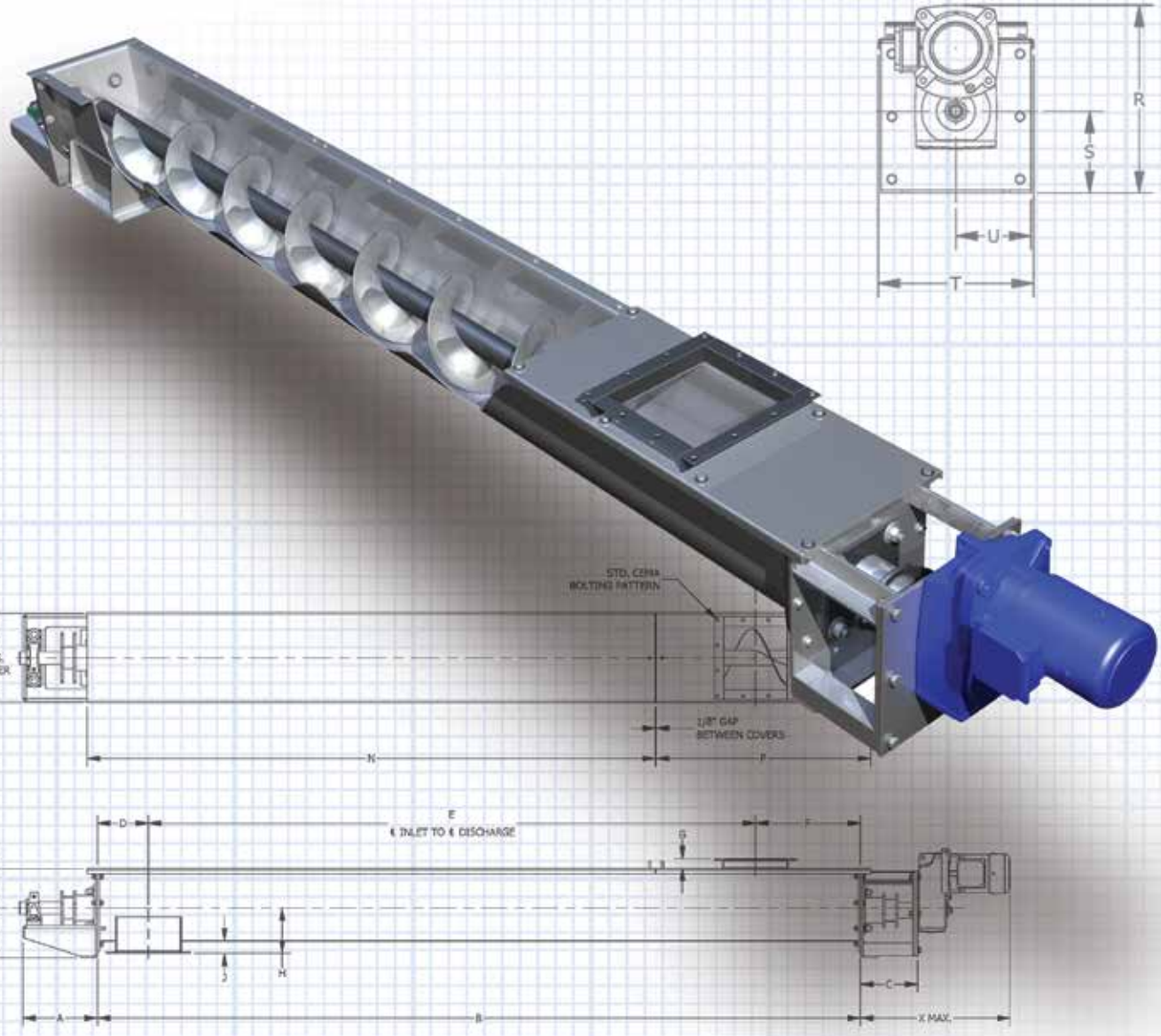
Design
Engineering
Manufacturing

Conveying Knowledge, Workmanship, Solutions

COMPONENT GUIDE

Screw Conveyors



Release Date 8.1.16

ISO 9001 Certified

KWS PROFILE

Founded in 1972, KWS Manufacturing Company, Ltd, is the leader in the design and manufacture of conveying equipment for the bulk material handling industry. Our primary Customers are power transmission distributors, end users, engineering firms, system suppliers and original equipment manufacturers (OEMs).

As an ISO 9001 certified manufacturer, KWS provides the highest quality equipment and service to our Customers. The KWS name stands for Knowledge, Workmanship and Solutions. Our large number of repeat Customers shows our commitment to Customer satisfaction. Our quality system ensures that your equipment is designed and manufactured to rigid specifications and validated by exceeding performance expectations.

We also offer complete system design and engineered solutions for our Customers. KWS is one of the largest conveyor manufacturers in North America and continues to grow every year.

KWS SCREW CONVEYOR COMPONENT GUIDE

Screw conveyors are a cost effective and reliable method of conveying bulk materials. Thousands of bulk materials are conveyed and processed daily utilizing screw conveyors. The KWS Screw Conveyor Component Guide is an excellent resource for understanding and selecting the proper components for screw conveyors. The component guide is easy to use, with descriptions of every screw conveyor component and their proper use. Recommendations are provided to assist the screw conveyor designer on how to properly select components for a specific application.

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CARBON STEEL STOCK COMPONENTS

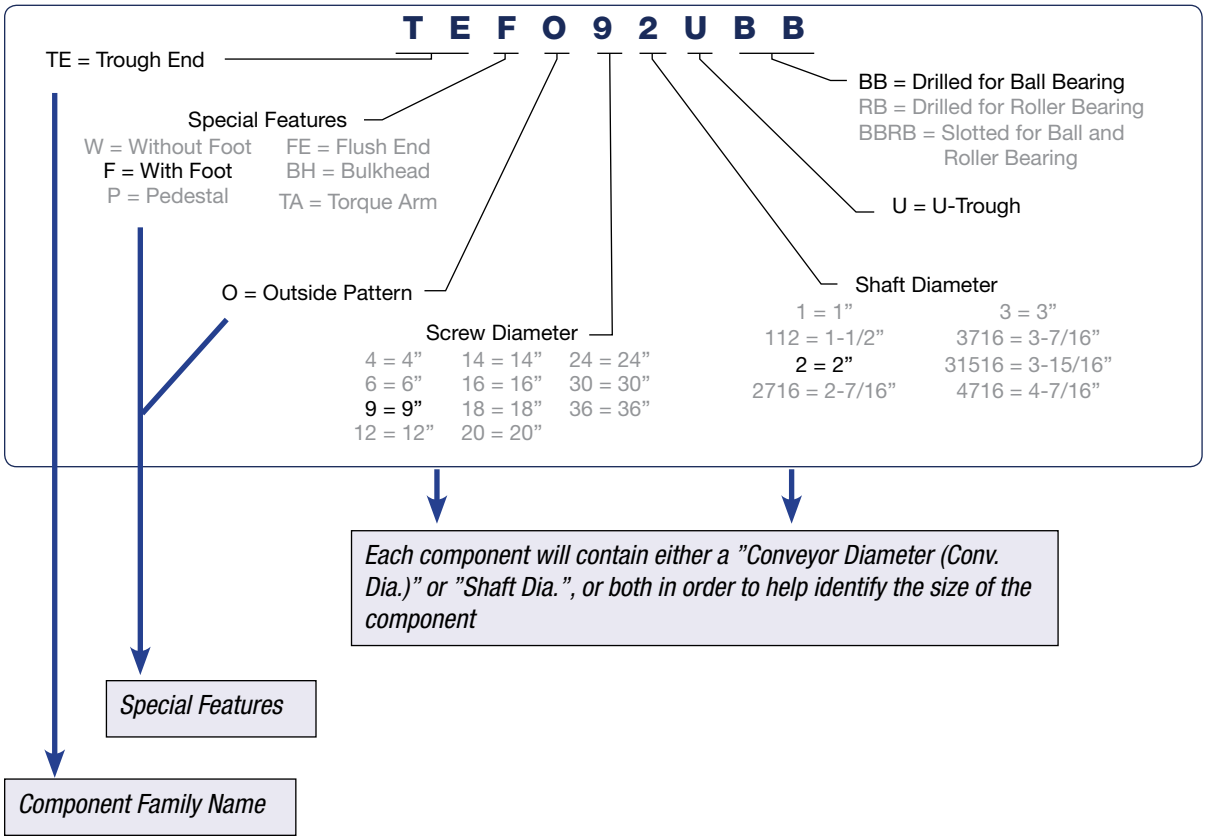
USING THE KWS SCREW CONVEYOR GUIDE

Each component specified in the KWS Screw Conveyor Component Guide can be used in the design and manufacture of screw conveyors and screw feeders. A very wide selection of components is provided so the engineer or designer can customize each screw conveyor or screw feeder for a specific application or need. Screw conveyors and screw feeders are used throughout the world for conveying and metering thousands of bulk materials and are the most versatile of all mechanical conveying devices.

The KWS Screw Conveyor Component Guide provides a description of each component along with dimensional information, weight and stock availability. KWS also offers the KWS Screw Conveyor Engineering Guide to better understand the design of screw conveyors and screw feeders.

An example of KWS part number nomenclature is shown below. Please note that dimensions and weights of some standard components could change as design improvements are made, so please contact KWS Engineering or your KWS salesperson before finalizing your design.

NOMENCLATURE



SCREWS

Screws can be configured for every application. The Basic Conveyor Flight and Pitch Type Section provides descriptions of various types of screws that can be used in a multitude of bulk material conveying and processing applications.

The use of helicoid or sectional screws is dependent upon the requirements of the application and the needs of the end user. In general, helicoid screws are used in light to medium duty applications, and are more cost effective when compared to sectional screws. Sectional screws can be configured for almost every type of application with special features such as ribbon or cut-and-folded flighting. Sectional screws can also be manufactured from special materials such as AR-235 or 316 stainless steel.

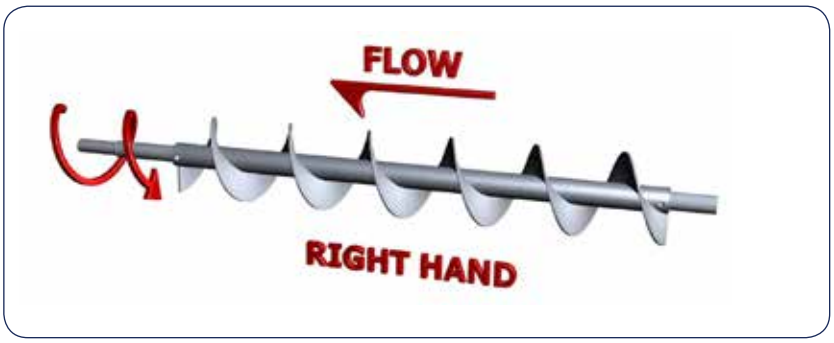
Screw section length is also dependent upon the requirements of the application and the needs of the end user. Standard screw lengths and hanger bearings can be used where the bulk material is non-abrasive and free-flowing. Single length screws are recommended for abrasive, heavy industrial applications.

Screws are available in right and left hand construction. Right hand screws are much more common and are recommended for almost every application. Spare parts are more readily available for right hand screws. The ”hand” of a screw along with the direction of rotation of the screw determine the direction of bulk material flow. The diagrams below illustrate the direction of bulk material flow for both right hand and left hand screws when rotated clockwise or counter clockwise. The rotation arrows indicate the location of the motor and gear reducer. The direction of bulk material flow is reversed when the direction of rotation is reversed.

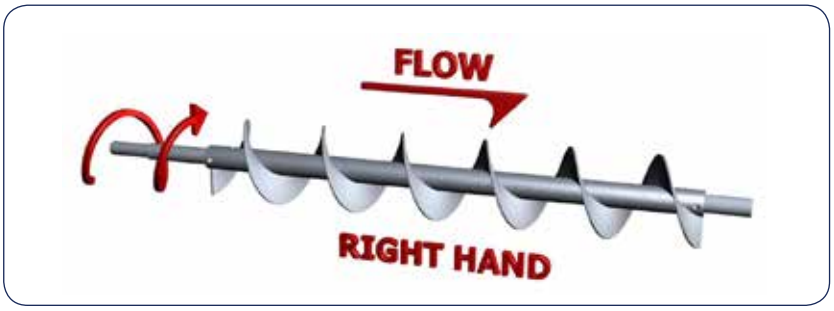
A right hand screw with the motor and gear reducer located on the discharge end pulls the bulk material toward the discharge end and rotates clockwise.

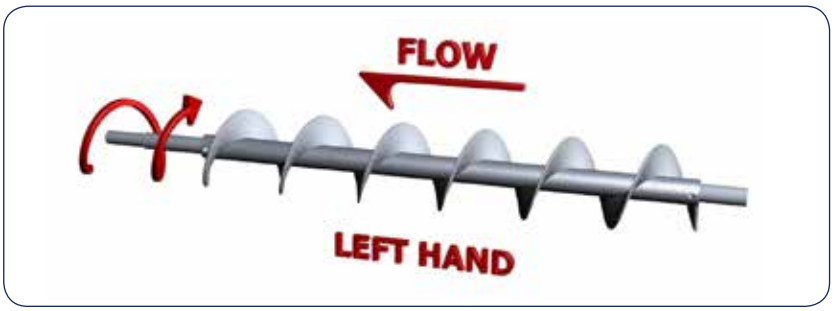
A left hand screw with the motor and gear reducer located on the discharge end pulls the bulk material toward the discharge end and rotates counter-clockwise.

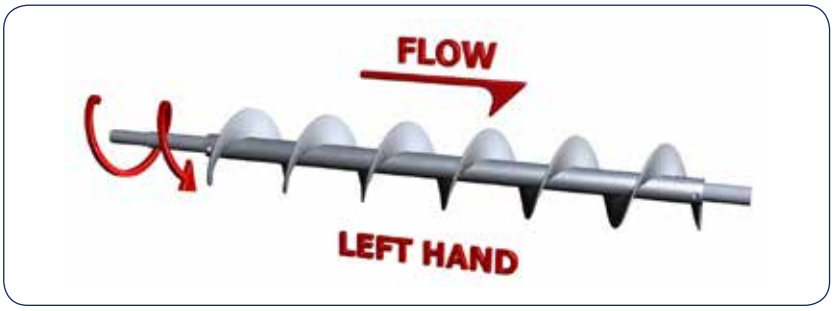
To determine the hand of a screw, observe the slope of the near side of the flighting. If the slope is downward to the right, then the screw is right hand. If the slope is downward to the left, the screw is left hand.

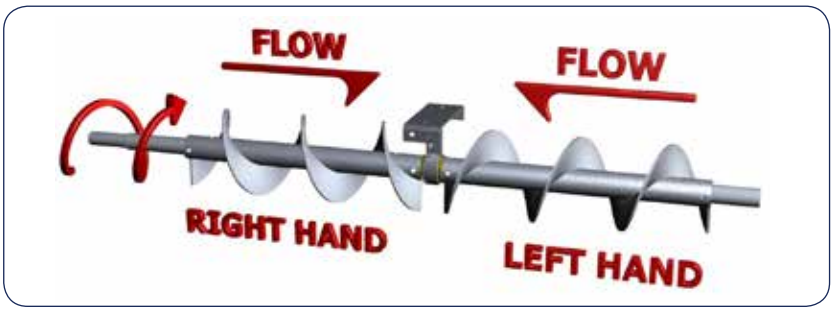


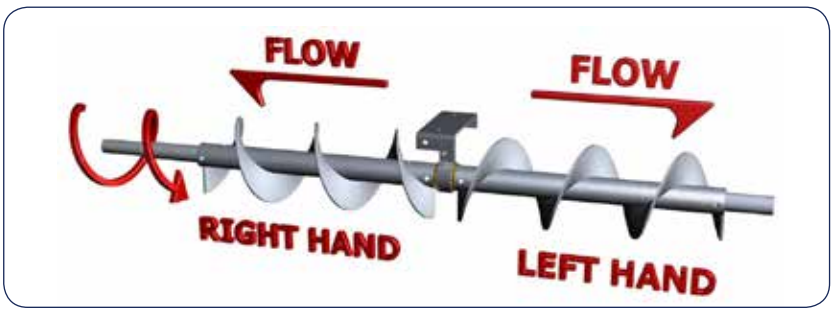
SCREWS


FLOW
RIGHT HAND


FLOW
LEFT HAND

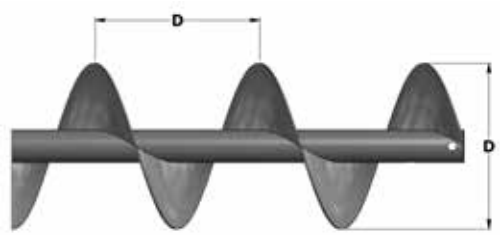

FLOW
LEFT HAND


FLOW
FLOW
RIGHT HAND
LEFT HAND


FLOW
FLOW
RIGHT HAND
LEFT HAND

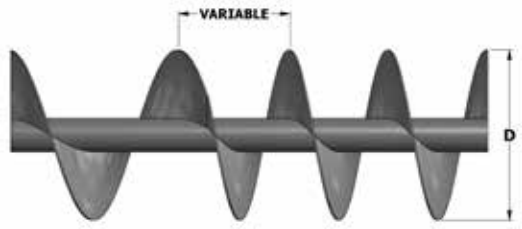
BASIC CONVEYOR FLIGHT AND PITCH TYPES

STANDARD PITCH, SINGLE FLIGHT



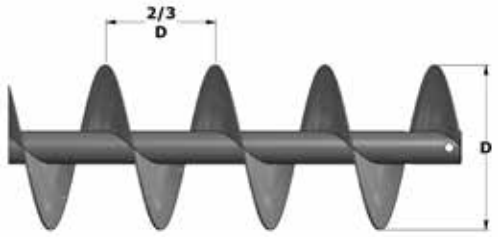
Standard pitch, single flight screws have the outside diameter equal to the pitch and are the most common screw type used for horizontal screw conveyors and inclines up to 10-degrees.

VARIABLE PITCH, SINGLE FLIGHT



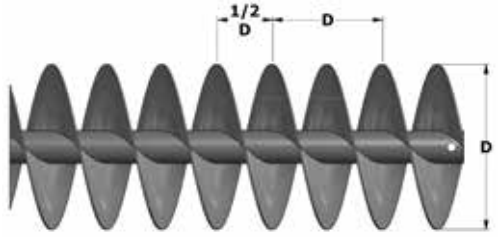
Variable pitch, single flight screws have increasing pitch with every flight and are used in screw feeders to provide uniform withdrawal of free-flowing bulk materials from hoppers, bins or silos.

SHORT PITCH, SINGLE FLIGHT



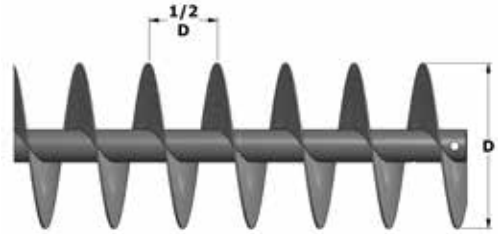
Short pitch, single flight screws have the pitch reduced to 2/3 of the diameter and are most commonly used in inclined and vertical screw conveyor applications. Short pitch is also used in some variable pitch screw feeder applications.

STANDARD PITCH, DOUBLE FIGHT



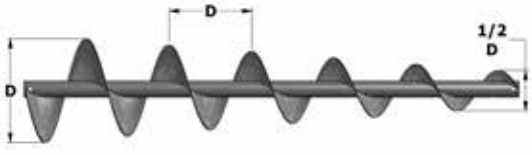
Standard pitch, double flight screws have the outside diameter equal to the pitch, very similar to standard pitch, single flight. A second set of flights is added 180-degrees apart from the first set of flights to provide a more even discharge of bulk materials.

HALF PITCH, SINGLE FLIGHT



Half pitch, single flight screws have the pitch reduced to 1/2 of the diameter and are commonly used in inclined and vertical screw conveyor applications. 1/2 pitch is also used in some variable pitch screw feeder applications.

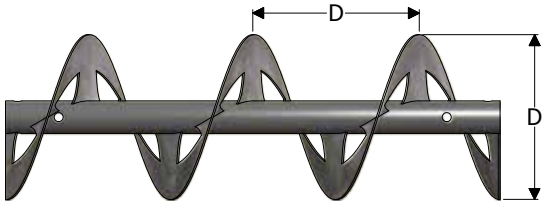
STANDARD PITCH, TAPERED SINGLE FLIGHT



Standard pitch, single tapered flight screws have a tapered outside diameter increasing from 1/2 to full diameter and are used in screw feeders to provide uniform withdrawal of free-flowing bulk materials from hoppers, bins or silos.

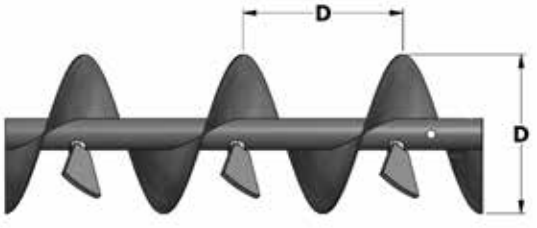
BASIC CONVEYOR FLIGHT AND PITCH TYPES

STANDARD PITCH, SINGLE RIBBON FLIGHT



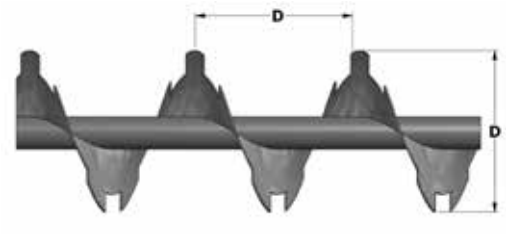
Standard pitch, single ribbon flight screws have a space within the flight and around the center pipe to minimize the collection and buildup of viscous and sticky bulk materials.

STANDARD PITCH, SINGLE FLIGHT WITH PADDLES



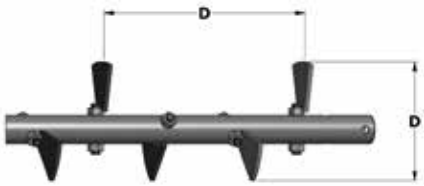
Standard pitch, single flight with paddles screws have adjustable paddles located between screw flights. Up to four paddles per pitch can be added for gentle and thorough mixing of bulk materials.

STANDARD PITCH, SINGLE CUT FLIGHT



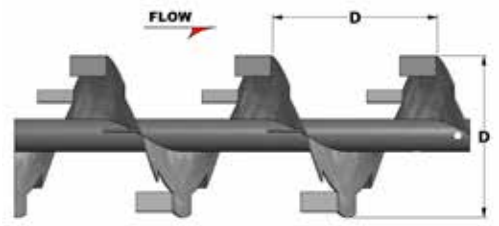
Standard pitch, single cut flight screws are notched at regular intervals on the outer edge to promote mixing and agitation of bulk materials.

STANDARD PITCH, PADDLE



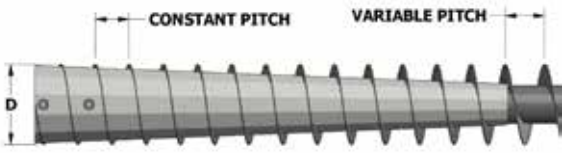
Standard pitch, paddle screws have adjustable paddles located in a helix around the diameter of the center pipe. Up to four paddles per pitch can be used for aggressive mixing and controlled flow of bulk materials.

STANDARD PITCH, SINGLE CUT AND FOLDED FLIGHT



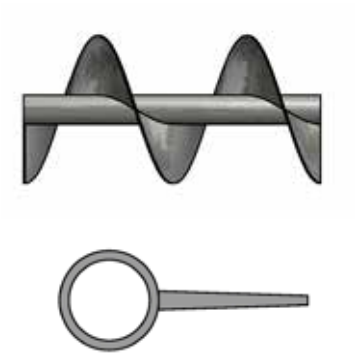
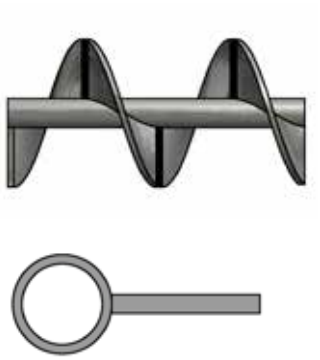
Standard pitch, single cut and folded flight screws are notched at regular intervals on the outer edge and have lifting paddles to promote aggressive mixing and agitation of bulk materials.

MASS FLOW

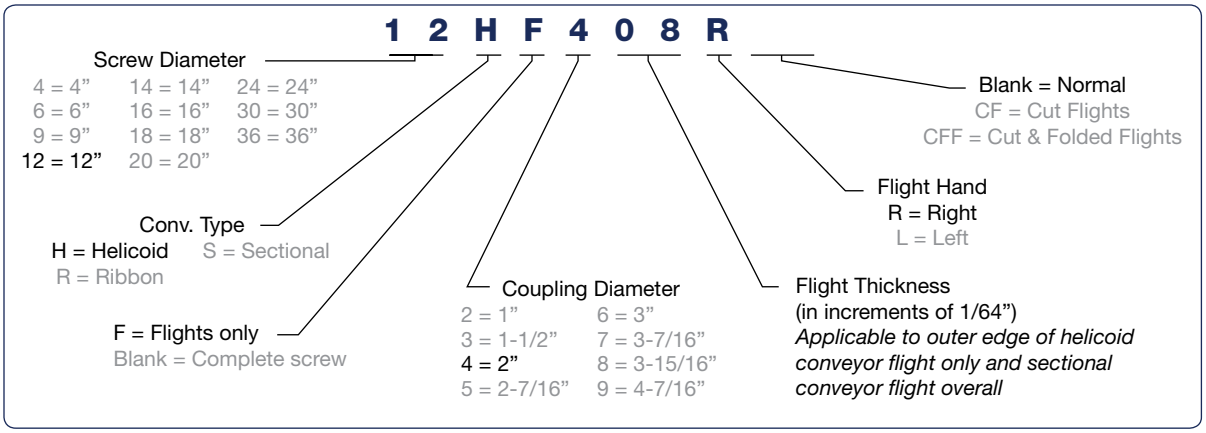


Mass flow screws utilize a combination of internal cone and variable pitch to provide increasing volume with every flight and are used in screw feeders to provide uniform withdrawal of bulk materials from hoppers, bins or silos.

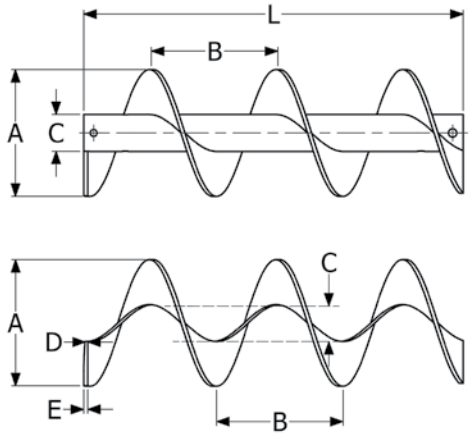
CONVEYOR SCREWS: HELICOID VERSUS SECTIONAL

HELICOID FLIGHT SCREW CONVEYORS	SECTIONAL FLIGHT SCREW CONVEYORS
	
Helicoid flighting is cold rolled from special steel into a continuous helix that produces a work-hardened, smoothly finished flighting surface. It is very cost-effective and provides superior strength with diameter, pitch and thickness closely controlled. Helicoid screws are manufactured by mounting helicoid flighting on a center pipe and fastening by intermittent welds. Continuous welding on the carrying side or both sides is also available. Internal collars are inserted in each end and plug welded to accommodate shafts. Screws are structurally reinforced at the ends by end lugs.	Sectional flighting is manufactured from steel plate and formed into a helix. Sectional flighting is available in heavier thicknesses than helicoid flighting and used in more abrasive applications. Sectional screws are manufactured by mounting sectional flighting on a center pipe, butt welding each flight together and fastening by intermittent welds. Continuous welding on the carrying side or both sides is also available. Internal collars are inserted in each end and plug welded to accommodate shafts. Screws can be structurally reinforced at the ends by end lugs.

NOMENCLATURE



HELICOID SCREW AND FLIGHTING

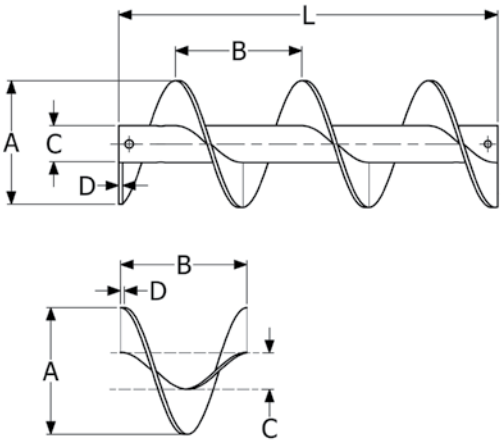


A	B	Part Number	Screw Coupling Dia	Pipe Sch 40		L	A		B		D	E	Average Weight Per Ft. (Lbs./Ft.)	
Screw Dia.	Pitch			Size	C Pipe OD	Std. Length	Diameter Tolerance		Pitch Tolerance		Flight Thickness		Complete Screw	Flight Only
							Plus	Minus	Plus	Minus	Root	Tip		
4”	4”	4H#206•*	1”	1-1/4”	1-21/32”	9’ - 10-1/2”	1/16”	1/8”	1/2”	1/4”	3/16”	3/32”	4	2
6”	6”	6H#304•*	1-1/2”	2”	2-3/8”	9’ - 10”	1/16”	3/16”	1/2”	1/4”	1/8”	1/16”	5	2
		6H#308•*									1/4”	1/8”	6	3
		6H#312•*									3/8”	3/16”	7	5
9”	9”	9H#306•*	1-1/2”	2”	2-3/8”	9’ - 10”	1/16”	3/16”	3/4”	1/4”	3/16”	3/32”	7	3
		9H#312•*									3/8”	3/16”	10	7
		9H#406•*	2”	2-1/2”	2-7/8”			3/16”			3/16”	3/32”	9	3
		9H#412•*						1/4”			3/8”	3/16”	12	6
		9H#414•*									7/16”	7/32”	13	7
12”	12”	12H#408•*	2”	2-1/2”	2-7/8”	11’ - 10”	1/8”	5/16”	1”	1/4”	1/4”	1/8”	12	6
		12H#412•*									3/8”	3/16”	15	9
		12H#508•*	2-7/16”	3”	3-1/2”	11’ - 9”					1/4”	1/8”	14	6
		12H#512•*									3/8”	3/16”	17	8
		12H#614•*	3”	3-1/2”	4”	11’ - 9”	1/8”	3/8”	1”	1/4”	7/16”	7/32”	19	9
14”	14”	14H#508•*	2-7/16”	3”	3-1/2”	11’ - 9”	1/8”	5/16”	1”	1/4”	1/4”	1/8”	14	7
		14H#614•*	3”	3-1/2”	4”	11’ - 9”	1/8”	3/8”	1”	1/4”	7/16”	7/32”	22	11
16”	16”	16H#610•*	3”	3-1/2”	4”	11’ - 9”	1/8”	3/8”	1-1/2”	1/4”	5/16”	5/32”	19	10
		16H#614•*		4”	4-1/2”						7/16”	7/32”	24	13

 # F = Flighting Only, Blank = Screw • R = Right Hand Flighting, L = Left Hand Flighting

** Only Right Hand Flighting is a KWS Stock Component*

SECTIONAL SCREW AND FLIGHTING



A	B	Part Number	Screw Coupling Dia	Pipe Sch 40		L	A		B		D	Average Weight	
Screw Dia.	Pitch			Size	C Pipe OD	Std. Length	Diameter Tolerance		Pitch Tolerance		Flight Thickness	Complete Screw (Lbs./Ft.)	Flight Only (Lbs./ea.)
							Plus	Minus	Plus	Minus			
4”	NOT AVAILABLE												
6”	6”	6S#307•	1-1/2”	2”	2-3/8”	9’ - 10”	1/16”	3/16”	3/8”	1/4”	12 Ga.	6	1
		6S#309•									10 Ga.	6	2
		6S#312•									3/16”	7	2
		6S#316•*									1/4”	8	3
9”	9”	9S#307•	1-1/2”	2”	2-3/8”	9’ - 10”	1/16”	3/16”	1/2”	1/4”	12 Ga.	6	3
		9S#309•									10 Ga.	7	4
		9S#312•									3/16”	9	5
		9S#316•*									1/4”	11	6
		9S#324•*									3/8”	14	9
		9S#407•	2”	2-1/2”	2-7/8”	9’ - 10”	1/16”	3/16”	1/2”	1/4”	12 Ga.	9	3
		9S#409•						3/16”			10 Ga.	10	4
		9S#412•						3/16”			3/16”	11	5
		9S#416•						1/4”			1/4”	13	6
		9S#424•*						1/4”			3/8”	16	9
12”	12”	12S#409•	2”	2-1/2”	2-7/8”	11’ - 10”	1/8”	5/16”	3/4”	1/4”	10 Ga.	11	6
		12S#412•									3/16”	13	7
		12S#416•*									1/4”	15	14
		12S#424•*									3/8”	19	20
		12S#509•	2-7/16”	3”	3-1/2”	11’ - 9”	1/8”	5/16”	3/4”	1/4”	10 Ga.	13	6
		12S#512•									3/16”	15	7
		12S#516•									1/4”	17	10
		12S#524•*									3/8”	21	15
		12S#612•	3”	3-1/2”	4”	11’ - 9”	1/8”	5/16”	3/4”	1/4”	3/16”	16	7
		12S#616•						5/16”			1/4”	18	10
		12S#624•*						3/8”			3/8”	22	13

 # F = Flighting Only, Blank = Screw • R = Right Hand Flighting, L = Left Hand Flighting

** Only Right Hand Flighting is a KWS Stock Component*

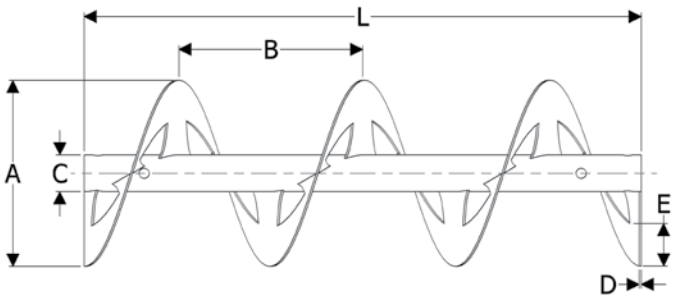
SECTIONAL SCREW AND FLIGHTING

A	B	Part Number	Screw Coupling Dia	Pipe Sch 40		L	A		B		D	Average Weight	
Screw Dia.	Pitch			Size	C Pipe OD	Std. Length	Diameter Tolerance		Pitch Tolerance		Flight Thickness	Complete Screw (Lbs./Ft.)	Flight Only (Lbs./ea.)
							Plus	Minus	Plus	Minus			
14”	14”	14S#509•	2-7/16”	3”	3-1/2”	11’ - 9”	1/8”	5/16”	3/4”	1/4”	10 Ga.	14	7
		14S#512•									3/16”	16	10
		14S#516•*									1/4”	19	13
		14S#524•									3/8”	23	20
		14S#612•	3”	3-1/2”	4”	11’ - 9”	1/8”	5/16”	3/4”	1/4”	3/16”	18	11
		14S#616•						5/16”			1/4”	20	13
		14S#624•*						3/8”			3/8”	25	20
16”	16”	16S#609•	3”	3-1/2”	4”	11’ - 9”	1/8”	3/8”	3/4”	1/4”	10 Ga.	15	10
		16S#612•						3/8”			3/16”	19	14
		16S#616•						3/8”			1/4”	22	18
		16S#624•*						3/8”			3/8”	27	26
		16S#632•						1/2”			1/2”	33	35
18”	18”	18S#612•	3”	3-1/2”	4”	11’ - 9”	3/16”	3/8”	3/4”	1/2”	3/16”	20	18
		18S#616•						3/8”			1/4”	23	24
		18S#624•*						3/8”			3/8”	29	35
		18S#632•						1/2”			1/2”	36	46
		18S#712•	3-7/16”	4”	4-1/2”	11’ - 8”	3/16”	3/8”	3/4”	1/2”	3/16”	22	18
		18S#716•						3/8”			1/4”	25	24
		18S#724•						3/8”			3/8”	31	35
		18S#732•						1/2”			1/2”	37	46
20”	20”	20S#612•	3”	3-1/2”	4”	11’ - 9”	3/16”	3/8”	7/8”	1/2”	3/16”	21	20
		20S#616•						3/8”			1/4”	25	28
		20S#624•*						3/8”			3/8”	32	40
		20S#632•						1/2”			1/2”	39	56
		20S#712•	3-7/16”	4”	4-1/2”	11’ - 8”	3/16”	3/8”	7/8”	1/2”	3/16”	23	20
		20S#716•						3/8”			1/4”	26	28
		20S#724•*						3/8”			3/8”	33	40
		20S#732•						1/2”			1/2”	40	56
24”	24”	24S#712•	3-7/16”	4”	4-1/2”	11’ - 8”	3/16”	3/8”	7/8”	1/2”	3/16”	25	38
		24S#716•						3/8”			1/4”	30	42
		24S#724•*						3/8”			3/8”	38	63
		24S#732•						1/2”			1/2”	46	84
30”	30”	30S#816•	3-15/16”	5”	5-9/16”	11’ - 8”	3/16”	3/8”	7/8”	1/2”	1/4”	38	54
		30S#824 •						3/8”			3/8”	50	70
		30S#832•						1/2”			1/2”	59	83
36”	36”	36S#916•	4-7/16”	6”	6-5/8”	11’ - 7”	3/16”	3/8”	7/8”	1/2”	1/4”	47	63
		36S#924•						3/8”			3/8”	60	80
		36S#932•						1/2”			1/2”	73	98

 # F = Flighting Only, Blank = Screw • R = Right Hand Flighting, L = Left Hand Flighting

** Only Right Hand Flighting is a KWS Stock Component*

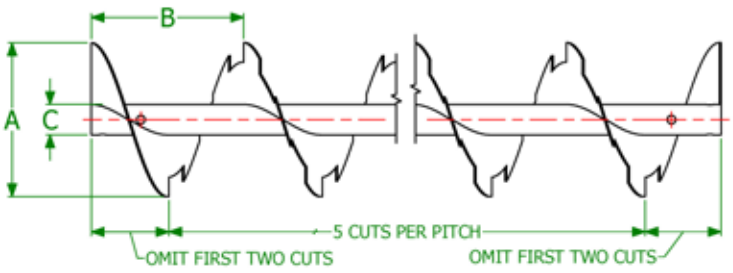
RIBBON SCREW



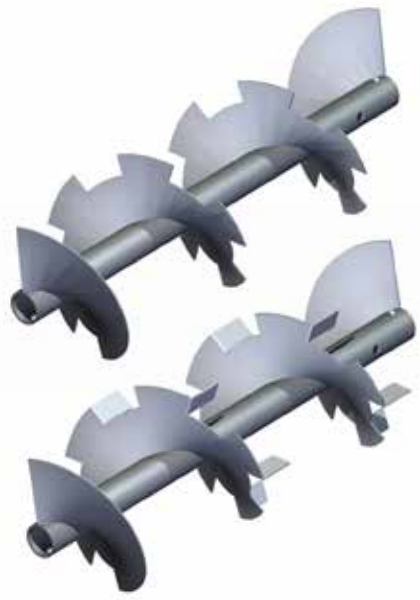
A	B	Part Number	Screw Coupling Dia	Pipe Sch 40		L	A		B		D	E	Average Weight	
Screw Dia.	Pitch			Size	C Pipe OD	Std. Length	Diameter Tolerance Plus	Diameter Tolerance Minus	Pitch Tolerance Plus	Pitch Tolerance Minus	Flight Thickness	Flight Width	Complete Screw (Lbs./Ft.)	Flight Only (Lbs./ea.)
4”	NOT AVAILABLE													
6”	6”	6R312•	1-1/2”	2”	2-3/8”	9' - 10”	1/16”	3/16”	3/8”	1/4”	3/16”	1”	7	2
9”	9”	9R316•	1-1/2”	2”	2-3/8”	9' - 10”	1/16”	3/16”	1/2”	1/4”	1/4”	1-1/2”	10	5
		9R424•	2”	2-1/2”	2-7/8”			1/4”			3/8”		15	8
12”	12”	12R416•	2”	2-1/2”	2-7/8”	11’ - 10”	1/8”	5/16”	3/4”	1/4”	1/4”	2”	14	13
		12R424•									3/8”	2-1/2”	18	19
		12R524•	2-7/16”	3”	3-1/2”	11’ - 9”							20	14
		12R624•	3”	3-1/2”	4”			3/8”					21	12
14”	14”	14R524•	2-7/16”	3”	3-1/2”	11’ - 9”	1/8”	5/16”	3/4”	1/4”	3/8”	2-1/2”	22	19
		14R624•	3”	3-1/2”	4”			3/8”					24	19
16”	16”	16R616•	3”	3-1/2”	4”	11’ - 9”	1/8”	3/8”	3/4”	1/4”	1/4”	2-1/2”	21	17
		16R624•									3/8”		26	25
18”	18”	18R624•	3”	3-1/2”	4”	11’ - 9”	3/16”	3/8”	3/4”	1/2”	3/8”	3”	28	34
		18R724•	3-7/16”	4”	4-1/2”	11’ - 8”							30	34
20”	20”	20R624•	3”	3-1/2”	4”	11’ - 9”	3/16”	3/8”	7/8”	1/2”	3/8”	3”	31	39
		20R724•	3-7/16”	4”	4-1/2”	11’ - 8”							32	39
24”	24”	24R724•	3-7/16”	4”	4-1/2”	11’ - 8”	3/16”	3/8”	7/8”	1/2”	3/8”	3”	37	62
30”	30”	30R824•	3-15/16”	5”	5-9/16”	11’ - 8”	3/16”	3/8”	7/8”	1/2”	3/8”	4”	49	69
36”	36”	36R924•	4-7/16”	6”	6-5/8”	11’ - 7”	3/16”	3/8”	7/8”	1/2”	3/8”	4”	59	79

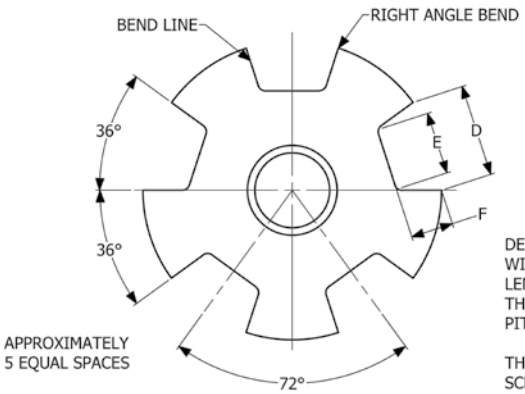
• R = Right Hand Flighting, L = Left Hand Flighting

CUT SCREW / CUT AND FOLDED SCREW



FOR INFORMATION ON TOLERANCES, PIPE SIZES, AND THICKNESSES REFER TO SECTIONAL SCREWS





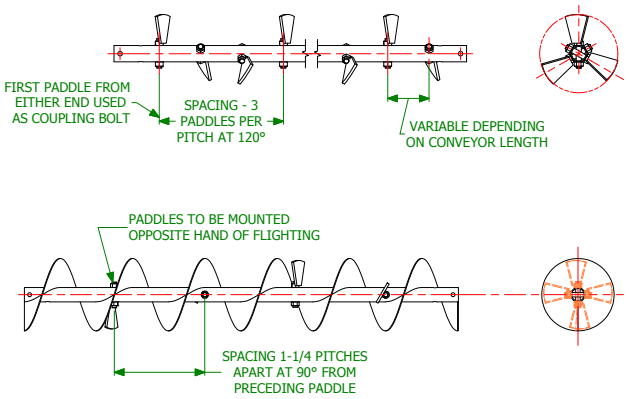
DEPTH OF CUT "F" IS ONE HALF THE FLIGHT WIDTH FOR NORMAL MAXIMUM PIPE SIZE. LENGTHS "D" & "E" ARE CALCULATED FROM THE DEVELOPED O.D. FOR A STANDARD PITCH.

THIS ALSO APPLIES TO CUT AND FOLDED SCREW AS WELL

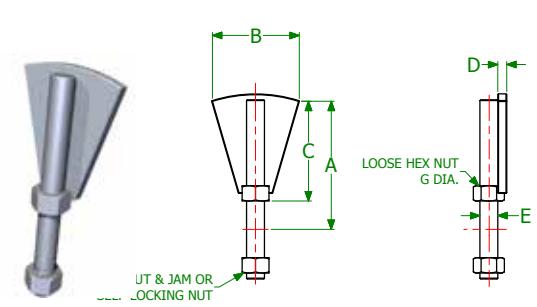
A	B			Pipe Sch 40		L	A		B			D	E	F	Average Weight	
Screw Dia.	Pitch	Part Number	Screw Coupling Dia	Size	C Pipe OD	Std. Length	Diameter Tolerance Plus	Diameter Tolerance Minus	Pitch Tolerance Plus	Pitch Tolerance Minus	Flight Thickness	Length of Upper Cut	Length of Lower Cut	Depth of Cut	Complete Screw (Lbs./Ft.)	Flight Only (Lbs./ea.)
4”	NOT AVAILABLE															
6”	6”	6S312•-#	1-1/2”	2”	2-3/8”	9' - 10”	1/16”	3/16”	3/8”	1/4”	3/16”	2”	1-1/2”	7/8”	7	2
9”	9”	9S316•-#	1-1/2”	2”	2-3/8”	9' - 10”	1/16”	3/16”	1/2”	1/4”	1/4”	3”	2-1/8”	1-1/2”	11	6
		9S424•-#	2”	2-1/2”	2-7/8”			1/4”			3/8”				16	9
12”	12”	12S416•-#	2”	2-1/2”	2-7/8”	11' - 10”	1/8”	5/16”	3/4”	1/4”	1/4”	4”	2-3/4”	2”	15	14
		12S424•-#									3/8”				19	20
		12S524•-#	2-7/16”	3”	3-1/2”	11' - 9”									21	15
		12S624•-#	3”	3-1/2”	4”			3/8”							22	13
14”	14”	14S524•-#	2-7/16”	3”	3-1/2”	11' - 9”	1/8”	5/16”	3/4”	1/4”	3/8”	4-5/8”	3-1/8”	2-1/2”	23	20
		14S624•-#	3”	3-1/2”	4”			3/8”							25	20
16”	16”	16S616•-#	3”	3-1/2”	4”	11' - 9”	1/8”	3/8”	3/4”	1/4”	1/4”	5-1/4”	3-1/2”	3”	22	18
		16S624•-#									3/8”				27	26
18”	18”	18S624•-#	3”	3-1/2”	4”	11' - 9”	3/16”	3/8”	3/4”	1/2”	3/8”	6”	3-7/8”	3-3/8”	29	35
		18S724•-#	3-7/16”	4”	4-1/2”	11' - 8”									31	35
20”	20”	20S624•-#	3”	3-1/2”	4”	11' - 9”	3/16”	3/8”	7/8”	1/2”	3/8”	6-5/8”	4-1/4”	3-7/8”	32	40
		20S724•-#	3-7/16”	4”	4-1/2”	11' - 8”									33	40
24”	24”	24S724•-#	3-7/16”	4”	4-1/2”	11' - 8”	3/16”	3/8”	7/8”	1/2”	3/8”	7-7/8”	4-7/8”	4-7/8”	38	63
30”	30”	30S824•-#	3-15/16”	5”	5-9/16”	11' - 8”	3/16”	3/8”	7/8”	1/2”	3/8”	9-9/32”	5-23/32”	5-3/4”	50	70
36”	36”	36S924•-#	4-7/16”	6”	6-5/8”	11' - 7”	3/16”	3/8”	7/8”	1/2”	3/8”	11-1/8”	7-3/16”	6-3/8”	60	80

• R = Right Hand Flighting, L = Left Hand Flighting # CF = Cut Flight Screw, CFF = Cut and Folded Flight Screw

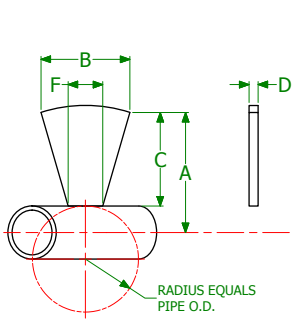
PADDLE SCREW CONVEYORS



PADDLES



STYLE 1: ADJUSTABLE



STYLE 2: WELDED

Screw Dia.	Part Number	Cplg.Dia.	Pipe Size	A	B	C	D	E	F	G	Wt. Each Paddle (Lbs.)
4”	PAD42	1”	1-1/4”	2”	1-1/2”	1-3/16”	3/16”	3/8”	7/8”	1/2”	0.25
6”	PAD63	1-1/2”	2”	3”	2-1/16”	1-13/16”	1/4”	1/2”	1-7/16”	5/8”	0.50
9”	PAD93 PAD94	1-1/2” 2”	2” 2-1/2”	4-1/2”	2-3/4”	3-5/16” 3-1/16”	1/4”	1/2” 5/8”	1-1/2” 1-3/4”	5/8” 3/4”	0.50 0.75
12”	PAD124 PAD125 PAD126	2” 2-7/16” 3”	2-1/2” 3” 3-1/2”	6”	3-11/16”	4-9/16” 4-1/4” 4”	3/8”	5/8” 5/8” 3/4”	1-3/4” 1-7/8” 2”	3/4” 3/4” 7/8”	1.50 1.75 2.00
14”	PAD145 PAD146	2-7/16” 3”	3” 3-1/2”	7”	4-1/4”	5-1/4” 5”	3/8”	5/8” 3/4”	2” 2-1/8”	3/4” 7/8”	2.25 2.50
16”	PAD166 PAD166	3” 3”	3-1/2” 4”	8”	4-15/16”	6” 5-3/4”	3/8”	3/4” 7/8”	2-1/4” 2-3/8”	7/8” 1”	3.25 3.50
18”	PAD186 PAD187	3” 3-7/16”	3-1/2” 4”	9”	5-3/8”	7” 6-3/4”	3/8”	3/4” 7/8”	2-1/8” 2-1/4”	7/8” 1”	4.00 4.25
20”	PAD206 PAD207	3” 3-7/16”	3-1/2” 4”	10”	6-1/8”	8” 7-3/4”	3/8”	3/4” 7/8”	2-7/16” 2-9/16”	7/8” 1”	4.75 5.00
24”	PAD247	3-7/16”	4”	12-1/8”	7-3/8”	9-7/8”	1/2”	7/8”	2-11/16”	1”	6.75
30”	PAD308	3-15/16”	5”	15”	9-1/2”	12”	1/2”	7/8”	3-1/4”	1”	7.50
36”	PAD369	4-7/16”	6”	18”	11-3/8”	15”	5/8”	7/8”	3-9/16”	1”	9.25

SCREW CONVEYOR SURFACE FINISHES

The surface finish of the interior and exterior of a screw conveyor can be very important to the success of the overall bulk material process. Certain bulk materials such as chemicals or food products require special finishes to maintain the integrity of the bulk material and prevent contamination. Understanding the bulk material process is very important to determining the proper surface finish of a screw conveyor.

Most industrial applications such as conveying limestone, biosolids or offal require no special polishing of the welds, flights or pipe on the interior of a screw conveyor. Likewise, the exterior of a screw conveyor requires no special polishing of the welds or surfaces of the troughs, trough ends or covers. Pits and crevices are allowed at welded joints because the bulk material will not contaminate or corrode.

Special industrial applications such as conveying food ingredients or specialty chemicals require special polishing of the welds, flights and pipe on the interior of a screw conveyor. Continuous welding of the flights to both sides of the center pipe is typically required to eliminate any pits or crevices. The surfaces of the flights, welds and pipe are then polished to a specific grit finish to meet the requirements of the application. The exterior of a screw conveyor may require special welding and polishing of the troughs, trough ends and covers. No pits or crevices are allowed at welded joints because the bulk material could be contaminated or cause corrosion.

The KWS screw conveyor surface finishes shown below address the needs of almost every bulk material application. Surface finishes are called out for the interior and exterior of a screw conveyor including the welds, flights, pipe, troughs, trough ends and covers.

The KWS screw conveyor surface finishes are much more comprehensive when compared to the CEMA surface finishes. KWS addresses the surface finish requirements of the welds, flights, pipe, troughs, trough ends and covers while CEMA only addresses the surface finish of the welds on a screw conveyor. The CEMA surface finish call outs are incomplete and can be confusing to the Customer, possibly creating a problem.

Our goal at KWS is to exceed the expectations of our Customers by providing screw conveyors with the proper surface finish for the application and process.

SCREW CONVEYOR SURFACE FINISHES

Screw Assembly:

KWS Industrial Finish 1S
Weld: Weld spatter and slag removed, 40 to 50 grit finish, pits and crevices permissible (CEMA II)
Flight Surface: Mill finish, no grinding or polishing on steel surfaces
Pipe: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 2S
Weld: Weld spatter and slag removed, 80 to 100 grit finish, pits and crevices permissible (CEMA III)
Flight Surface: Mill finish, no grinding or polishing on steel surfaces
Pipe: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 3S
Weld: Weld spatter and slag removed, welds as laid, no pits or crevices permissible (No CEMA equivalent)
Flight Surface: Mill finish, no grinding or polishing on steel surfaces
Pipe: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 1SP
Weld, Flight Surface and Pipe: 150 grit finish on all surfaces, no pits or crevices permissible (No CEMA Equivalent)

Trough Assembly (Including Trough Ends and Covers)

KWS Industrial Finish 1T – Interior and/or Exterior
Weld: Weld spatter and slag removed, 40 to 50 grit finish, pits and crevices permissible (CEMA II)
Trough Surface: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 2T – Interior and/or Exterior
Weld: Weld spatter and slag removed, 80 to 100 grit finish, pits and crevices permissible (CEMA III)
Trough Surface: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 3T – Interior and/or Exterior
Weld: Weld spatter and slag removed, welds as laid, no pits or crevices permissible (No CEMA equivalent)
Trough Surface: Mill finish, no grinding or polishing on steel surfaces

KWS Industrial Finish 1TP – Interior Only
Weld: 150 grit finish, no pits or crevices permissible (CEMA IV)
Trough Surface: Mill finish, no grinding or polishing on 2B surfaces, plate surfaces to be polished to 150 grit finish

SCREW CONVEYOR SURFACE FINISHES

KWS Industrial Finish 2TP – Interior Only
Weld and Trough Surface: 150 grit finish on all surfaces, no pits or crevices permissible (No CEMA Equivalent)

Standard Exterior Paint Finish for Carbon Steel Components and Assemblies
(Up to 220-Degrees F)
Surface Preparation: Hand tool clean per SSPC-SP2
Paint: One shop coat of KWS gray enamel, 2 to 3 mils minimum DFT

Standard Exterior Paint Finish for Carbon Steel Components and Assemblies
(Between 220 and 600-Degrees F)
Surface Preparation: Near white blast per SSPC-SP10
Paint: One shop coat of KWS high temperature paint, 2 to 3 mils minimum DFT

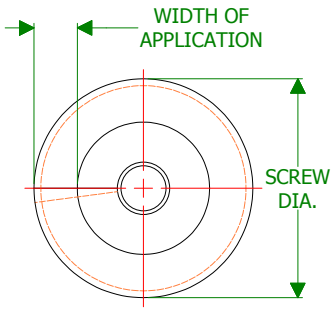
KWS HARDSURFACING FOR ABRASIVE APPLICATIONS

KWS provides screw conveyors manufactured from many commercially available abrasion-resistant materials. Metals such as AR-235, AR-400 and AR-500 plate are used in many abrasive applications. Hardsurfacing, also known as hardfacing, is the application of wear-resistant metals to the flight surface by means of welding. KWS hardsurfaced screws are designed to eliminate excessive wear on flights while conveying abrasive bulk materials. A hardsurface alloy is typically welded to the carrying side of the flighting face. When handling extremely abrasive bulk materials such as glass cullet or wood bark, the non-carrying side and outside diameter of the flight as well as the outer surface of the center pipe can be hardsurfaced to prevent wear of the softer base materials.

Hardsurfacing materials manufactured by Postle Industries, Allied Welding and Stellite are commonly used by KWS. Many other hardsurface alloys are available. The chart provided shows the standard width of hardsurfacing for a specific screw conveyor diameter. Please consult KWS Engineering or your KWS Salesperson to determine the best solution for your application.

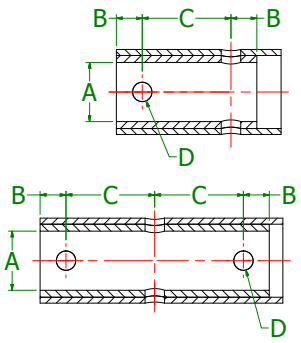
Additional consideration must be given to selecting the proper coupling shafts and hanger bearings for an abrasive application. Hard iron bearings and hardened coupling shafts are sufficient for most moderately abrasive applications such as handling crushed limestone or Portland cement. For severely abrasive applications such as handling alumina or flyash, Stellite sleeved bearings and couplings shafts are typically required.

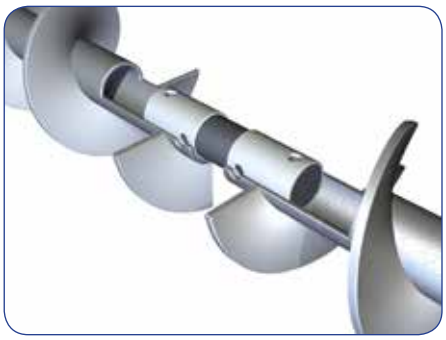
Screw Dia.	Width of Application
4”	3/4”
6”	1”
9”	1-1/2”
12”	2”
14”	2”
16”	2-1/2”
18”	2-1/2”
20”	3”
24”	3”
30”	4”
36”	4”



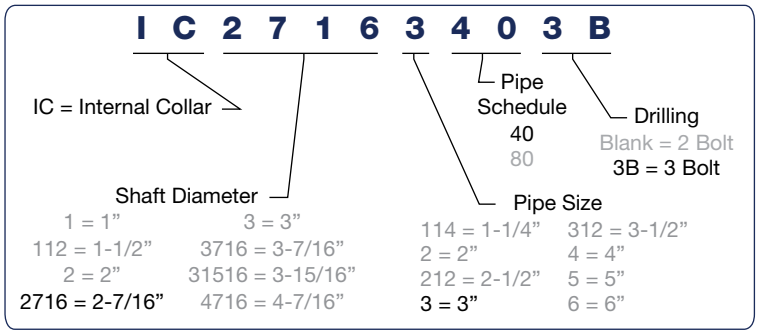
INTERNAL COLLARS

Internal collars, sometimes referred to as bushings, are used to reduce the inside diameter of the center pipe of a screw to match standard CEMA shaft sizes and to increase the torque rating of the CEMA bolted connection. For standard pipe sizes, internal collars are manufactured from special seamless tubing and match fit to the bore of the pipe of a screw. Internal collars are plug welded in place for a permanent connection. For larger than standard pipe sizes KWS creates a shrink fit connection between the internal collar and pipe. Then, the internal collars are plug welded in place for a permanent connection.





NOMENCLATURE



Part Number	A		B	C	D	Weight (Lbs.)	
	Bore Dimension		Spacing 1st Bolt	Bolt Centers	Nominal Bolt Size	2 Bolt	3 Bolt
	Min.	Max.					
IC111440*	1.005"	1.016"	1/2"	2"	3/8"	3	4
IC112240*	1.505"	1.516"	7/8"	3"	1/2"	3	4
IC221240*	2.005"	2.016"	7/8"	3"	5/8"	3	4
IC2716340*	2.443"	2.458"	15/16"	3"	5/8"	4	7
IC331240*	3.005"	3.025"	1"	3"	3/4"	4	7
IC3440*	3.005"	3.025"	1"	3"	3/4"	4	7
IC3716440*	3.443"	3.467"	1-1/2"	4"	7/8"	8	12
IC31516540	3.943"	3.967"	1-11/16"	4"	1-1/8"	17	27
IC4716640	4.443"	4.467"	1-7/8"	4"	1-1/4"	35	50

** KWS Stock Component in 2-bolt only*

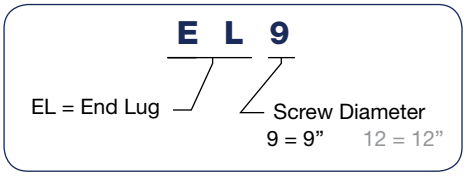
END LUGS

End lugs are used to provide extra support to the first and last flight of a screw section and are located on the non-carrying side of the flight. End lugs are manufactured from heavy-gauge steel and continuously welded to the flight and center pipe of a screw section. End lugs are designed to provide maximum support with the least obstruction of material flow.

Screw Dia.	Part Number
6" to 9" 12" to 16"	EL9* EL12*

** KWS Stock Component*

NOMENCLATURE



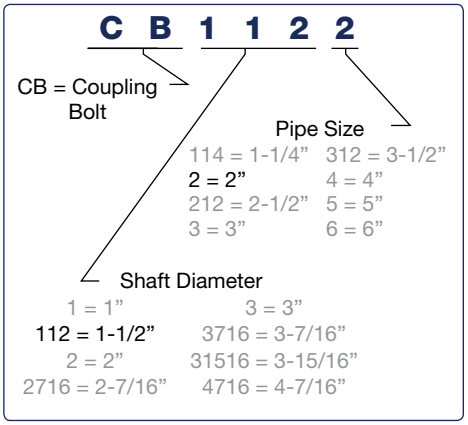
COUPLING BOLTS

Coupling bolts are manufactured from various high-strength carbon steels and 18-8 stainless steels. KWS stocks Grade 5 carbon steel and 18-8 stainless steel coupling bolts. The shank length of a coupling bolt is equal to the measured outside diameter of the center pipe of the screw to provide maximum shear area and strength. It is very important to only use the correct coupling bolt for corresponding screw and pipe size.

Cplg. Dia.	Outside Pipe Dia	Pipe Size (Sch 40)	Bolt Size	Part Number	Wt. Each (Lbs.)
1"	1-11/16"	1-1/4"	3/8" x 2-1/16"	CB1114*	0.13
1-1/2"	2-3/8"	2"	1/2" x 3"	CB1122*	0.32
2"	2-7/8"	2-1/2"	5/8" x 3-5/8"	CB2212*	0.56
2-7/16"	3-1/2"	3"	5/8" x 4-3/8"	CB27163*	0.63
3"	4"	3-1/2"	3/4" x 5"	CB3312*	0.91
3"	4-1/2"	4"	3/4" x 5-1/2"	CB34*	1.05
3-7/16"	4-1/2"	4"	7/8" x 5-1/2"	CB37164*	1.59
3-15/16"	5-9/16"	5"	1-1/8" x 7-1/16"	CB315165	3.14
4-7/16"	6-5/8"	6"	1-1/4" x 7-1/2"	CB47166	4.62

** KWS Stock Component*

NOMENCLATURE



HANGERS

Hangers are intermediate support brackets located between screw sections along the length of a screw conveyor. Hangers allow for the use of multiple screw sections. Many different hanger styles are available, depending on the application. Style 216 and 226 hangers are the most widely used and are in stock at KWS. Hangers are generally used when conveying non-abrasive and free-flowing bulk materials. The bulk material must be able to flow around the hanger. Hangers are not recommended when conveying abrasive and sluggish bulk materials.

NOMENCLATURE

H G R 1 2 2 2 6 2 7 1 6

- HGR = Hanger
- Screw Diameter: 4 = 4”, 6 = 6”, 9 = 9”, 12 = 12”, 14 = 14”, 16 = 16”, 18 = 18”, 20 = 20”, 24 = 24”, 30 = 30”, 36 = 36”
- Style: 216, 220, 226, 230, 316, 326, 660, 670
- Trough Type: Blank = U-Trough, F = Flared Trough
- Shaft Diameter: 1 = 1”, 112 = 1-1/2”, 2 = 2”, 2716 = 2-7/16”, 3 = 3”, 3716 = 3-7/16”, 31516 = 3-15/16”, 4716 = 4-7/16”
- Blank = Standard, GP = Drilled for use with grease pipe

Style 216

Style 216 hangers are an inside flush mounted hanger. The double body bar provides extra rigidity for heavier screw sections in more demanding applications. The flush mounted top bar bolts to the inside of the trough flanges and allows for the use of standard trough covers.

Style 220

Style 220 hangers are a top mounted hanger. The combination body bar provides rigidity for light and medium duty applications while allowing minimal obstruction of material flow. The top mounted top bar bolts to the top of the trough flanges and requires the use of special covers.

Style 226

Style 226 hangers are an inside flush mounted hanger. The combination body bar provides rigidity for light and medium duty applications while allowing minimal obstruction of material flow. The flush mounted top bar bolts to the inside of the trough flanges and allows for the use of standard trough covers.

HANGERS

Style 230

Style 230 hangers are a top mounted hanger. The double body bar provides extra rigidity for heavier screw sections in more demanding applications. The top mounted top bar bolts to the top of the trough flanges and requires the use of special covers.

Style 316

Style 316 hangers are an inside flush mounted hanger. The top bar is self-adjusting to compensate for thermal expansion in high temperature applications. The double body bar provides extra rigidity for heavier screw sections in more demanding applications. The flush mounted top bar bolts to the inside of the trough flanges and allows for the use of standard trough covers.

Style 326

Style 326 hangers are an inside flush mounted hanger. The top bar is self-adjusting to compensate for thermal expansion in high temperature applications. The combination body bar provides rigidity for light and medium duty applications while allowing minimal obstruction of material flow. The flush mounted top bar bolts to the inside of the trough flanges and allows for the use of standard trough covers.

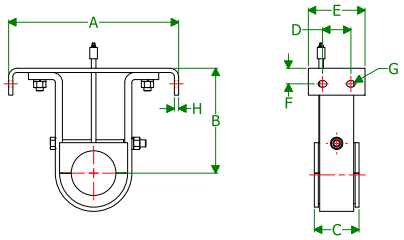
Style 660

Style 660 hangers are a top mounted hanger. Supplied with a dust-tight sealed ball bearing, style 660 hangers allow for 4-degrees of shaft misalignment and temperatures up to 240-degrees F. The pipe body bar provides rigidity for light and medium duty applications while allowing minimal obstruction of material flow. The top mounted top bar bolts to the top of the trough flanges and requires the use of special covers.

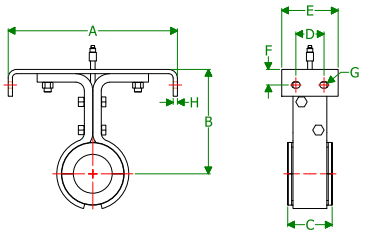
Style 670

Style 670 hangers are an inside flush mounted hanger. Supplied with a dust-tight sealed ball bearing, style 670 hangers allow for 4-degrees of shaft misalignment and temperatures up to 240-degrees F. The pipe body bar provides rigidity for light and medium duty applications while allowing minimal obstruction of material flow. The flush mounted top bar bolts to the inside of the trough flanges and allows for the use of standard trough covers.

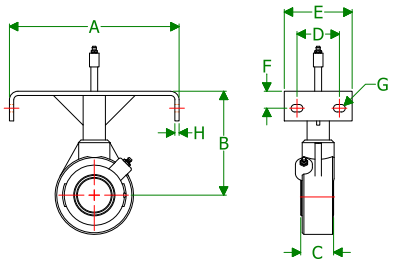
U-TROUGH HANGERS



Style 216 for U - Trough



Style 226 for U - Trough



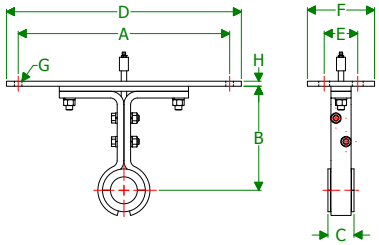
Style 670 for U - Trough

Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	Part Number	Weight (Lbs.)		
											216	226	670
4”	1”	5”	3-5/8”	1-1/2	2”	4”	5/8”	1/4”	3/16”	HGR4#1*†•	3	5	5
6”	1-1/2”	7”	4-1/2”	2”	2-1/2”	4”	3/4”	3/8”	1/4”	HGR6#112*@	5	7	7
9”	1-1/2” 2”	10”	6-1/8”	2” 2”	2-1/2”	4”	1”	3/8”	1/4”	HGR9#112*@ HGR9#2*@	7 9	9 11	8 9
12”	2” 2-7/16” 3”	13”	7-3/4”	2” 3” 3”	2-1/2”	5”	1-1/4”	1/2”	3/8”	HGR12#2*@ HGR12#2716*@ HGR12#3*@	14 18 21	16 21 28	12 20 30
14”	2-7/16” 3”	15”	9-1/4”	3” 3”	2-1/2”	5”	1-3/8”	1/2”	3/8”	HGR14#2716*@ HGR14#3*@	23 25	22 26	21 32
16”	3”	17”	10-5/8”	3”	2-1/2”	5”	1-3/8”	1/2”	3/8”	HGR16#3*@	28	39	35
18”	3” 3-7/16”	19”	12-1/8”	3” 4”	3-1/2”	5”	1-5/8”	5/8”	1/2”	HGR18#3*@ HGR18#3716*@	34 44	41 49	40 46
20”	3” 3-7/16”	21”	13-1/2”	3” 4”	3-1/2”	5”	1-5/8”	5/8”	1/2”	HGR20#3*@ HGR20#3716*@	36 47	43 51	45 52
24”	3-7/16”	25”	16-1/2”	4”	3-1/2”	5”	1-3/4”	5/8”	1/2”	HGR24#3716*@	53	67	63
30”	3-15/16”	31”	19-1/2”	4”	3-1/2”	5-1/2”	1-3/4”	3/4”	1/2”	HGR30#31516•@	68	79	68
36”	4-7/16”	37”	22-1/2”	5”	3-1/2”	5-1/2”	1-3/4”	3/4”	1/2”	HGR36#4716•@	83	88	83

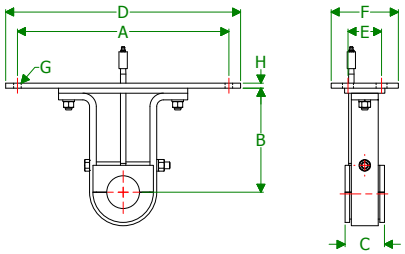
** KWS Stock Component only for 216 and 226 standard style hangers # = 216, 226, or 670*
† Not Available for Style 216 • Not Available for Style 670 @ = Blank=Standard, GP=Drilled for grease pipe

U-TROUGH HANGERS

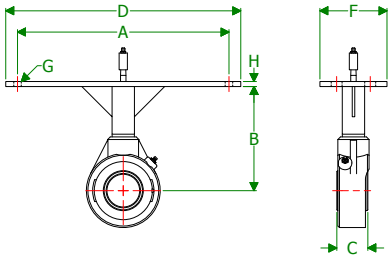
Style 220 for U - Trough



Style 230 for U - Trough



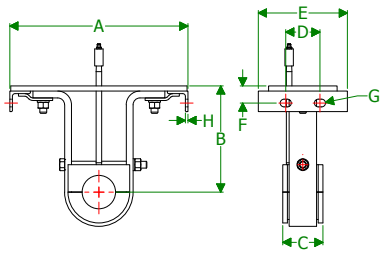
Style 660 for U - Trough



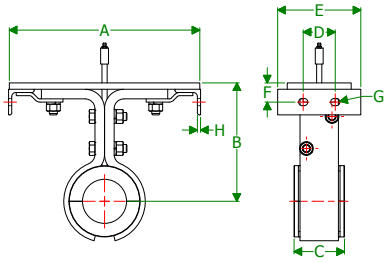
Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	Part Number	Weight (Lbs.)		
											220	230	660
4”	1”	6-1/4”	3-5/8”	1-1/2”	7-1/4”	2”	4”	1/4”	1/4”	HGR4#1†•	5	5	5
6”	1-1/2”	8-3/4”	4-1/2”	2”	9-3/4”	2-1/2”	4”	3/8”	1/4”	HGR6#112@	7	7	7
9”	1-1/2” 2”	12-1/4”	6-1/8”	2” 2”	13-1/2”	2-1/2”	4”	3/8”	1/4”	HGR9#112@ HGR9#2@	9 11	9 11	8 9
12”	2” 2-7/16” 3”	15-3/4”	7-3/4”	2” 3” 3”	17-1/2”	2-1/2”	5”	1/2”	3/8”	HGR12#2@ HGR12#2716@ HGR12#3@	16 21 28	16 21 28	12 20 30
14”	2-7/16” 3”	17-3/4”	9-1/4”	3” 3”	19-1/2”	2-1/2”	5”	1/2”	3/8”	HGR14#2716@ HGR14#3@	26 33	26 33	21 32
16”	3”	19-3/4”	10-5/8”	3”	21-1/2”	2-1/2”	5”	1/2”	3/8”	HGR16#3@	39	39	35
18”	3” 3-7/16”	22-1/4”	12-1/8”	3” 4”	24-1/2”	3-1/2”	5”	5/8”	1/2”	HGR18#3@ HGR18#3716@	41 49	41 49	40 46
20”	3” 3-7/16”	24-1/2”	13-1/2”	3” 4”	26-1/2”	3-1/2”	5”	5/8”	1/2”	HGR20#3@ HGR20#3716@	43 51	43 51	45 58
24”	3-7/16”	28-1/4”	16-1/2”	4”	30-1/2”	3-1/2”	5”	5/8”	1/2”	HGR24#3716@	67	67	69
30”	3-15/16”	36-1/4”	19-1/2”	4”	38-1/2”	3-1/2”	5-1/2”	3/4”	1/2”	HGR30#31516•@	73	73	75
36”	4-7/16”	42-1/4”	22-1/2”	5”	44-1/2”	3-1/2”	5-1/2”	3/4”	1/2”	HGR36#4716•@	88	88	91

 # = 220, 230, or 660 † Not Available for Style 230 • Not Available for Style 660
@ = Blank=Standard, GP=Drilled for grease pipe

U-TROUGH HANGERS



Style 316 for U - Trough



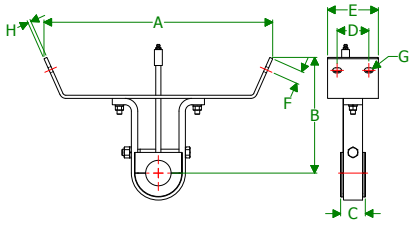
Style 326 for U - Trough

Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	Part Number	Weight (Lbs.)	
											220	230
4”	1”	5”	3-5/8”	1-1/2”	2”	5”	5/8”	1/4”	1/8”	HGR4#1†@	5	5
6”	1-1/2”	7”	4-1/2”	2”	2-1/2”	6”	3/4”	3/8”	1/8”	HGR6#112@	6	6
9”	1-1/2” 2”	10”	6-1/8”	2” 2”	2-1/2”	6”	1”	3/8”	3/16”	HGR9#112@ HGR9#2@	8 10	8 10
12”	2” 2-7/16” 3”	13”	7-3/4”	2” 3” 3”	2-1/2”	6-1/2”	1-1/4”	1/2”	3/16”	HGR12#2@ HGR12#2716@ HGR12#3@	15 20 25	15 20 25
14”	2-7/16” 3”	15”	9-1/4”	3” 3”	2-1/2”	6-1/2”	1-3/8”	1/2”	1/4”	HGR14#2716@ HGR14#3@	24 31	24 29
16”	3”	17”	10-5/8”	3”	2-1/2”	6-1/2”	1-3/8”	1/2”	1/4”	HGR16#3@	36	35
18”	3” 3-7/16”	19”	12-1/8”	3” 4”	3-1/2”	6-1/2” 7”	1-5/8”	5/8”	1/4”	HGR18#3@ HGR18#3716@	36 48	34 47
20”	3” 3-7/16”	21”	13-1/2”	3” 4”	3-1/2”	6-1/2” 7”	1-5/8”	5/8”	1/4”	HGR20#3@ HGR20#3716@	40 51	40 51
24”	3-7/16”	25”	16-1/2”	4”	3-1/2”	7”	1-3/4”	5/8”	5/16”	HGR24#3716@	58	58
30”	3-15/16”	31”	19-1/2”	4”	3-1/2”	8”	1-3/4”	3/4”	3/8”	HGR30#31516@	63	64
36”	4-7/16”	37”	22-1/2”	5”	3-1/2”	8”	1-3/4”	3/4”	3/8”	HGR36#4716@	80	82

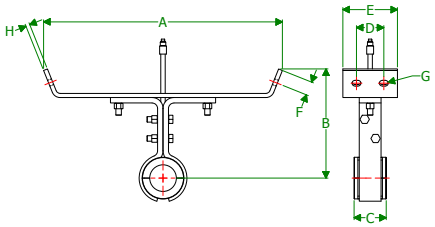
 # = 316 or 326 † Not Available for Style 316 @ = Blank=Standard, GP=Drilled for grease pipe

FLARED TROUGH HANGERS

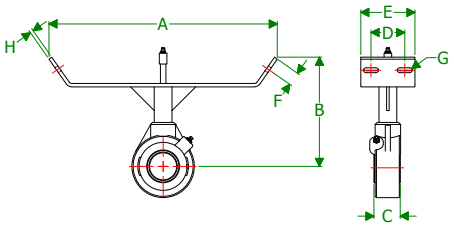
Style 216 for Flared Trough



Style 226 for Flared Trough



Style 670 for Flared Trough



Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	Part Number	Weight (Lbs.)		
											220	230	660
4”	NOT AVAILABLE												
6”	1-1/2”	14”	7”	2”	2-1/2”	4”	3/4”	3/8”	1/4”	HGR6#F112@	7	8	8
9”	1-1/2” 2”	18”	9”	2” 2”	2-1/2”	4”	1”	3/8”	1/4”	HGR9#F112@ HGR9#F2@	8 10	10 13	9 11
12”	2” 2-7/16” 3”	22”	10”	2” 3” 3”	2-1/2”	5”	1-1/4”	1/2”	3/8”	HGR12#F2@ HGR12#F2716@ HGR12#F3@	15 20 24	18 23 32	14 23 35
14”	2-7/16” 3”	24”	11”	3” 3”	2-1/2”	5”	1-3/8”	1/2”	1/4	HGR14#F2716†@ HGR14#F3†@	25 28	29 27	24 37
16”	3”	28”	11-1/2”	3”	2-1/2”	5”	1-3/8”	1/2”	1/4	HGR16#F3†@	31	43	49
18”	3” 3-7/16”	31”	12-1/8”	3” 4”	3-1/2”	6”	1-5/8”	5/8”	3/8”	HGR18#F3†@ HGR18#F3716†@	37 50	45 55	45 52
20”	3” 3-7/16”	34”	13-1/2”	3” 4”	3-1/2”	6”	1-5/8”	5/8”	3/8”	HGR20#F3†@ HGR20#F3716†@	39 53	47 57	50 58
24”	3-7/16”	40”	16-1/2”	4”	3-1/2”	6”	1-5/8”	5/8”	3/8”	HGR24#F3716†@	59	73	69
30”	3-15/16”	47-3/8”	19-1/2”	4”	3-1/2”	7”	1-5/8”	3/4”	1/2”	HGR30#F31516•† @	78	95	78
36”	4-7/16”	54-3/8”	22-1/2”	5”	3-1/2”	7”	1-5/8”	3/4”	1/2”	HGR36#F4716•† @	95	117	95

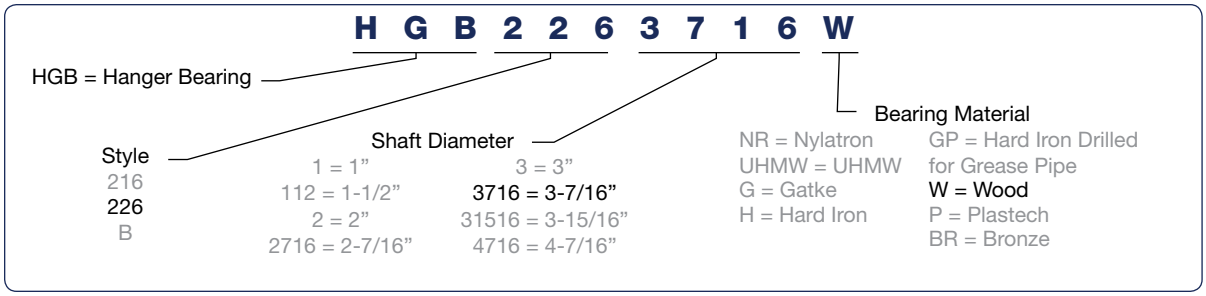
 # = 216, 226, or 670 † Requires Top Bar To Be Constructed From Channel • Not Available For Style 670
@ = Blank=Standard, GP=Drilled for grease pipe

HANGER BEARINGS

Hanger bearings provide a bearing surface to support a screw section when multiple screw sections are used in a screw conveyor. Hanger bearings are journal or plain type bearings that mount in hangers and are replaceable when worn. Many different hanger bearing materials are available, depending on the application. Style 216 and 226 bearings are the most widely used and are in stock at KWS.

KWS hanger bearing recommendations are listed in the Component Series Table of the KWS Screw Conveyor Engineering Guide for the specific bulk material to be conveyed. The most common hanger bearing materials are described in the table below. Please consult KWS Engineering for specific hanger bearing recommendations.

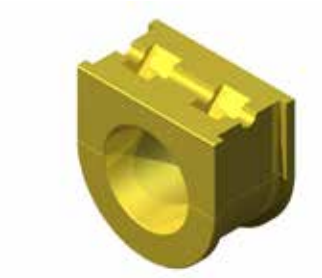
NOMENCLATURE



Bearing Material	RPM Max	Temp Max (°F)	Wear Resist*	Industry Uses	Comments
Nylatron (NR)	60	180	3	Chemical handling, grain, feed	Self lubricating, very low load capacity
UHMW	60	160	6	Food, Ice	USDA approved, doesn't swell in water
Gatke (G)	75	250	7	Medium temp applications (alternate for Hard Iron)	Low load capacity, Food Grade
Hard Iron (H)	75	400	9	Lime, Cement, Salt, Gypsum	Requires hardened shaft, can be noisy, lube req'd in some applications
Wood (W)	175	160	4	Grain, Feed, Fertilizer	Self lubricating, good general purpose
Plastech (P)	100	160	6	Grain, Food	Food grade
Bronze (BR)	150	850	7	Grain, Feed, Processing	Self lubricating, high quality bearings, high load capacity
Ball Bearing (BB)	400	180	1**	High speed, low loading	Screw action tends to force product thru seals reducing bearing life
Stellite (S)	50	1000	10	Very high temp applications, metal processing, ceramics	Requires stellite insert in shaft

** 0 = Least, 10 = Highest ** Depending on bearing type and seal arrangement*

HANGER BEARINGS

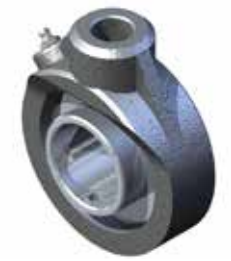


Style 216

Style 216 hanger bearings are used in 216, 316, and 230 hangers, and are manufactured to CEMA dimensional standards. Style 216 hangers and hanger bearings offer superior rigidity and are excellent for extra heavy-duty applications.

Style 226

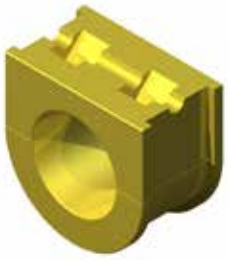
Style 226 hanger bearings are used in 226, 326, and 220 hangers, and are manufactured to CEMA dimensional standards. Style 226 hangers and hanger bearings have clearance for bulk materials to pass and are excellent for normal and heavy-duty applications.

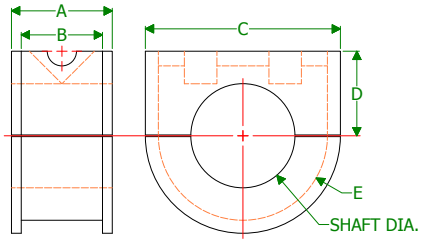


Style B

Style B hanger bearings are used in 660 and 670 hangers, and are manufactured to CEMA dimensional standards. Style B hanger bearings utilize a self-aligning ball bearing for lower power consumption and quieter operation. The bearing is sealed to minimize contamination.

STYLE 216 HANGER BEARING

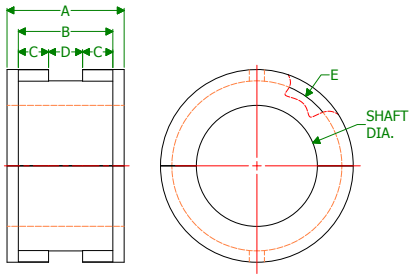




Shaft Dia.	A	B	C	D	E (Dia.)	Part Number	Weight (Lbs.) •
1”	NOT AVAILABLE						
1-1/2”	1-15/16”	1-9/16”	2-3/4”	1-3/8”	2-1/4”	HGB216112#*	2.0
2”	1-15/16”	1-9/16”	3-3/4”	1-5/8”	3-1/4”	HGB2162#*	4.0
2-7/16”	2-15/16”	2-1/4”	4-1/2”	2”	4”	HGB2162716#*	9.2
3”	2-15/16”	2-1/4”	5”	2-5/16”	4-1/2”	HGB2163#*	10.8
3-7/16”	3-15/16”	3-1/4”	5-1/2”	2-7/16”	4-7/8”	HGB2163716#*	15.2
3-15/16”	3-15/16”	3-1/4”	6”	2-11/16”	5-3/8”	HGB21631516#*	17.3
4-7/16”	4-15/16”	4-1/4”	7-3/16”	3-1/4”	6-3/16”	HGB2164716#*	31.7

** KWS Stock Component • All weights are based on hard iron. # Bearing Material (UHMW, Gatke, Hard Iron, Wood, Bronze, Stellite)*
Note: Only Hard Iron and Bronze are available in 3-15/15” and 4-7/16”.

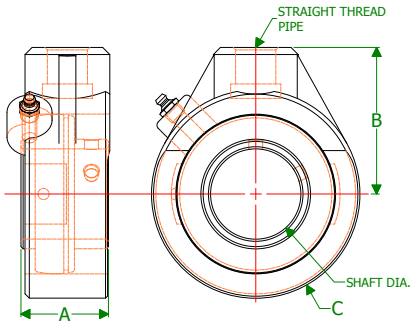
STYLE 226 HANGER BEARING

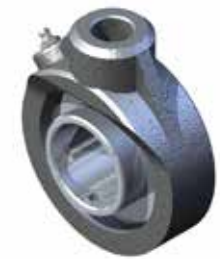


Shaft Dia.	A	B	C	D	E (Dia.)	Part Number	Weight (Lbs.) •
1”	1-7/16”	1-1/8”	5/16”	1/2”	1-3/16”	HGB2261#*	2
1-1/2”	1-15/16”	1-9/16”	1/2”	9/16”	2-3/16”	HGB226112#*	2
2”	1-15/16”	1-9/16”	1/2”	9/16”	2-13/16”	HGB2262#*	4
2-7/16”	2-15/16”	2-1/4”	3/4”	3/4”	3-3/16”	HGB2262716#*	9
3”	2-15/16”	2-1/4”	3/4”	3/4”	4-1/16”	HGB2263#*	11
3-7/16”	3-15/16”	3-1/4”	1-1/4”	3/4”	4-3/4”	HGB2263716#*	15
3-15/16”	3-15/16”	3-1/4”	1-1/4”	3/4”	5-1/4”	HGB22631516#	17
4-7/16”	4-15/16”	4-1/4”	1-3/4”	3/4”	5-13/16”	HGB2264716#	32

*• All weights are based on hard iron. # Bearing Material (Nylatron, UHMW, Gatke, Hard Iron, Wood, Plastech, Bronze, Stellite) * KWS Stock Component Note: Only UHMW and Wood are available in the 1” size.*

STYLE B HANGER BEARING





Shaft Dia.	A	B	C	Straight Thread Pipe D	Part Number	Weight
1”	1-1/2”	2-1/2”	3-1/8”	3/4”	HGBB1	3
1-1/2”	1-15/16”	2-7/8”	4”	3/4”	HGBB112	3
2”	1-15/16”	3-1/4”	4-5/8”	3/4”	HGBB2	4
2-7/16”	2-5/16”	4”	5-1/2”	1”	HGBB2716	7
3”	2-3/8”	4-7/8”	7”	1”	HGBB3	15
3-7/16”	2-9/16”	6”	8-3/8”	1-1/2”	HGBB3716	21

TROUGH ENDS

Trough ends are manufactured from heavy gauge steel to very close tolerances. Assembly and mounting holes are precision cut to ensure correct alignment with trough end flanges.

KWS stocks a large inventory of trough ends in both carbon and stainless steel construction that are ready for immediate shipment. Stock trough ends are available with hole patterns for 4-bolt flange mounted ball and roller bearings.

NOMENCLATURE

T E W O 9 2 U B B

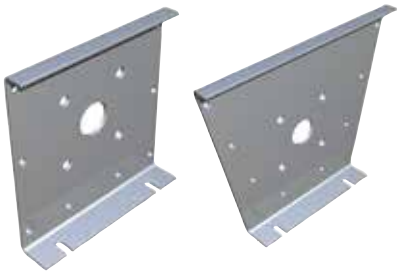
- **T E** — TE = Trough End
- **W** — W = Without Foot; F = With Foot; P = Pedestal; FE = Flush End; BH = Bulkhead; TA = Torque Arm
- **O** — O = Outside Pattern; *Omit for Bulkhead*
- **9** — Screw Diameter: 4 = 4”, 6 = 6”, 9 = 9”, 12 = 12”, 14 = 14”, 16 = 16”, 18 = 18”, 20 = 20”, 24 = 24”, 30 = 30”, 36 = 36”
- **2** — Shaft Diameter: 1 = 1”, 112 = 1-1/2”, 2 = 2”, 2716 = 2-7/16”, 3 = 3”, 3716 = 3-7/16”, 31516 = 3-15/16”, 4716 = 4-7/16”
- **U** — U = U-Trough; F = Flared Trough; R = Rectangular Trough; T = Tubular Trough
- **B B** — BB = Drilled for Ball Bearing; BBRB* = Slotted for Ball and Roller Bearing; RB = Drilled for Roller Bearing

** Stock trough ends are BBRB, except 2” dia.*

Note: Torque Arm Trough Ends include Drive Size before bearing call-out. (i.e: TETAO92U-SK3-RB)

WITHOUT FOOT

Trough ends without feet are typically used in applications where a screw conveyor is suspended above ground and is supported from the top flange.



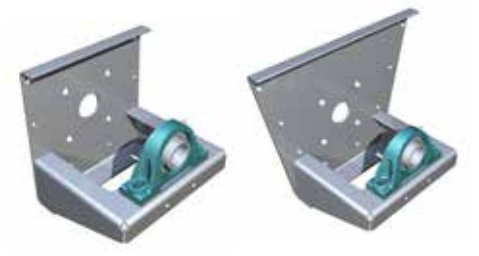
WITH FOOT

Trough ends with feet are the most commonly used type of trough end, and are typically used in applications where a screw conveyor is mounted directly to the floor or on structural supports.

TROUGH ENDS

PEDESTAL

Pedestal trough ends are typically used in heavy and extra-heavy duty applications where a split gland, flanged gland or mechanical seal is required. Pedestal trough ends require the use of a pillow block bearing. The space between the trough end and pillow block bearing prevents contamination of the bearing.

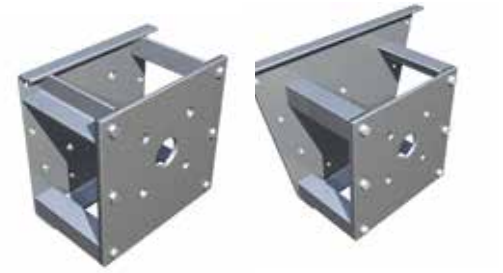


FLUSH END

Flush End trough ends are used with flush end discharge spouts where overall length needs to be minimized and conveyance length needs to be maximized. The bottom flange of the flush end trough end is drilled to match the discharge flange pattern.

BULKHEAD

Bulkhead trough ends are used with flange mounted gear reducers on the drive end of a screw conveyor and are typically used in heavy and extra-heavy duty applications where a split gland, flanged gland or mechanical seal is required. The space between the trough end and bulkhead prevents contamination of the gear reducer. A bulkhead drive shaft is required.

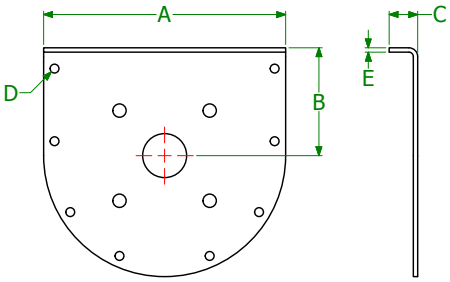


TORQUE ARM

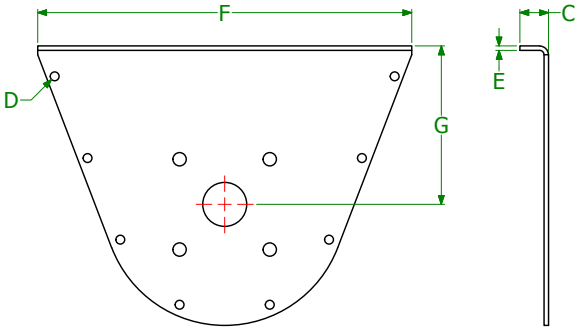
Torque arm trough ends are used with pillow block bearings and shaft-mounted gear reducers on the drive end of a screw conveyor and are typically used in heavy and extra-heavy duty applications where a split gland, flanged gland or mechanical seal is required. The space between the trough end and pillow block bearing prevents contamination of the bearing and gear reducer. The special torque arm design allows the gear reducer to float freely on the drive shaft. A torque arm drive shaft is required.

TROUGH ENDS WITHOUT FEET

U-TROUGH WITHOUT FOOT



FLARED WITHOUT FOOT



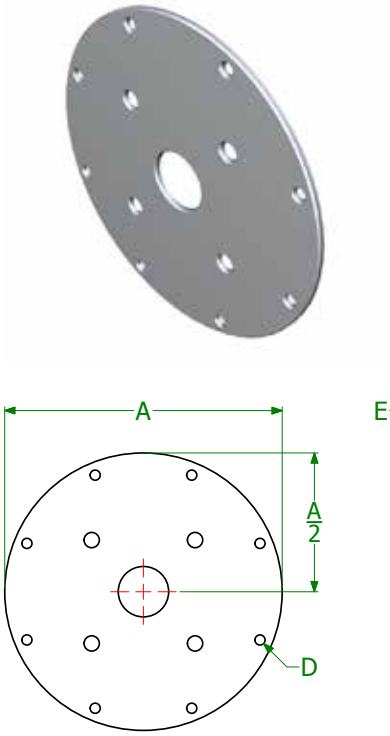
Screw Dia.	Shaft Dia	A	B	C	D Bolts	E	F	G	Part Numbers	Weight (Lbs.)	
										U-Trough	Flared
4”	1”	7-3/4”	3-5/8”	1-7/16”	3/8”	3/16”	X	X	TEW041#	5	N/A
6”	1-1/2”	9-3/4”	4-1/2”	1-1/2”	3/8”	3/16”	16-5/8”	7”	TEW06112#	10	13
9”	1-1/2” 2”	13-3/4”	6-1/8”	1-5/8”	3/8”	1/4”	21-1/4”	9”	TEW09112# TEW092#	18 18	19 24
12”	2” 2-7/16” 3”	17-1/4”	7-3/4”	2”	1/2”	1/4”	26-3/8”	10”	TEW0122# TEW0122716# TEW0123#	43 43 43	36 37 49
14”	2-7/16” 3”	19-1/4”	9-1/4”	2”	1/2”	1/4”	28-3/8”	11”	TEW0142716# TEW0143#	48 48	43 55
16”	3”	21-1/4”	10-5/8”	2-1/2”	5/8”	3/8”	32-1/2”	11-1/2”	TEW0163#	62	72
18”	3” 3-7/16”	24-1/4”	12-1/8”	2-1/2”	5/8”	3/8”	36-1/2”	12-1/8”	TEW0183# TEW0183716#	84 84	83 89
20”	3” 3-7/16”	26-1/4”	13-1/2”	2-1/2”	5/8”	3/8”	39-1/2”	13-1/2”	TEW0203# TEW0203716#	102 102	103 109
24”	3-7/16”	30-1/4”	16-1/2”	2-1/2”	5/8”	3/8”	45-1/2”	16-1/2”	TEW0243716#	128	132
30”	3-15/16”	38”	19-1/2”	3”•	5/8”	1/2”•	47-3/8”	19-1/2”	TEW03031516#•	250	267
36”	4-7/16”	44”	22-1/2”	3”•	5/8”	1/2”•	54-3/8”	22-1/2”	TEW0364716#•	340	350

 # = Trough and Bearing type; U=U-Trough, F=Flared, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing

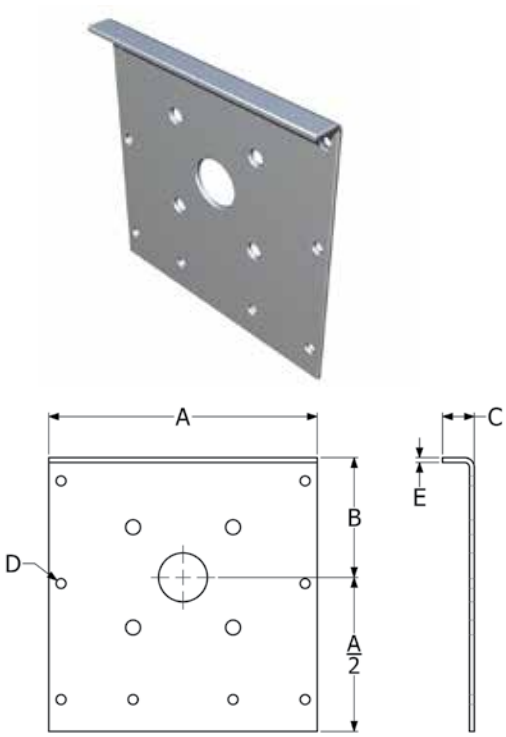
• Top Flange Must Be Welded On and Not Formed

TROUGH ENDS WITHOUT FEET

TUBULAR WITHOUT FOOT



RECTANGULAR WITHOUT FOOT

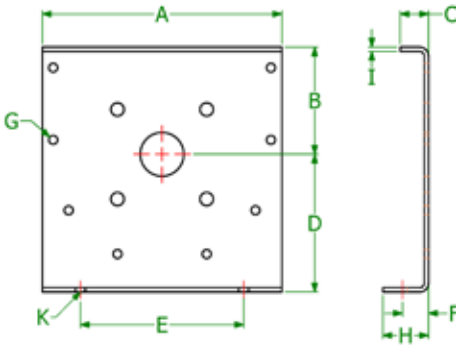


Screw Dia.	Shaft Dia	A	B	C	D Bolts	E	Part Numbers	Weight (Lbs.)	
								Tubular	Rectangular
4”	1”	7-3/4”	3-5/8”	1-7/16”	3/8”	3/16”	TEW041#	4	N/A
6”	1-1/2”	9-3/4”	4-1/2”	1-1/2”	3/8”	3/16”	TEW06112#	9	11
9”	1-1/2” 2”	13-3/4”	6-1/8”	1-5/8”	3/8”	1/4”	TEW09112# TEW092#	12 15	16 21
12”	2” 2-7/16” 3”	17-1/4”	7-3/4”	2”	1/2”	1/4”	TEW0122# TEW0122716# TEW0123#	29 24 36	32 33 51
14”	2-7/16” 3”	19-1/4”	9-1/4”	2”	1/2”	1/4”	TEW0142716# TEW0143#	30 42	39 57
16”	3”	21-1/4”	10-5/8”	2-1/2”	5/8”	3/8”	TEW0163#	52	72
18”	3” 3-7/16”	24-1/4”	12-1/8”	2-1/2”	5/8”	3/8”	TEW0183# TEW0183716#	63 74	79 86
20”	3” 3-7/16”	26-1/4”	13-1/2”	2-1/2”	5/8”	3/8”	TEW0203# TEW0203716#	85 97	104 110
24”	3-7/16”	30-1/4”	16-1/2”	2-1/2”	5/8”	3/8”	TEW0243716#	116	138
30”	3-15/16”	38”	19-1/2”	3” •	5/8”	1/2”•	TEW03031516#•	131	182
36”	4-7/16”	44”	22-1/2”	3” •	5/8”	1/2”•	TEW0364716#•	237	301

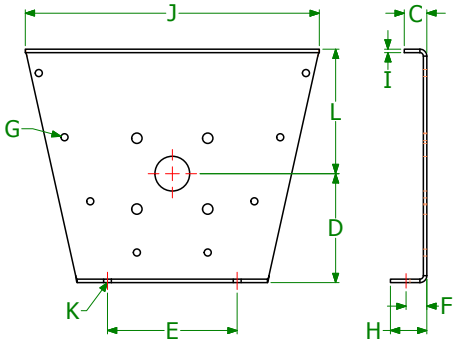
 # = Trough and Bearing type; T=Tubular, R=Rectangular, BB=Ball Bearing, BBRB=Slotted for Ball and Roller Bearing, RB=Roller Bearing *• Top Flange Must Be Welded On and Not Formed*

TROUGH ENDS WITH FEET

U-TROUGH WITH FOOT



FLARED WITH FOOT



Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	I	J	K Bolts	L	Part Numbers	Weight (Lbs.)	
															U-Trough	Flared Trough
4”	1”	7-3/4”	3-5/8”	1-7/16”	4-5/8”	5-3/4”	1”	3/8”	1-5/8”	3/16”	X	3/8”	X	TEF041#*	7	N/A
6”	1-1/2”	9-3/4”	4-1/2”	1-1/2”	5-5/8”	8-1/8”	1”	3/8”	1-3/4”	3/16”	16-5/8”	3/8”	7”	TEF06112#*	12	15
9”	1-1/2” 2”	13-3/4”	6-1/8”	1-5/8”	7-7/8”	9-3/8”	1-1/2”	3/8”	2-5/8”	1/4”	21-1/4”	1/2”	9”	TEF09112#* TEF092#*	18 22	22 27
12”	2” 2-7/16” 3”	17-1/4”	7-3/4”	2”	9-5/8”	12-1/4”	1-5/8”	1/2”	2-3/4”	1/4”	26-3/8”	5/8”	10”	TEF0122#* TEF0122716#* TEF0123#*	36 38 50	43 44 56
14”	2-7/16” 3”	19-1/4”	9-1/4”	2”	10-7/8”	13-1/2”	1-5/8”	1/2”	2-7/8”	1/4”	28-3/8”	5/8”	11”	TEF0142716#* TEF0143#*	45 57	52 64
16”	3”	21-1/4”	10-5/8”	2-1/2”	12”	14-7/8”	2”	5/8”	3-1/4”	3/8”	32-1/2”	5/8”	11-1/2”	TEF0163#*	75	85
18”	3” 3-7/16”	24-1/4”	12-1/8”	2-1/2”	13-3/8”	16”	2”	5/8”	3-1/4”	3/8”	36-1/2”	5/8”	12-1/8”	TEF0183#* TEF0183716#*	89 101	98 104
20”	3” 3-7/16”	26-1/4”	13-1/2”	2-1/2”	15”	19-1/4”	2-1/4”	5/8”	3-3/4”	3/8”	39-1/2”	3/4”	13-1/2”	TEF0203#* TEF0203716#*	142 153	153 169
24”	3-7/16”	30-1/4”	16-1/2”	2-1/2”	18-1/8”	20”	2-1/2”	5/8”	4-1/8”	3/8”	45-1/2”	3/4”	16-1/2”	TEF0243716#*	197	213
30”	3-15/16”	38”	19-1/2”	3”•	21-1/2”	30”	2-1/2”	5/8”	4-1/2”•	1/2”•	47-3/8”	3/4”	19-1/2”	TEF03031516#•	215	230
36”	4-7/16”	44”	22-1/2”	3”•	24”	36”	2-1/2”	5/8”	4-1/2”•	1/2”•	54-3/8”	3/4”	22-1/2”	TEF0364716#•	330	360

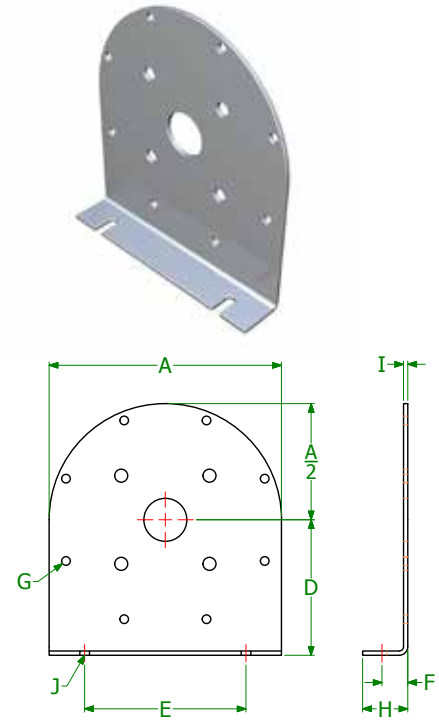
**KWS Stock Component (U-Trough only. Stock trough ends are BBRB, except 2” dia. which are drilled for Ball Bearing only)*

 # = Trough and Bearing type; U=U-Trough, F=Flared, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing

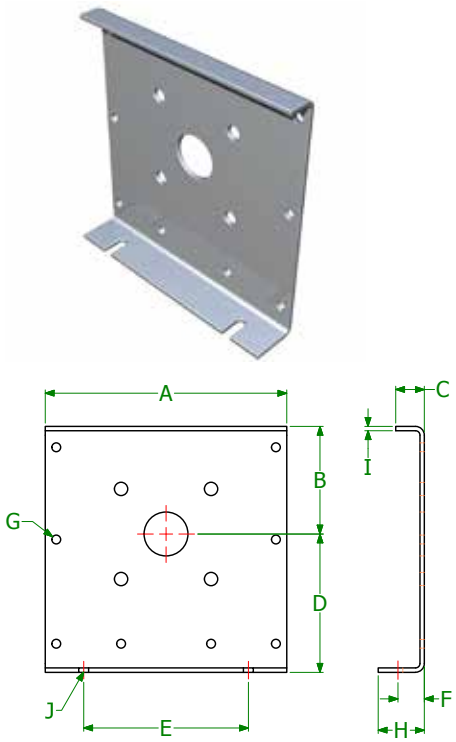
• Flanges Must Be Welded On and Not Formed

TROUGH ENDS WITH FEET

TUBULAR WITH FOOT



RECTANGULAR WITH FOOT



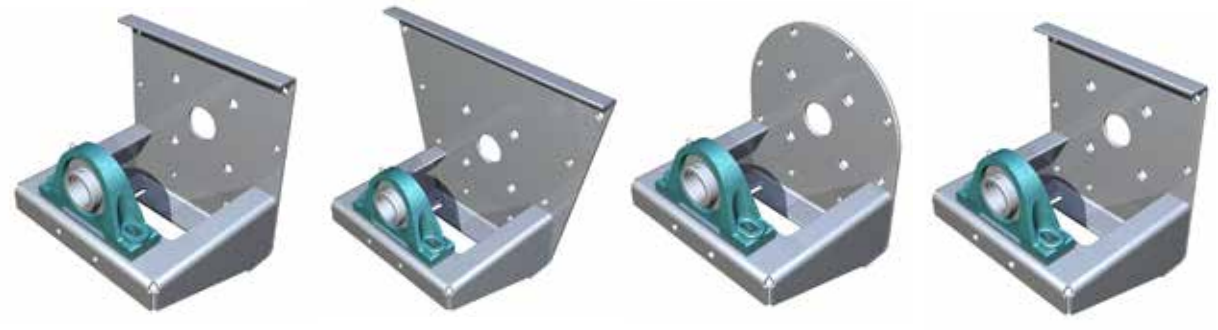
Screw Dia.	Shaft Dia.	A	B	C	D	E	F	G Bolts	H	I	J Bolts	Part Numbers	Weight (Lbs.)	
													Tubular	Rectangular
4”	1”	7-3/4”	X	X	4-5/8”	5-3/4”	1”	3/8”	1-5/8”	3/16”	3/8”	TEF041#	6	N/A
6”	1-1/2”	9-3/4”	4-1/2”	1-1/2”	5-5/8”	8-1/8”	1”	3/8”	1-3/4”	3/16”	3/8”	TEF06112#	11	13
9”	1-1/2” 2”	13-3/4”	6-1/8”	1-5/8”	7-7/8”	9-3/8”	1-1/2”	3/8”	2-5/8”	1/4”	1/2”	TEF09112# TEF092#	15 18	19 24
12”	2” 2-7/16” 3”	17-1/4”	7-3/4”	2”	9-5/8”	12-1/4”	1-5/8”	1/2”	2-3/4”	1/4”	5/8”	TEF0122# TEF0122716# TEF0123#	29 31 43	39 40 58
14”	2-7/16” 3”	19-1/4”	9-1/4”	2”	10-7/8”	13-1/2”	1-5/8”	1/2”	2-7/8”	1/4”	5/8”	TEF0142716# TEF0143#	39 51	48 66
16”	3”	21-1/4”	10-5/8”	2-1/2”	12”	14-7/8”	2”	5/8”	3-1/4”	3/8”	5/8”	TEF0163#	65	85
18”	3” 3-7/16”	24-1/4”	12-1/8”	2-1/2”	13-3/8”	16”	2”	5/8”	3-1/4”	3/8”	5/8”	TEF0183# TEF0183716#	78 89	94 101
20”	3” 3-7/16”	26-1/4”	13-1/2”	2-1/2”	15”	19-1/4”	2-1/4”	5/8”	3-3/4”	3/8”	3/4”	TEF0203# TEF0203716#	115 127	134 140
24”	3-7/16”	30-1/4”	16-1/2”	2-1/2”	18-1/8”	20”	2-1/2”	5/8”	4-1/8”	3/8”	3/4”	TEF0243716#	157	179
30”	3-15/16”	38”	19-1/2”	3”•	21-1/2”	30”	2-1/2”	5/8”	4-1/2”•	1/2”•	3/4”	TEF03031516#•	250	270
36”	4-7/16”	44”	22-1/2”	3”•	24”	36”	2-1/2”	5/8”	4-1/2”•	1/2”•	3/4”	TEF0364716#•	320	340

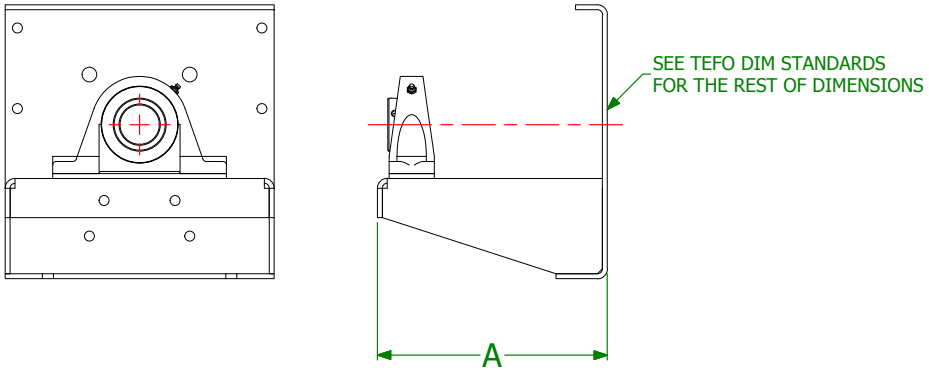
 # = Trough and Bearing type; T=Tubular, R=Rectangular, BB=Ball Bearing, BBRB=Slotted for Ball and Roller Bearing, RB=Roller Bearing

• Flanges Must Be Welded On and Not Formed

PEDESTAL TROUGH ENDS

U-TROUGH **FLARED** **TUBULAR** **RECTANGULAR**





Note: Dimension shown is the same for each style trough.

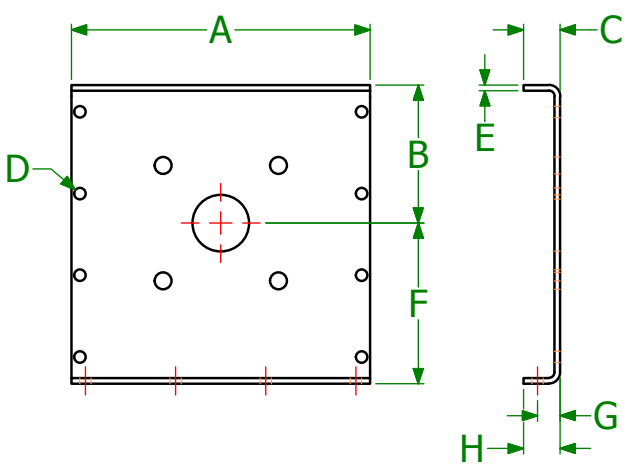
Screw Dia.	Shaft Dia.	A	Part Numbers	Weight (Lbs.)			
				U-Trough	Flared	Tubular	Rectangular
4”	1”	10”	TEPO41#	14	15	13	14
6”	1-1/2”	10-3/4”	TEPO6112#	19	22	18	20
9”	1-1/2” 2”	10-3/4” 11-1/4”	TEPO9112# TEPO92#	27 30	31 36	24 27	28 33
12”	2” 2-7/16” 3”	11-1/4” 13” 12-3/4”	TEPO122# TEPO122716# TEPO123#	56 58 70	63 64 76	49 51 63	59 60 78
14”	2-7/16” 3”	13” 12-3/4”	TEPO142716# TEPO143#	68 80	75 87	62 74	71 89
16”	3”	12-3/4”	TEPO163#	115	125	105	125
18”	3” 3-7/16”	12-3/4” 14-1/2”	TEPO183# TEPO183716#	129 139	138 144	118 149	134 141
20”	3” 3-7/16”	12-3/4” 14-1/2”	TEPO203# TEPO203716#	189 195	196 202	178 190	197 203
24”	3-7/16”	14-1/2”	TEPO243716#	246	250	234	256
30”	3-15/16”	14-1/2”	TEPO3031516#•	271	296	265	305
36”	4-7/16”	14-1/2”	TEPO364716#•	406	374	400	401

 # = Trough and Bearing type; U=U-Trough, F=Flared, T=Tubular, R=Rectangular, BB=Ball Bearing, RB=Roller Bearing

• Flanges must be welded on and not formed

FLUSH END DISCHARGE TROUGH ENDS

U- TROUGH AND RECTANGULAR FLUSH END



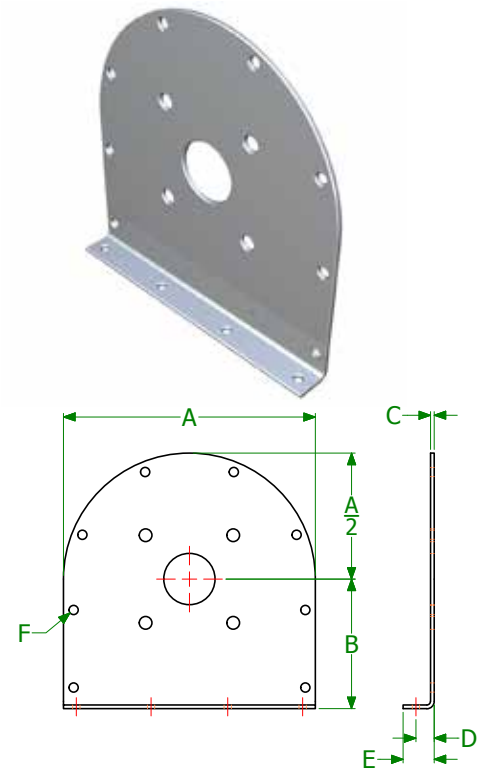
Note: U-Trough and Rectangular Flush End Discharge Trough Ends are dimensionally the same.

Screw Dia.	Shaft Dia.	A	B	C	D Bolts	E	F	G	H	Part Number	Weight (Lbs.)
4”	1”	7-1/2”	3-5/8”	1-7/16”	3/8”	3/16”	3-3/4”	7/8”	1-1/4”	TEFE041#	9
6”	1-1/2”	10”	4-1/2”	1-1/2”	3/8”	3/16”	5”	13/16”	1-1/2”	TEFE06112#	13
9”	1-1/2” 2”	13-1/4”	6-1/8”	1-5/8”	3/8”	1/4”	7-1/8”	1”	1-5/8”	TEFE09112# TEFE092#	19 24
12”	2” 2-7/16” 3”	17-1/4”	7-3/4”	2”	1/2”	1/4”	8-7/8”	1-1/4”	2-1/8”	TEFE0122# TEFE0122716# TEFE0123#	39 40 58
14”	2-7/16” 3”	19-1/4”	9-1/4”	2”	1/2”	1/4”	10-1/8”	1-1/4”	2-1/8”	TEFE0142716# TEFE0143#	48 66
16”	3”	21-1/4”	10-5/8”	2-1/2”	5/8”	3/8”	11-1/8”	1-1/4”	2-1/8”	TEFE0163#	85
18”	3” 3-7/16”	24-1/4”	12-1/8”	2-1/2”	5/8”	3/8”	12-3/8”	1-1/2”	2-5/8”	TEFE0183# TEFE0183716#	94 101
20”	3” 3-7/16”	26-1/4”	13-1/2”	2-1/2”	5/8”	3/8”	13-3/8”	1-1/2”	2-5/8”	TEFE0203# TEFE0203716#	134 140
24”	3-7/16”	30-1/4”	16-1/2”	2-1/2”	5/8”	3/8”	15-3/8”	1-1/2”	2-5/8”	TEFE0243716#	179
30”	3-15/16”	38”	19-1/2”	3”•	5/8”	1/2”•	18-3/8”	1-3/4”	3”•	TEFE03031516#•	270
36”	4-7/16”	44”	22-1/2”	3”•	5/8”	1/2”•	21-3/8”	1-3/4”	3”•	TEFE0364716#•	340

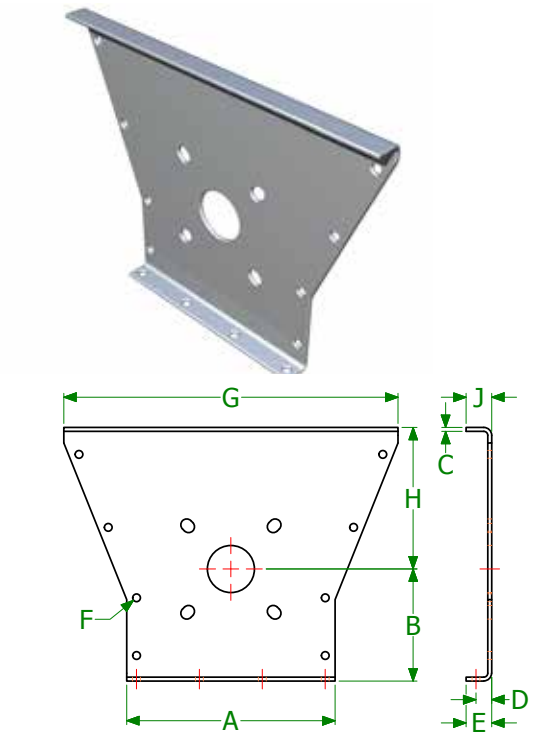
 # = Trough and Bearing type; U=U-Trough, F=Flared, T=Tubular, R=Rectangular, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing • Flanges Must Be Welded On and Not Formed

FLUSH END DISCHARGE TROUGH ENDS

TUBULAR FLUSH END



FLARED FLUSH END

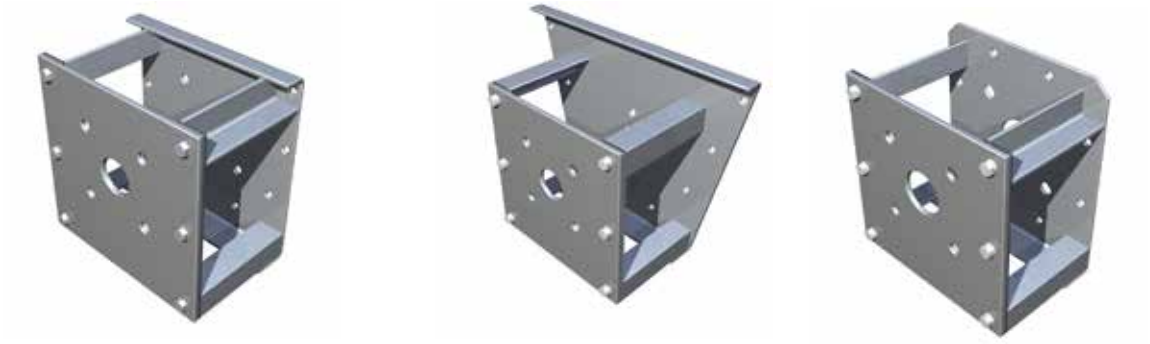


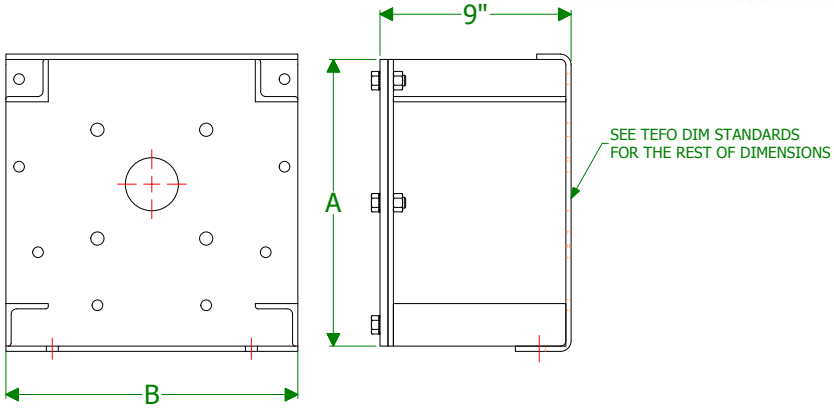
Screw Dia.	Shaft Dia.	A	B	C	D	E	F Bolts	G	H	J	Part Number	Weight (Lbs.)	
												Tubular	Flared
4”	1”	7-1/2”	3-3/4”	3/16”	7/8”	1 1/4”	3/8”	X	X	X	TEFE041#	6	N/A
6”	1-1/2”	10”	5”	3/16”	13/16”	1-1/2”	3/8”	16-5/8”	7”	1-1/2”	TEFE06112#	11	13
9”	1-1/2” 2”	13-1/4”	7-1/8”	1/4”	1”	1-5/8”	3/8”	21-1/4”	9”	1-5/8”	TEFE09112# TEFE092#	15 18	19 23
12”	2” 2-7/16” 3”	17-1/4”	8-7/8”	1/4”	1-1/4”	2-1/8”	1/2”	26-3/8”	10”	2”	TEFE0122# TEFE0122716# TEFE0123#	29 31 43	37 38 56
14”	2-7/16” 3”	19-1/4”	10-1/8”	1/4”	1-1/4”	2-1/8”	1/2”	28-3/8”	11”	2”	TEFE0142716# TEFE0143#	39 51	45 55
16”	3”	21-1/4”	11-1/8”	3/8”	1-1/4”	2-1/8”	5/8”	32-1/2”	11-1/2”	2-1/2”	TEFE0163#	65	73
18”	3” 3-7/16”	24-1/4”	12-3/8”	3/8”	1-1/2”	2-5/8”	5/8”	36-1/2”	12-1/8”	2-1/2”	TEFE0183# TEFE0183716#	78 89	84 89
20”	3” 3-7/16”	26-1/4”	13-3/8”	3/8”	1-1/2”	2-5/8”	5/8”	39-1/2”	13-1/2”	2-1/2”	TEFE0203# TEFE0203716#	115 127	130 144
24”	3-7/16”	30-1/4”	15-3/8”	3/8”	1-1/2”	2-5/8”	5/8”	45-1/2”	16-1/2”	2-1/2”	TEFE0243716#	157	181
30”	3-15/16”	37-1/4”	18-3/8”	1/2”•	1-3/4”	3-1/8”•	5/8”	47-3/8”	19-1/2”	3”•	TEFE03031516#•	250	196
36”	4-7/16”	43-1/4”	21-3/8”	1/2”•	1-3/4”	3-1/8”•	5/8”	54-3/8”	22-1/2”	3”•	TEFE0364716#•	320	306

 # = Trough and Bearing type; T=Tubular Trough, F=Flared Trough, R=Rectangular Trough, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing • Flanges Must Be Welded On and Not Formed

BULKHEAD TROUGH ENDS

U-TROUGH/RECTANGULAR **FLARED** **TUBULAR**





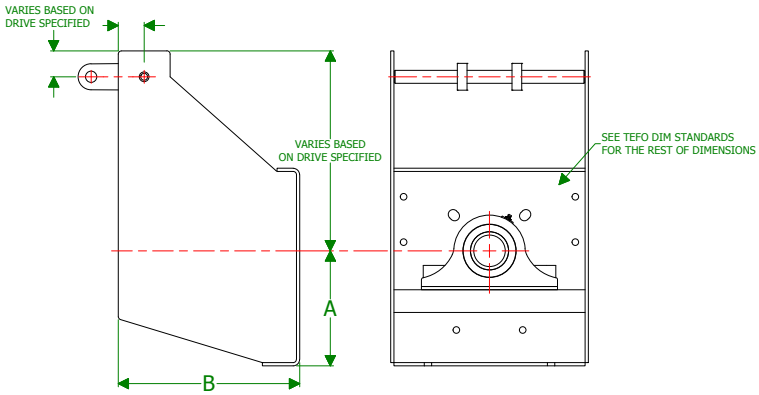
Note: Dimensions shown are the same for each style trough.

Screw Dia.	Shaft Dia.	A	B •	Part Numbers	Weight (Lbs.)			
					U-Trough	Flared	Tubular	Rectangular
4”	1”	7-3/4”	7-3/4”	TEBH41#	23	N/A	21	N/A
6”	1-1/2”	9-3/4”	9-3/4”	TEBH6112#	32	35	31	33
9”	1-1/2” 2”	13-1/2”	13-3/4”	TEBH9112# TEBH92#	53 57	57 62	50 53	53 57
12”	2” 2-7/16” 3”	16-7/8”	17-1/4”	TEBH122# TEBH122716# TEBH123#	96 98 110	103 104 116	89 91 103	96 98 110
14”	2-7/16” 3”	19-5/8”	19-1/4”	TEBH142716# TEBH143#	112 134	129 141	116 128	112 134
16”	3”	21-7/8”	21-1/4”	TEBH163#	195	205	185	195
18”	3” 3-7/16”	21-7/8”	21-1/4”	TEBH183# TEBH183716#	209 221	218 224	198 209	209 221
20”	3” 3-7/16”	21-7/8”	21-1/4”	TEBH203# TEBH203716#	262 273	273 289	235 247	262 273
24”	3-7/16”	21-7/8”	21-1/4”	TEBH243716#	317	333	277	317
30”	3-15/16”	26-1/4”	26-1/4”	TEBH3031516#	375	390	410	375
36”	4-7/16”	26-1/4”	26-1/4”	TEBH364716#	490	520	480	490

 # = Trough and Bearing type; U=U-Trough, R=Rectangular Trough, F=Flared Trough, T=Tubular Trough, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing • ”B” Dimension Is Width Of Drive Plate, Not Trough End Plate

TORQUE ARM TROUGH ENDS

U-TROUGH/RECTANGULAR **FLARED** **TUBULAR**



Note: Dimensions shown are the same for each style trough.

Screw Dia.	Shaft Dia.	A	B •	Part Numbers
4”	1”	4-5/8”	11”	TETA041#
6”	1-1/2”	5-5/8”	11-3/4”	TETA06112#
9”	1-1/2” 2”	7-7/8”	11-3/4” 12-1/4”	TETA09112# TETA092#
12”	2” 2-7/16” 3”	9-5/8”	12-1/4” 13” 13-3/4”	TETA0122# TETA0122716# TETA0123#
14”	2-7/16” 3”	10-7/8”	13” 13-3/4”	TETA0142716# TETA0143#
16”	3”	12”	13-3/4”	TETA0163#
18”	3” 3-7/16”	13-3/8”	13-3/4” 15-1/2”	TETA0183# TETA0183716#
20”	3” 3-7/16”	15”	13-3/4” 15-1/2”	TETA0203# TETA0203716#
24”	3-7/16”	18-1/8”	15-1/2”	TETA0243716#
30”	3-15/16”	21-1/2”	15-3/4”	TETA03031516#
36”	4-7/16”	24”	16-1/4”	TETA0364716#

 # = Trough and Bearing type; U=U-Trough, R=Rectangular Trough, F=Flared Trough, T=Tubular Trough, BB=Ball Bearing, RB=Roller Bearing, BBRB=Slotted for Roller and Ball Bearing

• ”B” Dimension Is Width Of Drive Plate, Not Trough End Plate

SEALS

Several types of shaft seals are available to prevent contamination of bulk materials being conveyed or the leakage of bulk materials from screw conveyors. Improper selection of shaft seals could result in the loss of production or exposure of personnel to a harmful bulk material.

NOMENCLATURE

P S 1 1 2 L

PS = Plate Seal
WPS = Waste Pack Seal
SGS = Split Gland Seal
FGS = Flanged Gland Seal

Shaft Diameter
1 = 1"
112 = 1-1/2"
2 = 2"
2716 = 2-7/16"
3 = 3"
3716 = 3-7/16"
31516 = 3-15/16"
4716 = 4-7/16"

For PS:
L = Lip Seal

For WPS:
WL = Lip Seal

For SGS and FGS:
G = Graphite
H = Hi -Temp
N = Nylon
T = Teflon

PLATE SEAL

Plate seals are economical and effective shaft seals that are mounted between a trough end and a flanged bearing by means of common bolts. Stock plate seals are available with neoprene lip seals. Other types of seal cartridges are also available upon request. Plate seals can also be used with pedestal trough ends and pillow block bearings.

WASTE PACK SEAL

Waste pack seals are the most common type of screw conveyor shaft seal because of low cost and simple design and are mounted between a trough end and a flanged bearing by means of common bolts. All KWS waste pack seals are available with neoprene lip seal. Other types of seal cartridges are also available upon request. An opening at the top of the seal housing facilitates the packing of loose fiber material called waste packing. The waste packing forms a seal around the diameter of the shaft. The waste packing can be oiled for specific applications. Waste pack seals can also be used with pedestal trough ends and pillow block bearings.

SPLIT GLAND SEAL

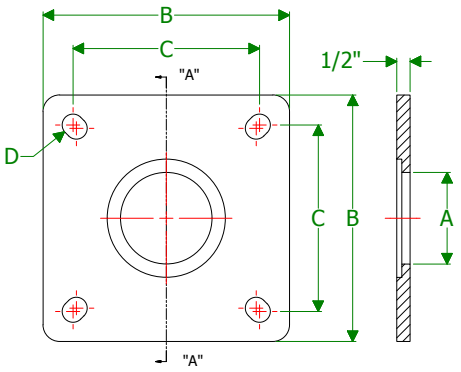
Split gland seals are compression type seals utilizing one ring of rope packing and typically located on the outside of a pedestal trough end. The standard rope packing is graphite impregnated for wear resistance. Other types of rope packing are available including Teflon and Fiberfrax. Split gland seals are easily adjusted by tightening the upper and lower nuts to further compress the packing around the shaft.

FLANGED GLAND SEAL

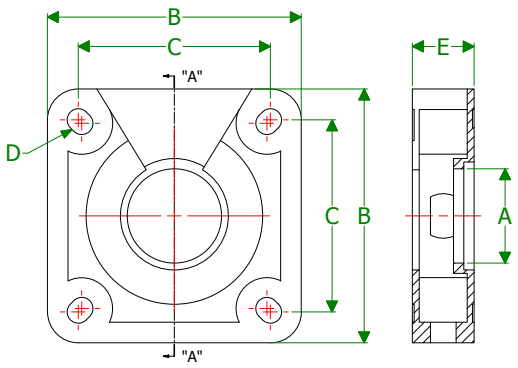
Flanged gland seals are compression type seals utilizing multiple rings of packing and located on the outside of a pedestal trough end. The standard rope packing is graphite impregnated for wear resistance. Other types of rope packing are available including Teflon and Fiberfrax. Flanged gland seals are easily adjusted by tightening the "follower" nuts to further compress the rope packing around the shaft. Many custom designs are available, including air purged, grease purged and split "follower" type.

PLATE AND WASTE PACK SEAL

PLATE SEAL



WASTE PACK SEAL



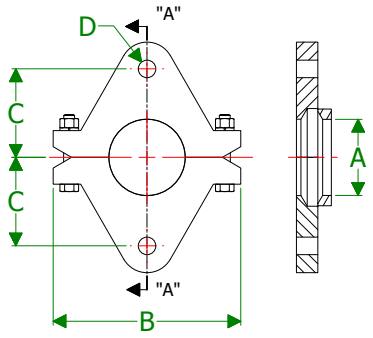
A Shaft Dia.	B	C Min.	C Max.	D Bolts	E	Part Number Plate Seal	Part Number Waste Pack Seal	Weight (Lbs.) Plate Seal	Weight (Lbs.) Waste Pack Seal
1”	4”	2-3/4”	2-3/4”	3/8”	1-3/4”	PS1L	WPS1WL	2	3
1-1/2”	5-3/8”	4”	4-1/8”	1/2”	1-3/4”	PS112L*	WPS112WL*	4	7
2”	6-1/2”	4-3/8”	5-1/8”	5/8”	1-3/4”	PS2L*	WPS2WL*	6	9
2-7/16”	7-3/8”	5-3/8”	5-5/8”	5/8”	1-3/4”	PS2716L*	WPS2716WL*	8	11
3”	7-3/4”	6”	6”	3/4”	1-3/4”	PS3L*	WPS3WL*	8	12
3-7/16”	9-1/4”	6-3/4”	7”	3/4”	2-1/4”	PS3716L*	WPS3716WL*	12	18
3-15/16”	10-1/4”	7-3/4”	7-3/4”	7/8”	2-1/4”	PS31516L	WPS31516WL	14	22
4-7/16”	10-7/8”	8-3/4”	8-3/4”	7/8”	2-1/4”	PS4716L	WPS4716WL	15	24

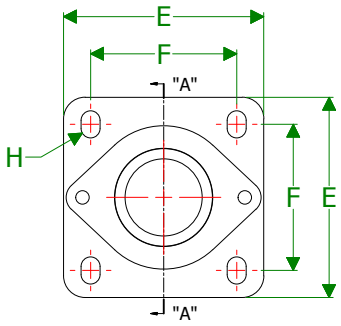
** KWS Stock Component (Includes Lip Seal Style Only)*

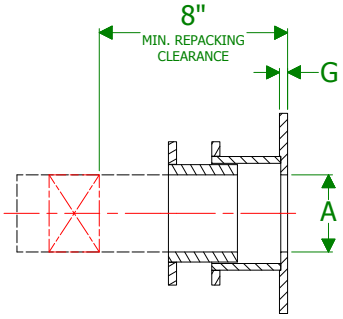
SPLIT GLAND AND FLANGED GLAND SEAL

SPLIT GLAND SEAL

FLANGED GLAND SEAL







A	B	C	D	E	F	G	H	Part Number		Weight (Lbs.)	
Shaft Dia.			Bolts				Bolts	Split Gland Seal	Flanged Gland Seal	Split Gland Seal	Flanged Gland Seal
1”	4-1/8”	1-3/4”	3/8”	4”	2-3/4”	3/8”	3/8”	SGS1#	FGS1#	4	10
1-1/2”	4-5/8”	2-3/16”	1/2”	5-3/8”	4”	3/8”	1/2”	SGS112#*	FGS112#*	5	14
2”	5-3/8”	2-5/8”	1/2”	6-1/2”	5-1/8”	3/8”	5/8”	SGS2#*	FGS2#*	6	18
2-7/16”	6-1/8”	3-1/16”	5/8”	7-3/8”	5-5/8”	3/8”	5/8”	SGS2716#*	FGS2716#*	8	21
3”	6-3/4”	3-9/16”	5/8”	7-3/4”	6”	3/8”	3/4”	SGS3#*	FGS3#*	9	27
3-7/16”	8-3/4”	4-1/8”	3/4”	9-1/4”	6-3/4”	1/2”	3/4”	SGS3716#*	FGS3716#*	13	30
3-15/16”	9-1/2”	4-1/2”	3/4”	10-1/4”	7-3/4”	1/2”	7/8”	SGS31516#	FGS31516#	14	35
4-7/16”	10”	4-5/8”	3/4”	10-3/4”	8-3/4”	1/2”	7/8”	SGS4716#	FGS4716#	15	40

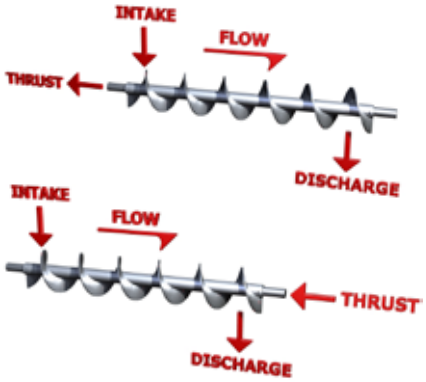
** KWS Stock Component (Graphite seal material only) #Seal Material; G=Graphite, H=Hi-Temp, N=Nylon, T=Teflon*

END BEARINGS

End bearings provide support at one or both ends of a screw conveyor and must be designed to handle radial and thrust loads as well as shaft runout.

Radial load as measured at the end bearing is half the weight of the last screw section. Radial loads act at right angles to the shaft centerline or bearing axis of rotation. Radial loads are typically negligible at the screw conveyor end shaft. However, end bearings located at the drive end of a screw conveyor are subject to higher radial loading due to the weight of the gear reducer and motor or overhung loads from chain and sprocket drives.

Thrust load is the reaction through the conveyor screws from the movement of a bulk material. Thrust loads are also called axial loads and act parallel to the shaft centerline or bearing axis of rotation. The end bearing on the drive end must prevent axial movement of the screw. Any axial movement of the screw could allow contact with the hanger bearings or trough ends. KWS recommends locating the drive unit and thrust bearing at the discharge end of a screw conveyor, placing the screws in tension and preventing misalignment when the conveyor is heavily loaded.



Shaft runout occurs when the shaft rotates in an eccentric pattern about the centerline axis. Shaft runout is caused by the minor amount of ”bend” inherent in any screw due to the manufacturing process. Shaft runout must be accounted for at the bearings to avoid premature bearing failure. KWS recommends using a fixed thrust bearing at the drive end and a ball or spherical roller bearing at the tail end.

NOMENCLATURE

E B F 1 1 2 B B

EB = End Bearing

F = Flange
P = Pillow Block

Shaft Diameter
1 = 1”
112 = 1-1/2”
2 = 2”
2716 = 2 -7/16”
3 = 3”
3716 = 3-7/16”
31516 = 3-15/16”
4716 = 4-7/16”

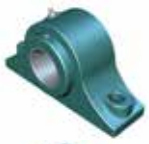
BB = Ball Bearing
RB = Roller Bearing

FLANGED ROLLER BEARING

Flanged roller bearings are mounted directly to standard trough ends on the drive end of a screw conveyor. The flanged roller bearing housing contains two sets of tapered bearings that are designed to withstand the thrust of the bulk material being conveyed.

FLANGED BALL BEARING

Flanged ball bearings are mounted directly to standard trough ends on the tail end of a screw conveyor. The ball bearing housing contains one set of ball bearings that are designed to withstand radial loads only.



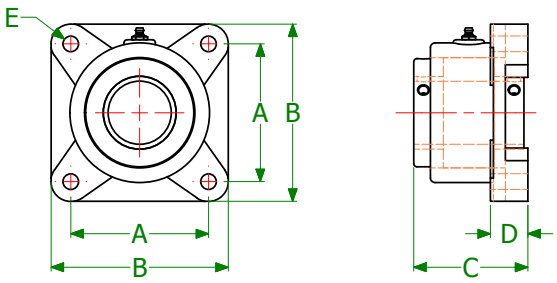
PILLOW BLOCK ROLLER BEARING

Pillow block roller bearings are mounted to pedestal trough ends on the drive end of a screw conveyor. The flanged roller bearing housing contains two sets of tapered or spherical bearings that are designed to withstand the thrust of the bulk material being conveyed.

PILLOW BLOCK BALL BEARING

Pillow block ball bearings are mounted to pedestal trough ends on the tail end of a screw conveyor. The ball bearing housing contains one set of ball bearings that are designed to withstand radial loads only.

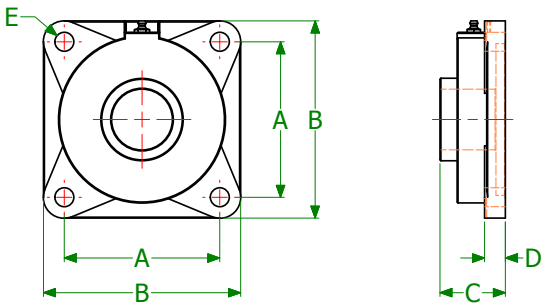
ROLLER BEARING FLANGE UNIT



Shaft Dia.	A	B	C	D	E Bolt Dia.	Part Number	Weight (Lbs.)
1”	NOT AVAILABLE						
1-1/2”	4–1/8”	5-3/8”	3-3/8”	1-3/16”	1/2”	EBF112R*	11
2”	4–3/8”	5-5/8”	3-1/2”	1-3/16”	1/2”	EBF2R*	12
2-7/16”	5-3/8”	6-7/8”	4”	1-1/2”	5/8”	EBF2716R*	20
3”	6”	7-3/4”	4-1/2”	1-5/8”	3/4”	EBF3R*	26
3-7/16”	7”	9-1/4”	5”	1-7/8”	3/4”	EBF3716R*	50
3-15/16”	7-1/2”	10-1/4”	6-1/4”	2-1/8”	7/8”	EBF31516R	75
4-7/16”	8-3/4”	10-7/8”	7-3/4”	2-7/16”	7/8”	EBF4716R	90

** KWS Stock Component*

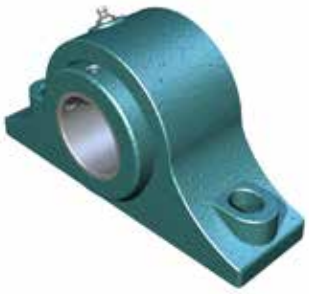
BALL BEARING FLANGE UNIT

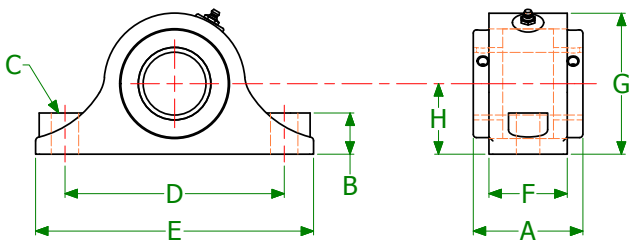


Shaft Dia.	A	B	C	D	E Bolt Dia.	Part Number	Weight (Lbs.)
1”	2-3/4”	3-3/4”	1 3/8”	1/2”	7/16”	EBF1BB*	2
1-1/2”	4”	5-1/8”	2”	1/2”	1/2”	EBF112BB*	5
2”	5-1/8”	6-1/2”	2-1/4”	11/16”	5/8”	EBF2BB*	10
2-7/16”	5-5/8”	6-7/8”	2-3/8”	5/8”	5/8”	EBF2716BB*	11
3”	6 ”	7-3/4”	3-1/16”	7/8”	3/4”	EBF3BB*	22
3-7/16”	6-3/4”	8-7/16”	3-3/8”	1”	3/4”	EBF3716BB*	28
3-15/16”	NOT AVAILABLE						
4-7/16”	NOT AVAILABLE						

** KWS Stock Component - All Flange Bearings Include 1/8” Alemite Fitting*

ROLLER BEARING PILLOW BLOCK

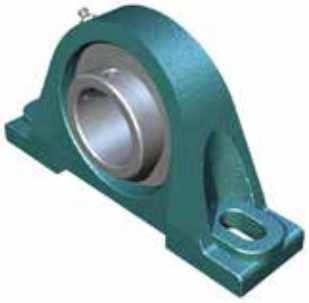


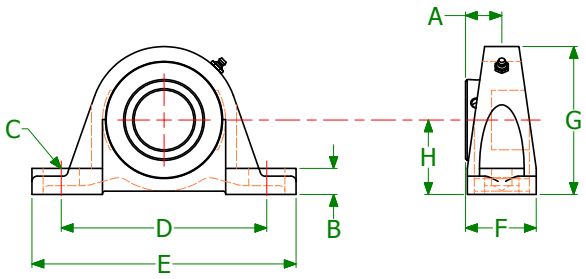


Shaft Dia.	A	B	C Bolt Dia.	D	E	F	G	H	Part Number	Weight (Lbs.)
1”	NOT AVAILABLE									
1-1/2”	3-3/8”	1-1/4”	1/2”	6-1/4”	7-7/8”	2-3/8”	4-1/4”	2-1/8”	EBP112R	10
2”	3-1/2”	1-5/16”	5/8”	7”	8-7/8”	2-1/2”	4-1/2”	2-1/4”	EBP2R	12
2-7/16”	4”	1-5/8”	5/8”	8-1/2”	10-1/2”	2-7/8”	5-1/2”	2-3/4”	EBP2716R	20
3”	4-1/2”	1-7/8”	3/4”	9-1/2”	12”	3”	6-1/4”	3-1/8”	EBP3R	28
3-7/16”	5”	2-1/4”	7/8”	11”	14”	3-1/2”	7-1/2”	3-3/4”	EBP3716R	46
3-15/16”	6-1/4”	2-7/16”	3/4”•	12-1/2”	15-1/4”	4-1/2”	8-7/16”	4-3/4”	EBP31516R•	69
4-7/16”	6-3/4”	2-3/4”	3/4”•	13-1/2”	16-5/8”	4-5/8”	9-5/16”	4-3/4”	EBP4716R•	85

• Uses a 4 bolt base instead of 2.

BALL BEARING PILLOW BLOCK





Shaft Dia.	A	B	C Bolt Dia.	D	E	F	G	H	Part Number	Weight (Lbs.)
1”	3/4”	9/16”	3/8”	4-1/8”	5-1/2”	1-7/16”	2-3/4”	1-7/16”	EBP1BB	2
1-1/2”	1-3/16”	15/16”	1/2”	5-1/2”	7-1/4”	1-15/16”	4-3/16”	2-1/8”	EBP112BB	6
2”	1-3/8”	7/8”	5/8”	7”	8-7/8”	2-3/8”	4-15/16”	2-1/2”	EBP2BB	9
2-7/16”	1-7/16”	15/16”	3/4”	8”	10-3/4”	2-5/8”	6-1/16”	3”	EBP2716BB	16
3”	1-1/2”	1-1/4”	7/8”	9”	11-3/4”	3”	6-15/16”	3-1/2”	EBP3BB	21
3-7/16”	1-5/8”	1-5/16”	7/8”	11”	14”	3-3/8”	8”	4”	EBP3716BB	32
3-15/16”	NOT AVAILABLE									
4-7/16”	NOT AVAILABLE									

SHAFTS

Shafts are designed to transmit rotation and torque between individual conveyor screw sections and provide radial support at the hanger bearings and trough ends. Shafts are manufactured from cold-rolled C-1045 carbon steel as well as 304 and 316 stainless steel; other materials are available upon request. Cold-rolled C-1045 carbon steel shafts are adequate for most applications. However, high-tensile strength materials such as C-4140 may be required for specific applications. Stainless steel shafts may be necessary when corrosive or contaminable materials are to be conveyed. Using a combination of CNC and specially-built jigs, KWS shafts are manufactured to the tightest tolerances available and ensure perfect bolting alignment.

Shaft size is determined based on full motor torque of the drive assembly and the materials of construction of the shafts. Cold-rolled C-1045 carbon steel has a yield strength of 45,000 psi. 304 and 316 stainless steel shafts have a yield strength of 30,000 psi. Please refer to the Engineering Section of the KWS Engineering Guide for further information on shaft selection. A significant safety factor is included in the shaft design calculations.

For information regarding the weights of each shaft, please contact KWS Engineering.

COUPLING SHAFT

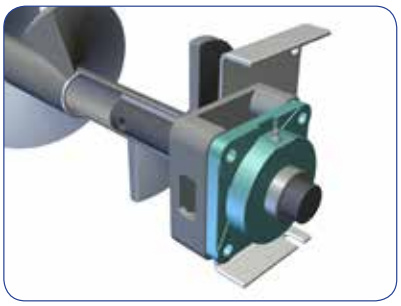
Coupling shafts transmit rotation and torque between screw sections. Clearance is provided between the screw sections for a hanger and hanger bearing support. Hardened shafts are required for hard iron hanger bearings.

CLOSE COUPLING SHAFT

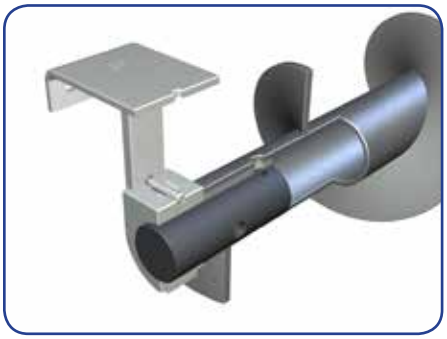
Close coupling shafts transmit rotation and torque between screw sections. The screw sections are butted together with no clearance and clocked to form one continuous helix. Close coupled screws are supported by a wear liner or wear bars that are welded into the trough sections.

END SHAFT

End shafts support the tail end of the screw section at the non-drive end of the screw conveyor. End shafts are typically the same diameter as the coupling and drive shafts. End shaft length is dependent on the type of end bearing, seal and trough end.

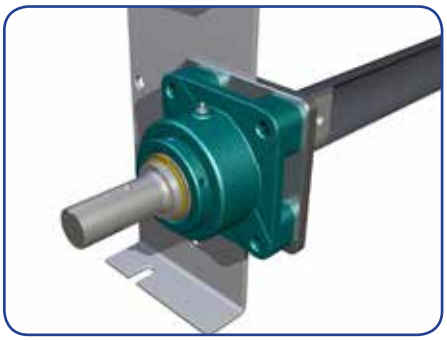


SHAFTS



HANGER END SHAFT

Hanger end shafts are very similar to end shafts except that a hanger with hanger bearing is used as the end bearing instead of a flanged or pillow block bearing. Hanger end shafts are hardened in the bearing area when using hard iron hanger bearings.

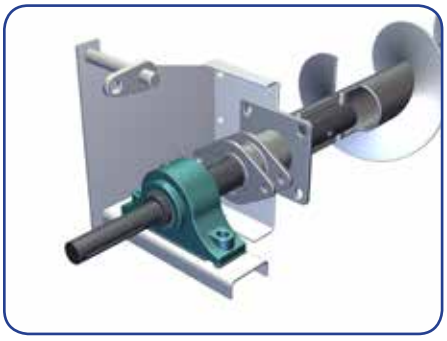


ROLLER THRUST BEARING DRIVE SHAFT

Roller thrust bearing drive shafts are used with roller thrust bearings. A key-way is provided to couple the drive shaft with the output shaft of a gear reducer or a sprocket with chain. The drive shaft has snap ring grooves on either side of the flanged roller bearing to capture thrust loading in both directions.

BULKHEAD DRIVE SHAFT

Bulkhead drive shafts are extended shafts that are used with KWS bulkhead trough ends. Standard bulkhead drive shafts can be designed to work with any gear reducer manufacturer.



TORQUE ARM DRIVE SHAFT

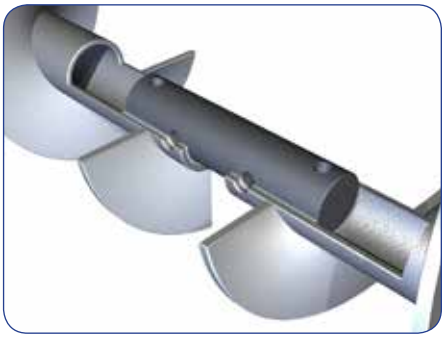
Torque arm drive shafts are extended shafts that are used with KWS torque arm trough ends. Standard torque arm drive shafts can be designed to work with any gear reducer manufacturer.

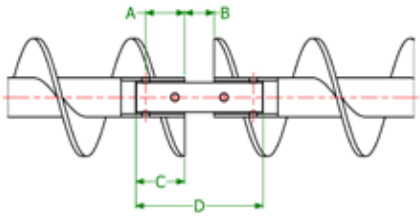
COUPLING SHAFT

NOMENCLATURE

C S 3 7 1 6 H

- CS = Coupling Shaft
- Shaft Diameter
  - 1 = 1”
  - 112 = 1-1/2”
  - 2 = 2”
  - 2716 = 2-7/16”
  - 3 = 3”
  - 3716 = 3-7/16”
  - 31516 = 3-15/16”
  - 4716 = 4-7/16”
- Blank = Standard
- H = Hardened
- SS = Stainless Steel





Note: Also available as a 3-bolt shaft. Dimensions may change for a 3-bolt shaft.

Shaft Dia.	Part Number	A	B	C	D
1”	CS1#*	2”	1-1/2”	3”	7-1/2”
1-1/2”	CS112#*	3”	2”	4-3/4”	11-1/2”
2”	CS2#*	3”	2”	4-3/4”	11-1/2”
2-7/16”	CS2716#*	3”	3”	4-7/8”	12-3/4”
3”	CS3#*	3”	3”	5”	13”
3-7/16”	CS3716#*	4”	4”	7”	18”
3-15/16”	CS31516#	4”	4”	7-3/8”	18-3/4”
4-7/16”	CS4716#	4”	5”	7-3/4”	20-1/2”

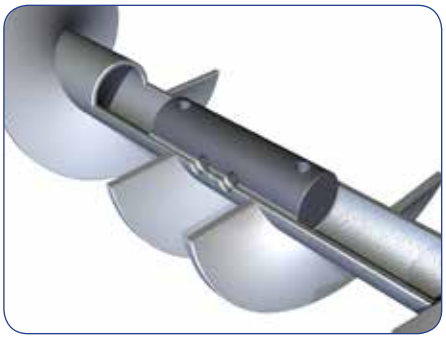
** KWS Stock Component (Made-to-order End Shafts are available upon request)*
 # Bearing Area; Blank = Standard, H = Hardened or Material; Blank = Standard, SS = Stainless Steel

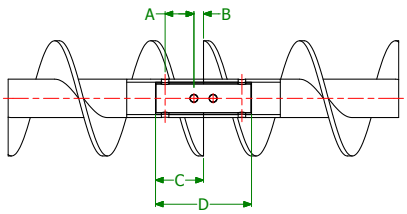
CLOSE COUPLING SHAFT

NOMENCLATURE

C C S 3 7 1 6 S S

- CCS = Close Coupling Shaft
- Shaft Diameter
  - 1 = 1”
  - 112 = 1-1/2”
  - 2 = 2”
  - 2716 = 2-7/16”
  - 3 = 3”
  - 3716 = 3-7/16”
  - 31516 = 3-15/16”
  - 4716 = 4-7/16”
- Blank = Standard
- SS = Stainless Steel





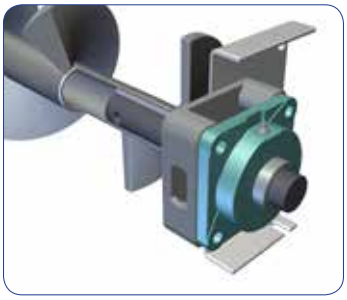
Note: Also available as a 3-bolt shaft. Dimensions may change for a 3-bolt shaft.

Shaft Dia.	Part Number	A	B	C	D
1”	CCS1#	2”	1/2”	3”	6”
1-1/2”	CCS112#*	3”	7/8”	4-3/4”	9-1/2”
2”	CCS2#*	3”	7/8”	4-3/4”	9-1/2”
2-7/16”	CCS2716#*	3”	15/16”	4-7/8”	9-3/4”
3”	CCS3#*	3”	1”	5”	10”
3-7/16”	CCS3716#*	4”	1-1/2”	7”	14”
3-15/16”	CCS31516#	4”	1-11/16”	7-3/8”	14-3/4”
4-7/16”	CCS4716#	4”	1-7/8”	7-3/4”	15-1/2”

** KWS Stock Component (Standard Only)*
 # Material; Blank = Standard, SS = Stainless Steel

END SHAFT

NOMENCLATURE

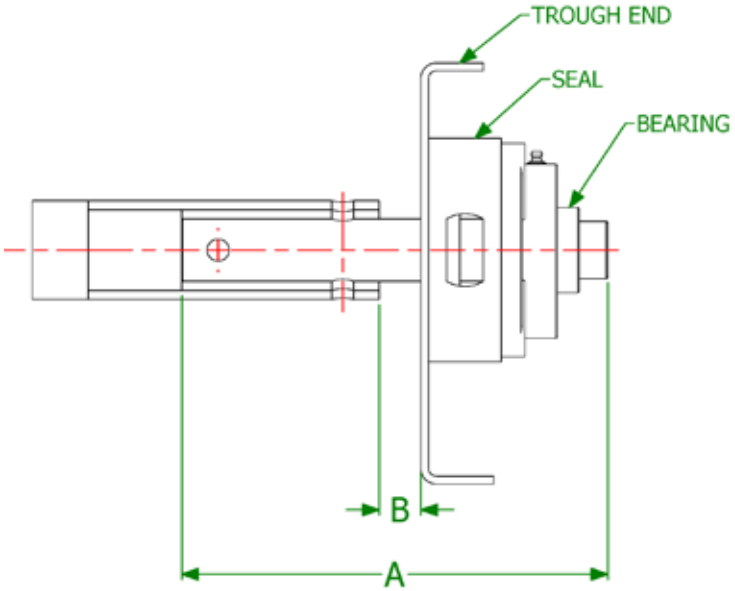


E S 1 1 2

ES = End Shaft

Shaft Diameter

1 = 1”	3 = 3”
112 = 1-1/2”	3716 = 3-7/16”
2 = 2”	31516 = 3-15/16”
2716 = 2-7/16”	4716 = 4-7/16”



Shaft Dia.	Drilling	A	B	Part Number
1”	2-Bolt	7-1/2”	3/4”	ES1*
1-1/2”	2-Bolt	11-3/4”	1”	ES112*
2”	2-Bolt	12”	1”	ES2*
2-7/16”	2-Bolt	13”	1-1/2”	ES2716*
3”	2-Bolt	14”	1-1/2”	ES3*
3-7/16”	2-Bolt	17-3/8”	2”	ES3716*
3-15/16”	2-Bolt	19-1/4”	2”	ES31516
4-7/16”	2-Bolt	20-3/4”	2-1/2”	ES4716

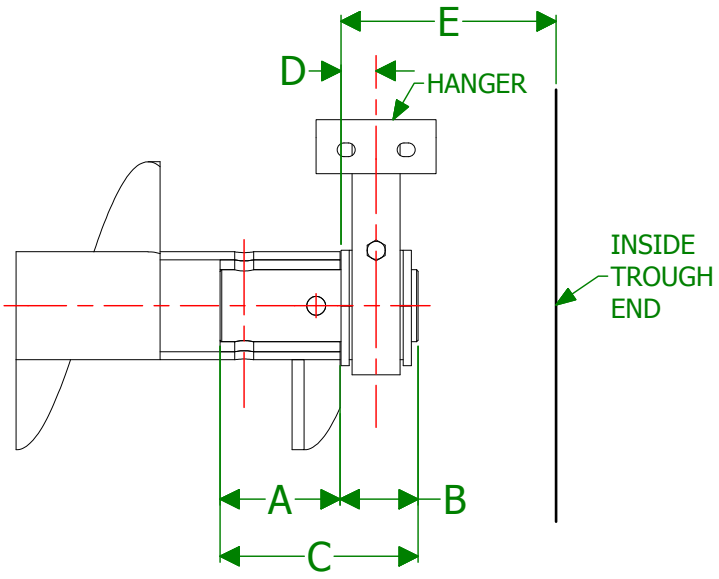
** KWS Stock Component. (Made-to-order End Shafts are available upon request)*

HANGER END SHAFT

NOMENCLATURE

H E S 1 1 2 H

- HES = Hanger End Shaft
- Shaft Diameter
  - 1 = 1”
  - 112 = 1-1/2”
  - 2 = 2”
  - 2716 = 2-7/16”
  - 3 = 3”
  - 3716 = 3-7/16”
  - 31516 = 3-15/16”
  - 4716 = 4-7/16”
- Blank = Standard
- H = Hardened
- SS = Stainless Steel



Note: Also available as a 3-bolt shaft. Dimensions may change for a 3-bolt shaft.

Shaft Dia.	A	B	C	D	E	Part Number
1”	3”	1-5/8”	4-5/8”	3/4”	2-3/8”	HES1#
1-1/2”	4-3/4”	2-1/8”	6-7/8”	1”	3-1/8”	HES112#
2”	4-3/4”	2-1/8”	6-7/8”	1”	3-1/8”	HES2#
2-7/16”	4-7/8”	3-1/4”	8-1/8”	1-1/2”	4-3/4”	HES2716#
3”	5”	3-1/4”	8-1/4”	1-1/2”	4-3/4”	HES3#
3-7/16”	7”	4-1/4”	11-1/4”	2”	6-1/4”	HES3716#
3-15/16”	7-3/8”	4-1/4”	11-5/8”	2”	6-1/4”	HES31516#
4-7/16”	7-3/4”	5-1/4”	13”	2-1/2”	7-3/4”	HES4716#

 # Bearing Area; Blank = Standard, H = Hardened or Material; Blank = Standard, SS = Stainless Steel

ROLLER THRUST BEARING SHAFT

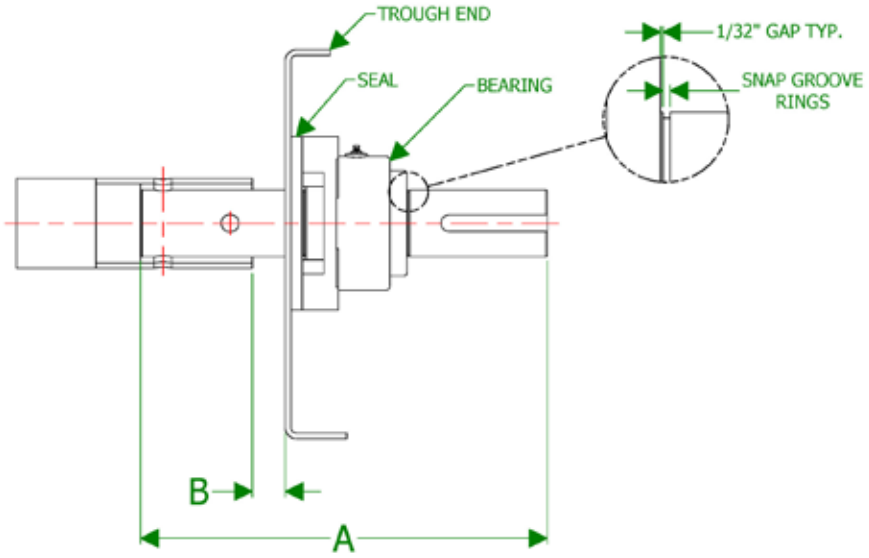
NOMENCLATURE

R T B 1 1 2

RTB = Roller Thrust Bearing

Shaft Diameter

1 = 1”
112 = 1-1/2”
2 = 2”
2716 = 2-7/16”
3 = 3”
3716 = 3-7/16”
31516 = 3-15/16”
4716 = 4-7/16”



Shaft Dia.	B	A (WPS)	Part Number
1”	Not Available		
1-1/2”	1”	15-15/32”	RTB112
2”	1”	16-1/8”	RTB2
2-7/16”	1-1/2”	18-5/16”	RTB2716
3”	1-1/2”	19-7/16”	RTB3
3-7/16”	2”	24-1/8”	RTB3716
3-15/16”	Contact KWS		RTB31516
4-7/16”	Contact KWS		RTB4716

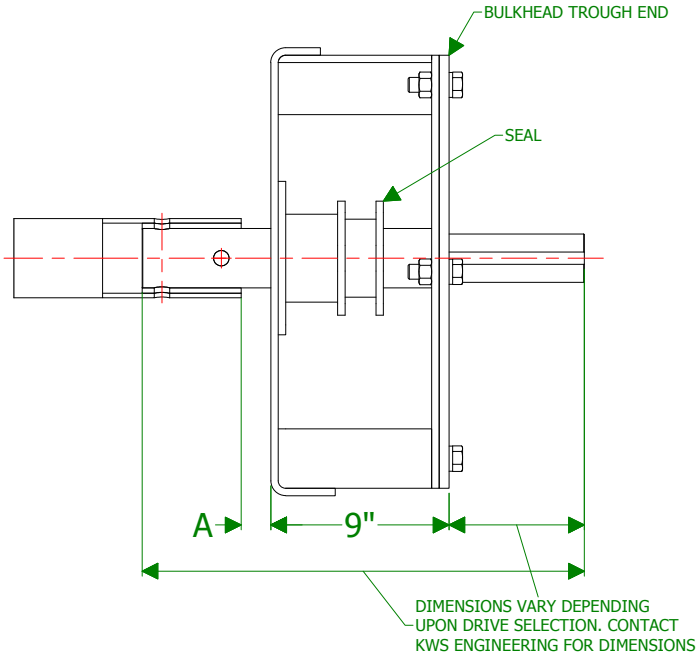
BULKHEAD SHAFT

NOMENCLATURE

Q D S - (Varies) - 2 - 2 B - B H

- DS = Drive Shaft
- Drive Size / Adapter Style
- Shaft Diameter
- 2B = 2 Bolt, 3B = 3 Bolt
- BH = Bulkhead
- Drive Manufacturer:
  - N = Nord Drive Shaft
  - Q = Quantis Drive Shaft
  - (Other Mfg. drive shafts available)

1 = 1”	3 = 3”
112 = 1-1/2”	3716 = 3-7/16”
2 = 2”	31516 = 3-15/16”
2716 = 2-7/16”	4716 = 4-7/16”



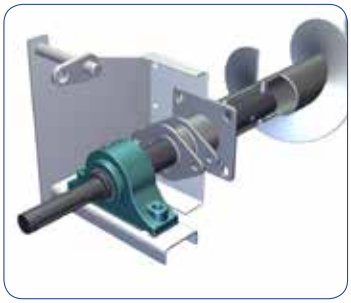
Shaft Dia.	A	Part Number
1”	3/4”	•DS-#-1-#-BH
1-1/2”	1”	•DS-#-112-#-BH
2”	1”	•DS-#-2-#-BH
2-7/16”	1-1/2”	•DS-#-2716-#-BH
3”	1-1/2”	•DS-#-3-#-BH
3-7/16”	2”	•DS-#-3716-#-BH
3-15/16”	2”	•DS-#-31516-#-BH
4-7/16”	2-1/2”	•DS-#-4716-#-BH

 # = Varies Depending Upon Drive Selection and Number of Bolts

•Drive Manufcturer: N = Nord, Q = Quantis

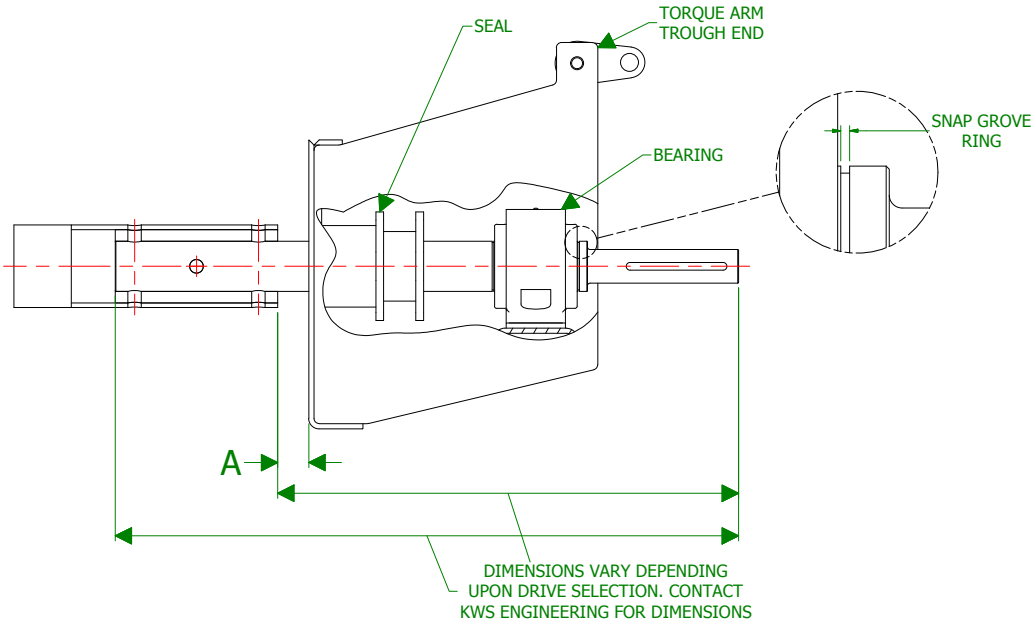
TORQUE ARM SHAFT

NOMENCLATURE



Q D S - (Varies) - 2 - 2 B - P

- Q D S: DS = Drive Shaft
- (Varies): Drive Size / Adapter Style
- Drive Manufacturer:
  - N = Nord Drive Shaft
  - Q = Quantis Drive Shaft
  - (Other Mfg. drive shafts available)
- 2: Shaft Diameter
  - 1 = 1”
  - 112 = 1-1/2”
  - 2 = 2”
  - 2716 = 2-7/16”
  - 3 = 3”
  - 3716 = 3-7/16”
  - 31516 = 3-15/16”
  - 4716 = 4-7/16”
- 2B: 2B = 2 Bolt, 3B = 3 Bolt
- P = Pedestal



Shaft Dia.	A	Part Number
1”	3/4”	•DS-#-1-#-P
1-1/2”	1”	•DS-#-112-#-P
2”	1”	•DS-#-2-#-P
2-7/16”	1-1/2”	•DS-#-2716-#-P
3”	1-1/2”	•DS-#-3-#-P
3-7/16”	2”	•DS-#-3716-#-P
3-15/16”	2”	•DS-#-31516-#-P
4-7/16”	2-1/2”	•DS-#-4716-#-P

 # = Varies Depending Upon Drive Selection and Number of Bolts

• Drive Manufacturer: N = Nord, Q = Quantis

TROUGHS

KWS designs and manufactures many different types of troughs and tubular housings for every bulk material handling application. All troughs and tubular housings are available in carbon steel construction as well as abrasion-resistant steels, hot-dipped galvanized and stainless steel. KWS can manufacture troughs and tubular housings out of any commercially available metal. Plate end flanges are CNC cut and jig-welded to ensure exact alignment with adjacent trough sections. KWS recommends supporting every trough section with flanged feet or saddles.

NOMENCLATURE

T U F 1 2 3 1 6 J

- **T** = Trough
- **Shape**: U = U-Trough; T = Tubular; FL = Flared; R = Rectangular
- **Housing Configuration**: A = Angle Flange; F = Formed Flange; DF = Double Flange; FC = Formed Channel; DB = Drop Bottom; DA = Double Angle
- **Screw Diameter**: 4 = 4”; 6 = 6”; 9 = 9”; 12 = 12”; 14 = 14”; 16 = 16”; 18 = 18”; 20 = 20”; 24 = 24”; 30 = 30”; 36 = 36”
- **Material Thickness**: 14 = 14GA; 12 = 12GA; 10 = 10GA; 316 = 3/16”; 250 = 1/4”; 375 = 3/8”; 500 = 1/2”
- **J** = Jacketed; Blank = All Others

U-TROUGHS

U-troughs are the most common type of trough for screw conveyors and screw feeders. The U–trough design is simple, economical and provides access for maintenance.

ANGLE FLANGE

Angle flange troughs are manufactured with structural angle top flanges to provide extra rigidity. Stock angle flange troughs utilize thinner gauges of metal and are typically used in light and medium duty applications.

FORMED FLANGE

Formed flange troughs are manufactured with formed top flanges. Stock formed flange troughs utilize heavier gauges of steel and are typically used for medium to heavy duty applications. Formed flange troughs are dust-tight.

TROUGHS

DOUBLE FORMED FLANGE

Double formed flange troughs are manufactured with two formed top flanges for added rigidity. Double formed flange troughs provide an effective dust-tight seal when used with flanged covers and a compressible gasket material.

FORMED CHANNEL

Formed channel troughs are manufactured with two formed side channels to provide rigidity for spanning long distances without intermediate supports. The lower, curved trough section is typically bolted to the channel sides and can be replaced when worn.

DROP BOTTOM

Drop bottom troughs are manufactured with a removable or hinged lower curved trough section. Drop bottom troughs allow access to the screw for clean out or maintenance purposes. Removable drop bottom troughs are bolted on close spacing on both sides of the trough. Hinged drop bottom troughs are hinged on one side with quick-release clamps and safety bolts on the other side.

JACKETED

Jacketed troughs are manufactured with an outer jacket that is seal-welded to the trough. Bulk materials can be cooled, heated or maintained at a constant temperature with jacketed troughs. Heat transfer mediums such as water, hot oil or steam flow through the jacketed trough to provide heat transfer. ASME coded troughs are available from KWS.

FLARED TROUGH

Flared troughs are manufactured with formed top flanges. The top opening of a flared trough is wider than a U-trough to allow sticky or viscous bulk materials to enter the trough easier. Many mixing screw conveyors utilize flared troughs because the additional space above the screw creates more room for bulk materials to be mixed.

TROUGHS

TUBULAR HOUSINGS

Tubular housings are typically used when a screw conveyor is inclined over 15-degrees. Conveying efficiency is greatly improved with tubular housings because bulk materials are contained and fall back is reduced. Tubular housings are also used for weather-tight applications and used to hold internal pressure in a screw conveyor. ASME coded tubular housings are available from KWS.

NON-SPLIT

Non-split tubular housings are manufactured by rolling a cylindrical tube and continuously welding at the seam or cutting down spouting or pipe to length.

SPLIT

Split tubular housings are manufactured by rolling two halves and forming flanges on each side. The two halves are then bolted together to form a rigid assembly.

RECTANGULAR TROUGHS

Rectangular troughs are typically used in applications for conveying abrasive bulk materials. The space between the screw and rectangular trough fills with the bulk material being conveyed forming a static layer. The bulk material being conveyed slides over the static material and eliminates wear on the rectangular trough. Rectangular troughs are also beneficial when utilizing certain abrasion-resistant steels such as AR-400, AR-500 and chromium carbide steel due to their low formability.

ANGLE FLANGE

Angle flange rectangular troughs are manufactured with structural angle top flanges to provide extra rigidity similar to U-troughs.

FORMED FLANGE

Formed flange rectangular troughs are manufactured with formed angle top flanges similar to U-troughs.

ANGLE FLANGE -TOP & BOTTOM

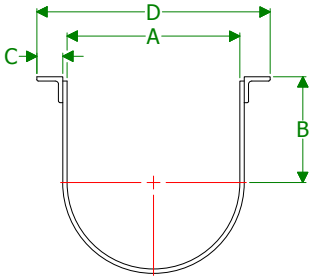
Angle flange – top & bottom rectangular troughs are manufactured with structural angles on both the top and bottom flanges. Some high strength steel plate materials such as AR-400 cannot be formed at 90-degree angles and angle flanges are required.

FORMED FLANGE -TOP & BOTTOM

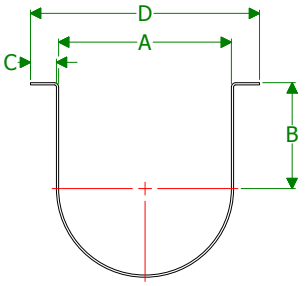
Formed flange – top & bottom rectangular troughs are manufactured with formed angles on both the top and bottom flanges.

U-TROUGHS

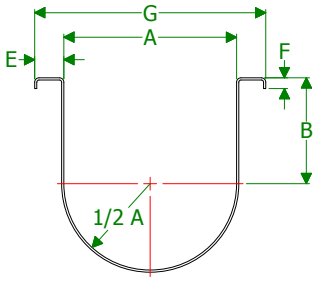
ANGLED FLANGE



FORMED FLANGE



DOUBLE FORMED FLANGE

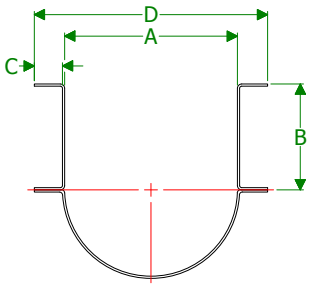


Screw Dia.	Trough Thk.	A	B	C	D	E	F	G	Angle Flange		Formed Flange		Double Formed Flange	
									Part Number	Wt. Per ft. (Lbs.)	Part Number	Wt. Per ft. (Lbs.)	Part Number	Wt Per ft. (Lbs.)
4”	14 Ga. 12 Ga. 10 Ga.	5”	3-5/8”	1”	7-1/4”	1-1/4”	7/8”	7-1/2”	TUA414* TUA412 TUA410	7 9 12	TUF414 TUF412 TUF410	5 7 9	TUDF414 TUDF412 TUDF410	6 9 11
6”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	7”	4-1/2”	1-1/4”	9-3/4” 9-3/4” 9-3/4” 9-7/8” 10”	1-3/8”	7/8” 7/8” 7/8” 1-5/8” 1-3/4”	9-3/4”	TUA614* TUA612 TUA610 TUA6316 TUA6250	9 13 16 22 30	TUF614 TUF612 TUF610 TUF6316* TUF6250	7 10 13 19 28	TUDF614 TUDF612 TUDF610 TUDF6316 TUDF6250	8 12 15 21 30
9”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	10”	6-1/8”	1-1/2”	13-1/4” 13-1/4” 13-1/4” 13-3/8” 13-1/2”	1-11/16”	7/8” 7/8” 7/8” 1-5/8” 1-3/4”	13-3/8”	TUA914* TUA912 TUA910* TUA9316 TUA9250	12 16 21 27 39	TUF914 TUF912 TUF910 TUF9316* TUF9250	10 13 17 22 34	TUDF914 TUDF912 TUDF910 TUDF9316 TUDF9250	11 15 20 26 38
12”	12 Ga. 10 Ga. 3/16” 1/4”	13”	7-3/4”	2”	17-1/4” 17-1/4” 17-3/8” 17-1/2”	2-1/8”	7/8” 7/8” 1-5/8” 1-3/4”	17-1/4”	TUA1212* TUA1210 TUA12316 TUA12250	21 27 35 46	TUF1212 TUF1210 TUF12316* TUF12250	17 22 29 38	TUDF1212 TUDF1210 TUDF12316 TUDF12250	19 25 33 44
14”	12 Ga. 10 Ga. 3/16” 1/4”	15”	9-1/4”	2”	19-1/4” 19-1/4” 19-3/8” 19-1/2”	2-1/8”	7/8” 7/8” 1-5/8” 1-3/4”	19-1/4”	TUA1412* TUA1410 TUA14316 TUA14250	23 30 39 52	TUF1412 TUF1410 TUF14316* TUF14250	19 25 33 44	TUDF1412 TUDF1410 TUDF14316 TUDF14250	21 28 37 50
16”	12 Ga. 10 Ga. 3/16” 1/4”	17”	10-5/8”	2”	21-1/4” 21-1/4” 21-3/8” 21-1/2”	2-1/8”	7/8” 7/8” 1-5/8” 1-3/4”	21-1/4”	TUA1612* TUA1610 TUA16316 TUA16250	26 33 43 57	TUF1612 TUF1610 TUF16316* TUF16250	22 28 37 49	TUDF1612 TUDF1610 TUDF16316 TUDF16250	24 31 41 55
18”	10 Ga. 3/16” 1/4”	19”	12-1/8”	2-1/2”	24-1/4” 24-3/8” 24-1/2”	2-5/8”	7/8” 1-5/8” 1-3/4”	24-1/4”	TUA1810* TUA18316 TUA18250	38 50 65	TUF1810 TUF18316 TUF18250	32 42 55	TUDF1810 TUDF18316 TUDF18250	35 46 61
20”	3/16” 1/4”	21”	13-1/2”	2-1/2”	26-1/2” 26-1/2”	2-5/8”	1-5/8” 1-3/4”	26-1/4”	TUA20316* TUA20250	54 71	TUF20316 TUF20250	46 61	TUDF20316 TUDF20250	50 67
24”	3/16” 1/4”	25”	16-1/2”	2-1/2”	30-3/8” 30-1/2”	2-5/8”	1-5/8” 1-3/4”	30-1/4”	TUA24316* TUA24250	63 83	TUF24316 TUF24250	55 73	TUDF24316 TUDF24250	59 79
30”	3/8” 1/2”	31”	19-1/2”	3”	37-3/4” 38”	3-1/8” X	1-3/4” X	37-1/4” X	TUA30375 TUA30500	148 198	TUF30375 X	134 X	TUDF30375 X	142 X
36”	3/8” 1/2”	37”	22-1/2”	3”	43-3/4” 44”	3-1/2” X	1-3/4” X	44” X	TUA36375 TUA36500	170 227	TUF36375 X	156 X	TUDF36375 X	164 X

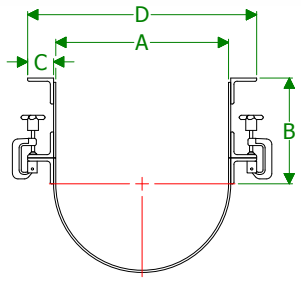
** KWS Stock Component (In Carbon Steel only)*

U-TROUGHS

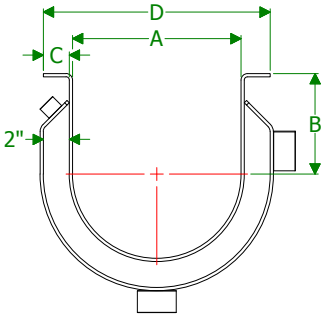
FORMED CHANNEL



DROP BOTTOM



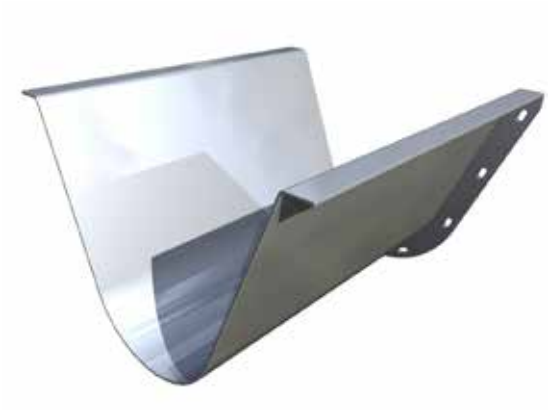
JACKETED

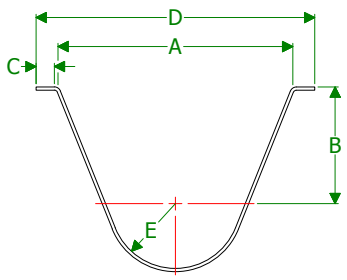


Screw Dia.	Trough Thk.	A	B	C	D	Formed Chanel Trough		Drop Bottom Trough		Jacketed Trough	
						Part Number	Wt. Per ft. (Lbs.)	Part Number	Wt. Per ft (Lbs.) †	Part Number	Wt. Per ft. (Lbs.)•
4”	NOT AVAILABLE										
6”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	7”	4-1/2”	1-1/4”	9-3/4” 9-3/4” 9-3/4” 9-7/8” 10”	TUFC614 TUFC612 TUFC610 TUFC6316 TUFC6250	9 12 16 20 26	TUDB614 TUDB612 TUDB610 TUDB6316 TUDB6250	14 16 19 23 29	X	X
9”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	10”	6-1/8”	1-1/2”	13-1/4” 13-1/4” 13-1/4” 13-3/8” 13-1/2”	TUFC914 TUFC912 TUFC910 TUFC9316 TUFC9250	12 16 20 26 30	TUDB914 TUDB912 TUDB910 TUDB9316 TUDB9250	18 22 27 33 39	TUF914J TUF912J TUF910J TUF9316J TUF9250J	19 25 33 43 62
12”	12 Ga. 10 Ga. 3/16” 1/4”	13”	7-3/4”	2”	17-1/4” 17-1/4” 17-3/8” 17-1/2”	TUFC1212 TUFC1210 TUFC12316 TUFC12250	20 26 35 46	TUDB1212 TUDB1210 TUDB12316 TUDB12250	31 28 45 56	TUF1212J TUF1210J TUF12316J TUF12250J	32 41 54 72
14”	12 Ga. 10 Ga. 3/16” 1/4”	15”	9-1/4”	2”	19-1/4” 19-1/4” 19-3/8” 19-1/2”	TUFC1412 TUFC1410 TUFC14316 TUFC14250	22 29 39 51	TUDB1412 TUDB1410 TUDB14316 TUDB14250	33 40 49 62	TUF1412J TUF1410J TUF14316J TUF14250J	36 47 61 82
16”	12 Ga. 10 Ga. 3/16” 1/4”	17”	10-5/8”	2”	21-1/4” 21-1/4” 21-3/8” 21-1/2”	TUFC1612 TUFC1610 TUFC16316 TUFC16250	25 32 50 56	TUDB1612 TUDB1610 TUDB16316 TUDB16250	36 43 53 67	TUF1612J TUF1610J TUF16316J TUF16250J	41 52 69 91
18”	10 Ga. 3/16” 1/4”	19”	12-1/8”	2-1/2”	24-1/4” 24-3/8” 24-1/2”	TUFC1810 TUFC18316 TUFC18250	37 49 64	TUDB1810 TUDB18316 TUDB18250	43 65 80	TUF1810J TUF18316J TUF18250J	58 77 102
20”	3/16” 1/4”	21”	13-1/2”	2-1/2”	26-1/2” 26-1/2”	TUFC20316 TUFC20250	53 70	TUDB20316 TUDB20250	69 86	TUF20316J TUF20250J	84 112
24”	3/16” 1/4”	25”	16-1/2”	2-1/2”	30-3/8” 30-1/2”	TUFC24316 TUFC24250	63 82	TUDB24316 TUDB24250	78 98	TUF24316J TUF24250J	100 133
30”	3/8” 1/2”	31”	19-1/2”	3”	37-3/4” 38”	TUFC30375 X	151 X	TUDB30375 TUDB30500	163 238	TUF30375J X	241 X
36”	3/8” 1/2”	37”	22-1/2”	3”	43-3/4” 44”	TUFC36375 X	173 X	TUDB36375 TUDB36500	185 260	TUA36375J X	281 X

† Weights do not include clamps • Weights do not include couplings

FLARED TROUGHS

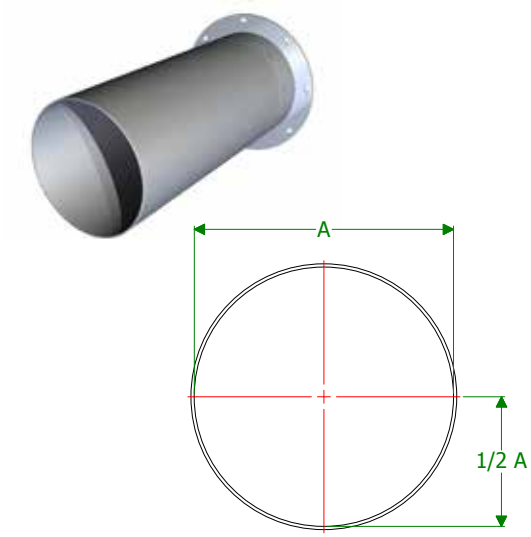




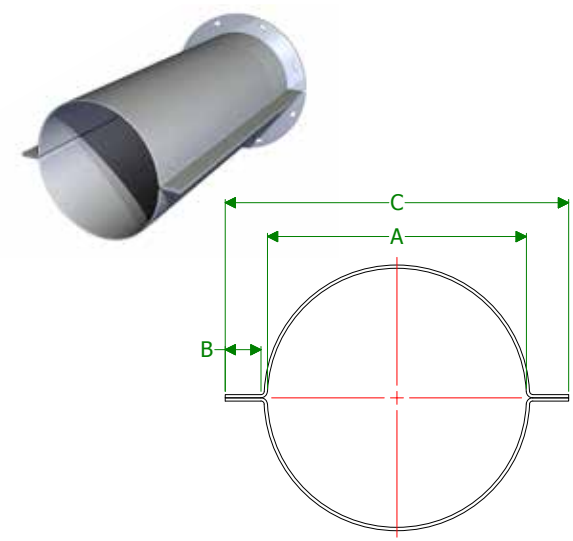
Screw Dia.	Trough Thk.	A	B	C	D	E	Part Number	Weight Per Foot (Lbs.)
4”	NOT AVAILABLE							
6”	14 Ga. 12 Ga. 3/16” 1/4”	14”	7”	1-1/4”	16-5/8” 16-5/8” 16-3/4” 16-7/8”	3-1/2”	TFLF614 TFLF612 TFLF6316 TFLF6250	5 8 11 15
9”	12 Ga. 10 Ga. 3/16” 1/4”	18”	9”	1-1/2”	21-1/4” 21-1/4” 21-3/8” 21-1/2”	5”	TFLF912 TFLF910 TFLF9316 TFLF9250	10 18 23 37
12”	12 Ga. 10 Ga. 3/16” 1/4”	22”	10”	2”	26-1/4” 26-1/4” 26-3/8” 26-3/8”	6-1/2”	TFLF1212 TFLF1210 TFLF12316 TFLF12250	17 22 30 41
14”	12 Ga. 10 Ga. 3/16” 1/4”	24”	11”	2”	28-1/4” 28-1/4” 28-3/8” 28-3/8”	7-1/2”	TFLF1412 TFLF1410 TFLF14316 TFLF14250	19 24 33 45
16”	12 Ga. 10 Ga. 3/16” 1/4”	28”	11-1/2”	2”	32-1/4” 32-1/4” 32-3/8” 32-1/2”	8-1/2”	TFLF1612 TFLF1610 TFLF16316 TFLF16250	20 26 36 48
18”	10 Ga. 3/16” 1/4”	31”	12-1/8”	2-1/2”	36-1/4” 36-3/8” 36-1/2”	9-1/2”	TFLF1810 TFLF18316 TFLF18250	30 40 53
20”	3/16” 1/4”	34”	13-1/2”	2-1/2”	39-3/8” 39-1/2”	10-1/2”	TFLF20316 TFLF20250	43 58
24”	3/16” 1/4”	40”	16-1/2”	2-1/2”	45-3/8” 45-1/2”	12-1/2”	TFLF24316 TFLF24250	51 68
30”	3/8” 1/2”	48”	19-1/2”	3”	55” 55-3/8”	15-1/2”	TFLF30375 TFLF30500	13 184
36”	3/8” 1/2”	54”	22-1/2”	3”	61-1/8” 61-1/2”	18-1/2”	TFLF36375 TFLF36500	15 213

TUBULAR TROUGHS

NON-SPLIT



SPLIT

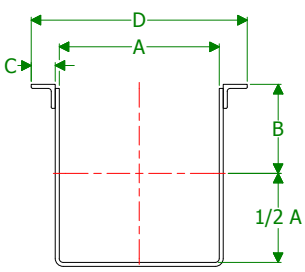


Screw Dia.	Trough Thk.	A (Dia.)	B	C	Non-Split		Split	
					Part Number	Wt Per Foot (Lbs.)	Part Number	Wt. Per Foot (Lbs.)
4”	14 Ga. 12 Ga. 10 Ga.	5” •	1”	7-1/4	N/A TT412-DS N/A	X 7 X	TTF414 TTF412 TTF410	5 7 9
6”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	7” •	1-1/4”	9-3/4” 9-3/4” 9-3/4” 9-7/8” 10”	TT614-DS TT612-DS N/A N/A N/A	7 9 X X X	TTF614 TTF612 TTF610 TTF6316 TTF6250	8 10 13 18 26
9”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	10” •	1-7/16”	13-3/8” 13-3/8” 13-3/8” 13-3/8” 13-1/2”	N/A TT912-DS TT910-DS TT9316-DS TT9250-DS	X 13 17 22 30	TTF914 TTF912 TTF910 TTF9316 TTF9250	11 15 19 25 34
12”	12 Ga. 10 Ga. 3/16” 1/4”	13”	2”	17-1/4” 17-1/4” 17-3/8” 17-3/8”	TT1212 TT1210 TT12316 TT12250	16 21 28 37	TTF1212 TTF1210 TTF12316 TTF12250	20 25 33 45
14”	12 Ga. 10 Ga. 3/16” 1/4”	15”	2”	19-1/4” 19-1/4” 19-3/8” 19-1/2”	TT1412 TT1410 TT14316 TT14250	19 24 32 43	TTF1412 TTF1410 TTF14316 TTF14250	22 29 38 50
16”	12 Ga. 10 Ga. 3/16” 1/4”	17”	2”	21-1/4” 21-1/4” 21-3/8” 21-1/2”	TT1612 TT1610 TT16316 TT16250	21 28 37 49	TTF1612 TTF1610 TTF16316 TTF16250	25 32 42 56
18”	10 Ga. 3/16” 1/4”	19”	2-1/2”	24-1/4” 24-1/2” 24-1/2”	TT1810 TT18316 TT18250	31 41 55	TTF1810 TTF18316 TTF18250	36 48 64
20”	3/16” 1/4”	21”	2-1/2”	26-3/8” 26-1/2”	TT20316 TT20250	46 61	TTF20316 TTF20250	53 70
24”	3/16” 1/4”	25”	2-1/2”	30-3/8” 30-1/2”	TT24316 TT24250	54 73	TTF24316 TTF24250	62 82
30”	3/8” 1/2”	31”	3”	37-3/4” 38”	TT30375 TT30500	136 188	TTF30375 TTF30500	153 210
36”	3/8” 1/2”	37”	3”	43-3/4” 44”	TT36375 TT36500	163 224	TTF36375 TTF36500	180 245

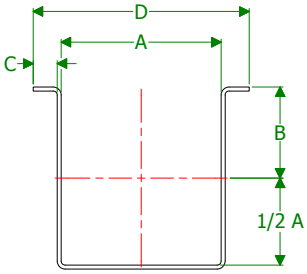
• Down Spouting Used for Non-Split 4, 6, and 9 inch: ”A” Dimension Becomes OD and not ID

RECTANGULAR TROUGHS

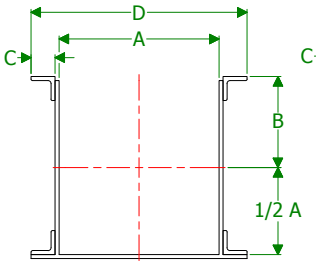
ANGLE FLANGE



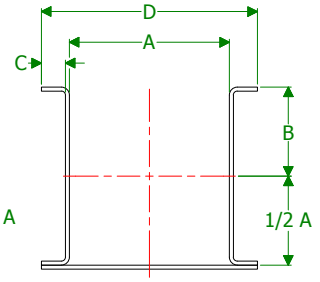
FORMED FLANGE



DOUBLE ANGLE



FORMED CHANNEL



Screw Dia.	Trough Thk	A	B	C	D	Angle Flanged		Formed Flanged		Double Angle		Formed Channel	
						Part Number	Wt./Ft. (Lbs.)	Part Number	Wt./Ft. (Lbs.)	Part Number	Wt./Ft. (Lbs.)	Part Number	Wt /Ft (Lbs)
4”	NOT AVAILABLE												
6”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	7”	4-1/2”	1-1/4”	9-3/4” 9-3/4” 9-3/4” 9-7/8” 10”	TRA614 TRA612 TRA610 TRA6316 TRA6250	8 11 14 19 25	TRF614 TRF612 TRF610 TRF6316 TRF6250	8 11 14 19 25	TRDA614 TRDA612 TRDA610 TRDA6316 TRDA6250	9 12 16 21 28	TRFC614 TRFC612 TRFC610 TRFC6316 TRFC6250	8 11 14 19 25
9”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	10”	6-1/8”	1-1/2”	13-1/4” 13-1/4” 13-1/4” 13-3/8” 13-1/2”	TRA914 TRA912 TRA910 TRA9316 TRA9250	11 15 19 26 34	TRF914 TRF912 TRF910 TRF9316 TRF9250	11 15 19 26 34	TRDA914 TRDA912 TRDA910 TRDA9316 TRDA9250	12 17 22 29 38	TRFC914 TRFC912 TRFC910 TRFC9316 TRFC9250	11 15 19 26 35
12”	12 Ga. 10 Ga. 3/16” 1/4”	13”	7-3/4”	2”	17-1/4” 17-1/4” 17-3/8” 17-1/2”	TRA1212 TRA1210 TRA12316 TRA12250	19 25 31 44	TRF1212 TRF1210 TRF12316 TRF12250	19 25 31 44	TRDA1212 TRDA1210 TRDA12316 TRDA12250	22 28 38 50	TRFC1212 TRFC1210 TRFC12316 TRFC12250	19 25 34 45
14”	12 Ga. 10 Ga. 3/16” 1/4”	15”	9-1/4”	2”	19-1/4” 19-1/4” 19-3/8” 19-1/2”	TRA1412 TRA1410 TRA14316 TRA14250	22 29 38 51	TRF1412 TRF1410 TRF14316 TRF14250	22 29 38 51	TRDA1412 TRDA1410 TRDA14316 TRDA14250	24 32 42 56	TRFC1412 TRFC1410 TRFC14316 TRFC14250	22 29 39 52
16”	12 Ga. 10 Ga. 3/16” 1/4”	17”	10-5/8”	2”	21-1/4” 21-1/4” 21-3/8” 21-1/2”	TRA1612 TRA1610 TRA16316 TRA16250	25 32 42 57	TRF1612 TRF1610 TRF16316 TRF16250	25 32 42 57	TRDA1612 TRDA1610 TRDA16316 TRDA16250	27 35 37 50	TRFC1612 TRFC1610 TRFC16316 TRFC16250	25 33 44 58
18”	10 Ga. 3/16” 1/4”	19”	12-1/8”	2-1/2”	24-1/4” 24-3/8” 24-1/2”	TRA1810 TRA18316 TRA18250	37 49 65	TRF1810 TRF18316 TRF18250	37 49 65	TRDA1810 TRDA18316 TRDA18250	40 54 72	TRFC1810 TRFC18316 TRFC18250	37 49 66
20”	3/16” 1/4”	21”	13-1/2”	2-1/2”	26-3/8” 26-1/2”	TRA20316 TRA20250	54 72	TRF20316 TRF20250	53 71	TRDA20316 TRDA20250	59 78	TRFC20316 TRFC20250	54 73
24”	3/16” 1/4”	25”	16-1/2”	2-1/2”	30-3/8” 30-1/2”	TRA24316 TRA24250	63 85	TRF24316 TRF24250	63 84	TRDA24316 TRDA24250	69 91	TRFC24316 TRFC24250	65 86
30”	3/8”	31”	19-1/2”	3”	37-3/4”	TRA30375	154	TRF30375	153	TRDA30375	166	TRFC30375	157
36”	3/8”	37”	22-1/2”	3”	43-3/4”	TRA36375	180	TRF36375	178	TRDA36375	192	TRFC36375	183

PLATE END FLANGES

Plate end flanges are continuously welded to the ends of each trough section and used to connect trough sections together. Bolts are located external to the trough for ease of access. Plate end flanges are CNC cut and jig-welded to ensure exact alignment with other adjacent sections.

NOMENCLATURE

P E F 1 2 U M S 3

- PEF = Plate End Flange
- Screw Diameter
  - 4 = 4”
  - 6 = 6”
  - 9 = 9”
  - 12 = 12”
  - 14 = 14”
  - 16 = 16”
  - 18 = 18”
  - 20 = 20”
  - 24 = 24”
  - 30 = 30”
  - 36 = 36”
- Shape
  - U = U-Trough
  - F = Flared
  - T = Tubular
  - R = Rectangular
- Material
  - MS = Mild Steel
  - SS = Stainless Steel
- Thickness
  - 10 = Fits troughs up to 10Ga thick
  - 3 = Fits troughs up to 1/4” thick

U-TROUGH PLATE END FLANGE

TUBULAR TROUGH PLATE END FLANGE

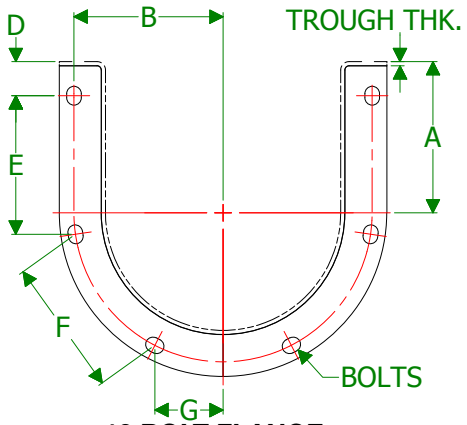
RECTANGULAR TROUGH PLATE END FLANGE

FLARED TROUGH PLATE END FLANGE

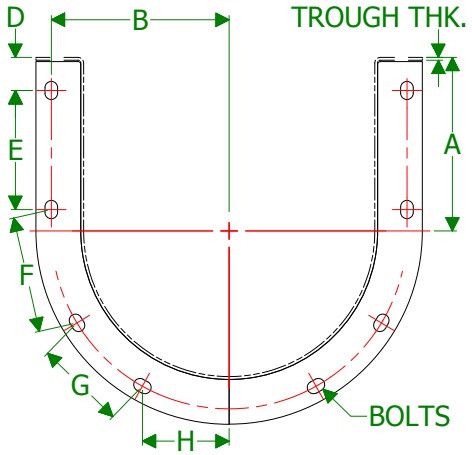
U-TROUGH / RECTANGULAR FLUSH END PLATE END FLANGE

U–TROUGH PLATE END FLANGES

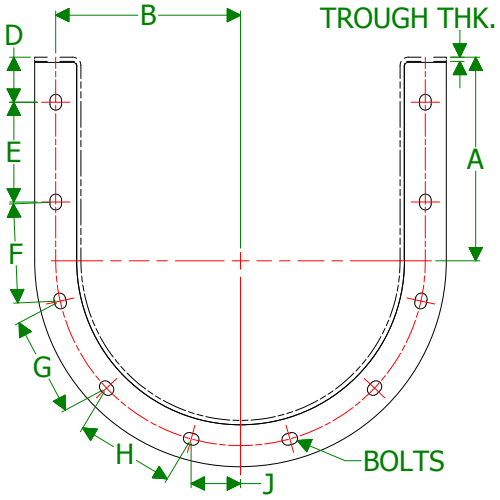
6 BOLT FLANGE



8 BOLT FLANGE



10 BOLT FLANGE



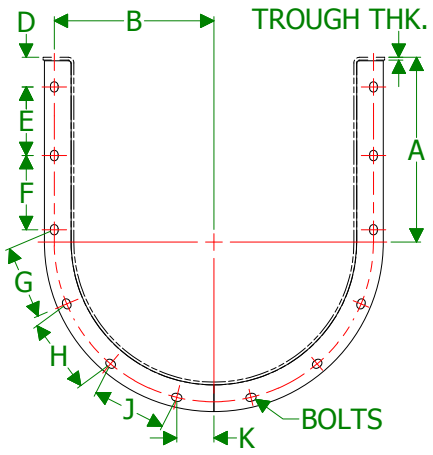
Screw Dia.	Bolts		A	B	C Thk.	D	E	F	G	H	J	Part Number	Weight (Lbs.)
	Dia.	Qty.											
4”	3/8”	6	3-5/8”	3-1/2”	3/16”	1-1/8”	3-1/8”	3 1/8”	1-9/16”	X	X	PEF4U•#*	1
6”	3/8”	6	4-1/2”	4-7/16”	3/16”	1-1/32”	4-1/8”	4-1/16”	2”	X	X	PEF6U•#*	2
9”	3/8”	8	6-1/8”	6-1/4”	1/4”	1-3/16”	4-1/8”	4-1/8”	3-3/4”	2-9/16”	X	PEF9U•#*	4
12”	1/2”	8	7-3/4”	7-15/16”	1/4”	1-1/2”	5-5/16”	5-3/16”	4-1/16”	3-7/8”	X	PEF12U•#*	6
14”	1/2”	8	9-1/4”	8-15/16”	1/4”	2-1/2”	5-5/8”	5-15/16”	5-15/16”	3”	X	PEF14U•#*	7
16”	5/8”	8	10-5/8”	10”	1/4”	2-5/8”	6-3/8”	6-5/8”	6-5/8”	3-3/4”	2-15/16”	PEF16U•#*	8
18”	5/8”	10	12-1/8”	11”	1/4”	2-11/16”	5-15/16”	5-7/8”	5-7/8”	5-7/8”	2-11/32”	PEF18U•#*	11
20”	5/8”	10	13-1/2”	12-3/16”	1/4”	2-3/4”	6-1/4”	6-11/16”	6-11/16”	6-11/16”	3-3/8”	PEF20U•#*	12

** KWS Stock Component (Only Mild Steel) # = Thickness: 10 = Fits troughs up to 10Ga thick, 3 = Fits troughs up to 1/4” thick*

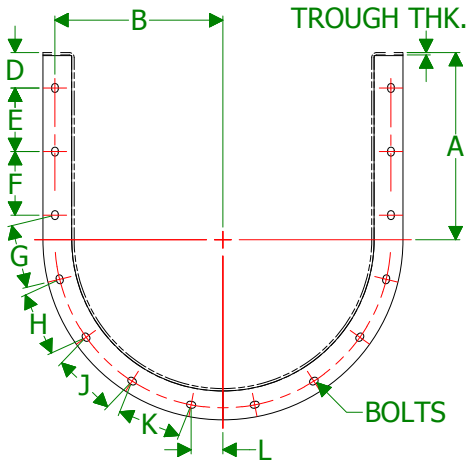
• Material Type; MS = Mild Steel, SS = Stainless Steel

U–TROUGH PLATE END FLANGES

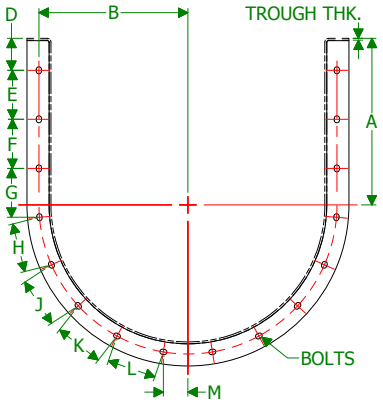
12 BOLT FLANGE



14 BOLT FLANGE



16 BOLT FLANGE



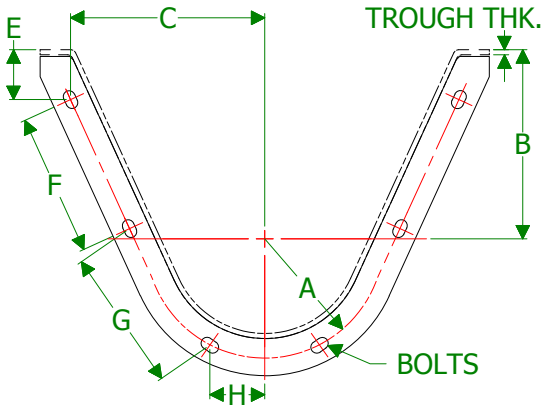
Screw Dia.	Bolts		A	B	C Thk.	D	E	F	G	H	J	K	L	M	Part Number	Weight (Lbs.)
	Dia.	Qty.														
24”	5/8”	12	16-1/2”	14-1/4”	1/4”	2-5/8”	6-1/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	3-5/16”	X	X	PEF24U•#*	14
30”	5/8”	14	19-1/2”	17-1/2”	3/8”	3-3/4”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	3-5/16”	X	PEF30U•#	21
36”	5/8”	16	22-1/2”	20-1/8”	3/8”	4-5/16”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	6-5/8”	3-5/16”	PEF36U•#	25

** KWS Stock Component (Only Mild Steel) # = Thickness: 10 = Fits troughs up to 10Ga thick, 3 = Fits troughs up to 1/4” thick*

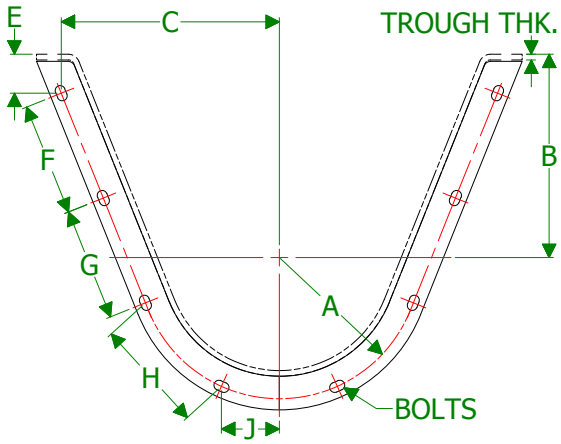
• Material Type; MS = Mild Steel, SS = Stainless Steel

FLARED TROUGH PLATE END FLANGES

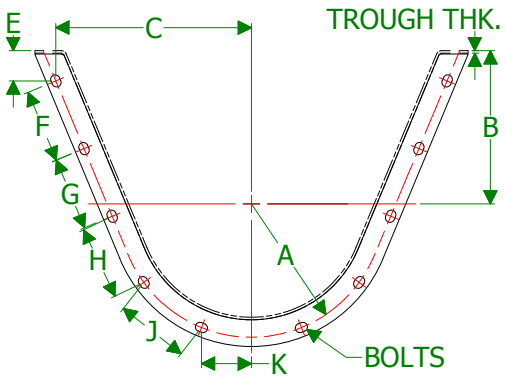
6 BOLT FLANGE



8 BOLT FLANGE



10 BOLT FLANGE

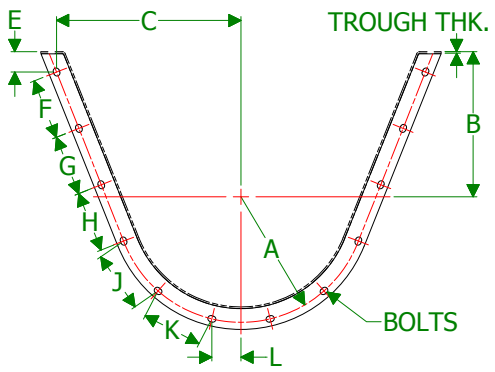


Screw Dia.	Bolts		A	B	C	D Thk.	E	F	G	H	J	K	Part Number	Weight (Lbs.)
	Dia.	Qty.												
4”	NOT AVAILABLE													
6”	3/8”	6	4-7/16”	7”	7-3/16”	3/16”	1-27/32”	5-1/4”	5-1/4”	2-1/32”	X	X	PEF6F•	3
9”	3/8”	8	6-1/4”	9”	9-11/16”	1/4”	1-3/4”	5”	5”	5”	2-9/16”	X	PEF9F•	5
12”	1/2”	8	7-15/16”	10”	11-13/16”	1/4”	1-13/16”	5-3/4”	5-3/4”	5-3/4”	3-7/8”	X	PEF12F•	7
14”	1/2”	10	8-15/16”	11”	12-3/4”	1/4”	2-1/16”	5-1/8”	5-1/8”	5-1/8”	5-1/8”	3”	PEF14F•	8
16”	5/8”	10	10”	11-1/2”	14-11/16”	1/4”	2-1/4”	5-1/2”	5-1/2”	5-1/2”	5-1/2”	3-3/4”	PEF16F•	8
18”	5/8”	10	11”	12-1/8”	16”	1/4”	2-5/8”	6-3/16”	6-3/16”	6-3/16	6-3/16”	2-15/16”	PEF18F•	11
20”	5/8”	10	12-3/16”	13-1/2”	17-7/8”	1/4”	2-5/16”	7”	7”	7””	7”	3-11/32”	PEF20F•	12

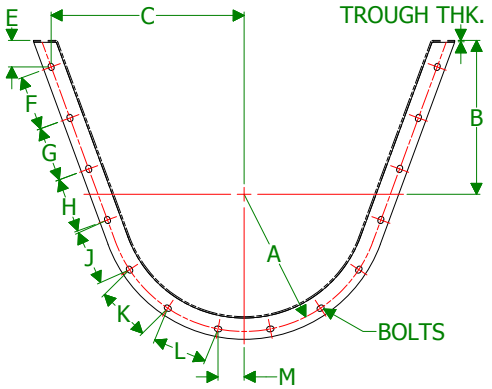
• Material Type; MS = Mild Steel, SS = Stainless Steel

FLARED TROUGH PLATE END FLANGES

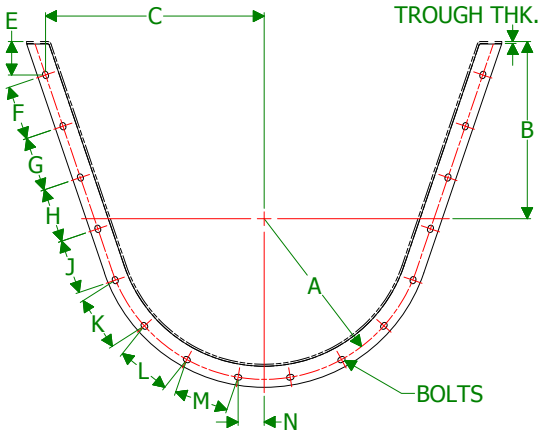
12 BOLT FLANGE



14 BOLT FLANGE



16 BOLT FLANGE

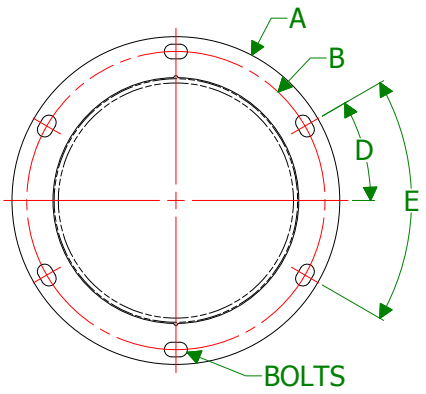


Screw Dia.	Bolts		A	B	C	D Thk.	E	F	G	H	J	K	L	M	N	Part Number	Weight (Lbs.)
	Dia.	Qty.															
24”	5/8”	12	14-1/4”	16-1/2”	20-15/16”	1/4”	2-5/16”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	3-5/16”	X	X	PEF24F•	15
30”	5/8”	14	17-1/2”	19-1/2”	24-13/16”	3/8”	3-1/2”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	3-1/2”	X	PEF30F•	20
36”	5/8”	16	20-1/2”	22-1/2”	27-15/16”	3/8”	3-1/2”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	6-7/8”	4-1/4	PEF36F•	23

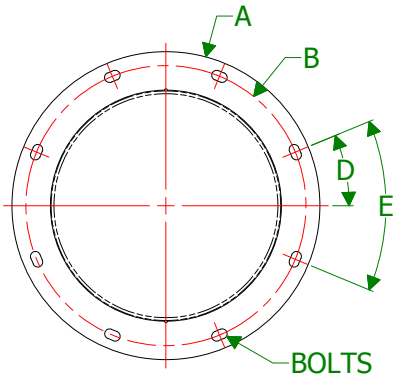
• Material Type; MS = Mild Steel, SS = Stainless Steel

TUBULAR TROUGH PLATE END FLANGES

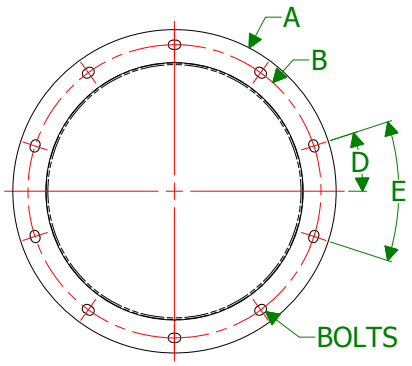
6 BOLT FLANGE

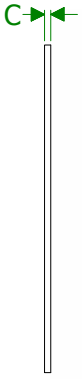


8 BOLT FLANGE



10 BOLT FLANGE



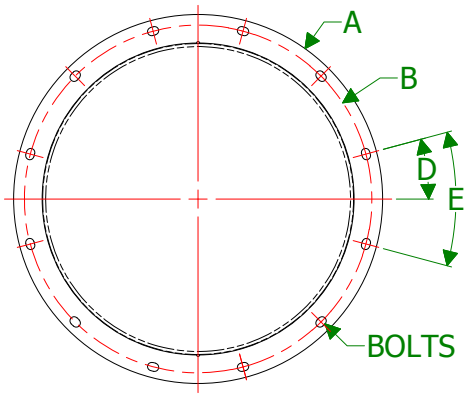


Screw Dia.	Bolts		A	B	C	D	E	Part	Weight
	Dia.	Qty.	Dia.	Dia.	Thk.	Angle	Angle	Number	(Lbs.)
4”	3/8”	6	7-3/4”	7”	3/16”	30°	60°	PEF4T•	2
6”	3/8”	6	9-3/4”	8-7/8”	3/16”	30°	60°	PEF6T•	2
9”	3/8”	8	13-3/4”	12-1/2”	1/4”	22.5°	45°	PEF9T•	5
12”	1/2”	8	17-1/4”	15-7/8”	1/4”	22.5°	45°	PEF12T•	8
14”	1/2”	8	19-1/4”	17-7/8”	1/4”	22.5°	45°	PEF14T•	8
16”	5/8”	8	21-1/4”	20”	1/4”	22.5°	45°	PEF16T•	9
18”	5/8”	10	24-1/4”	22”	1/4”	18°	36°	PEF18T•	13
20”	5/8”	10	26-1/4”	24-3/8”	1/4”	18°	36°	PEF20T•	14

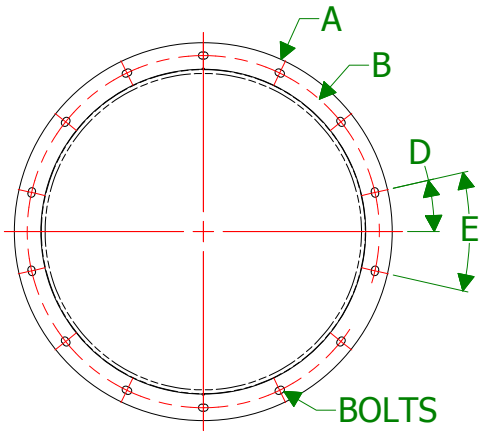
• Material Type; MS = Mild Steel, SS = Stainless Steel

TUBULAR TROUGH PLATE END FLANGES

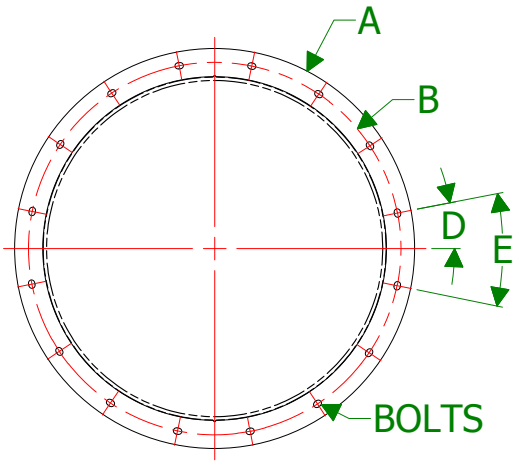
12 BOLT FLANGE

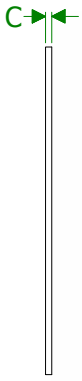


14 BOLT FLANGE



16 BOLT FLANGE



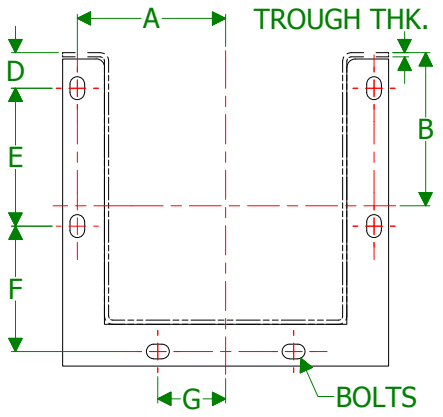


Screw Dia.	Bolts		A Dia	B Dia.	C Thk.	D Angle	E Angle	Part Number	Weight (Lbs.)
	Dia	Qty							
24”	5/8”	12	30-1/4”	28-1/2”	1/4”	15°	30°	PEF24T•	17
30”	5/8”	14	37”	34-1/2”	3/8”	13°	26°	PEF30T•	22
36”	5/8”	16	44”	41”	3/8”	11.5°	23°	PEF36T•	31

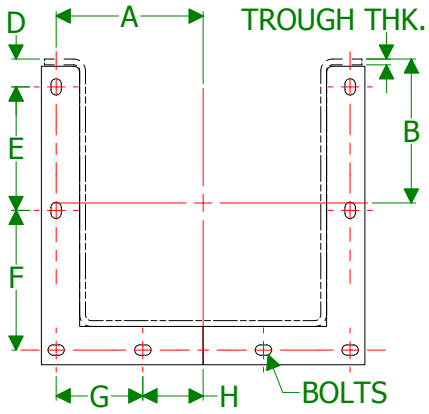
• Material Type; MS = Mild Steel, SS = Stainless Steel

RECTANGULAR PLATE END FLANGES

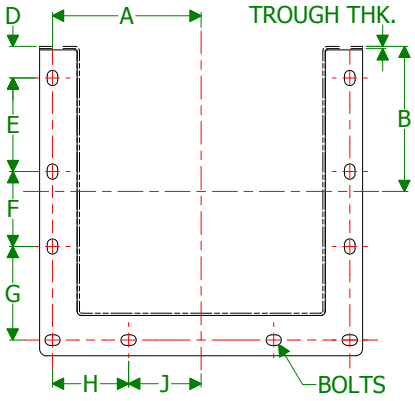
6 BOLT FLANGE



8 BOLT FLANGE



10 BOLT FLANGE

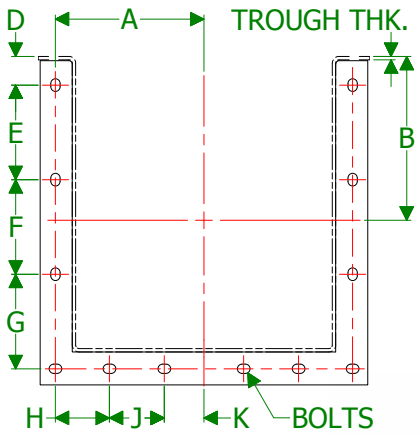


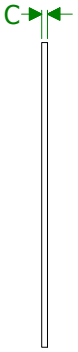
Screw Dia.	Bolts Dia	Bolts Qty.	A	B	C Thick	D	E	F	G	H	J	Part Number	Weight (Lbs.)
4”	NOT AVAILABLE												
6”	3/8”	6	4-9/16”	4-1/2”	3/16”	1-1/16”	4-1/8”	3-3/4”	2-1/32”	X	X	PEF6R•	3
9”	3/8”	8	6-1/4”	6-1/8”	1/4”	1-3/16”	5-1/4”	5-15/16”	3-11/16”	2-9/16”	X	PEF9R•	4
12”	1/2”	10	7-15/16”	7-3/4”	1/4”	1-11/16”	5”	4”	5”	4-1/16”	3-7/8”	PEF12R•	7
14”	1/2”	10	8-15/16”	9-1/4”	1/4”	2-7/16”	5-1/4”	5-1/4”	5-1/4”	5-15/16”	3	PEF14R•	8
16”	5/8”	10	10”	10-5/8”	1/4”	2-5/8”	6”	6”	6”	6-1/4”	3-3/4”	PEF16R•	9

• Material Type; MS = Mild Steel, SS = Stainless Steel

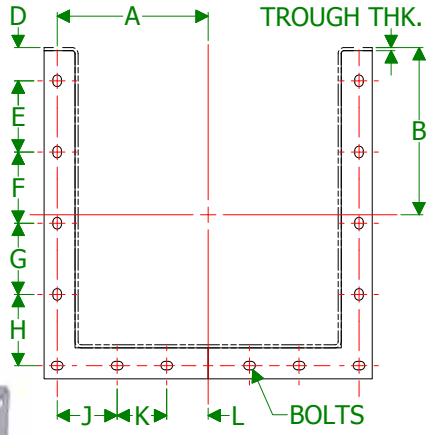
RECTANGULAR PLATE END FLANGES

12 BOLT FLANGE

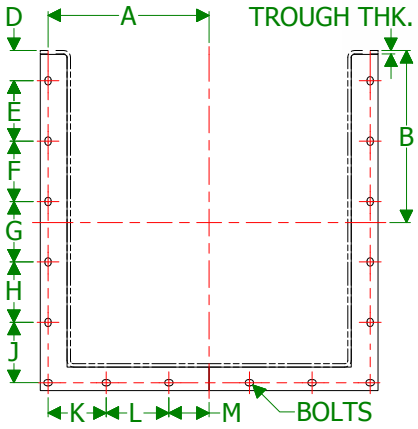




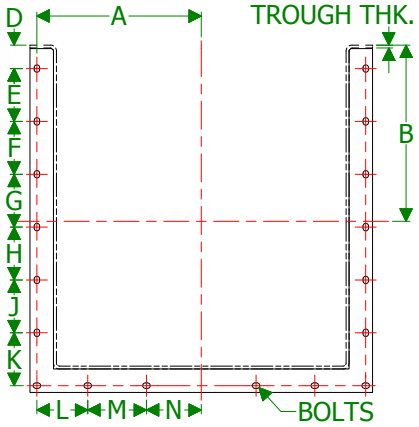
14 BOLT FLANGE



16 BOLT FLANGE



18 BOLT FLANGE

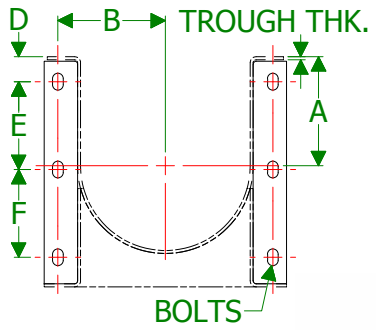


Screw Dia.	Bolts Dia.	Bolts Qty.	A	B	C Thk.	D	E	F	G	H	J	K	L	M	N	Part Number	Weight (Lbs.)
18”	5/8”	12	11”	12-1/8”	1/4”	2-1/8”	7”	7”	7	4”	4-1/16”	2-15/16”	X	X	X	PEF18R•	13
20”	5/8”	14	12-3/16”	13-1/2”	1/4”	2-11/16”	5-3/4”	5-3/4”	5-3/4	5-3/4	4-27/32”	4”	3-11/32”	X	X	PEF20R•	21
24”	5/8”	14	14-1/4”	16-1/2”	1/4”	2-3/4”	7”	7”	7”	7”	5-1/2”	5-7/16”	3-5/16”	X	X	PEF24R•	30
30”	5/8”	16	18”	19-1/2”	3/8”	2-15/16”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	4-1/2”	X	PEF30R•	36
36”	5/8”	18	21”	22-1/2”	3/8”	3”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	6-3/4”	7”	7”	7”	PEF36R•	44

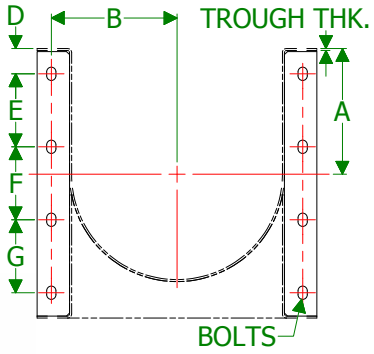
• Material Type; MS = Mild Steel, SS = Stainless Steel

U–TROUGH AND RECTANGULAR FLUSH END PLATE END FLANGE

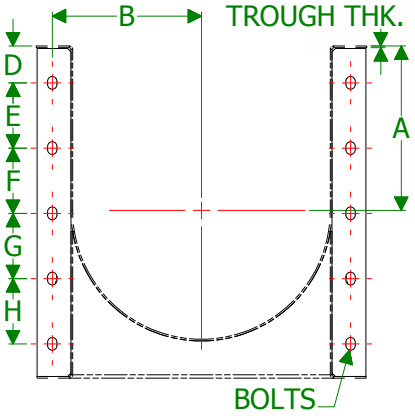
6 BOLT FLANGE



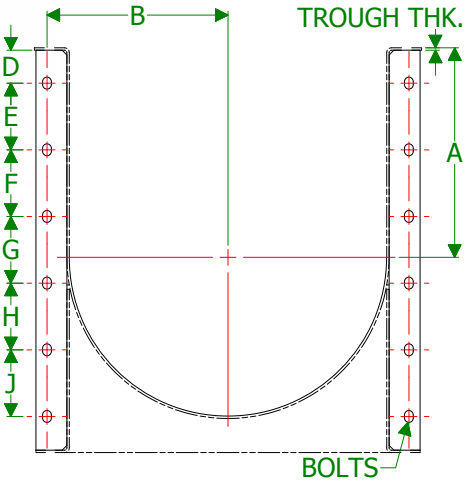
8 BOLT FLANGE



10 BOLT FLANGE



12 BOLT FLANGE



Screw Dia.	Bolts		A	B	C Thk.	D	E	F	G	H	J	K	Part Number	Weight (Lbs.)
	Dia.	Qty.												
4”	3/8”	6	3-5/8”	3-3/8”	3/16”	1-1/4”	2-1/2”	2-1/2”	X	X	X	X	PEF4@•FE	2
6”	3/8”	6	4-1/2”	4-7/16”	3/16”	1-1/16”	3-5/8”	3-5/8”	X	X	X	X	PEF6@•FE	2
9”	3/8”	8	6-1/8”	6 1/4”	1/4”	1-3/16”	3-5/8”	3-5/8”	3-5/8”	X	X	X	PEF9@•FE	3
12”	1/2”	8	7-3/4”	7-15/16”	1/4”	1-1/2”	4-5/8”	4-5/8”	4-5/8”	X	X	X	PEF12@•FE	5
14”	1/2”	8	9-1/4”	8-15/16”	1/4”	2-1/2”	4-3/4”	4-3/4”	4-3/4”	X	X	X	PEF14@•FE	6
16”	5/8”	8	10-5/8”	10”	1/4”	2-5/8”	5-1/2”	5-1/2”	5-1/2”	X	X	X	PEF16@•FE	6
18”	5/8”	10	12-1/8”	11”	1/4”	2-11/16”	4-13/16”	4-13/16”	4-13/16”	4-13/16”	X	X	PEF18@•FE	9
20”	5/8”	10	13-1/2”	12-3/16”	3/8”	2-27/32”	5-5/16”	5-5/16”	5-5/16”	5-5/16”	X	X	PEF20@•FE	14
24”	5/8”	12	16-1/2”	14-1/4”	3/8”	2-3/4”	5-1/4”	5-1/4”	5-1/4”	5-1/4”	5-1/4”	X	PEF24@•FE	18
30”	5/8”	12	19-1/2”	17-1/2”	3/8”	2-1/2”	6-1/4”	6-1/4”	6-1/4”	6-1/4”	6-1/4”	X	PEF30@•FE	27
36”	5/8”	14	22-1/2”	20-1/2”	3/8”	2-1/2”	6-1/4”	6-1/4”	6-1/4”	6-1/4”	6-1/4”	6-1/4”	PEF36@•FE	32

• Material Type; MS = Mild Steel, SS = Stainless Steel @ = U for U-Trough or R for Rectangular Note: 14 Bolt Pattern Not Shown

DISCHARGE SPOUTS

Discharge spouts are typically located at one end of a screw conveyor on the bottom of the trough. Bulk materials exit a screw conveyor through the discharge spout. Multiple discharge spouts with slide gates can be used to distribute bulk materials to various downstream processes. Slide gates should not be used on the final discharge of a screw conveyor because if the slide gate is closed, bulk materials will be compressed against the trough end and cause damage to the screw conveyor.

NOMENCLATURE

D S P 1 2 3 1 6 T F E

DSP = Discharge Spout

Screw Diameter
- 4 = 4”
- 6 = 6”
- 9 = 9”
- 12 = 12”
- 14 = 14”
- 16 = 16”
- 18 = 18”
- 20 = 20”
- 24 = 24”
- 30 = 30”
- 36 = 36”

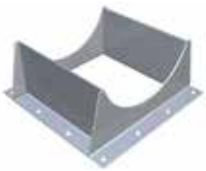
Discharge Thickness
- 14 = 14GA
- 12 = 12GA
- 10 = 10GA
- 316 = 3/16”
- 250 = 1/4”
- 375 = 3/8”
- 500 = 1/2”

Shape
- Blank = U-Trough
- T = Tubular
- F = Flared
- R = Rectangular

Discharge Style
- Blank = Plain (Fixed)
- HS = Hand Slide
- FE = Flush End Formed Trough
- FEA = Flush End Angled Trough

STANDARD

Standard discharge spouts are continuously welded to the bottom of a U-trough or tubular housing and can be located anywhere along the length of a screw conveyor. A minimum distance is required for the final discharge spout to allow for welding of the plate end flange and discharge spout.

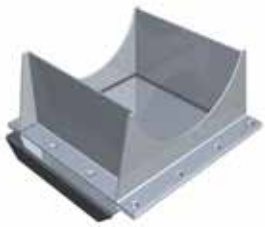


FLUSH END

Flush end discharge spouts are continuously welded to the end of a U-trough or tubular housing in order to maximize the length of the trough. A special flush end trough end is required with a flush end discharge. The discharge is considered ”flush” with the trough end.

HAND SLIDE

A hand slide gate is the simplest form of slide gate and utilizes a slide plate, spacer and retainer flange bolted to a standard discharge spout.

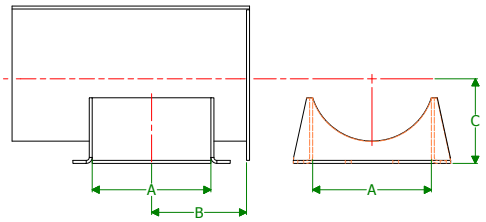


OPEN END

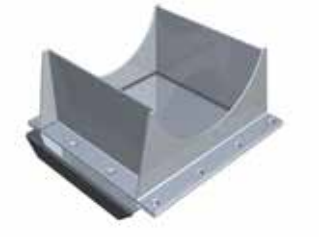
Open end discharge spouts utilize a hanger, hanger bearing and end shaft to allow bulk materials to discharge out the end of a screw conveyor. Open end discharges allow for maximum conveying distance over the length of the trough.

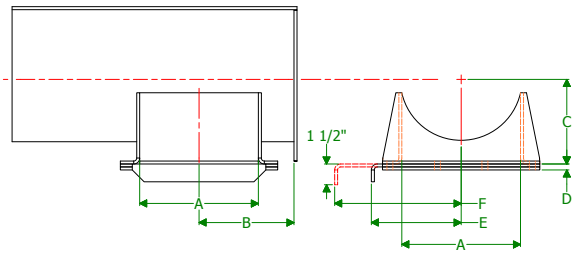
DISCHARGES

STANDARD

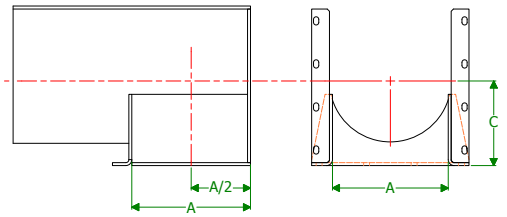


WITH HAND SLIDE





FLUSH END



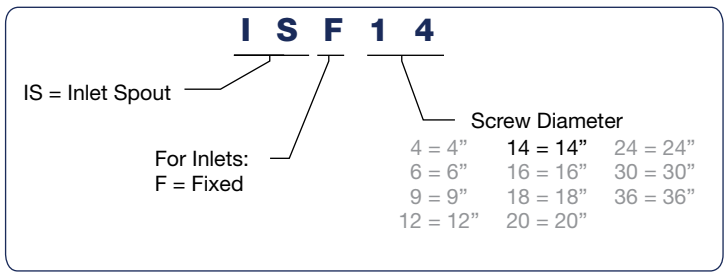
Screw Dia.	Thk.	A	B Min.	C	D	E	F	Standard		With Hand Slide		Flush End	
								Part Number	Weight (Lbs)	Part Number	Wt.	Part Number	Weight (Lbs.).
4”	14 Ga. 12 Ga. 10 Ga.	5”	4-1/2”	3-3/4”	5/16”	5-5/8”	11”	DSP414# DSP412#* DSP410#	2 3 4	DSP414#HS DSP412#HS DSP410#HS	5 6 6	DSP414#FE DSP412#FE DSP410#FE	2 2 3
6”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	7”	6”	5”	5/16”	6-5/8”	14”	DSP614# DSP612#* DSP610# DSP6316# DSP6250#	4 5 7 8 10	DSP614#HS DSP612#HS DSP610#HS DSP6316#HS DSP6250#HS	8 9 1 12 14	DSP614#FE DSP612#FE DSP610#FE DSP6316#FE DSP6250#FE	3 4 5 6 8
9”	14 Ga. 12 Ga. 10 Ga. 3/16” 1/4”	10”	8”	7-1/8”	5/16”	8”	19”	DSP914# DSP912# DSP910#* DSP9316# DSP9250#	7 10 12 16 20	DSP914#HS DSP912#HS DSP910#HS DSP9316#HS DSP9250#HS	15 17 20 23 28	DSP914#FE DSP912#FE DSP910#FE DSP9316#FE DSP9250#FE	5 7 9 12 15
12”	12 Ga. 10 Ga. 3/16” 1/4”	13”	10-1/2”	8-7/8”	5/16”	10-1/8”	24”	DSP1212# DSP1210#* DSP12316# DSP12250#	16 20 26 33	DSP1212#HS DSP1210#HS DSP12316#HS DSP12250#HS	29 33 39 46	DSP1212#FE DSP1210#FE DSP12316#FE DSP12250#FE	12 15 20 24
14”	12 Ga. 10 Ga. 3/16” 1/4”	15”	11-1/2”	10-1/8”	5/16”	11-1/4”	27”	DSP1412# DSP1410#* DSP14316# DSP14250#	20 26 32 41	DSP1412#HS DSP1410#HS DSP14316#HS DSP14250#HS	41 47 54 63	DSP1412#FE DSP1410#FE DSP14316#FE DSP14250#FE	15 19 24 31
16”	12 Ga. 10 Ga. 3/16” 1/4”	17”	13-1/2”	11-1/8”	5/16”	12-3/8”	30”	DSP1612# DSP1610# DSP16316#* DSP16250#	23 30 38 50	DSP1612#HS DSP1610#HS DSP16316#HS DSP16250#HS	45 52 60 72	DSP1612#FE DSP1610#FE DSP16316#FE DSP16250#FE	17 23 29 38
18”	10 Ga. 3/16” 1/4”	19”	14-1/2”	12-3/8”	5/16”	13-3/8”	33”	DSP1810# DSP18316#* DSP18250#	39 50 64	DSP1810#HS DSP18316#HS DSP18250#HS	5 76 90	DSP1810#FE DSP18316#FE DSP18250#FE	29 38 48
20”	3/16” 1/4”	21”	15-1/2”	13-3/8”	3/8”	14-3/8”	36”	DSP20316#* DSP20250#	58 75	DSP20316#HS DSP20250#HS	89 106	DSP20316#FE DSP20250#FE	43 56
24”	3/16” 1/4”	25”	17-1/2”	15-3/8”	3/8”	16-3/8”	42”	DSP24316#* DSP24250#	75 97	DSP24316#HS DSP24250#HS	117 139	DSP24316#FE DSP24250#FE	56 72
30”	3/8” 1/2”	31”	20-1/2”	18-3/8”	1/2”	18-3/8”	48”	DSP30375# DSP30500#	194 259	DSP30375#HS DSP30500#HS	253 318	DSP30375#FE DSP30500#FE	146 194
36”	3/8” 1/2”	37”	23-1/2”	21-3/8”	1/2”	20-3/8”	54”	DSP36375# DSP36500#	272 363	DSP36375#HS DSP36500#HS	351 442	DSP36375#FE DSP36500#FE	204 272

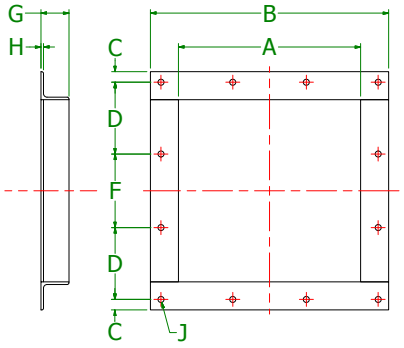
** KWS Stock Component (U-Trough Only) # = Specify Trough Style: Blank = U-Trough, T = Tubular, F = Flared, R = Rectangular*

INLET SPOUTS

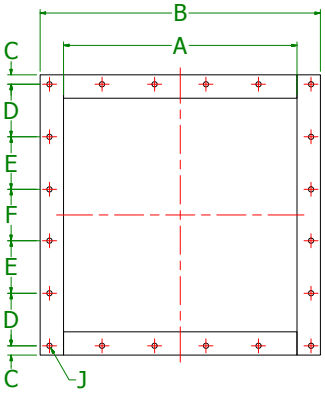
Inlet spouts are typically located at one end of a screw conveyor on the top of the cover. Bulk materials enter a screw conveyor through the inlet spout. Multiple inlet spouts can be used to feed a screw conveyor. The screw conveyor must be designed for the total volumetric feed rate of all of the inlets combined.

NOMENCLATURE

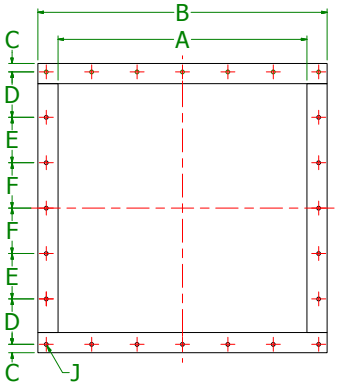




12 BOLT



20 BOLT



24 BOLT

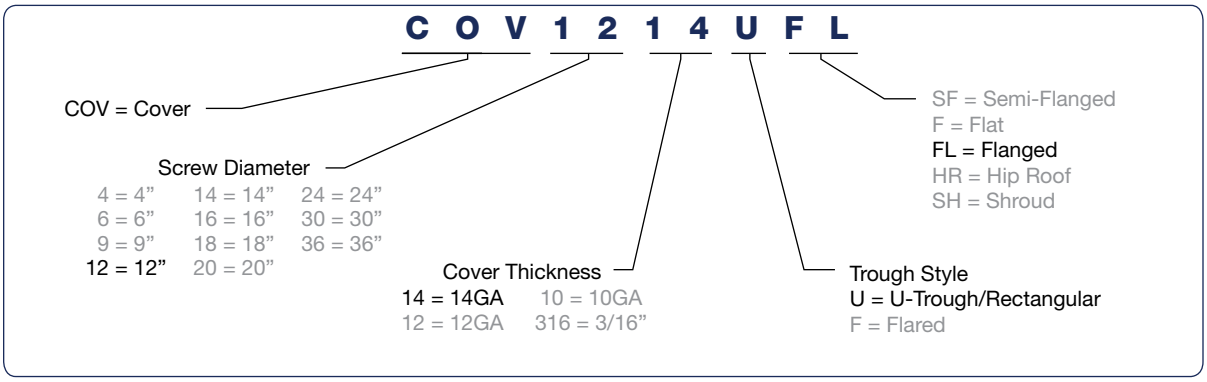
Screw Dia.	A	B		C		D	E	F	G	H	J		Part Number	Weight (Lbs.)
		Inlets	Discharges	Inlets	Discharges						Qty.	Bolt Dia.		
4”	5”	7-1/2”	7-1/2”	3/8”	3/8	2-1/4	X	2-1/4”	1-1/4	1/8	12	1/4”	ISF4*	2
6”	7”	10”	10”	11/16”	11/16”	2-13/16”	X	3”	1-1/2”	3/16”	12	3/8”	ISF6*	5
9”	10”	13”	13-1/4”	1/2”	5/8”	4”	X	4”	1-1/2”	3/16”	12	3/8”	ISF9*	7
12”	13”	17”	17-1/4”	3/4”	7/8”	5-1/8”	X	5-1/4”	2”	3/16”	12	3/8”	ISF12*	12
14”	15”	19”	19-1/4”	3/4”	7/8”	3-1/2”	3-1/2”	3-1/2”	2”	3/16”	20	3/8”	ISF14*	14
16”	17”	21”	21-1/4”	3/4”	7/8”	3-3/4”	4”	4”	2”	1/4”	20	3/8”	ISF16*	15
18”	19”	24”	24-1/4”	1”	1-1/8”	4-7/16”	4-3/8”	4-3/8”	2-1/2”	1/4”	20	1/2”	ISF18*	29
20”	21”	26”	26-1/4”	1”	1-1/8”	4-7/8”	4-3/4”	4-3/4”	2-1/2”	1/4”	20	1/2”	ISF20*	32
24”	25”	30”	30-1/4”	1”	1-1/8”	5-5/8”	5-5/8”	5-1/2”	2-1/2”	1/4”	20	1/2”	ISF24*	37
30”	31”	37”	36-1/4”	1-1/4”	1-3/8”	5-3/4”	5-3/4”	5-3/4”	3”	3/8”	24	1/2”	ISF30	62
36”	37”	43”	43-1/4”	1-1/4”	1-3/8”	6-3/4”	6-3/4”	6-3/4”	3”	3/4”	24	1/2”	ISF36	73

** KWS Stock Component (Only Includes Fixed Inlets) Note: Above table gives dimensions for the Discharge Flanges also.*

COVERS

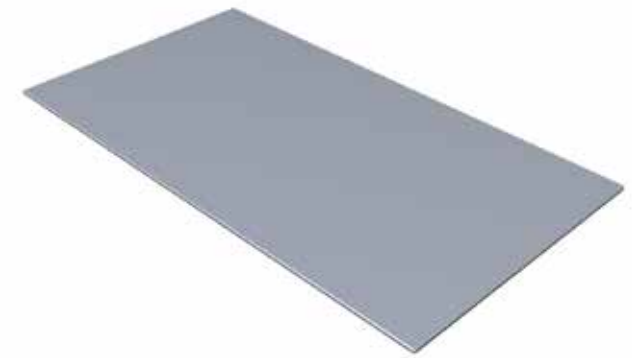
Covers are placed over the trough and fastened in place to provide a FIXED enclosure for the bulk material and to provide protection for personnel operating and maintaining the equipment. Standard cover lengths are 10-feet for 4, 6, and 9-inch diameter screw conveyors. Standard cover lengths are 12-feet for screw conveyors 12-inch and larger in diameter. KWS recommends bolting all covers on close centers to prevent access to the screw during operation.

NOMENCLATURE



FLANGED

Flanged covers are manufactured with formed flanges on each side to provide extra rigidity. KWS recommends using flanged covers with U, flared and rectangular troughs because covers are held in place by the formed flanges on each side. KWS recommends bolting all covers on close centers to prevent access to the screw during operation.



FLAT

Flat covers are manufactured from thin gauge flat metal and do not have the rigidity of flanged covers. KWS does not recommend the use of flat covers because flat covers can easily slide off the top of a screw conveyor and cause injury to personnel. KWS recommends bolting all covers on close centers to prevent access to the screw during operation.

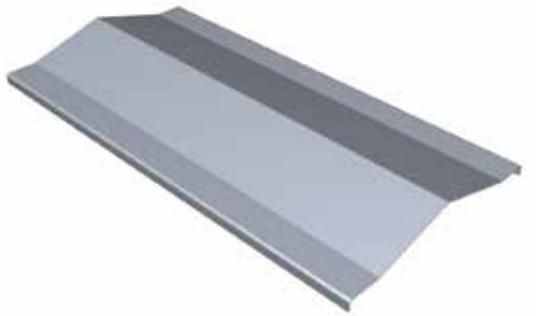
COVERS

SEMI-FLANGED

Semi-flanged covers are manufactured with a slight formed flange on each side to provide some rigidity. KWS recommends flanged covers in place of semi-flanged covers in most applications. Cover sections are typically secured using spring clamps. KWS recommends bolting all covers on close centers to prevent access to the screw during operation.

HIP ROOF

Hip roof or ridged covers are manufactured with a center peak for outdoor applications. Snow or rain runs off the hip roof cover similar to a roof on a house. Formed flanges on both sides of the cover provide extra rigidity. KWS recommends bolting all covers on close centers to prevent access to the screw during operation.

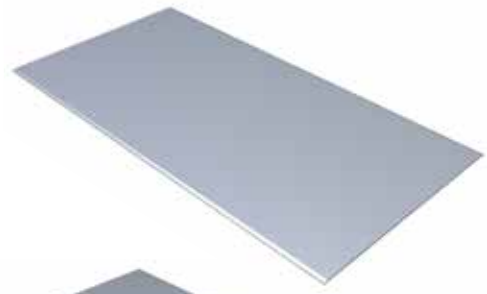


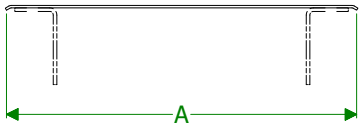
SHROUD

Shrouds are manufactured to fit in U, flared or rectangular troughs and create a tubular cross section for screw feeders and steeply inclined screw conveyors. Standard covers can be used with shrouds. Shrouds are bolted on both sides of the trough for easy removal and include an integrated batten bar.

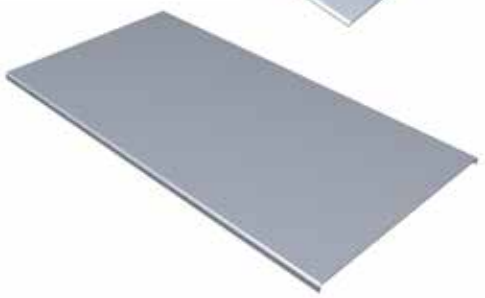
COVERS

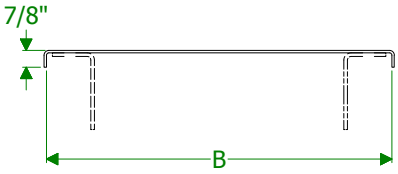
SEMI-FLANGED



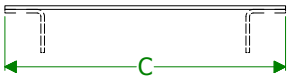


FLANGED





FLAT



Screw Dia.	Cover Thk.	A • (Approx)	B •	C •	Semi-Flanged		Flanged		Flat	
					Part Number	Wt. (Lbs.)	Part Number	Wt. (Lbs.)	Part Number	Wt. (Lbs.)
4”	14 Ga.	8-3/8”	8”	7-3/4”	COV414#SF	2	COV414#FL*	3	COV414#F	2
6”	14 Ga.	10-7/8”	10-1/2”	9-3/4”	COV614#SF	3	COV614#FL*	4	COV614#F	2
9”	14 Ga. 12 Ga.	14-3/8”	14”	13-1/4”	COV914#SF COV912#SF	4 5	COV914#FL* COV912#FL	5 7	COV914#F COV912#F	3 6
12”	14 Ga. 12 Ga.	18-1/4”	18”	17-1/4”	COV1214#SF COV1212#SF	5 7	COV1214#FL* COV1212#FL	6 8	COV1214#F COV1212#F	5 8
14”	14 Ga. 12 Ga.	20-1/4”	20”	19-1/4”	COV1414#SF COV1412#SF	6 8	COV1414#FL* COV1412#FL	6 9	COV1414#F COV1412#F	5 9
16”	14 Ga. 12 Ga.	22-1/4”	22”	21-1/4”	COV1614#SF COV1612#SF	6 9	COV1614#FL* COV1612#FL	7 10	COV1614#F COV1612#F	6 10
18”	12 Ga. 10 Ga.	25-1/4”	25”	24-1/4”	COV1812#SF COV1810#SF	10 14	COV1812#FL COV1810#FL*	11 14	COV1812#F COV1810#F	6 11
20”	12 Ga. 10 Ga.	27-1/4”	27”	26-1/4”	COV2012#SF COV2010#SF	11 15	COV2012#FL COV2010#FL*	12 15	COV2012#F COV2010#F	7 12
24”	12 Ga. 10 Ga.	31-1/4”	31”	30-1/4”	COV2412#SF COV2410#SF	12 17	COV2412#FL COV2410#FL*	14 18	COV2412#F COV2410#F	11 14
30”	10 Ga.	39-3/8”	39”	38-1/2”	COV3010#SF	21	COV3010#FL	22	COV3010#F	21
36”	3/16”	45-3/8”	45”	44-1/2”	COV36316#SF	32	COV36316#FL	33	COV36316#F	32

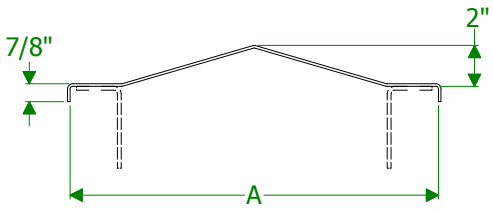
** KWS Stock Component (U-Troughs only) • Dimensions will change for flared troughs*

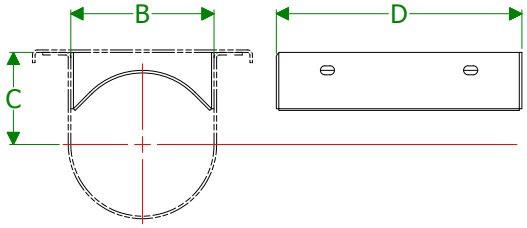
 # Trough Style; U = U-Trough/Rectangular, F = Flared

COVERS

HIP ROOF

SHROUD





Screw Dia.	Cover Thk.	A •	B •	C •	D	Hip Roof		Shroud	
						Part Number	Wt. /Ft. (Lbs.)	Part Number	Wt. /Ft. (Lbs.)
4”	14 Ga.	8”	5”	3-5/8”	8”	COV414#HR	2	N/A	
6”	14 Ga. 12 Ga.	10-1/2”	7”	4-1/2”	12”	COV614#HR COV612#HR	4 4	N/A COV612#SH*	8
9”	14 Ga. 12 Ga. 3/16”	14”	10”	6-1/8”	18”	COV914#HR COV912#HR X	4 6 X	N/A N/A COV9316#SH*	23
12”	14 Ga. 10 Ga 3/16”	18”	13”	7-3/4”	24”	COV1214#HR COV1210#HR X	5 10 X	N/A N/A COV12316#SH*	41
14”	14 Ga. 10 Ga. 3/16”	20”	15”	9-1/4”	28”	COV1414#HR COV1410#HR X	6 11 X	N/A N/A COV14316#SH*	60
16”	14 Ga. 10 Ga. 3/16”	22”	17”	10-5/8”	32”	COV1614#HR COV1610#HR X	7 12 X	N/A N/A COV16316#SH*	78
18”	12 Ga. 10 Ga. 3/16”	25”	19”	12-1/8”	36”	COV1812#HR COV1810#HR X	10 12 X	N/A N/A COV18316#SH*	98
20”	12 Ga. 10 Ga. 3/16”	27”	21”	13-1/2”	40”	COV2012#HR COV2010#HR X	11 15 X	N/A N/A COV20316#SH*	114
24”	12 Ga. 10 Ga. 3/16”	31”	25”	16-1/2”	48”	COV2412#HR COV2410#HR X	14 19 X	N/A N/A COV24316#SH*	175
30”	10 Ga. 3/16” 1/4”	39”	31”	20-1/4”	60”	COV3010#HR X X	25	N/A N/A COV30250#SH	290
36”	3/16” 1/4”	45”	37”	24-3/8”	72”	COV36316#HR X	36	N/A COV36250#SH	330

** KWS Stock Component (U-Troughs only) • Dimensions will change for flared troughs*

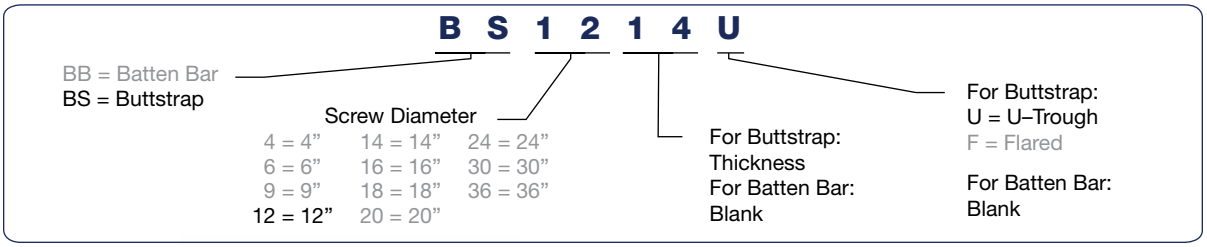
 # Trough Style; U = U-Trough/Rectangular, F = Flared

BUTTSTRAPS AND BATTEN BARS

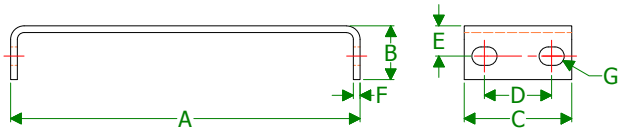
Buttstraps fit over the top of the joint between two cover sections. Gasket material is used under the buttstrap to provide a sealed design. The buttstrap is bolted on both sides through the cover and trough flange to create a dust-tight enclosure.

Batten bars are mounted flush with the top of the trough flange and fit under the joint between two cover sections. Gasket material is used over the batten bar to provide a seal. Batten bars can be provided with weld studs or rivnuts for securing the cover sections to the batten bar to create a dust-tight enclosure.

NOMENCLATURE



BATTEN BAR



BUTTSTRAP

Screw Dia.	A	B	C	D	E	F	G Bolts	H	Buttstrap		Batten Bar	
									Part Number	Weight (Lbs.)	Part Number	Weight (Lbs.)
4"	5"	1"	3"	2"	5/8"	3/16"	3/8"	8-3/8"	BS4#@	1	BB4	1
6"	7"	1-1/4"	3"	2"	3/4"	3/16"	3/8"	10-7/8"	BS6#@	1	BB6	2
9"	10"	1-1/2"	4"	2-1/2"	7/8"	1/4"	1/2"	14-3/8"	BS9#@	1	BB9	4
12"	13"	2"	4"	2-1/2"	1-1/8"	1/4"	5/8"	18-3/8"	BS12#@	2	BB12	5
14"	15"	2	4"	2-1/2"	1-1/8"	1/4"	5/8"	20-3/8"	BS14#@	2	BB14	6
16"	17"	2	5"	2-1/2"	1-1/8"	3/8"	5/8"	22-3/8"	BS16#@	2	BB16	11
18"	19"	2-1/2"	5"	3-1/2"	1-3/8"	3/8"	5/8"	25-3/8"	BS18#@	3	BB18	13
20"	21"	2-1/2"	5"	3-1/2"	1-3/8"	3/8"	3/4"	27-3/8"	BS20#@	4	BB20	14
24"	25"	2-1/2"	5"	3-1/2"	1-3/8"	3/8"	3/4"	31-3/8"	BS24#@	4	BB24	17
30"	31"	3"	6"	3-1/2"	1-3/4"	1/4"	3/4	39-3/8"	BS30#@	7	BB30 •	27
36"	37"	3"	6"	3-1/2"	1-3/4"	1/4"	3/4"	45-3/8"	BS36#@	7	BB36 •	32

• Requires a Formed Channel Support Bar # = Thickness Note: Dimensions in the above table are for U-Troughs only.
@ = Trough Type; U = U-Trough, F = Flared

HANGER POCKET

Hanger pockets allow the use of standard U-trough hangers in tubular housings. Hanger pockets are continuously welded on the top of a tubular housing at each hanger bearing location. A hanger bolts to the sides of the hanger pocket and space is allowed for bearing maintenance and replacement. Standard 216 and 226 style hanger bearings can be used with hanger pockets. A bolted cover seals the hanger pocket.

NOMENCLATURE

H G P 1 2 3 1 6

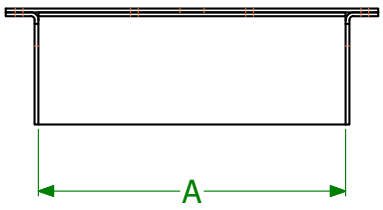
HGP = Hanger Pocket

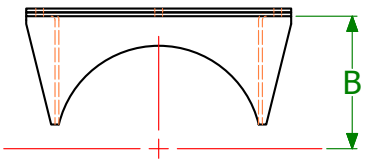
Screw Diameter

4 = 4”	14 = 14”	24 = 24”
6 = 6”	16 = 16”	30 = 30”
9 = 9”	18 = 18”	36 = 36”
12 = 12”	20 = 20”	

Material Thickness

14 = 14GA	316 = 3/16”
12 = 12GA	250 = 1/4”
10 = 10GA	375 = 3/8”





Screw Dia.	Part Number	A	B	Material Thickness	Weight (Lbs.)
4”	HGP414 HGP412 HGP410	12”	3-3/4”	14 Ga. 12 Ga. 10 Ga.	3 5 7
6”	HGP614 HGP612 HGP610	18”	5”	14 Ga. 12 Ga. 10 Ga.	5 7 9
9”	HGP914 HGP912 HGP910 HGP9316	18”	7-1/8”	14 Ga. 12 Ga. 10 Ga. 3/16”	8 10 13 18
12”	HGP1212 HGP1210 HGP12316 HGP12250	24”	8-7/8”	12 Ga. 10 Ga. 3/16” 1/4”	15 20 27 36
14”	HGP1412 HGP1410 HGP14316 HGP14250	20”	10-1/8”	12 Ga. 10 Ga. 3/16” 1/4”	19 24 33 44
16”	HGP1612 HGP1610 HGP16316 HGP16250	24”	11-1/8”	12 Ga. 10 Ga. 3/16” 1/4”	23 30 41 55

Screw Dia.	Part Number	A	B	Material Thickness	Weight (Lbs.).
18”	HGP1810 HGP18316 HGP18250	26”	12-3/8”	10 Ga. 3/16” 1/4”	37 51 68
20”	HGP2010 HGP20316 HGP20250	26”	14”	10 Ga. 3/16” 1/4”	46 63 84
24”	HGP2410 HGP24316 HGP24250	26”	17”	10 Ga. 3/16” 1/4”	61 83 111
30”	HGP30250 HGP30375	32”	20”	1/4” 3/8”	149 182
36”	HGP36250 HGP36375	34”	23”	1/4” 3/8”	199 235

SADDLES

Saddles provide support for a screw conveyor anywhere along the length of the trough. Saddles are welded to the bottom of a trough section at the desired support location and then fastened to the floor or structural support. A standard saddle will fit U-trough, flared trough, and tubular housings. Rectangular troughs require special saddles.

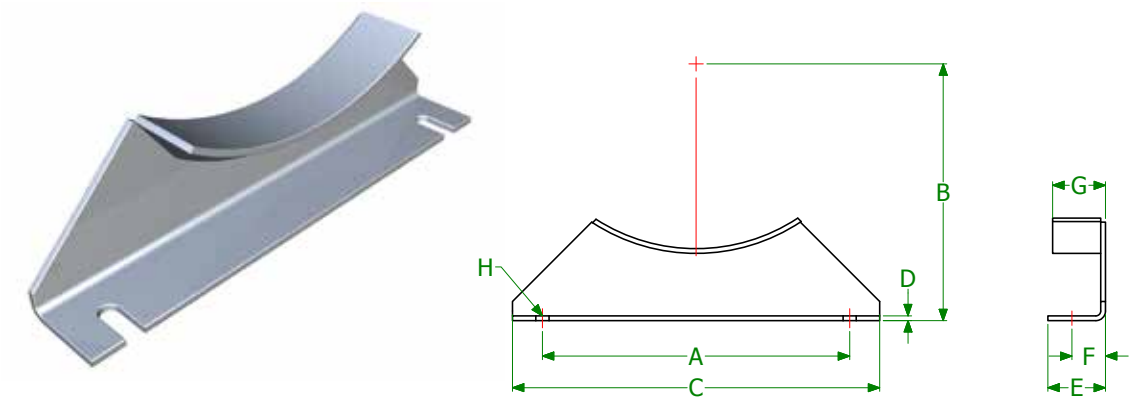
NOMENCLATURE

S A D 1 2

SAD = Saddle

Screw Diameter

4 = 4”	14 = 14”	24 = 24”
6 = 6”	16 = 16”	30 = 30”
9 = 9”	18 = 18”	36 = 36”
12 = 12”	20 = 20”	



Screw Dia.	A	B	C	D	E	F	G	H Bolts	Part Number	Weight (Lbs.)
4”	5-3/4”	4-5/8”	7-3/8”	3/16”	1-1/2”	7/8”	1-3/8”	3/8”	SAD4*	2
6”	8-1/8”	5-5/8”	10”	3/16”	1-1/2”	13/16”	1-3/4”	3/8”	SAD6*	3
9”	9-3/8”	7-7/8”	12”	3/16”	2-1/2”	1-5/16”	2”	1/2”	SAD9*	4
12”	12-1/4”	9-5/8”	15”	1/4”	2-1/2”	1-3/8”	2-1/4”	5/8”	SAD12*	6
14”	13-1/2”	10-7/8”	16-1/2”	1/4”	2-1/2”	1-3/8”	2-3/4”	5/8”	SAD14*	8
16”	14-7/8”	12”	18”	1/4”	3”	1-3/4”	2-3/4”	5/8”	SAD16*	10
18”	16”	13-3/8”	19-1/8”	1/4”	3”	1-3/4”	2-3/4”	5/8”	SAD18*	11
20”	19-1/4”	15”	22-3/4”	1/4”	3-1/2”	2”	2-3/4”	3/4”	SAD20*	15
24”	20”	18-1/8”	24”	1/4”	4”	2-1/4”	2-3/4”	3/4”	SAD24*	17
30”	30”	21-1/2”	38”	3/8”	4-1/2”	2-1/2”	4”	3/4”	SAD30	20
36”	36”	24”	44”	1/2”	4-1/2”	2-1/2”	4”	3/4”	SAD36	25

** KWS Stock Component*

FEET

Feet provide support for a screw conveyor at each trough connection. Feet are bolted through the trough flanges and then fastened to the floor or structural support. A standard foot will fit U-trough, flared trough and tubular trough housing except for 4”, 6”, 18”, and 20” which are unique for tubular housings. Rectangular troughs require special feet.

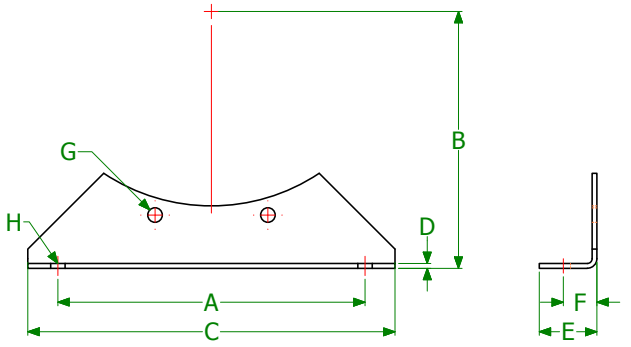
NOMENCLATURE

F T 1 2

FT = Foot

Screw Diameter

4 = 4” 14 = 14” 24 = 24”
6 = 6” 16 = 16” 30 = 30”
9 = 9” 18 = 18” 36 = 36”
12 = 12” 20 = 20”



Screw Dia.	A	B	C	D	E	F	G bolts	H Bolts	Part Number	Weight (Lbs.)
4”	5-3/4”	4-5/8”	7-3/8”	3/16”	1-1/2”	7/8”	3/8”	3/8”	FT4*	2
6”	8-1/8”	5-5/8”	10”	3/16”	1-1/2”	13/16”	3/8”	3/8”	FT6*	3
9”	9-3/8”	7-7/8”	12”	3/16”	2-1/2”	1-5/16”	3/8”	1/2”	FT9*	4
12”	12-1/4”	9-5/8”	15”	1/4”	2-1/2”	1-5/8”	1/2”	5/8”	FT12*	6
14”	13-1/2”	10-7/8”	16-1/2”	1/4”	2-1/2”	1-3/8”	1/2”	5/8”	FT14*	8
16”	14-7/8”	12”	18”	1/4”	3”	1-3/4”	5/8”	5/8”	FT16*	10
18”	16”	13-3/8”	19-1/8”	1/4”	3”	1-3/4”	5/8”	5/8”	FT18*	11
20”	19-1/4”	15”	22-3/4”	1/4”	3-1/2”	2”	5/8”	3/4”	FT20*	15
24”	20”	18-1/8”	24”	1/4”	4”	2-1/4”	5/8”	3/4”	FT24*	17
30”	30”	21-1/2”	38”	3/8”	4-1/2”	2-1/2”	5/8”	3/4”	FT30	21
36”	36”	24”	44”	1/2”	4-1/2”	2-1/2”	5/8”	3/4”	FT36	25

** KWS Stock Component*

BOLT REQUIREMENTS

CONVEYOR DIAMETER: 4" - 14"

Components Assembled	Conveyor Diameter									
	4		6		9		12		14	
	No	Size	No	Size	No	Size	No	Size	No	Size
Covers (Per Section) on 24" Centers	12	3/8" x 1-1/2"	12	3/8" x 1-1/2"	12	3/8" x 1-1/2"	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"
Trough Flange										
U-Trough	6	3/8" x 1-1/2"	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	8	1/2" x 2"	8	1/2" x 2"
Tubular	6	3/8" x 1-1/2"	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	8	1/2" x 2"	8	1/2" x 2"
Flared	N/A	N/A	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	8	1/2" x 2"	10	1/2" x 2"
Rectangular	N/A	N/A	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	10	1/2" x 2"	10	1/2" x 2"
Flush Discharge Ends	6	3/8" x 1-1/2"	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	8	1/2" x 2"	8	1/2" x 2"
Foot										
U-Trough	2	3/8" x 1-1/2"	2	3/8" x 1-1/2"	2	3/8" x 1-1/2"	2	1/2" x 2"	2	1/2" x 2"
Tubular	3	3/8" x 1-1/2"	3	3/8" x 1-1/2"	3	3/8" x 1-1/2"	3	1/2" x 2"	3	1/2" x 2"
Flared	N/A	N/A	2	3/8" x 1-1/2"	2	3/8" x 1-1/2"	2	1/2" x 2"	2	1/2" x 2"
Rectangular	N/A	N/A	2	3/8" x 1-1/2"	2	3/8" x 1-1/2"	2	1/2" x 2"	2	1/2" x 2"
Pipe Supports	2	3/8" x 1-1/2"	2	3/8" x 1-1/2"	2	1/2" x 2"	2	5/8" x 2"	2	5/8" x 2"
Inlet/Discharge										
Square	12	1/4" x "1	12	3/8" x 1-1/2"	12	3/8" x 1-1/2"	12	3/8" x 1-1/2"	20	3/8" x 1-1/2"
Round	6	3/8" x 1-1/2"	6	3/8" x 1-1/2"	8	3/8" x 1-1/2"	8	1/2" x 1-1/2"	8	1/2" x 1-1/2"
Hanger/Batten Bar	4	3/8" x 1"	4	3/8" x 1"	4	3/8" x 1"	4	1/2" x 1-1/2"	4	1/2" x 1-1/2"

CONVEYOR DIAMETER: 16" - 36"

Components Assembled	Conveyor Diameter											
	16		18		20		24		30		36	
	No	Size	No	Size	No	Size	No	Size	No	Size	No	Size
Covers (Per Section) on 24" Centers	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"	14	3/8" x 1-1/2"
Trough Flange												
U-Trough	8	5/8" x 2"	10	5/8" x 2"	10	5/8" x 2"	12	5/8" x 2"	14	5/8" x 2-1/2"	16	5/8" x 2-1/2"
Tubular	8	5/8" x 2"	10	5/8" x 2"	10	5/8" x 2"	12	5/8" x 2"	14	5/8" x 2-1/2"	16	5/8" x 2-1/2"
Flared	10	5/8" x 2"	10	5/8" x 2"	10	5/8" x 2"	12	5/8" x 2"	14	5/8" x 2-1/2"	16	5/8" x 2-1/2"
Rectangular	10	5/8" x 2"	12	5/8" x 2"	14	5/8" x 2"	14	5/8" x 2"	16	5/8" x 2-1/2"	18	5/8" x 2-1/2"
Flush Discharge Ends	8	5/8" x 2"	10	5/8" x 2"	10	5/8" x 2"	12	5/8" x 2"	12	5/8" x 2-1/2"	14	5/8" x 2-1/2"
Foot												
U-Trough	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"	4	5/8" x 3"	4	5/8" x 3"
Tubular	3	5/8" x 2-1/2"	3	5/8" x 2-1/2"	3	5/8" x 2-1/2"	3	5/8" x 2-1/2"	4	5/8" x 3"	4	5/8" x 3"
Flared	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"	4	5/8" x 2-1/2"	4	5/8" x 3"	4	5/8" x 3"
Rectangular	2	5/8" x 2-1/2"	4	5/8" x 2-1/2"	4	5/8" x 2-1/2"	4	5/8" x 2-1/2"	4	5/8" x 3"	4	5/8" x 3"
Pipe Supports	2	5/8" x 2"	2	5/8" x 2"	2	3/4" x 2-1/2"	2	3/4" x 2-1/2"	2	3/4" x 2-1/2"	2	3/4" x 2-1/2"
Inlet/Discharge												
Square	20	1/2" x 1-1/2"	20	1/2" x 1-1/2"	20	1/2" x 1-1/2"	20	1/2" x 1-1/2"	24	1/2" x 2"	24	1/2" x 2"
Round	8	5/8" x 2"	10	5/8" x 2"	10	5/8" x 2"	12	5/8" x 2"				
Hanger/Batten Bar	4	1/2" x 2"	4	5/8" x 2"	4	5/8" x 2"	4	5/8" x 2-1/2"	4	3/4" x 2-1/2"	4	3/4" x 2-1/2"

BOLT REQUIREMENTS

SHAFT DIAMETER: 1" TO 2-7/16"

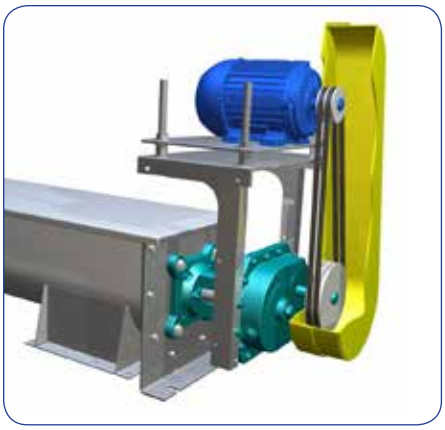
Components Assembled	Shaft Diameter							
	1"		1-1/2"		2"		2-7/16"	
	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size
End Bearings To Trough End								
SCP Adapter	X	X	4	1/2" x 2"	4	1/2" X 2"	4	5/8" X 2-1/2"
Ball, Flanged	4	7/16" x 2"	4	1/2" x 2"	4	5/8" x 2-1/2"	4	5/8" x 2-1/2"
Roller, Flanged	X	X	4	1/2" x 2-1/2"	4	1/2" X 2-1/2"	4	5/8" X 3"
Ball, Pillow Block	2	3/8" x 2"	2	1/2" x 2-1/2"	2	5/8" x 2-1/2"	2	5/8" x 2-1/2"
Roller, Pillow Block	X	X	2	1/2" x 2-1/2"	2	5/8" x 3"	2	5/8" x 3-1/2"
Seals to Trough End								
Flanged Gland	4	3/8" x 2"	4	1/2" x 2"	4	1/2" x 2"	4	5/8" x 2"
Plate	4	3/8" x 1-1/2"	4	1/2" x 2"	4	5/8" x 2-1/2"	4	5/8" x 2-1/2"
Plate w/Ball	4	3/8" x 2-1/2"	4	1/2" x 3"	4	5/8" x 3"	4	5/8" x 3"
Plate w/ Roller	N/A	N/A	4	1/2" x 3"	4	1/2" x 3-1/2"	4	5/8" x 4"
Split Gland	2	3/8" x 4"	2	1/2" x 4-1/2"	2	1/2" x 4-1/2"	2	5/8" x 4-1/2"
Waste Pack	4	3/8" x 3-1/2"	4	1/2" x 3"	4	5/8" x 3-1/2"	4	5/8" x 3-1/2"
Waste Pack w/Ball	4	3/8" x 3-1/2"	4	1/2" x 4"	4	5/8" x 4"	4	5/8" x 4"
Waste Pack w/Roller	N/A	N/A	4	1/2" x 4-1/2"	4	1/2" x 4-1/2 "	4	5/8" x 5"

SHAFT DIAMETER: 3" - 4-7/16"

Components Assembled	Shaft Diameter							
	3"		3-7/16"		3-15/16"		4-7/16"	
	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size
End Bearings To Trough End								
SCP Adapter	4	3/4" X 3"	4	3/4" x 3"	4	7/8" x 3"	4	7/8" x 3"
Ball, Flanged	4	3/4" x 3"	4	3/4" x 3"	N/A	N/A	N/A	N/A
Roller, Flanged	4	3/4" X 3- 1/2"	4	3/4" x 4"	4	7/8" x 4-1/2"	4	7/8" x 5"
Ball, Pillow Block	2	7/8" x 3-1/2"	2	7/8" x 3-1/2"	N/A	N/A	N/A	N/A
Roller, Pillow Block	2	3/4" x 4"	2	7/8" x 4-1/2"	4	3/4" x 4-1/2"	4	3/4" x 5"
Seals to Trough End								
Flanged Gland	4	3/4" x 2"	4	3/4" x 2-1/2"	4	7/8" x 3"	4	7/8" x 3"
Plate	4	3/4" x 3"	4	3/4" x 3"	4	7/8" x 3"	4	7/8" x 3"
Plate w/Ball	4	3/4" x 4"	4	3/4" x 4"	N/A	N/A	N/A	N/A
Plate w/ Roller	4	3/4" x 4-1/2"	4	3/4" x 5"	4	7/8" x 5-1/2"	4	7/8" x 5-1/2"
Split Gland	2	5/8" x 5"	2	3/4" x 6"	2	7/8" x 6"	2	7/8" x 6"
Waste Pack	4	3/4" x 4"	4	3/4" x 4-1/2"	4	7/8" x 4-1/2"	4	7/8" x 4-1/2"
Waste Pack w/Ball	4	3/4" x 4-1/2"	4	3/4" x 5-1/2"	N/A	N/A	N/A	N/A
Waste Pack w/Roller	4	3/4" x 5-1/2"	4	3/4" x 6"	4	7/8" x 7"	4	7/8" x 7"

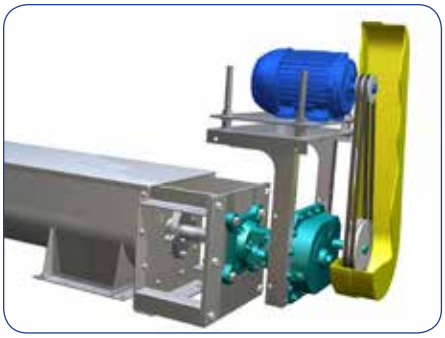
DRIVE ARRANGEMENTS

KWS utilizes a variety of drive arrangements and gear reducer manufacturers. Each drive arrangement shown below provides unique advantages for specific applications. KWS designs each drive with a minimum of 1.4 service factor (Class II) to ensure long life and reduced maintenance. Spare parts are available through authorized power transmission distributors all across the U.S. and Canada.



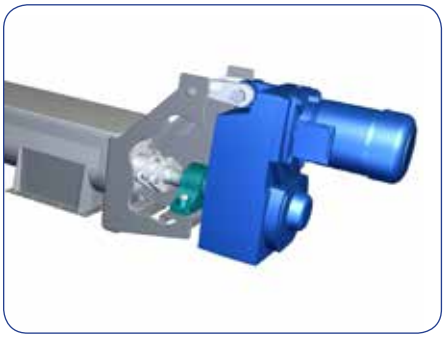
SCREW CONVEYOR DRIVE

Screw conveyor drives are the most common drive arrangement utilizing a screw conveyor adapter that bolts to the trough end of a screw conveyor. The gear reducer is flange mounted directly to the trough end to provide a simple, rigid assembly.



BULKHEAD

Bulkhead trough ends are used in applications where there is a need to locate the drive away from the trough end. When conveying bulk materials at high temperatures, the drive must be located away from the source of heat to prevent drive failure. Also, if a special shaft seal is required, bulkhead trough ends provide clearance for the seal. Flanged gland, split gland and mechanical seals are typically used with bulkhead trough ends.



TORQUE ARM

Torque arm trough ends allow shaft-mounted reducers to ”float” to handle shaft run-out. A pillow block bearing is required to support the screw when using a torque arm trough end. Similar to bulkhead trough ends, torque arm trough ends are used in special applications where there is a need to locate the drive away from the trough end. Flanged gland, split gland and mechanical seals are typically used with torque arm trough ends.

Notes

Notes

Design Engineering Manufacturing

What makes KWS different from other manufacturers?
At KWS we understand the needs and exceed the expectations of our Customers. As an ISO-9001 certified company, quality is integrated into every aspect of our processes. Quality is defined by the Customer, and derived from the total KWS Customer experience. It's not just product quality, but quality throughout every step of the Sales, Engineering and Manufacturing processes. Quality starts with our first Customer contact and never ends.

Conveying Knowledge, Workmanship, Solutions

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