PRETREATMENT EQUIPMENT

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ANR ENGINEERING

TÜV NORD ISO 9001 : 2015

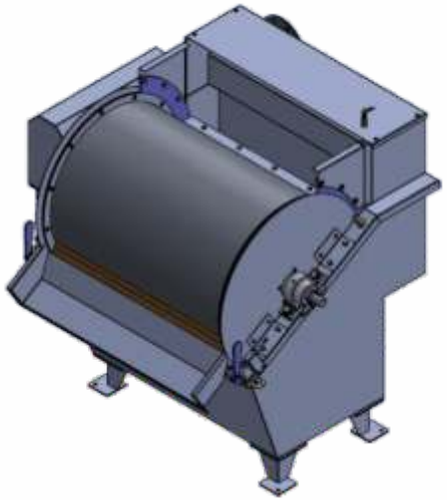
DWA Klare Konzepte. Saubere Umwelt.

MADE IN GERMANY

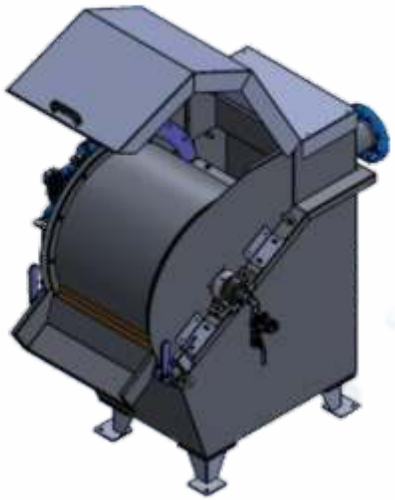
Member of German Water Partnership

DRUM SCREEN DS-SERIES

The DS drum screen separates and screens suspended solids and fibers from process or wastewater. The machine is made of stainless steel. The wastewater is fed by gravity or by pump into a rotating drumscreen. Due to the mesh size of the drumscreen, the waste/process water flows through the screen while the solids and particles are retained on the rotating drum and removed with a special knife scraper into the tray.



Drumscreen DS60-90 without cover



Drumscreen DS40-50 with cover

Materials:

Drum: AISI304, AISI316
Body: AISI304, AISI316
Knife scrapper: brass

Level sensors:

LI 5143 (IFM)
KF 5001 (IFM)

Option:

Stainless steel cover
Control panel with VFD
Screw compactor

Flush valve :

Ball valve + Solenoid valve 2/2 24/220V (Bürkert 6211)

Gearbox with Motor:

V=230/400, 50/60Hz, Ip65

TECHNICAL INFORMATION DRUMSCREEN DS40-XX SERIES

Drum diameter 400mm

Type	Drum length, mm	Installed power	Width, mm	Length, mm	Height, mm	Inlet	Overflow	Outlet
DS40-25	250	0,25kW	700	1.200	1.000	DN100	DN100	DN100
DS40-50	500	0,25kW	950	1.200	1.000	DN150	DN100	DN100
DS40-75	750	0,25kW	1.200	1.200	1.000	DN200	DN100	DN100

CAPACITY

m^3/h clean water

Typ	Screen gap. mm				
	0,15	0,25	0,50	0,75	1,00
DS40-25	7	11	19	25	30
DS40-50	14	21	36	50	60
DS40-75	21	32	56	75	90

DRUMSCREEN DS60-XX SERIES

Drum diameter 600mm

Type	Drum length, mm	Installed power	Width, mm	Length, mm	Height, mm	Inlet	Overflow	Outlet
DS60-50	500	0,55kW	1.082	1.335	1.299	DN250	DN100	DN200
DS60-90	900	0,55kW	1.382	1.335	1.299	DN250	DN100	DN200
DS60-120	1.200	0,75kW	1.782	1.335	1.299	DN300	DN100	DN250
DS60-150	1.500	0,75kW	2.082	1.335	1.299	DN350	DN100	DN300

CAPACITY

m^3/h clean water

Typ	Screen gap. mm				
	0,15	0,25	0,50	0,75	1,00
DS60-50	20	32	60	80	90
DS60-90	35	54	95	127	152
DS60-120	46	72	127	169	203
DS60-150	58	90	159	212	254

DISSOLVED AIR FLOTATION DAF

PROCESS DESCRIPTION

Dissolved air flotation (DAF) is a water treatment process that clarifies wastewaters (or other waters) by the removal of suspended matter such as oil or solids. The removal is achieved by dissolving air in the water or wastewater under pressure and then releasing the air at atmospheric pressure in a flotation tank basin. The released air forms tiny bubbles which adhere to the suspended matter causing the suspended matter to float to the surface of the water where it may then be removed by a skimming device.

Dissolved air flotation is very widely used in treating the industrial wastewater effluents from food processing, oil refineries, petrochemical and chemical plants, natural gas processing plants, paper mills, general water treatment and similar industrial facilities. A very similar process known as induced gas flotation is also used for wastewater treatment. Froth flotation is commonly used in the processing of mineral ores.
In the oil industry, dissolved gas flotation (DGF) units do not use air as the flotation medium due to the explosion risk. Nitrogen gas is used instead to create the bubbles.

TYPE OF MASHINES

B-	F-	N-	H-	100-	S 316-	W
P- Pretreatment	**F-** Flotation	**A-** Air	**V-** Vertical	**5-1000** Nominal flow, m^3/h	**S 304-** Material AISI304	**L** with Lamela
B- Biological	**S-** Sedimentation	**N-** Nitrogen	**H-** Horizontal		**S 316** Material AISI 316	**W** without Lamela
F- Fat remover					**D** Material Duplex	
R- Rainwater						

POSSIBLE OPTIONS:

Material:
AISI 304
AISI316
Duplex

Saturation:
Vertical
Horizontal

Air Injection
Direct into pump
After pump

Saturation pump
One stage pump
Multistage pump

Valves
Ball valves
Membrane valves

Flocculation pipe
HDPE
PVC
Stainless steel

Reagent dosing
Membrane pumps
Screw pumps
Delution station
pH Sensor

Additional
Lamela
Cover
Stairs
Control cabinet
Pneumatic cabinet

TECHNICAL DATA

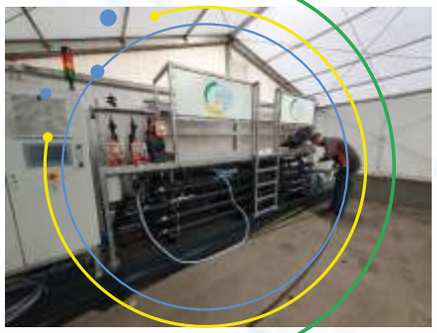
TYPE	FLOW 1* m^3/h	FLOW 2* m^3/h	Length* mm	Width* mm	Height* mm
FAV-10	10	5	3.800	1.400	1.700
FAV-20	20	10	4.600	1.900	2.100
FAV-30	30	15	6.200	1.900	2.200
FAV-40	40	20	7.000	2.450	2.400
FAV-60	60	30	9.000	2.450	2.400
FAV-90	90	45	11.500	2.450	2.400
FAV-100	100	50	11.500	3.400	2.500
FAV-120	120	60	12.000	3.400	2.500
FAV-140	140	70	13.500	3.500	2.500
FAV-160	160	80	15.100	3.500	2.500
FAH-200	200	100	7.500	3.800	2.400
FAH-400	400	200	11.600	3.800	2.400
FAH-600	600	300	14.200	3.800	2.400

*- this data could be changed if wastewater parameters are different
FLOW1 – Pretreatment, fat remover, rainwater (TSS up to 3.000 mg/L)
FLOW2 – Biological (TSS up to 6.000mg/L)

EXAMPLES

DAIRY

- 1 x PFAH-160-S304-W
- 2 x BFAH-160-S304-W



COSMETICS

- 1x PFAH-20-S304-L

RAINWATER

- 1x RFAH-60-S304-L

SLAUGHTERHOUSE

- 1x PFAV-200-S316-L

Made in Germany

EXAMPLES

VEGETABLES

- 1x PFAH-30-S316-W

POTATO FLACES

- 1x PFAH-60-S316-W
- 1x BFAH-120-S316-W

OIL REFINERY PLANT

- 2x PFHV-200-S316-L

WEAT PROCESSING

- 1x RFAH-60-S304-L

Made in Germany

POLYMER UNIT CS-SERIES

Materials:
AISI 304 AISI 316 HDPE

Level sensors:
Ultrasonic

Flush valve :
Ball valve + Solenoid valve 2/2 24/220V (Bürkert 6211)

Powder dosing system:
25 kg (one bag)/ 50kg (two bags) bunker
Heating for dosing auger

Flowmeter:
12-36V 4…20mA (Bürkert 8012)

Control cabinet
7'' HMI touch screen Siemens based PLC

Option:
Additional mixer
Membrane dosing pump (any capacity)
Screw dosing pump (any capacity)
Liquid polymer dilution system

PULVER POLYMER

Model	CS600	CS1100	CS1500	CS1900	CS3000
Volume	600	1100	1500	1900	3000
30 Min Maturation L/h	1200	2200	3000	3800	6000
60 Min Maturation L/h	600	1100	1500	1900	3000
Power, kW	0,9	0,9	1,2	1,2	1,5

EMULSION POLYMER

Model	CL600	CL1100	CL1500	CL1900	CL3000
Volume	600	1100	1500	1900	3000
15 Min Maturation L/h	2400	4400	6000	7600	12000
30 Min Maturation L/h	1200	2200	3000	3800	6000
Power, kW	0,5	0,6	0,7	0,8	0,8

PULVER UND EMULSION

Model	CSL600	CSL1100	CSL1500	CSL1900	CSL3000
Volume	600	1100	1500	1900	3000
30 Min Maturation L/h	1200	2200	3000	3800	6000
60 Min Maturation L/h	600	1100	1500	1900	3000
Power, kW	1,1	1,1	1,3	1,3	1,7

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