



PRESCRIPTION

PATIENT ACCESS

PREPARATION

APPLICATION

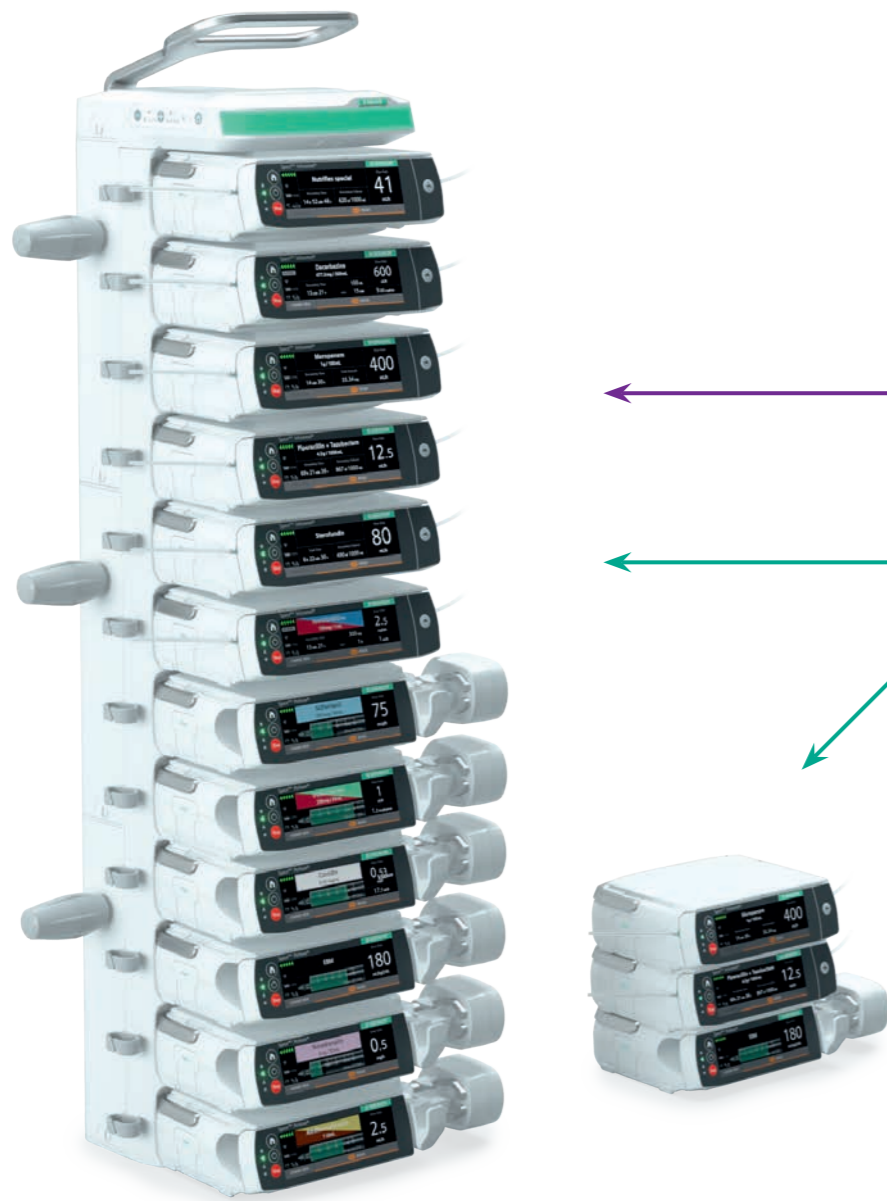
DISCHARGE
MANAGEMENT

Space^{plus} & OnlineSuite^{plus}

Advanced. Superior. Digital.

#spaceplus

A MILESTONE IN INFUSION THERAPY.



Welcome to Space^{plus} & OnlineSuite^{plus} -
our new Smart Infusion Ecosystem!

Space^{plus} and OnlineSuite^{plus} make up a unique ecosystem that allows for the seamless flow of data. Each pump is equipped with an integrated WiFi module, resulting in a continuous bidirectional exchange of data – even during transport.

70 YEARS
OF EXPERIENCE
IN INFUSION
PUMP SYSTEMS
SINCE 1951

ENGINEERED
& MADE
IN GERMANY



TODAY'S THERAPY.

Today's infusion pumps are designed to improve accuracy and reduce medication errors.

However, studies have shown that these devices are involved in 35-60% of the estimated 770,000 adverse drug events (ADEs) that occur each year.¹


In order to reduce infusion errors, hospitals demand smart devices that are connected to the hospital network.

More connectivity always comes with potential new vulnerabilities. Thus, a new technology is only as smart as its cyber security.⁵




15-19% 
OF MEDICAL DEVICES WERE
RUNNING ON OUTDATED
OPERATING SYSTEMS, POSING
A SECURITY RISK.¹

1. <https://www.securitymagazine.com/articles/94381-healthcare-security-challenge-how-cyberattacks-are-evolving>

23,000 
REPORTS OF MALFUNCTIONS
AND INJURIES WHILE USING
IV PUMPS WERE SUBMITTED.²

2. Giuliano KK. Intravenous Smart Pumps : Usability Issues, Intravenous Medication Administration Error, and Patient Safety. Crit Care Nurs Clin. 2018; 30(2):215-24.

> 7 MILL. 
PATIENTS ARE AFFECTED BY
PREVENTABLE MEDICATION
ERRORS, RESULTING IN ANNUAL
COSTS OF OVER \$21 BILLION.³

3. Da Silva BA, Krishnamurthy M. The alarming reality of medication error: a patient case and review of Pennsylvania and National data. J Community Hosp Intern Med Perspect. 2016 Sep 7;6(4):31758. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5016741/>

Please refer to the following pages and see how Space^{plus} & OnlineSuite^{plus} can help you resolve these problems.



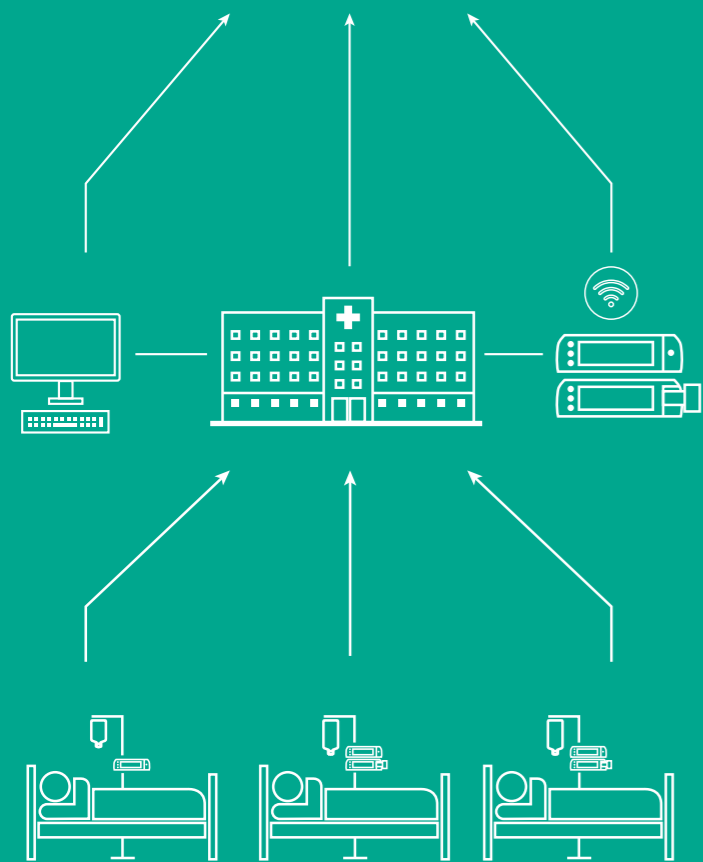
#hospitaldigitalisation

THE DECISION TO IMPLEMENT THIS
ADVANCED INFUSION SYSTEM
BEGINS YOUR JOURNEY INTO THE
**DIGITALLY ENHANCED HOSPITAL
OF THE FUTURE.**

CONNECTING AN ECOSYSTEM.

B|BRAUN
Health Cloud

OnlineSuite^{plus}
powered by B. Braun Health Cloud



The B. Braun Health Cloud connection provides the hospital with fully automatic updates and upgrades of software, access to E-Learnings, and further product information.

OnlineSuite^{plus} is an innovative IT platform providing software applications that help users to reduce medication errors and develop more efficient processes across the entire hospital.

Space^{plus} infusions pumps are easily connected to the hospital IT network thanks to the integrated WiFi module.

All infusion pumps may be used flexibly either in the station, as a single pump, or on transport.

FUTURE-ORIENTED TECHNOLOGY

SMART TECHNOLOGY SMART HOSPITALS

CYBER SECURITY

Data transmitted through the hospital network between the Space^{plus} infusion pumps and the OnlineSuite^{plus} servers is encrypted.



INTEROPERABILITY

Engineered to be easily integrated into the hospital IT environment using the bi-directional HL7IHE framework for data communication.



SEAMLESS DOCUMENTATION

Space^{plus} infusions pumps introduce an internal data buffer for data caching when no network connection is available.

CONNECTING AN ECOSYSTEM.

Space^{plus} in combination with OnlineSuite^{plus} is **THE DIGITAL INFUSION SYSTEM** for hospitals that want to offer their patients complex, individual, and safe infusion therapy with maximum medical options.

It is easy to integrate, with state-of-the-art interoperability into hospital information systems and an advanced approach to better **CYBER SECURITY**, the Space^{plus} system is the digital solution of choice for the healthcare sector.

OnlineSuite^{plus}
powered by B. Braun Health Cloud

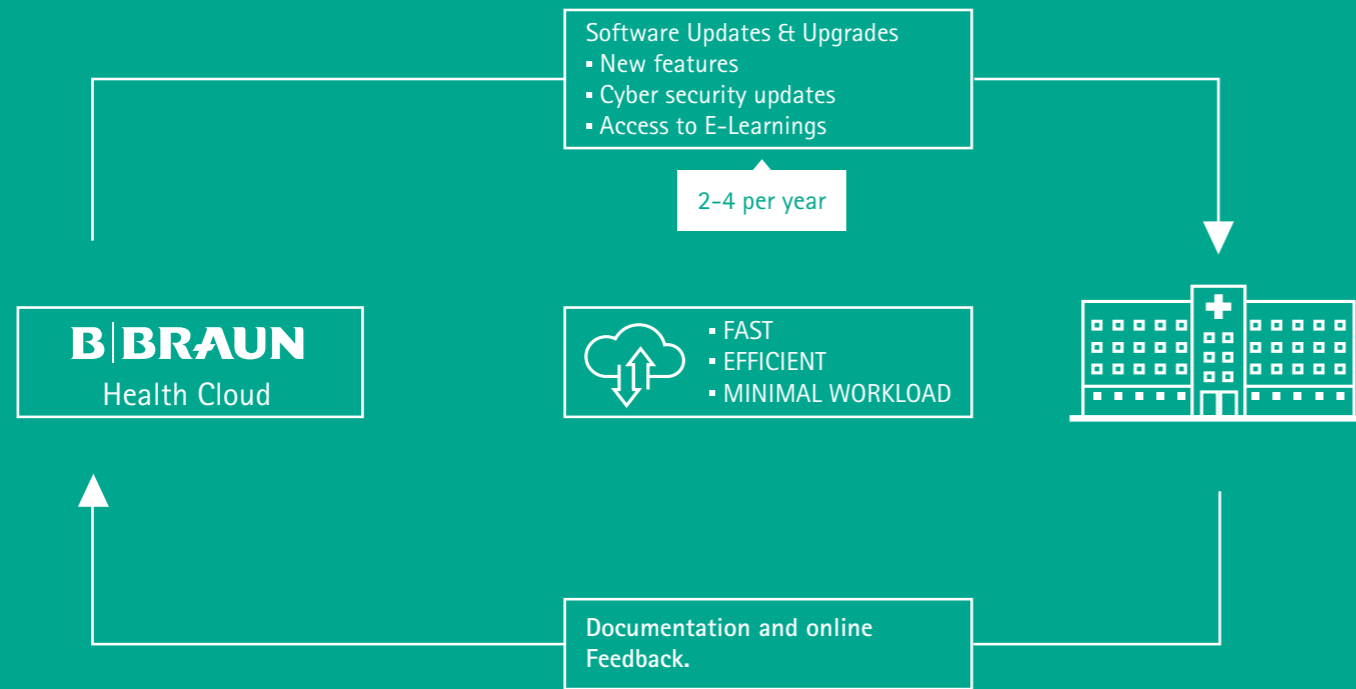
OnlineSuite^{plus} is the next generation of innovative software applications for the digital management of B. Braun infusion pumps in hospitals.



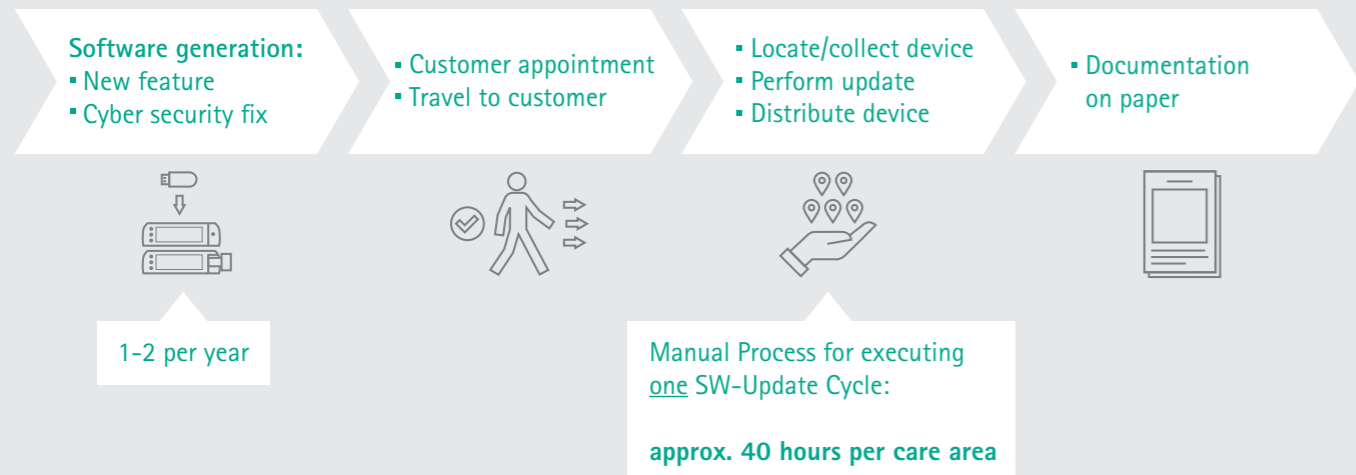
#remotedevicemanagement

**LESS DOWNTIME
MORE PRODUCTIVITY.**

DIGITAL INFUSION PUMP UPDATES



TODAY'S MANUAL PROCESS



Manual processes for infusion pump updates are time consuming, interrupt clinical workflows due to the unavailability of infusion pumps during update procedures, and can last several weeks.

DIGITAL WORKFLOW

LESS DOWNTIME MORE PRODUCTIVITY

ZERO TOUCH DEPLOYMENT
 Remote updates of infusion pumps via the hospital network without interrupting the clinical workflows.



ALWAYS THE LATEST SOFTWARE
 The B. Braun Health Cloud provides direct access to the latest software, E-Learnings, and further product information.



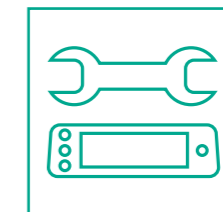
DRUG LIBRARIES ON THE FLY
 Drug Library data is always up to date at the infusion pumps.



DRIVING DIGITALISATION. HEALTHCARE 4.0.

Efficient processes for updating infusion devices with new **SOFTWARE AND DRUG LIBRARY DATA** through the hospital's network is an essential time-saving benefit for the biomedical engineering department.

Equally important from a clinical perspective is the fact that infusion therapy is not interrupted during the controlled **TRANSFER OF UPDATES**.



Device Manager^{plus}
 Technicians' centralised toolbox for managing infusion pumps across the entire hospital via its network.

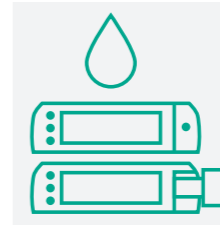
AWARD-WINNING WORKPLACE DESIGN AND FLEXIBILITY.



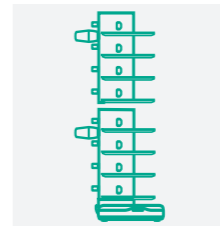
DESIGN & ENGINEERING

TRUST IN EXPERIENCE QUALITY OF LIFE

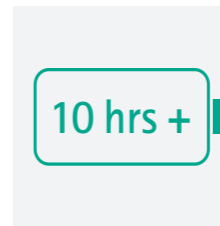
IP44 MOISTURE PROTECTION
B. Braun SpacePlus pumps feature IP44 moisture protection against splashing water from any direction



SUPERIOR WORKPLACE DESIGN
Giant possibilities in the smallest of spaces: The modular system allows for configurations of up to 24 pumps.



BATTERY CAPACITY
Long-lasting batteries set the staff free from inflexible wall sockets.



THE AWARD-WINNING WORKPLACE DESIGN AND FLEXIBILITY.

Easy and tool-free **CONNECTION OF UP TO 6 STATIONS** that can be extended to a workstation for **UP TO 24 INFUSION PUMPS**. The station displays visual and audible alarms centrally, allowing for quicker alarm localisation within the room. The innovative design supports routine tasks like cleaning and disinfection.



reddot winner 2021

iF International Forum Design





#userexperience

**EFFICIENT CLINICAL
WORKFLOWS.**

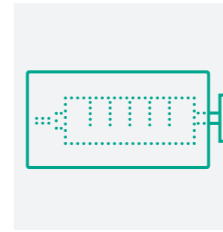
EASE OF USE

TOUCHSCREEN TECHNOLOGY. HIGHLY VISIBLE COLOUR DISPLAY



SYRINGE STATUS VIA UI

The new user interface makes it even easier for you to schedule syringe changes easily, as the fill status of the syringe is visualised on the screen.



TOUCHSCREEN USER INTERFACE

The resistive touchscreen colour display guides healthcare professionals through therapy settings and options.

AT A GLANCE

Even from a far distance, the active agent of a running infusion or pump alarm can be identified.



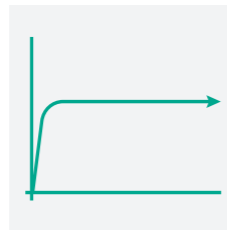
EASE BY DESIGN.

The operation of Space^{plus} is highly **USER-FRIENDLY AND INTUITIVE** and can be adapted to clinical workflows in order to reduce medication errors.

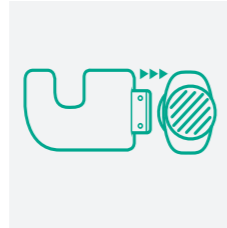
Both the Infusomat[®] and the Perfusor[®] have the **SAME DESIGN, INTERFACE, AND MENU STRUCTURE**. This means less training for healthcare professionals and a reduced risk of incorrect handling.

Space^{plus} allows one to **REACT QUICKLY, APPROPRIATELY, AND SAFELY**. Without thinking.

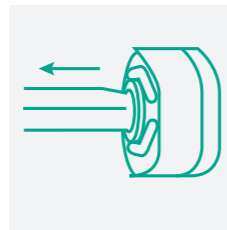
INTERACT WITH TECHNOLOGY INTERFACE WITH LIFE



OUTSTANDING ACCURACY
Precision determines health. Space^{plus} Perfusor[®] and Space^{plus} Infusomat[®] introduce new dimensions of delivery rate accuracy based on superior mechanical drive technology.



SYRINGE PISTON BRAKE
The unique syringe piston brake prevents freeflow and handling mistakes during syringe change.



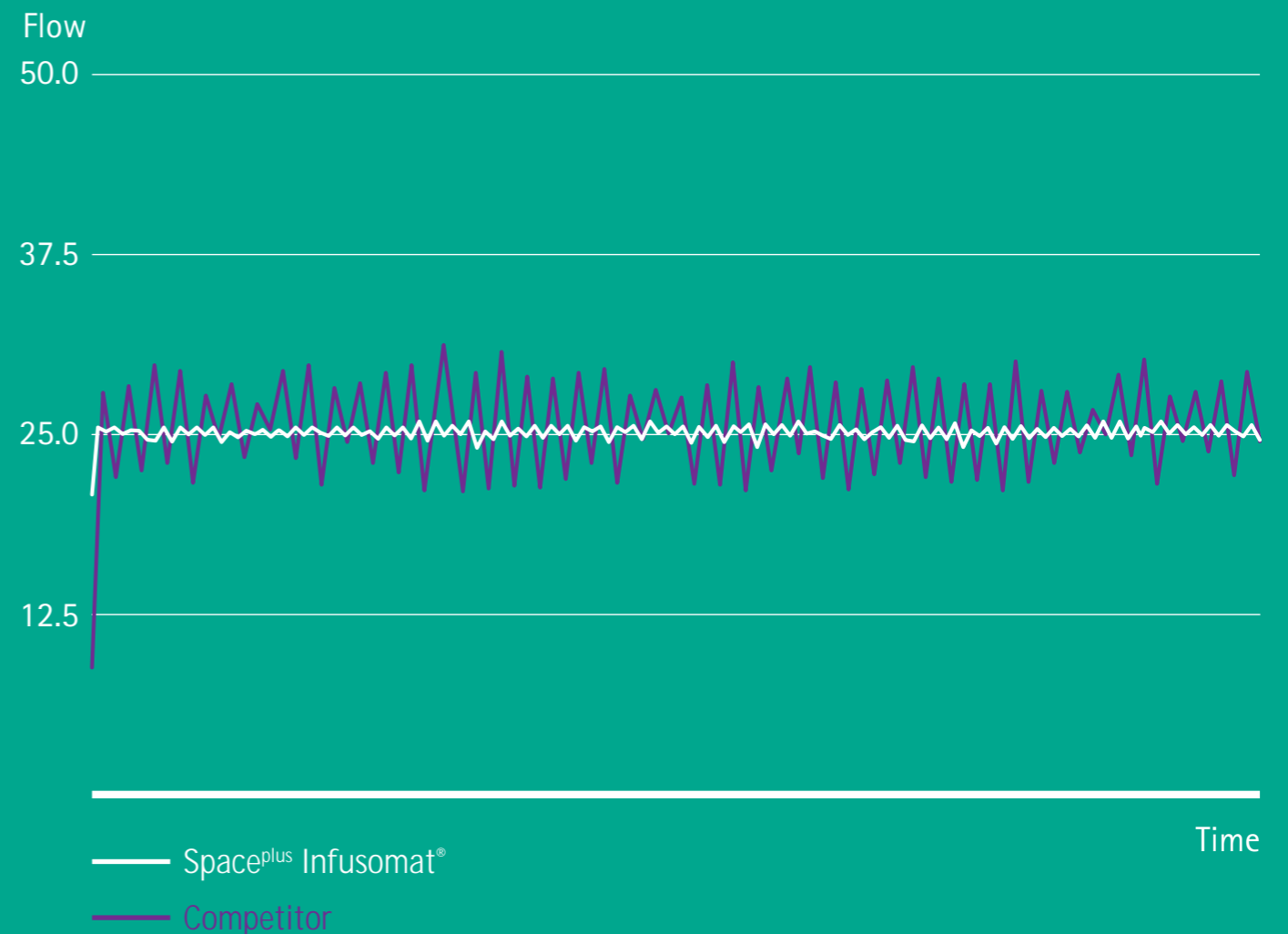
FULL AUTOMATIC DRIVE
The automatic drive technology allows for outstanding start-up when changing disposables: it's fast, and highly accurate.

INFUSOMAT[®] MEETS PERFUSOR[®]

The innovative drive technology not only enables **OUTSTANDING STARTUP AND DELIVERY PERFORMANCE**, but also delivers unique convenience when changing disposables. **ANTI-FREEFLOW TECHNOLOGY** is incorporated both within the pumps and on the line set.

Catecholamines are also not a problem, as they can be administered with the Infusomat[®] **DUE TO CONSISTENTLY HIGH PRECISION.**

FLOW ACCURACY AT 25 ML/H



These graphs show the accuracy and uniformity of flow over time. It must be remembered that the delivery characteristics and the delivery accuracy are significantly affected by the disposable used.

Accurate and consistent flow rate are particularly important for high-alert medications that pose significant risk when improperly delivered.

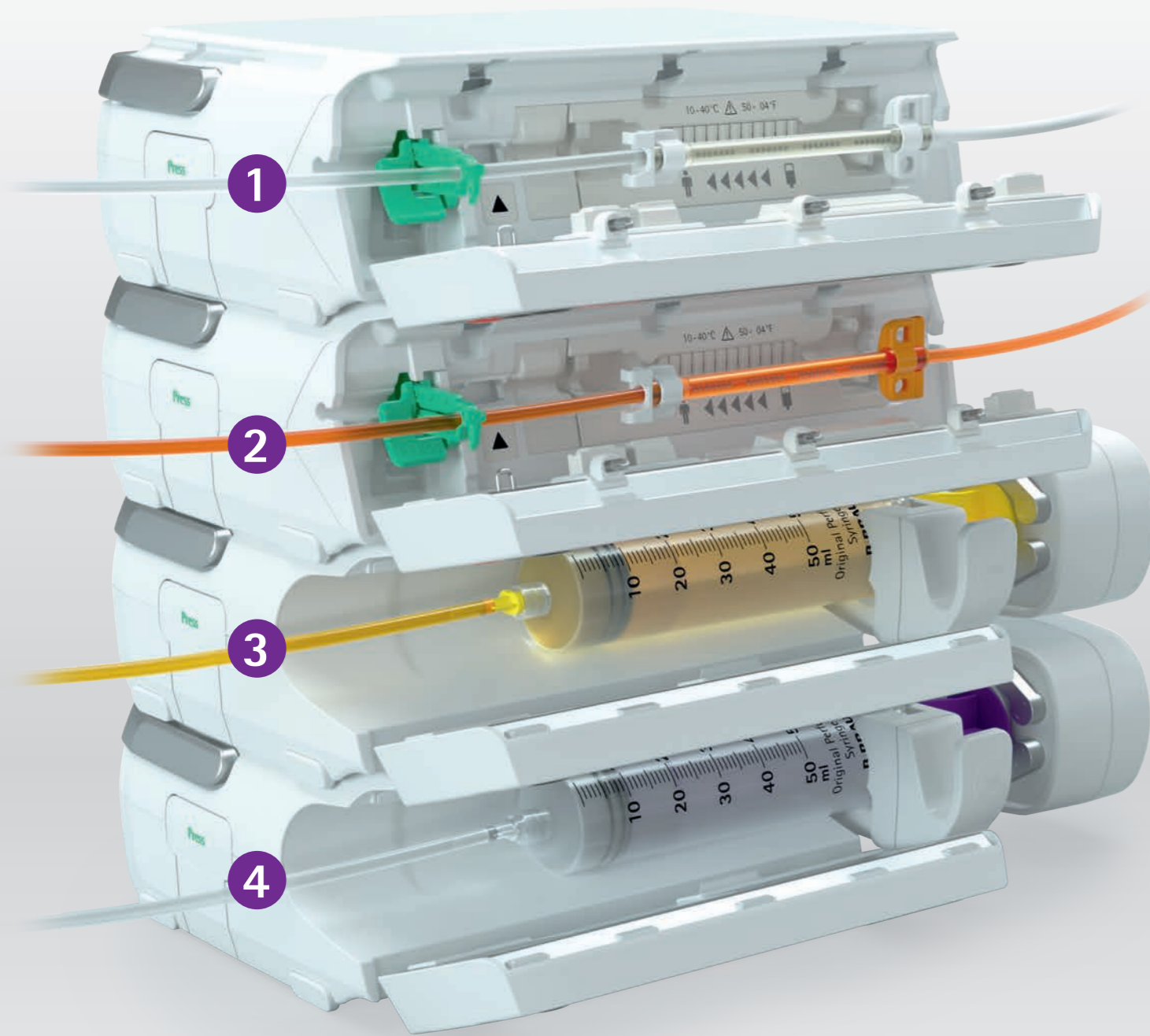


#userexperience

**LESS DEVICE FOOTPRINT.
MORE SPACE TO CARE.**

DISPOSABLES

A WIDE RANGE OF THERAPIES INCLUDING DEDICATED DISPOSABLES



1 Standard
INFUSION THERAPY,
TCI, TIVA

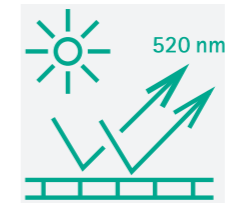
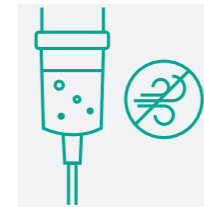
2 Light protected
PHOTOSENSITIVE
MEDICATION

3 NRFit®
PAIN THERAPY

4 ENFit®
NUTRITION THERAPY

SAFESET - AIRSTOP

The unique filter membrane at the bottom of the drip chamber prevents air from the container from entering the connection line and ensures the line cannot run empty - thus leading to less disconnection of lines.



LIGHT PROTECTED

Increased security through completely light-protected products, which supports the early detection of air bubbles and particles.

NRFit®

More safety in the area of regional anaesthesia to avoid risks of misconnections between neuraxial and intravenous application. Guidance by connector design and color coding.



NRFit®



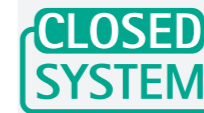
ENFit®

ENFit®

More safety in the area of enteral feeding to avoid risks of misconnections. Guidance by connector design and color coding.

CYTO-SET®

A comprehensive range of dedicated "closed system" consumables is available for the administration of cytotoxic drugs and other hazardous medications.



DEDICATED THERAPIES, DEDICATED DISPOSABLES.

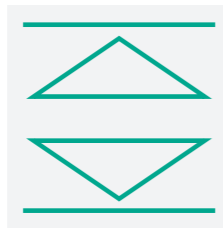
The dedicated disposables cover the full range of different therapies like standard-, light-protected-, transfusion-, pain- and antibiotic-therapy, closed systems for oncology, and disposables for enteral nutrition.

With the Original Perfusor® syringes, B. Braun offers three-part disposable syringes that have an excellent sliding performance and add the excellent delivery characteristics of the Space^{plus} Perfusor®.

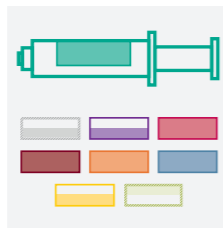
Additionally, the Original Perfusor® lines provide the option of color-coding to more quickly identify highly potent drugs and to reduce the risk of confusion.

FLEXIBILITY IN USE

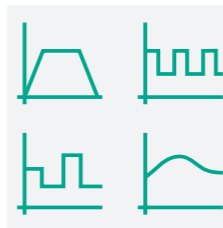
EVEN MORE PERFORMANCE EVEN MORE SPACE



DOSEGUARD™ – THE SAFER, THE BETTER
DoseGuard™ reduces the risk of medication errors by adding safety limits to therapies.



DRUG COLOR CODING
Space^{plus} offers multiple and individual drug color codes to support safety at first glance.



VARIOUS THERAPY MODES
Space^{plus} offers a variety of therapy modes for infusion, pain- and nutrition therapies. For hospital-wide usage - no matter where!

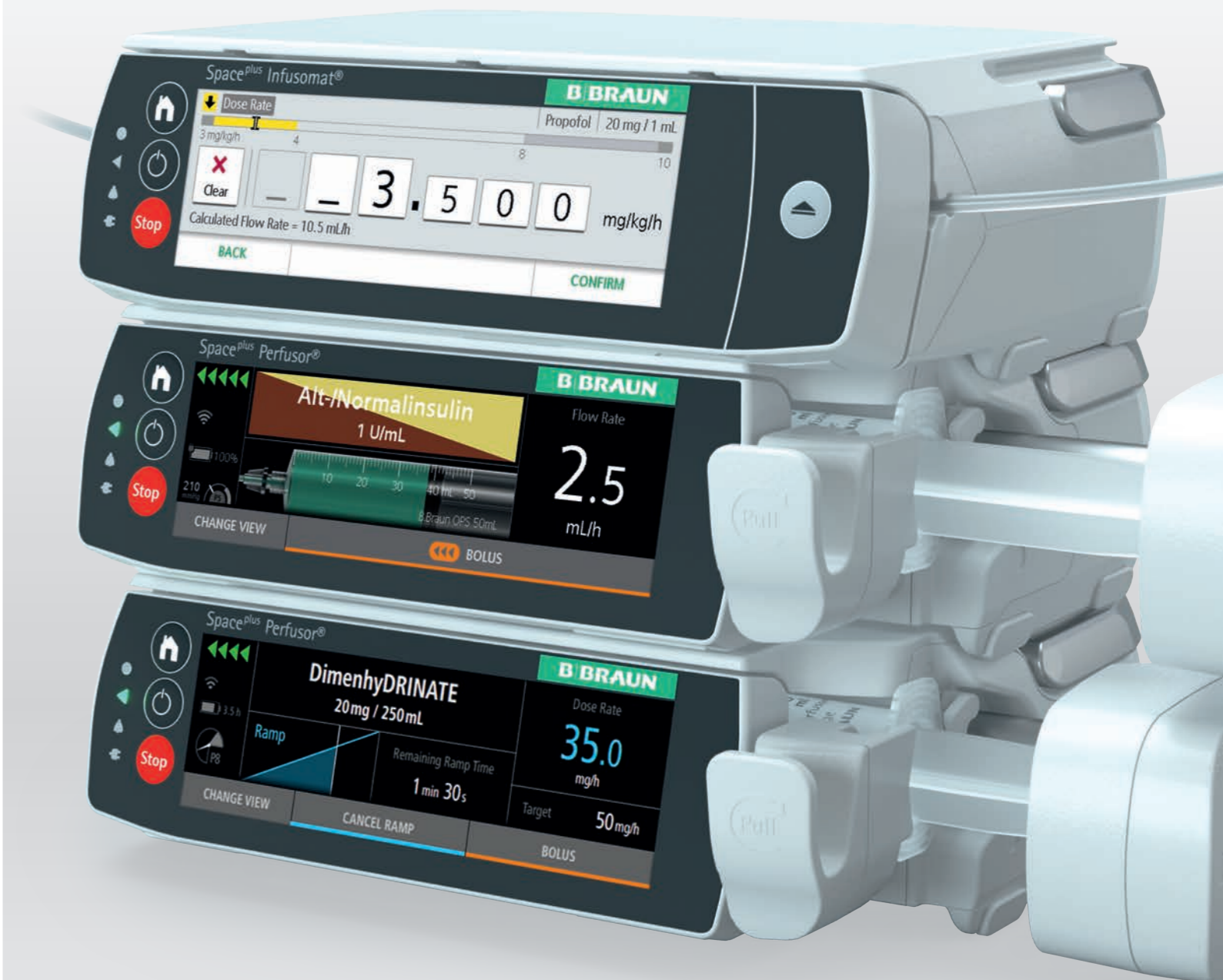
Space^{plus} DrugLibrary Manager
Manage medication data centrally to configure your drug library according to the care unit and patient-specific needs.



THINKING IN LARGER SCALES.

Space^{plus} covers a wide range of therapies for **ADULTS, PEDIATRICS, AND NEONATES** for the delivery of parenteral and enteral fluids. These routes include, but are not limited to, **INTRAVENOUS, IRRIGATION/EPIDURAL, ENTERAL, AND PARENTERAL.** **THERAPY MODES** reduce nurse workloads and allow for the higher standardisation of therapies within the respective limits in order to reduce medication error.

The system allows for **EASY WORKFLOWS** during intra- and interhospital transfer as well as during MR scans with the respective accessory.



A SCALABLE SOLUTION TO FIT YOUR NEEDS.

The smart ecosystem incorporates an exceptional overall package of leading technology and outstanding quality, sophisticated therapy options, interoperability, and efficient workflows.



OnlineSuite^{plus}

ONLINESUITE^{PLUS} IS THE GENERATION OF INNOVATIVE SOFTWARE APPLICATIONS FOR THE DIGITAL MANAGEMENT OF B. BRAUN INFUSION PUMPS IN HOSPITALS.

B. Braun Health Cloud

B. BRAUN HEALTH CLOUD PROVIDES DIRECT ACCESS TO THE LATEST SOFTWARE, E-LEARNINGS, AND FURTHER PRODUCT INFORMATION.

New User Interface

SHOWS WHAT'S MOST IMPORTANT, FOR A MORE EFFICIENT AND SWIFT OPERATION OF OUR INFUSION PUMPS.

Reliable Construction

THE DESIGN WITHSTANDS THE CHALLENGES OF EVERYDAY LIFE DUE TO ITS FLEXIBILITY – EVEN DURING TRANSPORT.

#spaceforyou

For the nurses and the physicians.
For inventors, creators, makers.
And of course, for the patients.

**For the digital natives.
For the experts.**

For You

Space^{plus}



LITERATURE

1. Biltoft J, Finnemann L. Clinical and financial effects of smart pump-electronic medical record interoperability at a hospital in a regional health system. *Am J Health-Syst Pharm*. 2018; 75(14):1064-8.
2. <https://www.securitymagazine.com/articles/94381-healthcare-security-challenge-how-cyberattacks-are-evolving>
3. Giuliano KK. Intravenous Smart Pumps : Usability Issues, Intravenous Medication Administration Error, and Patient Safety. *Crit Care Nurs Clin*. 2018; 30(2):215-24.
4. Da Silva BA, Krishnamurthy M. The alarming reality of medication error: a patient case and review of Pennsylvania and National data. *J Community Hosp Intern Med Perspect*. 2016 Sep 7;6(4):31758. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5016741/>
5. Smart Medication Delivery Systems: Infusion Pumps Healthcare Human Factors Group; April 2009