

Surgebusters - Frequently Asked Questions

1. Why are companies and institutions choosing to control the surge in their tanks?

To provide the maximum degree of operational safety for their liquid loads, in order to protect employees, easing their physical and mental stress; to prolong the life of equipment and to enhance the safety of the motoring public.

2. Why do Surge Busters® work so well?

With unlimited directions of deflection, this tie-down system eliminates up to 96% of surge in all directions, front to back - side to side - all angles and throughout the entire compartment. Traditional baffles only reduce surge front to back and do not reduce surge within each compartment. Click for technical information.

3. Can this tie-down system be used with potable water?

Yes, they are made of virgin HD polypropylene and approved by the F.D.A for food grade use (potable water). Surge Busters can also be used with most types of hazmat loads (gasoline, diesel, and most types of chemicals). There are one or two caustic acids that are not recommended. For specific information please contact us.

4. Will the Surge Buster® work in all types and shapes of tanks?

Yes, this tie-down system can be installed in all sizes and shapes of tanks – round, elliptical, square and even triangular. The only constraint is the lid size - will the SurgeBuster fit through the tank opening?

5. Who uses the Surge Buster® system?

Fuel and chemical haulers, DOT's, Road Districts, Irrigation Districts, City/County Park Dept's, potable water haulers, agriculture and farm use, etc. They are used for pesticide and herbicide spraying, magnesium chloride spraying for icy roads and any transportation of liquids.

6. When are these Surge Busters® the most beneficial?

During braking, accelerating and when taking evasive action is necessary. When reduced stress on the truck, frame and tank mounts is desired. When keeping blended products in suspension is important.

7. Do these Surge Busters® cause any stress to the tank?

No, this system is not attached to the tank, will not cause any physical damage. Due to the design that eliminates any permanent contact points there is no entrapment of materials and cleaning is simple. A standard water bath while Surge Busters are still in the tank is sufficient.

FAQ - continued

8. Do Surge Busters® take up room in the tank?

SurgeBusters displace only .8% of tank volume, or approximately 8 gallons per 1000 gallons. Weight is approximately 70 pounds per 1000 gallons.

9. How many SurgeBusters are required for my tank?

For exact calculations click on SurgeBusters - Tank Calculations.

10. What is the SurgeBuster warranty?

The expected life of a Surge Buster System is 15 years. Any product failure due to manufacturing defect will be replaced without charge.

MORE: Surge Busters are approved by the U. S. Forest Service and are required in Fire Suppression Units. They are NFPA Compliant (National Fire Protection Association).

Surgebusters – How Does It Work?



The Surge Buster system is designed to function differently than the traditional baffle.

The traditional baffle reduces surge by compartmentalizing the tank and is affixed solidly to the walls of the tank. Surge in a liquid load is the result of directional momentum creating a standing wave and that wave reacting on the tank.

At forty miles per hour the directional momentum in a 3000 gallon Leg tank is approximately 52,000 foot pounds of directional pressure. This is largely the result of the standing wave. Traditional solid wall baffles (two) would reduce this front to rear surge by 35%, leaving 35,360 foot pounds of directional surge in the tank.

The solid wall baffles have no effect on the side-to-side surge. The Surge Buster system is designed to prevent the standing wave from forming. This is accomplished by converting the directional momentum to a series of eddies and swirls throughout the tank. By creating this swirling or eddying effect, virtually no directional surge can be produced. As a result of this action you have, in effect, created an agitation system within the tank.

In the example of the 3000 gallon. Leg tank used above the directional momentum or surge is reduced to approximately 600 foot pounds of directional surge. This is the result of the natural leveling effect of liquid in motion and not the result of a standing wave.

Example:

3000 gallon leg tank at 40 mph momentum

Un-baffled	Solid Wall	Surge Buster
52,000	35,600	600

The Surge Buster system removes virtually all the directional surge from a tank (front to rear, side to side). As a result, the damage normally accredited to surge (role over accidents, stress and wear on tank, drive train, breaks, driver, etc.) is significantly reduced.

As an additional benefit the tank fills and empties in a smooth level fashion. In the case of a spray rig application, it prevents skips in application caused by slosh in the partially full tank. It also, by the constant stirring motion, causes additives to be kept in constant suspension. Many other side benefits are present such as driver comfort.

How Many SurgeBusters Do I Need?

To determine the number of Surge Busters for a particular size tank:

SurgeBuster 15" (for tanks with fills > 15")

1. Determine the tank capacity.
2. Divide the tank capacity by 32
3. This will give the number of units for that particular system.
4. Example: 525 gallons divided by 32 = 16.4
5. Round up to 17; Tank requires 17 units.



SurgeBuster 7" (for tanks with fills between 7" and 15")

1. Determine the tank capacity.
2. Divide the tank capacity by 30
3. This will give the number of units for that particular system.
4. Example: 225 gallons divided by 30 = 7.5
5. Round up to 8; Tank requires 8 units.

Note: The system should appear $\frac{1}{2}$ to $\frac{3}{4}$ full when placed in tank.

Mini-Busters (for small tanks, usually < 25 gallons)

1. Determine the tank capacity.
2. Multiply # of gallons in tank by 15.
3. Example: 10 gallon tank x 15 = 150
4. Tank requires 150 units.

NOTE: DO NOT USE MORE OR LESS THAN REQUIRED.

SurgeBuster Instant Tank Baffles

- Reduce Water Tank Surge
- Improve Vehicle Safety & Control
- Reduce Liability Concerns
- Reduce Repair Expense: Brakes, Tires, Transmission

*Easy to
Install!*



*Save
\$\$\$*

Top Tank - no baffles

Water surges when brakes applied

Stop surge with Surge Busters

Bottom tank - Surge Busters!



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