

medicina   
**SUPERLOCK**  
enteral feeding system



*leaders in enteral delivery*



# medicina SUPERLOCK enteral feeding system

The Medicina SUPERLOCK range of oral/enteral syringes has been developed to deliver enteral feeds, medicines and flushes safely to neonatal, paediatric and adult patients.

The SUPERLOCK connectors are bigger than the standard Luers and it is mechanically impossible to connect any device in the SUPERLOCK system to any intravenous device under any circumstances.

The technique to make the connections is the same as with existing devices, so there is no special training need for end users.

An additional safety feature of the system is that every device is colour coded purple to clearly differentiate the enteral feed or formula lines from all the other patient access lines.

This connection is oversize and eliminates the risk of harm to patients from the accidental misconnection to intravenous devices.



the syringes,  
tubes and  
accessories are  
all fitted with a  
dedicated  
SUPERLOCK  
connector



“eliminates the risk of harm to patients from accidental misconnections”



# patients

Firstly we would like to focus on particular patient groups to understand their feeding and medication needs and show how the components of the SUPERLOCK feeding system can be used to aspirate and safely deliver feeds, flushes and medicines to all patients.

## neonates

The SUPERLOCK enteral feeding system has all the necessary devices to feed babies safely, either by pump or gravity bolus.

SUPERLOCK syringes provide the widest internal tip diameter, which gives a better flow for the delivery of gravity or bolus feeds. Oral syringes and Non-Luer syringes can only deliver gravity feeds very slowly because the feed has to pass through a very narrow syringe port. SUPERLOCK syringes also produce lower delivery pressures for medications.

To compliment the SUPERLOCK system, there is a new purple enteral syringe pump. The pump is as distinct from IV pumps as the Medicina syringes and offers some unique safety features.

The P900 enteral syringe pump has been designed to deliver small volumes of enteral feeds, accurately and safely, using only enteral syringes. Therefore it is ideal for the delivery of small volumes to neonates and paediatric patients. An important feature of the pump is that only "MEDICINA" syringes will operate in the pump. All other syringes are incompatible. This offers a unique additional safety feature for enterally fed patients.

All the necessary feeding tubes, low volume extension sets and other

accessories such as drainage bags, are available to feed and aspirate all sizes of babies.

Medicina is the only European company who manufacture all the components necessary to safely feed and administer medicines to babies in the department of neonatal care.



## paediatric and adult patients

The Medicina SUPERLOCK enteral syringe system can be used safely to feed, flush and deliver enteral medicines to all types of patients. All patients can be at risk from the harm caused by misconnections of enteral feeds to intravenous devices.

Although these risks are higher in critical care departments many countries have now banned the use of standard I.V. Luers on all enteral feeding equipment and the use of intravenous syringes with enterally fed patients to reduce the risk of accidental misconnections.

Children needing enteral nutritional support are usually pump fed but some smaller children and some patients fed by pump overnight use bolus or gravity feeds. The larger syringes can be used to gravity feed either directly into the tube or using the extension set. Feeding containers can be accessed by using the milk straw. The smaller syringes can be used to deliver feeds into the tubes or directly in to pump administration sets.

Medicines can also be delivered using the smaller syringes both orally and into the feeding devices.

Adults are also often pump fed but it is important to maintain the patency of the enteral feeding device by flushing. All enteral devices should be flushed at least every six hours and also before and after medicines to prevent any drug-feed interaction. The smaller syringes are also used to deliver medicines accurately and safely into enteral feeding devices. It is also important to confirm the correct position of enteral feeding devices and the syringes are very useful for aspiration. Universal pH indicator strips are then used on the aspirate to confirm device position.



“many countries have now banned the use of standard I.V. Luers on all enteral feeding equipment”



# feeding tubes

Medicina has several ranges of feeding tubes for both short and long term indications.

The most popular tubes are designed to feed patients for short periods of up to seven days. There are also long term tubes with guide wires and wider bore tubes for aspiration. In addition there are several specialist nasojejunal tubes and double lumen feeding and aspiration tubes including a Replogle tube.

## nasogastric tube priming volumes

| diameter/length | 50cm    | 80cm   | 120cm  |
|-----------------|---------|--------|--------|
| 4FR             | 0.25mls | 0.6mls | 0.9mls |
| 5FR             | 0.5mls  | 0.8mls | 1.1mls |
| 6FR             | 0.7mls  | 1.1mls | 1.6mls |
| 8FR             | 0.9mls  | 1.4mls | 2.1mls |
| 10FR            | 1.7mls  | 2.8mls | 4.2mls |

## short term

The short term tubes are mainly used in neonates and children but can be used in adults who need short term enteral support.

The tubes are used to feed, flush and deliver medicines. The tubes have a male Luer connector which fits Medicina SUPERLOCK syringes and administration sets. The tubing itself is smooth and carries distance marks to reference tube position. All tubes have a radiopaque stripe to confirm position with X-Ray.

These tubes are made of polyurethane (MG), and silicone (MGSIL) in popular sizes for longer term usage. Additionally there are some specialist nasojejunal tubes and double lumen feeding and aspiration tubes including a Replogle tube.



## short term wide bore

These tubes are polyurethane and available from 6FR - 20FR diameters with a length of 80cm or 100cm.

These tubes are used to aspirate and feed adults and children for seven to fourteen days. Typical use would be in intensive care, high dependency units, theatres, crash trolleys and surgical wards. The tubes have a male Luer lock connector which fits Medicina SUPERLOCK syringes. In addition they have a funnel or bladder type connector to fit suction equipment. The tubing itself is smooth and carries distance marks to reference tube position. All tubes have a radiopaque stripe to confirm position with X-Ray or a pH strip is included in each pouch. These tubes are softer and smoother than normal PVC Ryles type tubes and are easier to pass and more comfortable for the patients.



## long term

These tubes are polyurethane with guide wires and are used longer term to feed adults and children for up to 60 days.

Some popular sizes in 8FR and 10FR are also available weighted. Typical users would be critical care areas, medical and care of the elderly units, paediatric units and also community patients. The tubes have a male Luer lock connector which fits Medicina SUPERLOCK syringes and the female Luer ends of pump administration sets. They also have a male-Luer guidewire holder allowing

aspiration to confirm correct position using Medicina SUPERLOCK syringes. The tubing itself is smooth and carries distance marks to reference tube position. All tubes are fully radiopaque (40% Barium sulphate compounded into the tube), to confirm position with X-Ray or a pH strip is included in each pouch.



# accessories

Medicina has put together the largest range of accessories to help with the delivery of feeds and medicines using the SUPERLOCK feeding system.

There are straws, caps, bottle adapters, sets and a wide variety of small but important accessories to help with the access of enteral equipment. Several long and short extension sets with and without Y-sites are available which are used to connect between the feeding container or syringe and the nasogastric tube.

There are several non IV compatible adapters to help connect to other feeding devices like gastrostomy tubes. There is also a range of drainage bags, all with compatible connectors to allow gastric drainage from nasogastric tubes or other devices.

There are also several bottle and container adapters to help access medicine containers and feed containers. Liquid medicines are best where possible. There are several press-in tamper-proof bottle adapters to access medicine containers.

A dedicated Medicine needle is available which can access multi dose vials with the rubber bung type cap. A filter needle



is also available to filter out any possible glass particles when medicines arrive in glass ampoules.

A specialist Surfactant administration kit is also available for the drawing up and delivery of surfactant in babies.



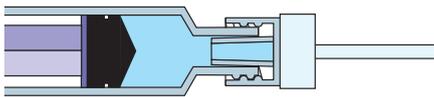
“The largest range of accessories to help with the delivery of feeds and medicines using the syringe feeding system”



# connections

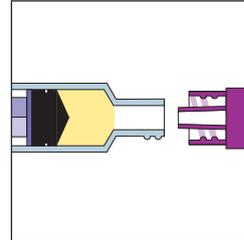
## priming connections

It is normal practice, with I.V. fluids, to prime the syringe and connectors with fluid to exclude air. This is not necessary with enteral connections.



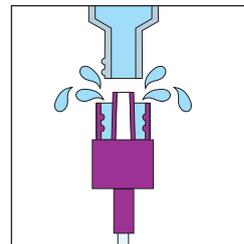
## enteral connections

It is important that enteral connections are not primed with feed or thick medicines as it can be difficult to separate the connections. The threads can sometimes become clogged with feed and debris.



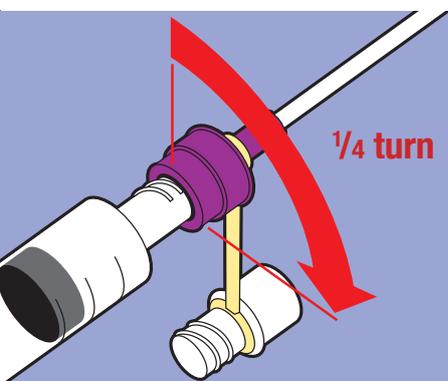
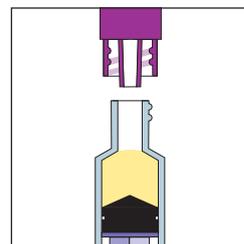
## flushing connection threads

It is also good routine practice, following feeds or the delivery of medicines, to flush the inside threads of the connector of Medicina SUPERLOCK NG tubes. This will prevent any disconnection problems.



## priming medicina enteral connections

It is therefore recommended that feeding tubes, lines and enteral syringes are only primed up to but not including the connection. The connection is left full of air which is not a problem for enteral nutrition. In this way the internal threads of the male Luer do not become clogged with feed or medicines.



## making connections

When making connections to Medicina SUPERLOCKS it is only necessary to tighten the connection by one quarter turn.

This will provide a good seal and will allow simple disconnection.



# oral and enteral medicines

In general, liquid forms of medicine should be used where possible for both the oral and enteral routes.

Soluble tablets or capsules can be used if they are thoroughly dissolved. Enteric coated medicines should never be crushed or dissolved. If the liquid and soluble forms are unavailable then tablets can be crushed or capsules opened and mixed in 10-15mls of water (5-10mls for children). The tablet crusher should be rinsed and the washings and residue flushed down the tube.

## delivery

Medicines should be delivered using an oral enteral syringe. Tubes should be flushed before and after medicines with 20-30mls of water in adults and 5-10mls in children. Each medicine should be administered separately and the tube and the syringe should be flushed between the dose of different medicines. In general medicines should not be added to feeds because of potential interactions. Timing may also be important as some medicines are designed to be absorbed by an empty stomach.

## medicine container access

Medicines can be drawn up using the medicine straw and the milk straw for larger volumes and thicker preparations. If glass ampoules are used, then a medicine filter straw is available.

Several bottle adapters are available to fit the various liquid bottles. The universal bottle adapter fits most and there are six other sizes which fit flush into the bottle to allow the use of tamper-proof bottle caps for children. A needle is also available for use with multi-dose bottles with a rubber bung.

## medicine and feed interactions

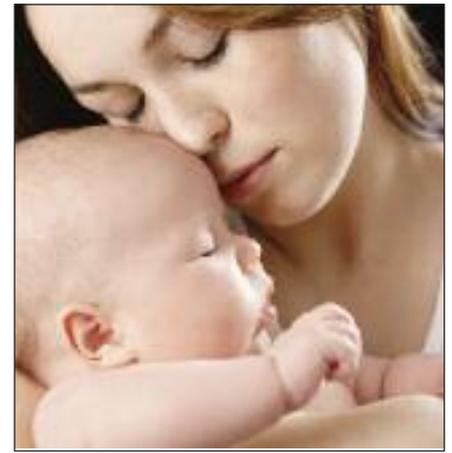
Some medicines can interact with enteral feeds, vitamins and electrolytes and some need to be given on an empty stomach. It is therefore important to flush before and after each feed to prevent any coagulation of the proteins in the feeds, which can block the feeding tubes.

## outpatient medicines

The Bottle adapter can be provided non-sterile so that a suitable adapter can be packed with a suitable syringe for patients leaving hospital. A small instruction pad has also been produced so an instructions leaflet can be torn off for each outpatient as required.

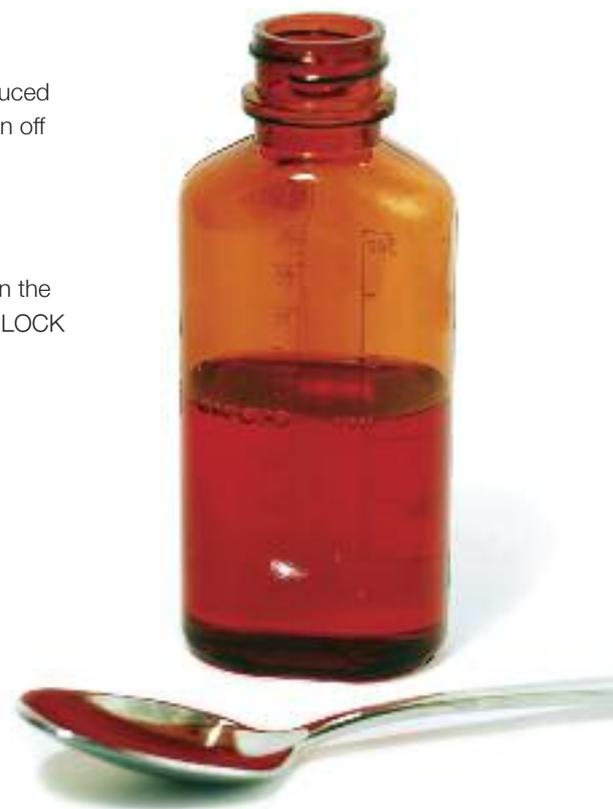
## oral medicines

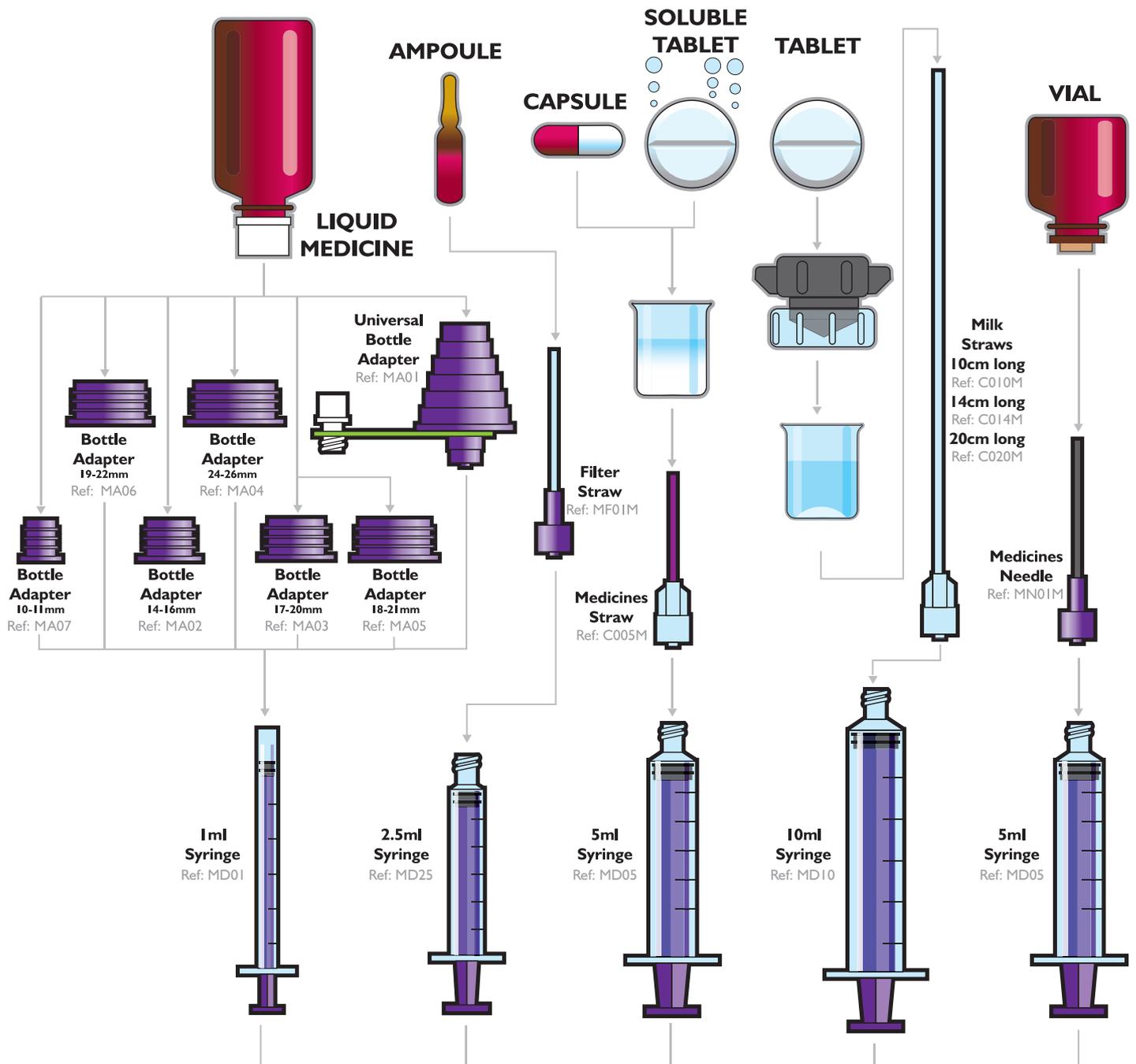
These can be drawn up and used in the same way and all Medicina SUPERLOCK syringes can be used for this route.



## small volume medicines

It is advisable to use the medicine straw for very small volumes of medicines (Less than 0.5mls) as the straw will occupy the dead space of the syringe in the same way as the male Luer lock on the feeding tube. In this way medicines can be delivered accurately without considering the dead space.





**ENTERAL**

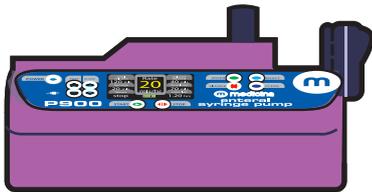


**ORAL**



# product range

## enteral syringe pump



**P900** Enteral Syringe Pump (1)

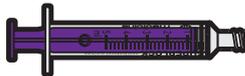
## superlock enteral syringes



- MD01** 1ml Superlock Syringe (100)
- MD01B** 1ml Superlock Syringe (Bulk, Non-Sterile) (500)



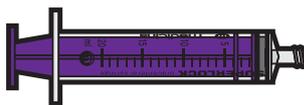
- MD25** 2.5ml Superlock Syringe (100)
- MD25B** 2.5ml Superlock Syringe (Bulk, Non-Sterile) (500)



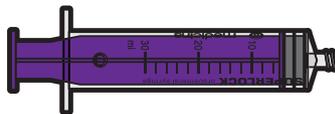
- MD05** 5ml Superlock Syringe (100)
- MD05B** 5ml Superlock Syringe (Bulk, Non-Sterile) (500)



- MD10** 10ml Superlock Syringe (100)
- MD10B** 10ml Superlock Syringe (Bulk, Non-Sterile) (500)



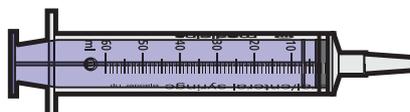
- MD20** 20ml Superlock Syringe (80)



- MD30** 30ml Superlock Syringe (80)



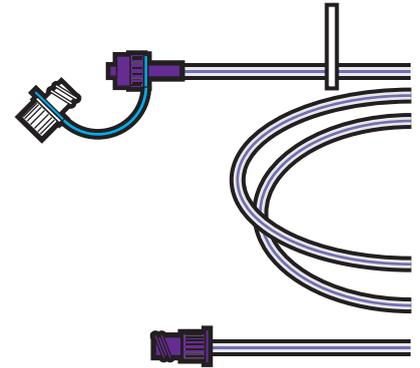
- MD60** 60ml Superlock Syringe (60)



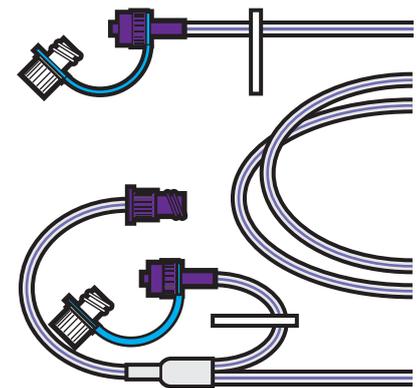
- PE60B** 60ml Purple Bladder Tip (55)

## accessories

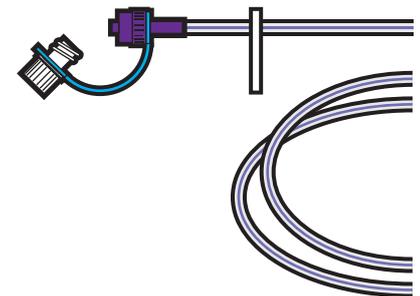
### extension sets



- MF075** 75cm long Enteral Extension Set (50)
- MF150** 150cm long Enteral Extension Set (50)
- MF150W** 150cm long Wide Bore Enteral Extension Set (50)



- MF150Y** 150cm long Y-Site Enteral Extension Set (50)

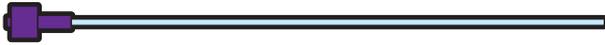


- MM150Y** 150cm long Male Ended Y-Site Enteral Extension Set (50)



## accessories

### bottle adapters



**MRC150** 150mm Rectal Medicine Straw (50)



**MRC075** 75mm Rectal Medicine Straw (50)



**MA01** Stepped Bottle Adapter (50)



**MA02** 14-16mm Bottle Adapter (50)



**MA03** 17-20mm Bottle Adapter (50)



**MA04** 24-26mm Bottle Adapter (50)



**MA05** 18-21mm Bottle Adapter (50)  
(Oramorph)



**MA06** 19-22mm Bottle Adapter (50)



**MA07** 10-11mm Bottle Adapter (50)



### miscellaneous



**C005M** Medicine Straw (50)



**C010M** 10cm long Milk Straw (50)

**C014M** 14cm long Milk Straw (50)

**C020M** 20cm long Milk Straw (50)



**MF01M** Filter Straw (50)



**MN01M** Enteral Needle (50)



**MC01** Male Cap  
(packed singly) (50)

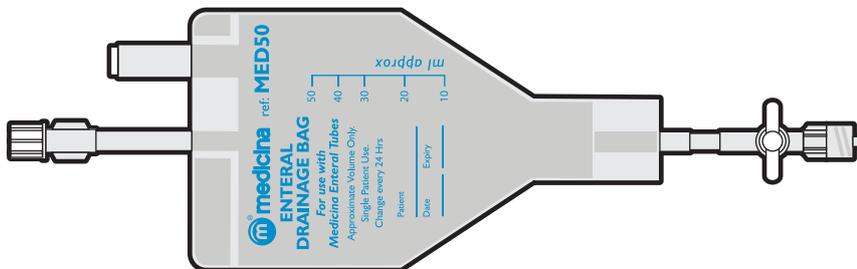
**MC08** Male Caps  
(packs of 8) (50)

**MC01B** Male Caps  
(bulk) (2000)



**MK01** Superlock Male Adapter (50)

### enteral drainage bags



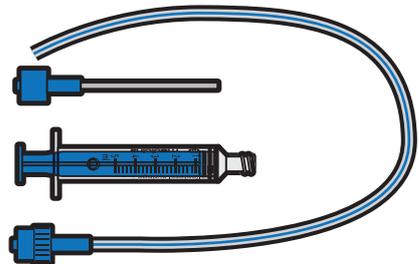
**MED50M** 50ml Enteral  
Drainage Bag (50)

**MED250M** 250ml Enteral  
Drainage Bag (50)

**MED100M** 100ml Enteral  
Drainage Bag (50)

**MED500M** 500ml Enteral  
Drainage Bag (50)

### surfactant kit



**SF01** Surfactant Kit (25)  
NHS Code: TBA

## feeding tubes

### short term Infant polyurethane feeding tubes



|         |                  |
|---------|------------------|
| MG4/40  | 4FR x 40cm (50)  |
| MG4/50  | 4FR x 50cm (50)  |
| MG4/60  | 4FR x 60cm (50)  |
| MG4/90  | 4FR x 90cm (50)  |
| MG5/40  | 5FR x 40cm (50)  |
| MG5/50  | 5FR x 50cm (50)  |
| MG5/60  | 5FR x 60cm (50)  |
| MG5/90  | 5FR x 90cm (50)  |
| MG6/40  | 6FR x 40cm (50)  |
| MG6/50  | 6FR x 50cm (50)  |
| MG6/60  | 6FR x 60cm (50)  |
| MG6/90  | 6FR x 90cm (50)  |
| MG8/40  | 8FR x 40cm (50)  |
| MG8/50  | 8FR x 50cm (50)  |
| MG8/60  | 8FR x 60cm (50)  |
| MG8/90  | 8FR x 90cm (50)  |
| MG8/120 | 8FR x 120cm (50) |
| MG10/80 | 10FR x 80cm (50) |

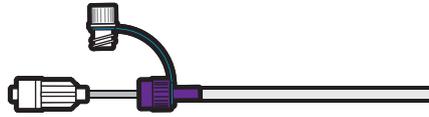
#### weighted tubes

|          |                  |
|----------|------------------|
| MG6/50W  | 6FR x 50cm (50)  |
| MG6/80W  | 6FR x 80cm (50)  |
| MG8/80W  | 8FR x 80cm (50)  |
| MG10/80W | 10FR x 80cm (50) |
| MG12/80W | 12FR x 80cm (50) |

### short term Infant weighted silicone feeding tubes

|            |                   |
|------------|-------------------|
| MGSIL5/40  | 5FR x 40cm (50)   |
| MGSIL5/60  | 5FR x 60cm (50)   |
| MGSIL5/90  | 5FR x 90cm (50)   |
| MGSIL65/40 | 6.5FR x 40cm (50) |
| MGSIL65/60 | 6.5FR x 60cm (50) |
| MGSIL65/90 | 6.5FR x 90cm (50) |
| MGSIL8/40  | 8FR x 40cm (50)   |
| MGSIL8/60  | 8FR x 60cm (50)   |
| MGSIL8/90  | 8FR x 90cm (50)   |

### long term polyurethane feeding tubes



|           |                   |
|-----------|-------------------|
| MGP6/55   | 6FR x 55cm (25)   |
| MGP6/75   | 6FR x 75cm (25)   |
| MGP6/85   | 6FR x 85cm (25)   |
| MGP8/55   | 8FR x 55cm (25)   |
| MGP8/75   | 8FR x 75cm (25)   |
| MGP8/85   | 8FR x 85cm (25)   |
| MGP8/120  | 8FR x 120cm (25)  |
| MGP10/85  | 10FR x 85cm (25)  |
| MGP10/120 | 10FR x 120cm (25) |

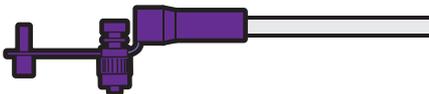
#### weighted tubes

|           |                  |
|-----------|------------------|
| MGP8/85W  | 8FR x 85cm (25)  |
| MGP10/85W | 10FR x 85cm (25) |

### nasojejunal tubes

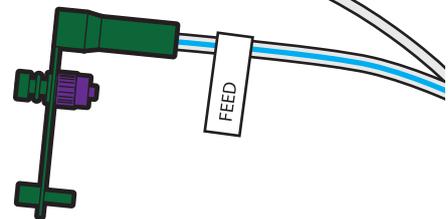
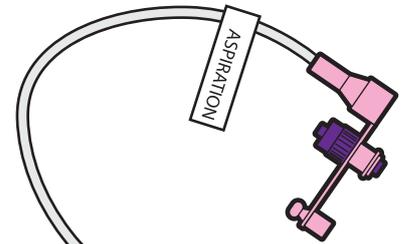
|           |                   |
|-----------|-------------------|
| MJP6/120  | 6FR x 120cm (10)  |
| MJP8/120  | 8FR x 120cm (10)  |
| MJP8/130  | 8FR x 130cm (10)  |
| MJP10/130 | 10FR x 130cm (10) |

### short term polyurethane Ryles feeding tubes



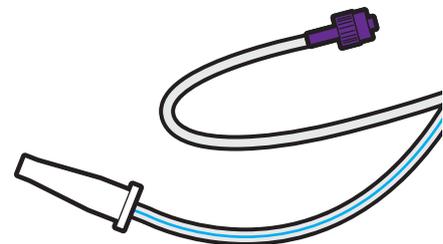
|           |                   |
|-----------|-------------------|
| MRT6/80   | 6FR x 80cm (50)   |
| MRT8/80   | 8FR x 80cm (50)   |
| MRT10/100 | 10FR x 100cm (50) |
| MRT12/100 | 12FR x 100cm (50) |
| MRT14/100 | 14FR x 100cm (50) |
| MRT16/100 | 16FR x 100cm (50) |
| MRT18/100 | 18FR x 100cm (50) |
| MRT20/100 | 20FR x 100cm (50) |

### double lumen feeding tubes



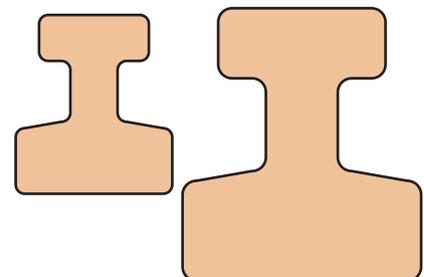
**EF2M** Standard Nasojejunal/Aspiration tube 10/8FR x 120cm  
Internal Guidewire (5)

**EF2EM** Endoscopic Nasojejunal/Aspiration tube 10/8FR x 120cm  
External Guidewire (5)



**NF02M** 10FR x 60cm 'Replogle Tube'  
Suction tube (5)

### accessories



**NP02** Paediatric NG Plaster (100)

**NP01** Adult NG Plaster (100)



**IN01** pH Indicator Strips (200)

# information guides for medicina products

Medicina produces a large number of more detailed guides for the safe use of all Medicina products.



There is a comprehensive web site which has a large download section. Booklets, instruction posters and pocket guides can be downloaded in PDF format. Alternatively contact Medicina or your agent to request hard copies. Below are some examples of the information we provide.



# medicina SUPERLOCK enteral feeding system

The Medicina SUPERLOCK enteral feeding system is a complete range of equipment which has been developed for the safe delivery of enteral formula, feeds, medicines and flushes for all types of patients.



Unit 2, Rivington View Business Park, Station Road, Blackrod, Bolton BL6 5BN  
Telephone: +44(0)1204 695050 email: [info@medicina.co.uk](mailto:info@medicina.co.uk)  
[www.medicina.co.uk](http://www.medicina.co.uk)

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