Centrifugal Separators

WTZA-Centrifugal separators

To separate solid particles from aqueous mediums, Wolftechnik centrifugal separators take advantage of the differing densities of the two mediums. The inside of the separator is especially shaped to make the medium circulate around it. The resulting centrifugal forces act strongly on the particles to be eliminated and enable efficient separation. Wolftechnik centrifugal separators are especially well-suited for removing hard, solid particles of sand, glass and metal. Wolftechnik centrifugal separators can be made of C-steel, stainless steel or plastic. With an identical internal assembly they are manufactured in the three assembly series WTEZA, WTDZA and WTFZA, but differ in the accessibility of the inlet chamber and dirt chamber.

WTZA-Centrifugal separators

Technical data

Material:	Housings and installations
	WTZA-T: Stainless steel 1.4301
	WTZA-C: C-Steel, blue varnished
	Filter element: 1.4435 (316 L Mo+)
	Seals: Viton
In-/Outlet:	Size, Type see table installation measurements
Drain:	Size, Type see table installation measurements
Manometer:	See table installation measurements
Pressure:	Max. 10 bar
Temperature:	Max. 95°C
Flow rate:	(See text: flow rate capacity)

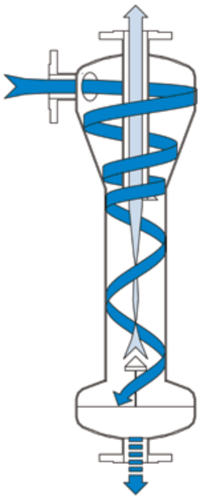
Applications

- Industrial washing plant
- Cooling circuits
- Steel manufacturing
- Deep-drilling system in mining
- Irrigation plants
- Manufacturing of optical lenses

Characteristics and Advantages

- No flexible wearing parts
- No sieves or other filter material
- No time-out
- No maintenance- or reverse wash-cycles
- Easy integration into already existing lines
- Periodical discharge of separated substances

How it works



1. The tangential inlet connecting piece sets the liquid to be cleaned which contains impurities, in a rotary motion.
2. The cone serves to accelerate the current. The arising centrifugal energy affects the particles.
3. The centrifugal force presses the particles, which are heavier than the liquid, onto the wall of the central pipe.
4. With the aid of the gravity force and the current the particles slide downward into the collection chamber in rotary motion. Due to the sudden diameter enlargement a calming of the spiral movement occurs and the particles settle.
5. The cleansed liquid arrives in the liquid eddy of the under pressure zone. The lower deflector breaks the eddy prior to the collection chamber.
6. The dirt accumulated in the collection chamber is removed in periodic intervals during working operation. This can be done manually or by means of an automatic draining valve.

Flow rate capacity, differential pressure, efficiency

Depending on the flow rate capacity, the differential pressure and the efficiency will change.
To forecast these changes the Wolf-technik Company filter systems have an evaluation program process. This supports us in the construction of new equipment and makes it possible to customize solutions with precise data concerning the pressure, efficiency, loss which can be expected as well as regarding the attainable separating rate discharge. Due to the variation of the flow rate capacity with otherwise constant conditions for the mathematical operation the interpretation program supplies the exact course of the curve of the differential pressure and the efficiency in accordance to the flow rate performance. This data can be made available on request in connection with a proposition. Thus the effects can be considered and taken into account in conjunction with the installation of a centrifugal separator into existing systems and plants.