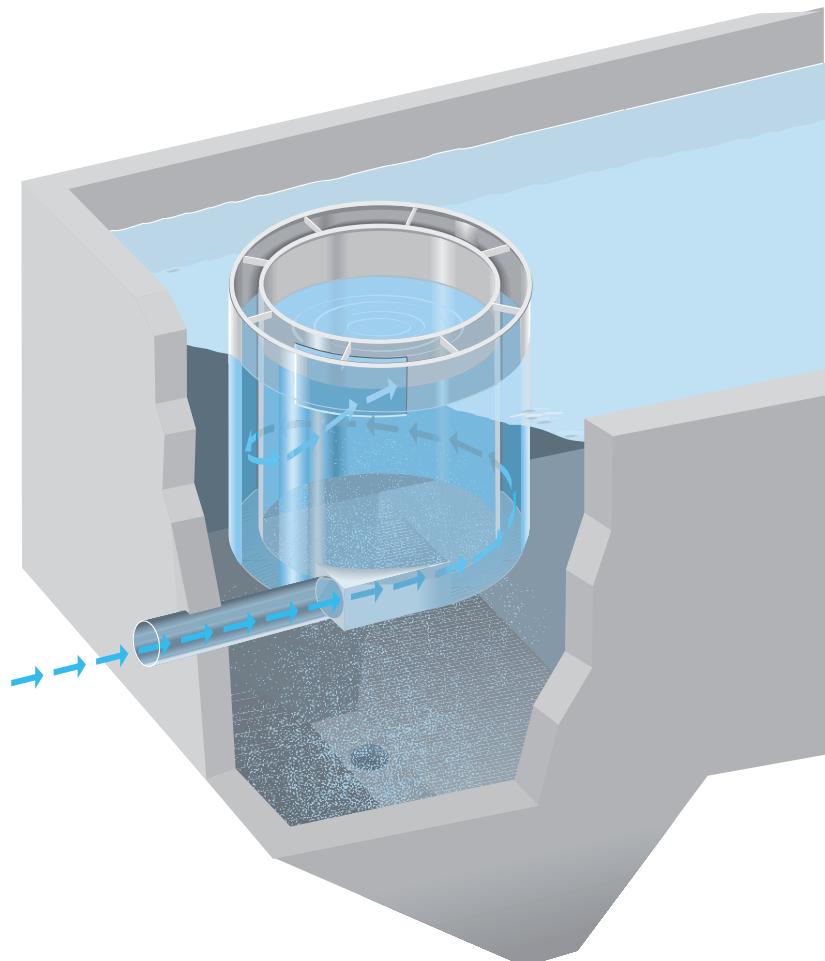


Z4500 AND Z4000

Equipment for an Effective Flocculation Process



Main areas of use and features

- Improved visibility in the tank
- A higher flow rate can be accepted with capacity maintained or improved
- Reduction in PTOT (total phosphorus)
- Reduction in suspended matter
- Reduced surface sludge formation
- Reduced sludge flight under heavy load
- Smaller amounts of precipitation chemicals required
- No flocculation paddles needed

Z4500 AND Z4000 EQUIPMENT FOR AN EFFECTIVE FLOCCULATION PROCESS

Floc Builders Pavafloc Z4500 and Flocbee Z4000

Nordic Water supplies unique static floc builders which help to distribute the water evenly throughout the sedimentation tank. The Zickert floc builders give the water a damping effect which contributes to rapid floc buildup before sedimentation takes place.

The floc builders are designed to be installed over sludge pits. They have no moving parts. Where the tank in question is circular, the existing concrete structure of the tank is used. The equipment can be quickly installed with only minor modifications.

Because these floc builders have no moving parts there are no operating or maintenance costs. In fact, they offer a direct saving, since better use is made of the precipitation chemicals. The rate of sedimentation is increased because the flocs are already larger when they enter the tank. This increases the total capacity of the tank and allows higher flow rates without causing sludge flight, for example after heavy rainfall.

The Z4000 FlocBee is made up of two cylinders with a solid bottom between them. The inner cylinder has no bottom. Incoming water enters at the bottom between the cylinders. The water is guided around and into the inner cylinder via an opening in the top edge. It is then forced downwards and out into the tank.

Improved floc building

The Z4500 PavaFloc was developed from the Z4000 FlocBee. In order for PavaFloc to cope with wide variations in flow, the central vessel has been made conical. The water enters at the

bottom of the central vessel and is forced upwards. The increasing diameter of the vessel creates a damping effect on the water, which favours floc building. At the top edge, the water flows out into the straight outer cylinder. Since the circumference of the inner vessel becomes smaller downwards, the outer volume increases gradually when the water is forced down. This contributes to further damping, which encourages floc building.

Many applications

Both the Z4500 PavaFloc and the Z4000 FlocBee have been successfully used in several water treatment applications, such as sedimentation tanks for preprecipitation, simultaneous pre-precipitation, biological flocculation/sedimentation and post-pre-precipitation. They can also be used in drinkingwater purification plants and in industrial wastewater treatment processes where damping and/or improved flocculation are required.



Installation with two Z4000 FlocBees operating in parallel, a good solution in wide tanks.

TECHNICAL SPECIFICATIONS OF THE Z4500 PAVAFLLOC AND THE Z4000 FLOCBEE

| | |
|--------------|---|
| Applications | Rectangular and circular sedimentation tanks. |
| Dimensions | For the best possible results, PavaFlocs should be individually dimensioned for each tank. Dimensions are based on the results of JAR tests and on flow data. |
| Materials | Stainless steel ASTM 304 L or acid-resistant steel ASTM 316 L. |
| Assembly | Small versions are supplied ready assembled. Large versions are supplied in sections for bolting together on site. |