

Tracheal T-Tube

Code: TM



The Tracheal T-Tube makes possible the maintenance of an adequate caliber in the airway. It can act as a support for the tracheal wall in the stenosis treatment.

The external branch of the Tracheal T-Tubes prevents displacement and permits the aspiration of bronchial secretions.

Indications:

- Tracheal stenosis
- Subglottic stenosis
- Laryngotracheal stenosis
- After a tracheal resection and a termino-terminal anastomosis
- Tracheal reconstruction
- Larynx or trachea trauma
- Conventional tracheal cannula substitution

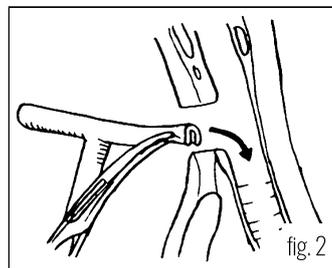
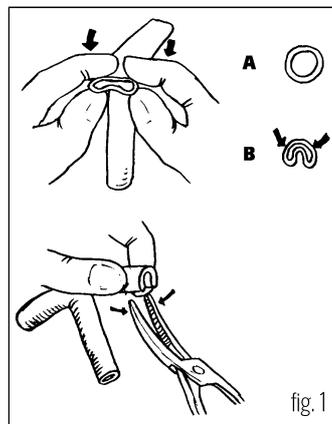
How to Use

Insertion:

The procedure is usually performed in the same operating room and under the effect of the general anesthesia that was available for tracheal repair, but it can also be done under local anesthesia. Two curved forceps and aspiration system will be required. The lower branch of the "T" tube must be folded at its end (fig.1), to facilitate its introduction through the tracheal osteoma.

The curved forceps will maintain the tube on a folded position (fig. 2). Then the assembly will be introduced inside the trachea through the tracheostomy hole (fig. 3).

The second forceps will secure the T-tube by its external branch, thus avoiding an unwanted displacement (fig.4). Mobilize the T-Tube until its upper branch enters the trachea and lodges on its inside, occupying the tracheal portion adjacent to the vocal cords (fig.5). Finally, the ring with the lid must be collocated on the outer branch of the "T" tube. To do this, you can thread the ring in the forceps, grab the outer branch of the "T" tube and slide the ring until it is close to the neck' skin, interposing a gauze between the skin and the ring. Occlude the external branch with the provided lid.



The tape method:

It is a very clever and useful resource that consists of using a ribbon about 80 cm long, which can be carried out with a narrow bandage.

It must be introduced through the end of the external branch of the T-tube, and guided it all along the tube's interior so that it gets out through the upper tracheal branch. Then you should take that bandage end and, with the help of a forceps, introduce it through the tracheostomy hole until it reaches the inside of the trachea. A second long forceps is inserted inside the bronchoscope until it arrives and takes the end of the tape that had been left inside the trachea and, pulling on it, the tape then will travel around the inside of the bronchoscope or tracheoscope until it appears on the proximal end. So we have now a thin ribbon that enters the outer branch of the "T" tube and gets out through our bronchoscope.

As always, the lower branch of the T-Tube always lodges easily in the distal trachea, but the upper branch may remain folded, or half of its distance in the glottis' direction. At the moment of tensing tape that we have placed, taking it by its ends, the branches of the T-tube will be easily aligned following the alternative that the tape occupies, accommodating the tube in a safe way. Additionally, the tape method avoids the accidental displacement of the T-tube during the implant maneuver.

Removal:

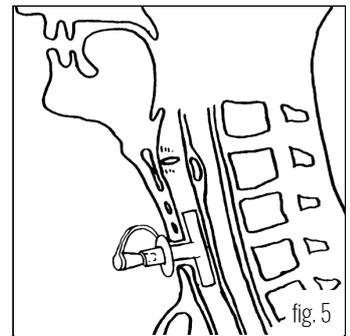
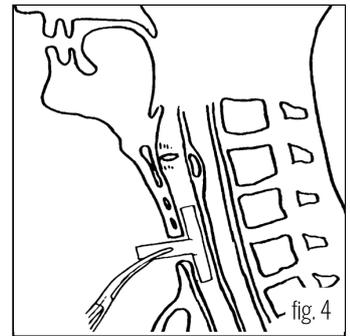
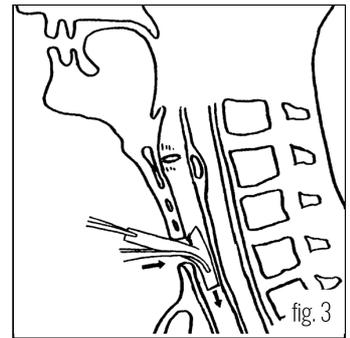
The Tracheal T-Tube can be easily removed by taking it by its external branch and pulling. This traction causes the fold of its internal branches that will meet, thus abandoning the trachea through the osteoma, following the direction of the force that pulls from it, from the outside.

The removal can be done if the treatment time is completed or to carry out a T-tube replacement. The most delicate extraction can also be carried out using a straight laryngoscope or a tracheoscope that, when introduced into the airway, allows to visualize the end of the T-tube. Take the T-tube through the tracheoscope, while an assistant sections with a pair of scissors the outer branch of the tube at the closest point from the trachea. Next, the T-tube will be removed with a forceps through the tracheoscope channel.

Other forms of insertion and removal are possible depending on the experience and preferences of the physician.

Anesthesia through the T-Tube:

Anesthesia through the Tracheal T-tube is possible. The upper branch must be included to avoid the loss of anesthetic gases. This can be achieved by inflating the balloon of a catheter that, introduced nasally, must cross the vocal cords and lodge within the upper branch of the Stening® T-Tube. Since the tracheal T-tube lacks of an inflatable balloon, positive pressure ventilation can cause a variable loss of air volume administered, and will depend on the greater or lesser space between the wall of the tube and the trachea.



Postoperative Cares:

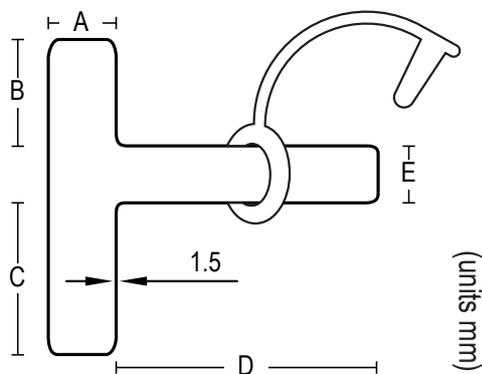
- Perform washes and aspirations frequently.
- Both internal branches must be suctioned. A thin catheter connected to the aspiration system can be used. To guide the catheter in the upper or lower direction within the Stening® T-tube, the external branch can be tilted in the opposite direction to the one that is going to be suctioned.
- Aspiration can also be done with the help of a flexible bronchoscope.
- Once the aspiration has been completed the external branch must remain permanently closed.
- Keep the external branch occluded with the lid provided for that purpose to permit moist and warm air inhalation through the upper airway and reduce the volume of secretions.
- Clean the skin that surrounds the tube a couple of times a day.
- The instructions may vary for each case and must be adjusted and provided to the patient and his relatives by the physician.

Warning:

- Keep the external branch occluded permanently with the lid provided.
- In the presence of stridor, difficult breathing or any other anomaly, remove the external lid and consult the specialist immediately.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Transparent or Radiopaque



References		Dimensions (mm)				
Translucent	Radiopaque	Diameter (A)	B	C	D	E
TM10	TMX10	10	20	29	50	11
TM11	TMX11	11	20	29	50	11
TM12	TMX12	12	23	32	60	11
TM13	TMX13	13	24	33	60	11
TM14	TMX14	14	26	35	70	11
TM15	TMX15	15	26	36	70	11
TM16	TMX16	16	27	37	70	11

Stening® provides detailed instructions for use with each device, including insertion and removal techniques, precautions, and postoperative care.

For custom made devices you can [contact us](#)

A radiopaque device can be white or pale yellow.

Due to the characteristics of the production process, the sizes of the devices may vary by +/- 2%

Warning: the product should not be reused because this can cause cross contamination.

Long Tracheal T-Tube

Code: TML



The Tracheal T-Tube makes possible the maintenance of an adequate caliber in the airway. It can act as a support for the tracheal wall in the stenosis treatment.

The external branch of the Tracheal T-Tubes prevents displacement and permits the aspiration of bronchial secretions.

Indications:

- Distal, precarinal and tracheal injuries
- Tracheal stenosis
- Subglottic stenosis
- Laryngotracheal stenosis
- After a tracheal resection and a termino-terminal anastomosis
- Tracheal reconstruction
- Larynx or trachea trauma
- Conventional tracheal cannula substitution

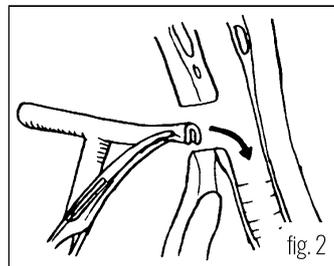
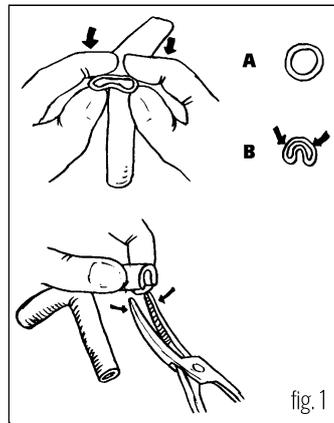
How to Use

Insertion:

The procedure is usually performed in the same operating room and under the effect of the general anesthesia that was available for tracheal repair, but it can also be done under local anesthesia. Two curved forceps and aspiration system will be required. The lower branch of the "T" tube must be folded at its end (fig.1), to facilitate its introduction through the tracheal osteoma.

The curved forceps will maintain the tube on a folded position (fig. 2). Then the assembly will be introduced inside the trachea through the tracheostomy hole (fig. 3).

The second forceps will secure the T-tube by its external branch, thus avoiding an unwanted displacement (fig.4). Mobilize the T-Tube until its upper branch enters the trachea and lodges on its inside, occupying the tracheal portion adjacent to the vocal cords (fig.5). Finally, the ring with the lid must be collocated on the outer branch of the "T" tube. To do this, you can thread the ring in the forceps, grab the outer branch of the "T" tube and slide the ring until it is close to the neck' skin, interposing a gauze between the skin and the ring. Occlude the external branch with the provided lid.



The tape method:

It is a very clever and useful resource that consists of using a ribbon about 80 cm long, which can be carried out with a narrow bandage.

It must be introduced through the end of the external branch of the T-tube, and guided it all along the tube's interior so that it gets out through the upper tracheal branch. Then you should take that bandage end and, with the help of a forceps, introduce it through the tracheostomy hole until it reaches the inside of the trachea. A second long forceps is inserted inside the bronchoscope until it arrives and takes the end of the tape that had been left inside the trachea and, pulling on it, the tape then will travel around the inside of the bronchoscope or tracheoscope until it appears on the proximal end. So we have now a thin ribbon that enters the outer branch of the "T" tube and gets out through our bronchoscope.

As always, the lower branch of the T-Tube always lodges easily in the distal trachea, but the upper branch may remain folded, or half of its distance in the glottis' direction. At the moment of tensing tape that we have placed, taking it by its ends, the branches of the T-tube will be easily aligned following the alternative that the tape occupies, accommodating the tube in a safe way. Additionally, the tape method avoids the accidental displacement of the T-tube during the implant maneuver.

Removal:

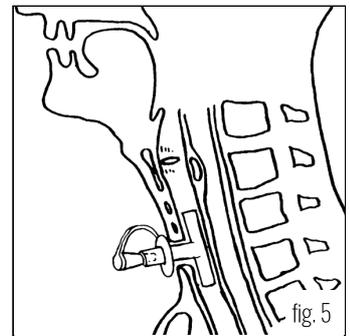
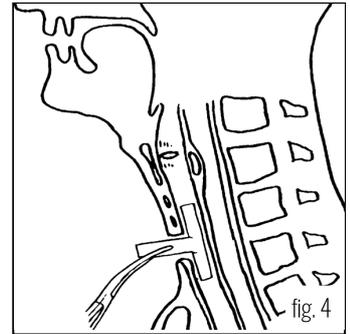
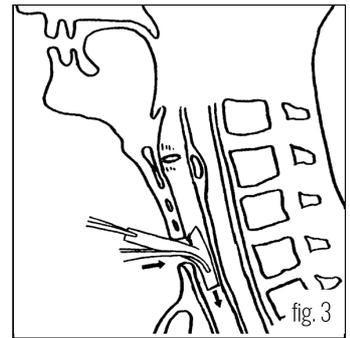
The Tracheal T-Tube can be easily removed by taking it by its external branch and pulling. This traction causes the fold of its internal branches that will meet, thus abandoning the trachea through the osteoma, following the direction of the force that pulls from it, from the outside.

The removal can be done if the treatment time is completed or to carry out a T-tube replacement. The most delicate extraction can also be carried out using a straight laryngoscope or a tracheoscope that, when introduced into the airway, allows to visualize the end of the T-tube. Take the T-tube through the tracheoscope, while an assistant sections with a pair of scissors the outer branch of the tube at the closest point from the trachea. Next, the T-tube will be removed with a forceps through the tracheoscope channel.

Other forms of insertion and removal are possible depending on the experience and preferences of the physician.

Anesthesia through the T-Tube:

Anesthesia through the Tracheal T-tube is possible. The upper branch must be included to avoid the loss of anesthetic gases. This can be achieved by inflating the balloon of a catheter that, introduced nasally, must cross the vocal cords and lodge within the upper branch of the Stening® T-Tube. Since the tracheal T-tube lacks of an inflatable balloon, positive pressure ventilation can cause a variable loss of air volume administered, and will depend on the greater or lesser space between the wall of the tube and the trachea.



Postoperative Cares:

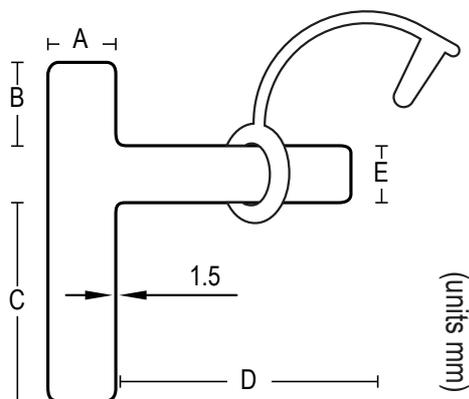
- Perform washes and aspirations frequently.
- Both internal branches must be suctioned. A thin catheter connected to the aspiration system can be used. To guide the catheter in the upper or lower direction within the Stening® T-tube, the external branch can be tilted in the opposite direction to the one that is going to be suctioned.
- Aspiration can also be done with the help of a flexible bronchoscope.
- Once the aspiration has been completed the external branch must remain permanently closed.
- Keep the external branch occluded with the lid provided for that purpose to permit moist and warm air inhalation through the upper airway and reduce the volume of secretions.
- Clean the skin that surrounds the tube a couple of times a day.
- The instructions may vary for each case and must be adjusted and provided to the patient and his relatives by the physician.

Warning:

- Keep the external branch occluded permanently with the lid provided.
- In the presence of stridor, difficult breathing or any other anomaly, remove the external lid and consult the specialist immediately.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Transparent or Radiopaque



References		Dimensions (mm)				
Translucent	Radiopaque	Diameter (A)	B	C	D	E
TML10	TMLX10	10	35	75	50	11
TML11	TMLX11	11	35	75	50	11
TML12	TMLX12	12	35	75	60	11
TML13	TMLX13	13	35	75	60	11
TML14	TMLX14	14	35	75	70	11
TML15	TMLX15	15	35	75	70	11
TML16	TMLX16	16	35	75	70	11

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A radiopaque device can be white or pale yellow.

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Warning: the product should not be reused because this can cause cross contamination.

Pediatric Angular Tracheal T-Tube

Code: TMPA



The Tracheal T-Tube makes possible the maintenance of an adequate caliber in the airway. It can act as a support for the tracheal wall in the stenosis treatment.

The external branch of the Tracheal T-Tubes prevents displacement and permits the aspiration of bronchial secretions.

TMPA external branch has an angle of 70°.

Indications:

- Tracheal stenosis
- Laryngeal stenosis
- Laryngotracheal stenosis
- Segmental tracheal resection
- Support in tracheal reconstruction

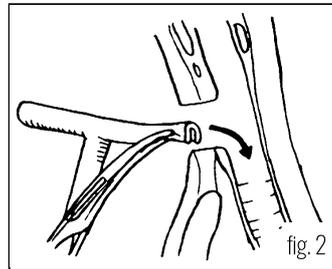
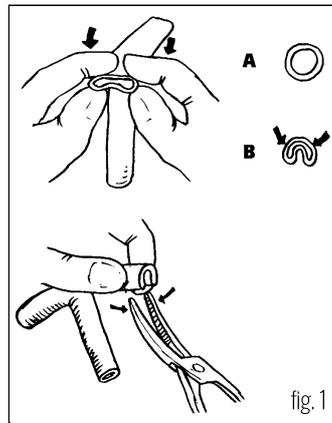
How to Use

Insertion:

The procedure is usually performed in the same operating room and under the effect of the general anesthesia that was available for tracheal repair, but it can also be done under local anesthesia. Two curved forceps and aspiration system will be required. The lower branch of the "T" tube must be folded at its end (fig.1), to facilitate its introduction through the tracheal osteoma.

The curved forceps will maintain the tube on a folded position (fig. 2). Then the assembly will be introduced inside the trachea through the tracheostomy hole (fig. 3).

The second forceps will secure the T-tube by its external branch, thus avoiding an unwanted displacement (fig.4). Mobilize the T-Tube until its upper branch enters the trachea and lodges on its inside, occupying the tracheal portion adjacent to the vocal cords (fig.5). Finally, the ring with the lid must be collocated on the outer branch of the "T" tube. To do this, you can thread the ring in the forceps, grab the outer branch of the "T" tube and slide the ring until it is close to the neck' skin, interposing a gauze between the skin and the ring. Occlude the external branch with the provided lid.



The tape method:

It is a very clever and useful resource that consists of using a ribbon about 80 cm long, which can be carried out with a narrow bandage.

It must be introduced through the end of the external branch of the T-tube, and guided it all along the tube's interior so that it gets out through the upper tracheal branch. Then you should take that bandage end and, with the help of a forceps, introduce it through the tracheostomy hole until it reaches the inside of the trachea. A second long forceps is inserted inside the bronchoscope until it arrives and takes the end of the tape that had been left inside the trachea and, pulling on it, the tape then will travel around the inside of the bronchoscope or tracheoscope until it appears on the proximal end. So we have now a thin ribbon that enters the outer branch of the "T" tube and gets out through our bronchoscope.

As always, the lower branch of the T-Tube always lodges easily in the distal trachea, but the upper branch may remain folded, or half of its distance in the glottis' direction. At the moment of tensing tape that we have placed, taking it by its ends, the branches of the T-tube will be easily aligned following the alternative that the tape occupies, accommodating the tube in a safe way. Additionally, the tape method avoids the accidental displacement of the T-tube during the implant maneuver.

Removal:

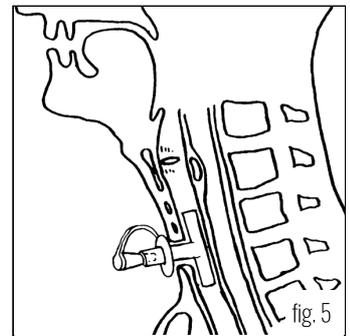
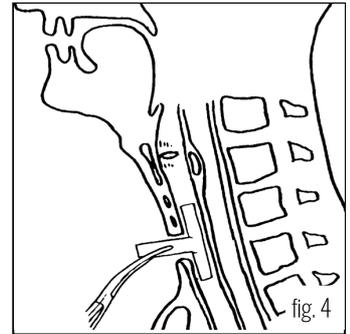
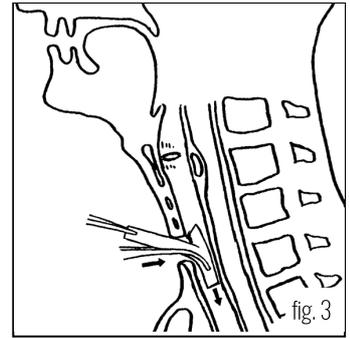
The Tracheal T-Tube can be easily removed by taking it by its external branch and pulling. This traction causes the fold of its internal branches that will meet, thus abandoning the trachea through the osteoma, following the direction of the force that pulls from it, from the outside.

The removal can be done if the treatment time is completed or to carry out a T-tube replacement. The most delicate extraction can also be carried out using a straight laryngoscope or a tracheoscope that, when introduced into the airway, allows to visualize the end of the T-tube. Take the T-tube through the tracheoscope, while an assistant sections with a pair of scissors the outer branch of the tube at the closest point from the trachea. Next, the T-tube will be removed with a forceps through the tracheoscope channel.

Other forms of insertion and removal are possible depending on the experience and preferences of the physician.

Anesthesia through the T-Tube:

Anesthesia through the Tracheal T-tube is possible. The upper branch must be included to avoid the loss of anesthetic gases. This can be achieved by inflating the balloon of a catheter that, introduced nasally, must cross the vocal cords and lodge within the upper branch of the Stening® T-Tube. Since the tracheal T-tube lacks of an inflatable balloon, positive pressure ventilation can cause a variable loss of air volume administered, and will depend on the greater or lesser space between the wall of the tube and the trachea.



Postoperative Cares:

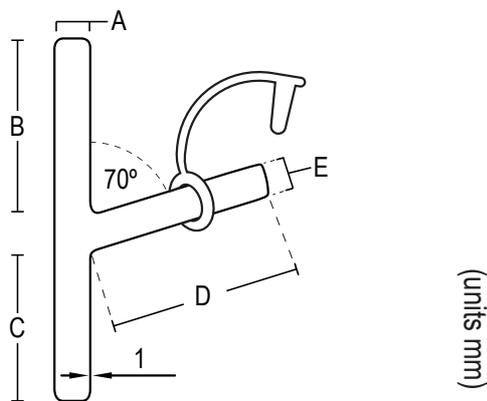
- Perform washes and aspirations frequently.
- Both internal branches must be suctioned. A thin catheter connected to the aspiration system can be used. To guide the catheter in the upper or lower direction within the Stening® T-tube, the external branch can be tilted in the opposite direction to the one that is going to be suctioned.
- Aspiration can also be done with the help of a flexible bronchoscope.
- Once the aspiration has been completed the external branch must remain permanently closed.
- Keep the external branch occluded with the lid provided for that purpose to permit moist and warm air inhalation through the upper airway and reduce the volume of secretions.
- Clean the skin that surrounds the tube a couple of times a day.
- The instructions may vary for each case and must be adjusted and provided to the patient and his relatives by the physician.

Warning:

- Keep the external branch occluded permanently with the lid provided.
- In the presence of stridor, difficult breathing or any other anomaly, remove the external lid and consult the specialist immediately.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Transparent or Radiopaque



References		Dimensions (mm)				
Translucent	Radiopaque	Diameter (A)	B	C	D	E
TMPA6	TMPAX6	6	56	40	40	6
TMPA7	TMPAX7	7	56	40	40	6
TMPA8	TMPAX8	8	56	40	40	8
TMPA9	TMPAX9	9	56	62	40	8

Stening® provides detailed instructions for use with each device, including insertion and removal techniques, precautions, and postoperative care.

For custom made devices you can [contact us](#)

A radiopaque device can be white or pale yellow.

Due to the characteristics of the production process, the sizes of the devices may vary by +/- 2%

Warning: the product should not be reused because this can cause cross contamination.

Laryngeal Stent

Code: LK / LP / LM / LG



The Stening® Laryngeal stent is a silicone prosthesis that copies the reliefs of the endolarynx. This flexible mould is an alternative to support the laryngeal skeleton in situations of organ trauma or after the reconstruction surgery. It has a very smooth surface and blunt edges that reduce traumatism on the mucosa. Its flexibility favors the tolerance and the solid conformation prevents its collapse and deformation.

The Stening® Laryngeal Stent is radiopaque and it is accompanied by four silicone discs that help on its external fixation.

Indications:

- Laryngeal stenosis
- Surgical reconstruction
- Partial laryngectomies
- Severe burns

How to Use:

The implantation of this stent requires a previous tracheostomy, because orinasal respiration will not be possible.

The surgical procedure will be the one of choice of the attending physician, but usually, in the cases of stenosis, an anterior and posterior laryngeal fissure with a graft of costal cartilage to achieve greater laryngeal stability is carried out.

Once the stent has been placed in the appropriate position, it can be fixed with two capitons following the path:

[skin] - [subcutaneous planes] - [stent] - [soft tissues] - [skin]

and it will remain in that place, acting as a tutor, as long as the doctor deems necessary for each case.

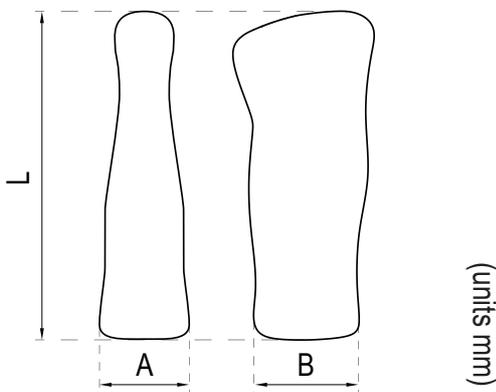
The extraction is done orally, removing it with a forceps that will take it by its upper end.

Cares:

It does not require extra cares, just the ones carried out in the postoperative of laryngeal surgery.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Radiopaque



References		Dimensions (mm)		
Translucent	Radiopaque	Length	A	B
-	LK	20 to 33	6 to 9	7 to 10
-	LP	36.8	9.7	9.9
-	LM	39	10	11.3
-	LG	46	15	15.6

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Pharyngeal Tube

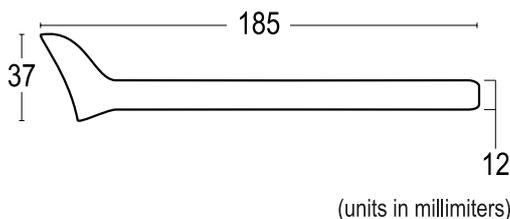
Code: TF



It is made out of flexible silicone and is useful in a wide range of situations.

Its apical end is progressively enlarged, in this way the anterior edge maintains contact with the base of the tongue, while the posterior one rests on the pharyngeal wall. In that way, the saliva is stored in the oropharynx leading to esophagus, preventing the maceration of the tissues and avoiding the aspiration of the saliva towards the airway.

A nasointestinal tube for feeding can be inserted through the Pharyngeal Tube.



Indications:

- Secondary fistulas to laryngectomy, radiotherapy, neoplastic conditions, caustic ingestion
- Orocutaneous or pharyngocutaneous, traumatic fistula
- Head and neck oncological surgery
- Esophageal stenosis
- Esophagus carcinoma

How to Use:

The introduction of the pharyngeal tube should be done under general anesthesia. It can be cut up to the length that is considered appropriate for the case.

A laryngoscope will be used to have convenient access to the larynx and adequate vision.

With the help of a hypopharyngoscope and a long forceps, take the tube by its distal end to lead it into the esophagus, until the proximal cup is at the laryngeal level. Previous esophageal dilatation may be necessary.

After its introduction it can be fixed with a percutaneous point.

Cares:

Perform a periodic check-up carried out by the physician.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Transparent or Radiopaque

References		Dimensions (mm)		
Translucent	Radiopaque	Width	Length	Diameter
TF12	TFX12	37	185	12

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Warning: the product should not be reused because this can cause cross contamination.

Tracheostomy Tutor

Code: TU



*The Tracheostomy Tutor allows a secondary access to the airway.
It replaces the conventional tracheal cannula providing comfort, reducing the production of secretions and facilitating phonation.
Maintains the tracheostomy orifice permeable until its definitive closure is decided.*

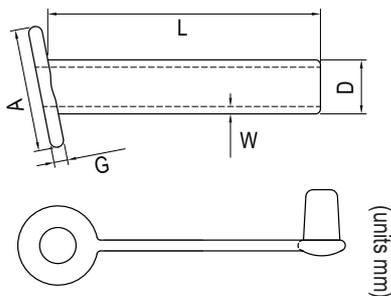
The tutor is fixed in the osteoma of the anterior tracheal wall and in the planes of the neck. Its introduction into the tracheal clearance is minimal.

The ring of the outer branch keeps it in the desired position.

Its external branch must be included permanently, so that the entrance of warm and humid air by the upper airway is possible.

Indications:

- After removing a cannula or a T-tube, to avoid a definitive closure of the osteoma.
- Preserve the tracheostomy hole.



(units mm)

How to Use:

The osteoma tutor is introduced through the already formed tracheal orifice.

Previously the surrounding skin will be sanitized and an antiseptic solution will be applied.

Since the tutor is small, the use of a lubricant is optional.

The tutor is introduced by the stoma taking it between the thumb and forefinger or with the help of a curved forceps.

Already in position and as it proceeds after the placement of the T-Tube model, the ring that fixes the lid, separated from the skin by small gauze, will be applied.

To remove the tutor, you must pull from its external branch.

Cares:

The portion of the tutor that lodges inside the trachea consists of two small fins that make accidental extraction difficult.

Therefore, there is no part of the device inside the trachea, as it happens with a conventional cannula, so that the aspiration from the tutor's interior is unnecessary.

It also has a lid on its external branch that makes the aspiration of tracheal secretions possible in cases where, due to the abundance of these, it is necessary.

Features

- Medical grade silicone
- Bevelled edges to prevent granulomas
- Removable
- Surface of maximum softness to avoid adherence of secretions
- Transparent or Radiopaque

References		Dimensions (mm)				
Translucent	Radiopaque	Diameter (D)	Length (L)	Wall thickness (W)	Height (A)	Thickness (G)
TU11	TUX11	11	55	1.5	25	2.75
TU8	TUX8	8	55	1	16	2.75

Stening® provides detailed instructions for use with each device, including insertion and removal techniques, precautions, and postoperative care.

For custom made devices you can [contact us](#)

A radiopaque device can be white or pale yellow.

Due to the characteristics of the production process, the sizes of the devices may vary by +/- 2%

Warning: the product should not be reused because this can cause cross contamination.