

**ASSEMBLY PROCEDURE GUIDELINES  
(THREADED FITTINGS)**

Threaded plastic pipe and fittings fall into two categories of application.

**CAT-1** : When they are used in all plastic systems

**CAT-2** : When they are used to transition from metal to plastic

There are three possible combinations:

- 1) Plastic male pipe to plastic female fitting (recommended)
- 2) Plastic male pipe to metal female fitting (recommended)
- 3) Metal male pipe to plastic female fitting (not recommended)

**NOTE:** Threading a metal male threaded pipe into a plastic female threaded fitting will produce a very high stress in the plastic fitting and is not recommended.

**QUESTION:** Why does a threaded metal pipe cause more problems than threaded plastic pipe when installed into a plastic female fitting?

**ANSWER:** When plastic pipe to threaded plastic fittings are tightened, the female fitting expands and the male fitting compresses.

Stress is shared equally between the two (male and female). However, when a metal male thread is tightened into a plastic female thread the stress is not shared equally. Since metal has a much greater strength compared to plastic it does not compress when tightened. This places all the stress on the plastic female fitting

To properly install a male threaded pipe into a female threaded fitting you should first thread the pipe into the fitting (dry fit) until the pipe just starts to tighten on the pipe thread taper.

Count the number of threads that it takes to disengage the two parts (document this number).

Wrap Teflon tape on the male thread in the normal way and reassemble to the number of turns required to disengage the two parts.

Now tighten an additional 1-1/2 turns and STOP (DO NOT TIGHTEN BEYOND 1-1/2 TURNS OR THE FEMALE FITTING COULD BE DAMAGED).

**NOTE:** For joints that are difficult to seal, wrap a single layer of Teflon tape (in the normal way) on the pipe threads and apply an approved thread sealant over Teflon tape (the sealant acts as a lubricant and will prevent the tape from tearing).

Reassemble as before and do not over-tighten.