



Technical Bulletin no 17

HYCOVER Rotary Distributor Machines

The ever increasing use of plastic media for the treatment of municipal and industrial waste waters has resulted in the need for the provision of rotary distributors with the ability to deliver much higher flows of effluent than that traditionally applied to stone trickling filters. In addition to these higher flows it has been established that there is a need for careful control of application rates to ensure that correct wetting of the media pack is achieved to provide the desired SK factor. Periodic slow speed operation of machines is also required to control the build-up of biomass within the media pack.

Sewaco have, for the past 30 years, specialised in the design, manufacture, supply and installation of purpose designed static and rotary **HYCOVER** distributors to meet this requirement. Rotary distributor machines are offered with variable speed electro-pneumatic drive units that incorporate a programmable facility to automatically activate an ultra slow speed setting for periodic flushing of the media pack.

A unique feature of the drive mechanism enables the **HYCOVER** distributors to revert to reaction drive in the event of power failure. Upon resumption of the power supply drive units automatically revert back to the pre-set speed.

HYCOVER Rotary distributors are available in a range of designs, including 2, 3, 4 & 6 arm versions that can handle a wide range of gravity or pumped feed rates. Self dosing machines with integral syphon arrangements. Open trough machines are often selected to cater for larger flows.

HYCOVER rotary distributors are manufactured using either Stainless Steel or heavy duty galvanised steel for centre columns and bowls. Tubular and open trough type arms are formed from stainless steel as standard. Our over mounted cartridge type assembly provides easy replacement of bearing thus avoiding the need for heavy plant to carry out the majority of repairs and maintenance. The unique **HYCOVER** design also avoids the need for a water seal arrangement on standard designs with the exception of the 'Lo-head' version.



Twin trough arm **HYCOVER** rotary distributor with variable speed drive arranged to apply up to 70lt/sec of primary settled sewage to the surface of a 13.1mt Ø roughing filter containing some 430m³ plastic media packed to 3.6mts



Twin tubular arm **HYCOVER** rotary distributor with variable speed drive arranged to apply up to 60lt/sec of secondary sewage effluent to the surface of a 22.5mt Ø **HYRATE Polytower** packed to 6.0mts with some 2430m³ of modular plastic media



Stainless steel washout box set into surface of media adjacent to access doorway.



Typical **HYRATE Polytower** with stairway and local control panel on top platform adjacent to doorway



Distributor arms are fitted with Quick strip full flow washout end cap & stainless steel chain..



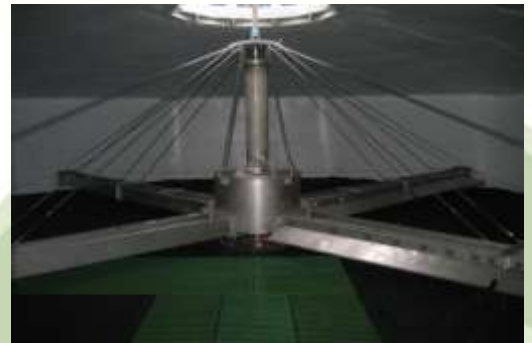
Application of effluent to the media surface, using our unique design of stainless steel spreader plates, ensures effective cover throughout the full range of flow fed to each machine. Internal flow control weirs enable primary arms to accommodate normal flow and secondary arms to receive flows up to the maximum FFT for the filter

HYRATE biofilter shells range from 1.8 x 2.4 mt plan to 30 mt square and from 6.0 mt to 30 mt diameter. Our unique **HYRATE 'Polytower'** design has been developed over the past 15 years to accommodate the use of structured media and rotary distributors. Filter shells accommodate media packed in depths ranging from 2.4 - 7.2 mts. Purpose made access stairways and high level splitter tanks complement the range of plant we manufacture.

Purpose designed media support systems for modular plastic media are factory built and delivered to site ready for installation onto prepared concrete dwarf walls, showing a worthwhile saving in construction time.

In addition to our range of **HYCOVER** rotary distributors Sewaco also manufacture the **HYCOVER** static distribution system. Suitable for installation directly onto the finished media surface in any sized rectangular filter the system includes a full set of access walkways and pipe support brackets, enabling easy access to every specially designed irrigation nozzle, fitted with our unique spreader plates.

The **HYCOVER** static distribution system can be fitted with our **AUTOCLEANSE** automatic nozzle cleansing system that is especially suited for distribution systems installed in enclosed filters where access is restricted



4 Arm all stainless **HYCOVER** trough type machine, to apply 55 lt/sec of primary sewage. Fitted with external over-mounted variable speed drive. Installed in an 11.75 mt **HYRATE Polytower** fitted with roof and low level odour extract system.



4 Arm motor driven **HYCOVER** tubular arm distributor applying some 170 lt/sec to 12.0 mt dia **HYRATE** nitrifying filter.



2 Arm reaction driven **HYCOVER 'Lo-Flo'** tubular arm distributor applying 3.2 lt/sec to an 18.0 mt dia stone trickling filter.



4 Arm motor driven **HYCOVER** trough arm distributor applying some 360 lt/sec to 20.0 mt dia **HYRATE** nitrifying filter.