

# BEHIND *the* STEEL

## 36" to 60" Alignment-Free Combination Belt Drive

The **Alignment-Free Combination Drive**, sometimes called a "boom" drive, uses a rigid low speed coupling and fluid coupling with a tunnel instead of traditional belts and sheaves. By eliminating the use of belts and sheaves, the need to align the drive is completely eradicated.

### BENEFITS:

- Quick installation
- Quick transport from one location to another as drive and take-up are on one movable base
- Readily available, less expensive components
- Need for alignment is eradicated
- Components can be used to match other 150HP & 200HP drives

### » Take-Up

The take-up unit installed makes this drive unique as most are on a separate base. This type of design allows for movability and ease of installation. The take-up on this particular unit is designed for short runs. It assists in a smooth start-up of the unit by decreasing belt slippage and allows for ease of belt splicing if needed.

### » Ratchet Jacks

Two ratchet jacks allow the attached discharge boom to be lowered or raised depending on the height of the operation.

### » Motor

A totally enclosed fan cooled motor is used on this unit. A 445TD frame size with a standard shaft is used here. The motor can be started with an across-the-line starter used with a fluid coupling or a VFD starter to create a more controlled start.

### » Fluid Coupling

This drive is equipped with a Voith 422TVVS-EEK-E fluid coupling paired with an across-the-line starter. It can also be set up using an elastomer coupling with a VFD starter. VFD starters allow for a controlled start while fluid couplings build up the speed to start the drive.

These two options function similarly and are based on customer preference.

### » Bearings

This unit is furnished with 4-bolt, split-house bearings designed for heavy-duty operations in mining. Each bearing unit consists of a bearing, seal, lubricant, and shaft locking mechanism. Bearings are chosen based on pulley shaft size and tolerances. This drive uses size SAF22538, 6 15/16" bearings.

### » Pulleys

This drive is equipped with a flat-face, mine-duty drive pulley, a discharge pulley, and a take-up pulley. The drive pulley has MSHA-approved diamond lagging for bi-directional pulley rotation, allows for reduction of spare pulley inventory, and sheds water from the conveyor belt. The discharge and take-up pulleys have the same dimensions and include smooth (plain) lagging. Plain lagging is used to protect non-drive pulleys on the dirty side of the belt.

### » Rigid Low Speed Coupling

Used when a rigid connection is required between the low speed shaft of a gearbox and the head shaft of a conveyor pulley. When sized properly, a low speed rigid coupling will carry the application torque and weight of the gearbox. A rigid coupling consists of male and female hubs in a bolt-together design that is user-friendly to the operator.



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