

PLASTIC FITTINGS FOR FLEXIBLE TUBING & HOSE

NYLON, POLYPROPYLENE PVDF

FT-CLAMP



By Individual
Model No.†

Important Properties of PVDF Products

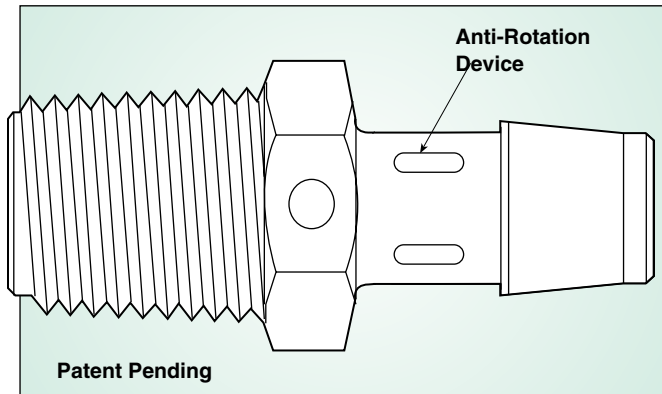
- ✔ High Mechanical Strength and Toughness
- ✔ High Abrasion Resistance
- ✔ Chemical and Solvent Resistance
- ✔ Weathering Resistance
- ✔ High Thermal Stability
- ✔ High Dielectric Strength
- ✔ UV Light and Radiation Resistance
- ✔ Fungi Resistance

Outstanding Characteristics of PVDF Products

PVDF has been used as a pipe liner in **chemical processing plants** since its introduction nearly 30 years ago. It has been used extensively in the **paper and paper pulp industries**, where equipment is constantly exposed to high concentrations of Chlorine and Chlorine Dioxide. In these applications the permeation resistance of PVDF components far surpassed that of PTFE.

PVDF products are used extensively in **silicon microcircuit fabrication**. Processes in this industry commonly use deionized water, a fluid that is highly corrosive to steel. The deionized water is often sanitized through the injection of ozone and exposure to UV light, both of which can seriously degrade the integrity of materials less durable than PVDF.

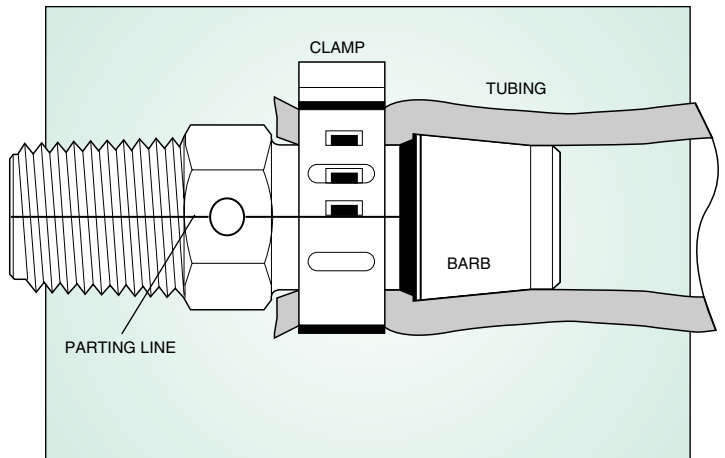
† Visit omega.com/rohs to determine specific RoHS compliance.



| To Order | |
|------------|------------------------------|
| Model No. | Clamping Range (Closed-Open) |
| FT-CLAMP-1 | 0.312 to 0.875" |
| FT-CLAMP-2 | 0.500 to 1.00" |
| FT-CLAMP-3 | 0.625 to 1.25" |
| FT-CLAMP-4 | 0.625 to 1.500" |

Ordering Examples: FT-CLAMP-1, clamp fitting for 0.312 to 0.875" range.

FT-CLAMP-3, clamp fitting for 0.625 to 1.25" range.



Proper Clamp Placement

Clamps Must Be Used With All Fittings Which Have Anti-Rotation Devices

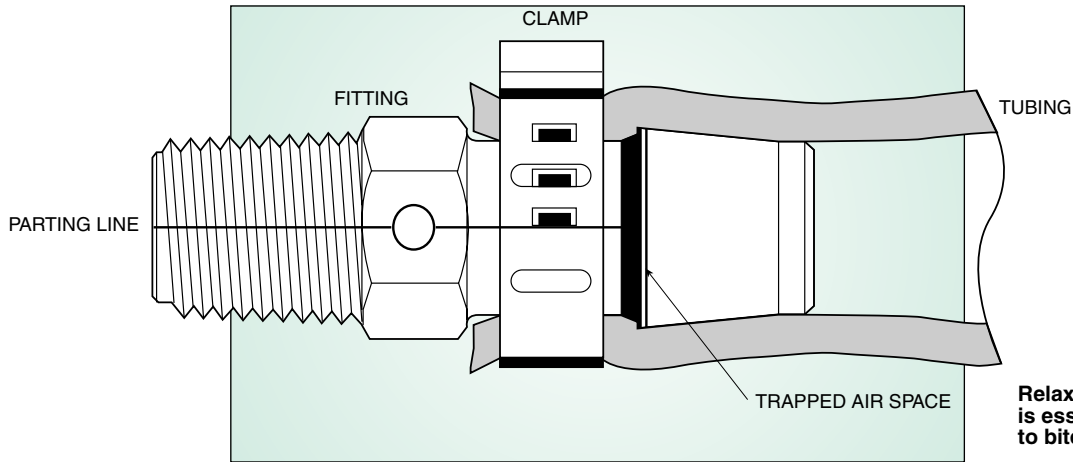
Never place a clamp over the large diameter of the barb. Clamps work best when tightened around the recess behind the barb. For best results place the clamp behind the barb and over the anti-rotation devices. The

anti-rotation devices are small oval shaped raised areas which inhibit hose rotation on the barb. Rotation of the hose on the barb causes many of the leaks that occur with other fittings.

Quality Tubing and Hose Fittings Features...

OMEGA's threads are molded in precision-ground cavities resulting in perfectly matched threads at the parting line. While this method is the most costly, it produces the cleanest, most accurate molded thread possible.

OMEGA's single-barbed fittings are made so that the molded-in parting line stops at the base of the barb. The ridge and the conical surface are free of the molded-in leak path. The conical surface on the fitting is smooth and glass-like, for excellent sealing.



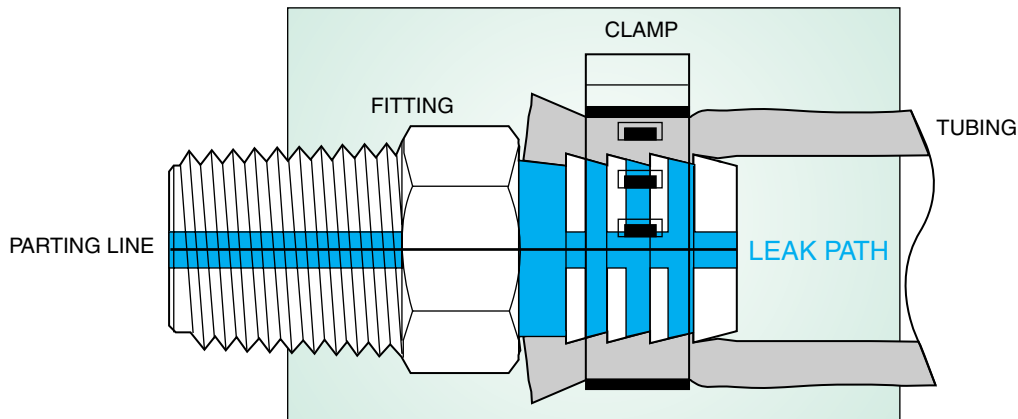
Clamping the relaxed hose behind the barb causes the clamp to work like a drawstring, forcing the diameter of the hose to become smaller than the flare of the fitting barb. If the tubing swells from internal pressure (near burst), the

clamp will be pulled up tight to the back of the barb and the seal will be maintained. When the clamps are placed over the OMEGA® exclusive anti-rotation device the tubing cannot be freed by a twisting motion.

Why Multiple Barb Fittings Fail

Tooling mismatches often occur in poor-quality fittings causing mismatched threads and barbs and resulting in leakage.

Tooling cannot be designed to avoid a parting line on multiple barb fittings. This parting line creates a leak path which becomes more pronounced as the tool wears.



Typical Clamping Position

1. Clamping on top of barbs in attempt to force the tube down behind the barbs can cause damage. It will round off the sharp edges of the barb and cause it to bite less into the tube.
2. The clamping pressure causes the tube to flare out behind the clamp. Barbs located behind the clamp will have little or no effect.

Multiple barbs are typically in close succession. This prevents the tubing from relaxing to its original size, which is essential to the barb's performance. If the tubing does not relax behind the barb, the barb is rendered useless, as shown above. (Note the bridging effect.)

Additional Note: Brass fittings are machined and do not have the problem of molded-in parting lines. However, brass fittings are usually designed with multiple barbs and have the other problem characteristics shown above. In addition, machinable brass contains free lead. Brass parts cannot be used on any system if internal heavy metals are undesirable or dangerous.