

# Auger Products

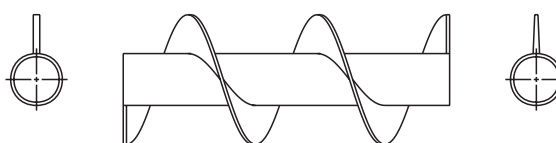
## Conveyor Screw Flighting

Screw conveyor flighting is made in either of two ways, as "helicoid" or "sectional" flights. Helicoid flights are formed from a flat bar or strip into a continuous helix. This flighting is thinner on the outer edge than on the inner edge. This process provides a continuous one-piece construction with a work-hardened, smooth finished flighting surface. Sectional flights are formed from a flat disc and the thickness of the flight is uniform. The lead of a sectional flight is slightly greater than one pitch. A continuous helix is made by joining a number of sectional flights together on a piece of pipe and butt welding them together.

## Screw Flight Mounting

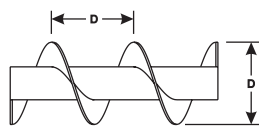
The metal helix of the screw, or the paddles used in lieu of a continuous helix, is mounted on either a hollow tube or a solid shaft. The hollow tube is normally Schedule 40 black steel pipe, but Schedule 80 pipe and mechanically drawn steel tubing sometimes are used. Occasionally a solid steel shaft is used for special conditions.

The pipe sections are bushed at the ends, and holes are drilled for the coupling bolts.

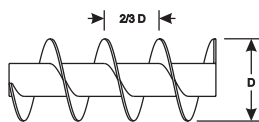


## Basic Conveyor Flight and Pitch Types

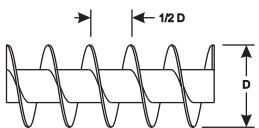
STANDARD PITCH, SINGLE FLIGHT



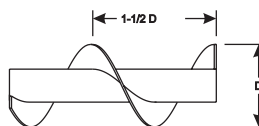
SHORT PITCH, SINGLE FLIGHT



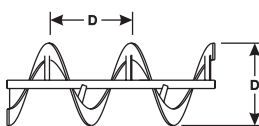
HALF PITCH, SINGLE FLIGHT



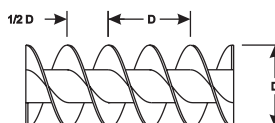
LONG PITCH, SINGLE FLIGHT



SINGLE FLIGHT, RIBBON



STANDARD PITCH, DOUBLE FLIGHT



### STANDARD PITCH, SINGLE FLIGHT

Conveyor screws with pitch equal to screw diameter are considered standard. They are suitable for a wide range of materials in most conventional applications.

### SHORT PITCH, SINGLE FLIGHT

Flight pitch is reduced to 2/3 diameter. Recommended for inclined or vertical applications. Used in screw feeders. Shorter pitch retards flushing of materials which fluidize.

### HALF PITCH, SINGLE FLIGHT

Similar to short pitch, except pitch is reduced to 1/2 standard pitch. Useful for vertical or inclined applications, for screw feeders and for handling extremely fluid materials.

### LONG PITCH, SINGLE FLIGHT

Pitch is equal to 1-1/2 diameters. Useful for agitating fluid materials or for rapid movement of very free-flowing materials.

### SINGLE FLIGHT RIBBON

Excellent for conveying sticky or viscous materials. Open space between flighting and pipe eliminates collection and build-up of the material.

### STANDARD PITCH, DOUBLE FLIGHT

Standard pitch, double flight screws provide smooth, regular material flow and uniform movement of certain types of materials.

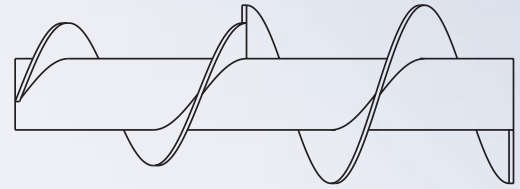
1-800-435-0782

**DRIVES**  
INCORPORATED

# Auger Products

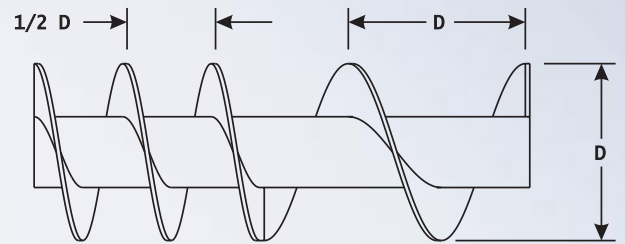
## Stepped Diameter Conveyor Screw

Consists of flights of different diameters. Each may have a regular or varied pitch mounted in tandem on one pipe or shaft. They are frequently used as feeder screws with the smaller diameter located under bins or hoppers to regulate the flow of material. Also is used to regulate the flow of material in packing of free flowing material.



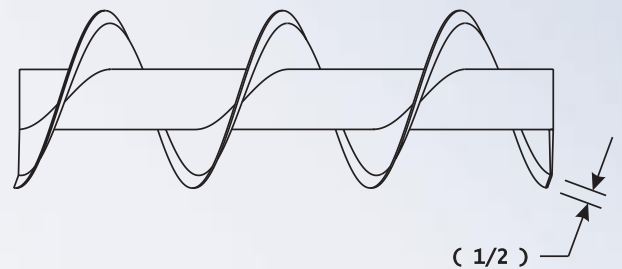
## Stepped Pitch Conveyor Screw

Screws with succeeding single or groups of sectional flights increasing in pitch. Used as feeder screws to draw fine free-flowing material uniformly from the entire length of the feed opening.



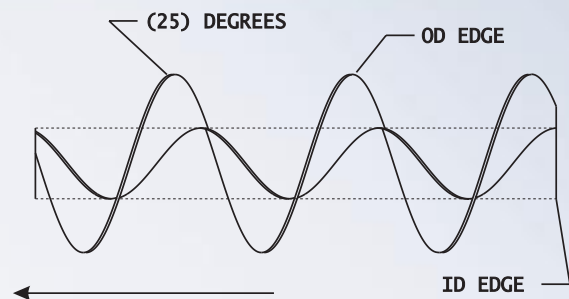
## Cupped Pitch, Conveyor Screw

This screw is effective in slowing the flushing action of material that has fluidized in hoppers for inclined and vertical applications. This can be added to any auger with the strip width greater than 1.375", having a pitch longer than 3.750", and material thickness up to .250". Angles range from 7 to 45 degrees. O.D. will shrink .080 to .160 when flanged.



## Full Tilt, Conveyor Screw

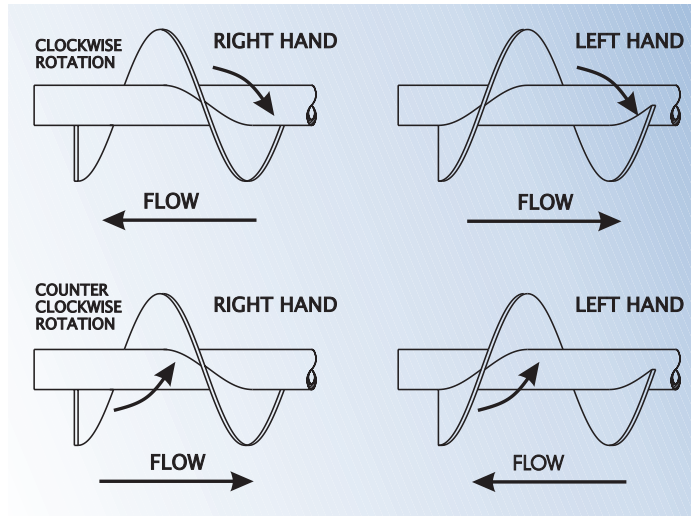
Consists of a screw where the O.D. surface leads the I.D. surface by up to (25) degrees. This style of auger reduces O.D. wear and grain damage. It also increases the flow rate of free flowing materials.



# Auger Products

## Rolling Limitations

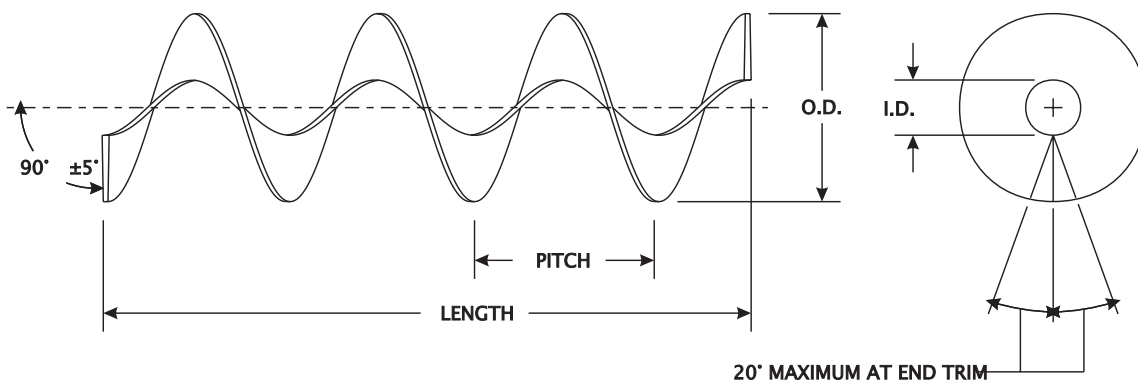
- Maximum strip width – 7"
- Maximum strip thickness - .437"
- Maximum outside diameter – 32"
- Maximum O.D. to I.D. ratio – 5:1



**QUALITY**  
Performance  
Service

Sales service and  
Auger Engineering  
assistance await  
your call.

TOLERANCE UNLESS OTHERWISE SPECIFIED				(MM)	
I.D.	+ .12 (3); - 0	TO 8" (200) O.D.	O.D.	± .12 (3)	TO 8" (200) O.D.
	+ .20 (5); - 0	8" (200) TO 14" (350) O.D.		± .20 (5)	8" (200) TO 14" (350) O.D.
	+ .28 (7); - 0	OVER 14" (350) O.D.		± .28 (7)	OVER 14" (350) O.D.
LENGTH	PRIMARY CUT	SECONDARY CUT			
	+ 3" (75); - 0	± .28 (7)	60" (1500) AND LESS		
	+ 4" (100); - 0	± .39 (10)	OVER 60" (1500)		
PITCH	± .59 (15)	UP TO 6" (150) PITCH	STRIP WIDTH TOLERANCE		
	± .79 (20)	6" (150) TO 10" (250) PITCH	STEEL MILL STANDARD TOLERANCE		
	± 1 (25)	10" (250) TO 14" (350) PITCH			
	± 1.57 (40)	14" (350) PITCH AND OVER			



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# Auger Products

## Right and Left Hand Screws

A conveyor is either right hand or left hand as determined by how the helical flighting is formed. The hand of the screw may be clearly and easily ascertained by looking at the end of the screw. A screw which has the helical flighting wrapped around the pipe in a counter-clockwise direction. This is arbitrarily termed a LEFT hand screw.

A screw showing the helical wrapped around the pipe in a clockwise direction is termed a RIGHT hand screw.

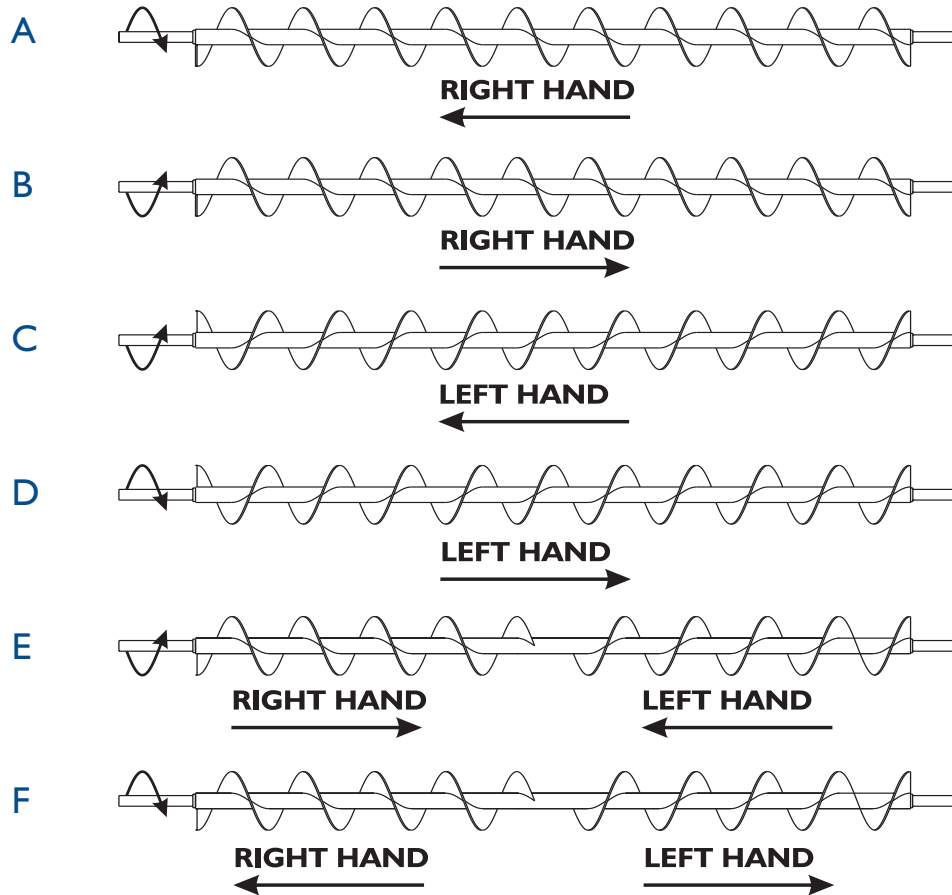
A conveyor screw viewed from either end will show the same configuration.

If the end of the conveyor screw is not readily visible, then by merely imagining that the flighting has been cut and the cut end exposed, the hand of the screw readily may be determined.

*Allow us an opportunity to quote and supply mounted sub-assemblies. Finished assemblies custom made to meet your product application.*

### How to Determine Hand of Conveyor

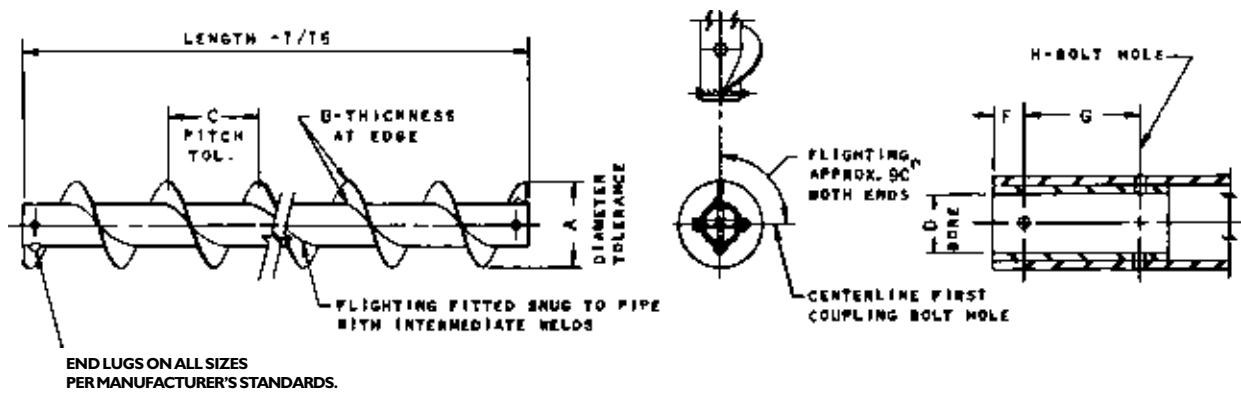
The print below indicates which way the material will move if right or left hand screws are rotated as indicated.



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# Auger Products

## Helicoid Conveyor Screws

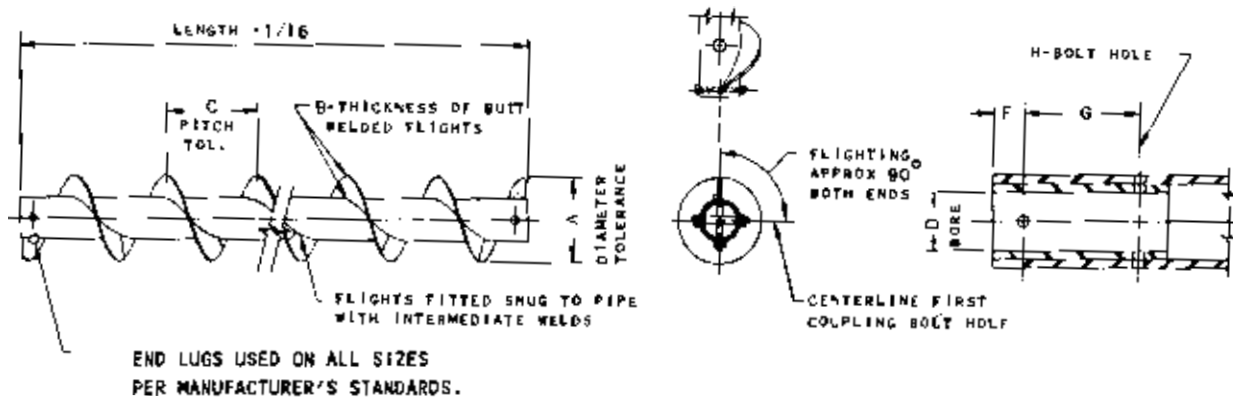


Listed screw dia. and pitch	Cplg. Dia.	Size Designation	Pipe size sch. 40 inches	Length feet and inches	A		B		C		D		F	G	H
					Diameter tolerance		Thick-ness inner edge	Thick-ness outer edge	Pitch tolerance		Bushing bore inside Diameter				
					Plus	Minus	Plus	Minus	Min.	Max.					
Inches					Inches										
6	1-1/2	6H304	2	9-10	1/16	3/16	1/8	1/16	1/2	1/4	1.505	1.516	7/8	3	17/32
	1-1/2	6H308	2	9-10	1/16	3/16	1/4	1/8	3/4	1/4	1.505	1.516	7/8	3	17/32
	1-1/2	6H312	2	9-10	1/16	3/16	3/8	3/16	3/4	1/4	1.505	1.516	7/8	3	17/32
9	1-1/2	9H306	2	9-10	1/16	3/16	3/16	3/32	3/4	1/4	1.505	1.516	7/8	3	17/32
	1-1/2	9H312	2	9-10	1/16	3/16	3/8	3/16	3/4	1/4	1.505	1.516	7/8	3	17/32
	2	9H406	2-1/2	9-10	1/16	3/16	3/16	3/32	3/4	1/4	2.005	2.016	7/8	3	21/32
	2	9H412	2-1/2	9-10	1/16	1/4	3/8	3/16	3/4	1/4	2.005	2.016	7/8	3	21/32
	2	9H414	2-1/2	9-10	1/16	1/4	7/16	7/32	3/4	1/4	2.005	2.016	7/8	3	21/32
12	2	12H408	2-1/2	11-10	1/8	5/16	1/4	1/8	1	1/4	2.005	2.016	7/8	3	21/32
	2	12H412	2-1/2	11-10	1/8	5/16	3/8	3/16	1	1/4	2.005	2.016	7/8	3	21/32
	2-7/16	12H508	3	11-9	1/8	5/16	1/4	1/8	1	1/4	2.443	2.458	15/16	3	21/32
	2-7/16	12H512	3	11-9	1/8	5/16	3/8	3/16	1	1/4	2.443	2.458	15/16	3	21/32
	3	12H614	3-1/2	11-9	1/8	3/8	7/16	7/32	1	1/4	3.005	3.025	1	3	25/32
14	2-7/16	14H508	3	11-9	1/8	5/16	1/4	1/8	1	1/4	2.443	2.458	15/16	3	21/32
	3	14H614	3-1/2	11-9	1/8	3/8	7/16	7/32	1	1/4	3.005	3.025	1	3	25/32
16	3	16H610	3-1/2	11-9	1/8	3/8	5/16	5/32	1-1/2	1/4	3.005	3.025	1	3	25/32
	3	16H614	3-1/2	11-9	1/8	3/8	7/16	7/32	1-1/2	1/4	3.005	3.025	1	3	25/32

CEMA STANDARD NO. 300-001

# Auger Products

## Sectional Flight Conveyor Screws



CEMA STANDARD NO. 300-002

Listed screw dia. and pitch	Cplg. Dia.	Size Designation	Pipe size sch. 40 inches	Length feet and inches	A		B	C		D		F	G	H
					Diameter tolerance		Flight Thickness	Pitch tolerance		Bushing bore inside diameter		Spacing 1st bolt hole	Centers 2nd bolt hole	Nom. bolt hole size
					Plus	Minus		Plus	Minus	Min.	Max.			
Inches					Inches									
6	1-1/2	6S209	2	9-10	1/16	3/16	10 Ga	3/8	1/4	1.505	1.516	7/8	3	17/32
	1-1/2	6S312	2	9-10	1/16	3/16	3/16	3/8	1/4	1.505	1.516	7/8	3	17/32
9	1-1/2	9S312	2	9-10	1/16	3/16	3/16	1/2	1/4	1.505	1.516	7/8	3	17/32
	2	9S412	2-1/2	9-10	1/16	3/16	3/16	1/2	1/4	2.005	2.016	7/8	3	21/32
	2	9S416	2-1/2	9-10	1/16	1/4	1/4	1/2	1/4	2.005	2.016	7/8	3	21/32
12	2	12S412	2-1/2	11-10	1/8	5/16	3/16	3/4	1/4	2.005	2.016	7/8	3	21/32
	2-7/16	12S512	3	11-9	1/8	5/16	3/16	3/4	1/4	2.443	2.458	15/16	3	21/32
	2-7/16	12S516	3	11-9	1/8	5/16	1/4	3/4	1/4	2.443	2.458	15/16	3	21/32
	3	12S616	3-1/2	11-9	1/8	5/16	1/4	3/4	1/4	3.005	3.025	1	3	25/32
	3	12S624	3-1/2	11-9	1/8	3/8	3/8	3/4	1/4	3.005	3.025	1	3	25/32
14	2-7/16	14S512	3	11-9	1/8	5/16	3/16	3/4	1/4	2.443	2.458	15/16	3	21/32
	3	14S616	3-1/2	11-9	1/8	5/16	1/4	3/4	1/4	3.005	3.025	1	3	25/32
	3	14S624	3-1/2	11-9	1/8	3/8	3/8	3/4	1/4	3.005	3.025	1	3	25/32
16	3	16S612	3-1/2	11-9	1/8	3/8	3/16	3/4	1/4	3.005	3.025	1	3	25/32
	3	16S616	3-1/2	11-9	1/8	3/8	1/4	3/4	1/4	3.005	3.025	1	3	25/32
	3	16S624	3-1/2	11-9	1/8	3/8	3/8	3/4	1/4	3.005	3.025	1	3	25/32
	3	16S632	3-1/2	11-9	1/8	1/2	1/2	3/4	1/4	3.005	3.025	1	3	25/32

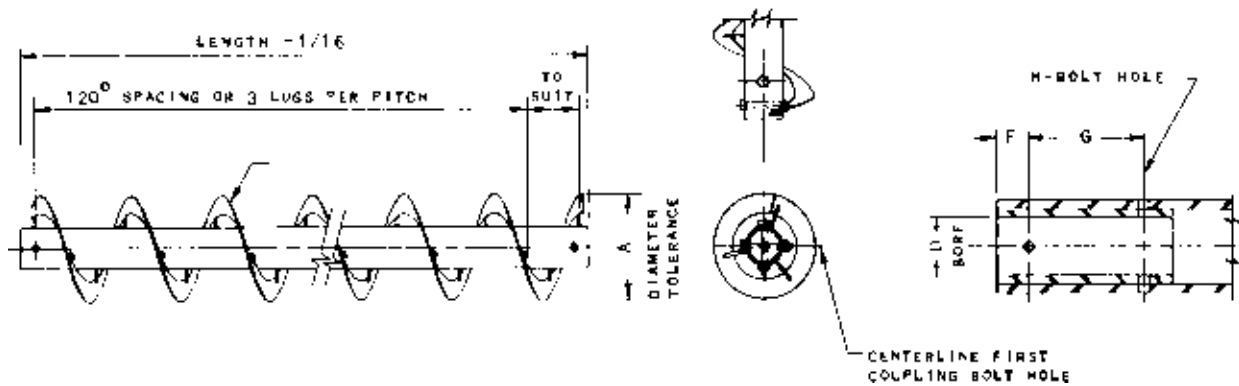
# Auger Products

## Sectional Flight Conveyor Screws (Continued)

Listed screw dia. and pitch	Cplg. Dia.	Size Designation	Pipe size sch. 40 inches	Length feet and inches	A		B	C		D		F	G	H
					Diameter tolerance		Flight Thickness	Pitch tolerance		Bushing bore inside diameter		Spacing 1st bolt hole	Centers 2nd bolt hole	Nom. bolt hole size
					Plus	Minus		Plus	Minus	Min.	Max.			
Inches		Inches												
18	3	18S616	3-1/2	11-9	3/16	3/8	1/4	3/4	1/2	3.005	3.025	1	3	25/32
	3	18S624	3-1/2	11-9	3/16	3/8	3/8	3/4	1/2	3.005	3.025	1	3	25/32
	3	18S632	3-1/2	11-9	3/16	1/2	1/2	3/4	1/2	3.005	3.025	1	3	25/32
	3-7/16	18S716	4	11-8	3/16	3/8	1/4	3/4	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	18S724	4	11-8	3/16	3/8	3/8	3/4	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	18S732	4	11-8	3/16	1/2	1/2	3/4	1/2	3.443	3.467	1-1/2	4	29/32
20	3	20S616	3-1/2	11-9	3/16	3/8	1/4	7/8	1/2	3.005	3.025	1	3	25/32
	3	20S624	3-1/2	11-9	3/16	3/8	3/8	7/8	1/2	3.005	3.025	1	3	25/32
	3-7/16	20S716	4	11-8	3/16	3/8	1/4	7/8	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	20S724	4	11-8	3/16	3/8	3/8	7/8	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	20S732	4	11-8	3/16	1/2	1/2	7/8	1/2	3.443	3.467	1-1/2	4	29/32
24	3-7/16	24S716	4	11-8	3/16	3/8	1/4	7/8	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	24S724	4	11-8	3/16	3/8	3/8	7/8	1/2	3.443	3.467	1-1/2	4	29/32
	3-7/16	24S732	4	11-8	3/16	1/2	1/2	7/8	1/2	3.443	3.467	1-1/2	4	29/32

# Auger Products

## Ribbon Flight Conveyor Screws

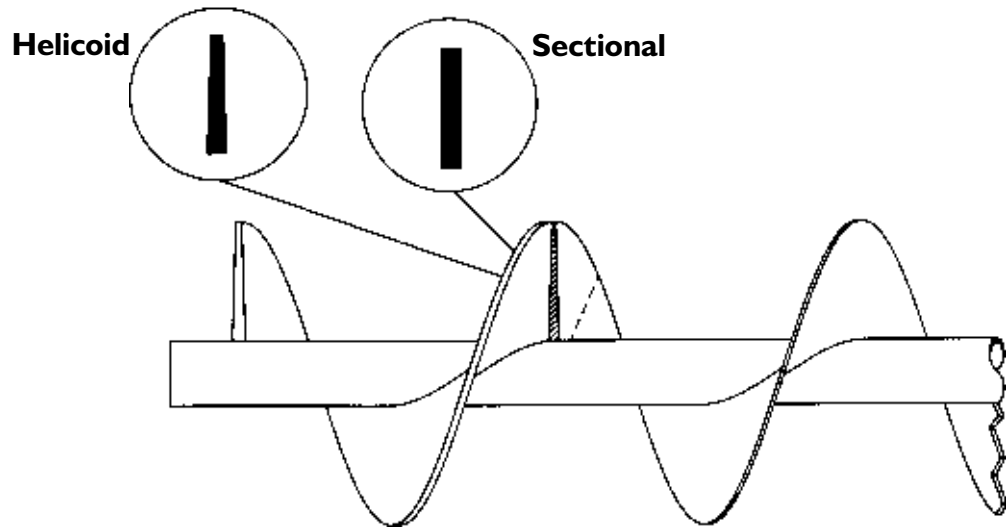


Listed screw dia. and pitch	Cplg. Dia.	Size Designation	Pipe size sch. 40 inches	Length feet and inches	A		B		D		F	G	H
					Diameter tolerance		Flight Size		Bushing bore inside Diameter				
					Plus	Minus	Thick.	Width	Min.	Max.	Inches		
6	1-1/2	6R312	2	9-10	1/16	3/16	3/16	1	1.505	1.516	7/8	3	17/32
9	1-1/2	9R316	2	9-10	1/16	3/16	1/4	1-1/2	1.505	1.516	7/8	3	17/32
12	2	12R416	2-1/2	11-10	1/8	5/16	1/4	2	2.005	2.016	7/8	3	21/32
	2	12R424	2-1/2	11-10	1/8	3/8	3/8	2-1/2	2.005	2.016	7/8	3	21/32
14	2-7/16	12R524	3	11-9	1/8	3/8	3/8	2-1/2	2.443	2.458	15/16	3	21/32
	2-7/16	14R524	3	11-9	1/8	3/8	3/8	2-1/2	2.443	2.458	15/16	3	21/32
16	3	14R624	3-1/2	11-9	1/8	3/8	3/8	2-1/2	3.005	3.025	1	3	25/32
	3	16R616	3-1/2	11-9	1/8	3/8	1/4	2-1/2	3.005	3.025	1	3	25/32
16	3	16R624	3-1/2	11-9	1/8	3/8	3/8	2-1/2	3.005	3.025	1	3	25/32
	3	18R624	3-1/2	11-9	3/16	3/8	3/8	3	3.005	3.025	1	3	25/32
20	3-7/16	20R724	4	11-8	3/16	3/8	3/8	3	3.443	3.467	1-1/2	4	29/32
24	3-7/16	24R724	4	11-8	3/16	3/8	3/8	3	3.443	3.467	1-1/2	4	29/32

CEMA STANDARD NO. 300-006

# Auger Products

## Special Flight



### Manufacturer of:

**USA** ANSI

Power Transmission  
Roller Chains

Conveyor Chain  
Products

Pintle Chains

Auger Products

Engineering Class  
Chains

### Flight Design to Resist Wear

Sometimes special consideration needs to be given to the design of an auger assembly due to unusual wear or strength concerns. Most wear in a screw conveyor occurs at the intake, and sometimes at the discharge, when submerged in the conveyed material. One method of providing additional strength or wear life for a helicoid conveyor is to start the conveyor with one or more pitches of a sectional flight or a thicker helicoid flight. The illustration above shows how two augers can be joined and overlapped to give additional support and increased wear surface.

1-800-435-0782