



**ZUTHER**  
Cleaning technology

[ZUTHER-ONLINE.DE](http://ZUTHER-ONLINE.DE)



## ***QUALITY THAT STEMS FROM TRADITION***

Your specialist for cleaning technology. For nearly 100 years.

# The high-performance „OPTIMA“ aspirator

is suitable for multi-grade operation without screen change and is tested with a variety of cereals and legumes. In this regard a capacity of up to 160 t/h can be achieved. The OPTIMA is used for scalping and main cleaning of virtually all cereals and can be also implemented universally for seed cleaning. Also treatment of “problem crops” like maize, peas, sunflower seeds, beans, etc. as well as sorting out of foreign objects is no problem for the machine.

In this regard, OPTIMA is also equipped for the harshest work conditions. In case of an uneven intake, the machine automatically regulates the capacity in the air separating chamber. Internally, distribution devices ensure optimal utilization of the entire machine width. For wet goods and oleaginous fruit, the screen bypass enables tasks with only the air separator and scalping screens, and thus prevents adhesion on the screen frame.

Rubber balls keep the screen pores open at all times, ensuring passage. In addition, the progressive wear-resistant lining from stainless steel and plastic results in a significantly extended service life.



## At a glance

- light fraction separation and size classification
- exact sorting of mixed grain into three sizes
- precise removal of dust and lightweight particles
- preparation of various kinds of grain without changing the screen
- very compact, low-maintenance design
- high performance, up to 160 t/h
- long-term optimization of operating costs

# Technical data

**Inflow distribution** Distributor screw (Ø 300 mm)  
**Feed regulation** Flow regulation controlled via fill level  
**Aspiration air** Approx. 15-20% exhaust air to the filter system or to the post separator  
**Adjustment parameters** Aspiration air quantity, aspiration air direction for optimal effect, bypass flap for bypassing the main screen and secondary screens

Type designation	Capacity t/h*	Length mm	Width mm	Inflow height mm	Scalpers m <sup>2</sup>	Main screens m <sup>2</sup>	Secondary screens m <sup>2</sup>	Weight kg	Drive power kW
Optima 2001/15	80	1.860	2.740	3.874	3,2	6,4	3,2	1.700	14
Optima 2002/15	160	3.322	2.740	3.874	6,4	12,8	6,4	3.600	28

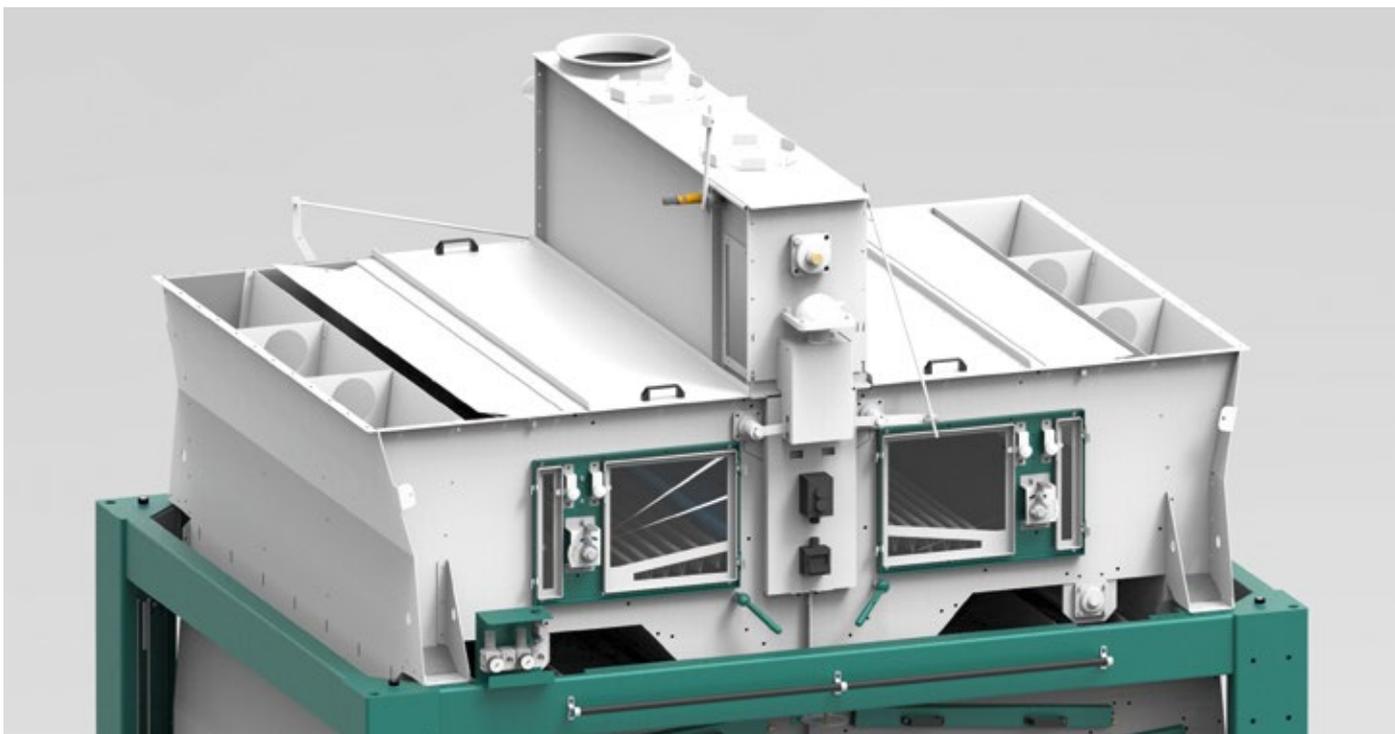


Fig.: Spherical frame for screen cleaning

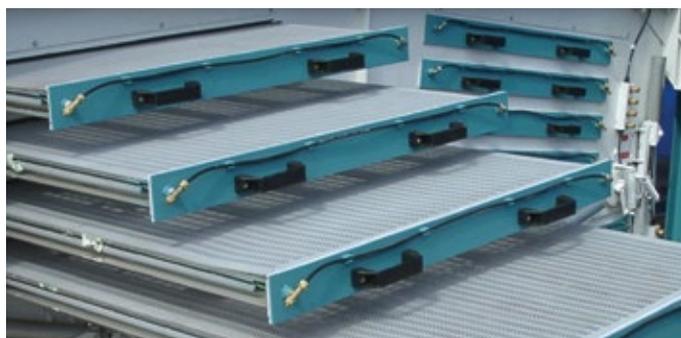
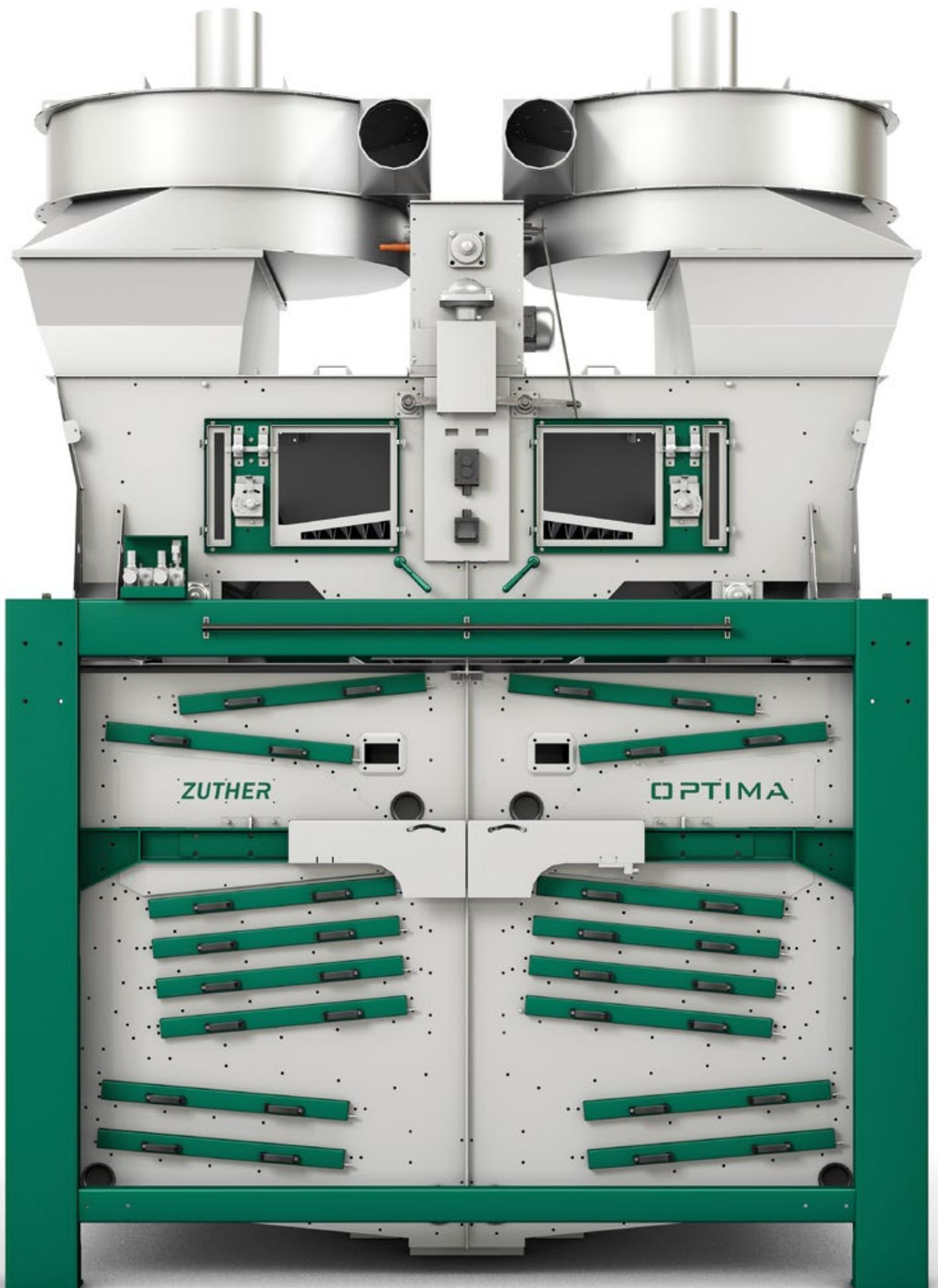


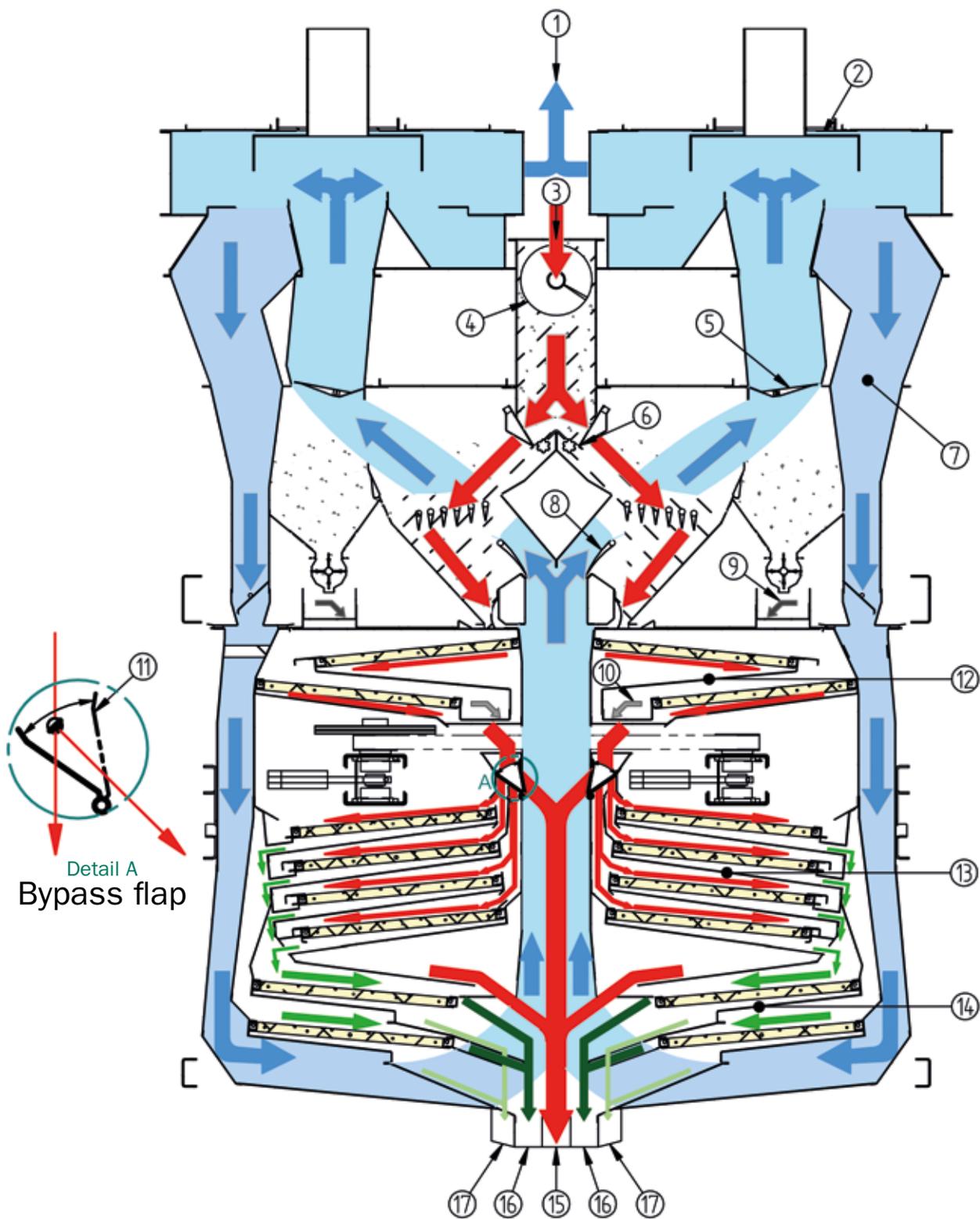
Fig.: Screen frames with air-actuated central locking



All capacity information is based on a bulk weight of 0.75 t/m<sup>3</sup>



# OPTIMA flow diagram



1	Exhaust air
2	Circulating air fan
3	Product infeed
4	Distributor screw
5	Air flow regulation
6	Inflow regulation

7	Circulating air duct
8	Air guidance flap
9	Waste
10	Grading discharge
11	Bypass flap
12	Scalpers

13	Main screens
14	Secondary screens
15	Discharge good product
16	Discharge 2nd sort
17	Discharge small grain

## The VORTEX bulk goods cleaner

is the logical consequence of the demand for preparing bulk goods efficiently and effectively in such a manner that fast additional steps can be realized in the processing chain. For cereals this mainly concerns placement in storage, preparation for drying, and quality improvement when removing from storage.

The VORTEX is an air separator combining important sorting components in a single machine with a minimal spatial requirements and achieves a throughput capacity of up to 250 t/h. You will not find maintenance-free rotational distribution of bulk solids with the ingenious and simple ring gap air sifter geometry and the effective compact dust separator fan combination (recirculation separator) in this space-saving, cylindrical design in other solutions. This results in an essential advantage: The VORTEX can be quickly and cost-effectively integrated in existing plants.

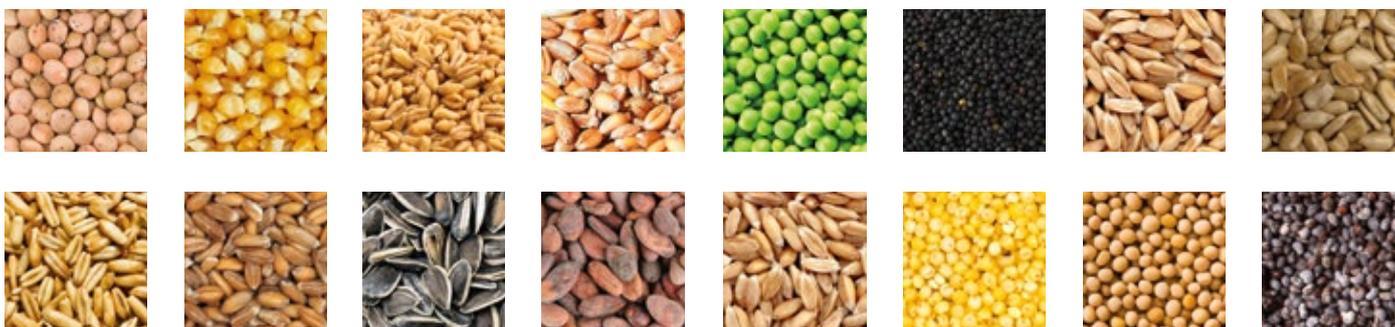
### At a glance

- excellent cleaning performance
- throughput capacity 80 – 250 t/h
- compact design, minimal space requirement
- environmentally friendly thanks to air circulation technology
- easy operation (also via remote control)
- excellent price-performance ratio
- wear-resistant liner in the inflow area
- minimal exhaust air volume
- maintenance-friendly thanks to segmented design
- wear-resistant liner in the discharge area (option)
- large inspection window (option)

# Technical data

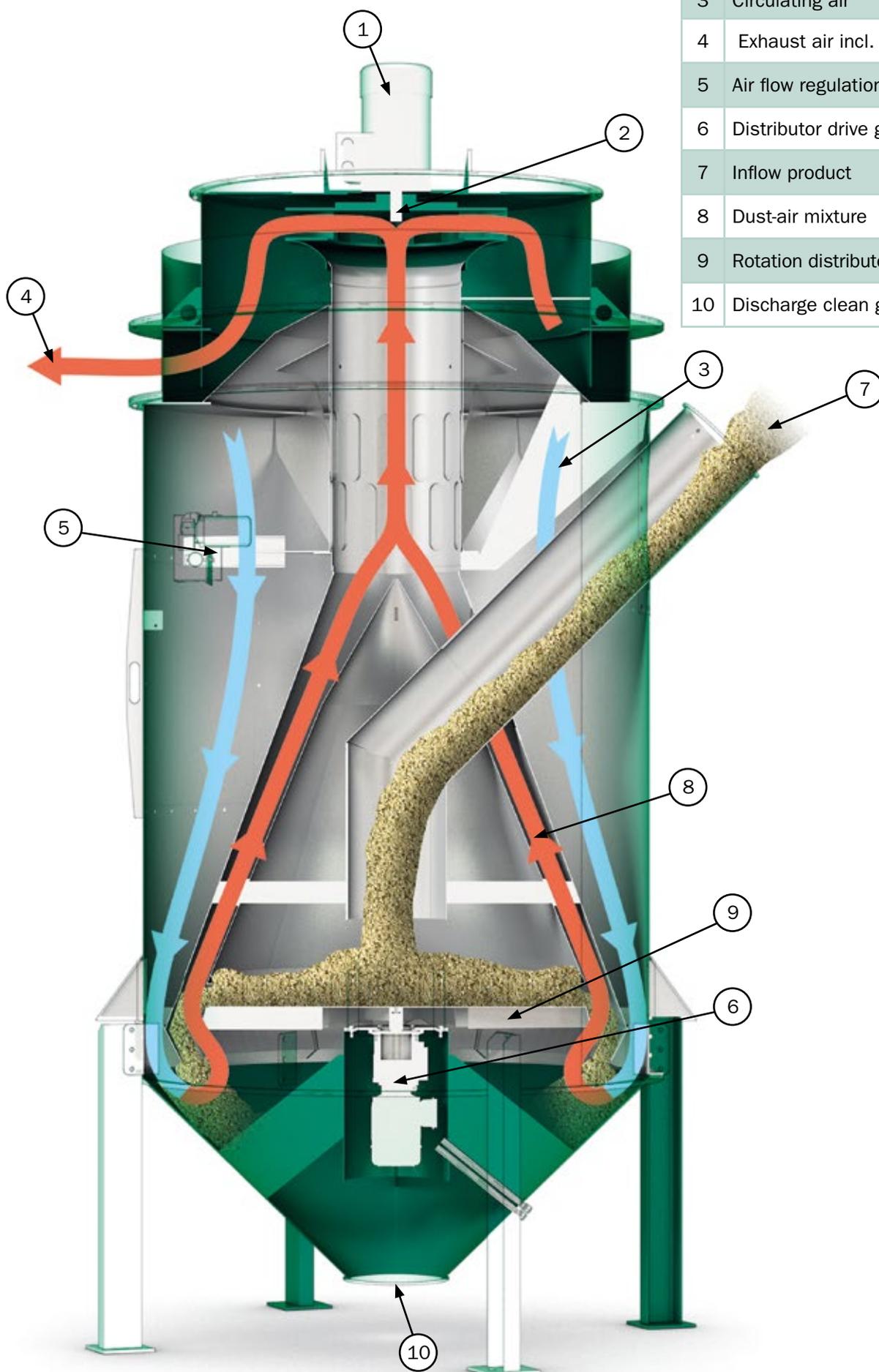
**Inflow distribution:** Rotating spreading disc  
**Infeed regulation** None, via charging rate  
**Aspiration exhaust air** Approx. 15-20% exhaust air to the filter system or to the post separator  
**Adjustment parameters** Return air regulation, air circulation rate via local or remote adjustment

Vortex Type designation	80	120	160	250
Throughput capacity m <sup>3</sup> / h / t/h	90-107/68-80	130-160/100-120	190-214/143-160	240-333/180-250
Aspiration Air capacity m <sup>3</sup> /h	6.400	9.600	12.800	16.000
Drive power Circulating air separator kW	4,00	7,50	11,00	11,00
Drive power Spreading disc kW	0,37	0,55	0,75	1,10
Overall height mm	2.702	3.176	3.608	4.409
Diameter, outer mm	966	1.222	1.516	1.924
Inflow diameter mm (VR)	200	250	300	350
Outflow diameter mm (VR)	200	250	300	350
Approx. weight kg	820	930	1.720	3.400



All capacity information is based on a bulk weight of 0.75 t/m<sup>3</sup>

# VORTEX flow diagram



1	Fan drive motor
2	Circulating air fan
3	Circulating air
4	Exhaust air incl. extracted dust
5	Air flow regulation
6	Distributor drive gear motor
7	Inflow product
8	Dust-air mixture
9	Rotation distributor (spreading disc)
10	Discharge clean goods

## ***Planning, production, assembly and maintenance – all from a single source.***

With us, you always have a project manager responsible for you, who will be your personal contact from the planning to the completion of your project.

You get a system that is all of a piece. Our highly skilled employees do the planning on a 3-D CAD system at the most modern CAD workstations. So you can see in detail even before the ground-breaking how your system is going to look. By using 3-D design, we prevent planning errors which cannot be immediately detected in complex 2-D designs.

A modern materials management system ensures that all the parts required for your order go into production with the right properties, in the required quantities and at the right time. The system provides immediate information at any time on the current status of your order.

## ***Even after the assembly of your system, we will still be there for you.***

### **EMERGENCY SERVICE**

Even outside our normal business hours, you can always reach a contact person who will help you solve your problem. During grain harvest time, we set up a 24-hour emergency service which guarantees immediate troubleshooting. If it should prove necessary, we can put a customer service technician at your disposal at any time. Thanks to our location in the immediate vicinity of Hamburg Airport, a specialist can soon be on site even abroad.

### **SPARE PARTS DELIVERY SERVICE**

Even the best component has to be replaced sometime. To make sure that the downtimes of your system are as short as possible, we keep a large portion of the required spare and wear parts in stock at our central warehouse. Selected logistic partners take over the transport so you get your parts safely and on time, even if it means immediately sending the part by courier.

### **MODIFYING YOUR SYSTEM AND ENHANCING ITS PERFORMANCE**

Even if your company is expanding and the system that was supplied is stretched to its limits, we will be at your service with the expertise we have gained in nearly 100 years, working up solutions to modify or enhance the performance of your system. So you see, we will still be your partner tomorrow.



»Quality starts with a focus on customer satisfaction.«

André Wohlgemuth, Design

## We put great value on returning customers – not returned products.

Our most important value is to ensure that our products and services are of high quality. We achieve this with our QM system, based on a large number of ongoing inspection plans. These plans are not used at the end of a process, but rather accompany it from design to production up to assembly.

Thus we ensure that faults are identified at an early stage of the process and helps avoiding expensive reworking. The way we select and constantly assess our suppliers also helps us guarantee high quality and nearly faultless production.

Kunde: Auftrag Nr.: Name: **ZUTHER**  
 Anlagen- und Service

**Prüfprotokoll Gurtelevatoren Typ ELXG + ELY Zusammenbau/Endmontage Werker** **ACHTUNG: Mindestens vor dem Beginn des Curtes prüfen**

LPD (Anlagenart)	Tätigkeit/OK abhaken	04-04	04-04
1 Rigid, Schwach und Puls anschauen und Fingerschweißen	prüfen		
3 Maße gem. umsatziger Zeichnung eintragen	messen		siehe Zeichnung umsatzig
2 Einbauhöhe mm	messen	mm	mm
3 Einbauhöhe mm	messen	mm	mm
4 Höhe Bewerksbefähigungsrahmen 1	messen	mm	mm
5 Höhe Bewerksbefähigungsrahmen 2	messen	mm	mm
6 Höhe Bewerksbefähigungsrahmen	messen	mm	mm
7 Bewerksbefähigungsrahmen und -stützen	prüfen		
8 Doppelröhren: auf gleiche Gurtlängen achten!	prüfen		
9 Bewerksbefähigungsrahmen angeschraubt und gekörnt	prüfen		
10 Becherfertig und Bechergröße	prüfen		
11 Becherendmont. Becher-Schweißnähte geprüfen	prüfen		
12 Auslaufwerk montiert und Verschleißschutz	prüfen		
Gelenk und Abwurfbach verschweißen	prüfen		
Abwurfbach angeschraubt	prüfen		
Bei RC-Elevator u. Hall-Elevator mit RC-Zugabe	RC	JA / NEIN	NEIN
Keine Querstreben im Auslauf montiert	prüfen		Die vier Querstreben sind zu montieren!
Handhaben montiert u. Walleabdichtung verschrauben	prüfen		

\*\*\*mindestens 20 min vor Beginn der Montage

# The right solution for every requirement

## SYSTEMS ENGINEERING

- Silo systems
- Flat storage warehouses
- Grain reception systems
- Grain drying systems
- Loading plants
- Biomass plants
- Malting plant technology

## MATERIALS HANDLING TECHNOLOGY

- Belt elevators
- Chain elevators
- Trough conveyors
- Conveyor belts
- Screw conveyors
- Loading
- Biomass materials handling technology
- Chain scrapers

## MEASURING AND CONTROL TECHNOLOGY

- System control
- Level sensing
- Temperature monitoring
- Weighing technology

## PIPE SYSTEMS

- Round pipe systems
- Rectangular pipe systems
- Sliders
- Distributors
- Wear-resistant liners

## DUST REMOVAL TECHNOLOGY

- Filter systems
- Dust removal at grain reception
- Point filters
- Double door systems

## LABORATORY EQUIPMENT

- Truck sampling
- Pipe sampling
- Sample cleaning
- Sample dividers

## MATERIALS PREPARATION TECHNOLOGY

- Optima
- Vortex
- Accessories

## PRESERVATION TECHNOLOGY

- Drying systems
- Refrigerating devices

## CONTRACT PRODUCTION / SERVICE

- Contract production
- Spare parts service
- Engineering

## Quality that origins from tradition. Your specialist for cleaning technology. For nearly 100 years.

As has been shown in the past, enterprises with a long tradition are particularly well suited to meeting challenges like ongoing further development of design and manufacture. ZUTHER can draw on expertise gained in nearly one hundred years of business. Joining tradition and forward-looking technology with perfectly trained personnel is a determining factor in the daily activities of our enterprise. Principles such as partnership, quality, efficiency, innovation, and sustainability were already pronounced back then and will be considered self-evident in the future, as well.

Decades of practical experience and the close cooperation with our customers have enabled cleaning technology from ZUTHER to reach a whole new level of performance capability, efficiency, and ease of maintenance.

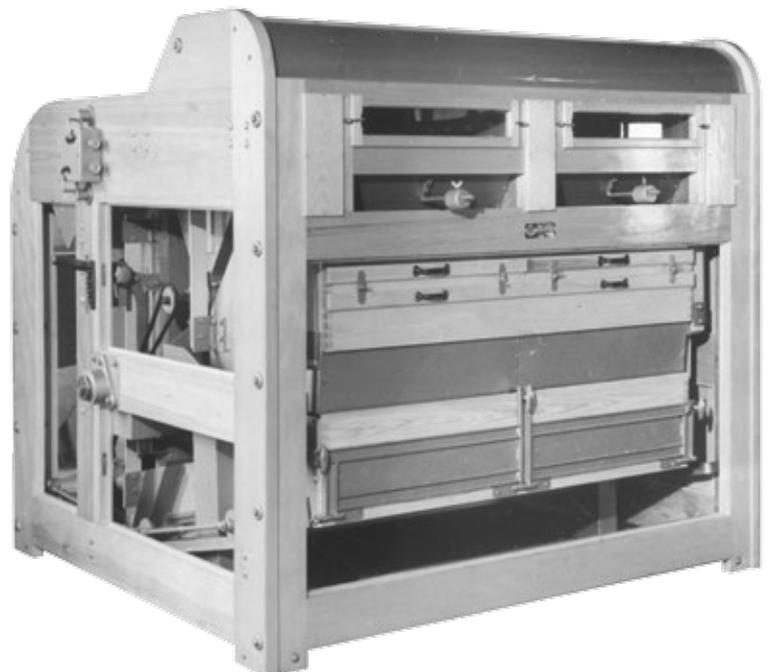


Fig.: AS 20 timber cleaner, year of manufacture 1953



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