

SECTION X

SHAFTLESS SCREW CONVEYORS SECTION X

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*Conveyors shown without cover for illustration purposes only. Please follow manufacturing safety guidelines when operating conveyors.

Typical Applications

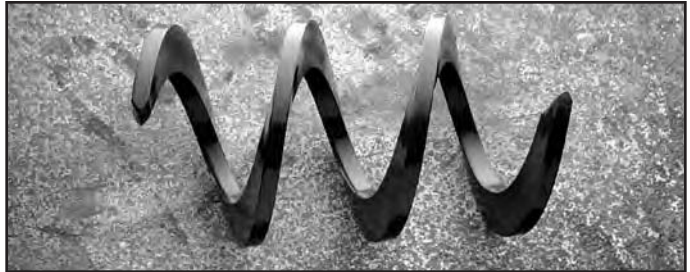
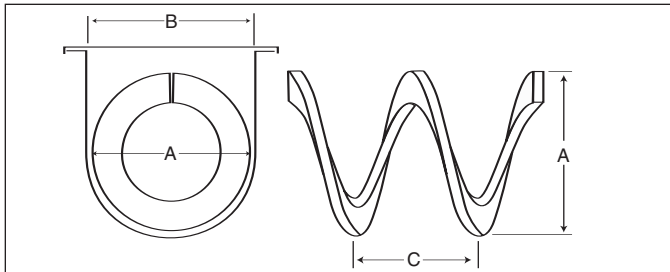
- **Rendering**
 - Poultry Processing • Meat Processing • Fish Processing
 - Chicken Feathers • Whole Carcasses • Animal Waste • Fish/Animal Bones
- **Pulp & Paper, Gypsum Board, Particle Board**
 - Lime Mud • Oversized Wood Chips • Hogged Bark • Shavings
- **Agriculture**
 - Fertilizer • Corn Gluten • Sugar Beets/Cane Processing • Chopped Hay
- **Hospital Waste Processing, Recycle Plants**
 - Shredded Cans • Bottles • Paper • Medical Disposables
- **Wine & Beverage Industries**
 - Grape Skins • Stems • Pumice • Fruit Peels
- **Waste Water • Solid Waste Treatment**
 - Sludge • Grit • Screenings • Solids Removal
- **Chemical & Heavy Industrial**
 - Ash • Recycle Batteries • Carbon Black • Shredded Tires

FEATURE	FUNCTION	BENEFIT
Continuous Flight	Eliminate Hangers	Reduces Maintenance Costs
3/4"-1" Flight	Long Lasting	Increases Uptime
No Tail Seals or Tail Bearings	Use Blind End Plate	Reduces Maintenance Costs
Cold Formed Flight	High Brinell	Longer Life
No Center Pipe Required	Eliminate Buildup On Pipe	Lower Maintenance/ Operation Costs
	Can Handle Particle Sizes Up To 90% Of Spiral O.D.	
	Allows Higher Trough Loading (45%-95%)	Increases Screw Capacity
Side Inlet Feeding	No Vertical Transition Necessary	Lower Installation Cost Reduces Headroom

Size and Capacity

Specifications:

- Type of Steel** Carbon Steel • High Brinell Carbon Steel • Stainless Steel
- Capacity** Up to 17,000 CFH
- Diameter** 6" to 30" (and Larger)
- Pitches** Full & 2/3
- Trough** CEMA Standards
- Options** UHMW Liners, AR Liners, Rider Bars, Drive End Seals
- Advantages** Spanning longer distances without intermediate bearings. Transport sticky products and large lumps.



45% Trough Loading

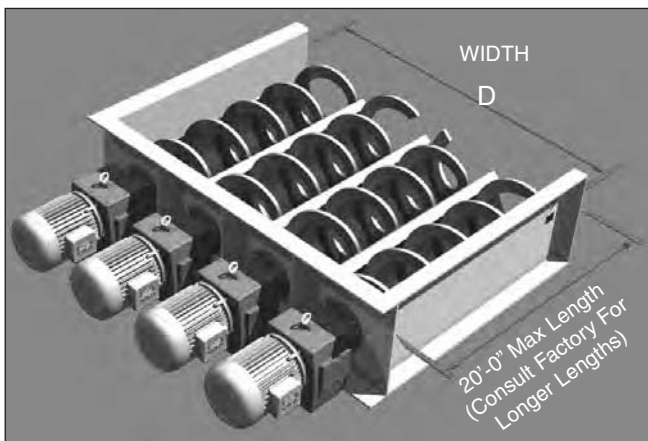
NOM. DIA.	A Dia.	B Inside	C Pitch	CFH* Full Pitch	CFH* 2/3 Pitch	MAX RPM
6	5½	7	6	52	35	25
9	8½	10	9	182	122	25
10	9½	11	10	261	174	25
12	11½	13	12	441	295	25
14	13½	15	14	730	489	25
16	15½	17	16	1030	690	25
18	17½	19	18	1524	1021	25
20	19½	21	20	2147	1438	25
24	23½	25	24	3401	2278	25
30	29½	31	30	6792	4528	25

95% Trough Loading

NOM. DIA.	A Dia.	B Inside	C Pitch	CFH* Full Pitch	CFH* 2/3 Pitch	MAX RPM
6	5½	7	6	108	73	25
9	8½	10	9	385	258	25
10	9½	11	10	544	363	25
12	11½	13	12	932	625	25
14	13½	15	14	1542	1033	25
16	15½	17	16	2176	1458	25
18	17½	19	18	3218	2156	25
20	19½	21	20	4532	3038	25
24	23½	25	24	7180	4810	25
30	29½	31	30	14425	9617	25

*CFH = Cubic Feet per hour. **ALL DIMENSIONS SHOWN IN INCHES.

Quad Screw Feeder



95% Trough Loading

NOM DIA.	WIDTH D	CFH* Full Pitch	CFH* 2/3 Pitch	MAX RPM
6	28	261	175	15
9	40	922	618	15
10	44	1292	862	15
12	52	2238	1500	15
14	60	3700	2479	15
16	68	5222	3500	15
18	76	7722	5173	15
20	84	10880	7290	15
24	100	17231	11545	15
30	124	34005	22669	15

*CFH = Cubic Feet per hour. **ALL DIMENSIONS SHOWN IN INCHES.



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

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

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

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

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

on the caution labels affixed to the equipment.

6. Do not place hands, feet, or any part of your body, in the conveyor.
7. Never walk on conveyor covers, grating or guards.
8. Do not use conveyor for any purpose other than that for which it was intended.
9. Do not poke or prod material into the conveyor with a bar or stick inserted through the openings.
10. Keep area around conveyor drive and control station free of debris and obstacles.
11. Eliminate all sources of stored energy (materials or devices that could cause conveyor components to move without power applied) before opening the conveyor
12. Do not attempt to clear a jammed conveyor until power has been LOCKED OUT.
13. Do not attempt field modification of conveyor or components.
14. Conveyors are not normally manufactured or designed to handle materials that are hazardous to personnel. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Conveyors may be designed to handle these materials. Conveyors are not manufactured or designed to comply with local, state or federal codes for unfired pressure vessels. If hazardous materials are to be conveyed or if the conveyor is to be subjected to internal or external pressure, manufacturer should be consulted prior to any modifications.

CEMA insists that disconnecting and locking out the power to the motor driving the unit provides the only real protection against injury. Secondary safety devices are available; however, the decision as to their need and the type required must be made by the owner-assembler as we have no information regard-

ing plant wiring, plant environment, the interlocking of the screw conveyor with other equipment, extent of plant automation, etc. Other devices should not be used as a substitute for locking out the power prior to removing guards or covers. We caution that use of the secondary devices may cause employees to develop a false sense of security and fail to lock out power before removing covers or guards. This could result in a serious injury should the secondary device fail or malfunction.

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

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

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

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

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



PROMINENTLY DISPLAY THESE SAFETY LABELS ON INSTALLED EQUIPMENT



NOTICE: This document is provided by CEMA as a service to the industry in the interest of promoting safety. It is advisory only and it is not a substitute for a thorough safety program. Users should consult with qualified engineers and other safety professionals. CEMA makes no representations or warranties, either expressed or implied, and the users of this document assume full responsibility for the safe design and operation of equipment.