



# Siemens MAGNETOM Avanto Dot 1.5T

RELOCATABLE MRI TRAILER  
PLANNING GUIDE  
MR20



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## **Rental Solutions from Scandinavian Medical Solutions**

At Scandinavian Medical offer solutions that differ from other rental solutions on the market, providing a flexible, cost-effective solution tailored to your requirements, timeline, and budget.

Our team has developed a unique and flexible rental concept, which provides you with a wide selection of customized alternatives to high-cost OEM equipment at a fixed monthly rate. There are no heavy investments, no risks, and no residual value.

We offer short – and long-term rental solutions - from fixed-site to trailers and modular rental solutions. Regardless of the challenges you face - be it replacement of equipment, breakdowns, bridging periods, or back-locks - we offer excellent solutions that ensure you can avoid downtime and optimize your scan capacity.

## System Specifications

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- **Brand:** Siemens
- **Model:** Avanto Dot 1.5T
- **YOM:** 2012
- **Condition:** Complete and fully functional according to OEM standard
- **Field strength:** 1.5T
- **Channels:** Tim 76x18
- **Gradient strength:** 33/125
- **Gradient Type:** Q-Engine
- **Magnet YOM:** 2012
- **Magnet Type:** OR105
- **Compressor YOM:** 2019
- **Compressor type:** Sumitomo F-70H
- **Table Type:** Fixed
- **Cold head model:** RDK-408L2
- **Cold head model change:** 2014 (Refurbished in 2019)
- **Coils:** 4Ch Flex Large, 4Ch Flex Small, 4Ch ShoulderLarge, 4Ch Shoulder Small, 8Ch Foot Ankle, 8Ch Wrist,Body Matrix,Body Matrix,Breast Matrix head,Double Loop Left,Double Loop Right,Head Matrix,Neck Matrix,PA Matrix–feet,PA Matrix–head, Spine Matrix, TxRx 15Ch Knee QED, 4-channel Interface, Body (whole body coil)

- **Console SW:** NUMARIS/4
- **SW version console:** SYNGO MR D13
- **SW options console:** Tim Application Suite, Angio Suite, Cardiac Suite, Neuro Suite, BodySuite, Onco Suite, Ortho Suite, Breast Suite, Scientific Suite, syngo General License, 3D Usage License, 3D MPR (Volume of Interest), 3D MIP, 3D SSD, Argus Viewer, Worklist, PhoenixZIP, Stereotactic Support, syngo Remote Assist, CISS & DESS, TimCT Fast View, iPATExtensions, Image Filter Software, MPPS, Inline 3D Distortion Correction, 3D Distortion Correction, Dot Engine Basic, Brain Dot Engine, Inline Diffusion, BLADE, AutoAlign Head LS, MDDW, Composing, Tim Whole Body, Matrix Mode, TWIST, Native, Motion Correction NR, RESOLVE, Morpho Quality Control













## Inventory

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- Doors in operator room with interior blinds
- Magnetic shielding - fringe field not exceeding 0,5 mT outside of building.
- RF room in accordance with the system requirements
- Chiller incl. cooling water installation.
- Air-conditioning with temperature control.
- Electrical installations.
- Patient lift

## Dimensions & Weight

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MRI trailer with its dimensions you can see in Figure 1

**Height:** 4 Meters

**Width:** 2,55 Meters

**Length:** 13,55 Meters

The total weight of a trailer including the MRI Avanto Dot 1.5T system is about **32 tons.**

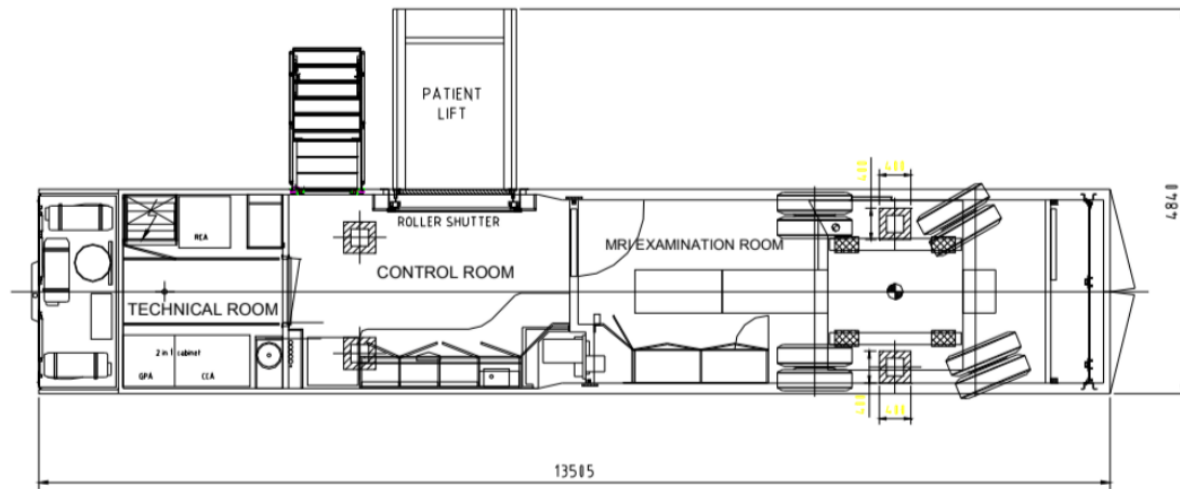


Figure 1 MRI building (can differ in furnishing and positioning of doors)

## Trailer Specification

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<b>Maximum permissible mass:</b>	32 000kg
<b>Maximum load on axle 1:</b>	10 000kg
<b>Maximum load on axle 2:</b>	10 000kg
<b>Maximum load on truck axle:</b>	11 700kg
<b>Turning radius:</b>	2 040mm
<b>Front overhang:</b>	1 580mm
<b>Coupling height:</b>	1 200mm
<b>Distance king-pin till first axles</b>	8 110mm
<b>Distance between rear axles</b>	2 030mm

The total weight of a trailer including the MRI Avanto Dot 1.5T system is about **32 tons**.

## Environmental requirements

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All necessary administrative consents needed for the unit installation in the indicated area and for entry and unloading should be provided.

The Minimum area required for parking the trailer (without the tractor) is

Length = 16,5m

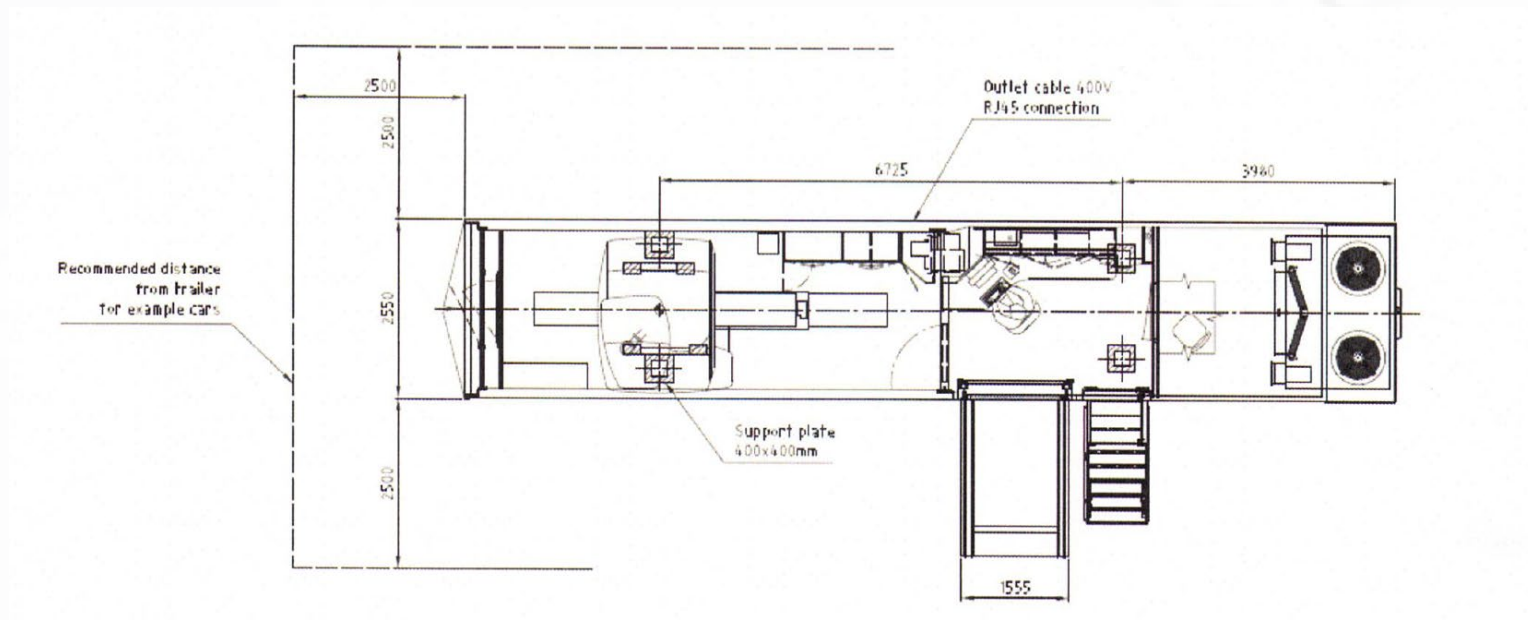
Width = 7,6 m

The ground and the access way must be clearly paved.

In order to ensure operation of the stabilizing system the ground must be level and the deviation must not exceed 1% (which is 0,6 degree!).

Make sure that the patient lift, stairs and belly compartments are easily accessible for patient entry and services.

The following drawing gives an overview of the dimensions and weight of the Mobile Medical trailer.



**Important Notice:**

From side walls and back wall is a minimum clearance of 2,5m required!



Otherwise, the imaging can be affected by metal objects.

## Access Route & Turing Radius

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The access way must have a minimum width of 7,2 m. The radius of the turning circle should have an outer radius of 12,5 m and an inner radius of 5,3 m of the turning circles.

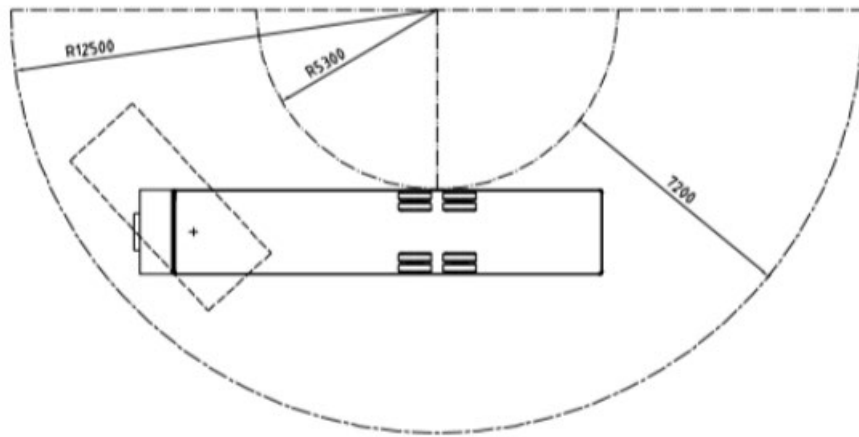
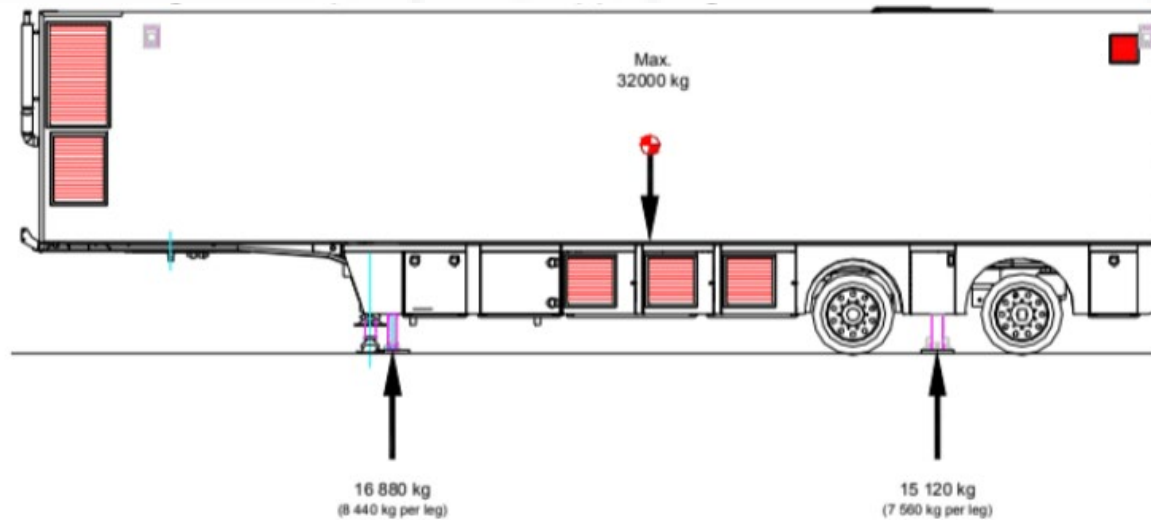


Figure 2: Turning radius.

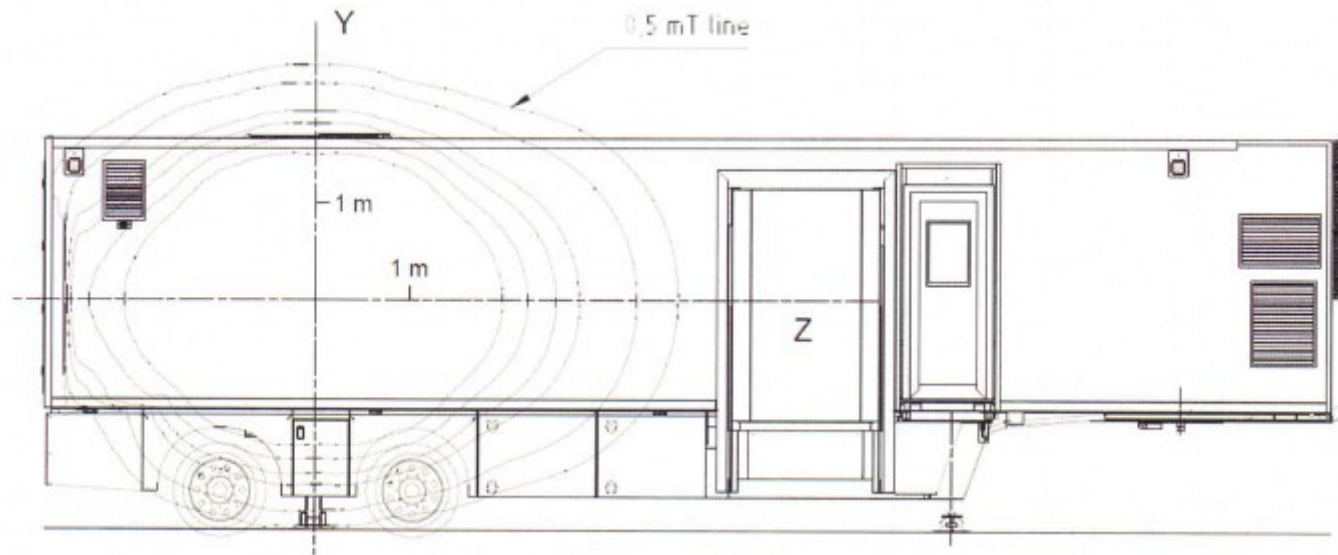
## Minimum Container Sitting Conditions

A level ground should be prepared for unit installation with an accuracy of 10mm. The ground and access way must be able to carry the weight of the trailer and tractor. The weight of the trailer is appr. 32 000 kg. Under the support legs must be placed a nylon support block of 0,4 x 0,4 m (delivered with the trailer).



## Magnetic Shielding

The MRI unit is equipped with magnetic shielding. The shielding will keep the magnetic field outside the trailer walls below 0,5 mT. Inside the trailer, close to the magnet, the magnetic field is higher than 0,5 mT. These areas are restricted for people with pacemakers and magnetic items. These areas are marked with safety signs, provided by the MRI manufacturer.



## Airflow considerations

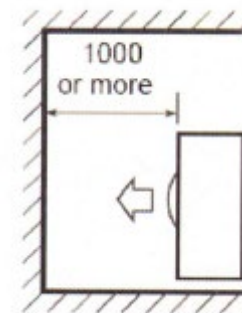
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The following clearances are acceptable for the airflow: 1000mm from the grills of the outside aircon units and generator.

At the front side the chiller is situated.

The grills for the chiller need the following clearance for the airflow:

- 1000mm for the side grills
- 2500mm for the top ventilators

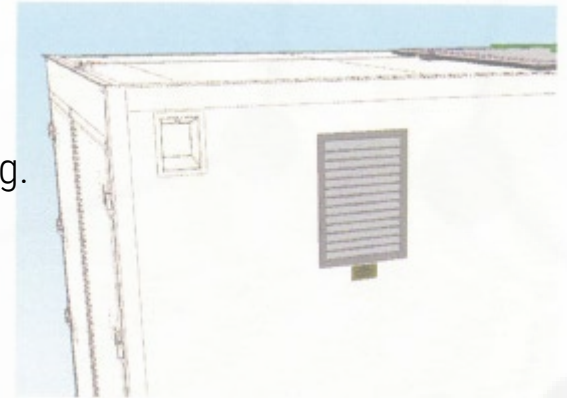


At the right side of the trailer is a grill with a dimension of 0,6x0,4m located. The exhaust is the vent opening of the helium gas of the magnet. The grill must be allowed to vent unrestricted, allowing the helium gas to dissipate.

WARNING:

Keep away from the grill. Extremely cold gas may be exhausted with no warning.

Do not work on the venting if the magnet is on field !



## Tractor requirements

At the front side of the trailer are the connections points to the tractor for:

- Brake system
- ABS/EBS system
- Lights 24V ISO N
- Lights 24V ISO S

The coupling on the tractor should match the couplings of the trailer.



The trailer is equipped with a 2" coupling pin.

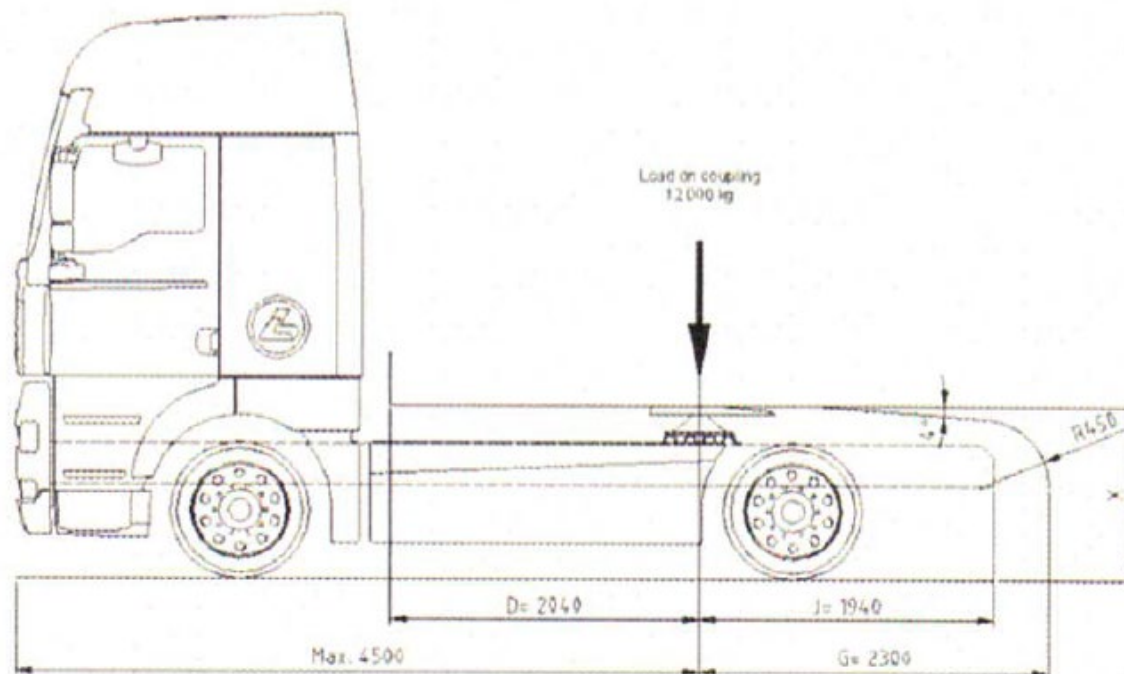
The tractor must have the matching fifth wheel coupling.



Important Notice:

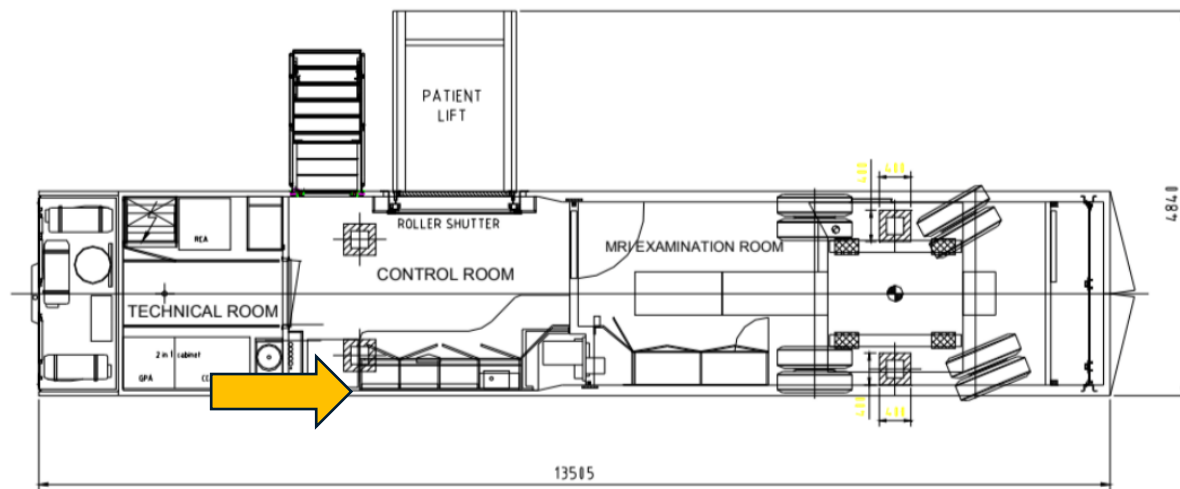
- Docking and undocking manoeuvre when coupling and uncoupling the tractor to and from the trailer must be completed at the lowest practicable speed to minimize shock inputs to the magnet!

The coupling height of the tractor should match the coupling height of the trailer which is 1,15m



## Ethernet Connection

To connect the unit with the local LAN network, there are patch panels, located in the lower storage compartment.





## **MRI Trailer Connection**

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Applying power to the main power connection, connecting the building to electricity, and performing protective measurements after connecting the power supply are the responsibility of the user. These activities must be performed by a person with appropriate qualifications.

Connecting the building should take place within 2 hours from setting up the building.

Power requirements

MRI System – 70 KVA

Trailer with Chiller – 22 KVA

Total – **92 KVA , 130 A**

The trailer is equipped with a 400 volt 3 phases 50Hz electric system according to the TN-S system.

The site shall provide a 3PH, 400 V, 50 Hz

The electrical phase rotation of the supply should be L1 L2 L3. A 15-meter power cable, wired directly to the trailer, is provided for connecting the mobile unit to local power.

The mains lead is not intended to withstand the wear and tear of traffic passing over it. The site shall provide necessary protective ramps, catenary systems or other means to protect the cable where it traverses roads or pathways.

The power cable is provided with a 400 V-250 A Marechal DS2 (3928017) male connector



The customer facility must have the Marechal DS2 female connector (3924017) to match this connector.



## Contact

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