

## **Safety & Installation Manual for Douglas Vortex® Pulleys**

Douglas Vortex® Pulleys are specially designed for use on bulk product belt conveyors. They offer optimum self-cleaning characteristics and can be used in the following pulley locations: Snub, Tail, GTU bend pulleys, and Take-up positions.

Douglas Vortex® pulleys are normally designed for use with XT Style bushings for shaft retention. However, there are other options available such as keyless locking elements and QD Style bushings.

### **SAFETY INFORMATION**

NEVER OPERATE, ADJUST, OR INSTALL EQUIPMENT ON A MOVING CONVEYOR.

Proper guarding is necessary as the Vortex® Pulley presents two nip points when the conveyor is operating.

Before beginning installation or maintenance of any conveyor component make sure the entire system is locked out and tagged out. Follow all OSHA, MSHA, and other guidelines that pertain to lockout and tag-out procedures.

Follow all federal, state, local, and owner recommended safety guidelines.

Do not allow anyone to attempt installation of the Vortex® Pulley until they have read this manual thoroughly and understand it completely.

Do not wear loose clothing such as but not limited to hooded shirts/sweatshirts, jewelry or neckties when working on or around belt conveyors. The moving parts of a belt conveyor may catch these items and may result in serious injury.

Never operate a conveyor without guards securely in place and properly adjusted.

Before starting the conveyor make sure that no one is exposed to the moving parts or material being discharged. The speed of the conveyor and the material being conveyed is sufficient to cause bodily injury.

Always replace worn or damaged components with factory recommended components.

Always remember that SAFETY IS EVERYONE'S RESPONSIBILITY.

### **USE SAFE PRACTICES WHEN WORKING ON CONVEYOR PULLEYS**

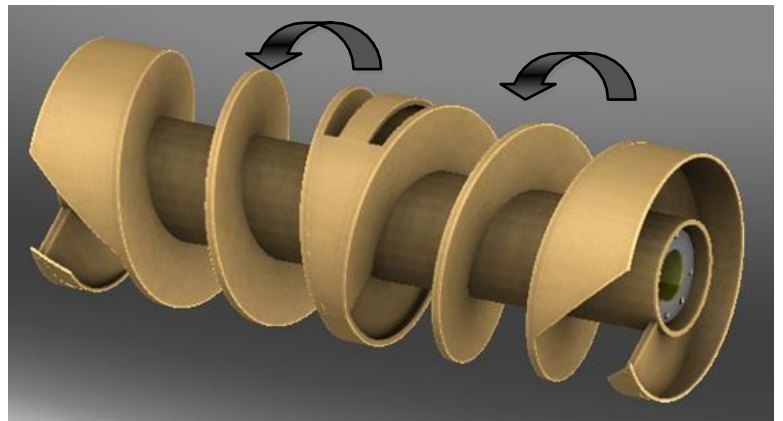
- A. Bearings and housings should be mounted to manufacturer's instructions. Proper alignment of bearing housings on shaft is necessary for bearing and seal life. Check mounting surfaces and holes before installing pulley assembly.
- B. Units that are not placed into service immediately should be stored as stated.
- C. Adhere to the instructions for "Bushing Installation Instructions" that are available by Douglas Manufacturing in the following documents:

QD Bushing Installation • XT Bushing Installation • Keyless Locking Element Installation

## **VORTEX<sup>®</sup> PULLEY INSTALLATION**

1. Before beginning work on any conveyor always lockout and tag-out the equipment. Follow all OSHA, MSHA, and other guidelines that pertain to lockout and tag-out procedures.
2. Ensure that bushing bolts are properly tightened to specification and that bearings are properly secured to the shaft. For the first month of operation check the torque on bushing bolts at least once a week.
3. Vortex<sup>®</sup> Pulley assemblies are very heavy by nature and will require the use of lifting equipment to position and install. Ask for help if needed during installation.
4. Loose product will be discharged at each end of the Vortex<sup>®</sup> Pulley. Make sure that all guards are designed in a manner to prevent build-up and protect personnel from falling or flying debris in the areas next to the pulley ends.
5. When preparing to install the Vortex<sup>®</sup> pulley assembly on your belt conveyor it is important to mount this pulley in a way that provides rotation only in the direction indicated by the center wrap.

6. **WARNING:** Douglas Vortex<sup>®</sup> pulleys may only be used in the rotation indicated. Rotation in the opposite direction may tear edges of the conveyor belt. In addition, normal belt tracking may be disrupted. If the Vortex<sup>®</sup> pulley is mounted contrary to these instructions material will accumulate to the center of the pulley. Douglas Vortex<sup>®</sup> pulleys may not be used on bidirectional (reversing) belt conveyors.



7. The Vortex<sup>®</sup> Pulley when installed correctly will provide years of service. It should be inspected occasionally for wear and serviced promptly to prevent damage to the conveyor belt.

## **STORAGE INSTRUCTIONS**

- A. Block the pulley to keep the face from prolonged contact with the ground.
- B. If stored outside, protect the entire pulley assembly from the elements such as but not limited to sunlight, rain and snow.

**Modification or other work on a conveyor pulley assembly may not be performed without prior written consent of Douglas Manufacturing Co., Inc.**