



## Tech-Tip

### Understanding Thread Forms

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Marelon<sup>®</sup> thru-hulls all have parallel threads. They are “NPT” style threads but are not tapered. No thru-hulls, regardless of material have tapered threads. The technical abbreviation for this parallel thread form is “NPSM” (American Standard Straight Mechanical Pipe Thread) or, depending on which “expert” you talk to; “NPSC” (American Standard Straight Coupling Pipe Thread). The two are basically the same. Plastic injection molded thread forms are manufactured to ANSI B2.1 and SAE J476 standards.

“NPT” (American Standard Pipe Taper Thread) is the “Standard” for industrial and household pipes and fittings. It is important to note that the end threads are “imperfect threads” designed to act as a seal/tightener as a female NPT threaded part is mated. These threads are found on all “fittings” you buy from your local builders supply and the large discount “Home Depots” of the world.

Marelon<sup>®</sup> valves elbows and tailpipes\* have the parallel threads consistent with the thru-hulls. None of these thread forms are “self-sealing”; pipe dope, thread seal compounds or Teflon tape must be used on all Marelon plumbing fittings.

When mating other materials (bronze, stainless steel, PVC or other nylon fittings) to Marelon<sup>®</sup> one must be conscious of the potential difference in thread forms. A tapered male thread will screw into a Marelon<sup>®</sup> female thread but you may have a weak connection due to the male taper. This will make thread sealing more difficult due to the greater gap between the threads. A male threaded Marelon<sup>®</sup> fitting will not work in a female tapered thread. A male metal fitting would have the same problem.

Knowing what threads you have on the fittings to be mated is very important for proper sealing and strength. Cross threading or mismatched threads can cause leaks and possibly failure of the connection.

\* We do offer NPT tapered male threaded tailpipes (model “HC” series numbers 910146 thru 910168) in some sizes. These can be found on page 8 of the 2007/8 Marelon<sup>®</sup> Plumbing Systems Catalog. BSP threads are also available on some fittings. Contact Forespar<sup>®</sup> for a list of parts with BSP threads if needed.

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