

## Post-operative wound drainage

- › High-vacuum drainage
- › Low-vacuum drainage
- › Gravity drainage

The product portfolio for post-operative wound drainage from pfm medical ag offers a variety of systems for drainage by high-vacuum, low-vacuum and gravity for many clinical applications.

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## OR-system / Ward-system

The **OR system** is a pre-evacuated reservoir with connecting tube for post-operative high-vacuum Redon wound drainage and is suitable for initial placement during surgery.

The **ward system** is a pre-evacuated reservoir for post-operative high-vacuum Redon wound drainage and is intended for replacement during patients treatment.

### View



### Benefits

#### High initial vacuum

The Redon bottle has a high initial vacuum of max. 98,000 Pa.

#### Redon connection tube

The tube with transparent universal Redon connector CH 06 - CH 18 for connection to the drain is pre-attached.

#### Several system sizes

200 ml and 400 ml systems provide a 50 ml safety volume.

### Details

- ▶ Plug connection or Luer-Lock connection
- ▶ Crystal-clear material for reliable qualitative assessment of secretions
- ▶ Rough and fine graduation for at-a-glance information about current fill levels
- ▶ Integrated vacuum indicator with qualitative min. / max. indication
- ▶ Quick-release fasteners included
- ▶ Single packed, sterile
- ▶ Latex-free
- ▶ Redon bottle DEHP-free

### Technical Data

- ▶ **Bottle volume:** 200 ml - 600 ml

### Ordering Information

#### OR system

REF	Volume	Connection	PU
20201	200 ml	Plug	40
20204	200 ml	Luer-Lock	40
20301	400 ml	Plug	40
20304	400 ml	Luer-Lock	40
20401	600 ml	Plug	30
20404	600 ml	Luer-Lock	30

#### Ward system

REF	Volume	Connection	PU
20200	200 ml	Plug	50
20203	200 ml	Luer-Lock	50
20300	400 ml	Plug	40
20303	400 ml	Luer-Lock	40
20400	600 ml	Plug	30
20403	600 ml	Luer-Lock	30

## Redon Sets

The **Redon Sets** for post-operative high vacuum wound drainage consist of a Redon bottle, a connection tube, a Redon drain and a single-use needle. The Redon Sets are suitable for initial placement during surgery and contain all for the drainage needed components.

### View



### Benefits

#### Complete set

In addition to the Redon bottle with connecting tube, the set also contains a drain and a suitable disposable needle.

#### Redon connection tube

The tube with transparent universal Redon connector CH 06 - CH 18 for connection to the drain is pre-attached.

#### High initial vacuum

The Redon bottle has a high initial vacuum of max. 98,000 Pa.

#### Several system sizes

200 ml and 400 ml systems provide a 50 ml safety volume.

### Details

- ▶ Luer-Lock connection
- ▶ Crystal-clear material for reliable qualitative assessment of secretions
- ▶ Rough and fine graduation for at-a-glance information about current fill levels
- ▶ Integrated vacuum indicator with qualitative min. / max. indication
- ▶ Quick-release fasteners included
- ▶ Single packed, sterile
- ▶ Latex-free
- ▶ Redon bottle and Redon drain DEHP-free

### Technical Data

- ▶ **Bottle volume:** 200 ml - 600 ml
- ▶ **Drain size:** CH 10 - CH 18
- ▶ **Drain length:** 75 cm
- ▶ **Drain perforation length:** 15 cm

### Ordering Information

REF	Volume	Connection	Drain size	PU
21502 *	600 ml	Luer-Lock	CH 10	25
20569	600 ml	Luer-Lock	CH 12	25
20567	600 ml	Luer-Lock	CH 14	25
20568	600 ml	Luer-Lock	CH 16	25
20918	600 ml	Luer-Lock	CH 18	25

For requests on availability and minimum order quantity of the products please refer to our Customer Service: T +49 (0)2236 9641-220; service@pfmmedical.com

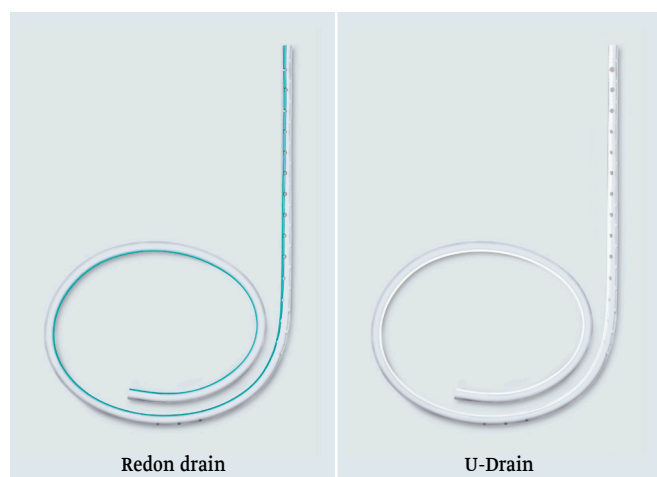
\* White strip on bottle for lettering.

## Redon drains / U-Drains

The cross-perforated **Redon drains and U-Drains** are suitable for post-operative high vacuum wound drainage.

The special cross-perforated **U-Drains** improve drainage performance by 1.5 to 2.5 times compared with conventional Redon drains. <sup>[1]</sup>

### Views



### Benefits

#### Improved drainage performance with U-Drains

The gently rounded drainage holes with a linear increase in diameter towards the distal end direction enable a higher drainage performance.

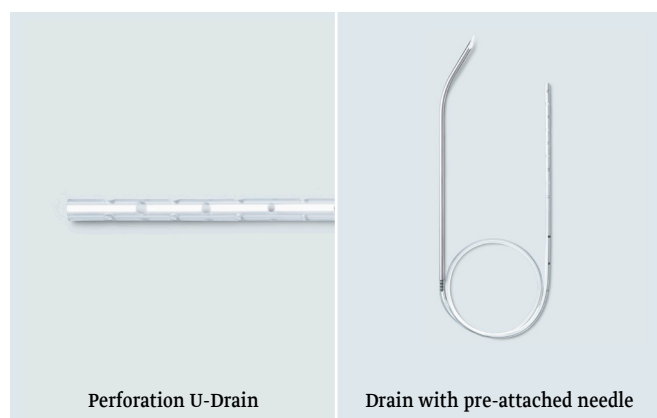
#### Easy to reposition

The triple ring marking makes repositioning easy.

#### Configuration with pre-attached needle

The pre-attached needle, made from high-quality stainless steel always provides a perfectly sharp needle for optimal placement.

### Detail Views



### Details

- ▶ Made from medical PVC, DEHP-free
- ▶ Precision-manufactured drainage holes
- ▶ Radiopaque
- ▶ Single packed, sterile
- ▶ Latex-free

### Technical Data

- ▶ **Length:** 50 cm / 75 cm

## Ordering Information

### Redon drains

REF	Size	Perforation	Length	PU
20027	CH 06	15 cm	50 cm	100
20020	CH 08	15 cm	50 cm	100
20026	CH 09	15 cm	50 cm	100
20021	CH 10	15 cm	50 cm	100
20022	CH 12	15 cm	50 cm	100
20023	CH 14	15 cm	50 cm	100
20024	CH 16	15 cm	50 cm	100
20025	CH 18	15 cm	50 cm	50

<sup>[1]</sup> Enneker C., Fleischmann E., Lange Th.: Klinische Anwendung und vergleichende Untersuchung der Ulmer Drainage und der herkömmlichen Gewebssaugdrainage nach Redon. Der Chirurg 50, 626-630 (1979)

**Redon drains with pre-attached needle**

REF	Size	Perforation	Length	PU
20067	CH 08	15 cm	75 cm	10
20068	CH 10	15 cm	75 cm	10
20087	CH 12	15 cm	75 cm	10
20097	CH 14	15 cm	75 cm	10

**U-Drains**

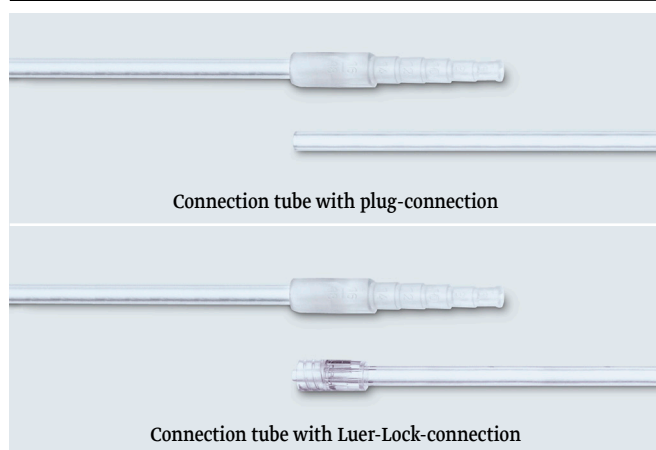
REF	Size	Perforation	Length	PU
20122	CH 08	6 cm	50 cm	100
20120	CH 10	5 cm	50 cm	100
20123	CH 10	8 cm	50 cm	100
20121	CH 12	5 cm	50 cm	100
20124	CH 12	10 cm	50 cm	100
20125	CH 14	12 cm	50 cm	100
20126	CH 16	12 cm	50 cm	100

**U-Drains with pre-attached needle**

REF	Size	Perforation	Length	PU
20128	CH 10	8 cm	50 cm	10
20129	CH 12	10 cm	50 cm	10
20131	CH 14	12 cm	50 cm	10

**Redon connection tube**

The **Redon connection tube** is used for connection of Redon or U-Drains to the pre-evacuated Redon bottle for post-operative high vacuum wound drainage.

**View****Benefits****Various configuration**

Separately available connection tubes allow an individual replacement if required.

**Details**

- ▶ Single packed, sterile
- ▶ Latex-free

**Technical Data**

- ▶ **Length:** 120 cm (20818: Universal Redon connector)

**Ordering Information**

REF	Version	PU
20814	Connection tube with plug connection and universal Redon connector CH 06 – CH 18	25
20824	Connection tube with Luer-Lock connection and universal Redon connector CH 06 – CH 18	25
20818	Universal Redon connector CH 06 – CH 18 (no tube)	100

## Redon-Mini Set

The manually compressible bellows of the **Redon-Mini Set** uses a low vacuum (approx. 10,000 Pa initially) for post-operative wound drainage. The Redon-Mini Set includes a drain and a pre-attached stainless steel needle.

### View



### Benefits

#### Quick qualitative assessment of secretion

By using transparent material the drained fluid can be quickly assessed.

#### Safe drain connection

The plug or screw connection is used for quick and safe drain fitting.

### Details

- ▶ Initial low vacuum approx. 10,000 Pa
- ▶ Redon drain DEHP-free
- ▶ Seamless transition to needle
- ▶ Fully radiopaque
- ▶ Single packed, sterile
- ▶ Latex-free

### Technical Data

- ▶ **Volume:** 30 ml / 150 ml
- ▶ **Drain size:** CH 06 / CH 08
- ▶ **Length:** Redon drain: 30 cm, cross-perforation: 5 cm

### Ordering Information

REF	Connection	Drain size	Volume	PU
20604	Screw	CH 06	30 ml	20
20608	Screw	CH 08	30 ml	20
20651	Plug	CH 06	150 ml	10
20652	Plug	CH 08	150 ml	10
20653	Screw	CH 08	150 ml	10
20654	Screw	CH 06	150 ml	10
20611	Screw	No Drain	30 ml	20
20657	Screw	No Drain	150 ml	10
20650	Plug	No Drain	150 ml	10

## Low Vacuum System

The **Low Vacuum System** is a large capacity wound drainage system for manual evacuation in sensitive tissue using a constant low vacuum.

### View



### Benefits

#### Gentle application

With its large capacity - compared to other low vacuum systems - this system for manual evacuation with low suction ensures gentle\* wound drainage in sensitive tissue.

#### Improved patient and user protection

Two one-way valves efficiently prevent backflow thus minimising the risk of retrograde wound infections.

#### Minimised risk of cross-contamination

Cost-effective replacement bags with one-way valve minimise the risk of cross-contamination.

#### Pre-configured sets

The pre-configured set consists of bellows, connection tube, Y-connector, Redon drains and optionally a disposable guide needle.

Assembly with silicone drains also optionally available.

### Details

- ▶ Large capacity 250 ml bellows to increase the time intervals between re-evacuations and to reduce the total number of re-evacuations required
- ▶ Pre-attached Y-connectors with closed distal ends allow the optional use of one or two Redon drains (CH 08 - CH 18) without the need for additional connectors, adaptors or clamps
- ▶ Hydrophobically coated filter on the drainage bag for hygienic pressure equalisation without the risk of contact with the secretion
- ▶ Safety cap at the bottom outlet of the bellows to prevent spillage of residual fluid
- ▶ Ease of use
- ▶ Redon drains DEHP-free
- ▶ Latex-free

### Technical Data

- ▶ **Length:** Redon drain: 50 cm, perforation: 15 cm
- ▶ **Volume:** Bellows: 250 ml, Drainage bag: 700 ml

### Ordering Information

REF	Version	Size	PU
20760	2 Redon drains	CH 10	25
20761	2 Redon drains	CH 14	25
20762	2 Redon drains	CH 18	25
20770	2 Redon drains, trocar	CH 10	25
20771	2 Redon drains, trocar	CH 14	25
20772	2 Redon drains, trocar	CH 18	25
20780	Exchange bag	700 ml	25

\* compared to high vacuum systems

## Soft-Drain Flat Active

The **Soft-Drain Flat Active** consists of a flat silicone drain and a low-vacuum reservoir for suction-assisted wound drainage.

### View



### Benefits

#### Active assistance of suction

The included reservoir creates a negative pressure and assists actively the suction of the drainage.

#### Outstanding safety

The inner ribbing of the flat drain prevents it from collapsing even at higher pressures or when a vacuum is applied.

#### Easy drain removal

The seamless soft coupling between the drain and tube enables the safe and gentle removal of inserted drains.

### Technical Data

- ▶ **Full length:** 80 cm
- ▶ **Drain length:** 20 cm

### Details

- ▶ Transparent 150 ml low-vacuum silicone reservoir with anti-reflux valve and universal hanger
- ▶ Graduation of the reservoir for at-a-glance information about current fill levels
- ▶ Perforated at full length with gently rounded atraumatic holes
- ▶ Flat drain made from 100 % medical silicone
- ▶ Central opening
- ▶ Fully radiopaque drain tube
- ▶ Double packed, sterile
- ▶ Latex-free

### Ordering Information

REF	Height x width	Perforation	Volume reservoir	PU
0615-0072	3 x 7 mm	20 cm (full)	150 ml	10
0615-0102	4 x 10 mm	20 cm (full)	150 ml	10

## Soft-Drain Flat Reservoir

The **Soft-Drain Flat Reservoir** is a transparent low-vacuum silicone reservoir with an anti-reflux valve and a universal hanger.

### View



### Benefits

#### Graduation

The graduation provides an at-a-glance information about current fill levels of the reservoir.

#### Anti-reflux valve

The Anti-reflux-valve prohibits a back-flow of collected wound fluid into the drainage.

#### Universal hanger

By use of the universal hanger the system can easily be attached at any bed position.

### Details

- ▶ Reservoir made from 100 % silicone
- ▶ Sterile
- ▶ Latex-free

### Technical Data

- ▶ **Volume:** 100 ml – 400 ml

### Ordering Information

REF	Volume	PU
2013-0610	100 ml	10
2013-0615	150 ml	10
2013-0620	200 ml	10
2013-0640	400 ml	5



## Soft-Drain Flat

The **Soft-Drain Flat Single** is a flat silicone drain for open or half-open wound drainage by gravity.

The **Soft-Drain Flat System** consists of a flat silicone drain and a collection bag.

### View



### Benefits

#### Outstanding safety

The inner ribbing of the flat drain prevents it from collapsing even at higher pressures or when a vacuum is applied.

#### Easy drain removal

The seamless soft coupling between the drain and tube enables the safe and gentle removal of completely inserted drains.

#### System configuration

The pre-attached collection bag allows the usage as closed system instantly.

### Details

- ▶ Flat drain made from 100 % medical silicone
- ▶ Perforated at 3/4 length or full length with gently rounded atraumatic holes
- ▶ Central opening
- ▶ Fully radiopaque drain tube
- ▶ Double packed, sterile
- ▶ Latex-free

### Technical Data

- ▶ **Full length:** 80 cm
- ▶ **Drain length:** 20 cm

## Ordering Information

### Soft-Drain Flat Single

REF	Height x width	Perforation	Volume collection bag	PU
2014-0071	3 x 7 mm	15 cm (3/4)	-	10
2014-0072	3 x 7 mm	20 cm (full)	-	10
2014-0101	4 x 10 mm	15 cm (3/4)	-	10
2014-0102	4 x 10 mm	20 cm (full)	-	10

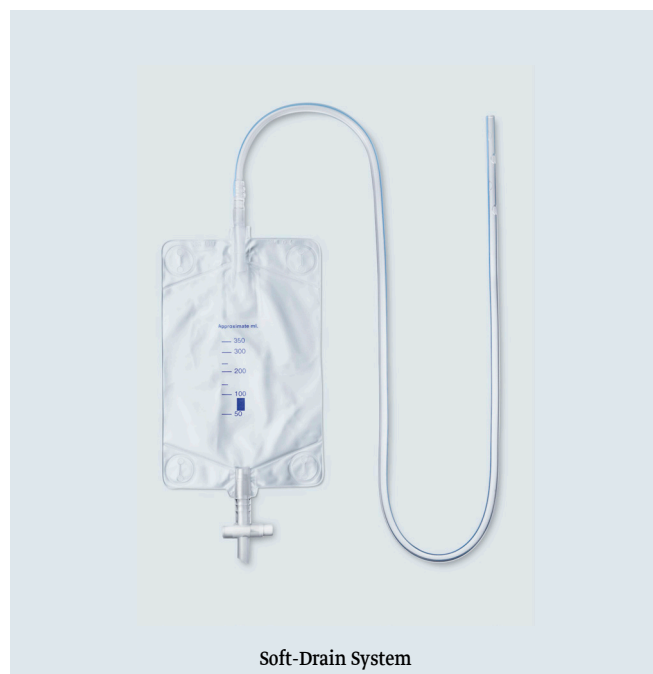
### Soft-Drain Flat System

REF	Height x width	Perforation	Volume collection bag	PU
22580	3 x 7 mm	20 cm (full)	350 ml	10
22581	4 x 10 mm	20 cm (full)	350 ml	10

## Soft-Drain

The **Soft-Drain Single** is a round silicone drain for open or half-open wound drainage by gravity.

### View



The **Soft-Drain System** consists of a round silicone drain and a collection bag with outlet.

### Benefits

#### Gentle drainage

Five laterally offset atraumatic holes and a gently rounded central opening ensure gentle drainage.

#### System configuration

The pre-attached collection bag allows the usage as closed system instantly.

### Details

- ▶ Round drain made from 100 % medical silicone
- ▶ Fully radiopaque
- ▶ Double packed, sterile
- ▶ Latex-free

### Technical Data

- ▶ **Drain length:** 50 cm
- ▶ **System configuration drain length:** 100 cm
- ▶ **Volume collection bag:** 350 ml

## Ordering Information

### Soft-Drain Single

REF	Size	PU
21930	CH 09	20
21931	CH 12	20
21932	CH 14	20
21933	CH 16	20
21945	CH 18	20
21934	CH 20	15
21935	CH 24	15
21936	CH 26	15
21937	CH 30	10
21938	CH 33	10
21939	CH 36	10

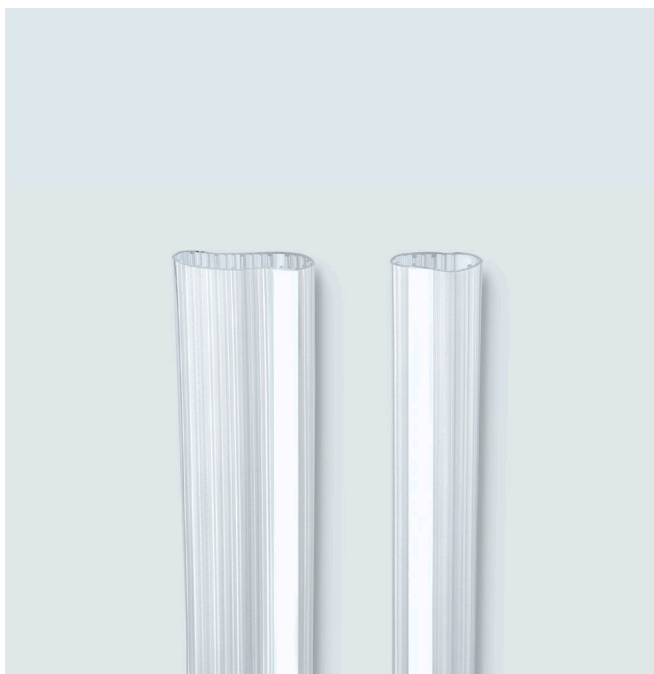
### Soft-Drain System

REF	Size	Volume collection bag	PU
-	-	-	-
22120	CH 12	350 ml	10
22121	CH 14	350 ml	10
22122	CH 16	350 ml	10
22123	CH 18	350 ml	10
22124	CH 20	350 ml	10
22125	CH 24	350 ml	10
22126	CH 26	350 ml	10
22127	CH 30	350 ml	10
22128	CH 33	350 ml	10
22129	CH 36	350 ml	10

## Dispo-Flow

The **Dispo-Flow** is a capillary drain made from silicone with inner ribbing for gentle wound drainage by means of capillary suction and gravity.

### View



### Benefits

#### Gentle drainage

The Dispo-Flow is an alternative to conventional latex penrose drainage. It is suitable for wound drainage in indications when the application of a vacuum is contraindicated but sufficient drainage performance is required.

### Details

- › Capillary drain made from 100 % medical silicone
- › Central opening
- › Fully radiopaque
- › Double packed, sterile
- › Latex-free
- › DEHP-free

### Technical Data

- › **Width:** 8 mm - 12 mm
- › **Length:** 30 cm / 50 cm

### Ordering Information

REF	Width	Length	PU
22533	8 mm	30 cm	25
22535	8 mm	50 cm	25
22553	10 mm	30 cm	25
22555	10 mm	50 cm	25
22573	12 mm	30 cm	25
22575	12 mm	50 cm	25

## Endo-Drain

The **Endo-Drain** is a fluted silicone drain for gravity application or for usage with low-vacuum-suction systems. The Endo-Drain Set contains a pre-attached needle and a J-Connector

### View



### Benefits

#### Excellent placement

The high-quality stainless steel of the pre-attached disposable needle ensures an always perfectly sharp needle for optimal placement.

#### Easy removal

The design of the drainage channels makes the removal of the drain easy because of the low incidence of tissue growth.

#### Kink resistant

The structure of the drainage material ensures a high level of kink resistance.

#### Easy inspection

The transparent connection tube allows an easy visual inspection of the tube.

#### Very good biocompatibility

The fluted drainage tube is made from 100 % medical silicone for very good biocompatibility.

#### Including J-Connector

The accompanying J-Connector allows a connection to a reservoir with internal spring.

### Details

- ▶ Fully radiopaque
- ▶ Double packed, sterile
- ▶ Latex-free
- ▶ Drainage can be shortened

### Technical Data

- ▶ **Drain length:** 120 cm
- ▶ **Drainchannel length:** 30 cm

### Ordering Information

REF	Size	Needle/Connector	PU
2015-9710J	10 FR	Yes	10
2015-9715J	15 FR	Yes	10
2015-9719J	19 FR	Yes	10
2015-9721J	21 FR	Yes	10

## Koelner Drainage

The **Koelner Drainage** is a reservoir for post-operative wound drainage without suction. It allows the drainage of wound areas in which Redon drains are used without negative pressure.

### View



### Benefits

#### Hygienic 3 µm-outlet filter

When used as a gravity drainage the 3 µm-outlet filter allows easy escape of excess air in the reservoir.

#### OR-Version with universal Redon connector

The tube with transparent universal Redon connector CH 06 - CH 18 for connection to the drain is pre-attached.

### Detail View



### Details

- ▶ Luer-Lock connection
- ▶ Crystal-clear material for reliable qualitative assessment of secretions
- ▶ Rough and fine graduation for at-a-glance information about current fill levels
- ▶ Quick-release fasteners included
- ▶ Double packed, sterile
- ▶ Latex-free
- ▶ Redon bottle DEHP-free

### Technical Data

- ▶ **Bottle volume:** 400 ml

### Ordering Information

REF	Version	Connection	PU
20384	Ward	Luer-Lock	40
20385	OR	Luer-Lock	40

## Biliary drainage bag

The **biliary drainage bag** is a collection bag for secretions from the drainage of post-operative wounds using gravity drainage.

### View



### Benefits

#### Simple control of fill level

The graduation of the bag provides an at-a-glance information about current fill levels.

#### Various configurations

Multiple versions offer a wide range of connection options as needed.

### Detail View



### Details

- ▶ Made from medical PVC, DEHP-free
- ▶ With outlet depending on configuration

### Technical Data

- ▶ **Volume:** 500 ml - 2000 ml
- ▶ **Tubing length:** 800 mm


### Ordering Information


REF	Picture	Version	Bag	Volume	PU
24008	1	Luer-Lock, male	No outlet	1500 ml	25
24017	2	Luer, male / connector for T-Drain	No outlet	1500 ml	25
24016	3	Luer-Lock, male / tubing adapter Luer, male / connector for T-Drain	No outlet	1500 ml	25
24022	3	Luer-Lock, male / tubing adapter Luer, male / connector for T-Drain	Bottom outlet	2000 ml	25
24028	4	3-way-stopcock (Luer-Lock, male/female)	Bottom outlet	500 ml	10


**For your notes**

## Contact

Should you have any questions our Customer Solutions Team is happy to advise you.

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