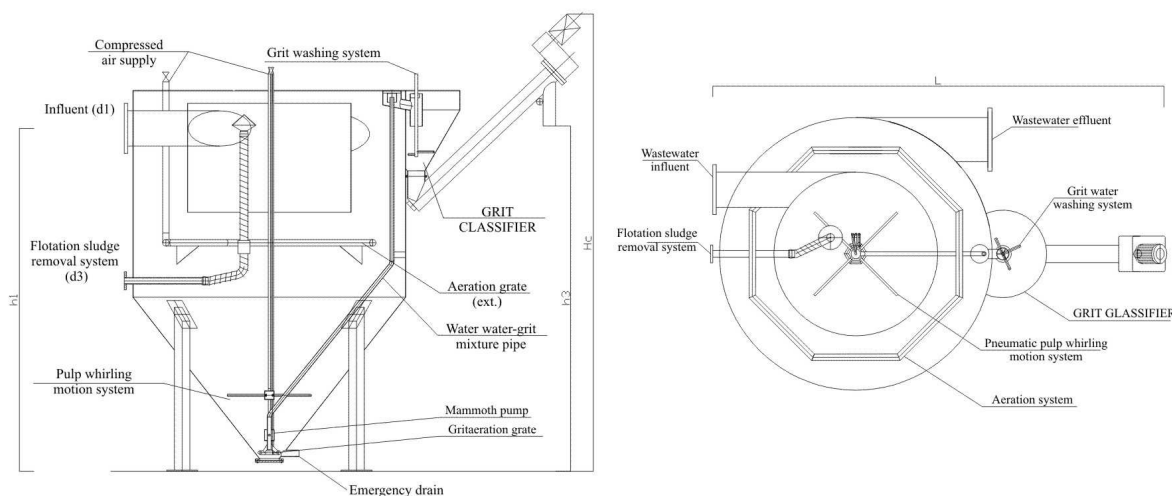


## WHIRL GRIT SEPARATOR INTEGRATED WITH GRIT CLASSIFIER DF PSZ



### SPECIFICATIONS

Parameter	Unit	PSZ 1/60	PSZ 2/120	PSZ 3/160	PSZ 4/200	PSZ 5/300	PSZ 6/400
Throughput	Q m <sup>3</sup> /h	60	120	160	200	300	400
Grit separator diameter	D mm	1300	1800	2200	2500	3000	3500
Total height	Hc mm	2210	2850	4030	4250	5400	5400
Influent height	h1 mm	1450	2000	2900	3150	4150	4150
Effluent height	h2 mm	1400	1950	2850	3100	4100	4100
Grit discharge height	h3 mm	1600	2170	3050	3290	4350	4150
Total length	L mm	2485	3315	4430	4930	5540	6100
Influent connection diameter	d1 mm	150	200	250	300	350	400
Effluent connection diameter	d2 mm	200	250	300	350	400	450
Flotation sludge removal connection diameter	d3 mm	50	60	60	80	100	100
Screw conveyor driving motor power	P kW	0,75	1,1	1,1	1,1	1,5	1,5
Compressed air demand	Zp l/min	50	50	80	80	100	100
Aeration grate compressed air demand	Zr l/min	100	120	130	150	200	300
Amount of washing water	Zw m <sup>3</sup> /h	9	12	15	18	24	30
Pressure	P bar	0,6	0,6	0,6	0,6	0,6	0,6
Volume	V m <sup>3</sup>	1,2	2,8	7,2	9,8	18,4	23,5
Weight of grit separator	m kg	400	900	1200	1500	2200	2400

\* for screw conveyor inclination 45°

### APPLICATION:

The whirl grit separator with integrated grit classifier are used for separation and discharge of grit and solids from wastewater with the possibility of flotation sludge discharge. Additionally, grit washing and dewatering is also possible.

### CONSTRUCTION:

As standard, the unit is made of EN 1.4301 grade stainless steel.

The inlet and the outlet are connected, respectively, to the inside and outer rings. The unit has an adjustable flotation sludge removal funnel.

Two independent aeration systems are installed in the tank. Compressed air to supply the mammoth pump and for grit aeration may be supplied from a small compressor; the air supply to the organic suspended matter and wastewater aeration comes from a blower station.

The grit classifier is fully integrated with the sand trap which makes dewatering more effective, lowers investment costs and reduces the footprint of the system.

### OPERATION PRINCIPLE

Wastewater is let in via inlet port into inner ring and is made to whirl. Centrifugal and gravity force make the grit and other solids to slow down and settle to the bottom of the tank while the excess of the fluid with suspended organic matter overflows to the outer ring and leaves the unit with the effluent. Floating fats and organic matter swirling with the liquid in the inner ring are periodically removed via adjustable flotation sludge funnel.

The grit that settled at the bottom of the grit separator tank is sucked by an airlift and conveyed to the grit classifier where it enters first the washing chamber for flushing with municipal water or effluent (option) and then the sedimentation chamber, where from water-soaked grit is moved by an screw-type conveyor, while the water drains by gravity, for discharge to the outside.