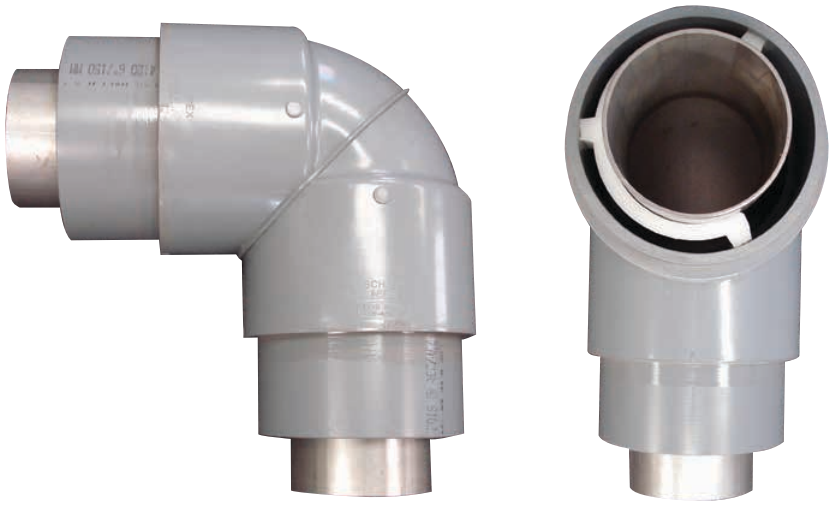
CustomGuard® (SS x CPVC)

Product Datasheet



Custom-designed and fabricated double containment systems including dissimilar material systems.

Unlike other systems that try to run everything through the same material, our specialists will recommend and provide the absolute best system for each individual application, looking not only at chemical compatibility but also at cost (material and installation), life expectancy and turn around time.

SS x CPVC systems offer the best of both metals and thermoplastics.

The SS provides a system capable of handling a myriad of chemicals and injected steam, while the CPVC provides protection against galvanic corrosion.

CPVC
< STANDARDS >

ASTM D1784
ASTM D2837
ASTM F437
ASTM F439
ASTM F441/F441M
ASTM F1970

S102.2M

NSF-61

ADDITIONAL CORROSIVE WASTE PRODUCTS

FLOWAY™
ACID RESISTANT FLOOR DRAINS

LABLINE™
MECHANICAL JOINT ACID WASTE SYSTEM

NEUTRATANK®
NEUTRALIZATION TANKS

ENFIELD®
ELECTROFUSION ACID WASTE SYSTEM

PLENUMLINE™
FR-PVDF MECHANICAL JOINT ACID WASTE SYSTEM

ipexna.com
Toll Free: 800 463-9572

IPEX by aliaxis

DAINEAIP041117U

PVC and CPVC Notes

Guardian vinyl closure coupling installations 3" and up requires the following:

- gallon containers of primer and cement
- medium-body, slow-set cement
- large daubers/rollers/brushes

IMPORTANT: Always apply primer and cement liberally.
DO NOT take shortcuts. Follow Guardian's instructions explicitly.

Note: Always allow 48 hours or more, depending on environmental conditions, to cure before testing vinyl carrier/containment pipe.

Factory testing of trial joints made by contractor is available at no charge. This is strongly recommended.

Common Mistakes

- Insufficient amount of cement
- Incorrect or outdated cement
- Incorrect or no primer used
- Pipe ends not bevelled
- Pipes misaligned
- Contamination (dirt) on cementing area
- Improper positioning of closure coupling on containment pipe
- Pipe window too large
- Movement of pipe sections before cement is fully cured
- Wrong size applicator
- Closure coupling and/or pipe not dry prior to solvent cementing closure coupling

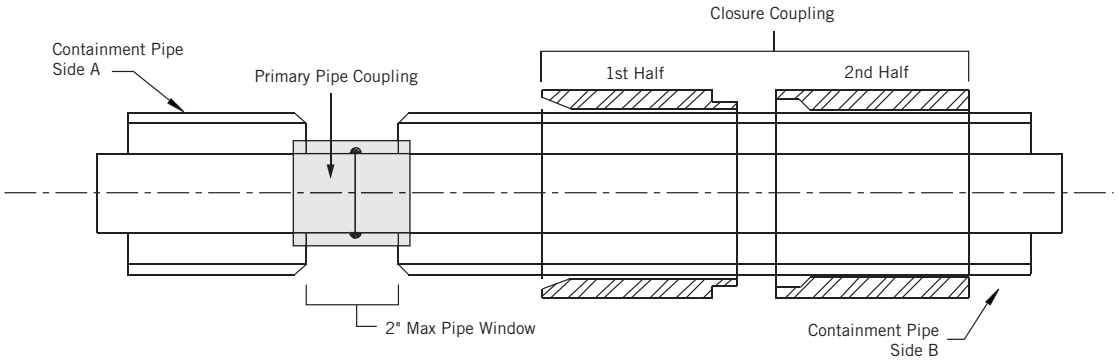
PVC and CPVC Instructions

1. Thermally equalize both the pipe and closure coupling by exposing them to similar temperatures for over 60 minutes. Clean containment pipe with a clean cloth prior to sliding closure coupling onto pipe with minimum resistance. If coupling does not respond accordingly, contact factory. Wrap the coupling with a waterproof plastic bag, or wrap with tape while on containment pipe to keep it clean and dry prior to solvent cementing.

   Note: Always use an approved primer and a "medium body – slow net" cement for all cementing procedures on PVC. Check expiration date on cement. If cement exceeds the date, throw away and use cement by expiry date.

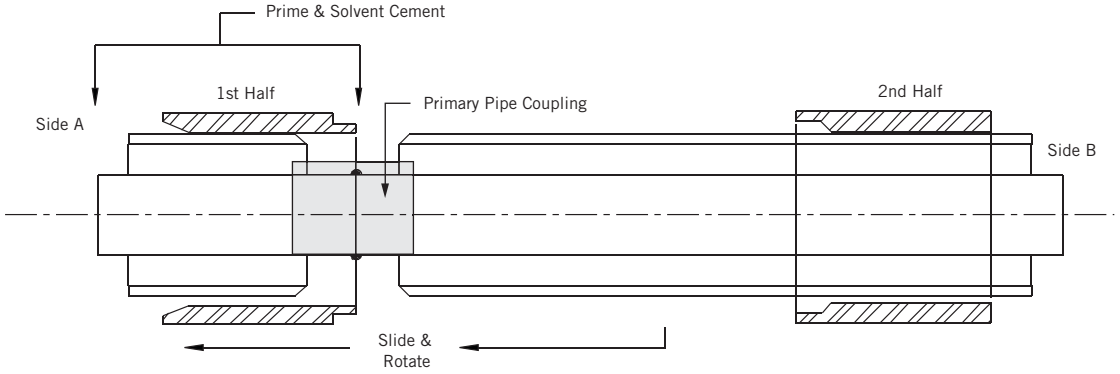
2. Bevel all ends of pipe. Slide the closure coupling across the pipe window to check for proper alignment. If resistance is met when transitioning from one side to the other, reposition containment pipe to eliminate resistance

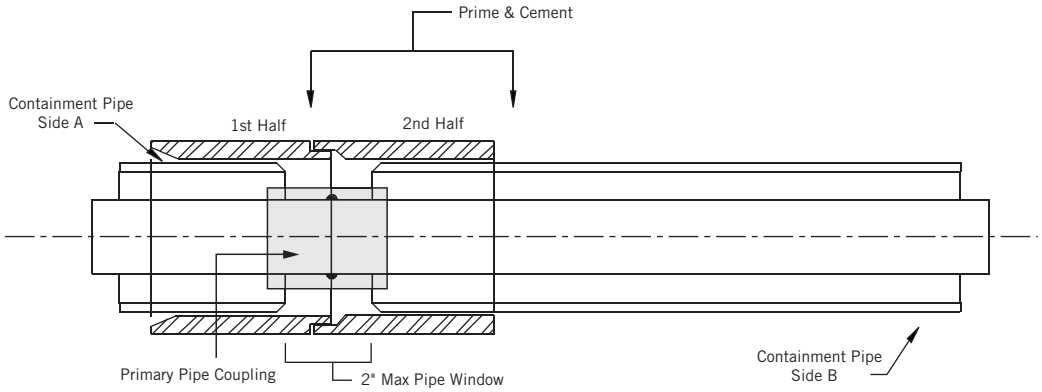
   Note: All closure coupling installations require two people



3. Liberally apply primer to 'Side A' of containment pipe as indicated above. Quickly slide the first half of the closure coupling onto the pipe (rotating constantly). Slide closure coupling back to Side B. Do not stop rotating. Apply more primer to Side A and repeat. Pe rform the same procedure with solvent cement and position first half on Side A as shown below.

   Note: Restrain the first half of closure coupling so it doesn't move from its position while cementing the second half of the closure coupling.

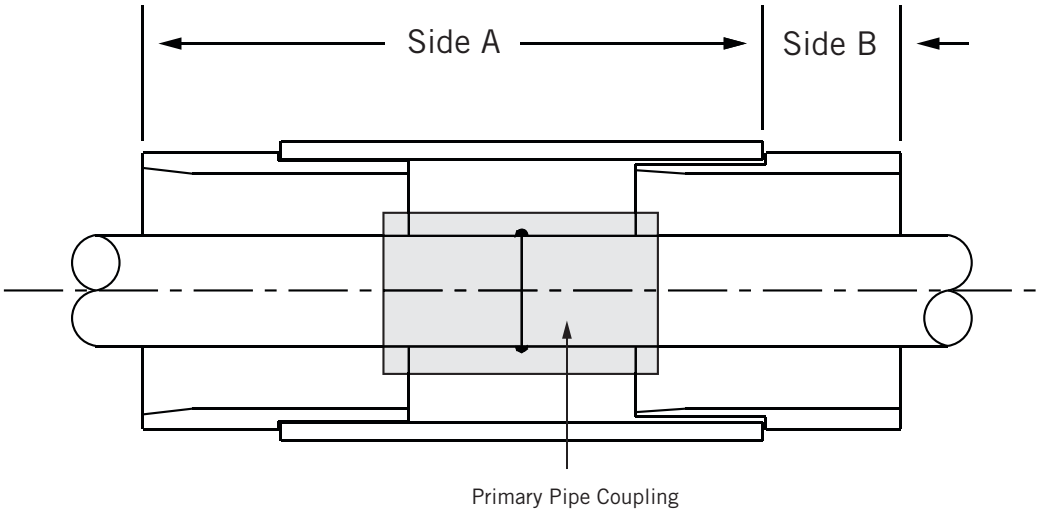




4. Repeat the previous step with the second half of the closure coupling on Side B and place into position as shown below.

2" and 3" Closure Couplings

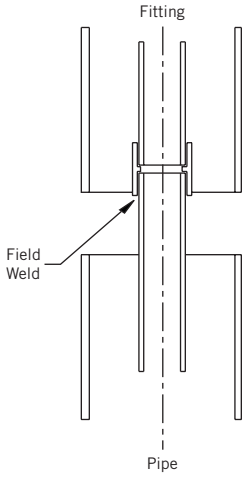
The procedure for installing 2" and 3" closure couplings is the same as 4" and above, except that the design is slightly different. The 2" and 3" closure couplings have a female socket on the trailing edge of the first half piece and a male end on the leading edge of the second half. Also, the first half piece is much longer than the second half piece. This means that the trailing edge of the first half piece will rest on 'Side B' of the containment pipe as opposed to being in the 2" window (see drawing below).



Metal/Vinyl, Metal/FRP

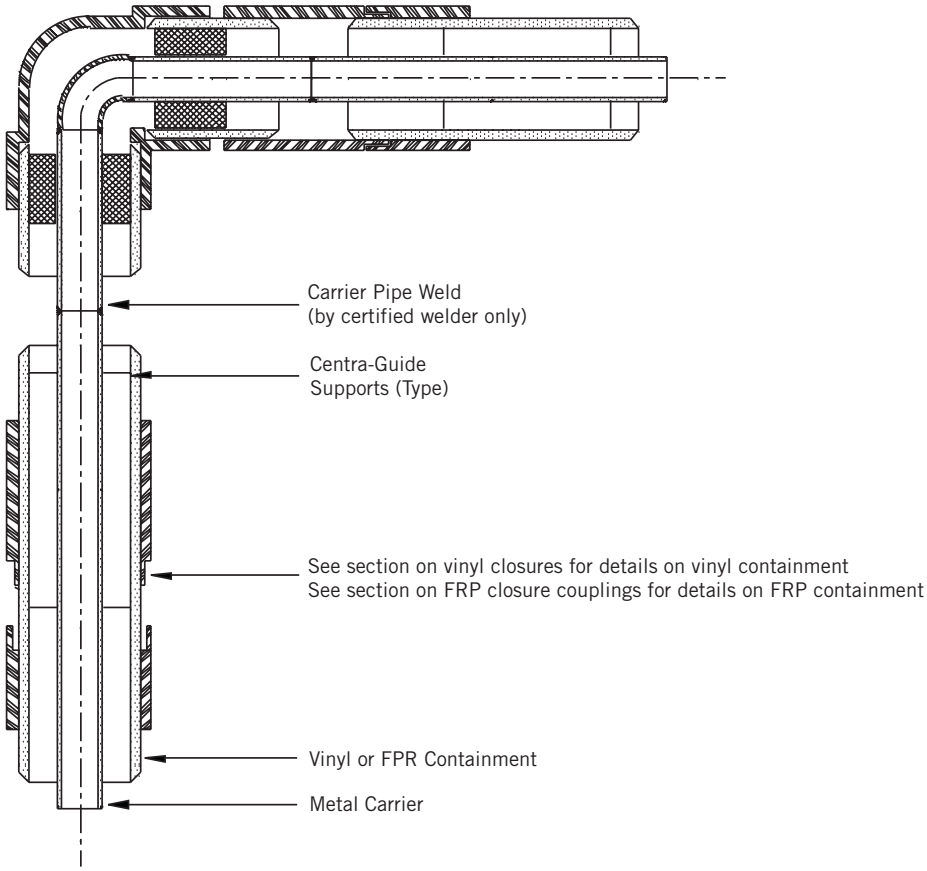
This is an example of a metal carrier and vinyl containment 90-degree elbow being joined to its mating pipes. Fitting is supplied with metal pipe beveled for welding and spigot containment ends. Metal pipe is welded and, after testing, the closure coupling is installed. The pipe window should not exceed two inches. All joints on this type of system require this procedure.

Note: To close FRP window, see FRP closure coupling instructions.



⚠ WARNING

Flammable vapors may be present in the space between the carrier pipe and containment pipe. Use caution when an open flame is present or when welding.



Testing

The purpose of a site pressure test is to establish that all joints have been correctly made. Encase allows for the individual testing of the primary and secondary piping.

Primary Pipe

Hydrostatic testing of the primary joint can be performed ten minutes after the final primary joint has been completed. The pressure testing procedure detailed below should be strictly followed.

1. Fully inspect the installed piping for evidence of mechanical abuse and suspect joints.
2. Split the system into convenient test sections, not exceeding 1,000 ft. The piping should be capped off with an expandable plug at the end of the pipe section to be tested.
3. Prior to starting the test, straight lengths of pipe should be backfilled between fittings that are tested.
4. Slowly fill the pipe section with cold water, taking care to evaluate all trapped air in the process. Use air release valves in any high spots in the system. Do not pressurize at this stage.
5. Leave the pipe for at least one hour to allow an equilibrium temperature to be achieved.
6. Visually check the system for leaks. If clear, check for, and remove any, remaining air from the system.
7. Pressurize the system to a suggested maximum of 10 feet head by means of a standard 10 foot standing water test using a 10 foot vertical riser, or a low-pressure hand pump.
8. Leave the line at 10 feet head for a period of up to eight hours, during which time the water level should not change (standing water test), nor should the pressure gauge reading change (hand pump test).
9. If there is a significant drop in pressure, or extended times are required to achieve the desired pressure, either joint leakage has occurred or air is still entrapped in the line. In this event, inspect for joint leaks. If none are found, check for entrapped air – this must be removed prior to continuing the test.
10. If joints are found to be leaking, the system must be fully drained and the joints repaired. Dry, or marginally fused Enfield joints can be re-fused by following steps 5 through 13 in the Standard Enfield Electrofusion Installation procedure. To remove moisture from the joint, use the drying cycle.
    - To dry the Enfield joint jusing the handheld Enfusion machine with software V1.17 or earlier, the drying cycle can be accessed by starting and stopping a regular fusion cycle within 2 seconds.
    - To dry the Enfield joint using the handheld Enfusion machine with software V1.19, users need to connect the leads and fittings. The machine will prompt the user to “PRESS START”. The user needs to press the “SELECT” button and then “START” button immediately after. The drying cycle will appear with a 45 second count down.
    - Allow the joint to cool.
    - Now re-fuse using the correct Enfusion machine settings for the size of pipe being joined following steps 5-13 of the Standard Enfield Electrofusion Installation procedure.
    - Should any of the re-welded fitting(s) fail the second hydro-test, the leaking joint(s) can be back-welded with a hot-air gun and welding rod. Should the back-welded joint(s) fail a third hydro-test, they will need to be cut out of the system and substituted with new fittings.
    - If a joint has be to cut out and replaced, the procedure for pipe modification detailed in this manual should be strictly followed.
11. Repeat the 10 feet head test after repairing any leaking joints, following the procedure described above.

Secondary Pipe – Hydrostatic Testing

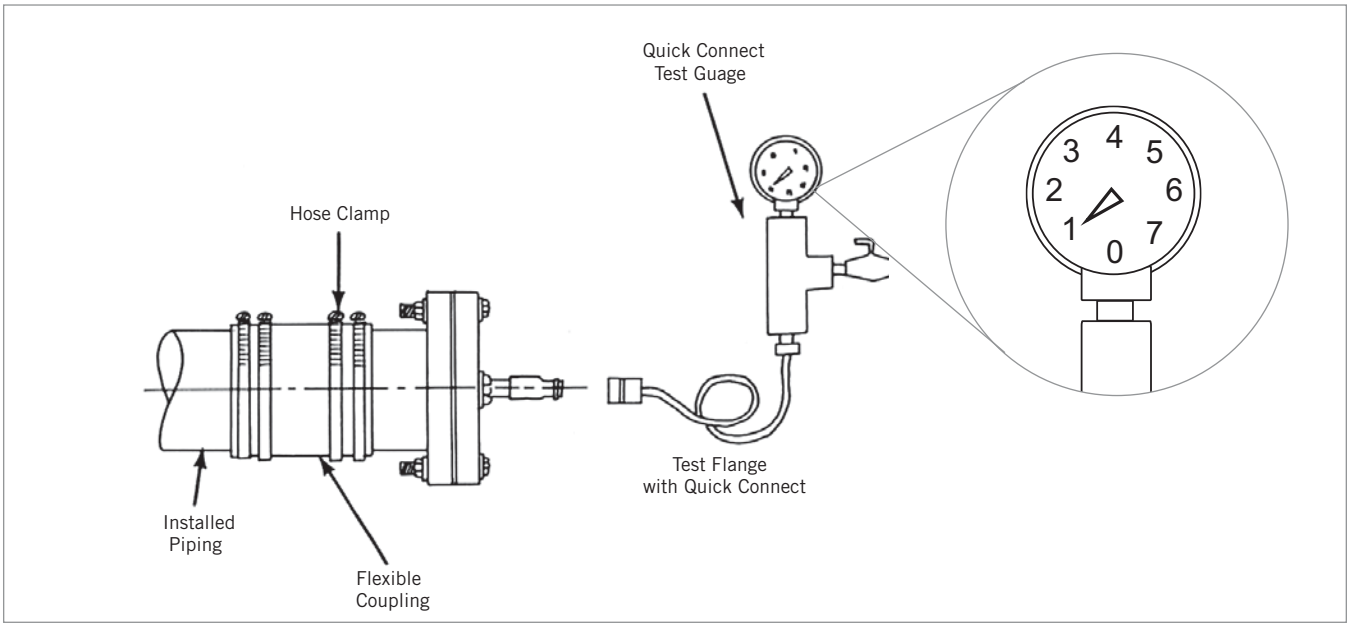
1. After successfully completing the primary pipe 10 foot head test, the secondary pipe can be joined and tested. Do not drain the primary pipe. Simply leave the primary pipe at a 10 foot-head hydrostatic pressure to avoid any possibility of the primary pipe collapsing due to the external load from the secondary pipe test.
2. Fill the secondary pipe with cold water and repeat steps 5 to 11 in 'Primary Pipe' procedure..
3. After successfully completing the secondary pipe test, leave the primary pipe full of water and under pressure. Drain the secondary pipe and purge through with low pressure, dry (-100F dewpoint), air or nitrogen to purge out all moisture from the system.

Secondary Pipe – Air Testing

After successfully completing the primary pipe 10 foot head, hydrostatic pressure joint integrity test, the secondary pipe can be joined and tested.

Do not drain the primary pipe. Simply leave the primary pipe at a 10 foot-head hydrostatic pressure to avoid any possibility of the primary pipe collapsing due to the external load from the secondary pipe test.

For systems containing: cable leak detection, low points not easily drained, p- traps, or where it is not possible to dry out the interstitial space, it may be necessary to conduct a pneumatic joint integrity test; subject to the engineer and/or authority having jurisdiction. This alternative joint integrity test uses dry, low pressure air.



1. Leave the primary pipe at a 10-foot head hydrostatic pressure to avoid any possibility of the primary pipe collapsing due to external load from the secondary pipe test.
2. Slowly pressurize the secondary pipe with air to a MAXIMUM of 5 psi for 1 hour, using a similar test assembly as shown. To ensure that the pressure does not exceed 5 psi, the testing equipment should also include a pressure regulator or pressure relief valve (set at no higher than 5 psi) and pressure guage.
3. While taking great care not to impact or damage the secondary pipe, the exposed secondary joints should be wiped with an IPEX approved leak detector. In addition, check the pressure gauge to make sure that there is no pressure decay.
4. It is essential that the system is closely monitored and that the pipe suffers no impact or other damage during the test.

NOTE: For more information on lower pressure air testing of thermoplastic piping systems, reference Unibell B-6.

⚠ WARNING

Take special care to avoid causing impact to the piping when testing the interstitial space of rigid thermoplastic systems using compressed gases. Impact to the system during air testing can cause failure which may result in injury or death.

Conduct this test only when the ambient temperature is 50°F or above.

The secondary pipe should never be pressurized to any more than 5 psi when using air.

About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems

Products manufactured by IPEX Inc. and distributed in the United States by IPEX USA LLC.

ipexna.com
Toll Free: 800 463-9572

IPEX by aliaxis