# **SIEMENS**

# **3D-TOP Ceiling Stand**

ΑX

# **Maintenance Instructions**

3D-TOP Ceiling Stand

Components

The protocol RX22-040.832.02.06.02 is required for these instructions

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### 1 Prerequisites / Notes

### 1.1 Requirements

NOTE

During maintenance on the product, the work steps in the certificate must be documented accordingly.

Maintenance is divided into chapters (as a rule, max. 6 hours for components). Since there can be the same component more than one in a customer system, the component checkpoints in the certificate are listed accordingly. Each component must then be entered with the Part Number and Serial Number. There are also "options" in the customer system. The options must be check marked accordingly in the certificate.

With parts that must be replaced periodically (battery/steel cables...), the startup date or the last replacement date must be entered to ensure the ability to track the dates. As a rule, the date can be found in the User Handbook (Handover Protocol / old Maintenance Certificate).

#### **Required Documents**

- Maintenance Protocol
- See also the individual chapters.

#### 1.2 Notes

#### 1.2.1 Safety Information

#### 1.2.1.1 General Safety Information

When carrying out the work steps and checks, the general safety information contained in ARTD (General Guidelines for Technical Service) must be observed.

**MWARNING** 

Dangerous X-radiation during checks and adjustment work steps.

Risk of death or serious bodily injury.

During the check and adjustment work steps that must be performed with radiation switched on, the mandatory radiation safety measures must be observed. These check and adjustment work steps are explicitly labeled on the following pages with the radiation warning symbol .

#### 1.2.1.2 Product-specific Safety Information

When carrying out the work steps and checks, the product-specific safety information contained in the documents must be observed.

#### 1.2.2 Product-specific Remarks

The illustrations and drawings may differ slightly depending on the actual system.

#### 1.2.2.1 Notes Regarding Maintenance

Damaged or worn parts may be replaced only with original parts. The Inspection and Maintenance Checklists must be filled out and signed by the Maintenance Technician. Repair work and work steps that are not listed in the checklists must be listed separately.

NOTE

Replace damaged parts in discussion with the customer.

#### 1.2.3 General Remarks

#### 1.2.3.1 Maintenance time / interval

The maintenance time and the maintenance interval is listed in each chapter for a component or in the general chapters.

The completion times for cyclical replacement of parts, e.g. cables or spring-loaded mechanisms, etc. are not included in these Maintenance Instructions.

The work time can be viewed only as a reference value, because the time for e.g. cleaning can vary widely.

#### 1.2.3.2 Tolerance Data

General tolerances for linear dimensions per ISO 2768

These tolerances apply for all dimensions listed in these instructions as long as no other tolerance is expressly listed next to the value.

Limit value for the nominal range	over 3 mm to 6 mm	over 6 mm to 30 mm	over 30 mm to 120 mm	over 120 mm to 400 mm	over 400 mm to 1000 mm	over 1000 mm to 2000 mm	over 2000 mm to 4000 mm
Adm. toler- ance	± 0,5 mm	± 1 mm	± 1,5 mm	± 2,5 mm	± 4 mm	± 6 mm	± 8 mm

#### 1.2.3.3 Maximum Torque Values in Nm

NOTE

Check the floor mounting.

The torque values for anchor bolts are listed in the Maintenance Instructions (only for the type of anchor bolts included with the unit).

If the mounting method is different, only "the unit mounting" can be checked for tightness.

Nominalthread		Screw material						
diameter		Iron/steel per DIN 267						Brass CuZn alloy
	Hardness rating	4.6	4.8	5.8	8.8	10.9	12.9	
M 3		0,5	0,67	0,83	1,3	1,9	2,2	0,62
M 3.5		0,76	1,0	1,3	2,0	2,8	3,4	0,95
M 4		1,1	1,5	1,9	3,0	4,2	5,1	1,4
M 5		2,2	3,0	3,7	6,0	8,4	10,1	2,8
M 6		3,8	5,1	6,4	10,2	14,4	17,3	4,8
M 8		9,5	12,6	15,8	25,3	35,6	42,7	11,9
M 10		18,7	24,8	31,1	49,8	70,0	84,0	23,3
M 12		32,9	43,8	54,8	87,6	123,3	147,9	41,1

If no other information is provided, use the corresponding torque values for hardness rating 8.8 when checking torque values!

A tolerance of  $\pm$  10% is permitted for torque values.

#### 1.2.3.4 Explanation of Abbreviations in the Maintenance Certificate

Abbrevia- tion	Explanation
SI	Safety Inspection
SIE	Electrical Safety
SIM	Mechanical Safety
PM	Preventive Maintenance
PMP	Periodic Preventive Maintenance
PMA	Maintenance, Preventive Adjustments
PMF	Preventive Check of Operating Values and of Functions
Q	System Quality, Image Quality
QIQ	Image Quality
QSQ	System Quality
SW	Software Maintenance
CSE	Customer Service Engineer
IVK	Installed Volume Component

Abbrevia- tion	Explanation
MU	Maintenance Unit
ROI	Region of interest

### 1.2.3.5 DHHS Regulations

This document does **not** replace the DHHS Maintenance Instructions "Maintenance Instructions/Measurement Certificate" in countries with DHHS Regulations.

### 2 General Visual Check

### 2.1 Visual Check per IEC 62353

#### SI Checking the cover panels

- All required cover panels present.
  - Check the cover panels for visible damage, sharp edges or cracks.

#### SI Required operator documents present

- Are the required operator documents complete, present, legible?
  - In new systems, there is a list with the documents that are shipped in the System Binder.
  - Based on this list, completeness can be checked easily.
  - **The following always applies:** All user instructions, supplements and safety notes required for **use** of the system must be present.

#### SI Checking the Cables, Corrugated Hoses

- The cables (corrugated hoses) may not have any cracks in the insulation.
- Check the corresponding strain reliefs or cable shielding connections.
  - The check refers only to laid cables that are visible and to the way in which they are laid!

#### SI Check the cable corrugated hoses (of mobile components).

- Check the way in which cables are laid (corrugated hoses) to mobile components.
  - The cables should not pose a risk of tripping and should not be laid over any sharp edges.
  - The check refers only to laid cables that are visible and to the way in which they are laid!

#### SI Checking the radiation protective panels

- To the extent configured, visually check the following radiation safety panels for cracks or other damage:
  - Radiation protection cover panels
  - Lead rubber flaps
  - Ceiling-mounted radiation shield
  - Any additional radiation shields that can be installed
  - Movable radiation shield

#### SI Checking warning labels

- All warning labels that reference a hazard to the user, patient or the unit through use of the system must be present.
  - e.g: Crushing of fingers, crushing of feet, laser, maximum load, collision warnings.

# 2.2 Table of Warning Labels

• No warning labels present.

### 3 Cleaning the Components

#### **Required Tools, Test Equipment and Aids**

Anti-static Vacuum Cleaner
 n.a.

• Lint-free cleaning cloths n.a.

Brush to apply grease
 n.a.

Brush to remove dust
 n.a.

Cleaning agents for plastic, glass and painted parts

e.g. Hakapur concentrated cleaner (500 g), 96 60 648 RH999

cleaning agent and rust protection for rails

e.g. WD40 contact spray (spray can, 400 g), 28 70 061

• Alcohol n.a.

• Ethyl alcohol, 96% to clean the monitor screen n.a.

#### **Cleaning and General Remarks**

NOTE

Depending on the component, observe the applicable points.

#### PM Inspection of internal heat dissipation

- Clean all ventilation grids.
- Check all fans for function.

#### PM Cleaning

- Remove dust that has collected inside of the particular components.
- Remove soiling that is not accessible to the customer's cleaning personnel during maintenance work.

NOTE

For hygienic reasons, wear rubber gloves while cleaning.

- Soften contrast medium with water only and remove it.
- After completing maintenance work, remove soiling from enameled and anodized parts with WD40 contact spray, enamel cleaning agent or Hakapur.

## 4 3D TOP Ceiling Stand

### 4.1 Special Requirements

#### 4.1.1 Required Documents

• Replacement Instructions

#### 4.1.2 Required Tools and Measuring Equipment

•	Step ladder	n.a.
•	Work gloves	n.a.
	Protection against splits in the steel cables	
•	Torque wrench, 2 Nm to 20 Nm (1/4" drive)	70 59 975
•	Torque wrench, 20 Nm to 100 Nm (3/8" drive)	44 30 906
•	Torque wrench attachment	56 60 852
•	Set of Allen wrenches with ball end (4, 5, 6, 8, 10 mm) (3/8" drive)	81 59 980
•	8 mm Allen wrench (1/2" drive), without ball end	52 66 531
•	Spring balance, 100N	44 29 122
•	Spring balance, 200N	44 15 113

#### 4.1.3 Required Aids

Cleaning agents and rust protection for rails

 e.g. WD40 contact spray (spray can, 400 g),
 Longtime PD2 (20 g tube) for bearing cages, open ball bearings, pinion gears ...

 Viscogen KL 300 (50 ml tube) for steel cables and chains
 72 79 107

#### Paints (to touch up chips/scratches in the paint finish)

White (spray can)White textured (paint stick)84 27 73434 44 403

### 4.1.4 Product-specific Safety Information

n.a.

#### 4.1.5 Work Time/Maintenance Interval

• 2 hours / 12 months

### 4.1.6 Parts Subject to Wear

Component	Name	Quan- tity	Part No.	Cyclical replace- ment after 10 years	Replaced when damaged
3D TOP ceil-	Spring-loaded Mechanism with built-in Cables	1	49 53 931	Х	Х
ing stand	E-TL steel cable set	1	30 71 219 G6019		Х
	Brake lining	2	30 70 815 G6019		Х

### 4.2 Inspection and Maintenance

#### PM Cleaning

See (Cleaning the Components / p. 11).

#### SIM Longitudinal Bridge / Checking the Condition and Installation

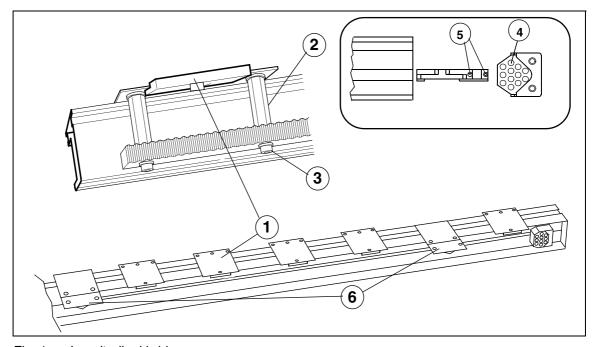




Fig. 1: Longitudinal bridge

Longitudinal rail ceiling mounting (M10 Allen screws). 50 Nm

#### **NOTE**

For the screws that are not accessible because of the pinion rack, the "torque wrench attachement, 5660852" absolutely must be used. Otherwise, the screw heads can be damaged.

Checking the pinion rack.

#### **NOTE**

This check is required only during the 1st maintenance. The documentation applies as proof of securing with Loctite! The the pinion rack mount should be secured with Loctite when installed the first time. In this case, NO check is required. For the check, remove one screw to determine whether LOCTITE has been used; then reinsert the screw with LOCTITE. If LOCTITE was not used, apply LOCTITE to all screws on the pinion rack.



- Check the switch strike plate clamping screws (6/Fig. 1 / p. 14) for the S42/43 safety limit switches (M4 Allen screw) for tightness.
- End stops and rubber bumpers (4/Fig. 1 / p. 14).



 Check the M6 or M8 set screws (5/Fig. 1 / p. 14) in the longitudinal and transverse stop detents for tightness. With an M6 set screw 6.5 Nm, with an M8 set screw 16 Nm.

#### SIM Check to ensure the roller bearing on the transverse carriage is secured.

**NOTE** 

The roller bearings are secured with mounting screws that have been tightened to a specified torque. If the spacer sleeves are not yet installed on a ceiling stand, they absolutely need be installed afterward.

 If spacer sleeves are placed over the roller bearing shafts, the torque no longer needs to be checked.



If **no** spacer sleeves are installed:

- then the M8 set screws (1/Fig. 2 / p. 15) that secure the roller bearings must be checked **16 Nm**
- and the installation kit with Material No. 87 73 681, "Installation Kit, Split Collar for Rollers" (spacer sleeves) will need to be installed.

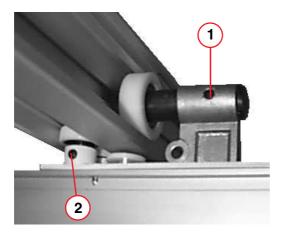


Fig. 2: Mount

#### SIM M4 Transverse Bridge / Checking Installation

Check the roller bearings and lateral guide bearings (2/Fig. 2 / p. 15).

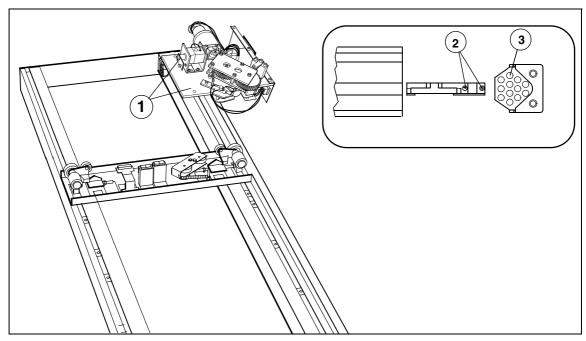


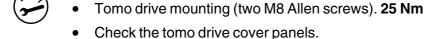
Fig. 3: Checking mounting

- · Check the mounting points for the cable guides.
- Check the stops and rubber bumpers (3/Fig. 3 / p. 16).



**PMA** 

• Check the M6 or M8 set screws (2/Fig. 3 / p. 16) for the transverse SID stop detents for tightness. With an M6 set screw **6.5 Nm**, with an M8 set screw **16 Nm**.



Check the installation parts.

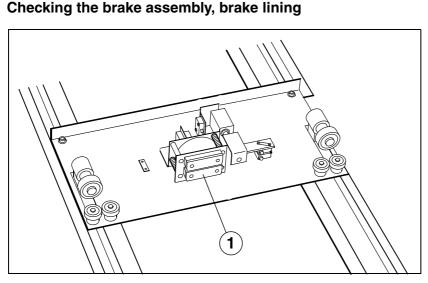


Fig. 4: Brake assembly

- Check the condition of the brake lining (1/Fig. 4 / p. 16).
- Check the mounting screws for tightness.

#### SIE Check the S42/S43 safety limit switches (only with the tomo option).

• Check the function of the safety limit switches.

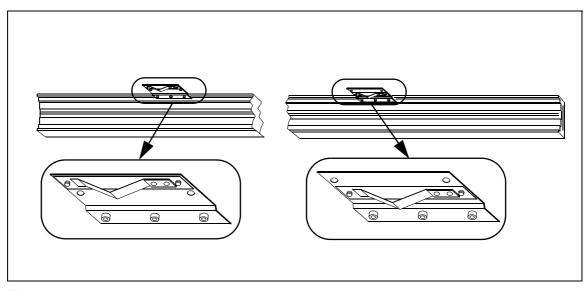


Fig. 5:

- Select tomo.
- Move into the S42/S43 switches
  - The switches must positively actuate.
  - The safety breaker audibly deenergizes and the red lamp on the left side of the table (safety circuit) **must** go on.

#### **Tomo Drive**

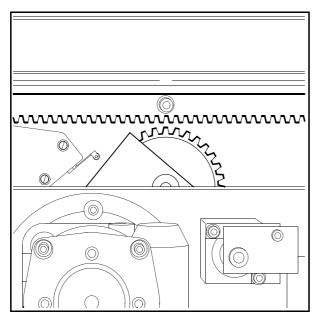


Fig. 6:

- Check the spacing of the pinion gear to the pinion rack (per the Adjustment Instructions).
- Check the function of the lift magnets.

#### SIM Check to ensure the roller bearing on the telescope carriage is secured.

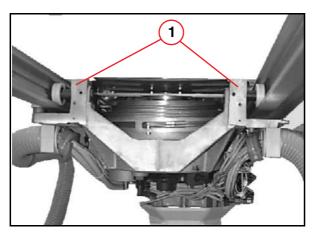


Fig. 7: Checking mounting

**NOTE** 

The roller bearings are secured with mounting screws that have been tightened to a specified torque. If the spacer sleeves are not yet installed on a ceiling stand, they absolutely need be installed afterward.

• If spacer sleeves are placed over the roller bearing shafts, the torque no longer needs to be checked.



- If no spacer sleeves are installed:
  - then the M8 set screws (1/Fig. 7 / p. 18) that secure the roller bearings must be checked 13 Nm
  - and the installation kit with Material No. 87 73 681, "Installation Kit, Split Collar for Rollers" (spacer sleeves) will need to be installed.

#### SIM Checking the M1 telescope carriage / installation

- · Check the mounting points for the cable guides.
- Roller bearings and lateral guide bearings.
- Checking the cover panels.
- Check the installation parts.

#### PMA Checking the brake assembly, brake lining

Check the condition of the brake lining and the mounting.

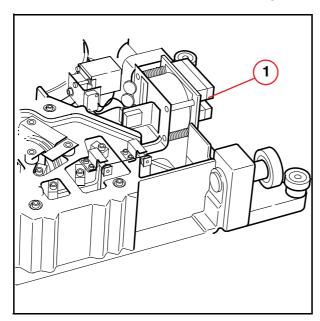


Fig. 8: Brake assembly

- Check the adjustment (1/Fig. 8 / p. 19).
- Check the mounting screws for tightness.

#### PM Cleaning the Brake

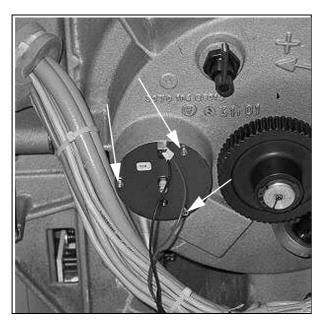
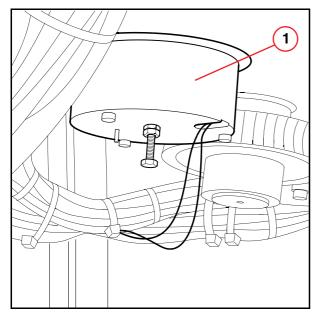


Fig. 9:

- Cover the tube unit and support arm with a cloth because when the brake is removed, black brake dust will fall down.
- Remove the brake cover; three Allen screws (arrows/(Fig. 9 / p. 20)).
  - The brake will still hold.
- Hold a cloth under the brake and release the brake by pressing the button (blue).
  - The brake can now be pulled off carefully (dust).
  - Wipe off the brake thoroughly with cloth.
- Now stuff the cloth into the brake shaft.
  - Do not insert the ends of the cloth into the brake disk holes.
- Slowly move telescope lift at least 3-5 times up and down.
  - Lift should be at least 1 m.
  - When this is done, the brake disk is turned and cleaned.
- Reinstall the brake.
- Remove the cover cloths.
- Check the brake function.

#### PMF Check the function of the lift magnet.



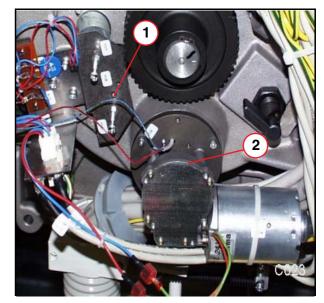


Fig. 10: Lift brake

Fig. 11: Lift drive

- The Y13 or Y17-19 lift brake (1/Fig. 10 / p. 21) must release when the brake button is pressed and audibly engage when the button is released.
- Check the tracking function of the M16 lift motor and the Y16 coupling (2/Fig. 11 / p. 21).

# SIM Weight compensation replaced (required every 10 years) SIM Checking the Weight Compensation

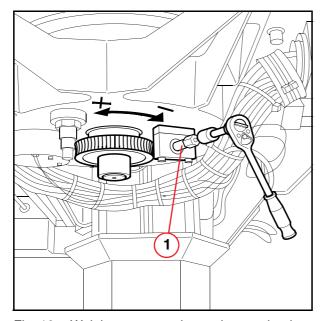


Fig. 12: Weight compensation spring mechanism

The stand must be adjusted with slight buoyancy (range: 0.3 - 1 kg or per the customer's request).

Readjust the weight compensation using a wrench with the 17 mm attachment at the
adjustment screw (1/Fig. 12 / p. 21) on the telescope. When doing this, take note of the
arrow on the cast housing for the spring loaded mechanism, as well as the rotation
direction ± of the gear.

#### NOTE

If the spring mechanism needs to be retensioned within a brief time period and/or if a reduction in the maximum extended length is determined, replace the spring-loaded mechanism.

#### **∆WARNING**

Do not open the spring-loaded mechanism.

If not observed, death or serious bodily injury can occur.

⇔ When replacing the spring-loaded mechanism, the spring housing may not be opened.

#### SIM Checking the Steel Cables

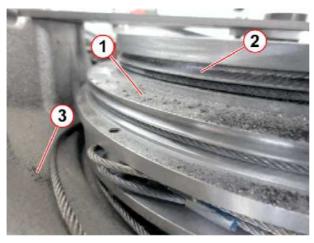


Fig. 13: Spring-loaded mechanism with heavy wear

Pos. 1 Metal wear and slivers
Pos. 2 Worn cable groove
Pos. 3 Normal powdery deposit

- 1. Are any metal shavings or slivers of the steel cable visible on the spring-loaded mechanism or inside the cover panels? (1/Fig. 13 / p. 22)
- 2. Are the cable grooves in the spring-loaded mechanism (2/Fig. 13 / p. 22) in good order?

They are then okay.

- a) If **no** aluminum shavings are seen on the steel cable reel. (A situation such as the one shown in (1/Fig. 13 / p. 22) is **not** okay!)
- b) If the steel cable grooves are flat and smooth. They may **not** be worn or abraded to the point where they are uneven. A situation as shown in the illustration (2/Fig. 13 / p. 22) is **not** okay!
- c) If only a light, powdery deposit (3/Fig. 13 / p. 22) is visible.

- If the condition of the spring-loaded mechanism is as poor as that shown in (Fig. 13 / p. 22), then the **spring-loaded mechanism together with the steel cables** must be replaced.
- 3. Is the safety cable long enough? (Measure the deflection of the safety cable.)
  - a) Move the telescope into the highest position.
  - b) Deflect the safety cable upward, as shown in (Fig. 14 / p. 23), until great mechanical resistance is felt. Measure deflection A (distance between the support cable and the safety cable) at the location indicated (30 mm from the edge of the casting).

#### NOTICE

#### Deflection A must be 55 mm or more.

- ☐ If the deflection is less than 55 mm, but can still be clearly felt, the system can remain in operation. Both cables will need to be replaced as soon as possible.
- If the safety cable cannot be deflected (safety cable is under load!), then the system must not be operated any longer and both cables must be replaced.

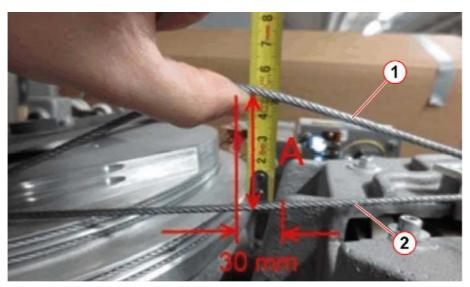


Fig. 14: Deflection of safety steel cable
Pos. 1 Safety steel cable (top guide slot)
Pos. 2 Support steel cable (bottom guide slot)

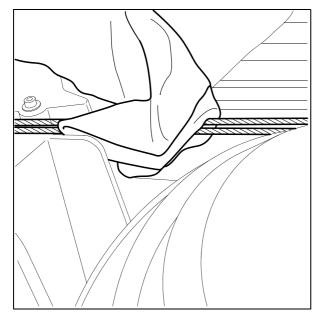


Fig. 15: Safety cable

NOTE

Beginning approx. January 2008, new stands / spring-loaded mechanisms with plastic-coated support cables will be shipped. The steel safety cables will still have no coating.

#### With support and safety cables not plastic-coated:

- Check the steel support and safety cables for splits.
  - To do this, run a cloth over the cables as shown in (Fig. 15 / p. 24). Splits and cable damage are evidenced by the fibers caught. To do this, move the telescope into both end positions. With the telescope moved in, in particular check both the support cable and the safety cable where they run into the spring-loaded mechanism.
- Relubricate the cables with VISCOGEN KL300.

NOTE

If splits are found, both cables must always be replaced.

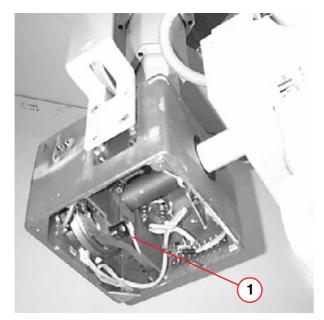
#### With plastic-coated support cables:

- Perform a visual check of the plastic coating on the support cable along the entire cable length that is accessible. To do this, move the telescope into both end positions. With the telescope moved in, in particular check both the support cable and the safety cable where they run into the spring-loaded mechanism.
  - There may be no cracks or deep scratches in the plastic coating.
- Clean the cable notches in the spring-loaded mechanism of wear residue.
- Plastic-coated support cables may not be lubricated.

NOTE

If cracks or scratches or splits are found, both cables must always be replaced.

#### PMA Checking the Support Arm / Rotation Movements



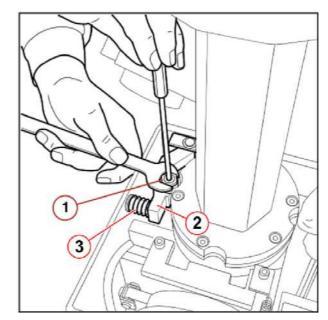


Fig. 16: Rotation movements

Fig. 17: Rotation / vertical axis

- Rotation around the horizontal axis (1/Fig. 16 / p. 25).
  - Checking the Movement and Stop Functions
- Check movement and the stop function around the vertical axis (Fig. 17 / p. 25).
- Check whether rattling or other unusual noises can be heard during movement around the vertical axis (Fig. 17 / p. 25). If needed, lubricate the bearing at (1/Fig. 17 / p. 25):
  - To do this, release the tension on the bearing lever (2/Fig. 17 / p. 25), i.e. press the spring (3/Fig. 17 / p. 25) together with pliers or a vice grip.
  - Remove the countersunk screw (1/Fig. 17 / p. 25), take out the eccentric shaft with bearing.
  - Remove the bearing from the eccentric shaft and lubricate both parts with Optimol Longtime PD2.
  - Insert the bearing and eccentric shaft and thread in the countersunk screw (1/Fig. 17 / p. 25); when doing this, use Loctite 221. However, do not tighten the countersunk screw (1/Fig. 17 / p. 25) completely.
- Following installation of the bearing, the eccentric shaft must be readjusted; to do this:
  - Adjust the eccentric shaft at (1/Fig. 17 / p. 25) accordingly using a 17 mm open-end wrench; to do this, release the brake at the control panel.
  - Following successful adjustment, secure the eccentric shaft in this position by tightening the countersunk screw (1/Fig. 17 / p. 25).
  - Move into the position several times from both directions and check the result of the adjustment.
  - If needed, repeat the adjustment.

#### SIM Mounting on the telescope

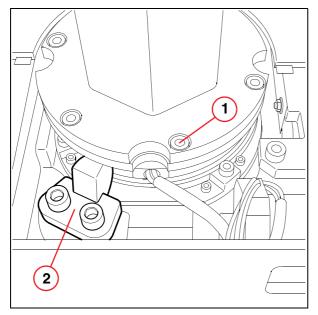




Fig. 18: Mounting on the telescope

- Check the condition and mounting of the support arm (six M6 Allen screws) (1/Fig. 18 / p. 26). 10 Nm
- Check the condition and mounting of the end stop (2/Fig. 18 / p. 26) for wear.

#### SIM Play in the support arm

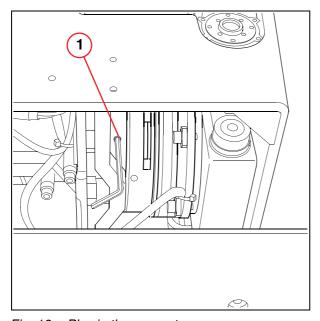


Fig. 19: Play in the support arm

• Check the 3 mounting screws (1/Fig. 19 / p. 26) for tightness in the rotation axis.

#### PMP Checking the movement and braking forces

 Check the movement forces with the brake released using a spring balance (here, also make sure there is smooth movement).

	Movement Forces	Braking Forces
Longitudinal movement	≤ 30 N	90 - 120 N
Transverse movement	≤ 30 N	90 - 120 N

### 5 Final Work Steps

### 5.1 Special Requirements

#### 5.1.1 Required Documents

n.a.

#### 5.1.2 Required Tools and Measuring Equipment

Ground wire test meter

Ground wire test meter (the test meter must meet the specifications of IEC 61557 / EN 61557 / VDE 0413 / IEC 62353),

e.g.: SECUTEST  $\bullet$  SIII , PROFITEST  $\bullet$  0100S-II, Metriso G 500, Metraohm 413, Metraline RLO Check, MTECH\*

\* Order directly from:

GMC-I Messtechnik GmbH

Südwestpark 15

D-90449 Nuernberg

Germany

Telephone +49 911 8602-0

Fax +49 911 8602-669

e-mail: info@gossenmetrawatt.com http://www.gossenmetrawatt.com

#### 5.1.3 Required Aids

n.a.

#### 5.1.4 Required Materials

n.a.

#### 5.1.5 Product-specific Safety Information

n.a.

#### 5.1.6 Work Time/Maintenance Interval

• 20 minutes / 12 months

### 5.2 Inspection and Maintenance

#### **Installing the Cover Panels**

 Install all cover panels that are not yet installed in the reverse sequence. When doing this, absolutely connect the ground wires if present.

#### SIE Measurement of Ground Wire Resistance according to IEC 62353

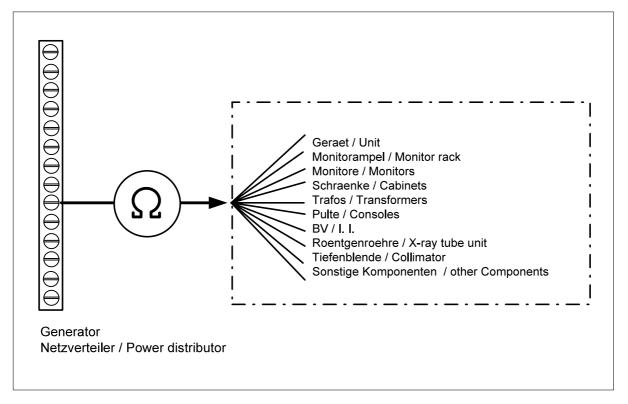


Fig. 20: Ground wire check with fixed power connection

• Switch off power to the system.

#### NOTE

To record the maintenance steps and in particular the ground wire measurement, the certificate

XP00-000.835.02 or "XP00-RFU.835.01" (simplified version) must also be filled out.

According to IEC 62353, the measured values must be compared to the old values. The old values can be seen in the

- \* Startup Certificate
- \* old Maintenance Certificate
- \* old certificate for the checks per IEC 62353 XP00-000.835.02 or "XP00-RFU.835.01".

If significant differences are found or if the measured values exceed 180 mOhm, it may be necessary to initiate corrective measures.

As a rule, the ground wires are not connected or not correctly connected.

#### Test procedure:

- Measure between all conductible parts of the system that can be touched and the ground wire bus rail (e.g. in the generator, power distributor).

If using direct current, repeat the measurement with the opposite voltage polarity. Both measured resistance values may not exceed the permissible value.

The measurement values between the generator "ground wire bus rail" and the installed guide rails, i.e., large mechanical parts of the components, must be recorded.

Measurement values on "paneling screws", etc. are reproducible only with difficulty.

Maximum value: 0,2  $\Omega$  (Observe country-specific regulations!) **Exception**: Accessory rails on the collimator and tabletop.

#### NOTE

#### **Exceptions:**

Accessory rails on the collimator and tabletop.

Components with Voltage less than/equal to 24 Volts

Covers, which cover electrical components with voltages lower than/equal to 24 V.

#### NOTE

For customers without a service contract, a label "Next maintenance, MM.YY" can be placed close to the operating location.

#### SI Perform the final function check.

This check should include the following:

- If configured,
  - check triggering of exposure on "film" or using the indirect technique.
  - Fluoroscopy / Viewing on the Monitor
- Unit movements, motorized and manual
- If needed, reset the service indicator.
  - ⇒ For example, on the RADIS image system.

<sup>&</sup>quot;Hat and coat check!!!"

# **6** Changes to Previous Version

Chapter	Section	Changes
3D TOP Ceiling Stand	Inspection and Maintenance	Checking for slivers and measurement of the safety steel cable deflection integrated into text.

# 7 List of Hazard IDs

There are no Hazard IDs in this document.