



# Micro Drum Filters



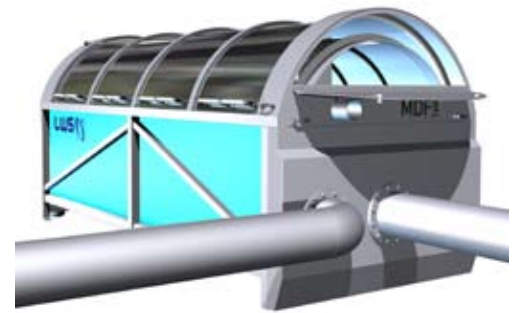
LWS Solutions Micro Drum Filter (MDF) is a pressure less system with the purpose of physically removing or recovering solids, debris or fibres from 20 micron and larger out of process liquids. Next to the below mentioned application areas Micro Drum Filters have an important function in pre-filtration and polishing in wastewater treatment plants.

LWS Solutions Micro Drum Filters self-cleaning functionality in combination with a large filtration surface guarantee a high flow capacity from 20 m<sup>3</sup> up to 2000 m<sup>3</sup> per hour.

MDF features an integrated collect and discharge system, that dewateres the solids and ensures that waste material easily can be conveyed for disposal or further treatment.

LWS Solutions Micro Drum Filters are designed for continuous use and ensure a low maintenance frequency and a long service life.

The construction is compact and engineered for easy operation. All parts, including the screens, are made from stainless steel and chemical resistant materials.



## Advantages

- Efficient and continuous removal of organic matter and light floating solids from river-, lake, sea and process water;
- Completely automatic operation; easy installation
- Separation down to 20 micron; exchangeable elements
- No pressure required, gravity fed system
- Low energy use, limited maintenance and labour requirement, low operational costs
- Level controls initiate motor and pump functions only when required
- No process interruptions
- Unlimited flow capacity in small footprint
- Efficient and high reduction of suspended solids
- Reduction of BOD5 and COD
- Reduction of phosphorus, ammonia, nitrogen levels

## Applications

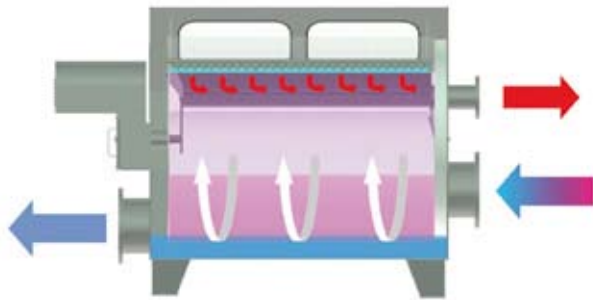
- Intake water; river-, lake- & seawater
- Pre-filter and effluent polishing in municipal and industrial WWT plants
- Process water; removal of organic and fibrous solids
- Desalination plants
- Membrane filtration plants
- UV - pre-filter
- Power plants
- Waste water treatment plants, communal and industrial
- Pulp & paper processing
- Food processing; re-use of washing w
- Irrigation
- Aqua culture; fish farming



## Working Principle

Process water flows under gravity into the rotating drum. The filter element collects floating debris, solids or fibres. Controlled by level control the drum starts rotating and subsequently the spray system is started. The screen is cleaned with directed spray nozzles using filtered water which forces

the solids into the collection and discharge tray. Collected dirt is forced out of the collection tray with a screw and subsequently collected in a suitable tank. Filtered water flows out of the filter through the lower placed outlet.



## Features

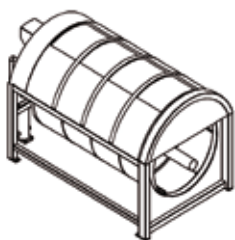
Material	Sump FRP (fiber reinforced plastic) Frame stainless steel* Cover Stainless steel Screen stainless steel mesh wire Collection tray Stainless steel Screw Stainless steel Other parts Stainless steel Viton Seals Durable supporting wheels	Outlet	DN flanged
Pump	vertical high pressure, stainless steel	Sludge outlet	DN flanged
Motor	direct chain drive	Controls	Level controls (3 levels) Soft start Control cabinet
Capacity**	20 m <sup>3</sup> up to 2000 m <sup>3</sup>	Spray Nozzles	Water consumption Screen wash system 2.2 l/min per nozzle, 10 nozzles/ meter Required pressure screen < 40 µm 10 -12 bar screen > 40 µm 6-7 bar
Inlet	DN flanged	Filter elements	20 micron and higher

Element Size	Amount of suspended solids	Capacity in m <sup>3</sup> /hour per m <sup>2</sup> of filter surface
20 micron	40 mg/ltr	30
40 micron	40 mg/ltr	55
70 micron	40 mg/ltr	80

Above mentioned data are indications only.

\* other materials possible

\*\* capacity is related to the chosen element size and the amount of suspended solids



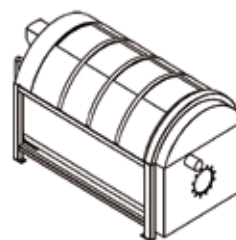
open inlet/without tank



open inlet/with tank



pipe inlet/with tank



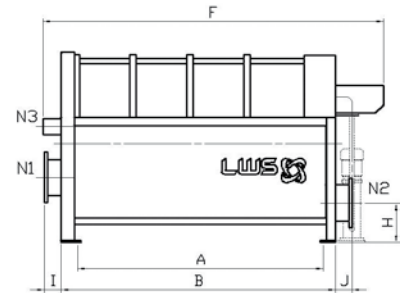
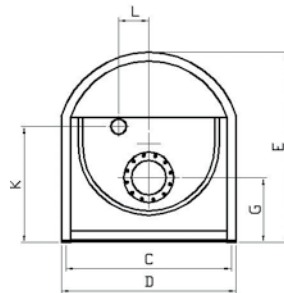
pipe inlet/with tank and by-pass

Configurations shown above are standards. Other combinations are possible.

## General Data

Type	A	B	C	D	E	F	G	H	I	J	K	N1	N2	N3
801	607	773	987	1040	1130	1170	387	235	100	100	687	ND150	ND150	ND125
802	1115	1281	987	1040	1130	1675	387	235	100	100	687	ND150	ND150	ND125
803	1623	1789	987	1040	1130	2185	387	235	100	100	687	ND150	ND150	ND125
804	2131	2297	987	1040	1130	2693	387	235	100	100	687	ND150	ND150	ND125
1202	1180	1429	1480	1560	1695	2020	580	353	150	150	1030	ND300	ND300	ND125
1203	1688	1937	1480	1560	1695	2530	580	353	150	150	1030	ND300	ND300	ND125
1204	2196	2445	1480	1560	1695	3040	580	353	150	150	1030	ND300	ND300	ND125
1602	1164	1413	1880	1960	2086	1993	650	424	150	150	442	ND450	ND450	ND125
1604	2180	2429	1880	1960	2086	3010	650	424	150	150	442	ND450	ND450	ND125
1606	3196	3445	1880	1960	2086	4025	650	424	150	150	442	ND450	ND450	ND125
2004	2217	2528	2350	2450	2608	3254	813	530	200	200	552	ND500	ND500	ND125
2006	3233	3544	2350	2450	2608	4270	813	530	200	200	552	ND500	ND500	ND125
2008	4249	4560	2350	2450	2608	5286	813	530	200	200	552	ND500	ND500	ND125

Above mentioned data are indications only.



## Separators and Strainers

Beside Micro Drum Filters we also develop and produce standard and custom made Separators and Strainers. If you are interested in our products please contact us by phone or by email.



## LWS Solutions BV



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