Chain Conveyors
Chain Conveyors
type LOUISE TKF

For conveying, distributing, and reclaiming powdery, coarse, fine grained, abrasive and moist bulk materials such as:

- Natural and FGD Gypsum
- Blast furnace slag
- Limestone
- Burnt lime
- Clinker
- Raw meal
- Cement
- Filter dust
- Coal
- Ash
- Fertilizers
- Soda ash
- Alternative Fuels
- and others

Designed to suit the properties of the bulk material, the operating hour and the conditions of the surroundings, with the appropriate chain speed and chain width being of vital importance for the service life of the conveyor.

Outstanding benefits:
- Dust tight design
- No spillage
- Centre distance to 50 m
- Design with single or double-strand chain
- Available in shock pressure proof design
- Low maintenance
- Long service life
Filter dust reclaim
Selection of Trough Sections

Available with single and double-strand chain depending on the application

Single-strand chain with standard/oversized flights

Double-strand chain with wear plates
Applications

Distribution of various types of bulk materials

Chain Conveyors to convey and distribute bulk materials to different locations. Controlled feeding of the Chain Conveyor is realized through one single feeding chute.

The number of discharge openings varies in accordance with the plant requirements. All intermediate discharge openings are fitted with remote controlled shut-off gates allowing to choose the receiving silo from the central control room. The final discharge opening in the drive station remains open at any time.
Reclaim of bulk material from various silos or hoppers

A double row needle gate or a motorized slide gate, open in normal operation, isolates the silo or hopper from the Chain Conveyor for maintenance purposes. During the discharge process the full load of the bulk material is supported by a discharge table located underneath the reclaim opening on the return run. This arrangement enables the volumetric discharge at the required rate by regulating the height of the material layer either with the chain speed through the frequency converter or with a motorized or manual level control. Discharge onto subsequent equipment is realized through the discharge opening in the tension station.
For coal mill feeding applications, all Chain Conveyors come in a shock-pressure proof design resisting to 3.5 bar on a standard basis.

These Chain Conveyors feature a double-strand chain. A variable speed drive with frequency converter ensures a uniform material flow and controlled feeding.

A double-strand Chain Conveyor loads FGD Gypsum from the flue-gas desulphurisation into the storage silo
Components & Details

Tension Station

Drive Station

Tension Station

Drive Station

Single-strand chain

Double-strand chain

Drive sprocket

Take-up sprocket
Proportional feeding of the Chain Conveyor handling the boiler ash allows for homogeneous distribution of the 200 - 550 °C ash in the conveyor trough.

The dust taken from the precipitator has a temperature of approx. 300 °C.

Both Chain Conveyors are equipped with a single-strand chain.

Bottom ash and filter dust are unloaded into intermediate storage silos.
Conveying Capacity

The properties of the bulk material are essential to determine the main features of the Chain Conveyor’s components such as chain type or flight height. They also determine the material layer and the actual conveying capacity. The following capacities are based on standard conditions.

![Single-strand chain](image1.png)  ![Double-strand chain](image2.png)

**Conveying capacity with standard conditions**

<table>
<thead>
<tr>
<th>Width A</th>
<th>Trough Width B1</th>
<th>Height H*</th>
<th>Material level S</th>
<th>Flight Height h</th>
<th>Theoretical capacity m³/h</th>
<th>Conveying speed m/s</th>
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*The trough height depends on the chain size and the number of sprocket teeth.

*Subject to change without notice
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