Vertical vortex-type sand traps

KUNST LPVV-2.9-K through LPVV-6.1

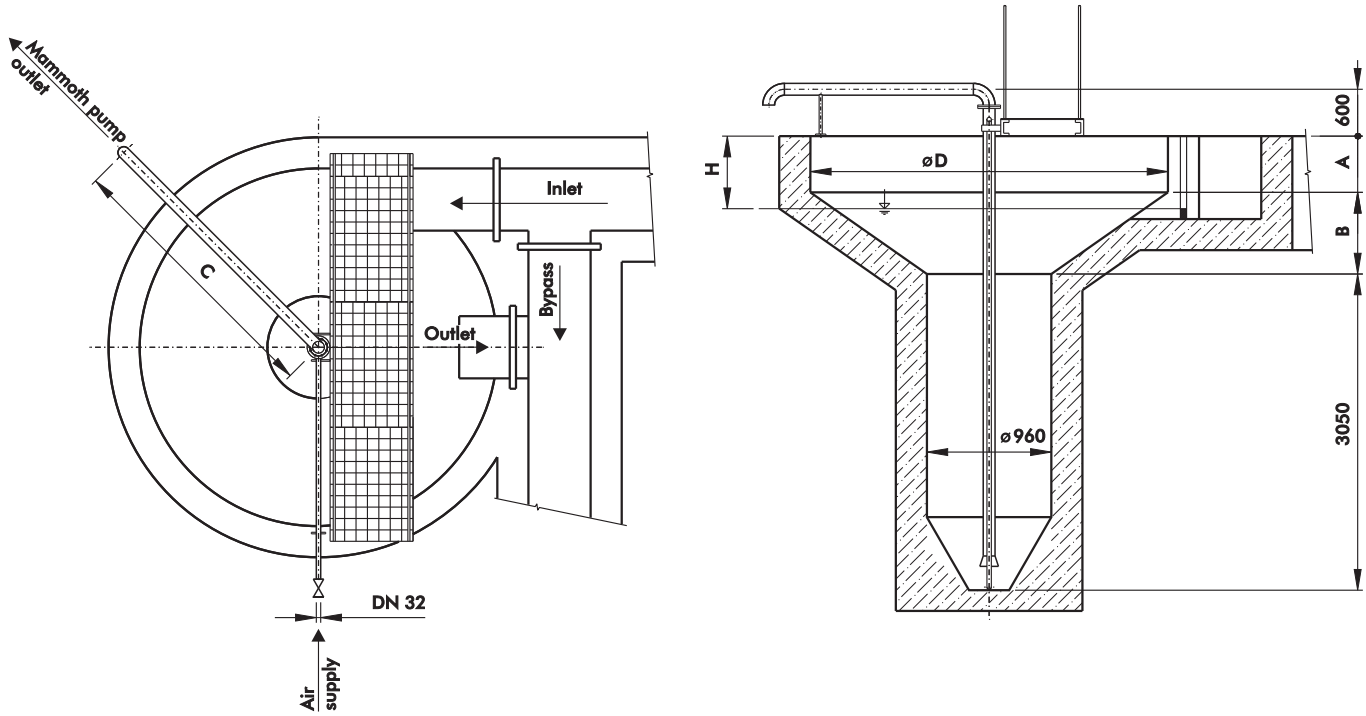

TABLE OF MAIN DIMENSIONS:

Parameter	Designation		Size and designation of the final settling tank DNKP					
			LPVV-2,9-K	LPVV-3,5-K	LPVV-4,0-K	LPVV-4,6-K	LPVV-5,4-K	LPVV-6,1-K
Trap diameter	D	mm	2900	3500	4000	4600	5400	6100
Inflow min. – max.	Q	l/s	3,5 - 112	3,5 - 215	3,5 - 265	3,5 - 320	3,5 - 510	3,5 - 560
Height of vertical part	A	mm	400	550	600	600	600	600
Height of conical part	B	mm	640	830	1020	1210	1460	1710
Length of outlet pipe	C	mm	3200	3600	3900	4300	4900	5400
Minimal water level	H	mm	640	860	960	1020	1160	1210

R.č. LPVV-K 02/08-B-en

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APPLICATION

The vertical, vertex-type sand trap is used for gravitational separation of sand contained in inflow water and subsequent removal of sand. The vertical sand serves as upstream clarification unit after preliminary treatment stages as screen and gravel trap.

FUNCTIONAL PRINCIPLE

The sand containing waste water enters the sand trap through a steadily expanding gutter. Under the influence of tangential inflow, the water is set in helical rotary motion. Sandparticles having a diameter of more than 0.2mm sink on the cylindrical part of the trap, where they sediment. Water freed from sand flows off through a notch in sand trap's wall. Sand becomes periodically withdrawn from the trap and enters the subsequent treatment stages (sand separation, grit washing) by means of a mammoth pump. The Air supply to drive the mammoth pump and elutriating of settled sand is offered according to the customer's requirements. Submerged pumps are necessary in case of highly deep build in sand traps in order to convey the water-sand-slurry as well as to elutriate the sludge using water or air. These occurrences are solved individually according to the customer's needs. Including the sand trap into the WWTP-layout it is necessary to consider shut-down and bypass including their closing devices and overflow edges at the outlet of the trap.

MATERIAL DESIGN

The mammoth pumps as well as its connecting pipes are made of nonferrous steel. The utility footbridge is hot-dipped galvanized. This ensures long plant lifetime without necessity of work and cost intensive maintenance.

OPERATION AND MAINTENANCE

The operation of all sizes of sand traps is limited to occasional cleaning of the outlet gutter from potential pollutions. The time interval of conveying the sand, its automation as well as operation of affiliated plants is solved by the costumer.

DELIVERY FORM

The LPVV is delivered partially or complete including delivery and installation of additional equipment or according to contract. The disposition of equipment as well as extent of delivery may be individually revised according to costumer's requirements (e.g. dimensions of footbridges, anchorage of pipes etc.).

DELIVERY DATE

According to contract

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