

HELP SECURE AIRWAYS. THE BETTER WAY.

Shiley™ endotracheal tubes with TaperGuard™ cuff technology



Every patient is unique. That's why Shiley™ endotracheal tubes with TaperGuard™ cuff technology are designed to meet unique needs.

For more than 40 years, medical teams have trusted the Shiley™ endotracheal tube portfolio. Our broad portfolio features basic and specialty tubes, as well as cuffed and uncuffed options in a range of sizes from pediatric to adult.

To provide a next-generation, low-volume, low-pressure design, TaperGuard™ cuff technology was developed as an extension of the Shiley™ airway portfolio. It replaces the high-volume, low-pressure cuff design featured on legacy products.

Medtronic
Further, Together

PRODUCT OVERVIEW

The Shiley™ endotracheal tube with TaperGuard™ cuff technology product portfolio provides a variety of enhancements compared to legacy products.

Reduced pressure on the tracheal wall

Excess endotracheal tube cuff pressure on the trachea — even for a short duration — may lead to complications, including:

- Sore throat¹
- Hoarseness¹
- Restricted blood flow¹
- Tracheal lesions¹
- Morbidity¹

Shiley™ endotracheal tubes with TaperGuard™ cuff technology have been shown to reduce the tracheal pressure area by as much as 29 percent compared to those with Hi-Lo™ cuff.^{2,3} Additionally, Shiley™ endotracheal tubes with TaperGuard™ cuff technology have been found to reduce the incidence and severity of sore throat after surgical procedures.⁴

More uniform pressure distribution

When intracuff pressures were compared, the Shiley™ endotracheal tubes with TaperGuard™ cuff technology provided more uniform pressure distribution than Shiley™ endotracheal tubes with Hi-Lo™ cuff.^{2,3} Figures 1a and 1b demonstrate the difference in pressure between the two cuff designs.

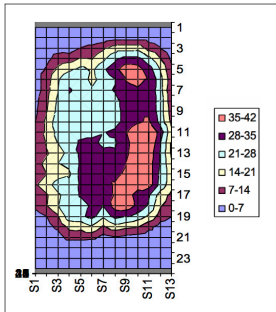


Figure 1a. Shiley™ endotracheal tube with Hi-Lo™ cuff

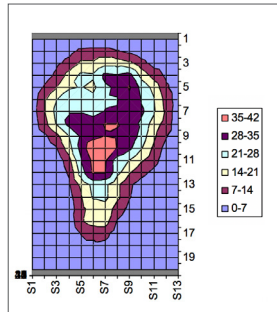


Figure 1b. Shiley™ endotracheal tube with TaperGuard™ cuff technology

Patients can be affected by tracheal pressure — and the amount of tracheal contact points on each cuff type. Figure 2a shows how the barrel-shaped cuff rests on a wider portion of the trachea. It also has more hot spots or pressure spots exerted on the trachea compared to Figure 2b, which shows how the taper-shaped cuff has a narrowing touch point and a more symmetrical pressure pattern.^{2,3}

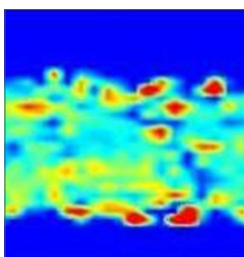


Figure 2a. Shiley™ endotracheal tube with Hi-Lo™ cuff

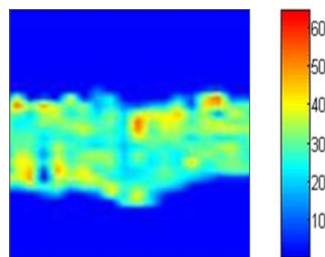


Figure 2b. Shiley™ endotracheal tube with TaperGuard™ cuff technology

Better sealing and improved lung protection

The design of the patented TaperGuard™ cuff technology also provides better sealing properties for improved lung protection compared to the legacy cuff designs. The taper-shaped cuff reduces microaspiration by an average of 90 percent compared to the barrel-shaped cuff on Shiley™ endotracheal tubes with Hi-Lo™ cuff.⁵ Figure 3a and 3b show how, compared to Shiley™ endotracheal tubes with Hi-Lo™ cuff, Shiley™ endotracheal tubes with TaperGuard™ cuff technology create a patented sealing band, which significantly reduces the amount of fluid that may leak into the lungs.⁶



Figure 3a. Shiley™ endotracheal tube with Hi-Lo™ cuff



Figure 3b. Shiley™ endotracheal tube with TaperGuard™ cuff technology

The taper-shaped cuff design significantly improves tracheal seal compared to the previous barrel-shaped cuff design. The taper-shaped cuff is designed with a proximal end diameter larger than the average adult trachea and a smaller diameter at the distal end. The reduction in this distal cuff material enables the cuff diameter to better match the diameter of the trachea forming a sealing band. This reduces the amount of excess cuff material and provides a better seal against the trachea, as shown in Figure 4.

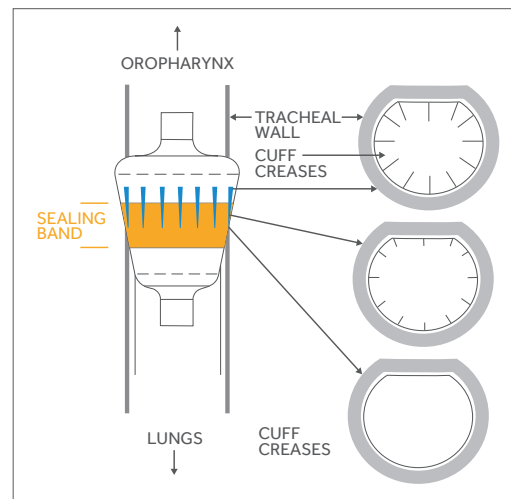


Figure 4.

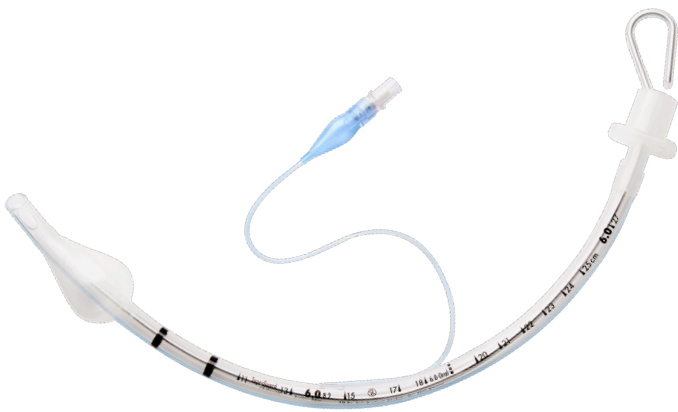
THE PORTFOLIO AT A GLANCE

Meeting your — and your patients' — needs

The portfolio of Shiley™ endotracheal tubes with TaperGuard™ cuff technology includes options to meet a variety of needs.

Shiley™ oral and nasal endotracheal tubes with TaperGuard™ technology and optional stylet

For basic use, the Shiley™ endotracheal tube with TaperGuard™ technology is ideal.



Ordering information

REF	REF with stylet	I.D. (mm)	O.D. (mm)	LENGTH (mm)	CUFF Ø (mm)
18750	18750S	5.0	6.9	274	17.4
18755	18755S	5.5	7.5	304	17.4
18760	18760S	6.0	8.2	317	20.6
18765	18765S	6.5	8.9	327	20.6
18770	18770S	7.0	9.5	339	25.4
18775	18775S	7.5	10.2	350	25.4
18780	18780S	8.0	10.8	360	25.4
18785	18785S	8.5	11.4	370	28.6
18790	18790S	9.0	12.1	375	28.6
18795	18795S	9.5	12.8	375	28.6
18710	18710S	10.0	13.5	375	28.6

Carton quantity: 10

All tubes are delivered sterile packed, for single use only.

Shiley™ oral and nasal RAE endotracheal tubes with TaperGuard™ cuff technology

For specialty surgical procedures, the preformed, nonkinking shape of the Shiley™ RAE endotracheal tube with TaperGuard™ cuff technology extends the anesthesia circuit out of the surgical field.

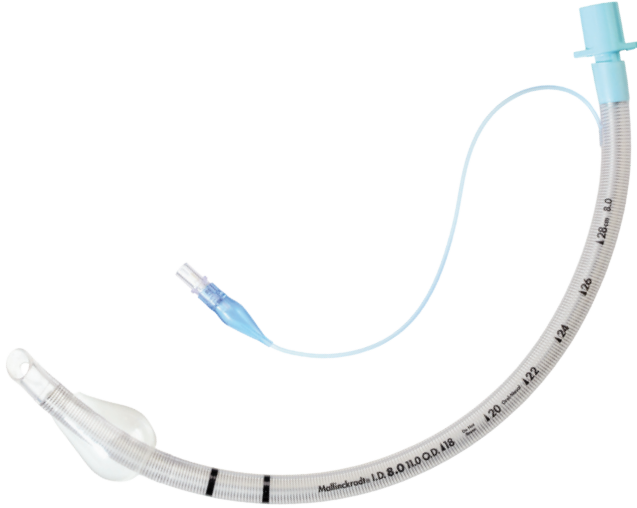


Ordering information

	REF with TaperGuard™ Cuff	I.D. (mm)	O.D. (mm)	LENGTH (mm)	CUFF Ø (mm)
Oral					
PEDIATRIC	115-50OR	5.0	6.9	251	19
	115-55OR	5.5	7.6	263	21
	115-60OR	6.0	8.2	287	22
	115-65OR	6.5	8.7	297	24
	115-70OR	7.0	9.5	317	28
	115-75OR	7.5	10.1	327	30
	115-80OR	8.0	10.8	345	31
	115-85OR	8.5	11.1	355	33
	115-90OR	9.0	11.9	374	34
	Nasal				
	119-60NR	6.0	8.2	386	22
	119-65NR	6.5	8.7	396	24
	119-70NR	7.0	9.5	406	28
	119-75NR	7.5	10.1	416	30
	119-80NR	8.0	10.8	425	31

Shiley™ oral and nasal reinforced endotracheal tubes with TaperGuard™ cuff technology

Also for specialty surgical procedures, the metal-reinforced spiral encapsulated in the wall of the Shiley™ reinforced endotracheal tube with TaperGuard™ cuff technology helps prevent kinking, regardless of patient position.

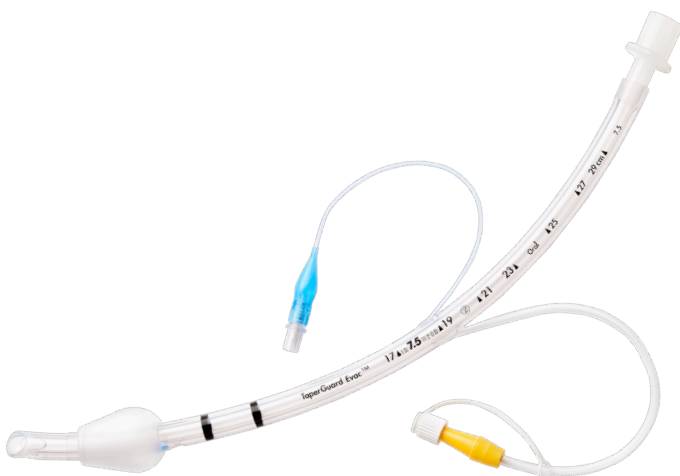


Ordering information

REF with TaperGuard™ Cuff	I.D. (mm)	O.D. (mm)	LENGTH (mm)	CUFF Ø (mm)
118-60MTG	6.0	8.4	320	21
118-65MTG	6.5	8.9	330	22
118-70MTG	7.0	9.7	340	24
118-75MTG	7.5	10.3	350	26
118-80MTG	8.0	11.0	360	28
118-85MTG	8.5	11.6	365	29
118-90MTG	9.0	12.1	370	31
118-95MTG	9.5	12.9	370	32

Shiley™ evac oral endotracheal tube with TaperGuard™ cuff technology and optional stylet

For patients who need longer- ventilatory assistance, the evac port above the cuff of Shiley™ evac endotracheal tubes with TaperGuard™ cuff technology helps remove secretions. It can also reduce the potential for ventilator associated pneumonia (VAP).



Ordering information

REF	REF with stylet	I.D. (mm)	O.D. (mm)	LENGTH (mm)	CUFF Ø (mm)
Oral					
18860	18860S	6.0	9	308	22
18865	18865S	6.5	9.8	317	22
18870	18870S	7.0	10.4	330	24
18875	18875S	7.5	11.2	350	26
18880	18880S	8.0	11.8	360	27
18885	18885S	8.5	12.6	370	29
18890	18890S	9.0	13.1	375	30

Carton quantity: 10

All tubes are delivered sterile packed, for single use only.



TAKE A CLOSER LOOK

Shiley™ endotracheal tubes with TaperGuard™ cuff technology can gently enhance lung protection.

LEARN MORE

[medtronic.com/covidien/products/intubation](https://www.medtronic.com/covidien/products/intubation)

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2. Lichtenthal P, Wood L, Wong A, Borg U. Pressure applied to tracheal wall by barrel and taper shaped cuffs. *Anesthesiology.* 2011;115:A1054.
3. Based on internal test report #10033000, TaperGuard™ seal performance summary report. Feb 2009.
4. Chang JE, Kim H, Han SH, Lee JM, Ji S, Hwang JY. Effect of endotracheal tube cuff shape on postoperative sore throat after endotracheal intubation. *Anesth Analg.* 2017;125(4):1240–1245.
5. Lichtenthal PR, Maul D, Borg U. Do tracheal tubes prevent microaspiration? *Br J Anaesth.* 2011;107(5):821–822.
6. Shiotsuka J, Lefor AT, Sanui M, Nagata O, Horiguchi A, Sasabuchi Y. A quantitative evaluation of fluid leakage around a polyvinyl chloride tapered endotracheal tube cuff using an in vitro model. *HSR Proc Intensive Care Cardiovasc Anesth.* 2012;4(3):169–175.

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