

# medicina pre-formed silicone silos

Medicina Silos are pre-formed silicone bags indicated for use in infants with gastroschisis. Silos are indicated for the protection of the exposed bowel in infants suitable for a bedside staged closure or as temporary protection before a traditional theatre closure.

Silos provide a closed environment for containment of exposed intestine. A Silo can be placed soon after birth without need for general anaesthesia. The aim is to reduce the leakage of serous exudate and heat loss, stabilise the gut for transfer, reduce the risk of torsion and aid the staged reduction of the gut.

The open end of the Silo is rolled over a solid but flexible silicone ring which is compressed to allow insertion into the peritoneal cavity. An adhesive dressing of suitable internal diameter to match the Silo is provided to secure the skin tabs to the skin. The distal end of the bag is reinforced with

Silos are indicated for the protection of the exposed bowel in infants

nylon mesh and has an eye cut out for suspension with the elastic silicone tubing provided. A short length of the tubing (30cm approx) can be cut off to form a slip knot around the Silo to help reduce the bowel.



## Medicina Silo

The Silos are pre-formed silicone bags indicated for infants with gastroschisis.



Medicina Silo  
An innovative surgical solution for infants with Gastroschisis



Units 1-4, Rivington View Business Park,  
Station Road, Blackrod, Bolton BL6 5BN, UK  
Telephone: +44(0)1204 695050  
[www.medicina.co.uk](http://www.medicina.co.uk)



*Innovative surgical solutions*





Medicina Silos are pre-formed silicone bags indicated for use in infants with gastroschisis. Silos are indicated for the protection of the exposed bowel

The size of the defect is measured approximately and a Silo of suitable size is selected. The smallest Silo possible is recommended as stretching of the defect may occur with the larger sizes. The exposed portion of the bowel is carefully placed into a Silo allowing time for the stomach contents to be aspirated and for some of the bowel oedema and congestion to be overcome. The open end is then inserted into the peritoneum by compressing the ring. If insertion is difficult then a pair of small Langenbeck retractors can be used to hold the leading edge of the ring in place. Dislocations have been reported therefore it is recommended that the skin tabs are secured to the skin with the silicone dressing provided. Suturing of the Silo to the skin should not be necessary. Care should be taken to secure the dressing as it also acts as a seal to reduce serous leakage from the peritoneal cavity. Each Silo has a dressing with the appropriate size keyhole. These dressings can also be purchased separately. Care should be taken to place the umbilical cord through

the central hole and thereby over the dressing. The umbilical cord is left at least 5cm long and wrapped in a sterile antibacterial dressing to aid the closure of the defect after the Silo is removed. The bag is then placed under gentle traction with the elastic tube provided and adjusted for the most comfortable position. A 30cm length of the tubing should be reserved to form a slipknot around the Silo above the bowel. This helps to reduce oedema and congestion of the bowel. The bowel can then be reduced in a staged manner over a period until the abdomen can accommodate the viscera (usually less than five days). It is recommended that the Silo is removed at least 24 hours after the bowel is fully reduced.

The Silo can be removed by applying traction to the Silo and indenting the wall just above the ring until it appears and can be grasped. After removal of the Silo, closure can be achieved by applying a dressing across the defect to create traction of the umbilical cord. In some cases, a sutured fascial closure is necessary under general anaesthetic.



### Practical advantages

No anaesthesia or sedation is required as the reduction can take place in the neonatal ITU. The bags are transparent and so allow continuous inspection of the condition of the bowel. The rate of reduction can therefore be tailored to each child. The Silos are held suspended above the child to allow bowel oedema to subside.

#### References:

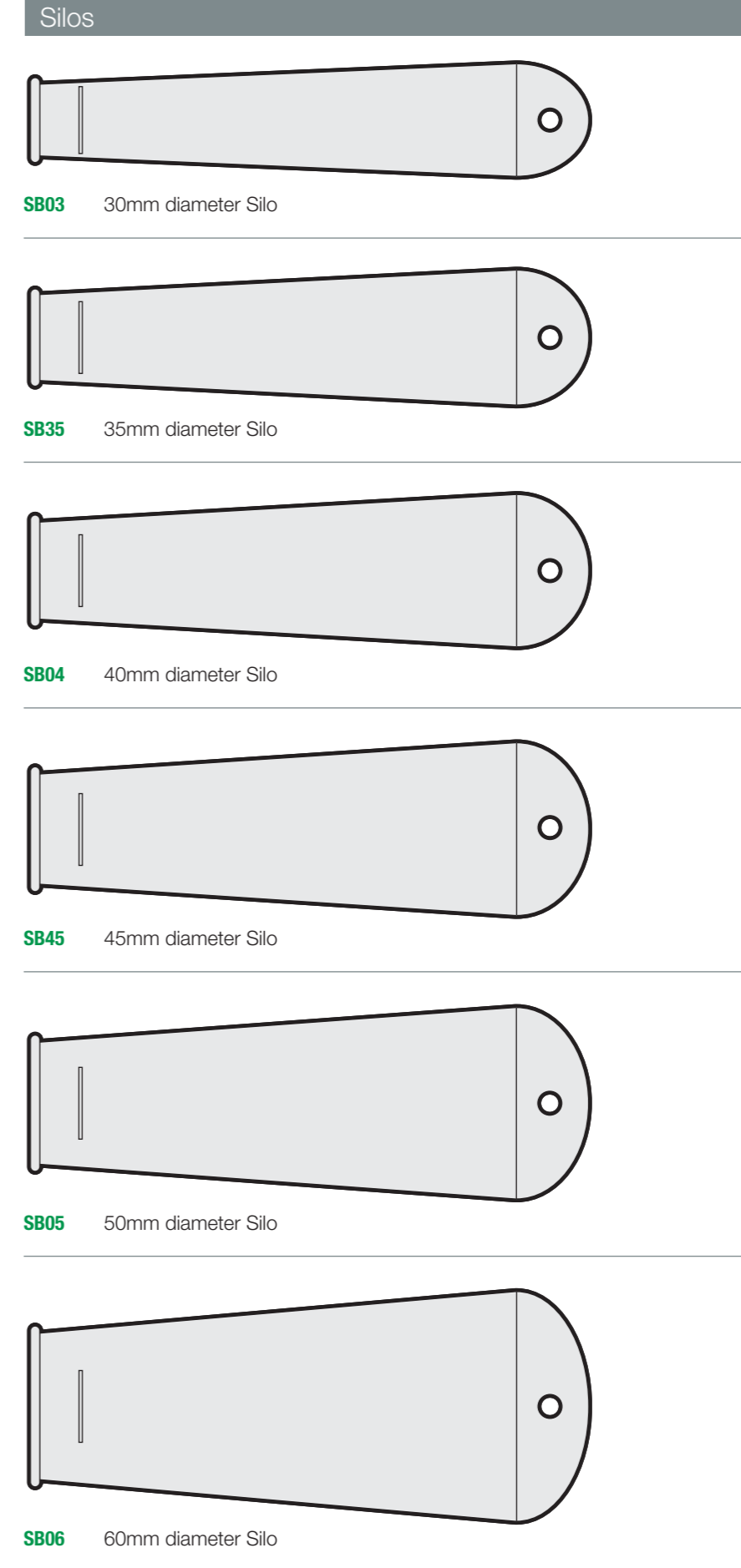
- (1) Gastroschisis: a simple technique for staged closure. Fischer et Al. JPediatric Surg 30: 1171, 1995
- (2) Necrotising enterocolitis after gastroschisis repair. Jayanthi et Al J Pediatr Surg 33: 705-707, 1998
- (3) Ischemic bowel after primary closure for gastroschisis. Ein et Al JPed Surg 23: 728-730, 1988
- (4) Routine insertion silastic silo for infants with gastroschisis. Mirkes J Ped sur June 2000

### Clinical advantages

Many recent studies suggest that a staged closure is associated with a lower rate of complications<sup>1</sup>. In particular, evidence suggests a lower risk of necrotising enterocolitis<sup>2</sup> and lower risk of bowel perforation<sup>3</sup>. Studies also show reductions in neonatal ITU stay<sup>4</sup> and emphasise the cost benefit compared to operating theatre time<sup>4</sup>.



Studies show reductions in neonatal ITU stay and emphasise the cost benefit compared to operating theatre time



No anaesthesia or sedation is required as the reduction can take place in the neonatal ITU.

