

Engineering Data Sheet

8086

Product: RipTide™ Pulse Blender

Static type mixers generally contain a variety of mixing elements to achieve liquid/liquid and solids/liquid mixing. In water treatment practice, they are frequently used to mix coagulants and flocculants with water. Unfortunately, they frequently require cleaning because many chemicals employed are extremely effective in precipitating or coagulating solids. These solids tend to foul the mixer element and over time may actually plug the static mixer.

The RipTide™ Pulse Blender was successfully developed to prevent plugging while improving the mixing process. Mixing and blending are accomplished simultaneously. As water is introduced into the RipTide™, rotational liquid flow is generated as the mixing liquid travels through the pipe. Hydraulic shear is created between slower and faster moving liquid as the fluid rotates at a higher speed nearer the pipe's circumference. See attached drawing S-8100. It is the hydraulic shear that accomplishes significant mixing in three dimensions at very little pressure

drop. In addition, because there are no elements to foul, subsequent plugging cannot occur.

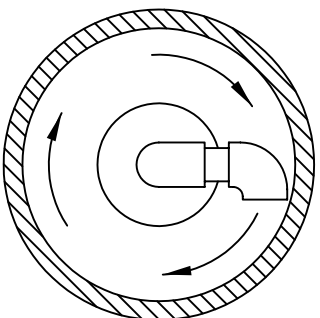
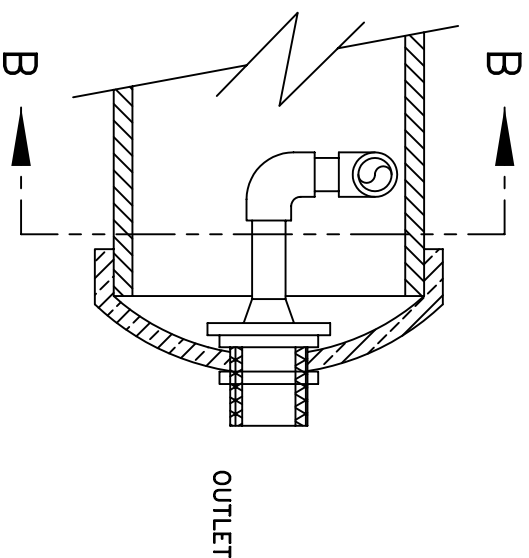
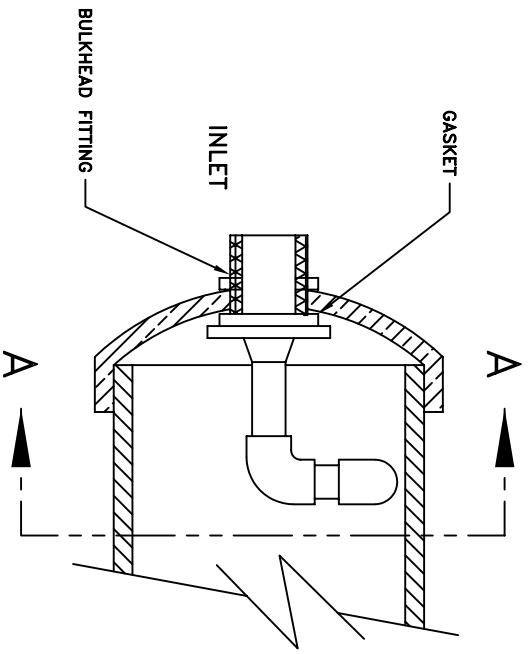
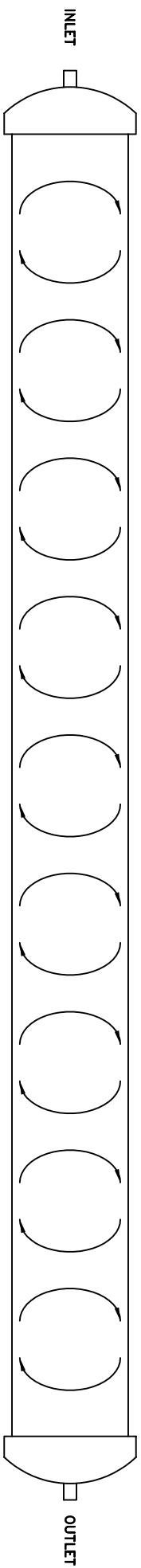
By changing the diameter of the RipTide™ one can change the rotational velocity of the liquid thereby changing its hydraulic gradient or mixing energy. The RipTide™ can easily accommodate chemical feeders that transfer a pulse of chemical rather than a steady flow since forward and backward mixing occurs throughout the full pipe length.

The RipTide™ can be used in either a vertical or horizontal position. In the horizontal mode, rotating the product until the outlet elbow is at the top of the pipe can purge all air. The product is therefore marked "This Side Up" for horizontal installations. No cleaning ports are included, as the RipTide™ never requires servicing.

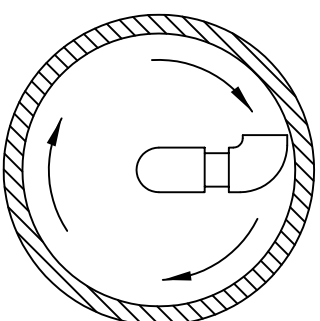
For specific applications, please contact the **WSE** Engineering department.

From the Engineering Department of
WaterSmart
Environmental, Inc.





VIEW A-A



VIEW B-B

GENERAL DESIGN SPECIFICATIONS:

HYDRAULIC RESIDENCE TIME 30-60 SECONDS
 MATERIALS OF CONSTRUCTION PVC STANDARD (OTHER MATERIALS AVAILABLE)
 SIZE 4" Ø TO 20" Ø
 PRESSURE RATING 100 PSIG, MINIMUM

RipTide™

PULSE BLENDER

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