Fact:
The Archer Fish, which live in the Mangroves of South East Asia, are famed for their ability to shoot a highly accurate jet of water from their mouths in order to knock down prey.
Recognised in operating theatres, intensive care units and general wards across the world, the Smiths Medical range of Syringe Pumps have been trusted by healthcare professionals for over 20 years. The recent introduction of the Medfusion™ Syringe Pump to the portfolio offers advanced medication error software – PharmGuard™ Safety Software. The Medfusion™ Syringe Pump is a small, lightweight and portable syringe pump, particularly suited for the paediatric market.

The Omnifuse Syringe Pumps incorporate drug protocol software designed to minimise the risk of medication errors during programming. Available as either a base or PCA (Patient Controlled Analgesia) variant, the Omnifuse Syringe Pump achieves a high degree of operational flexibility, providing the optimum balance between simplicity and sophistication. Established on a strong foundation of reliability, accuracy and safety, the 3000 range of syringe pumps are dependable and intuitive to use. Designed to meet all delivery needs, the range provides pumps from general infusion through to anaesthesia and TCI applications.

Medfusion™ Syringe Pump

The Medfusion™ Syringe Pump with PharmGuard™ Safety Software is an intuitive system designed to enhance safety while maintaining simplicity. Customers benefit from streamlined implementation and improved work flow.

'Intelligent' Pressure Monitoring

Experience breakthrough rapid occlusion detection technology with FlowSentry™, a comprehensive array of pressure-related safety features. This includes rapid alarm response time (less than five minutes at 1.0 ml/hr with 60cc syringe) and reduced false alarms. An enhanced graphic display of pressure trend allows earlier opportunities for clinical intervention, and a post-occlusion bolus reduction feature decreases post-occlusion bolus to less than 0.3ml, without the use of expensive dedicated disposable sets.

Specifications

- Dimensions: 10.5" wide x 5.1" high x 5.5" deep
- Weight: 3.8 lbs / 1.7 kg
- Accuracy: Nominal +/-2% excluding syringe variations
- Flow Rate Range: Dependent upon syringe size: 0.01 ml/hr to 1130 ml/hr
- Delivery Modes: ml/hr, Body Weight, Mass, Volume Over Time, Custom Sliding, Intermittent
- Delivery Options: 13 options include Loading Dose, Bolus Dose, Standby, Volume Limit, and HMS Rate
- Power Sources: 100 to 240 VAC, 50/60 Hz, 30 VA
- Internal Rechargeable Battery
- Optional External DC Input
- Safety Class II-Type CF
- Internal Battery Capacity: 10 hours at 5.0 ml/hr with 60 ml syringe for daily (from fully charged battery)
- User-Defined Delivery Libraries: Four libraries with 16 profiles per library
- One library is “E-Plate” for optional rapid setup
- MRI Tested*: May be used in MRI rooms with static magnetic fields up to 150 gauss

Ready to Use

The rotating pole clamp allows the user to align the pole clamp for mounting on a vertical or horizontal pole, bedrail, or similar solid structure. The large, bright screen with adjustable backlighting complements an intuitive hardware interface.

Communications Enabled

The Medfusion™ Syringe Pump imports and exports data to assist in patient data management. A communication accessory will allow the pump to communicate in a number of modes including RS232 and wireless.

References

1. Occlusion response time is affected by syringe size, flow rate and pressure setting.

* See operations manual for specific criteria.
All library entries can be configured with upper and lower limits for the parameters that will be entered when setting up an infusion – dose, delivery rate, bolus and loading dose. When dose limits have been set, the user of the library template will be alerted if a value is entered that exceeds the programmed limits.

Libraries can also be generated by ‘cloning’ pumps – transferring libraries from one pump to another using serial communications (infrared or RS232). The library also allows blank fields, which promote more accurate patient-specific data entry.

With the V3.06 software a maximum of 4 drug categories per profile, containing 16 drug entries per category, resulting in a maximum of 64 available libraries.

PharmGuard™ Safety Software is the application for the Medfusion™ Syringe Pump. It provides comprehensive management and analysis capabilities and its purpose is to improve patient safety by reducing user error.

Through the PharmGuard™ Safety Software Toolbox it is possible to:
• Securely create and deploy custom configurations.
• Collect data for analysis of Drug Programme usage and variations from the Drug Programme custom infusion parameters.
• Collect history data for analysis of a single pump’s operational, infusion and alarm history.
• View data in a printer-friendly format using Standard Reports, installed with the PharmGuard™ Safety Software toolbox. Custom Reports can be created with compatible software.

Specifications

<table>
<thead>
<tr>
<th>PharmGuard™ Safety Software</th>
<th>PharmGuard™ Safety Software v3.0.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional override near empty</td>
<td>YES</td>
</tr>
<tr>
<td>Optional override empty</td>
<td>YES</td>
</tr>
<tr>
<td>Automatic bolus rate reduction</td>
<td>YES</td>
</tr>
<tr>
<td>Large font for drug name, dose and rate</td>
<td>YES</td>
</tr>
<tr>
<td>Ability to use blank fields for numeric data</td>
<td>YES</td>
</tr>
<tr>
<td>Ability to use tall man lettering</td>
<td>YES</td>
</tr>
<tr>
<td>Optional hospital security pass code</td>
<td>YES</td>
</tr>
<tr>
<td>Available delivery modes</td>
<td>17</td>
</tr>
<tr>
<td>Rapid occlusion reduction – FlowSentry™</td>
<td>YES</td>
</tr>
<tr>
<td>Number of available libraries</td>
<td>64</td>
</tr>
<tr>
<td>Available profiles (area specific custom configurations)</td>
<td>1</td>
</tr>
<tr>
<td>Number of drug categories per profile</td>
<td>4</td>
</tr>
<tr>
<td>Number of drug entries per categories</td>
<td>16</td>
</tr>
<tr>
<td>Number of drug ID characters displayed during infusion</td>
<td>19</td>
</tr>
</tbody>
</table>
Charting of Pain, Nausea and Sedation Scores
Recognising the increasing need to audit acute pain services, and to assist in understanding patient requirements more clearly, Omnifuse PCA can display a graphical representation of patient profiles when pain, nausea and sedation parameters are entered into the pump.

Electronic Patient Handset
Omnifuse PCA is supplied with an ergonomically-designed electronic patient handset which illuminates when a bolus is available. An adjustable wrist strap or clip is also supplied to attach the handset to the patient’s gown, preventing misplacement.
The widely-varying requirements of today’s health care environment need not mean an ever-increasing number of pump varieties and variants. The Omnifuse core design philosophy is to provide a single pump which can be used throughout the hospital from intensive care to general wards.

Omnifuse Offers Safety as Standard
Omnifuse is provided with drug protocol software as standard to help minimise medication errors during programming. Drug Pro software enables the clinician to develop up to 50 user-defined drug libraries within set parameters on a PC, then upload to the pump for quick and trouble-free programming [see page 5 for more details]. Password-protected keypad and lockable security cover provide increased confidence and safety on the ward.

Sleep Mode
Unique to Omnifuse is the ASLEEP function, allowing the pump to be programmed and left in a dormant state awaiting use. Infusion can commence immediately following connection to the patient and confirmation of the infusion settings.

Flexibility
Omnifuse performance can be tailored to provide the desired balance between simplicity and sophistication. Using the PIN protected configuration menu, a wide range of features can be enabled or disabled depending on whether quick set-up or specialised protocols are required. These features include:
• Drug protocols.
• Advanced infusion modes.
• Infusion programming in mass units.

Safety
Volumetric accuracy of ±2.0%, rapid start-up performance and occlusion detection with a minimal bolus on release of occlusion all contribute to safety.

Hardware Enhancements
Omnifuse is available with a range of hardware enhancements:
• In-line pressure sensing.
• Transparent security cover.

Paediatrics / Neonatal
This specialised area requires a high level of pump performance and safety.
Omnifuse:
• Is compatible with 2ml syringes.
• Can be capped to a rate no greater than 50 ml/h.
• Can be used with in-line pressure sensing.
• Can be programmed in a variety of mass units including nano-grams.
• Can be used in combination with a range of Flo-Safer™ low-priming volume extension sets.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolus Rate Range</td>
<td>0.1–800ml/h</td>
</tr>
<tr>
<td>Purge Rate</td>
<td>Configurable up to 0–800ml/h</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Volumetric: ±2.0% [based on ±2.0% using the Braun Omnifix® 50ml syringe]</td>
</tr>
<tr>
<td>Infusion Modes</td>
<td>Continuous, Preset Time, Preset Volume, Intermittent, Circadian Rhythm</td>
</tr>
<tr>
<td>Occlusion Alarm Thresholds</td>
<td>5 levels between 180 &amp; 1250mmHg (independent of syringe size)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>Sealed lead acid</td>
</tr>
<tr>
<td>Battery Life</td>
<td>18 hours 30min/N (12°C)</td>
</tr>
<tr>
<td>Battery Charge Time</td>
<td>18 hours to full charge</td>
</tr>
<tr>
<td>AC Power Supply</td>
<td>100–240V at 50/60Hz</td>
</tr>
<tr>
<td>Weight</td>
<td>3.5kg (not including pole clamp)</td>
</tr>
<tr>
<td>Dimension</td>
<td>384 x 170 x 92mm</td>
</tr>
<tr>
<td>Fluid Ingress Protection</td>
<td>IPX4</td>
</tr>
<tr>
<td>Electrical Safety</td>
<td>Class I, Type CF</td>
</tr>
<tr>
<td>Design Standards</td>
<td>EN 60601–1, EN 60601–1–2, EN 60601–1–4, EN 60601–2–24</td>
</tr>
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</table>

Syringe Sizes and Rate Range:

<table>
<thead>
<tr>
<th>Syringe Size</th>
<th>Rate Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2ml syringe</td>
<td>0.1–50ml/h</td>
</tr>
<tr>
<td>5ml syringe</td>
<td>0.1–100ml/h</td>
</tr>
<tr>
<td>10ml syringe</td>
<td>0.1–200ml/h</td>
</tr>
<tr>
<td>20ml syringe</td>
<td>0.1–400ml/h</td>
</tr>
<tr>
<td>30ml syringe</td>
<td>0.1–600ml/h</td>
</tr>
</tbody>
</table>
TECHNICIAN SOFTWARE

An Innovative Approach to Pump Management

The Omnifuse Technician Software package assists the hospital technician, allowing the creation of a bespoke electronic log for all Omnifuse pumps in use, indexed by serial number.

Using the Intuitive Interface the Technician Can:
- Store and download configuration settings to the Omnifuse.
- Download, store and view pump history.
- Perform a full set of tests and sensor calibrations simply and quickly by following the on-screen instructions.
- Log the replacement of specific important parts during the lifetime of the pump.

DRUG PROTOCOL SOFTWARE

Introducing Omnifuse Drug Protocols – a Quick Route to Safer Infusion.

Dose error is known to account for a significant number of adverse incidents involving infusion pumps. Omnifuse drug protocol software will assist with medication error prevention.

Create Your Own Drug Protocols:
- In accordance with drug prescribing instructions.
- Infusion parameters can be ‘variable’ – i.e. the parameter values are user-adjustable within specified limits allowing, for example, the flexibility to titrate to effect.
- Infusion parameters can be ‘fixed’ – i.e. the parameter values are determined when the protocol is created allowing maximum control.

Manage Bespoke Drug Protocol Libraries:
- Drug protocol libraries can be tailored to different wards within the hospital, reflecting their own particular requirements.
- The drug protocol libraries are managed using the Omnifuse Drug Protocol Management System on a PC.
- The Omnifuse Drug Protocol Management System is also used to send the drug protocol library to the Omnifuse.

Using Omnifuse with Drug Protocols:
- Simplifies the programming of the pump at the bedside.
- Up to 50 drug protocols may be stored in the pump.
- May help to reduce pump programming errors.

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Product Codes

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0151-0266</td>
<td>Omnifuse Technician Pack</td>
</tr>
<tr>
<td>0153-0084</td>
<td>Omnifuse Protocol Support Software CD</td>
</tr>
</tbody>
</table>
**GRASEBY® 3100 SYRINGE PUMP**

**Complete History Log – Flexible Infusion Pump with Memory**

- The precision components and patented design ensure high accuracy across the whole infusion range.
- A wide range of parameters:
  - Syringe size/brand lock, maximum allowable infusion rate, selectable infusion modes including intermittent and pre-set volume, mass unit infusion rate options, rate change whilst infusing, bolus whilst infusing, pressure sensing method, pressure display units and format, alarm volume.

**Service Information Log**

- Records pump usage and reliability data.
- RS232 Serial Port for connection to a printer or remote monitoring system.

**Flexible Power Supply**

The 3150 can be used on AC power supplies from 100 - 240V AC, 50/60 Hz, or can operate via their internal batteries which provide more than three hours' power for patient transportation, or in the event of AC power failure.

Note: 3150 available in English language version only.

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**GRASEBY® 3150 SYRINGE PUMP**

**Safety and simplicity**

**Fast Occlusion Alarm**

The 3100's internal occlusion pressure detector has a time to alarm response which makes it suitable for neonatal risk infusions.

**Adjustable Occlusion Pressure**

The Graseby® 3100 is suitable for a range of applications from routine ward use to neonatal infusions.

**Excellent Flow-Rate Accuracy**

The high level of short and long-term flow-rate accuracy makes the 3100 suitable for neonatal and high risk infusions.

- 0.1 – 199.9ml/hr Infusion Rate allows a wide range of drug therapies.

The internal battery provides more than two and a half hours' power for patient transportation, or in the event of AC power failure.

The totaliser allows volume infused to be recorded.

**Automatic Syringe Size-Sensing**

Automatic sensing of 20ml, 30ml and 50/60ml size syringes. The Graseby® 3100 accepts syringes from all major manufacturers.

---

**Specifications**

<table>
<thead>
<tr>
<th>AC Power Supply</th>
<th>220-50Hz or 100-120, 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Type</td>
<td>Sealed Lead Acid (Cyclon)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>3 hours fully charged and under normal operating conditions</td>
</tr>
<tr>
<td>Syringe Types</td>
<td>BD Plastipak 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Braun Omnifix 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Braun Perfusor 50ml (optional)</td>
</tr>
<tr>
<td></td>
<td>Monoject 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Terumo 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Fresenius 50ml</td>
</tr>
<tr>
<td>Infusion Range</td>
<td>0.1 – 199.9ml/hr</td>
</tr>
<tr>
<td>Volume Infused Counter</td>
<td>0 – 999.9ml (in 0.1ml increments)</td>
</tr>
<tr>
<td>Weight</td>
<td>3.6kg (including pole clamp + batteries)</td>
</tr>
<tr>
<td>Dimension</td>
<td>250 x 115 x 175mm (height pole clamp fitted and plunger clamp closed)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 40°C</td>
</tr>
<tr>
<td>Drive Accuracy</td>
<td>&lt;±2% over a complete syringe length</td>
</tr>
</tbody>
</table>

**Product Code**

Graseby® 3100 syringe pump 0131-0001

---

**Infusion Range**

- 0.05 – 200.0ml/hr
- 0.01 – 999.0mg/hr
- 0.01 – 999.0µg/hr
- 0.01 – 999.0µg/kg/hr
- 0.01 – 999.0µg/kg/min
- 0.01 – 999.0µg/kg/hr
- 0.01 – 999.0mg/kg/min

**Mass Unit Programming Range**

- Patient Weight: 0.4 – 200.0kg
- Drug mass: 1µg – 999.0mg
- Drug Volume: 1ml – 60ml

**Volume Infused Counter**

- 0 – 999.9mls (in 0.1ml increments)

**Electrical Safety**

- Class II; Type CF; Drip-proof IPX1

**Design Standards**

- IEC 601-1
- IEC 601-1-2

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**SM58 Syringe PumpSM.qxd  24/4/06  17:20  Page 13**
**In-line Pressure Monitoring – Plus Complete History Log**

**Mass Rate Infusion Units**

The choice of infusion units simplifies new drug infusion protocols. The mass unit infusion regime can be displayed as a ml/hr infusion rate if desired.

**Intermittent Infusion Mode**

Allows infusion of a volume of drug over a set delivery time (e.g. 5ml over 15 minutes), with unique Repeat Option (e.g. 5mls every 2 hours), simplifying repeated drug administration.

**Configurable to your Specific Needs**

The 3200 gives you control over which features are made available, allowing faster, simpler control of regular infusions.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preset Volume or Preset Timed (YTBII) Infusion</strong></td>
<td><strong>Keeping Pain Under Their Control</strong></td>
</tr>
<tr>
<td>Allows the safe administration of a pre-determined volume of drug (e.g. 10ml at 6ml/hr, or 10ml over 20 minutes).</td>
<td>The locking syringe cover provides additional security to the standard syringes tampering alarms.</td>
</tr>
<tr>
<td><strong>Wide Range of Syringe Sizes and Types</strong></td>
<td><strong>Effective</strong></td>
</tr>
<tr>
<td>The 3200 accepts syringe sizes from 5ml to 60ml, from all major syringe brands, with automatic size detection.</td>
<td>With features like clinician override, loading dose and a comprehensive alarm system, the Graseby® 3300 is suitable for all types of patient in any clinical situation.</td>
</tr>
<tr>
<td><strong>Configurable to your Specific Needs</strong></td>
<td><strong>Flexible</strong></td>
</tr>
<tr>
<td>The 3200 gives you control over which features are made available, allowing faster, simpler control of regular infusions.</td>
<td>The 3300 PCA Pump is suitable for use with strong and weak analgesics for both adults and children. A range of syringe brands may be used and a variety of external devices can be connected via the RS232.</td>
</tr>
</tbody>
</table>

**In-line Occlusion Pressure Range**

Table:

<table>
<thead>
<tr>
<th>Range</th>
<th>Unit</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1000</td>
<td>mmHg</td>
<td>0 - 1355</td>
</tr>
<tr>
<td>0 - 133.3</td>
<td>kPa</td>
<td>0 - 1316</td>
</tr>
<tr>
<td>0 - 19.34</td>
<td>psi</td>
<td></td>
</tr>
</tbody>
</table>

**Driver Accuracy**

+/- 2% (0.01 - 999.0µg/hr)

**Printer/Monitor Port**

D-type 9 way connector (RS232)

**Language Versions**

English, French, German, Italian, Dutch, Spanish

**UK Patent no.**

2229497

---

**Specifications**

<table>
<thead>
<tr>
<th>AC Power Supply</th>
<th>220-240V or 100-120V at 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Life</td>
<td>8 hours (fully charged and under normal operating conditions)</td>
</tr>
<tr>
<td><strong>Drug Types</strong></td>
<td>BD Plastipak 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Braun Omnifix 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Braun Perfusor 50ml (optional)</td>
</tr>
<tr>
<td></td>
<td>Terumo 20, 30, 50/60ml</td>
</tr>
<tr>
<td></td>
<td>Fresenius Injectomat 50ml</td>
</tr>
<tr>
<td></td>
<td>IMS Pumpjet 30ml (prefilled)</td>
</tr>
<tr>
<td></td>
<td>DBL Rapiject 50ml (prefilled)</td>
</tr>
</tbody>
</table>

**Concentration**

1µg/ml – 99.5mg/ml

**Loading Dose**

0µg – 99.5mg/ml

**Dose Duration**

0.05 – 999.9ml/hr

**Lock-out Period**

0 - 360 minutes

**In-line Occlusion Pressure Range**

<table>
<thead>
<tr>
<th>Range</th>
<th>Unit</th>
<th>Unit</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1000</td>
<td>mmHg</td>
<td>0 - 1355</td>
<td>cmH2O</td>
</tr>
<tr>
<td>0 - 133.3</td>
<td>kPa</td>
<td>0 - 1316</td>
<td>mBar</td>
</tr>
<tr>
<td>0 - 19.34</td>
<td>psi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Continuous Infusion**

0 - 20 ml/hr (with bolus)

**Weight**

Not exceeding 3.5kg inc batteries and pole clamp

**Dimensions**

335mm x 195mm x 130mm

---

**Effective**

With features like clinician override, loading dose and a comprehensive alarm system, the Graseby® 3300 is suitable for all types of patient in any clinical situation.

**Flexible**

The 3300 PCA Pump is suitable for use with strong and weak analgesics for both adults and children. A range of syringe brands may be used and a variety of external devices can be connected via the RS232.

---

**Easy to Use**

The 4 step programme sequence allows for quick and simple programming. The clear LCD display gives the user comprehensive messages and prompts.

**Unique**

The unique Patient Activated Timed Infusion Mode makes a background infusion of morphine safe. This helps to control a patient’s pain at night to enable better rest and recovery.

**Patient History Key**

The history can be viewed on-screen by a summarised or extended format – during or after the infusion.
**Simplicity and Safety in Anaesthesia and Intensive Care**

**Wide infusion rate range**

- 0.1 - 400 ml/hr for maintenance infusions.
- 0.1 - 1200 ml/hr for bolus infusions.

*Tailor-made performance for the wide range of drugs used in anaesthesia and intensive care.*

**Preset Hands-free Bolus**

Allows a predetermined bolus to be set and delivered, automatically.

**Mass rate infusion units**

Choice of infusion units (ml/hr, mg/kg/hr, mg/kg/min, μg/kg/hr, μg/kg/min, mg/hr, μg/hr) simplifies drug infusion protocols. The mass rate infusion regime can be displayed as a ml/hr infusion rate.

**Internal Battery**

Provides minimum of 10 hours’ power for patient transportation.

**Adjustable occlusion pressure**

From 250 - 850 mmHg (33 - 113 kPa). Allows use over a range of applications from intravenous to spinal infusions.

**RS 232 communications**

The Graseby® 3400 has an Open Communications Protocol* to allow the pump to be remotely controlled and/or monitored. This makes it ideal for use with pharmacokinetic model-driven systems or by other types of equipment requiring controlled drug delivery.

* available on request.

**Convenience and control in IV anaesthesia**

**rate**

Covers the widest range of drug applications and patient types.

**bolus**

Hands free: programmed dose lets you concentrate on the patient not the pump. Hands on – for precise control in dose / response situations. Bolus volume dose and dose duration are calculated automatically.

**mass units infusion**

Wide choice of units with rate displayed in mass unit and ml/hr.

**totaliser**

Records volume infused in ml and/or mass unit.

**power supply**

Flexible – can be used worldwide.

**Batteries**

Give more than 10 hours life from full charge.

**Internally adjustable occlusion pressure**

Suitable for a range of applications.

**optional TCI capability**

- With the Astra Zeneca Diprifusor module the 3500 pump can perform Target Controlled Infusions of Diprivan® (propofol).
- Makes controlling the depth of anaesthesia as easy as using a vaporiser.*
- Effect site concentration available at the touch of a button.
- Clear display of predicted blood concentration of propofol.
- Compensation for interrupted infusion.
- Time to (configurable) ‘wake up’.
- Time to target.

---

**Specifications**

**AC power supply**

220-240V, 100 - 120V, 50/60Hz, 40VA

**Battery type**

Sealed Lead Acid (Cyclon)

**Battery life**

10+ hours (fully charged at 400 ml/hr)

**Syringe types**

JMS 5, 10, 20, 30, 50/60ml

**Flow rate**

0.1 – 400 ml/hr, in 0.1 ml increments

**Volume infused totaliser**

0-99999.999ml (in 0.0001 ml increments)

**Drive accuracy**

<±2%

**Electrical safety**

Class II, Type CF, Drip proof IPX1

**Design standards**

IEC 601-1, 2

EN 60601-1-90

EN 60601-1-1990

**Product Code**

0132-0001

**Product Code**

0138-0001
Flo-Safer™ Extension Set System

Commencing an infusion requires not only the correct equipment, training, drug protocol and patient management, but also the appropriate disposal.

Smith Medical can offer a range of extension sets to suit every individual patient requirement.

- Includes line clamps with an option of an integral Anti-Syphon Valve.
- Available with a fluid path of PVC or PE medical grade plastics.
-Yellow extension sets that are colour-coded to conform with the internationally recognised colour for epidural use.
- Wastage and consequent drug expenditure reduced by low volume sets that incorporate narrow bore tubing, reducing priming volume by 75%.
- Integral Roberts Clamp giving the confidence of a safer and convenient method of flow control.

Specifications

<table>
<thead>
<tr>
<th>PVC Extension Sets &amp; R Clamp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length (cm)</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

Sets supplied in packs of 50

Specifications

<table>
<thead>
<tr>
<th>PVC Extension Sets + ASV + R Clamp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length (cm)</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

Sets supplied in packs of 50

Specifications

<table>
<thead>
<tr>
<th>PE Lined Extension Sets + ASV + R Clamp</th>
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</thead>
<tbody>
<tr>
<td><strong>Length/cm</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

Sets supplied in packs of 50

Specifications

<table>
<thead>
<tr>
<th>150cm PVC Extension Sets + Y Set + Non-Return Valve and Loop</th>
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<tbody>
<tr>
<td><strong>Priming Product Codes</strong></td>
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<tr>
<td>2.8ml</td>
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</tbody>
</table>

Sets supplied in packs of 50

Specifications

<table>
<thead>
<tr>
<th>150cm PVC Extension Sets + Pressure Sensing Disc</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priming</strong></td>
</tr>
<tr>
<td>2.2ml</td>
</tr>
</tbody>
</table>

Sets supplied in packs of 50

Notes: These part-numbers refer to the UK variant.

ASV – Anti-Syphon Valve
PVC – Polivinil chloride
PE – Polyethylene
PU – Polyurethane
R Clamp – Roberts Clamp
S Clip – Slip Clip