

GreenField Direct LLC, has developed the PipeBurst Pro Jr. which provides its owners with the most complete clean water domestic flood detection and prevention solution available in the market today. Leaks, of various types and sizes, are common and if allowed to continue can cause extensive damage and severe property loss. Being prepared for leaks can not only help keep your family and business assets safe, it can also help minimize flood damage and reduce the time and costs of recovery.

The patent pending PipeBurst Pro Jr. is a new and revolutionary professional grade system that provides rapid domestic flood protection. PipeBurst Pro Jr. combines a unique design using high tech sensors and proprietary control components which offer flexibility, proven dependability and lasting value. The PipeBurst Pro Jr. responds early and gives positive action to prevent costly water damage losses such as hidden mold, ruined flooring, loss of photos and other valuables that cannot be replaced. Quick delivery and easy installation means your PipeBurst Pro Jr. can be protecting your business, home and family with the peace of mind they deserve.



PipeBurst Pro Jr. – 1" Zylon TickerValve, VIP Jr. and SideKick

PipeBurst Pro Jr. System Overview: Today's homes are packed with more appliances than ever and a lot of them feature some sort of "water usage" inside them. This exposure vastly increases the risk of a domestic water leak; but when you combine this with the fact that each of these appliances is under continuous pressure these days to be manufactured at an ever lower cost to satisfy the public, you begin to see how a perfect storm is developing for a significant number of disastrous water damaging events that can happen inside the home.

From the iron water pipes of yesteryear, to newer copper pipes used since the 1950's, we are now seeing pressurized plastic pipes becoming increasingly popular in homes at all price levels. (Formerly, for some time, plastic pipes had only been used on the non-pressurized "drain" side of the plumbing). The iron pipes used more than 50 years ago have by now, seen their dependable days disappear. Copper pipes that have been popular for decades are now being challenged by the more cost effective plastic plumbing. Sturdily built plastic parts are often made of better, longer lasting quality than some copper parts are. But plastic does lend itself to being made "just good enough" and to last "just long enough". This type of engineering often leaves the owner with a disastrous, wet, mess to deal with.

From an act as simple as driving a small nail into the wall to hang up a picture, a leak can develop that is non-detectable for an unforeseen period of time. The old saying that "Quality never goes out of style" has significant meaning when it comes to preventing disasters that can ruin precious, irreplaceable items such as generations of photos, or legal documents. Additionally, your life-style is interrupted for what can be months of clean up and dry out time.

Tremendous personal inconvenience, decreased resale value of your home, and mold intrusion for improperly cleaned up floods, along with other unforeseen factors, add up to this being an event no one ever wants to experience firsthand.

With all the information and equipment available to prevent this from happening, it remains the second highest category of insurance claims, according to the Insurance Information Institute - <http://www.iii.org/media/facts/statsbyissue/homeowners/>. Home water damage claims also represent nearly three times the frequency of home fire claims. Domestic water damage is a significant problem and by and large, these floods are not caused by small nail holes in pipes! **The insurance industry estimates the annual property losses from water damage to be:**

- *Over \$500,000,000 to buildings.*
- *Over \$150,000,000 from washing machine hoses alone.*
- *Over \$50,000,000 from leaking hot water tanks.*
- *250,000 families with ruined homes in the US.*
- *One broken pipe can deliver a flood in excess of 5,000 gallons in just an 8 hour period.*
- *One broken ice maker tube can cause many thousands of dollars in damage.*
- *Homeowners insurance doesn't cover flood damage, or it is very limited.*
- *Water damage is the single most costly insurance claim made by homeowners.*
- *The number of water damage claims continues to climb exponentially each year.*
- *Floods and flash floods happen in all 50 states.*
- *Just an inch of water can cause costly damage to your home.*
- *Even though many claims were paid, many more others were not and most were limited to far below the actual losses incurred and none paid for the aggravation and stress.*

The answer to these problems is called the PipeBurst Pro Jr. system manufactured by GreenField Direct. We have not sacrificed quality for the sake of the dollar. Our range of premium systems are built as they should be to provide the type of reliable protection this type of realistic problem requires. The PipeBurst Pro family will provide you with the *peace of mind* you require; protecting your family from the serious disaster of water leaks in your home or business.

POTENTIAL LEAKAGE CAUSES ARE AN EXTENSIVE LIST: More and more products today are made as inexpensively as possible to meet market demands; and more of these products have water features required within them in order to function. Their potential failure-leakage points are many and can be caused by any of the following means:

*water in the door refrigerators
clothes washers
showers, saunas and steamers
automatic humidifiers
HVAC furnace units
hydronic in-floor heating systems
stove sinks*

*automatic coffee makers
electric controlled faucets
instant hot water dispensers
hot water heaters
snow melt boilers and lines
icemakers
water softeners*

*dishwashers large and small
multiple bathroom sinks
multi-floor bathroom toilets, bidet's
outside faucets exposed to freezing geothermal
whirlpool tubs
bar sinks
And much, much more...*

QUALITY is also our "Job 1": GreenField Direct has created the PipeBurst Pro Jr. system specifying its' many exclusive features only *after* specifying the highest quality components available! Additionally, our Great Plains factory is certified to ISO 9001:2008 quality standards for our manufacturing systems. The heart of this system is our *Water-Proof*, low voltage, motorized actuator; collectively known as the "TickerValve". This is due to the unique sound it makes while performing its "SloFlow" opening cycle. Our premium system uses only stainless steel construction in its full flow ball valve; the best material available for this type of water application. The 12 volt, motorized, actuator we specified for use on our TickerValve has been used by John Deere for over 10 years to control various valves on their rugged, self-

propelled field sprayers. This is one of the toughest applications in the world as the electric valve actuator is exposed to a wide variety of corrosive chemicals and fertilizers, as well as extreme temperatures that can well exceed 120 degrees F from time to time. Then they are rapidly drenched in a cool spray. Due to this valve actuator's extreme dependability, several other major companies also requiring rugged, low voltage, electric valves for critical applications have been using these same electric valves for over 35 years.

About Our PERFORMANCE RATINGS – Official Actuator and Valve ratings: NEMA 6p (National Electrical Manufacturers Association): “Waterproof” electric valve actuator enclosure.

WHAT IT MEANS TO YOU: Having a proven, *waterproof* electric motor on your PipeBurst Pro Jr. valve gives you maximum protection against long term failure due to moist conditions the system may encounter in less than ideal installations or unforeseen directional pipe bursts.

For example: The location where our exclusive TickerValve needs to be installed is often not able to be determined to a large extent, by the installer (certified plumber). Our TickerValve is typically installed immediately after the city water meter. This is often close to the floor in a basement or close to, or in the ground if it's an outdoor installation. Either of these locations is a prime spot for being flooded or rained on; which likely would disable any unit that was not waterproof. This would negate any advantages of having such a system in the first place. In short, it would give you a false sense of security.

Our VIP Jr. Controller can be located with much more freedom of choice. For instance, in a location where the TickerValve must be installed on the outside of the structure, the VIP Jr. would still be mounted inside the building. The VIP Jr. will be mounted higher up than the TickerValve normally is, and since all electric connections between the two are totally sealed and waterproof, it can still effectively control our TickerValve which may be completely under water at the time. It is also high enough to not encounter routine floor cleanings, over decades of use, which may spray water inside an unsealed electric valve actuator.

When you want to protect yourself from domestic or foreign water leaks and intrusions, it simply doesn't make sense to use anything less than our waterproof, TickerValve! The electric valves we use are simply the best; demonstrated by the fact that they are also **used by: John Deere, NASA and other US Government Agencies, and the BMW ORACLE Racing Catamaran** just to drop a few notable names.

NEMA 7d and United States Coast Guard approved: “Ignition Proof” Electric Motor Enclosure

WHAT IT MEANS TO YOU: We think you would care if your flood system's electric valve actuator case was not rated to contain all electrical sparks inside it and not allow any infiltration of gas inside the motor case. Also, if our TickerValve does somehow get gas inside the motor case, its heavy construction is strong enough to actually “contain” the potential ignition. As such, our TickerValve actuator is rated as ignition proof.

We assume you would not want to take a chance that a slow leaking gas line whose fumes may have settled at the lowest point in your building, could encounter a stray spark that would ignite them (motors have the potential to spark when they operate). Our NEMA 7d TickerValve rating means we have been tested by an Independent Testing Laboratory and successfully passed their required ignition tests (all 50 of them!). All of these conditions could cause devastating consequences, so we have insured against this ever happening to you. Our NEMA 7d and 6p ratings further explain why we are often used down in the hulls of boats (such as the BMW ORACLE and ocean going yachts). Boats

represent a compact installation that has serious ramifications should these types of catastrophic failures be allowed to occur at sea. Although it's very expensive to produce an electric actuator that meets these ratings, our proprietary production and testing methods allow us to do just that in a cost effective manner.

ABOUT OUR BALL VALVES: Our TickerValve's premium, full flow ball valve is constructed of 316 series Stainless Steel. This Stainless Steel's high nickel content will not allow it to rust or otherwise deteriorate. It is built to provide decades of dependable service. It's rated at 600 psi, which is typically more than a 6:1 safety factor, as most applications do not run above 100 psi.

Its' 3 piece bolted construction allows for simple and quick disassembly and reassembly for difficult or tight installations. This premium feature also makes it very simple to install new valve seats and seals in the unlikely event that maintenance is ever required. It has proven itself to provide tens of thousands of openings and closings; thus lasting indefinitely in this application. The valve stem, (the most likely spot to leak on most valves), is constructed using 2 methods of sealing: 1. A pair of twin O-rings as the primary seal, and: 2. A secondary PTFE lubricated thrust seal. Thus, any one seal can fail and still leave sufficient sealing surfaces in place to avoid external leakage. Of course, in our typical method of designing, using both redundancy and superior quality; if it ever did leak, our FloodBug or SideKick would quickly sense the moisture and close it... automatically. Thus, audibly and visually signaling you that a problem does exist that needs attention (plus, your home's water will already be OFF, and you will quickly notice that!).

Our TickerValve also comes equipped with a Manual Override Handle; thus providing fail-safe access to control the valve manually, if required, for any peculiar reason. Its' ¼ turn handle is simple to use and highly visible (bright yellow in color) for quick access.



1" Stainless Steel TickerValve with Actuator Attached

WHY OUR "MOTORIZED" TickerValve? Our full flow, motorized, TickerValve is frankly, over-engineered to provide the required "extra" power to insure the valve's proper operation even in tough water applications. These often create mineral build-up on the moving parts in the flow path, inside the valve itself. As simple as water seems to be, it is one of the most difficult fluids to control smoothly due to its lack of lubricity. Oily liquids, while often more difficult to handle, are typically, vastly easier to control than simple, plain, H₂O.

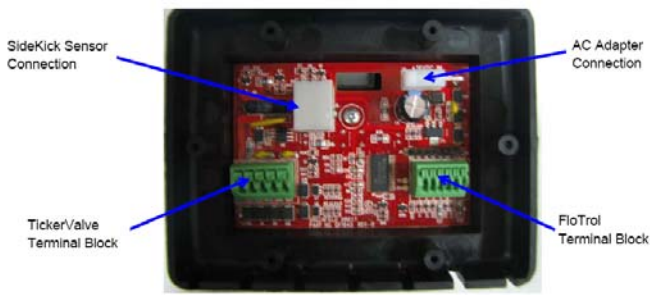
Because of these potential hazards, our TickerValve cycles back and forth in a 90 degree rotation arc. This way if it encounters any sort of obstruction while closing that it can't power its way through, it can free itself by re-opening in reverse. 25 years ago our valves rotated round and round stopping every 90 degrees and never reversing; however this cycle pattern caused inherent problems we have long since overcome with the back and forth rotation pattern we use now. Additionally, our exclusive TickerValve features a $\frac{3}{4}$ second close time to stop the leak fast, and a SloFlow "Ticking" action to open the valve in several slower steps. This prevents the surge of released energy in the form of *water hammer*, from damaging your pipes upon re-pressurizing of the homes plumbing every time the TickerValve is opened. Quick close, and SloFlow open is a PipeBurst Pro Jr. exclusive feature.

The 12 volt DC gear-motor inside our rugged TickerValve actuator's case is built using all steel gears in its *final drive* stages. No plastic gears are used in this high torque area! We also use *Perma-Lube* grease inside the gearbox to eliminate all maintenance of our actuator. The handy, clear, position indicator dome (with a yellow flag inside), on the top of our TickerValve gives immediate visual indication of the valve's position below it. This is very useful during installation, testing and trouble shooting. As such, again, we have sweated the details so you can rest assured you are getting the best system available. Our TickerValve actuator's enclosure is *waterproof*, and we back that claim with a 7 year limited warranty. This exclusive waterproof feature and our proprietary sealing process has not been successfully duplicated by anyone industry wide! It quite simply is the best available. Whether your control valve is located inside and you routinely spray the area down with a hose or you locate it outside in a wet weather climate, our waterproof TickerValve will yield decades of dependable service for you.

ABOUT THE SIDEKICK: The SideKick is a high quality water sensor. The SideKick's 5' long, lay-flat flexible wire simply plugs into the VIP Jr. The SideKick water sensor is a weighted, stainless steel casting that houses its gold water sensors. At about 3/8" tall, the SideKick can easily be slid under a refrigerator, dishwasher or similar appliance to provide point source water detection.



ABOUT THE VIP JR: The VIP Jr. is the central control and user interface for the PipeBurst Pro Jr. system. It operates the TickerValve and indicates the system state with two LEDs and an audible alarm.



VIP Jr. Circuit Board



VIP Jr. with Attached SideKick

ABOUT THE FLOTROL: The FloTrol is an optional hardwired remote control switch used to operate the TickerValve. It basically displays the functions that the VIP Jr. sends to it via a lighted LED.

- Gives you a convenient one button touch to close the TickerValve at any given moment.
- The FloTrol monitor exclusively features PosiTrol valve position indication meaning the Water OFF status is not displayed until the TickerValve provides feedback signals that indicate it has indeed reached its fully closed position.
- Announces and monitors all of the SideKick statuses in the system.
- It can be wall mounted. The FloTrol is a versatile tool you won't want to be without.



FloTrol Remote Control Switch

ABOUT OUR WARRANTY: Quite simply the best protection on the market. We feature a 7 year limited warranty that emphasizes our quality and premium features.

PIPEBURST PRO JR. QUALITY: Our quality claims are reinforced by over 35 years of practical application and manufacturing experiences. Plus, we are also certified to ISO 9001:2008 quality standards for our manufacturing control processes!

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