

# Reg-U-Flo<sup>®</sup> Vortex Flow Control

Optimize flow control for up to **50% reduction** in wet weather storage costs

## APPLICATIONS

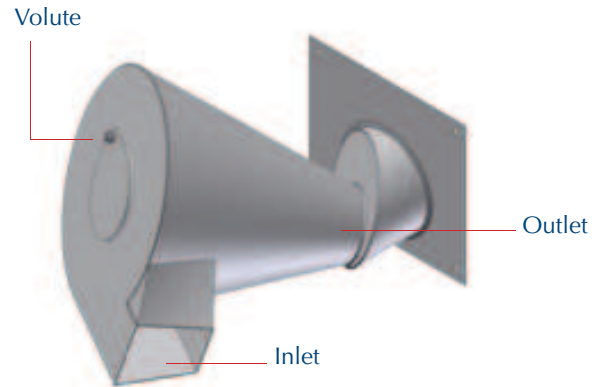
- Control of flow within and entering Combined Sewers
- Control of flow within and entering WWTPs
- Catch basin inlet flow control
- Flow balancing and on-site attenuation
- Velocity and energy dissipation of flow streams
- Capture and control of floatable trash
- Storage volume reduction

## ADVANTAGES

- Up to 50% savings on CSO project costs
- Self-activating with no moving parts or power requirements
- Openings are 3-6 times larger than the equivalent orifice
- Requires minimal maintenance
- Available in sections for installations with restricted access
- Performance proven with over 18,000 installations worldwide



The **Reg-U-Flo Vortex Flow Control** provides superior hydraulic performance over conventional flow controls. The unique design optimizes flow control for up to 50% reduction in wet weather storage and related project costs while providing large clear openings to reduce the chance of blockages.

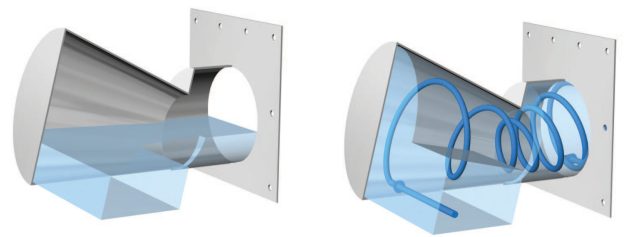
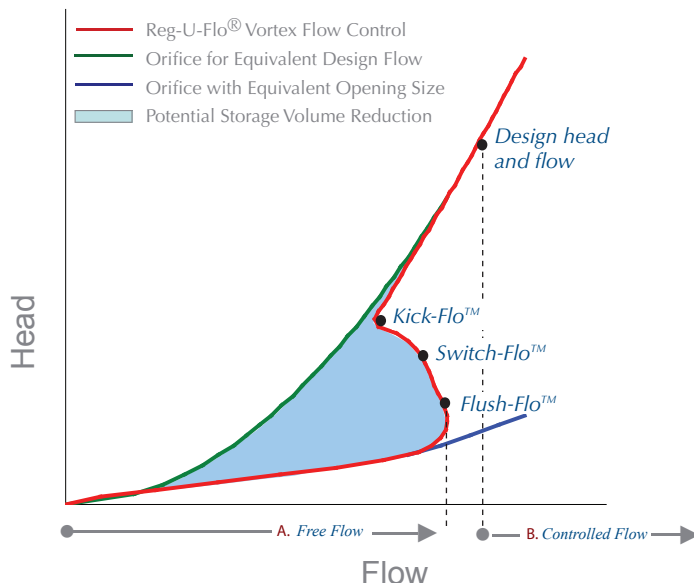


## HOW IT WORKS

The **Reg-U-Flo Vortex Flow Control** optimizes flow control by allowing higher discharge rates at lower heads than conventional flow control options. The head/discharge curves shown below illustrate the potential storage volume savings offered by a **Reg-U-Flo** compared to an orifice.

The **Reg-U-Flo** operates on simple fluid hydraulics. Flow enters the volute tangentially through the intake. Under low flow conditions, the **Reg-U-Flo** acts as a large orifice where water and debris pass directly from the inlet to the outlet as shown in **Figure A**.

As flow increases and reaches the **Flush-Flo™** point, high peripheral velocities start to throttle. As head increases, the valve approaches the **Switch-Flo™** and **Kick-Flo™** points and an air-filled core starts to form in the volute. As head continues to increase, the air core fully stabilizes and the valve discharge is throttled to that of a smaller orifice (see **Figure B**).



A. Free Flow

B. Controlled Flow

**SIZING AND DESIGN**




**Reg-U-Flo Vortex Flow Control Design Chart**

Three series of **Reg-U-Flo Vortex Flow Controls** are available to suit various applications and design constraints.

Refer to the **Reg-U-Flo Design Chart** for typical sizing guidelines.

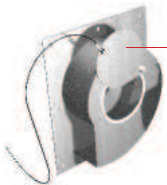
*\* Reg-U-Flo Vortex Flow Controls can be manufactured to any specified diameter. Listed diameter ranges are typical guidelines only.*

*\*\* Flow ranges listed are for 3' - 24' of head.*

| Series  | Model             | Typical Diameter Range* | Typical Flow Range** (cfs) | Mount Style               |
|---|-------------------|-------------------------|----------------------------|---------------------------|
|  S | SH<br>SXH<br>SMXH | 2" - 16"                | 0.05 - 6.5                 | Wall Mount<br>Pipe Mount  |
|  V | SV<br>SXV         | 2" - 16"                | 0.05 - 7.5                 | Floor Mount<br>Pipe Mount |
|  C | C<br>CX<br>CH     | 6" - 75"                | 0.1 - 388                  | Floor Mount               |

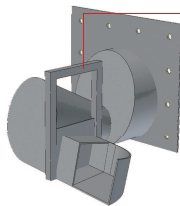
**Optional Design Accessories**

**Pivoting Bypass Door**



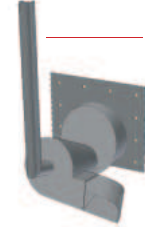
Provision for emergency bypass and maintenance access.

**Adjustable Inlet**



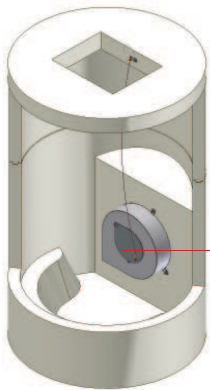
To adjust inlet aperture and achieve a custom flow rate post installation.

**Vortex Suppressor Pipe**

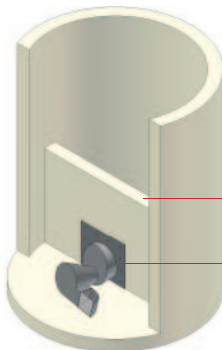


To eliminate air core for automatic emergency bypass.

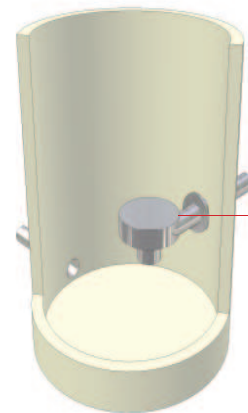
**Typical Chamber Configurations**



Wall Mounted SXH Valve for Catch Basin Inlet Control



Bypass Weir  
Floor Mounted CH Valve for Storm Flow Control and Treatment Plant Flow Control



Pipe Mounted SXV Valve for Flow Control Within Collection Systems

For more information please call our office toll free at 800-848-2706 or inquire at [www.hydro-international.biz](http://www.hydro-international.biz).