16 1/2	4	3 1/2	5	1 5/8	1 5/8	3/4	53

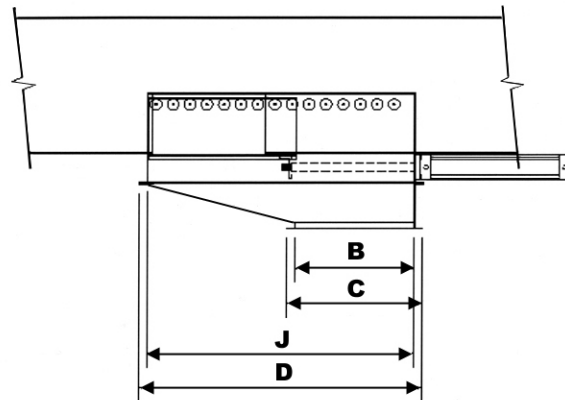
HANGERS



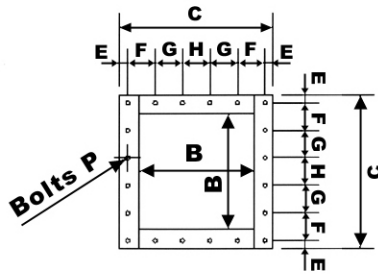
SCREW DIA (")	PART #	SHAFT DIA (")	A	B	C	E	F	G	H BOLTS	K	WT
6	6SH3163	1 1/2	7	4 1/2	2	2 1/2	6	3/4	3/8	1/8	7
9	9SH3163	1 1/2	10	6 1/8	2	2 1/2	6	1	3/8	3/16	9
	9SH3164	2			2						10
12	12SH3164	2	13	7 3/4	2	2 1/2	6 1/2	1 1/4	1/2	3/16	14
	12SH3165	2 7/16			3						19
	12SH3166	3			3						25
14	14SH3165	2 7/16	15	9 1/4	3	2 1/2	6 1/2	1 3/8	1/2	3/16	23
	14SH3166	3			3						31
16	16SH3166	3	17	10 5/8	3	2 1/2	8	1 3/8	1/2	3/16	36
18	18SH3166	3	19	12 1/8	3	3 1/2	8	1 5/8	5/8	1/4	36
	18SH3167	3 7/16			4						48
20	20SH3166	3	21	13 1/2	3	3 1/2	8	1 5/8	5/8	1/4	38
	20SH3167	3 7/16			4						51
24	24SH3167	3 7/16	25	16 1/2	4	3 1/2	8	1 5/8	5/8	1/4	58

DISCHARGE GATES

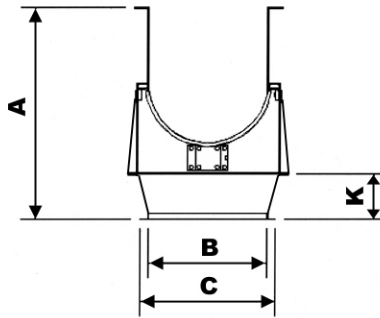
Curved Slide Gate- Air Operated, Dust Tight Enclosure



SIDE VIEW MOUNTED ON TROUGH



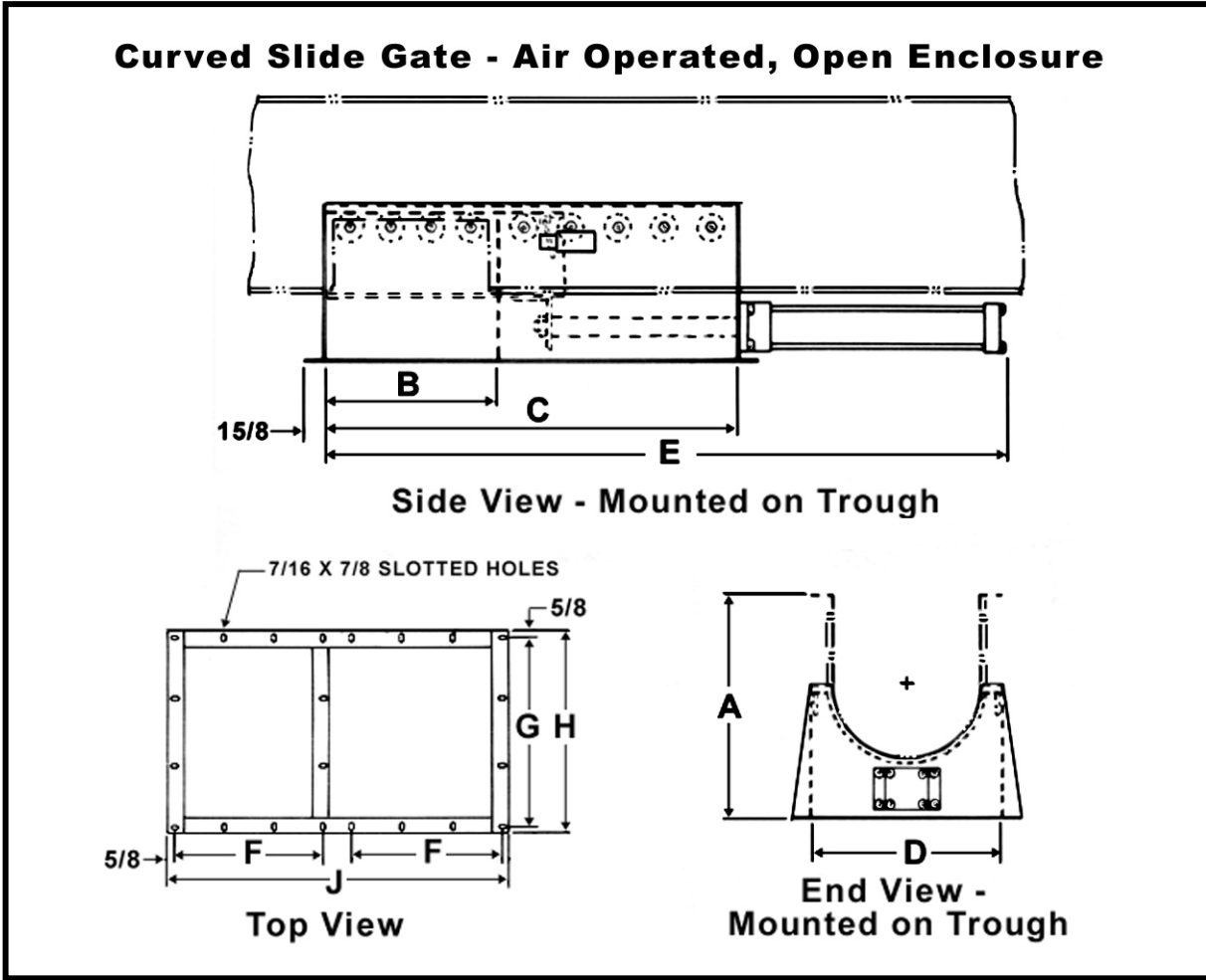
BOLT PATTERN



END VIEW MOUNTED ON TROUGH

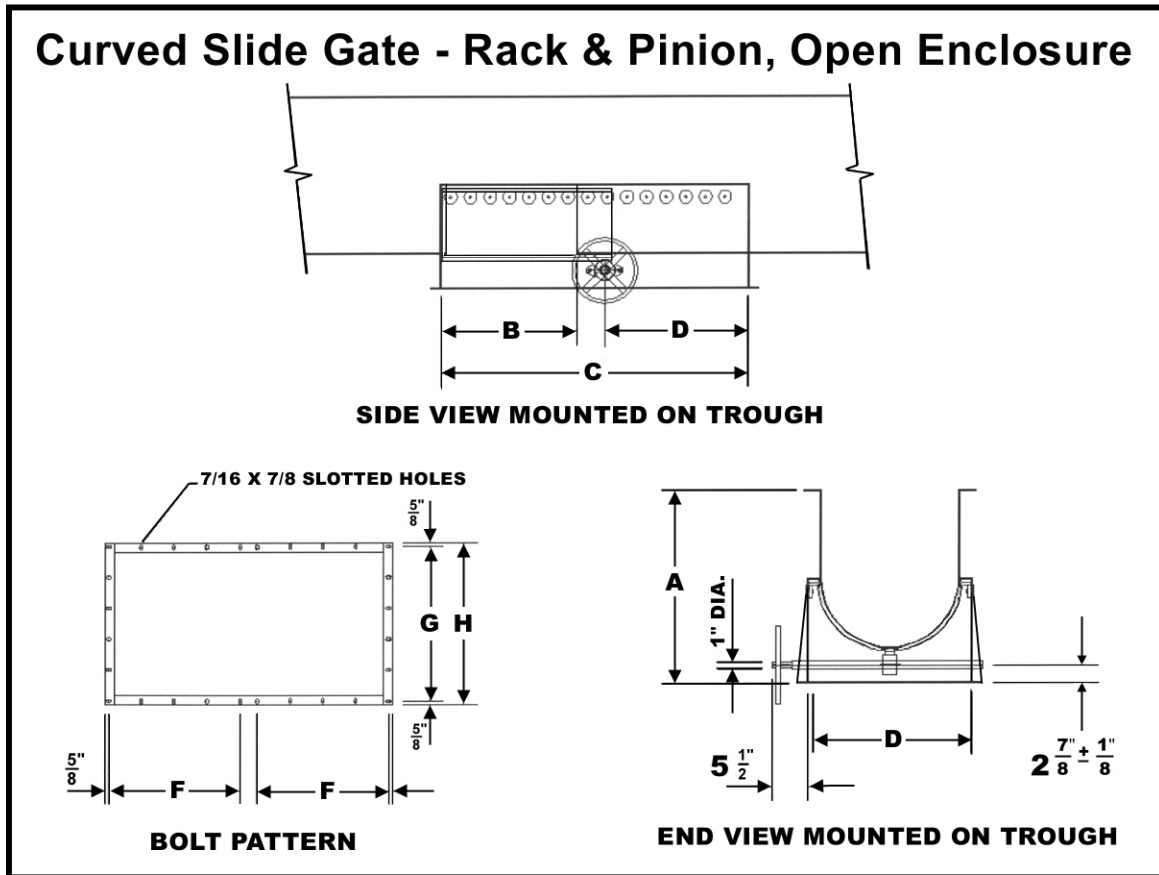
CONV. SIZE	PART #	DIMENSIONS											AIR CYL. BORE
		A	B	C	D	E	F	G	H	J	K	P	
6	6CVGT-A-E	13 1/2	7	10	30 4/9	1 1/16	2 13/16	—	3	19	4	7/16	2
9	9CVGT-A-E	17 1/8	10	13	39 4/9	1/2	4	—	4	25	5	7/16	2
12	12CVGT-A-E	19 3/4	13	17 1/4	48 9/16	7/8	5 1/8	—	5 1/4	31	6	7/16	2 1/2
14	14CVGT-A-E	22 1/4	15	19 1/4	54 9/16	7/8	3 1/2	3 1/2	3 1/2	35	6	7/16	2 1/2
16	16CVGT-A-E	24 5/8	17	21 1/4	61 3/8	7/8	3 3/4	4	4	39	7	7/16	3 1/4
18	18CVGT-A-E	27 7/8	19	24 1/4	67 3/8	1 1/8	4 7/16	4 3/8	4 3/8	43	7	9/16	3 1/4
20	20CVGT-A-E	29 1/2	21	26 1/4	73 3/8	1 1/8	4 7/8	4 3/4	4 3/4	47	8	9/16	3 1/4
24	24CVGT-A-E	34 1/2	25	20 1/4	85 3/8	1 1/8	5 5/8	5 5/8	5 1/2	55	9	9/16	3 1/4

DISCHARGE GATES



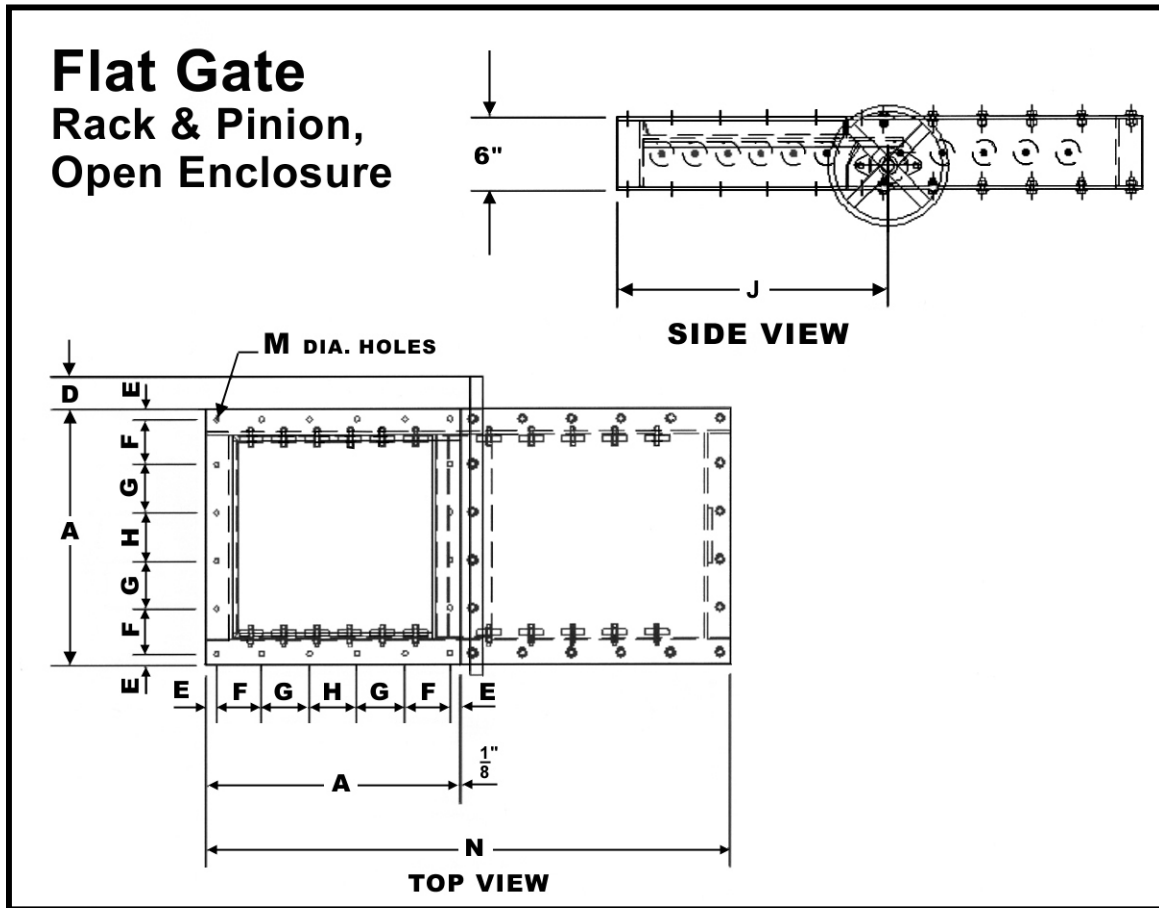
CONV. SIZE	PART #	DIMENSIONS									AIR CYL. BORE
		A	B	C	D	E	F	G	H	J	
6	6CVGT-A	13 1/2	7	19	11	30 7/16	3 HOLES - 4 1/2 C-C=9	4 HOLES-4.333 C-C=13	14 1/4	22 1/4	2
9	9CVGT-A	17 1/8	10	25	14	39 7/16	4 HOLES - 4 C-C=12	4 HOLES-5.333 C-C=16	17 1/4	28 1/4	2
12	12CVGT-A	19 3/4	13	31	17	48 9/16	4 HOLES - 5 C-C=15	4 HOLES-6.333 C-C=19	20 1/4	34 1/4	2 1/2
14	14CVGT-A	22 1/4	15	35	19	54 9/16	5 HOLES - 4 1/4 C-C=17	6 HOLES-4.2 C-C=21	22 1/4	34 1/4	2 1/2
16	16CVGT-A	24 5/8	17	39	21	61 3/8	5 HOLES - 4 3/4 C-C=19	6 HOLES-4.6 C-C=23	24 1/4	38 1/4	3 1/4
18	18CVGT-A	27 1/8	19	43	23	67 3/8	5 HOLES - 5 1/4 C-C=21	6 HOLES-D C-C=25	26 1/4	42 1/4	3 1/4
20	20CVGT-A	29 1/2	21	47	25	73 3/8	5 HOLES - 5 3/4 C-C=23	6 HOLES-5.4 C-C=27	28 1/4	50 1/4	3 1/4
24	24CVGT-A	34 1/2	25	55	29	85 3/8	7 HOLES - 4 1/2 C-C=27	6 HOLES-6.2 C-C=31	32 1/4	58 1/4	3 1/4

DISCHARGE GATES



CONV. SIZE	PART #	DIMENSIONS								
		A	B	C	D	E	F	G	H	J
6	6CVGT-RP	13 ½	7	19	11	11	3 HOLES-4 ½ C-C=9	4 HOLES-4.333 C-C=13	14 ¼	22 ¼
9	9CVGT-RP	17 ⅛	10	25	14	14	4 HOLES-4 C-C=12	4 HOLES-5.333 C-C=16	17 ¼	28 ¼
12	12CVGT-RP	19 ¾	13	31	17	17	4 HOLES-5 C-C=15	4 HOLES-6.333 C-C=19	20 ¼	34 ¼
14	14CVGT-RP	22 ¼	15	35	19	19	5 HOLES-4 ¼ C-C=17	6 HOLES-4.2 C-C=21	22 ¼	38 ¼
16	16CVGT-RP	24 ⅝	17	39	21	21	5 HOLES-4 ¾ C-C=19	6 HOLES-4.6 C-C=23	24 ¼	42 ¼
18	18CVGT-RP	27 ⅛	19	43	23	23	5 HOLES-5 ¼ C-C=21	6 HOLES-5 C-C=25	26 ¼	46 ¼
20	20CVGT-RP	29 ½	21	47	25	25	5 HOLES-5 ¾ C-C=23	6 HOLES-5.4 C-C=27	28 ¼	50 ¼
24	24CVGT-RP	34 ½	25	55	29	29	7 HOLES-4 ½ C-C=27	6 HOLES-6.2 C-C=31	32 ¼	58 ¼

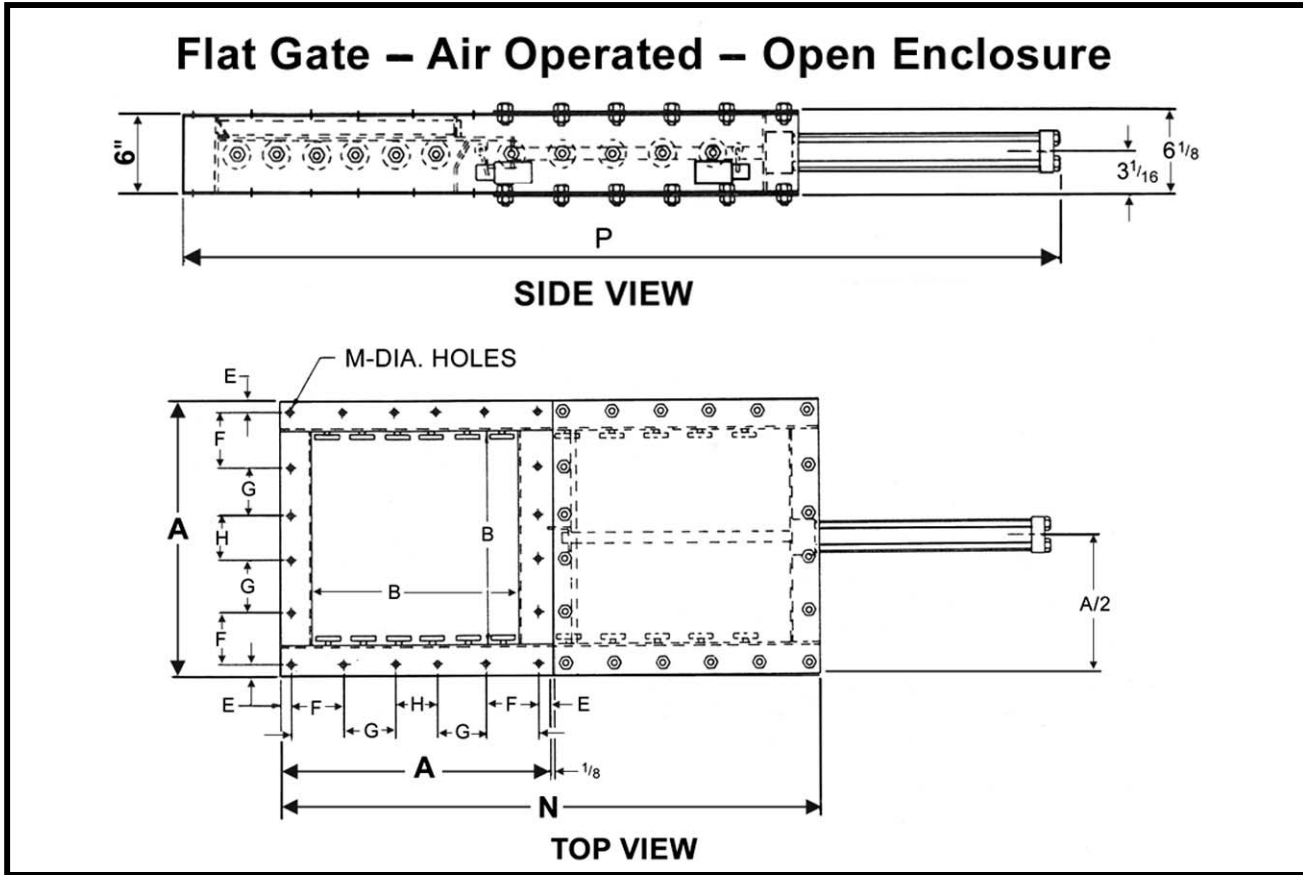
DISCHARGE GATES



RACK & PINION GATE

SIZE	PART #	A	B	C	D	E	F	G	H	J	K	L	M	N	P
5	5FLGT-RP	7 1/2	5	17 1/2	4	3/8	2 1/4	—	2 1/4	10	2 15/32	1	5/16	17 5/8	25 13/16
6	6FLGT-RP	9	6	20	4	9/19	3 15/16	—	—	11 1/2	2 15/32	1	7/16	20 1/8	29 1/16
7	7FLGT-RP	10	7	22	4	11/16	2 13/16	—	3	12 1/2	2 15/32	1	7/16	22 1/8	32 1/16
8	8FLGT-RP	11	8	24	4	9/16	3 3/16	—	3 1/2	13 1/2	2 15/32	1	7/16	24 1/8	35 1/16
10	10FLGT-RP	13	10	28	4	1/2	4	—	4	15 1/2	2 15/32	1	7/16	28 1/2	41 9/16
11	11FLGT-RP	14 1/4	11	30 1/4	4	5/8	4 5/16	—	4 3/8	16 5/8	2 15/32	1	7/16	30 3/4	44 11/16
12	12FLGT-RP	16 1/4	12	33 1/4	4	7/8	4 3/4	—	5	18 1/8	1 7/8	1 1/4	7/16	33 3/4	48 3/16
13	13FLGT-RP	17 1/4	13	35 1/4	4	7/8	5 1/8	—	5 1/4	19 1/8	1 7/8	1 1/4	7/16	35 3/4	51 3/16
14	14FLGT-RP	18 1/4	14	37 1/4	4	7/8	4 1/8	4 1/8	—	20 1/8	1 7/8	1 1/4	7/16	37 3/4	54 3/16
15	15FLGT-RP	19 1/4	15	39 1/4	4	7/8	3 1/2	3 1/2	3 1/2	21 1/8	1 7/8	1 1/4	7/16	39 3/4	57 3/16
16	16FLGT-RP	20 1/4	16	41 1/4	4	7/8	3 5/8	3 5/8	4	22 1/8	1 7/8	1 1/4	7/16	41 3/4	60 1/4
17	17FLGT-RP	21 1/4	17	43 1/4	4	7/8	3 3/4	4	4	23 1/8	1 7/8	1 1/4	7/16	43 3/4	63 1/4
18	18FLGT-RP	23 1/4	18	46 1/4	4	1/8	4 1/2	4	4	24 1/8	2 15/32	1	9/16	46 3/4	66 3/4
19	19FLGT-RP	24 1/4	19	48 1/4	4	1/8	4 7/16	4 3/8	4 3/8	25 1/8	2 15/32	1	9/16	48 3/4	70 9/16
20	20FLGT-RP	25 1/4	20	50 1/4	4	1/8	4 3/4	4 1/2	4 1/2	26 1/8	2 15/32	1	9/16	50 3/4	73 9/16
21	21FLGT-RP	26 1/4	21	52 1/4	4	1/8	4 7/8	4 3/4	4 3/4	27 1/8	2 15/32	1	9/16	52 3/4	76 9/16
22	22FLGT-RP	27 1/4	22	54 1/4	4	1/8	5	5	5	28 1/8	2 15/32	1	9/16	54 3/4	79 9/16
24	24FLGT-RP	29 1/4	24	58 1/4	4	1/8	5 3/8	5 3/8	5 3/8	30 1/8	1 7/8	1 1/4	9/16	58 3/4	85 9/16
25	25FLGT-RP	30 1/4	25	60 1/4	4	1/8	5 5/8	5 1/2	5 1/2	31 1/8	1 7/8	1 1/4	9/16	60 3/4	88 9/16

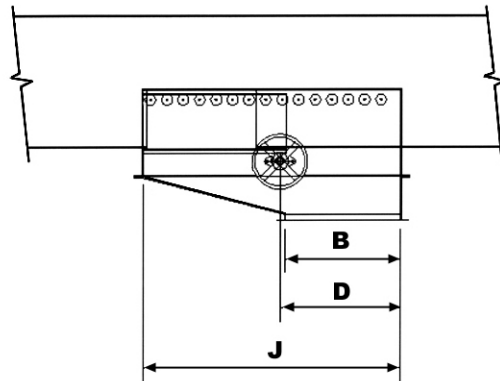
DISCHARGE GATES



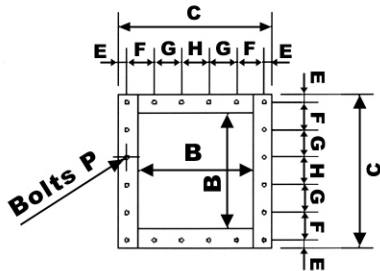
SIZE	PART #	A	B	C	D	E	F	G	H	J	K	L	M	N	P
5	5FLGT-A	7 1/2	5	17 1/2	4	3/8	2 1/4	—	2 1/4	10	2 15/32	1	5/16	17 5/8	25 13/16
6	6FLGT-A	9	6	20	4	9/19	3 15/16	—	—	11 1/2	2 15/32	1	7/16	20 1/8	29 1/16
7	7FLGT-A	10	7	22	4	11/16	2 13/16	—	3	12 1/2	2 15/32	1	7/16	22 1/8	32 1/16
8	8FLGT-A	11	8	24	4	9/16	3 3/16	—	3 1/2	13 1/2	2 15/32	1	7/16	24 1/8	35 1/16
10	10FLGT-A	13	10	28	4	1/2	4	—	4	15 1/2	2 15/32	1	7/16	28 1/2	41 9/16
11	11FLGT-A	14 1/4	11	30 1/4	4	5/8	4 5/16	—	4 3/8	16 5/8	2 15/32	1	7/16	30 3/4	44 11/16
12	12FLGT-A	16 1/4	12	33 1/4	4	7/8	4 3/4	—	5	18 1/8	1 7/8	1 1/4	7/16	33 3/4	48 3/16
13	13FLGT-A	17 1/4	13	35 1/4	4	7/8	5 1/8	—	5 1/4	19 1/8	1 7/8	1 1/4	7/16	35 3/4	51 3/16
14	14FLGT-A	18 1/4	14	37 1/4	4	7/8	4 1/8	4 1/8	—	20 1/8	1 7/8	1 1/4	7/16	37 3/4	54 3/16
15	15FLGT-A	19 1/4	15	39 1/4	4	7/8	3 1/2	3 1/2	3 1/2	21 1/8	1 7/8	1 1/4	7/16	39 3/4	57 3/16
16	16FLGT-A	20 1/4	16	41 1/4	4	7/8	3 5/8	3 5/8	4	22 1/8	1 7/8	1 1/4	7/16	41 3/4	60 1/4
17	17FLGT-A	21 1/4	17	43 1/4	4	7/8	3 3/4	4	4	23 1/8	1 7/8	1 1/4	7/16	43 3/4	63 1/4
18	18FLGT-A	23 1/4	18	46 1/4	4	1 1/8	4 1/2	4	4	24 5/8	2 15/32	1	9/16	46 3/4	66 3/4
19	19FLGT-A	24 1/4	19	48 1/4	4	1 1/8	4 7/16	4 3/8	4 3/8	25 5/8	2 15/32	1	9/16	48 3/4	70 9/16
20	20FLGT-A	25 1/4	20	50 1/4	4	1 1/8	4 3/4	4 1/2	4 1/2	26 5/8	2 15/32	1	9/16	50 3/4	73 9/16
21	21FLGT-A	26 1/4	21	52 1/4	4	1 1/8	4 7/8	4 3/4	4 3/16	27 5/8	2 15/32	1	9/16	52 3/4	76 9/16
22	22FLGT-A	27 1/4	22	54 1/4	4	1 1/8	5	5	5	28 5/8	2 15/32	1	9/16	54 3/4	79 9/16
24	24FLGT-A	29 1/4	24	58 1/4	4	1 1/8	5 7/16	5 3/8	5 3/8	30 5/8	1 7/8	1 1/4	9/16	58 3/4	85 9/16
25	25FLGT-A	30 1/4	25	60 1/4	4	1 1/8	5 5/8	5 1/2	5 1/2	31 5/8	1 7/8	1 1/4	9/16	60 3/4	88 9/16

DISCHARGE GATES

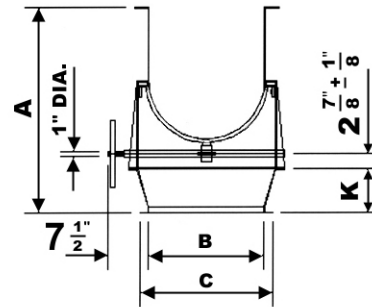
Curved Gate – Rack & Pinion – Dust-Tight Enclosure



SIDE VIEW MOUNTED ON TROUGH



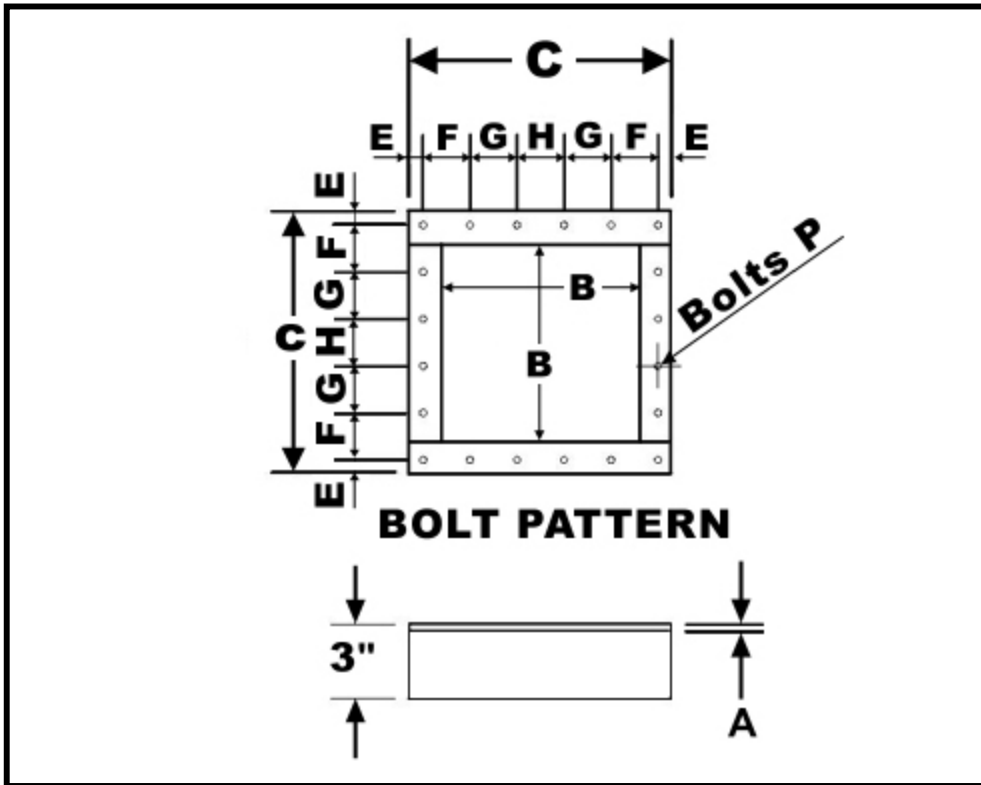
BOLT PATTERN



END VIEW MOUNTED ON TROUGH

CONV. SIZE	DIMENSIONS											
	PART #	A	B	C	D	E	F	G	H	J	K	P
6	6CVGT-RP-E	17 1/2	7	19	11	11/16	2 13/16	—	3	19	4	7/16
9	9CVGT-RP-E	22 1/8	10	13	14	1/2	4	—	4	25	5	7/16
12	12CVGT-RP-E	25 3/4	13	17 1/4	17	7/8	5 1/8	—	5 1/4	31	6	7/16
14	14CVGT-RP-E	28 1/4	15	19 1/4	19	7/8	3 1/2	3 1/2	3 1/2	35	6	7/16
16	16CVGT-RP-E	31 5/8	17	21 1/4	21	7/8	3 3/4	4	4	39	7	7/16
18	18CVGT-RP-E	34 1/8	19	24 1/4	23	1 1/8	4 7/16	4 3/8	4 3/8	43	7	9/16
20	20CVGT-RP-E	37 1/2	21	26 1/4	25	1 1/8	4 7/8	4 3/4	4 3/4	47	8	9/16
24	24CVGT-RP-E	43 1/2	25	30 1/4	29	1 1/8	5 5/8	5 5/8	5 1/2	55	9	9/16

COMPONENT SELECTION: INLETS

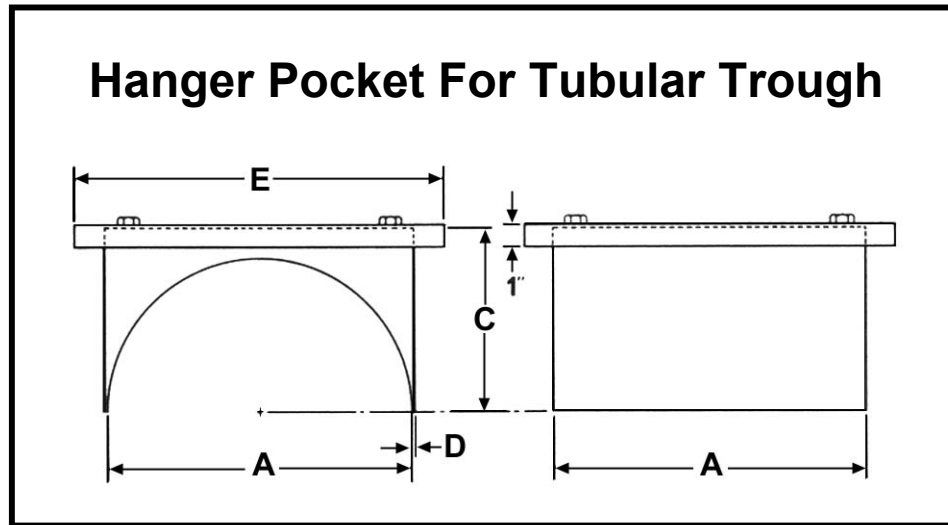


SCREW DIAMETER	PART #	WEIGHT - LBS	FLANGE THICKNESS	B	C	E	F	G	H	P
			A							
6	6SCI	4.2	12 GA	7	10	$1\frac{1}{16}$	$2\frac{13}{16}$	—	3	$\frac{3}{8}$ (1)
9	9SCI	7.8	10 GA	10	13	$\frac{1}{2}$	4	—	4	$\frac{3}{8}$ (1)
10	10SCI	8.6	10 GA	11	14 $\frac{1}{4}$	$\frac{5}{8}$	$4\frac{5}{16}$	—	$4\frac{3}{8}$	$\frac{3}{8}$ (1)
12	12SCI	11	10 GA	13	17 $\frac{1}{4}$	$\frac{7}{8}$	$5\frac{1}{8}$	—	$5\frac{1}{4}$	$\frac{3}{8}$ (1)
14	14SCI	13	10 GA	15	19 $\frac{1}{4}$	$\frac{7}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$\frac{3}{8}$ (2)
16	16SCI	14	10 GA	17	21 $\frac{1}{4}$	$\frac{7}{8}$	$3\frac{3}{4}$	4	4	$\frac{3}{8}$ (2)
18	18SCI	20	10 GA	19	24 $\frac{1}{4}$	$1\frac{1}{8}$	$4\frac{7}{16}$	$4\frac{3}{8}$	$4\frac{3}{8}$	$\frac{1}{2}$ (2)
20	20SCI	22	10 GA	21	26 $\frac{1}{4}$	$1\frac{1}{8}$	$4\frac{7}{8}$	$4\frac{3}{4}$	$4\frac{3}{4}$	$\frac{1}{2}$ (2)
24	24SCI	23	10 GA	25	30 $\frac{1}{4}$	$1\frac{1}{8}$	$5\frac{5}{8}$	$5\frac{5}{8}$	$5\frac{1}{2}$	$\frac{1}{2}$ (2)

ALL DIMENSIONS ARE IN INCHES.

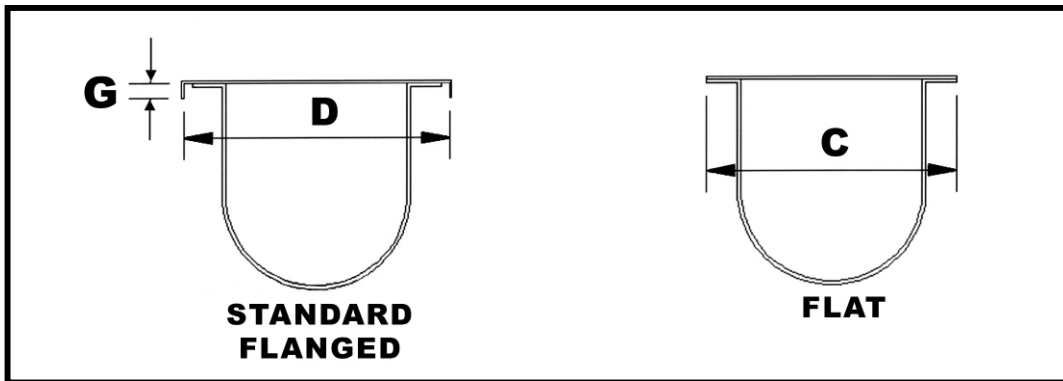
- (1) 12 BOLTS
- (2) 20 BOLTS

HANGER POCKETS



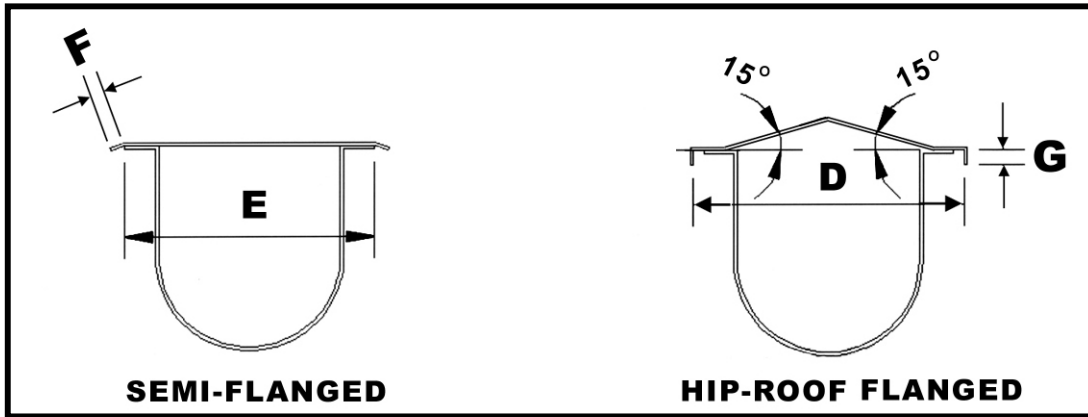
Screw Dia.	Part #	A	C	D	E	WT.
6	6SHP14	7	5	14	9 3/4	7
	6SHP10			10		9
9	9SHP14	10	7 1/8	14	13 1/8	8
	9SHP12			12		10
	9SHP10			10		13
	9SHP7			3/16		18
12	12SHP12	13	8 7/8	12	17 1/4	15
	12SHP10			10		20
	12SHP7			3/16		27
	12SHP3			1/4		36
14	14SHP12	15	10 1/8	12	19 1/4	19
	14SHP10			10		24
	14SHP7			3/16		33
	14SHP3			1/4		44
16	16SHP12	17	11 1/8	12	21 1/4	23
	16SHP10			10		30
	16SHP7			3/16		41
	16SHP3			1/4		55
18	18SHP12	19	12 3/8	12	24 1/4	30
	18SHP10			10		37
	18SHP7			3/16		58
	18SHP3			1/4		68
20	20SHP10	21	13 3/8	10	26 1/4	46
	20SHP7			3/16		63
	20SHP3			1/4		84
24	24SHP10	25	15 3/8	10	30 1/4	61
	24SHP7			3/16		83
	24SHP3			1/4		111

CONVEYOR COVERS



SCREW DIA. (")	COVER THICK.	FLANGED PART #	WT STD LENGTH	FLAT PART #	WT STD LENGTH	C	D	G
6	16	6SCF16	24	6SCNF16	20	9 3/4	9 7/8	1/2
9	16	9SCF16	32	9SCNF16	30	13 3/8	13 3/8	1/2
	10	9SCF10	72	9SCNF10	62			5/8
12	14	12SCF14	60	12SCNF14	54	17 1/2	17 1/2	1/2
	10	12SCF10	109	12SCNF10	96			5/8
14	14	14SCF14	67	14SCNF14	60	19 1/2	19 1/2	1/2
	10	14SCF10	120	14SCNF10	108			5/8
16	14	16SCF14	73	16SCNF14	66	21 1/2	21 1/2	1/2
	10	16SCF10	132	16SCNF10	119			5/8
18	14	18SCF14	85	18SCNF14	76	24 1/2	24 1/2	1/2
	10	18SCF10	149	18SCNF10	136			5/8
20	14	20SCF14	90	20SCNF14	84	26 1/2	26 1/2	1/2
	10	20SCF10	161	20SCNF10	148			5/8
24	12	24SCF12	142	24SCNF12	132	30 1/2	30 1/2	5/8
	10	24SCF10	182	24SCNF10	170			5/8

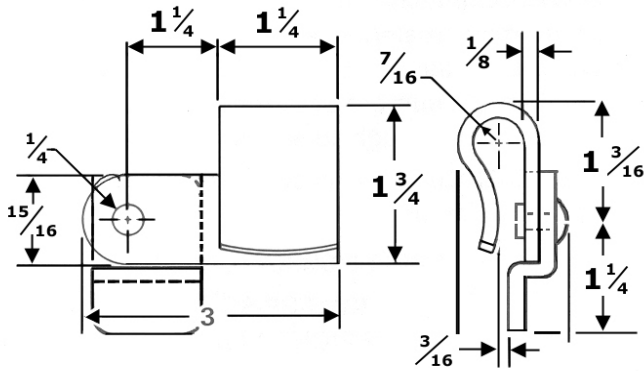
CONVEYOR COVERS



SCREW DIA. (")	COVER THICK.	SEMI-FLANGED PART #	WT STD LENGTH	HIP-ROOF PART #	WT STD LENGTH	D	E	F	G
6	16	6SCSF16	24	6SCH16	20	9 7/8	9 3/4	1/2	1/2
9	16	9SCSF16	32	9SCH16	30	13 3/8	13 3/8	1/2	1/2
	10	9SCSF10	72	9SCH10	62				5/8
12	14	12SCSF14	60	12SCH14	54	17 1/2	17 1/2	1/2	1/2
	10	12SCSF10	109	12SCH10	96				5/8
14	14	14SCSF14	67	14SCH14	60	19 1/2	19 1/2	1/2	1/2
	10	14SCSF10	120	14SCH10	108				5/8
16	14	16SCSF14	73	16SCH14	66	21 1/2	21 1/2	1/2	1/2
	10	16SCSF10	132	16SCH10	119				5/8
18	14	18SCSF14	85	18SCH14	76	24 1/2	24 1/2	1/2	1/2
	10	18SCSF10	149	18SCH10	136				5/8
20	14	20SCSF14	90	20SCH14	84	26 1/2	26 1/2	1/2	1/2
	10	20SCSF10	161	20SCH10	148				5/8
24	12	24SCSF12	142	24SCH12	132	30 1/2	30 1/2	1/2	5/8
	10	24SCSF10	182	24SCH10	170				5/8

CLAMPS

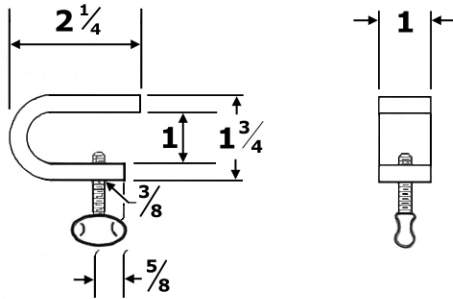
SPRING CLAMP



Spring clamps are manufactured from heavy gauge steel. Clamps with brackets are welded to flat covers and rotated to fasten to the trough. These clamps may be used with a variety of gasket material such as red rubber, neoprene, or sponge rubber.

SPRING CLAMP	
PRODUCT	PART #
CLAMP ONLY	SCSPC
CLAMP W/ BRACKET	SCSPC-B

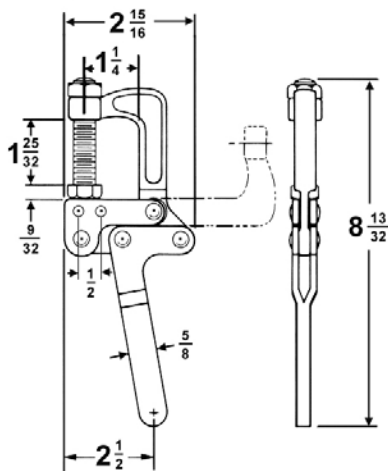
SCREW CLAMP



Screw clamps are used with flat or flanged covers on screw conveyors up to 24". Used on 24" centers, they provide a secure method of fastening the covers to the trough.

SCREW CLAMP	
PRODUCT	PART #
CLAMP ONLY	SCSC
CLAMP W/ BRACKET	SCSC-B

TOGGLE CLAMP



Toggle clamps are used when quick access is needed and secure fastening is possible without any tools. The base of the clamp is welded to the trough with the top moving a full 90° to provide the clamping action. These are available in carbon or stainless steel.

TOGGLE CLAMPS	
PRODUCT	PART #
CLAMP ONLY	SCTC
CLAMP W/ BRACKET	SCTC-B

Screw Conveyor Data Sheet

Information needed to design a Screw Conveyor



CUSTOMER: _____ DATE PROPOSAL DUE: _____

ADDRESS: _____

CONTACT: _____ PHONE # _____

SCREW DESCR: _____ Qty. _____ " DIA. X _____ LONG (C INLET TO C DISCH.) (OVERALL) HORIZ. INCL. _____° DECL. _____°

CAPACITY: _____ (CFH) (LBS/HR) (TPH) (MTPH) (BPH)

MATERIAL: _____ DENSITY _____ LBS/FT³ TEMP _____ °F MOISTURE _____ %

LUMPS: MAX SIZE _____ IN LUMP CLASS: (Lump % of Total; I = 10%, II = 25%, III = 95%)

INSTALLATION: INDOORS OUTDOORS NEW REPLACEMENT MAT'L OF CONSTR.: MILD STEEL T304 T316 HD GALV OTHER _____

IS IT?: FEEDER CONVEYOR IS FEED?: FLOOD LOAD UNIFORM

FED BY: _____ INLET SIZE: _____ DISCHARGES TO: _____

DRIVE: (SCREW CONVEYOR DRIVE) (SHAFT MOUNT) (OTHER: _____)

NOTES: _____

TROUGH: STYLE _____ THK. _____ COUP. BOLTS: _____

DISCHARGE: TYPE _____ QTY. _____ HANGER: STYLE _____

GATES: TYPE _____ QTY. _____ HANGER BRG.: TYPE _____

TROUGH END TYPE: TAIL _____ COVER: STYLE _____ THK. _____

TROUGH END TYPE: HEAD _____ COVER FASTENERS: TYPE _____

BEARING TYPE: TAIL _____ HEAD _____ INLETS: STYLE _____ QTY. _____

SEAL TYPE: TAIL _____ HEAD _____ GASKETS: TYPE _____ THK. _____

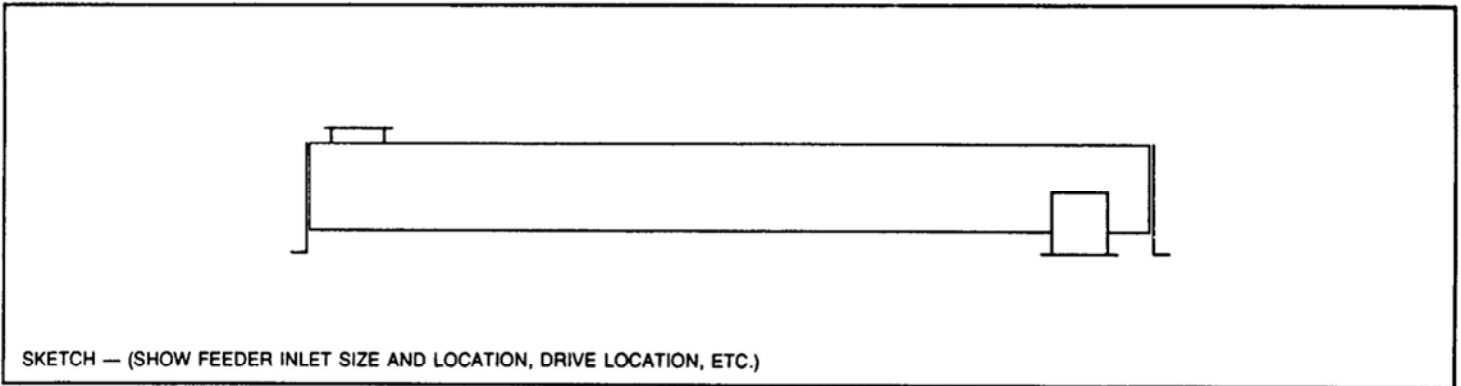
SCREW: DIA _____ (RH) (LH) PITCH _____ THK. _____ DRIVE _____ HP AT _____ RPM

MOTOR: _____ MOTOR MOUNT _____

REDUCER: _____

V-BELT/CHAIN: _____

NOTES: _____



SKETCH — (SHOW FEEDER INLET SIZE AND LOCATION, DRIVE LOCATION, ETC.)



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