

Taron RDD Filter

The Future of Wastewater Treatment is here.

What are Pilot's Purposes?

Locations: Italy and United States

Application Type: Secondary Clarification combined with Tertiary Filtration

Objective: Simplify the wastewater treatment process while reducing capex

Influent Characteristics:

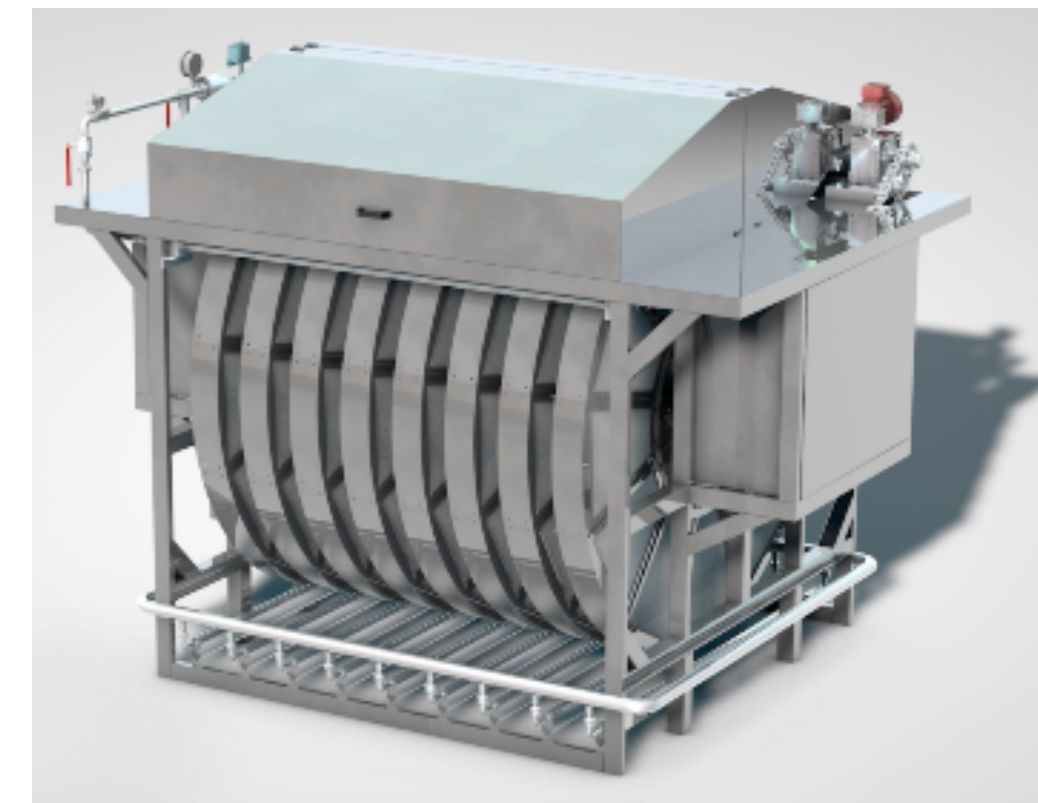
MLSS ranging 3,500 – 25,000 mg/L

Taron is a first-of-its-kind technology that combines the secondary clarification and tertiary filtration portion of the wastewater treatment process into one complete step. It is Taron's prerogative to become a solution that will re-standardize the wastewater treatment process with an new, more simplistic approach characterized by reduced capex and low opex.

Compelling Value Proposition

Taron's unique design and unparalleled capabilities allow the Customer to face several challenges by providing:

- Hydraulic capacity increase (plant upgrade with existing infrastructure)
- Improved nutrient removal (N and P (Bio-P as well as chemical precipitation))
- Improved effluent quality (meeting regulatory requirements)
- Reduced capital expenditures for new installations
- Reduced footprint for new installations
- WWTPs with significant e.g. seasonal flow variations



The Experience

Both the Italy and US pilot confirmed Taron's extraordinary capabilities. Both pilots had been tested under various MLSS concentrations ranging from 3,500 mg/L to approx. 25,000 mg/L; under all these test parameters Taron had consistently achieved low TSS along with low turbidity ranging from 1.7 NTU to 14.6 NTU. The pilot operated at a flux rate ranging from 247 gfd to 1,247 gfd (420 l/mh to 2,121 l/mh). Taron's ability to provide superior effluent quality at high MLSS concentrations is attributed to its capability of operating at high flux rates.

Please see data from the pilots below:

Italian prototype, Installation April, 2019

Parameter	Minimum	Average	Maximum
Flux [gfd, l/mh]	298, 507	670, 1139	1247, 2121
MLSS RDD Filter tank [mg/L]	3,800	12,415	24,910
Filtrate turbidity [NTU]	1.7	3.9	12.3

US pilot, installation November, 2019

Parameter	Minimum	Average	Maximum
Flux [gfd, l/mh]	247, 420	801, 1362	1207, 2052
MLSS RDD Filter tank [mg/L]	3,500	8,305	19,960
Filtrate turbidity [NTU]	2.4	5.6	14.6

What Problem does this solve?

Wastewater treatment plants that contain secondary clarifiers and tertiary filters operate around a maximum MLSS of 4,000 mg/L. Taron can treat concentrations well above this capacity, which allows for Taron to be integrated with a significantly smaller bioreactor (reducing the amount of capex required).

Like Taron, MBRs can operate at significantly higher MLSS. However, MBR flux rates are drastically lower as Taron can operate at flux rates that are 50 - 100 times greater than MBR. This is a contributing factor behind the high capex required for purchase of MBRs.

Taron's ability to operate at high MLSS and high flux rates greatly saves on Customer capex while in turn providing the following benefits:

- Produces high quality filtrate with low turbidity and very low TSS
- Helps WWTPs meet regulatory code standards quickly
- Continuous wetting system assures steady filtration performance with no filtration downtime
- Low head loss and low energy demand due to gravity filtration
- Highly compact – low footprint
- Easy and fast start-/ ramp up from stand-by mode (operational flexibility)

What does this mean for the future?

There is no other product like Taron on the market. Taron has proven to be successful from its pilots and is currently in the process of becoming a fully developed product. Taron is expected to officially hit the market towards the end of 2020.

Taron's extraordinary capabilities brings a whole new dynamic to the wastewater treatment process and can very well shape the future of the industry.