

The IntenSieve® is a rotating belt finesieve (RBF). The technology is widely used around the world in a variety of applications, both municipal and industrial. The IntenSieve® is equipable with a variety of filtermesh opening sizes, which can range from 90 to 2000 microns.

An IntenSieve® combines two critical processes into one compact unit – solid/liquid separation and solids thickening. The rotating filtermesh removes suspended solids and produces thickened screenings. IntenSieve® is the most suitable technology to replace conventional primary treatment.

An IntenSieve® system offers the flexibility needed to perform optimally under many conditions, is cost-effective and compact. Almost without exception, the IntenSieve® is operated without the addition of flocculants or coagulants.



Operation

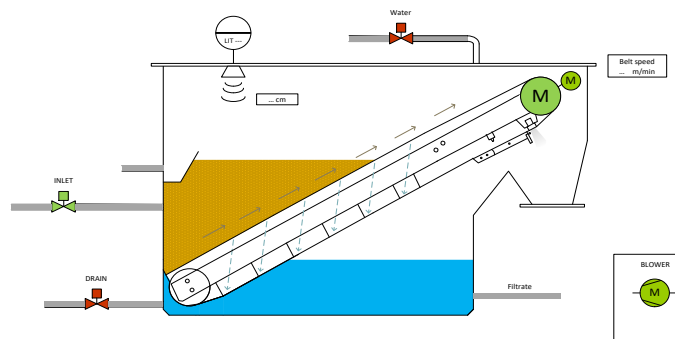
The feed water is fed to the machine while free water is escaping through the filtermesh. The suspended matter separated by the filtermesh acts as a precoat, improving the efficiency in separation. The movement of the filtermesh is continuous, with the speed being controlled according to the fluid level in the machine.

The filtrate (free water) is collected under the mesh in the frame of the machine and then discharged. The filtered dry matter is removed from the filtermesh by means of a cleaning system using low pressurised air at the end of the filtration zone. A hot water rinse is provided to remove any grease or comparable deposits from the filtermesh. This hot water rinse is applied cyclically, with the machine being rinsed for some minutes.

The sieve part (the sieve table) of each IntenSieve® is easily removable and placed in a frame. The filter frame is lifted out of the frame, among other things, for changing sieve cloths.

References

CirTec has been involved in more than 20 research projects that have extensively examined the performance of systems and the impact on downstream processes. With over fifty operational finesieves in the Netherlands, CirTec is market leader in the Netherlands. The IntenSieve® can be used at various applications, including relieving the underlying purification and effluent polishing. CirTec has references in both sewage treatment plants and a wide range of industries, such as food processing, recycling and tanneries.



CirTec IntenSieve®

Wherever there is a water flow with suspended solids, the IntenSieve® can be used. The benefits of using the IntenSieve® includes superior performance, compact dimensions, reduced sludge production and improved effluent quality.

The IntenSieve® is also used as an integrated part in CellCap®, the composed technology for recovering, for example, cellulose from sewage.



There is a wide range of models available, meaning that the IntenSieve® can offer a solution for almost every application. The machines are modular, so by combining them a solution can be offered for every capacity.



		CT-80	CT-120	CT-170
Length	m	2.0	2.4	2.9
Width	m	1.4	1.8	2.3
Height	m	1.4	1.6	1.8
Weight empty	kg	790	1,060	1,470
Weight in use	kg	1,560	2,600	4,830

CellWash

In the CellCap® concept (in line separation of pure cellulose), a cellulose washer is installed in front of the IntenSieve®. The pre-separation consists of a fine-meshed drum through which, the cellulose fibres can escape whereas hair, leaves, seeds and other components are caught. This is due to the inventive feed system used. Because both process components are fully tuned to each other, a cellulose washer can easily be fitted in (if space is provided), even when the IntenSieve® has already been installed. All connections of the machines are the same and the hydraulic profile hardly changes by installing the CellWash.



CellPress

The CellPress is optimised for the dewatering of cellulose/fibre rich streams. The construction of the machine is roughly divided in three sections. In the first section, “the drain section”, free water is released from the filtered material by gravity. The first pressure build-up takes place in the second phase. A coarser press basket is installed, in which water escapes from the edges of the thickened screen material. In the final phase, the pressure is further increased and the excess water escapes through a fine-mesh basket. The pressure inside the machine is regulated mechanically.

About CirTec B.V.

To maintain a good and healthy environment for future generations, it is crucial that we reduce the disposal of waste and encourage recycling of valuable components. CirTec aims to contribute actively to the sustainability of our society, and reuse of (waste) materials in particular.

With both proven and innovative technology, we are able to provide the most appropriate solution for a large number of environmental issues. We focus on the development of alternative raw materials such as recovered cellulose from municipal wastewater and the use of low value residual heat for evaporation of concentrated streams. Cooperation and sharing knowledge are the keys to progress and an integral part of our business model.