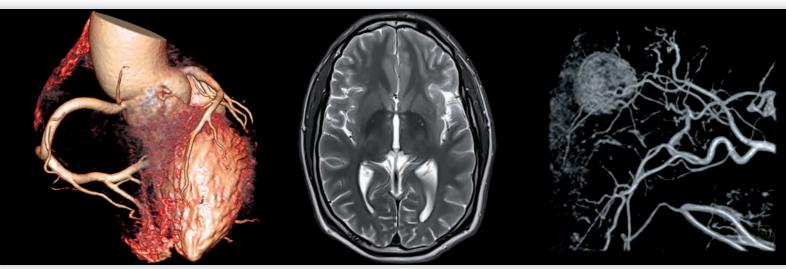
## Essential for contrast



© Photos: Siemens AC



PRODUCT CATALOGUE





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## Essential for contrast



### **PRFFACE**

### 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.

havin Bowten

Martin Bartels Chairman of the Board



## PRODUCT CATALOGUE

### Overview

MEDTRON AG	Page 6
History	Page 7
<ul> <li>Magnetic Resonance Imaging</li> </ul>	
Accutron MR3	Page 16 - 20
<ul><li>Computed Tomography</li></ul>	
Accutron CT-D	Page 36 - 40
<ul><li>Angiography</li></ul>	
Accutron HP-D	Page 54 - 58
Multiple use	Page 64 - 70
Consumables-Overview	Page 71 - 77
Service	Page 78
Contact & Teams	Page 79



### 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
- Annex II, Directive 93/42/EEC

### 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

15<sup>th</sup> 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

 10<sup>th</sup> 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









# **Accutron MR3:**

The master of multi-tasking



## 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**

mjeetier parameters	
Maximum injection volume	64 ml (CM) / 200 ml (NaCl) / 50 ml (Infusion pump)
Partial injection volume	0.1 - 64 ml (CM) / 200 ml (NaCl), programmable in 0.1 ml increments
Maximum injection pressure	21 bar, programmable from 5 to 21 bar in 1 bar increments
Flow rate CM / NaCl	0.1 – 10 ml/s, programmable in 0.1 ml/s increments Alternatively, input of flow rate or phase duration
Flow rate infusion pump	0.001 – 30 ml/min, programmable in 0.001 ml/min increments
Number of phases	1 to 6
Injection delay	0.1 - 600 s
Phase delay	1 – 255 s
Remote control	Wireless touch screen remote control Alternatively, display of injection parameters or pressure graph Optional: hand switch
Subject to technical alterations	Optional name Street









## 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

Article name	Description	Article number
Remote control	Touch screen remote control	FB887
Power supply unit remote control	Power supply unit MPP30 24 V/ 30 W for touch screen remote control	400424
Charger	Charger Mascot 24 V, input voltage: 110-230 V	LG1003
Adapter 64 ml ELS NaCl	Adapter for the option "empty syringe" (64 ml NaCl)	610183
Software Option "Prefilled Type D"	Software option "Prefilled CM syringe" Dotarem, ProHance, Magnevist, Gadovist, Omniscan	490163
Software Option "Prefilled Type M"	Software option for the option "Prefilled CM syringe" - MultiHance	490180
Bottle holder	Bottle holder with cupholder and cup	600351
Cup	Cup 100 ml	600174
Infusion stand	Infusion stand for Accutron MR3 with cupholder and cup	490201
Antenna extension set	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	600015
Antenna 2.4 GHz	Antenna 2.4 GHz, straight	400020
Data cable, 9-pole	Data cable, 9-pole Sub-D (for MRI), plug - plug, 20 m	420169
Transmitter	Transmitter with Bluetooth radio module	600783

# Accutron MR3 The master of multi-tasking

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:

The mobile MRI specialist



## 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

Maximum injection volume	64 (CM) / 200 ml (NaCl)
Partial injection volume	0.1 – 200 ml, programmable in 0.1 ml increment
Maximum injection pressure	21 bar, programmable from 5 to 21 bar in 1 bar increments
Flow rate of the two injection units	0,1 – 10 ml/s, programmable in 0.1 ml/s increments Alternatively, input of flow rate or phase duration
Number of phases	1 to 6
Injection delay	1 – 255 s
Phase delay	1 – 255 s
Remote control	Wireless touch screen remote control Alternatively, display of injection parameters or pressure graph Optional: hand switch

Subject to technical alterations









## Accessories and Options



Touch screen remote control Article number FB886



hand switch for Accutron MR with hand switch holder Article number 601065



Double bottle holder
Article number 601001



Adapter for prefilled syringes

Article number 490108



Adapter 64 ml ELS
Article number 602175

Article name	Description	Article number
Remote control	Touch screen remote control	FB886
Power supply unit remote control	Power supply unit MPP30 24 V/30 W for touch screen remote co	ontrol 400424
Charger	Charger Mascot 24 V, input voltage: 110-230 V	LG1003
Hand switch with holder	Hand switch for Accutron MR880 with holder for remote control	601065
Software Option "prefilled syringe"	Enables the use of prefilled syringes via ELS adapter e.g. Optiray	490108
Double bottle holder	Double bottle holder Accutron	601001
Cupholder	Cupholder with tube holder for the following versions: CM-200, 0	CM-65 504162
Cup	Cup 100 ml	600174
Adapter & cupholder combination 1	Combination for adapter and cupholder Accutron MR for version CN	M-20/200 502164
Adapter & cupholder combination 2	Combination for adapter and cupholder Accutron MR for the foll versions: CM-20/65/200, CM-65/200, CM-20/65	owing 502163
Adapter 64 ml ELS	Adapter for the option "empty syringe" (64 ml NaCl)	602175
Antenna extension set	Antenna extension set for MRI	600015
Antenna 2.4 GHz	Antenna 2.4 GHz, straight	400020
Data cable, 9-pole	Data cable, 9-pole Sub-D (for MRI), plug – plug, 20 m	420169
Transmitter	Transmitter with Bluetooth radio module	600783
Option 2nd remote control	Option for the use of two remote controls for MR880	490112

# 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.

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

Article number



## with filling tube

Residual volume: 1.5 ml

ELS 200 ml (S) (Easy Loading Syringe) 31 6026-000

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



### Tube system with suction line and drip chamber (for Scanbag® CM-supply bag)

	ID	Length	Filling volume
CM-Side	2.0 mm	10 cm	0.3 ml
NaCl-Side	2.0 mm	40 cm	1.3 ml
Patient line	1.5 mm	150 cm	2.7 ml
Suction side with drip chamber	2.7 mm	100 cm	15.8 ml

### Suitable for prefilled syringes

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



### MRS 222 MR-tube system with 1 inline drip chamber (for Scanbag® CM-supply bag)

Pressure side, ID 2.0 mm	Length	Filling volume	
CM-Side	12 cm	0.6 ml	
NaCl-Side	36 cm	1.3 ml	
Suction side, ID 2.7 mm	Length	Filling volume	
CM-Side, green	100 cm	5.8 ml	
NaCl-Side, white	100 cm	5.8 ml	
2 x drip chamber		each one 10 ml	

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

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

Article number



### MRS 222 MR-tube system

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side NaCl-Side	12 cm 36 cm	0.6 ml 1.3 ml
Suction side, ID 2.7 mm	Length	Filling volume

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



Length from Y-piece: 180 cm Inner diameter: 2.0 mm Total filling volume: 6.9 ml

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



### MR-ELS tube system with 2 valves, green 31 7104-000

Inner diameter: 1.7 mm Coiled line: 180 cm Short side: 10 cm Long side: 34 cm Filling volume: 5.1 ml

Packing unit: 50 pieces/carton



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

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side	12 cm	0.4 ml
NaCl-Side	36 cm	1.1 ml
Patient line (ID: 1.5 mm)	150 cm	2.6 ml
Suction side, ID 2.7 mm	Length	Filling volume
Suction side, ID 2.7 mm CM-Side, green	Length 100 cm	Filling volume 5.8 ml

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

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

Article number



### MRS 225 MR-tube system

31 7125-100

Inner diameter: 2.0 mm

CM-Side         6 cm         0.2 ml           NaCl-Side         32 cm         1.0 ml	

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



### MR-Set ELS 65 ml

31 7602-100

2 piecesELS 65 ml (Easy Loading Syringe)31 6065-0001 pieceMR-ELS tube system with 2 valves, green31 7104-1002 piecesstandard spike31 9095-100

Packing unit: 20 pieces/carton

Suitable for 65/65 ml version



### MR-Set ELS 65/200 ml

31 7603-100

1 piece	ELS 65 ml (Easy Loading Syringe)	31 6065-000
1 piece	ELS 200 ml (S) (Easy Loading Syringe)	31 6026-000
1 piece	Double head tube system	31 7101-100
1 piece	SP 227 vented spike, luer lock	31 9095-100
1 piece	Minispike, green	31 9099-100

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

Suitable for 65/200 ml version



### MR-Kit ELS 65 ml

31 7604-100

 1 piece
 ELS 65 ml syringe
 31 6065-000

 1 piece
 MR-ELS tube system with 2 valves, green
 31 7104-100

 1 piece
 standard spike
 31 9095-100

Packing unit: 50 pieces/carton

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

Article number



### CT2/MRT Set ELS

### 31 7625-000

 2 pieces
 ELS 200 ml (Easy Loading Syringe) with filling tube
 31 6025-000

 1 piece
 MRS 222 MR-tube system
 31 7100-000

 1 piece
 ES 224/150 patient line
 31 8151-000

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

Suitable for 200/200 ml version

just for Accutron MR



### CT2/MRT Set ELS (S)

### 31 7627-100

 2 pieces
 ELS 200 ml (S) (Easy Loading Syringe)
 31 6026-000

 1 piece
 MR 222 MR-tube system
 31 7100-100

 1 piece
 ES 224/150 patient line
 31 8151-100

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

Suitable for 200/200 ml version

just for Accutron MF



### ES 224/25 patient line with valve

### 31 8020-100

Length: 25 cm Inner diameter: 1.5 mm Filling volume: 0.4 ml

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



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

31 8025-100

Length: 32 cm Inner diameter: 2.0 mm Filling volume: 0.9 ml

Packing unit: 200 pieces/carton - 5,000 pieces/pallet

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

Article number



## Patient line 150 cm with terminal check valves

31 8026-100

Length: 150 cm Inner diameter: 2.0 mm Filling volume: 4.8 ml

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



### Patient line 150 cm with 2 check valves 31 8036-100

Length: 150 cm + 10 cm Inner diameter: 1.5 mm Filling volume: 2.8 ml

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



## DW 229 Connector with 3-way stop cock

31 8042-100

Filling volume: 0.2 ml

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



### ES 224 Patient line

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

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

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

Article number



### Patient line with valve

Inner diameter: 1.5 mm

31 8152-100
31 8198-100
31 8251-100
31 8301-100

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



### Coiled line 150 cm

31 8213-000

Length: 150 cm Inner diameter: 1.6 mm Filling volume: 3.1 ml

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



### Coiled line with check valve

Inner diameter: 1.6 mm

Length: 150 cm, filling volume: 3.1 ml 31 8214-000 Length: 180 cm, filling volume: 3.7 ml 31 8181-000

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



### Coiled line 150 cm with 2 check valves 31 8217-000

Inner diameter: 1.5 mm Length: 150 cm Filling volume: 2.6 ml

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

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

Article number



## Coiled line 235 cm with Y-connector and valve

31 8235-000

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

just for Accutron MR3



### Coiled line with check valve

Inner diameter: 1.5 mm

Length: 250 cm, filling volume: 4.4 ml

Length: 300 cm, filling volume: 5.3 ml

31 8253-000
31 8303-000

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



### DW 226 3-way stopcock

31 9085-100

Filling volume: 0.3 ml

Packing unit: 50 pieces/carton

200 pieces/carton- 11,200 pieces/pallet

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

Article number



### SP 227 vented spike, luer lock

31 9095-100

Filling volume: 0.4 ml

Packing unit: 50 pieces/carton

200 pieces/carton- 11,200 pieces/pallet



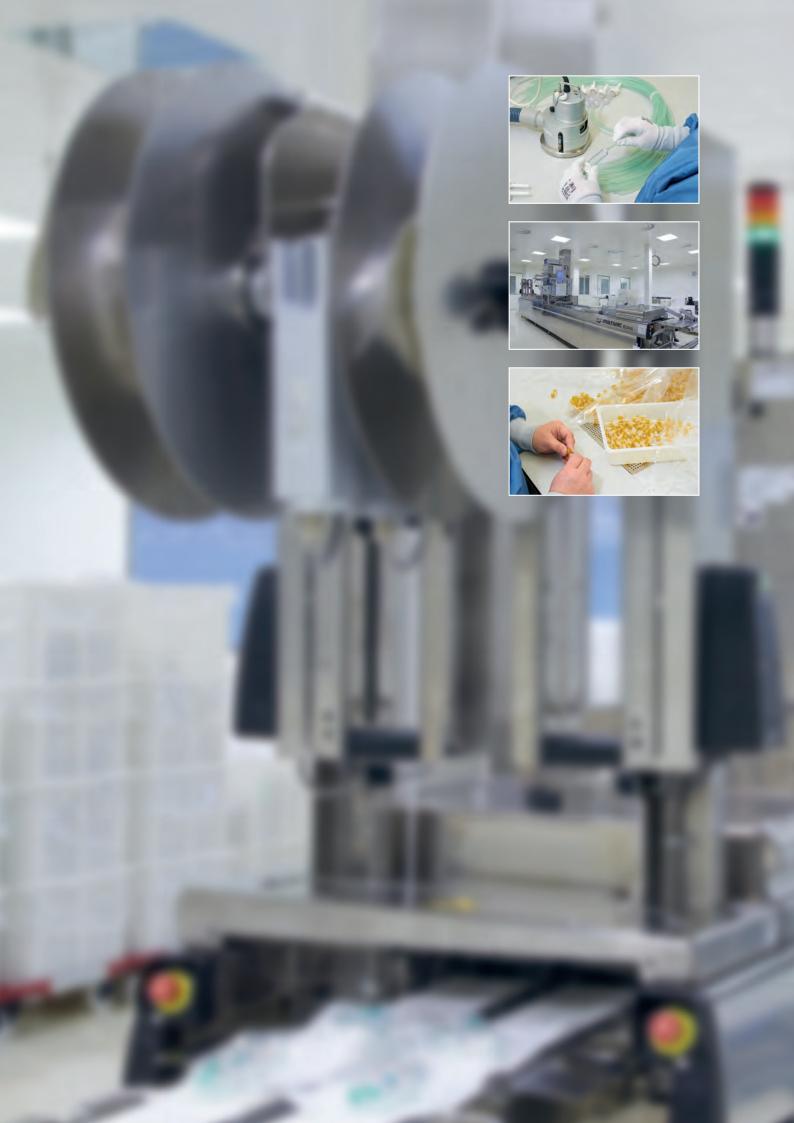
### Minispike green

31 9099-100

Filling volume: 0.2 ml

Packing unit: 50 pieces/carton

200 pieces/carton- 11,200 pieces/pallet





# **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**

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

### Subject to technical alterations









## Accessories and Options



Accutron CT-D power supply Article number CT862



Touch screen remote control, Double bottle holder wireless with power supply Article number FB866



Accutron CT-D Article number 490203



Infusion stand Article number 490200



Handswitch for CT-D Article number 601062

Article name	Description Ai	rticle number
Accutron CT-D power supply	Double head injector for computed tomography power supply version	on CT862
Accutron CT-D ceiling mount	Double head injector for computed tomography ceiling mount vers	ion CT861
Ceiling suspension	Ceiling suspension Accutron CT-D	530166
Power supply unit for ceiling version	Power supply unit Accutron CT-D for ceiling version	600417
Power supply unit for roller version	Double head injector for computed tomography	600424
CANopen Interface Siemens	CANopen Interface (Siemens) for Accutron CT-D	IF864
Interface Philips	Interface for Philips Scanner	620148
Remote control	Touch screen remote control	FB866
Power supply unit for remote control	Power supply unit MPP30 24 V/30 W for touch screen remote cont	trol 400424
Charger	Charger 24 V for CT-D/CT input voltage: 110-230 V	LG1004
Software option "prefilled syringe"	Enables the use of prefilled syringes via ELS adapter e.g. Optiray	490110
Hand switch	Hand switch for CT-D	601062
Infusion stand	Infusion stand for Accutron CT-D with cupholder and cup	490200
Bottle holder	Bottle holder with cupholder and cup	600351
Double bottle holder	Double bottle holder for Accutron CT-D ceiling version (CT861)	490203
Cup	Cup 100 ml	600174
Cup holder	Cup holder with cup	600334
Antenna 2.4 GHz	Antenna 2.4 GHz	400020

# Accutron CT-D The diagnostic specialist

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.





# Accutron CT: The flexible precision partner



# 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

Maximum injection volume	200 ml
Partial injection volume	1 – 200 ml, programmable in 1 ml increments
Maximum injection pressure	21 bar, programmable from 5 to 21 bar in 1 bar increments
Flow rate	0.1 – 10 ml/s, programmable in increments of 0.1 ml/s Alternatively input of flow rate or phase duration
Number of phases	1 to 6
Injection delay	1 - 255 s
Phase delay	1 - 255 s
Scan delay	1 – 255 s

Subject to technical alterations

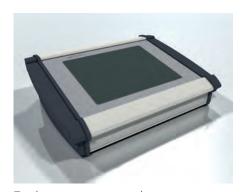








# Accessories and Options



Touch screen remote control

Article number FB875S



Infusion stand
Article number 490200

Article name	Description	Article number
Accutron CT power supply	Single head injector for computed tomography power supply versi	on CT871
Remote control	Touch screen remote control, wireless, incl. power supply unit	FB875S
Power supply unit for remote control	Power supply unit MPP30 24 V/30 W for touch screen remote co	ntrol 400424
Software-Option "prefilled syringe"	Adapter for the option "prefilled syringe" e.g. Optiray	490110
Bottle holder	Bottle holder with cupholder and cup for CT871	504162
Cup	Cup 100 ml	600174
Infusion stand	Infusion stand for Accutron CT with cupholder and cup	490200
Antenna 2.4 GHz	Antenna 2.4 GHz	400020
Hand switch	Hand switch	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.

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

Article number



# ELS 200 ml (Easy Loading Syringe) with filling tube

31 6025-000

Residual volume: 1.5 ml

ELS 200 ml (S) (Easy Loading Syringe) 31 6026-000

Residual volume: 1.5 ml

Packing unit: 50 pieces/carton - 1,500 pieces/pallet



#### ES 223 tube system with spike

31 7080-100

	ID	Length	Filling volume
Pressure side	2.0 mm	13 cm	0.4 ml
Suction side	2.7 mm	100 cm	6.3 ml

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

just for Accutron CT



#### EK 223 tube system with drip chamber 31 7081-100

	ID	Length	Filling volume
Pressure side	2.0 mm	13 cm	0.4 ml
Suction side	2.7 mm	100 cm	5.8 ml
Drip chamber			10 ml

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

just for Accutron CT



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

	D	Length	Filling volume
CM-Side	2.0 mm	10 cm	0.3 ml
NaCl-Side	2.0 mm	40 cm	1.3 ml
Patient line	1.5 mm	1.500 mm	2.7 ml
Suction side with drip chamber	2.7 mm	1.000 mm	15.8 ml

#### Suitable for prefilled syringes

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

#### 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)

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side NaCl-Side	12 cm 36 cm	0.6 ml 1.3 ml
Suction side, ID 2.7 mm	Length	Filling volume
CM-Side, green	100 cm	5.8 ml
NaCl-Side, white	100 cm	5.8 ml
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

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side	12 cm	0.6 ml
NaCl-Side	36 cm	1.3 ml
Suction side, ID 2.7 mm	Length	Filling volume
CM-Side, green	100 cm	5.8 ml
NaCl-Side, white	100 cm	5.8 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 31 7109-100 1 inline drip chamber (for Scanbag® CM-supply bag)

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side	12 cm	0.4 ml
NaCl-Side	36 cm	1.1 ml
Patient line (ID: 1.5 mm)	150 cm	2.6 ml
Suction side, ID 2.7 mm	Length	Filling volume
Suction side, ID 2.7 mm CM-Side, green	Length 100 cm	Filling volume 5.8 ml
CM-Side, green	100 cm	5.8 ml

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

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



#### MRS 225 MR-tube system

31 7125-100

Inner diameter: 2.0 mm

Length Filling volume

 $\begin{array}{ccc} \text{CM-Side} & \text{6 cm} & \text{0.2 ml} \\ \text{NaCl-Side} & \text{32 cm} & \text{1.0 ml} \end{array}$ 

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



#### 82 CT Kit ELS

31 7616-000

1 piece ELS 200 ml (Easy Loading Syringe) with filling tube 31 6025-000 1 piece Coiled line 150 cm 31 8213-000

Packing unit: 50 pieces/carton - 1,500 pieces/pallet

just for Accutron CT



#### CT2/MRT Set ELS

31 7625-000

 2 pieces
 ELS 200 ml (Easy Loading Syringe) with filling tube
 31 6025-000

 1 piece
 MRS 222 MR-tube system
 31 7100-000

 1 piece
 ES 224/150 patient line
 31 8151-000

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



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

31 7627-100

 2 pieces
 ELS 200 ml (S) (Easy Loading Syringe)
 31 6026-000

 1 piece
 MRS 222 MR-tube system
 31 7100-100

 1 piece
 ES 224/150 patient line
 31 8151-100

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

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

Article number



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

31 8020-100

Length: 25 cm Innen diameter: 1.5 mm Filling volume: 0.4 ml

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



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

31 8025-100

Length: 32 cm Inner diameter: 2.0 mm Filling volume: 1.2 ml

Packing unit: 200 pieces/carton - 5,000 pieces/pallet



# Patient line 150 cm with terminal check valves

31 8026-100

Length: 150 cm Inner diameter: 2.0 mm Filling volume: 4.8 ml

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



#### Patient line 150 cm with 2 check valves 31 8036-100

Length: 150 cm + 10 cm Inner diameter: 2.0 mm Filling volume: 5.2 ml

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

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

Article number



# DW 229 Connector with 3-way stop cock

31 8042-100

Filling volume: 0.5 ml

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



#### ES 224 Patient line Inner diameter: 1.5 mm

ES224/80, lenght: 80 cm, filling volume: 1.4 ml	31 8081-100
ES224/100, lenght: 100 cm, filling volume: 1.8 ml	31 8101-100
ES224/150, lenght: 150 cm, filling volume: 2.7 ml	31 8151-100
ES224/200, lenght: 200 cm, filling volume: 3.6 ml	31 8199-100
ES224/250, lenght: 250 cm, filling volume: 4.4 ml	31 8250-100
ES224/300, lenght: 300 cm, filling volume: 5.3 ml	31 8300-100

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



#### Patient line with valve

Inner diameter: 1.5 mm

Length: 150 cm, filling volume: 2.7 ml	31 8152-100
Length: 200 cm, filling volume: 3.5 ml	31 8198-100
Length: 250 cm, filling volume: 4.4 ml	31 8251-100
Length: 300 cm, filling volume: 5.3 ml	31 8301-100

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



#### Coiled line 150 cm

31 8213-000

Length: 150 cm Inner diameter: 1.6 mm Filling volume: 3.1 ml

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

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

Article number

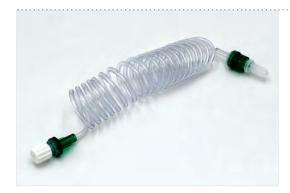


#### Coiled line with check valve

Inner diameter: 1.6 mm

31 8214-000 Length: 150 cm, filling volume: 3.1 ml 31 8181-000 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 31 8217-000

Inner diameter: 1.5 mm Length: 150 cm Filling volume: 2.6 ml

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



#### Coiled line 235 cm with Y-connector 31 8235-000 and valve

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



#### Coiled line with check valve

Inner diameter: 1.5 mm

Length: 250 cm, filling volume: 4.4 ml 31 8253-000 31 8303-000 Length: 300 cm, filling volume: 5.3 ml

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

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

Article number



# SD 225 suction tube with 3-way stopcock and spike

31 9080-100

Filling volume: 0.3 ml (3-way stopcock) + 6.3 ml (suction tube)

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





#### DW 226 3-way stopcock

31 9085-100

Filling volume: 0.1 ml

Packing unit: 50 pieces/carton

200 pieces/carton - 11,200 pieces/pallet



#### SP 227 vented spike, luer lock

31 9095-100

Filling volume: 0.4 ml

Packing unit: 50 pieces/carton

200 pieces/carton - 11,200 pieces/pallet



#### Minispike, green

31 9099-100

Filling volume: 0.2 ml

Packing unit: 50 pieces/carton

200 pieces/carton - 11,200 pieces/pallet



# Accutron HP-D: The precise multi-talent for angiography



# 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

#### Injection parameters

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

Subject to technical alterations

# Accessories and Options



Accutron HP-D roller version
Article number HP833



Touch screen remote control

Article number FB834



Double bottle holder
Article number 601001



Hand switch
Article number 600679

Article name	Description	Article number
Interface Canon	Interface Accutron HP-D for Canon Scanner	IF859-C
Interface GE	Interface Accutron HP-D for GE Scanner	IF859-G
Interface Philips	Interface Accutron HP-D for Philips Scanner	IF859-P
Interface Shimadzu	Interface Accutron HP-D for Shimadzu Scanner	IF-859-S
Interface Siemens	Interface Accutron HP-D for Siemens Scanner	IF859
Interface Siemens Cios Alpha	Interface Accutron HP-D for Siemens Cios Alpha Scanner	IF859-SC
Interface SW	Interface Accutron HP-D zum Wechseln zwischen verschiedenen Scann	ern IF859-SW
Interface Ziehm	Interface Accutron HP-D für Ziehm Scanner	IF859-Z
DVI interface	DVI interface for Siemens and Philips angiography devices to show the injector's screen display on the monitor of the angio device	490150
Power supply unit	additional power supply unit for Accutron HP-D	NT1001
Remote control	Touch screen remote control 10.4", wireless, incl. power supply unit	FB834
Power supply unit for remote control	Power supply unit MPP30 24 V/30 W for touch screen remote control	400424
Double charger	Double charger HP-D	LG1002
Hand switch	Hand switch HP-D	600679
Pressure jacket	Pressure jacket HP ELS 200	640130B
Double bottle holder	Double bottle holder for Accutron HP-D	601001
Bottle holder	Bottle holder with cup holder and cup	600351
Cup	Cup 100 ml	600174
Antenna 2.4 GHz	Antenna 2.4 GHz	400020

# Accutron HP-D The precise multi-talent for angiography

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.



# Accutron HP: The mobile all-rounder



# 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**

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

#### Subject to technical alterations



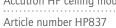






# Accessories and Options







Accutron HP table mount
Article number HP890



Infusion stand
Article number 490201



Touch screen remote control

Article number FB838



Hand switch for HP
Article number 601068

Article name	Description Article	number
Accutron HP table mount	Table version of Accutron HP	HP890
Accutron HP ceiling mount	Ceiling version of Accutron HP	HP837
Ceiling suspension	Ceiling suspension Accutron HP	530166
Power supply unit	additional power supply unit for Accutron HP	NT1000
Power supply unit for ceiling mount version	power supply unit for Accutron HP ceiling mount version	610007
Interface Canon	Interface for Canon Scanner	IF839-C
Interface GE	Interface for GE Scanner	IF839-G
Interface Philips	Interface for Philips Scanner	IF839-P
Interface Shimadzu	Interface for Shimadzu Brantist Safire VC17 Scanner	IF-839-S
Interface Siemens	Interface for Siemens Scanner	IF839
Interface Siemens Cios Alpha	Interface for Siemens Cios Alpha Scanner	IF839-SC
Interface Ziehm	Interface for Ziehm Vision	IF839-Z
Remote control	Touch screen remote control, wireless	FB838
Power supply unit for remote control	Power supply unit MPP30 24V / 30 W for touch screen remote control	400424
Charger	Charger Accutron HP	LG1002
Hand switch	Hand switch for Accutron HP	601068
Pressure jacket	Pressure jacket HP ELS 200, integrated into adapter ring	640130B
Bottle holder	Bottle holder with cupholder and cup	600351
Cup	Cup 100 ml	600174
Infusion stand	Infusion stand for Accutron HP836 with cupholder and cup	490200
Infusion stand	Infusion stand for Accutron HP837 with cupholder and cup	490200

# **Accutron HP**The mobile all-rounder

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 and Computed 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.

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

Article number



# ELS 200 ml (Easy Loading Syringe) with filling tube

31 6025-000

Residual volume: 1.5 ml | At 83 bar only usable with pressure sleeve!

ELS 200 ml (S) (Easy Loading Syringe) 31 6026-000

Residual volume: 1.5 ml | At 83 bar only usable with pressure sleeve!

Packing unit: 50 pieces/carton - 1,500 pieces/pallet



#### HSD 525 suction tube

31 5080-000

Length: 100 cm Inner diameter: 2.7 mm

Filling volume: 0.3 ml 3-way stop cock,

6.0 ml tube + spike

Packing unit: 25 pieces/carton

just for Accutron HP



#### HSD 527 suction tube with valve

31 5082-000

Length: 100 cm Inner diameter: 2.7 mm Filling volume: 0.2 ml valve, 16 ml tube with drip chamber

Packing unit: 50 pieces/carton

just for Accutron HP



# HSD 527 suction tube with valve and inline drip chamber

31 5083-000

(for Scanbag® CM-supply bag)

Length: 100 cm Inner diameter: 2.7 mm

Filling volume: 0.2 ml valve, 16 ml patient line with drip chamber

Packing unit: 50 pieces/carton

just for Accutron HP



#### HDW 526 high-pressure 3-way stop cock 31 5085-100

Filling volume: 0.3 ml

Packing unit: 50 pieces/carton 200 pieces/carton

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

Article number



#### HS 224 RA patient line

Inner diameter: 1.8 mm, Rotating Adapter, Braided PU tube

Lenght: 100 cm, filling volume: 2.5 ml 31 5100-000 Lenght: 120 cm, filling volume: 3.1 ml 31 5126-000

Packing unit: 50 pieces/carton



#### HS 224 RA patient line

Inner diameter: 1.8 mm, Rotating Adapter, Braided PU tube

31 5136-000 Lenght: 150 cm, filling volume: 3.9 ml 31 5135-000 Lenght: 180 cm, filling volume: 4.6 ml

Packing unit: 25 pieces/carton



#### HS 224/180 RA patient line with valve 31 5124-000

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



#### HS 224 patient line

Inner diameter: 1.8 mm **Braided PU tube** 

31 5125-000 Lenght: 120 cm, filling volume: 3.1 ml Packing unit: 50 pieces/carton

31 5134-000 Lenght: 180 cm, filling volume: 4.6 ml

Packing unit: 25 pieces/carton



Inner diameter: 1.5 mm, PCV-tube

31 5129-000 Length: 120 cm, Filling volume: 3.8 ml 31 5132-000 Length: 180 cm, Filling volume: 5.7 ml

Packing unit: 50 pieces/carton



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

Article number



#### HP RA patient line PVC-flex

Inner diameter: 1.5 mm Rotating Adapter

Length: 120 cm, Filling volume: 2.18 ml 31 5130-000

Packing unit: 50 pieces/carton

Length: 150 cm, Filling volume: 2.24 ml 31 5138-000

Packing unit: 25 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 31 5137-000 Length: 150 cm, filling volume: 2.7 ml 31 5121-000

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



31 5140-000



#### Accutron HP-D tube system

31 7183-000

31 7184-000

Pressure side	Length	Filling volume
CM-Side	16 cm	0.7 ml
NaCl-Side	16 cm	0.7 ml
Suction Side	Length	Filling volume
CM-Side, green	100 cm	16 ml incl. drip chamber
NaCl-Side, white	100 cm	16 ml incl. drip chamber
2 x drip chamber		each one 10 ml
D 1: : 25 :	, .	Accutron HP-D

Packing unit: 25 pieces/carton



#### ScanBag® HP-D tube system

(for Scanbag® CM-supply bag)

` 3	, , ,	
Pressure side	Length	Filling volume
CM-Side	16 cm	0.7 ml
NaCl-Side	16 cm	0.7 ml
Suction side	Length	Filling volume
CM-Side, green	100 cm	16 ml incl. drip chamber
NaCl-Side, white	100 cm	16 ml incl. drip chamber just for
2 x drip chamber		each one 10 ml Accutron HP-D

Packing unit: 25 pieces/carton

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



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

31 7187-000

Article number

Pressure side Length Filling volume

CM-Side 18 cm 0.46 ml

NaCl-Side 18 cm 0.46 ml

Shared line 200 cm 3.5 ml

Packing unit: 25 pieces/carton

just for Accutron HP-D



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

31 7188-000

Pressure side Length Filling volume
CM-Side 195 cm 4.85 ml
NaCl-Side 195 cm 4.85 ml
Shared line 15 cm 0.26 ml

Packing unit: 25 pieces/carton

just for Accutron HP-D



#### SP 227 vented spike, luer lock

31 9095-100

Filling volume: 0.4 ml

Packing unit: 50 pieces/carton

200 pieces/carton - 11,200 pieces/pallet



#### Minispike, green

31 9099-100

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

Art. no. A	rticle name	Pressure line	Suction line	drip chamber
31 5100-000	HS 224/100 RA Patient line	TPU braided	Χ	Χ
31 5121-000	HP 150 RA Patient line with valve, PVC-flex	PVC tube	Χ	X
31 5124-000	HS 224/180 RA Patient line with valve	TPU braided	Χ	Χ
31 5125-000	HS 224/120 Patient line	TPU braided	Χ	Χ
31 5126-000	HS 224/120 RA Patient line	TPU braided	Χ	Χ
31 5132-000	HP 180 Patient line	PVC tube	Χ	Χ
31 5134-000	HS 224/180 Patient line	TPU braided	Χ	Χ
31 5135-000	HS 224/180 RA Patient line	TPU braided	Х	Χ
31 5136-000	HS 224/150 RA Patient line	TPU braided	Χ	Χ
31 5137-000	HP 120 RA Patient line with valve, PVC-flex	PVC tube	Χ	Χ
31 5138-000	HP 150 RA Patient line, PVC-flex	PVC tube	Χ	Χ
31 5139-000	HP 110 RA Patient line, PVC-flex	PVC tube	Χ	Χ
31 5140-000	HP 110 RA Patient line with check valve, PVC-flex	PVC tube	Χ	Χ

Art. no.	Article name	Pressure line	Suction line	drip chamber
31 5080-000	O HSD 525 suction tube	X	PVC tube, plasticizer TOTM	Х
31 5082-000	O HSD 527 suction tube with valve	X	PVC tube, plasticizer TOTM	NONDOP
31 7183-000	Accutron HP-D tube system	TPU braided	PVC tube, plasticizer TOTM	NONDOP
31 7184-000	) ScanBag <sup>®</sup> HP-D tube system	TPU braided	PVC tube, plasticizer TOTM	NONDOP
31 7187-000	Accutron HP-D Y-connector	TPU braided PVC tube, plasticizer TOTM	Χ	Х
31 7188-100	Accutron HP-D Y-connector long supply	TPU braided PVC tube, plasticizer TOTM	Χ	Χ



# Efficient 8h-use



Economically efficient by time and cost saving! Environmentally compatible!

# Variabel & flexible

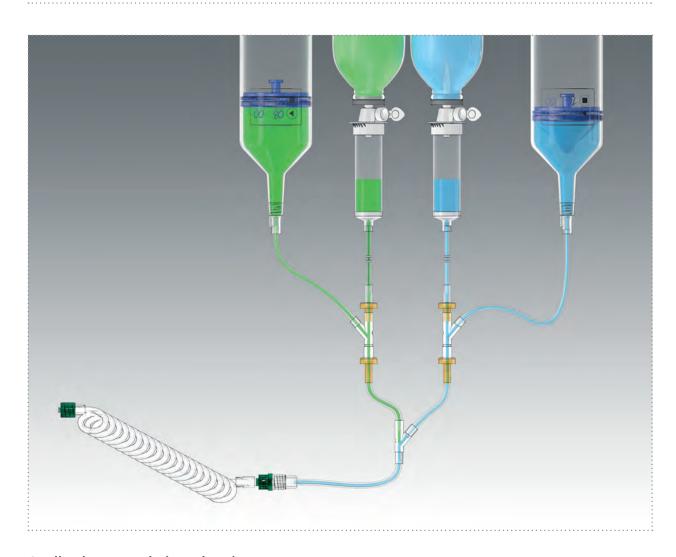


8h-syringe, 8h-tube system and patient line build a system! Individual system solution!

# Save handling



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



#### 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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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

Article number



#### ELS 200 ml Syringe MU

31 4626-100

Filling volume: 200 ml Residual volume: 1.5 ml

Packing unit: 50 pieces/carton incl. sticker to mark the start- and endtime of the 8 hours – 1,500 pieces/pallet

#### 8h-Tube system

Article number



#### EK 223 tube system with drip chamber 31 4081-100

	ID	Length	Filling volume
Pressure side Suction side			0.4 ml 15.8 ml incl. drip chamber

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

Single and double head injectors for CT and MRI (21 bar/305 psi)

Article number



# MRS 222 XS MR-tube system with 31 4099-100 1 inline drip chamber (for Scanbag® CM-supply bag)

Pressure side, ID 2 mm	Length	Filling volume
CM-Side NaCl-Side	26 cm 46 cm	0.7 ml 1.7 ml
Suction side, ID 2.7 mm	Length	Filling volume
Suction side, ID 2.7 mm	Length 100 cm	Filling volume 15.8 ml incl. drip chamber

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



#### MRS 222 MR-tube system

31 4100-100

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side	26 cm	0.7 ml
NaCl-Side	46 cm	1.7 ml
Suction side, ID 2.7 mm	Length	Filling volume
CM-Side, green	100 cm	15.8 ml incl. drip chamber
NaCl-Side, white	100 cm	15.8 ml incl. drip chamber
2 x drip chamber		each 10 ml

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



# Double head-tube system with 1 inline 31 4108-100 drip chamber and valve (for Scanbag® CM-supply bag)

Pressure side, ID 2.0 / 1.5 n	nm Length	Filling volume
CM-Side	146 cm	4.1 ml
NaCl-Side	186 cm	4.8 ml
Suction side, ID 2.7 mm	Length	Filling volume
CM-Side, green	100 cm	15.8 ml incl. drip chamber
NaCl-Side, white	100 cm	15.8 ml incl. drip chamber
2 x drip chamber		each 10 ml

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



# MRS 222 XS tube system with 31 4119-100 exchangeable spikes and additional valve

Pressure side, ID 2.0 mm	Length	Filling volume
CM-Side NaCl-Side	176 cm 176 cm	5.7 ml 5.7 ml
Suction side, ID 2.7 mm	Length	Filling volume
CM-Side, green NaCl-Side, white 2 x drip chamber	100 cm 100 cm	15.8 ml incl. drip chamber 15.8 ml incl. drip chamber each 10 ml

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

Single and double head injectors for CT and MRI (21 bar/305 psi)

#### Patient lines to use with 8h-Tube systems

Article number



# ES 224/25 patient line with valve

31 8020-100

Length: 25 cm Inner diameter: 1.5 mm Filling volume: 0.4 ml

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



# Patient line 150 cm with terminal check valves

31 8026-100

Length: 150 cm Inner diameter: 2.0 mm Filling volume: 4.8 ml

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



#### Patient line 150 cm with two check valves 31 8036-100

Length: 150 cm + 10 cm Inner diameter: 2.0 mm Filling volume: 5.2 ml

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



#### Patient line with valve

Inner diameter: 1.5 mm

 Length: 150 cm, filling volume: 2.6 ml
 31 8152-100

 Length: 200 cm, filling volume: 3.5 ml
 31 8198-100

 Length: 250 cm, filling volume: 4.4 ml
 31 8251-100

 Length: 300 cm, filling volume: 5.3 ml
 31 8301-100

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

Single and double head injectors for CT and MRI (21 bar/305 psi)

Article number



#### Coiled line with valve

Inner diameter: 1.6 mm

Length: 150 cm, filling volume: 3.1 ml 31 8214-000 Length: 180 cm, filling volume: 3.7 ml 31 8181-000

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



#### Coiled line 150 cm with 2 check valves 31 8217-000

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

31 4095-100

Filling volume: 0.4 ml

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

Single and double head injectors for CT and MRI (21 bar/305 psi)



### Kompatibilitätserklärung **Declaration of Compatibility**

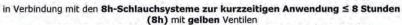


tube systems

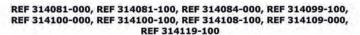
Hiermit erklären wir, dass die folgenden von der MEDTRON AG als Hersteller im Sinne der Richtlinie 93/42 EWG hergestellten und vertriebenen

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-Syringe for short-term use ≤ 8 hours (8h) REF 314626-100 "ELS 200ml Syringe MU"

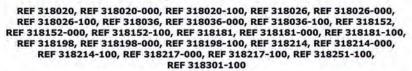


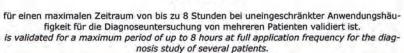
in conjunction with the 8h-tubesystems for short-term use ≤ 8 hours (8h) with yellow valves





and the patient lines for single use (single-use device) with green valves





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

The hygienic safety from the syringe, tubesystem 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 Knecht Non-Active Medical Devices Management

Kennnummer der CE-Kennzeichnung / CE identification number: 0482 MEDCERT GmbH, Pilatuspool 2, 20355 Hamburg, Germany

FB 07.19.61 Revision 00



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



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



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



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



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



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



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



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



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



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



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



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



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



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

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

#### Overview



Art. no. 31 5136-000 HS 224/150 RA patient line



Art.-Nr. 31 7080-100 ES 223 tube system with spike



Art. no. 31 5137-000 HP 120 RA patient line with check valve, PVC-flex



Art.-Nr. 31 7081-100 EK 223 tube system with drip chamber



Art.-Nr. 31 5138-000 HP 150 RA patient line PVC-flex



Art.-Nr. 31 7083-100 Tube system with suction line and drip chamber



Art.-Nr. 31 5140-000 HP 110 RA patient line with check valve, PVC



Art.-Nr. 31 7099-100 MRS 222 MR-tube system with 1 inline drip chamber



Art.-Nr. 31 6025-000 ELS 200 ml (Easy Loading Syringe) with filling tube



Art.-Nr. 31 7100-100 MRS 222 MR-tube system



Art.-Nr. 31 6026-000 ELS 200 ml (S) (Easy Loading Syringe)



Art.-Nr. 31 7101-100 Double head-tube system



Art.-Nr. 31 6065-000 ELS 65 ml (Easy Loading Syringe)



Art.-Nr. 31 7104-000 MR-ELS tube system with 2 valves, green

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



Art.-Nr. 31 7109-100

Double head-tube system with 1 inline drip chamber



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



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



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



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



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



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



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



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



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



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



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



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



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

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

#### Overview



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



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



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



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



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



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



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



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



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



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



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



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



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



Art.-Nr. 31 8235-000 Coiled line 235cm 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)



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



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



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



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



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



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



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



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



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



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

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

#### 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 4100-100 MRS 222 MR-tube system



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



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



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

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 8036-100 Patient line 150 cm with 2 check valves



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

#### **SERVICE**

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



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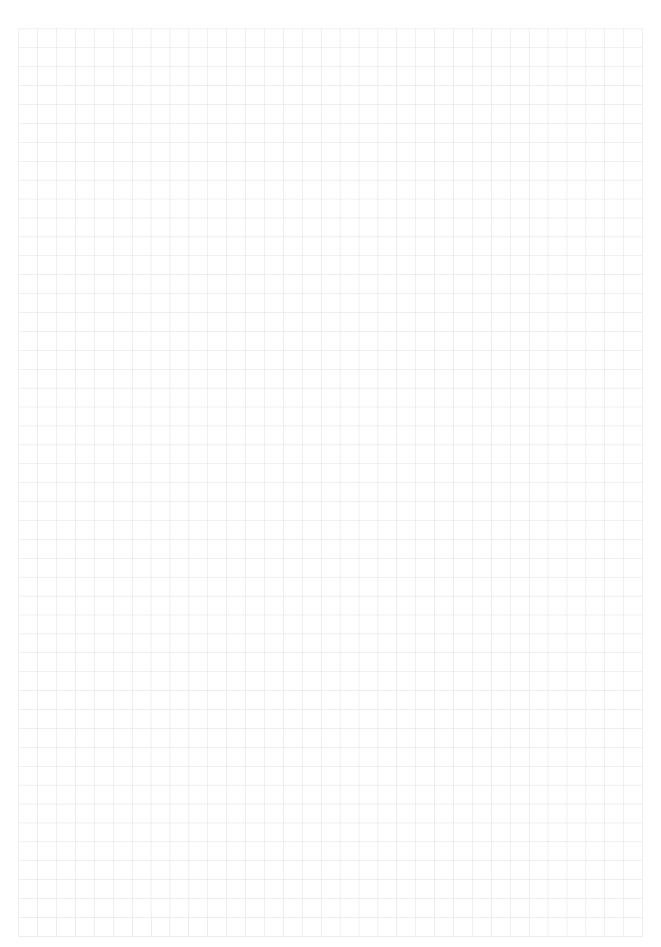
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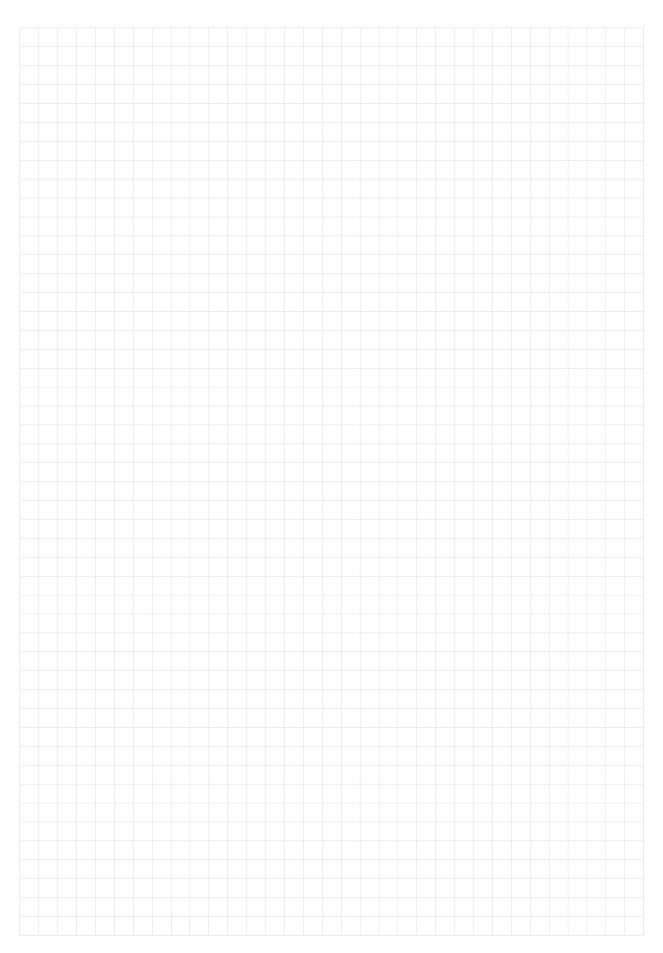
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## NOTES

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## NOTES

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