



**METAL SOLUTIONS**  
**CLUTCHES, COUPLINGS, SHEAVES & PULLEYS**

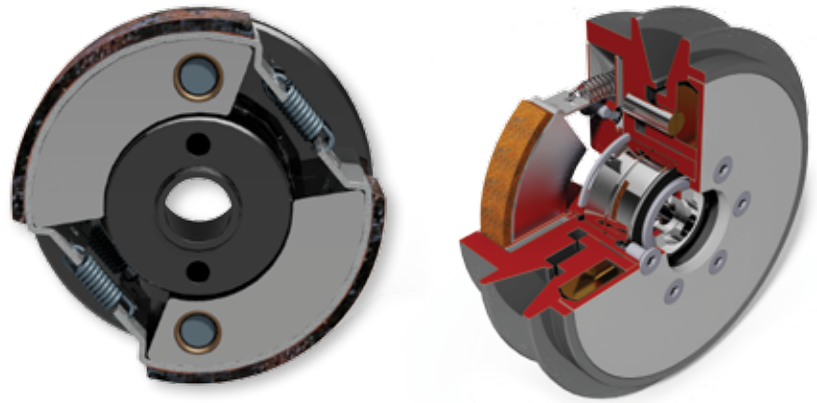


# METAL PRODUCTS

Optibelt has a long history of manufacturing high quality power transmission belts. This engineering expertise and application excellence has led Optibelt to develop key products and partnerships for metal drive components. Optibelt can engineer customer's complete drive systems for standard or custom drive solutions.

## CLUTCHES & BRAKES

Optibelt has partnered with Amsbeck, a leading manufacturer and designer of clutches and brakes.



## COUPLINGS

Tecnam, formerly known as Desch DPC, has a long history providing standard and custom coupling solutions to the power transmission industry.



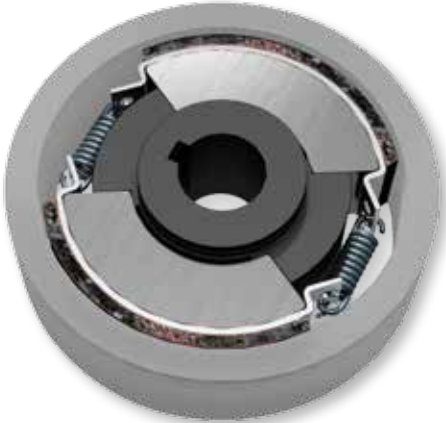
## PULLEYS, SHEAVES & BUSHINGS

We can provide almost any size of pulley, sheave or bushing. Optibelt has the largest metric ranges available and can also offer imperial sizes. Our mission is to exceed our customer's expectation in design, performance and value. Custom engineered products are available.



# CLUTCHES & BRAKES

Amsbeck is a manufacturer and designer of centrifugal clutches and brakes as well as hydraulic clutches. Robust and high quality designs are available and can be custom engineered for your application requirements.



## HIGH TORQUE

The hub guides the centrifugal weights as the clutch is engaged and disengaged.

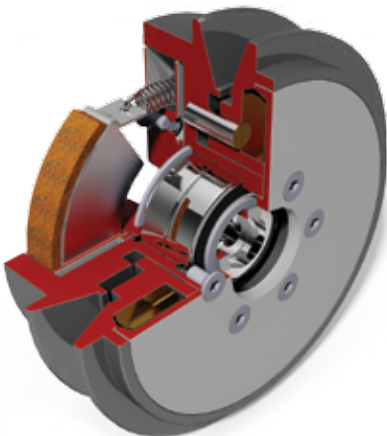
- The hub profile is designed for high torque transmission
- Clutch engagement can be operated independent of shaft rotation
- High power transmission to clutch diameter ratio
- Simple, robust and versatile design
- Used for centrifugal clutches and brakes



## PIVOTING

Utilizes a pivoting centrifugal weight mechanism, where the centrifugal weight pivots to engage and disengage the clutch in a self-reinforcement "jaw effect".

- Smooth power train engagement
- Increased clutch dampening
- Low-vibration and low-noise
- Used for centrifugal clutches and brakes



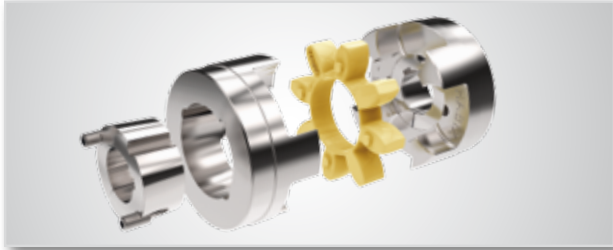
## INTEGRATED BELT TENSIONER

An innovative self-tensioning belt mechanism integrated into a centrifugal clutch.

- Optimized power transfer
- Can increase belt life significantly
- Reduced power train wear
- Reduces operating and owning costs
- Automatic and manual designs

# FLEXIBLE COUPLINGS

Tecnam couplings feature flexible dampening elements that protect your machines from unforeseen drive line spikes, accommodate misalignment and absorb harmful vibrations to keep your machines safe and business running.



## HABIX®

- Fail-safe plug-in / jaw coupling with flexible element (spider)
- **Max. Bore:** 100 mm **Nominal Torque up to:** 3,600 Nm
- **Types:** HWN (pre-drilled or finish bored), HWT (for taper bushings), Plus (backlash-free type, pre-drilled or with finish bore)
- Standard applications with normal torque and dampening requirements



## HADEFLEX®

- Fail-safe plug-in / jaw coupling with flexible element (spider)
- **Max. Bore:** 160 mm **Nominal Torque up to:** 15,000 Nm
- **Types:** XW (pre-drilled), TX (for taper bushings), F (two and three-part version)
- Standard applications with normal torque and dampening requirements



## HRC

- Fail-safe enclosed plug-in / jaw coupling with flexible element (spider)
- **Max. Bore:** 115 mm **Nominal Torque up to:** 3,150 Nm
- **Types:** B (pre-drilled), F and H (for taper bushings)
- Applications with increased torque and dampening requirements



## PEX

- Fail-safe plug-in / jaw coupling with flexible elements
- **Max. Bore:** 100 mm **Nominal Torque up to:** 2,800 Nm
- **Types:** A (three-part), B (two-part)
- Applications with increased torque and dampening requirements



## ORPEX®

- Fail-safe pin coupling with flexible elements
- **Max. Bore:** 640 mm **Nominal Torque up to:** 1,300,000 Nm
- **Types:** WN (gray cast iron), WS (steel)
- Applications with high transmitted torque and dampening requirements



## FLEX

- Highly flexible tire coupling
- **Max. Bore:** 190 mm **Nominal Torque up to:** 14,675 Nm
- **Types:** B (pre-drilled), F and H (for taper bushings)
- Applications with increased dampening and shaft misalignment requirements

# RIGID COUPLINGS

Tecnam rigid couplings securely link your drive shafts together. These couplings transfer high torque through the drive line and provide some misalignment to protect your expensive machinery



## MINI CLAMP

- Torsionally stiff flexible coupling made in one piece that is backlash free which is ideal for motion controlled applications
- **Max. Bore:** 40 mm **Nominal Torque up to:** 220 Nm
- **Types:** MWK (clamp hub slotted), MWH (half-shells)
- Ideal for limited installation spaces
- Hub versions available to fit your application



## SMALL CLAMP

- Easy-to-assemble shaft connection
- **Max. Bore:** 50 mm **Nominal Torque up to:** 2,250 Nm
- **Types:** Slotted 1-piece and split 2-piece design in steel and stainless steel
- Simple and easy-to-assemble shaft connections
- Available in steel and stainless steel



## CLAMP

- Robust, easy-to-assemble, torsionally stiff with no dampening requirements
- **Max. Bore:** 220 mm **Nominal Torque up to:** 80,000 Nm
- **Types:** DIN 115, Form A & B (horizontal), Form A & C (vertical)
- Ideally suitable to connect shafts in series
- Clamp coupling can also be provided with protective sheet steel jacket
- Available in cast iron and steel



## FLANGE

- Easy-to-assemble shaft connection
- **Max. Bore:** 500 mm **Nominal Torque up to:** 1,425,000 Nm
- **Types:** DIN 115, Form A & C
- Simple and particularly robust shaft connections with no specific dampening requirements
- Available in cast iron and steel



## FERROFLEX® N

- High torsional stiffness with misalignment capability
- **Max. Bore:** 140 mm **Nominal Torque up to:** 12,000 Nm
- Backlash-free & maintenance-free
- Temperature resistance from -30 °C to +280 °C



## GEAR GC

- Crowned toothed and greased gear
- **Max. Bore:** 1,000 mm **Nominal Torque up to:** 8,000,000 Nm
- **Types:** GC & GC-ECO
- Suitable for horizontal and vertical applications
- Standard designs available as well as custom engineered for your application requirements

## SUCCESS STORIES



**INDUSTRY:** CONSTRUCTION

**APPLICATION:** RAMMER

**PRODUCT:** PIVOTING

Construction equipment has high amplitude and high operation cycles which stresses the power train components and causes high levels of noise, vibration and harshness.

The pivoting clutch was developed for a smooth engagement and disengagement of the power train. The centrifugal flyweights are pinned to the hub flange where they are allowed to pivot and smoothly engage and disengage the clutch. The pivoting design does not require hardened materials as required in other designs, is robust and long lasting.

Today, the pivoting clutch is used in almost every professional rammer. It is a problem solver for tough applications or if the application requires a smooth engagement, the pivoting clutch is the optimal solution.



**INDUSTRY:** CONSTRUCTION

**APPLICATION:** PLATE COMPACTOR

**PRODUCT:** INTEGRATED BELT TENSIONER

Because of the nature of compaction equipment, there is tremendous stress put on the drive systems. Amsbeck realized this and began work on a 2-stage centrifugal clutch that automatically engages and re-tensions the drive belt.

The new integrated belt clutch system was able to double the life expectancy of the belt. Because of the engineering efforts, Amsbeck clutches and drive solutions have become the standard in this market.



## SUCCESS STORIES

**CUSTOMER:** OEM

**APPLICATION:** SCREW COMPRESSOR

**PRODUCT:** HABIX PLUS

An OEM of screw compressors was having problems with their units automatically being shut down from the safety monitoring sensors measuring higher than expected vibrations during normal operation.

The Habix Plus coupling features a no-backlash dampening element (spider) insert, which smooths out peak torques and dampens torsional vibrations - resulting in a smoother running drive line. The Habix Plus design utilizes a secure clamp mechanism that accurately aligns the coupling hub with the shaft axis, which increases the balance of the drive line. A higher balanced drive line produces less misalignment, less stress and vibrations. The Habix Plus hubs are precisely machined to tight tolerances. This produces low part to part variation and increases coupling and drive line balance to levels above our competition.

The Habix Plus coupling was installed and resolved the issue, allowing the customer and OEM to continue safely running their machines.



**INDUSTRY:** AGRICULTURE

**APPLICATION:** HARVESTER

**PRODUCT:** HABIX

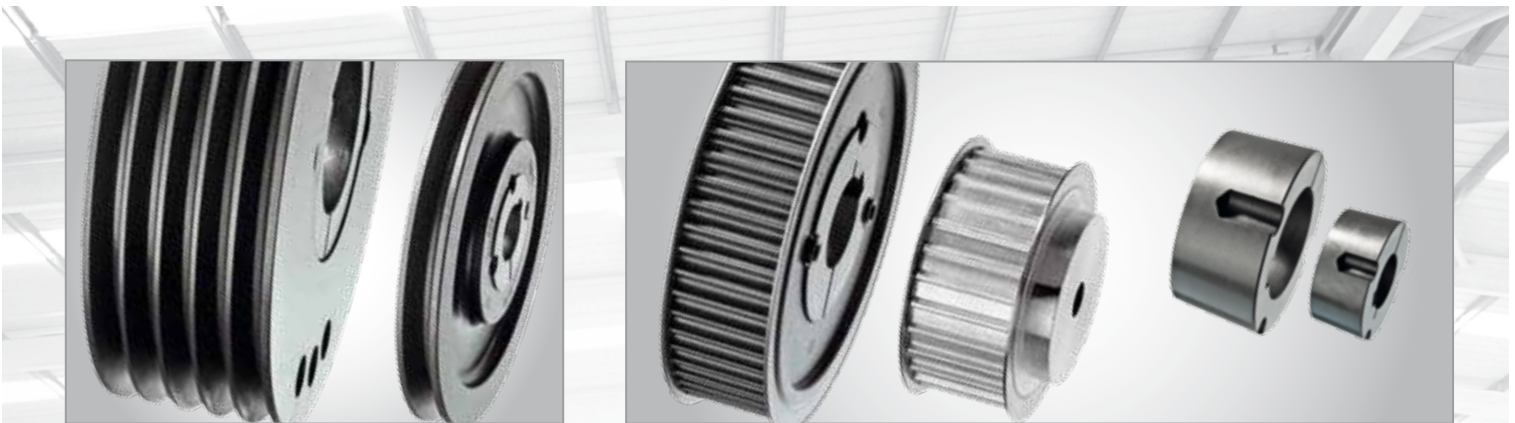
An agricultural manufacturer wanted to utilize the features of the jaw coupling in the corn head attachment that harvests the crops. An off-the-shelf coupling would not work due to the limited space and required torque.

An innovative solution was provided by customizing the Habix Plus coupling. Both hubs were reduced in length to satisfy the harvester space constraints. One hub was composed of a flange connection with a through bore, while the second hub had an integrated splined bore. The element compensated for the drive line misalignment, damped out torsional spikes and provided over load protection for the expensive harvester's corn head drive system.





# PULLEYS, SHEAVES & BUSHINGS



## V-BELT SHEAVES

- Metric Taper-Lock V-belt sheaves
- QD V-belt sheaves
- Taper-Lock and QD bushings

## TIMING PULLEYS

- Delta Chain pulleys with Taper-Lock bushings
- HTD pulleys with Taper-Lock bushings or Minimum Plain Bore
- Pulleys for ZR belts (L, H, XH, XL) Taper-Lock bushings or Minimum Plain Bore
- Metric Minimum Plain Bore pulleys for polyurethane timing belts (T2.5, T5, T10, AT5, AT10)

## ADDITIONAL CAPABILITIES

### SPECIALIZED / ENGINEERED SOLUTIONS

- Custom engineered to reduce weight for V-belt, timing belt, flat belt pulleys, flywheels, or special pulleys.
- Support for OEM in-house product design teams, to provide additional engineering resources/expertise.

### OTHER DRIVE COMPONENTS

- Steel motor bases
- Cast iron & steel motor slide rails
- Screw-on or weld-on hubs
- Custom solutions

## OPTIBELT: YOUR COMPLETE DRIVE SOLUTION PARTNER

Optibelt began as a belt manufacturer and has been rapidly expanding ever since. Today the Optibelt Group is a complete global supplier of high quality, precision drive components. If you have a drive, Optibelt can be your solutions partner.

