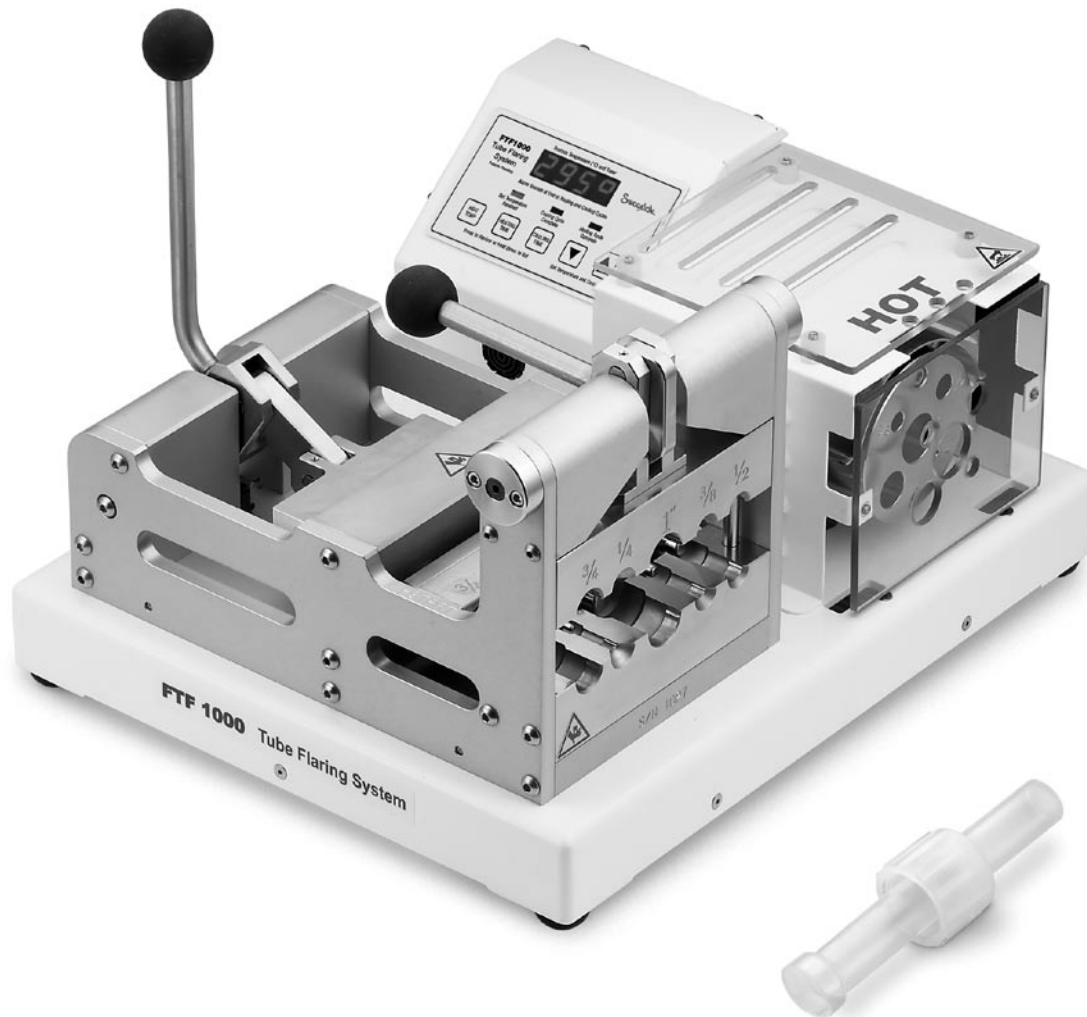


Plastic Tube Flaring System



Model FTF 1000

- Precision tube flaring system for use with fine thread flare connections
- Accommodates tubing sizes of 1/4, 3/8, 1/2, 3/4, and 1 in.
- Electronic controls ensure uniform tube heating and repeatable flared ends
- Complete flaring cycle in approximately one minute
- Easy to learn and operate
- CE compliant

Features

The Swagelok® Model FTF 1000 is a complete, easy-to-operate tool for precision flaring of 1/4, 3/8, 1/2, 3/4, and 1 in. plastic tubing. The self-contained fixtures align and support the tubing during the flaring process, while the electronic controls ensure accurate, uniform tubing flares. With a cycle time of approximately one minute, the plastic tube flaring system reduces installation time.

- Ready-to-install flared tube end is complete in three easy steps: heat, clamp, and flare.
- Five mandrel sizes are built into the fixture—no loose mandrels to misplace or damage.
- Flared end is “cool to the touch” at the end of the cycle—no additional cool down time is required.
- Flaring process takes about a minute; flared tube can be used immediately or stored for later use.
- Controlled process minimizes post-forming shrinkage to ensure accurate, repeatable results.
- Finished tube flare matches the nose geometry of the fitting, promoting excellent sealing performance at assembly.

Technical Data

Values are based on DuPont® 450 PFA UHP tubing. Adjustments may be needed due to material type and material variation.

Tube Size in.	Heating Temperature °C (°F)	Heating Time seconds	Cooling Time seconds	PFA Tubing Wall Thickness in.
1/4	220 (428)	20	30	0.047
3/8 1/2 3/4 1	295 (563)	40	30	0.063

Specifications

Power requirements: 115 or 230 V (ac), 50/60 Hz

Heat source: Radial conduction

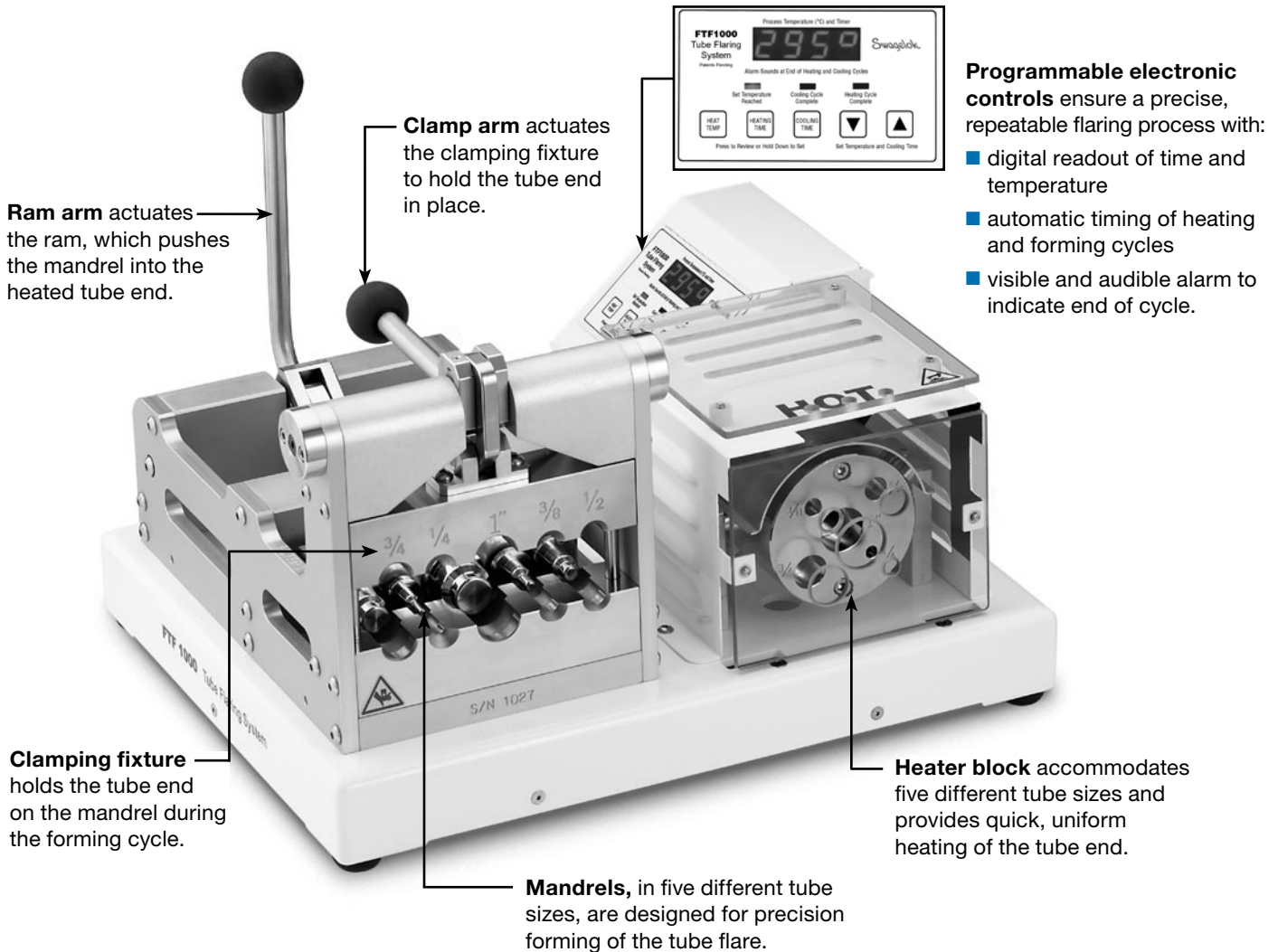
Dimensions: 14 W by 16.9 L by 10.5 H in. (356 by 430 by 267 mm)

Programmable electronic control ranges:

Temperature: 100 to 300°C (212 to 572°F)

Heat time: 10 to 100 seconds

Cooling time: 10 to 100 seconds



Programmable electronic controls ensure a precise, repeatable flaring process with:

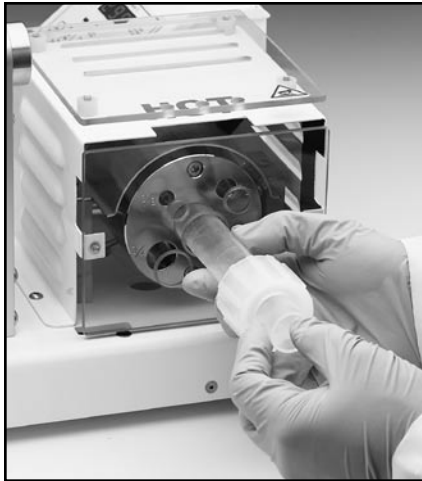
- digital readout of time and temperature
- automatic timing of heating and forming cycles
- visible and audible alarm to indicate end of cycle.

Operation

See the Swagelok *Plastic Tube Flaring System User's Manual, MS-13-171*, for operating instructions.

Create ready-to-install flared tube ends with the electronically controlled Swagelok FTF 1000 tube flaring system.

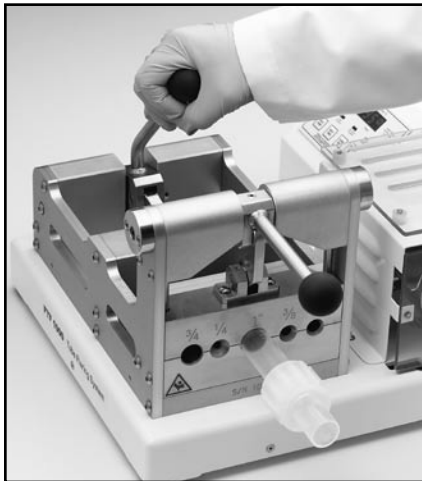
**Heating
the tube.**



**Clamping
the tube.**



**Flaring
the tube.**



Result:

The precision-formed flared tube end is ready for immediate installation, or it can be stocked for later use.



Flare Comparison

- Conventional room-temperature and heat-flaring processes are operator dependent, which can produce inconsistent results.
- The tube end is stretched from the *inside* only, and does not conform fully to the fitting nose.
- Considerable post-forming shrinkage can affect connection assembly and performance.

**Conventional
flared tube end**



**Swagelok FTF 1000
flared tube end**

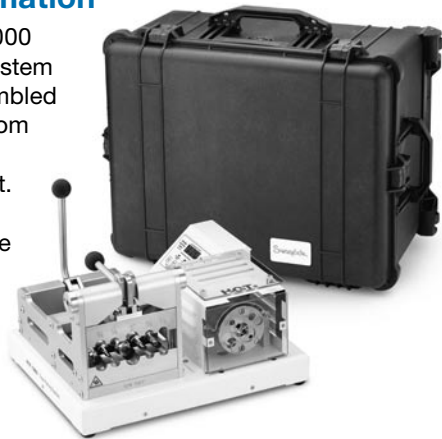


**Fine thread
flared fitting**

- The Swagelok FTF 1000 tube flaring system is an electronically controlled process ensuring accurate and repeatable results.
- The tube end is formed from both *inside* and *outside* of the tube. The finished flare conforms more precisely to the fitting nose.
- Minimal post-forming shrinkage promotes excellent connection assembly and performance.

Ordering Information

The Swagelok FTF 1000 plastic tube flaring system is shipped fully assembled in a heavy-duty, custom case for ease of storage and transport. Power cord and instruction manual are included.



To order a Swagelok plastic tube flaring system, select the ordering number based on the geographic region.

Geographic Region	Voltage	Ordering Number
United States	115 V (ac) 50/60 Hz	MS-FT-1-1
	230 V (ac) 50/60 Hz	MS-FT-2-2
Japan, Taiwan	115 V (ac) 50/60 Hz	MS-FT-1-1
	230 V (ac) 50/60 Hz	MS-FT-2-4
United Kingdom, Singapore	230 V (ac) 50/60 Hz	MS-FT-2-6
Continental Europe, Korea	230 V (ac) 50/60 Hz	MS-FT-2-7
Australia, China, New Zealand	230 V (ac) 50/60 Hz	MS-FT-2-8

Accessories

Tube Cutter

A tube cutter for plastic tubing up to 1 in. outside diameter is available.

Ordering number: **MS-FT-TC**



Ultrahigh-Purity Fluoropolymer Products



The Swagelok family of UHP fluoropolymer products includes pneumatically actuated and quarter-turn manual radial diaphragm-sealed shutoff valves, O-ring-free check valves, fine thread flare fittings, and tubing.

See these Swagelok catalogs for more information:

- *Ultrahigh-Purity Fluoropolymer Diaphragm Valves—DRP Series, MS-02-171*
- *Ultrahigh-Purity Fluoropolymer Diaphragm Valves with Adjustable Flow and Bypass Features—Adjustable DRP Series, MS-02-300*
- *Ultrahigh-Purity Fluoropolymer 3-Way Diaphragm Valves, Pneumatically Actuated—DRP Series, MS-02-321*
- *Ultrahigh-Purity Fluoropolymer O-Ring-Free Poppet Check Valves—CHP Series, MS-02-320*
- *High-Purity PFA Fine Thread Flare Fittings, MS-02-195*
- *Ultrahigh-Purity Fluoropolymer Tubing, MS-02-196*

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.