



Plastic Pipe and Fittings Association

CPVC to Metal Pipe

Using Transition Fittings
for Hot & Cold Water Installation

Transitions and Adapters

- Adapter: A fitting used to change its configuration from one end to the other



Socket to Thread



Solder to Thread

- Transition: A fitting used to transition from one material to another



CPVC to Brass





Transition Fittings

For use with hot and cold portions of a potable water system

- Connect CPVC Pipe to Fixtures
- Connect CPVC Pipe to Valves
- Connect CPVC Pipe to Water Heaters
- Connect CPVC Pipe to Metal Pipes

All-CPVC Male Threaded Adapters

- Can be used as a transition on the cold water portion of the system
- Should not be used on the hot water side
 - Differences in thermal expansion and contraction may cause a drip leak to occur if male threads are used in metal female threads.



CPVC Socket x Female Thread

(with elastomeric gasket)*

- Seals when a male pipe thread contacts the elastomeric gasket seated in the female threads
- Non-interference fit
 - Will not seal without gasket between male and female threads.
- **Not** to be used with PTFE tape or thread sealant!
 - Gasket can be damaged or distorted
- ¼ additional turn once thread contact is made with gasket
 - Do not over-tighten



*This fitting is considered a transition fitting (as opposed to an adapter) because it utilizes an elastomeric gasket to provide a seal instead of an interference fit on the threads.

*CPVC Socket x Female Thread without an elastomeric gasket can be used for CPVC to CPVC connections

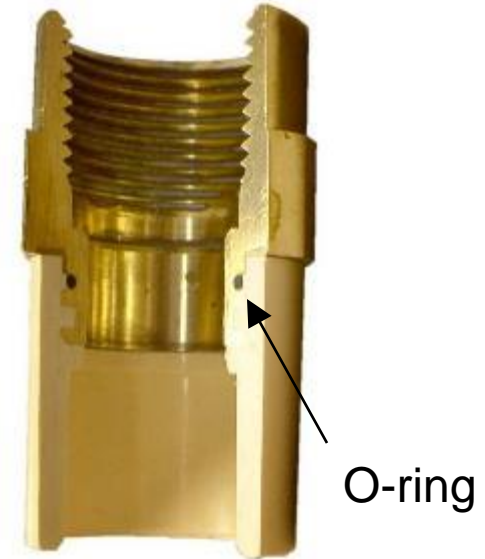
CPVC Socket x Metal Thread



Brass



Copper



- Available in many configurations
- Threaded ends may be male or female
- CPVC portion molded directly to metal body
- Sealed by means of an internally molded o-ring (visible in cut-away)



Transition Unions

- Can be taken apart and put back together again quickly, easily and repeatedly
- Allowed by code to be installed in *accessible locations only*

Do not install behind walls or in other un-accessible locations!

Transition Unions



- Multi-component fittings with a CPVC and metal end
- Elastomeric seal provides a leak-free connection
- CPVC end either female socket or male spigot
- Metal end either solder joint socket, compression (ferrule), or threaded



Do not use unions that are entirely plastic to transition between metal and plastic piping!



Installation Guidelines

- Follow manufacturer recommended installation procedures
- Use PTFE tape or approved thread sealants on NPT threads only
- Do not use PTFE tape or other thread sealants on straight mechanical threads like union nuts or female threaded fittings with an elastomeric gasket.



Installation Guidelines

- Female threaded CPVC adapters without an elastomeric seal should never be used when transitioning.
- If a tapered pipe thread connection between the CPVC and metal components must be made, use a CPVC male thread adapter.
- Consult the fittings manufacturer for additional limitations.
- Do not over-tighten threaded plastic fittings.



Installation Guidelines

- Male metal NPT pipe threads should not be threaded into female plastic NPT pipe threads. The preferred method of transitioning between metal and CPVC plumbing components is to use an insert molded metal-in-CPVC fitting or true union with a metal and a CPVC end.

For information on connecting to storage-type water heaters and for other information go to:

http://www.ppfahome.org/pdf/cpvc_manual.pdf