



SOMATOM go.Up

Basic Planning Information

Table of contents	
Planning Example	3
Room Dimensioning	5
Statics and Transport	6
Environment	8
Electrical Installation	9
General Information	10

Legend

-----	Motion area / Swivelling range / Minimal room size / Safety distance	-----	Wall mounted
.....	Service area	-----	Additional equipment
-----	Floor mounted	-----	Demolition
-----	Ceiling mounted		

Dimensioning

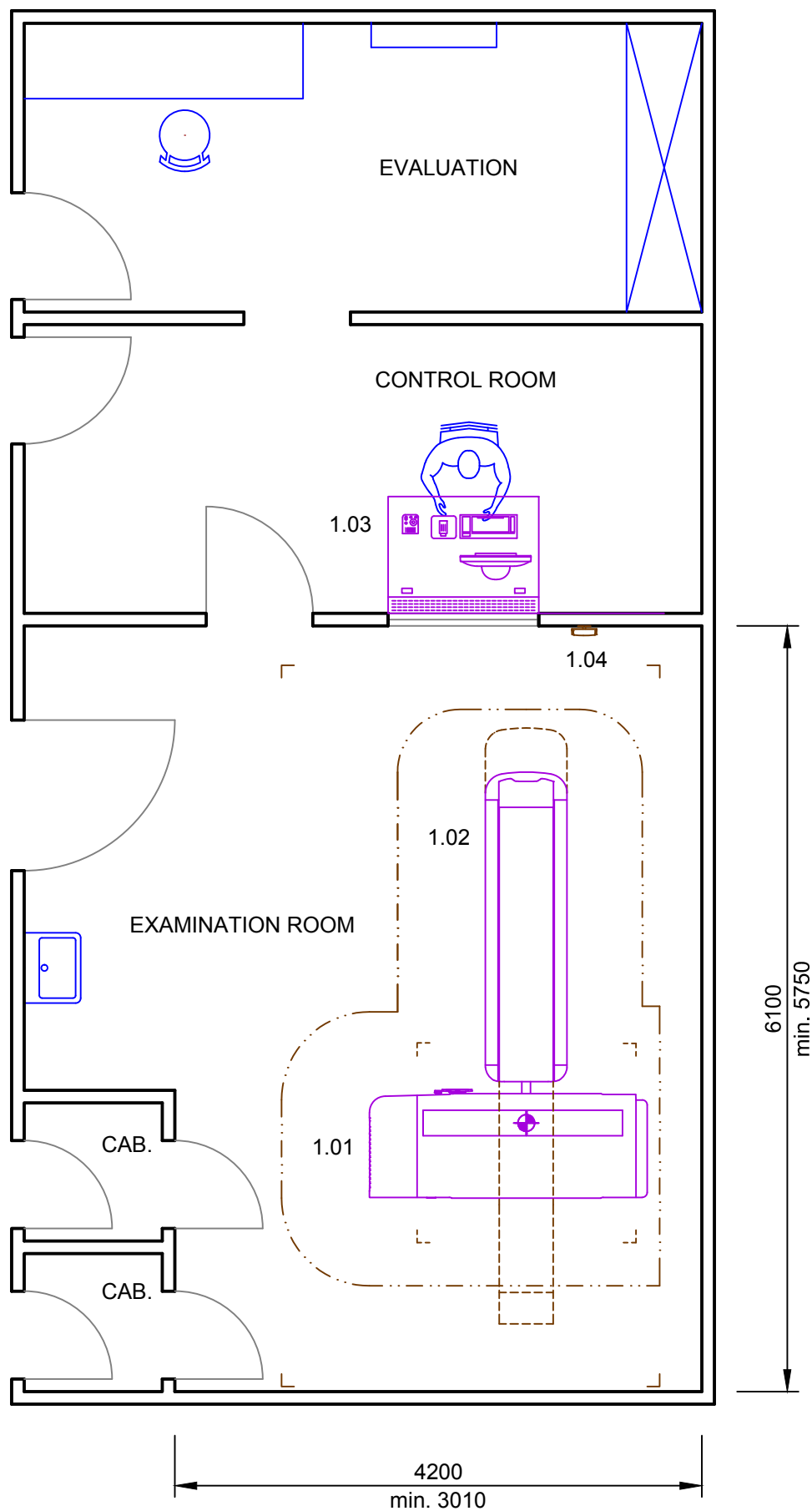
All installation measurements apply to finished wall/floor/ceiling and are to be checked prior to assembling the unit.



⊕ Orientation point = reference point of the Siemens unit for planning and installation

Please note: The drawing parts in this document are not to scale!

Planning Example



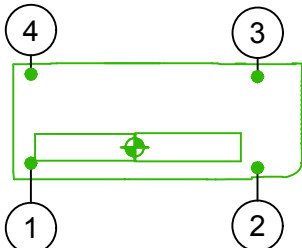
SOMATOM go.Up - Equipment Legend				
Pos.	Description	Weight (kg), Heat dissipation to the air (W)		
		kg	W	Remark
1.01	Gantry with tablet, remote control, computer and UPS	1280	5200	#1
1.02	Patient table Vario 1 (1600 mm scannable range)	387	300	
1.03	Control unit with TFT monitor, control box, keyboard	9	75	
1.04	Wireless Access Point	<25	<700	optional
	#1 1500 W in stand-by mode, isocentre at 985 mm			

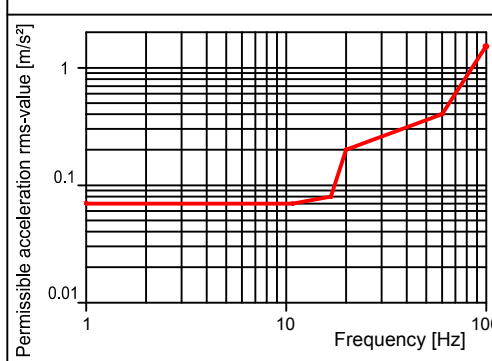
Room Dimensioning

Room dimensioning
The indicated room dimensions have to be checked on site. The planning department has to be informed about possible deviations. Otherwise we cannot assume any guarantee for the accurate implementation of the dimensions indicated in the planning documents.

Room height
Technically required minimum room height 2000 mm (with injector arm: 2300 mm). Measured from the highest point of the finished floor (with covering) to the lowest point of the ceiling.
Required room height when using a CARE Vision CT ceiling system must be observed.

Statics and Transport

Statics				
		<p>The floor construction has to be performed solid and free of vibration, e.g. concrete flooring C20/25 to C50/60 corresponding to DIN EN 206-1, according to the maximum values as specified in the textblock "Floor and building vibrations".</p> <p>It is recommended to test the weight capacity of the concrete or composite flooring by a stress analyst.</p> <p>Fastening the gantry on the floor is possible but only necessary in countries prone to earthquakes or according to local regulations. Securing the patient table to the floor is mandatory.</p>		
Total weight of Gantry: 1278 kg		Total static load (center of gravity): $F_{\text{stat total}} = 12.78 \text{ kN}$		
Partial load on gantry foot number		①	②	③
Nominal static load after levelling $F_{\text{stat nom}}$ [kN]		2.63	3.12	4.37
Maximum dynamic load (amplitude) during gantry rotation $F_{\text{dyn max}}$ [kN]		± 0.3	± 0.3	± 0.3
Outer diameter gantry foot [mm]		54	54	54
Floor contact area gantry foot [cm ²]		16	16	16
<p>During gantry installation and leveling, the maximum possible load on one gantry foot can be 7.66 kN (the gantry is standing on two diagonal feet). Design access floors for a weight capacity of min. 400 kg per slab/plate. During gantry transport, the load may be higher at certain individual points (3-point load, e.g. due to uneven flooring).</p>				

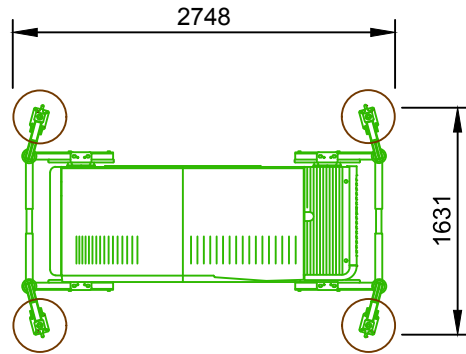
Floor- and building vibrations	
<p>Floor- and building vibrations can reduce image quality!</p> <p>Sources that produce vibrations are, e.g.: Railroad routes, subways, roads, road works and construction sites, hospital power plants, mines, open-cast minings, quarries (explosions), ferry moorings, any other sources of striking vibrations. Any transient vibration has to be less than 0.5 m/s² peak-to-peak in the time domain. The vibrations have to be measured with a sampling rate of 1000 Hz.</p> <p>The CT system is not sensitive to common vibrations. If the CT is away from vibrational sources, or the CT is replacing a CT system that to date has not shown image quality problems due to vibrations, it is usually not necessary to execute vibrational measurements.</p> <p>It is the customer's responsibility to contract a qualified specialist. The specialist must implement site modifications to meet the specific limits, and to design structural solutions in case of deviations.</p> <p>If there are any doubts, the following thresholds have to be verified by measurement: In the three spatial directions, acceleration in vibrations at the mounting points of the computer tomograph (Gantry and Patient Handling System PHS) must not exceed the thresholds as described in the above shown diagram.</p>	<div><p>Permissible continuous floor vibrations</p></div>

Transport

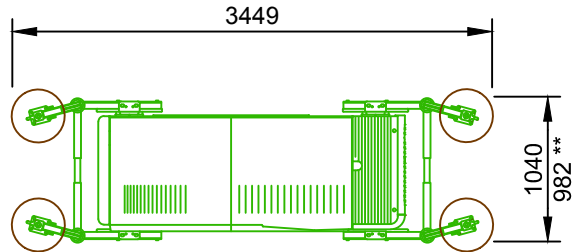
The transport route (doors and hallways) needs sufficient dimensions for the following parts!

Gantry with transport device

Transport rollers swiveled out
ca. 2748 x 1631 x 1864* mm (L x W x H)



Transport rollers swiveled in
ca. 3449 x 1040 x 1864* mm (L x W x H)



* The transport device with the gantry can be lowered to a ground clearance of 7 mm.

** The Gantry can be moved through the entrance < 1000 mm, when the transport adapter is partially removed.

TIPPING HAZARD !

Transport with the rollers swivelled in is permissible only in narrow passages!
As soon as the system has passed through narrow passages, the transport rollers have to be swivelled out again.

Gantry with transport device 1500 kg, transport device 220 kg.

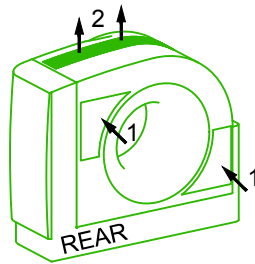
The maximum possible floor load (2-point load) per roller which may arise during gantry transport is 7.66 kN.
If necessary, cover the transport route with metal sheets to distribute the load.

The door must have a final clearance of 1250 mm if bed entrance to the CT examination room is requested.

PHS Vario1 / RT	Weight 600 kg	2850 x 830 x 1517 mm (L x W x H)
PHS Vario2	Weight 650 kg	2850 x 830 x 1517 mm (L x W x H)

Environment

Environment		
All CT components	Temperature Relative humidity Temperature (recommended) Relative humidity (recommended) Barometric pressure Temperature gradient	18 to 30 °C 20 to 75 % 22 to 26 °C 30 to 60 % 800 to 1060 hPa 6 K/h
Transport / storage	Temperature Relative humidity Barometric pressure Temperature gradient Maximum storage period	-20 to 50 °C 10 to 95 % 700 to 1060 hPa 10° K/h 2 months
If it is not possible to maintain these ranges, an air conditioning system with or without humidifier / dehumidifier should be installed. By intake of outside air it is recommended to install air filters (Class EU3 to EU4) for filtering dust particles of > 10 µm (DIN EN 779).		

On-site cooling requirements			
Workload CT-system [%]	100 (maximum power)	0 (stand-by)	 1) air intake 2) exhaust air
Heat dissipation to ambient air	5.2 kW	1.5 kW	
Air temperature (air intake)	18 °C to 30 °C		
Temperature gradient (air intake)	max. ± 1 K/min; max. < 6 K/h; additional requirements: max. ± 4 K/h in 24 h		
Humidity (air intake)	20 % to 75 %		
Air flow rate (through the Gantry)	1300 m³/h to 1600 m³/h		
Structural room conditions (e.g. windows, large glass areas, building and room thermal insulation, room size and volume...) influences the climatic room conditions for the air-cooled gantry and other air-cooled CT-system components in general. These climatic influences must be taken into account by the Project Manager when dimensioning a new or checking an existing on-site room air condition.			

Electrical Installation

Power requirements			
Power Line: TN-S	3/N/PE AC 50/60 Hz \pm 2Hz	Connection value	43.6 kVA
Line Voltage:	400 V \pm 10 %	<u>Power consumption:</u>	
Line impedance:	\leq 270 m Ω	Stand-by:	\leq 2 kVA
		System off:	0 kVA
		for the time up to 6 s:	max. 50 kVA
Cable cross section is to be determined by country regulation and calculation.			
Size of connector terminals in the gantry is 16 to 35 mm ² . N, PE adapter terminal 16 mm ² available			

Room lighting
<p>Ambient lighting in rooms with diagnostics or with workstations must comply with the respective local and national regulations.</p> <p>General requirements like the needed intensity of illumination - adjustable, reproducible, flicker-free or a limitation of dazzlings and reflections etc. have to be observed (EN 12464-1, DIN 5035-7).</p>

General Information

Display screen workstations

For setting up display screen workstations, take account of the guidelines in the Display Screen Workstation directive as well as any national regulations (e.g. EN ISO 9241-5).

Smart Remote Services (SRS)

Smart Remote Services (SRS) is used for remote diagnostics as well as remote service to provide highest system availability.

Requirements:

- Broadband connection (min 2 Mb/s download, 512 kb/s upload) without time or volume limitations
- Router (for exclusive use with SRS, a router can be obtained by Siemens for free)

Data protection and security is defined in the Smart Remote Services security concept.

Network Integration

The Siemens components are using TCP/IP Protocol, a 100/1000 Mbit/s switched Ethernet network and static IP addresses.

The required network cabling (min. CAT 5 TP) has to be provided on site.

Media converters, which are needed for using fibre optic cabling, are not in the scope of Siemens delivery.

To prepare the implementation of the new system into the existing network environment, the availability of the needed network data at least two weeks before starting the installation is mandatory.

This is the only way to ensure a seamless integration of the new system into the workflow of the department.

Notes on preparations for installation

Contracts for performing and supervising on-site installation preparations should be concluded with technically competent companies by the customer. The customer is responsible for timely and proper completion and supervision of all preparations for installation at the construction site in observance of all applicable legal regulations (e.g. X-ray regulations, radiation protection regulations) and all applicable general recognized rules of technology (e.g. VDE regulations, DIN standards).

Execution and supervision of installation preparations at the construction site and later observance of the standard operating conditions are not included in our duties. The customer is responsible for checking the static calculations and, where applicable, the air conditioning in the building to be equipped.

Safety distances

Distances from moving parts of the medical device to walls, furniture and other equipment have to be kept to avoid injuries by crushing in compliance with local regulations, e.g. a minimum distance of 50 cm according to EN 349.

It is the customer's responsibility to ensure the above requirements are followed.

This is to avoid the risk of injury.

If safety distances are not maintained **appropriate on-site safety measures** have to be put in place.

Clear visible markings according to national guidelines, e.g. crushing warning signs, hazard warning tape, hazard area cordon, safety mats, may be required.



Radiation protection

The structural radiation protection depends on the location of the unit and the function of the surrounding rooms. By order, the planning departments of Siemens Healthcare prepare radiation protection calculation and radiation protection plan.

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