Essential for contrast
PREFACE
Martin Bartels, Chairman of the Board

For more than twentyfive years we have been putting our knowledge and our innovation at the service of radiologists and their patients.

Thomas Alva Edison, the inventor of the light bulb, once said: "If there is a way to do it better, find it." From our point of view, this is the best way to permanently ensure quality.

This means to us to provide an even better support for the users in their workflow. Therefore, we develop contrast medium injectors and the corresponding medical devices for single and multiple use, which can be handled ever more easily, safely and quickly and thus help to save time and effort in every examination.

With our innovative injection systems we develop pioneering solutions which combine an optimal support in imaging and a contrast medium injection which is as safe and patient-friendly as possible.

Moreover, we permanently adapt our own development and production processes in such a way that we are able to face the current and future requirements of our customers open-mindedly and creatively.

MEDTRON injection systems are long-lived and fail-safe. Our service team is very reliable and helps quickly and competently. Our injectors are exclusively produced in Germany. This is a further quality advantage which we use for the benefit of our customers.

The accuracy of our injectors is already part of the name of our new product generation: Accutron.

All that makes our products what they are: Essential for contrast.

Martin Bartels
Chairman of the Board
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MEDTRON AG - Essential for contrast

MEDTRON AG is an internationally operating medical technology company. As one of the leading manufacturers of ultramodern contrast medium injectors, MEDTRON AG has made its name on the international market: Across the globe, many thousand doctors, hospitals and diagnostic centres place their trust in MEDTRON’s contrast medium injectors made in Germany. The innovative and high quality injector systems of the German company complete almost all modern examination methods which can be performed by the help of medical imaging systems such as computed tomography, magnetic resonance imaging and angiography.

One of the aims of the competent MEDTRON R&D team is to combine improved diagnostics, patient-friendliness and economic efficiency. Experienced radiologists and creative engineers work together amongst others to improve image representation by means of special injection profiles in radiology – an aim which can only be reached by a flexible drive concept for the injectors. Therefore, the R&D team is in constant dialogue with the users of the injectors and integrates customer requirements into the product development.

To optimize examination techniques, development projects are also run in close cooperation with all well-known manufacturers of radiological imaging systems and devices.

On request, every contrast medium injector of MEDTRON can be equipped with a user interface in most of the corresponding languages. Of course, MEDTRON offers a wide range of device-specific and high-quality consumables for its injectors.

Certificates

MEDTRON AG is certified according to
- DIN EN ISO 13485
HISTORY

Opportunities and the successes we made out of them …

2017
• 25 years MEDTRON AG –
  A quarter of a century

2014
• Market launch of Accutron MR3 with integrated infusion pump

2013
• MEDTRON opens new production site for consumables at Hermeskeil/Germany

2012
• 20th anniversary of MEDTRON AG

2010
• Market launch of the Accutron HP

2008
• Market launch of the Accutron HP-D
  (first double head injector for angiography)
• Market launch of the Accutron CT-D

2007
• 15th anniversary of MEDTRON AG

2006
• Market launch of the new Accutron series:
  Accutron CT, Accutron MR

2004
• Market launch of the Easy Loading Syringe (ELS)

2003
• Change of legal form to “AG” (corresponds roughly to “plc” or “inc”), trading now under the name of MEDTRON AG
• Market launch of the touch screen remote control for Injektron CT2 and Injektron 82 MRT

2002
• 10th anniversary of MEDTRON Medizinische Systeme GmbH

2000
• Market launch of the CT injector Injektron CT2, the first double head injector for computed tomography in the world; it has been awarded the Saarland State Prize for Product Design

1998
• Market launch of the MRI injector Injektron 82 MRT, approved for the use with tomographs of up to 3 Tesla

1996
• Market launch of the Angio/CT injector
  Injektron 82 HP, the first bifunctional high-pressure injector for angiography and computed tomography

1993
• Market launch of the CT injectors Injektron 82 M and 82 S, special versions of the Injektron 82 CT for the use of prefilled injection syringes
• Sales start of disposable articles

1992
• Foundation of MEDTRON Medizinische Systeme GmbH
  The aim: to develop, produce and distribute medical devices for radiology and to set up an international distribution and service network
• Development and market launch of the CT injector Injektron 82 CT, the first compact microprocessor-controlled injector
Artikel-Nummer: MR882
(only usable with Siemens scanner)
Easy filling
• Automatic filling or manual filling with variable speed
• Optimized tube systems with check valves

Mindful workflow
• KVO function ensures that access to the vein is maintained during long examinations
• Injection can be interrupted at any time and continued if needed

Wireless & mobile
• Mains supply independent thanks to high-output rechargeable batteries

Hygienic design
• Tough, stable and light aluminum casing
• Easy to clean and hygienic
Technical data

**Mechanical design**
- Swivelling injection units connected to a mobile column stand
- Injection position at an angle of about 15° below horizontal, tilt vertically upwards to vent the system
- Total weight: 41 kg

**Power supply**
- Operation is independent of the mains supply, thanks to high-output rechargeable batteries
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 140 VA

**Injection profiles**
- 80 injection profiles can be edited and stored by the user

**Filling of injection syringes**
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 4 ml/s
- Optimized tube systems with check valves

**Injection parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum injection volume</td>
<td>64 ml (CM) / 200 ml (NaCl) / 50 ml (Infusion pump)</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>0.1 – 64 ml (CM) / 200 ml (NaCl), programmable in 0.1 ml increments</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>21 bar, programmable from 5 to 21 bar in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate CM / NaCl</td>
<td>0.1 – 10 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>Alternatively, input of flow rate or phase duration</td>
</tr>
<tr>
<td>Flow rate infusion pump</td>
<td>0.001 – 30 ml/min, programmable in 0.001 ml/min increments</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 6</td>
</tr>
<tr>
<td>Injection delay</td>
<td>0.1 – 600 s</td>
</tr>
<tr>
<td>Phase delay</td>
<td>1 – 255 s</td>
</tr>
<tr>
<td>Remote control</td>
<td>Wireless touch screen remote control</td>
</tr>
<tr>
<td></td>
<td>Alternatively, display of injection parameters or pressure graph</td>
</tr>
<tr>
<td></td>
<td>Optional: hand switch</td>
</tr>
</tbody>
</table>

*Subject to technical alterations*
Accessories and Options

- Accutron Infusion stand
  Article number 490201

- Touch screen remote control
  Article number FB887

- Adapter for prefilled syringes Type D
  Article number 490163

- Adapter for syringes
  64 ml NaCl
  Article number 610183

- Adapter for prefilled syringes Type M
  Article number 490180
## Accessories and Options

<table>
<thead>
<tr>
<th>Article name</th>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>Touch screen remote control</td>
<td>F8887</td>
</tr>
<tr>
<td>Power supply unit remote control</td>
<td>Power supply unit MPP30 24 V/ 30 W for touch screen remote control</td>
<td>400424</td>
</tr>
<tr>
<td>Charger</td>
<td>Charger Mascot 24 V, input voltage: 110-230 V</td>
<td>LG1003</td>
</tr>
<tr>
<td>Adapter 64 ml ELS NaCl</td>
<td>Adapter for the option &quot;empty syringe&quot; (64 ml NaCl)</td>
<td>610183</td>
</tr>
<tr>
<td>Software Option <em>Prefilled Type D</em></td>
<td>Software option &quot;Prefilled CM syringe&quot; Dotarem, ProHance, Magnevist, Gadovist, Omniscan</td>
<td>490163</td>
</tr>
<tr>
<td>Software Option <em>Prefilled Type M</em></td>
<td>Software option for the option &quot;Prefilled CM syringe&quot; - MultiHance</td>
<td>490180</td>
</tr>
<tr>
<td>Bottle holder</td>
<td>Bottle holder with cupholder and cup</td>
<td>600351</td>
</tr>
<tr>
<td>Cup</td>
<td>Cup 100 ml</td>
<td>600174</td>
</tr>
<tr>
<td>Infusion stand</td>
<td>Infusion stand for Accutron MR3 with cupholder and cup</td>
<td>490201</td>
</tr>
<tr>
<td>Antenna extension set</td>
<td>Antenna extension set for MRI consisting of: 20 m data cable, SMA antenna coupling, 0.25 m SMA antenna extension, 2 x adapter socket BNC – SMA</td>
<td>600015</td>
</tr>
<tr>
<td>Antenna 2.4 GHz</td>
<td>Antenna 2.4 GHz, straight</td>
<td>400020</td>
</tr>
<tr>
<td>Data cable, 9-pole</td>
<td>Data cable, 9-pole Sub-D (for MRI), plug – plug, 20 m</td>
<td>420169</td>
</tr>
<tr>
<td>Transmitter</td>
<td>Transmitter with Bluetooth radio module</td>
<td>600783</td>
</tr>
</tbody>
</table>
The Accutron MR3 is designed for precisely dosed injections of contrast medium (CM) and saline solution (NaCl) as well as for the infusion of fluids. The Accutron MR3 has an injection unit with three drive units which can be controlled independently of each other. The third drive in the injection unit, the so-called infusion pump, is used for the infusion of fluids. You can create both pure infusion phases and pure injection phases as well as combined phases with injection and infusion steps in a profile.

Clinical improvements

- The integrated infusion pump enables simultaneous administration of fluids during an MRI examination.
- It extends your clinical application to include pharmacological cardiac MRI stress testing.

Operating improvements

- Wireless and mobile configuration provides flexibility by eliminating barriers, such as nearby power requirements and/or cable installation.
- It functions with select pre-filled syringes to increase throughput via quick use and improved patient turnaround times.

Financial improvements

- The integrated infusion pump eliminates the need to purchase a separate MR compatible infusion device.
- Wireless and mobile configuration without power requirements and/or cable installations reduces costly installation expenses.
ACCUTRON MR

Article number: MR880

USABLE WITH 2 REMOTE CONTROLS!
**Easy filling**
- Automatic filling or manual filling with variable speed
- Optimized tube systems with check valves

**Mindful workflow**
- KVO function ensures that access to the vein is maintained during long examinations
- Injection can be interrupted at any time and continued if needed

**Wireless & mobile**
- Mains supply independent thanks to high-output rechargeable batteries

**Hygienic design**
- Tough, stable and light aluminum casing
- Easy to clean and hygienic
Technical data

Mechanical design
- Swivelling injection units connected to a mobile column stand
- Injection position at an angle of about 15° below horizontal, tilt vertically upwards to vent the system
- Total weight: 37 kg

Power supply
- Operation is independent of the mains supply, thanks to high-output rechargeable batteries
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 160 VA

Injection profiles
- 80 injection profiles can be edited and stored by the user

Filling of injection syringes
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 5 ml/s
- Optimized tube systems with check valves

Injection parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Maximum injection volume</td>
<td>64 (CM) / 200 ml (NaCl)</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>0.1 – 200 ml, programmable in 0.1 ml increment</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>21 bar, programmable from 5 to 21 bar in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate of the two injection units</td>
<td>0.1 – 10 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>Alternatively, input of flow rate or phase duration</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 6</td>
</tr>
<tr>
<td>Injection delay</td>
<td>1 – 255 s</td>
</tr>
<tr>
<td>Phase delay</td>
<td>1 – 255 s</td>
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<tr>
<td>Remote control</td>
<td>Wireless touch screen remote control</td>
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<td></td>
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</tr>
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</table>

Subject to technical alterations
# Accessories and Options

<table>
<thead>
<tr>
<th>Article name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Remote control</td>
<td>Touch screen remote control</td>
<td>FB886</td>
</tr>
<tr>
<td>Power supply unit remote control</td>
<td>Power supply unit MPP30 24 V/30 W for touch screen remote control</td>
<td>400424</td>
</tr>
<tr>
<td>Charger</td>
<td>Charger Mascot 24 V, input voltage: 110-230 V</td>
<td>LG1003</td>
</tr>
<tr>
<td>Hand switch with holder</td>
<td>Hand switch for Accutron MR880 with holder for remote control</td>
<td>601065</td>
</tr>
<tr>
<td>Software Option „prefilled syringe“</td>
<td>Enables the use of prefilled syringes via ELS adapter e.g. Optiray</td>
<td>490108</td>
</tr>
<tr>
<td>Double bottle holder</td>
<td>Double bottle holder Accutron</td>
<td>601001</td>
</tr>
<tr>
<td>Cup</td>
<td>Cup 100 ml</td>
<td>600174</td>
</tr>
<tr>
<td>Adapter &amp; cupholder combination 1</td>
<td>Combination for adapter and cupholder Accutron MR for version CM-20/200</td>
<td>502164</td>
</tr>
<tr>
<td>Adapter &amp; cupholder combination 2</td>
<td>Combination for adapter and cupholder Accutron MR for the following versions: CM-20/65/200, CM-65/200, CM-20/65</td>
<td>502163</td>
</tr>
<tr>
<td>Adapter 64 ml ELS</td>
<td>Adapter for the option &quot;empty syringe&quot; (64 ml NaCl)</td>
<td>602175</td>
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<tr>
<td>Antenna extension set</td>
<td>Antenna extension set for MRI</td>
<td>600015</td>
</tr>
<tr>
<td>Antenna 2.4 GHz</td>
<td>Antenna 2.4 GHz, straight</td>
<td>400020</td>
</tr>
<tr>
<td>Data cable, 9-pole</td>
<td>Data cable, 9-pole Sub-D (for MRI), plug – plug, 20 m</td>
<td>420169</td>
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<tr>
<td>Transmitter</td>
<td>Transmitter with Bluetooth radio module</td>
<td>600783</td>
</tr>
<tr>
<td>Option 2nd remote control</td>
<td>Option for the use of two remote controls for MR880</td>
<td>490112</td>
</tr>
</tbody>
</table>
Accutron MR
The mobile MRI specialist

The Accutron MR is designed for precisely dosed injections of contrast medium (CM) and saline solution (NaCl). The Accutron MR has two injection units which can be controlled independently of each other and so the contrast medium can be positioned variably and accurately in the examination area with NaCl, depending on the application.

Clinical improvements

- The Keep-Vein-Open (KVO) software feature helps to maintain vascular access during longer imaging procedures.
- The compatibility with select pre-filled syringes helps to support improved hygiene and reduced risk of contamination.

Operating improvements

- Wireless and mobile configuration provides flexibility by eliminating barriers, such as nearby power requirements and/or cable installation.
- It can be used with two remote interfaces so that one injector is shared between two MR examination rooms.

Financial improvements

- Wireless and mobile configuration without power requirements and/or cable installations reduces costly installation expenses.
- The increased patient throughput with pre-filled syringes is leading to potentially increased revenue.
CONSUMABLES

Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>ID</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 6025-000</td>
<td>ELS 200 ml (Easy Loading Syringe) with filling tube</td>
<td>2.0 mm</td>
<td>10 cm</td>
<td>0.3 ml</td>
</tr>
<tr>
<td>31 6026-000</td>
<td>ELS 200 ml (S) (Easy Loading Syringe) with filling tube</td>
<td>2.0 mm</td>
<td>40 cm</td>
<td>1.3 ml</td>
</tr>
<tr>
<td>31 6065-000</td>
<td>ELS 65 ml (Easy Loading Syringe) with filling tube</td>
<td>1.5 mm</td>
<td>150 cm</td>
<td>2.7 ml</td>
</tr>
<tr>
<td>31 7083-100</td>
<td>Tube system with suction line and drip chamber (for Scanbag® CM-supply bag)</td>
<td>2.7 mm</td>
<td>100 cm</td>
<td>15.8 ml</td>
</tr>
<tr>
<td>31 7099-100</td>
<td>MRS 222 MR-tube system with 1 inline drip chamber (for Scanbag® CM-supply bag)</td>
<td>2.0 mm</td>
<td>12 cm</td>
<td>0.6 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.0 mm</td>
<td>36 cm</td>
<td>1.3 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.7 mm</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.7 mm</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.0 mm</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 cm</td>
<td>each one 10 ml</td>
<td></td>
</tr>
</tbody>
</table>

Residual volume: 1.5 ml
Packing unit: 50 pieces/carton – 1,500 pieces/pallet

Residual volume: 0.3 ml
Packing unit: 50 pieces/carton – 2,100 pieces/pallet

Suitable for prefilled syringes
Packing unit: 50 pieces/carton – 2,800 pieces/pallet
### CONSUMABLES

Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>MRS 222 MR-tube system</th>
<th>31 7100-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressure side, ID 2.0 mm</strong></td>
<td><strong>Length</strong></td>
<td><strong>Filling volume</strong></td>
</tr>
<tr>
<td>CM-Side</td>
<td>12 cm</td>
<td>0.6 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>36 cm</td>
<td>1.3 ml</td>
</tr>
<tr>
<td><strong>Suction side, ID 2.7 mm</strong></td>
<td><strong>Length</strong></td>
<td><strong>Filling volume</strong></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>each one 10 ml</td>
</tr>
<tr>
<td>2 x drip chamber</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

<table>
<thead>
<tr>
<th>Article number</th>
<th>Double head-tube system</th>
<th>31 7101-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length from Y-piece:</strong></td>
<td><strong>180 cm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Inner diameter:</strong></td>
<td><strong>2.0 mm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total filling volume:</strong></td>
<td><strong>6.9 ml</strong></td>
<td></td>
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Packing unit: 50 pieces/carton – 4,000 pieces/pallet

<table>
<thead>
<tr>
<th>Article number</th>
<th>MR-ELS tube system with 2 valves, green</th>
<th>31 7104-000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inner diameter:</strong></td>
<td><strong>1.7 mm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Coiled line:</strong></td>
<td><strong>180 cm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Short side:</strong></td>
<td><strong>10 cm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Long side:</strong></td>
<td><strong>34 cm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Filling volume:</strong></td>
<td><strong>5.1 ml</strong></td>
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</tbody>
</table>

Packing unit: 50 pieces/carton

<table>
<thead>
<tr>
<th>Article number</th>
<th>Double head-tube system with 1 inline drip chamber</th>
<th>31 7109-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressure side, ID 2.0 mm</strong></td>
<td><strong>Length</strong></td>
<td><strong>Filling volume</strong></td>
</tr>
<tr>
<td>CM-Side</td>
<td>12 cm</td>
<td>0.4 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>36 cm</td>
<td>1.1 ml</td>
</tr>
<tr>
<td>Patient line (ID: 1.5 mm)</td>
<td>150 cm</td>
<td>2.6 ml</td>
</tr>
<tr>
<td><strong>Suction side, ID 2.7 mm</strong></td>
<td><strong>Length</strong></td>
<td><strong>Filling volume</strong></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>each one 10 ml</td>
</tr>
<tr>
<td>2 x drip chamber</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet
CONSUMABLES

Double head injectors for magnetic resonance imaging (21 bar/305 psi)

MRS 225 MR-tube system

<table>
<thead>
<tr>
<th>Article number</th>
<th>31 7125-100</th>
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<tbody>
<tr>
<td>Inner diameter</td>
<td>2.0 mm</td>
</tr>
<tr>
<td>Length</td>
<td>Filling volume</td>
</tr>
<tr>
<td>CM-Side</td>
<td>6 cm</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>32 cm</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 4,000 pieces/pallet

MR-Set ELS 65 ml

<table>
<thead>
<tr>
<th>Article number</th>
<th>31 7602-100</th>
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</thead>
<tbody>
<tr>
<td>2 pieces</td>
<td>ELS 65 ml (Easy Loading Syringe)</td>
</tr>
<tr>
<td>1 piece</td>
<td>MR-ELS tube system with 2 valves, green</td>
</tr>
<tr>
<td>2 pieces</td>
<td>standard spike</td>
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</tbody>
</table>

Packing unit: 20 pieces/carton

Suitable for 65/65 ml version

MR-Set ELS 65/200 ml

<table>
<thead>
<tr>
<th>Article number</th>
<th>31 7603-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 piece</td>
<td>ELS 65 ml (Easy Loading Syringe)</td>
</tr>
<tr>
<td>1 piece</td>
<td>ELS 200 ml (S) (Easy Loading Syringe)</td>
</tr>
<tr>
<td>1 piece</td>
<td>Double head tube system</td>
</tr>
<tr>
<td>1 piece</td>
<td>SP 227 vented spike, luer lock</td>
</tr>
<tr>
<td>1 piece</td>
<td>Minispike, green</td>
</tr>
</tbody>
</table>

Packing unit: 24 pieces/carton – 384 pieces/pallet

Suitable for 65/200 ml version

MR-Kit ELS 65 ml

<table>
<thead>
<tr>
<th>Article number</th>
<th>31 7604-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 piece</td>
<td>ELS 65 ml syringe</td>
</tr>
<tr>
<td>1 piece</td>
<td>MR-ELS tube system with 2 valves, green</td>
</tr>
<tr>
<td>1 piece</td>
<td>standard spike</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton
CONSUMABLES
Double head injectors for magnetic resonance imaging (21 bar/305 psi)

**CT2/MRT Set ELS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pieces ELS 200 ml (Easy Loading Syringe) with filling tube</td>
<td>31 7625-000</td>
</tr>
<tr>
<td>1 piece MRS 222 MR-tube system</td>
<td>31 7100-000</td>
</tr>
<tr>
<td>1 piece ES 224/150 patient line</td>
<td>31 8151-000</td>
</tr>
</tbody>
</table>

Packing unit: 20 pieces/carton – 600 pieces/pallet

Suitable for 200/200 ml version

**CT2/MRT Set ELS (S)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pieces ELS 200 ml (S) (Easy Loading Syringe)</td>
<td>31 7627-100</td>
</tr>
<tr>
<td>1 piece MRS 222 MR-tube system</td>
<td>31 7100-100</td>
</tr>
<tr>
<td>1 piece ES 224/150 patient line</td>
<td>31 8151-100</td>
</tr>
</tbody>
</table>

Packing unit: 20 pieces/carton – 600 pieces/pallet

Suitable for 200/200 ml version

**ES 224/25 patient line with valve**

<table>
<thead>
<tr>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 25 cm</td>
<td>31 8020-100</td>
</tr>
<tr>
<td>Inner diameter: 1.5 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.4 ml</td>
<td></td>
</tr>
</tbody>
</table>

Packing unit: 100 pieces/carton – 8,000 pieces/pallet

**One-way-stopcock with extension line 30cm, luer lock**

<table>
<thead>
<tr>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 32 cm</td>
<td>31 8025-100</td>
</tr>
<tr>
<td>Inner diameter: 2.0 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.9 ml</td>
<td></td>
</tr>
</tbody>
</table>

Packing unit: 200 pieces/carton – 5,000 pieces/pallet
CONSUMABLES

Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Pallet Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 8026-100</td>
<td>Patient line 150 cm with terminal check valves</td>
<td>50 pieces/carton - 5,850 pieces/pallet</td>
</tr>
<tr>
<td></td>
<td>Length: 150 cm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inner diameter: 2.0 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Filling volume: 4.8 ml</td>
<td></td>
</tr>
</tbody>
</table>

| 31 8036-100    | Patient line 150 cm with 2 check valves                                      | 50 pieces/carton - 5,850 pieces/pallet |
|                | Length: 150 cm + 10 cm                                                      |                    |
|                | Inner diameter: 1.5 mm                                                      |                    |
|                | Filling volume: 2.8 ml                                                      |                    |

| 31 8042-100    | DW 229 Connector with 3-way stop cock                                       | 100 pieces/carton - 8,000 pieces/pallet |
|                | Filling volume: 0.2 ml                                                      |                    |

| 31 8081-100    | ES 224 Patient line                                                         | 200 pieces/carton - 11,200 pieces/pallet |
|                | Inner diameter: 1.5 mm                                                      |                    |
|                | ES 224/80 Length: 80 cm, filling volume: 1.5 ml                            | 31 8081-100 |
|                | ES 224/100 Length: 100 cm, filling volume: 1.8 ml                           | 31 8101-100 |
|                | ES 224/150 Length: 150 cm, filling volume: 2.7 ml                           | 31 8151-100 |
|                | ES 224/200 Length: 200 cm, filling volume: 3.6 ml                           | 31 8199-100 |
|                | ES 224/250 Length: 250 cm, filling volume: 4.4 ml                           | 31 8250-100 |
|                | ES 224/300 Length: 300 cm, filling volume: 5.3 ml                           | 31 8300-100 |
**CONSUMABLES**

Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Patient line with valve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inner diameter: 1.5 mm</td>
</tr>
<tr>
<td>31 8152-100</td>
<td>Length: 150 cm, filling volume: 2.7 ml</td>
</tr>
<tr>
<td>31 8198-100</td>
<td>Length: 200 cm, filling volume: 3.5 ml</td>
</tr>
<tr>
<td>31 8251-100</td>
<td>Length: 250 cm, filling volume: 4.4 ml</td>
</tr>
<tr>
<td>31 8301-100</td>
<td>Length: 300 cm, filling volume: 5.3 ml</td>
</tr>
</tbody>
</table>

Packing unit: 200 pieces/carton – 11,200 pieces/pallet

<table>
<thead>
<tr>
<th>Coiled line 150 cm</th>
<th>31 8213-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 150 cm</td>
<td>Inner diameter: 1.6 mm</td>
</tr>
<tr>
<td></td>
<td>Filling volume: 3.1 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 5,850 pieces/pallet

<table>
<thead>
<tr>
<th>Coiled line with check valve</th>
<th>31 8214-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner diameter: 1.6 mm</td>
<td></td>
</tr>
<tr>
<td>Length: 150 cm, filling volume: 3.1 ml</td>
<td>31 8181-000</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 5,850 pieces/pallet

<table>
<thead>
<tr>
<th>Coiled line 150 cm with 2 check valves</th>
<th>31 8217-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner diameter: 1.5 mm</td>
<td></td>
</tr>
<tr>
<td>Length: 150 cm</td>
<td>Filling volume: 2.6 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 5,850 pieces/pallet
CONSUMABLES
Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 8235-000</td>
<td>Coiled line 235 cm with Y-connector and valve</td>
<td>Length: 235 cm + 1 x 10 cm + 1 x 12 cm, Inner diameter: 1.6 mm, Total filling volume: 5.6 ml, Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>31 8253-000</td>
<td>Coiled line with check valve</td>
<td>Inner diameter: 1.5 mm, Length: 250 cm, filling volume: 4.4 ml, Length: 300 cm, filling volume: 5.3 ml, Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>31 9085-100</td>
<td>DW 226 3-way stopcock</td>
<td>Filling volume: 0.3 ml, Packing unit: 50 pieces/carton – 200 pieces/carton – 11,200 pieces/pallet</td>
</tr>
</tbody>
</table>
Double head injectors for magnetic resonance imaging (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Filling Volume</th>
<th>Packing Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 9095-100</td>
<td>SP 227 vented spike, luer lock</td>
<td>0.4 ml</td>
<td>50 pieces/carton, 200 pieces/carton, 1,200 pieces/pallet</td>
</tr>
<tr>
<td>31 9099-100</td>
<td>Minispike green</td>
<td>0.2 ml</td>
<td>50 pieces/carton, 200 pieces/carton, 1,200 pieces/pallet</td>
</tr>
</tbody>
</table>
Accutron CT-D:
The diagnostics specialist

Easy filling
• Automatic filling or manual filling with variable speed
• Optimized tube systems with check valves

Mindful workflow
• Two-step launching process and Pre-inject function controlled via the start/stop hand switch provide precise monitoring
• SMART Assist offers an automated workflow

Wireless & mobile
• Mains supply independent thanks to high-output rechargeable batteries

Hygienic design
• Tough, stable and light aluminum casing
• Easy to clean and hygienic
Technical data

**Mechanical design**
- Swivelling injection unit on a mobile column stand
- Secured injection position at an angle of about 15° below horizontal (detected by a built-in inclination sensor), tilt vertically upwards to vent the system
- Total weight: 26 kg

**Power supply**
- Operation is independent of the mains supply thanks to high-output rechargeable batteries.
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 100 VA

**Injection profiles**
- 80 profiles can be edited and stored by the user

**Filling of injection syringes**
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 5 ml/s
- Optimized tube systems with check valves

### Injection parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum injection volume</td>
<td>2 x 200 ml</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>1 – 200 ml, programmable in 1 ml increments</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>21 bar, programmable from 5 to 21 bar in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate of the two injection units</td>
<td>0.1 – 10 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>Alternatively, input of flow rate or phase duration</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 6</td>
</tr>
<tr>
<td>Injection delay</td>
<td>0 – 255 s</td>
</tr>
<tr>
<td>Phase delay</td>
<td>0 – 255 s</td>
</tr>
<tr>
<td>Scan delay</td>
<td>0 – 255 s</td>
</tr>
</tbody>
</table>

Subject to technical alterations
## Accessories and Options

<table>
<thead>
<tr>
<th>Article name</th>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accutron CT-D power supply</td>
<td>Double head injector for computed tomography power supply version</td>
<td>CT862</td>
</tr>
<tr>
<td>Accutron CT-D ceiling mount</td>
<td>Double head injector for computed tomography ceiling mount version</td>
<td>CT861</td>
</tr>
<tr>
<td>Ceiling suspension</td>
<td>Ceiling suspension Accutron CT-D</td>
<td>530166</td>
</tr>
<tr>
<td>Power supply unit for ceiling version</td>
<td>Power supply unit Accutron CT-D for ceiling version</td>
<td>600417</td>
</tr>
<tr>
<td>Power supply unit for roller version</td>
<td>Double head injector for computed tomography</td>
<td>600424</td>
</tr>
<tr>
<td>CANopen Interface Siemens</td>
<td>CANopen Interface (Siemens) for Accutron CT-D</td>
<td>IF864</td>
</tr>
<tr>
<td>Interface Philips</td>
<td>Interface for Philips Scanner</td>
<td>620148</td>
</tr>
<tr>
<td>Remote control</td>
<td>Touch screen remote control</td>
<td>FB866</td>
</tr>
<tr>
<td>Power supply unit for remote control</td>
<td>Power supply unit MPP30 24 V/30 W for touch screen remote control</td>
<td>400424</td>
</tr>
<tr>
<td>Charger</td>
<td>Charger 24 V for CT-D/CT input voltage: 110-230 V</td>
<td>LG1004</td>
</tr>
<tr>
<td>Software option <em>prefilled syringe</em></td>
<td>Enables the use of prefilled syringes via ELS adapter e.g. Optiray</td>
<td>490110</td>
</tr>
<tr>
<td>Hand switch</td>
<td>Hand switch for CT-D</td>
<td>601062</td>
</tr>
<tr>
<td>Infusion stand</td>
<td>Infusion stand for Accutron CT-D with cupholder and cup</td>
<td>490200</td>
</tr>
<tr>
<td>Bottle holder</td>
<td>Bottle holder with cupholder and cup</td>
<td>600351</td>
</tr>
<tr>
<td>Double bottle holder</td>
<td>Double bottle holder for Accutron CT-D ceiling version (CT861)</td>
<td>490203</td>
</tr>
<tr>
<td>Cup</td>
<td>Cup 100 ml</td>
<td>600174</td>
</tr>
<tr>
<td>Cup holder</td>
<td>Cup holder with cup</td>
<td>600334</td>
</tr>
<tr>
<td>Antenna 2.4 GHz</td>
<td>Antenna 2.4 GHz</td>
<td>400020</td>
</tr>
</tbody>
</table>
The Accutron CT-D is designed for precisely dosed injections of contrast medium (CM) and saline solution (NaCl) in computed tomography. It has an injection unit with two drive units which can be controlled independently of each other and so the contrast medium can be positioned variably and accurately in the examination area by the help of NaCl, depending on the application.

The Accutron® CT-D is also made for use in contrast-enhanced mammography procedures.

Clinical improvements

- It limits patient risk by reducing the amount of contrast a patient receives during injection.
- It supports CE mammography as a new clinical application area in women’s health.
- It may reduce risk of infections by being easy to clean and hygienic.

Operating improvements

- Wireless and mobile configuration provides flexibility to quickly change examination rooms and eliminates barriers, such as nearby power requirements and/or cable installation.
- The integration with the scanner interface reduces workload for the operator and improves patient turnaround times.

Financial improvements

- It may reduce the amount of contrast required per patient, resulting in less operating expenses.
- It supports the development of a new clinical service in mammography, leading to potentially increased revenue.
**Easy filling**
- Automatic filling or manual filling with variable speed
- Optimized tube systems with check valves

**Mindful workflow**
- Up to 80 injection profiles, individually created for your examination and easily accessible
- Two step launching process controlled via the start/stop hand switch provides precise monitoring.

**Agile mobility**
- Light weight and compact design allow easy placement.
- Wireless touch screen remote control offers cable-free installation and service.

**Hygienic design**
- Tough, stable and light aluminum casing
- Easy to clean and hygienic
Technical data

Mechanical design
- Swivelling injection unit on a mobile column stand
- Secured injection position at an angle of about 15° below horizontal (detected by a built-in inclination sensor), tilt vertically upwards to vent the system
- Total weight: 14.4 kg

Power supply
- Operation is independent of the mains supply thanks to high-output rechargeable batteries.
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 170 VA

Injection profiles
- 80 profiles can be edited and stored by the user

Filling of injection syringes
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 5 ml/s
- Optimized tube systems with check valves

Injection parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum injection volume</td>
<td>200 ml</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>1 – 200 ml, programmable in 1 ml increments</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>21 bar, programmable from 5 to 21 bar in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate</td>
<td>0.1 – 10 ml/s, programmable in increments of 0.1 ml/s Alternatively input of flow rate or phase duration</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 6</td>
</tr>
<tr>
<td>Injection delay</td>
<td>1 – 255 s</td>
</tr>
<tr>
<td>Phase delay</td>
<td>1 – 255 s</td>
</tr>
<tr>
<td>Scan delay</td>
<td>1 – 255 s</td>
</tr>
</tbody>
</table>

Subject to technical alterations
# Accessories and Options

**Accessories**

- **Remote control**
  - Touch screen remote control, wireless, incl. power supply unit
  - Article number: FB875S

- **Power supply unit for remote control**
  - Power supply unit MPP30 24 V/30 W for touch screen remote control
  - Article number: 400424

- **Software-Option “prefilled syringe”**
  - Adapter for the option “prefilled syringe” e.g. Optiray
  - Article number: 490110

- **Bottle holder**
  - Bottle holder with cupholder and cup for CT871
  - Article number: 504162

- **Cup**
  - Cup 100 ml
  - Article number: 600174

- **Infusion stand**
  - Infusion stand for Accutron CT with cupholder and cup
  - Article number: 490200

- **Antenna 2.4 GHz**
  - Antenna 2.4 GHz
  - Article number: 400020

- **Hand switch**
  - Hand switch
  - Article number: 601062
Accutron CT
The mobile precision partner

The Accutron® CT is a single head / single syringe power injector designed and built using the same technology platform that all Accutron® injectors are based upon. Whether you are budget conscious or newly exploring the potential use of a powered injector in your CT department, Accutron® CT is your starting point.

It is designed for precisely dosed injections of contrast medium for computed tomography. The touch screen offers an overview at all times of the injection currently under way with the specified parameters. By means of the remote control you can control the high-pressure injector from the control room.

Clinical improvements

- It provides real-time pressure monitoring which allows for improved precision and safety.
- The integrated heatable syringe holder keeps contrast media heated to body temperature providing optimal viscosity and decreased patient discomfort.

Operating improvements

- Agile mobility with a configuration that provides flexibility to quickly change examination rooms.
- It functions with select pre-filled syringes to increase throughput via quick use and improved patient turnaround times.

Financial improvements

- Consistent reliability helps to reduce repeat examinations due to contrast mistiming.
- It provides solid performance and price affordability in CT imaging.
CONSUMABLES

Single and double head injectors for computed tomography (21 bar/305 psi)

**ELS 200 ml (Easy Loading Syringe) with filling tube**
Article number: 31 6025-000
Residual volume: 1.5 ml

**ELS 200 ml (S) (Easy Loading Syringe)**
Article number: 31 6026-000
Residual volume: 1.5 ml
Packing unit: 50 pieces/carton – 1,500 pieces/pallet

**ES 223 tube system with spike**
Article number: 31 7080-100

<table>
<thead>
<tr>
<th>ID</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure side</td>
<td>2.0 mm</td>
<td>13 cm</td>
</tr>
<tr>
<td>Suction side</td>
<td>2.7 mm</td>
<td>100 cm</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

**EK 223 tube system with drip chamber**
Article number: 31 7081-100

<table>
<thead>
<tr>
<th>ID</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure side</td>
<td>2.0 mm</td>
<td>13 cm</td>
</tr>
<tr>
<td>Suction side</td>
<td>2.7 mm</td>
<td>100 cm</td>
</tr>
<tr>
<td>Drip chamber</td>
<td></td>
<td>10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

**Tube system with suction line and drip chamber (for Scanbag® CM-supply bag)**
Article number: 31 7083-100

<table>
<thead>
<tr>
<th>ID</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>2.0 mm</td>
<td>10 cm</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>2.0 mm</td>
<td>40 cm</td>
</tr>
<tr>
<td>Patient line</td>
<td>1.5 mm</td>
<td>1,500 mm</td>
</tr>
<tr>
<td>Suction side with drip chamber</td>
<td>2.7 mm</td>
<td>1,000 mm</td>
</tr>
</tbody>
</table>

Suitable for prefilled syringes
Packing unit: 50 pieces/carton – 2,800 pieces/pallet
**CONSUMABLES**

Single and double head injectors for computed tomography (21 bar/305 psi)

---

**MRS 222 MR-tube system**

**31 7099-100**

with 1 inline drip chamber (for Scanbag® CM-supply bag)

<table>
<thead>
<tr>
<th>Pressure side, ID 2.0 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>12 cm</td>
<td>0.6 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>36 cm</td>
<td>1.3 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suction side, ID 2.7 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
</tbody>
</table>

2 x drip chamber each one 10 ml

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

---

**MRS 222 MR-tube system**

**31 7100-100**

<table>
<thead>
<tr>
<th>Pressure side, ID 2.0 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>12 cm</td>
<td>0.6 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>36 cm</td>
<td>1.3 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suction side, ID 2.7 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
</tbody>
</table>

2 x drip chamber each one 10 ml

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

---

**Double head-tube system**

**31 7101-100**

Length from Y-Connector: 180 cm

Inner diameter: 2.0 mm

Complete filling volume: 6.9 ml

Packing unit: 50 pieces/carton – 4,000 pieces/pallet

---

**Double head tube system with 1 inline drip chamber**

(for Scanbag® CM-supply bag)

<table>
<thead>
<tr>
<th>Pressure side, ID 2.0 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>12 cm</td>
<td>0.4 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>36 cm</td>
<td>1.1 ml</td>
</tr>
<tr>
<td>Patient line (ID: 1.5 mm)</td>
<td>150 cm</td>
<td>2.6 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suction side, ID 2.7 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>5.8 ml</td>
</tr>
</tbody>
</table>

2 x drip chamber each one 10 ml

Packing unit: 50 pieces/carton – 2,800 pieces/pallet
CONSUMABLES

Single and double head injectors for computed tomography (21 bar/305 psi)

**MRS 225 MR-tube system**

- Inner diameter: 2.0 mm
- **Length** | **Filling volume**
  - CM-Side: 6 cm | 0.2 ml
  - NaCl-Side: 32 cm | 1.0 ml
- Packing unit: 50 pieces/carton – 4,000 pieces/pallet

**82 CT Kit ELS**

- 1 piece ELS 200 ml (Easy Loading Syringe) with filling tube
- 1 piece Coiled line 150 cm
- Packing unit: 50 pieces/carton – 1,500 pieces/pallet

**CT2/MRT Set ELS**

- 2 pieces ELS 200 ml (Easy Loading Syringe) with filling tube
- 1 piece MRS 222 MR-tube system
- 1 piece ES 224/150 patient line
- Packing unit: 20 pieces/carton – 600 pieces/pallet

**CT2/MRT Set ELS (S)**

- 2 pieces ELS 200 ml (S) (Easy Loading Syringe)
- 1 piece MRS 222 MR-tube system
- 1 piece ES 224/150 patient line
- Packing unit: 20 pieces/carton – 600 pieces/pallet
CONSUMABLES
Single and double head injectors for computed tomography (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES 224/25 patient line with valve 31 8020-100</td>
<td>Length: 25 cm&lt;br&gt;Innen diameter: 1.5 mm&lt;br&gt;Filling volume: 0.4 ml</td>
<td>Packing unit: 100 pieces/carton – 8,000 pieces/pallet</td>
</tr>
<tr>
<td>One-way-stopcock with extension line 30 cm, luer lock 31 8025-100</td>
<td>Length: 32 cm&lt;br&gt;Inner diameter: 2.0 mm&lt;br&gt;Filling volume: 1.2 ml</td>
<td>Packing unit: 200 pieces/carton – 5,000 pieces/pallet</td>
</tr>
<tr>
<td>Patient line 150 cm with terminal check valves 31 8026-100</td>
<td>Length: 150 cm&lt;br&gt;Inner diameter: 2.0 mm&lt;br&gt;Filling volume: 4.8 ml</td>
<td>Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>Patient line 150 cm with 2 check valves 31 8036-100</td>
<td>Length: 150 cm + 10 cm&lt;br&gt;Inner diameter: 2.0 mm&lt;br&gt;Filling volume: 5.2 ml</td>
<td>Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
</tbody>
</table>
CONSUMABLES

Single and double head injectors for computed tomography (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>DW 229 Connector with 3-way stop cock</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Filling volume: 0.5 ml</td>
</tr>
<tr>
<td></td>
<td>Packing unit: 100 pieces/carton – 8,000 pieces/pallet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>ES 224 Patient line Inner diameter: 1.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ES224/80, length: 80 cm, filling volume: 1.4 ml</td>
</tr>
<tr>
<td></td>
<td>ES224/100, length: 100 cm, filling volume: 1.8 ml</td>
</tr>
<tr>
<td></td>
<td>ES224/150, length: 150 cm, filling volume: 2.7 ml</td>
</tr>
<tr>
<td></td>
<td>ES224/200, length: 200 cm, filling volume: 3.6 ml</td>
</tr>
<tr>
<td></td>
<td>ES224/250, length: 250 cm, filling volume: 4.4 ml</td>
</tr>
<tr>
<td></td>
<td>ES224/300, length: 300 cm, filling volume: 5.3 ml</td>
</tr>
<tr>
<td></td>
<td>Packing unit: 200 pieces/carton – 11,200 pieces/pallet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>Patient line with valve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inner diameter: 1.5 mm</td>
</tr>
<tr>
<td></td>
<td>Length: 150 cm, filling volume: 2.7 ml</td>
</tr>
<tr>
<td></td>
<td>Length: 200 cm, filling volume: 3.5 ml</td>
</tr>
<tr>
<td></td>
<td>Length: 250 cm, filling volume: 4.4 ml</td>
</tr>
<tr>
<td></td>
<td>Length: 300 cm, filling volume: 5.3 ml</td>
</tr>
<tr>
<td></td>
<td>Packing unit: 200 pieces/carton – 11,200 pieces/pallet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>Coiled line 150 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length: 150 cm</td>
</tr>
<tr>
<td></td>
<td>Inner diameter: 1.6 mm</td>
</tr>
<tr>
<td></td>
<td>Filling volume: 3.1 ml</td>
</tr>
<tr>
<td></td>
<td>Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
</tbody>
</table>
### CONSUMABLES

Single and double head injectors for computed tomography (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Inner Diameter</th>
<th>Length 1</th>
<th>Filling Volume 1</th>
<th>Length 2</th>
<th>Filling Volume 2</th>
<th>Packing Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>318214-000</td>
<td>Coiled line with check valve</td>
<td>1.6 mm</td>
<td>150 cm</td>
<td>3.1 ml</td>
<td>180 cm</td>
<td>3.7 ml</td>
<td>50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>318181-000</td>
<td>Coiled line with check valve</td>
<td>1.6 mm</td>
<td>150 cm</td>
<td>3.1 ml</td>
<td>180 cm</td>
<td>3.7 ml</td>
<td>50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Inner Diameter</th>
<th>Length 1</th>
<th>Filling Volume 1</th>
<th>Length 2</th>
<th>Filling Volume 2</th>
<th>Packing Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>318217-000</td>
<td>Coiled line 150 cm with 2 check valves</td>
<td>1.5 mm</td>
<td>150 cm</td>
<td>2.6 ml</td>
<td>250 cm</td>
<td>4.4 ml</td>
<td>50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>318235-000</td>
<td>Coiled line 235 cm with Y-connector and valve</td>
<td>1.6 mm</td>
<td>235 cm + 1 x 10 cm + 1 x 12 cm</td>
<td>5.6 ml</td>
<td>300 cm</td>
<td>5.3 ml</td>
<td>50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
<tr>
<td>318253-000</td>
<td>Coiled line with check valve</td>
<td>1.5 mm</td>
<td>250 cm</td>
<td>4.4 ml</td>
<td>300 cm</td>
<td>5.3 ml</td>
<td>50 pieces/carton – 5,850 pieces/pallet</td>
</tr>
</tbody>
</table>
### CONSUMABLES

Single and double head injectors for computed tomography (21 bar/305 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Filling volume</th>
<th>Packing unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 9080-100</td>
<td>SD 225 suction tube with 3-way stopcock and spike</td>
<td>0.3 ml (3-way stopcock) + 6.3 ml (suction tube)</td>
<td>50 pieces/carton – 4,000 pieces/pallet</td>
</tr>
<tr>
<td>31 9095-100</td>
<td>SP 227 vented spike, luer lock</td>
<td>0.4 ml</td>
<td>50 pieces/carton – 11,200 pieces/pallet</td>
</tr>
<tr>
<td>31 9099-100</td>
<td>Minispike, green</td>
<td>0.2 ml</td>
<td>50 pieces/carton – 11,200 pieces/pallet</td>
</tr>
<tr>
<td>31 9085-100</td>
<td>DW 226 3-way stopcock</td>
<td>0.1 ml</td>
<td>50 pieces/carton – 11,200 pieces/pallet</td>
</tr>
</tbody>
</table>
Easy filling
• Automatic filling or manual filling with variable speed
• Optimized tube systems with check valves

Mindful workflow
• Direct interface with different OEM imaging equipment
• KVO function ensures that access to the vein is maintained during long examinations

Wireless & mobile
• Mains supply independent thanks to high-output rechargeable batteries

Hygienic design
• Tough, stable and light aluminum casing
• Easy to clean and hygienic
Technical data

**Mechanical design**
- Swivelling injection unit on a mobile column stand
- Secured injection position at an angle of about 15° below horizontal (detected by a built-in inclination sensor), tilt vertically upwards to vent the system
- Hand switch to control the injection
- Total weight: 62 kg

**Power supply**
- Operation is independent of the mains supply thanks to high-output rechargeable batteries.
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 300 VA

**Injection profiles**
- 60 injection profiles can be edited and stored by the user (for CT and HP)

**Filling of injection syringes**
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 4 ml/s
- Optimized high-pressure tube systems with check valves
- Automatic adaption of capacity
- Keep-vein-open function for maintaining the access to blood vessels
- Rinsing function using NaCl
- Pressure cuff recognition
## Injection parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum injection volume</td>
<td>2 x 200 ml</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>1 – 200 ml, programmable in 1 ml increments</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>Angio-Mode: 83 bar (1200 psi), programmable from 5 to 83 bar (73 to 1200 psi) in 1 bar increments</td>
</tr>
<tr>
<td></td>
<td>CT-Mode: 21 bar (305 psi), programmable from 5 to 21 bar (73 to 305 psi) in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate of the two injection units</td>
<td>Angio-Mode: 0.1 – 30 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>CT-Mode: 0.1 – 10 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td>Rise time</td>
<td>0.1 – 10 s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Injection delay</td>
<td>0 – 255 s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td>Phase delay</td>
<td>0 – 255 s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td>X-ray delay</td>
<td>Angio-Mode: 0 – 255 s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td>Scan delay</td>
<td>CT-Mode: 0 – 255 s, programmable in 0.1 ml/s increments, with acoustic signal</td>
</tr>
</tbody>
</table>

Subject to technical alterations
## Accessories and Options

<table>
<thead>
<tr>
<th>Article name</th>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface Canon</td>
<td>Interface Accutron HP-D for Canon Scanner</td>
<td>IF859-C</td>
</tr>
<tr>
<td>Interface GE</td>
<td>Interface Accutron HP-D for GE Scanner</td>
<td>IF859-G</td>
</tr>
<tr>
<td>Interface Philips</td>
<td>Interface Accutron HP-D for Philips Scanner</td>
<td>IF859-P</td>
</tr>
<tr>
<td>Interface Shimadzu</td>
<td>Interface Accutron HP-D for Shimadzu Scanner</td>
<td>IF859-S</td>
</tr>
<tr>
<td>Interface Siemens</td>
<td>Interface Accutron HP-D for Siemens Scanner</td>
<td>IF859-S</td>
</tr>
<tr>
<td>Interface Siemens Cios Alpha</td>
<td>Interface Accutron HP-D for Siemens Cios Alpha Scanner</td>
<td>IF859-SC</td>
</tr>
<tr>
<td>Interface SW</td>
<td>Interface Accutron HP-D zum Wechseln zwischen verschiedenen Scannern</td>
<td>IF859-SW</td>
</tr>
<tr>
<td>Interface Ziehm</td>
<td>Interface Accutron HP-D für Ziehm Scanner</td>
<td>IF859-Z</td>
</tr>
<tr>
<td>DVI interface</td>
<td>DVI interface for Siemens and Philips angiography devices to show the injector’s screen display on the monitor of the angio device</td>
<td>490150</td>
</tr>
<tr>
<td>Power supply unit</td>
<td>additional power supply unit for Accutron HP-D</td>
<td>NT1001</td>
</tr>
<tr>
<td>Remote control</td>
<td>Touch screen remote control 10.4&quot;, wireless, incl. power supply unit</td>
<td>FB834</td>
</tr>
<tr>
<td>Power supply unit for remote control</td>
<td>Power supply unit MPP30 24 V/30 W for touch screen remote control</td>
<td>400424</td>
</tr>
<tr>
<td>Double charger</td>
<td>Double charger HP-D</td>
<td>LG1002</td>
</tr>
<tr>
<td>Hand switch</td>
<td>Hand switch HP-D</td>
<td>600679</td>
</tr>
<tr>
<td>Pressure jacket</td>
<td>Pressure jacket HP ELS 200</td>
<td>640130B</td>
</tr>
<tr>
<td>Double bottle holder</td>
<td>Double bottle holder for Accutron HP-D</td>
<td>601001</td>
</tr>
<tr>
<td>Bottle holder</td>
<td>Bottle holder with cup holder and cup</td>
<td>600351</td>
</tr>
<tr>
<td>Cup</td>
<td>Cup 100 ml</td>
<td>600174</td>
</tr>
<tr>
<td>Antenna 2.4 GHz</td>
<td>Antenna 2.4 GHz</td>
<td>400020</td>
</tr>
</tbody>
</table>
The Accutron HP-D is designed for precisely dosed injections of contrast medium (CM) and saline solution (NaCl). You can flexibly change between computed tomography mode (CT) and angiography mode (Angio). The Accutron HP-D has an injection unit with two drive units which can be controlled independently of each other and so the contrast medium can be positioned variably and accurately in the examination area with NaCl, depending on the application.

Clinical improvements

- It reduces beam hardening artifacts through flexible adjustment of contrast concentration using saline.
- The cleanly defined & reproducible contrast media bolus’ can be achieved by pushing contrast media with a saline bolus.

Operating improvements

- Wireless and mobile configuration provides flexibility to quickly change examination rooms and eliminates barriers; such as nearby power requirements and/or cable installation.
- The integration with the scanner interface reduces workload for the operator and improves patient turnaround times.

Financial improvements

- It may reduce the amount of contrast required per patient; resulting in less operating expenses.
- It can be utilized in both Angiography and Computer tomography modes; eliminating the need to purchase an additional injector for CT.
Easy filling
• Automatic filling or manual filling with variable speed
• Optimized tube systems with check valves

Mindful workflow
• Direct interface with different OEM imaging equipment
• Up to 120 total injection profiles (60 in Angio mode/60 in CT mode)
  individually created for your examinations and easily accessible

Wireless & mobile
• Mains supply independent thanks to high-output rechargeable batteries

Hygienic design
• Tough, stable and light aluminum casing
• Easy to clean and hygienic
Technical data

**Mechanical design**
- Swivelling injection unit on a mobile column stand
- Secured injection position at an angle of about 15° below horizontal (detected by a built-in inclination sensor), tilt vertically upwards to vent the system
- Hand switch to control the injection
- Total weight: 41 kg

**Power supply**
- Operation is independent of the mains supply thanks to high-output rechargeable batteries.
- Input voltage charger: 100 – 240 V, 50 – 60 Hz
- Power consumption charger: < 300 VA
- Emergency power supply

**Injection profiles**
- 60 injection profiles can be edited and stored by the user (CT and HP).

**Filling of injection syringes**
- Automatic filling via menu with volume input or manual filling with variable speed
- Filling speed: 1 – 4 ml/s
- Optimized high-pressure tube systems with check valves

**Injection parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum injection volume</td>
<td>200 ml</td>
</tr>
<tr>
<td>Partial injection volume</td>
<td>1 – 200 ml, programmable in 0.1 ml increment</td>
</tr>
<tr>
<td>Maximum injection pressure</td>
<td>Angio-Mode: 83 bar (1200 psi), programmable from 5 to 83 (73 to 1200 psi) bar in 1 bar increments</td>
</tr>
<tr>
<td></td>
<td>CT-Mode: 21 bar (305 psi), programmable from 5 to 21 bar (73 to 305 psi) in 1 bar increments</td>
</tr>
<tr>
<td>Flow rate of the two injection units</td>
<td>Angio-Mode: 0.1 – 30 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>CT-Mode: 0.1 – 10 ml/s, programmable in 0.1 ml/s increments</td>
</tr>
<tr>
<td></td>
<td>Alternatively, input of flow rate or phase duration</td>
</tr>
<tr>
<td>Number of phases</td>
<td>1 to 3</td>
</tr>
<tr>
<td>Injection delay</td>
<td>0 – 255 s</td>
</tr>
<tr>
<td>Phase delay</td>
<td>0 – 255 s</td>
</tr>
<tr>
<td>X-ray delay/Scan delay</td>
<td>Angio-Mode: 0 – 99 s, CT-Mode: 0 – 99 s</td>
</tr>
</tbody>
</table>

Subject to technical alterations
## Accessories and Options

<table>
<thead>
<tr>
<th>Article name</th>
<th>Description</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accutron HP table mount</td>
<td>Table version of Accutron HP</td>
<td>HP890</td>
</tr>
<tr>
<td>Accutron HP ceiling mount</td>
<td>Ceiling version of Accutron HP</td>
<td>HP837</td>
</tr>
<tr>
<td>Ceiling suspension</td>
<td>Ceiling suspension Accutron HP</td>
<td>530166</td>
</tr>
<tr>
<td>Power supply unit</td>
<td>additional power supply unit for Accutron HP</td>
<td>NT1000</td>
</tr>
<tr>
<td>Power supply unit for ceiling mount version</td>
<td>power supply unit for Accutron HP ceiling mount version</td>
<td>610007</td>
</tr>
<tr>
<td>Interface Canon</td>
<td>Interface for Canon Scanner</td>
<td>IF839-C</td>
</tr>
<tr>
<td>Interface GE</td>
<td>Interface for GE Scanner</td>
<td>IF839-G</td>
</tr>
<tr>
<td>Interface Philips</td>
<td>Interface for Philips Scanner</td>
<td>IF839-P</td>
</tr>
<tr>
<td>Interface Shimadzu</td>
<td>Interface for Shimadzu Brantist Safire VC17 Scanner</td>
<td>IF839-S</td>
</tr>
<tr>
<td>Interface Siemens</td>
<td>Interface for Siemens Scanner</td>
<td>IF839</td>
</tr>
<tr>
<td>Interface Siemens Cios Alpha</td>
<td>Interface for Siemens Cios Alpha Scanner</td>
<td>IF839-SC</td>
</tr>
<tr>
<td>Interface Ziehm</td>
<td>Interface for Ziehm Vision</td>
<td>IF839-Z</td>
</tr>
<tr>
<td>Remote control</td>
<td>Touch screen remote control, wireless</td>
<td>FB838</td>
</tr>
<tr>
<td>Power supply unit for remote control</td>
<td>Power supply unit MPP30 24V / 30 W for touch screen remote control</td>
<td>400424</td>
</tr>
<tr>
<td>Charger</td>
<td>Charger Accutron HP</td>
<td>LG1002</td>
</tr>
<tr>
<td>Hand switch</td>
<td>Hand switch for Accutron HP</td>
<td>601068</td>
</tr>
<tr>
<td>Pressure jacket</td>
<td>Pressure jacket HP ELS 200, integrated into adapter ring</td>
<td>640130B</td>
</tr>
<tr>
<td>Bottle holder</td>
<td>Bottle holder with cupholder and cup</td>
<td>600351</td>
</tr>
<tr>
<td>Cup</td>
<td>Cup 100 ml</td>
<td>600174</td>
</tr>
<tr>
<td>Infusion stand</td>
<td>Infusion stand for Accutron HP836 with cupholder and cup</td>
<td>490200</td>
</tr>
<tr>
<td>Infusion stand</td>
<td>Infusion stand for Accutron HP837 with cupholder and cup</td>
<td>490200</td>
</tr>
</tbody>
</table>
The Accutron HP is designed for precisely dosed injections of contrast medium (CM). You can flexibly change between angiography mode and computed tomography modes (CT mode). The injector runs independently of the mains network as it can be operated wirelessly with battery cells.

Clinical improvements

- It enables interdisciplinary clinical imaging examinations, in both Angiography andComputed Tomography.
- It reduces risk of infections by being easy to clean and hygienic.

Operating improvements

- Wireless and mobile configuration provides flexibility to quickly change examination rooms and eliminates barriers; such as nearby power requirements and/or cable installation.
- The integration with the scanner interface reduces workload for the operator and improves patient turnaround times.

Financial improvements

- It reduces the amount of capital expenditures because of dual usability in Angiography and CT.
- The integration with the scanner interface can support increased throughput via workflow efficiencies; leading to potentially increased revenue.
CONSUMABLES

Single and double head high-pressure injectors (83 bar/1,200 psi)

<table>
<thead>
<tr>
<th>Article number</th>
<th>ELS 200 ml (Easy Loading Syringe) with filling tube</th>
<th>31 6025-000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residual volume: 1.5 ml</td>
<td>At 83 bar only usable with pressure sleeve!</td>
</tr>
<tr>
<td>Article number</td>
<td>ELS 200 ml (S) (Easy Loading Syringe)</td>
<td>31 6026-000</td>
</tr>
<tr>
<td></td>
<td>Residual volume: 1.5 ml</td>
<td>At 83 bar only usable with pressure sleeve!</td>
</tr>
<tr>
<td></td>
<td>Packing unit: 50 pieces/carton – 1,500 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>HSD 525 suction tube</th>
<th>31 5080-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 100 cm</td>
<td>Inner diameter: 2.7 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.2 ml valve, 16 ml tube with drip chamber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing unit: 25 pieces/carton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>HSD 527 suction tube with valve</th>
<th>31 5082-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 100 cm</td>
<td>Inner diameter: 2.7 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.2 ml valve, 16 ml tube with drip chamber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>HSD 527 suction tube with valve and inline drip chamber (for Scanbag® CM-supply bag)</th>
<th>31 5083-000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 100 cm</td>
<td>Inner diameter: 2.7 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.2 ml valve, 16 ml patient line with drip chamber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article number</th>
<th>HDW 526 high-pressure 3-way stop cock</th>
<th>31 5085-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling volume: 0.3 ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton, 200 pieces/carton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CONSUMABLES

Single and double head high-pressure injectors (83 bar/1,200 psi)

**HS 224 RA patient line**
- Inner diameter: 1.8 mm, Rotating Adapter, **Braided PU tube**
- Length: 100 cm, filling volume: 2.5 ml
- Length: 120 cm, filling volume: 3.1 ml
- Packing unit: 50 pieces/carton

**(Article number)**
- 31 5100-000
- 31 5126-000

**HS 224 RA patient line**
- Inner diameter: 1.8 mm, Rotating Adapter, **Braided PU tube**
- Length: 150 cm, filling volume: 3.9 ml
- Length: 180 cm, filling volume: 4.6 ml
- Packing unit: 25 pieces/carton

**(Article number)**
- 31 5136-000
- 31 5135-000

**HS 224/180 RA patient line with valve**
- Inner diameter: 1.8 mm, Rotating Adapter
- **Braided PU tube with check valve**
- Length: 180 cm
- Filling volume: 4.6 ml
- Packing unit: 50 pieces/carton

**(Article number)**
- 31 5124-000

**HS 224 patient line**
- Inner diameter: 1.8 mm
- **Braided PU tube**
- Length: 120 cm, filling volume: 3.1 ml
- Packing unit: 50 pieces/carton
- Length: 180 cm, filling volume: 4.6 ml
- Packing unit: 25 pieces/carton

**(Article number)**
- 31 5125-000
- 31 5134-000

**HP patient line**
- Inner diameter: 1.5 mm, **PCV-tube**
- Length: 120 cm, Filling volume: 3.8 ml
- Length: 180 cm, Filling volume: 5.7 ml
- Packing unit: 50 pieces/carton

**(Article number)**
- 31 5129-000
- 31 5132-000
CONSUMABLES

Single and double head high-pressure injectors (83 bar/1,200 psi)

**HP RA patient line PVC-flex**
- Inner diameter: 1.5 mm
- Rotating Adapter
- Length: 120 cm, Filling volume: 2.18 ml
- Packing unit: 50 pieces/carton
  
- Length: 150 cm, Filling volume: 2.24 ml
- Packing unit: 50 pieces/carton

**HP RA patient line with check valve, PVC-flex**
- Inner diameter: 1.5 mm
- Rotating Adapter/PVC-flex tube, with check valve
- Length: 120 cm, filling volume: 2.2 ml
- Length: 150 cm, filling volume: 2.7 ml
- Packing unit: 50 pieces/carton

**HP 110 RA patient line with check valve, PVC-flex**
- Total length: 110 cm
- Inner diameter: 1.5 mm
- Filling volume: 2.0 ml
- Packing unit: 25 pieces/carton

**Accutron HP-D tube system**

<table>
<thead>
<tr>
<th>Pressure side</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>16 cm</td>
<td>0.7 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>16 cm</td>
<td>0.7 ml</td>
</tr>
<tr>
<td>Suction Side</td>
<td>Length</td>
<td>Filling volume</td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>16 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>16 ml incl. drip chamber</td>
</tr>
<tr>
<td>2 x drip chamber</td>
<td></td>
<td>each one 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 25 pieces/carton

**ScanBag® HP-D tube system**
(for Scanbag® CM-supply bag)

<table>
<thead>
<tr>
<th>Pressure side</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>16 cm</td>
<td>0.7 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>16 cm</td>
<td>0.7 ml</td>
</tr>
<tr>
<td>Suction side</td>
<td>Length</td>
<td>Filling volume</td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td>16 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td>16 ml incl. drip chamber</td>
</tr>
<tr>
<td>2 x drip chamber</td>
<td></td>
<td>each one 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 25 pieces/carton
CONSUMABLES
Single and double head high-pressure injectors (83 bar/1,200 psi)

---

**Article number**

**Accutron HP-D - Y-Pressure line with 2 check valves**

<table>
<thead>
<tr>
<th>Pressure side</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>18 cm</td>
<td>0.46 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>18 cm</td>
<td>0.46 ml</td>
</tr>
<tr>
<td>Shared line</td>
<td>200 cm</td>
<td>3.5 ml</td>
</tr>
</tbody>
</table>

Packing unit: 25 pieces/carton

---

**Accutron HP-D - Y-connector 83 bar with 2 CV and RA - long branches**

<table>
<thead>
<tr>
<th>Pressure side</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>195 cm</td>
<td>4.85 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>195 cm</td>
<td>4.85 ml</td>
</tr>
<tr>
<td>Shared line</td>
<td>15 cm</td>
<td>0.26 ml</td>
</tr>
</tbody>
</table>

Packing unit: 25 pieces/carton

---

**SP 227 vented spike, luer lock**

Filling volume: 0.4 ml

Packing unit: 50 pieces/carton

200 pieces/carton – 11,200 pieces/pallet

---

**Minispike, green**

Filling volume: 0.2 ml

Packing unit: 50 pieces/carton

200 pieces/carton – 11,200 pieces/pallet
### Single and double head high-pressure injectors - material characteristics

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Article name</th>
<th>Pressure line</th>
<th>Suction line</th>
<th>drip chamber</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 5100-000</td>
<td>HS 224/100 RA Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5121-000</td>
<td>HP 150 RA Patient line with valve, PVC-flex</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5124-000</td>
<td>HS 224/180 RA Patient line with valve</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5125-000</td>
<td>HS 224/120 Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5126-000</td>
<td>HS 224/120 RA Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5132-000</td>
<td>HP 180 Patient line</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5134-000</td>
<td>HS 224/180 Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5135-000</td>
<td>HS 224/180 RA Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5136-000</td>
<td>HS 224/150 RA Patient line</td>
<td>TPU braided</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5137-000</td>
<td>HP 120 RA Patient line with valve, PVC-flex</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5138-000</td>
<td>HP 150 RA Patient line, PVC-flex</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5139-000</td>
<td>HP 110 RA Patient line, PVC-flex</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>31 5140-000</td>
<td>HP 110 RA Patient line with check valve, PVC-flex</td>
<td>PVC tube</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Article name</th>
<th>Pressure line</th>
<th>Suction line</th>
<th>drip chamber</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 5080-000</td>
<td>HSD 525 suction tube</td>
<td>X</td>
<td>PVC tube, plasticizer TOTM</td>
<td>X</td>
</tr>
<tr>
<td>31 5082-000</td>
<td>HSD 527 suction tube with valve</td>
<td>X</td>
<td>PVC tube, plasticizer TOTM</td>
<td>NONDOP</td>
</tr>
<tr>
<td>31 7183-000</td>
<td>Accutron HP-D tube system</td>
<td>TPU braided</td>
<td>PVC tube, plasticizer TOTM</td>
<td>NONDOP</td>
</tr>
<tr>
<td>31 7184-000</td>
<td>ScanBag® HP-D tube system</td>
<td>TPU braided</td>
<td>PVC tube, plasticizer TOTM</td>
<td>NONDOP</td>
</tr>
<tr>
<td>31 7187-000</td>
<td>Accutron HP-D Y-connector</td>
<td>TPU braided</td>
<td>PVC tube, plasticizer TOTM</td>
<td>X</td>
</tr>
<tr>
<td>31 7188-100</td>
<td>Accutron HP-D Y-connector long supply</td>
<td>TPU braided</td>
<td>PVC tube, plasticizer TOTM</td>
<td>X</td>
</tr>
</tbody>
</table>
Efficient 8h-use

- Economically efficient by time and cost saving!
- Environmentally compatible!

Variabel & flexible

- 8h-syringe, 8h-tube system and patient line build a system!
- Individual system solution!

Save handling

- Overview and control by special stickers!
- Compact and well-structured design!
Tips for use

Application example (see above)

Syringe:
ELS 200 ml syringe MU
Article number 31 4626-100

Tube system:
MRS 222 MR tube system
Article number 31 4100-100

Patient line:
Coiled line 150 cm with 2 check valves
Article number 31 8217-000

++ + ++ ✓
+
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++ + ++ ✓
+
+

++ + ++ ✓
+
+

++ + ++ X
+
+

++ + ++ X
+
+

MULTIPLE USE UP TO 8h
MULTIPLE USE UP TO 8h
Single and double head injectors for CT and MRI (21 bar/305 psi)

With regards to our drip chambers with a spike:
The drip chambers are equipped with microbiological ventilation and a soil filter for particle-free filling.

With regards to our inline drip chambers:
The drip chambers are equipped with a soil filter for particle-free filling.

Our valve technology is secure for up to 8 hours in terms of microbiological and viral hazards. It is also self-closing: The opening pressure is 250 mbar.

8h-Syringe

<table>
<thead>
<tr>
<th>Article number</th>
<th>ELS 200 ml Syringe MU 31 4626-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling volume: 200 ml</td>
<td></td>
</tr>
<tr>
<td>Residual volume: 1.5 ml</td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton incl. sticker to mark the start- and endtime of the 8 hours – 1,500 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>

8h-Tube system

<table>
<thead>
<tr>
<th>Article number</th>
<th>EK 223 tube system with drip chamber 31 4081-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Length</td>
</tr>
<tr>
<td>Pressure side 2 mm</td>
<td>14 cm</td>
</tr>
<tr>
<td>Suction side 2.7 mm</td>
<td>100 cm</td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton – 2,800 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>
### MRS 222 XS MR-tube system with 1 inline drip chamber (for Scanbag® CM-supply bag)

<table>
<thead>
<tr>
<th>Component</th>
<th>Pressure side, ID 2 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>26 cm</td>
<td></td>
<td>0.7 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>46 cm</td>
<td></td>
<td>1.7 ml</td>
</tr>
<tr>
<td>Suction side, ID 2.7 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber each 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

### MRS 222 MR-tube system

<table>
<thead>
<tr>
<th>Component</th>
<th>Pressure side, ID 2.0 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>26 cm</td>
<td></td>
<td>0.7 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>46 cm</td>
<td></td>
<td>1.7 ml</td>
</tr>
<tr>
<td>Suction side, ID 2.7 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber each 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

### Double head-tube system with 1 inline drip chamber and valve (for Scanbag® CM-supply bag)

<table>
<thead>
<tr>
<th>Component</th>
<th>Pressure side, ID 2.0 / 1.5 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>146 cm</td>
<td></td>
<td>4.1 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>186 cm</td>
<td></td>
<td>4.8 ml</td>
</tr>
<tr>
<td>Suction side, ID 2.7 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber each 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet

### MRS 222 XS tube system with exchangeable spikes and additional valve

<table>
<thead>
<tr>
<th>Component</th>
<th>Pressure side, ID 2.0 mm</th>
<th>Length</th>
<th>Filling volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-Side</td>
<td>176 cm</td>
<td></td>
<td>5.7 ml</td>
</tr>
<tr>
<td>NaCl-Side</td>
<td>176 cm</td>
<td></td>
<td>5.7 ml</td>
</tr>
<tr>
<td>Suction side, ID 2.7 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM-Side, green</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber</td>
</tr>
<tr>
<td>NaCl-Side, white</td>
<td>100 cm</td>
<td></td>
<td>15.8 ml incl. drip chamber each 10 ml</td>
</tr>
</tbody>
</table>

Packing unit: 50 pieces/carton – 2,800 pieces/pallet
MULTIPLE USE UP TO 8h
Single and double head injectors for CT and MRI (21 bar/305 psi)

Patient lines to use with 8h-Tube systems

<table>
<thead>
<tr>
<th>Patient line</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES 224/25 patient line with valve</td>
<td>31 8020-100</td>
</tr>
<tr>
<td>Length: 25 cm</td>
<td></td>
</tr>
<tr>
<td>Inner diameter: 1.5 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 0.4 ml</td>
<td></td>
</tr>
<tr>
<td>Packing unit: 100 pieces/carton – 8,000 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient line</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient line 150 cm with terminal check valves</td>
<td>31 8026-100</td>
</tr>
<tr>
<td>Length: 150 cm</td>
<td></td>
</tr>
<tr>
<td>Inner diameter: 2.0 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 4.8 ml</td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient line</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient line 150 cm with two check valves</td>
<td>31 8036-100</td>
</tr>
<tr>
<td>Length: 150 cm + 10 cm</td>
<td></td>
</tr>
<tr>
<td>Inner diameter: 2.0 mm</td>
<td></td>
</tr>
<tr>
<td>Filling volume: 5.2 ml</td>
<td></td>
</tr>
<tr>
<td>Packing unit: 50 pieces/carton – 5,850 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient line with valve</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner diameter: 1.5 mm</td>
<td></td>
</tr>
<tr>
<td>Length: 150 cm, filling volume: 2.6 ml</td>
<td>31 8152-100</td>
</tr>
<tr>
<td>Length: 200 cm, filling volume: 3.5 ml</td>
<td>31 8198-100</td>
</tr>
<tr>
<td>Length: 250 cm, filling volume: 4.4 ml</td>
<td>31 8251-100</td>
</tr>
<tr>
<td>Length: 300 cm, filling volume: 5.3 ml</td>
<td>31 8301-100</td>
</tr>
<tr>
<td>Packing unit: 200 pieces/carton – 11,200 pieces/pallet</td>
<td></td>
</tr>
</tbody>
</table>
MULTIPLE USE UP TO 8h
Single and double head injectors for CT and MRI (21 bar/305 psi)

Coiled line with valve
Inner diameter: 1.6 mm
Length: 150 cm, filling volume: 3.1 ml  
Length: 180 cm, filling volume: 3.7 ml
Packing unit: 50 pieces/carton - 5,850 pieces/pallet

Coiled line 150 cm with 2 check valves  
Inner diameter: 1.5 mm
Length: 150 cm
Filling volume: 2.6 ml
Packing unit: 50 pieces/carton - 5,850 pieces/pallet

Vented spike MU  
Filling volume: 0.4 ml
Packing unit: 200 pieces/carton - 11,200 pieces/pallet
Hiermit erklären wir, dass die folgenden von der MEDTRON AG als Hersteller im Sinne der Richtlinie 93/42 EWG hergestellten und vertretenen Produkte im Sinne der genannten Richtlinie als medizinische Einrichtungen nach den Bestimmungen der 93/42 EWG vermarktet und geliefert werden.

The undersigned manufacturer hereby declare that the following products produced and distributed by MEDTRON AG as a manufacturer within the meaning of Directive 93/42 EEC:

8h-Spritze zur kurzzeitigen Anwendung ≤ 8 Stunden (8h)

REF 314626-100 „ELS 200ml Spritze MU“

8h-Spritzen for short-term use ≤ 8 hours (8h)

REF 314626-100 „ELS 200ml Syringe MU“

In Verbindung mit den 8h-Schlauchsysteme zur kurzzeitigen Anwendung ≤ 8 Stunden (8h) mit gelben Ventilen

REF 314061-000, REF 314061-100, REF 314084-000, REF 314099-100, REF 314100-000, REF 314100-100, REF 314109-000, REF 314119-100

with yellow valves

And den Patientenleitungen zur einmaligen Benutzung (Einmalprodukt) mit grünen Ventilen

REF 318020, REF 318020-000, REF 318020-100, REF 318026, REF 318026-000, REF 318026-100, REF 318036, REF 318036-000, REF 318036-100, REF 318152, REF 318152-000, REF 318152-100, REF 318181, REF 318181-000, REF 318181-100, REF 318198, REF 318198-000, REF 318198-100, REF 318214, REF 318214-000, REF 318214-100, REF 318217-000, REF 318217-100, REF 318251-100, REF 318201-100

with green valves

für einen maximalen Zeitraum von bis zu 8 Stunden bei uneingeschränkter Anwendungshäufigkeit für die Diagnoseuntersuchung von mehreren Patienten validiert ist.

is validated for a maximum period of up to 8 hours at full application frequency for the diagnosis study of several patients.

Die hygienische Unbedenklichkeit von der Spritze, Schlauchleitungen und Ventile wurde im Rahmen von mikrobiologischen Studien für die kurzzeitige Anwendung von ≤ 8 Stunden in einem unabhängigen akkreditierten Labor untersucht.

The hygienic safety from the syringe, tube system and valves was investigated as part of microbiological studies for short-term use of ≤ 8 hours in an independent accredited laboratory.

Diese Erklärung wird verantwortlich für den Hersteller abgegeben.

This declaration is delivered under the responsibility of the manufacturer.

Hauptstraße 255 66128 Saarbrücken Germany

Saarbrücken, 30.10.2018

Tobias Kriecht
NonActive Medical Devices Management

Keinnummer der CE-Konformität / CE Identification number: 0482
MEDCOERT GmbH, Philippstr. 2, 20355 Hamburg, Germany

Revision 00
CONSUMABLES
Overview

Art. no. 31 5080-000
HSD 525 Suction tube

Art. no. 31 5082-000
HSD 527 suction tube
with valve

Art. no. 31 5083-000
HSD 527 suction tube
with valve and inline drip chamber

Art. no. 31 5085-100
HDW 526 high pressure
3-way stopcock

Art. no. 31 5100-000
HS 224/100 RA patient line

Art. no. 31 5101-000
HP 150 RA patient line with
check valve, PVC-flex

Art. no. 31 5121-000
HP 150 RA patient line with
check valve, PVC-flex

Art. no. 31 5124-000
HS 224/180 RA patient line
with valve

Art. no. 31 5125-000
HS 224/120 patient line

Art. no. 31 5126-000
HS 224/120 RA patient line

Art. no. 31 5129-000
HP 120 patient line

Art. no. 31 5130-000
HP RA patient line PVC-flex

Art. no. 31 5132-000
HP 180 patient line

Art. no. 31 5134-000
HS 224/180 patient line

Art. no. 31 5135-000
HS 224/180 RA patient line

Double head injectors for Magnetic resonance imaging (21 bar/305 psi)
Injectors for Computed tomography (21 bar/305 psi)
High-pressure injectors for Angiography (83 bar/1.200 psi)
## CONSUMABLES

**Overview**

<table>
<thead>
<tr>
<th>Art.-Nr.</th>
<th>Description</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 7080-100</td>
<td>ES 223 tube system with spike</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>31 7081-100</td>
<td>EK 223 tube system with drip chamber</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>31 7083-100</td>
<td>Tube system with suction line and drip chamber</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>31 7100-100</td>
<td>MRS 222 MR-tube system</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>31 7104-000</td>
<td>MR–ELS tube system with 2 valves, green</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>

- **Double head injectors for Magnetic resonance imaging (21 bar/305 psi)**
- **High-pressure injectors for Angiography (83 bar/1200 psi)**
- **Injectors for Computed tomography (21 bar/305 psi)**
CONSUMABLES
Overview

- Art.-Nr. 31 7109-100
  Double head-tube system with 1 inline drip chamber

- Art.-Nr. 31 7125-100
  MRS 225 MR-tube system

- Art.-Nr. 31 7183-000
  Accutron HP-D tube system

- Art.-Nr. 31 7184-000
  Scanbag® HP-D tube system

- Art.-Nr. 31 7187-000
  Accutron HP-D - Y-pressure line with 2 check valves

- Art.-Nr. 31 7188-100
  Accutron HP-D - Y-connector 83 bar with 2 CV and RA - long branches

- Art.-Nr. 31 7602-100
  MR-Set ELS 65/200 ml

- Art.-Nr. 31 7603-100
  MR-Set ELS 65/200 ml

- Art.-Nr. 31 7604-100
  MR-Kit ELS 65 ml

- Art.-Nr. 31 7616-000
  82 CT-Kit ELS

- Art.-Nr. 31 7625-000
  CT2/MRT Set ELS

- Art.-Nr. 31 7627-100
  CT2/MRT Set ELS (S)

- Art.-Nr. 31 8020-100
  ES 224/25 patient line with valve

- Art.-Nr. 31 8025-100
  One-way-stopcock with extension line 30 cm, luer lock

- Art.-Nr. 31 7603-100
  MR-Set ELS 65/200 ml

- Art.-Nr. 31 7604-100
  MR-Kit ELS 65 ml

Double head injectors for Magnetic resonance imaging (21 bar/305 psi)
High-pressure injectors for Angiography (83 bar/1.200 psi)
Injectors for Computed tomography (21 bar/305 psi)
CONSUMABLES
Overview

- Art.-Nr. 31 8026-100
  Patient line 150 cm with terminal check valves

- Art.-Nr. 31 8036-100
  Patient line 150 cm with 2 check valves

- Art.-Nr. 31 8042-100
  DW 229 Connector with 3-way stop cock

- Art.-Nr. 31 8081-100
  ES 224/80 patient line

- Art.-Nr. 31 8101-100
  ES 224/100 patient line

- Art.-Nr. 31 8151-100
  ES 224/150 patient line

- Art.-Nr. 31 8152-100
  Patient line 150 cm with check valve

- Art.-Nr. 31 8181-000
  Coiled line 180 cm with check valve

- Art.-Nr. 31 8198-100
  Patient line 200 cm with valve

- Art.-Nr. 31 8199-100
  ES 224/200 patient line

- Art.-Nr. 31 8213-000
  Coiled line 150 cm

- Art.-Nr. 31 8214-000
  Coiled line 150 cm with check valve

- Art.-Nr. 31 8217-000
  Coiled line 150 cm with 2 check valves

- Art.-Nr. 31 8235-000
  Coiled line 235 cm with Y-connector with check valve

Double head injectors for Magnetic resonance imaging (21 bar/305 psi)
High-pressure injectors for Angiography (83 bar/1,200 psi)
Injectors for Computed tomography (21 bar/305 psi)
CONSUMABLES OVERVIEW

Double head injectors for Magnetic resonance imaging (21 bar/305 psi)

Injectors for Computed tomography (21 bar/305 psi)

High-pressure injectors for Angiography (83 bar/1200 psi)

- Art.-Nr. 31 8250-100
  ES 224/250 patient line

- Art.-Nr. 31 8251-100
  Patient line 250 cm with valve

- Art.-Nr. 31 8253-000
  Coiled line 250 cm with check valve

- Art.-Nr. 31 8300-100
  ES 224/300 patient line

- Art.-Nr. 31 8301-100
  Patient line 300 cm with valve

- Art.-Nr. 31 8303-000
  Coiled line 300 cm with check valve

- Art.-Nr. 31 9080-100
  SD 225 suction tube with 3-way stopcock and spike

- Art.-Nr. 31 9085-100
  DW 226 3-way stopcock

- Art.-Nr. 31 9095-100
  SP 227 vented spike, luer lock

- Art.-Nr. 31 9099-100
  Minispike, green

- Art.-Nr. 31 8250-100
  ES 224/250 patient line

- Art.-Nr. 31 8251-100
  Patient line 250 cm with valve

- Art.-Nr. 31 8253-000
  Coiled line 250 cm with check valve

- Art.-Nr. 31 8300-100
  ES 224/300 patient line

- Art.-Nr. 31 8301-100
  Patient line 300 cm with valve

- Art.-Nr. 31 8303-000
  Coiled line 300 cm with check valve

- Art.-Nr. 31 9080-100
  SD 225 suction tube with 3-way stopcock and spike

- Art.-Nr. 31 9085-100
  DW 226 3-way stopcock

- Art.-Nr. 31 9095-100
  SP 227 vented spike, luer lock

- Art.-Nr. 31 9099-100
  Minispike, green
CONSUMABLES MULTIPLE USE UP TO 8h

Overview

8h-Syringe

Art.-Nr. 31 4626-100
ELS 200 ml syringe MU

8h-Tube system

Art.-Nr. 31 4081-100
EK 223 tube system with drip chamber

Art.-Nr. 31 4095-100
Spike with ventilation MU

Art.-Nr. 31 4099-100
MRS 222 MR-tube system with 1 inline drip chamber

Art.-Nr. 31 4100-100
MRS 222 MR-tube system

Art.-Nr. 31 4108-100
Double head tube system with 1 inline drip chamber and valve

Art.-Nr. 31 4119-100
MRS 222 XS tube system with exchangeable spikes and additional valve

Patient lines to use with 8h-Tube systems

Art.-Nr. 31 8020-100
ES 224/25 patient line with check valve

Art.-Nr. 31 8026-100
Patient line 150 cm with terminal check valves

Art.-Nr. 31 8036-100
Patient line 150 cm with 2 check valves

Art.-Nr. 31 8152-100
Patient line 150 cm with check valve
**CONSUMABLES MULTIPLE USE UP TO 8h**

**Overview**

- Art.-Nr. 31 8181-000
  - Coiled line 180 cm
  - with valve

- Art.-Nr. 31 8198-000
  - Patient line 200 cm
  - with valve

- Art.-Nr. 31 8214-000
  - Coiled line 150 cm
  - with valve

- Art.-Nr. 31 8217-000
  - Coiled line 150 cm
  - with 2 check valves

- Art.-Nr. 31 8251-100
  - Patient line 250 cm
  - with valve

- Art.-Nr. 31 8301-100
  - Patient line 300 cm
  - with valve

- Art.-Nr. 31 8217-000
  - Coiled line 150 cm
  - with 2 check valves
As is generally known, a reliable service increases customer satisfaction.

And since satisfied customers are more than important, MEDTRON makes every effort to provide its customers with a 100% operative injector. In order to ensure this, MEDTRON works with local service partners that provide quick and competent maintenance service.

Customers can find their local service partner on MEDTRON’s website.

MEDTRON injectors are extremely reliable and long-lived. If nevertheless any technical problems arise, the friendly service teams of MEDTRON’s service partners will provide quick and competent assistance.

RELIABLE – FAST – EFFICIENT
MEDTRON AG
Hauptstr. 255
66128 Saarbruecken
Germany
Phone: +49 (0)681-97017-0
Fax: +49 (0)681-97017-20
Mail: info@medtron.com
Web: www.medtron.com

Team DACH:
Germany, Austria, Switzerland
Phone: +49 (0)681-97017-72
Fax: +49 (0)681-97017-60
Mail: sales.dach@medtron.com

Team International 1:
W/SEMEA, LATAM, Africa, APAC
Phone: +49 (0)681-97017-26
Fax: +49 (0)681-97017-20
Mail: sales.int1@medtron.com

Team International 2:
E-Europe, CIS
Phone: +49 (0)681-97017-63
Fax: +49 (0)681-97017-20
Mail: sales.int2@medtron.com

Service:
Phone: +49 (0)681-97017-50/-83
Fax: +49 (0)681-97017-85
Mail: service@medtron.com