



Chain Conveyors



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Chain Conveyors type LOUISE TKF

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

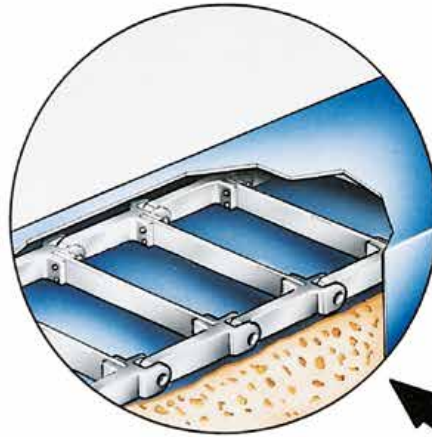
- Natural and FGD Gypsum
- Blast furnace slag
- Limestone
- Burnt lime
- Clinker
- Raw meal
- Cement
- Filter dust
- Coal
- Ash
- Fertilizers
- Soda ash

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.

- 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

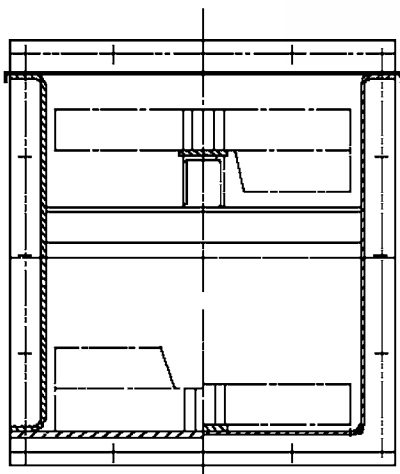
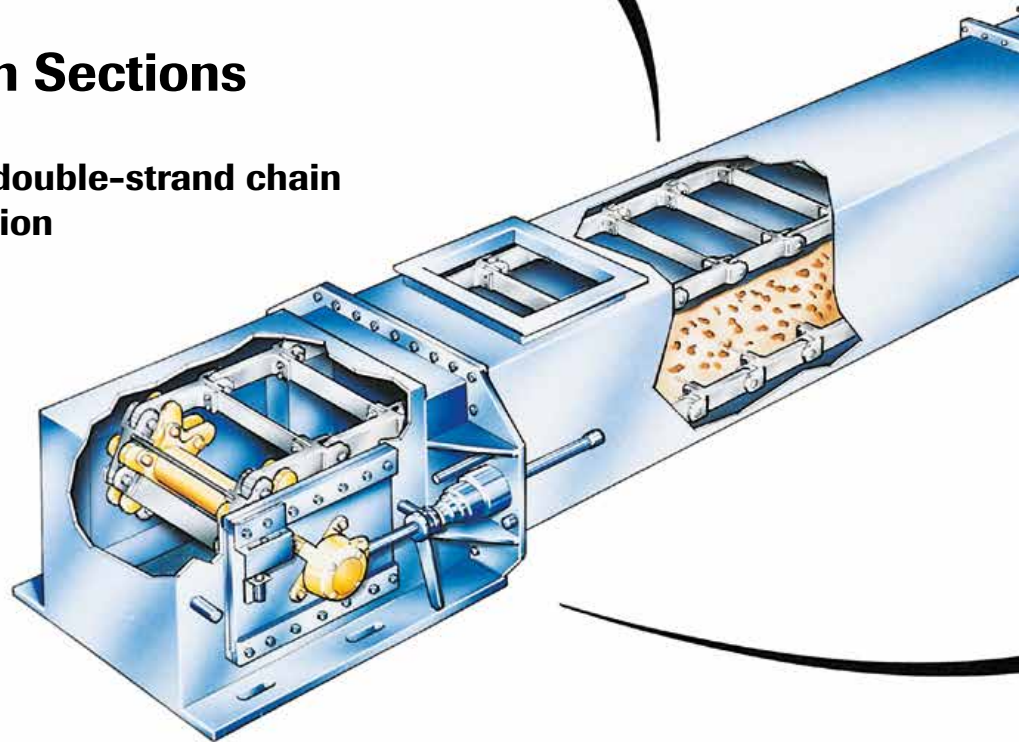


Filter dust reclaim

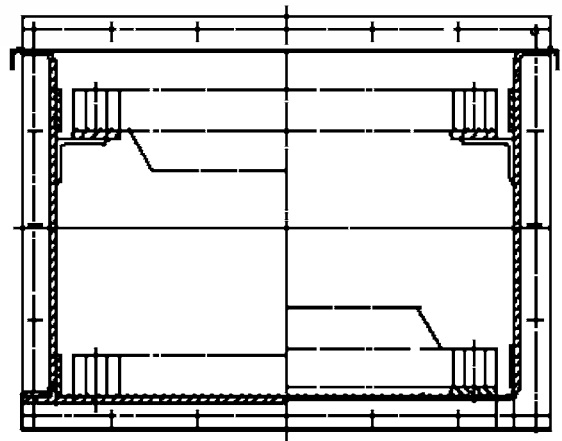


Selection of Trough Sections

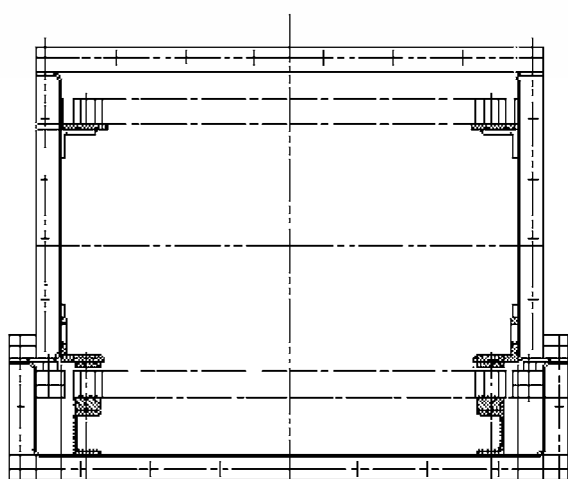
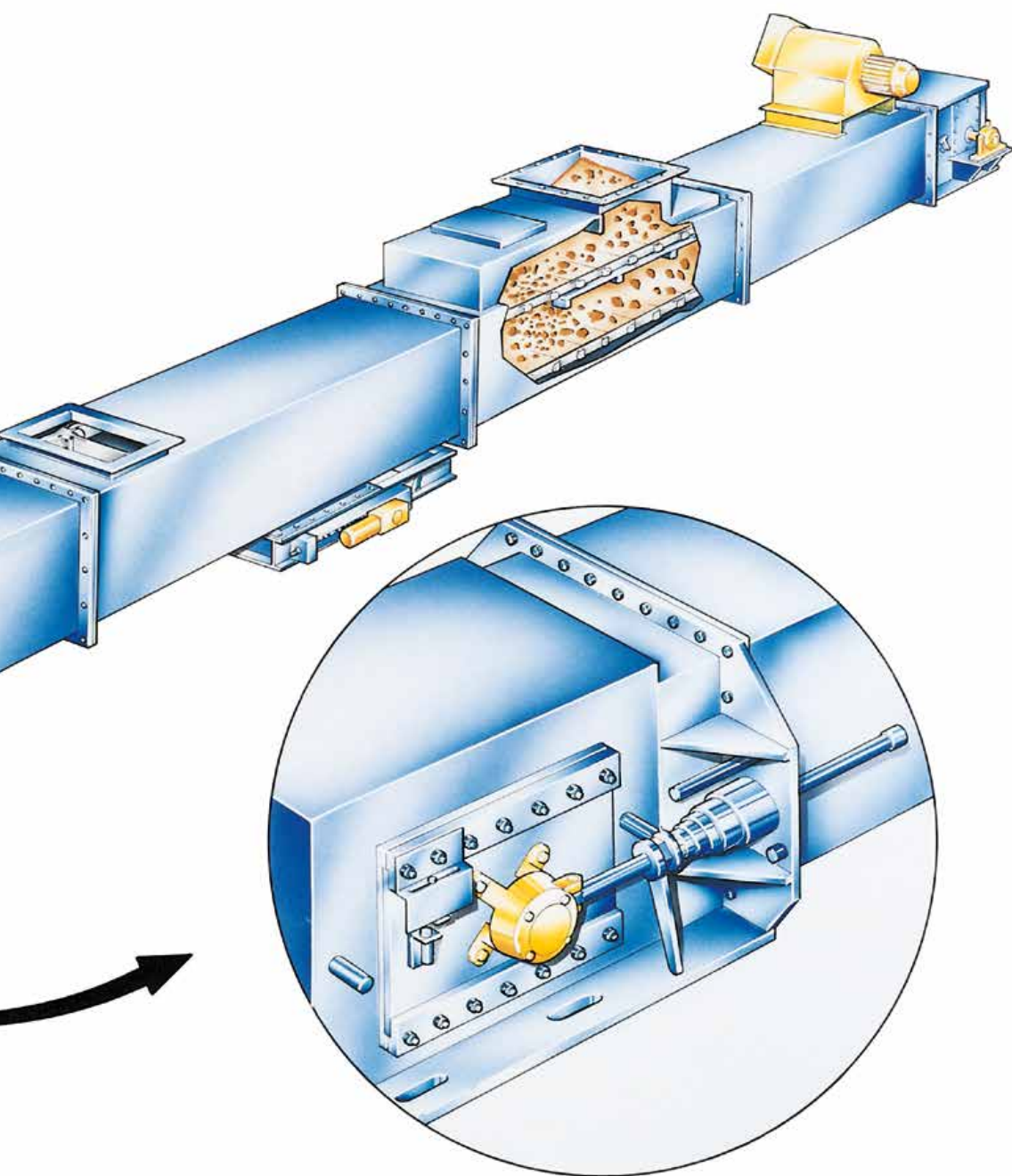
Available with single and double-strand chain depending on the application



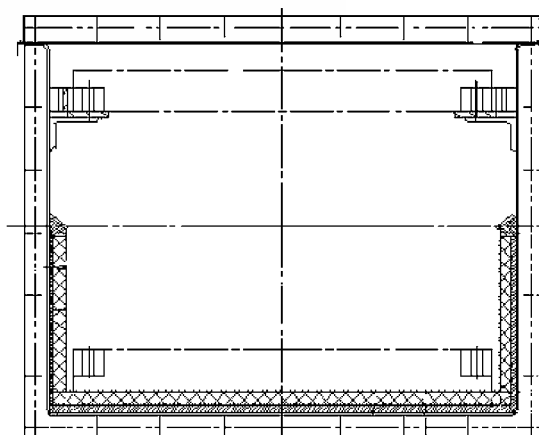
Single-strand chain with standard/oversized flights



Double-strand chain with wear plates



Section with material bed for clinker transport

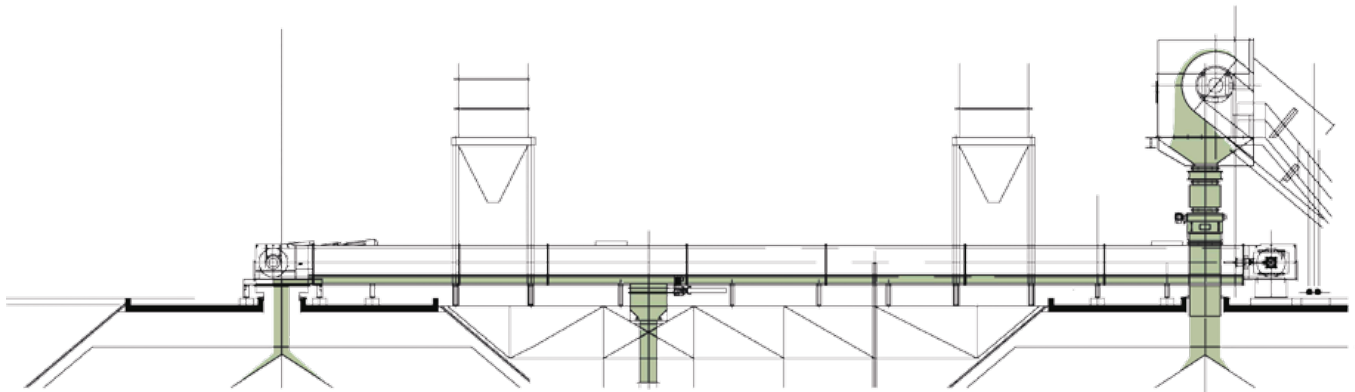


Section with cast basalt lining



Distributing bulk materials into a battery of silos

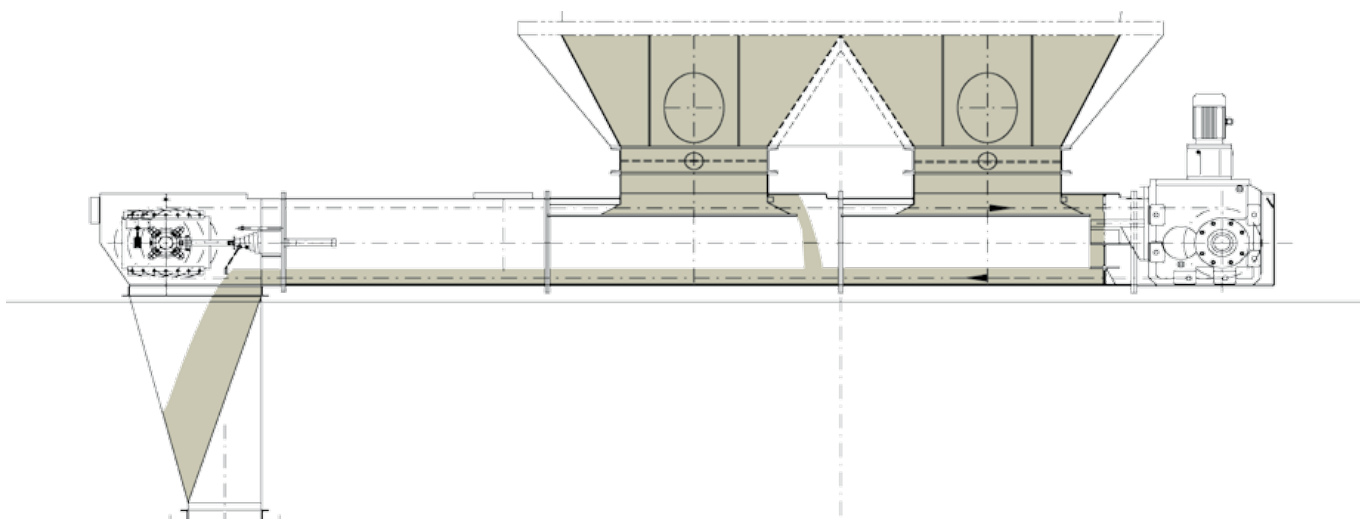
Applications



Distribution of various types of bulk materials

Chain Conveyors to convey and distribute bulk materials to different locations.

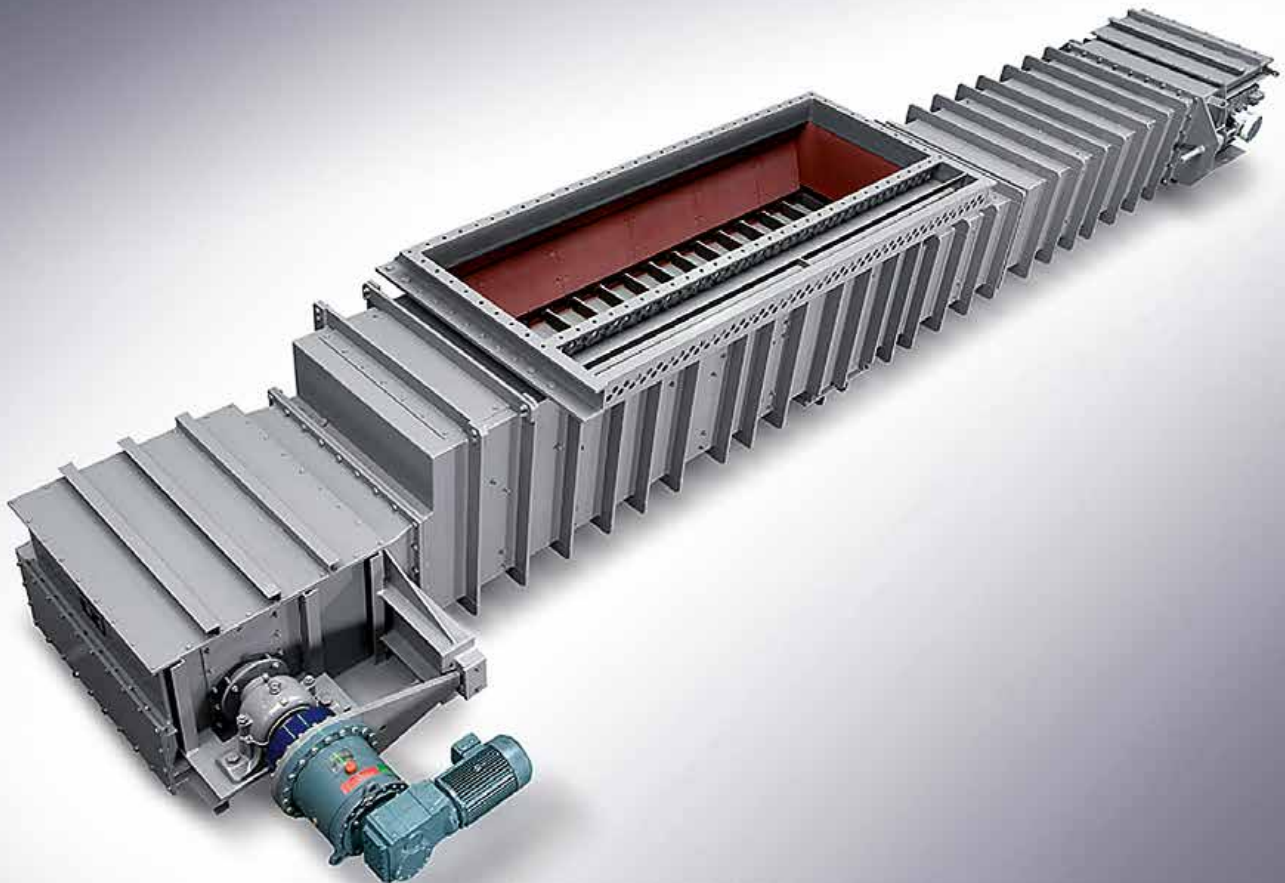
Controlled feeding of the Chain Conveyor is realized through one single feeding chute. The number of discharge openings varies in accordance with the plant requirements. All intermediate discharge openings are fitted with remote controlled shut-off gates allowing to choose the receiving silo from the 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.



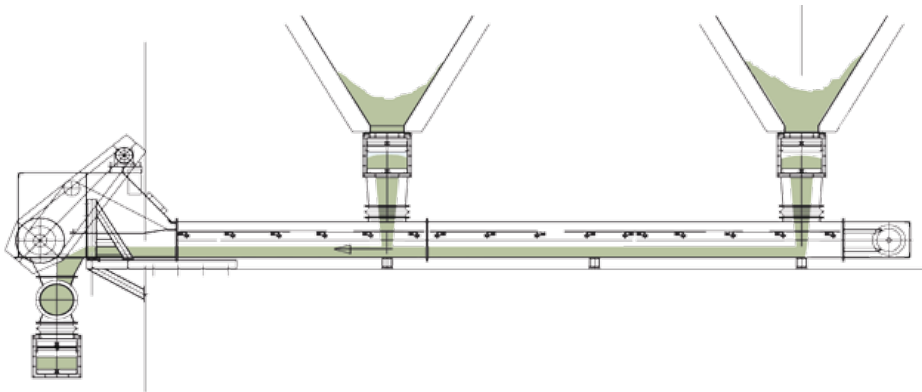
Coal Mill Feeding

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.



Chain Conveyor with Gravity Chain Tensioning



For the reclaim of fines such as precipitator dust from filter hoppers, the Chain Conveyor with gravity chain tensioning is an economic solution as an integrated or add-on conveyor.

Chain tensioning is achieved by guiding the chain over an idler roller in the drive station, thus causing the chain to sag by its own weight, ensuring perfect fit of the chain around the chain sprocket. With this conveyor design, no tensioning device is required in the return station.



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

Waste Incineration Plants



Hot boiler ash from a row of boilers

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.

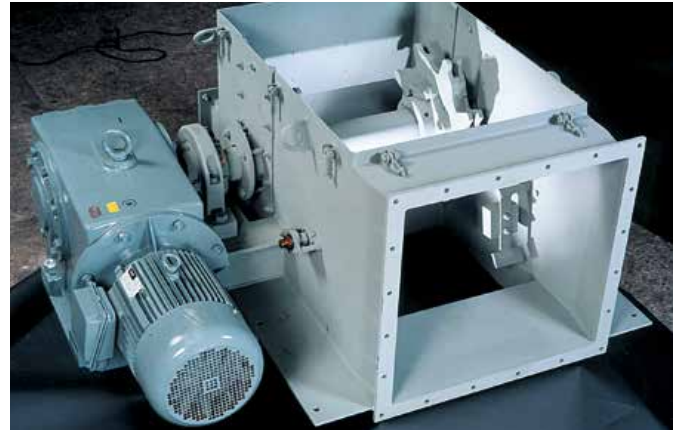
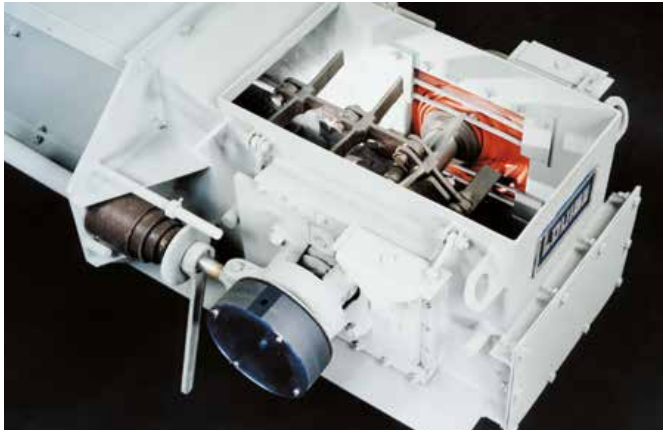


Limestone handling



View into Chain Conveyor – Limestone feeding

Components & Details

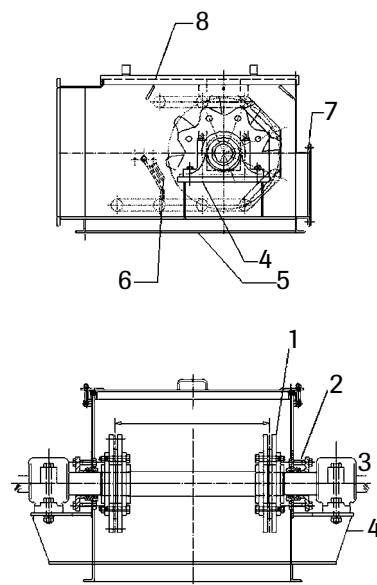
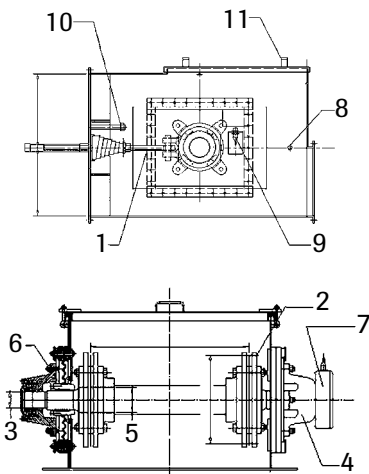


Tension Station

Drive Station

- 1 Chain tensioning device
- 2 Return sprocket
- 3-4 Tension bearing
- 5 Hub
- 6 Stuffing boxes
- 7 Speed monitor
- 8 Bearing shield end position
- 9 Chain monitoring
- 10 Reference point for pretension
- 11 Station cover

- 1 Drive sprocket
- 2 Stuffing box
- 3 Pillow block bearing
- 4 Pillow block bearing support
- 5 Outlet flange
- 6 Chain scraper
- 7 Maintenance opening
- 8 Station cover



Fork Link Chains

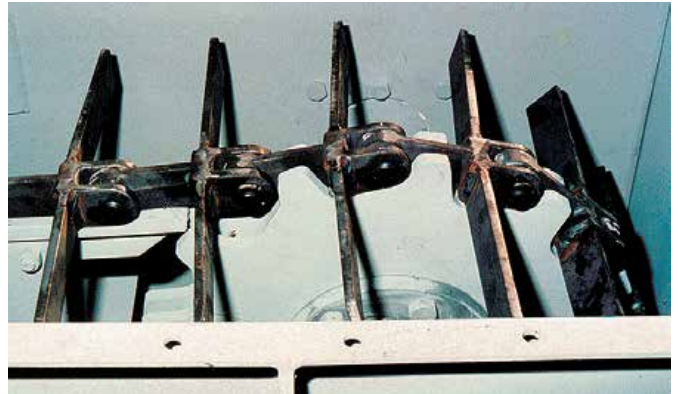
LOUISE single and double-strand chains are drop-forged and extremely wear-resistant.

Chain links and connecting pins are hardened to 58–60 HRC.

The flights are either welded to the chain links for single-strand chains or fixed with fastening bows on both sides of the chain links for double-strand chains.

The steel used for fabrication of the flights is chosen to suit the bulk material's properties. If abrasive material is to be conveyed, the flights are fabricated from wear-resistant steel.

Standard widths of single-strand chains range from 250 mm to 630 mm. Standard double-strand chains range from 630 mm to 2,000 mm.



Single-strand chain



Double-strand chain

Chain Sprockets

The chain sprockets are hardened in areas subject to wear. The sprockets are split into segments as a standard. Therefore, replacement of the sprocket sections does not imply disassembly of the chain strand.

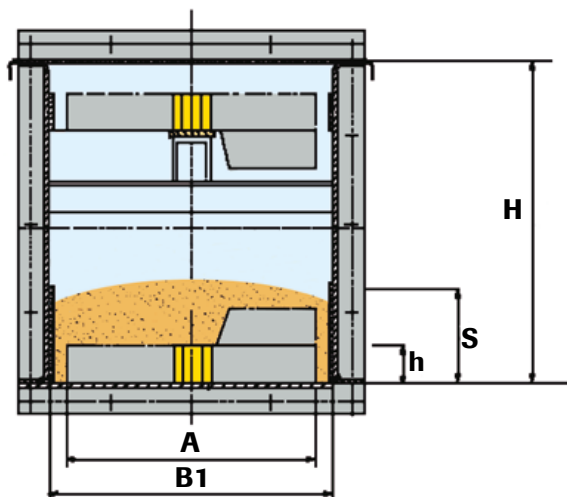
Depending on the load, the sprockets feature six, eight, ten or twelve teeth.



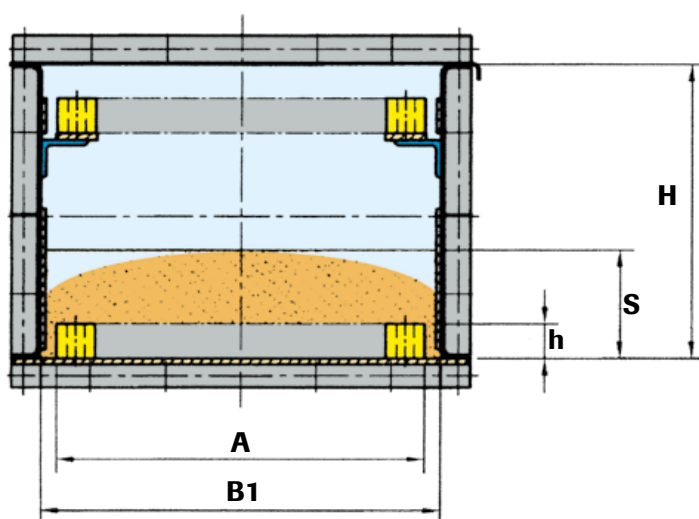
Drive sprocket



Take-up sprocket



Single-strand chain



Double-strand chain

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.

Conveying capacity with standard conditions

Width A	Trough		Material level	Flight	Theoretical capacity m ³ /h					
	Width B1	Height H*	S	Height h	<i>Conveying speed m/s</i>					
mm	mm	mm	mm	mm	0.05	0.10	0.15	0.20	0.25	0.30
250/1	306	515	100	50	5.5	11.0	16.5	22.0	27.5	33.0
400/1	456	515	150	50	12.5	25.0	37.5	50.0	62.5	75.0
		645		50						
630/1	686	515	170	50	20.0	40.0	60.0	80.0	100.0	120.0
630/2		645		50						
800/2	856	515	200	50	29.5	59.0	88.5	118.0	147.5	
		645	230	60	34.5	69.0	103.0	138.0	172.5	
1,000/2	1,056	645	230	60	49.5	99.0	148.5	198.0	247.5	
		775	280	60	51.5	103.0	154.5	206.0	257.5	
1,200/2	1,256	645	230	60	50.5	101.0	151.5	202.0	310.0	
		775	280	60	62.0	124.0	186.0	248.0		
1,400/2	1,456	645	230	60	59.0	118.0	177.0	236.0		
		775	280	60	71.5	143.0	214.5	286.0		
1,600/2	1,656	775	280	80	81.5	163.0	244.5	326.0		
1,800/2	1,856	775	280	80	91.5	183.0	274.5			
2,000/2	2,056	775	280	80	102.0	204.0	306.0			

* The trough height depends on the chain size and the number of sprocket teeth.

After Sales Service

Customer Proximity around the World

At AUMUND, service does not end at the sale of the equipment. It's the beginning of a long-term partnership. AUMUND offers you a full range of services – from commissioning to the delivery of quality spare and wear parts to customized preventive maintenance programs and equipment upgrading. The benefits for you: Maximum equipment efficiency at lower operating cost.

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THE AUMUND GROUP

GERMANY

AUMUND Fördertechnik GmbH

Saalloffer Str. 17
47495 Rheinberg
Phone: +49 - 2843 - 72 0
Fax: +49 - 2843 - 6 02 70
info@aumund.de
www.aumund.com

AUMUND Logistic GmbH

Saalloffer Str. 17
47495 Rheinberg
Phone: +49 - 2843 - 72 0
Fax: +49 - 2843 - 7 24 73
logistic@aumund.de
www.aumund.com

SCHADE Lagertechnik GmbH

Bruchstraße 1
45883 Gelsenkirchen
Phone: +49 - 209 - 50 31 60
Fax: +49 - 209 - 50 31 62 88
sales@schade-lagertechnik.com
www.schade-lagertechnik.com

GREAT BRITAIN

SAMSON Materials Handling Ltd.

Gemini House Cambridgeshire
Business Park, 1 Bartholomew's Walk
Ely, Cambridgeshire CB7 4EA
Phone: +44 - 1353 - 665 001
Fax: +44 - 1353 - 666 734
sales@samson-mh.com
www.samson-mh.com

INDIA

AUMUND Engineering Private Ltd.

2nd Floor, Lakshmi Neela Rite Choice
Chambers · 9, Bazulla Road,
T. Nagar Chennai - 600 017
Phone: +91 - 44 - 4393 63 00
Fax: +91 - 44 - 2815 60 46
aumund@vsnl.com

HONG KONG SAR

AUMUND Asia (H.K.) Limited

Unit 3B & 5, 30/F.
148 Electric Road
North Point
Hong Kong
Phone: +852 - 3695 - 43 33
Fax: +852 - 3695 - 43 11
info@aumund-asia.com

DUBAI U.A.E.

AUMUND Fördertechnik GmbH Representative Office

P.O. Box 35291
Dubai, UAE
Phone: +971 - 4 - 2823762
catalina@aumund.com

THE NETHERLANDS

AUMUND Holding B.V.

Wilhelminapark 40
5911 EE Venlo
Phone: +31 - 77 - 320 01 11
Fax: +31 - 77 - 320 07 28
info@aumund-holding.nl

SWITZERLAND

AUMUND AG

Arther Str. 3
6301 Zug
Phone: +41 - 41 - 710 10 82
Fax: +41 - 41 - 710 42 02
info@aumund.ch

RUSSIA

AUMUND Representative Office

German-Russian House, Office 44
ul. Malaja Pirogovskaja 5
119435 Moscow / Russia
Phone: +7 - 495 - 287 90 02
Fax: +7 - 495 - 287 90 06
info@aumund.ru

SCHADE Representative Office

German-Russian House, Office 44
ul. Malaja Pirogovskaja 5
119435 Moscow / Russia
Phone: +7 - 495 - 287 90 03
Fax: +7 - 495 - 287 90 06
info@aumund.ru

FRANCE

AUMUND France S.A.R.L.

43, rue de Trévise · F 75009 Paris
Phone: +33 - 1 - 42 46 72 72
Fax: +33 - 1 - 42 46 72 74
aumund@aumund.fr

BRAZIL

AUMUND Ltda.

Avenida Eng. Luis Carlos Berrini
716 - 4. andar - conj. 41
04571-000 - São Paulo / SP
Phone: +55 - 11 - 3059 0160
Fax: +55 - 11 - 3059 0161
aumund@aumund.com.br

USA

AUMUND Corporation

1701 Barrett Lakes Blvd
Barrett Lakes Center I
Suite 450
Kennesaw, GA 30144
Phone: +1 - 770 - 226 - 95 78
Fax: +1 - 770 - 953 - 48 44
sales@aumundusa.com

P.R. CHINA

AUMUND Machinery Trading (Beijing) Co. Ltd.

Rm. 7-8, 22-F, East Ocean Centre
No. 24 Jianguomenwai Avenue
Chaoyang District
Beijing 100004
Phone: +86 - 10 - 65 15 58 13 / 14
Fax: +86 - 10 - 65 15 58 15
aumund@aumund.cn



AUMUND Headquarters in Rheinberg, Germany

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AUMUND Foerdertechnik GmbH · Saalhoffer Str. 17 · 47495 Rheinberg (Germany)

Tel.: + 49 (0) 28 43-720 · Fax: + 49 (0) 28 43-6 02 70 · info@aumund.de

www.aumund.com