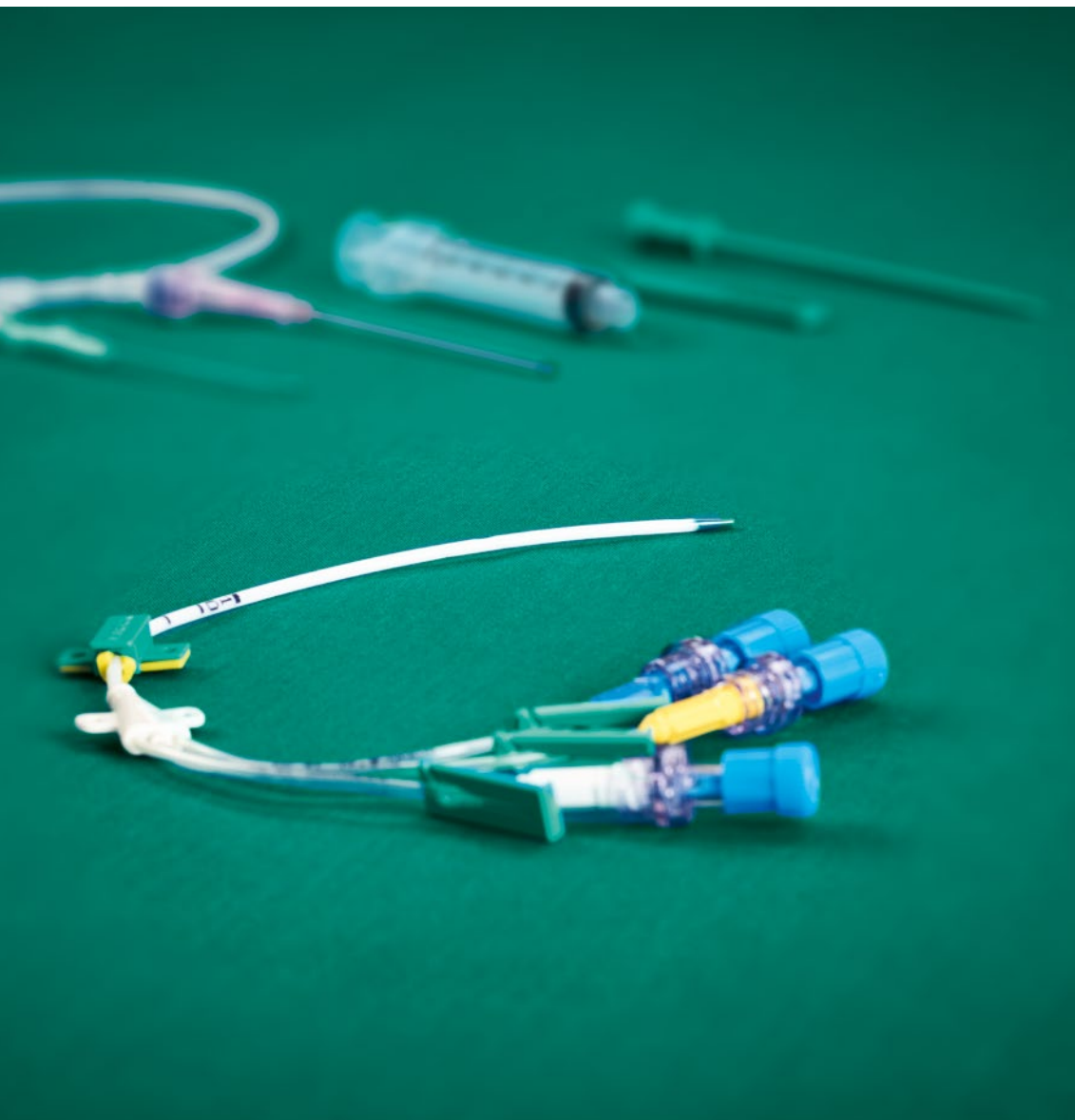




PRESCRIPTION

PATIENT ACCESS

PREPARATION

APPLICATION

DISCHARGE
MANAGEMENT

Certofix[®]

Central Venous Catheter Sets

Your Partner for Central Venous Catheters



USER ENVIRONMENTS

EMERGENCY ROOM



OPERATING ROOM



ICU



ONCOLOGY



PAEDIATRICS





BROAD RANGE OF CHOICES FOR ANY APPLICATION

The B. Braun Certofix® product range offers a comprehensive portfolio of acute central venous catheter (CVC) sets for both adult and paediatric patients. Certofix® CVCs are used in various acute care environments in the hospital.

INDICATED THERAPIES

- Vasopressors/Inotropes
 - Vessel-irritating drugs
 - Parenteral nutrition
 - IV Solutions with high osmolality
 - Chemotherapy
 - Difficult peripheral vein access
 - Hemodynamic monitoring*
 - Transfusion of blood products
-

* In combination with other devices e.g. Pulmonary Artery Catheter

CVC Placement with Certofix®

B. Braun – Your System Partner for Ultrasound-guided CVC Placement and ECG-guided Catheter Tip Positioning

POINT OF CARE ULTRASOUND GUIDED CVC PLACEMENT



Safety Seldinger needle

- Active safety clip (after use) to prevent needle stick injury



Valve needle

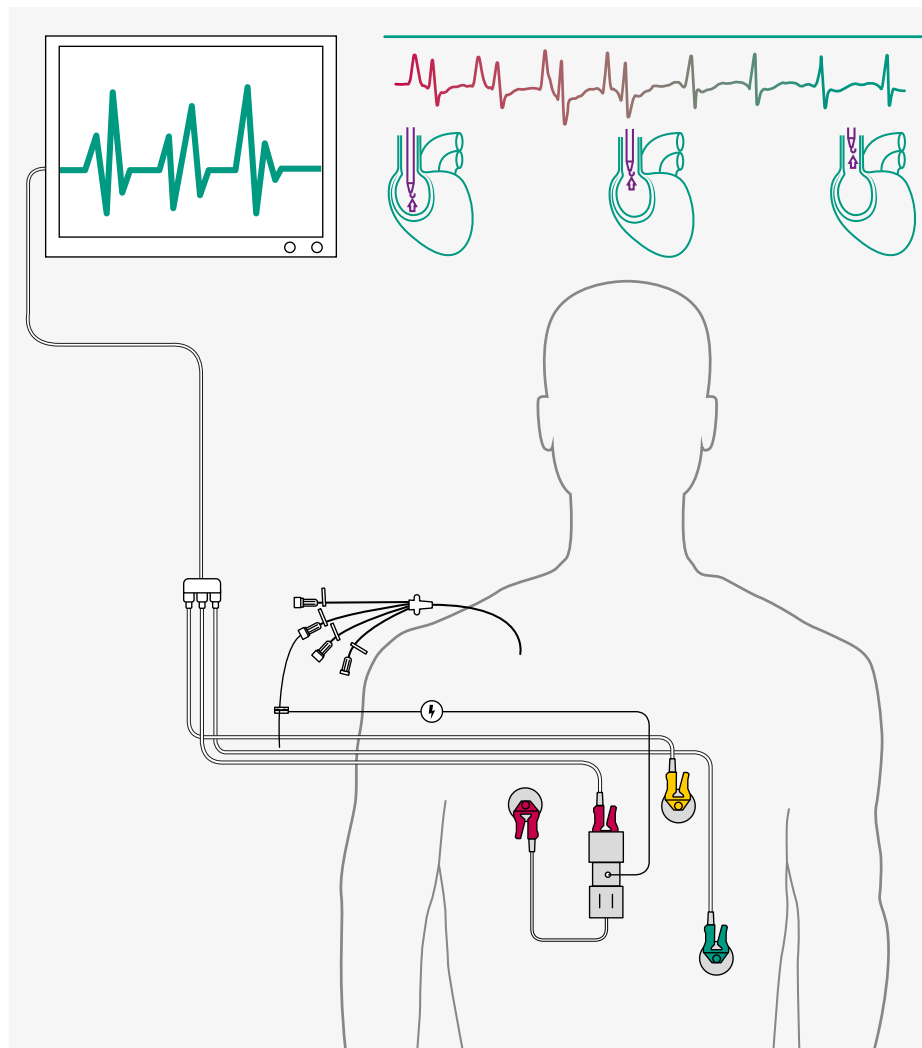
- Allows guidewire insertion and aspiration without disconnecting the syringe
- Prevents air embolism and excessive blood loss during guidewire insertion



Safety Scalpel

- The scalpel can be slid back into the housing and blocked to prevent sharps injury

ECG BASED CENTRAL VENOUS CATHETER TIP PLACEMENT AND POSITION CONTROL



The Nitinol Guidewires

- Flexible and resilient to kinking or knotting, to facilitate successful insertion of guidewire and placement of CVC
- "J" and a straight tip in one wire. Both tips are flexible and suitable for insertion
- All guidewires have length markings



Certodyn® Universal Adapters, Alphacard® and ECG Cable

- Accessories to confirm CVC tip position during or after placement via ECG. Compatible with most commonly used ECG monitors.

Selected highlight products depicted. See overview on page 8/9 (Certifix® Set Configurations).



IN-Stopper (for Certofix® Econoline only)

- Offers needle access via the integrated latex-free membrane
- Smooth outer surface for easy disinfection
- Supports contact-free Luer tapers



Safsite® valve

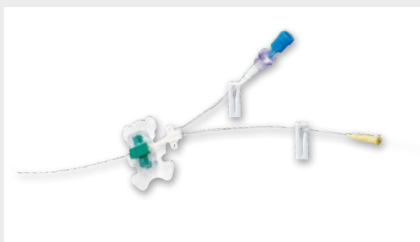
- Needle-free Injection / Infusion-Valve
- Allows infusion and blood withdrawal without flow restriction



Also available for the paediatric patients...

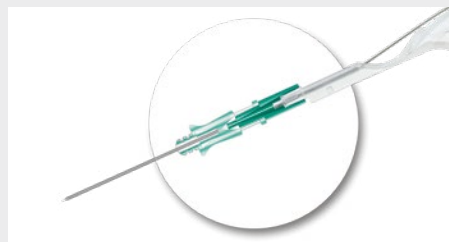
Certofix® Paed

Acute central venous catheter sets for infants and paediatric patients via Seldinger technique.



Choice of catheter

- Various sizes and lumen available for infant and paediatric patients according to age, body weight and therapy needs



Dispenser adapter

- Premounted to paediatric guidewire dispenser
- Facilitates advancing guidewire tip into the introducer needle

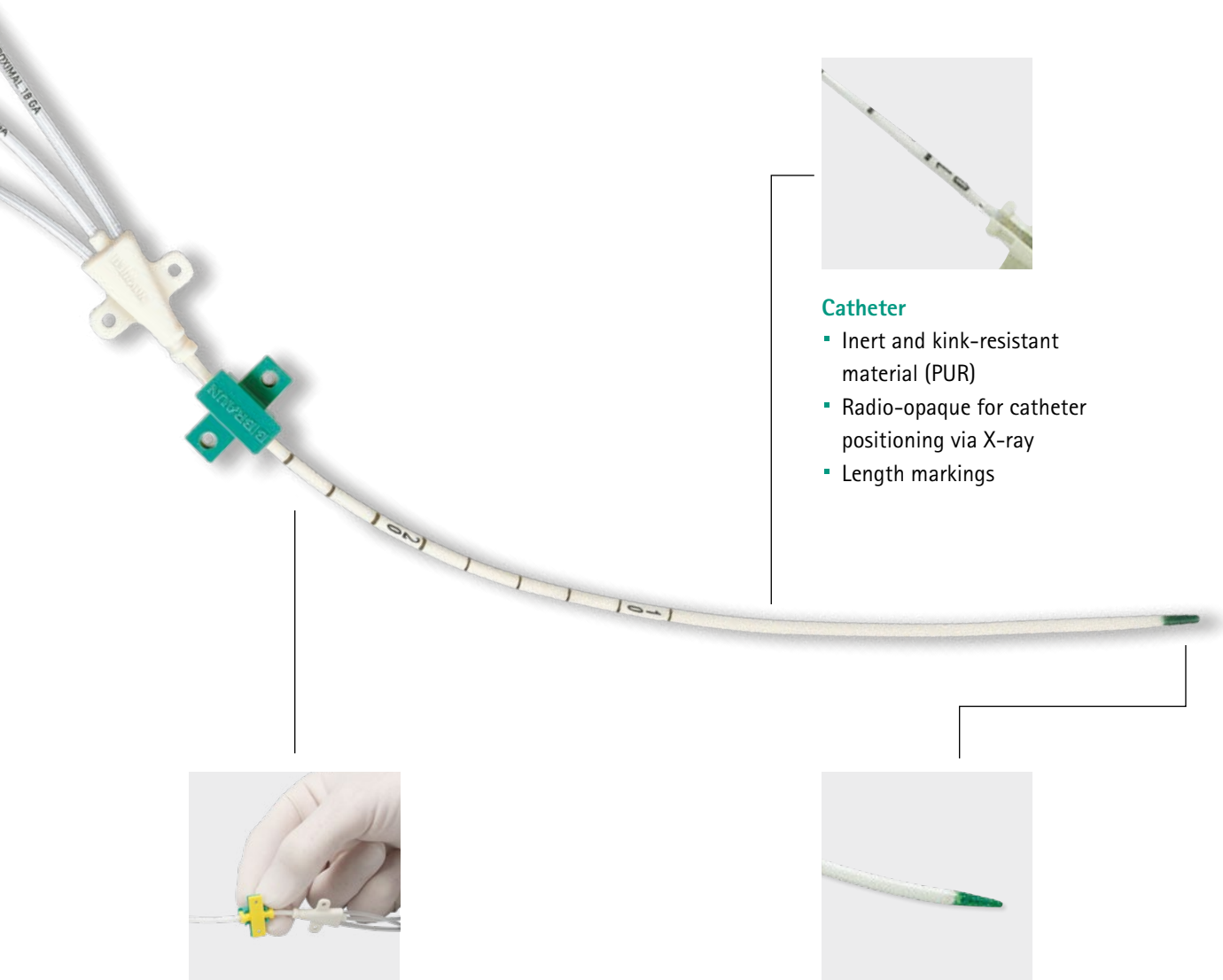
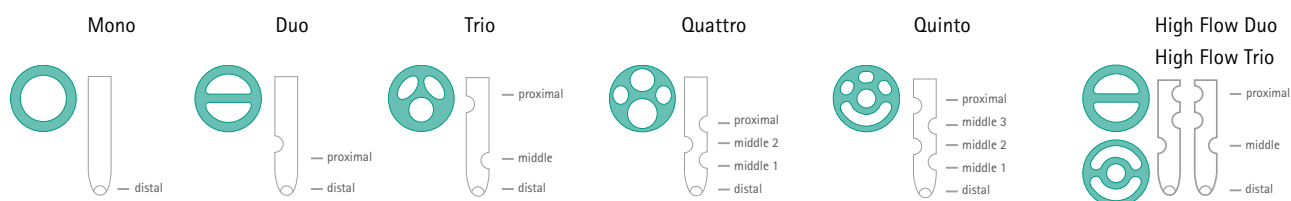


"Teddy Bear" Statlock fixation*

Non-sutured catheter fixation

- Tolerated by infants and children

Lumen Variants of Certofix® Catheters



Catheter

- Inert and kink-resistant material (PUR)
- Radio-opaque for catheter positioning via X-ray
- Length markings

Movable Fixation Clips

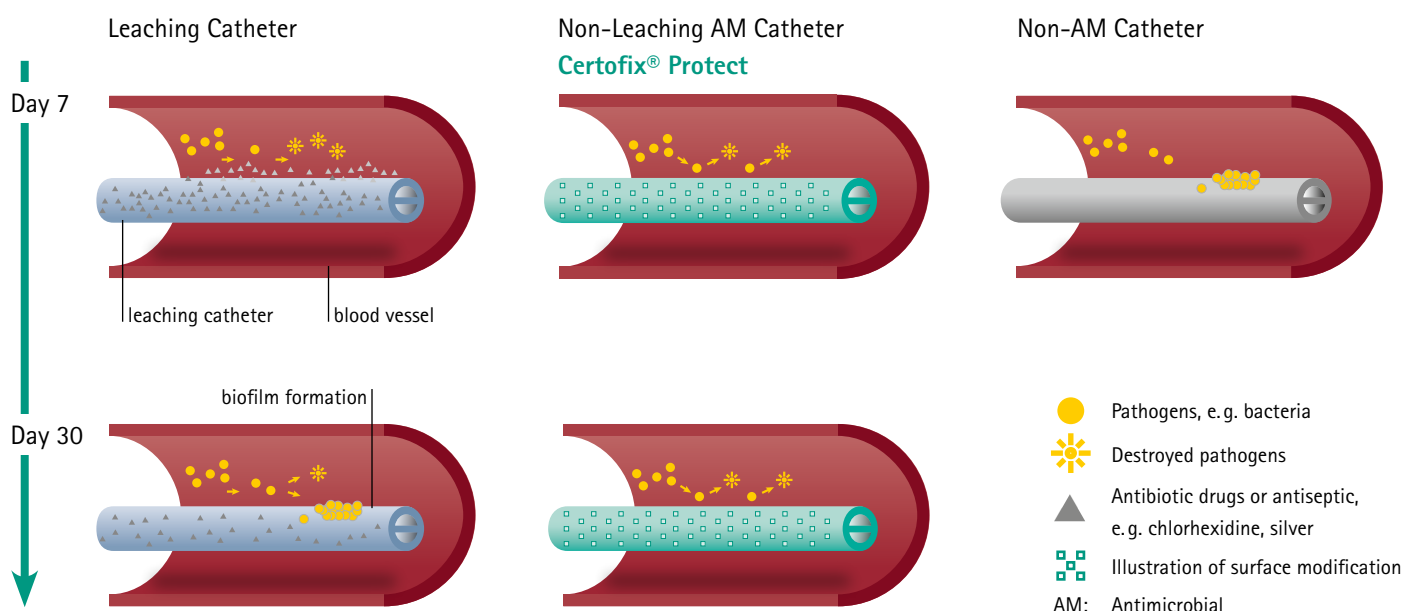
- To adjust optimal skin fixation position with sutured or non-sutured fixation

Soft tip

- Soft and pliant tip material (PUR)

Certofix[®] Protect

Central Venous Catheters with Proven Non-leaching Antimicrobial Effect
Durable over 30 Days



Antimicrobial CVCs	"Leaching"	"Non-Leaching"
Antimicrobial material	Coated or impregnated with silver, antiseptics (chlorhexidine) or antibiotic drugs	A non-leaching technology with polymer surface modification, on both outer surface and internal luminal surface
Mode of Action	Antimicrobial effect by active release of antibiotic drug or antiseptics which directly damage and inhibit pathogen growth	Antimicrobial effect by polymer surface modification, prevent adhesion of pathogens, microbial colonization and biofilm formation ⁷⁻⁹
Durability	Antimicrobial activity against pathogen declines significantly at day 7 and disappears at 28 days of dwell time ¹⁰	Antimicrobial activity does not decline. Proven durability over 30 days ⁹
Antimicrobial Spectrum	Gaps in antimicrobial spectrum from material with ionized silver or antibiotic drugs ¹⁰	Antimicrobial effect proven with all typical CLABSI* eligible pathogens ⁸⁻⁹
Risks and Concerns	- Risk of adverse effects from antibiotics¹¹ - Concern of antibiotic resistance¹¹⁻¹⁴	- Antibiotic-free

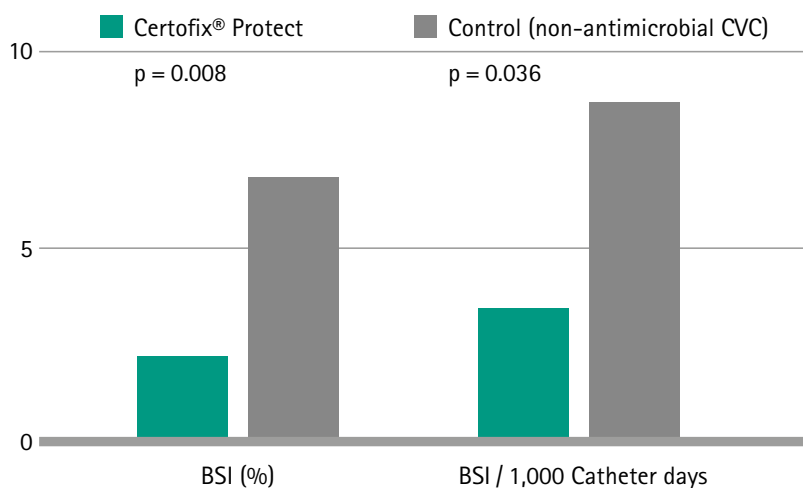
* CLABSI: Central line-associated bloodstream infections

** CRBSI: Catheter-related bloodstream infections

Note: The illustrations are to be used for explaining mechanism only

Infectious complications can occur during prolonged use of CVCs

- **Central line-associated bloodstream infections, (CLABSI)** are associated with increased morbidity, mortality, and health care costs^{1,2}
- **Biofilm formation** is the key process in the pathogenesis of CLABSI^{3,4}
- Risk of CRBSI** rapidly increase from dwell time at day 7-9⁵



A clinical study with Certofix® Protect has proven (n=616):

- Use of Certofix® Protect is associated with significant reduction of blood stream infection (BSI) from 6.5% to 2% and from 8.3 to 3.2/1,000 Catheter days
- The group using Certofix® Protect underwent less antibiotic therapy⁶



The "Roll-out" test showed:

- Certofix® Protect prevents microbial colonization and biofilm formation over 30 days
- The antimicrobial efficacy is proven with typical bacteria and fungi causing CVC associated blood stream infection⁹

The same test results were obtained for:

- Staphylococcus epidermidis, Pseudomonas aeruginosa
- Escherichia coli, Enterococcus faecalis
- Klebsiella pneumoniae
- Fungi: Candida albicans

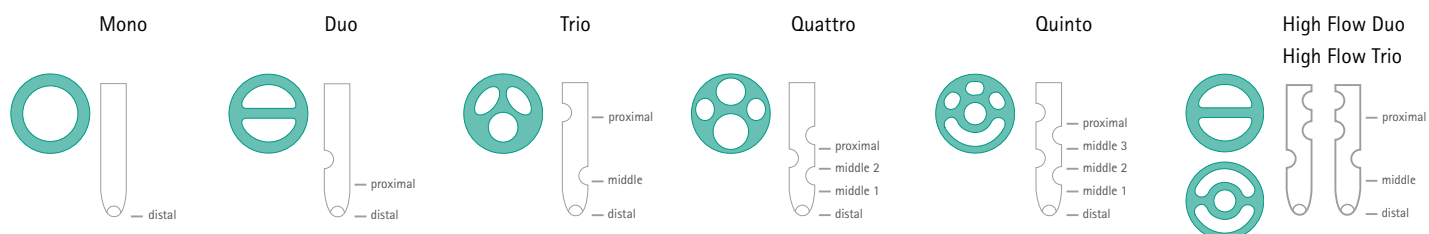


Certofix® Set Configurations

Set Configuration	Catheter Variants (only one catheter in each set)						
	Mono	Duo	Trio	Quattro	Quinto	HF Duo	HF Trio
Certofix® Standard S Sets	■	■	■		■		
Certofix® Standard V Sets	■	■	■	■	■		
Certofix® Protect	■	■	■	■	■	■	■
Certofix® High Flow						■	■
Certofix® Safety	■	■	■	■	■		
Certofix® Econoline	■	■	■				
Certofix® Paed	■	■	■				

HF: high flow

Lumen Variants of Certofix® Catheters



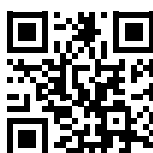
Accessories							
Introducer Needle	Nitinol Guidewire	Syringe	Scalpel	Dilator	ECG Cable	Needle-free connector	Non-sutured Fixation
Seldinger	■	■	■*	■	■	Safsite®*	
Valve	■	■	■*	■	■	Safsite®*	
Valve	■	■	■*	■	■	Safsite®*	
Valve/ Seldinger	■	■	■	■	■	Safsite®	
Safety Seldinger	■	■	■**	■	■	Safsite®*	
Seldinger	■			■		Instopper	
Seldinger	■	■	■	■*	■	Safsite® or Discofix® 3-way stopcock	Statlock

* Not in sets with Mono Lumen CVC

** Safety Scalpel



ProSet Customized CVC kits in modular system
<https://www.bbraun.com/en/products-and-therapies/services/proset.html#>



More Information on Product and Therapy
www.bbraun.com

Product Specifications

Certofix® Standard Sets

Name	Catheter**						Introducer Needle	
Certofix® Standard V-Sets	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M1/M2/M3/P	min. Flow Rate (ml/min) D/M1/M2/M3/P	Filling Volume (ml) D/M1/M2/M3/P	Type	Gauge
Mono V 220	1	4	20	18	18	0.315	V	20
Mono V 315	1	5	15	16	60	0.370	V	18
Mono V 320	1	5	20	16	52	0.415	V	18
Mono V 330	1	5	30	16	40	0.510	V	18
Mono V 415	1	6	15	14	90	0.455	V	18
Mono V 420	1	6	20	14	80	0.535	V	18
Mono V 430	1	6	30	14	75	0.690	V	18
Duo V 715	2	7	15	16/16	60/50	0.400/0.335	V	18
Duo V 720	2	7	20	16/16	55/45	0.455/0.380	V	18
Duo V 730	2	7	30	16/16	52/37	0.570/0.470	V	18
Trio V 715	3	7	15	16/18/18	50/28/28	0.340/0.205/0.195	V	18
Trio V 720	3	7	20	16/18/18	46/22/22	0.380/0.215/0.205	V	18
Trio V 730	3	7	30	16/18/18	38/18/18	0.460/0.240/0.230	V	18
Quattro V 815	4	8	15	14/18/18/16	50/20/20/50	0.435/0.205/0.260/0.255	V	18
Quattro V 820	4	8	20	14/18/18/16	40/15/15/40	0.500/0.215/0.280/0.295	V	18
Quattro V 830	4	8	30	14/18/18/16	35/10/10/35	0.635/0.240/0.325/0.380	V	18
Quinto V 1215	5	12	15	16/18/18/18/12	65/32/32/30/225	0.445/0.280/0.280/0.315/1.080	V	18
Quinto V 1220	5	12	20	16/18/18/18/12	55/28/28/28/185	0.515/0.300/0.300/0.340/1.105	V	18

Name	Catheter**						Introducer Needle	
Certofix® Standard S-Sets	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M1/M2/M3/P	min. Flow Rate (ml/min) D/M1/M2/M3/P	Filling Volume (ml) D/M1/M2/M3/P	Type	Gauge
Mono S 215	1	4	15	18	23	0.300	S	20
Mono S 220	1	4	20	18	18	0.315	S	20
Mono S 315	1	5	15	16	60	0.370	S	18
Mono S 320	1	5	20	16	52	0.415	S	18
Mono S 330	1	5	30	16	40	0.510	S	18
Mono S 415	1	6	15	14	90	0.455	S	18
Mono S 420	1	6	20	14	80	0.535	S	18
Mono S 430	1	6	30	14	75	0.690	S	18
Duo S 715	2	7	15	16/16	60/50	0.400/0.335	S	18
Duo S 720	2	7	20	16/16	55/45	0.455/0.380	S	18
Duo S 730	2	7	30	16/16	52/37	0.570/0.470	S	18
Trio S 715	3	7	15	16/18/18	50/28/28	0.340/0.205/0.195	S	18
Trio S 720	3	7	20	16/18/18	46/22/22	0.380/0.215/0.205	S	18
Trio S 730	3	7	30	16/18/18	38/18/18	0.460/0.240/0.230	S	18
Quinto S 1220	5	12	20	16/18/18/18/12	55/28/28/28/185	0.515/0.300/0.300/0.340/1.105	S	18

Guidewire ***		Other Accessories					Article No.* (REF)
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite®	
50	0.63	5 ml	-	5	1x	-	4160215
50	0.89	5 ml	-	6	1x	-	4160231
50	0.89	5 ml	-	6	1x	-	4160266
70	0.89	5 ml	-	6	1x	-	4160290
50	0.89	5 ml	-	8	1x	-	4160517
50	0.89	5 ml	-	8	1x	-	4160320
70	0.89	5 ml	-	8	1x	-	4160789
50	0.89	5 ml	1x	8	1x	2x	4166159
50	0.89	5 ml	1x	8	1x	2x	4161211
70	0.89	5 ml	1x	8	1x	2x	4161319
50	0.89	5 ml	1x	8	1x	3x	4162153
50	0.89	5 ml	1x	8	1x	3x	4163214
70	0.89	5 ml	1x	8	1x	3x	4163311
50	0.89	5 ml	1x	9	1x	4x	4167767
50	0.89	5 ml	1x	9	1x	4x	4167775
70	0.89	5 ml	1x	9	1x	4x	4167783
50	0.89	5 ml	1x	12	1x	5x	4166841
50	0.89	5 ml	1x	12	1x	5x	4166868

Additional Information Certofix® Standard Sets & Standard S-Sets

V: Valve Needle, S: Seldinger Needle

D: distal, M: middle, P: proximal

The sales unit of Certofix® Standard Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** All catheters are made of PUR, with soft tip and length marking

*** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Guidewire ***		Other Accessories					Article No.* (REF)
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite®	
50	0.63	5 ml	-	5	1x	-	4160185
50	0.63	5 ml	-	5	1x	-	4160207
50	0.89	5 ml	-	6	1x	-	4160223
50	0.89	5 ml	-	6	1x	-	4160258
70	0.89	5 ml	-	6	1x	-	4160282
50	0.89	5 ml	-	8	1x	-	4160509
50	0.89	5 ml	-	8	1x	-	4160304
70	0.89	5 ml	-	8	1x	-	4160762
50	0.89	5 ml	1x	8	1x	2x	4164158
50	0.89	5 ml	1x	8	1x	2x	4167385
70	0.89	5 ml	1x	8	1x	2x	4167394
50	0.89	5 ml	1x	8	1x	3x	4161159
50	0.89	5 ml	1x	8	1x	3x	4167408
70	0.89	5 ml	1x	8	1x	3x	4163306
50	0.89	5 ml	1x	12	1x	5x	4166852

Product Specifications

Certifix® Protect

Name	Catheter**						Introducer Needle	
Certifix® Protect	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M1/M2/M3/P	min. Flow Rate (ml/min) D/M1/M2/M3/P	Filling Volume (ml) D/M1/M2/M3/P	Type	Gauge
Mono V 320 P	1	5	20	16	52	0.415	V	18
Mono V 330 P	1	5	30	16	40	0.510	V	18
Mono V 420 P	1	6	20	14	80	0.535	V	18
Mono V 430 P	1	6	30	14	75	0.690	V	18
Duo V 715 P	2	7	15	16/16	60/50	0.400/0.335	V	18
Duo V 720 P	2	7	20	16/16	55/45	0.455/0.380	V	18
Duo V 730 P	2	7	30	16/16	52/37	0.570/0.470	V	18
Duo HF V 720 P	2	7	20	14/18	100/27	0.555/0.276	V	18
Trio V 715 P	3	7	15	16/18/18	50/28/28	0.340/0.205/0.195	V	18
Trio V 720 P	3	7	20	16/18/18	46/22/22	0.380/0.215/0.205	V	18
Trio V 730 P	3	7	30	16/18/18	38/18/18	0.460/0.240/0.230	V	18
Trio HF V 1220 P	3	12	20	16/12/12	55/165/165	0.470/1.410/1.401	V	18
Quattro V 815 P	4	8	15	14/18/18/16	50/20/20/50	0.435/0.205/0.260/0.255	V	18
Quattro V 820 P	4	8	20	14/18/18/16	40/15/15/40	0.500/0.215/0.280/0.295	V	18
Quattro V 830 P	4	8	30	14/18/18/16	35/10/10/35	0.635/0.240/0.325/0.380	V	18
Quinto V 1220 P	5	12	20	16/18/18/18/12	55/28/28/28/185	0.515/0.300/0.300/0.340/1.105	V	18

Certifix® High Flow

Name	Catheter**						Introducer Needle	
Certifix® High Flow	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M/P	min. Flow Rate (ml/min) D/M/P	Filling Volume (ml) D/M/P	Type	Gauge
Duo HF V 715	2	7	15	14/18	105/42	0.480/0.245	V	18
Duo HF V 720	2	7	20	14/18	100/27	0.555/0.275	V	18
Duo HF S 720	2	7	20	14/18	100/27	0.555/0.275	S	18
Duo HF V 920	2	9	20	13/13	95/120	1.220/1.105	V	18
Duo HF V 1215	2	12	15	11/11	260/260	1.425/1.335	V	18
Duo HF V 1220	2	12	20	11/11	230/230	1.580/1.490	V	18
Trio HF V 1215	3	12	15	16/12/12	65/225/225	0.415/1.260/1.170	V	18
Trio HF S 1215	3	12	15	16/12/12	65/225/225	0.415/1.260/1.170	S	18
Trio HF V 1220	3	12	20	16/12/12	55/165/165	0.470/1.410/1.400	V	18
Trio HF S 1220	3	12	20	16/12/12	55/165/165	0.470/1.410/1.400	S	18
Protect Duo HF V 720 P	2	7	20	14/18	100/27	0.555/0.276	V	18
Protect Trio HF V 1220 P	3	12	20	16/12/12	55/165/165	0.470/1.410/1.401	V	18

Guidewire ***		Other Accessories					Article No.* (REF)
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite®	
50	0.89	5 ml	-	6	1x	-	4160266P
70	0.89	5 ml	-	6	1x	-	4160290P
50	0.89	5 ml	-	8	1x	-	4160320P
70	0.89	5 ml	-	8	1x	-	4160789P
50	0.89	5 ml	1x	8	1x	2x	4166159P
50	0.89	5 ml	1x	8	1x	2x	4161211P
70	0.89	5 ml	1x	8	1x	2x	4161319P
50	0.89	5 ml	1x	8	1x	2x	4168534P
50	0.89	5 ml	1x	8	1x	3x	4162153P
50	0.89	5 ml	1x	8	1x	3x	4163214P
70	0.89	5 ml	1x	8	1x	3x	4163311P
50	0.89	5 ml	1x	12	1x	3x	4160622P
50	0.89	5 ml	1x	9	1x	4x	4167767P
50	0.89	5 ml	1x	9	1x	4x	4167775P
70	0.89	5 ml	1x	9	1x	4x	4167783P
50	0.89	5 ml	1x	12	1x	5x	4166868P

Additional Information Certofix® Protect

V: Valve Needle

D: distal, M: middle, P: proximal

The sales unit of Certofix® Protect Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** The base material of the central venous catheter consists of polyurethane. All lumen, including the hub and the outer surface of the catheter are coated with a long-chain high-molecular polymer-based methacrylate. This modified surface is non-covalently linked to the polyurethane catheter material and is embedded and bonded to the base material of the catheter. The polymer's chemically modified side groups are freely accessible on the catheter surface. They contain hydrophilic side groups such as polyethylene glycol and antiseptic biguanide side groups. The side chain which is derived from a polymeric biguanide is chemically similar to the antiseptic polihexanide.

*** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Guidewire ***		Other Accessories					Article No.* (REF)
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite®	
50	0.89	5 ml	1x	8	1x	2x	4168518
50	0.89	5 ml	1x	8	1x	2x	4168534
50	0.89	5 ml	1x	8	1x	2x	4168528
50	0.89	5 ml	1x	9	1x	2x	4167511
50	0.89	5 ml	1x	12	1x	2x	4167538
50	0.89	5 ml	1x	12	1x	2x	4167546
50	0.89	5 ml	1x	12	1x	3x	4160614
50	0.89	5 ml	1x	12	1x	3x	4160578
50	0.89	5 ml	1x	12	1x	3x	4160622
50	0.89	5 ml	1x	12	1x	3x	4160586
50	0.89	5 ml	1x	8	1x	2x	4168534P
50	0.89	5 ml	1x	12	1x	3x	4160622P

Additional Information Certofix® High Flow

V: Valve Needle, S: Seldinger Needle

D: distal, M: middle, P: proximal

The sales unit of Certofix® High Flow Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** All catheters are made of PUR, with soft tip and length marking

*** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Product Specifications

Certofix® Safety

Name	Catheter**						Introducer Needle	
Certofix® Safety	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M1/M2/M3/P	min. Flow Rate (ml/min) D/M1/M2/M3/P	Filling Volume (ml) D/M1/M2/M3/P	Type	Gauge
Mono S 320	1	5	20	16	52	0.415	Safety	18
Mono S 330	1	5	30	16	40	0.510	Safety	18
Duo S 720	2	7	20	16/16	55/45	0.455/0.380	Safety	18
Duo S 730	2	7	30	16/16	52/37	0.570/0.470	Safety	18
Trio S 720	3	7	20	16/18/18	46/22/22	0.380/0.215/0.205	Safety	18
Trio S 730	3	7	30	16/18/18	38/18/18	0.460/0.240/0.230	Safety	18
Quattro S 820	4	8	20	14/18/18/16	40/15/15/40	0.500/0.215/0.280/0.295	Safety	18
Quinto S 1220	5	12	20	16/18/18/18/12	55/28/28/28/185	0.515/0.300/0.300/0.340/1.105	Safety	18

Certofix® Paed

Name	Catheter***						Introducer Needle	
Certofix® Paed	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M/P	min. Flow Rate (ml/min) D/M/P	Filling Volume (ml) D/M/P	Type	Gauge
Mono S 110	1	3	10	22	15	0.100	S	21
Duo S 408	2	4	8	22/22	18/18	0.235/0.205	S	21
Duo S 413	2	4	13	22/22	10/10	0.255/0.225	S	21
Duo S 420	2	4	20	22/22	9/9	0.275/0.250	S	21
Duo S 508	2	5	8	18/20	30/15	0.250/0.205	S	21
Duo S 513	2	5	13	18/20	22/11	0.270/0.225	S	21
Duo S 520	2	5	20	18/20	18/9	0.300/0.250	S	21
Trio S 508	3	5	8	20/22/22	30/15/15	0.235/0.185/0.180	S	21
Trio S 513	3	5	13	20/22/22	29/10/10	0.260/0.200/0.195	S	21
Trio S 520	3	5	20	20/22/22	18/6/6	0.290/0.215/0.210	S	21

Guidewire ***		Other Accessories					Article No.* (REF)
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite®	
50	0.89	5 ml	Safety	6	1x	-	4160258S
70	0.89	5 ml	Safety	6	1x	-	4160282S
50	0.89	5 ml	Safety	8	1x	2x	4167385S
70	0.89	5 ml	Safety	8	1x	2x	4167394S
50	0.89	5 ml	Safety	8	1x	3x	4167408S
70	0.89	5 ml	Safety	8	1x	3x	4163306S
50	0.89	5 ml	Safety	9	1x	4x	4167775S
50	0.89	5 ml	Safety	12	1x	5x	4166852S

Additional Information Certofix® Safety

D: distal, M: middle, P: proximal

The sales unit of Certofix® Safety Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** All catheters are made of PUR, with soft tip and length marking

*** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Guidewire ****		Other Accessories						
Length (cm)	Ø (mm)	Syringe	Scalpel	Dilator (Fr)	Connection cable ECG	Needle Free Connector Safsite® (instead of Safsite®) 1x Infusion extension line 1x Discifix® 3-way stopcock	Statlock catheter fixation	Article No. (REF)
25	0.46	3 ml	1x	-	1x		1x	4160177**
50	0.46	5 ml	1x	5	1x	2x	1x	4166906
50	0.46	5 ml	1x	5	1x	2x	1x	4166922
50	0.46	5 ml	1x	5	1x	2x	1x	4166949
50	0.46	5 ml	1x	6	1x	2x	1x	4167112
50	0.46	5 ml	1x	6	1x	2x	1x	4167139
50	0.46	5 ml	1x	6	1x	2x	1x	4167155
50	0.46	5 ml	1x	6	1x	3x	1x	4167228
50	0.46	5 ml	1x	6	1x	3x	1x	4167244
50	0.46	5 ml	1x	6	1x	3x	1x	4167260

Additional Information Certofix® Paed

S: Seldinger Needle

D: distal, M: middle, P: proximal

The sales unit of Certofix® Paed Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** Note: Please consider country specific article codes with suffix „-01“ or „-04“

*** All catheters are made of PUR, with soft tip and length marking

**** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Product Specifications

Certofix® Econoline

Name	Catheter**						Introducer Needle	
Certofix® Econoline	Lumen	Size (Fr)	Length (cm)	Lumen Ø (Gauge) D/M/P	min. Flow Rate (ml/min) D/M/P	Filling Volume (ml) D/M/P	Type	Gauge
Mono 215	1	4	15	18	16	0.175	S	20
Mono 220	1	4	20	18	13	0.200	S	20
Mono 315	1	5	15	16	55	0.300	S	18
Mono 320	1	5	20	16	45	0.350	S	18
Mono 330	1	5	30	16	40	0.445	S	18
Mono 415	1	6	15	14	95	0.470	S	18
Mono 420	1	6	20	14	85	0.550	S	18
Mono 430	1	6	30	14	75	0.700	S	18
Duo 715	2	7	15	16/16	60/50	0.400/0.335	S	18
Duo 720	2	7	20	16/16	55/45	0.455/0.380	S	18
Duo 730	2	7	30	16/16	52/37	0.570/0.470	S	18
Trio 715	3	7	15	16/18/18	50/28/28	0.340/0.205/0.195	S	18
Trio 720	3	7	20	16/18/18	46/22/22	0.380/0.215/0.205	S	18
Trio 730	3	7	30	16/18/18	38/18/18	0.460/0.240/0.230	S	18

ACCESSORIES FOR CATHETER TIP POSITIONING WITH ECG

Accessories	Description	Article No.*
	Certodyn Universal® Adapter	
	Electronic switch box (for adults)	4150228
	Certodyn Universal® Adapter Paed	
	Electronic switch box (for paediatric patient)	4150724
	Alphacard®	
	Syringe with electrode to Certodyn® universal adapter	U1800401

Guidewire***		Other Accessories		Article No.* (REF)
Length (cm)	Ø (mm)	IN- Stopper	Dilator (Fr)	
50	0.63	1x	5	4160185E
50	0.63	1x	5	4160207E
50	0.89	1x	6	4160223E
50	0.89	1x	6	4160258E
70	0.89	1x	6	4160282E
50	0.89	1x	8	4160509E
50	0.89	1x	8	4160304E
70	0.89	1x	8	4160762E
50	0.89	2x	8	4164156E
50	0.89	2x	8	4162200E
70	0.89	2x	8	4162307E
50	0.89	3x	8	4161157E
50	0.89	3x	8	4163206E
70	0.89	3x	8	4163303E

Additional Information Certofix® Econoline

S: Seldinger Needle

D: distal, M: middle, P: proximal

The sales unit of Certofix® Econoline Sets is 10 pieces/box

* Note: Please consider country specific article codes with suffix „-07“

** All catheters are made of PUR, with soft tip and length marking

*** All guidewires are made of Nitinol, with one soft J tip and one soft straight tip, printed with length markings and ECG marked

Literature

1. The Joint Commission. Preventing Central Line–Associated Bloodstream Infections: A Global Challenge, a Global Perspective. Oak Brook, IL: Joint Commission Resources, May 2012. <http://www.PreventingCLABSIs.pdf>.
2. <https://ecdc.europa.eu/en/publications-data/directory-guidance-prevention-and-control/healthcare-associated-infections-1>
3. Yousif A, Jamal MA, Raad I. Biofilm-based central line-associated bloodstream infections. *Adv Exp Med Biol*. 2015; 830:157–79
4. Elliott TSJ. The pathogenesis and prevention of intravascular catheter-related infections. In: Hamilton H, Bodenham AR. *Central venous catheters*. Chichester [u.a.]: Wiley-Blackwell 2009; 206–209
5. McLaws ML, Burrell AR. Zero risk for central line-associated bloodstream infection: are we there yet? *Crit Care Med*. 2012 Feb; 40(2):388–93
6. Krikava I, et al. The efficacy of a non-leaching antibacterial central venous catheter – a prospective, randomized, double-blind study. *Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub*. 2019. [Epub ahead of print]
7. Richards GA, et al. Investigation of biofilm formation on a charged intravenous catheter relative to that on a similar but uncharged catheter
8. Brunke J, Riemann T, Roschke I, 30 days antimicrobial efficacy of non-leaching central venous catheters (Poster 063), *Critical Care* 2016, Volume 20 Suppl 2.
9. Brunke J, et al. Quantitative comparison of the antimicrobial efficiency of leaching versus nonleaching polymer materials. *Macromol. Biosci*. 2016, 16, 647–654
10. Hanna H, et al. Comparative in vitro efficacies and antimicrobial durabilities of novel antimicrobial central venous catheters. *Antimicrob Agents Chemother*. 2006 Oct;50(10):3283–8
11. Yasukawa T, Fujita Y, Sari A. Antimicrobial impregnated central venous catheters. *N Engl J Med*. 1999 Jun 3; 340(22):1762
12. Raad I, Hanna H, Jiang Y, Dvorak T, Reitzel R, Chaiban G, Sherertz R, Hachem R. Comparative activities of daptomycin, linezolid, and tigecycline against catheter-related methicillin-resistant *Staphylococcus bacteremic* isolates embedded in biofilm. *Antimicrob Agents Chemother*. 2007 May; 51(5):1656–60
13. Tambe SM, Sampath L, Modak SM. In vitro evaluation of the risk of developing bacterial resistance to antiseptics and antibiotics used in medical devices. *J Antimicrob Chemother* 2001; 47: 589–98
14. Sampath LA, Tambe SM, Modak SM. In vitro and in vivo efficacy of catheters impregnated with antiseptics or antibiotics: evaluation of the risk of bacterial resistance to the antimicrobials in the catheters. *Infect Control Hosp Epidemiol* 2001; 22: 640–6