

# Engineered Belt Terminal Groups





# Lower your cost per ton with built in durability



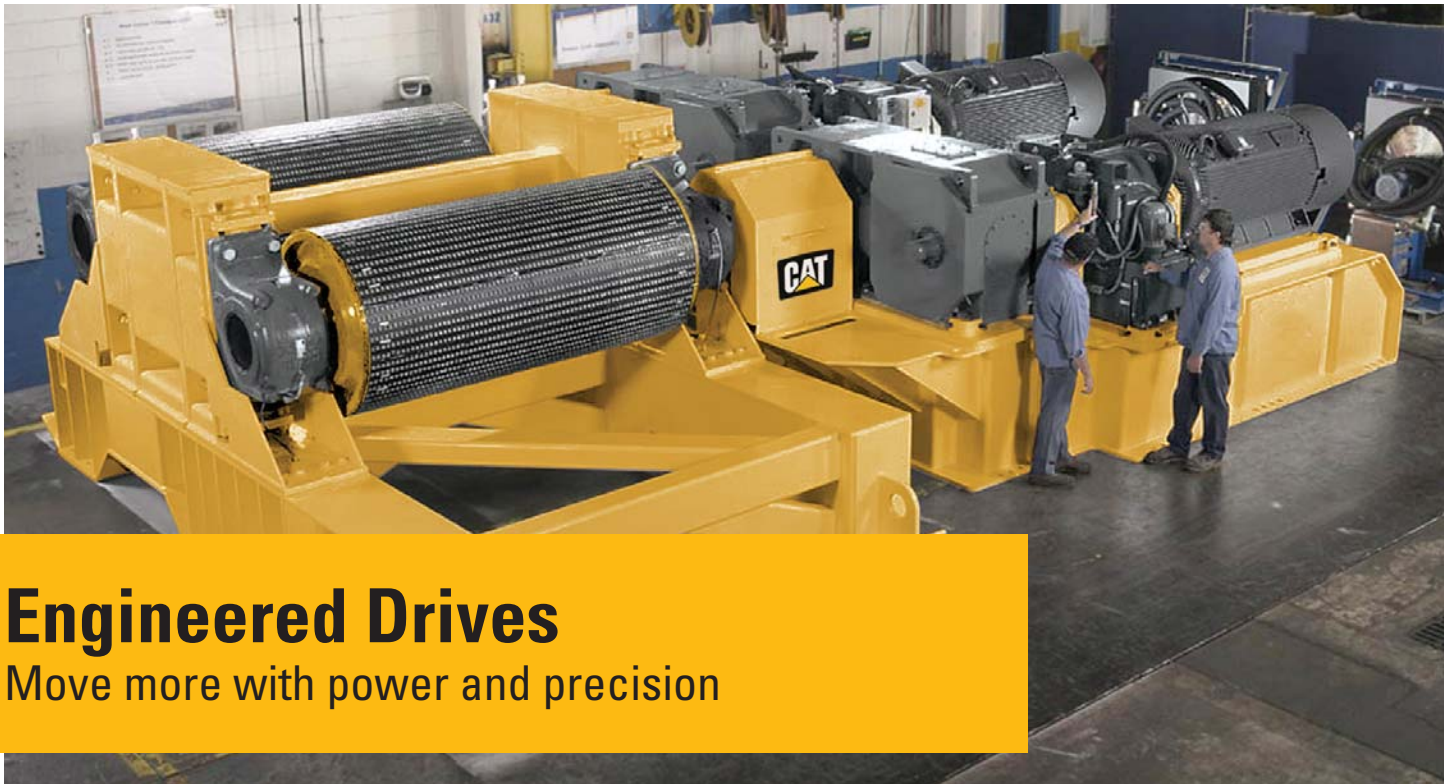
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**Custom-designed for your applications, our heavy-duty engineered belt systems solutions and belt products are made to handle the most demanding bulk-material handling requirements in both underground and surface applications. Cat® belt terminal groups are precision engineered to meet each customer's mining or tunneling requirements and experienced technicians are available to supervise the installation and ensure a smooth startup.**





## Engineered Drives

Move more with power and precision

***Designed to increase productivity and perform reliably, our belt terminal groups are engineered for your specific mine applications.***

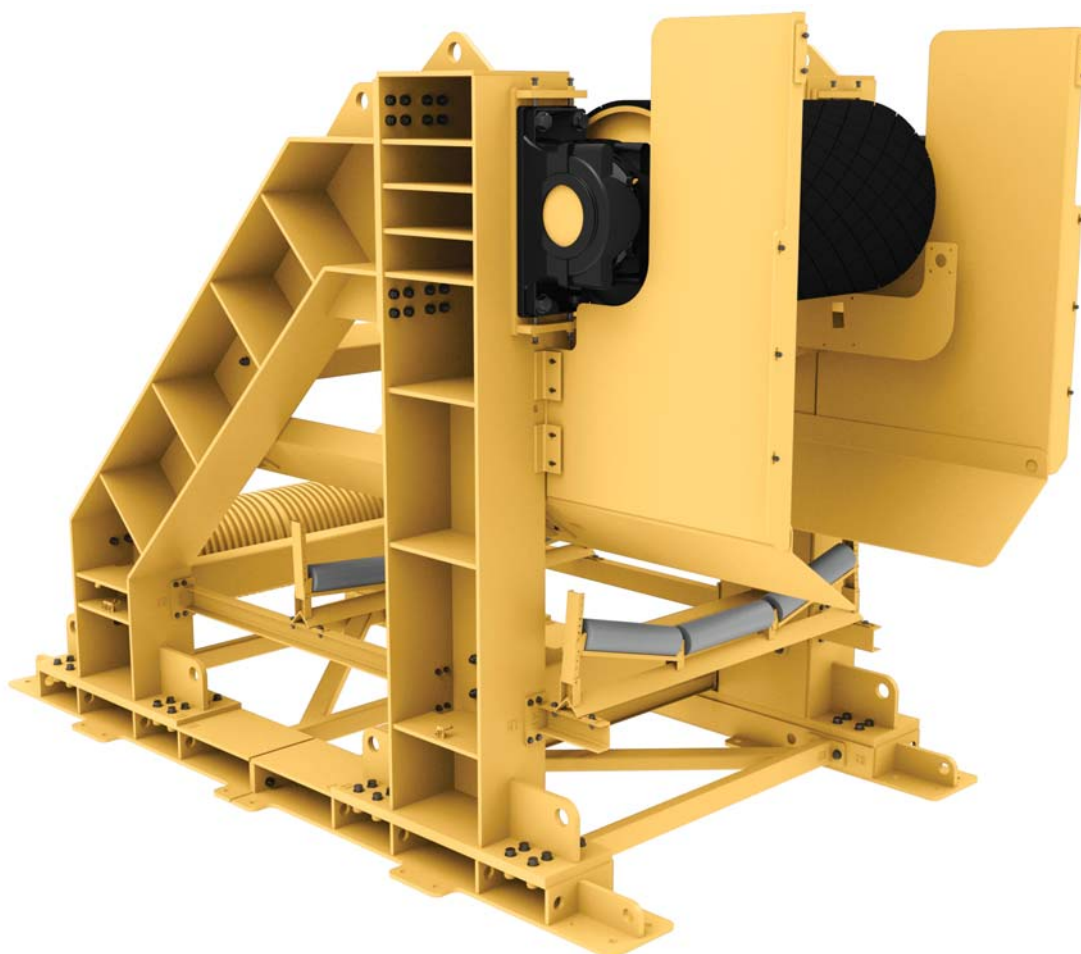
### **Parallel or alignment-free design option**

Alignment-free design gives the following benefits:

- Ease of setup and installation
- Ease of transportation in and around mine
- Narrower overall drive width
- Universal mounting – left-hand or right-hand mounting
- Reduced operating maintenance
- Supports both mechanical and electrical technologies (Fluid Couplings or Variable Frequency Drive (VFD), etc.)
- Engineered class pulleys add to the reliability and long life common to engineered belt systems

# Remote Discharges

Transferring your material efficiently



***Transfer your material efficiently with our Remote Discharges. Designed for in-line 30-, 60- or 90-degree transfer points, material is loaded onto the conveyor belt.***

## **Available in floor-mounted or roof-hung configurations**

- Remote A-frame design
- Attached boom design with ratchet jacks
- Designed for in-line, 30-, 60- or 90-degree transfer points
- Includes engineered class pulley
  - Snub pulley available
  - Integrated tail pulley available on A-frame design



# Take-Ups and Storage Units

Improve conveyor efficiency with most responsive tensioning technology



***Increase conveyor efficiency at your operation with our responsive tensioning technology. Caterpillar engineered take-ups and storage units apply continuous and accurate belt tension supporting slack removal and efficient conveyor operation.***

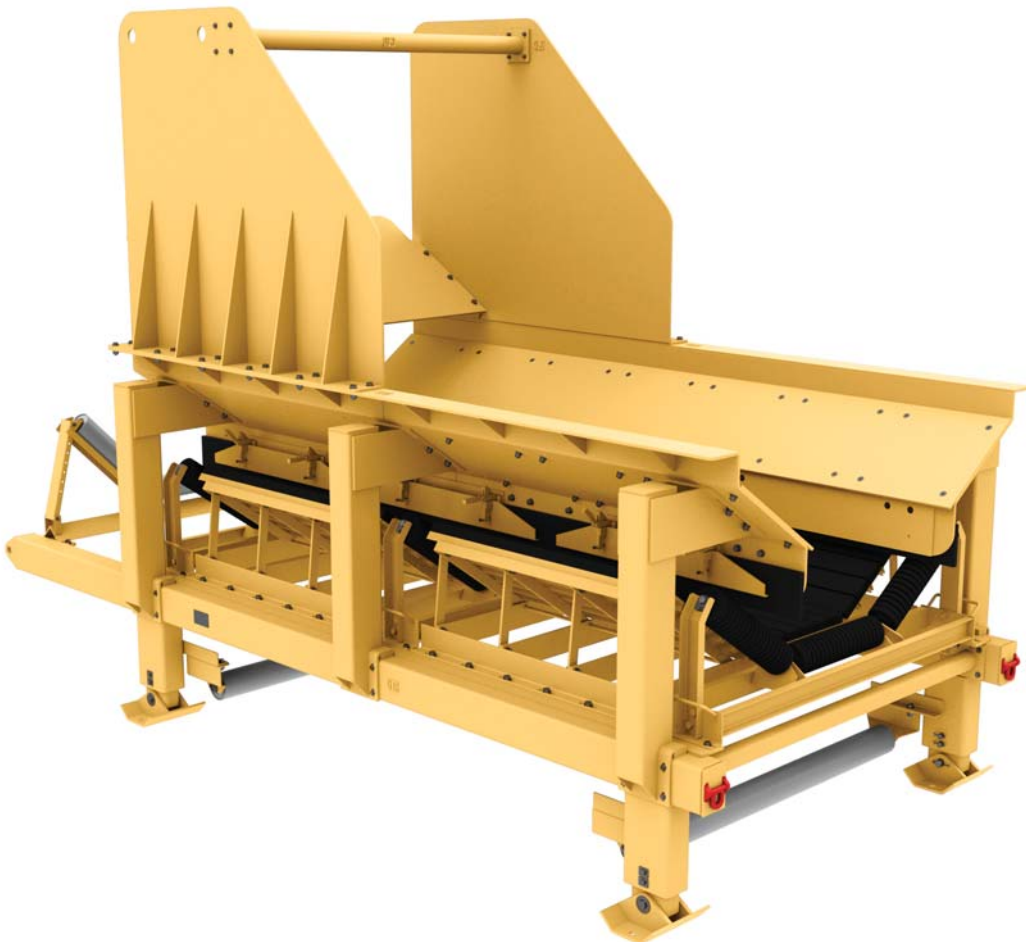
- Hydraulic or electric winch design
- Hydraulic cylinder design
- Active travel length/belt storage per design requirements
- Designed for the max force each cylinder or winch can provide
- Eliminates any weak links in the entire take-up system

***Improve material transfer with Caterpillar engineered tail sections, which are designed to receive discharges from a variety of haulage equipment. Two common designs are the in-line and off-set tail section, both of which are designed with a heavy-duty, rigid loading frame. Intermediate and tail loading sections offer either impact resistant idlers or EXALON® impact slider beds.***

- Two common designs are in-line and off-set
- Intermediate and tail loading sections offer either impact resistant idlers or EXALON impact slider beds
- Rigid, heavy-duty engineered loading frame
- Designed to receive discharges from various haulage equipment

## **Loading Sections**

Multiple loading solutions for efficient material transfer



# Engineered Class Pulleys

Drive conveyors with power



Keeping in mind some of the severe conditions at customer mine sites, Cat Pulleys are engineered for strength and reliability. They perform reliably, driving conveyors with installed power in excess of 3750 kW (5,000 hp). Caterpillar offers a line of Turbo-Disc and T-Bottom pulleys that are designed based on conveyor requirements. Turbo-Disc pulleys are designed for tensions up to 53.4 kN (12,000 lbf), while T-Bottom are designed for tensions greater than 53.4 kN (12,000 lbf).

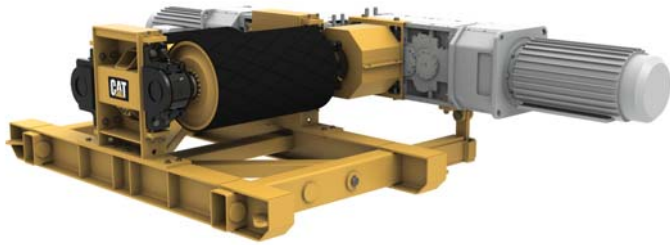
For conventional designed conveyor pulleys, the areas most prone to failure are locations where circumferential welds are utilized with hub-to-end disc welds being the most common failure. The machined end-discs of the pulley require fewer welds and provides fewer areas for failure. Solid steel plates make the hub integral to the end-disc and all high stress-concentration welds are minimized or eliminated. Keyless locking elements in conjunction with Turbo Disc or T-Bottom designs completely remove 'Bellows Stress' from each end disc. In both Turbo-Disc and T-Bottom designs, the end-discs are shaped to ensure optimum distribution of stresses throughout the end-disc and the pulley.



# Engineered Belt Terminal Groups Specifications

## Engineered BTGs for Surface and Underground

### Drive



<b>Installed Power</b>	Up to 3750 kW (5,000 hp)
<b>Belt Width</b>	Up to 2200 mm (84 in)
<b>Belt Speed</b>	Up to 5.08 m/sec (1,000 ft/min)
<b>Capacity</b>	Up to 9072 tonnes/h (10,000 tons/h)
<b>Configuration</b>	Right Angle Alignment-Free and Fixed-Alignment Solutions
<b>Drive Technology</b>	AC VFD, Fluid Coupling Drives, DC Drives, SCR Drives, Across the Line

### Take-Up



<b>Belt Width</b>	Up to 2200 mm (84 in)
<b>Carriage Travel</b>	Up to 43 m (140 ft)
<b>Design</b>	Hydraulic Cylinder, Electric Constant Tension Winch, Hydraulic Winch, Gravity

### Storage Units



<b>Belt Width</b>	Up to 2200 mm (84 in)
<b>Belt Storage</b>	Up to 490 m (1,600 ft)
<b>Design</b>	Electric Constant Tension Winch, Hydraulic Winch

### Remote Discharge



<b>Belt Width</b>	Up to 2200 mm (84 in)
<b>Design</b>	Remote A-Frame, Remote Adjustable Boom

### Loading Sections



<b>Belt Width</b>	Up to 2200 mm (84 in)
<b>Design</b>	Tail, Intermediate
<b>Belt Plow</b>	V-plow, Diagonal

Belt Systems and Belt Products

Surface Idlers



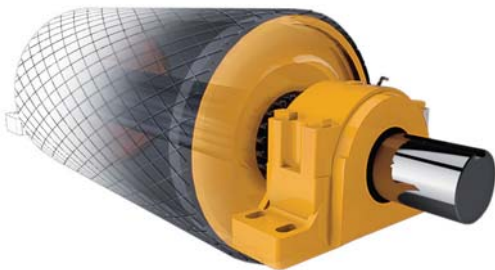
Ratings	CEMA C, D, E
Roll Diameter	CEMA C and D; 10, 13 and 15 cm (4, 5 and 6 in) CEMA E; 15.2-17.8 cm (6-7 in)
Roll Design	Steel and/or EXALON (HMWPE)
Belt Width	45.7-243.8 cm (18-96 in)

Underground Idlers



Ratings	CEMA C, D, E
Roll Diameter	CEMA C and D; 10, 13 and 15 cm (4, 5 and 6 in) CEMA E; 15.2-17.8 cm (6-7 in)
Roll Design	Steel and EXALON (HMWPE)
Belt Width	45.7-243.8 cm (18-96 in)
Configuration	Floor Mounted, Roof Hung, Wire Rope, Catenary, Flex Pal

Engineered Class Pulleys



Application	Surface and Underground
Design Type	T-Bottom and Turbo-Disc
Pulley Specifications	Designed to meet specific tension requirements for any conveyor system
Belt Widths	Up to 2400 mm (96 in)
Lagging Type	Diamond Grooved, Ceramic (Cold or Vulcanized Bond)





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