

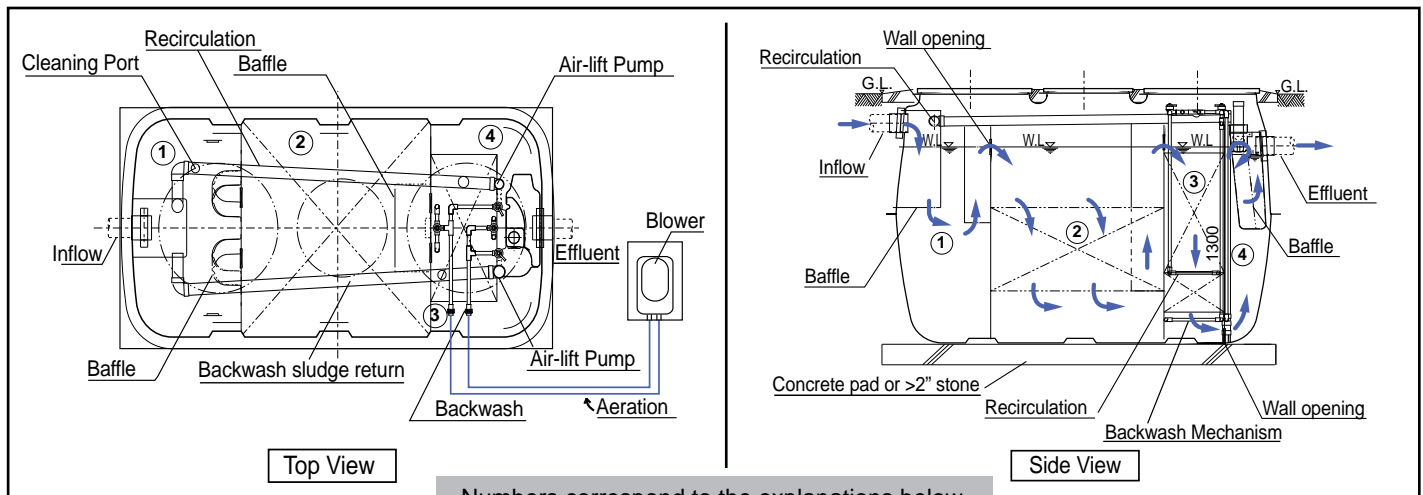
Fusion® Series Treatment Systems

PROCESS DESCRIPTION

How the Fusion® system works



Certified to
ANSI-NSF40
Class I
performance
designation



Numbers correspond to the explanations below.

1. Sedimentation Chamber

This chamber is designed to physically separate solids (sludge) and fat/grease (scum) from the incoming water.

2. Anaerobic Chamber

This chamber contains a spherical-skeleton type of filter media (4.3 inch diameter). Through fixed film processes on the surface of the filter media, biological anaerobic treatment thrives while suspended solids are captured. Furthermore, the microorganisms in this chamber convert nitrates in the recirculated water returning from the aerobic chamber to gaseous nitrogen. The nitrogen then escapes to the atmosphere.

3. Aerobic Filter Media Chamber

The aerobic floating and circulating filter media chamber consists of an aeration upper section and a filter media lower section. The chamber is filled with hollow, cylindrical filter media (0.6 inch diameter and 0.55 inches long). Biological treatment takes place with the help of the fixed film growth on the

filter media surface. Aeration is continuous. Residual suspended solids are captured by the filter media circulating in this section.

The filter media in the Aeration chamber are backwashed regularly (5 or 10 minute cycle, twice a day) by the backwash system located at the bottom of the chamber. The backwashed water is transferred by an air lift pump back into the sedimentation chamber for further digestion.

4. Treated Water Storage Chamber

During normal operation, a recirculation line transfers a portion of the treated water back into the sedimentation chamber by way of an air lift pump. This chamber is designed to temporarily store treated water coming out of the aerobic filter media chamber. The treated water in the storage chamber is ready for discharge.

The Fusion® Series Treatment Systems represent a collaboration with Fuji Clean Co., Ltd.