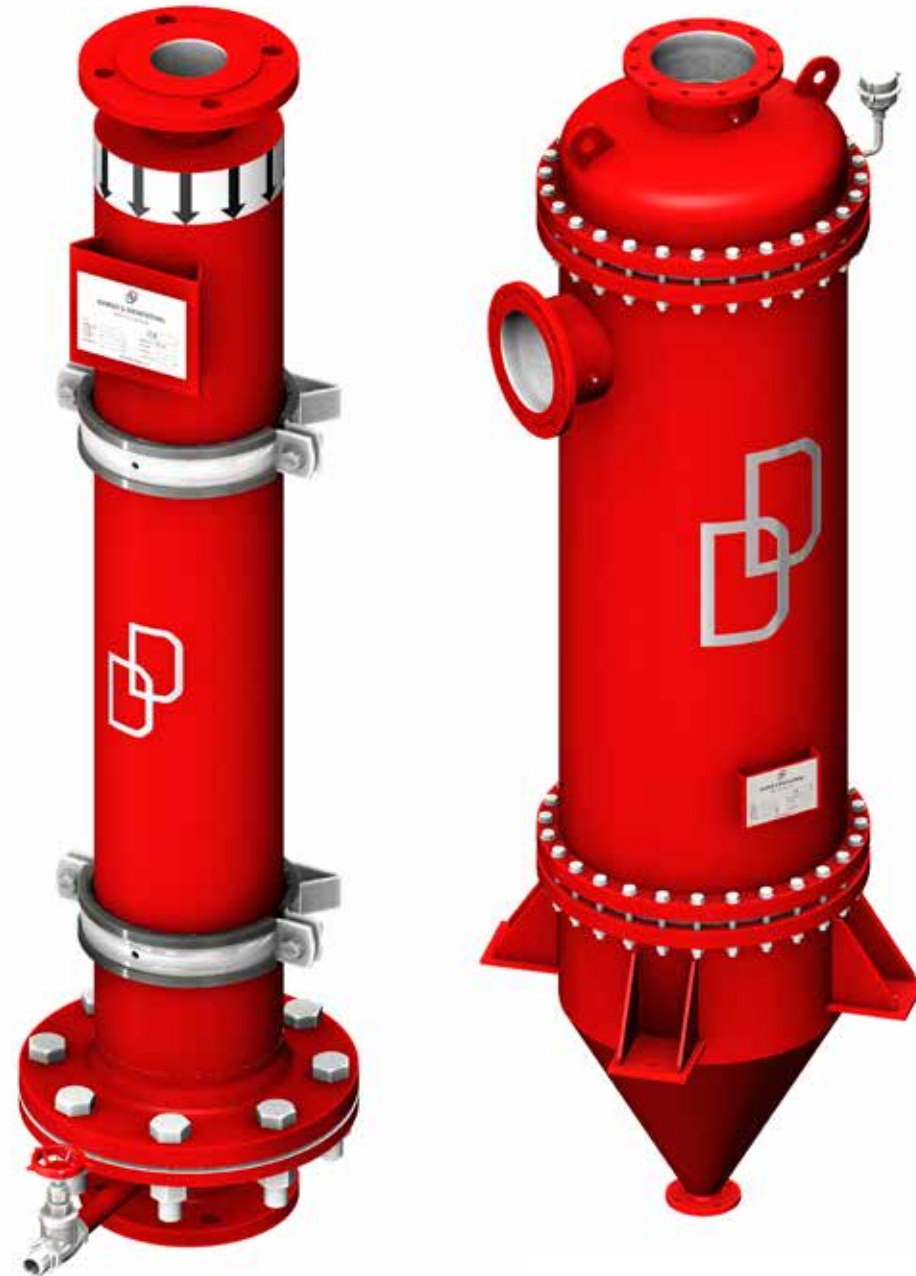


SEPARATORS

FILTER WITH CENTRIFUGAL SEPARATION



DANGO & DIENENTHAL

BETTER VALUES.

SEPARATOR (SPR)

FILTER WITH CENTRIFUGAL SEPARATION

The separation of particles with specific weights is ensured by the combination of centrifugal separation in the outer and inner vortex and the inertia at the slotted tube.

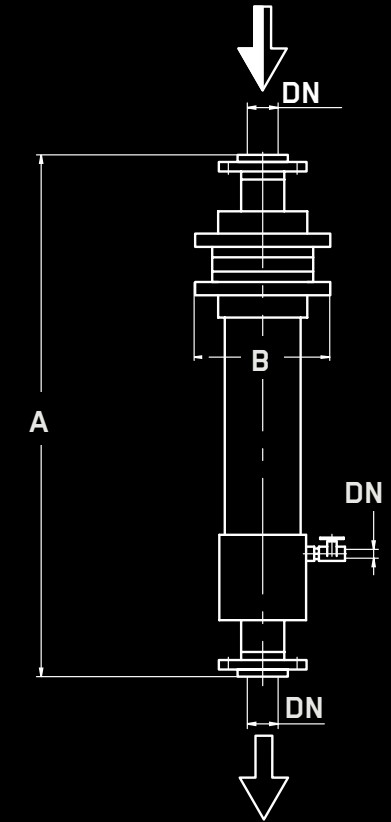
FILTER HOUSING

Standard design	Steel, plastic
Special design	Stainless steel

Special designs possible for filter housings and technical specifications. Feel free to contact us! We are happy to advise you.

TECHNICAL DATA

Flow rate	Max. 250 m ³ /h
Filter fineness	≥ 5 μm
Operating pressure	2 to 63 bar
Pressure loss with clean filter	1 to 2 bar
Flanges	DN 50 to 200
Temperature	-10 to +110 °C
Inline design	Yes



ADVANTAGES

- ⊙ Separation of high solid quantities
- ⊙ Robust design
- ⊙ Diversity of materials
- ⊙ Low wear and tear
(no moving parts in the filter)
- ⊙ Easy installation
- ⊙ Low concentrate losses

TYPE / DN	DIMENSIONS IN MM		FLOW RATE m ³ /h	INLET / OUTLET DN	CONCENTRATE OUTLET DN ₁
	A	B			
SPR 1/2"	720	150	1-2	G 1/2"	G 1/2"
SPR 3 / 5 / 10	900	220	2-10	50	G 1/2"
SPR 20 / 30 / 50	1,100	300	10-50	65	G 1/2"
SPR 75	1,100	300	51-75	80	G 1/2"
SPR 85	1,100	340	76-90	100	G 1/2"

FILTER SIZE

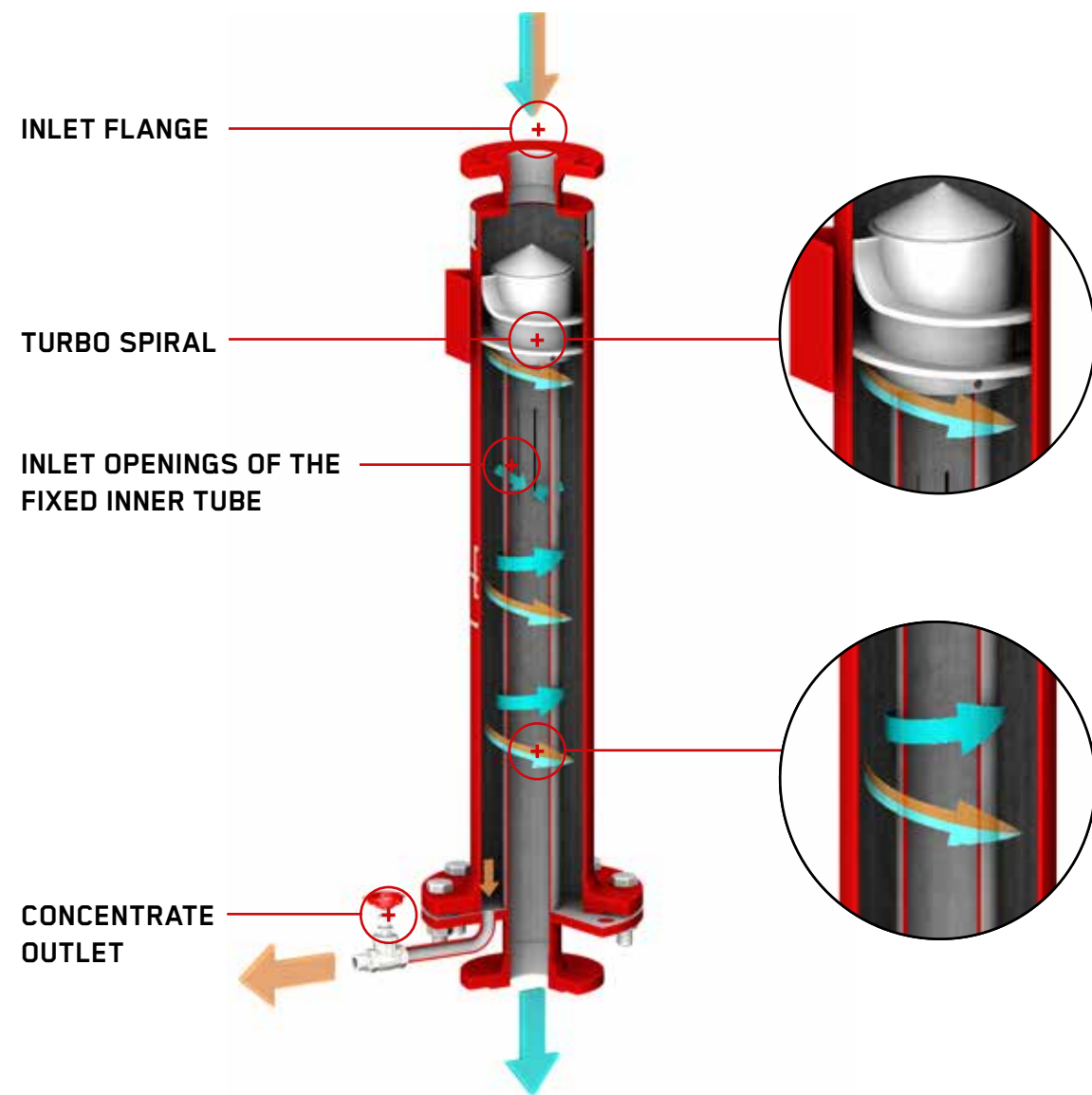
The filter size depends on the throughput capacity, the acceptable pressure drop, and the degree of contamination of the raw water.

NOW IT'S UP TO YOU

To prepare an offer, we request that you complete the filter project questionnaire and send it to us by e-mail. You can find this at:

www.dds-filter.com/en/downloads/

FILTRATION WITH THE SPR

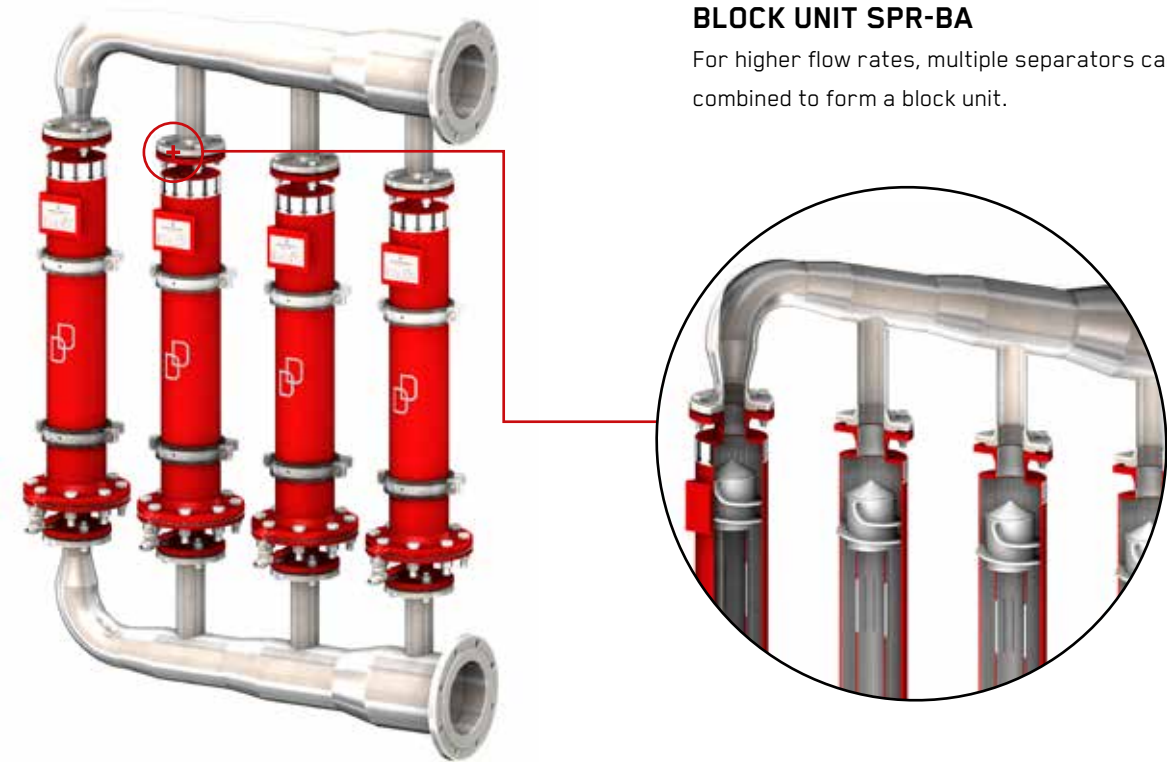


The Separator (SPR) is a fully automatic separation and purification device for liquid media specifically designed for the separation of heavy solids.

The raw water enters the separator via the inlet flange. The housing contains a turbo spiral which sets the medium in rotation.

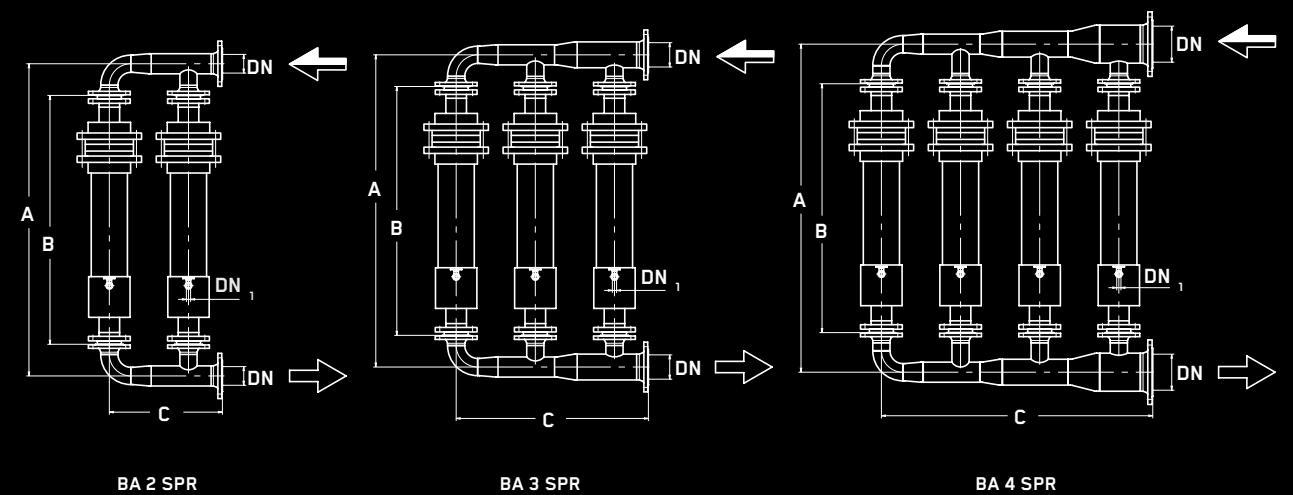
The resulting centrifugal forces act on the heavy particles (> 1.3 kg/dm³) in the outer vortex. In the lower area of this separation block, the medium starts to move upwards again at the inner tube

(inner vortex). The concentrate outlet is located in the lower area of the separator. The device-dependent quantity of solids separated (up to 0.2% in the inflow) can be continuously drained out at the concentrate outlet at a flow rate of 3-10% of the inflow. The purified medium enters the inlet openings of the fixed inner tube and exits the filter via the outlet flange.



BLOCK UNIT SPR-BA

For higher flow rates, multiple separators can be combined to form a block unit.



TYPE / DN	DIMENSIONS IN MM			INLET / OUTLET DN	CONCENTRATE OUTLET DN ₁
	A	B	C		
BA 2 SPR	1,384	1,100	500	G 1/2"	2 x G 1/2"
BA 3 SPR	1,384	1,100	850	G 1/2"	3 x G 1/2"
BA 4 SPR	1,698	1,100	1,200	G 1/2"	4 x G 1/2"

MULTI-SEPARATOR (SPR-M)

CENTRIFUGAL SEPARATOR FOR HIGHER FLOW RATES

The Multi-Separator includes multiple separators integrated into a single housing. This allows effective separation at higher flow rates.

FILTER HOUSING

Standard design	Steel
Special design	Stainless steel

Special designs possible for filter housings and technical specifications. Feel free to contact us! We are happy to advise you.

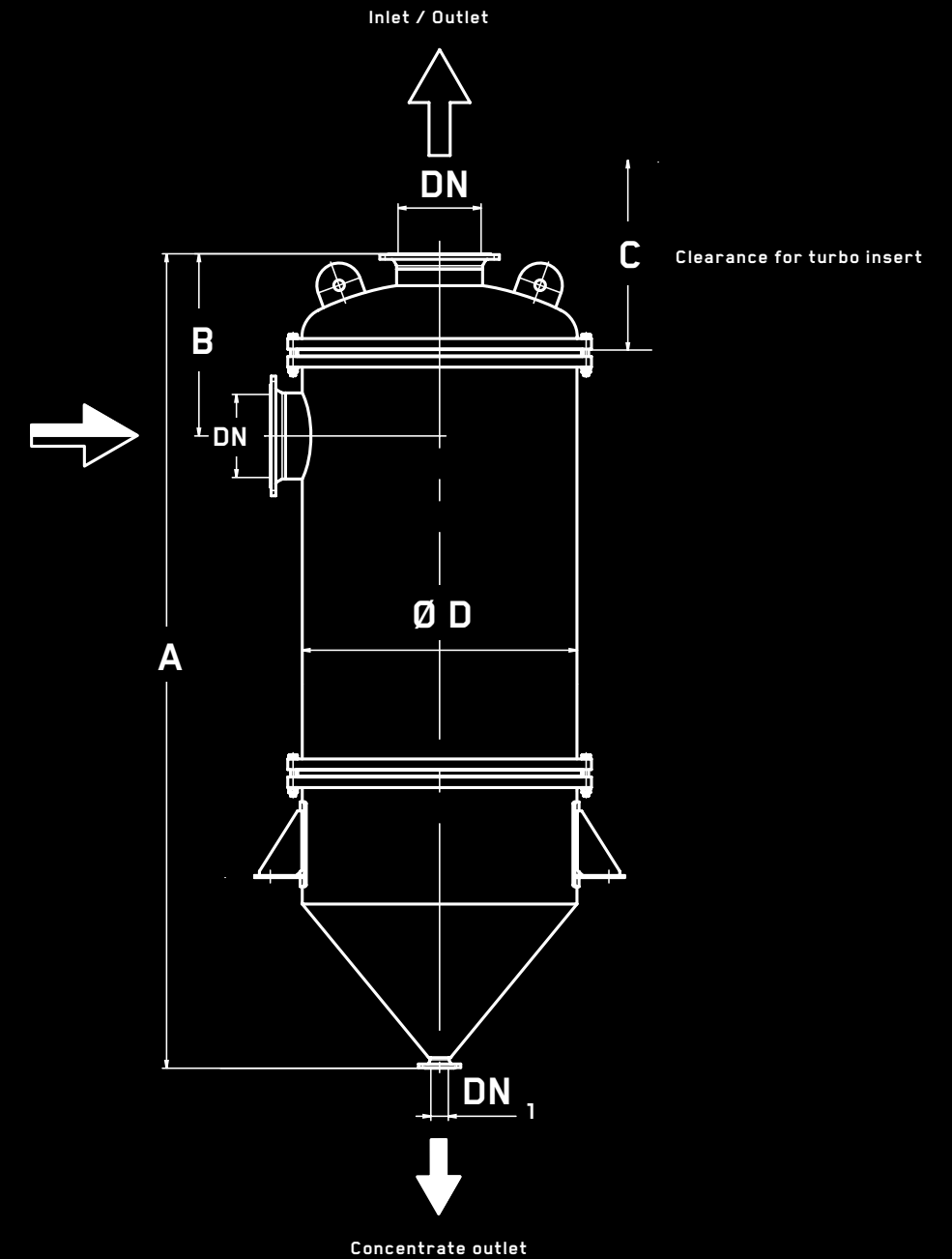
TECHNICAL DATA

Flow rate	Max. 3,000 m ³ /h
Filter fineness	≥ 5 μm
Operating pressure	2 to 63 bar
Pressure loss with clean filter	1 to 2 bar
Flanges	DN 150 to 700
Temperature	-10 to +10 °C
Inline design	Yes



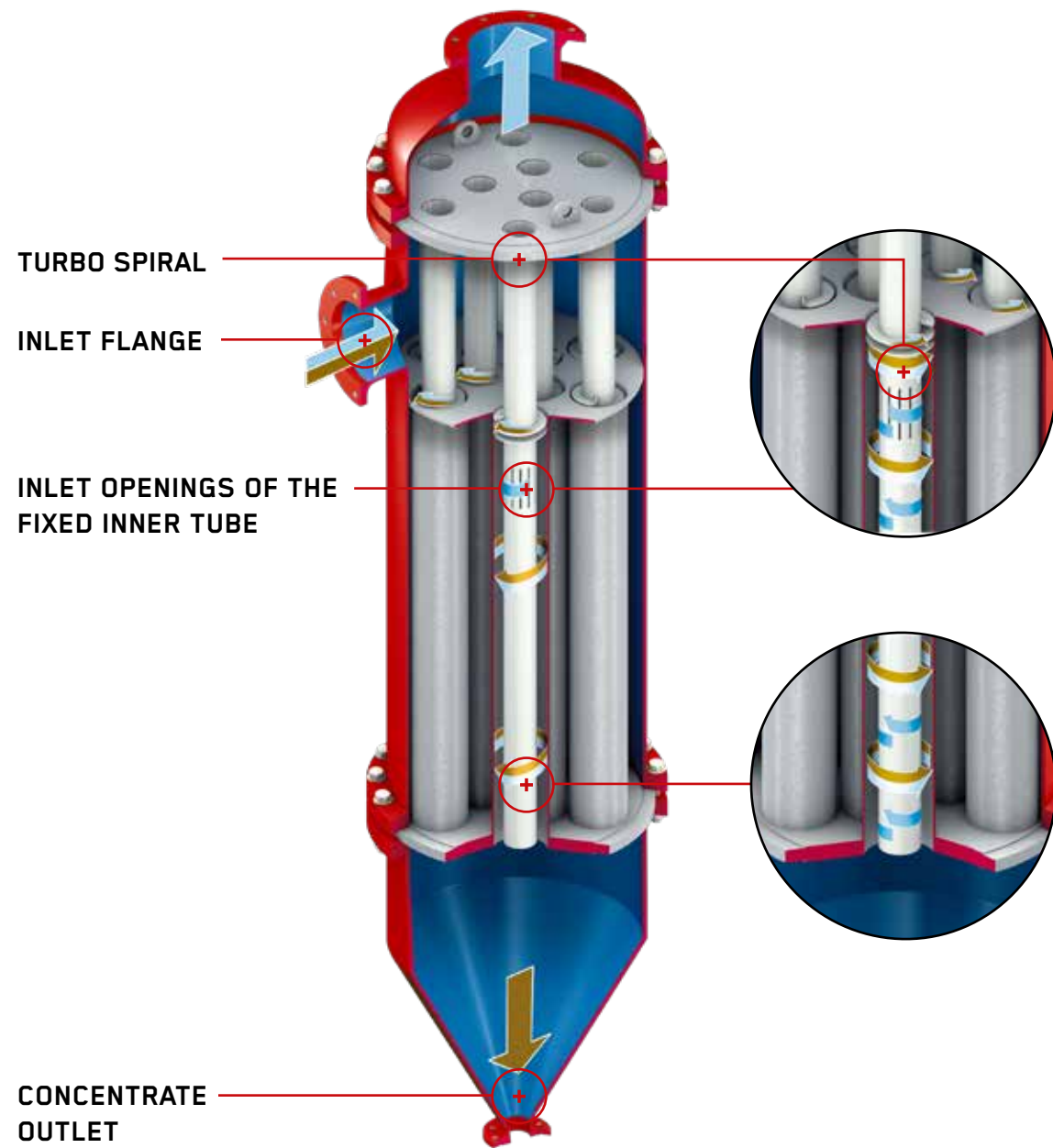
ADVANTAGES

- ⊙ Separation of high solid quantities
- ⊙ Robust design
- ⊙ Diversity of materials
- ⊙ Low wear and tear
(no moving parts in the filter)
- ⊙ Easy installation
- ⊙ Low concentrate losses



TYPE / DN	DIMENSIONS IN MM				INLET / OUTLET DN	CONCENTRATE OUTLET DN ₁	FLOW RATE m ³ /h	WEIGHT EMPTY kg	WEIGHT FILLED kg
	A	B	C	D					
M4	2,597	572	1,800	419	150	25	120-200	500	775
M6	2,932	690	1,900	508	200	50	180-300	950	1,530
M9	3,250	720	1,900	711	250	65	270-500	1,260	2,210
M12	3,524	785	1,900	900	300	80	360-600	1,750	3,460
M18	3,670	860	2,200	998	400	80	540-1,000	2,000	4,500
M30	3,845	860	2,100	1,298	400	80	900-1,500	3,600	8,100
M54	4,380	1,085	2,300	1,700	600	150	1,620-3,000	5,200	13,800

FILTRATION WITH THE SPR-M



The Multi-Separator (SPR-M) is based on the working principle of the Separator (SPR). To allow higher flow rates while minimizing the required space, multiple separators are installed in a shared housing. The raw water enters the Multi-Separator via the inlet flange. In the

distribution block, the raw water is distributed among multiple separators. Specifically heavy particles settle in the dirt collection container, from which they are separated via the concentrate outlet either continuously or discontinuously depending on the requirements of the customer.

OUR FILTERS IN ACTION




OUR FILTER SYSTEMS PROTECT

- ⊙ Plate heat exchangers
- ⊙ Spray nozzles
- ⊙ Piping systems
- ⊙ Mechanical seals
- ⊙ Pumps
- ⊙ Microfiltration systems
- ⊙ The environment
- ⊙ Final products

THE NEW DEFINITION OF PURITY FOR YOUR MEDIUM

- ⊙ Cooling water
- ⊙ River water
- ⊙ Seawater & ballast water
- ⊙ Sinter & scale water
- ⊙ Process water
- ⊙ Oils & emulsions
- ⊙ Mussels & mussel larvae infested waters
- ⊙ Drinking water
- ⊙ Effluent water

PROCESS DIAGRAM

 Shut-off valve	3	Plate filter as prefilter	6	Pump - return	
1	Settling tank	4	Multi-Separator	7	Concentrate thickener
2	Pump - flow	5	Cooling tower	8	Concentrate settling tank

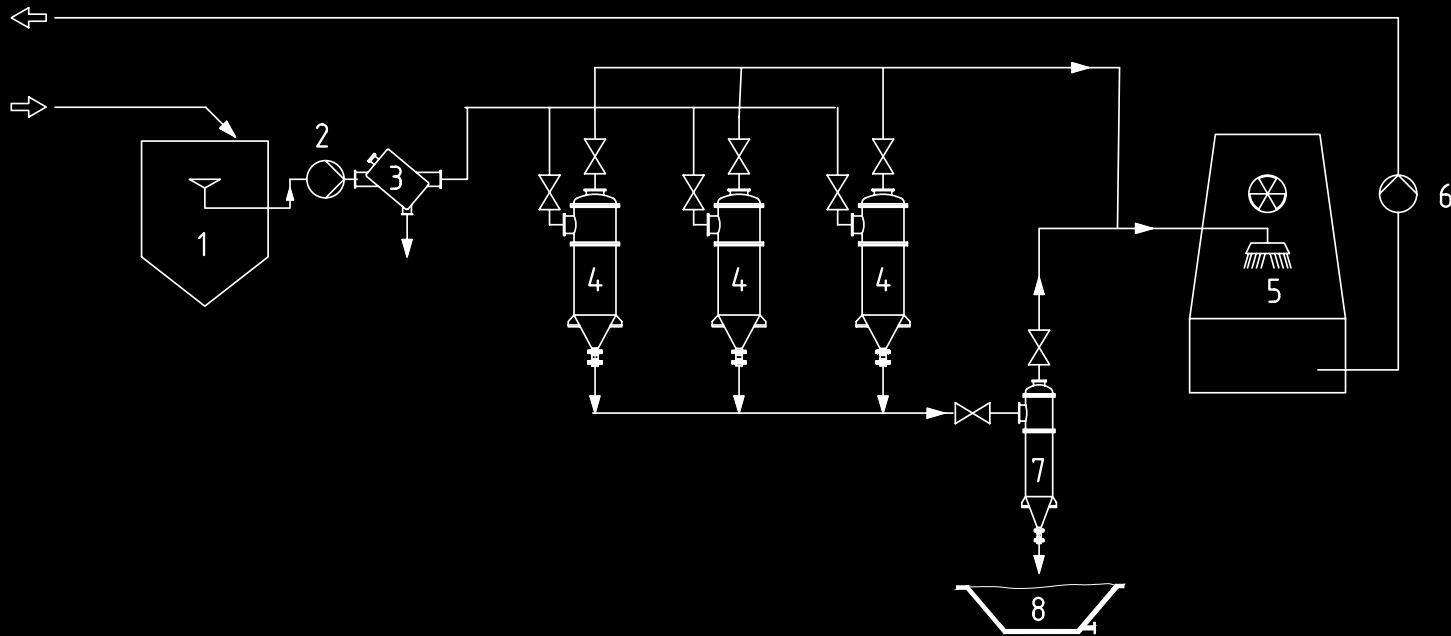


DIAGRAM SHOWING THE ARRANGEMENT OF VARIOUS SEPARATING DEVICES IN THE COOLING WATER CIRCUIT OF A HOT STRIP MILL

TECHNICAL INFORMATION

SCOPE OF DELIVERY

- ⊙ 230 V voltage
- ⊙ 400 V voltage*
- ⊙ 110 V to 690 V voltage*
- ⊙ Pressure Equipment Directive (PED)
- ⊙ ASME*
- ⊙ Explosion protection*
- ⊙ Differential pressure measurement
- ⊙ Differential pressure as 4-20 mA signal*
- ⊙ Automatic filter control system
- ⊙ Backwash with own medium
- ⊙ Backwash with external medium*
- ⊙ Backwash with suction pump*
- ⊙ Electrical or pneumatic flushing valve
- ⊙ Signal exchange with PCS
- ⊙ Cabling including plug
- ⊙ Documentation
- ⊙ Certificates*
- ⊙ Function test at the manufacturer's factory

* Available at extra cost

SHAPE BETTER VALUES

CLOSER. BETTER. SIMPLER.

We make sure that you get the filter that is perfectly suited to your application. Our engineering office will design the filter to match your operating parameters. This allows us to adapt our product to your specific use.



EXPERIENCED PARTNER

All DANGO & DIENENTHAL filters are handled by our specially qualified and regularly trained staff. Both our mechanical production and assembly departments have extensive expertise.



CERTIFIED TESTING

Our certified quality management system enables seamless monitoring and control of all production steps. This ensures early detection and troubleshooting, allowing us to offer you a high level of quality.



THE TEAM AT YOUR SIDE

If you require staff for training or maintenance at your company, don't hesitate to contact us. Our specially qualified employees will be happy to assist you.



IDEAL PRODUCTION CONDITIONS

We have been producing filters in our factory in Siegen, Germany, since 1941. Our continuously improved, state-of-the-art range of machinery and modern factory buildings provide an environment that is essential for manufacturing high-quality products.

WE ARE HERE TO ASSIST YOU

+49 271 401 4123

Or by e-mail: post@dds-filter.com

Monday-Friday:

You can find us at the following address:

8:00 a.m. - 4:00 p.m. (CET)

Hagener Str. 103

(except for holidays)

57072 Siegen, Germany



WWW.DDS-FILTER.COM