

VOLUTE DUO™ product video – commented process flow section voiceover

Let's have a close look at VOLUTE DUO technology. The smallest of this product line, the RVP-241 model, can process 12–52 kg of dry solids per hour.

VOLUTE DUO™ introduces the concept of two counter-rotating screws in a single filter drum. The screws break up and expose the sludge for thickening and dewatering in a single, compact operation. The filter drum is constructed of a series of fixed and moving rings that create a mechanical self-cleaning screen to clear the fine gaps between the rings.

The cylinder consists of two parts – a thickening and a dewatering zone. The low-speed rotating screws economically transfer the sludge through the filter drum. While the sludge is continuously compressed as it travels through thickening and then dewatering zone for discharge, the filtrate easily leaves the filter drum.

Now let's have a look at the sludge dewatering process flow from A to Z.

VOLUTE DUO introduces an inline mixer to rapidly mix the flocculant and the inlet sludge before it enters the filter drum which significantly improves flocculation quality and can reduce the polymer dosage by up to 20 %.

The adjustable flocculation tank provides sufficient maturation time for the flocculation process completion. Well-flocculated sludge is carried forward to the filter drum.

Two counterrotating screws inside the cylinder constantly push the sludge forward in the direction of the end plate for discharge.

Because the moving rings are no longer in contact with the screw flights, wear is dramatically reduced thanks to the externally driven shaft.

The excess solids that can remain on the cylinder surface are washed off at regular intervals. The use of pressurized water is unnecessary as the standard tap water pressure is sufficient.

In addition to the main filtrate outlet, there is an optional filtrate outlet separating the dewatering zone filtrate from the high-quality filtrate from the thickening zone.