



Hydrasand[®]
Continuous Sand Filter

■ *Description of Operation*

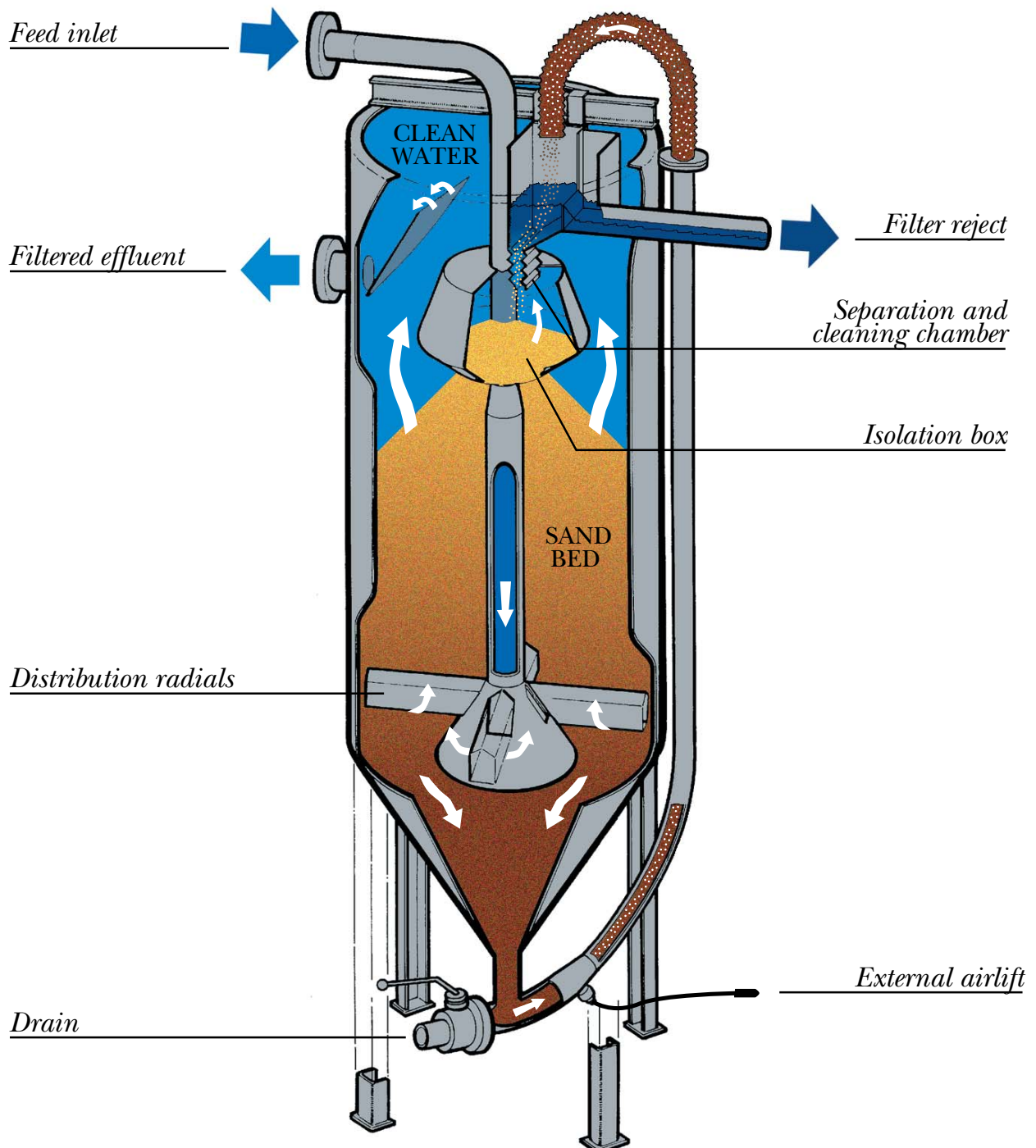
Raw influent is fed into the base of the sand filled, cone bottomed filter. The flow then rises through the sand so that clean effluent is discharged over the upper weir.

The rising flow of the effluent is distributed evenly over the whole cross section of the filter by means of a radial grating system.

The contaminated sand falls continuously to the bottom cone outlet from where it is transferred by an external air-lift to the wash chamber at the top of the unit.

Final backwashing of the sand is then performed by a counter current of clean water before returning to the sand bed in the isolation box.

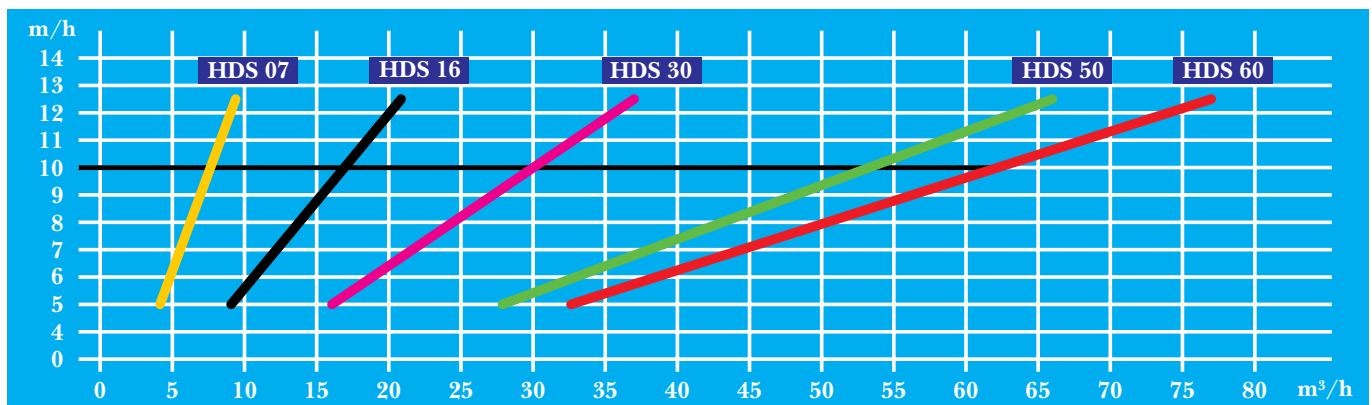
The dirty wash water is discharged over the lower weir for disposal.



■ *HYDRASAND® advantages*

- ✓ Continuous operation and cleaning
- ✓ High filtration efficiency
- ✓ Superior lift and scouring of sand
- ✓ External airlift for better accessibility
- ✓ No possible contamination of clear water by returning sand
- ✓ Efficient final rinse of sand into the isolation box
- ✓ Manageable reject stream
- ✓ Minimum maintenance cost
- ✓ Adaptability of sand bed depth
- ✓ Flexibility of design
- ✓ Minimum energy requirements
- ✗ No shutdown for backwash
- ✗ No moving parts
- ✗ No backwash material required

■ *Flow rate performance*



■ *Performance by application*

Application	Inlet raw water	Outlet filtrates
Tertiary treatment	SS 30 - 70 MG/L	SS < 5 MG/L
Phosphorous removal	P 2 - 5 MG/L	P < 0,5 MG/L
Potable water	2 - 10 NTU	< 0,5 NTU
Recirculation of process water	SS 40 - 100 MG/L	SS 5 - 15 MG/L
Paper mill waste water	SS 5 - 80 MG/L	SS 1 - 10 MG/L
Metal finishing waste treatment	SS 20 - 180 MG/L	SS < 5 MG/L
Oily waste	10 - 30 MG/L HC	1 - 10 MG/L HC

■ *Technical data*

Model	Filtration area (m²)	Diameter (m)	Total Height		Requirement (Nm³/h at 4 bar)	Reject flow
			Single bed (m)	Double bed (m)		
HDS 07	0,70	0,95	3,260	4,260	1,5	ca. 5 %
HDS 16	1,60	1,45	4,210	5,210	2,0	ca. 5 %
HDS 30	2,90	1,95	4,650	5,650	5,5	ca. 5 %
HDS 50	5,10	2,55	5,335	6,335	10,0	ca. 5 %
HDS 60	6,00	2,75	5,600	6,600	12	ca. 5 %

Main applications

- ✓ Tertiary Treatment
- ✓ Phosphorous Removal
- ✓ Biofiltration
- ✓ Algae Removal
- ✓ Potable Water Reclamation
- ✓ Membrane Filter Pretreatment

- ✓ Water Reclamation
- ✓ Groundwater Remediation
- ✓ Metal Finishing
- ✓ Mill Scale Removal
- ✓ Chemical Processing
- ✓ Cooling Towers



Photo : Foto Team Stone

France

Andritz S.A.S.
2/4 avenue de l'Europe
78140 VELIZY
Tel. +33 (0)1 39 26 05 50
Fax +33 (0)1 39 26 05 60

Austria

Andritz AG
Stattegger Strasse 18
A-8045 Graz
Tel. +43 316 6902-0
Fax +43 316 6902-415

United Kingdom

Andritz Ltd
Unit B - Sheepbridge Centre
Sheepbridge Lane
Chesterfield,
Derbyshire, S41 9RX
Tel. +44 (0)1246-260660
Fax +44 (0)1246-260760

Germany

Andritz GmbH
Stephanopeler Strasse 22
D-58675 Hemer-Sundwig
Tel. +49 2372 9696-0
Fax +49 2372 9696-50

Spain

Andritz Ingenieria S.A.
c/Agustín y Antonia, 12
E- 28700 San Sebastián
de los Reyes
Tel. +34 91 663 64 09
Fax +34 91 651 19 31

U.S.A.

Andritz Ruthner, Inc.
1010 Commercial Blvd. South
Arlington, Texas 76017
Tel. +1 817 4655611
Fax +1 817 4683961