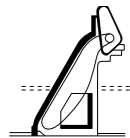


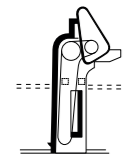
## Series and Types

The distance between the bosses of the filter elements (pitch) determine the AQUA-GUARD series. The type corresponds to the shape of the frame.

	Serie MN	Serie S
Pitch	100 mm	200 mm
Diameter of the shafts	18 mm	35 mm



**Type "C"**  
Installation angle: 60°C  
Free standing frame fixed in a flat-bottom channel.



**Type "T"**  
Installation angle: 85°C  
Fixed frame, supported at the top of the channel on four feet.

The capacity of an AQUA-GUARD depends on the screen width (channel width), the filtration mesh, the upstream water level and of course the SS content on the effluent to be treated.

		Max flow (m³/h)
<b>MN</b>	C	600
	T	3000
<b>S</b>	T	20 000

Example of a municipal waste water (SS: 200 mg/l).

## Typical applications

- Screening at inlet of municipal or industrial sewage treatment plants
- Water intake of water treatment plant (river, lake, ...)

## Industry

- Pulp and paper
- Meat processing, slaughterhouses
- Vegetable and fruit processing
- Food industry
- Wineries, breweries
- Textile industry
- Tanneries, bleaching, dyeing



# Aqua-Guard

## Self-washing continuous fine screen



**NORTH AMERICA**  
ANDRITZ SEPARATION Inc.  
Phone: +1 (817) 465 5611  
Fax: +1 (817) 468 3961  
separation.us@andritz.com

**EUROPE**  
ANDRITZ AG  
Phone: +43 (316) 6902 2318  
Fax: +43 (316) 6902 92318  
separation@andritz.com

**CHINA**  
ANDRITZ (China) Ltd.  
Phone: +86 (757) 6663 3419  
Fax: +86 (757) 6663 3448  
separation.cn@andritz.com

**AFRICA**  
ANDRITZ Delkor (Pty) Ltd.  
Phone: +27 (11) 466 2361  
Fax: +27 (86) 636 2122  
separation.za@andritz.com

**SOUTH AMERICA**  
ANDRITZ SEPARATION Ltda.  
Phone: +55 (47) 3387 9110  
Fax: +55 (47) 3387 9103  
separation.bra@andritz.com

**ASIA**  
ANDRITZ Singapore Pte. Ltd.  
Phone: +65 (6512) 1800  
Fax: +65 (6863) 4482  
separation.sg@andritz.com

**AUSTRALIA**  
ANDRITZ Pty. Ltd.  
Phone: +61 (3) 8773 4888  
Fax: +61 (3) 8773 4899  
separation.au@andritz.com

[www.andritz.com](http://www.andritz.com)

# ANDRITZ SEPARATION

## Self-washing continuous fine screen

Launched by ANDRITZ at the end of the Seventies, the fine screening concept has since been setting the standard in over 50 countries. The self cleaning AQUA-GUARD continuous belt screen has been a pioneer in this field and remains the reference.

### Operating principle

The AQUA-GUARD self-washing continuous screen can be quickly installed into any type of channel, including existing ones, and are easy to maintain due to their compact, robust design. Optimized operation and separation efficiency secure high throughput also for pollution-laden waters.

AQUA-GUARD is mainly composed of:

- a self-supporting welded frame
- a washing ramp located in the head of the equipment
- a motor coupled with a driving chain
- a filtration screen

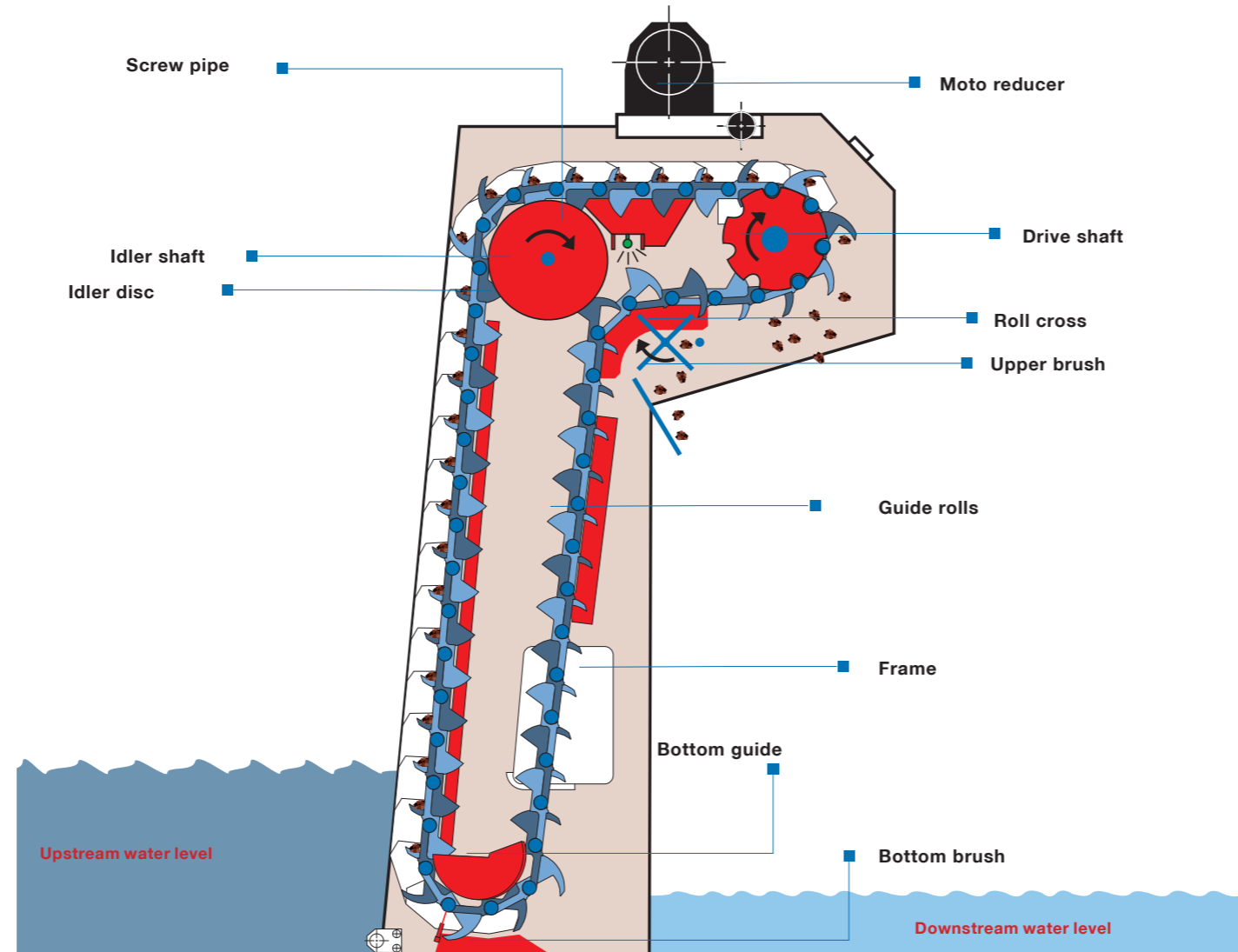
The filter elements are interconnected to form an endless belt which collects all undesirable solid materials, carries them away from the fluid, ejects the solids to a conveyor or container and then mechanically cleans itself so that a clean, unobstructed screening area is continuously presented to the moving liquid. Intermittent operation of the AQUA-GUARD fine screen minimizes wear and optimizes the screening efficiency in relation to the filter area.

- The material piles up, thus blinding the screen and increasing the effectiveness and the fineness of filtration.
- Large quantities of screening material form layers, which can be more easily discharged.

This is why ANDRITZ recommends intermittent operation for AQUA-GUARD fine screens by measurement of the headloss (DH = difference between the upstream and downstream water levels).

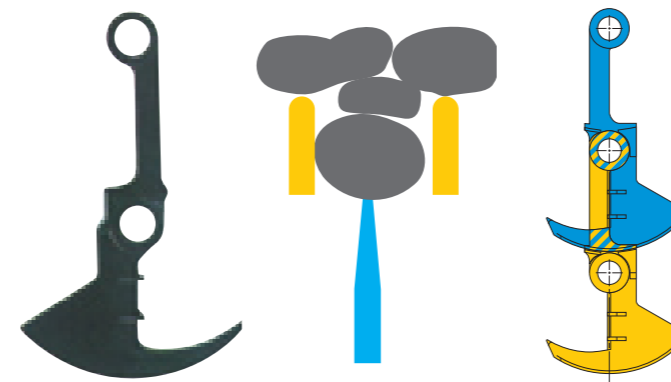
### Construction

Thanks to the special shape of the filter elements the AQUA-GUARD fine screen is uniquely placed among its competitors in terms of screening capacity, in terms of throughput as well as size of the solids to be removed.



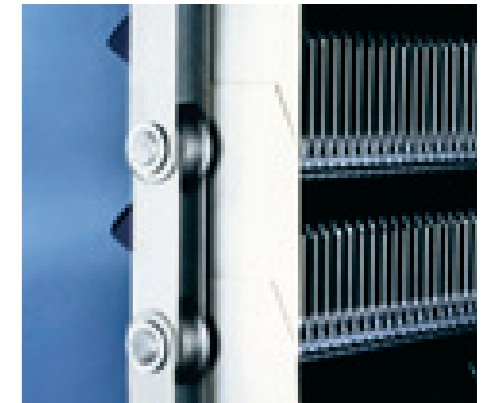
### 1. Filter elements

The patented design of the filter elements and their special arrangement, forming an endless filter belt, are the typical features of the AQUA-GUARD fine screen. Fitted to a support frame and interconnected, they form the screen's filtering area. The high-strength filter elements or hooks are made of moulded ABS. The following standard mesh sizes can be selected: 1 mm - 3 mm - 6 mm - 10 mm - 15 mm.



### 2. Double filter zone, self-cleaning feature

The AQUA-GUARD fine screen is the only one on the market that offers this double feature. The special shape of the teeth and their arrangement provide a vertical and horizontal - i.e. double - filtration mesh. Continuous self-cleaning is achieved by the interacting, interlocking filter elements.



### 3. Drive chains

The AQUA-GUARD continuous fine screen is driven via chains mounted on each end of the filter element support shafts, with the additional advantage of providing stability. Made of stainless steel AISI 403/30, the chains are very sturdy and can thus withstand temporary hydraulic overloading from high flows.

### 4. Robust, simple frame

Two firmly connected lateral supports form the AQUA-GUARD frame. The material finish can be selected from a number of options: painted carbon steel or stainless steel 304L / 316L. The self-supporting frame can be directly fixed at the bottom of a channel. The AQUA-GUARD features simple installation and ease of operation in any type of channel. Available screen sizes: 300 mm to 3000 mm width and 1 m to more than 12 m discharge height. The current maintenance of the AQUA-GUARD is limited to greasing and cleaning; it is very easy to reach the wear parts. The possible repairs are very quick and can be carried out on site mainly above channel (no immersed bearings).

