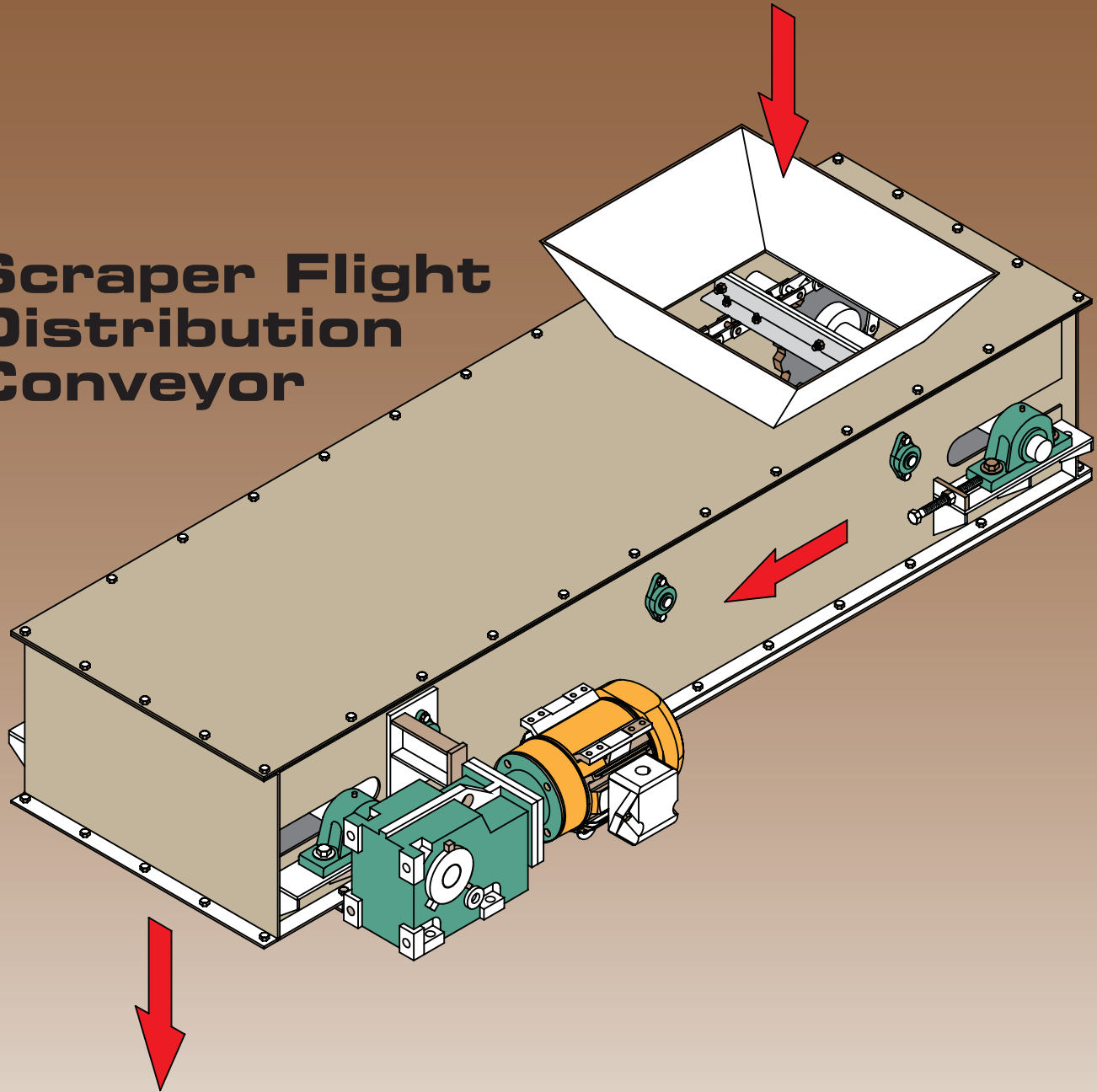


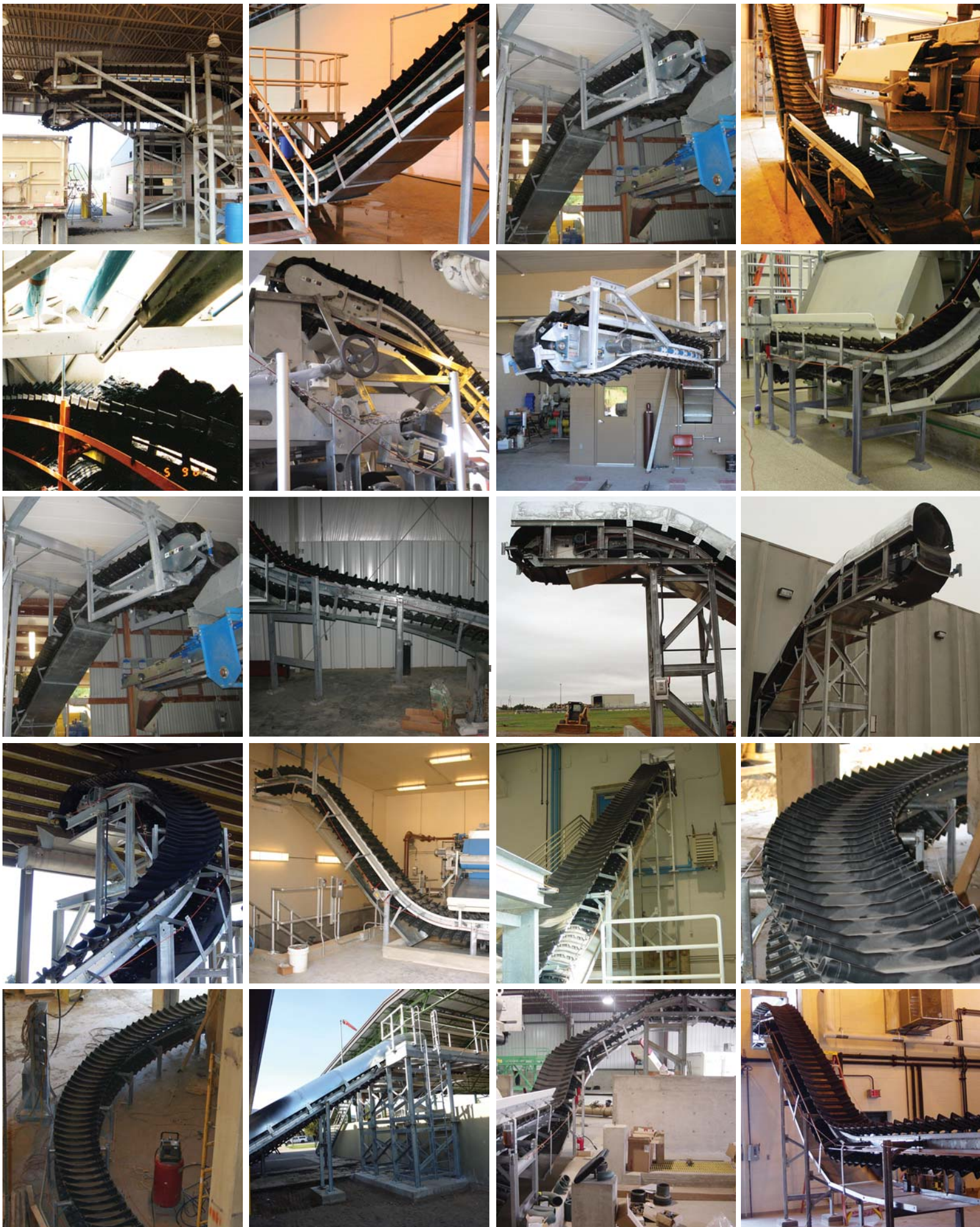
SERPENTIX® CONVEYOR CORP.

9085 Marshall Ct.
Westminster, CO 80031-2920
Phone: 303.430.8427
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www.serpentixconveyor.com
rob@serpentix.com



Scraper Flight Distribution Conveyor





Introduction

Serpentix Conveyor Corporation specializes in the design and manufacture of conveyor systems. Since our founding in 1969, we have undergone almost constant expansion as a result of customer demand for our products, three-dimensional continuous path™ conveyors. Our current manufacturing/production facility is located in Westminster, CO.

Operating over a continuous, three-dimensional path, Serpentix easily out performs – at less cost – conventional conveyors which can only operate along a straight line. The ability to incline steeply and to make continuous horizontal, helical and vertical curves, permits a single Serpentix conveyor to replace multiple conventional conveying devices, eliminating troublesome transfer points and reducing energy, space and maintenance costs.

The unique capabilities of the Serpentix belt, and other design features of the various models offered, permit a single Serpentix conveyor to perform the work of multiple conventional conveying devices. Many older, space-cramped plants have utilized Serpentix conveyors to modernize existing facilities without increasing plant size. In addition, the wide range of Serpentix capabilities, applied to new plant construction, has provided lower construction and operating costs, reduced installation costs, and safer and cleaner plants.



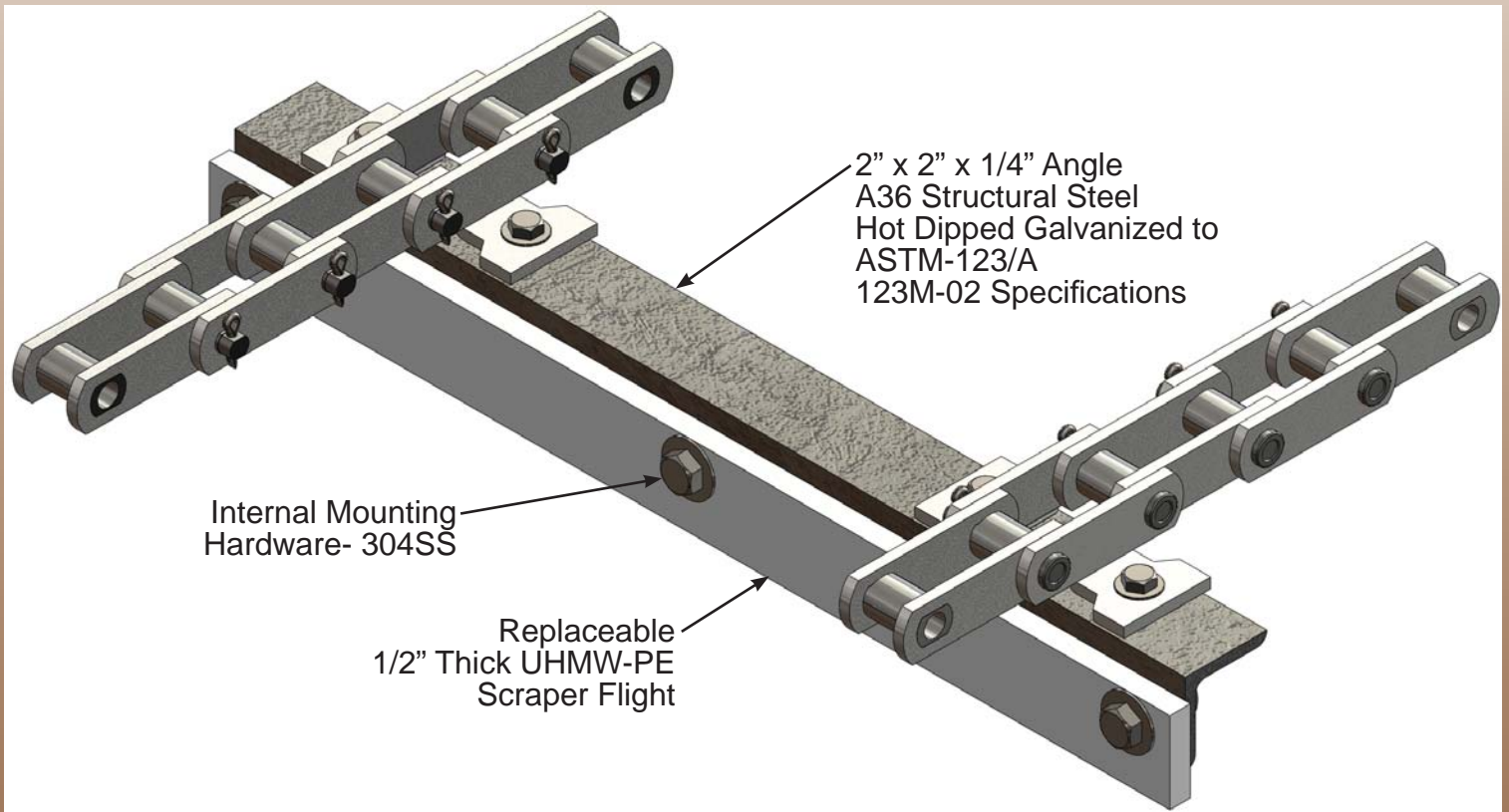
SERPENTIX® CONVEYOR CORP.

9085 Marshall Ct. Westminster, Colorado 80031

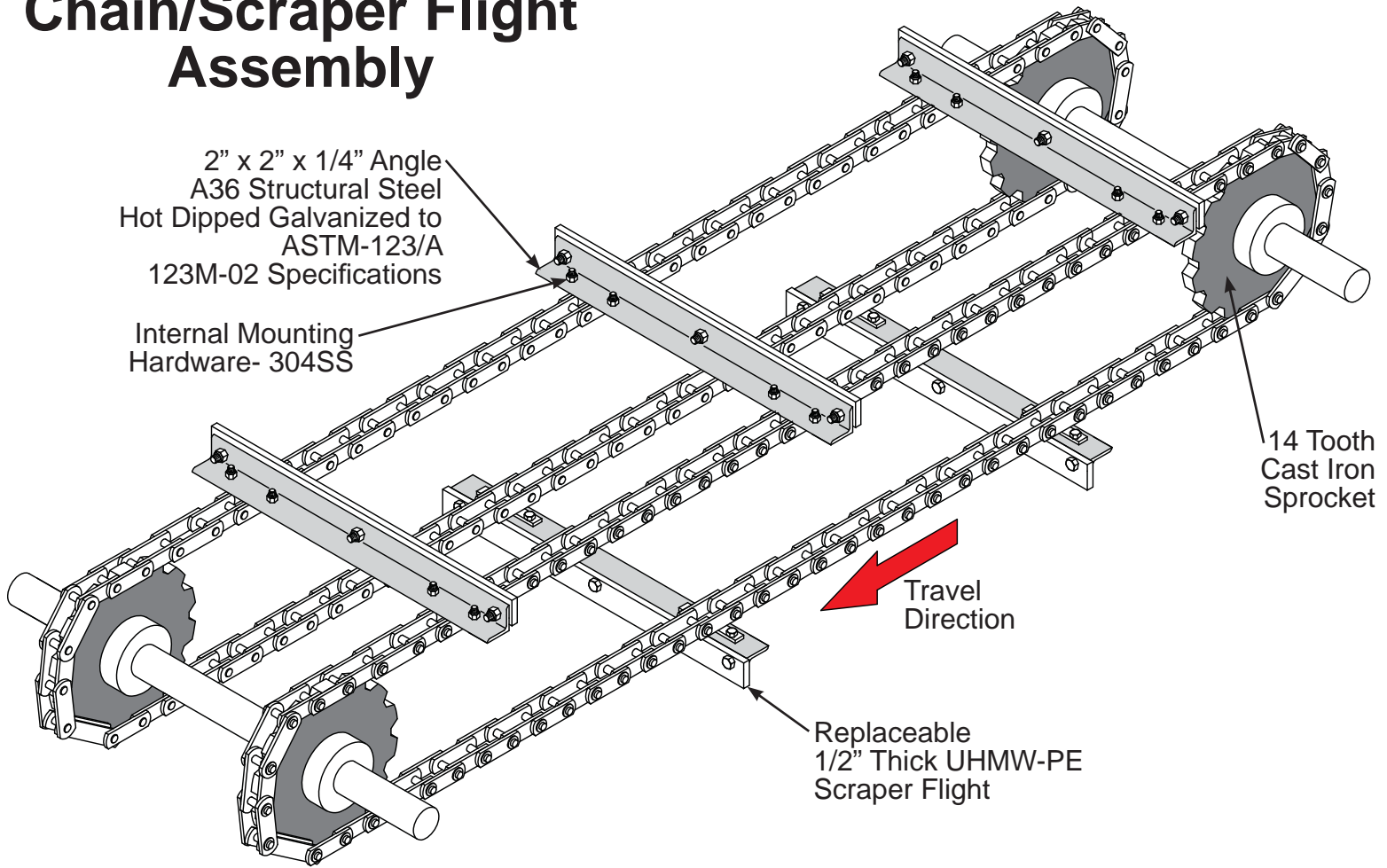
1-800-466-7979 · Fax 303-430-7337 · sales@serpentix.com · www.serpentixconveyor.com

Chain/Scraper Flight Assembly

Typical Scraper Flight Spacing every 31"



Chain/Scraper Flight Assembly

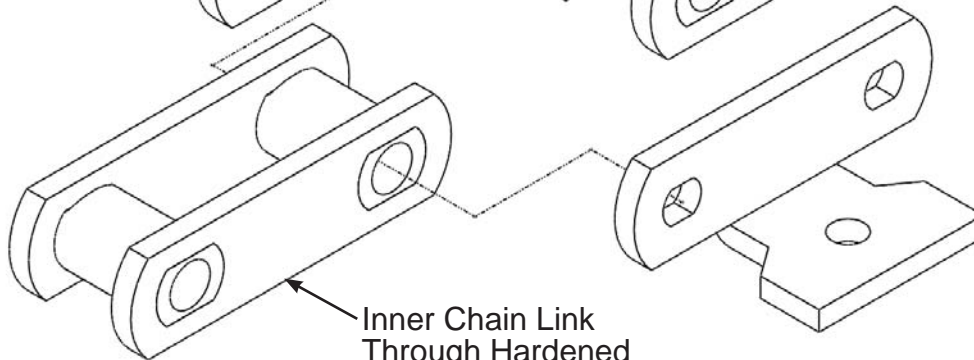
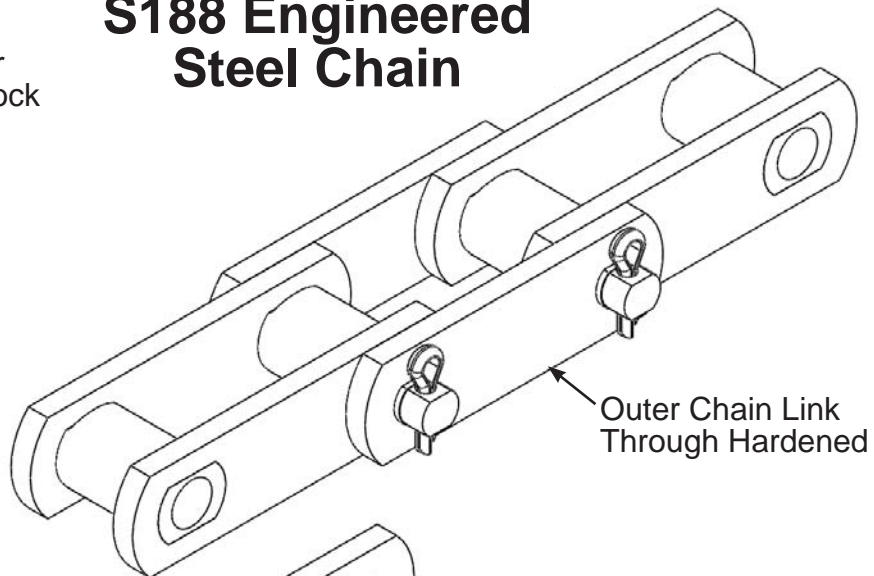
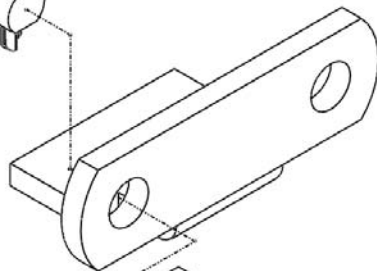


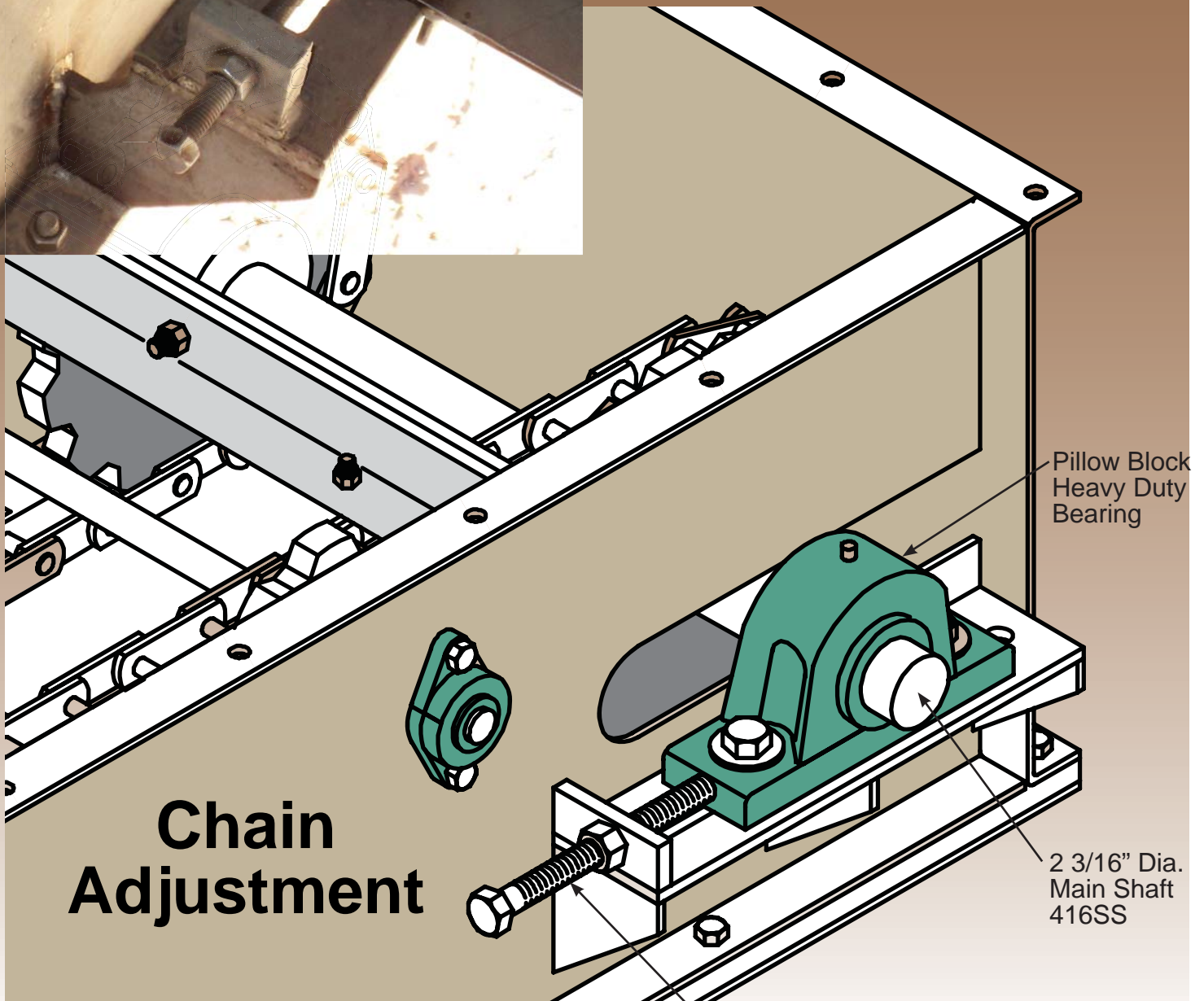
Carbonized
Press Fit Pin



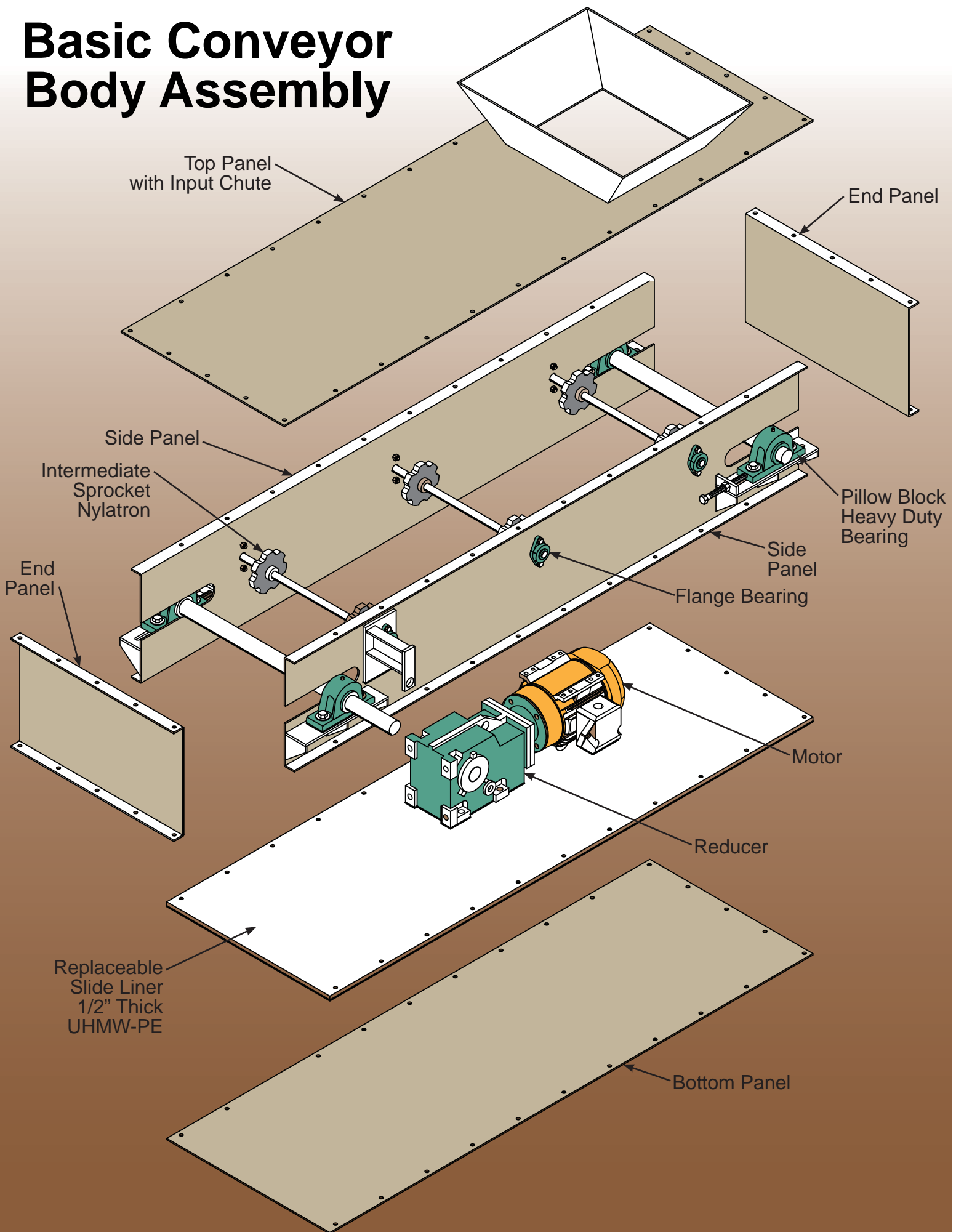
Cotter
Pin Lock

S188 Engineered Steel Chain

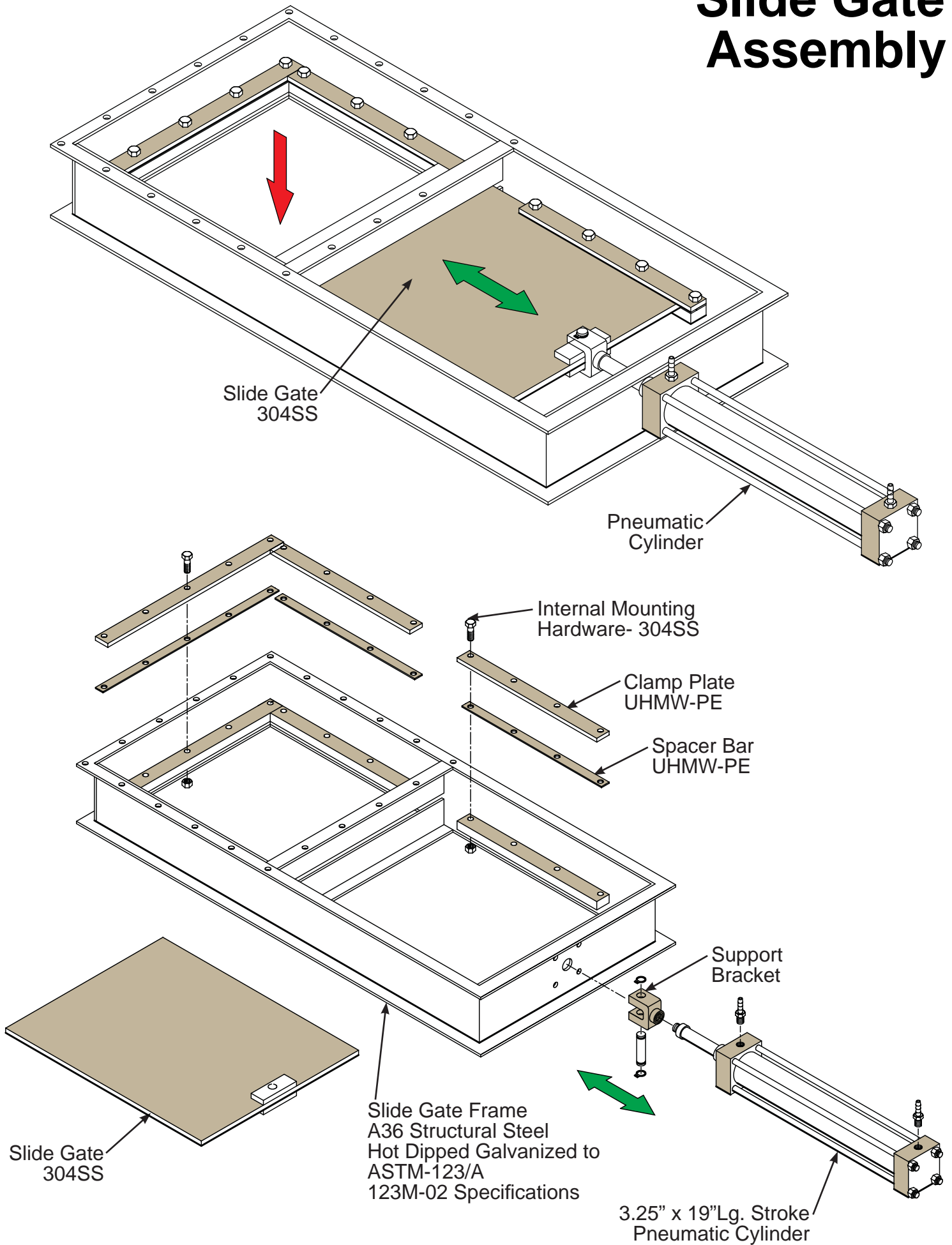




Basic Conveyor Body Assembly



Slide Gate Assembly



Scraper Flight Distribution Conveyor Equipment Specifications

QUALITY ASSURANCE

- A. The contractor shall furnish all equipment and labor required for a complete scraper flight distribution conveyor system as shown and specified. The scraper flight distribution conveyor system shall be manufactured by Serpentix Conveyor Corporation.

SCRAPER FLIGHT DISTRIBUTION CONVEYOR

- A. The conveyor equipment as supplied by Serpentix Conveyor Corporation shall consist of a conveyor housing, chain, scraper flights, inlet hopper(s), supports, take-up and drive station. The centerline length of the conveyor(s) shall be approximately 100' feet, with a 24" inch wide housing, and shall travel up to 50 FPM discharging through any of four (4) discharge openings which will be opened or closed with pneumatic gate valves. Sludge loading onto the conveyor shall be distributed evenly and shall not exceed a design capacity rated at 10 tons per hour.
- B. The equipment shall be furnished and installed complete in all details and ready for operation. The conveyor shall be designed for both continuous and for intermittent operation at a capacity not more than that specified. The exact length of conveyors will be noted on the drawings. The equipment furnished shall have adequate capacity to convey the specified capacity without failure and without overflowing the scraper flight distribution conveyor housing.
- C. The chain shall be hardened steel chain assembled with UHMW-PE flights ½" thick x 2" wide x 23 ½" long, evenly spaced at 30" apart. The sprockets at the drive and tension ends shall be cast iron. The steel housing shall include a 12-gauge bolt-on top cover, 3/16" thick sides, and a ¼" thick bolt-on bottom. The bottom shall incorporate a ½" thick UHMW-PE wear plate. The return chain will ride on nylatron intermediate sprockets, supported by stainless shafts mounted to flange bearings that will be bolted to the conveyor housing. Support members will be welded to the exterior of the conveyor housing to provide support points for structural supports as shown on the drawings.
- D. The drive end will include a 5 HP, 230-460V, TEFC, inverter duty rated motor mounted to a helical bevel right angle gear reducer. The reducer will mount on the drive shaft and have a torque arm to hold the gearbox stationary during operation. The drive shaft will be mounted in tapered roller pillow block bearings bolted to the conveyor housing.

- E. The tension end will have adjustable tapered roller pillow block bearings for chain tensioning. The bearings will be adjusted using threaded 304 stainless steel rod to tension the chain and secured by mounting bolts to hold the bearings in the proper position.

SUPPORTS

- A. The conveyor supports shall be structural steel conforming to ASTM A36. All shop welding shall conform to the latest standards of the American Welding Society.

GATE VALVES

- A. Four (4) discharge openings will be spaced beneath the conveyor per locations shown on the drawings. Each opening will be 19" x 19" square with flanged connections of sufficient design to attach a 19" gate valve where necessary. The outlets of the scraper flight distribution conveyor shall include pneumatic actuated, gate valves. Each outlet shall include a valve. Opening/closing of the valves will allow the operator to distribute the sludge in truck beds or dump containers.
- B. The valve frames shall be fabricated from A36 structural steel with a bolting pattern to match the outlet flanges of the discharge openings of the scraper flight distribution conveyor. The blade shall be 304 stainless steel. The pneumatic cylinder to actuate each valve shall be 3.25" diameter with a 19" stroke.
- C. One (1) cubic feet of air is required at 80 psi for the operation of the pneumatic cylinder. Conveyor manufacturer is not responsible for supplying the necessary air requirements.
- D. Each discharge valve shall also be configured to allow for a plastic tube chute assembly.

SAFETY STOP SWITCH

- A. Flag arm safety pull-cord switches shall be provided on each side of the conveyor with orange protective coated cable running the entire length of the conveyor.

FACTORY FINISH

- A. Shall be hot dipped galvanized to ASTM 123/A 123M-02 specifications. All OEM supplied equipment will be furnished with their factory-applied finish.

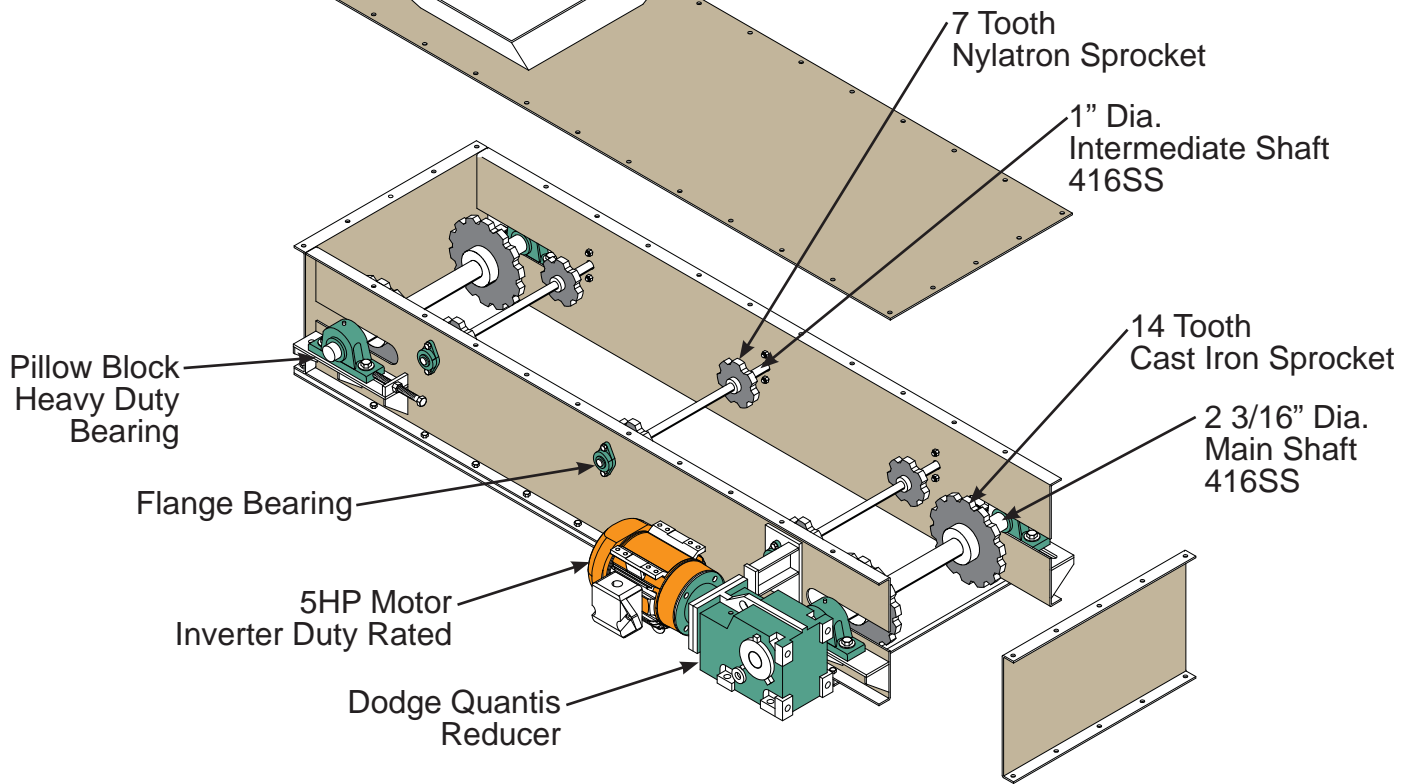
INSTALLATION

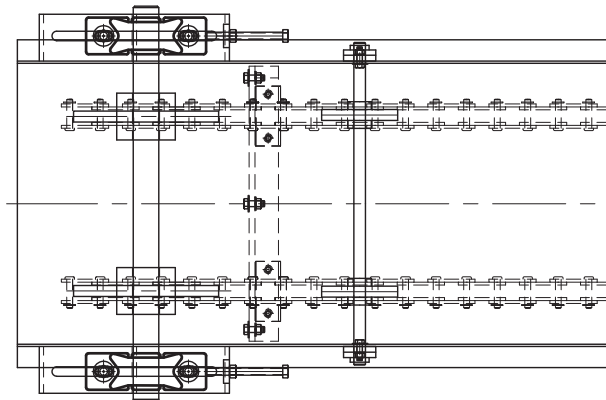
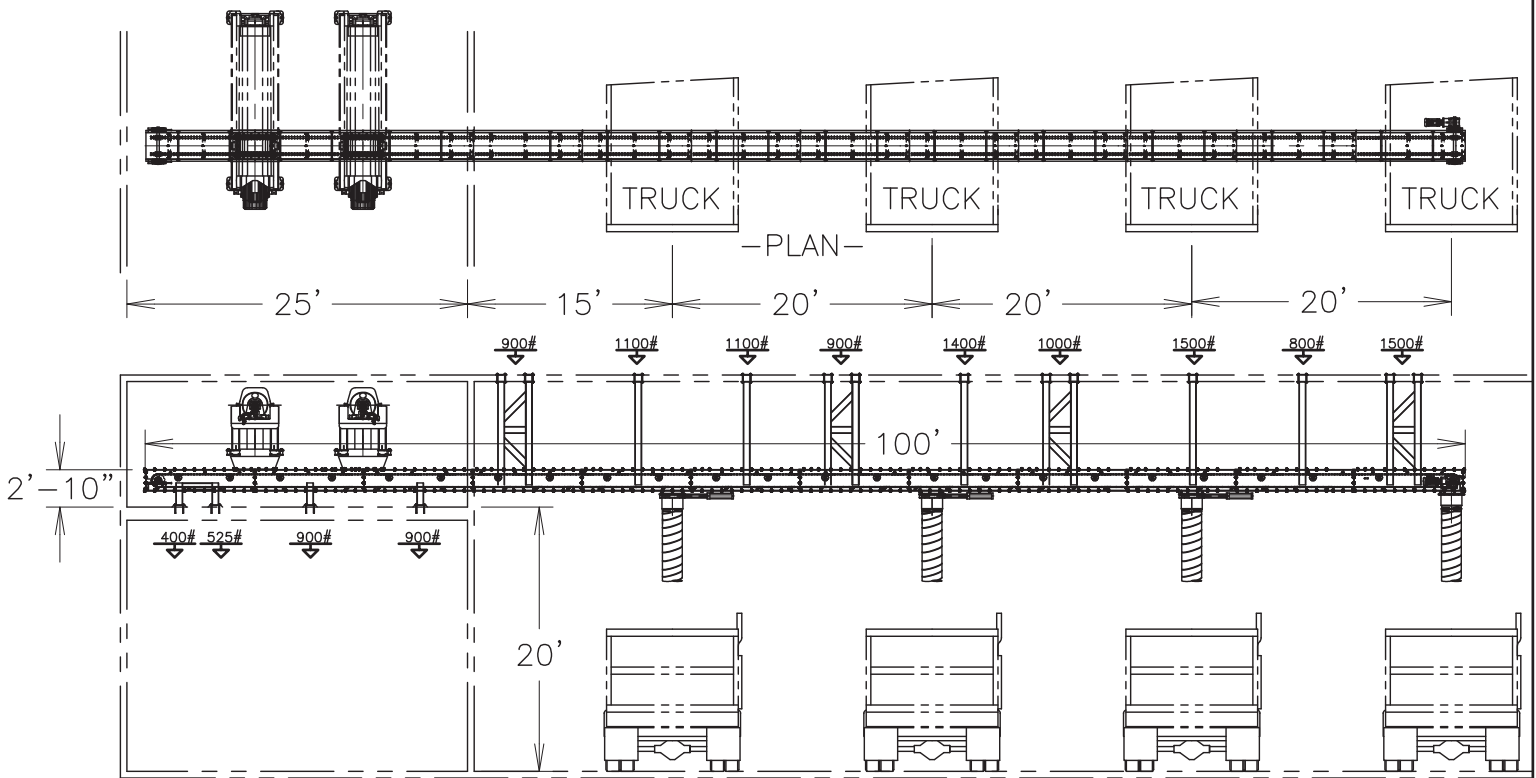
- A. All equipment furnished under this section shall be installed in accordance with the instructions and recommendations of the equipment manufacture and as indicated on the drawings. The contractor shall be responsible for coordination of this equipment with the requirements of the related equipment to obtain a complete, integrated and satisfactory operating installation of the conveying equipment. It shall be the contractor's responsibility to handle, store, and install the conveyor operation mechanism and accessories in strict accordance with the manufacturer's drawings and recommendations.
- B. Installation shall include furnishing the required oil and grease for initial operations. The grades of oil and grease shall be in accordance with the manufacturer's recommendations. Anchor bolts if required, shall be furnished by the contractor and set in accordance with the manufacturer's recommendations and drawings.
- C. Final assembly of the entire conveyor unit may require onsite modifications, in order to conform to any site deviations. This work shall be performed on site by the contractor.

SERVICE

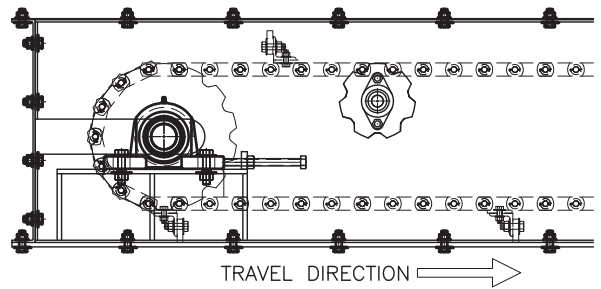
- A. The manufacturer's field engineer or factory trained authorized representative shall be on hand to inspect and check the installation of the equipment at the time of the initial start-up and operational testing of the equipment; and shall provide operation and maintenance instructional services for plant personnel.

Typical Exploded View without Running Gear






PLAN VIEW OF FLIGHTS



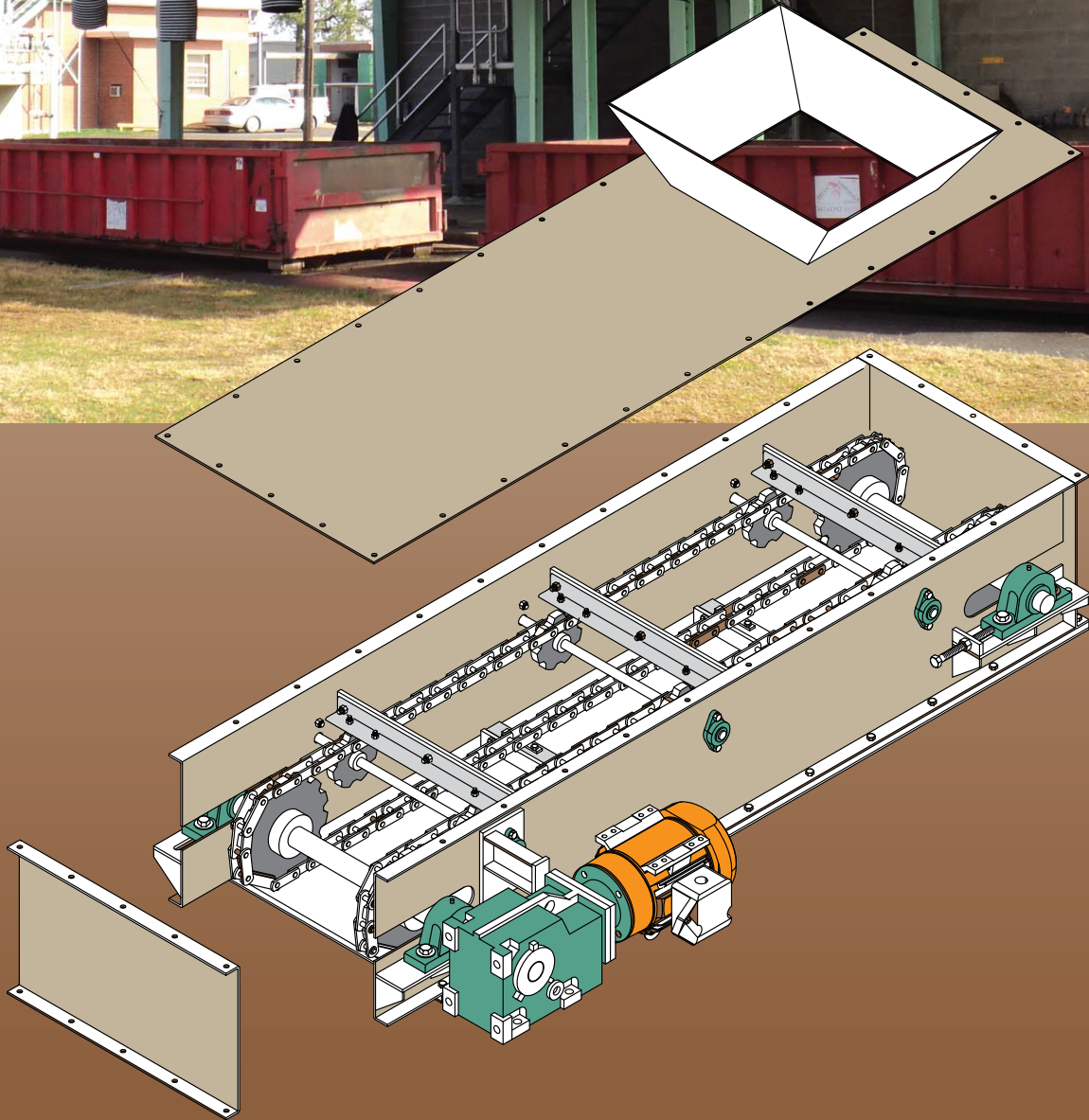
ELEVATION VIEW OF FLIGHTS

CONVEYOR DESIGN: FD	FLITE WIDTH: 24"	DESIGNED CAPACITY: 10 T/HR
LENGTH OF CONVEYOR: 100'		DENSITY: 65 #/CUFT
ELEVATION CHANGE: 0'		MAX ANGLE OF INCLINE: 0°
MATERIAL HANDLED: SLUDGE		FLITE SPEED: 50 FT/MIN
		HP: 5 230/460 VAC 3 PHASE, 60Hz 1750 RPM

TITLE WISCONSIN DISRIBUTION CONVEYOR SCRAPER FLIGHT CONVEYOR		
DRAWN BY R.E. NISSEN	 SERPENTIX 9085 MARSHALL COURT * WESTMINSTER, CO * USA 80031 PHONE (303) 430-8427 FAX (303) 430-7337 conveyor@ix.netcom.com	REV.
DRAWN DATE 02-13-2011		Q5231
CHECKED BY	SIZE A	DWG NO.
CHECKED DATE	SCALE	SHEET 1 OF 1

SERPENTIX® CONVEYOR CORP.

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