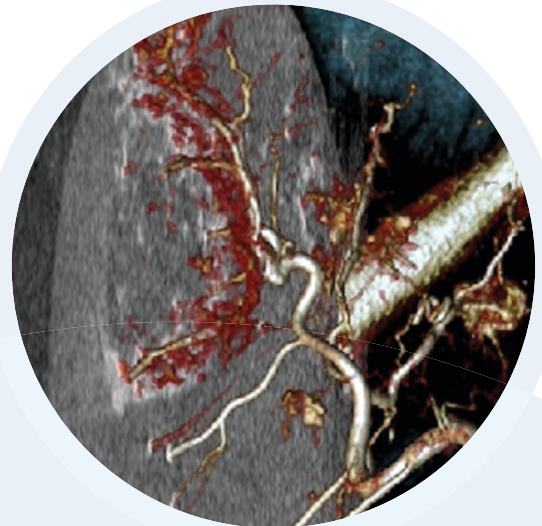
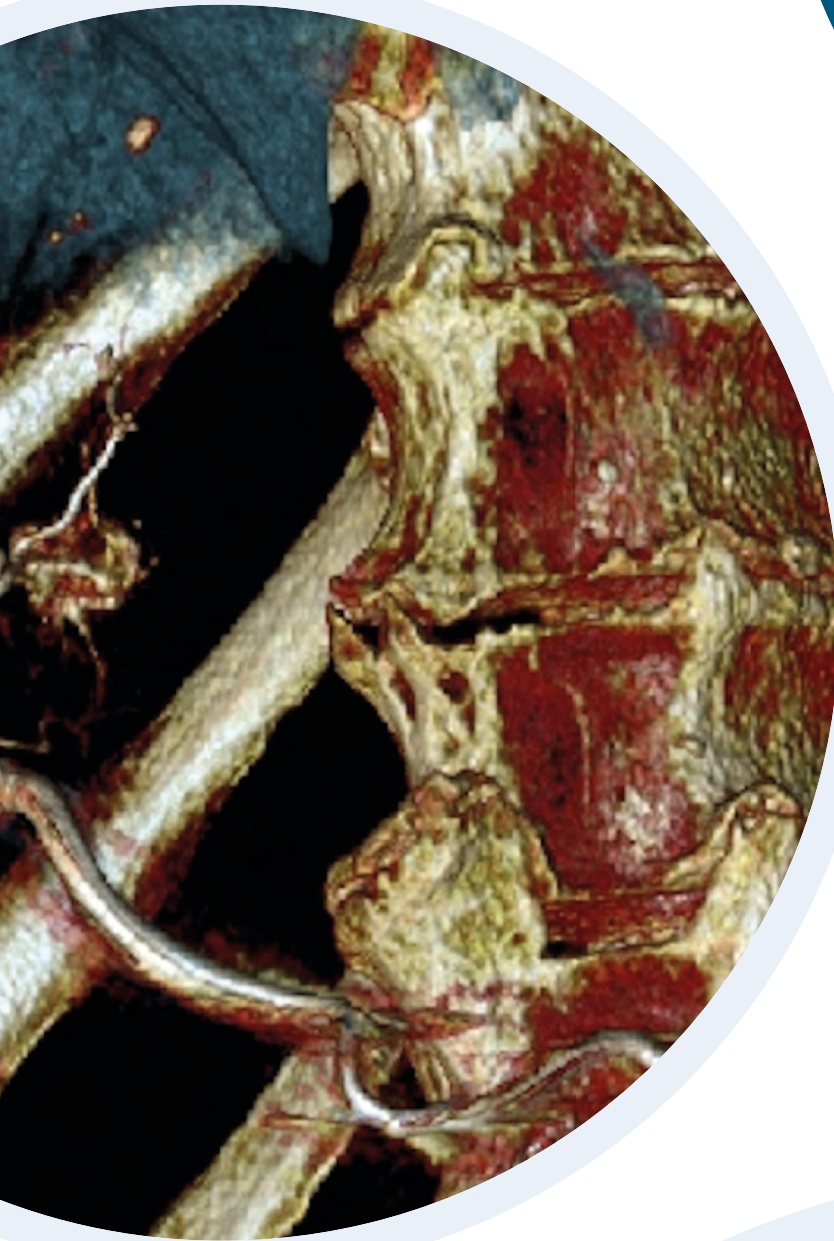


MED(TRON[®] AG



Essential for contrast

Accutron[®] Injectors for Angiography

Accutron® HP-D





Clinical Gains

- Hygiene: All Accutron® injectors are designed to be easy to clean, as they have no hidden sources of contamination such as inaccessible interstitial or internal spaces. This minimizes the risk of contamination.
- Precision: Adjusting the contrast agent concentration using saline solution minimizes contrast agent-induced hardening artifacts. In addition, the contrast agent dose for the patient is reduced without compromising image quality.
- Versatility: The Accutron® HP-D is designed for use in In addition, the contrast agent dose for the patient is reduced without compromising image quality.



Operational Gains

- Ergonomics: Thanks to its 180° swivel display, the Accutron® HP-D can be conveniently operated from both sides of the operating table.
- Connectivity: The Accutron® HP-D is synchronized with the angiography system via the interface.
- Mobility: The battery-powered Accutron® HP-D can be easily moved around the examination room without any annoying cables.



Financial Gains

- May reduce the amount of contrast required per patient; resulting in less operating expenses.
- Can be utilized in both angiography and computed tomography modes; eliminating the need to purchase an additional injector for CT.

Accutron® HP-D

Article number HP833

The Accutron®HP-D is a double syringe contrast delivery system designed for precise injection of contrast media and saline in angiography procedures at high pressures.

Particularly suitable for 3D angiography and Cone Beam CT due in part to its multiple phase capability and contrast concentration adjustment by simultaneous saline injection and its 180° swivel-mounted monitor which allows the user to operate it from both sides of the OR table. It can also synchronize wirelessly with the angiography systems using a specialized OEM interface.

Accutron®HP-D can also be operated as a single head injector, making it adaptable to all types of imaging protocols, for both diagnostic and interventional procedures. In addition to working with angiography procedures in angio mode, the Accutron®HP-D offers a standard pressure CT mode for intravenous use in hybrid CT procedures in the angiography suite.

Mechanical Design

Swivelling injection unit on
a mobile column stand

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

Filling of Injection Syringes

Automatic filling via menu with volume
input or manual filling with variable speed

Use of optimized high-pressure tube systems
with check valves

Automatic volume adjustment

Keep Vein Open function to keep
patency of IV access

Saline flush function

Pressure jacket detection



Disposables

Recommendations

Article number

2 x ELS 200 Pro QFT Syringe	31 6084-100
1x HSD 525 Suction Tube 100	31 5081-100
1x Accutron®HP-D - Y-Connector 83 bar with 2 CV and RA - long branches	31 7188-000

Accutron®HP-D
Article number HP833

Injection volume:

max. 200 ml,
each piston
1 - 200 ml programmable
in 0.1 ml increments

**Injection, phase,
x-ray and scan delay:**

0 - 255 s

Angio-Mode**Injection pressure:**

max. 83 bar (1200 psi),
5 - 83 bar (75 - 1200 psi),
programmable in
1 bar increments

Flow rate:

0.1 - 30 ml/s,
programmable in
0.1 ml/s increments

CT-Mode**Injection pressure:**

max. 21 bar (305 psi),
5 - 21 bar (75 - 305 psi),
programmable in
1 bar increments

Flow rate:

0.1 - 10 ml/s,
programmable in
0.1 ml/s increments

Injection profiles:

120 profiles,
each mode 60 profiles,
can be edited and stored
by the user

Number of phases:

1 to 3 phases

Filling speed:

1 - 4 ml/s,
programmable in
1 ml/s increments

Keep Vein Open:

1 - 4 ml
every 4 minutes

Rise time:

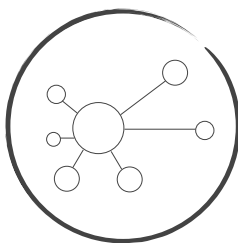
0.1 - 10 s,
programmable in
0.1 s increments

Subject to technical alterations

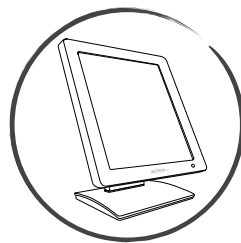
Specifications

Highlights

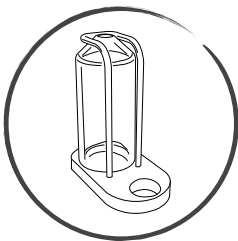
Additional highlights and options



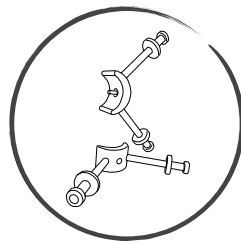
Select scanner
interfaces available



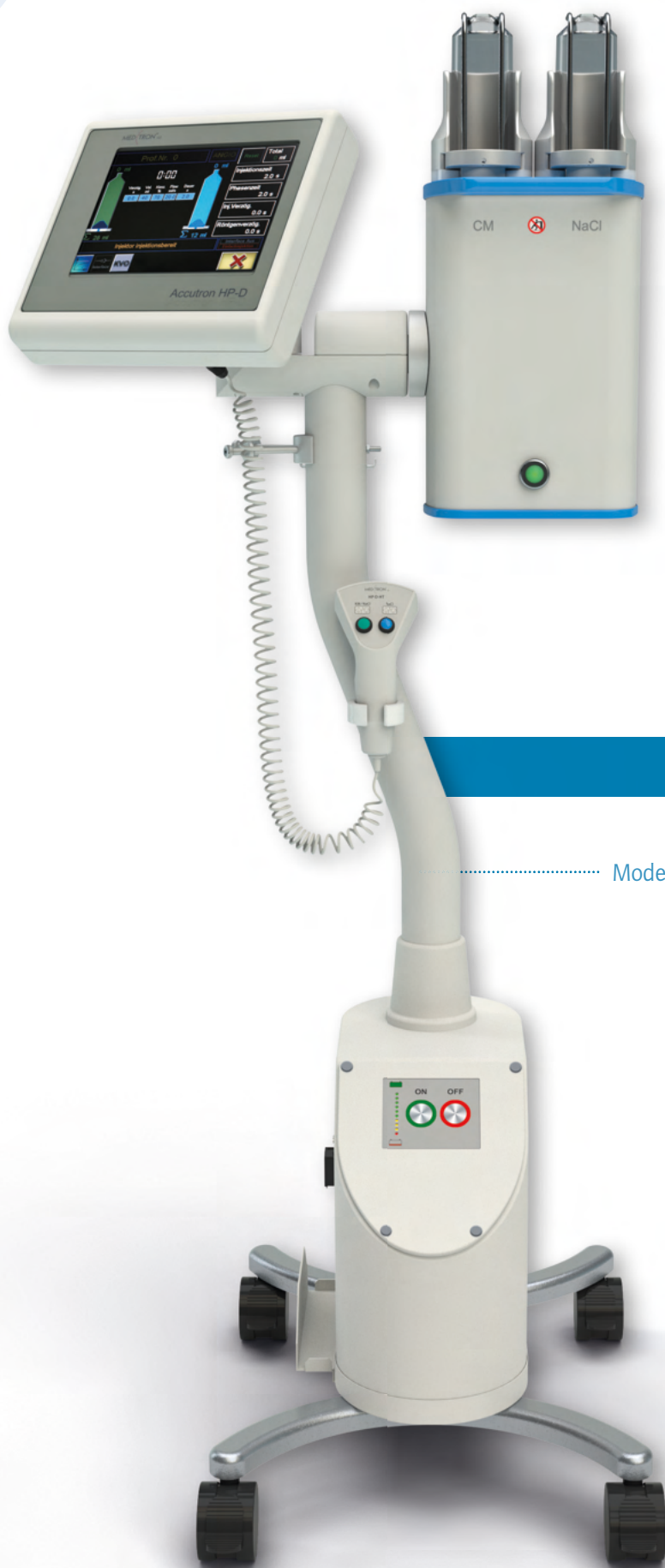
Touch screen remote
control, wireless



Pressure jacket



Double bottle holder



Model HP833

Clinical Application

The double head Accutron®HP-D injector is the perfect companion for your complex imaging needs.

- **Suitable for the roadmap mode and multiple injections**

Single injections for roadmapping are possible with the Accutron®HP-D in single mode. Multiple injections for navigation control are also possible in multiple mode.

- **Developed for C-arm cone beam CT sequences**

The double head injector allows contrast medium injections and irrigation with saline solution. The contrast agent concentration can be adjusted by simultaneous injections. The injector supports multiphase X-ray delays and has an auto hold function. Multiphase injection profiles can help to reduce artifacts.

- **Ready for improved venous examinations**

With the Accutron®HP-D you can combine injection phases of contrast medium and saline solution. It helps you reduce the total dose of contrast medium without compromising image quality.

- **Optimized for flat panel CT imaging**

It has a special CT mode for intravenous injections. Multi-phase profiles are possible with automatic adjustment of the maximum pressure.

- **Can be integrated into your scanning environment**

The injector can be integrated with many common angiography systems via a wireless interface. This reduces your workload and improves the throughput time per patient. It also has a counter for the contrast agent dose.



The single head Accutron® HP injector is ideally suited for interdisciplinary departments.

- **Can be used both for angiography and CT**

The Accutron® HP is an injector offering two imaging modes: an angiography mode for transcatheter injections and a CT mode for intravenous injections.

- **Roadmap mode for multiple injections**

Control your injections using the hand switch or the foot pedal when used with an angio interface. The Accutron® HP offers a single injection mode for DSA roadmapping as well as a multi-mode for multiple injections with fluoro.

Accutron® HP





Clinical Gains

- Hygiene: All Accutron® injectors are designed to be easy to clean, as they have no hidden sources of contamination such as inaccessible interstitial or internal spaces. This minimizes the risk of contamination.
- Versatility: The Accutron® HP is designed for use in diagnostic and interventional examinations in both angiography and computed tomography.



Operational Gains

- Control: The injection parameters are shown on the display, allowing reliable monitoring of the injection at any point during the examination.
- Connectivity: The Accutron® HP is synchronized with the angiography system via the interface.
- Mobility: The battery-powered Accutron® HP can be easily moved around the examination room without any annoying cables.



Financial Gains

- The Accutron® HP can be used for all diagnostic and interventional examinations in angiography and computed tomography.
- Our customized solutions for consumables keep operating costs at a manageable level.

Accutron® HP

Model HP836

The Accutron®HP is a contrast delivery system designed for precise injection of contrast media in angiography procedures at high pressure. Accutron®HP is an allrounder multi-talent because in addition to working with angiography procedures in angio mode, the Accutron®HP offers a standard pressure CT mode for intravenous use in hybrid CT procedures in the angiography suite.

You can confidently be assured that Accutron®HP delivers the injection parameters your procedures require because it features a 200 ml injection volume capacity, an automatic detection of the pressure jacket and flow rate monitoring software that provides real-time micro adjustments for maintaining an optimal flow rate.

Mechanical Design

Swivelling injection unit on
a mobile column stand

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

Filling of Injection Syringes

Automatic filling via menu with volume
input or manual filling with variable speed

Use of optimized high-pressure tube systems
with check valves



Accutron®HP
Article number HP836

Disposables

Recommendations

Article number

1 x ELS 200 Pro Syringe	31 6083-100
1x SP 227 Vented Spike,Luer Lock	31 9095-100
1x HS 224 RA Patient Line	31 5136-000

Injection volume:

max. 200 ml,
1 - 200 ml programmable
in 0.1 ml increments

**Injection, phase,
x-ray and scan delay:**

0 - 255 s injection and
phase delay,
0 - 99 s x-ray and
scan delay

CT-Mode**Injection pressure:**

max. 21 bar (305 psi),
5 - 21 bar (73 - 305 psi),
programmable in
1 bar increments

Flow rate:

0.1 - 10 ml/s,
programmable in
0.1 ml/s increments

Angio-Mode**Injection pressure:**

max. 83 bar (1200 psi),
5 - 83 bar (73 - 1200 psi),
programmable in
1 bar increments

Flow rate:

0.1 - 30 ml/s,
programmable in
0.1 ml/s increments

Injection profiles:

120 profiles,
each mode 60 profiles,
can be edited and stored
by the user

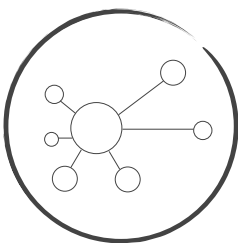
Phases:

1 to 3 phases

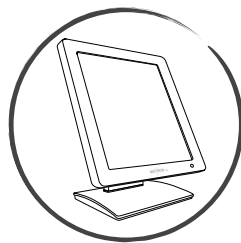
Subject to technical alterations

Specifications

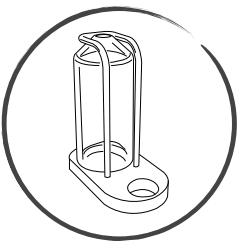
Highlights



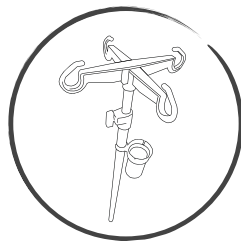
Numerous C-arm
interfaces available



Touch screen remote
control, wireless



Pressure jacket



Infusion stand



Model HP836

Model HP890

Model HP832



Variants

The Accutron®HP smartly adapts to fit your differing requirements. Regardless if you need a mobile imaging feature to be added to a surgical environment, the battery powered version can offer ideal wireless interoperability with mobile C-arms. We also offer for dedicated fixed angiography units, an Accutron®HP table and a powered version which provides for stable integration with the angiography system.



Accutron®HP Power Supply
Model HP832 – 24 kg

Accutron® HP Table Mount
Model HP890
13,5 kg



Matching table variations from the following manufacturers are also available:

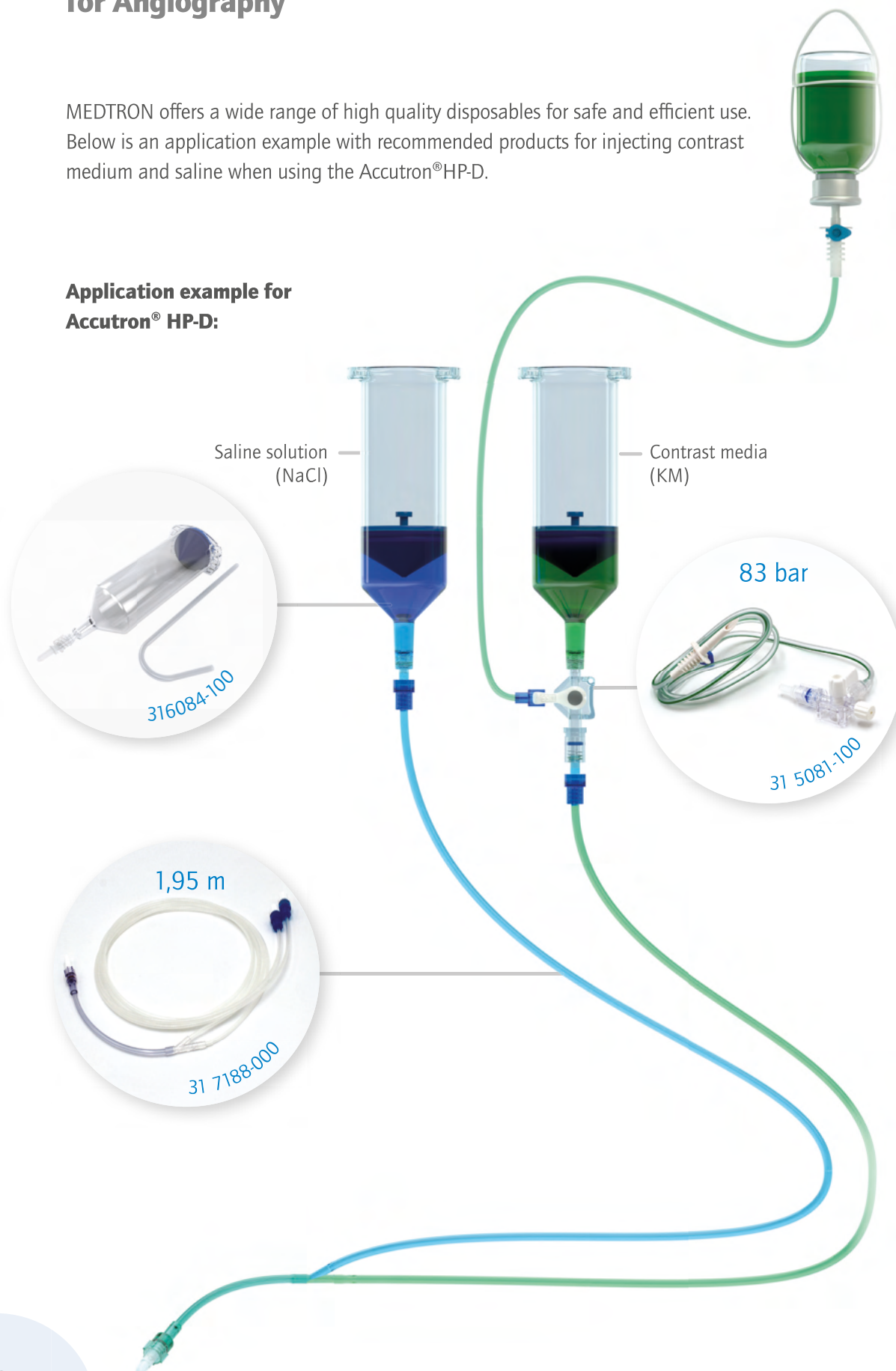
Accutron® HP Table Mounted Version Siemens	Single head injector for Siemens-compatible tables	HP890
Accutron® HP Table Mounted Version Philips	Single head injector for Philips-compatible tables	HP890-1
Accutron® HP Table Mounted Version GE	Single head injector for GE-compatible tables	HP890-2
Accutron® HP Table Mounted Version Ziehm	Single head injector for Ziehm-compatible tables	HP890

Consumables

for Angiography

MEDTRON offers a wide range of high quality disposables for safe and efficient use. Below is an application example with recommended products for injecting contrast medium and saline when using the Accutron® HP-D.

Application example for Accutron® HP-D:





ELC 200 Pro QFT Syringe

31 6084-100

Residual volume: 3.0 ml

At 83 bar only usable with pressure sleeve.

ELC 200 Pro Syringe

31 6083-100

Residual volume: 3.0 ml

At 83 bar only usable with pressure sleeve!

Packing unit: 50 pieces/carton – 1,200 pieces/pallet



Accutron®HP-D - Y-Connector 83 bar with 2 CV and RA - long branches

31 7188-000

Pressure side	Length	Filling volume	ID
CM-Side	180 cm	4.6 ml	1.8 mm
NaCl-Side	180 cm	4.6 ml	1.8 mm
Shared line	15 cm	0.3 ml	1.5 mm

Packing unit: 25 pieces/carton



SP 227 Vented Spike, Luer Lock

31 4095-100

Filling volume: 0.4 ml

Packing unit: 50 pieces/carton

200 pieces/carton – 11,200 pieces/pallet



HSD 525 Suction Tube 100

31 5081-100

Length filling tube: 100 cm

Inner diameter: 2.7 mm

Filling volume: Tube: 5.7 ml

Spike: 0.1 ml

Three-way stopcock: 0.3 ml

Packing unit: 50 pieces/carton



HS 224 RA Patient Line

31 5136-000

Inner diameter: 1.8 mm, rotating adapter

Length: 150 cm, filling volume: 3.8 ml

Packing unit: 25 pieces/carton

for Accutron®HP

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