COMBY PLANTS RCSD

Compact Systems for sewage effluent pre-treatment

MACHINE DESCRIPTION

The sewage acceptance unit is a system studied to receive and mechanically pre-treat sewage with a single compact unit. The wastewater piping is connected to the **RCSD** at the inlet flange. Pre-screened sewage allows to settle and wash out the sand and grit. Finally grease and oily particles are floated and scraped from the sludge surface (**RCSD3 version**).
The conditioned effluent is afterwards discharged into the biological wastewater treatment plant. The range offered by **R.E.M.** offers the unit in 2 different configurations.
**1. Comby plant type RCSD offered with the following configurations:**
- RCSD2: sand separation.
- RCSD3: sand separation and grease removal.

WORKING LOGIC FOR COMBY PLANTS RCSD

Sewage, with its solid particles, enters the aerated sedimentation tank; here sand deposits on the bottom of the tank where a sand conveying screw allows the extraction. Organics are kept in suspension by the air injection. The coarse air bubbles allow to wash out the sand and allows the separation of sand having a reduced organic content. The extraction screw removes and discharges the sand into the sand bin.
The **RCSD3** type is also equipped with a grease and oil skimmer. A travelling floating skimmer is installed in a side channel where grease are concentrate by the air pattern and segregate through a reverse Thomson-like baffle. The skimmer removes on a timer the floating parts and discharges them through a discharge pipe.
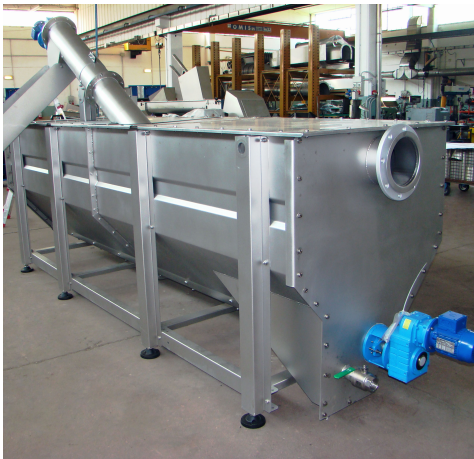
MAIN ADVANTAGES FOR COMBY PLANTS RCSD
1. No leaks, smells or aerosols generated by the system.
2. Designed to handle wastewater with high organic content.
3. No drives in contact with the sewage.
4. No concrete casting required.
6. Low costs for installation and erection.

GENERAL DIMENSIONAL DATA FOR COMBY PLANTS RCSD

Capcity is shown in **m³/h**. Compact plants are available also as extended version. The extended version have the conveyor elongated to allow to discharge at a higher level. This configuration is particularly designed for installations underground or in deep channels or pits. Here we provide some information about technical nature for this type of units:
- Sand removal up to 90% of sand having size 200 micron and bigger.
- Floating grease and oils reclaiming (RCSD3 only).

R.E.M. RCSD can be equipped with the following accessories:
- vertical discharge.
- bagging (single or endless bag type).
- heating and weather protection.
- centralized solenoid valves and piping.
- control cabinet.
- ATEX or UL NEMA 7 EX-proof version.

STANDARD DIMENSIONAL DATA FOR COMBY PLANTS RCSD

RCSD2 MODELS	RCSD2/10	RCSD2/20	RCSD2/30	RCSD2/40	RCSD2/60	RCSD2/80	RCSD2/100	RCSD2/120	RCSD2/150
A - mm	3869	4599	5178	6678	6748	9748	12733	8288	9833
B - mm	2581	2612	2628	2612	3549	3559	3559	4409	4399
C - mm	1074	1074	1074	1074	1430	1429	1429	1930	1929
Ø INLET - mm	DN100 PN10	DN200 PN10	DN200 PN10	DN200 PN10	DN300 PN10	DN300 PN10	DN400 PN10	DN400 PN10	DN500 PN10
Ø OUTLET - mm	DN100 PN10	DN200 PN10	DN200 PN10	DN200 PN10	DN300 PN10	DN300 PN10	DN400 PN10	DN400 PN10	DN500 PN10
FLOWRATES - m³/h	36	72	108	144	216	288	360	432	540

IMPORTANT THE DESIGN IS TAILORED FOR THE APPLICATION AND MAY BE MODIFIED DEPENDING ON CUSTOMER'S NEEDS.
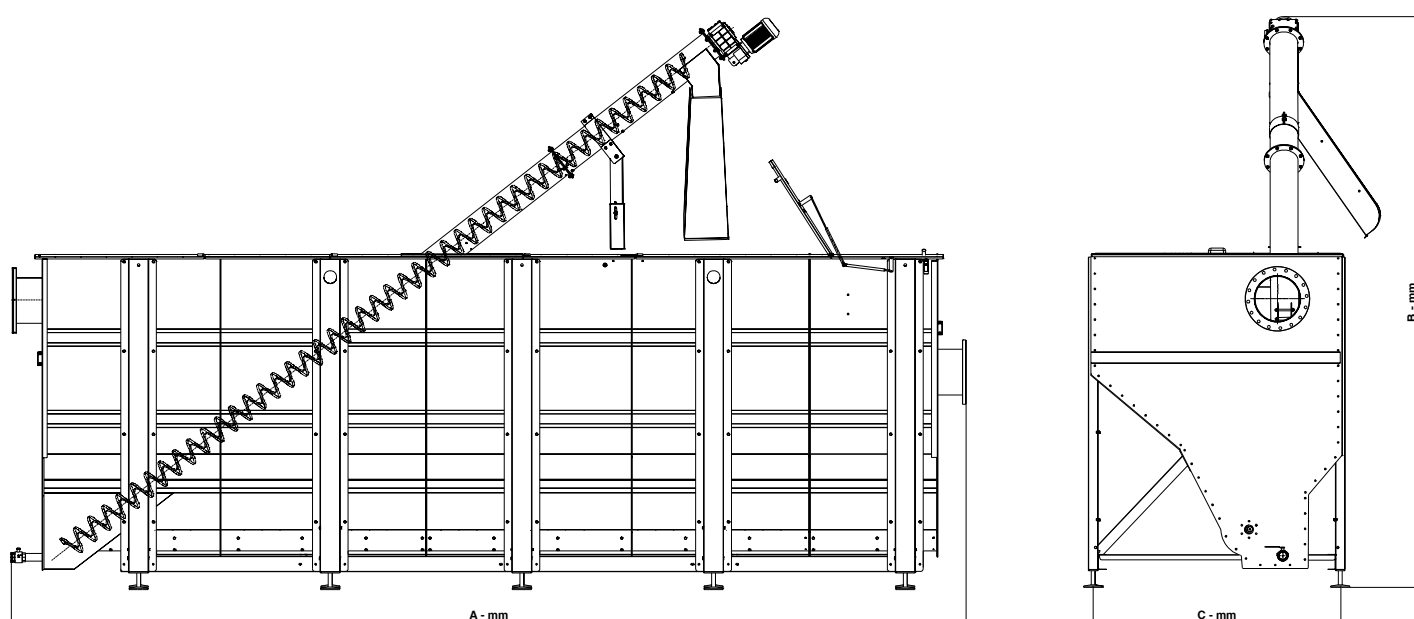
Materials of construction for fabricated parts: Stainless Steel AISI304 / Stainless Steel AISI316
Materials of construction of spiral: Stainless Steel AISI304 / Stainless Steel AISI316 / High resistance steel HRS

RCSD3 MODELS	RCSD3/10	RCSD3/20	RCSD3/30	RCSD3/40	RCSD3/60	RCSD3/80	RCSD3/100	RCSD3/120	RCSD3/150
A - mm	3869	4599	5178	6678	6748	9748	12733	8288	9833
B - mm	2581	2612	2628	2612	3549	3559	3559	4409	4399
C - mm	1074	1074	1074	1074	1430	1429	1429	1930	1929
Ø INLET - mm	DN100 PN10	DN200 PN10	DN200 PN10	DN200 PN10	DN300 PN10	DN300 PN10	DN400 PN10	DN400 PN10	DN500 PN10
Ø OUTLET - mm	DN100 PN10	DN200 PN10	DN200 PN10	DN200 PN10	DN300 PN10	DN300 PN10	DN400 PN10	DN400 PN10	DN500 PN10
Ø GREASE OUTLET - mm	DN150	DN150	DN150	DN150	DN150	DN150	DN150	DN150	DN150
FLOWRATES - m³/h	36	72	108	144	216	288	360	432	540