

Vertical sand trap

KUNST LPV-0.8-K through LPV-1.7-K

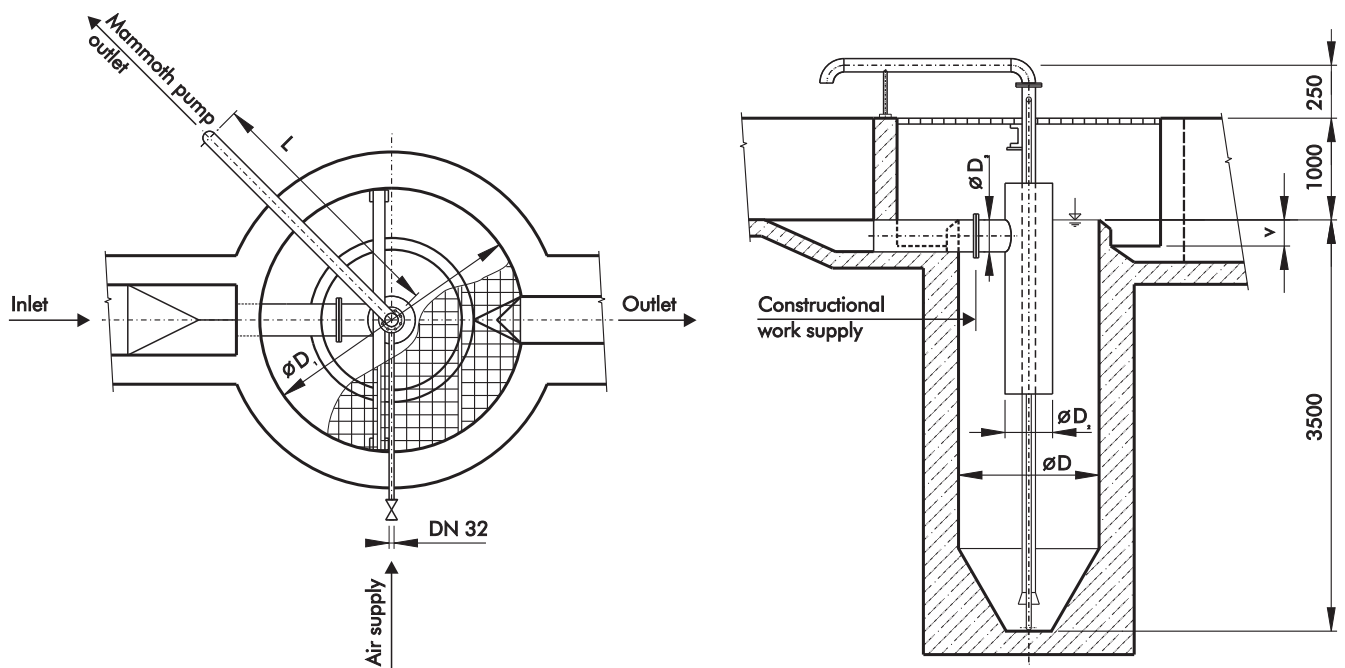


TABLE OF MAIN DIMENSIONS:

Parameter	Designation		Size and designation of the final settling tank DNKP				
			LPV-0,8-K	LPV-1,0-K	LPV-1,2-K	LPV-1,5-K	LPV-1,7-K
Trap diameter	D	mm	800	1000	1200	1500	1700
Inflow min. – max.	Q	l/s	1,2 - 19	2 - 33	4 - 50	6,5 - 78	8,8 - 106
Gutter depth	v	mm	200	200	200	300	300
Diameter of outlet gutter	D ₁	mm	1600	1800	2250	2900	3300
Diameter of inlet cylinder	D ₂	mm	400	400	400	500	500
Inlet pipe	D ₃	mm	200	200	250	300	300
Length of outlet pipe	L	mm	950	2050	2275	2600	2800

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APPLICATION

The vertical 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 inflow water is free from crude pollutions. The velocity of the sand containing waste water is decreased. Thus, sand grains having a Diameter of 0.2mm or bigger sediment in the trap. Waste water freed of sand ascends in the cylindrical part and flows through the gutter to trap outlet. Sand becomes periodically withdrawn from the trap and enters the subsequent treatment stages (sand separation, grit washing) by means of a mammoth pump.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.

MATERIAL DESIGN

The entire equipment of the sand trap (including mammoth pump) is made out of stainless steel. 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 customer.

DELIVERY FORM

The LPV 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 customer's requirements (e.g. footbridges, grids etc.).

DELIVERY DATE

According to contract