

HEAVY-DUTY CENTRIFUGE FOR SLUDGE DEWATERING

ROUGH INFORMATION ABOUT THE FUNCTION

This description is to be understood as *general information*, which is not describing the dewatering system for specific projects. In case of order, a detailed specification of the individual dewatering system will be established and adapted to the project conditions.

The separation of solids out of the liquid in the heavy-duty centrifuge happens basically in an identical fashion to the procedure in settling tanks. Only at a much more accelerated pace.

The difference is, the settling tank works on the principal of gravity only, but the heavy-duty centrifuge uses the very high revolutions of the drum to produce g-forces 1,000 x higher than gravity. The machine consists of a conic / cylindrical drum with a build in conveyor. Both run at very high speed in the same direction, whereby the screw runs at a slightly faster pace than the drum.

The sludge enters the heavy-duty centrifuge through a centrally situated inlet pipe. The g-force is directly applied and presses the sludge against the drum wall. Since the solids in the sludge are heavier than the water, the solids settle on the drum wall, whereby the water builds an inner ring. The depth of the water ring is controlled by setting the weir disks at the larger end of the drum, where the sludge is discharged.



The drained sludge is transported to the conical drum end by means of a conveyor, and discharged by gravity. Heavy-duty centrifuge divides municipal sludge continuously into a solid and a liquid phase.

Depending on the sludge structure, the solid parts with higher density than water can be extracted from the sludge. Under ideal conditions one receives clear water and drained sludge, whereby the desired volume occurs.

Heavy-duty centrifuge serves the foul sludge drainage with the help of flocculent. For different operating conditions settings of the heavy duty centrifuge, for example operating modus, differential speed and water depth, may have for example be adjusted.



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