Coronary Artery Phantoms with Stenosis and Plaque for Dynamic Cardio Simulator: Type AX
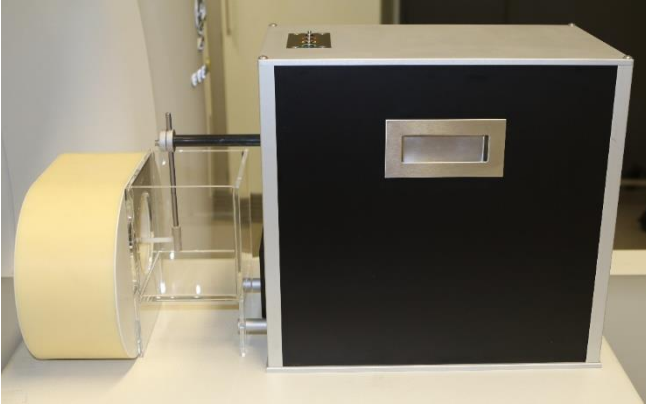
The Coronary Artery Stenosis Phantoms are designed to perform CT-measurements of contrast enhanced (iodine) coronary arteries with implemented plaque and stenosis targets. Different types of coronary arteries are available. It can be used with a static holder inside a water tank and a thorax phantom or with a motion simulator, respectively.
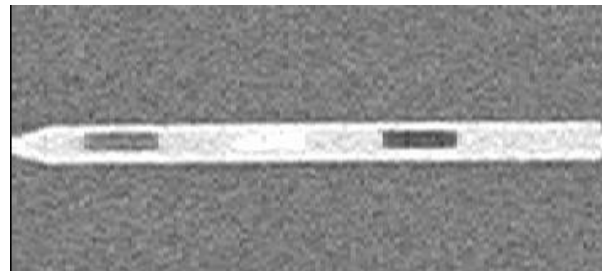

Sim4D-VL 3D-Motion Simulator with coronary artery phantom (left side: QRM-Thorax Phantom)

Static holder with coronary artery phantom in Water Tank (Holder: QRM-60109; Water Tank: QRM-10113)
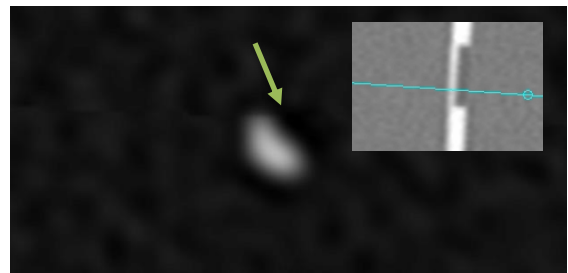

coronary artery phantom with three different partial stenosis

sagittal view: X-ray image of phantom with three different stenosis in iodinated blood and vessel wall


different types of plaque-, QA-phantoms and connectors for Sim4D-VL

axial view: 50% lipid plaque in iodinated blood

QRM GmbH / Baiersdorfer Str. 22
91096 Moehrendorf / Germany

www.3000buy.con 深圳市净康科技有限公司
联系人：王小姐 15813841944

Model AX - Set:

Six coronary artery stenosis phantoms with eccentric plaques (lumen narrowed by 17%, 33% and 50%): three with iodinated blood-equivalent lumen (approx. 300 HU/120 kV) and three with blood-equivalent lumen (approx. 45 HU/80-140 kV).

QRM coronary phantom AX - measures in mm
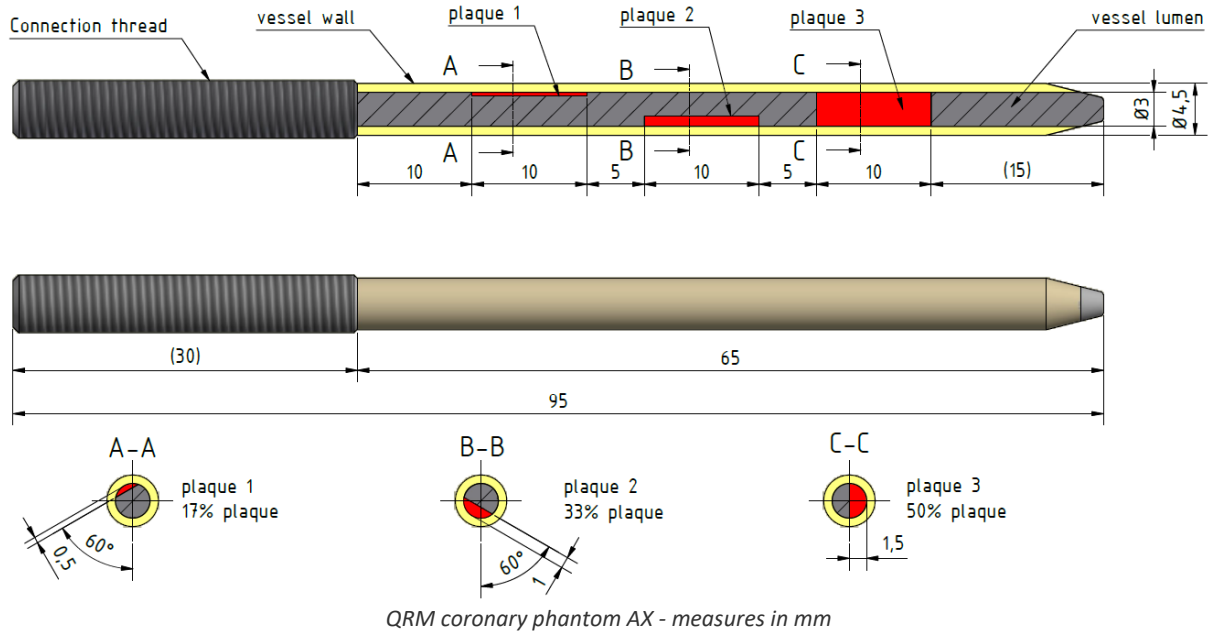
Plaque #	Plaque thickness	Plaque length	Lumen diameter	Stenosis (lumen reduction by diameter)	Stenosis (lumen reduction by area)
1 (A-A)	0.5 mm			**17 %**	11 %
2 (B-B)	1.0 mm	10 mm	3.0 mm	**33 %**	29 %
3 (C-C)	1.5 mm			**50 %**	50 %

Phantom #	Vessel lumen	Vessel wall[2]	Plaques
1	Blood + Iodine[1] (300 HU)	55 HU	CaHA[3]
2	Blood + Iodine[1] (300 HU)	55 HU	Lipid[1] (-25 HU)
3	Blood + Iodine[1] (300 HU)	55 HU	Fibro-fat[1] (100 HU)
4	Blood[2] (45 HU)	55 HU	CaHA[3]
5	Blood[2] (45 HU)	55 HU	Lipid[1] (-25 HU)
6	Blood[2] (45 HU)	55 HU	Fibro-fat[1] (100 HU)

[1] *given HU valid at 120 kV (accuracy ± 5 HU)*

[2] *given HU valid at 80 - 140 kV (accuracy ± 5 HU)*

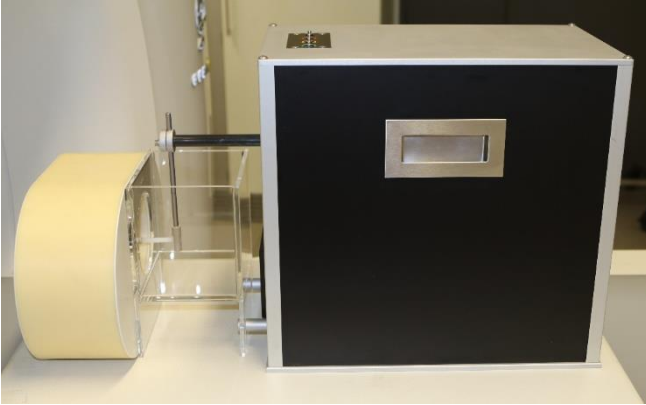[3] *water-equivalent material enriched with 370 mg CaHA/cm³*

All measurements are carried out on a Siemens CT-Scanner using a dedicated CT scan protocol. Cylindrical sample probes are measured using a state-of-the-art CT system with a dedicated CT scan protocol in a standard test environment (20 cm water-filled phantom at 20°C room temperature level). Please note that the actual HU-value depends on target size, scanner setup and X-ray spectrum and may vary on different CT-systems and setups.

Spectral-CT capable. Iodine and CaHA can be adjusted on customer's needs.

*A customer-owned **stent** can be attached (slide on) to the coronary artery phantoms.*

www.3000buy.con   深圳市净康科技有限公司
联系人：王小姐 15813841944

Coronary Artery Phantoms with Stenosis and Plaque for Dynamic Cardio Simulator: Type BX

The Coronary Artery Stenosis Phantoms are designed to perform CT-measurements of contrast enhanced (iodine) coronary arteries with implemented plaque and stenosis targets. Different types of coronary arteries are available. It can be used with a static holder inside a water tank and a thorax phantom or with a motion simulator, respectively.
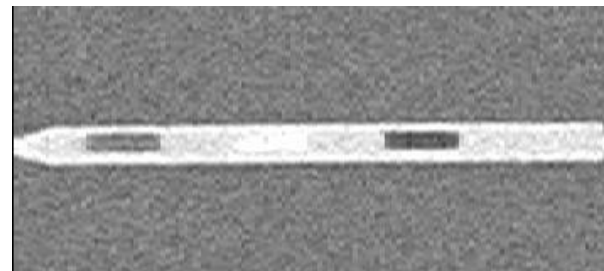

Sim4D-VL 3D-Motion Simulator with coronary artery phantom (left side: QRM-Thorax Phantom)

Static holder with coronary artery phantom in Water Tank (Holder: QRM-60109; Water Tank: QRM-10113)
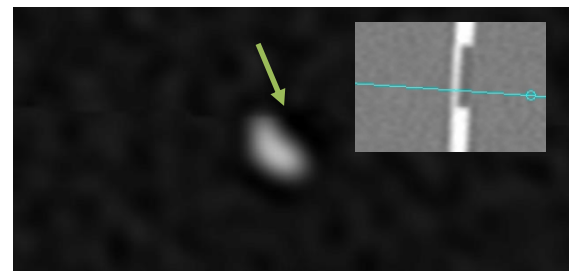

coronary artery phantom with three different partial stenosis

sagittal view: X-ray image of phantom with three different stenosis in iodinated blood and vessel wall
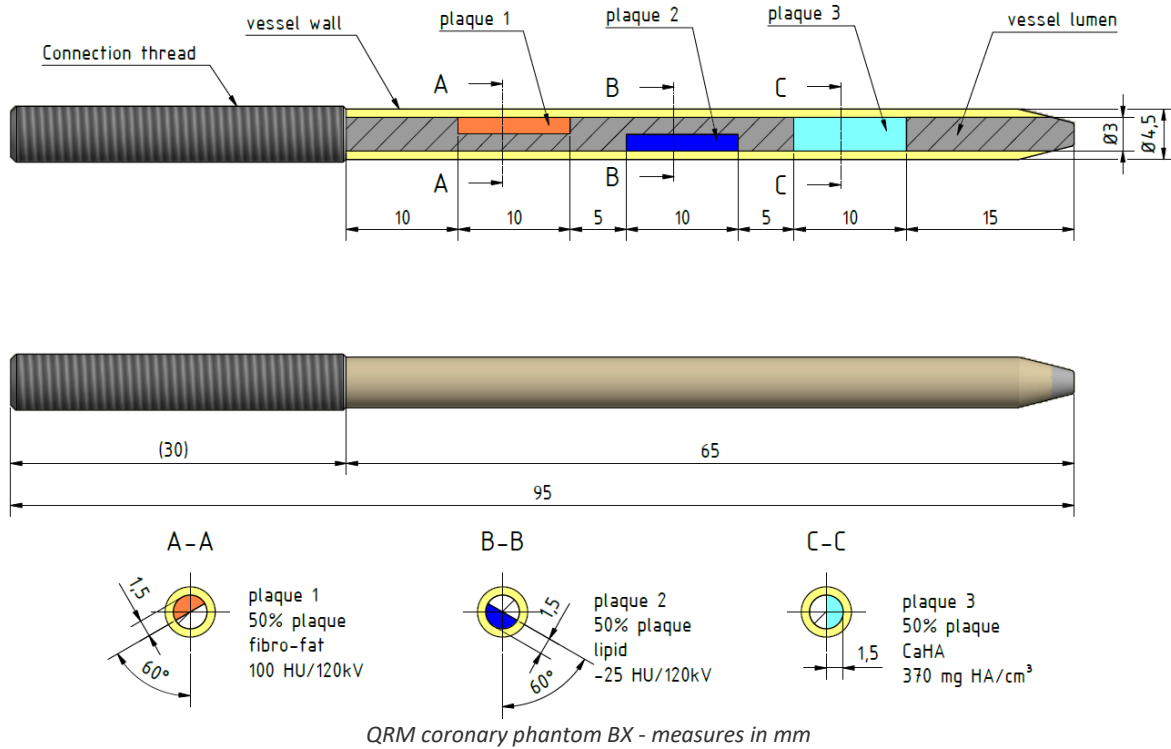

different types of plaque-, QA-phantoms and connectors for Sim4D-VL

axial view: 50% lipid plaque in iodinated blood

Model BX - Set:

Four coronary artery stenosis phantoms with eccentric plaques (narrowed by 50%): two with iodinated blood-equivalent lumen (approx. 300 HU/120 kV) and two with blood-equivalent lumen (approx. 45 HU/80-140 kV).

QRM coronary phantom BX - measures in mm

Plaque #	Plaque thickness	Plaque length	Lumen diameter	Stenosis (lumen reduction by diameter)	Stenosis (lumen reduction by area)
1 (A-A)					
2 (B-B)	1.5 mm	10 mm	3.0 mm	**50 %**	50 %
3 (C-C)					

Phantom #	Vessel lumen	Vessel wall[2]	Plaques
1	Blood + Iodine[1] (300 HU)	none	Fibro-fat[1] (100 HU) / Lipid[1] (-25 HU) / CaHA[3]
2	Blood + Iodine[1] (300 HU)	55 HU	Fibro-fat[1] (100 HU) / Lipid[1] (-25 HU) / CaHA[3]
3	Blood[2] (45 HU)	none	Fibro-fat[1] (100 HU) / Lipid[1] (-25 HU) / CaHA[3]
4	Blood[2] (45 HU)	55 HU	Fibro-fat[1] (100 HU) / Lipid[1] (-25 HU) / CaHA[3]

[1] *given HU valid at 120 kV (accuracy ± 5 HU)*

[2] *given HU valid at 80 - 140 kV (accuracy ± 5 HU)*

[3] *water-equivalent material enriched with 370 mg CaHA/cm³*

All measurements are carried out on a Siemens CT-Scanner using a dedicated CT scan protocol. Cylindrical sample probes are measured using a state-of-the-art CT system with a dedicated CT scan protocol in a standard test environment (20 cm water-filled phantom at 20°C room temperature level). Please note that the actual HU-value depends on target size, scanner setup and X-ray spectrum and may vary on different CT-systems and setups.

Spectral-CT capable. Iodine and CaHA can be adjusted on customer's needs.

QRM GmbH / Baiersdorfer Str. 22
91096 Moehrendorf / Germany

© QRM GmbH
www.3000buy.con 深圳市净康科技有限公司
联系人：王小姐 15813841944

2 / 3

*A customer-owned **stent** can be attached (slide on) to the coronary artery phantoms.*

QRM GmbH / Baiersdorfer Str. 22
91096 Moehrendorf / Germany

© QRM GmbH
www.3000buy.con 深圳市净康科技有限公司
联系人：王小姐 15813841944

3 / 3

Coronary Artery Phantoms with Stenosis and Plaque for Dynamic Cardio Simulator: Type DX

The Coronary Artery Stenosis Phantoms are designed to perform CT-measurements of contrast enhanced (iodine) coronary arteries with implemented plaque and stenosis targets. Different types of coronary arteries are available. It can be used with a static holder inside a water tank and a thorax phantom or with a motion simulator, respectively.
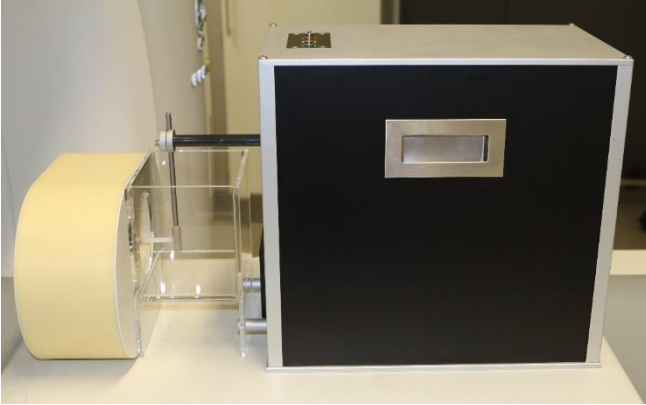
Sim4D-VL 3D-Motion Simulator with coronary artery phantom (left side: QRM-Thorax Phantom)

Static holder with coronary artery phantom in Water Tank (Holder: QRM-60109; Water Tank: QRM-10113)
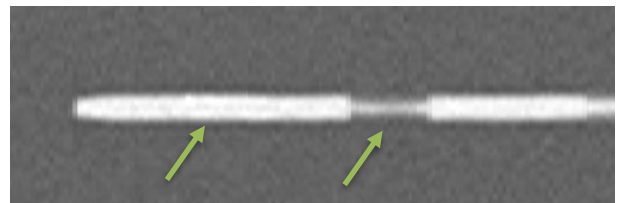

coronary artery phantom with two different circular stenosis

*sagittal view: X-ray image of phantom with stent attached*

different types of plaque-, QA-phantoms and connectors for Sim4D-VL

sagittal view: two circular stenosis: CaHA and fibro-fat at iodinated vessel

© QRM GmbH

QRM GmbH / Baiersdorfer Str. 22
91096 Moehrendorf / Germany

www.3000buy.con 深圳市净康科技有限公司
联系人：王小姐 **15813841944**

1 / 2

Model DX - Set:

Six coronary artery stenosis phantoms with concentric plaques (narrowed by 67% and 33%): three with iodinated blood-equivalent lumen (approx. 300 HU/120 kV) and three with blood-equivalent lumen (approx. 45 HU/80-140 kV).

QRM coronary phantom DX - measures in mm
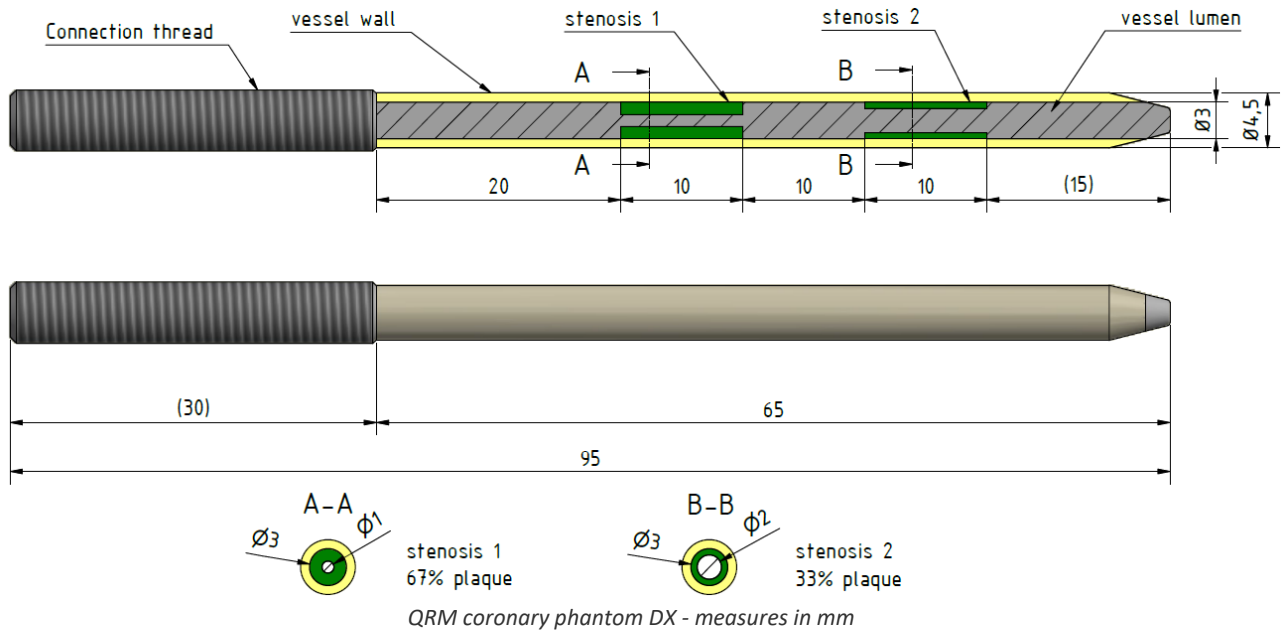
Plaque #	Plaque thickness	Plaque length	Lumen diameter	Stenosis (lumen reduction by diameter)	Stenosis (lumen reduction by area)
1 (A-A)	2.0 mm	10 mm	3.0 mm	67 %	89 %
2 (B-B)	1.0 mm			33 %	56 %

Phantom #	Vessel lumen	Vessel wall[2]	Plaques
1	Blood + Iodine[1] (300 HU)	55 HU	CaHA[3]
2	Blood + Iodine[1] (300 HU)	55 HU	Lipid[1] (-25 HU)
3	Blood + Iodine[1] (300 HU)	55 HU	Fibro-fat[1] (100 HU)
4	Blood[2] (45 HU)	55 HU	CaHA[3]
5	Blood[2] (45 HU)	55 HU	Lipid[1] (-25 HU)
6	Blood[2] (45 HU)	55 HU	Fibro-fat[1] (100 HU)

[1] *given HU valid at 120 kV (accuracy ± 5 HU)*
[2] *given HU valid at 80 - 140 kV (accuracy ± 5 HU)*
[3] *water-equivalent material enriched with 370 mg CaHA/cm³*

All measurements are carried out on a Siemens CT-Scanner using a dedicated CT scan protocol. Cylindrical sample probes are measured using a state-of-the-art CT system with a dedicated CT scan protocol in a standard test environment (20 cm water-filled phantom at 20°C room temperature level). Please note that the actual HU-value depends on target size, scanner setup and X-ray spectrum and may vary on different CT-systems and setups.

Spectral-CT capable. Iodine and CaHA can be adjusted on customer's needs.

*A customer-owned **stent** can be attached (slide on) to the coronary artery phantoms.*

QRM GmbH / Baiersdorfer Str. 22
91096 Moehrendorf / Germany

© QRM GmbH
www.3000buy.con 深圳市净康科技有限公司
联系人：王小姐 15813841944

2 / 2