

# Traveling bandscreen

## Fine filtration

Hubert traveling bandscreens are designed for fine filtration of surface water. The traveling bandscreen requires only a small installation area due to the vertical construction. That is why this type of screen is applied in places where the construction area of the total cleaning installation has to be restricted or where big differences occur between water levels. Traveling bandscreens can be used with channel depths of up to 15 meter and widths of up to 4 meter.

## Types

Hubert bandscreens can be divided into three main types:

- dual flow bandscreen (DF): has two inlets on the outside and a central outflow on the inside (Fig. A)
- central Dual Flow bandscreen (CDF); has a central inflow and outflow on two sides (Fig. B)
- cross flow bandscreen (CF): features radial flow through the mesh screens (Fig. C)

## Dual Flow bandscreen

The Dual Flow bandscreens are available in two different executions:

- **skid type**  
this type of bandscreen is built in a self-supporting casing
- **embedded type**  
this type of bandscreen is mounted against the concrete walls on embedded anchor plates

Both the DF and CDF types are suitable for capacities of 2,500 to 100,000 m<sup>3</sup>/h.



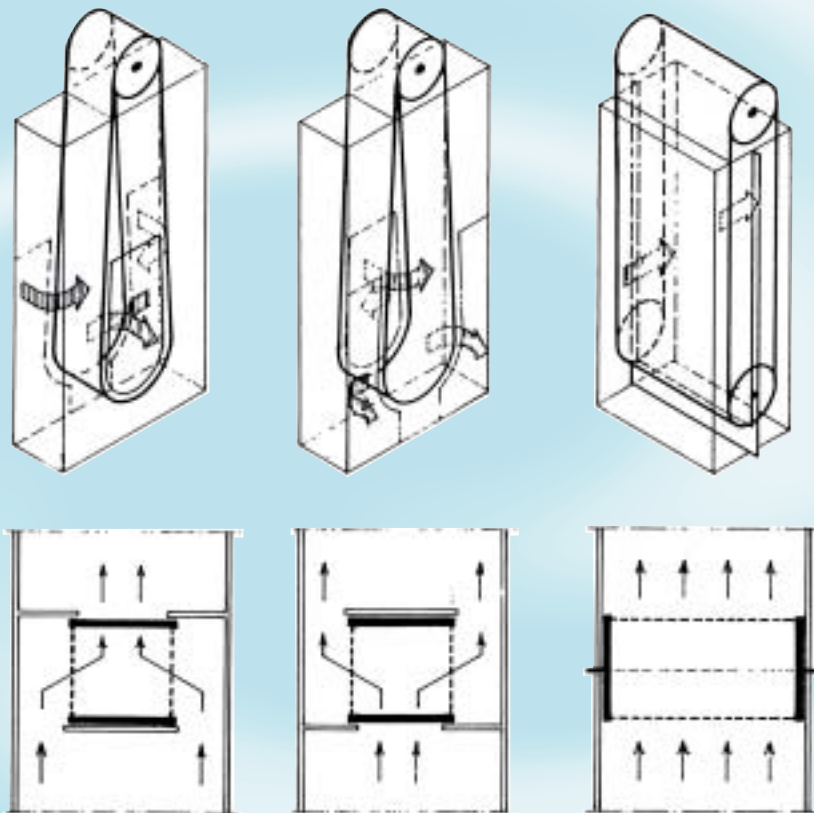
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## Cross flow bandscreen

Cross flow bandscreens are applied where the available channel width is limited (up to 5 meters). The water flows from one side through the screen-panels. The water leaves the screen through the other side, passing the screenpanels a second time. This type of screen has the advantage that the water flow does not change direction, which limits the in and outflow headloss.

Cross flow screens can either be installed upright or at an angle with the flow. This type is suitable for capacities of about 1.500 to 50.000 m<sup>3</sup>/h.

A. DUAL FLOW    B. CENTRAL DUAL FLOW    C. CROSS FLOW



## Design and construction

Bandscreen operates on the principle of a conveyor belt. In this case the belt has been replaced by mesh panels which are mounted between two endless transport chains. The chains are driven by two sprockets. The debris which is trapped on the screens is removed by water jets and discharged through a flushed chute. The drive unit, flushing mechanism and debris hopper are located on deck level. The upper section above deck level is provided with a metal or reinforced plastic cover. The mesh size varies from 2 x 2 mm to 10 x 10 mm, depends on the region size of screening. Special models can be provided with facilities for the removal and discharge of other debris like jellyfish, seaweed etc. Bandscreens are available in coated or stainless steel construction.

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## Advantages

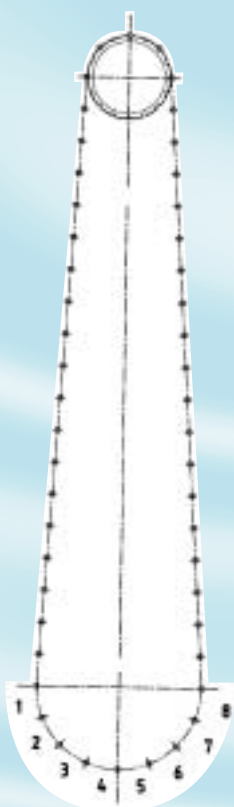
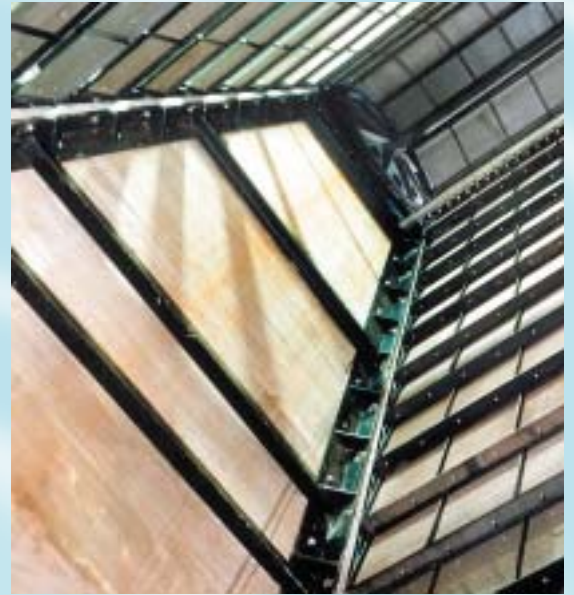
- large flow capacities
- suitable for large level difference
- debris removed at or above deck level, eliminating the need for a debris pump
- because none of the moving parts is constantly submerged, inspection and maintenance can be easily carried out at deck level

## Process Data Sheet

Water depth (mm)	Screenpanel Width			
	500	1000	1500	mm
1000	1500	1800		m <sup>3</sup> /h
2000	3500	7400		m <sup>3</sup> /h
3000	5200	11000	15500	m <sup>3</sup> /h
4000	6800	13500	21500	m <sup>3</sup> /h
5000	8400	17000	26000	m <sup>3</sup> /h
6000	10000	20000	31000	m <sup>3</sup> /h
7000	11500	23500	36000	m <sup>3</sup> /h
8000	13000	27000	41000	m <sup>3</sup> /h
9000	14500	30000	45000	m <sup>3</sup> /h
10000	16500	33000	50000	m <sup>3</sup> /h
	4	6	8	pcs 1)

1) panels in lower bend                      see sketch below

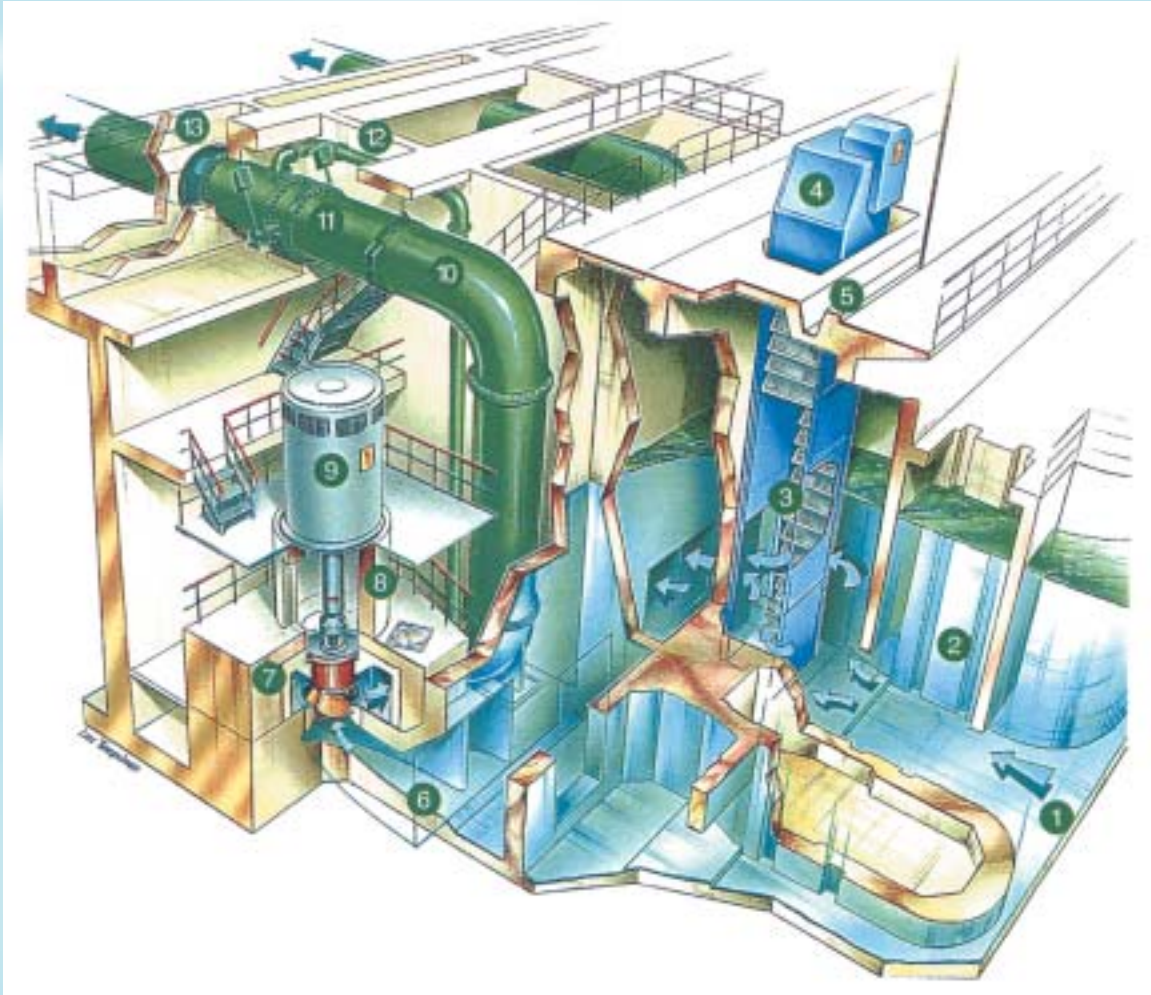
Screen mesh 5 x 5 mm  
Wire diameter 1 mm



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## Demkolec, Buggenum

Two double entry, dual flow traveling bandscreens  
capacity 17,280 m<sup>3</sup>/h, screen width 1.50 m.  
channel depth 14.75 m.



- |   |                                     |
|---|-------------------------------------|
| 1. Water intake                                   | 7. Stork BSV-Pump                   |
| 2. Recesses for inspection hatch                  | 8. Motor stand                      |
| 3. Hubert Traveling bandscreens                   | 9. Pump drive motor                 |
| 4. Hubert bandscreen drive and spraywater housing | 10. Pump discharge line             |
| 5. Debris discharge gutter                        | 11. Hydraulic controlled checkvalve |
| 6. Pump suction chamber                           | 12. Water priming line              |
|   | 13. Expansion bellows               |

Artist impression: courtesy of Stork Pompen bv.

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Kooyweg 20 8715 EP Stavoren • P.O. Box 29 8715 ZH Stavoren  
Tel. +31 514 684444 • Fax +31 514 682198 • info@hubert.nl • www.hubert.nl