



**Plant Name and Location**  
**Michigan Renewable Carbon**  
**Gwinn, MI**



**Design  
Engineering  
Manufacturing**

## **KWS Manufacturing**

3041 Conveyor Drive  
Burlleson, Texas 76028

Toll Free: (800) 543-6558  
Phone: (817) 295-2247  
Fax: (817) 447-8528

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

## Heavy Duty Screw Conveyors for Conveying Activated Carbon

### General Description of the Application

Biogenic Reagents is a producer of low cost, high performance carbon products made from renewable resources such as waste and biofuels. The company's flagship production facility, Michigan Renewable Carbon, produces specialty carbon products for the emissions control, metals production, and energy generation industries. Michigan Renewable Carbon was expanding production and required a new system utilizing heavy duty screw conveyors to transfer activated carbon from reactors to weigh belt feeders for their new process. KWS worked with their manufacturer's rep, Bystrom Conveying, along with an engineering firm, Barr Engineering, to develop an excellent solution on this project.

### Design Parameters of Application

**Product Type:** Activated Carbon

**Material Density:** 10 Lbs. per Cubic Foot

**Capacity:** 450 Cubic Feet per Hour

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

### Advantages Provided by KWS

Michigan Renewable Carbon and Barr Engineering contacted KWS and Bystrom Conveying at the beginning of the project for assistance in the design of various screw conveyors. They were looking for an experienced screw conveyor manufacturer to design and build a rugged and reliable screw conveyor system with rapid delivery. Funding for this project had already been secured and they were anxious to get their system running as quickly as possible. During the bid process, engineers at KWS provided valuable expertise to help Barr Engineering develop a lower cost solution for screw feeder and conveyor sizing, motor selection and construction features. Michigan Renewable Carbon placed the order in late-January and required the system to be delivered by the second week of March. KWS provided the quickest delivery of approval drawings and equipment because of their lean processes and manufacturing techniques. KWS met every aspect of the delivery schedule and helped keep the project within budget and on track. KWS was the perfect solution.

### Special Features of KWS Design

KWS provided approval drawings within days of receiving an order by utilizing their extensive Autodesk Inventor library of parts and drawing standards. Michigan Renewable Carbon was very pleased with the accuracy and timing of the approval drawings. Engineers at KWS worked closely with Barr Engineering to ensure that the screw conveyors fit into the system layout with no interference with other process equipment. KWS created system layout drawings to match and validate the layout drawing created by Barr Engineering. Barr Engineering was able to complete their design of the system quickly with the assistance of KWS. KWS kept all of the Customer's specific requirements in mind and designed the conveyors with special features such as nitrogen blanketing, specially designed U-trough screw conveyors to hold internal pressure, shaft guards for operator safety and premium efficient motors.

"Thank you for the fast delivery of the conveyors! The conveyors look great and operate perfectly!"

- Todd Smrekar, Vice President of Operations – Biogenic Reagents