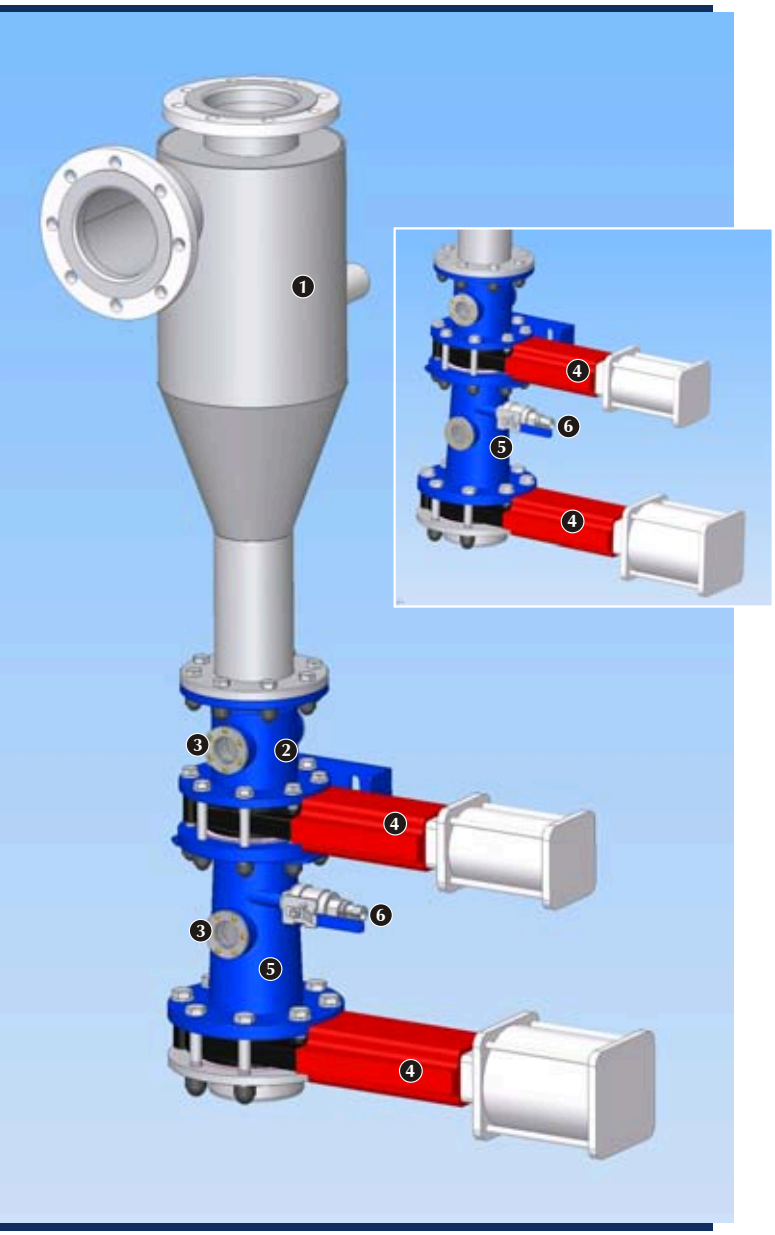
sand trap OP

engineering - progressive engineering



Sand trap OP is designed for **removal of sand and larger impurities** in heavy impure waste paper processing lines directly behind the primary screening stage and afterwards in any following cleaning points during separation of impurities at insufficient separation of sand from paper stock. It provides **considerably higher protection of following eguipment** (pumps, secondary cleaners, etc.) against contingent damage.

Sand trap works independently or in pairs according to actual on-site operating conditions. It differs from each other only in size and throughput. It belongs to a family of centrifugal cleaners working with a free whirl and automatic discharge of impurities into an over-pressure collecting box, being permanently rinsed with water. The sand traps OP-25 and 30 provide effective and also economical separation of specifically heavy impurities also from very coarse pulped stocks.

Design

The cleaned stock goes under pressure through a tangential input body into a cylindrical chamber. Here its linear movement is transferred to rotation. From here the stock goes into a conical part of the sand trap and impurities in the stock, being forced by centrifugal forces, are gradually gathered on the conical working surface.
Due to cone seating of the flow profile in the sand trap the accepted stock is forced to go back through the central part to its axial discharge branch. Heavy impurities with remaining fibres penetrate through a separating body outwards into the collecting box. A sight glass, installed in the separating body, is intended for visual check of sand trap functions.

Material

All parts coming in contact with the stock are made of stainless steel AISI 321 or AISI 316 Ti, other machine parts are made of structural steel St 52.

Machine design and work safety are in compliance with EU standards.

Main parts

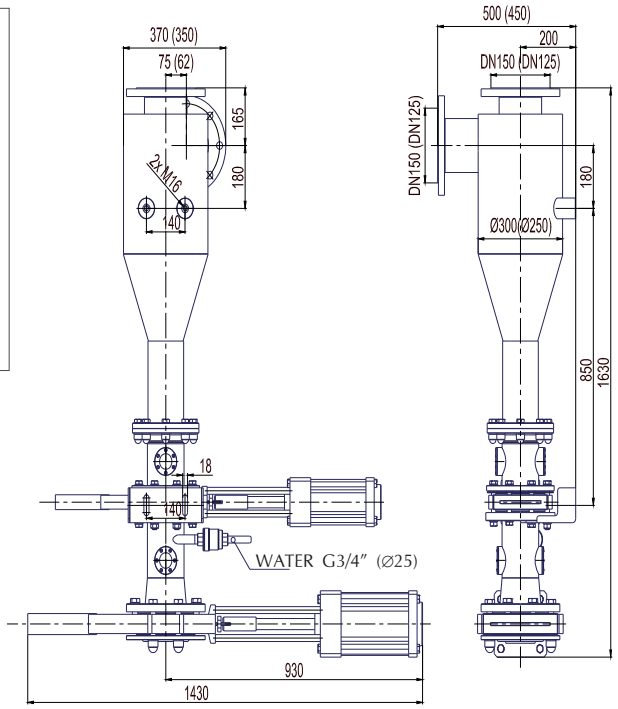
- input body with working cone **(1)**
- separating body with separating element **(2)**
- sight glasses **(3)**
- pneumatic gate valves **(4)**
- collecting box **(5)** with valve of rinsing water **(6)**

- low energy demand due to minor pressure losses
- high sorting efficiency and reliability in service also at sorting of very coarsely pulped stocks with high content of impurities
- high resistance against fouling
- simply and easy operation and maintenance
- easy replacement of all parts
- long service life

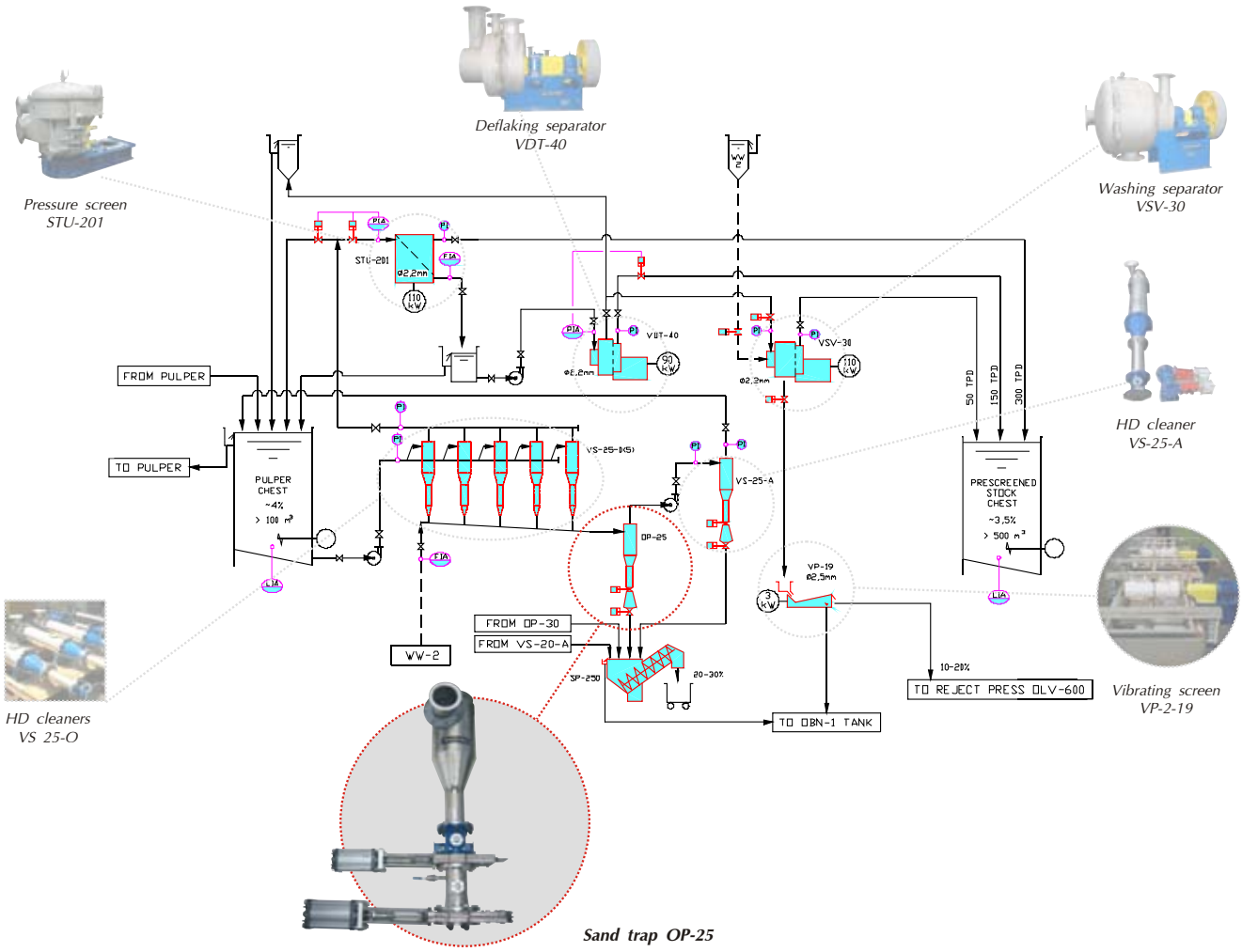
Advantages

TECHNICAL PARAMETERS

		OP-25	OP-30
Throughput	l/min	800 - 2500	1700 - 3600
Optimal throughput	l/min	1000 - 2000	2000 - 3200
Input pressure (p1)	kPa	max. 300	
Minimal output pressure (p2)	kPa	10	10
Optimal pressure loss	kPa	5 - 30	5 - 30
Maximal consistency	%	3	3
Optimal consistency	%	1 - 2	1 - 2
Sorting efficiency	%	80 - 90	80 - 90
Consumption of rinsing water	l/min	15 - 40	
Pressure of rinsing water	kPa	p2 + 50	
Collecting box capacity	dm^3	8	
Machine weight	kg	180	190



Example of machine installation. Stock preparation line for OCC/OMP processing, production of liners, capacity 500 tpd.
Primary screening - preliminary screening of heavy and light impurities.



Sand trap OP-25

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