



NOVELTY
TSC pumping station

TSA, TSB, TSC sewage pumping stations
with separation of solids

➔ Sewage pumping stations with separation of solids

One of the main and most persistent problems that occur in sewage pumping installations is the presence of solids. Regardless of the kind of pumps used, there is a constant risk of clogging of pumps hydraulic system, which causes an emergency in the pumping station. Especially troublesome are here solid elements in the form of strings, rags, bandages, etc. carried by sewage. Using 'clogless impeller', free-flow pumps will always be connected with decrease of hydraulic efficiency, which will result in increased cost of maintenance of a pumping station. Using a pumping station with separation of solids allows to effectively avoid above-mentioned and other problems that occur in sewage pumping systems.

⚙️ Construction

TS sewage pumping station is a complete, fully automated device that consists of the following components:

- ✔ collector and separation tank,
- ✔ two separators - a bar basket, or a flap,
- ✔ pumps with a high-efficiency channel impeller,
- ✔ UZS safety and control device,
- ✔ hydraulic equipment elements, i.e. flanges, T-connectors, elbows, system ball check valves, connectors, knife gate, etc.,
- ✔ ultrasonic level gauge.

★ Pumps

Sewage pumping station is equipped with alternately operating pumps of FZ type with highly efficient hydraulic system and reliable coupling system. In sewage pumping stations with separation of solids produced by Hydro-Vacuum S.A. there is a possibility of application of pumps with channel impellers with highly efficient el. motors with fan cooling or pumps in IP68 execution (motors could operate in humid conditions and submerged). Pumps of FZ type are equipped with many protections in form of built-in sensors. Multiplicity of types and sizes of FZ pumps allows for optimal selection of pumps acc. to the customer's needs.

🏠 Tank and armature

The sewage pumping station tank is made entirely of austenite steel or austenite steel. Separators, flanges, T-connectors and connecting elements are made of austenite steel of high corrosion resistance to sewage effects. The structure and materials of other elements of hydraulic equipment (check valves, gates, pumps) make them resistant to sewage effects. In construction of sewage pumping stations were used check valves that ensure reliable and effective transport of sewage containing solids on the stretch gravitational collector - separators.



🏠 Power supply and control

Control of operation of sewage pumping station is realized through safety-control device of UZS type. All devices are optionally equipped with acoustic-optical signaling of alarm states. On demand, we equip UZS with remote monitoring of station operation thanks to which customer have full control over sewage pumping station through computer program.

📊 Technical specification

Type	Sewage inflow [m³/h]	Discharge pipeline [mm]	Number of pumps [pieces]	Lower edge of inlet [mm]	Volume [m³]	Pump type	Minimum diameter of chamber [mm]
TSA*	0,5 - 400	80 - 250	2 - 4	400 - 2200	0,05 - 11	FZB.2-7, FZC.3-6, FZD.2-3	2000 - 5500
TSB*	1 - 80	80 - 150	2	400 - 1600	0,1 - 4	FZB.2-4, FZC.2-4, FZD.2-3, FZE.2-3	1500 - 3000
TSC*	4 - 100	100 - 150	2 - 4	600 - 1650	0,1 - 2,8	FZB.2-4, FZC.2-4, FZD.2-3, FZE.2-3	1500 - 2500

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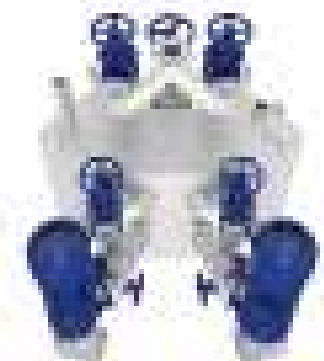
* on demand, sewage pumping stations with higher capacity and custom parameters are also available

✔ Advantages

- ✔ construction designed by engineers of Research & Development Department of Hydro-Vacuum S.A.,
- ✔ sewage pumping station patented in Polish and European patent office,
- ✔ stations are equipped with tested and award-winning highly efficient pumps of FZ type produced by Hydro-Vacuum S.A.,
- ✔ the whole device is produced in vernacular factory Hydro-Vacuum S.A. in Grudziądz,
- ✔ we ensure complexity - from delivery to station assembly and connection of remote monitoring,
- ✔ individual selection of each sewage pumping station for the customer's needs,
- ✔ higher, possible delivery head comparing to traditional pumping station,
- ✔ alarm states consisting of blocking of pumps limited to minimum,
- ✔ minimizing the risk of damaging of pump hydraulic system (separation of solids before pump),
- ✔ installation of sewage pumping station in dry chamber considerably improves comfort of realized conservation and maintenance works, possibility of disconnection of one pump without interruption of operation of station,
- ✔ smaller volumes of tanks prevent rotting of sewage and creation of unpleasant odours (more frequent pump starts and pumping out sewage).

★ New sewage pumping station with separation of solids of TSC type

- ✔ direct access to the separator without disconnection of the pump,
- ✔ cut-off valves before separators and pumps allow for realization of service activities without interruption of operation
- ✔ bigger area for personnel and easier access to separators and cut-off valves
- ✔ additional float switch that allows to control even in case of probe failure



★ Awards



Złoty Medal targów POLEKO 2006



Lider Instalacji 2008



Medal targów TIWS 2010



Medal Europejski 2011



Innowacyjny Produkt 2012

Innowacyjna Technologia EUREKA 2007

Grudziądz - Port Schulza



Dobroszyce - powiat oleśnicki



Brzezina - gmina Miękinia



Groblice - powiat wrocławski



Hydro-Vacuum SA, Sewage pumping stations prepared for shipment



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