



Hospital Care & OPM

## MEA Product Summary

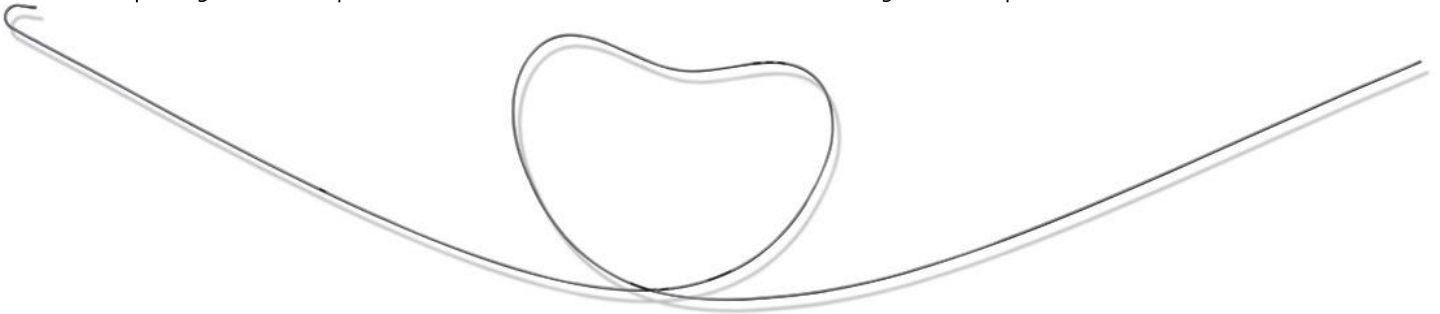
### Kink-Proof Guide Wire and Valve Needle – The ultimate tools for safe catheter placement

The new kink-proof guide wire from B. Braun makes placement of central venous catheter safe and easy even when confronted with difficult anatomical situation. The material of the guide wire flexibly adapts to the course of the vein but remains firm enough for easy advancement. When encountering anatomical obstacles the kink-proof guide wire does not bend or kink but resumes its straightness immediately after passing the barrier.

The kink-proof guide wire makes catheter insertion smooth by

- Its kink-proof flexibility
- Optimized tensile strength and
- Ideal ratio of flexibility and resilience

The kink-proof guide wire is part of all multi-lumen Certofix® Prime sets including Certofix® protect and Certofix® Paed sets.



B. Braun offers in all V-sets a unique introducer needle with a second hub. This allows the user to introduce the guide wire through the second hub without the need for removing the syringe from the introducer needle before. The medical doctor saves time after vein puncture and has a low risk of wrong manipulation and missing the vein.

The V-sets of B. Braun offer an unique combination of safety components which fits into each like a puzzle:



- Safe cannulation of the vein with the valve needle
- Quick, blood-free introduction of the guide wire via the second hub
- Smooth advancement of the kink-proof guide wire thanks to extreme flexibility but adequate stiffness
- Atraumatic soft tip and perfectly manufactured catheter surface reduce risk of endothelial damage
- A Safsite® valve on each lumen prevents the life-threatening risk of air embolism due to unintended loosening of the infusion lines.

B. Braun Certofix®: more certainty, more safety, more success

### Certofix® protect – Antipathogenic central venous catheter for long-term protection against catheter infection

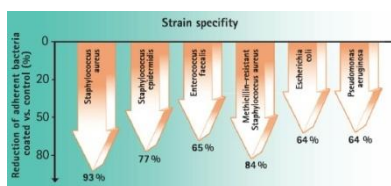


Certofix® Trio protect

The newly developed Certofix® protect catheter from B. Braun brings together all the essential features to reduce the rate of complication in critically ill patients.

- Polyurethane catheter with surfaces chemically modified to repel bacteria efficiently
- Active agents are irreversibly bonded and fixed to the catheter surface – no leaching could occur even during long-term use
- Chemical groups are well-known and highly tolerated by humans to avoid any adverse reactions like allergic sensitization reactions.
- Antiseptic groups made of polyhexanide and hydrophilic groups give the Certofix® protect a unique combination of antibacterial and anti-thrombogenic effect
- First and only catheter with antibacterial lumen protection up to the hub ideally suited for long-term treated patients in the ICU

#### Product description:



Efficiency of Certofix® protect against various bacterial strains.

- Multi-lumen polyurethane catheter with chemically modified lumen from soft tip to hub and modified external surface from soft tip to junction hub
- Antibacterial surface modification to prevent adhesion and growth of gram-positive and gram-negative bacteria
- Efficient against most important pathogens: MRSA, Staphylococcus aureus, Staphylococcus epidermidis, Enterococcus faecalis, Escherichia coli, Pseudomonas aeruginosa
- Anti-thrombogenic surface modification without heparine to reduce risk of thrombus aggregation
- Surface modification is bonded to catheter material for almost indefinite mode of action
- 2, 3, 4 and 5-lumen catheter sets
- 2 and 3-lumen HighFlow catheter sets
- Kink-proof guide wire and valve needle as introducer needle
- Green clamp on extension line for quick identification

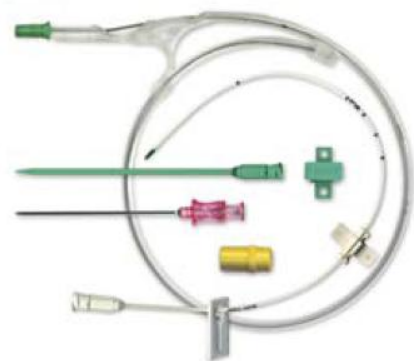
## Certofix® protect – Multi-lumen catheter for prevention of catheter colonization



Product	Code	Needle  Size, Length, mm/inch	Guide wire  ø x Length mm x cm	Catheter			Sales Unit/ pcs.	Ref. no.
				F	Length cm/inch	Channels G		
Certofix® protect Duo	V715	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	15/6"	16/16	10	4166159P
Certofix® protect Duo	V720	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	20/8"	16/16	10	4161211P
Certofix® protect Duo	V730	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	30/12 "	16/16	10	4161319P
Certofix® protect Duo HF	V720	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	20/8"	14/18	10	4168534P
Certofix® protect Trio	V715	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	15/6"	16/16/18	10	4162153P
Certofix® protect Trio	V720	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	20/8"	16/16/18	10	4163214P
Certofix® protect Trio	V730	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	7	30/12 "	16/16/18	10	4163311P
Certofix® protect Trio HF	V1220	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	12	20/8"	16/12/12	10	4160622P
Certofix® protect Quattro	V815	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	8	15/6"	16/18/18/12	10	4167767P
Certofix® protect Quattro	V820	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	8	20/8"	16/18/18/12	10	4167775P
Certofix® protect Quattro	V830	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	8	30/12 "	16/18/18/12	10	4167783P
Certofix® protect Quinto	V1220	G18, 70 / 2 7/9"	0.89 x 50 (kink-proof)	12	20/8 "	16/18/18/18 /12	10	4166868P

Introducer needle: V = Valve needle

### Certofix® Mono – Single lumen Seldinger sets with selected components



- Catheter made of highly biocompatible polyurethane
- Soft tip to reduce venous trauma
- Safety bag with Seldinger introducer needle, latex-free closing cone, dilator
- Opaque, X-ray detectable catheter with length marking
- Moveable fixation wing
- Transparent extension line with side clamp for short-term interruption
- Nitinol guide wire with one J-tip and one straight tip
- Ergonomic dispenser for easy guide wire advancement



Code	Needle		Kink-proof Guide wire ø x length  mm x cm	Catheter			Sales Unit/ pcs.	Ref. no.
	G	Length mm/inch		Size	ø mm	Length cm/inch		
Single lumen polyurethane catheter with soft tip, slide clamp, moveable fixation wing, guide wire with J-tip, dilator , Seldinger introducer needle, closing cone								
Mono 215	S, 20	50/2"	0.63 x 50	4F/18G	1.4	15/6"	10	4160185E
Mono 220	S, 20	50/2"	0.63 x 50	4F/18G	1.4	20/8"	10	4160207E
Mono 315	S, 18	70/2 7/9"	0.89 x 50	5F/16G	1.7	15/6"	10	4160223E
Mono 320	S, 18	70/2 7/9"	0.89 x 50	5F/16G	1.7	20/8"	10	4160258E
Mono 330	S, 18	70/2 7/9"	0.89 x 70	5F/16G	1.7	30/12"	10	4160282E
Mono 415	S, 18	70/2 7/9"	0.89 x 50	6F/14G	2.1	15/6"	10	4160509E
Mono 420	S, 18	70/2 7/9"	0.89 x 50	6F/14G	2.1	20/8"	10	4160304E
Mono 430	S, 18	70/2 7/9"	0.89 x 70	6F/14G	2.1	30/12"	10	4160762E

Introducer needle, S = Seldinger needle

### Certofix® Duo/Trio – Multi-lumen Seldinger sets with selected components



- Catheter made of highly biocompatible polyurethane
- Soft tip to reduce venous trauma
- Safety bag with Seldinger introducer needle, closing cones & dilator
- Opaque, X-ray detectable catheter with length marking
- Moveable fixation wing
- Latex-free closing cone for each lumen
- Transparent extension line with side clamp for short-term interruption
- Nitinol guide wire with one J-tip and one straight tip
- Ergonomic dispenser for easy guide wire advancement



Code	Needle		Kink-proof Guide wire ø x length  mm x cm	Catheter			Sales Unit/ pcs.	Ref. no.
	G	Length mm/inch		Size	ø mm	Length cm/inch		
Double lumen polyurethane catheter with soft tip, slide clamps, moveable fixation wing, guide wire with J-tip, dilator , 2 closing cones, Seldinger introducer needle								
Duo 715	S, 18	70/2 7/9"	0.89 x 50	7F	2.4	15/6"	10	4164156E
Duo 720	S, 18	70/2 7/9"	0.89 x 50	7F	2.4	20/8"	10	4162200E
Duo 730	S, 18	70/2 7/9"	0.89 x 70	7F	2.4	30/12"	10	4162307E
Triple lumen polyurethane catheter with soft tip, slide clamps, moveable fixation wing, guide wire with J-tip, dilator , 3 closing cones, Seldinger introducer needle								
Trio 715	S, 18	70/2 7/9"	0.89 x 50	7F	2.4	15/6"	10	4161157E
Trio 720	S, 18	70/2 7/9"	0.89 x 50	7F	2.4	20/8"	10	4163206E
Trio 730	S, 18	70/2 7/9"	0.89 x 70	7F	2.4	30/12"	10	4163303E

Introducer needle, S = Seldinger needle

### Certofix® Mono – Comprehensive single lumen catheter sets (Seldinger method)



- Catheter made of highly biocompatible polyurethane
  - Opaque, X-ray detectable catheter with length marking
  - Transparent extension line with side clamp
- Soft tip to reduce venous trauma
- Ready-to-use set components provided inside safety bag: Dilator, Safsite® valve, ECG connection cable, 5 ml Omnifix® lock syringe (included in all V-sets)
- Integrated and moveable fixation wing (for all sets with catheter length > 15 cm, except of Mono S 215 and Mono V 215)
- Highly flexible steel guide wire with one J-tip and one straight tip
- Different introducer needles: S = Seldinger needle; V = Valve needle



Code	Needle			Guide wire ø x length  mm x cm	Catheter			Sales Unit/ pcs.	Ref. no.
	Type	G	length mm/inch		Size	ø mm	length cm/inch		
Vena jugularis									
S 215	S	20	50/ 2"	0.63 x 50	4F/18G	1.4	15/6"	10	4160185
V 215	V	20	50/ 2"	0.63 x 50	4F/18G	1.4	15/6"	10	4160193
S 315	S	18	70/2 7/8"	0.89 x 50	5F/16G	1.7	15/6"	10	4160223
V 315	V	18	70/2 7/8"	0.89 x 50	5F/16G	1.7	15/6"	10	4160231
S 320	S	18	70/2 7/8"	0.89 x 50	5F/16G	1.7	20/8"	10	4160258
V 320	V	18	70/2 7/8"	0.89 x 50	5F/16G	1.7	20/8"	10	4160266
S 415	S	18	70/2 7/8"	0.89 x 50	6F/14G	2.1	15/6"	10	4160509
V 415	V	18	70/2 7/8"	0.89 x 50	6F/14G	2.1	15/6"	10	4160517
S 420	S	18	70/2 7/8"	0.89 x 50	6F/14G	2.1	20/8"	10	4160304
V 420	V	18	70/2 7/8"	0.89 x 50	6F/14G	2.1	20/8"	10	4160320
Vena subclavia									
S 220	S	20	50/ 2"	0.63 x 50	4F/18G	1.4	20/8"	10	4160207
V 220	V	20	50/ 2"	0.63 x 50	4F/18G	1.4	20/8"	10	4160215
S 330	S	18	70/2 7/8"	0.89 x 70	5F/16G	1.7	30/12"	10	4160282
V 330	V	18	70/2 7/8"	0.89 x 70	5F/16G	1.7	30/12"	10	4160290
S 430	S	18	70/2 7/8"	0.89 x 70	6F/14G	2.1	30/12"	10	4160762
V 430	V	18	70/2 7/8"	0.89 x 70	6F/14G	2.1	30/12"	10	4160789



### Certofix® Duo/Trio – Comprehensive multi-lumen catheter sets



Certofix® Duo – Double lumen catheter

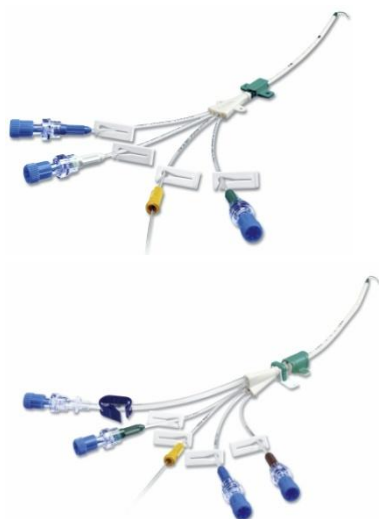
- Kink-proof guide wire with unsurpassed flexibility with J-tip and one straight tip
- Catheter made of highly biocompatible polyurethane
  - Opaque, X-ray detectable catheter with length marking
  - Transparent extension line with side clamp
- Ready-to-use set components provided inside safety bag:
  - Dilator, Safsite® valves for each hub, ECG connection cable, scalpel E11 type, 5 ml Omnifix® lock syringe (included in all V-sets)
- Soft tip to reduce venous trauma
- Integrated and moveable fixation wing
- Different introducer needles:
  - S = Seldinger needle; V = Valve needle



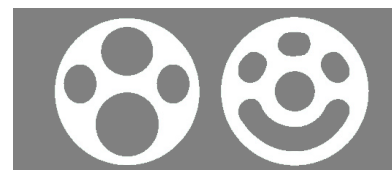
Code	Needle		Guide wire ø x length  mm x cm	Catheter				Sales Unit/ pcs.	Ref. no.
	ø Type	Length mm/inch		Size	Outer ø mm	Length cm/inch	Channels G		
Certofix® Duo – Double lumen catheter									
S 715	18G S	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	15/6"	16/16	10	4164158
V 715	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	15/6"	16/16	10	4166159
S720	18G S	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	20/8"	16/16	10	4167385
V 720	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	20/8"	16/16	10	4161211
S 730	18G S	70/2 7/9"	0.89 x 70 (kink-proof)	7 F	2.4	30/12"	16/16	10	4167394
V 730	18G V	70/2 7/9"	0.89 x 70 (kink-proof)	7 F	2.4	30/12"	16/16	10	4161319
Certofix® Trio – Triple lumen catheter									
S 715	18G S	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	15/6"	16/18/18	10	4161159
V 715	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	15/6"	16/18/18	10	4162153
S720	18G S	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	20/8"	16/18/18	10	4167408
V 720	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	7 F	2.4	20/8"	16/18/18	10	4163214
S 730	18G S	70/2 7/9"	0.89 x 70 (kink-proof)	7 F	2.4	30/12"	16/18/18	10	4163306
V 730	18G V	70/2 7/9"	0.89 x 70 (kink-proof)	7 F	2.4	30/12"	16/18/18	10	4163311



### Certofix® Quattro/Quinto – Comprehensive multi-lumen catheter sets (Seldinger method)



- Kink-proof guide wire with unsurpassed flexibility with J-tip and one straight tip
- Catheter made of highly biocompatible polyurethane
  - Opaque, X-ray detectable catheter with length marking
  - Transparent extension line with side clamp
- Soft tip to reduce venous trauma
- Ready to use set components provided inside safety bag: Dilator, Safsite® valve for each hub, ECG connection cable, scalpel E11 type, 5 ml Omnifix® lock syringe (included in all V-sets)
- Integrated and moveable fixation wing
- Different introducer needles: S = Seldinger needle; V = Valve needle



Code	Needle		Guide wire ø x length  mm x cm	Catheter				Sales Unit/ pcs.	Ref. no.
	ø Type	Length mm/inch		Size	Outer ø mm	Length cm/inch	Channels G		
Certofix® Quattro – Four lumen catheter									
V 815	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	8F	2.8	15/6"	16/18/18/14	10	4167767
V 820	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	8F	2.8	20/8"	16/18/18/14	10	4167775
V 830	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	8F	2.8	30/12"	16/18/18/14	10	4167783
Certofix® Quinto – Five lumen catheter									
V 1215	18G V	70/2 7/9"	0.89 x 50 (kink-proof)	12F	4.0	15/6"	16/18/18/18/12	10	4166841
S 1220	18G S	70/2 7/9"	0.89 x 70 (kink-proof)	12F	4.0	20/8"	16/18/18/18/12	10	4166852
V 1220	18G V	70/2 7/9"	0.89 x 70 (kink-proof)	12F	4.0	20/8"	16/18/18/18/12	10	4166868

Introducer needle: V = Valve needle S = Seldinger needle

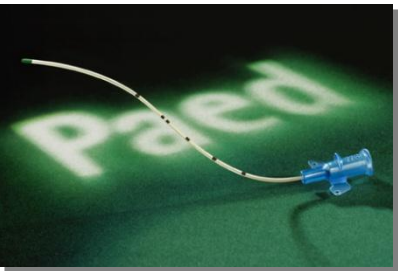
## Certofix® Duo HF/Trio HF – High flow (HF) catheter for High Flow Infusion



Code	Needle			Guide wire ø x length  mm x cm	Catheter				Sales Unit/ pcs.	Ref. no.
	Type	G	length mm/inch		F	Outer ø mm	length cm/inch	Channels G		
Double lumen polyurethane catheter with 2 large bore channels , soft tip, kink-proof guide wire with J-tip, 2 Safsite® valves, dilator, Omnifix® 5 ml lock syringe, movable fixation clip, ECG cable, introducer										
S 715	S	18	70/2 7/9"	0.89 x 50 (kink-proof)	7	2.4	15/6"	14/18	10	4168502
V 715	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	7	2.4	15/6"	14/18	10	4168518
S 720	S	18	70/2 7/9"	0.89 x 50 (kink-proof)	7	2.4	20/8"	14/18	10	4168528
V 720	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	7	2.4	20/8"	14/18	10	4168534
V 920	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	9	3.0	20/8"	13/13	10	4167511
V 1215	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	15/6"	11/11	10	4167538
V 1220	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	20/8"	11/11	10	4167546
Triple lumen polyurethane catheter with 2 large bore channels 12 G and one channel 16 G, soft tip, kink-proof guide wire with J-tip, 3 Safsite® valves, dilator, Omnifix® 5 ml lock syringe, movable fixation clip, ECG cable, introducer										
S 1215	S	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	15/6"	16/12/12	10	4160578
V 1215	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	15/6"	16/12/12	10	4160614
S 1220	S	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	20/8"	16/12/12	10	4160586
V 1220	V	18	70/2 7/9"	0.89 x 50 (kink-proof)	12	4.0	20/8"	16/12/12	10	4160622

Introducer needle: V = Valve needle S = Seldinger needle

Certofix® Mono Paed – Single lumen central venous catheter for pediatrics and neonatology (Seldinger method)



Certofix® Mono Paed

- Catheter made of PUR with soft catheter tip
  - opaque, X-ray detectable, with length markings
  - secure fixation with transparent wing fitting
- Kink-proof guide wire with unsurpassed flexibility with J-tip and one straight tip
- S = Seldinger needle G21 (0.8 x 38 mm)
- Infusion extension line, 23 cm, lock
- Blade scalpel fig. E 11 and ECG connection cable
- Discofix® 3-way stopcock



Code	Needle			Kink-proof guide wire	Catheter			Sales Unit/ pcs.	Ref. no.
	Type	G	length (mm/inch)		G	Outer ø (mm)	length cm/Inch		
S 110	S	21	38/ 1 ½"	0.46 x 250	22	0.9	10/5"	10	4160177

### Certofix® Duo/Trio Paed – Multi-lumen central venous catheter for pediatrics (Seldinger method)



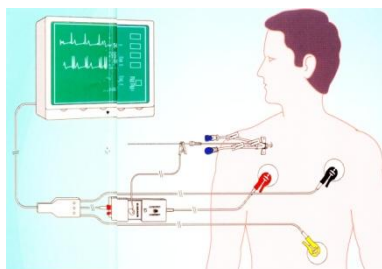
Certofix® Duo Paed with Teddy Bear fixation and Certofix® Trio Paed (here Teddy Bear fixation not shown)

- Catheter made of PUR with soft catheter tip
  - opaque, X-ray detectable, with length markings
  - color-coded fittings with Safsite® valves
- Soft, self-adhesive catheter fixation plaster in form of Teddy Bear for stitch free catheter fixation
- Kink-proof guide wire with unsurpassed flexibility with flexible J-tip and straight tip
- S = Seldinger needle G21 (0.8 x 38 mm)
- Omnifix® lock syringe, 5 ml
- Dilator, Blade scalpel fig. E11, ECG connection cable
- Movable fixation clip
- Safsite® valve to avoid air embolism



Code	Needle			Kink-proof guide wire ø x length  mm x cm	Catheter				Sales Unit/ pcs.	Ref. no.
	Type	G	length mm/inch		F / G	Outer ø (mm)	length cm/inch	Channels G		
Certofix® Duo Paed – double lumen catheter										
S 408	S	21	38/ 1 ½"	0.46 x 50	4/18	1.2	8/3 1/5"	22/22	10	4166906
S 413	S	21	38/ 1 ½"	0.46 x 50	4/18	1.2	13/5 1/5"	22/22	10	4166922
S 420	S	21	38/ 1 ½"	0.46 x 50	4/18	1.2	20 /8"	22/22	10	4166949
S 508	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	8/3 1/5"	18/20	10	4167112
S 513	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	13/5 1/5"	18/20	10	4167139
S 520	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	20/8"	18/20	10	4167155
Certofix® Trio Paed – triple lumen catheter										
S 508	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	8/3 1/5"	20/22/22	10	4167228
S 513	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	13/5 1/5"	20/22/22	10	4167244
S 520	S	21	38/ 1 ½"	0.46 x 50	5/16	1.7	20/8"	20/22/22	10	4167260

### Controlling central venous catheter placement with intra-atrial ECG



- ➔ enables immediate corrective measures to be made in the case of initial incorrect positioning of the catheter
- ➔ helps to prevent subsequent complications, particularly the risk of pericardiac perforation and catheter-induced cardiac arrhythmias
- ➔ replaces the X-ray, thus reduces the time needed and costs involved

See CVC-partner No. 2 brochure (ref. no. 6042589) for more details.

### Certodyn® Universal Adapter



- Rapid connection to any kind of ECG monitor
- May be switched from extracorporeal to intra-atrial ECG
- No x-ray required, no radiation exposure
- Effortless identification of the P wave, clear verification of position
- No subsequent re-catheterization due to incorrect positioning
- Medicolegal aspects: ECG position monitoring provides an equivalent level of documentation through accompanying ECG print-out as would be normally available by X-ray position monitoring.

### Alphacard® – CVC placement verification without x-ray

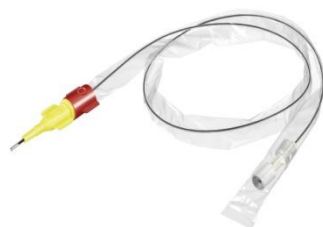


ECG control of catheter positioning with B. Braun Alphacard®

- Is quick and easy to handle
- Gives reliable signals
- Avoids hazardous x-ray's and
- Can be used during and after (!) placement of the central venous (Operating Theatre and ICU)
- Simple connection of syringe to distal hub of CVC and of electrode cable to Certodyn® Universal adapter

Article	Description	Ref. no.
Certodyn®	Universal adapter	4150228
Certodyn®	Universal adapter Paed	4150724
Alphacard®	Syringe with electrode cable to universal adapter for measurement of intra-atrial ECG	U1800401

### Cavafix® – Single lumen „Catheter-through-cannula“ central venous catheter



Cavafix® Certo® Mono

- Cavafix® MT
  - made of polyethylene
  - easy placement due to semi-rigid catheter material
  - protective sheath for „No-touch“-technique
- Cavafix® Certo® Mono
  - made of polyurethane (Certon®)
  - transparent, three embedded X-ray contrast lines and catheter markings
  - catheter length embossed on fitting
  - protective catheter sheath
- Catheter brake and lock fitting
- With Braunüle® MT introducer cannula
- Stabilizing stylet for easier manipulation






Article	Code	Braunüle®		Catheter			Sales Unit/ pcs.	Ref. no.
		G	length (mm/inch)	G	inner x outer ø (mm)	length (cm/inch)		
Vena jugularis								
Cavafix® MT	134	18	40/ 1 3/5"	20	0.5 x 0.9	32/13"	50	4286340
Vena jugularis								
Cavafix® Certo® Mono	255	16	50/2"	18	0.8 x 1.4	45/18"	50	4152557
Cavafix® Certo® Mono	335	14	50/2"	16	1.1 x 1.7	32/13"	50	4153359
Cavafix® Certo® Mono	355	14	50/2"	16	1.1 x 1.7	45/18"	50	4153553
Cavafix® Certo® Mono	455	12	50/2"	14	1.4 x 2.1	45/18"	50	4154550
Vena subclavia								
Cavafix® Certo® Mono	257	16	70/2 7/9"	18	0.8 x 1.4	45/18"	50	4152573
Cavafix® Certo® Mono	338	14	80/3 1/5"	16	1.1 x 1.7	32/13"	50	4153383
Cavafix® Certo® Mono	358	14	80/3 1/5"	16	1.1 x 1.7	45/18"	50	4153588
Cavafix® Certo® Mono	458	12	80/3 1/5"	14	1.4 x 2.1	45/18"	50	4154584
Vena basilica								
Cavafix® Certo® Mono	275	16	50/2"	18	0.8 x 1.4	70/28"	50	4152751
Cavafix® Certo® Mono	375	14	50/2"	16	1.1 x 1.7	70/28"	50	4153758
Cavafix® Certo® Mono	475	12	50/2"	14	1.4 x 2.1	70/28"	50	4154754

### Mini-Spike® – Vented dispensing pin for injections and withdrawals from vials or semi-rigid containers



- For all conventional multi-dose containers with 3-1000 ml
- Needle-free technology
- Tight-sealing snap cap which protects contact contamination of the connector
- Integrated air vent making over-pressure release techniques unnecessary, excellent flow rate
- Easy handling and excellent hygiene for repeated withdrawal of fluids
- Color coding of the snap cap allows better differentiation
- *Micro-Tip*: with short length designed for smaller vials
- *Mini-Spike® Chemo*: with aerosol-retentive air filter which reduces the risk of contamination with toxic aerosols
- *Mini-Spike® V*: the integrated valve prevents the solution from leaking out after disconnecting the syringe

Article		Description	Sales Unit/ pcs.	Ref. no.	PVC-free	DEHP-, Latex-free
With 0.45 µm bacteria-retentive air filter						
Mini-Spike®		Standard Tip	50	4550242	●	●
Mini-Spike® Micro-Tip		Micro-Tip	50	4550510	●	●
Mini-Spike® V		Standard Tip with integrated valve	50	4550560	●	●
With 0.45 µm bacteria-retentive air filter and 5 µm particle filter						
Mini-Spike® Filter		Standard Tip	50	4550234	●	●
Mini-Spike® Filter Micro-Tip		Micro-Tip	50	4550528	●	●
Mini-Spike® Filter V		Standard Tip with integrated valve	50	4550579	●	●
With 0.2 µm aerosol-retentive air filter and 5 µm particle filter						
Mini-Spike® Chemo		Standard Tip	50	4550340	●	●
Mini-Spike® Chemo Micro-Tip		Micro-Tip without particle filter	50	4550536	●	●
Mini-Spike® Chemo V		Standard Tip with integrated valve	50	4550587	●	●



### Intrapur® Inline – Infusion filter set for the application of chemotherapeutic agents



- Ready to use infusion set with 0.2 µm infusion filter
- Bacteria and particle retention
- Recommended period of use: 24 hours
- Reliable air venting regardless of position
- High flow volume

Article	Description	Sales Unit/ pcs.	Ref. no.	PVC- free	DEHP-, Latex- free
Intrapur® Inline	Inline filter set	20	4099842N	●	●






### Medifix® – Infusion system for measurement of the Central Venous Pressure



- **Medifix® tube system:**
  - with or without IV administration set Intrafix® Primeline
  - Discofix® 3-way stopcock
  - bacteria-tight venting of manometer tube
  - screw-tight Luer-Lock fitting
- **Medifix® manometer scale:**
  - graduation from +35 to -15 cm H<sub>2</sub>O
  - good readability for the measured value because of magnifying effect
  - zero-position indicator movable to either side
  - break-proof plastic
  - reusable
  - with two universal fixation clamps

Article	Description	IV Set	Sales Unit/ pcs.	Ref. no.	PVC- free	DEHP-, Latex- free
Medifix®	Short manometer tube, 100 cm	—	50	4276116	—	●
Medifix®	Long manometer tube, 180 cm	—	50	4276108	—	●
Medifix®	Short manometer tube, 100 cm	With Intrafix® Primeline, length of tubing 80 cm	50	4276620	—	●
Medifix®	Short manometer tube, 100 cm	With Intrafix® Primeline, length of tubing 145 cm	50	4276612	—	●
Medifix®	Long manometer tube, 180 cm	With Intrafix® Primeline, length of tubing 80 cm	50	4276728	—	●
Medifix®	Manometer scale	—	10	4279913	●	●

## Infusion filters – Recommendations

Solutions	Infusion filters	
Crystalloids / Drugs e.g. Sterofundin, Ringer, Sod. Chloride, Glucose, Amino acids	Intrapur® plus 0,2 µm, positively charged	
Lipids, e.g. Lipofundin, Lipidem	Intrapur® Lipid 1,2 µm	
Antibiotics	Intrapur® plus 0,2 µm, positively charged	
Volume Replacement, e. g. Gelatine	Intrapur® Lipid 1,2 µm or Intrapur® 0,2 µm via pressure infusion	
Blood	No infusion filter	
Cytostatics, e.g. Taxol	Sterifix 0,2 µm, non-charged	

## Sterifix® – Infusion filters

Sterifix®

Sterifix® Paed

Sterifix® Neonat





- 0.2 µm filter
- Low protein binding
- Bacteria retention
- Fungi retention
- Particle retention
- Air elimination
- Latex-free, DEHP-free

Article	Filtration area (cm²)	Flow rate (aqua dist., ml/min)	Filling volume		Tubings ø (mm)	Max. operation Pressure of Filter housing	Time of use recommended	Sales Unit/ pcs.	Ref. no.
			Filter housing (ml)	total incl. tubing (ml)					
Sterifix® Sterifix® Paed, Sterifix® Neonat (0.2 µm filter)									
Sterifix®	10	> 30	2.4	3.46	PVC 2x4.1	3.1	24 h	50	4099303
Sterifix®	10	> 30	2.4	4.54	PUR 3x4.1	3.1	24 h	50	4184637
Sterifix® Paed	4.5	> 10	0.7	0.7	No tubing	3.1	24 h	50	4099354
Sterifix® Neonat	1.65	> 2	0.4	0.76	PUR 1x2.35	5.2	24 h	50	4099257

PVC\* = PVC (DEHP-free)

## Sterifix® – Injection and aspiration filters

Article	Particle retention	Bacteria retention	Special features	Pore size	Sales Unit/ pcs.	Ref. no.
Sterifix® injection filter 	●	●	Suitable as syringe filter Lock fitting	0.2 µm	200	4099206
Sterifix® Pury 	●		Suitable as syringe filter Lock fitting	5 µm	100	4551001

## Easypump® II ST – LT – Elastomeric pump for short and long term infusion



### Prescribe 'Home and Mobility'

Newly available  
from B. Braun

Home is the best therapy. We are well aware of that. For this reason B. Braun developed a solution for the treatment of patients who need antibiotic or chemotherapy: *Easypump® II*

The elastomeric infusion pump enables physicians to relocate medical therapy to the outpatient care. While patients benefit from a rapid mobilization, hospitals profit from a reduced length of stay. *Easypump® II* – experience the options.

- Can be used in chemotherapy, antibiotics and IV pain management either in adults and pediatric patients
- High comfort for the patient inside the hospital but also for outpatient treatment due to small configuration and no maintenance (no alarm, no battery)
- Carry pouches allow unrestricted movement of patients during recreation/rehabilitation
- Integrated air venting and particulate filter
- **Latex-free product portfolio**
- **DEHP-free**
- Small and light (especially as therapy progresses)
- When filled to nominal volume, the flow accuracy is +/- 15 %



### User benefits

- Reduced work load for healthcare workers
- Safe and flexible therapy options
- Suitable for hospital and home use
- Discrete and comfortable therapy

### Description

*Easypump® II* elastomeric infusion pumps are designed to give clinicians and nurses the option to deliver pre-determined amounts of medication to the patient in a continuous and accurate manner, either in the hospital or at home.

*Easypump® II* is independent from main power supplies or batteries, enabling the patient to be treated in an ambulatory manner. Medication is delivered to the patient by positive pressure applied by the elastomeric membrane. The flow rate is determined by the combination of the flow regulation device (flow restrictor) and the positive pressure of the elastomeric membrane. This pressure delivers the solution against the back-pressure of catheters and blood pressure in the veins. Back-pressure affects the flow rate.

Product Specifications	Nominal filling volume	Nominal flow rate	Nominal infusion time	Ref. no.
<i>Easypump® II LT (long-term-infusion time)</i>				
Easypump® II LT 60-12-S	60 ml	5 ml/h	12 h	4540002
Easypump® II LT 500-12.5-S	500 ml	40 ml/h	12.5 h	4540003
Easypump® II LT 80-16-S	80 ml	5 ml/h	16 h	4540004
Easypump® II LT 125-25-S	125 ml	5 ml/h	25 h	4540006
Easypump® II LT 270-27-S	270 ml	10 ml/h	27 h	4540008
Easypump® II LT 60-30-S	60 ml	2 ml/h	30 h	4540010
Easypump® II LT 120-30-S	120 ml	4 ml/h	30 h	4540012
Easypump® II LT 400-40-S	400 ml	10 ml/h	40 h	4540014
Easypump® II LT 100-50-S	100 ml	2 ml/h	50 h	4540016
Easypump® II LT 270-54-S	270 ml	5 ml/h	54 h	4540018
Easypump® II LT 120-60-S	120 ml	2 ml/h	60 h	4540020
Easypump® II LT 100-67-S	100 ml	1.5 ml/h	67 h	4540024
Easypump® II LT 270-68-S	270 ml	4 ml/h	68 h	4540026
Easypump® II LT 400-80-S	400 ml	5 ml/h	80 h	4540022
Easypump® II LT 400-100-S	400 ml	4 ml/h	100 h	4540028
Easypump® II LT 65-130-S	65 ml	0.5 ml/h	130 h	4540030
Easypump® II LT 270-135-S	270 ml	2 ml/h	135 h	4540032
Easypump® II LT 300-150-S	300 ml	2 ml/h	150 h	4540034
Easypump® II LT 100-200-S	100 ml	0.5 ml/h	200 h	4540036
Easypump® II LT 270-270-S	270 ml	1 ml/h	270 h	4540038
<i>Easypump® II ST (short-term-infusion time)</i>				
Easypump® II ST 100-0.5-S	100 ml	200 ml/h	0.5 h	4540040
Easypump® II ST 250-0.5-S	250 ml	500 ml/h	0.5 h	4540042
Easypump® II ST 50-1-S	50 ml	50 ml/h	1 h	4540044
Easypump® II ST 100-1-S	100 ml	100 ml/h	1 h	4540046
Easypump® II ST 250-1-S	250 ml	250 ml/h	1h	4540048
Easypump® II ST 250-1.5-S	250 ml	167 ml/h	1.5h	4540050
Easypump® II ST 400-2-S	400 ml	200 ml/h	2 h	4540052
Easypump® II ST 500-2-S	500 ml	250 ml/h	2 h	4540054
Easypump® II ST 100-2-S	100 ml	50 ml/h	2 h	4540056
Easypump® II ST 400-4-S	400 ml	100 ml/h	4 h	4540058

All Easypump® II ST-LT variants are provided in boxes of 10 units.

Classification: Easypump® II elastomeric pumps are manufactured according to ISO 13485 and are in conformity with the following standards: - European Community (CE Mark) class IIb Medical Device Directive (MDD); - Product certified TÜV Product Service No. 0123 in accordance with 93/42/EEC; - ISO 28620: 2010 (E), particular requirements for the safety of infusion pumps and controllers.

### Easypump® C-bloc RA – Ambulatory elastomeric pump for Pain Therapy



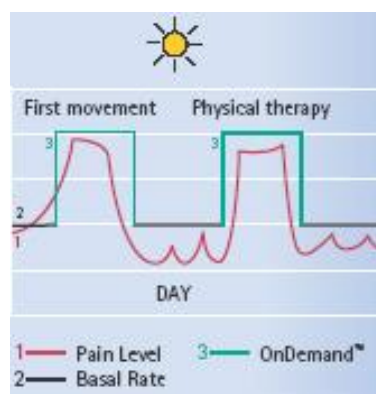
Elastomeric balloon



left: On-Demand™ piston for patient control analgesia

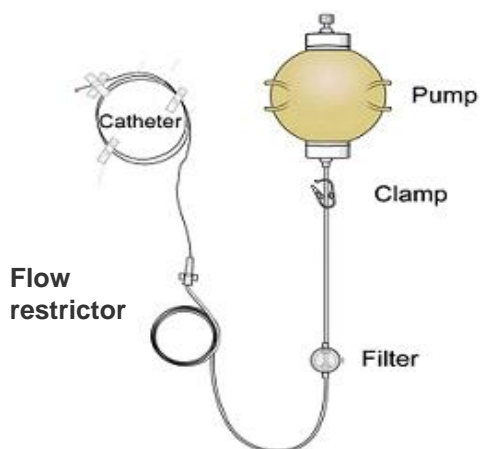


right: Select-A-Flow™ device for adjusting the flow rate







Principle of patient controlled analgesia using the On-Demand™ device

- Elastomeric pump without any mechanical or motor driven parts for continuous infusion of pain relieving drugs – single use for one patient
- 3-layer balloon with damage resistant outer shell and chemical inert inner layer (stability data for 35 drugs available)
- Middle, elastomeric layer made from latex provides continuous flow (accuracy  $\pm 15\%$ )
- Latex layer is completely embedded and does not have any contact to the anesthetic drug
- High comfort for the patient inside the hospital but also for outpatient treatment due to small configuration and no maintenance (no alarm, no battery)
- Carry pouches allow unrestricted movement of patients during recreation/rehabilitation
- Three fixed flow models (5, 8 or 10 ml/h) and four models with flexible flow rate or bolus function for improved patient satisfaction
- On-Demand™ device for patient controlled analgesia (PCA) allows additional infusion of local anesthetic drug (5 ml bolus) during peaks of pain sensation
- Select-A-Flow™ device replaces the standard flow restrictor and enables the medical doctor to adjust the basal flow rate according to the level of pain sensation. For example immediately after surgery a flow rate of 14 ml/h is chosen whereas at later time the flow rate could be reduced to 8 ml/h or even 2 ml/h






### Specification of Easypump® C-bloc RA with fixed flow rate:

- Elastomeric balloon, 400 ml or 270 ml with Luer-Lock hub for filling
- Infusion line, fully transparent, with clip, flow restrictor and Luer-Lock hub
- Flow restrictor (fixation on patient skin!)
- Filter: 1,2 µm particulate; 0,02 µm air eliminating
- When filled to nominal volume, the flow accuracy is +/- 15 %

Product Specifications	Color Code/Flow Rate	Filling Volume	Sales Unit/ pcs.	Ref. no.
Easypump® C-bloc™ RA Fixed Flow Rate	 5 ml/h	400 ml	10	4440003
Easypump® C-bloc™ RA Fixed Flow Rate	 8 ml/h	400 ml	10	4440004
Easypump® C-bloc™ RA Fixed Flow Rate	 10 ml/h	400 ml	10	4440005
Easypump® C-bloc™ RA Fixed Flow Rate + OnDemand™ (5 ml Bolus, 60 minutes lock-out period)	 5 ml/h	400 ml	10	4440006
Easypump® C-bloc™ RA + Select-A-Flow™	2 ml/h – 14 ml/h	400 ml	10	4440007
Easypump® C-bloc™ RA + Select-A-Flow™ + OnDemand™ (5 ml Bolus, 30 minutes lock-out period)	2 ml/h – 14 ml/h	400 ml	5	4440008
<b>Easypump® Carry Pouch</b>				
Carry Pouch for Easypump® Classic pouch small			1	4434447
Carry Pouch for Easypump® Classic pouch large			1	4434455
Carry Pouch for Easypump® Thermoisolated pouch			1	4438102

Select-A-Flow™ unit: 2 ml/h – 14 ml/h (7 steps of 2 ml/h increments) or 1 ml/h – 7 ml/h (7 steps of 1 ml/h increments)

Color-coded rings on the filling port indicate the following flow rates:  5 ml/h  8 ml/h  10 ml/h