

# GEMÜ® Flare and assembly quick guide

For GEMÜ High Purity PFA components, fittings and tubing



## Tubing preparation

- When determining the tubing length please take into account that the tubing is shortened during the flaring process (see table on the back for length reduction).
- Cut the tubing square.
- Check the tubing for contamination or external damage.
- Push the union nut over the tubing.



## Flaring procedure with a hot air gun

- Set the hot air gun to 400-450 °C.
- Hold the tubing end approx. 10 - 15 mm above the hot air outlet. Rotate the tubing uniformly 360° (see table on the back for recommended heating time).

### Caution:

Due to the potential danger of developing toxic gases, we recommend wearing respiratory masks with activated carbon filters.

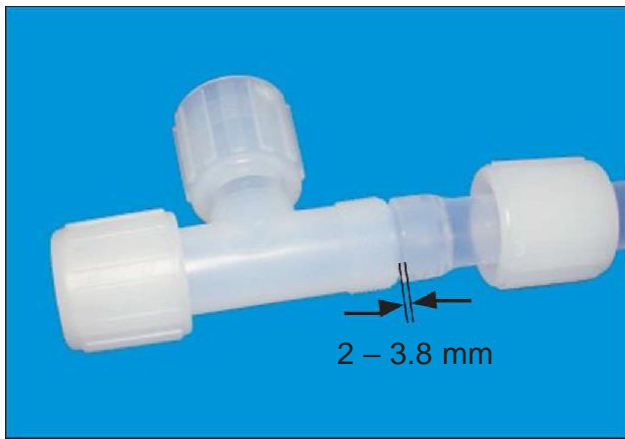


## Flaring the tubing

- After the heating phase immediately push the flaring mandrel into the heated tubing until the tube stop is reached, hold and let it cool down (see table on the back for holding time and cooling time).
- After the cool down phase remove the tubing from the flaring mandrel and check the result of the flaring process.

### Caution:

PFA tends to get back to its original form / to shrink. Therefore it is necessary to quickly assemble the tubing. If this is not possible, insert a plug to maintain the flared end.



### Assembly

- Fully push the flared tubing onto the fitting body. The maximum gap between the tubing end and the end of the fitting thread should be 2 to 3.8 mm.
- Tighten the union nut (see table below for recommended torque values).



### Retightening

- Flare connections exposed to temperatures > 75 °C should be retightened if necessary (see table below for values).

### Important information:

Please note the following when carrying out the flaring and assembly steps described above:

- Flaring and assembly work may only be carried out by authorized trained personnel.
- Observe the relevant operating instructions.
- Use appropriate, functional and safe tools.

Tubing and fitting size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
Heating time fo PFA (sec.) Hot air gun	15	25	25	25	25	25
Hold tubing on flaring mandrel (sec.)	20	20	20	20	25	25
Min. cooling time on flaring mandrel (min.)	2	2	3	3	3	3
Min. nut torque (inch, lbs (Nm)) PFA fitting / PVDF union nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)	35 (3.96)
Min. nut torque (inch, lbs (Nm)) PFA fitting / PFA union nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)	on request
Min. nut torque (inch, lbs (Nm)) PFA fitting / CPFA union nut	5 (.57)	8 (.90)	11 (1.24)	14 (1.58)	30 (3.39)	on request
Approx. length reduction (mm)	3.6	3.2	2.8	2.3	2.4	2.3