

# Original Perfusor® & Infusomat®

Your solution for every application



Automated Infusion Systems

System capable, user-friendly, reliable.

**B | BRAUN**  
SHARING EXPERTISE

# fm system workstations

## The entire spectrum of fluid management

One system for all requirements – leading in application, operation and documentation.

High flexibility in adapting to different tasks and ambient conditions. Flexible pump operation – with a selection of 5 different types.

Central management of up to 18 infusion pumps. Easy settings, status and trend monitoring, clear display of fluid balance.

Prevention of medication errors by simplified, safe entries via bar code scanner and compileable drug list specific to the ward.

Easy adaption to Patient-Data-Management and Hospital-Information Systems.

## Optimised propofol dosing

Greater efficiency for i.v. anaesthesia: In "OTCI" mode (Optimised Target Controlled Infusion), an optimised pharmacokinetic algorithm automatically controls the level and maintenance of the required delivery rates.

**Please ask for more information about fm system workstations!**



# Original Perfusor<sup>®</sup> accessories

## A system for safety

Original Perfusor<sup>®</sup> and Omnifix<sup>®</sup> syringes – with their excellent performance – complement the outstanding delivery characteristics of Perfusor<sup>®</sup> syringe pumps. Optimized start-up characteristics and consistent delivery are guaranteed – always.

Original Perfusor<sup>®</sup> infusion lines with luer-lock connectors always ensure safe hook-ups to the system.

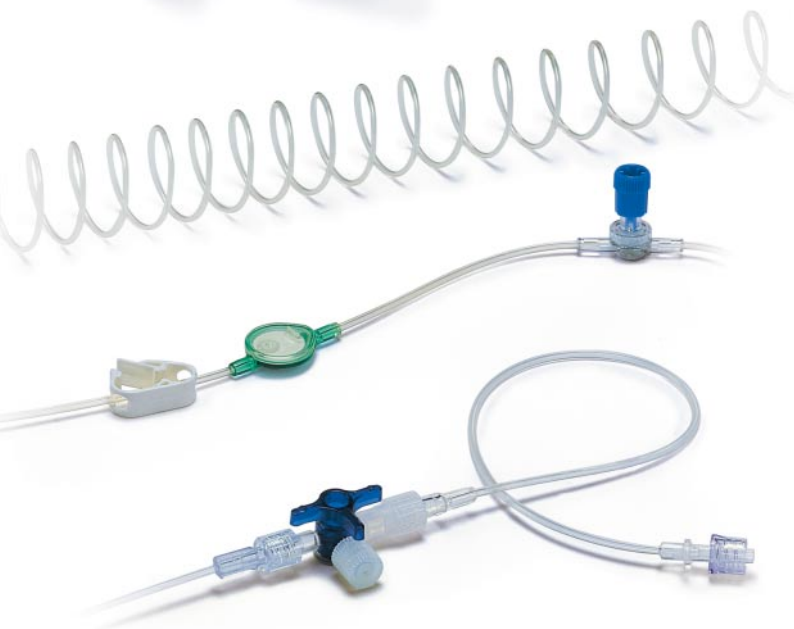
A large selection of syringes and infusion lines for specific applications.

## PRO-SET solutions for the infusion regimen

Configure your own complete, ready-to-use infusion systems from a broad range of products:

- Infusion lines available in various models.
- Infusion filters (0.2 mm and 1.2 mm) for lipid emulsions and mixed solutions
- Manifold stopcocks and customised sets.
- Back-check valves, safety connectors and ports.

**Please ask for your specific PRO-SET solution!**





# Flexibility and mobility: Perfusor® compact and Perfusor® compact S

## Leading-edge technology in a compact design

Easy syringe change, automatic size-recognition and proper fixation.

Excellent start-up characteristics, high accuracy of the set delivery rate and flow consistency even at low infusion rates.

Appropriate delivery rate adjustment without the need for interruption of the delivery. Bolus application at the touch of a key with simultaneous display of the delivery volume.

## 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.

## Perfusor® compact

The handy syringe pump for the use on all wards.

## Stackable mobile units that lock together

Mobile performance packages consisting of up to 3 Perfusor compact units which lock together for safe transportation, allowing uninterrupted continuation of infusion therapy during patient transportation.

## Battery operation for up to 80 hours

The Perfusor® compact can be battery operated. The inexpensive AA batteries can be exchanged easily.

## Perfusor® compact S

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



Performance data Perfusor® compact and Perfusor® compact S	
<b>Model, Classification</b>	Syringe pump, CF, defibrillation-proof, protection class II, IIb (complies with CE/MPG).
<b>Syringe selection</b>	Perfusor® compact: 20 and 50 ml. Perfusor® compact S: 2/3, 5, 10, 20, 30 and 50/60 ml, user-specific configuration possible.
<b>Delivery rate</b>	Perfusor® compact: 0.1...99.9 ml/h. Perfusor® compact S: 0.01...200.0 ml/h (depending on the syringe size used).
<b>Accuracy</b>	Accuracy of the set delivery rate: typ. ± 2%, (measurement time > 1h and delivery volume > 2 ml).
<b>Bolus parameters</b>	Bolus rate Perfusor® compact: 800 ml/h. Bolus rate Perfusor® compact S: 1-1200 ml/h.
<b>Function spectrum</b>	Delivery volume pre-setting: 0.1 to 999.9 ml. Perfusor® compact S: Time pre-selection: 00:01 to 99:00 h. Perfusor® compact S: Automatic calculation of the delivery rate based on volume over time. Standby infusion pause: pre-set values remain stored.
<b>Display</b>	Display: syringe type/size, delivery rate, current infusion, infused volume, pressure alarm, alarm sources, mains/battery operation/capacity.
<b>Safety system</b>	Automatic recognition of syringe size/fixation. Occlusion alarm pressure limits selectable: 0.3/0.6/1.2 bar. Automatic reduction of the bolus volume following pressure alarm. Perfusor® compact S: Data Lock – keys are blocked. Pre-alarms; 3 min. before syringe is empty, 30 min. before battery is discharged. Visual and acoustic alarms with interruption of pump operation: incorrect syringe insertion / fixation, occlusion, end of delivery, empty syringe, battery discharged. Alarm reminders in case of no input. System alarm signals a defect/delivery failure. Staff call connection.
<b>Interfaces</b>	RS 232, MFC-Plug-in contact for fm system workstations.
<b>Mains</b>	Integrated power supply, rated voltage 230/240 and 100/110 V, 50/60 Hz ~ Power consumption: 12 VA. External extra-low voltage: 12 V ..... DC.
<b>Battery operation</b>	Battery type: 4 x 1.5 V DC alkaline-manganese, (non-rechargeable). Battery operating time > 80 h at ≤ 10 ml/h. Optional battery pack, rechargeable. Battery operating time > 10 h at ≤ 10 ml/h, re-charge time > 16 h.
<b>Dimensions</b>	(W x H x D): 190 x 100 x 120 mm. Weight 1.5 kg approx.





PROPOFOL LIPURO 1%  
BOL ..... INFO  
Pressure: ..... <math>8 \times 10^9 / \text{kg/h}</math>

ml/h  
056.0  
7 8 9 0  
4 5 6 C  
1 2 3 . START STOP

Perfusor® fm B. BRAUN

END -- -- --  
Syringetype ?  
50 ml Perfusor

ml/h  
8 9 0  
4 5 6 C  
START STOP

Perfusor  
56 ml/h =  
 $8 \times 10^9 / \text{kg/h}$

# Precision and variety: Perfusor® fm

## Safety and operating convenience for all applications

Allows simple and fast syringe exchange with automatic fixation.

Wide range of syringes to select from. Identification of the size in use.

The integrated text display with operator guidance prompts provides all information necessary for making safe entries. Shorter alarm reaction times in case of system occlusion and automatic bolus reduction prevent incorrect dosing.

## High delivery performance, large range of settings

The ultimate in accuracy for delivery rates and flow consistency.

Excellent start-up characteristics for infusions with accurate dosages, starts even at low infusion rates.

## Perfusor® fm

With an outstanding performance spectrum to face the challenges of anaesthesia and intensive care medicine.

## TIVA mode for effective anaesthesia

Drug parameters can be entered directly.

Delivery rates are calculated automatically based on the entered values for patient body weight.

Quick adjustment of dosage without interrupting infusion.

Drug-specific or volumetric bolus, freely selectable bolus parameters.

## Flexibly adaptable, expandable by modular options

Syringe selection and function spectrum can be configured to meet specific user needs.

Easy to extend performance spectrum with updating/upgrading of performance parameters using PC programs.

Modular expansion saves the need for specially dedicated pumps:

- PCA module
- History module for treatment analysis.

Can be integrated into fm system workstation solutions.

## Perfusor® fm with PCA Module

Free selection between PCA and standard functions. Hierarchy system for safe therapy management. Individual parameter settings and reports on the course of therapy.



### Performance data Perfusor® fm and PCA module

<b>Model, classification</b>	Syringe pump, CF, defibrillation-proof, protection class I (complies with CE/MPG).
<b>Syringe selection</b>	10 ml Omnifix®, 20/50 ml Original Perfusor® syringes (additional syringes available on request).
<b>Delivery rate</b>	0,01...200,0 ml/h.
<b>Accuracy</b>	Accuracy of the set delivery rate: typ. ± 2%, (measurement time > 1h, min. 2 ml).
<b>Bolus parameters</b>	Bolus volumes: 0.1...50.0 ml. Bolus delivery rate: 1.0...1800.0 ml/h. Interval times: max. 99 h 59 min.
<b>Application parameters PCA-module</b>	Selectable modes: ml, µg or mg. Concentration: 0.001-999.9 µg or mg/ml. Bolus: 0.1...9.9 ml <sup>1)</sup> , Lockout time: 1 min ... 4 h. Initial bolus: 0...20.0 ml <sup>1)</sup> , Basal rate: 0...20.0 ml <sup>1)</sup> Dosage limitation: 0...500 ml <sup>1)</sup> , Observation interval: 1...8 h.
<b>Function spectrum</b>	Delivery volume pre-setting: 0.1 to 999.9 ml. Time pre-selection: max. 99 h 59 min. Automatic calculation of the delivery rate: based on volume and time pre-selection. Dose rate 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. Standby pause: max. 99 h 59 min, pre-set values remain stored.
<b>Display</b>	Delivery rate, current infusion, infused volume/time, dose, mains/battery operation, battery capacity, h/min. up to 9 drug names. Functions/operator guidance and alarm causes in plain text.
<b>Safety system</b>	Automatic syringe fixation by pressing a button. Automatic recognition of syringe size: 10/20/50 ml. Occlusion alarm pressure limits: 9 adjustable levels from 0.2...1.0 bar. Automatic reduction of the bolus volume following pressure alarm. Data lock: keys are blocked. 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. Pre-alarms: 3 min. before syringe is empty or battery is discharged. Staff call connection.
<b>Interfaces</b>	RS 232: MFC-Plug-in contact for fm system workstations.
<b>Service</b>	Integrated service programme: for application-specific configuration of function spectrum and technical diagnosis.
<b>Mains/battery - Operation</b>	Rated voltage: 200/230/240 V ~, 50/60 Hz, external extra-low voltage: 12 VA. Battery type: NiCd, battery operating time: > 3.5 h at ≤ 25 ml/h. Re-charge time: > 16 h.
<b>Dimensions</b>	(W x H x D): 360 x 110 x 170 mm. Weight: 3.5 kg approx.

<sup>1)</sup> value given in ml/µg/mg depending on the concentration





054.6 ml/h

infused vol. = 22.5ml  
BOL INFO

Four function buttons: Stop, Pause, Alarm, and Start/Stop.

7	8	9	0	⊕ ⊖
4	5	6	C	🔔
1	2	3	.	START STOP

Indicator lights: a red light and a yellow light, each with a bell icon above it.

Infusomat® fmS B. BRAUN

104.

infused vol. = --

Four function buttons: Stop, Pause, Alarm, and Start/Stop.

7	8	9	0	⊕ ⊖
4	5	6	C	🔔
1	2	3	.	START STOP

Indicator lights: a red light and a yellow light, each with a bell icon above it.

Infusoma

# Safety and economy: Infusomat® fmS

## Broad performance spectrum, easy settings

Infusion rates and drug parameters can be entered directly. 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 prompts provide all information for safe operation.

## Infusomat® fmS

Use Original Infusomat® infusion line for the highest accuracy of the set delivery rate and maximum consistency even over long periods.

## Simple set change, high degree of safety

Proper placement into the securing fasteners.

A flow clamp prevents "free flow" when the pump door is opened. The air detector minimises 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.

## 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.

Can be integrated in fm system workstation solutions.



## Performance data Infusomat® fmS

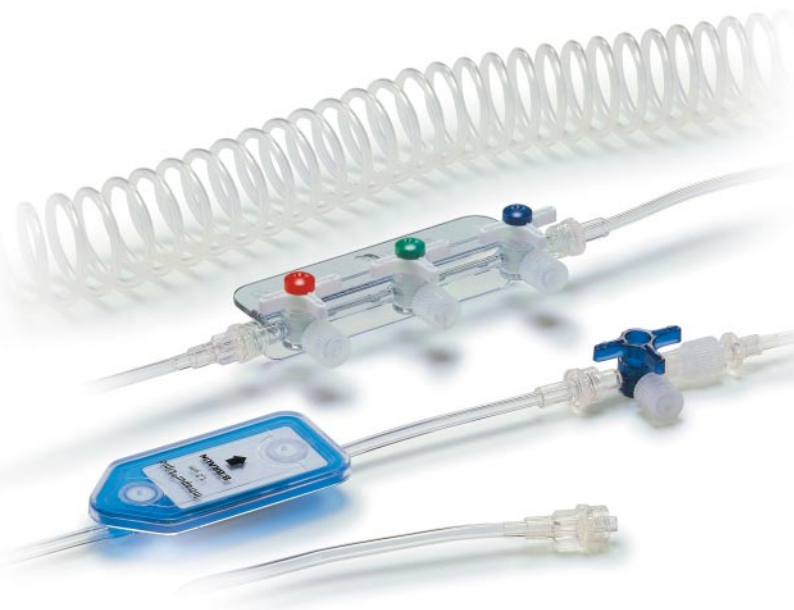
<b>Model, classification</b>	Volumetric infusion pump: CF, defibrillation-proof, protection class I (complies with CE/MPG).
<b>Delivery rate</b>	0.1...999.9 ml/h.
<b>Accuracy</b>	Accuracy of the set delivery rate typ. $\pm 5\%$ over a 96-h period with Original Infusomat® infusion line.
<b>Bolus parameters</b>	Bolus volumes: 0.1...999.9/500.0 ml. Bolus delivery rate: 1...999.9 ml/h. Interval times: max. 99 h 59 min.
<b>Function spectrum</b>	Delivery volume pre-setting: 0.1 to 9999.9 ml, Time pre-selection: max. 99 h 59 min. Automatic calculation of the delivery rate: based on volume and time pre-selection. 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 $\mu\text{g}$ , mg, IE, mmol, body weight- and time-based, e.g. mg/kg/min. Standby pause: max. 24 h, set values remain stored. Piggyback: sequential delivery of primary and secondary infusion by switch-over. History: time-based storage of 350 actions for therapy analysis.
<b>Display</b>	Delivery rate, current infusion, infused volume/time, dose, mains/battery operation, battery capacity. Up to 9 drug names. Functions/operator guide and alarm causes in plain text.
<b>Safety system</b>	Deactivation of drip control: in conjunction with volume pre-selection. Flow clamp: prevents free flow when pump door is open. Air detector: minimizes risk of air infusion. Selectable occlusion alarm pressure settings, Infusomat® fmS: 0.4/0.8/1.2 bar, Infusomat® P: 0.6/1.2 bar. Data Lock: keys are blocked. 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. Keep-Open Rate (KOR): for a delivery rate $> 10$ ml/h = 3 ml/h; for a $< 10$ ml/h = 1 ml/h. Staff call connection.
<b>Interfaces</b>	RS 232: MFC-Plug-in contact for fm system workstations.
<b>Service</b>	Integrated service programme: use-appropriate configuration of function spectrum and technical diagnosis.
<b>Mains/battery – Operation</b>	Rated voltage: 200/230/240 V $\sim$ , 50/60 Hz External extra-low voltage: 12 V. Battery type: NiCd; attery operating time at max. delivery rate: 3.5 h, Re-charge time: $> 16$ h.
<b>Dimensions</b>	(W x H x D): 140x240x200 mm, Weight: 3.1 kg approx.



# Original Infusomat® accessories

## A system for safety

Original Infusomat® infusion 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.



# Braunostat® organizer systems

## Customised configuration, universal adaptability

Braunostat® W/D systems are easily adapted to conventional ward equipment like stands, rails or ceiling units.

The modular components can be universally combined with each other, are easy to assemble and can be quickly adapted to changing conditions.

## For stationary and mobile applications

Universal Braunostat® U infusion stand for holding up to 3 infusion pumps.

Braunostat® B bedside infusion tripod for holding up to 3 syringe pumps or 1 volumetric infusion pump.

**Please ask us for more  
product information!**





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