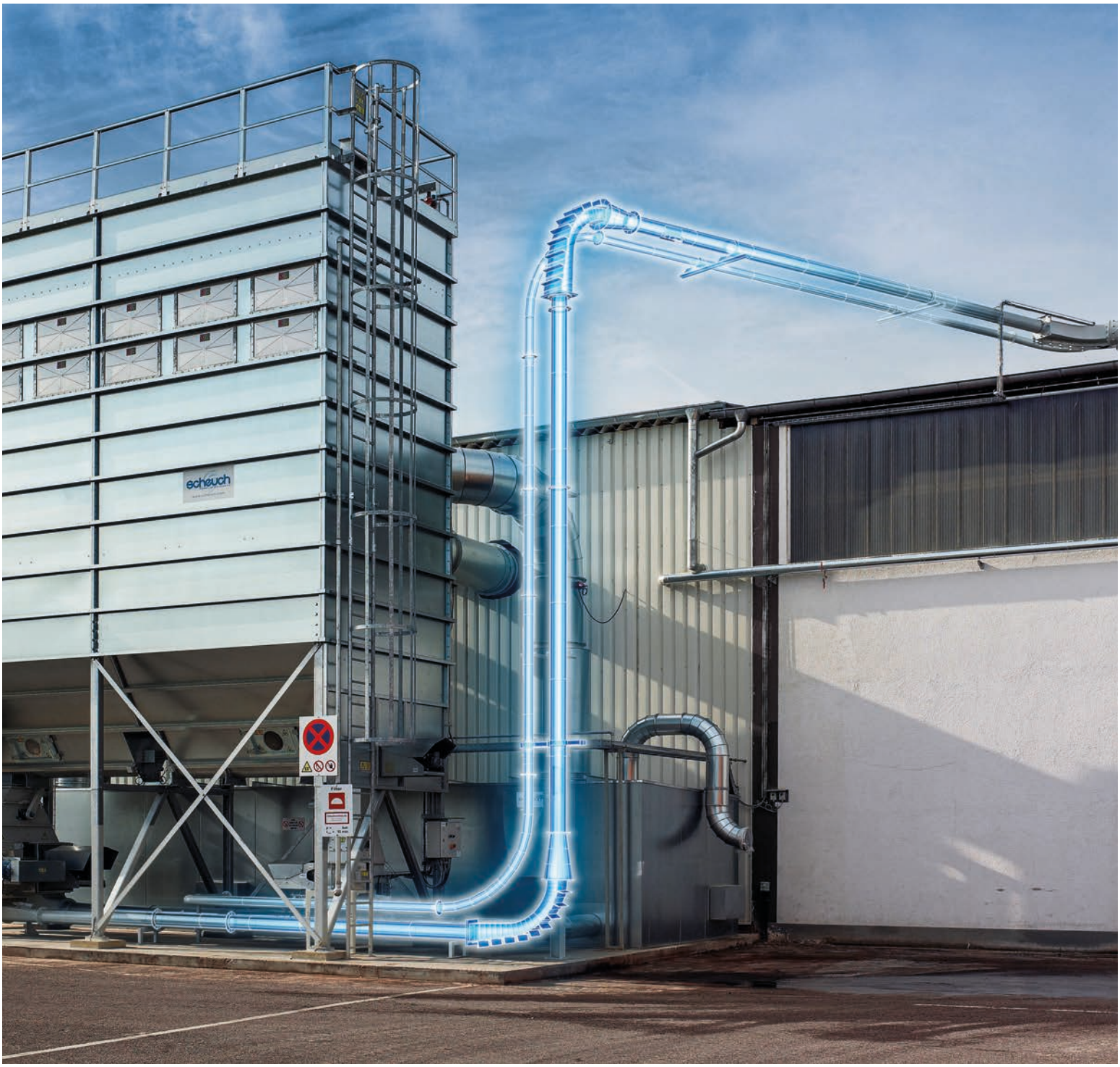


LIGNO

PNEUMATIC CONVEYING SYSTEMS

SAFE AND EFFICIENT TRANSPORT OVER ANY DISTANCE

THE HEART OF EVERY SYSTEM

PNEUMATIC CONVEYING SYSTEMS

The conveying system is a key component of every chip extraction system and has a significant impact on the operational safety and availability of the overall production plant. It can be regarded as the lifeline of the plant and guarantees trouble-free operation, particularly in the case of complex, interlinked production units.

Scheuch LIGNO has always been known for its reliable conveying systems. An uncompromising focus on power and availability is one of the foundations of our company philosophy.

Pneumatic conveying systems transport material such as swarf, chips, dust or pellets from the feeding point to a storage facility or separation system. At the feeding point, a rotary valve (pressure barrier and protective system) feeds the conveyed material into the conveying air flow which carries it through the conveyor pipe.

Low-pressure or medium-pressure conveying systems are used depending on the project requirements, the type and quantity of material and the conveying distance.

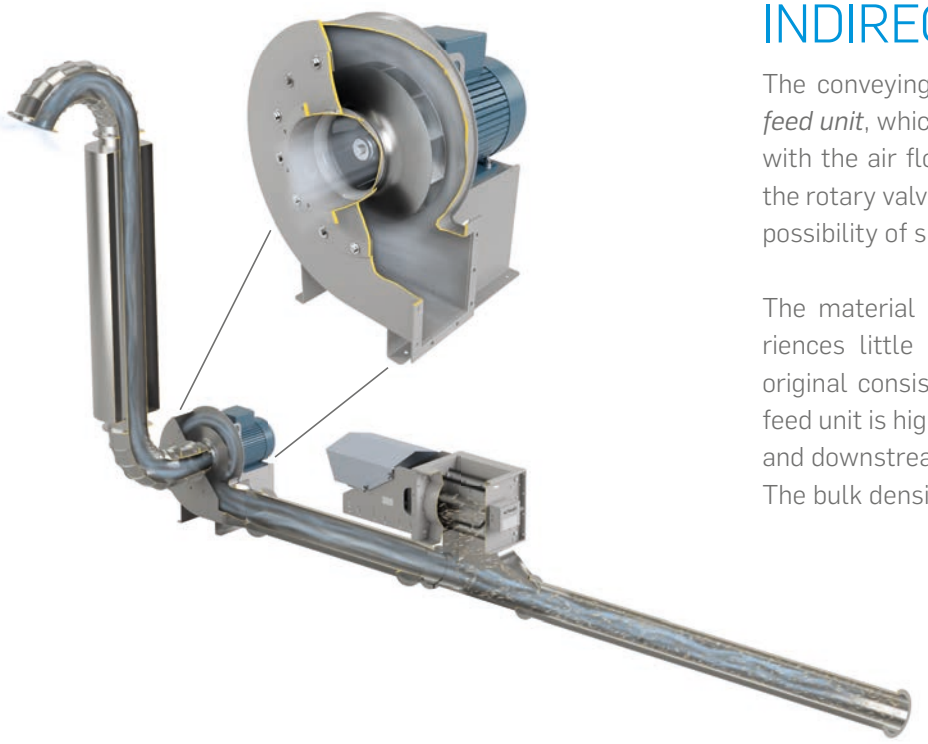
Low-pressure systems are designed with direct or indirect fan placement, depending on whether the fan is positioned upstream or downstream of the feeding point. They are available both with and without a closed circular pipeline.

Our comprehensive expertise guarantees that we are able to select the most efficient solution for every application.

DELIVERY PRESSURE < 20 mbar
up to 5,000 kg/h / length 200 m

LIGNO

LOW-PRESSURE CONVEYING SYSTEMS



INDIRECT TRANSPORT

The conveying fan is positioned *upstream of the material feed unit*, which means that transport takes place indirectly with the air flow accelerating the conveyed material under the rotary valve. There is no wear on the fan impeller, and no possibility of sparks being caused by foreign bodies.

The material is only conveyed through the duct, it experiences little mechanical stress and thus remains in its original consistency. The delivery pressure at the material feed unit is high, the leakage air at the rotary valve increases and downstream components are under high pressure.
The bulk density remains roughly the same.

DIRECT TRANSPORT

The conveying fan is positioned *downstream of the material feed unit*. The material is conveyed directly via the radial fan, with the air flow sucking the material under the rotary valve and into the conveying system.

Wear-resistant steels or special materials are used for the open impeller, and additional wear protection for the casing ensures high stability. Depending on the conveying capacity, radial fans with belt drives may also be used. The pressures in the duct are distributed evenly.

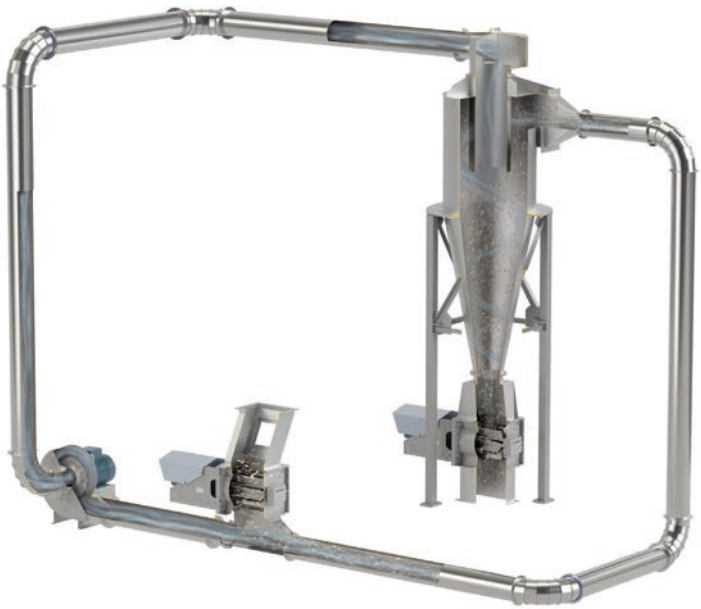
The conveyed material flows through the radial fan, which means that it experiences increased mechanical stress and in most cases changes its consistency. The bulk density may be higher.

CLOSED CIRCULAR PIPELINE CONVEYOR SYSTEM

The material is transported using a closed circular pipeline conveyor system.

The radial fan blows the separated material in the conveyor pipe in the direction of the material separator.

The recycled air is fed back towards the radial fan. With this type of conveyance, the air is guided in a circular motion, which means that no dust is discharged.



MATERIAL SEPARATION IN THE CLOSED CIRCULAR PIPELINE SYSTEM

In this case, a separator is used at the end of the conveying path. Which type of separator should be used will depend on the project-specific requirements. With its comprehensive product portfolio, Scheuch LIGNO provides efficient solutions for every application:

CENTRIFUGAL SEPARATOR

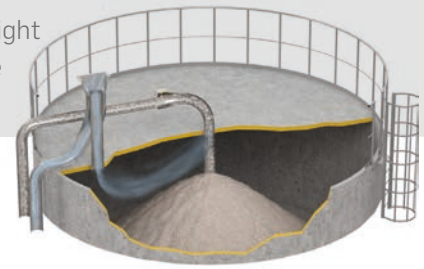
Design:

- Decoupling by means of ATEX-certified rotary valve
- Largely pressure-free filling

DIRECT INJECTION

Design:

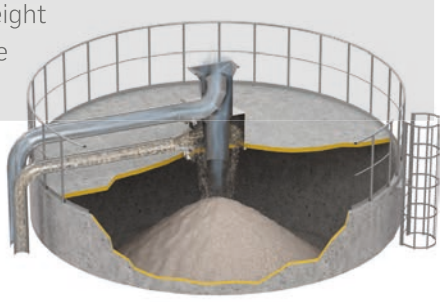
- Decoupling with back pressure flap and explosion diverter
- Low installation height
- Slight overpressure



MATERIAL SEPARATOR

Design:

- Decoupling with back pressure flap and explosion diverter
- Low installation height
- Slight overpressure



CONTAINER

Design:

- With filter tarpaulin and weather protection – so the pressure relief device can be omitted

DELIVERY PRESSURE < 500 mbar
up to 30,000 kg/h / length up to 1,500 m

LIGNO

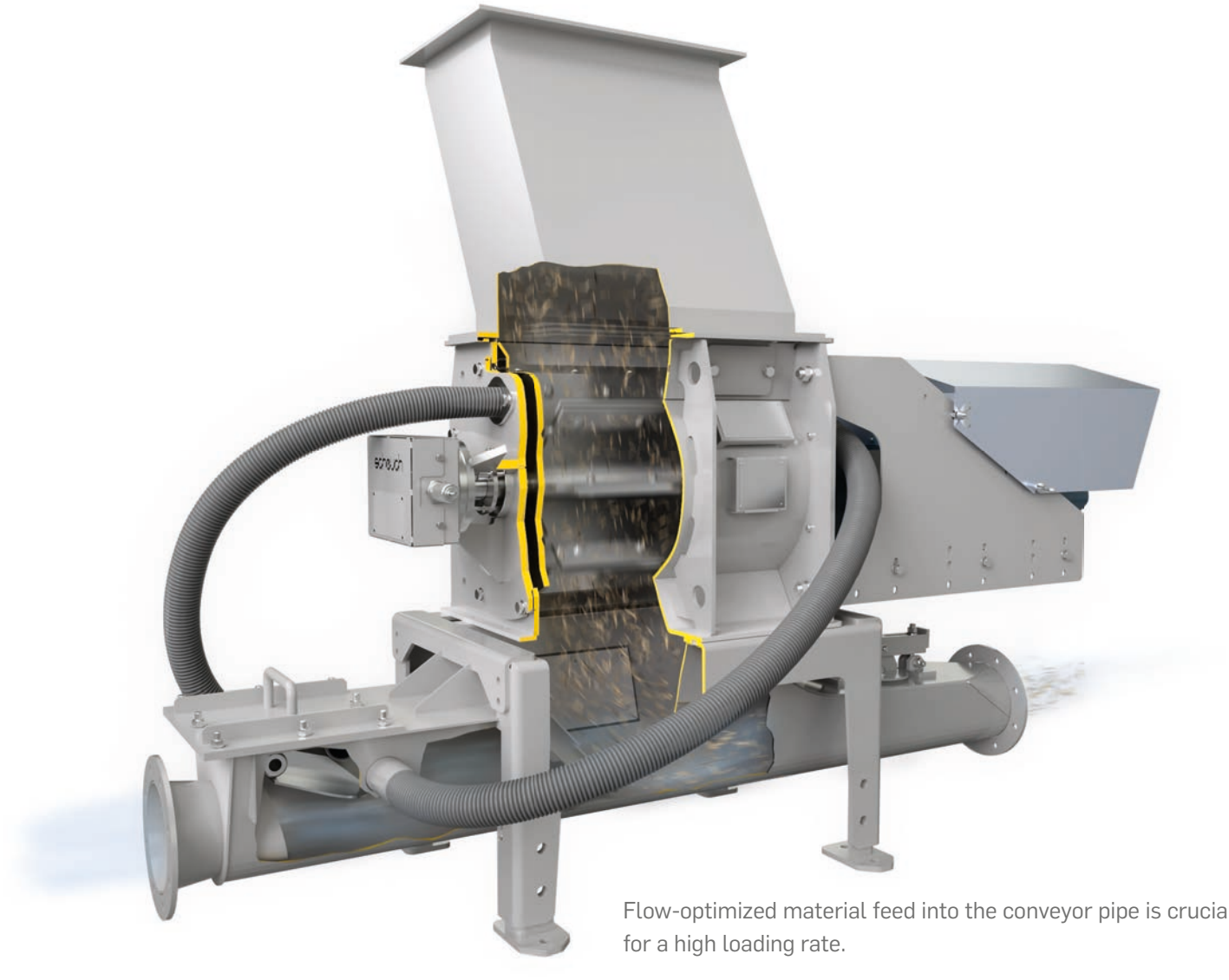
MEDIUM-PRESSURE CONVEYING SYSTEM

THE KEY COMPONENTS AT A GLANCE

If materials need to be conveyed over long distances and/or in large quantities, medium-pressure conveying systems (MP conveying systems) are a cost-effective choice. They involve indirect transport – the blower is positioned upstream of the material feed unit.

The key components of an MP conveying system are the rotary piston blower, which is highly efficient but keeps energy costs to a minimum, the material feed unit with a very robust rotary valve and a T-injector for effective material acceleration as well as the flow-optimized pipe system.

Thick-walled steel pipes and special bends with wear protection and a large bend radius ensure long service lifetimes and high operational safety.



Flow-optimized material feed into the conveyor pipe is crucial for a high loading rate.

MATERIAL SEPARATION WITH FILTRATION

If a closed circular pipeline system cannot be used, a filter system is employed at the end of the conveying path. Which type of separator should be used will depend on the project-specific requirements. With its comprehensive product portfolio, Scheuch LIGNO provides the most cost-effective solution for every application:

ROUND FILTER

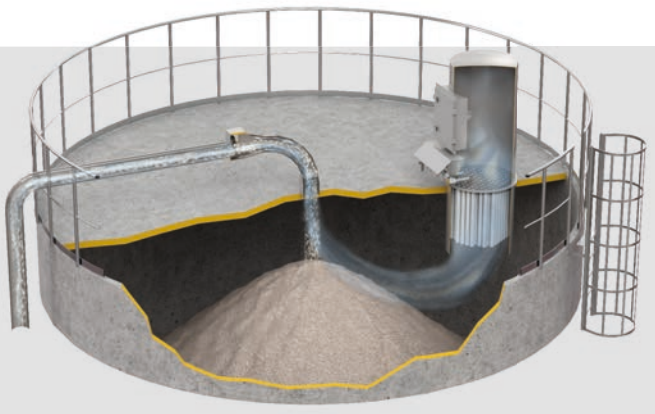
with pressure-shock-resistant casing:

- High material quantities
- ATEX-tested (certified) filling of closed silos
- Largely pressure-free silo filling via the rotary valve
- Silo decoupling by means of ATEX-certified rotary valve

FILTER WITH PANEL DESIGN

with solid construction:

- High air quantities
- ATEX-tested (certified) filling of closed silos
- Largely pressure-free silo filling via the rotary valve
- Material distribution to multiple silos or bunkers
- Silo decoupling by means of ATEX-certified rotary valve



SILO FILTER

with high compression strength:

- High material quantities
- Overpressure in the silo
- Low installation height
- Specifically for MP transport and large material quantities
- Certification regarding flashback and explosion decoupling available

ROTARY VALVES

Rotary valves are used to discharge dust, chips and fibrous bulk goods, and play a crucial role in ensuring availability and operational safety. They are used for pressure and explosion decoupling and provide protection against ignition and flame propagation.

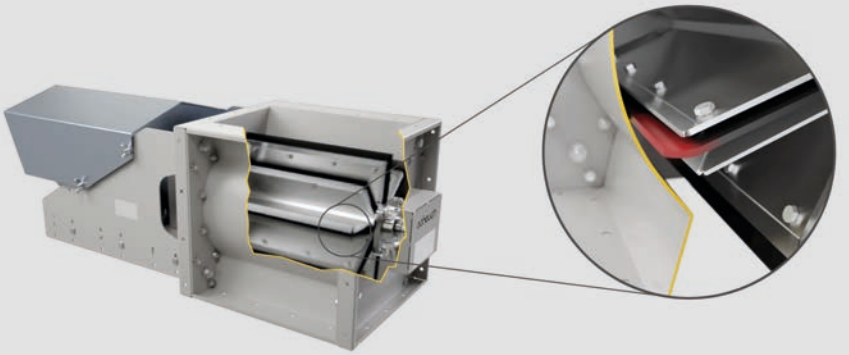
TYPE ZSL

Universal – with rubber sealing lip

Throughput volume up to 9,000 m³/h
Pressure difference up to 80 mbar

Design:

- Casing with screwed construction
- Rotor blades with elastic sealing lips
- Also available in ATEX design



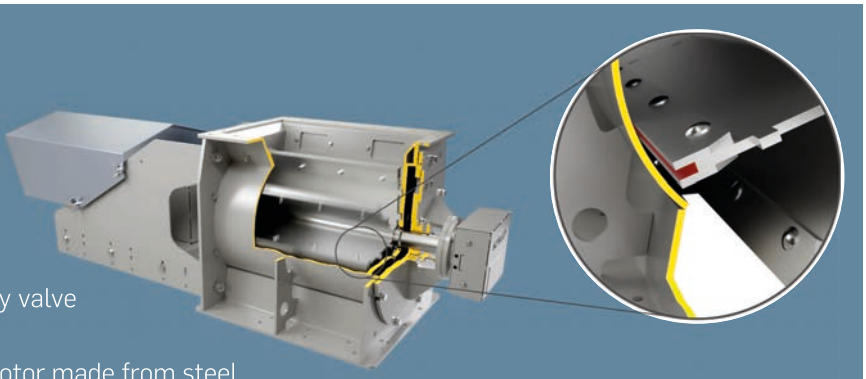
TYPE ZSS

Robust – with metal seal

Throughput volume up to 800 m³/h
Pressure difference up to 800 mbar

Design:

- Casing with solid welded construction
- Optional design as lightweight cutting rotary valve
- Also available in ATEX design
- Casing hard chrome-plated; wear-resistant rotor made from steel



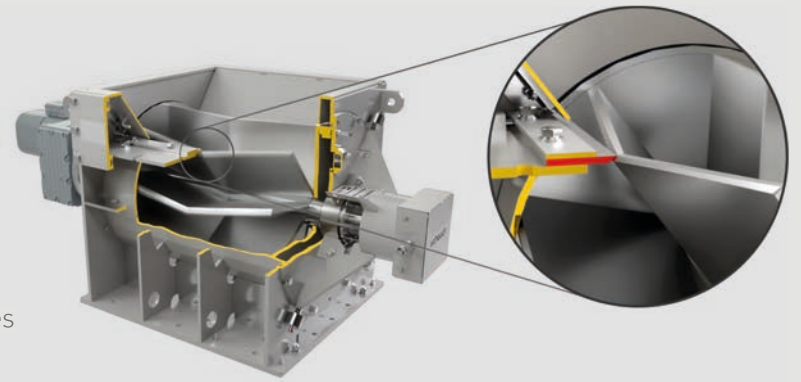
TYPE ZSM

Strong – with blade in inlet and outlet

Throughput volume up to 2,600 m³/h
Pressure difference up to 800 mbar

Design:

- Casing with solid welded construction
- Solid shear blade in inlet and outlet
- Wear-resistant rotor with hardened cutting edges
- Also available in ATEX design



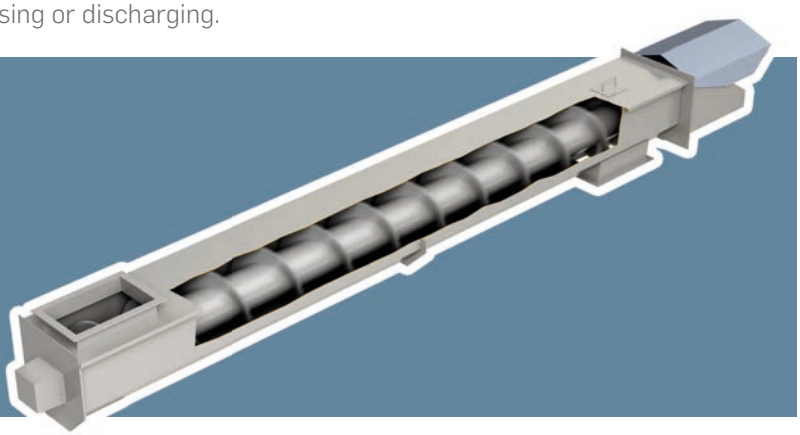
SCREW CONVEYORS

Feeding screws, screw conveyors and dosing screws produced in-house.
Available as tubular or trough screw conveyors for dosing or discharging.

NW 250 to NW 1,000
Length up to 12 m

Design:

- Robust tubular or trough screw conveyors with project-specific design and dimensions



scheuch
LIGNO

Scheuch LIGNO GmbH
Mehrnbach 116
4941 Mehrnbach
Austria

Phone +43 / 7752 / 905 – 8000
Fax +43 / 7752 / 905 – 68000
Email office@scheuch-ligno.com
Web www.scheuch-ligno.com