SICON®
Enclosed Belt Conveyor System

Conveyor Belt Group

WISSEKERKE TECHNIEK

Continental CONTITECH

Clean, safe and curve negotiable up to 180°. SICONbelt conveyor systems

The SICON®conveyor belt remains closed from the feeding point to the discharge point.
It thus measures up to particularly stringent requirements with respect to cornering suitability, cost-efficiency and environmental compatibility.

ContiTech Conveyor Belt Group
We are manufacturers of textile and steel cord conveyor belts, special products and service material – for mining, machine and plant engineering, and many other branches of industry. At our plant in Northeim, Germany – one of the most modern production facilities anywhere in the world – we turn out a complete range for all conveyor jobs. Our comprehensive service offering caters to the needs of retailers, primary equippers and operators.

Keep on running

The concept
The extra-high flexibility of SICON®conveyor belts renders involved system configurations possible for optimum conformity to topographical conditions. They can cope with corners and edges without the need for additional transfer points. Cornering radii of less than a meter can be realized. This makes possible the serpentine rout- ingoften required to cope with major altitude differences over very short distances. The “pouch” remains closed and dusttight even on the return trip.
This protects the material conveyed and the environment. Several feeding and discharging points can be set up along the transport route.

Good curve negotiability eliminates need for transfer points

Proven in diverse applications

- Construction industry
- Power industry
- Cellulose industry
- Steel/metal industry
- Underground/surface mining
- Foodstuffs industry
- Processing industry

The key advantages

- Copes well with steeply rising topography
- Eliminates need for transfer points thanks to good curve negotiability
- Does not pollute because belt closed on return trip
- Allows for two-way conveyor system; belt can be loaded in both directions; varying routing possible for trip out and back
- Prevents dust emissions
- Protects material conveyed
- Is lightweight and flexible, so easy to install; self-centering between guide pulleys and support pulleys
- Makes minimal space demands
- Manages gradients of up to 35°
- Reduces tensile load on belt by arrangement of several drive stations (with at least 90°encapsulation in curves)
- Is self-cleaning
- Can negotiate 180°curves with a radius smaller than1meter
- Allows for many feed and discharge options
- Loads uniformly and accelerates quickly

Focus on flexibility

How it functions

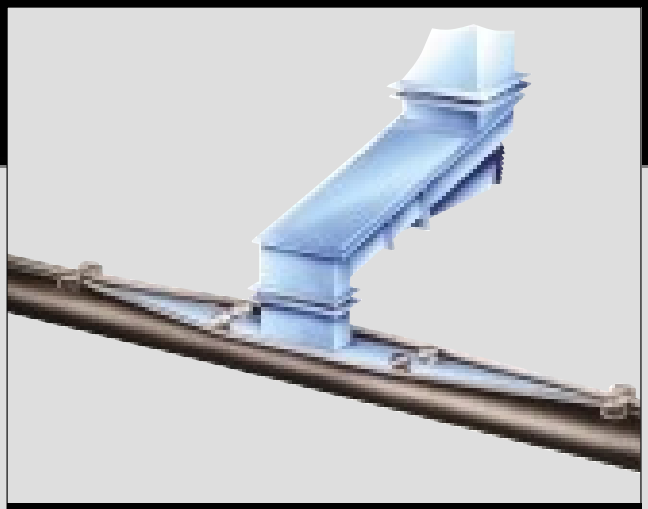
The SICON®conveyor belt is made of a highly flexible rubber capable of forming a pear-shaped “pouch”. Supporting profiles are vulcanized onto both edges. Their job is to track the belt between the support and guide pulleys. Steel cords are vulcanized into the center of the carrying profiles. The cords absorb the belt tension from the drive components. As the profiles are arranged above one another, the belt is closed to form a dusttight pouch. Another advantage of this profile arrangement is that it enables the belt to incline to the side so that the corner- ing radius works out to less than a meter.

Loading

The belt can be loaded at anywhere along the conveyor route. Special guide pulleys function to give the belt a U-shaped opening. In this way, the belt cushions the fall of the material during loading while steadying and accelerating its flow.

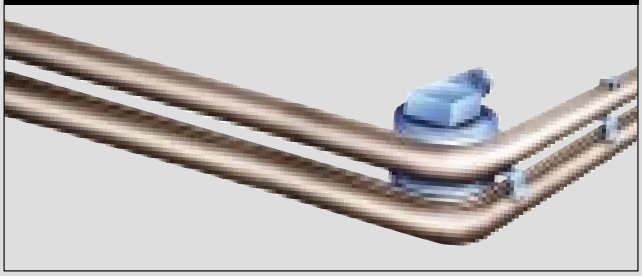
Drive/curves

The belt is guided into curves by means of individual deflection pulleys. The drives are fitted in at curves of at least 90°.

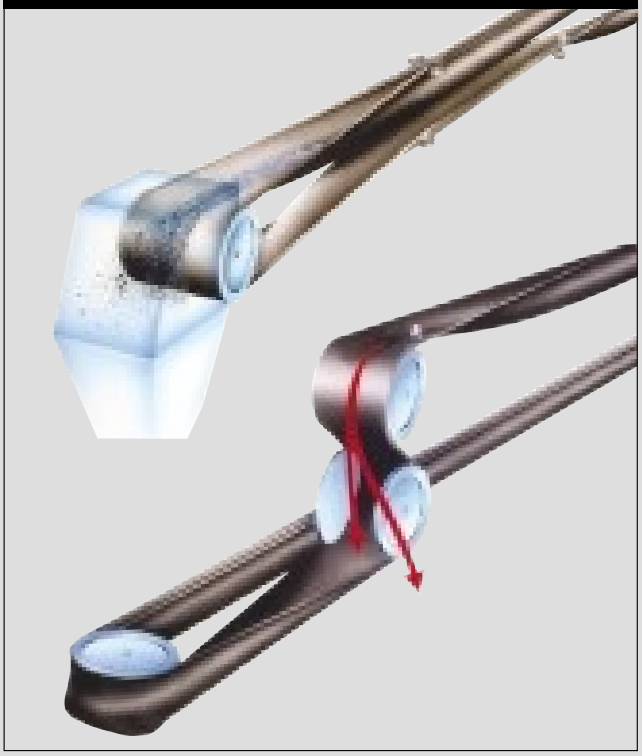


Loading

Drive



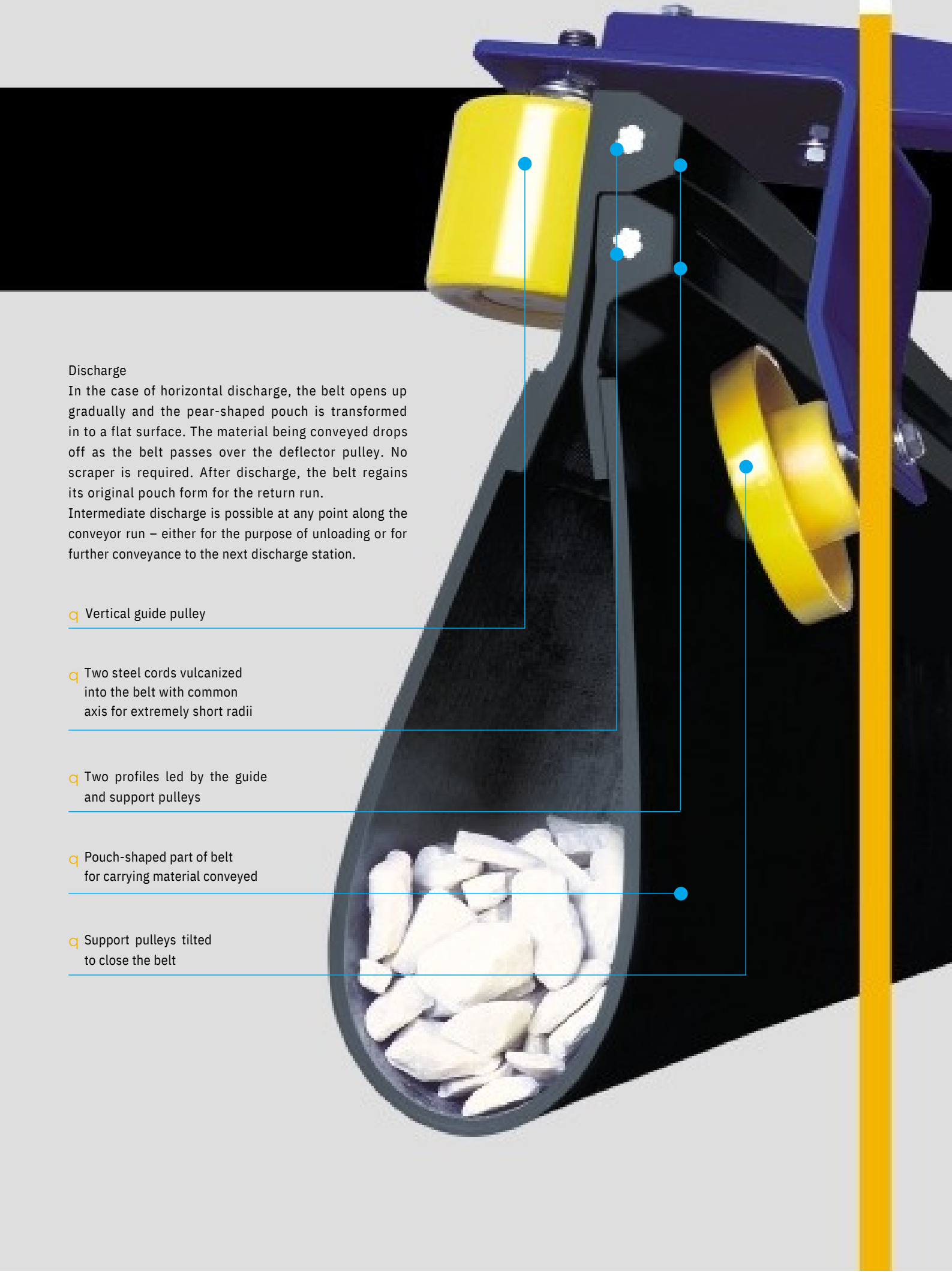
Discharge



Discharge

In the case of horizontal discharge, the belt opens up gradually and the pear-shaped pouch is transformed in to a flat surface. The material being conveyed drops off as the belt passes over the deflector pulley. No scraper is required. After discharge, the belt regains its original pouch form for the return run.

Intermediate discharge is possible at any point along the conveyor run – either for the purpose of unloading or for further conveyance to the next discharge station.



- Vertical guide pulley
- Two steel cords vulcanized into the belt with common axis for extremely short radii
- Two profiles led by the guide and support pulleys
- Pouch-shaped part of belt for carrying material conveyed
- Support pulleys tilted to close the belt

SICON® belt conveyor system – Proven in diverse applications

The standard range

SICON®100

Size of profile ca. 30 x 30 mm – pulley diameter: 1,200 mm

Belt width	Conveyor capacity unfolded (mm)	at 1.5 m/s (m3/h)
650	35	
800	55	
1,000	95	only light material
1,200	140	only light material

SICON®1000

Size of profile ca. 50 x 50 mm – pulley diameter: 2,000 mm

Belt width	Conveyor capacity unfolded (mm)	at 3 m/s (m3/h)
800	115	
1,000	190	
1,200	280	
1,400	380	

For high conveyor capacities, long conveyor systems and high stress loads

Materials conveyed and branches of industry

Construction industry	Power industry	Cellulose industry	Steel/metal industry	surface mining	Underground/	Foodstuffs industry*	Processing industry
plaster	ash	wood chips	ore		ore	residual products	chemicals
limestone	fuel peat	kaolin	foundry sand	grinding balls		raw materials	finished goods
clay	gypsum	bulk goods	coal	minerals		fish meal	(powder, granules)
sand	wood chips	used paper	metal concentrates	sand		fish feed	minerals
stone	limestone	salt	slag			grain	
dry mixture	coal					pellets	
cement	recycling materials						

*Use and suitability to specs on request

Simple loading of sensitive conveyor belts with open belt

High-care transport thanks to enclosed belt design

Does not pollute
thanks to enclosed belt on return trip

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