The whole hospital in the palm of your hand

B. Braun Space Infusion Systems

Automated Infusion Systems

B BRAUN
SHARING EXPERTISE

Space infusion pumps: Think new!

- Smallest and lightest pump system in the world
- Organized workplaces
- Ideal for interclinical and interhospital transport

We **pack a lot in** so you **get a lot out**

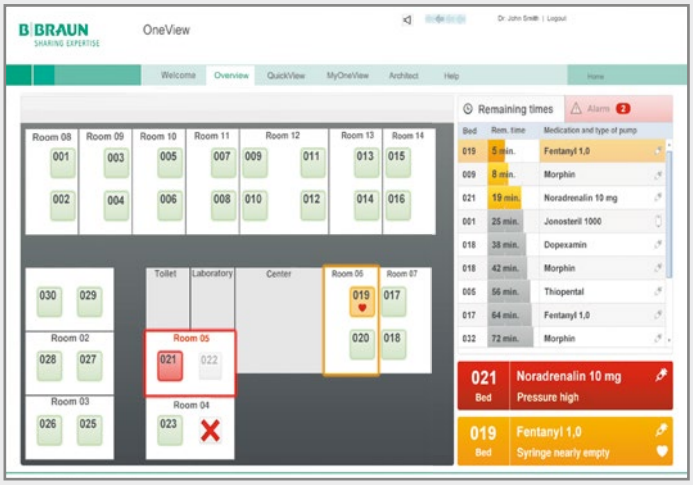
Find out more online:
Either scan the 2D barcode with your smartphone or follow the link to find out more
www.space.bbraun.com

We make things more **safe** so you can have it **easy**

- Simple, standardized handling
- Freeflow prevention
- Seamless IT integration

Intensive Care – Advanced Infusion Therapy

SpaceStation allows a fully flexible, modular setup of the infusion regime.

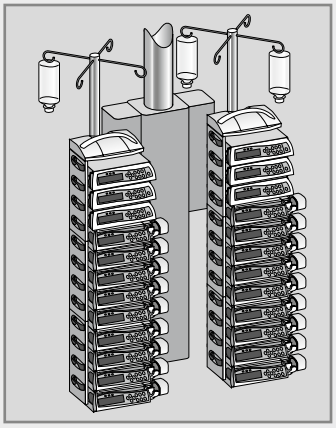


Quick and easy overview of infusion status through the centralized alarm management system, OneView.

Space Cover Comfort displays visual and audible alarms centrally, allowing for quicker alarm localization.

Easy insertion and removal of pumps regardless of position.

A fully equipped SpaceStation can be quickly and easily transported.



Set up a whole tower with only 1 power cord!

Both the Infusomat® Space and the Perfusor® Space have the same design, interface and menu structure.

This means less training for your nurses and a reduced risk of incorrect handling.

Benefits

- Maintain the necessary flexibility even when space is limited
- Increase patient safety with integrated drug library and dose limits
- Universal user interface reduces training required and increases safety
- Simple transport
- Quicker alarm localization

Intensive Care – Space Glucose Control (SGC)

Simplify your Glucose Management

Three steps less complexity

Reminder alarm when next blood sampling is required

Consideration of nutrition data and automatic calculation of appropriate insulin rate

Changes of nutrition results in new calculation of insulin rate

Three steps more safety

Blood sampling and analysis

Input of glucose value

Confirmation of insulin rate

Full therapy summary at a glance:
- Enteral, parenteral and insulin infusion parameters
- Time to next glucose measurement
- Glucose and insulin history

Simple, touchscreen user interface

Space GlucoseContol is the first system to offer the benefits of intensive insulin therapy without increasing workload:
- Inbuilt alogrithm calculates optimal insulin rate
- Both enteral and parenteral nutrition automatically included in calculation
- Learning software continually adapts to changes in insulin response and calculates optimal time until next glucose measurement

This decision support tool helps replace best guess decisions with precise calculations based on clinically proven software.

Benefits

- Shorter length of stay with reduced complications
- Decision support for necessary insulin dose and next glucose measurement
- Proven prevention of Hyper- and Hypoglycemia
- Automatic inclusion of nutrition values

Find out more online:
Either scan the 2D barcode with your smartphone or click on SGC on our webpage:
www.space.bbraun.com

More information:
Further information can be found in the brochure "In touch with the future: Space GlucoseControl" (6069010). Speak to your local sales rep or scan the 2D barcode with your smartphone.

Intensive Care – Take Over Mode

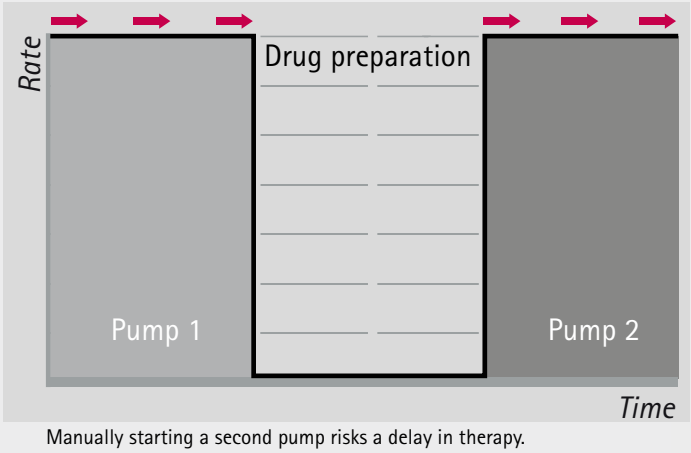
Increasing safety during syringe changes

The number of active devices at the patient bedside is continually increasing, and with that, the number of alarms on the ward. Coupled with this is the increased workload for the caregiver.

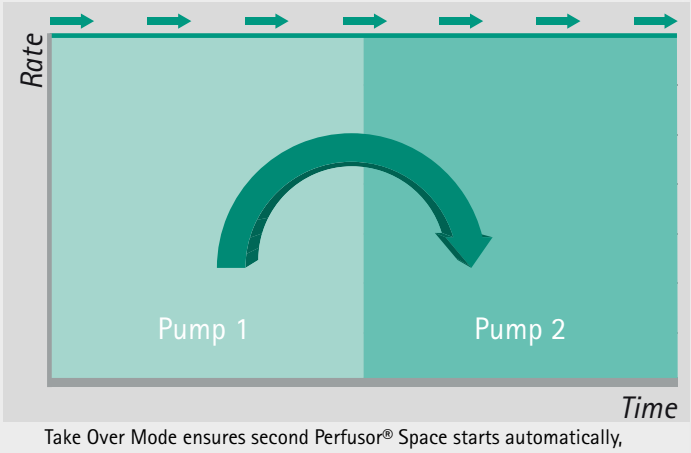
In this complex and stressful environment, an alarm warning of an empty syringe can often be overheard. This can lead to a delay before the therapy is continued with another syringe - an underdoese which can have dangerous consequences in the case of catecholamines.

Proactively set up the second infusion at a time which suites the user rather then reactively when the syringe is empty.

Clear labeling of both pumps

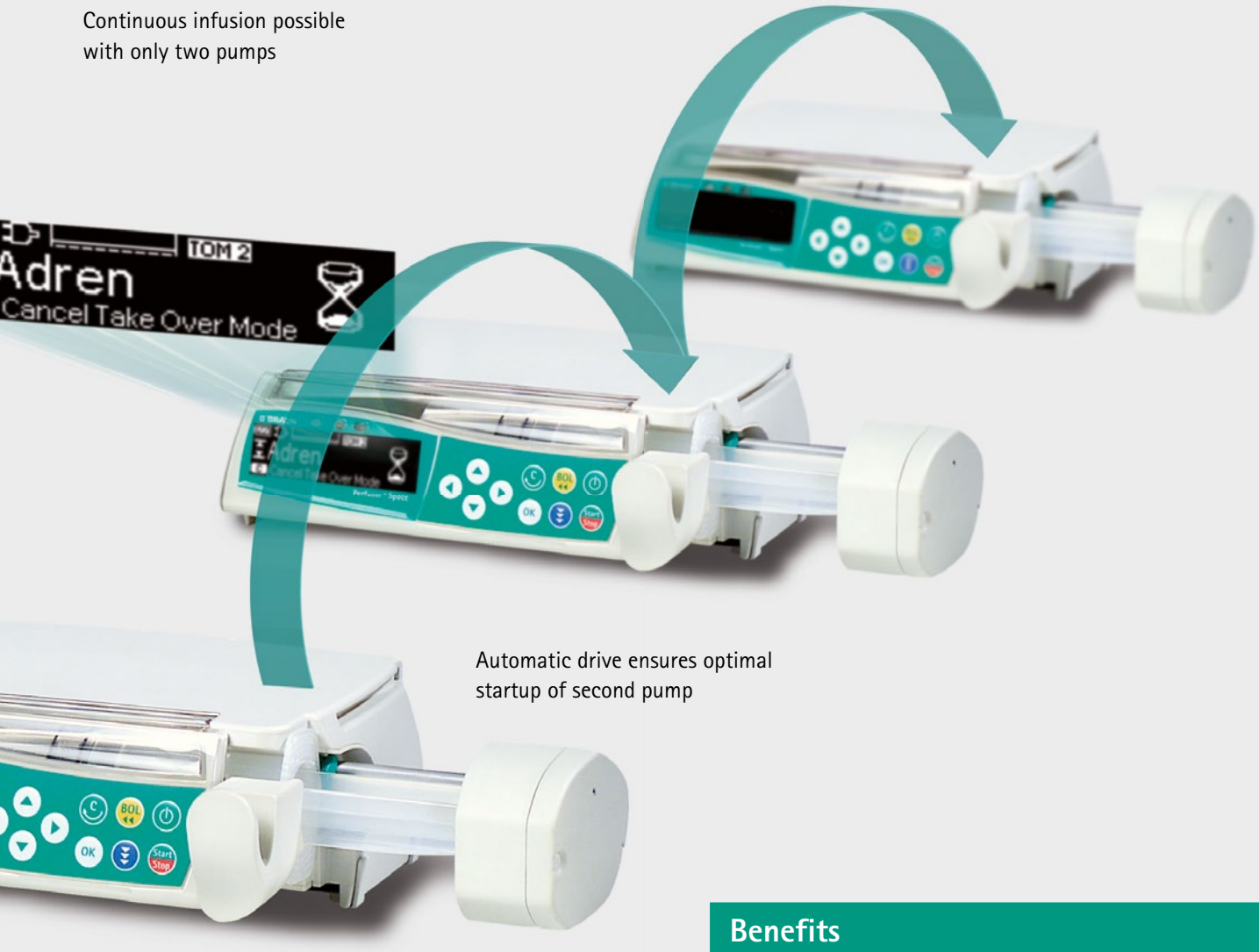


Manually starting a second pump risks a delay in therapy.



Take Over Mode ensures second Perfusor® Space starts automatically, minimizing the risks of underinfusion.

Continuous infusion possible
with only two pumps



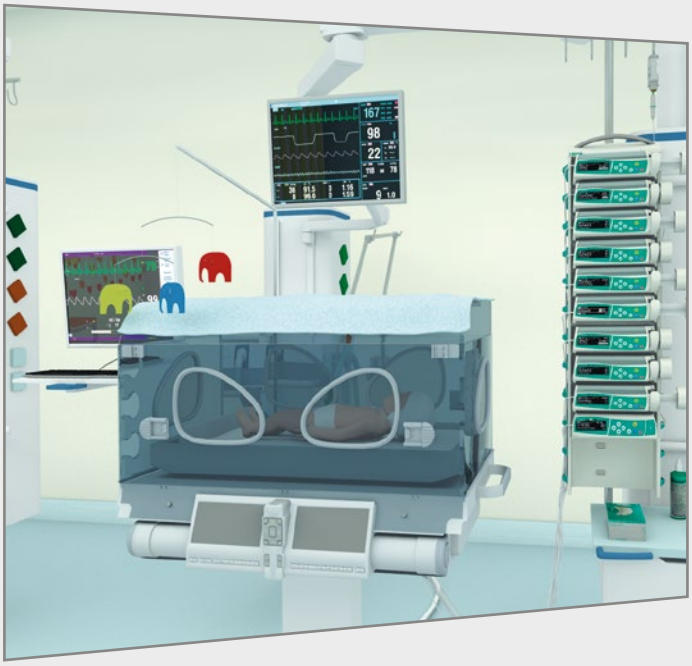
Automatic drive ensures optimal
startup of second pump

Take Over Mode fully automatically starts the second pump as soon as the first is empty – reducing the risk of underinfusion without increasing workload.

Benefits

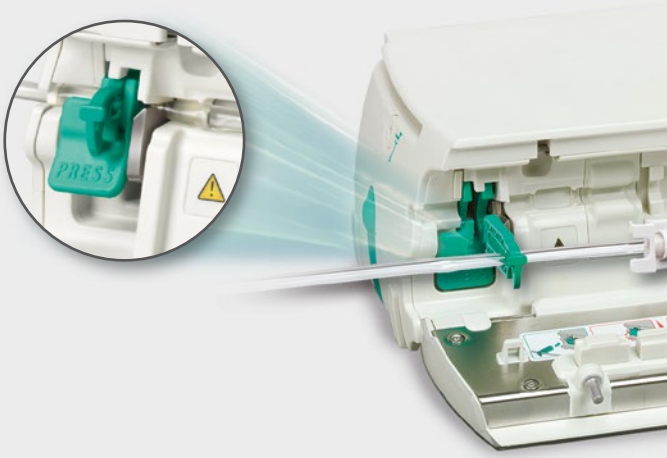
- Second Perfusor® Space starts automatically to reduce workload and prevent underinfusion
- Second Perfusor® Space may be set up at a convenient time
- Simplified handling due to automatic rate transfer

Paediatrics and Neonatology



Bolus free insertion

- Protection against accidental freeflow during line change or removal
- Set-based anti-freeflow clamp activates as soon as Infusomat® Space is opened and prevents overdose



Because children are not small adults, this field of care has the challenge of requiring high flexibility without compromising on safety.

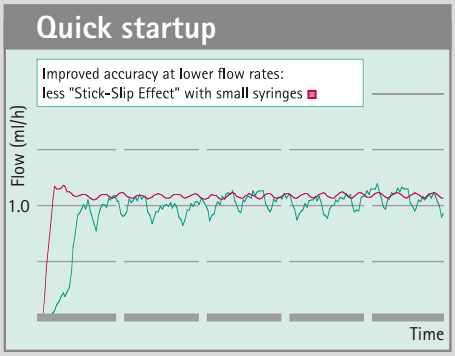
Space protects against medication error with easy to specify, ward specific hard and soft limits.

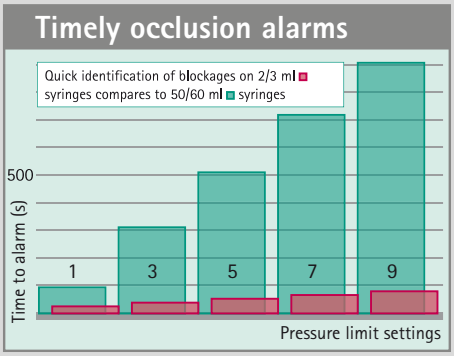
Soft limits:

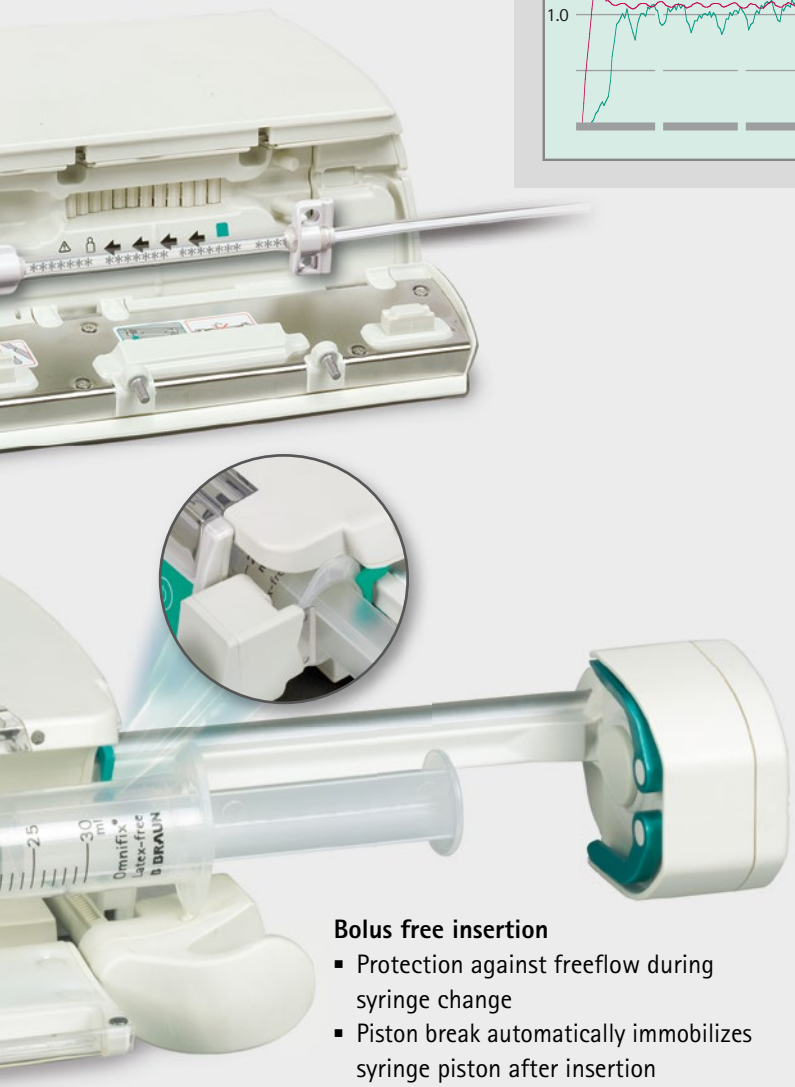
Hard limits:

The Perfusor® Space is compatible with all syringe sizes from 2/3ml to 50/60ml.
Choosing the right syringe for the indication ensures:

- Quick Startup
- Timely occlusion alarms







Bolus free insertion

- Protection against freeflow during syringe change
- Piston break automatically immobilizes syringe piston after insertion

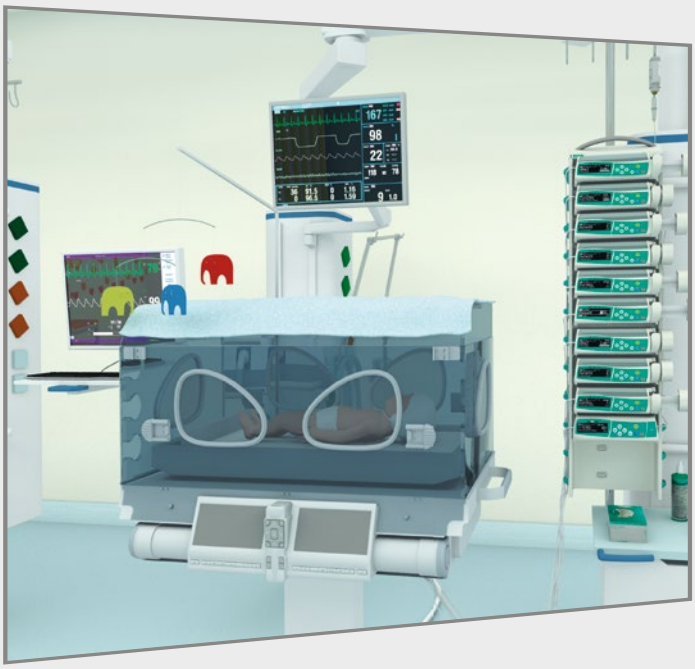
The Space platform offers the convenience of automatically calculated weight-related rates to ensure accuracy of infusion.

Benefits

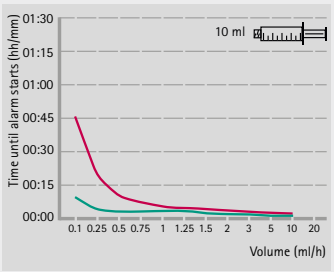
- High precision application
- Bolus free insertion
- Automatic calculation of weight related rates
- Drug specific hard- and soft limits
- Parameter changes can be locked via Data Lock function

Paediatrics and Neonatology – OccluGuard

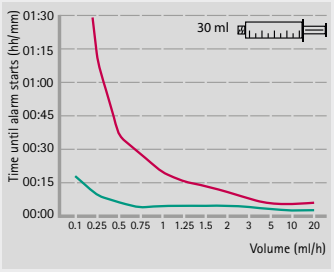
The fastest way to smart alarming



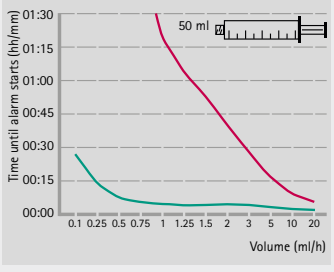
Occlusion Detecion
Closed stopcocks, blocked filters, kinked lines, syringe effects – five causes, one solution: **OccluGuard**



Fast alarming when you need it most
Traditional methods can take as long as an hour to detect occlusions. In this time, the patient receives a significant underdose without the user being informed.



Fast alarming reduces this underdose and ensures the user is presented with all the necessary information necessary to make a clinical decision.

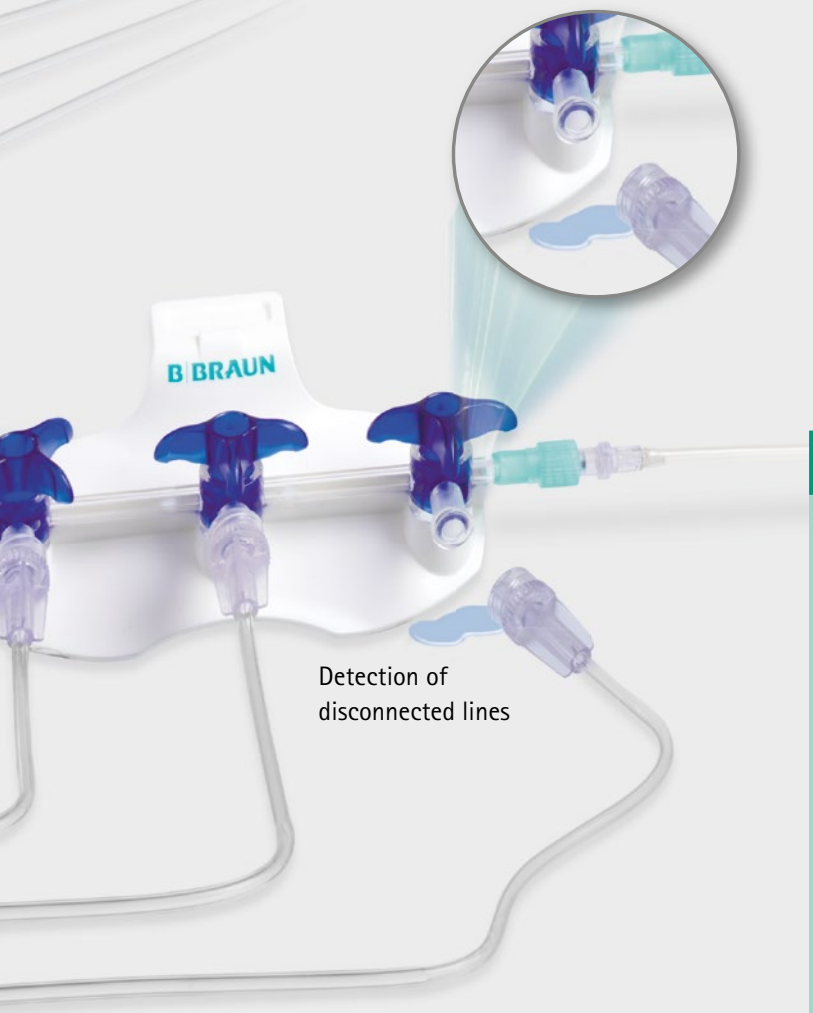


— Standard operation
— Operation with OccluGuard

No need for specialized disposables

Smart Pre-Alarms
OccluGuard is the new generation of smart alarms:

- OccluGuard automatically adapts to any infusion setup without the need for manual adjustments
- OccluGuard does not stop a running infusion and so reduces the risk of underinfusion
- Smart timeouts prevent nuisance alarms
- Should the cause of occlusion be removed (e.g. in the case of patient movement), the OccluGuard alarm will automatically stop.



Detection of disconnected lines

Benefits

- Fast:
  - Detection of occlusions and disconnections up to three times faster than traditional methods
  - Reduced risk of underdosage
- Smart:
  - No need for specialized disposables
  - No need for manual adjustments
  - No false alarms, no nuisance alarms

Operation Theatre: TCI

Greater flexibility

- Space TCI possible with Infusomat®, reducing the number of syringe changes necessary
- Increased safety with DoseGuard® drug error reduction software
- Greater control enabled through the ability to change the drug concentration
- Enhanced user control with the possibility of delivering an extra bolus during TCI
- MRI compatible with no interference or degradation of image quality

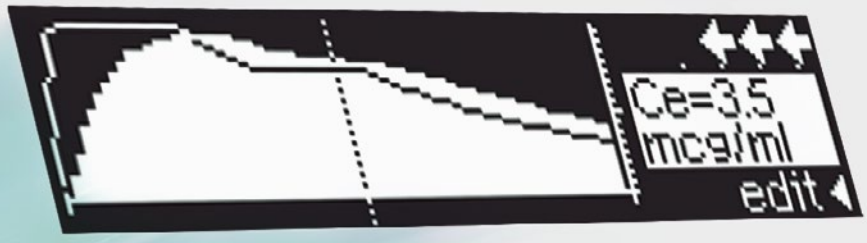
Third Generation TCI

B. Braun's Space system marks the introduction of 3rd generation TCI: simply use the nearest available Space pump as a temporary TCI pump.

Predefined therapy schemes save staff time
To select the right therapy, Space provides a variety of TCI algorithms (Propofol: Schnider, Marsh; Remifentanil: Minto) as well as user profiles (plasma targeting/effect site targeting).

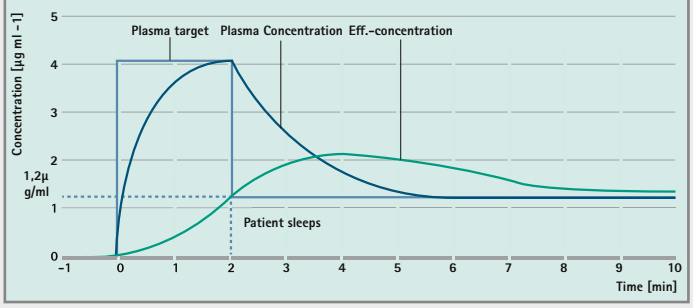
Anesthesia record keeping
Space offers the possibility to not only standardize the equipment in anesthesia with that of the rest of the hospital but also automatically generate electronic anesthesia records.

All important information visible on one screen

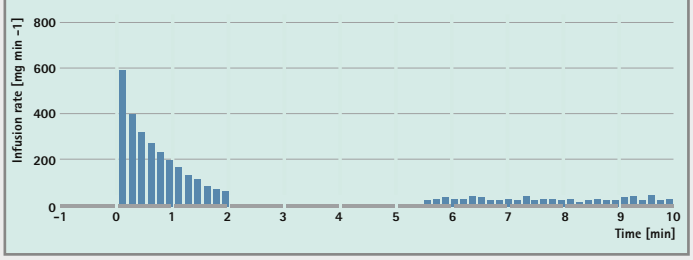


Single pump wireless connectivity
Each Space pump may be equipped with a wireless module built into the battery. This simple upgrade brings the full package of connectivity to a single pump, allowing these pumps to be used more flexibly and more mobile then ever before.

Concentrations



Infusion rates



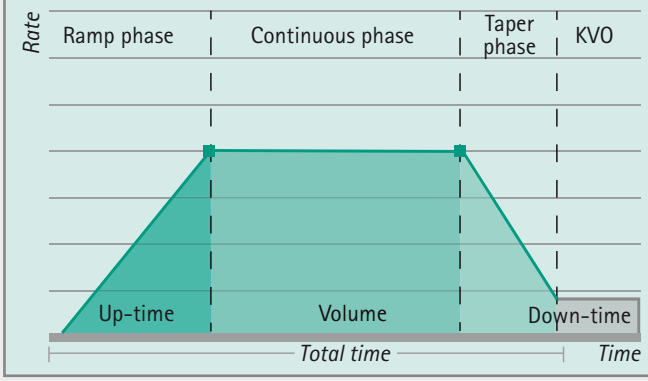
Benefits

- Third generation TCI not linked to dedicated disposables or pumps
- No equipment bottlenecks
- Algorithm ensures a light, sufficient and consistent anaesthesia
- Choice of algorithms: Propofol: Schnider, Marsh; Remifentanil: Minto

Specialist Units

Specialized Therapies for Specialist Units

Ramp and Taper

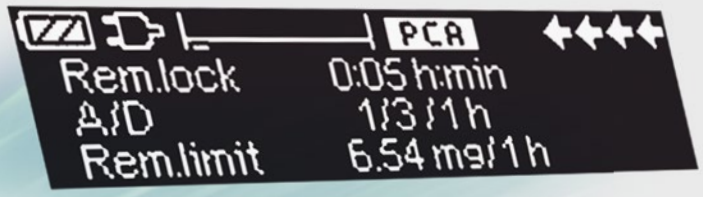


- Freely programmable ramping phase to slowly incorporate nutrition into therapy and avoid intolerances
- Plateau for main phase of therapy
- Taper phase ensures slow and regular transition between IV enteral nutrition

Patient Controlled Analgesia (PCA)

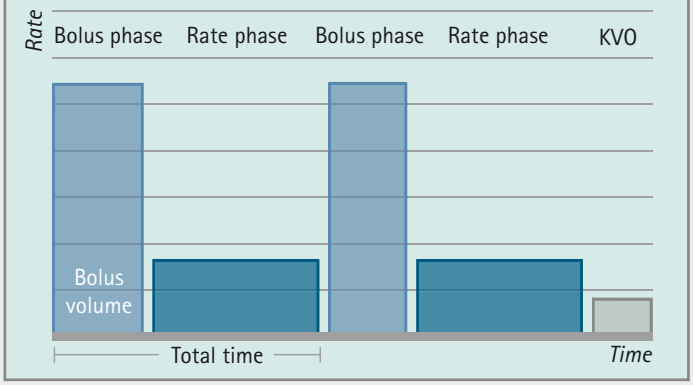
DataLock level 3 developed specifically for PCA.

- The text on the DataLock 3 can be customized to meet the requirements of pain services
- Prevents unauthorised change in parameters



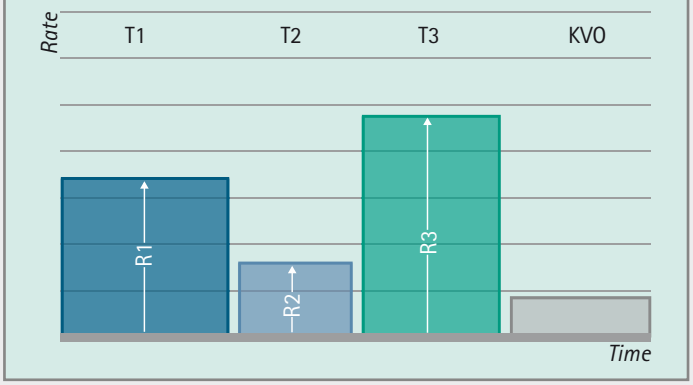
Syringe protective cap prevents accidental or unauthorised removal of syringe.

Multi Dose



- Two-phase therapy allows definition of a standard rate and bolus rate
- Ideal for infusion of antibiotics, cytostatics or tokolytic drugs

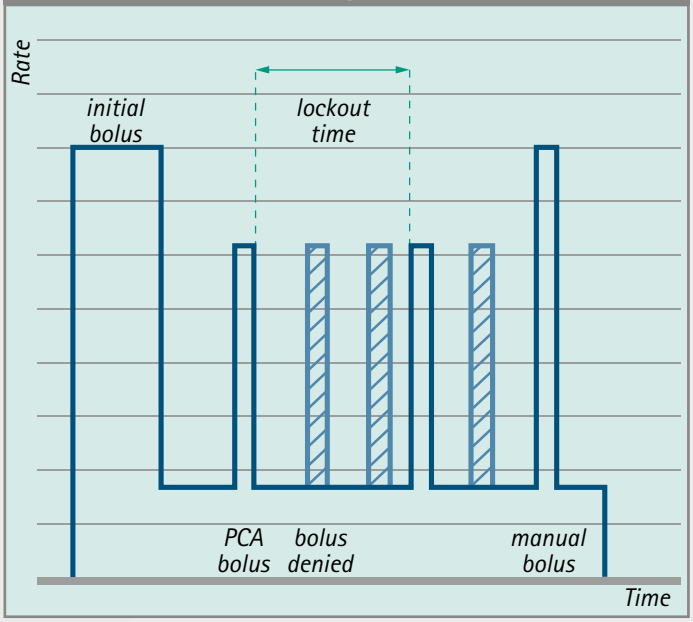
Program/Circadian mode



- Allows the programming of up to 12 different consecutive rates Indicated in, for example, Intravenous immunoglobin

Ensure sufficient therapy: The A/D (attempts vs deliveries) ration is automatically calculated.

Patient Controlled Analgesia



Benefits

Therapy Profiles:

- Reduced nurse workload
- Higher standardization of therapy
- Reduced medication error

PCA:

- Fast pain relief without increasing nurse workload
- Increased flexibility through extended battery life
- Therapy sufficiency always visible via A/D ratio
- Compatible with any Infusomat® Space or Perfusor® Space

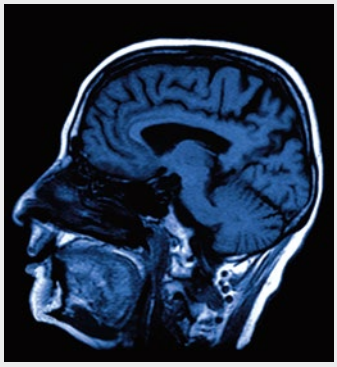
Imaging Environment – Space Station MRI

Convnetional methods for infusion in the MR environment include use of extra long infusion lines or dedicated MR-pumps. Both of these are costly and require an interruption of running infusions

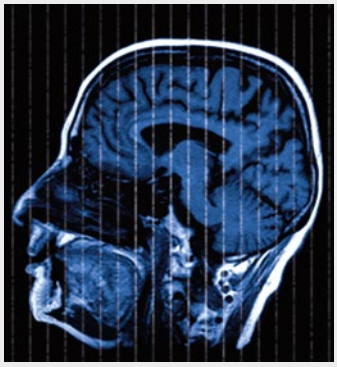
Standard infusion pumps for special applications
The SpaceStation MRI closes this technology gap by letting doctors and staff work with standard Space infusion pumps in the MRI setting.

- Optimal pump positioning: an inbuilt magnetic field meter, the TeslaSpy®, ensures pumps are never brought too close to the MRI Magnet
- Less need for re-scans: SpaceStation MRI shields the pumps against RF interference and thereby ensures interference-free images
- No interruptions: Close positioning of pumps means standard infusion lines can be used and running infusion pumps can simply be inserted into the SpaceStation MRI

The electromagnetic interference created by the pumps can negatively affect the image quality of the MRI images.



With SpaceStation MRI



Without SpaceStation MRI

MRI scanners emit strong magnetic fields that attract all ferromagnetic material. This poses a risk for patients and staff and can even damage the MRI equipment.
The magnetic field meter, TeslaSpy® ensures the SpaceStation MRI is always positioned at a safe distance from the magnet without increasing workload.

Cost Savings with SpaceStation MRI

- No dedicated pumps needed: peristaltic MR-compatible pumps cost up to 20,000€
- Lower risk of MRI Breakdown: although unlikely, an MRI breakdown caused by ferromagnetic material entering magnet can cost as much as 50,000€
- Less costly rescans: a typical re-scan costs approximately 500€
- Quicker, effective patient transfer: expensive extra long infusion lines are not only a cost factor in themselves but waste nurse time to prepare,.

Benefits

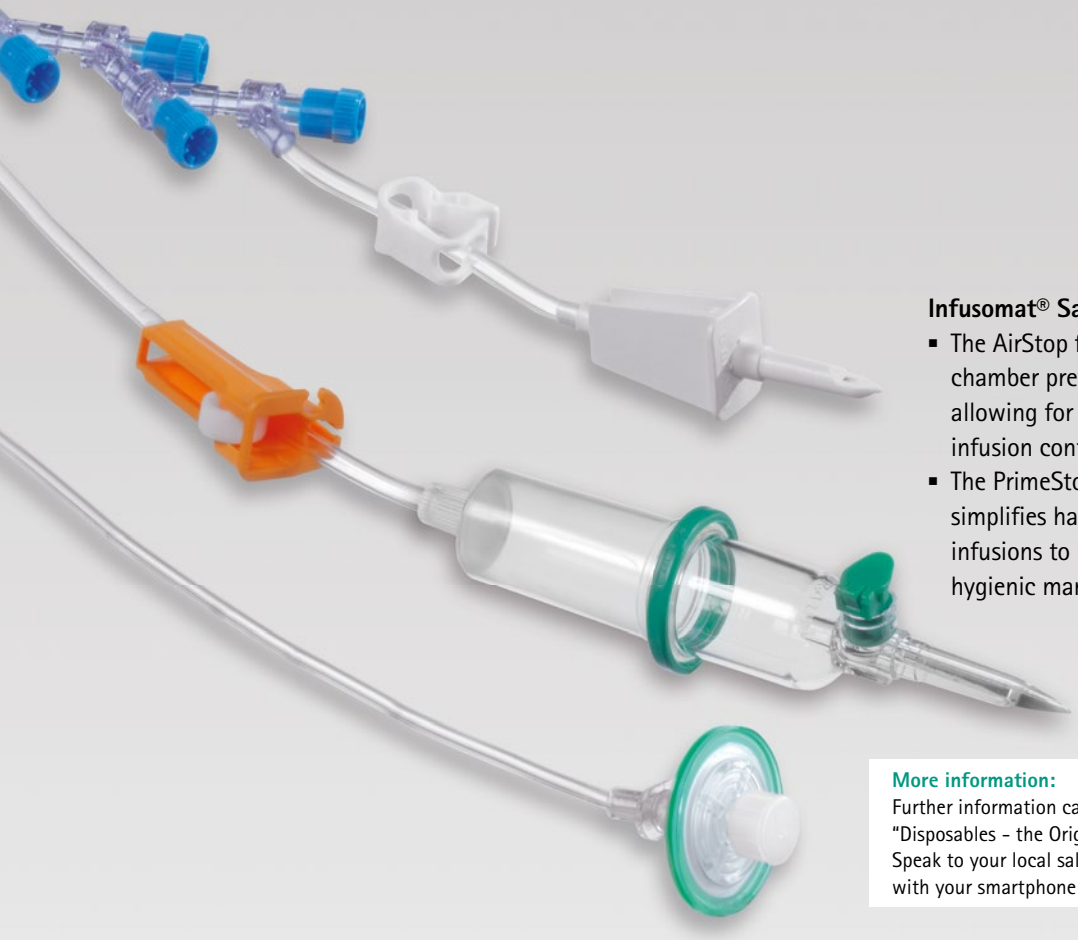
- Allows use of standard pumps in MRI environment
- Removes need for wasteful long infusion lines
- No interruption of running infusions
- Passive protection against scan interferrence

Find out more online:
Either scan the 2D barcode with your smartphone or click on MRI on our webpage
www.space.bbraun.com

Dedicated Disposables

The right disposable for the best result
Perfusor® Space pumps are essential where a precise and consistent infusion is necessary such as for inotropic drugs or in neonatal wards. The accuracy and consistency of an infusion, however, is not only dependant on the pump but is linked to the quality of the syringe. The interaction between a volumetric pump and the infusion line is just as subtle and an incorrect choice of line can lead to patient complications.

B. Braun therefore can only guarantee the accuracy and consistency of an infusion if high quality, dedicated disposables are used.

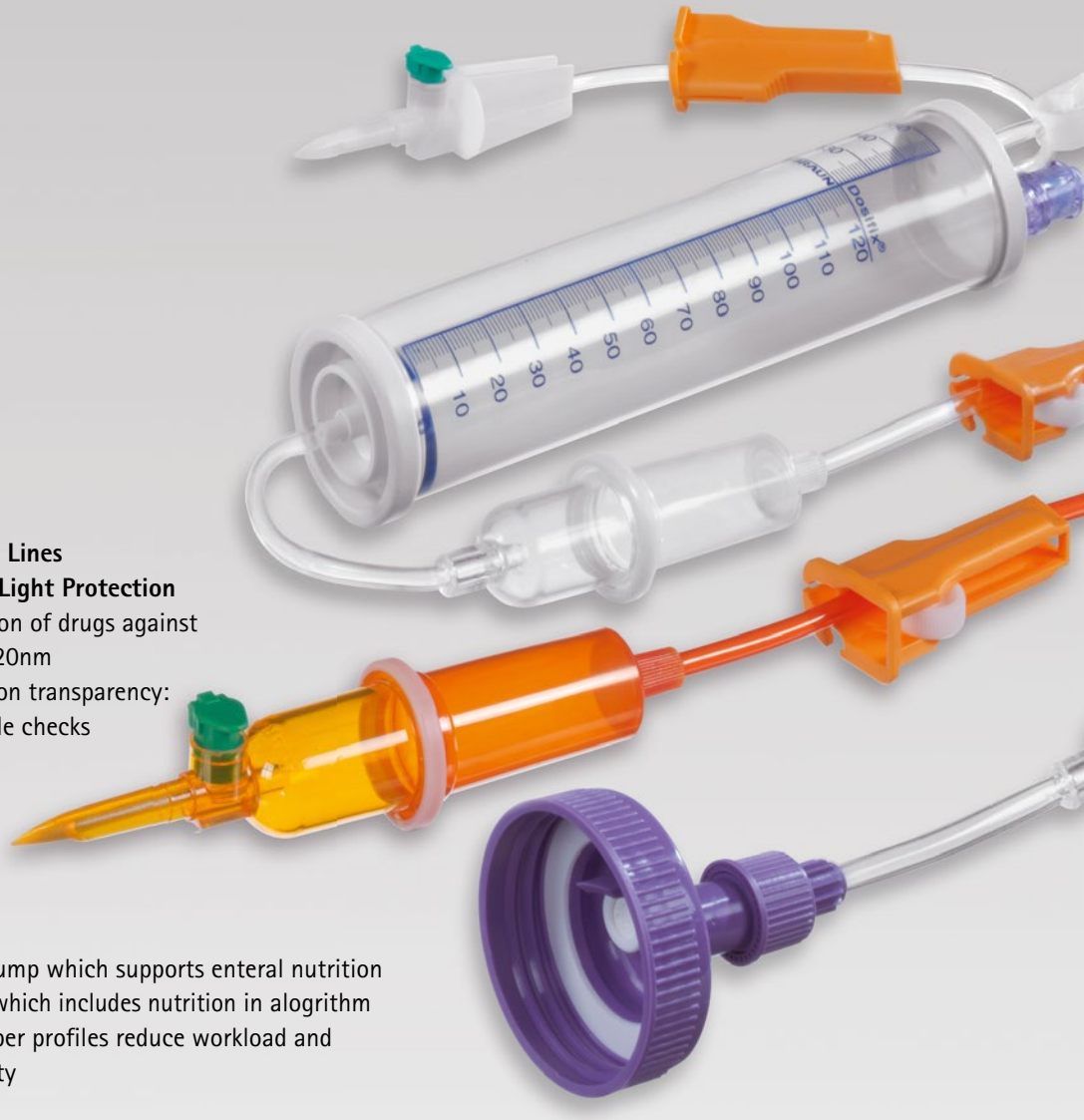


Infusomat® SafeSet
- The AirStop filter integrated into the drip chamber prevents the IV line running dry allowing for a more efficient change of infusion container
- The PrimeStop patient connector simplifies handling allowing for multiple infusions to be primed at once in a hygienic manner

More information:
Further information can be found in the brochure "Disposables - the Original by B. Braun" (6068892). Speak to your local sales rep or scan the 2D barcode with your smartphone

Benefits

- Further increases the range of available therapies
- Simple implementation through high system compatibility
- Broad range of disposables specifically suited to Space Infusion Pumps



Infusomat® Space Lines with Transparent Light Protection

- Optimal protection of drugs against UV light up to 520nm
- No compromise on transparency: manual air bubble checks are still possible

Nutrition lines

- Only universal pump which supports enteral nutrition
- Only SGC pump which includes nutrition in alogrithm
- Inbuilt Ramp/Taper profiles reduce workload and increase reliability

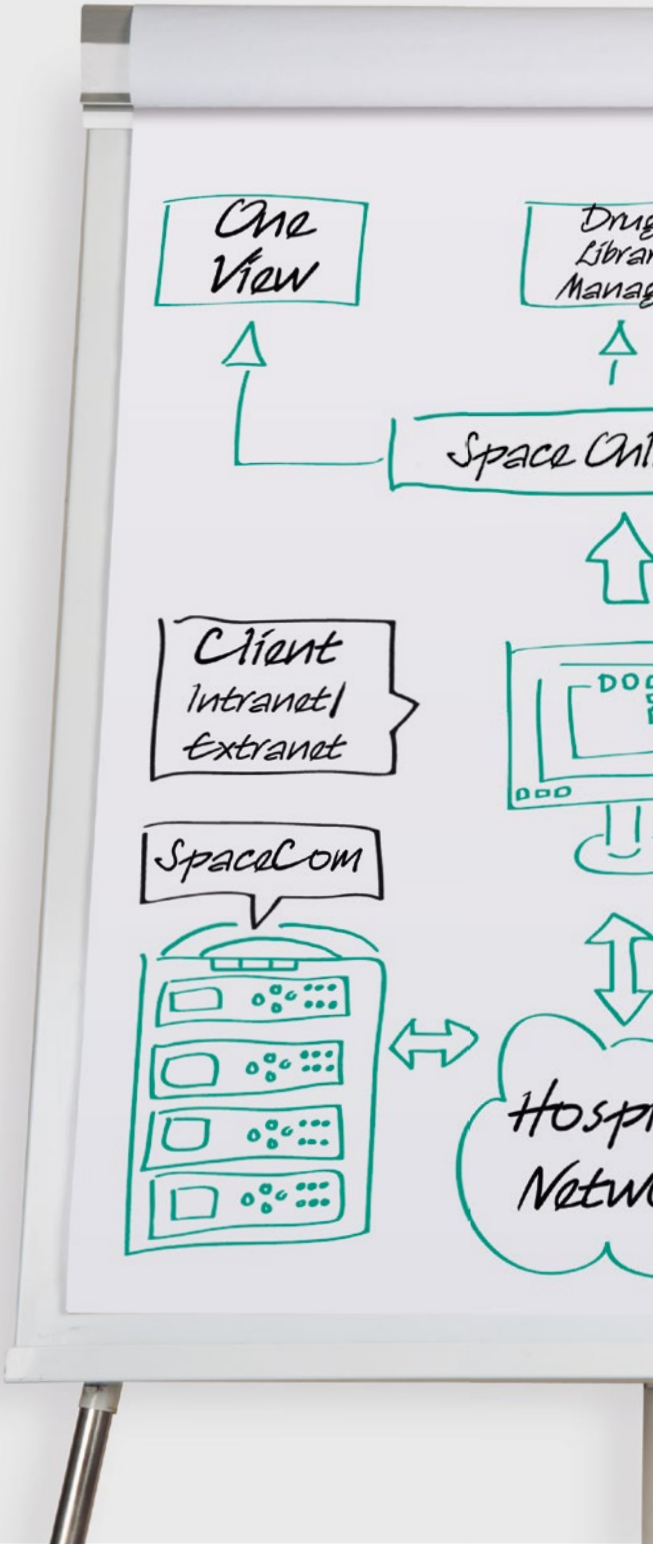
Space OnlineSuite – the new Application Platform

OneView

- Increased efficiency due to centralized IV therapy overview
- Immediate information in all rooms
- Pump alarm management support
- Reduces alarm stress for both nursing staff and patients
- Increased medication safety

Drug Library Manager .WEB

- Always up-to-date Drug Library
- Time saving for technicians
- No workflow disturbance
- Increased medication safety



Drug Library Manager

- Central administration of therapy settings
- One DrugLibrary file for all pumps
- Easy set up of Care Unit specific DrugLists

DoseTrac

Reports for:

- Insights into potential medication errors
- Monitor practice and process improvements
- Optimized pharmacy management
- Documentation without gaps

Benefits

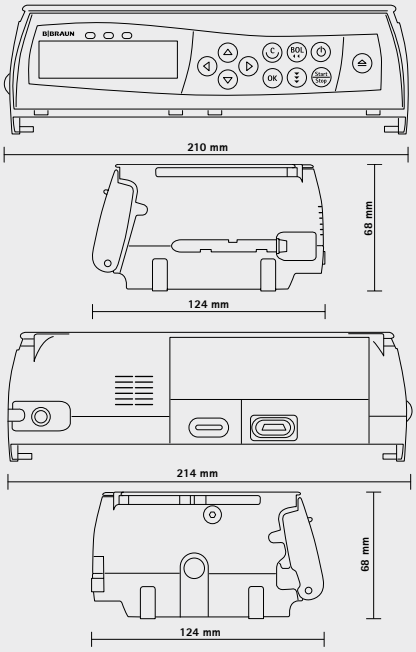
- One platform for several infusion management applications
- Easy to integrate into the hospital network
- Adaptable and extendable due to standardized technologies
- Future-proof design

More information:
Further information can be found in the brochure "Space OnlineSuite" (6064500).
Speak to your local sales rep or scan the 2D barcode with your smartphone.

Find out more online:
Either scan the 2D barcode with your smartphone or click on Space OnlineSuite on our webpage:
www.space.bbraun.com

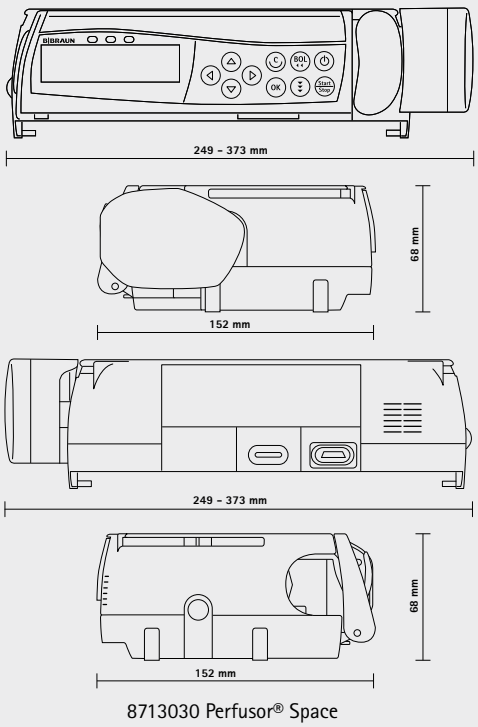
Technical Data

Infusomat® Space, Volumetric infusion pump	
Type of unit	Volumetric infusion pump
Dimensions	214 x 68 x 124 mm (WxHxD)
Weight	Approx. 1.4 kg
Moisture protection	IP 22, drip protected for horizontal usage
Display	Backlit graphic display, ~40° read angle from all sides
Keypad	Backlit keys, cell phone like cursor navigation
Flow Rates	0.1-1200 ml/h
Accuracy of set delivery rate	<< ±0,5 % mechanical accuracy ± 5 % according to IEC/EN 60601-2-24
Operating Temperature	+10° C ... + 40° C +50° F .... +105° F
Voltage	11-16 V DC supplied by external Space Power Supply or by SpaceStation
Battery operating time	Minimal power consumption of the devices and new battery technology ensure long operating times, e.g. 9.4 hrs. @ 80 ml/h, 8.5 hrs. @ 100 ml/h
Lifetime	Min. 10 years under continuous duty conditions
Article-No	Infusomat® Space: 8713050 Infusomat® Space P: 8713070



8713050 Infusmat® Space

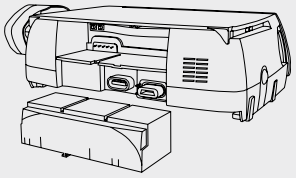
Perfusor® Space	
Type of unit	Infusion syringe pump, syringe driver
Dimensions	249 x 68 x 152 mm (WxHxD), drive parked
Weight	Approx. 1.4 kg
Moisture protection	IP 22, drip protected for horizontal usage
Display	Backlit graphic display, ~40° read angle from all sides
Keypad	Backlit keys, cell phone like cursor navigation
Flow Rates	0.01-1800 ml/h
Accuracy of set delivery rate	<< ± 0,5 % mechanical accuracy ± 2 % in compliance with IEC/EN 60601-2-24
Operating Temperature	+5° C ... + 40° C +41° F .... +105 °F
Voltage	11 - 16 V DC supplied by external Space Power Supply or by SpaceStation
Battery operating time	Minimal power consumption of the devices and new battery technology ensure long operating times, e.g. 16.8 hrs @ 1 ml/h, 16 hrs @ 5 ml/h, 14 hrs @ 20 ml/h
Lifetime	Min. 10 years under continuous duty conditions
Article-No	Perfusor® Space: 8713030

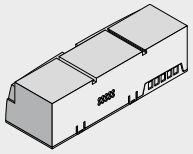


8713030 Perfusor® Space

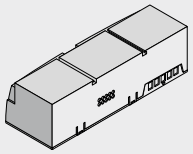
Space SmartBattery Packs

Type of unit	High capacity SmartBattery Pack for Infusomat® Space, Perfusor® Space, SpaceCom and SpaceCover Comfort		
Handling	Simple tool-free replacement by opening the cover of the battery compartment		
Cells	four 1.8 Ah NiMH cells		
Electronics	Discreet processor / memory PCB that monitors and controls the charging / discharging cycle		
Status	Visualization of the actual status as icon in the main screen (">10 %, ">50 %" or ">80 %" of the battery capacity) and as remaining time in hours and minutes		
Recharging time	Approx. 3 hours for 80 % of the operation time Approx. 6 hours for 100 % of the capacity		
Mechanism to extend battery lifetime	Processor PCB controls the temperature of the cells Embedded battery maintenance software		
Article-No	Battery Packs (SP)	with pin	without pin
	without Wireless:	8713180A	8713180
	with Wireless:	8713182A	8713182





8713180 Battery Pack SP without fixation pin

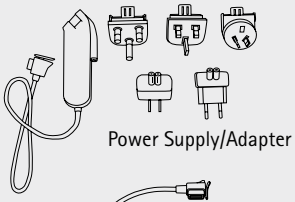


8713180A Battery Pack SP with fixation pin

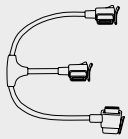
Space Power Supply and Space PoleClamp

Type of unit	High capacity SmartBattery Pack for Infusomat® Power Supply Space: Voltage supply for up to 3 Space pumps PoleClamp Space: Snap-in-Technique for fast fixation of stacks of up to 3 Space pumps	
Fixation	PoleClamp can be attached to infusion poles and vertical tubes (diameter 16–40 mm) as well as horizontal wall rail systems accord. to EN1789	
Moisture protection	Power Supply: protected from splash water, IP42	
Voltage	100–240 V AC +/-10 % = 90–264 V AC, 50/60 Hz	
Adapters	Euro, UK, USA, RSA, India, Korea, China, Australien	
Cable length	2 m	
Accessories	8713133 Combi Lead 12 V – to connect up to 3 Space pumps to one power supply; 8713135 Short infusion stand for Space PoleClamp	
Article-No	Space PoleClamp:	8713130
	Combi Lead 12 V:	8713133

8713130 Space PoleClamp



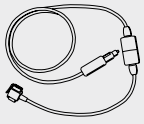
Power Supply/Adapter



8713133 Combi Lead 12 V

Ambulance cars, helicopters and jets

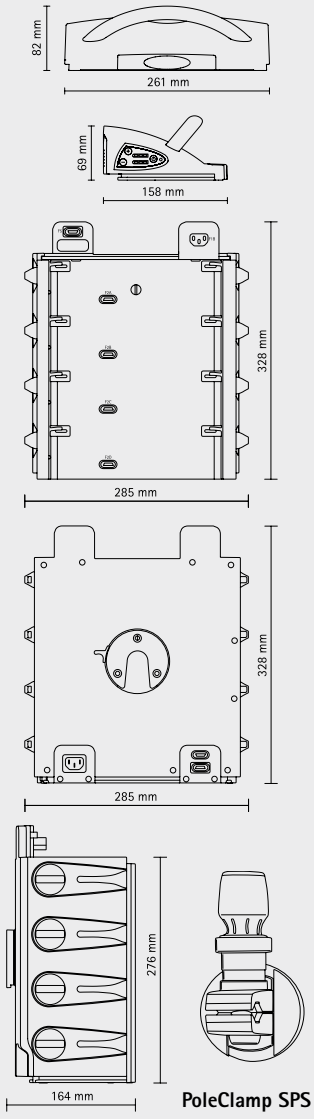
Type	12 V adapter cable to connect up to 3 Space pumps to the onboard supply system of ambulance cars, helicopters or jets	
Certificates for pumps incl. accessories	EN 1789 Type B: Emergency Ambulance EN 1789 Type C: Mobile Intensive Care Unit EN 13718-1: Air, water and difficult terrain ambulance	
Power consumption	max. 20 W for 3 pumps	
Accessories	8713231 On-board 12 V supply	
Article-No	On-board 12 V supply:	8713231



8713231 On-board 12 V supply

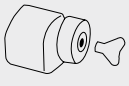
Technical Data

SpaceStation, SpaceCover Standard, SpaceCover Comfort	
Type of Device	Modular stackable rack (SpaceStation) for any combination of up to 4 Infusomat® Space or Perfusor® Space SpaceCover Standard as roof of the upper SpaceStation. SpaceCover comfort with central optical and acoustic operation status indicator. Central adjustable volume of the alarm signals.
Weights	SpaceCover Comfort: 0.9 kg SpaceCover Standard: 0.6 kg SpaceStation: 3.6 kg SpaceStation with SpaceCom: 4.1 kg
Expandability	Tool-free assembly of up to 6 Space Stations (6 x 4 slots) in one, two or three pillars
Fixation	Universal clamp can be attached to infusion poles (diameter 16-40 mm) as well as horizontal wall rail systes accord. to EN1789
Moisture protection	IP22, drip protected for horizontal usage
Power supply system	Built-in AC adapter. Standard mains cord for non-heating apparatus, rubber connector Primary: 100-120 V AC ~ 50/60 Hz, 200-240 V AC ~ 50/60 Hz, 110V 0.6 A/220 V 0.3 A; Secondary: 12V DC/35 W
Battery operating time	SpaceCoverComfort: ~ 26 hrs SpaceCom without WLAN: ~ 3 hrs @ one battery SpaceCom without WLAN: ~ 5 hrs @ two batteries SpaceCom with WLAN: ~ 2 hrs @ one battery SpaceCom with WLAN: ~ 3.5 hrs @ two batteries
Operating Temperature	+10° C ... + 40° C +50° F .... +105° F
Article-No	SpaceCover Standard: 8713147 SpaceCover Comfort: 8713145 SpaceStation: 8713140 SpaceStation incl. SpaceCom: 8713142 SpaceCom Retrofitting kit: 8713160 PoleClamp SPS 34251151



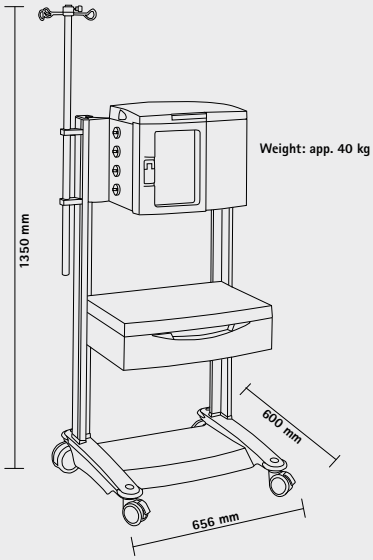
PoleClamp SPS

PCA	
Space PCA kit	PCA kit for Infusomat® and Perfusor® Space
Article-No	PCA kit: 8713554
Syringe anti removal cap	Protective cap to prevent syringe manipulation
Article-No	Anti removal cap: 8713556



SpaceStation MRI

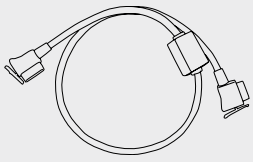
Type of unit	MR-conditional unit for taking up to four Space pumps incl. trolley
Certificates	Siemens MRI scanners: Trio (3 Tesla) Trio A Tim System (3 Tesla) Verio (3 Tesla) Espree (1.5 Tesla) Avanto (1.5 Tesla) Sonata (1.5 Tesla) Symphony (1.5 Tesla) ESSENZA (1.5 Tesla)
Max. magnetic flux density	20 mT = 200 G Online vectorial measurement of the field components in three axes.
Radio interference suppression	IEC EN 60601-1-2:2001 IEC EN 60601-2-24:1998
Voltage	Primary: 100-120V AC / 200-240 VAC; max 80 VA Inlet connector for non-heating apparatus; rubber connector
Moisture protection	IP21, protection against waterdrops
Article-No	SpaceStation MRI: 8713152



SpaceStation MRI

Accessories

Article-No	Extension lead 60 cm: 8713210 Extension lead 120 cm: 8713215 Extension lead 10 m: 8713315 Extension lead 15 m: 8713415 Space SmartBattery Pack: 8713180



Space OnlineSuite

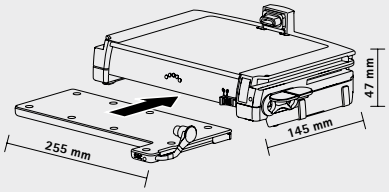
Article-No	Space OnlineSuite DVD: 876100 Space OnlineSuite DVD incl. license dongle: 876101

Space OnlineSuite DVD

Space OnlineSuite DVD incl. license dongle

Space GlucoseControl (SGC)

SpaceControl and SGC modul	Decision support system for glucose therapy. Consists of SpaceControl as user interface and the SGC module with the eMPC alogrithm.
Article-No	SpaceControl: 8713090 SGC Module: 8713584



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