



HPA-S Vessel Closure with Wrapping Technique

Especially for long term decompositions - lasting several hours at maximum operating temperature - this new vessel closure technique proves its **Special Benefits**:

- Optimum tightness even under extreme conditions
- No disintegration of the sealing material
- No metal parts in contact with vessel and lid, exclusively pure PTFE
- Low-priced sealing material

The **Application** of the wrapping technique is recommended when using decomposition temperatures higher than 250°C, including all types of vessels. Even "OR" vessels with O-ring groove can be closed using the wrapping technique - in this case the O-ring is omitted.

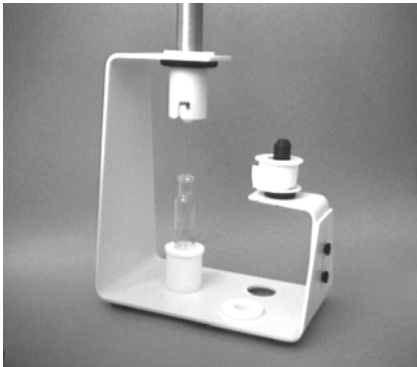
For new types of reaction vessels coming without flanged vessel neck, the use of the wrapping technique is absolutely necessary.

Initially, the wrapping technique has been developed to be applied for decompositions of inorganic samples lasting several hours. After extensive tests, however, the new wrapping technique has proved to be universally applicable. Special care has to be taken for organic samples which show high residual pressure within the vessels even after cooling down: after the decomposition, release the pressure very slowly to avoid damage of the vessels' lids.

Only the **PTFE strip** (Cat. No. 57886) is allowed to be used as vessel closure. A length of approx. 20-30 cm is necessary to close one vessel. An auxiliary means to hold the vessel while being closed is the **Wrapping Attachment** (Cat. No. 70277).



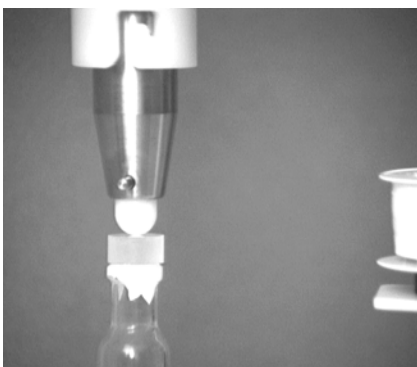
Vessel closing procedure using the wrapping technique:



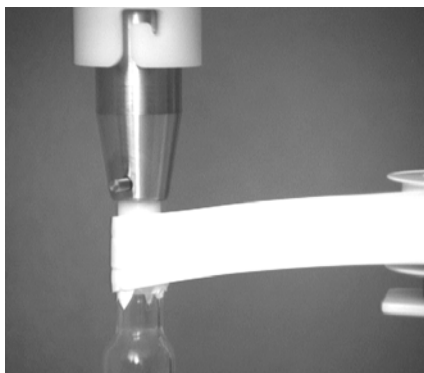
- Lift the loading weight and turn it to lock in top position.
- Put the vessel into the vessel holder. When using 30 (50) ml or 10 (15) ml vessels, use the appropriate reducer to allow exact positioning.



- Use a sharp scissors to cut approx. 3 cm PTFE strip and put it onto the vessel's opening. Take care that the PTFE strip is placed smoothly without folds and not overstretched.
- Smooth down the projecting PTFE strip.



- Place the quartz lid concentrically on the vessel and use the loading weight to fix. Slightly lift the loading weight, turn to release it from its locking position and slowly lower it towards the lid.



- Pull PTFE strip from the roller and wrap three windings around vessel neck and lid. Make sure the strip projects 3 to 5 mm beyond the top edge of the lid.

After having done the first winding, apply the other two ones by simply turning the vessel in its holder. While pulling off the strip, the roller's frictional resistance provides for the required prestress. In case the strip is too loose, the lid may fall from the vessel during releasing nitrogen upon completion of the decomposition.



- Cut the PTFE strip and smooth down its ending.
- Lift the loading weight and lock it at top position.
- Smooth down the projecting PTFE strip on lid and vessel neck.

This reliable wrapping technique provides absolute tightness of the vessel, even for long term decompositions lasting several hours at maximum operating temperature.

Important: Make sure the nitrogen is released **slowly** upon completion of the decomposition. Otherwise, the quartz lid may be lifted abruptly thus falling from the vessel or being damaged at all. By slowly releasing the nitrogen - lasting approx. 3 to 4 minutes - easy and troublefree opening of the vessels will be ensured even when decomposing organic matrices of high residual pressure.