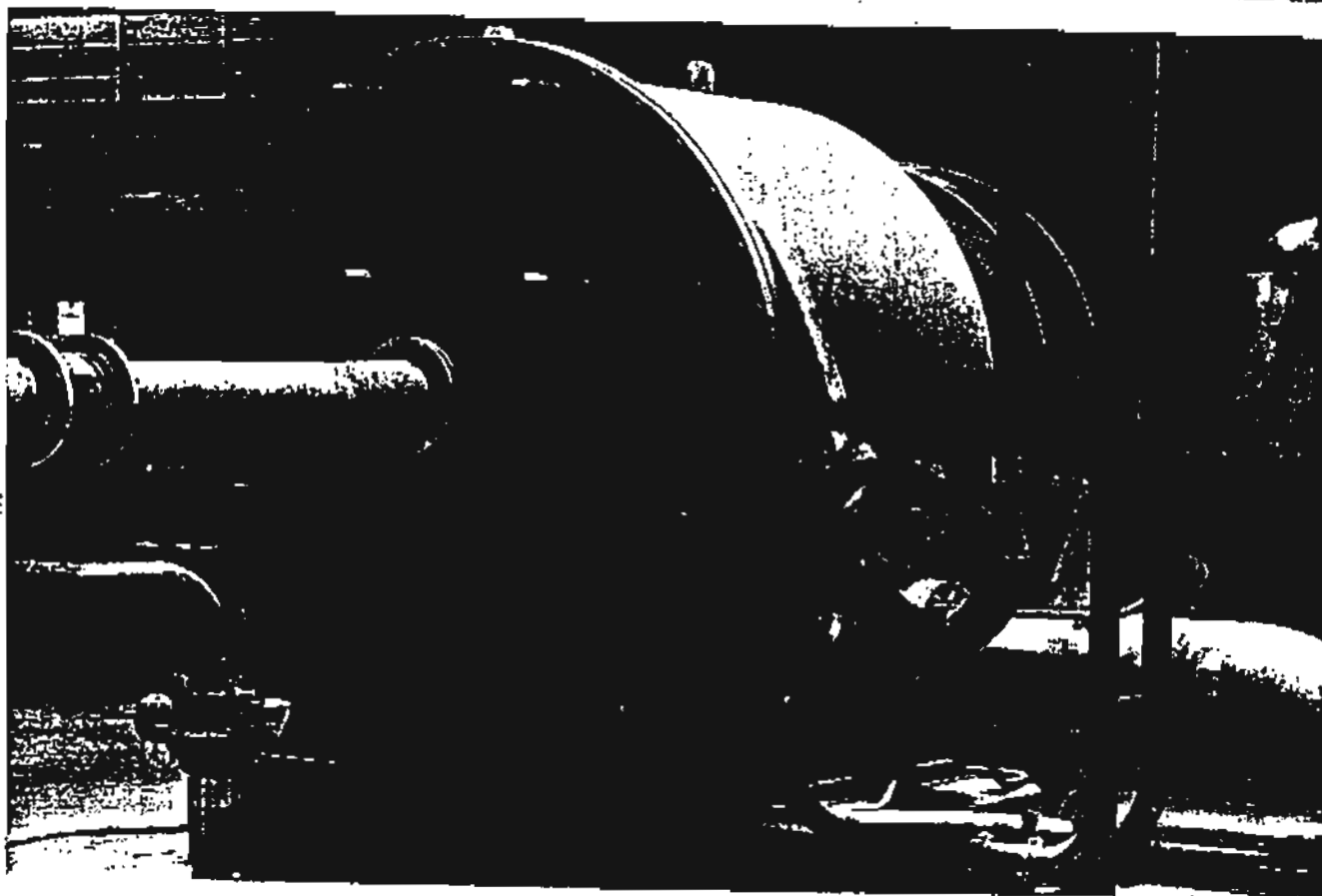


## Turbo Separator, type ATS

for preflushed secondary fibres

# VOITH



### Application

The Voith turbo separator, a highly efficient cleaning unit, is used in conjunction with the type AP waste paper pulper for the processing of unsorted secondary fibres.

This combination ensures trouble-free continuous operation for a virtually unlimited period. It need not be shut down for the cleaning of the pulper even if the furnish contains a high percentage of impurities.

In this two-stage pulping process, the secondary fibres are preflushed; they leave the pulper through a screen plate with large diameter perforations. Any floating and flat impurities such as polystyrene, cork, cellophane, etc., as well as specifically heavy contraries such as stones, staples, etc., are en-

trained by the flowing stock. The turbo separator discharges them separately as lightweight contraries and heavy dirt particles. At the same time, this machine also provides additional slushing.

### Basic Arrangement

Horizontal vat with wear-resistant cladding and feet and hinged cover on the front side; screen plate box with exchangeable screen plate, flanged onto the vessel. Horizontal shaft runs in grease-lubricated antifriction bearings. Shredding assembly of stainless steel, working edges have wear-resistant hard-faced overlay.

### Operation

The preflushed secondary fibres coming from the pulper flow continuously

through the turbo separator which provides additional slushing. The special design of the machine and the flow produced inside the vat provide the separation of lightweight contraries and heavy dirt particles contained in the stock. These components leave the turbo separator at different points. The lightweight contraries flow to a rescreening stage under the control of a timer-controlled valve. A centrifugal cleaner (KS 200/6 or KS 200/15) with an automatic dirt trap discharges impurities which have a higher specific gravity than the stock.

The turbo separator is driven via a flat belt drive.

In addition to the advantages of continuous operation, the process results in improved slushing action and pro-

duces a better cleaning effect than the single-stage arrangement. With the same specific energy consumption, the process boosts the slushing capacity of the pulper by about 50%.



#### Technical data

Size	08	10	20	21	30	31	40	41
to suit pulper size	AP 8/12	AP 12	AP 20	AP 26	AP 32	AP 40	AP 60	AP 80
Max. throughput [tons/24 hrs]	45	90	135	190	240	300	400	450
Power requirements [kW]	52	75	100	135	180	190	250	300
Motor rating [kW]	75	90	132	160	200	250	300	380
Impeller speed [1/min]	700	525	485	555	430	480	410	435
Motor speed [1/min]	1480	1480	1480	1480	1480	1480	1480	1480

#### Dimensions [mm]

h <sub>1</sub>	2055	2120	2225	2225	2535	2535	2995	2995
h <sub>2</sub>	1500	1400	1400	1400	1600	1600	1800	1800
l	1815	2840	3020	3020	3170	3170	3985	3985
DN <sub>1</sub>	150	200	200	200	300	300	350	350
DN <sub>2</sub>	150	200	200	200	300	300	350	350
DN <sub>3</sub>	100	125	125	125	150	150	200	200

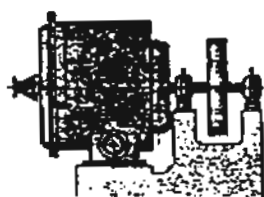
Dimensions and design subject to change.

# Voith Screening and Cleaning Machines — if reliability is what you are looking for!

Stock screening and stock cleaning — two important process stages. Paper quality and trouble-free operation of paper machines greatly depend on the cleaning result obtained.

And whatever you slush, Voith machinery can cope with every screening and cleaning problem. Engineering and technology are matched with modern production methods and with the impurities found in waste paper today.

Voith screens and cleaners are suitable for all production grades thanks to closely graded sizes, and keep energy requirements down. Advanced design and the choice of the most suitable materials ensure long operating life, simplify maintenance and thus increase availability.

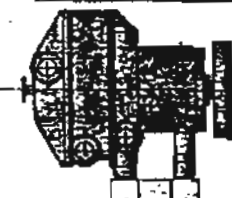


## Turboseparator®

For effective hole screening and further opening of the stock in the preparation of waste paper. Hole diameter 2.0–3.0 mm.

### 6 Sizes

Throughput [t/24 h]	45–450
Motor rating [kW]	75–360

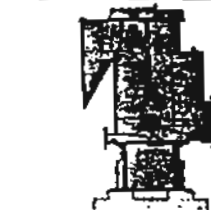


## Turbowasher

For forward screening in the rejects line. Fibre-free elutriation of impurities. Hole diameter 2.0–3.0 mm.

### 3 Sizes

Throughput [t/24 h]	20–115
Motor rating [kW]	110–160

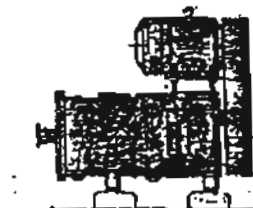


## Sortex®

Pressureless final-stage screen for the dewatering of concentrated contaminants. Hole diameter 4.0–12.0 mm.

### 1 Size

Throughput [t/24 h]	60
Motor rating [kW]	22
Final dryness of the rejects [% b.d.]	18–24



## Turbosorter

For effective slotted screening at stock consistencies of 3.0–4.0%. Slot widths 0.35–0.55 mm.

### 4 Sizes

Throughput [t/24 h]	70–220
Motor rating [kW]	45–110



## Vertical screen

For fine screening at stock consistencies of 0.8–1.0%. Hole diameter 1.0–2.0 mm. Slot widths 0.15–0.35 mm.

### 12 Sizes

Throughput [t/24 h]	80–1,400
Motor rating [kW]	15–280

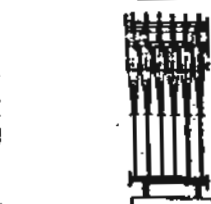


## Minisorter

For final-stage fine screening at stock consistencies of 0.8–1.0%. Hole diameter 1.0–2.0 mm. Slot widths 0.15–0.35 mm.

### 4 Sizes

Throughput [t/24 h]	8–65
Motor rating [kW]	3–22



## Centrifugal cleaners

In block arrangement with 6 units each for the effective discharge of fine heavy contaminants and light contaminants (sticky impurities).

2 Sizes	160/6E	250/3E
Throughput [t/min] per block	2,850–3,600	18,000
Stock consistency [% b.d.]	0.8–2	0.5–1.4

Dimensions and illustrations non-committal. Subject to change.

For detailed power data please refer to our

# VOITH

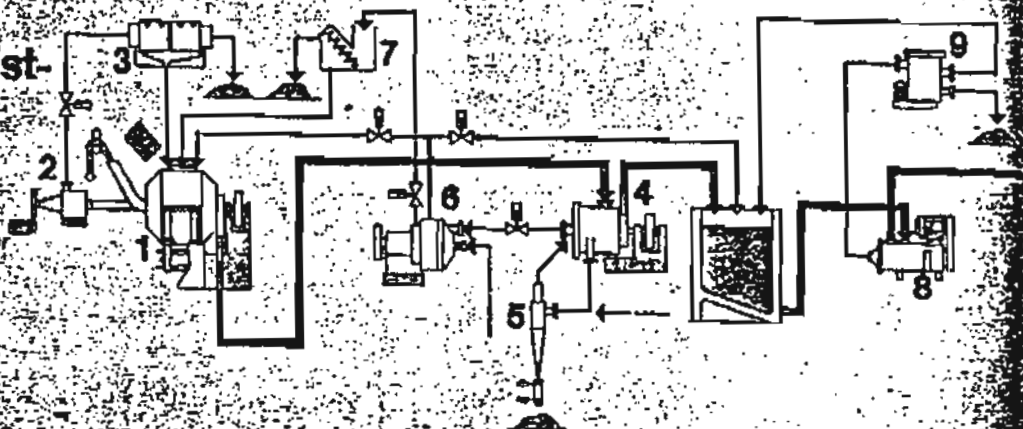
J.M. Voith GmbH  
Postfach 1940 D-7920 Heidenheim

Highly efficient and rugged single-purpose machines  
combined into efficient screening and cleaning systems

### Screening system for 3.0–4.5% stock consistency and medium to high throughputs

- 1 Pulper
- 2 Contaminex®
- 3 Screen drum
- 4 Turboseparator®
- 5 Centrifugal cleaner

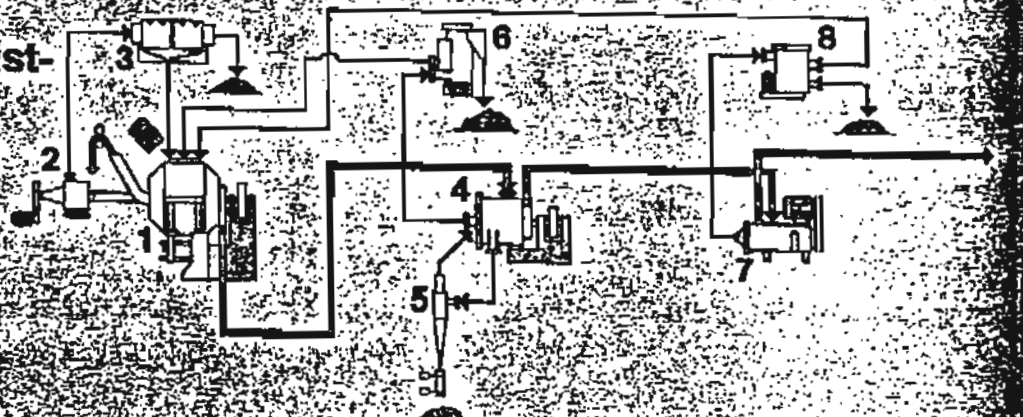
- 6 Turbowasher
- 7 Final-stage Drainer
- 8 Turbosorter
- 9 Minisorter



### Screening system for 3.0–4.5% stock consistency and low to medium throughputs

- 1 Pulper
- 2 Contaminex®
- 3 Screen drum
- 4 Turboseparator®
- 5 Centrifugal cleaner

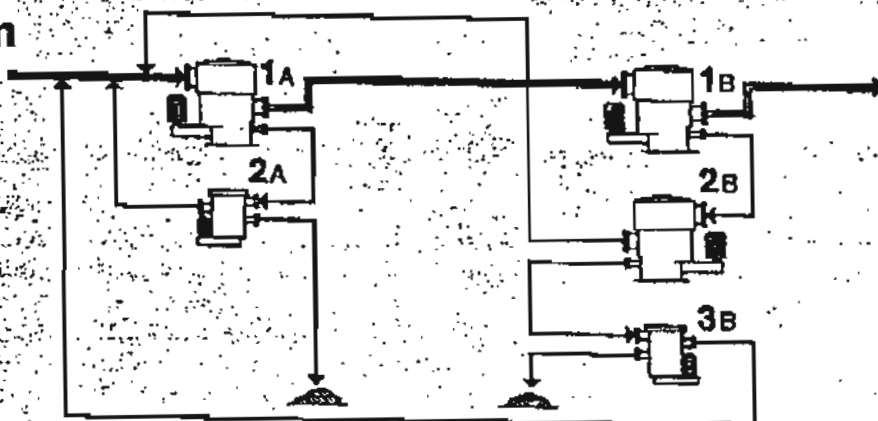
- 6 Sortex®
- 7 Turbosorter
- 8 Minisorter



### Fine screening system for 0.8–1.0%\* stock consistencies

- 1A Vertical screen (perforated screen basket)
- 2A Minisorter (perforated screen basket)
- 1B + 2B Vertical screen (slotted screen basket)
- 3B Minisorter (slotted screen basket)

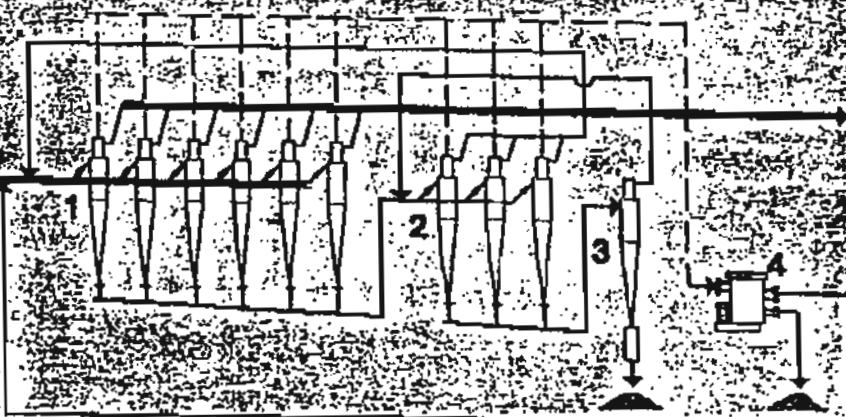
\* From 0.3% with long-fibre stocks to 1.3 %  
with Short Formers.



### Fine cleaning system for 0.8–1.0%\* stock consistencies

- 1 First stage: centrifugal cleaners with light contaminants discharge
- 2 Second stage: centrifugal cleaners with light contaminants discharge
- 3 Third stage: centrifugal cleaner(s) with Rejectomat®
- 4 Minisorter

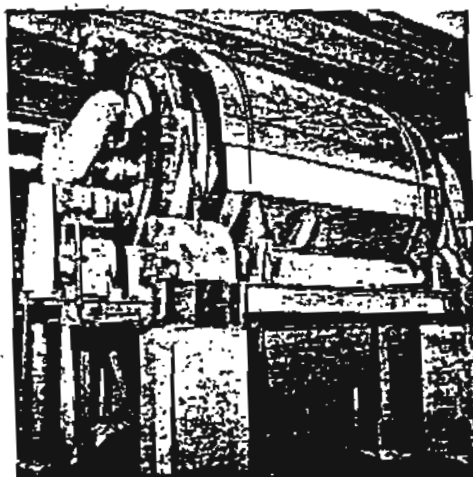
\* Up to 1.3% with Short Formers



Pulper waste removal by Contamriex® and screen drum for trouble-free continuous operation and thus higher production capacity. Turboseparator® with wear-resistant basalt lining for particularly effective hole screening. Unaffected by coarse impurities thanks to disc-screen principle. Very effective separation of heavy contaminants at 1.5–2.0% stock consistency by integrated centrifugal cleaners (Volth patent). Very good overall efficiency of the Turboseparator® stage by final-stage

screening with Turbowasher with perforations equal in size to or smaller than those of the Turboseparator®. Higher production by forward screening. Drip-free thickening of the fibre-free rejects by a final-stage Drainator (dewatering screw). For high purity requirements, especially for the separation of sticks, subsequent slotted screening stage with Turbo-sorter and Minisorter. The same slot width on both machines substantially increases the overall efficiency.

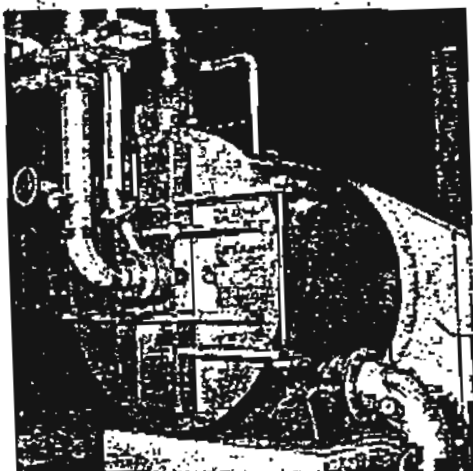
Photo: Screen drum



Screening system with all the advantages of system No. 1. A Sortex® is installed as final-stage screen instead of Turbowasher and final-stage Drainator. The accepts of this screen flow back into the pulper. The contaminants have a consistency of approx. 15%.

Simple arrangement with very good overall efficiency of the system.

Photo: Turboseparator®



Combination of pressure screens with perforated screen baskets in the A-stage and slotted screen baskets in the B-stage.

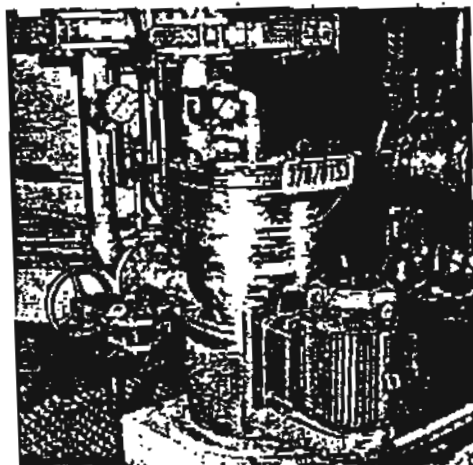
A-stage for the separation of chiefly flat contaminants.

B-stage for the removal of chiefly cubic contaminants, e.g., sticky impurities.

Each final stage has a Minisorter for the fibre-free discharge of trash.

Excellent overall efficiency of the screening system by the use of equal hole or slot widths in all screening stages.

Photo: Minisorter



Multi-stage centrifugal cleaner system for the discharge of fine heavy contaminants and impurities with a low specific gravity of different sizes and shapes, such as sticks.

Special centrifugal cleaners with light contaminants discharge in the first and second stages separate particularly sticky impurities.

Centrifugal cleaners with Rejectomat® in the third stage discharge heavy contaminants in concentrated form and fibre-free.

The Minisorter with very fine slots also effectively discharges the light contaminants of the first and second stages fibre-free.

Photo: Centrifugal cleaner system

