

Non-Powered, Self-Cleaning Storm Screen

Key Features & Benefits:

- Grade 316 or 304 stainless steel construction
- 6mm aperture screening in two dimensions
- 2 sizes available
- Meets regulatory requirements
- Units normally held in stock
- Suitable for retrofit applications
- Robust, proven technology

How We Create Value:

- Self-regulating unit with no power costs
- 20 year design life
- Maintenance free operation
- Self-cleansing hydro powered screen
- Fast delivery



Operation

Jacopa's Copa® cyclone is a non-powered, self-cleaning storm screen, developed in partnership with United Utilities. The Copa® cyclone's unique design eliminates the need for an external power supply and mechanical cleaning of the screen's surface.

The Copa® cyclone does not start operating until the water level reaches the shaft level. An internal baffle creates an overflow weir, directing flows onto the internal vanes. The vanes are attached to the aperture drum and cause the drum to rotate. The internal baffle extends from the 3 o'clock position to the 12 o'clock position. This only allows flows to enter the drum when water levels are above the 3 o'clock weir level.

The drum will start to rotate with even the smallest inflow. Since there is a high shear-action between the drum face and the surrounding water any screenings attached to the outside of the drum will be stripped from the aperture face. The water level over the weir rises with increased flow, utilizing a greater inflow screen area and increasing the screen throughput. The drum rotates faster as more flow enters, increasing the shear action and consequently improving the cleansing action. The unit is therefore self-regulating over the full range of flows. The drum will even continue to operate if the unit becomes completely submerged, utilizing the maximum inflow.

Features:

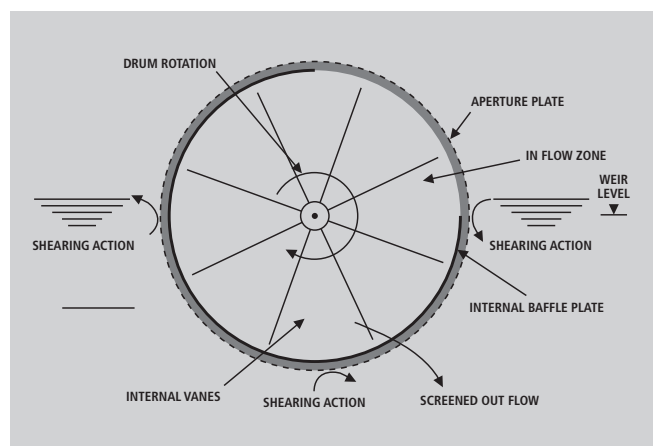
- Shaft bearing sealed for life
- Teflon coated to prevent FOG adhesion

Advantages:

- Zero pin holing
- Self-regulating

Applications:

- Storm tank discharges
- Pumping station overflows
- Storm over-flow chambers



A Revolution in CSO Screening Technology

Maintenance:

The unit is designed to be virtually maintenance free. The normal maintenance regime is to inspect the drum annually to ensure that it is clean and rotating freely. The shaft bearings are stainless steel, sealed for life and require no further maintenance.

Installation:

The Copa® cyclone is ideal for retrofit and new CSO chambers. The unit can be directly bolted onto a chamber wall, over a circular outlet or span across the CSO chamber from weir wall to chamber wall. The standard drum unit size is 700mm long, and 500mm in diameter.

Trials

Extensive trials have shown that screenings roll from the rotating face of the drum on up-stream and down-stream water levels, maintaining a clear surface area.

Our original experimental unit was tested at the National CSO test facility. The Copa® cyclone ran continuously for 5 hours with no blinding, and achieved a maximum SRV of 40%. Subsequent modifications to the standard unit are expected to increase the SRV.



Design	Cyclone 75	Cyclone 150
Design Flow	75 l/sec	150 l/s
Head Over Int. Weir	230 mm	360 mm
Maximum SVR	40%	40%
Drum Diameter	500 mm	675 mm

