

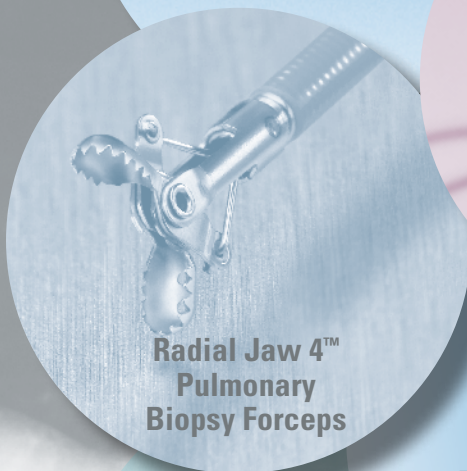
Pulmonary Endoscopy

**Boston
Scientific**

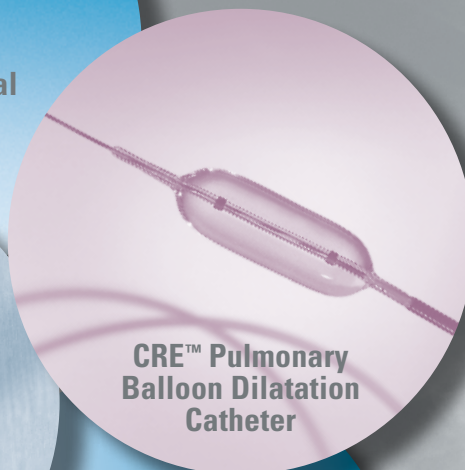
Advancing science for life™



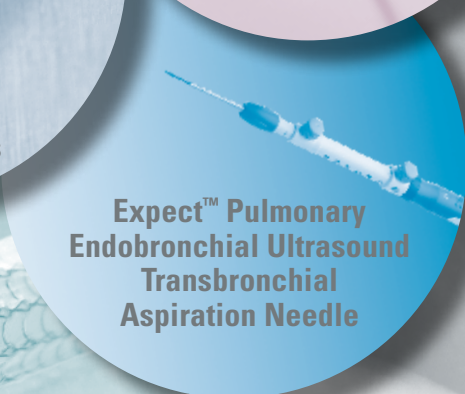
**Alair™ Bronchial
Thermoplasty
Catheter**



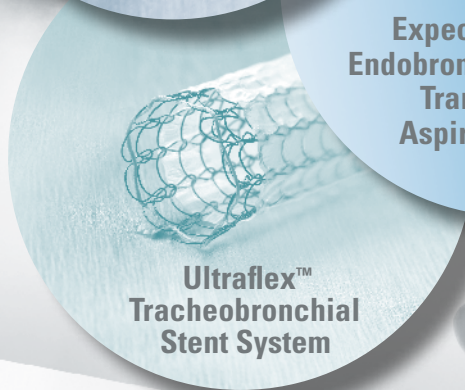
**Radial Jaw 4™
Pulmonary
Biopsy Forceps**



**CRE™ Pulmonary
Balloon Dilatation
Catheter**



**Expect™ Pulmonary
Endobronchial Ultrasound
Transbronchial
Aspiration Needle**



**Ultraflex™
Tracheobronchial
Stent System**

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Bronchial Thermoplasty System

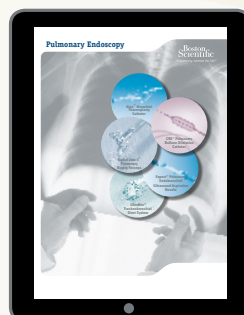
Pulmonary Endoscopy

Boston Scientific is committed to **helping advance the diagnosis and treatment of pulmonary diseases** by focusing on the development of less invasive devices and procedures.

In addition to our innovation in airway stent technologies, Boston Scientific offers a range of diagnostic and therapeutic devices including biopsy forceps, transbronchial aspiration needles, cytology brushes, dilatation balloons, and retrieval baskets.

We would also like to introduce Bronchial Thermoplasty, a new device-based treatment of severe persistent asthma in patients 18 years and older.

Our mission is to remain one of the globally recognized leaders in the management of pulmonary disease. We are fully dedicated to developing devices and procedures to improve the quality of life for patients.



This brochure is also available for download. Please contact your local sales representative.

Radial Jaw 4™

Pulmonary Biopsy Forceps
Single-Use Device

The Radial Jaw 4 Pulmonary Biopsy Forceps are intended to collect tissue endoscopically for histologic examination.

New Surgical Stainless Steel Jaw with Improved Micromesh Teeth

Designed to Provide:

- Tissue specimens for excellent sample handling and preparation
- Clean, precise bite for accurate histological diagnosis

New Streamlined Catheter

Designed to Provide:

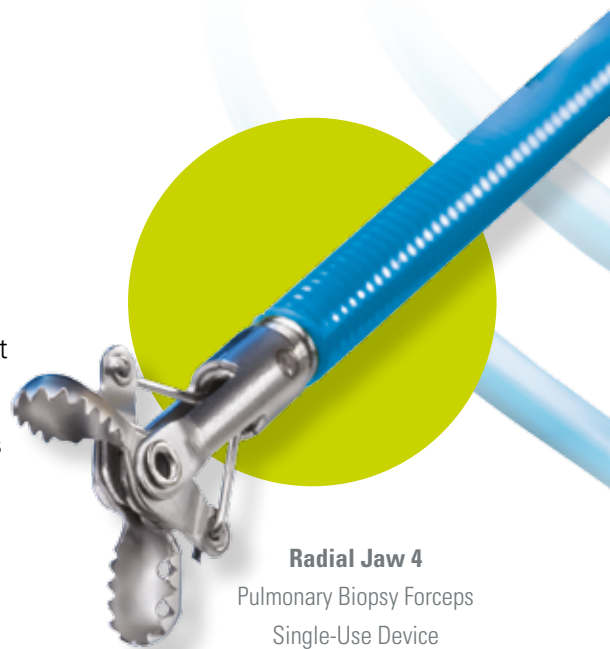
- Enhanced passability through tortuous anatomy
- The right balance of columnar strength and flexibility for excellent pushability and control during scope passage

Single-Use

- Eliminates the risk of transmitting patient-to-patient disease
- Provides first time sharpness

New Distal End Tube

- Improved visibility
- Prevents inadvertent lodging of the cap in the scope working channel



Radial Jaw 4
Pulmonary Biopsy Forceps
Single-Use Device

Radial Jaw 4™

Pulmonary Biopsy Forceps – Single-Use Device

Order Number	Description	Jaw O.D. (mm)	Working Length (cm)	Minimum Working Channel (mm)	Units
M00515181	Radial Jaw 4 Standard Capacity	1.8	100	2.0	Box 5
M00515182	Radial Jaw 4 Standard Capacity	1.8	100	2.0	Box 20
M00515191	Radial Jaw 4 Standard Capacity w/Needle	1.8	100	2.0	Box 5
M00515192	Radial Jaw 4 Standard Capacity w/Needle	1.8	100	2.0	Box 20
M00515201	Radial Jaw 4 Large Capacity	2.2	100	2.8	Box 5
M00515202	Radial Jaw 4 Large Capacity	2.2	100	2.8	Box 20

The Cellebrity Cytology Brush is indicated for acquiring tissue samples used for the diagnosis of suspected pathology in the airway tree.

PTFE Sheath

- Designed to help reduce friction, facilitating passage through the scope

Stainless Steel Wire Shaft

- Intended to provide strength to help resist kinking or bending during advancement

Bullet-Shaped Tip

- Designed to help reduce tissue trauma

Ergonomic Handle

- Ergonomic handle with automatic stop
- Facilitates single-hand brush advancement and withdrawal
- Helps reduce the risk of overwithdrawal and subsequent kinking of proximal shaft



Ergonomic Handle



Cytology Brush

Order Number	Description	Required Working Channel (mm)	Bristle O.D. (mm)	Sheath Length (cm)	Units
M00516001	Cellebrity Cytology Brush	2.0	1.0	140	Box 10
M00516011	Cellebrity Cytology Brush	2.0	1.5	140	Box 10
M00516071	Cellebrity Cytology Brush	2.0	1.9	100	Box 10
M00516151	Cellebrity Cytology Brush	2.0	1.9	150	Box 10

The eXcelon Transbronchial Aspiration Needle is indicated for use in aspiration in carinal, paratracheal, and hilar lesions of the bronchial tree where biopsy forceps cannot obtain a submucosal sample.

Procedural Safety Features

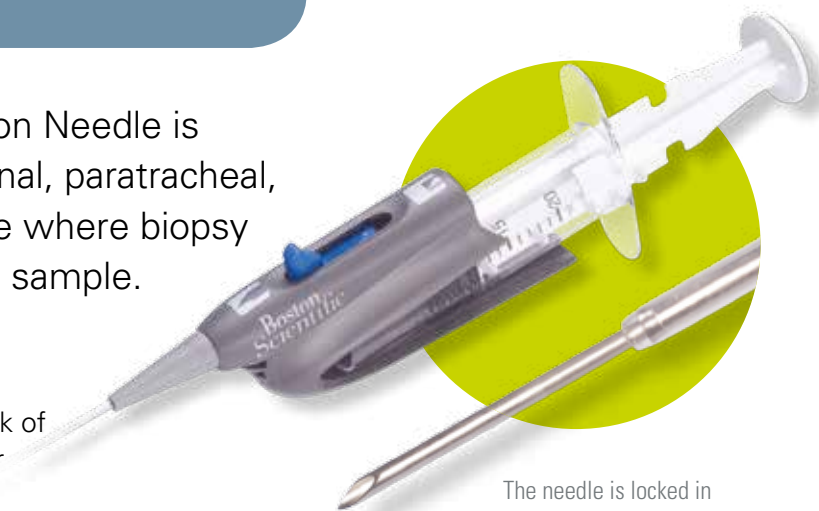
- Button Lock system is designed to reduce risk of accidental needle deployment during catheter advancement, potentially avoiding costly scope damage
- Fused hub and needle configuration is designed to help prevent needle detachment
- Clear catheter designed for visualization if blood is drawn during aspiration

High Performance Design

- "X-Catheter" is engineered to promote responsiveness and kink resistance for smooth needle penetration
- Distal coil is designed to promote tip flexibility while maintaining rigidity at the proximal end
- Needle internal volume is designed to provide increased space for specimen collection

Procedural Convenience Features

- Syringe locking feature is designed to reduce aspirating effort during the procedure and facilitate "single-handed" actuation
- Ergonomic handle design
- No need to disconnect syringe to break vacuum



The needle is locked in the extended position when button lock is depressed, moved completely forward and released next to the symbol shown above



The needle is locked in the retracted position when button lock is depressed, moved completely back and released next to the symbol shown above



X-Catheter Design

*Needle packaged with 20cc Syringe.

Order Number	Description*	Needle			Needle Length (mm)	Catheter Length (cm)	Sheath. O.D. (mm)	Units
		Gauge	O.D. (mm)	I.D. (mm)				
M00564101	eXcelon Transbronchial Aspiration Needle w/Syringe	19	1.07	0.69	15	130	1.8	Box 5
M00564111	eXcelon Transbronchial Aspiration Needle w/Syringe	20	0.90	0.58	15	130	1.8	Box 5
M00564121	eXcelon Transbronchial Aspiration Needle w/Syringe	21	0.81	0.50	15	130	1.8	Box 5

Expect™ Pulmonary

Endobronchial Ultrasound
Transbronchial Aspiration Needle

The Expect Needle is designed to be used with endobronchial ultrasound bronchoscopes for ultrasound guided fine needle aspiration (FNA) of the submucosal and extramural lesions of the tracheobronchial tree and the gastrointestinal tract.

Durability

Cobalt chromium needle provides benefits over some stainless steel alloys including greater needle hardness and excellent tensile properties to deliver*:

- Superior needle penetration*
- Improved pushability and kink resistance*
- Increased resistance to needle damage or deformation after multiple passes*
- Thin wall of needle aids in flexibility while maximizing inner diameter for improved sample collection

* Catheter and Specialty Needle Alloys, an abstract from Materials & Processes for Medical Devices Conference & Exposition, Minneapolis, MN, August 10-12, 2009.
This study compared a cobalt-chromium alloy with nanoflex and 304 stainless steels.
Bench test results may not necessarily be indicative of clinical performance.



**Expect Pulmonary Endobronchial
Ultrasound Transbronchial
Aspiration Needle**

Pass 1



Pass 18

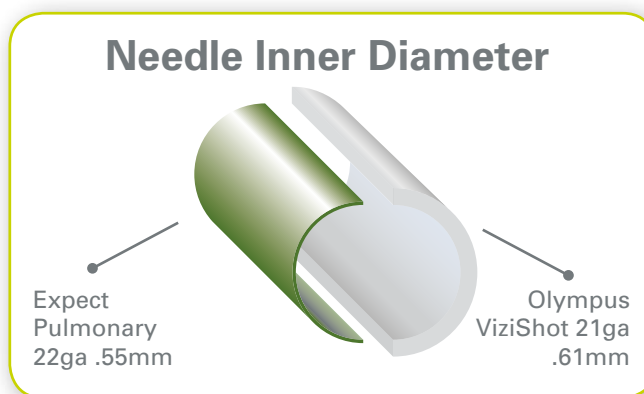


Reliability

Sharp needle tip grind is designed for precise penetration into the target area. Testing shows no deterioration in sample quality throughout a procedure.**

Thin Wall Design

Inner diameter of the 22ga Expect Needle is only 10% smaller than the Olympus 21ga needle.†



For illustrative purposes only

Highly Visible Echogenic Pattern

- Extends onto needle tip to help provide precise guidance within the target site
- Helps to maintain needle tip visibility at all times during a procedure

** Data on file. Bench test results may not necessarily be illustrative of clinical performance. † Endo Bronchial Ultrasound Transbronchial Needle Aspiration (EBUS-TBNA) Competitor Device Testing. #91043238. Milan Vidovic, Molly Phillips - Hungerford. Page 32, 2013-2015.

Expect™ Pulmonary

Endobronchial Ultrasound Transbronchial Aspiration Needle

Olympus Scope Compatible

Product Code	Gauge	Minimum Working Channel (mm)	Sheath Diameter (mm)	Packaging
M00558220	Expect Pulmonary 22ga – Olympus	2.0	1.6	Each
M00558221	Expect Pulmonary 22ga – Olympus	2.0	1.6	Box 5
M00558250	Expect Pulmonary 25ga – Olympus	2.0	1.4	Each
M00558251	Expect Pulmonary 25ga – Olympus	2.0	1.4	Box 5
M00558731	Expect Pulmonary Needle Adaptor – Olympus	N/A	N/A	Box 10

The CRE Pulmonary Balloon Dilator is intended to be used to endoscopically dilate strictures of the airway tree.

Three-in-One Technology

- Designed for successive, gradual dilation of strictures
- Helps eliminate the need for multiple balloons to employ multi-size dilation therapy

First Balloon Indicated for the Airway

- Indicated for airway stricture management

High Degree of Radial Vector Force

- Promotes low stricture compliance with little or no balloon waisting

0.035" Guidewire Compatible

- Designed for use with 0.035" Jagwire™ Pulmonary Guidewires

Rectilinear Shoulder Design

- Engineered to help promote endoscopic visualization
- Designed to provide greater usable balloon surface area during dilation

Radiopaque Markers

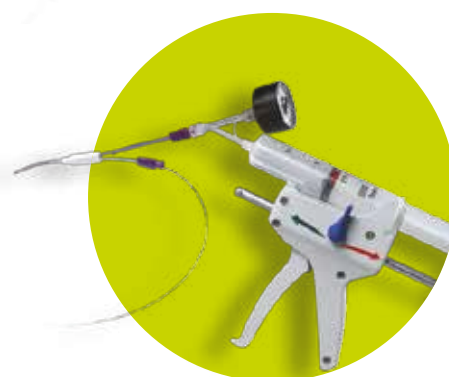
- Designed to facilitate fluoroscopic guidance of balloon positioning within a stricture

Inflation and Deflation

- Compatible with the Alliance™ II Inflation System
- Designed for rapid inflation and deflation when used with the Alliance II Inflation System



CRE Pulmonary
Balloon Dilator



Alliance II
Inflation System

Order Number	Description	Balloon Length (cm)	Initial Balloon O.D. (mm)	Intermediate Balloon O.D. (mm)	Maximum Balloon O.D. (mm)	Working Catheter Length (cm)
M00550300	CRE Balloon	5.5	12	13.5	15	75
M00550310	CRE Balloon	5.5	15	16.5	18	75
M00550320	CRE Balloon	5.5	18	19.0	20	75
M00550330	CRE Balloon	3.0	8	9.0	10	75
M00550340	CRE Balloon	3.0	10	11.0	12	75
M00550350	CRE Balloon	3.0	12	13.5	15	75

Packaged one per box

Alliance™ II Inflation System		
Order Number	Description	Units
M00550620	Alliance™ II Inflation Handle	Box 1
M00550601	60ml Syringe/Gauge Assembly	Box 5

Jagwire™ Pulmonary Guidewire				
Order Number	Description	O.D. (in) / (mm)	Length (cm)	Units
M00515171	Jagwire	.035 / 0.89	180	Box 2

ZeroTip™

Airway Retrieval Basket

ZeroTip Airway Retrieval Basket is indicated to be used to endoscopically remove foreign bodies in the airway.

Access

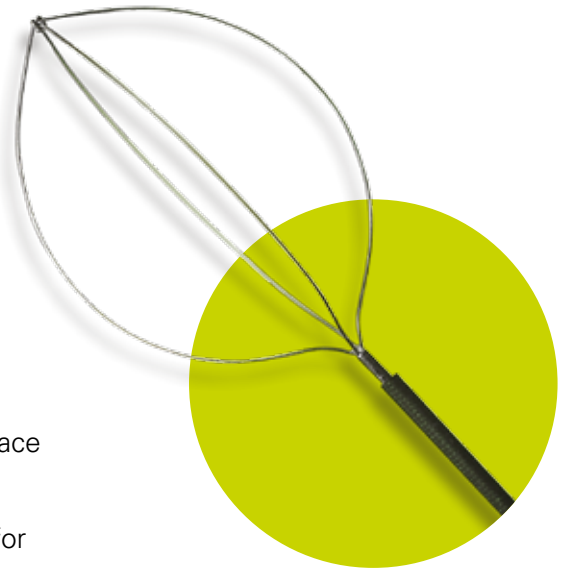
- Designed for access to the upper lobes where rigid bronchoscopy may be insufficient

Low-Profile Tip Design

- Flattened distal surface designed to reduce tissue-to-tip interface for smooth manipulation
- Knotted basket tip designed to help prevent wire movement for more reliable foreign body capture
- Low-profile basket configuration facilitates proximity to foreign body, enhancing retrieval

Advanced Construction

- Nitinol wire construction designed to offer a kink-resistant, flexible wire for scope deflection
- Low-friction sheath designed for smooth scope passage
- Multi-layer sheath is designed to enhance pushability, while maintaining flexibility for enhanced scope deflection



ZeroTip
Airway Retrieval Basket



Nitinol wire
construction for enhanced
scope deflection



Engineered for foreign
body retrieval, even in the
upper lobes

ZeroTip™

Airway Retrieval Basket

Order Number	Description	Sheath O.D. (mm)	Working Length (cm)	Basket Opening (mm)	Sheath Material	Units
M00513200	ZeroTip Airway Retrieval Basket	0.8	120	12	Polyimide / PTFE	Each
M00513210	ZeroTip Airway Retrieval Basket	1.0	120	16	Polyimide / PTFE	Each

The Ultraflex Tracheobronchial Stent System is indicated for use in the treatment of tracheobronchial strictures produced by malignant neoplasms.

The Ultraflex Tracheobronchial Stent System is designed to address the following clinical needs:

Accommodate Varying Airway Anatomy without Kinking

Knitted Nitinol Design

- Stent geometry is designed to adapt to anatomical contours and exert constant, gentle radial pressure to maintain patency while diffusing acute compression forces

Wide Range of Sizes

- Variety of lengths and diameters in both covered and uncovered designs is intended to allow for complete bridging of stricture

Clear Secretions

Flexible Open Loop Design

- Epithelization of uncovered stent may promote mucociliary clearance

Resist Migration

Uncovered Ends

- Epithelization of ends may limit migration

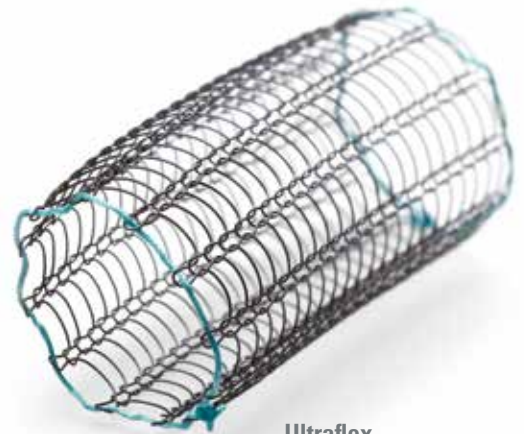
Resist Tumor Ingrowth

Polyurethane Covering

- On the covered version, covering helps resist tumor growth



Ultraflex
Tracheobronchial
Covered Stent System



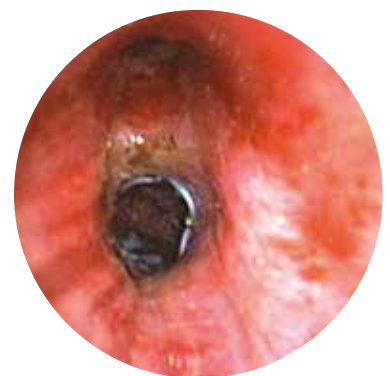
Ultraflex
Tracheobronchial
Uncovered Stent System



PET Scan



LLL Tumor



Post Stent

Delivery System

Low Profile

- The compressed stent and delivery system have between a 5-7mm outer diameter. The system is designed to facilitate advancement across tumors and may be placed via flexible or rigid bronchoscopy

Flexibility

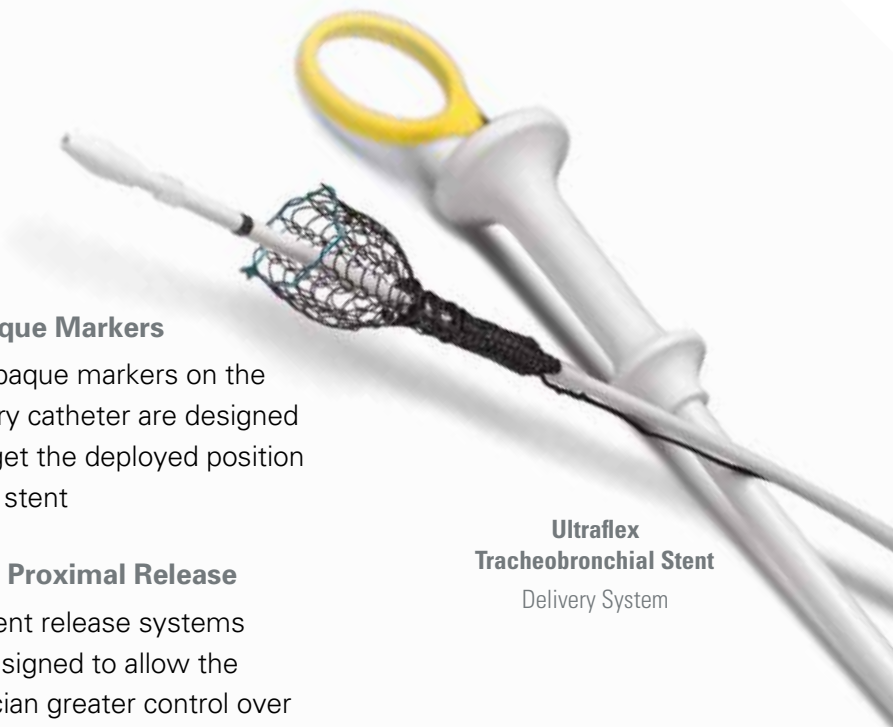
- The flexible delivery catheter is designed to enhance the ease of navigation through the airway

Radiopaque Markers

- Radiopaque markers on the delivery catheter are designed to target the deployed position of the stent

Distal or Proximal Release

- Different release systems are designed to allow the physician greater control over stent deployment



**Ultraflex
Tracheobronchial Stent
Delivery System**

Ultraflex™ Covered TracheoBronchial NG Stents – Distal Release

Tracheal Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)	Covered Length (mm)
M00564820	Ultraflex Tracheal NG Stent	14	80	65
M00564830	Ultraflex Tracheal NG Stent	16	40	25
M00564840	Ultraflex Tracheal NG Stent	16	60	45
M00564850	Ultraflex Tracheal NG Stent	16	80	65
M00564860	Ultraflex Tracheal NG Stent	18	40	25
M00564870	Ultraflex Tracheal NG Stent	18	60	45
M00564880	Ultraflex Tracheal NG Stent	18	80	65
M00564890	Ultraflex Tracheal NG Stent	20	40	25
M00564900	Ultraflex Tracheal NG Stent	20	60	45
M00564910	Ultraflex Tracheal NG Stent	20	80	65

Bronchial Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)	Covered Length (mm)
M00564740	Ultraflex Bronchial NG Stent	8	40	25
M00564750	Ultraflex Bronchial NG Stent	10	30	15
M00564760	Ultraflex Bronchial NG Stent	10	40	25
M00564770	Ultraflex Bronchial NG Stent	12	30	15
M00564780	Ultraflex Bronchial NG Stent	12	40	25
M00564790	Ultraflex Bronchial NG Stent	14	30	15
M00564800	Ultraflex Bronchial NG Stent	14	40	25
M00564810	Ultraflex Bronchial NG Stent	14	60	45

Packaged one per box

Ultraflex™ Non-covered Tracheobronchial NG Stents – Proximal Release

Tracheal Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)
M00564710	Ultraflex Tracheal NG Stent	14	40
M00564720	Ultraflex Tracheal NG Stent	14	60

Bronchial Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)
M00564640	Ultraflex Bronchial NG Stent	8	20
M00564650	Ultraflex Bronchial NG Stent	8	40
M00564660	Ultraflex Bronchial NG Stent	10	20
M00564670	Ultraflex Bronchial NG Stent	10	40
M00564680	Ultraflex Bronchial NG Stent	12	20
M00564690	Ultraflex Bronchial NG Stent	12	40
M00564700	Ultraflex Bronchial NG Stent	14	20

Packaged one per box

Ultraflex™ Non-covered Tracheobronchial NG Stents – Distal Release

Tracheal Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)
M00564530	Ultraflex Tracheal NG Stent	16	40
M00564540	Ultraflex Tracheal NG Stent	16	60
M00564560	Ultraflex Tracheal NG Stent	18	40
M00564570	Ultraflex Tracheal NG Stent	18	60
M00564590	Ultraflex Tracheal NG Stent	20	40
M00564600	Ultraflex Tracheal NG Stent	20	60

Bronchial Stents

Order Number	Description	Maximum Stent O.D. (mm)	Expanded Stent Length (mm)
M00564500	Ultraflex Bronchial NG Stent	10	30
M00564510	Ultraflex Bronchial NG Stent	12	30
M00564520	Ultraflex Bronchial NG Stent	14	30

Packaged one per box

The Polyflex Self-Expanding Silicone Airway Stent is fully covered and has been designed to reduce in-growth and/or endothelialization of the stent.

Indications

- Compression or strictures due to tumors (trachea and main bronchus)
- Stenosis of the central airway (such as trachea and main bronchus)
- Tracheoesophageal fistula
- Airway complications such as anastomosis and stenosis

Placement Technique

- The Polyflex Airway Stent requires rigid bronchoscopy

Gentle, Radial Force

- Designed to adapt to airway anatomy
- Helps maintain patency

Full-Length Silicone Coating

- Helps prevent tumor in-growth
- Designed to seal tracheoesophageal and bronchoesophageal fistulae

Engineered to Elongate when Stretched Lengthwise

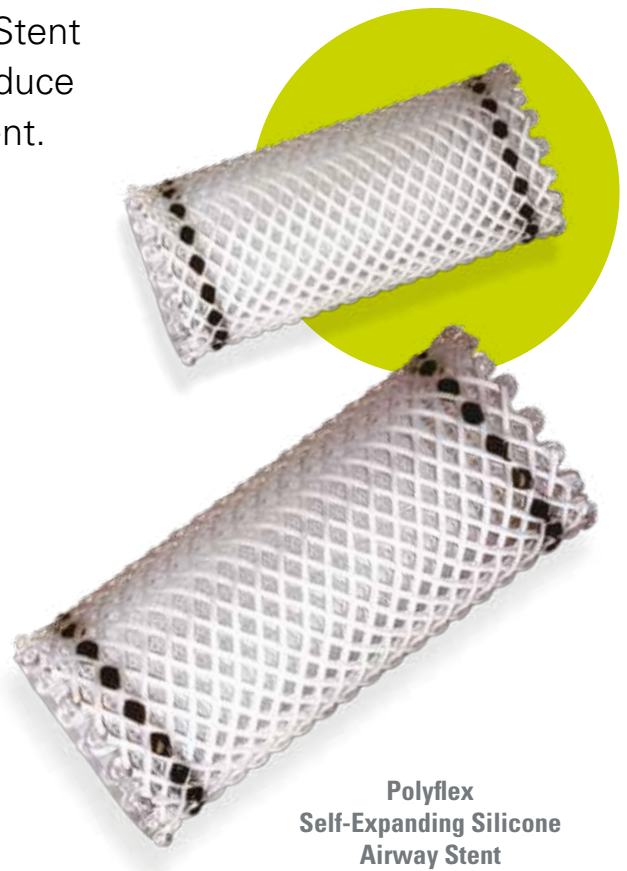
- Facilitates stent change or removal

Broad Range of Widths and Lengths

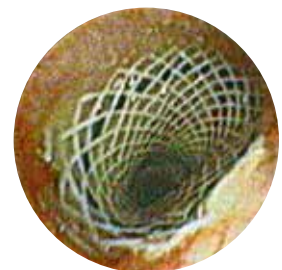
- Facilitates placement in a range of strictures

Radiopaque Delivery System

- Helps facilitate precise positioning and controlled use



**Polyflex
Self-Expanding Silicone
Airway Stent**



Polyflex Airway Stent in benign tracheal stenosis – shows adaptation to irregularities of the tracheal lumen

Note: Polyflex Airway is contraindicated for operable benign tracheal stenosis



Self-expanding stent made of silicone with polyester mesh

Polyester mesh structure on outer stent surface

Designed to help reduce migration

Thin wall diameter

Engineered for airway patency

Radiopaque markers

Help promote visibility during placement and post-operative follow-up

Silicone edge reinforcement

Designed to help reduce tissue granulation formation

Smooth inner surface

Designed to resist secretory incrustation

Order Number	Description	Stent I.D. (mm)	Stent Length (mm)	Delivery System Diameter (mm)
M00570000	Polyflex Airway Stent	8	20	7
M00570010	Polyflex Airway Stent	8	30	7
M00570020	Polyflex Airway Stent	10	20	8
M00570030	Polyflex Airway Stent	10	30	8
M00570040	Polyflex Airway Stent	10	40	8
M00570050	Polyflex Airway Stent	10	50	8
M00570060	Polyflex Airway Stent	12	20	9
M00570070	Polyflex Airway Stent	12	30	9
M00570080	Polyflex Airway Stent	12	40	9
M00570090	Polyflex Airway Stent	12	50	9
M00570100	Polyflex Airway Stent	14	20	9
M00570110	Polyflex Airway Stent	14	30	9
M00570120	Polyflex Airway Stent	14	40	9
M00570130	Polyflex Airway Stent	14	50	9
M00570140	Polyflex Airway Stent	14	60	9
M00570150	Polyflex Airway Stent	16	30	10
M00570160	Polyflex Airway Stent	16	40	10

Packaged one per box

Order Number	Description	Stent I.D. (mm)	Stent Length (mm)	Delivery System Diameter (mm)
M00570170	Polyflex Airway Stent	16	50	10
M00570180	Polyflex Airway Stent	16	60	10
M00570190	Polyflex Airway Stent	16	70	10
M00570200	Polyflex Airway Stent	18	30	11
M00570210	Polyflex Airway Stent	18	40	11
M00570220	Polyflex Airway Stent	18	50	11
M00570230	Polyflex Airway Stent	18	60	11
M00570240	Polyflex Airway Stent	18	70	11
M00570250	Polyflex Airway Stent	18	80	11
M00570260	Polyflex Airway Stent	20	40	12
M00570270	Polyflex Airway Stent	20	50	12
M00570280	Polyflex Airway Stent	20	60	12
M00570290	Polyflex Airway Stent	20	70	12
M00570300	Polyflex Airway Stent	20	80	12
M00570310	Polyflex Airway Stent	22	50	13
M00570320	Polyflex Airway Stent	22	60	13
M00570330	Polyflex Airway Stent	22	80	13

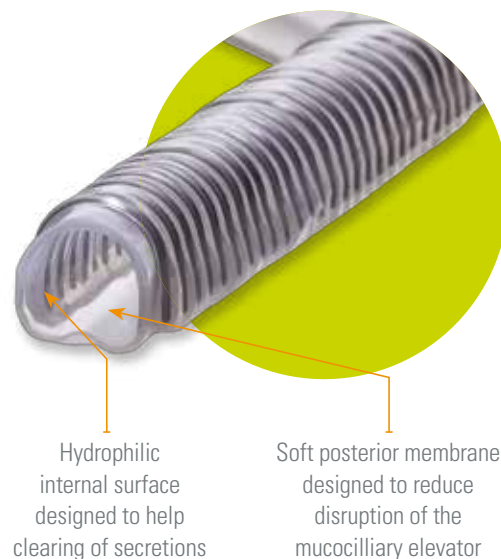
Dynamic™ (Y)

Bifurcated Tracheobronchial Stent

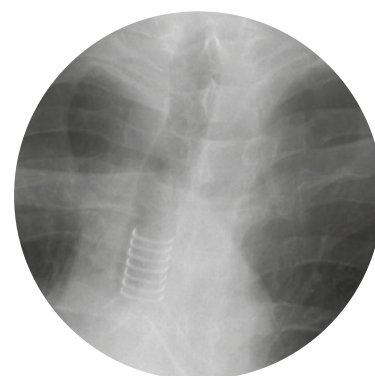
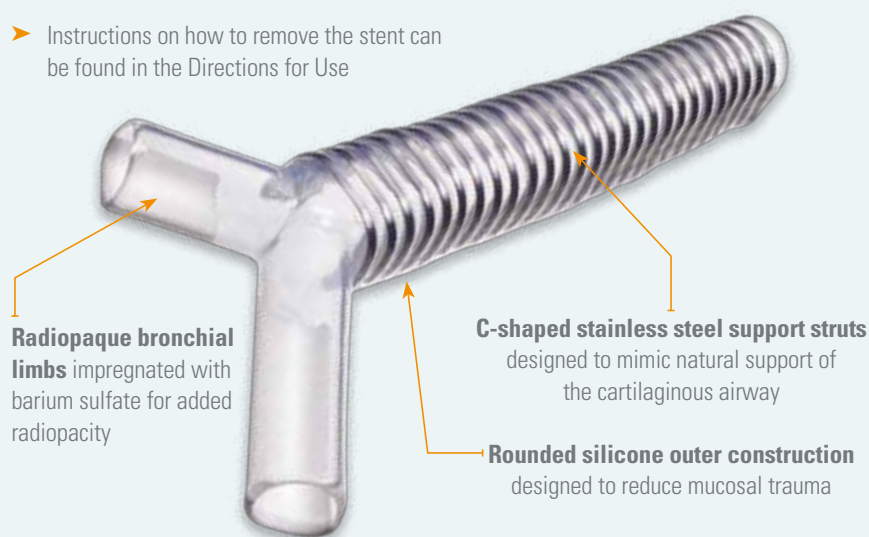
The Dynamic (Y) Stent is a tracheobronchial stent designed specifically for the airway anatomy. The stent, which consists of a single piece construction bifurcated tube, is designed to simultaneously secure the trachea, left mainstem and right mainstem bronchus.

The Dynamic (Y) Stent is intended to maintain patent airways in tracheal stenosis and seal tracheoesophageal fistulas. In addition the stent is applicable to the following conditions, including:

- Tracheomalacia
- Stenosis secondary to lung transplantation



- Instructions on how to remove the stent can be found in the Directions for Use



Post-operative chest radiograph confirming proper stent position

Dynamic™ (Y)

Bifurcated Tracheobronchial Stent

Order Number	Description	Tracheal Width (Internal) (mm)	Bronchial Width (Internal) (mm)	Tracheal Length (mm)	Bronchial Lengths (Right / Left) (mm)
M00570670	Dynamic (Y) Stent	11	8	110	25 / 40
M00570680	Dynamic (Y) Stent	13	10	110	25 / 40
M00570690	Dynamic (Y) Stent	15	12	110	25 / 40

Packaged one per box

The Alair™ System

Bronchial Thermoplasty System



Bronchial Thermoplasty (BT) is a procedure indicated for the treatment of severe persistent asthma in patients 18 years and older whose asthma is not well controlled with inhaled corticosteroids and long acting beta agonists.

What is BT?

➤ BT is a bronchoscopy based procedure that uses radiofrequency (RF) energy (18W) or mild heat (65C) to reduce the amount of excess airway smooth muscle (ASM) present in the airways and limit its ability to contract and narrow the airway. A complete BT treatment is performed in three outpatient procedure visits, each scheduled approximately three weeks apart.

Alair™

Bronchial Thermoplasty Catheter

A single-use device designed to be delivered through the working channel of a standard bronchoscope.

- Expandable electrode array with four 5mm electrodes that deliver RF energy to airways $\geq 3\text{mm}$ in diameter and distal to main stem bronchi
- Requires $\geq 2.0\text{mm}$ working channel diameter bronchoscope



Alair
RF energy electrode array



Alair
Bronchial Thermoplasty
Radiofrequency Controller

Indications for use approved in EU are: The Alair™ System is intended for use in the treatment of asthma in patients 18 years and older.

Alair™

Bronchial Thermoplasty (BT) System

Order Number	Model	Description	Active Electrode Length (mm)	Tip Diameter (mm)	Minimum Working Channel (mm)
M005ATS25020	ATS 2-5	Alair BT Catheter – Global	5.0	~1.5	2.0
M005ATS25010	ATS 2-5	Alair BT Catheter – North America	5.0	~1.5	2.0
M005ATS20000	ATS 200	Alair RF Controller – monopolar (return electrode not included)			

Packaged one per box

Notes

Notes

