

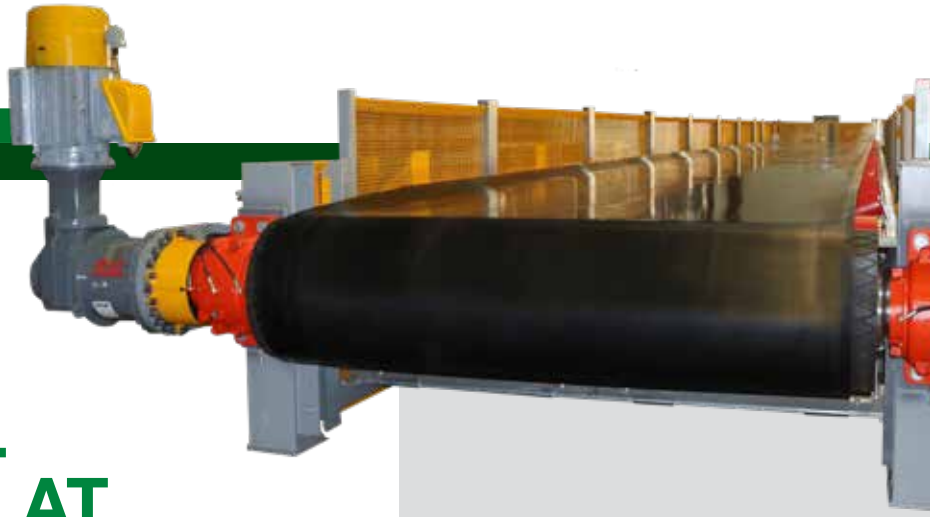
# BELT FEEDERS

TRADITIONAL TROUGHED & FLAT BELT FEEDERS  
TO SUIT ALL BUDGETS



**TRANSMIN**

# CONVENTIONAL TROUGHED & FLAT BELT FEEDERS



Since inception in 1987, Transmin has been designing and supplying bespoke belt feeders for mining and general industrial applications. In the early days these were mainly medium duty machines which sometimes incorporated load cells to accurately control or monitor material feed to process. Transmin now have the capability to design and fabricate heavy duty belt feeders.

Transmin belt feeder designs are safe to operate with simplified maintenance, they provide efficient materials handling and have optimisation options through custom designs. They can handle coarse, dry ores to feed crushers or screens and also fine, wet filter cake material to feed transfer conveyors or directly into a truck.

Transmin belt feeders are used across different industries, not limited to mining, aggregates and agriculture

Transmin can undertake the design and supply of the feeder, inlet hopper transition piece and bin isolation gate as a package, therefore giving peace of mind to the customer that responsibility for feeding performance rests with a single supplier.

Versatile applications where the belt feeders can be used include filter press discharge feeders with optional cake breakers, high capacity weighing applications screen feeding, reclaim hoppers, straight inclined feeding and surge bin feeders.

Transmin has other solutions for special applications, such as high temperature.

## SELECTION DATA

Please consult Transmin for confirmation of selection. Capacity range covers materials of various types of particle sizing. Non standard widths are available for special orders.

MODEL CONFIGURATION		
STANDARD BELT WIDTH (mm)	EFFECTIVE SKIRTED WIDTH (mm)	NOMINAL CAPACITY RANGE* (m <sup>3</sup> /h)
750	500	270
900	600	400
1200	800	700
1600	1050	1240
2000	1350	1940
2600	1750	3300
3200	2150	4900

\*Capacities in excess of 3500t/h are achievable, please consult Transmin direct. Capacities are calculated with a bed depth of two-thirds the skirted width and belt speed of approximately 0.5m/s.

## Features & Benefits:

### ► Head Enclosures

Fully enclosed for safety and dust control, with access doors and mounting points for primary and secondary cleaners and option for dust suppression.

### ► Drives

Compact, shaft mounted drives with either planetary helical bevel combinations or hydraulic units.

### ► Skirting & Liners

Standard liners include BIS 400, Chromium Carbide Overlay (CCO), UHMWPE and other options upon request.

### ► Guards

Built to Australian Standards #AS4024. Guards are easily removable in manageable sections and can be fully enclosed. Pull wire switches, belt drift switches, belt rip detectors & block chute switches are all optional features that can be added.

### ► Take Up

Manual screw, as standard or hydraulic assisted belt tensioning systems an optional feature.

### ► Custom Designs

Various widths to suit most applications, with belt widths up to 3.2m. We can also include features such as cake breakers and dynamic weighing solutions.

### ► Isolation Gate

Transmin can design and supply an isolation gate to suit your feeder application.



## Case Study:

# TWELVE BELT FEEDERS TO CONVEY FILTER CAKE



**Location:**  
Western Australia

**Operation Type:**  
Filtration Facility

**Equipment Solution:**  
Belt Feeders

**Year:**  
2017



### The Scope:

A major producer of alumina in WA decided to embark upon a programme of reclaiming material from their red mud tailing ponds. The decision to do so was driven by environmental factors plus valuable residual material could be recovered from the previously waste material.

Stage 1 took place at a facility close to Perth and involved the construction of a new filtration facility coupled with a new stockyard for the recovered material prior to it being shipped for further processing.

A filtration hall was built containing 6 large plate type filter presses designed to reduce the moisture in the resultant cake to 30% or less. The material is pumped into the filter presses as a slurry with the moisture then being squeezed out of the slurry in a series of plate membranes. Once the initial process is complete the resulting 'cakes' of solid material are discharged one by one as the system retracts.

Stage 2 took place at a second plant in the south west of WA and essentially repeated the plant initially installed closer to Perth.

### The Solution:

For both Stages 1 & 2, cakes each approximately 2m x 2m and weighing 285kg, fall from the filter presses as they open up onto 6 Transmin heavy duty belt feeders each 2.4m wide and approximately 25m long. Each of the belt

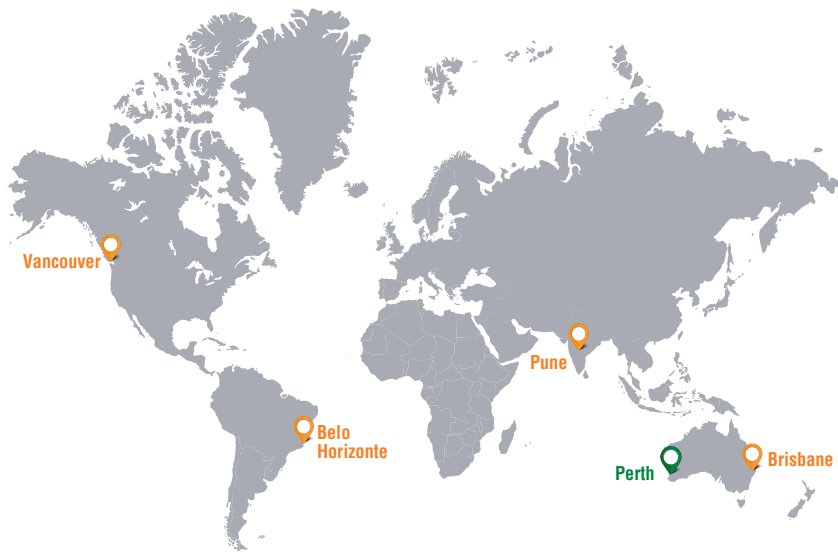
feeders discharge the material onto a yard conveyor and then to a stacker belt for storage prior to shipment or re processing.

The Transmin belt feeders incorporate a specially designed 'cake breaker' device at the point of discharge to ensure no material exits the belt feeders larger than 75mm. It is important to have a consistent sizing to the recovered material, which is achieved by the cake breakers. When the cakes fall from the filters initially they may not break up sufficiently simply due to gravity, so need assistance from the cake breakers.

The client specified that each feeder should be capable of being reversed under a fully loaded condition to enable off spec material to be discharged at the back end. This was achieved by Transmin's engineers due to extensive experience and knowledge of such systems built up over 30 years.

Transmin has been supplying belt feeders for many applications globally which means its experience can be applied to many applications throughout the mining and minerals processing industries with confidence.

All Transmin feeder designs are heavy duty to operate under heavy workloads and are fitted with the ConveyorPro range of high quality components including pulleys, belts, idlers and rollers, load supports and a range of sensors and material analysis systems.



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