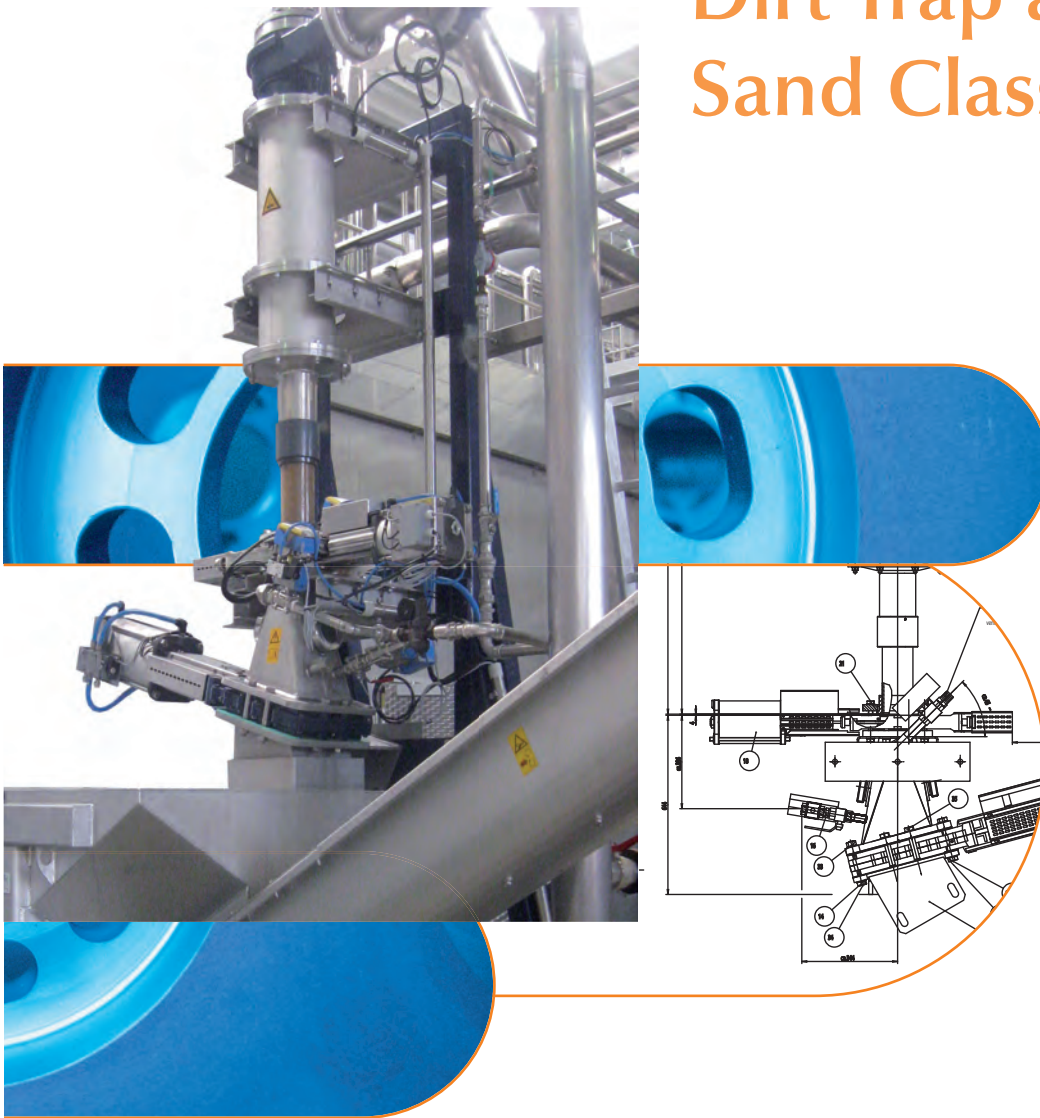


Mechanical Engineering

Sand Separators

Hydrocyclone, Dirt Trap and Sand Classifier



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Application

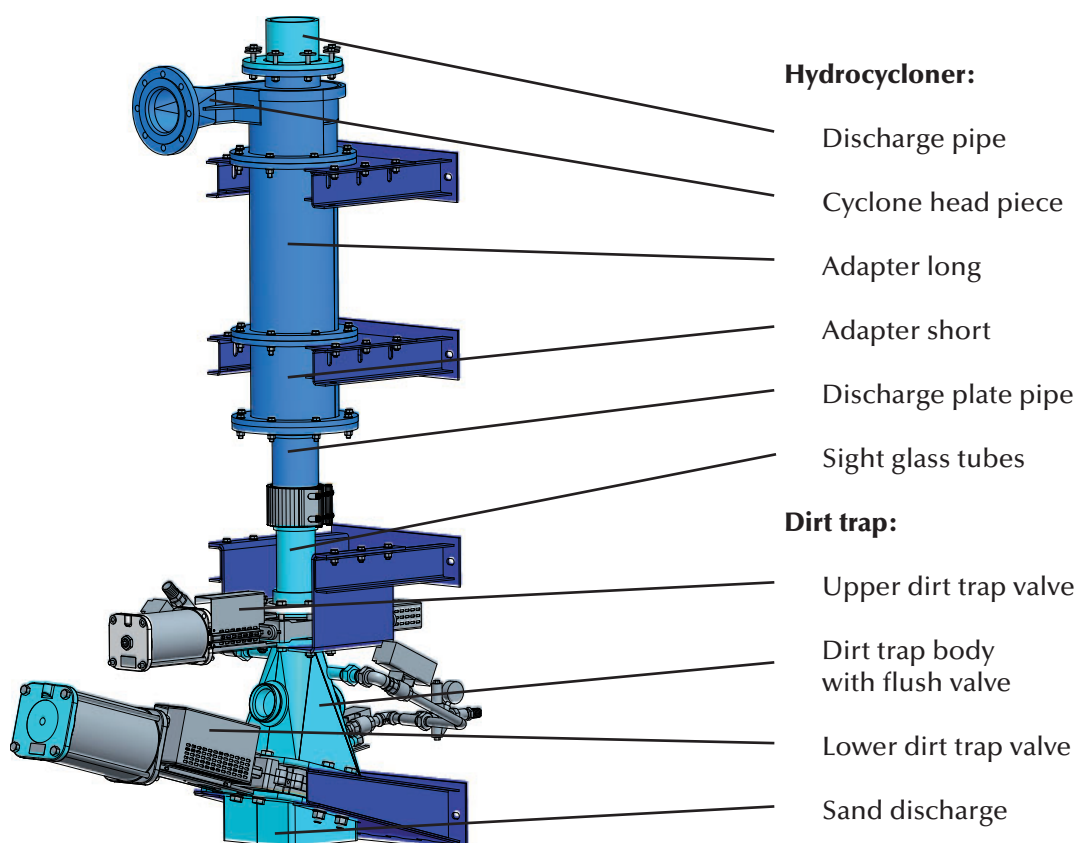
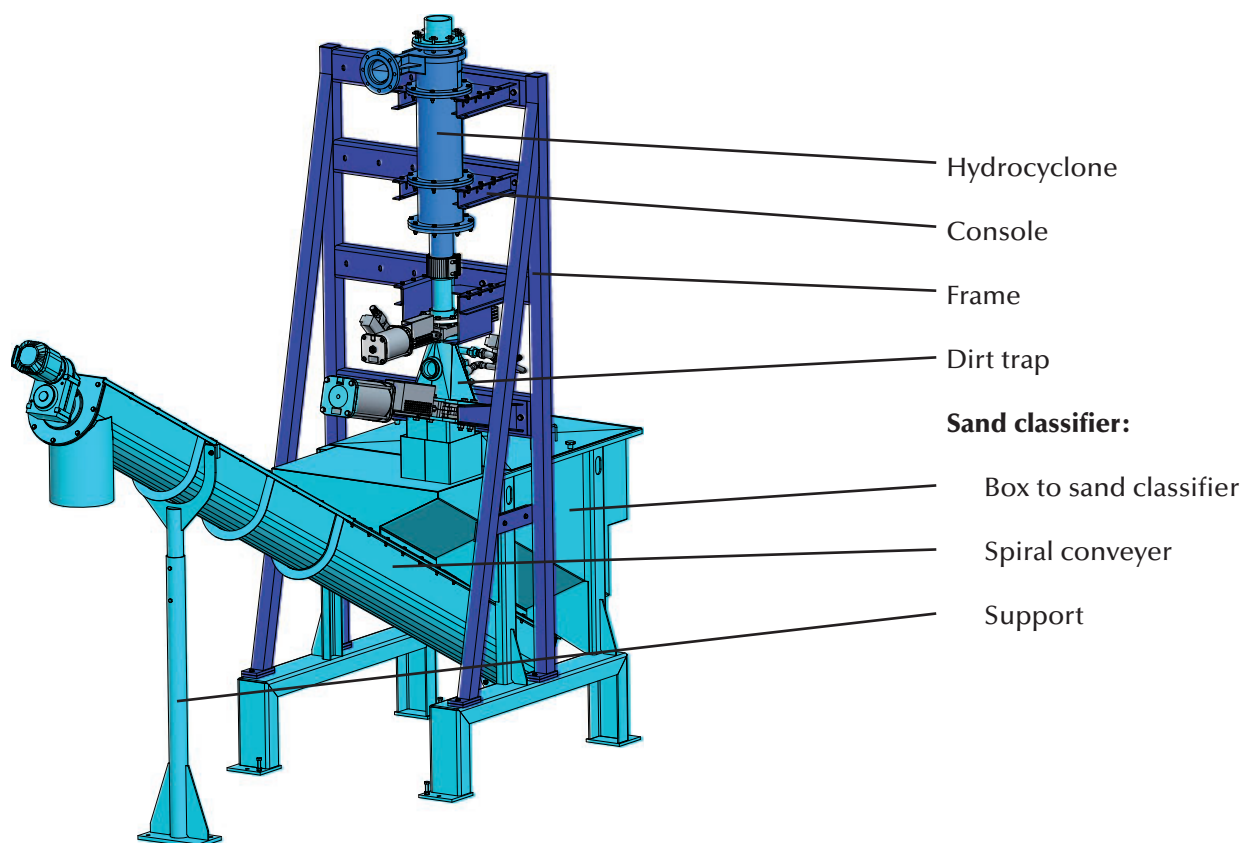
Sand separators are used for heavy contaminant separation from suspensions. Wire and pieces of metal sheet, in particular small, grainsize particles, such as glass and grit, will be separated.

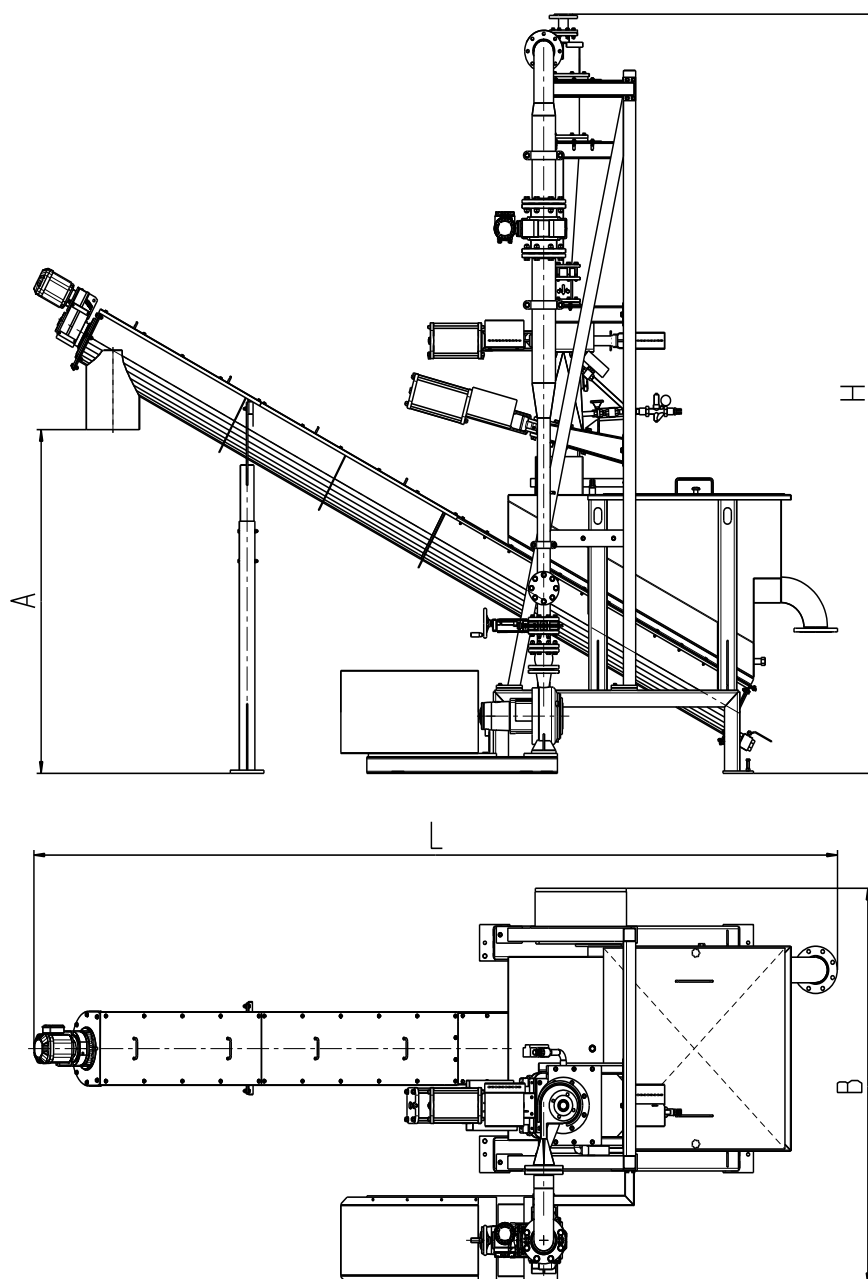
Construction Sand Separator

- Hydrocyclone:
 - Headpiece including inlet and outlet pipes provided with wear-resistant inserts
 - Separating cone with wear-resistant insert
 - Intermediate pipe
- Dirt trap:
 - Two pneumatically operated special gate valves
 - Flush valve
- Sand classifier:
 - Box
 - Spiral conveyor

Operation

The suspension entering the head-piece in tangential direction is subjected to high centrifugal acceleration based on the hydrocyclone principle. Under the effect of this, contaminants are flung to the wall of the separating cone, from where they sink into the dirt trap through an intermediate pipe, followed by the clean suspension being discharged from the headpiece of the grit separator in axial direction. Two looking glasses have been provided in the dirt trap for checking the sinking process. Heavy contaminants, such as adhering fibrous particles, are removed by the addition of backflow water to the dirt trap. Adjustable operating cycles of gate valves and dirt trap guarantee high adaptability to any level of contamination in the suspension.





type		160T	200K	200T	250K	250T
throughput	[l/min]	500	950	800	2000	1800
pressure loss	[bar]	0.5 – 1.0	0.5 – 2.0	0.5 – 1.2	0.5 – 2.0	0.8 – 1.2
consistency	[% of weight]	2 – 20	2 – 12	2 – 20	2 – 12	2 – 20
outlet Ø	[mm]	50	65	65	150	150
inlet Ø	[mm]	80	125	125	125	125
trap Ø	[mm]	100 – □ 250	100 – □ 250	125 – □ 250	125 – □ 250	125 – □ 250
particle size	[mm]	< 20	< 30	< 30	< 30	< 30
length L	[mm]	5000	5000	5000	5000	5000
width B	[mm]	2400	2400	2400	2400	2400
height H	[mm]	4150	4570	4300	4300	4500
height of throw-off A	[mm]	2070	2070	2070	2070	2070