

Circular final sedimentation tank Floc-In-FDi

KUNST DNKFI-FDi-30-K to DNKFI-FDi-45-K

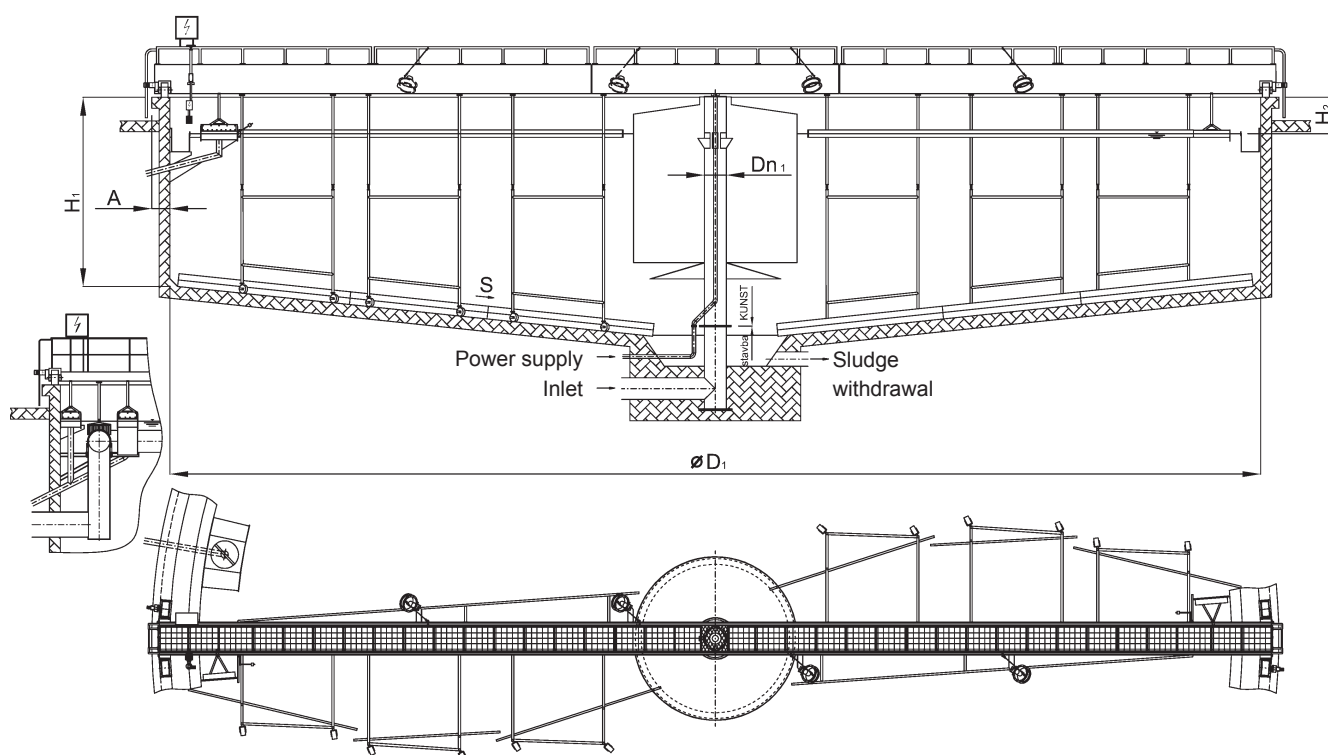


TABLE OF MAIN DIMENSIONS

Parameter	Variable		Size and designation of final settling tanks DNKFI-FDi				
			30	33	36	40	45
Tank diameter	D_1	mm	30 000	33 000	36 000	40 000	45 000
Lane width	A	mm	500	600	600	600	600
Side tank depth	H_1	mm	4 100	4 100	4 100	4 100	4 100
Distance of water level	H_2	mm	500	500	500	500	500
Diameter of inlet pipe	DN_1	mm	800	1 000	1 000	1 200	1 400
Down-grade	S	%	6 ÷ 8	6 ÷ 8	6 ÷ 8	6 ÷ 8	6 ÷ 8



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APPLICATION

The circular sedimentation tank Floc-In-FDi is designed for gravitational separation of activated sludge and final clarification of waste water after its biological treatment at improvement of separating properties of the tank and reduction of microflocs to be finally removed. It is used for removal from large volumes with higher concentrations of dry matter separated from sludge and ranging from 3,5 to 4% and here connected with requirements on higher velocity of discharge.

FUNCTIONAL PRINCIPLE

Waste water with a residual content of activated sludge flows through the central steel pipe to an inlet deflector. Here, velocity of the mixture goes down, the flow direction becomes unified being directed upwards into a flocculation cylinder which is closed at its head and degasified. In order to remove floating impurities from the closed cylinder the space becomes degasified supporting thereby the sedimentation process. The effluent water from the flocculation cylinder is deflected outside the central sludge trap. The flocculation cylinder, inlet and outlet deflector are firmly connected to the central pipe. Waste water, being deflected to the tank outer perimeter, ascends and overflows the adjustable spillway edge into a chute (the spillway edge is automatically cleaned by a rotary brush). Alternatively, the effluent water can be withdrawn by means of a perforated dip pipe which is wiped by a towed brush. Sludge which is separated in the sedimentation tank is continuously removed from the bottom into the central sludge trap by means of doubled doctors. Floating sludge residues are forced to move to the tank wall by level racks at air flow blown by fans and furthermore into a discharge chute. From here it is pumped into the next tank or becomes conveyed into a tank of floating debris by means of hinged racks. The sludge racks unit is firmly attached to a swinging bridge rolling on guide rails. This is enabled by solid rubbered wheels, or standard steel wheels. For adverse weather conditions it is possible to complete the application with a forced driving unit and a lantern gear respectively a rack mechanism. The variant with solid rubbered wheels can be optio-

nally completed with a mechanical system of a rotary brush intended for guide rails cleaning, respectively with a heating system.

Bridge travel speed and its regulation, hinged flocculator, inlet and outlet deflector, bottom doctors and level racks, location of fans etc. are calculated in dependence on the tank size. Power supply of the bridge switchboard is standardly connected through the central collector. For any accessories of the sedimentation tank contact the company KUNST, spol. s r.o.

MATERIAL DESIGN

The tank bridge structure is made of structural steel with metal coating or hot-dip galvanizing and seal coating. Chutes, spillway edges, dipping walls, flocculation devices, inlet and outlet deflector, doctors, racks, outlet part of effluent water and floating impurities, as well as other parts partially or fully dipped in water, are made of stainless steel. The guide rails are made of structural steel.

OPERATION AND MAINTENANCE

Operation of this equipment does not require permanent attendance and its routine maintenance should be done in compliance with instructions as stated in the operating manual. This equipment is designed for permanent outdoor duty.

DELIVERY FORM

Standard delivery includes on-site installation of the entire equipment with accessories according to a contract. Accessories (see well as particular dimensions, see chart) can be optionally changed upon agreement and technical clarification.

The supplier reserves the right of changes in its deliveries contrary to graphical figures, however, in compliance with the agreed parameters.

DELIVERY DATE

According to contract.

R.č. DNKFI-FDi-K 10/10-A-en