

Close Tolerance Machining  
of External Flange

## Special Design Screws for Recycled Materials at CP Manufacturing in San Diego, CA

### General Description of the Application

CP Manufacturing is one of the world leaders in separation technology for the recycling industry. All forms of waste including municipal solid waste (MSW), construction materials and electronic waste are recycled using systems designed by CP Manufacturing. Recycling can be a very dirty, dangerous and time-consuming job. Through innovative engineering and automation, CP makes recycling much more manageable. Screw conveyors are used throughout the recycling process for conveying and metering recycled materials such as plastic, metals, paper and solid waste.

CP Manufacturing designed a special 16-screw live bottom system for metering shredded and ground plastic. The screws used in the live bottom system required special machining and very tight tolerances. CP had contracted the fabrication of the screws to several screw conveyor manufacturers with very little success. In search of the proper solution, CP contacted KWS for help. KWS provided the screws to the required tolerances and saved CP time and money.

### Design Parameters of Application

**Product Type:** Recycled Plastic

**Duty:** 24 Hours per Day, 7 Days per Week

### Advantages Provided by KWS

As an ISO 9001-2015 certified manufacturer, KWS provides the highest quality equipment in the industry. By using the best manufacturing machinery and processes, KWS meets the most stringent demands of our Customers.

The live bottom screws are designed with special machined flanges on both ends. Keeping the flanges perpendicular to within 0.005-inches to the centerline of the screw is critical for proper operation. KWS met the manufacturing requirements by designing special jigs and fixtures for locating the flanges in exactly the correct position. Then, the flanges were TIG welded in place. TIG welds are smaller, cleaner and cause less distortion when compared to MIG welds. After welding the straightness and perpendicularity of the screws and flanges are checked to make sure the tolerances are met.

### Testimonial

“We were very pleased to finally find a manufacturer that could hold our required tolerance. The KWS screws passed testing and will now be used in our facilities worldwide.”

- Verena Schmitt, Research and Development Supervisor – CP Manufacturing



#### KWS Manufacturing

3041 Conveyor Drive  
Burlison, Texas 76028

Toll Free: (800) 543-6558

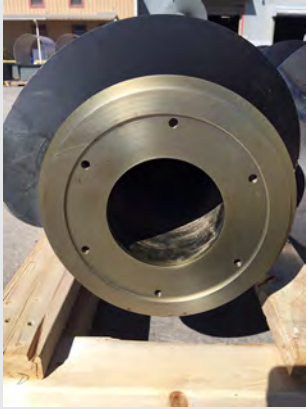
Phone: (817) 295-2247

Fax: (817) 447-8528

[www.kwsmfg.com](http://www.kwsmfg.com)



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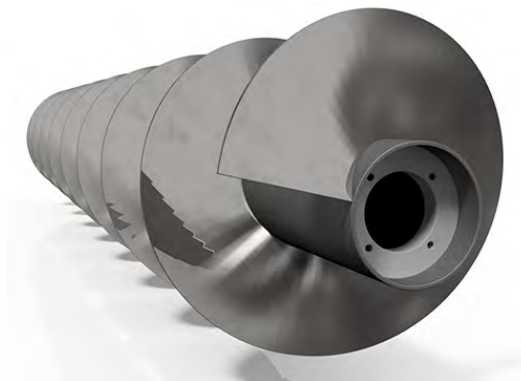
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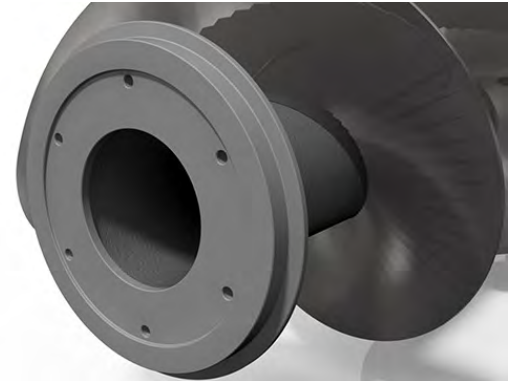
Screws are Installed at CP Manufacturing Facility and Ready for Testing



Screws are Carefully Crated for Shipment



Close Up View of Internal Flange



Close Up View of External Flange



**Design  
Engineering  
Manufacturing**

### **KWS Manufacturing**

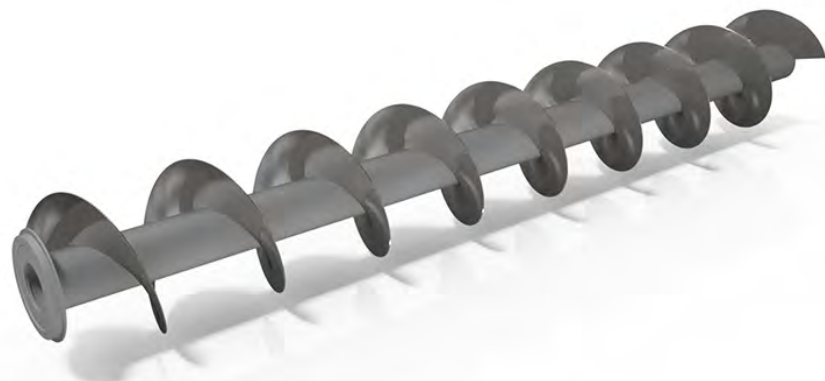
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Special Screws are Used for Metering Waste Plastic