



Hydro cyclone systems

with and without pre-separation for filtration of aqueous cooling lubricants, very low-viscosity oils and other liquids.

Purifying, clarifying and thickening:

- Single systems
- Central systems
- Special designs

Liqui
FILTER

pure. clean.

Separation efficiency

The separation efficiency of a hydro cyclone depends on various factors, e.g. the size and shape of the sludge particles, the difference in density between solid and liquid, the viscosity of the liquid, the pressure differential in the cyclone and the cyclone size. Particles up to a grain size of approx. 5 µm can be separated with a minimum density differential between liquid and solid of 1 g/cm³ (e.g. solid with 2 g/m³ in water)

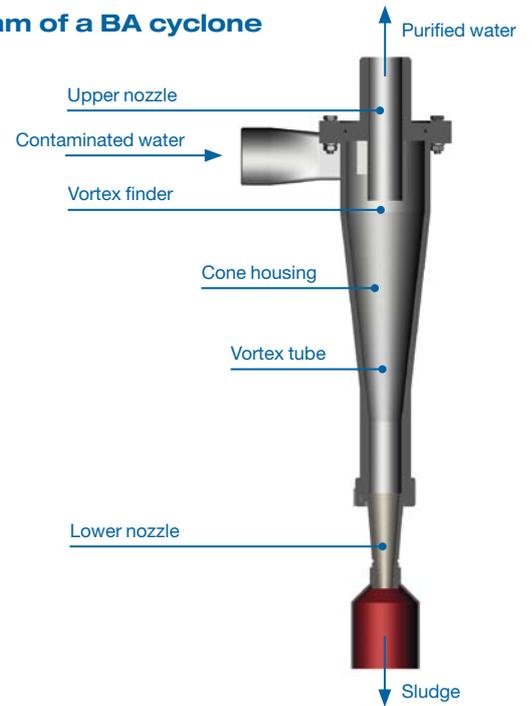
Operation

In our BA series cyclones, the medium to be purified is fed tangentially into the cylindrical cyclone tube with laminar flow through a specially designed inlet nozzle. A primary vortex is produced which moves towards the lower nozzle through the cone housing. The throttle effect of the lower nozzle produces a secondary flow rotating in the same direction which moves upwards in the opposite direction to the primary vortex and escapes through the upper nozzle. Therefore, the primary and secondary vortices have different flow properties. The velocity distribution over the cross-section of the unit shows that the maximum tangential velocity occurs between both flow types in the "mixed vortex".

To achieve an optimum purification effect, it is necessary to move the turning point, the "vortex sink", as close as possible to the lower nozzle.

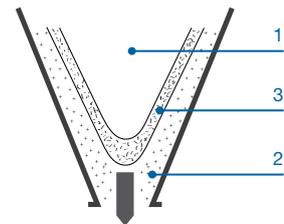
Due to the special design of the inlet nozzle and the ratios of all nozzles to one another, the BA cyclone manifests stable vortex behaviour in continuous operation which produces an optimum purification effect even with fluctuating sludge concentration.

Diagram of a BA cyclone

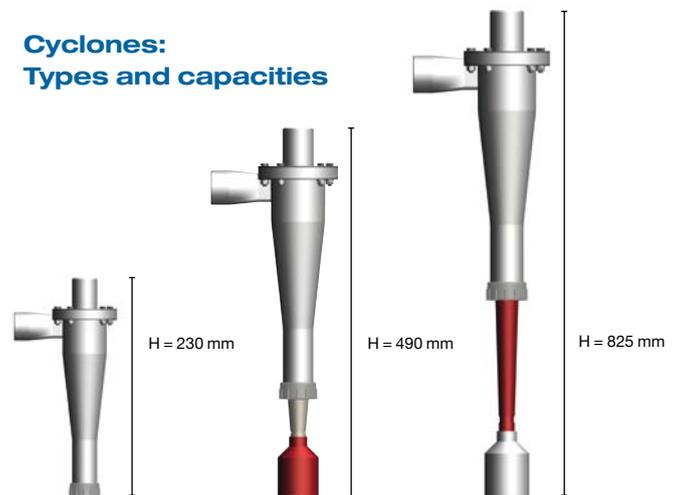


Flow field in the lower nozzle

- 1 Vortex source
- 2 Vortex sink
- 3 Mixed vortex



Cyclones: Types and capacities



Type BA45
for 1,7 m³/h

Type BA65
for 6,0 m³/h

Type BA150
for 30 m³/h

The specified capacities relate to a differential pressure of up to 2.5 bar.



Liqui FILTER

Liqui Filter GmbH

Richard-Stocker-Strasse 19 78234 Engen Germany
 Phone +49 7733 9402-0 Fax +49 7733 9402-40
 E-Mail info@liqui-filter.de Internet www.liqui-filter.de