

TRU-BEND Selection Criteria:

Design Data:

Weir Overflow Capacity (Qd): _____ (indicate L/s, cfs, gpm, etc...)
Maximum Head (H) at Qd: _____ (indicate ft or m)
Existing Structure: _____ (yes/no)
Overflow Weir Elevation: _____
Overflow Weir Length: _____
Maximum Upstream Water Level
(Max USWL): _____
Preferred number of Weir Modules: _____
Sealed on all Four Sides: _____ (yes/no)

Preferred Counterweight Option:

Separate Counterweight Structure: _____ (yes/no)
Concrete Weights: _____
Galvanized Steel Weights: _____
Stainless Steel Weights: _____

Material of Construction Preference:

SS 304 L: _____
SS 316 L: _____

Weir Monitoring Option:

Discharge Monitoring: _____ (yes/no)
Installation Assistance Required: _____ (yes/no)
Start-Up Required: _____ (yes/no)
Personnel Training Required: _____ (yes/no)

TRU-BEND Overflow Bending Weir Type O

The Clear Solution



Application

The **TRU-BEND** overflow Bending Weir (Type O) is designed to maintain maximum water storage levels upstream of the weir thus allowing full usage of all the available upstream storage volume, while not adversely affecting the overflow weir capacity.

Once a combined sewer overflow tank (or sewer) or a stormwater overflow tank (or sewer) is full, any additional influent water must be able to reach the receiving stream. The traditional way of accomplishing this was by using fixed weirs. However, fixed weirs have inherent disadvantages including: increased water pollution, lower usable tank and sewer storage volumes and no backflow protection. To avoid these disadvantages, increasing use is made of bending weirs such as the uniquely designed **TRU-BEND**.

The **TRU-BEND** is designed to open just enough to allow the additional influent water to overflow the weir while maintaining the maximum allowable upstream storage water level. This ensures that the frequency of overflow events is diminished which results in reducing the discharge of highly polluted water to the receiving stream.

Features

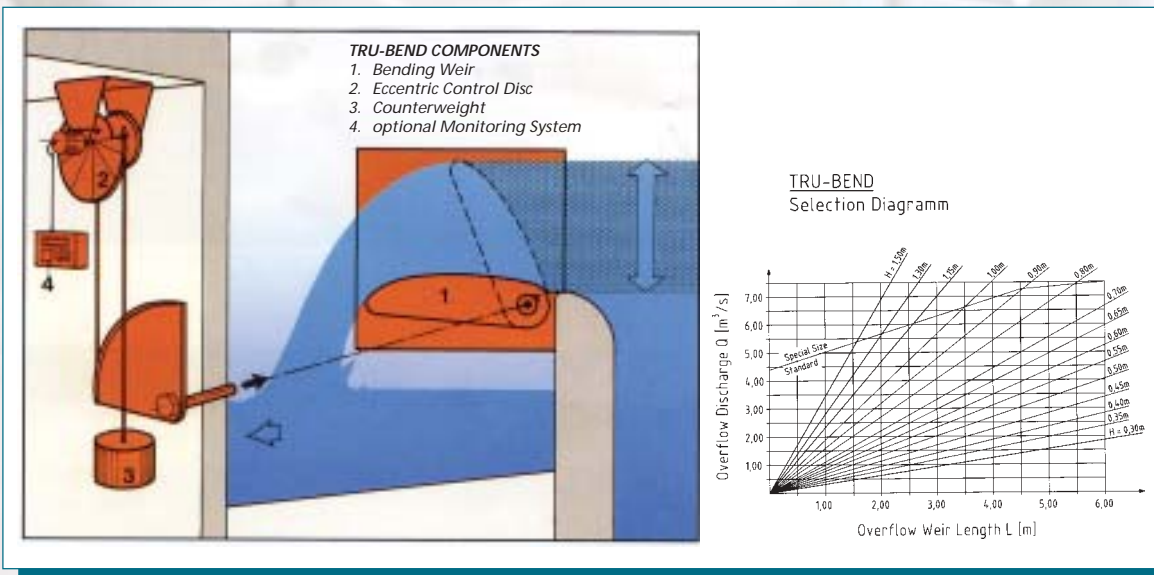
- Constant upstream water level is maintained
- 100% use of the available in-system storage volume is possible
- Reduced construction costs because retention basins can be downsized
- Increased water pollution protection since discharge to receiving stream commences only after complete filling of all available storage volume or after reaching maximum storage level
- Custom made designs make retro-fitting into existing basin overflows possible (additional storage volume gain)
- Stainless steel construction ensures reliable trouble free operation.
- Virtually maintenance free

Operation

The **TRU-BEND** overflow bending weir (Type O), is designed to react instantly and will automatically adjust itself in order to constantly maintain the designed overflow water level. The key component of the **TRU-BEND** is the eccentric control disc. This eccentric control disc is designed to supply a permanent balance of forces between the hydrodynamic pressure of the water (acting on the upstream face of the bending weir) and the counterbalancing weight. Should the additional inflow be greater than the design peak discharge, the **TRU-BEND** will remain fully open and act as an emergency overflow. The **TRU-BEND** may be installed in either new or existing overflow structures in order to increase storage capacity. While the **TRU-BEND** is custom made, it is shipped ready to install. It is simply dropped in place and anchored to the existing concrete structure. The Hydraulic capacity of the **TRU-BEND** is at least equal to that of a standard overflow weir. This means that the upstream water level is not adversely affected by the presence of the **TRU-BEND** overflow bending weir type O.



Downstream view of **TRU-BEND** Overflow Bending Weir

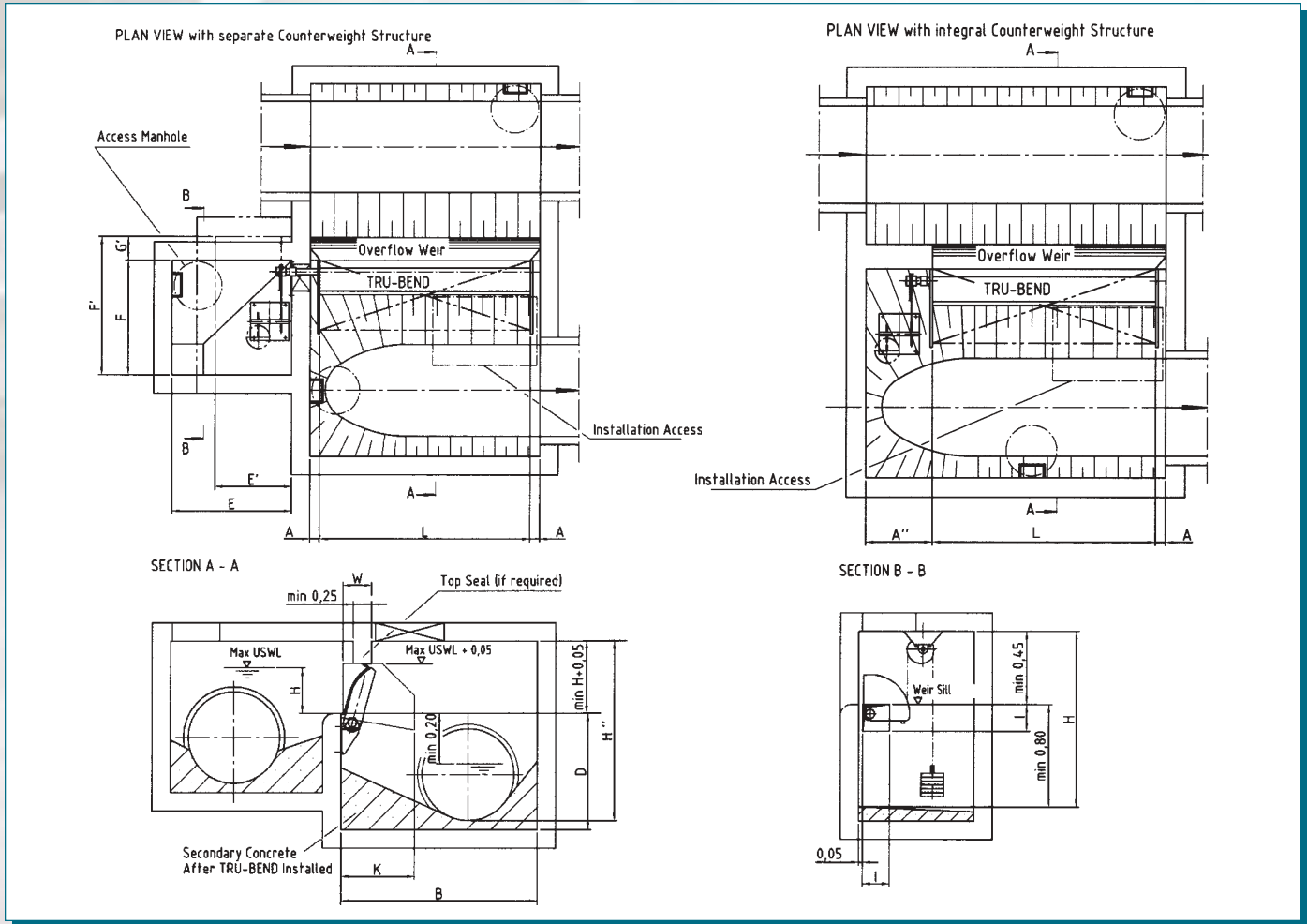


Represented locally by:



TRU-BEND sealed on all four sides

Installation Data for TRU-BEND Weir



Dimensions:

	TYPE I				TYPE II			TYPE III			
H [m]	0,30-0,45	0,50-0,55	0,60-0,70	0,50-0,65	0,70	0,80	0,90	0,70	0,80	0,90	1,00-1,50
L [m]	≤6,00	≤4,00	≤2,00	≤6,00>2,00	≤5,00>2,00	≤3,50	≤2,00	≤6,00>5,00	≤5,50>3,50	≤4,50>2,00s.	Auswahldiag.
A [m]	0,10				0,125			0,15			
B [m]	≥1,05-1,40	≥1,50-1,60	≥1,70-1,80	≥1,50-1,80	≥1,90	≥2,15	≥2,35	≥1,90	≥2,15	≥2,35	≥2,60-3,70
D [m]	≥0,60				≥0,85			≥0,85			
E [m]	≥1,50				≥1,50			≥1,50			
F [m]	≥1,50				≥1,50			≥1,50			
H [m]	≥1,80				≥2,40			≥3,00			
I [m]	0,30				0,35			0,40			
K [m]	0,55-0,80	0,85-0,95	0,95-1,10	0,85-1,05	1,10	1,30	1,40	1,10	1,30	1,40	1,50-2,10
W [m]	0,30		0,40	0,35	0,40		0,47	0,40		0,47	0,55-0,80
narrow counterweight chamber											
E' [m]	≥0,80				≥0,80			≥1,00			
E' [m]	≥1,90				≥1,90			≥2,10			
E' [m]	≥0,40				≥0,40			≥0,40			
without separate counterweight structure											
A'' [m]	≥0,80				≥0,80			≥0,90			
H'' [m]	≥1,95				≥2,20			≥2,75			