

Circular final sedimentation tank – Floc In deep

KUNST DNKHFI-10.5-K through DNKHFI-40-K

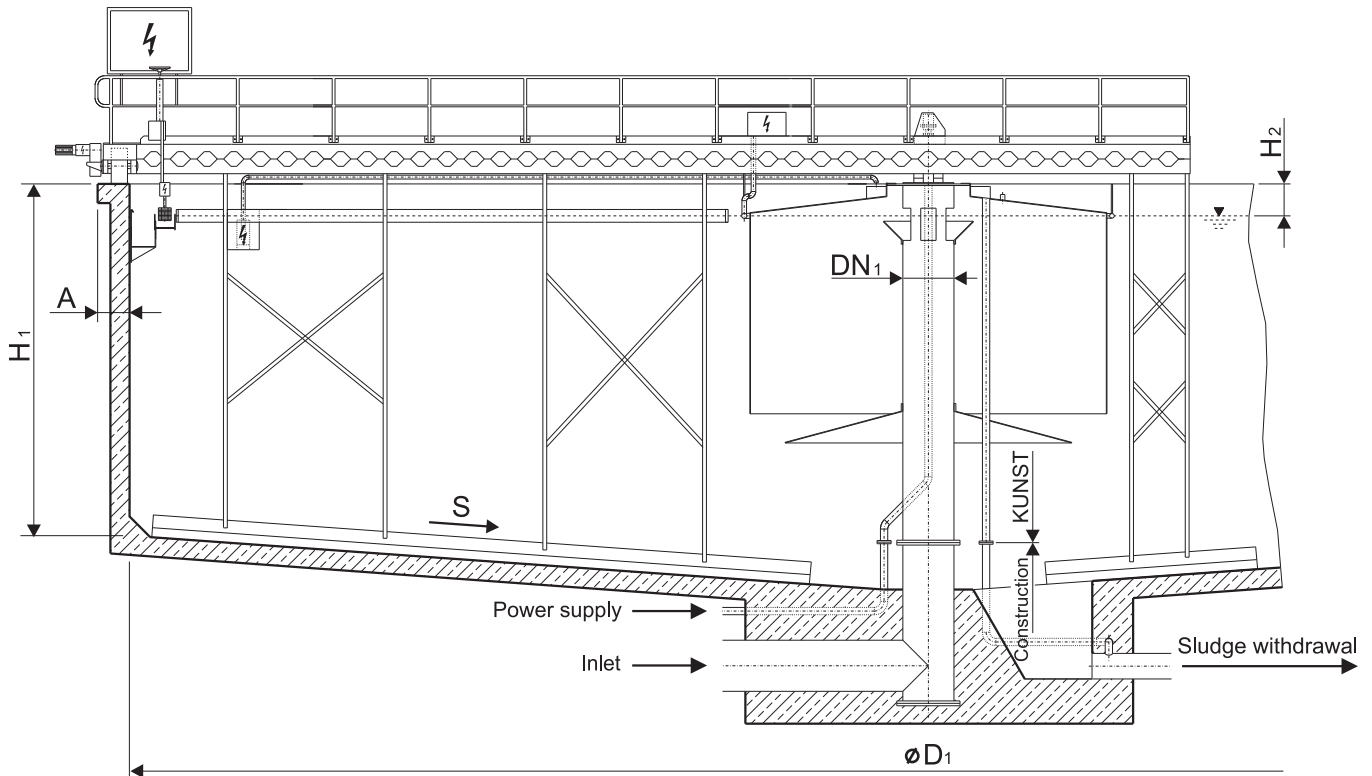


TABLE OF MAIN DIMENSIONS:

Parameter	Designation	Size and designation of the final settling tank DNKHFI											
		10,5-K	12-K	15-K	18-K	21-K	24-K	27-K	30-K	33-K	36-K	40-K	
Tank diameter	D ₁ mm	10 500	12 000	15 000	18 000	21 000	24 000	27 000	30 000	33 000	36 000	40 000	
Lane width	A mm	400	400	400	400	500	500	500	500	600	600	600	
Side tank depth	H ₁ mm	6 200	6 200	6 200	6 200	6 200	6 200	6 200	6 200	6 200	6 200	6 200	
Distance of water level	H ₂ mm	550	550	550	550	550	550	550	550	550	550	550	
Diameter of inlet pipe	DN ₁ mm	400	400	500	500	600	700	800	800	1 000	1 000	1 200	
Down-grade	S %	6	6	6	6	6	6	6	6	6	6	6	

REMARK:

Alternative method of specification of the tank equipment is chosen according to customer's requirement. The model Floc-In is suitable for modernization of existing final settling tanks as well as their construction.

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APPLICATION

The deep type of circular final settling tank Floc In is used for gravitational separation of activated sludge as well as subsequent clarification of waste water after its biological treatment in the event of an extremely stable and qualitative process, and at maximum load. The consistency is also noticeable in case of changes in temperature and seasonal changes in the sedimentation properties of the sludge. It assures also easy handling during inspection closures and wider regulation of recirculation ratio of returned sludge.

FUNCTIONAL PRINCIPLE

Waste water which contains a residual content of activated sludge flows through the central pipe over a deflector. Here, the velocity of the mixture becomes reduced, the flow direction becomes unified and is directed to the flocculation cylinder which is closed at its head and degasified. In order to remove floating debris from the closed cylinder it becomes degasified and supports thereby the sedimentation process. The effluent water from the flocculation cylinder becomes deflected outside the sludge trap. The flocculation cylinder, inlet deflector and outlet deflector are firmly connected to the central pipe. The waste water becomes deflected to the outer brink of the tank where it ascends and after passing underneath the skimming wall, it flows over the saw-tooth overflow edge. (The saw-tooth overflow edge becomes automatically cleaned.) Alternatively the effluent water can be withdrawn by means of a perforated dip pipe. Sludge which is separated in the final settling tank becomes steadily conveyed from the bottom of the tank into the sludge hopper by means of circular scrapers. Floating sludge becomes conveyed to the brink of the tank using floating sludge scraper, where it is collected and pumped into the next tank or becomes conveyed into the tank of floating debris by means of a collapsible floating sludge scraper unit. The sludge scraper is firmly connected with the swing bridge which rolls on a guide rail. This is enabled by using of solid rubber wheels, or usual wheels rolling on the guide rail. Under aggravating climatic conditions, the application of a forced drive is possible. Depending on the size of the tank is

calculated: the total length of the bridge (with the supernatant of the tank radius of DNKHFI-21-K), its roll speed and the possibility of regulation, the type of bracket of the flocculation device, in- and outlet deflector, scraper and floating sludge scraper installation, the size of the air source, etc. By default, the supply of the bridge panel through the central leader. The final settling tank's accessories are protected by utility pattern of the company KUNST, spol.

MATERIAL DESIGN

The standard version of the material is construction steel with subsequent metallization or galvanizing and seal coat. The gutters, edges, skimming walls, flocculation devices, inlet and outlet deflector, scrapers, the outflow of effluent water and floating debris as well as other parts dipped in water – are from stainless steel. The guide rail and as necessary the force drive are made of construction steel.

OPERATION AND MAINTENANCE

The operation of the facility does not require constant care. Their maintenance is in accordance with the instructions.

DELIVERY FORM

The equipment is the total DNKHFI including delivery and installation of additional equipment or according to contract. The disposition of equipment (equal to the dimensions, which are listed in the table of the main dimensions) can be individually reviewed and is the subject of the technical explanation. The supplier reserves in compliance with the parameters of the equipment right for a change of deliveries contrary graphical illustrations.

DELIVERY DATE

According to contract

R.č. DNKHFI-K 02/08-A-en