Laryngoscopes - Introduction



The Classification of Laryngoscopes

1. Conventional Laryngoscopes

The Conventional Laryngoscope, also referred to as a Standard Laryngoscope, has a light bulb incorporated into the blade, approximately $^{1}/_{3}$ of the distance from the tip. The light bulb screws into position and is powered via an integral line that transfers power from the batteries located within the handle.

2. Fibre Optic Laryngoscopes

The bulb in a Fibre Optic Laryngoscope is located in the handle and the light is transferred to the proximal tip of the blade via a fibre optic bundle, so the light is transmitted without heat, eliminating the risk of thermal damage to the patient's tissues within the patient's oral cavity.



Single Patient Use Handles and Disposable Blades

Prions, such as those associated with vCJD, are known to survive autoclaving, so a risk of cross-infection can remain even after sterilisation. Inadequate cleaning and reprocessing may also lead to residual bacterial and viral contamination.

Studies have shown that even decontaminated laryngoscope handles are a major source of cross contamination, with few being sterilised as often as needed.¹

Flexicare's range of single patient use laryngoscope blades and handles, such as BritePro Solo and BriteBlade Pro, eliminates the risk of cross contamination.

It has been demonstrated that single patient use blades and handles are cost effective when compared with reusable laryngoscopes.

Difficult Intubation

The lever operated hinged tip of Flexicare's Flexible blades provides greater tongue lift for an improved view of the airway during difficult intubations.

Fibre Optic Reusable Blades

Flexicare has a full range of reusable fibre optic laryngoscope blades and handles conforming to EN ISO 7376:2009. Using the highest grade of fibre optics provides maximum cold light transfer giving an optimal view of the larynx.

Fibre Optic Macintosh Blades

The curved design of the Macintosh blade allows the tip to be guided to the epiglottic vallecula for direct visualisation of the glottis whilst holding the tongue to the side for direct vision of intubation.







Fibre Optic Miller Blades

The straight Miller blade with a shallow curved tip provides greater control in patients with a larger epiglottis, such as in paediatric patients. Infant and neonatal Miller blades are also available with a delivery port to provide supplementary oxygen during laryngoscopy.







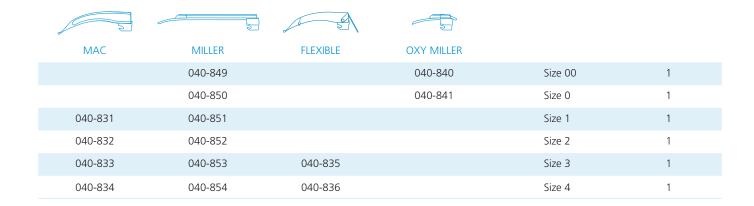
Fibre Optic Flexible Blades

Based on the standard Macintosh blade, the Flexible blade has a hinged tip operated by a lever mechanism. This elevates the epiglottis while reducing the amount of force required. A Flexible blade has been shown to improve the view during difficult intubations and in patients wearing cervical collars.









IntegraBlade Fibre Optic Reusable Laryngoscope Blades

The integrated fibre optic bundle within the body of the IntegraBlade makes the structure seamless, reducing the risk of contamination or foreign bodies becoming trapped, for easier and more effective reprocessing.



Increased Brightness

The Flexicare IntegraBlade is designed with an integrated wide profile fibre optic bundle to provide maximum light transfer.

Rounded Tip

The blade features an atraumatic curved tip which reduces the risk of tissue damage.

Fully Autoclavable

The 100% stainless steel construction of the blade provides long life, ensuring long term usage even after repeated autoclaving.







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MAC	MILLER		
	040-980N	IntegraBlade Fibre Optic - Size 00	1
	040-980	IntegraBlade Fibre Optic - Size 0	1
040-911	040-981	IntegraBlade Fibre Optic - Size 1	1
040-912	040-982	IntegraBlade Fibre Optic - Size 2	1
040-913	040-983	IntegraBlade Fibre Optic - Size 3	1
040-914	040-984	IntegraBlade Fibre Optic - Size 4	1

Fibre Optic Box Sets

040-860	Standard Size Handle - Knurled, with 3 Macintosh Blades Sizes 1, 2 and 3	1
040-861	Standard Size Handle - Knurled, with 4 Macintosh Blades Sizes 1, 2, 3 and 4	1
040-862	Standard Size Handle - Knurled, with 3 Macintosh Blades Sizes 2, 3 and 4	1

Fibre Optic Reusable Speciality Blades

Flexicare offers a range of fibre optic reusable speciality blades designed to provide clinicians with a complete choice for specific patient intubation requirements.

Robert Shaw Fibre Optic Blades

Designed for neonatal and infant use, Robert Shaw blades feature a gentle shallow blade curvature to lift the epiglottis indirectly in a similar way to Macintosh Blades.







Seward Fibre Optic Blades

Designed originally as an infant blade for asphyxia neonatorum, the Seward Blade is also used for paediatric patients.







Wisconsin Fibre Optic Blades

Designed for neonatal and infant use, the Wisconsin Blade provides an improved view and greater control of the epiglottis with a subtly wider distal end than a standard Miller Blade.







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ROBERT SHAW	SEWARD	WISCONSIN		
040-930		040-920	Size 0	1
040-931	040-951	040-921	Size 1	1
	040-952	040-922	Size 2	1
		040-923	Size 3	1
		040-924	Size 4	1

Single Patient Use Metal Fibre Optic Laryngoscopes

The BriteBlade Pro is a 100% Metal Single Patient Use Fibre Optic Blade designed for single patient use which eliminates the risk of cross contamination from both blade and handle. The hinge design prevents the folded blade from touching the handle.





Ultra Low Profile Blade

Flexicare's Ultra Low Profile Macintosh design reduces the risk of dental damage, and improves visualisation of the vocal cords, even during a difficult intubation.

Eliminate Risk of Cross-Infection

Single-use individually sterile-packed blade eliminates the risk of cross-infection between patients.

Eliminate Risk of Cross-Contamination

Blade stop design prevents the blade from touching the handle in folded position.



Confidence & Control

100% metal construction matches the performance characteristics of reusable blades.

Enhanced Vision

The encased fibre optic bundle provides bright, focused high intensity illumination.

Wide Choice at a Lower Cost

Full range of Macintosh & Miller Blades with a lower overall cost than reusable purchase, maintenance, cleaning and sterilisation costs.

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MAC	MILLER	FLEXIBLE	OXY MILLER	PHILLIPS		
	040-720N		040-731		Size 00	10
	040-720		040-730		Size 0	10
040-711	040-721				Size 1	10
040-712	040-722				Size 2	10
040-713	040-723	040-733		040-743	Size 3	10
040-715					Size 3.5	10
040-716					Size 3 Strong Curve	10
040-714	040-724	040-734		040-744	Size 4	10

BritePro is a Single Patient Use fibre optic handle system which comprises of a single patient use handle and a reusable light source using the latest in LED technology.

BritePro Handle

Single Patient Use

Packaging is clearly marked to ensure that the handle is only used as intended.

Comfort Grip

The main body of the handle incorporates a green textured grip which provides excellent control and feel even when wearing gloves. Green colour coding clearly identifies the handle as fibre optic specification.

Eliminate Risk of Cross-Contamination

Single use individually packed pre-sterilised handle.



Fully Encased Handle

BritePro features a completely unique encased mechanism which prevents any possibility of cross contamination. Incorporated within the encased handle is a light intensifier which maximises the transfer of light from the LightSource through to the tip of the fibre optic blade.

Rotating Metal Hinge

The freely rotating metal hinge allows the blade to be inserted easily whilst providing a positive locking mechanism when moved into the closed position.



LightSource is the reusable element of the BritePro system which contains the lithium battery and LED.

- Packed with Long-Life Battery
- Reusable
- LED Light Output at over 1000 LUX at the tip of the blade

The highly efficient LED uses the latest technology to deliver an intense white light without any colour bias to give the user excellent visualisation of the vocal cords.

The LED LightSource provides cool illumination for up to 10 hours and is energy efficient giving long lasting power, reducing the cost of expensive battery replacement. The LightSource is protected to prevent contamination during use and exchange.



There are three options available when purchasing BritePro:



LightSource Single unit complete with battery



Handle Packaged in boxes of 20



Handle & LightSource: Handle and LightSource with battery

040-791	BritePro Handle	20
040-792	LightSource with Battery	1
040-795	BritePro Handle and LightSource with Battery	20

BritePro Solo - Single Patient Use

BritePro Solo features a Single Patient Use handle and LED lightsource with a fibre optic all-metal blade. The blade and the handle conform to all standard fibre optic systems.

BritePro Solo

Complete

Supplied sterile packed with fitted batteries and changeable blade. BritePro Solo is ready to use straight out of the box.

Ultra Low Profile Blade

Flexicare's Ultra Low Profile Macintosh blade design reduces risk of dental damage, and improves visualisation of the vocal cords, even during a difficult intubation.

Ready When You Are

Simply open when needed, use and then dispose. BritePro Solo is ideal for all clinical areas, including Operating Theatres, Crash Trolleys and Emergency situations.

Performance

The textured grip provides excellent control and feel, while the high intensity light gives excellent visualisation.

Safe

Sterile, sealed and ready to use with an integral power source and light, BritePro Solo eliminates risk of cross contamination.

Reliable

With the advantage of being new every time, BritePro Solo can easily be tested "in-pack" without compromising sterility.

Mini Handle Option

Suitable for neonates and small infants, the lightweight BritePro Solo Mini handle provides excellent tactile feedback to the user.

Wide Choice

Full range of true Macintosh and Miller Blades.



Website



itePro Solo Video

Sterile packed with fitted batteries

IVIAC	IVIILLER	IVIIINI + IVIILLER	Sterile packed with	Tittled batteries
	040-340N	040-350N	BritePro Solo with Pro Blade - Size 00	10
	040-340	040-350	BritePro Solo with Pro Blade - Size 0	10
040-331	040-341	040-351	BritePro Solo with Pro Blade - Size 1	10
040-332	040-342		BritePro Solo with Pro Blade - Size 2	10
040-333	040-343		BritePro Solo with Pro Blade - Size 3	10
040-335			BritePro Solo with Pro Blade - Size 3.5	10
040-336			BritePro Solo with Pro Blade - Size 3 Strong Curve	10
040-334	040-344		BritePro Solo with Pro Blade - Size 4	10

MINI + MILLER

Handle Only

040-309	BritePro Solo Mini Handle	20
040-310	BritePro Solo Handle	20







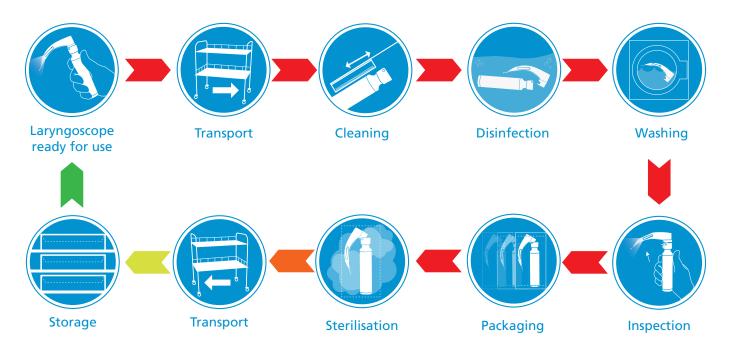
High Intensity Bright White Light



Atraumatic Rounded Tip and Edges

Why Single Patient Use?

Reusable Laryngoscopes are classified as high risk, and handles are a known source of cross-contamination. Studies have shown that decontamination using impregnated germicidal wipes is ineffective - with between 75%¹ and 86%² of "patient ready" handles remaining positive for bacterial contamination.



The AAGBI Safety Guideline on Infection Control ³ recommends that reusable laryngoscope handles be "sterilised by SSDs after every use", and concludes "single-use disposable equipment will remove the difficulties of reuse and decontamination procedures. The use of such equipment is to be encouraged".

BritePro Solo not only offers optimal patient safety, reliability and convenience of single use, but is cost effective ^{4,5} compared with reusable purchase, maintenance, replacement, reprocessing and sterilisation costs, and overcomes the problems associated with reusable systems:

- Laryngoscope failure rates as high as 30-50% as a result of reprocessing.^{6,7}
- Risk of cross-contamination resulting from poor cleaning or bacteria that remain following cleaning.^{1,2}
- Frequent loss of product and potential time delays in product availability.
- Diminished light transfer over time that can lead to lower rates of first intubation success as compared to disposable metal blades.^{6,7}

References:

references:

1 Call T, Auerbach F, Riddell S, Kiska D, Thongrod S, Tham S, Nussmeier N. Nosocomial Contamination of Laryngoscope Handles: Challenging Current Guidelines. International Anesthesia Research Society (2009) Vol. 109, No. 2

² Williams D, Dingley J, Jones C, Berry N. Contamination of Laryngoscope Handles. Journal of Hospital Infection (2010) 74, 123-128

³ AAGBI Safety Guideline: Infection Control in Anaesthesia (2008)

⁴ Vasquez C. Cost of Reprocessing Reusable Laryngoscopes. *Glendale Adventist Hospital* (2012)

⁵ Whitener D. The Cost of Reusable vs. Single-Use Laryngoscopes. Southeast Health, (2012)

⁶ Amour J, Le Manach Y, Borel M. Comparison of Single-use and Reusable Metal Laryngoscope Blades for Orotracheal Intubation during Rapid Sequence Induction of Anesthesia.

Anesthesiology (2010) 112:325–32

Nishiyama T. Changes in the Light Intensity of the Fiberoptic Laryngoscope Blade by Steam Sterilisation. International Anesthesia Research Society. Vol. 104, No. 4, April 2007

BritePro Max

Conforming to EN ISO 7376:2009 and compatible with all fibre optic blades, BritePro Max uses the latest in LED technology to provide a strong white light giving a clearer view of the larynx and a truer visualisation of tissue viability or lesions.



Energy Efficient

The energy efficiency of LED technology uses less power from the batteries than conventional halogen or krypton bulbs therefore reducing the need for frequent battery replacement. Delivers over 25,000 hours of light without the need to replace the bulb.



Compatible with all Fibre Optic Blades

BritePro Max is compatible with all fibre optic blades conforming to EN ISO 7376:2009 including BriteBlade Pro and reusable fibre optic blades.

Green System Identification

BritePro Max has the universally accepted colour identification green band to signify that the handle will fit fibre optic blade systems.

040-813	BritePro Max LED Standard Handle	1
040-814	BritePro Max LED Mini Handle	1
040-815	BritePro Max LED Stubby Handle	1
041-813	Replacement Light Housing	1

Fibre Optic Reusable Laryngoscope Handles & Box Sets

All handles are Bipolar, allowing the Laryngoscope to function irrespective of the way the batteries are inserted. All handles can be opened at both ends to remove swollen batteries with ease.

Fibre Optic Handles

	KNURLED	SATIN		
	040-811	040-821	Standard Size Fibre Optic Handle	1
	040-812	040-822	Mini Size Fibre Optic Handle	1
	040-823	040-824	Stubby Size Fibre Optic Handle	1
Halo	gen Bulbs			
	041-601		Halogen Bulb (for use with Fibre Optic Handles)	1
	041-606		Halogen Bulb (for use with Fibre Optic Handles)	6
Fibre	e Optic Box Se	ts		
	040-985MAX		BritePro Max LED Standard Size Handle with 4 IntegraBlades Mac Sizes 1, 2, 3 and 4	1
	040-986MAX		BritePro Max LED Standard Size Handle Max Handle with 3 IntegraBlades Mac Sizes 2, 3 and 4	1
	040-860		Standard Size Handle - Knurled, with 3 Mac Blades Sizes 1, 2 and 3	1
	040-861		Standard Size Handle - Knurled, with 4 Mac Blades Sizes 1, 2, 3 and 4	1
	040-862		Standard Size Handle - Knurled, with 3 Mac Blades Sizes 2, 3 and 4	1

Conventional Reusable Standard Laryngoscope Blades

Flexicare's range of conventional reusable laryngoscope blades are manufactured from high quality stainless steel. The light bulb in the blade can easily be changed and the distance from the bulb to the blade tip protects the patient from accidental burns, whilst providing a high level of illumination.

High Quality Stainless Steel • Fully Autoclavable Blades • Full Range of Blade Sizes • Conforming to EN ISO 7376:2009





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MAC	MILLER	OXY MILLER		
	040-129	040-127	Conventional Blade - Size 00	1
	040-130	040-128	Conventional Blade - Size 0	1
040-110	040-131		Conventional Blade - Size 1	1
040-111	040-132		Conventional Blade - Size 2	1
040-112	040-133		Conventional Blade- Size 3	1
040-113	040-134		Conventional Blade - Size 4	1

Conventional Reusable Speciality Blades

Flexicare offers a range of conventional reusable speciality blades designed to provide clinicians with a complete choice for specific patient intubation requirements.







Robert Shaw Conventional Blades

Designed for neonatal and infant use, Robert Shaw blades feature a gentle shallow blade curvature to lift the epiglottis indirectly in a similar way to Macintosh Blades.

Seward Conventional Blades

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Wisconsin Conventional Blades

Designed for neonatal and infant use, the Wisconsin Blade provides an improved view and greater control of the epiglottis with a subtly wider distal end than a standard Miller Blade.

ROBERT SHAW	SEWARD	WISCONSIN		
040-230		040-250	Size 0	1
040-231	040-261	040-251	Size 1	1
	040-262	040-252	Size 2	1
		040-253	Size 3	1
		040-254	Size 4	1

Single Patient Use Conventional Metal Blades & Handle

Flexicare offers a conventional illumination disposable metal blades and handles providing all the benefits in a single patient use form, negating the need for costly sterilisation.



Clearly Visible Markings

Each blade is clearly marked as Single Patient Use, avoiding the possibility of confusion with reusable blades.

Low Profile Design

Reduces the risk of accidental pressure or damage to the upper teeth.

Reduce the Risk of Cross-Contamination

The conventional bulb disposable metal laryngoscope range is designed and manufactured for Single Patient Use.

Single Patient Use Laryngoscope blades are an economical option for routine intubations, saving time and labour by requiring no sterilisation, disinfecting or maintenance. Flexicare's disposable laryngoscopes help eliminate concern of possible cross-contamination from vCJD, hepatitis, HIV and other infectious diseases.

Conventional Single Patient Use Metal Blades are available in all Macintosh sizes and can be used with either a reusable conventional handle or, for a total single patient use solution, with a disposable conventional metal handle.

040-431	Single Patient Use Metal Macintosh Blade No 1	10
040-432	Single Patient Use Metal Macintosh Blade No 2	10
040-433	Single Patient Use Metal Macintosh Blade No 3	10
040-434	Single Patient Use Metal Macintosh Blade No 4	10
040-430	Single Patient Use Metal Handle	10

Conventional Reusable Laryngoscope Handles & Box Sets

All handles are Bipolar, allowing the Laryngoscope to function irrespective of the direction the batteries are inserted. The handles can be opened at both ends to remove swollen batteries with ease.

In addition to the Fibre Optic and Conventional Reusable Laryngoscope Box Sets which are readily available, Flexicare offers a customisation service so clinicians can choose a combination of handles and blades for a bespoke intubation pack. The handles and blades are protected by the outer casing as well as being securely held in place within designated foam inner compartments.

For further information please contact us to discuss your requirements.

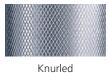
Box Sets

A range of box sets are available, with combinations of 3 or 4 blades.

Available in Two Surface Finishes

The range of Laryngoscope handles are available in a smooth or knurled finish.







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KNURLED	SMOOTH				
040-021	040-011	Standard Size Conventional Handle	1		
040-022	040-012	Mini Size Conventional Handle	1		
040-023	040-013	Stubby Size Conventional Handle	1		
Krypton Bulbs					
041-401		Small Krypton Bulb (for use with Conventional Miller Blades Sizes 00, 0 and 1)	1		
041-402		Standard Krypton Bulb (for use with Conventional Blades)	1		
Standard Box Sets					
040-239		Standard Size Handle - Knurled, with 3 Macintosh Blades Sizes 2, 3 and 4	1		
040-240		Standard Size Handle - Knurled, with 3 Macintosh Blades Sizes 1, 2 and 3	1		

Magill Forceps

040-241

Flexicare offers a range of Magill Forceps for clinicians to guide tracheal tubes into the larynx or aid nasogastric tubes into the oesophagus whilst maintaining an uninterrupted view. The stainless steel single patient use forceps are available in 3 sizes to meet specific patients' requirements.

Precision Engineered

Made from high grade stainless steel, the fine attention to detail makes these forceps ideal for use during difficult procedures.

Single Patient Use

High quality forceps which look and feel like their reusable counterparts but without the risk of cross-infection.



Standard Size Handle - Knurled, with 4 Macintosh Blades Sizes 1, 2, 3 and 4

042-411	Magill Forceps Adult - 25cms	10
042-412	Magill Forceps Child - 20cms	10
042-413	Magill Forceps Infant - 15cms	10