



Features

Angiography devices provide useful additional functions. These additional functions often remain unused in clinical routine because the medical personnel do not have the expertise to use these functions correctly.

AmoVes 200 has been developed to demonstrate and provide training in the functions of angiography systems. It enables targeted training and further education of medical personnel in the use of angiography systems. Users can familiarize themselves with the technical possibilities of their system before examining and treating human patients.

The core component of **AmoVes 200** is the phantom body. This has a perfused vascular structure and is therefore suitable for dynamic contrasting with negative and positive contrast media. A bone structure (spine) can be used to perform registration techniques.

User

The **AmoVes 200** phantom system must exclusively be sold, distributed or provided to and used only by persons of legal age with professional technical or medical education. The user must have sufficient language skills to completely read and understand the original operating manual in English language before first assembling and operation.

Applications

- **Projectional radiography imaging techniques** of the vascular system using fluoroscopy (FL), digital radiography (DR), or digital subtraction angiography (DSA)
- **Three-dimensional imaging techniques** of the vascular system using rotational angiography (3D-DSA) and C-Arm CT (CACT)
- **Image-based navigation techniques** based on projectional imaging (road-map functions, DSA overlay techniques), and volume imaging (3D-DSA, CACT)
- **Image-based registration techniques**
- **Software-based assistance solutions** for procedural workflows (**workflow solutions**)
- **Software-based assistance solutions** for **needle placement**

Detailed product description

The pump supplied with the **AmoVes 200** phantom system pumps water from the circulation reservoir of the phantom system into the aorta of the phantom body. The vascular structure and the pump time volume have been dimensioned in such a way as to ensure that the liquid is distributed evenly to the aorta and its branches. The water flows out of the vascular branches through the drainage channels back into the aorta from where it passes back into the circulation reservoir. A contrast media injection system (CMI system) is integrated into the upper part of the aorta. The CMI system provides a simple way of perfusing the vascular tree with iodine-based contrast medium. If contrast medium is injected via the contrast medium injection tube (CMI tube), the contrast medium is distributed directly into and approximately homogeneously throughout the vascular system. It is therefore not necessary to insert a vessel catheter and this is not intended. In order to save using liquid iodine-based contrast medium, ambient air can also be used as a negative contrast medium.

A **stylized spine** is integrated into the phantom body, which provides contrast in fluoroscopy, computed tomography, and magnetic resonance imaging (T2 weighting). With this spine, it is possible to use registration techniques. For this purpose, DICOM datasets and DICOM series of different modalities are provided for the phantom system (Comprehenso Website).

The phantom body provides two predefined puncture channels for **navigation-based needle placement techniques**. They cannot be used to learn how to puncture tissue but can be used to demonstrate correct needle alignment in imaging and for learning routine application of software-based assistance solutions.

Scope of delivery

The scope of delivery of the **AmoVes 200** phantom system contains the following (one each):

Transportation case, phantom body, circulation reservoir, cleaning reservoir, short circulation tube, long circulation tube, pump tube, Contrast medium injection tube (CMI tube), shutoff valve, pump, device card.

For operation, a suited safety approved **single plug extension cable** is required (see AmoVes 200 Original Operating Manual), which is **not within the scope of delivery**.

Technical data of product variants

AmoVes 200 Phantom System (EU)	... (US)	... (AUS)	... (UK)
Material No.	CMP22001 CMP22011#	CMP22002 CMP22012#	CMP22003 CMP22013#	CMP22004 CMP22014#
Storage temperature	0 – 40°C (32 – 104°F)			
Relative humidity	10% to 95% below dew point			
Air pressure	700 hPa - 1060 hPa			
Dimensions of the package	467 x 400 x 205 mm (w x h x d)			
Dimensions of the product	455 x 365 x 190 mm (w x h x d)			
Gross weight	6.64kg	6.72kg	6.72kg	6.72kg
Net weight	6.01kg	6.08kg	6.09kg	6.09kg
Pump version for	European union	USA, Canada	Australia	United Kingdom
Power supply	230-240V, 50Hz	120V, 60Hz	220-240V, 50Hz	220-240V, 50Hz
Plug type	Type C (2 pins)	Type A (2 pins)	Type I (2 pins)	Type G (2 pins)
Power cord length	1.5 m	7.55ft	2.3 m	2.2 m
Power consumption	2.6W			

AmoVes 200PRO Variant for frequent/heavy use

Part numbers

AmoVes 200 Phantom System (EU)	... (US)	... (AUS)	... (UK)
Material No.	CMP22001 CMP22011#	CMP22002 CMP22012#	CMP22003 CMP22013#	CMP22004 CMP22014#
Transportation case	CMP2200-M40 / CMP2201-M39#			
Phantom body	CMP2200-K05 / CMP2201-K05#			
Circulation reservoir	CMP2200-K10			
Cleaning reservoir	CMP2200-K11			
Short circulation tube	CMP2200-K08			
Long circulation tube	CMP2200-K09			
Pump tube	CMP2200-K13			
CMI tube	CMP2200-K07			
Pump	CMP22001-K15	CMP22002-K15	CMP22003-K15	CMP22004-K15

AmoVes 200PRO Variant for frequent/heavy use

Product variants

Product Name	Comprehenso Material No.	GTIN
AmoVes 200 Phantom System (EU)	CMP22001	4270002301603
AmoVes 200 Phantom System (US)	CMP22002	4270002301610
AmoVes 200 Phantom System (AUS)	CMP22003	4270002301627
AmoVes 200 Phantom System (UK)	CMP22004	4270002301634
AmoVes 200PRO Phantom System (EU)	CMP22011	4270002301641
AmoVes 200PRO Phantom System (US)	CMP22012	4270002301658
AmoVes 200PRO Phantom System (AUS)	CMP22013	4270002301665
AmoVes 200PRO Phantom System (UK)	CMP22014	4270002301672

Accessories

Set of Consumables

For operation and care of the phantom system, the [Set of Consumables for AmoVes 200X Phantom System](#) is required. A starter set of consumables is supplied with the phantom system and available separately from your dealer.

Comprehenso material no.: CMP220101, GTIN 4270002301689

Manufacturer

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