

# Proven Quality – Made in Germany

Original Perfusor® and Infusomat® – Quality products by B. Braun

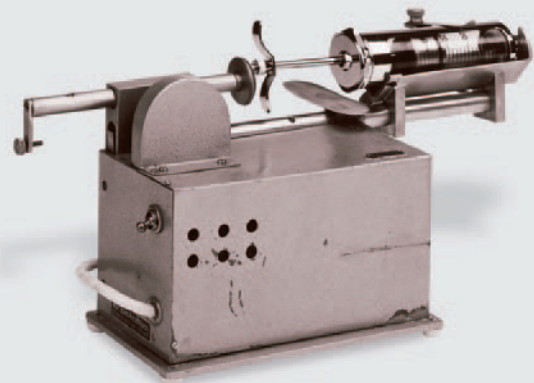


Automated Infusion Systems



# Tradition meets innovation

B. Braun faces the new challenges of every decade



## In the year 1951 ...

... B. Braun introduced the first syringe pump for continuous infusion on the market. Driven by innovation and developed for the needs of the daily use in hospitals, the first generation of the original Perfusor® was born.

Based on Dr. Hess' design, the Perfusor® allowed highly accurate drug delivery for the first time.

## Today ...

... more than 60 years later, the original Perfusor® is dominating the market for syringe pumps, supplemented by the Infusomat®. After decades of continuous research and innovation, the Perfusor® nowadays has nothing in common with its famous ancestor. But of course there are similarities: Compared to the technological advance, the B. Braun infusion pumps are ahead of the times and follow the same aims: making infusion therapy easier and safer.

Proven Quality made in Germany is an attribute for innovative, reliable and secure technology, as an achievement of the latest research results and performed by technical know-how.

Discover how B. Braun infusion pumps help you maximize the economy of care in your hospital, minimize risks to your patients and make your work much easier.





# Flexibility and mobility

## Syringe pump – Perfusor® compact and Perfusor® compact S



### Reliable technology in a compact design

- Easy syringe change, automatic size-recognition and proper fixation.
- Fast start-up and high accuracy of the set delivery rate and flow consistency even at low infusion rates.
- Bolus application at the touch of a key with simultaneous display of the delivery volume.
- Infusion rates can be entered very fast via the numeric key pad.

### Perfusor® compact

- The user-friendly pump for standard infusion therapy.

### Perfusor® compact S

- Highest variety of syringes from 2 ml up to 60 ml.
- Wide selection of syringe brands.
- Exact delivery rate adjustment starting at 0.01 ml/h.

### Battery operation for up to 80 hours

- The Perfusor® can be battery operated. The inexpensive AA batteries can be exchanged easily.
- Optional availability of a rechargeable battery.

### Stackable mobile units that lock together

- Up to 3 Perfusor® compact can be easily locked together for safe transport with no interruption of infusion therapy.

### Innovative pressure sensor

- Short reaction time during occlusion for every syringe size.
- Automatic bolus reduction for re-starts with more accurate dosage following a pressure alarm.

### Superior quality from Germany

- Proven in rough clinical routines.
- Road ambulance certified: EN1789.



### Perfusor® compact

The handy syringe pump for the use on all wards.



### Perfusor® compact S

Wide selection of syringes and very low delivery rates for the special requirements in paediatrics and neonatology.





# Safety and accuracy

## Volumetric infusion pump – Infusomat® fmS



### Broad performance spectrum, easy settings

- Infusion rates can be entered very fast via the numeric key pad.
- Delivery rates are calculated automatically based on volume and time pre-selection or on the values entered for patient body weight. Fast adjustment of delivery rate and dose without the need to interrupt the delivery.
- Freely selectable bolus applications can be administered at the touch of a key.
- Switching between a primary and a secondary infusion in "piggyback" mode. "History" function for clinical course analysis.

### The most important parameters are always visible

- The large display and the ergonomic design of the user interface make adjustments and monitoring easier. Operator guidance provide all information for safe operation.

### Reduced patient risk

- Freeflow protection with an anti-freeflow clamp built into the pump.
- The air detector minimizes the risk of air infusion.
- Adjustable pressure limits result in a reduction of the bolus volume and shorter alarm reaction times in case of system occlusion.
- Highest accuracy through high quality B. Braun Space Lines.

### Flexibly adaptable, modular expandable

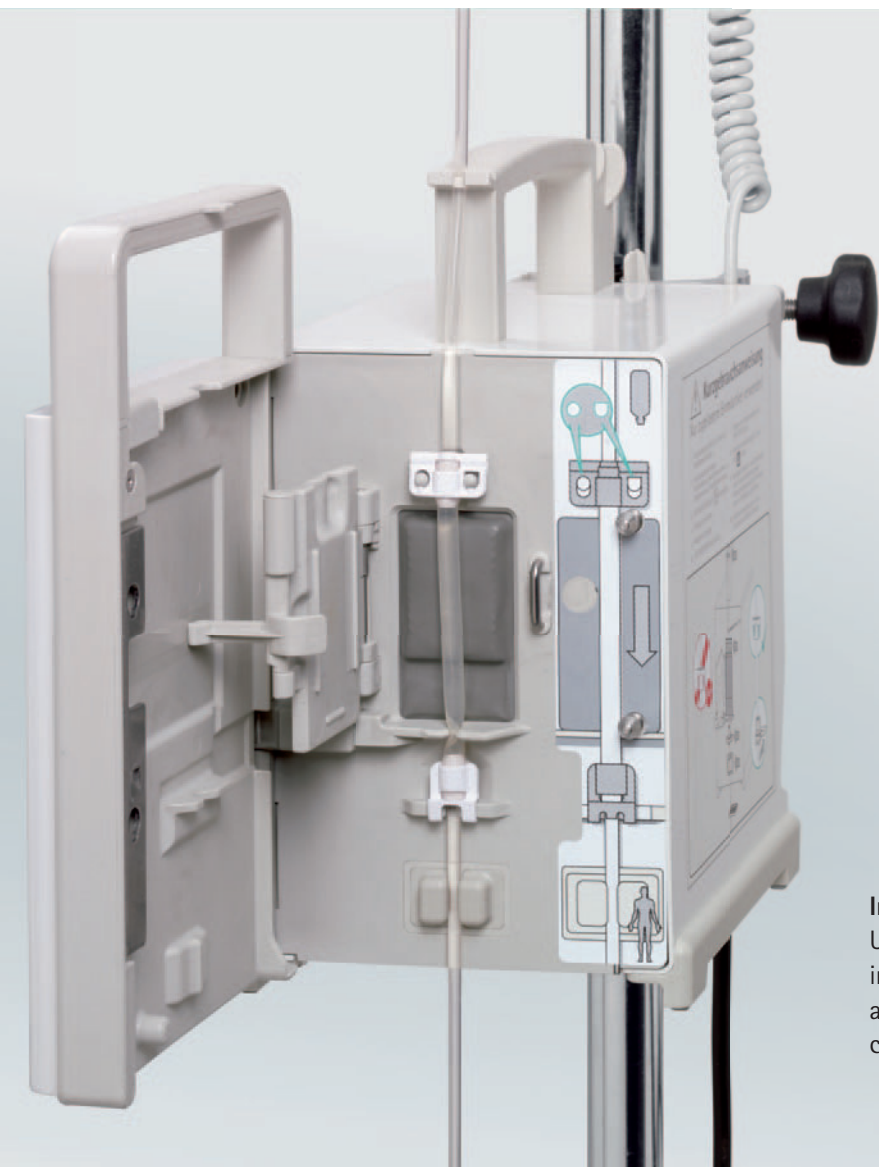
- Function spectrum can be configured to meet the user's specific needs.
- Easy to extend performance spectrum with updating/upgrading of performance parameters using PC programs.

### Simple set change, high degree of safety.



### Infusomat® fmS

The large display clearly shows infusion rate and infused volume even over greater distance.



### Infusomat® fmS

Use with Original Infusomat® infusion line for the highest accuracy and maximum consistency over long periods.

# A system for safety

## Original Perfusor® and Infusomat® disposables



**Perfusor® disposables**  
Original Perfusor® and Omnifix® syringes – with their excellent performance – complement the outstanding delivery characteristics of Perfusor® syringe pumps. So optimized start-up characteristics and consistent delivery can be achieved – always.

Original Perfusor® Lines with luer-lock connectors always ensure safe hook-ups to the system. A large selection of syringes and infusion lines for specific applications is available.

Optimized disposables for proven accuracy.

**Infusomat® Space Line**  
The Infusomat® Space Line is perfectly matched to both the peristaltic pump and its integrated safety system.

As a result, the outstanding performance characteristics of the Infusomat® fmS ensure high delivery accuracy and consistency and, most importantly, optimal functioning over long periods.

**Benefits of Infusomat® Space Line**

- Longer usage of the disposable – up to 96 hours.
- Almost no influence by surrounding temperature.

**Greater diversity**

- PVC free lines for pediatrics.
- Lines for light sensitive and high potent drugs.
- Lines for oncology.
- Lines for transfusion.

Original Perfusor® Syringes		Code No. (REF)
	<b>Original Perfusor® Syringes Luer Lock</b>	
	Original Perfusor® Syringe 50 ml with aspiration needle	872 8810F
	Original Perfusor® Syringe 20 ml with aspiration needle	872 8623
	<b>Omnifix® Luer Lock</b>	
	highest variety from 2 ml up to 60 ml for every indication	
	Omnifix® 50/60 ml Luer Lock	461 7509F
	Omnifix® 20 ml Luer Lock	461 7207V
	Omnifix® 2 ml Luer Lock	461 7029V
Original Perfusor® Lines		Code No. (REF)
	<b>PVC, 1.5 mm inner diameter</b>	
	Original Perfusor® Line, 150 cm, 2.6 ml priming volume	872 2960
	<b>PE, 1.0 mm inner diameter</b>	
	Original Perfusor® Line, 50 cm, 0.4 ml priming volume	825 5059
	Original Perfusor® Line, 150 cm, 1.2 ml priming volume	872 2935
	<b>UV-protected</b>	
	Original Perfusor® Line, made of PE, black, 150 cm, 1.2 ml priming volume	872 3010

Infusomat® Space Lines		Code No. (REF)
	<b>IV-Standard</b>	
	PVC	870 0036 SP
	Neutrapur®	825 0731 SP
	<b>IV-Standard with injection port</b>	
	for needle access	870 0087 SP
	Neutrapur® for needle-free access	870 0110 SP
	<b>UV-protected</b>	
	PVC, DEHP-free, black	870 0125 SP
	<b>Transfusion</b>	
	with 200 µm filter	827 066 SP
	<b>Enteral nutrition</b>	
	with Nutrifix® bag 1000 ml	825 0839 SP
	Neutrapur® with multi adapter	825 0857 SP
	<b>Neonate</b>	
	Neutrapur® with Dosifix® and needle-free access	825 0245 SP
	<b>Oncology</b>	
	Neutrapur® with 0.2 µm Sterifix	870 0095 SP
Infusion Poles		Code No. (REF)
	Braunostat® Basic - up to 3 infusion pumps	G101E
	Braunostat® Standard - up to 3 infusion pumps	872 7902
	Braunostat® Intensive - up to 9 infusion pumps	872 1106

For information on the entire portfolio please contact your local B. Braun representative.

# Technical data

Performance data Perfusor® compact and Perfusor® compact S		
Model, classification	Syringe pump, CF, defibrillation-proof, protection class II, IIb (complies with CE/MPG).	
Syringe selection	<ul style="list-style-type: none"><li>Perfusor® compact: 20 and 50 ml.</li><li>Perfusor® compact S: 2/3, 5, 10, 20, 30 and 50/60 ml, user-specific configuration possible.</li></ul>	
Delivery rate	<ul style="list-style-type: none"><li>Perfusor® compact: 0.1...99.9 ml/h.</li><li>Perfusor® compact S: 0.01...200.0 ml/h (depending on the syringe size used).</li></ul>	
Accuracy	Accuracy of the set delivery rate: typ. ±2%, (measurement time >1h and delivery volume > 2 ml).	
Bolus parameters	<ul style="list-style-type: none"><li>Bolus rate Perfusor® compact: 800 ml/h.</li><li>Bolus rate Perfusor® compact S: 1-1200 ml/h.</li></ul>	
Function spectrum	<ul style="list-style-type: none"><li>Delivery volume pre-setting: 0.1 to 999.9 ml.</li><li>Perfusor® compact S: Time pre-selection: 00:01 to 99:00 h.</li><li>Perfusor® compact S: Automatic calculation of the delivery rate based on volume over time.</li><li>Standby infusion pause: pre-set values remain stored.</li></ul>	
Display	Display: syringe type/size, delivery rate, current infusion, infused volume, pressure alarm, alarm sources, mains/battery operation/capacity.	
Safety system	<ul style="list-style-type: none"><li>Automatic recognition of syringe size/fixation.</li><li>Occlusion alarm pressure limits selectable: 0.3/0.6/1.2 bar.</li><li>Automatic reduction of the bolus volume following pressure alarm.</li><li>Perfusor® compact S: Data Lock – keys are blocked.</li><li>Pre-alarms: 3 min. before syringe is empty, 30 min. before battery is discharged.</li><li>Visual and acoustic alarms with interruption of pump operation: incorrect syringe insertion/ fixation, occlusion, end of delivery, empty syringe, battery discharged.</li><li>Alarm reminders in case of no input.</li><li>System alarm signals a defect/delivery failure.</li><li>Staff call connection.</li></ul>	
Interfaces	RS 232, MFC-Plug-in contact for fm system workstations.	
Mains	<ul style="list-style-type: none"><li>Integrated power supply, rated voltage 230/240 and 100/110 V, 50/60 Hz ~</li><li>Power consumption: 12 VA; (230/240 V), (110/120 V).</li><li>External extra-low voltage: 12 V _____ DC.</li></ul>	
Battery operation	<ul style="list-style-type: none"><li>Battery type: 4x1.5 V DC alkaline-manganese, (non-rechargeable).</li><li>Battery operating time &gt; 80 h at ≤10 ml/h.</li><li>Optional battery pack, rechargeable.</li><li>Battery operating time &gt;10 h at 10 ml/h, recharge time &gt;16 h.</li></ul>	
Dimensions	(WxHxD): 190x100x120 mm, weight: approx. 1.5 kg	
Code No. (REF)	<ul style="list-style-type: none"><li>Perfusor® compact (230/240 V)        871 4827</li><li>Perfusor® compact (110/120 V)       871 4835</li><li>Perfusor® compact S (230/240 V)     871 4843</li><li>Perfusor® compact S (110/120 V)    871 4886</li></ul>	

Infusomat® fmS		
Model, classification	Volumetric infusion pump: CF, defibrillation-proof, protection class I (complies with CE/MPG).	
Delivery rate	0.1...999.9 ml/h.	
Accuracy	Accuracy of the set delivery rate: typ. ±5% over a 96-h period with Original Infusomat® infusion line.	
Bolus parameters	<ul style="list-style-type: none"><li>Bolus volumes: 0.1...99.9/500.0 ml.</li><li>Bolus delivery rate: 1...999.9 ml/h.</li><li>Interval times: max. 99 h 59 min.</li></ul>	
Function spectrum	<ul style="list-style-type: none"><li>Delivery volume pre-setting: 0.1 to 9999.9 ml.</li><li>Time pre-selection: max. 99 h 59 min.</li><li>Automatic calculation of the delivery rate: based on volume and time pre-selection.</li><li>Dose calculation: automatic calculation of the delivery rate, ml/h based on the entry of drug concentration in conjunction with the desired dosage, selectable in µg, mg, IE, mmol, body weight- and time-based, e.g. mg/kg/min.</li><li>Piggyback: sequential delivery of primary and secondary infusion by switch-over.</li><li>History: time-based storage of 350 actions for therapy analysis.</li></ul>	
Display	<ul style="list-style-type: none"><li>Delivery rate, current infusion, infused volume/time, dose, mains/battery operation, battery capacity.</li><li>Up to 9 drug names.</li><li>Functions/operator guide and alarm causes in plain text.</li></ul>	
Safety system	<ul style="list-style-type: none"><li>Deactivation of drip control: in conjunction with volume pre-selection.</li><li>Flow clamp: prevents free flow when pump door is open.</li><li>Air detector: minimizes risk of air infusion.</li><li>Selectable occlusion alarm pressure settings, Infusomat® fmS: 0.4/0.8/1.2 bar, Infusomat® P: 0.6/1.2 bar.</li><li>Data Lock: keys are blocked.</li><li>Visual and acoustic alarms with interruption of pump operation: signals delivery failure in case of system defects, syringe alarm, pressure alarm, stand-by alarm, battery alarm.</li><li>Keep-Open Rate (KOR): for a delivery rate &gt;10 ml/h = 3 ml/h; for a &lt; 10 ml/h = 1 ml/h.</li><li>Staff call connection.</li></ul>	
Interfaces	RS 232: MFC-Plug-in contact for fm system workstations.	
Service	<ul style="list-style-type: none"><li>Integrated service program: use-appropriate configuration of function spectrum and technical diagnosis.</li></ul>	
Mains	<ul style="list-style-type: none"><li>Rated voltage: 200/230/240 V ~, 50/60 Hz</li><li>External extra-low voltage: 12 V.</li></ul>	
Battery operation	<ul style="list-style-type: none"><li>Battery type: NiCd</li><li>Battery operating time at max. delivery rate: 3.5 h,</li><li>Re-charge time: &gt;16 h; 230 /200 – 240/100 – 12 V</li></ul>	
Dimensions	(WxHxD): 140x240x200 mm, weight: approx. 3.1 kg	
Code No. (REF)	<ul style="list-style-type: none"><li>Infusomat® fmS (230 V)                871 5548</li><li>Infusomat® fmS (200-240 V)       871 5440</li><li>Infusomat® fmS (100-12 V)        871 5416</li></ul>	