



Changer racks

Changer racks on coordinate measuring machines for automatic changing of stylus systems

Operating Instructions



Read this first!

- Please read these operating instructions before using the ZEISS product.
- For your own safety, keep all relevant accompanying documents always ready at hand.

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Contact

Carl Zeiss
Business Group
Industrielle Messtechnik GmbH
Carl-Zeiss-Str. 22
73447 Oberkochen, Germany

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Preface

About this document

These operating instructions describe the changer racks used on ZEISS CMMs. To find out which changer rack can be used on your CMM, refer to the operating instructions for your CMM.

These operating instructions address operators and users of the coordinate measuring machine.

NOTE

Additional information on the respective changer rack can be found in the separate operating instructions for the specified changer racks. The product-specific operating instructions are supplied with the product.

Separate documents

The changer rack is used for the automatic change of stylus systems, optical probes and roughness sensors. The following separate documents are available:

- Contact probing systems
- Optical Probing Systems
- Articulating systems
- Changer racks
- Roughness sensors

The separate operating instructions can be found on the supplied data carrier.

Configuration of safety instructions

Safety instructions indicate a personal health hazard. We distinguish three different levels: danger, warning and caution. All three safety instructions are marked with the same warning symbol. The designation of the safety instruction is shown beside the symbol. The safety instructions used are described below.

Configuration of a safety instruction

A safety instruction may have the following components:

- Warning symbol and designation of the safety instruction (signal word): Danger, Warning or Caution.
- Source and cause of the danger
- Consequences for the user due to non-observance of the safety instruction
- Required measures to be taken by the user to avoid possible consequences
- A measure may cause an intermediate result.
- At the end of all measures, a final result may be obtained.

Personal health hazard



⚠ DANGER

A »danger« indicates an imminent risk to life and limb.

Non-observance of this safety instruction when the described risk occurs causes death or serious injuries.

Example: Electric shock due to high electric voltage.



⚠ WARNING

A »warning« indicates a possible risk to life and limb.

Non-observance of this safety instruction when the described risk occurs may cause death or serious injuries.

Example: Risk of severe crushing of the body caused by heavy loads.



⚠ CAUTION

A »caution« indicates a personal health hazard.

Non-observance of this safety instruction when the described risk occurs may cause slight to moderate injuries.

Example: Risk of minor crushing of the limbs caused by small loads.

Risk of material damage

If there is no personal health hazard, but the CMM or components may get damaged, this is pointed out by the following notice.



This symbol refers to possible damage to the CMM.

Non-observance of this safety instruction when the event occurs may cause damage to the CMM or one of its components.

Example: Collision of the probing system with a workpiece.

Markup elements

Text may be displayed differently in this document. Examples and the meaning of the representation type are described below:

Example	Meaning
<i>not</i>	Words to be emphasized are represented in <i>italics</i> . The italic print is sometimes used to mark a subheading, e.g. <i>Examples</i> :
<i>Main switch</i>	Any reference to control elements in the text is highlighted typographically.
Tolerance field	Designation of parts of software windows.
Cancel	Marking of buttons
RETURN	Keys of the keyboard are represented as small capitals.
"InstallShield Wizard completed"	Software messages
File → Open	Representation of menu items
Code	Source code
...\CALYPSO\protocol\protocol	File and directories
CALYPSO	Product name
ZEISS	Company name
CAUTION! The measuring table must be clean.	Safety instructions embedded in the text.
Note: Pay attention to the correct orientation of the qualification marks.	Note embedded in the text.
[1]	Representation of position numbers in texts

1

Introduction

This chapter contains:

Delivery package.....	1-2
Warranty and standards.....	1-3

Delivery package

The delivery package depends on the type and size of the changer rack. A description of the product and a list of the included parts are included in the packaging of the changer rack components.

Warranty and standards

Operating instructions for the CMM

The probing system is part of the CMM, for which certain standards apply. Furthermore, to operate the CMM, the safety instructions must be observed. See the operating instructions for the respective CMM.

The operating instructions for the CMM include information on the following topics:

- System safety
- Standards, regulations, and directives
- Warranty
- Safety

2

Safety

This chapter contains:

Intended Use	2-2
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Intended Use

The changer rack is used for the automatic change of stylus systems, optical probes and roughness sensors. This changer rack must not be used for other purposes.

Stylus system holders

The prerequisite for the automatic change is the presence of stylus system holders. The holders are mounted to the profile rails of the changer rack. Different holders can be mounted to a profile rail. The number of stylus system holders per profile rail depends on the type of holders.

NOTE

No forces are permitted to act on the holders because the holders can be damaged and their function may be impaired.

Reasonably foreseeable misuse

The changer rack must not be used for purposes contrary to the intended use.

Examples of reasonably foreseeable misuse:

- Only ZEISS stylus system holders are allowed to be mounted on the profile rails of the changer rack.
- It is not allowed to place tools or workpieces on the profile rails and stylus system holders.

3

Description

This chapter contains:

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Changer racks for CMM in a production environment	3-15
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Overview

The following changer racks are available:

Changer rack	Description
Changer rack for bridge-type CMMs	
MSR	The changer rack consists of two frame supports and at least one profile rail. Up to three profile rails are possible. Holders are mounted to the rails. This changer rack is available in different sizes.
MSR mini	The changer rack consists of a frame support and two profile rails of different lengths. Holders are mounted to the rails. Only one size of the changer rack is available. The horizontal profile rails have different lengths and can be remounted, if necessary. This changer rack is used for CMMs with small measuring volume. Note: In some countries, a changer rack version with only one profile rail is available.
ProMax	Changer rack with movable stylus system holders. Depending on the changer rack version, either single holders or profile rails with several holders can be moved. The changer rack is placed outside the measuring volume.
ProMax E	In principle identical with ProMax. Difference: electric drive for the movable stylus system holders.
Changer rack for horizontal-arm CMMs	
For RDS	The changer rack consists of a broad vertical system profile and two horizontal profile rails. Two stylus system holders can be mounted to a horizontal profile rail.
For CSC	In principle, the same as for RDS.
For DSC	In principle, the same as for RDS. In addition, a temp unit is located on the changer rack.
Changer racks for CMM in a production environment	
For DuraMax	The changer rack consists of a profile rail which is mounted to the wall of the CMM cast body.
For CenterMax	In principle, the same as for DuraMax. A possible second profile rail is optional. With a restriction of the measuring range, even a third profile rail is possible. Alternatively, a special ProMax changer rack can be mounted.

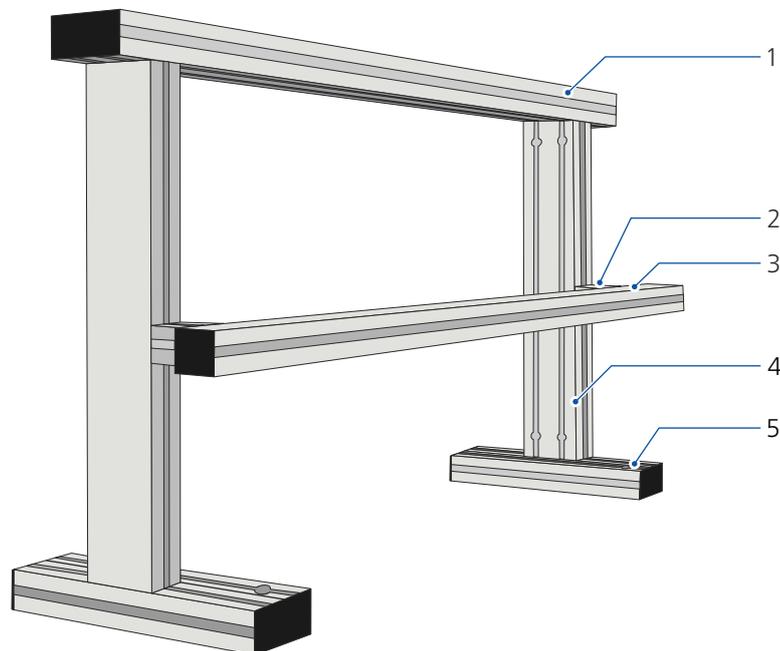
Changer rack	Description
For GageMax	In principle, the same as for DuraMax. Alternatively, a special ProMax changer rack can also be mounted.

Changer racks on bridge-type CMMs

MSR

The changer rack comes standard with two tiers: a fixed-height horizontal frame profile rail and a height-adjustable profile rail. A possible third profile rail is optional. The profile rails are mounted on the frame support.

The unit is preassembled. The height of the changer rack depends on the CMM.



- 1 Frame profile rail
- 2 Spacer for mounting profile rail; height-adjustable
- 3 Profile rail
- 4 Frame support (leg)
- 5 Foot profile; consisting of mounting and guide profiles

Height and length of the changer rack:

Changer rack height	450 - 800 mm
Changer rack length	800 - 1600 mm

NOTE

The height and length of the changer rack depends on the CMM.

Width of the profiles:

80 mm	Frame profiles: foot profile, frame support, frame profile rail
40 mm	Rail, spacers

Stylus system holders

Holders for the adapter plates of various probing systems can be mounted on the profile rails. The holders can be mounted anywhere along the rail.

Foot profile

The foot profile consists of a mounting profile and a guide profile. These two profiles form a unit. The mounting profile has a through hole for fastening to the measuring table. The guide element features a groove that allows you to mount the legs as needed. There is an additional groove on the side of the guide profile that allows you to connect mounting brackets.

Mounting bracket

Mounting brackets are an optional alternative for fastening the rack to the measuring table. Mounting brackets are preferred when the changer rack needs to be mounted in the Y axis and insufficient space is available for this purpose in the X axis.



Mounting bracket [1]

Frame supports

The profile rails are mounted on the frame supports. Spacers are provided for this purpose.

MSR mini

There are two variants:

- Standard: MSR mini with profile rails of different lengths
- Option: MSR mini with end-to-end profile rail

This variant is supplied in some countries for CMMs with small measuring volume. This changer rack is a bit more narrow and must not be converted.

Order number of the changer rack:

	Order number
MSR mini (standard)	626100-9392-000
MSR mini (option)	626100-9352-000

Height and width of the changer racks:

	MSR mini (standard)	MSR mini (option)
Height	450 mm	485 mm
Width	720 mm	600 mm

Standard



Collision with bridge support in case of a small measuring volume.

When the MSR mini (standard) is delivered, the lower profile rail is too long for CMMs with small measuring volume. The profile rail would collide with the bridge support.

- Convert the changer rack. ➤ See [⇒ 4-9]



Converted MSR mini

- 1 Frame profile rail
- 2 Frame support (leg)
- 3 Foot profile
- 4 Holder

The changer rack has two profile rails. One rail is mounted at the top of the frame support. The other one is attached to the side of the frame support and can be adjusted in height. The unit is preassembled.

Stylus system holders

Holders for the adapter plates of the VAST can be mounted to the profile rails. The holders can be mounted anywhere along the rail.

Width of the profiles:

- 80 mm Frame profiles: foot profile, frame support, frame profile rail
- 40 mm Rail, spacers

Foot profile

The foot consists of a fastening and a guide element. that form a unit. The mounting profile has a through hole for fastening to the measuring table. The guide element features a groove that allows you to mount the legs as needed. There is an additional groove on the side of the guide profile that allows you to connect mounting brackets.

NOTE

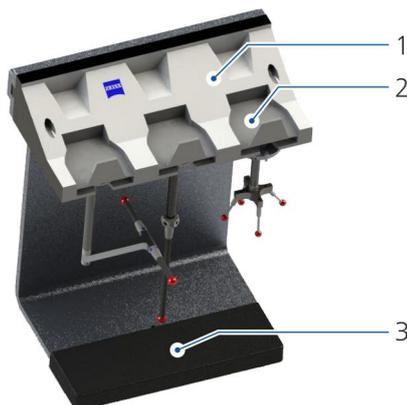
The base on the variant with only one profile rail consists of a metal plate.

Mounting bracket

Mounting brackets are an optional alternative for fastening the rack to the measuring table. Mounting brackets are preferred when the changer rack needs to be mounted in the Y axis and insufficient space is available for this purpose in the X axis.

VAST XXT changer rack

On optical CMMs, also the contact probe VAST XXT is used. For this probe, a changer rack is available.



VAST XXT changer rack

- 1 Storage unit with three rack holders
- 2 Holder
- 3 Magnetic base with pins on the bottom for fastening to the steel frame of optical CMMs

NOTE

The holder of the storage unit can be different. The form of the holder depends on the CMM.

ProMax (option)

ProMax is a changer rack with movable stylus system holders. Depending on the changer rack version, either single holders or profile rails with several holders can be moved.

The changer rack offers the advantage that the entire measuring range can be used for measurements. The changer rack is mounted outside the measuring range. During stylus system change-out, the selected holder moves into the measuring range. Once the new stylus system has been installed, the holder moves again out of the measuring range.

A linear module with pneumatic cylinder is used for moving the holders. The pneumatic cylinder requires compressed air. A service unit is necessary for pressure control. If the CMM is equipped with a service unit, the pneumatic cylinder will be connected to this service unit. If the CMM does not require compressed air, a service unit needs to be provided for the ProMax. This service unit is supplied by ZEISS.

NOTE

Separate operating instructions are available for ProMax. These operating instructions contain detailed information on the changer rack.

ProMax E (option)

ProMax E is a changer rack with movable stylus system holders. Depending on the changer rack version, either single holders or profile rails with several holders can be moved.

The changer rack offers the advantage that the entire measuring range can be used for measurements. The changer rack is mounted outside the measuring range. During stylus system change-out, the selected holder moves into the measuring range. Once the new stylus system has been installed, the holder moves again out of the measuring range.

An electrically driven linear module is used for moving the holders.

NOTE

Separate operating instructions are available for ProMax E. These operating instructions contain detailed information on the changer rack.

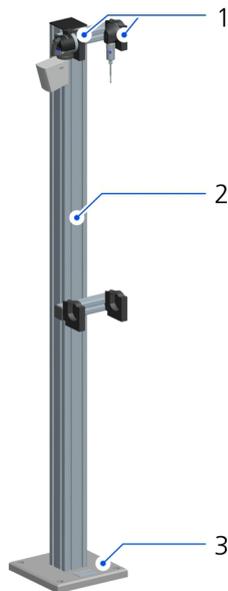
NOTE

For the installation of the ProMax E, three threaded bushings must be provided on the rear of the measuring table. See the operating instructions for the respective CMM.

Changer racks on horizontal-arm CMMs

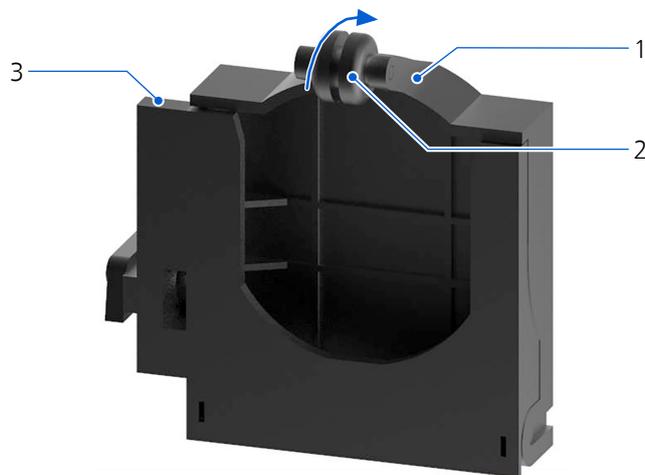
Changer rack with RDS holders

The changer rack consists of a vertical profile rail and a base plate for fastening on the measuring plate. Two rack holders are positioned on two horizontal profile rails respectively.



- 1 Stylus system holders on a horizontal profile rail
- 2 Vertical profile rail
- 3 Base plate with through holes for fastening on the measuring plate

RDS holder



RDS holder

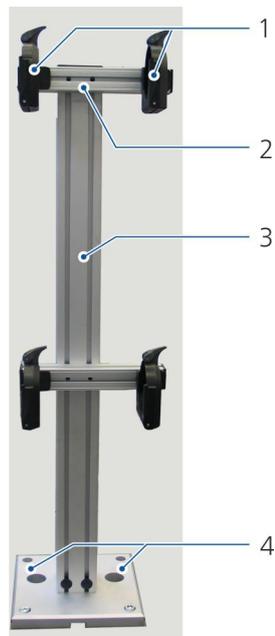
- 1 Swiveling protection for adapter plate
- 2 Role
- 3 Qualification corner

In the RDS stylus system holder, RDS adapter plates and some optical probes can be deposited.

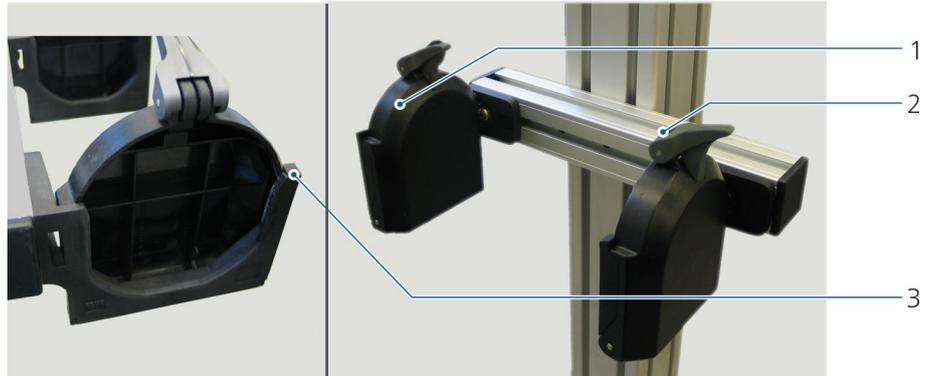
Order no.: 621770-8040-000

Changer rack with CSC holders

The changer rack consists of a vertical profile rail and a base plate for fastening on the measuring plate. Two rack holders are positioned on two horizontal profile rails respectively.



- 1 Stylus system holders
- 2 Horizontal profile rail
- 3 Vertical profile rail
- 4 Base plate with through holes for fastening on the measuring plate



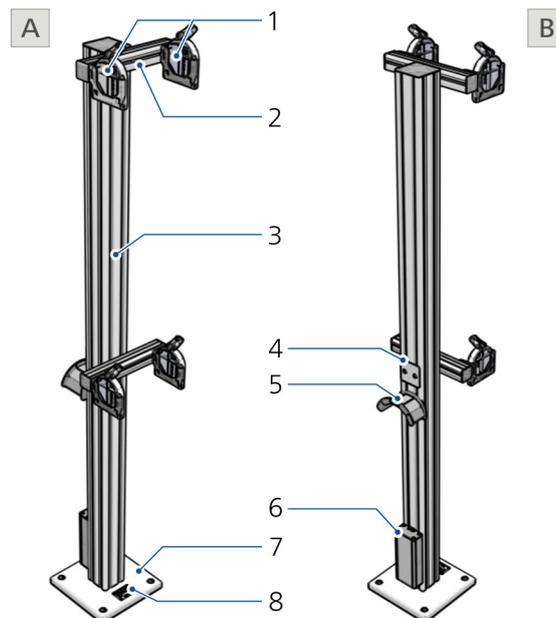
- 1 Swiveling flap
- 2 Lever for swiveling the flap while holding the adapter plate during automatic changing
- 3 Corner for qualification of the rack holder

In the CSC stylus system holder, CSC adapter plates and the optical probe EagleEye can be deposited.

Order no.: 621770-8040-000

Changer rack for DSC with ZCR 85 holders

The changer rack consists of a vertical profile rail and a base plate for fastening on the measuring plate. Two rack holders are positioned on two horizontal profile rails respectively.

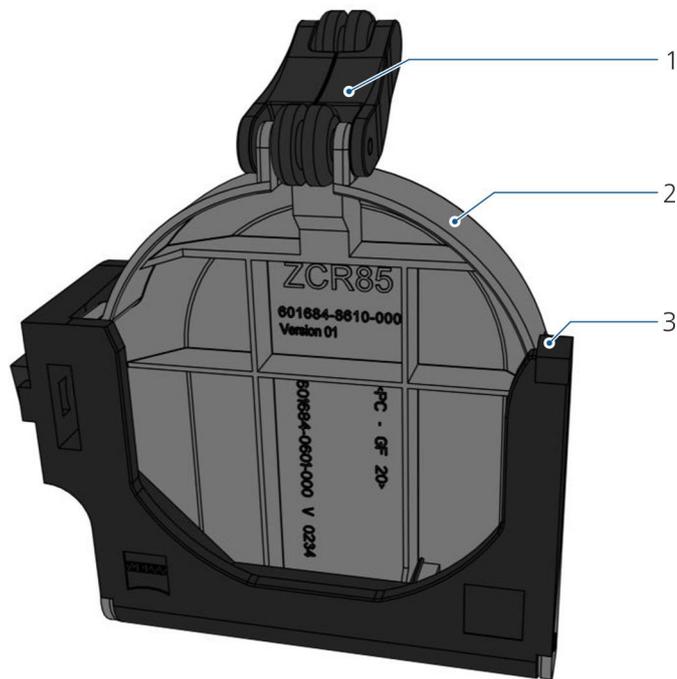


A Front view

B Rear view

- 1 Stylus system holders
- 2 Horizontal profile rail
- 3 Vertical profile rail
- 4 Magnet plate for magnetic temperature sensor
- 5 Cable support plate for temperature sensor
- 6 Box for connectors of the temperature sensors
- 7 Base plate with through holes for fastening on the measuring plate
- 8 Type label

Stylus system holders



ZCR 85 holder

- 1 Lever for swiveling the flap while holding the adapter plate during automatic changing
- 2 Swiveling flap
- 3 Corner for qualification of the rack holder

In the ZCR 85 stylus system holder, DSC adapter plates and the optical probe EagleEye can be deposited.

Designation

Order number

ZCR 85

601684-8610-000

NOTE

A DSC adapter plate can only be deposited in a ZCR 85 stylus system holder.

NOTE

For an automatic change of the probe, the holder must be qualified.
Please see the user guide for the measuring software.

Changer racks for CMM in a production environment

Changer rack for DuraMax

The changer rack is composed of a profile rail and at least one storage unit with three rack holders for VAST XXT adapter plates. It is possible to mount up to four storage units on the profile rail.



Changer rack on the DuraMax

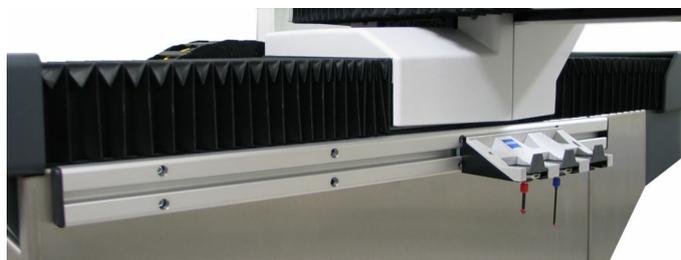
- 1 Storage unit for three VAST XXT adapter plates
- 2 End cap
- 3 Profile rail

NOTE

Eleven of twelve rack holders can be used for the automatic stylus system change. The last rack holder on the right side can only be used for manual storage of a stylus system.

NOTE

Due to the insulation of the DuraMax HTG basic body, the storage unit is moved by 13 mm into the measuring range.



Changer rack on the DuraMax HTG

Changer rack for CenterMax



Components of the changer racks

Changer racks supplied for retrofitting purposes are delivered unassembled.

Scope of delivery:

- Rail to mount the holders
- Holders:
 - 8 holders belong to a changer rack.
 - The holders are preassembled.
- Screws and mounting aids.

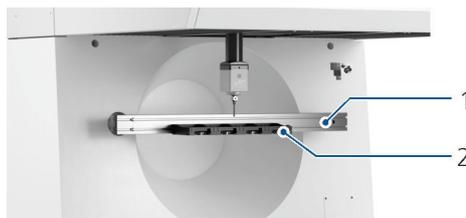
Two changer racks are available for CenterMax. One rack is included in the standard version and the other rack can be ordered:

Order numbers:

000000-1038-094	Standard
-----------------	----------

000000-1038-093	Option
-----------------	--------

Changer rack for GageMax



1 Profile rail

2 Holder

Components of the changer racks

Changer racks supplied for retrofitting purposes are delivered unassembled.

Scope of delivery:

- Rail to mount the holders
- Stylus system holders
The holders are preassembled.
- Screws and mounting aids.

Order number for the changer rack:

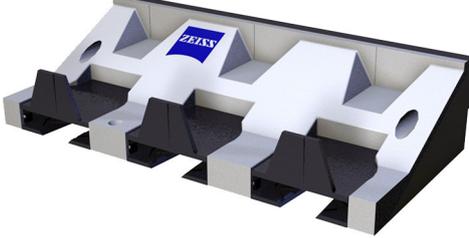
621910-8260-000

Including 4 VAST holders

Stylus system holders

Overview

The following holders can be mounted to a changer rack.

Probing system	Holder	Comment
VAST gold VAST XT gold	 <p data-bbox="533 801 660 835"><i>VAST holder</i></p>	NOTICE! The VAST holder must not be used for the VAST XTR gold.
VAST XTR gold VAST gold with articulating stylus ZAS	 <p data-bbox="533 1086 681 1115"><i>ZCR 70 holder</i></p>	NOTICE! For VAST gold, only in combination with articulating stylus ZAS.
XDT VAST XXT	 <p data-bbox="533 1391 762 1420"><i>VAST XXT storage unit</i></p>	This is a storage unit with three holders. The storage unit is mounted on the profile rail of a changer rack.
	 <p data-bbox="533 1653 746 1682"><i>ZCR-28-1-1W holder</i></p>	The single holder is mounted to the profile rail of a changer rack.
RDS	 <p data-bbox="533 2033 651 2063"><i>RDS holder</i></p>	

Probing system

Holder

Comment



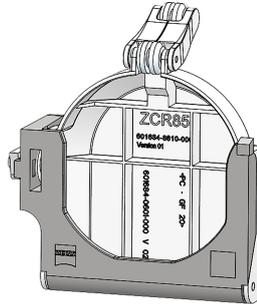
RDS holder for DotScan

CSC



CSC holder

DSC



ZCR 85 holder

4

Handling

This chapter contains:

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Note on the operation

Automatic stylus system change

The prerequisite for the automatic change is the presence of stylus system holders. The holders are mounted to the profile rails of the changer rack. Different holders can be mounted to a profile rail. The number of stylus system holders per profile rail depends on the type of holders:

- A minimum distance is not required for VAST stylus system holders since the stylus system is placed into the holder from the front.
- For RDS stylus system holders, a minimum distance is required since stylus systems or optical probes are placed into the holder from the side. Please see the user guide for the measuring software.

For CSC and DSC, the same requirements as for RDS apply.

Qualification

NOTE

For an automatic change of the stylus system, the holder must be qualified. Please see the user guide for the measuring software.

Safety notes

Holder



Risk of damage to the stylus system holders due to high force.

Destruction of a stylus system holder or impairment of its function.

- Do not lay or place any articles on the stylus system holders.
- Do not lean on a stylus system holder.

Changer racks on bridge-type CMMs

Setting up the MSR changer rack

Notes



⚠ CAUTION

Risk of injury during travel movements in the changer rack area.

If the distance between the column of the bridge and the changer rack is too small, there is a risk of jamming and crushing of the fingers.

- The changer rack must be installed such that there is a distance of at least 25 mm between the changer rack and the column of the bridge.



Exact changer rack alignment is necessary to enable trouble-free stylus system change. The deviation must not exceed 0.1 mm over the total length of the profile rail.

- Align the changer rack such that the deviation of the profile rail does not exceed 0.1 mm.

NOTE

For the MSR changer rack certain points must be observed:

- The changer rack may only be used in connection with ZEISS coordinate measuring machines.
- Only rack holders approved for use with ZEISS coordinate measuring machines may be mounted.
- The rack holders must be located within the CMM travel range. Otherwise the rack holders cannot be qualified.

Fastening the changer rack onto the measuring plate

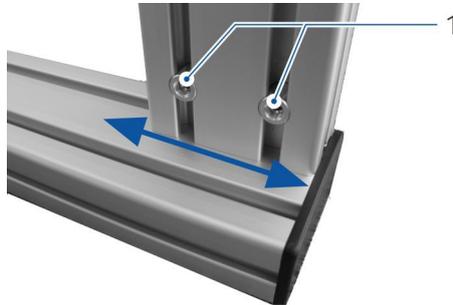
The changer rack is usually installed on the back of the measuring table in parallel to the X axis. Alternatively, it may also be installed in parallel to the Y axis. It is important during installation to make sure that the changer rack is completely aligned lengthwise.

Frame support distance The distance between the frame supports should be between 400 mm and 1000 mm, depending on the size of the changer rack.

When mounting, proceed as follows:

- 1 Fasten the changer rack to the measuring plate; screws M12, DIN 912.

- Loosen the lower set screws on both frame supports, two each per support.



1 Set screws

- Slide the frame supports along the guide profile out of the measuring area.
The qualification points for the holders must lie within the measuring range.
- Align the profile rail (< 0.1 mm/m).
- Retighten the set screws.

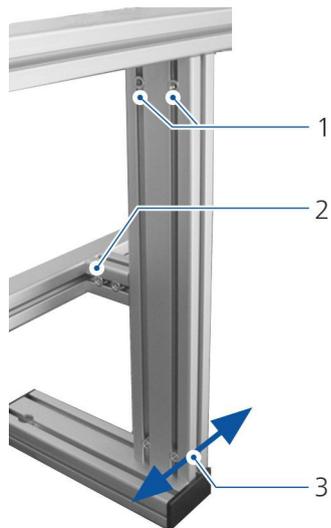
Fastening the changer rack with mounting brackets (option)

For special applications, there is the possibility of fastening the changer rack with mounting brackets. The mounting brackets make a continuous adjustment of the foot profile on the Y axis possible.

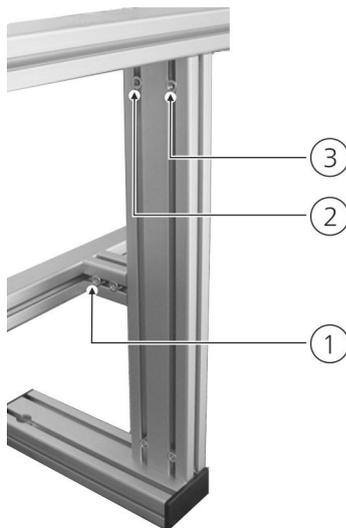


1 Mounting bracket with screw M12, DIN 912

- Hook the first mounting bracket in the side longitudinal slot of the foot profile and screw the mounting bracket onto the measuring plate.
- On the opposite side, loosen the set screws on the spacer bolt and the frame support.



- 1 Set screws on the frame support.
 - 2 Set screw on the spacer bolt; here the set screw for fastening the profile rail.
 - 3 Direction of movement when moving the second foot profile.
- 3** Fasten the opposite foot profile:
- Hook the mounting bracket in guide profile.
 - Slide the foot profile including the supports until the mounting bracket can be screwed onto the measuring plate.
 - Screw the mounting bracket onto the measuring plate.
- 4** Screw the set screws in the specified order.



When the sequence is not followed, the changer rack can be distorted. Therefore it is absolutely necessary to maintain the above sequence.

- First screw in the set screws onto the spacer bolt.
- And only then screw the set screws into the frame supports, see illustration.

Setting the height of the profile rail

The height of the lower profile rail can be adjusted. Proceed as follows:

- 1 Loosen the set screw on both spacer bolts.



- 1 Set screw on the spacer bolt; here the set screw for fastening on the frame supports.
- 2 Slide the profile rail to the desired height.
- 3 Align the profile rail (< 0.1 mm/m).
- 4 Retighten the set screws.

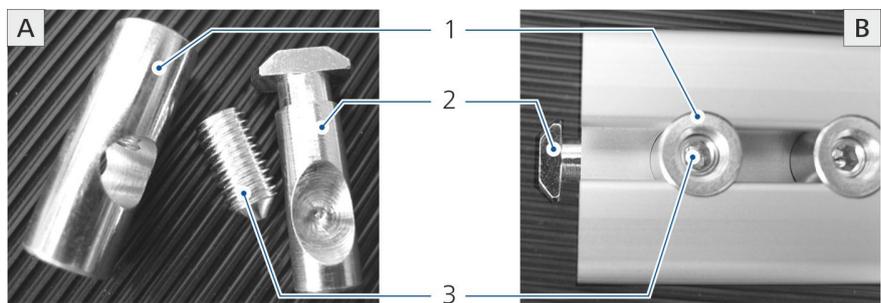
Mounting additional profile rails (option)

For higher changer racks, a third level can be set up.

NOTE

For the third level there is a longer spacer bolt.

- Use the longer spacer bolt for the lowest level.
- 1** If necessary, move the previously lower level up, see above.
 - 2** Mount the longer spacer bolts to the frame supports.
 - Loosen the set screws on the tension rod.
 - Slide the tension rod in the groove of the frame support and then turn the spacer bolt by 90°.
 - Tighten the set screw.



A Clamping set containing the tension rod, cross-piece and set screw

B Clamping set on the spacer bolt

- 1 Tension rod
- 2 Cross-piece
- 3 Set screw

- 3** Unscrew the set screw from the other side of the spacer bolt and pull the tension rod out of the spacer bolt.
The cross-piece remains in the spacer bolt.
- 4** Slide both tension rods into the groove of the profile rail and turn by 90°.
- 5** Fasten the profile rail on the spacer bolt.
 - Slide the tension rod completely into the spacer bolt.
 - Rescrew the set screws into the cross-piece. Do not tighten the tension rod yet.
- 6** Align the profile rail (< 0.1 mm/m).
- 7** Then tighten the set screws.

Setting up the MSR mini changer rack

Converting the changer rack

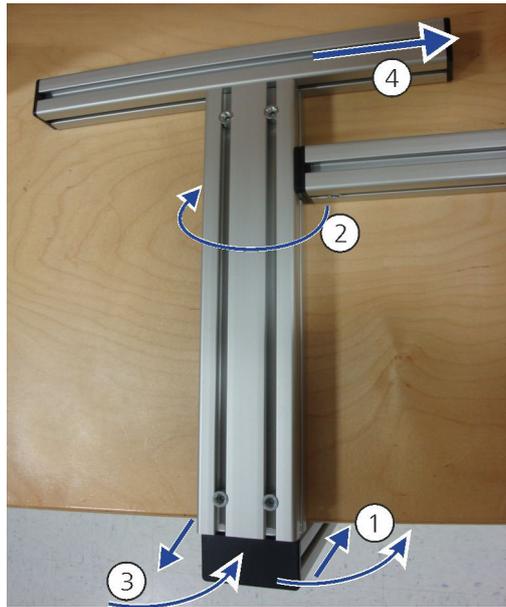
The MSR mini MSR mini changer rack is delivered assembled. For use on a CMM with small measuring volume, the changer rack needs to be converted. Otherwise, there would be a risk of collision with the bridge supports.



Condition on delivery of the MSR mini

Required modifications

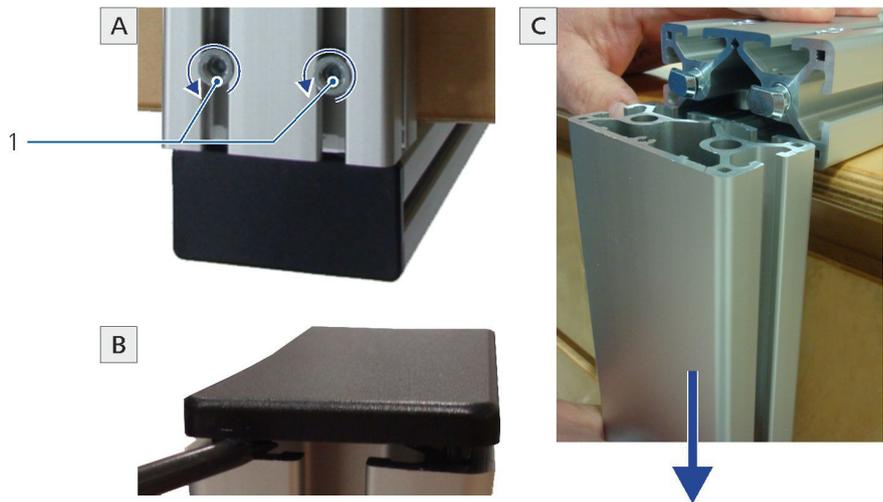
- The short profile rail must be attached to the right side of the profile support. **[2]**
You must first dismount the foot profile. **[1.3]**
- The long profile rail must be moved to the opposite side. **[4]**
The long profile rail must be mounted at a distance of at least 2.5 cm to the bridge support.



Order of modifications

Procedure

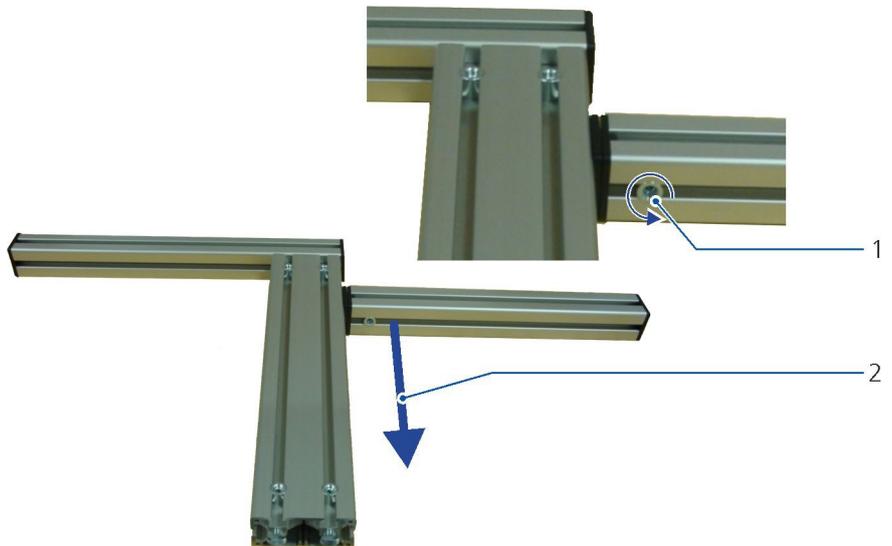
- 1 Place the changer rack on the table so that the foot profile points downwards. See above.
- 2 Loosen the screws from the profile support. **[A,1]**



- A Loosen the clamping set of the foot profile.
B Loosen the cap of the foot profile.
C Pull the foot profile downwards.
1 Screws for clamping set

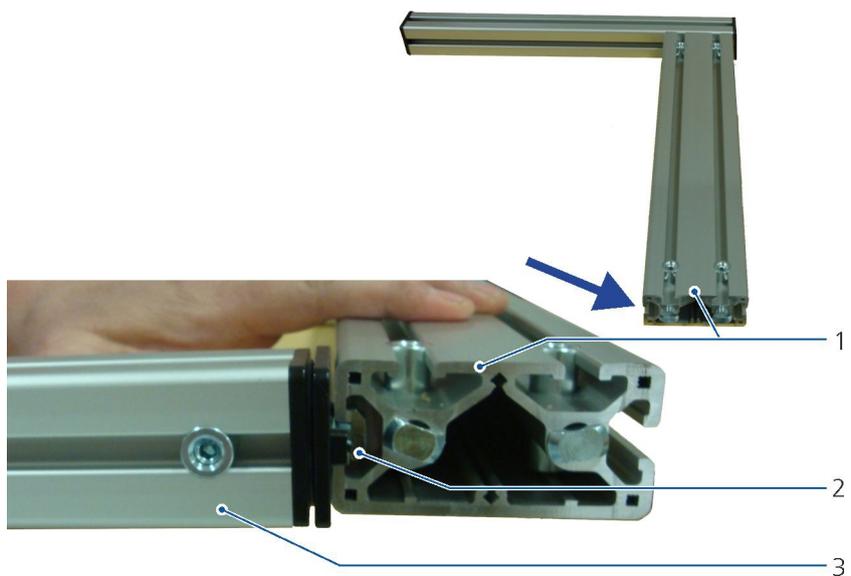
- 3 Carefully loosen and remove the black cap using a screwdriver. **[B]**
NOTICE! The foot profile and the cap must not be damaged.

- 4 Remove the foot profile from the support by pulling it downwards.
[C]
- 5 Loosen the screws from the short profile rail and pull the profile rail from the profile support.



- 1 Screw for loosening the clamping set
- 2 Movement direction for removing the profile rail

- 6 Slide the slot nut of the short profile rail into the groove on the other side of the profile support.



- 1 Profile support
- 2 Slot nut
- 3 Short profile rail

- 7 Move the profile rail towards the long profile rail and tighten the screw. **[1]**

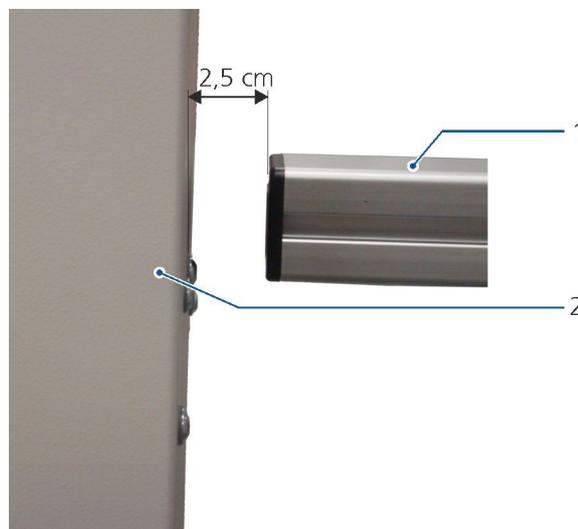


- 8 Loosen the two screws on the profile support and move the long profile rail in the direction of the arrow.



Note: The long and the short profile rail must overlap.

- 9 Mount the foot profile to the profile support.
10 Reattach the cap.
11 Screw the changer rack to the measuring table.
12 Move the profile rail to the left bridge support until the distance between the profile rail and the bridge support is 2.5 cm.



- 13** Tighten the two screws on the profile support.
The changer rack looks as follows after conversion:



Changer racks on horizontal-arm CMMs

Notes

NOTE

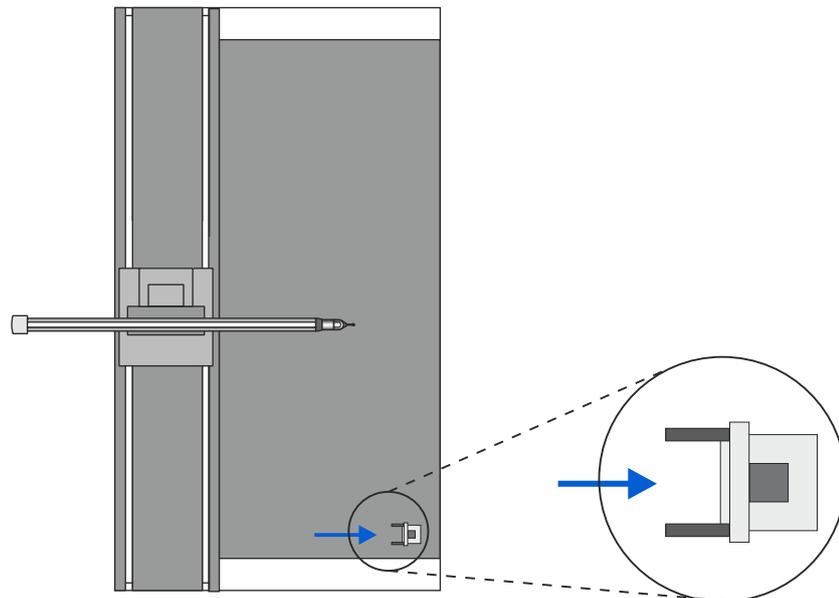
To enable trouble-free stylus system change, the profile rails for fastening the rack holders need to be aligned parallel to the CMM axes: 0.2 mm over 200 mm.

NOTE

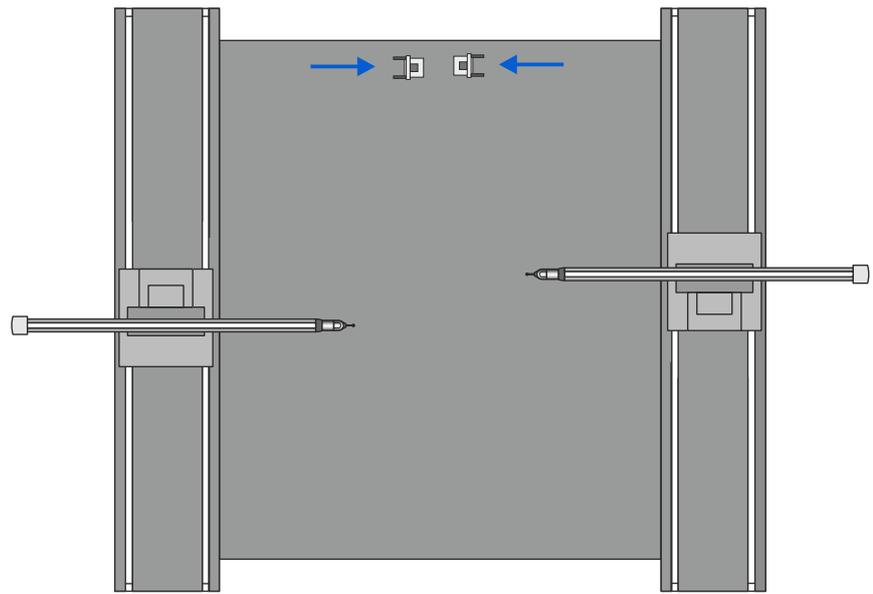
When using dual-arm CMMs, a single changer rack may only be used by one CMM. A single changer rack cannot be used by both CMMs.

Where should the changer rack be installed?

The changer rack may generally be installed at any location on the measuring plate. However, it must be ensured that probe change in the Y axis can be carried out without any collision with the workpiece and the changer rack. Preferably, the changer rack should be set up at the sides.



Changer rack for single-arm CMM



Changer rack for double-arm CMM

Changer rack for CMM in a production environment

There different requirements for changer racks on CMMs in production environment. See the operating instructions for the respective CMM.

Stylus system holders

Configuring stylus system holders

Mounting holders to the rail

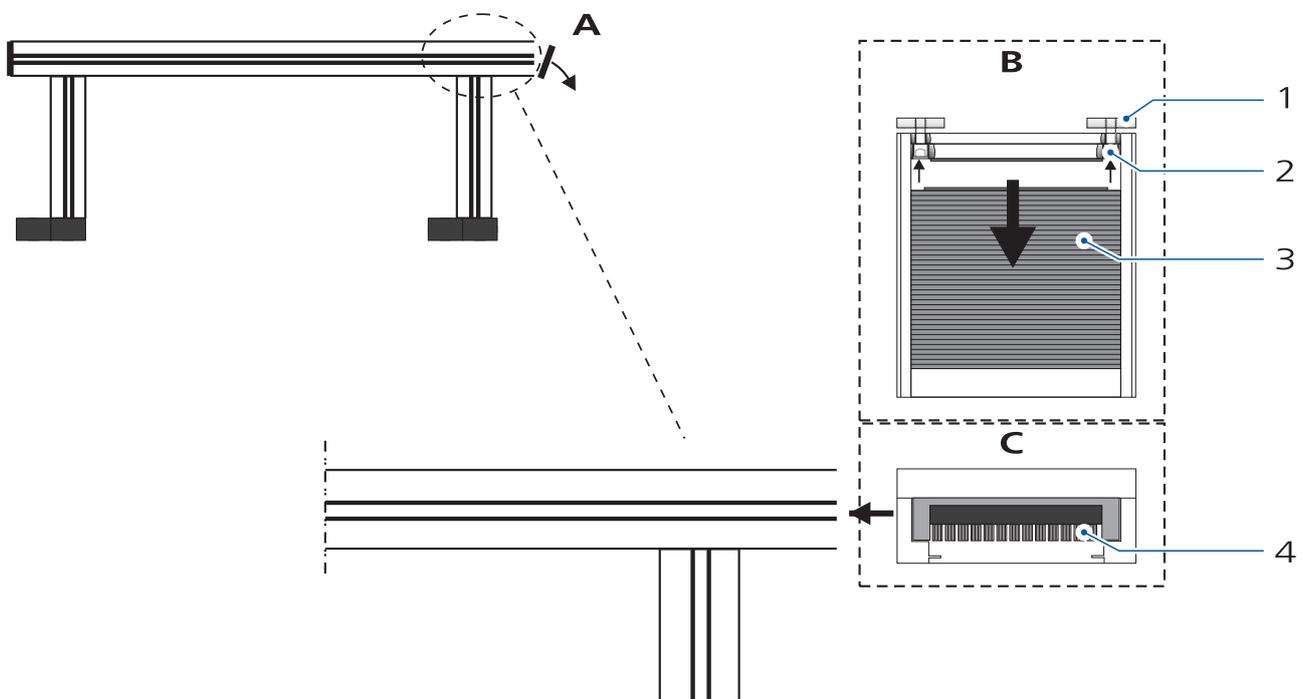
The holder versions vary depending on the probing system. Generally, fastening is the same for all versions. All holders are fastened to the profile rail using hexagon socket screws. For VAST holders two screws are required, while other holders only require one.

The holders are generally preassembled. The procedure for moving, removing, or adding a holder is described in the following.

NOTE

For the RDS holder, two washers are required to fasten the holder to the profile rail. The minimum distance between two holders must be 150 mm.

Procedure for VAST



Mounting an VAST holder

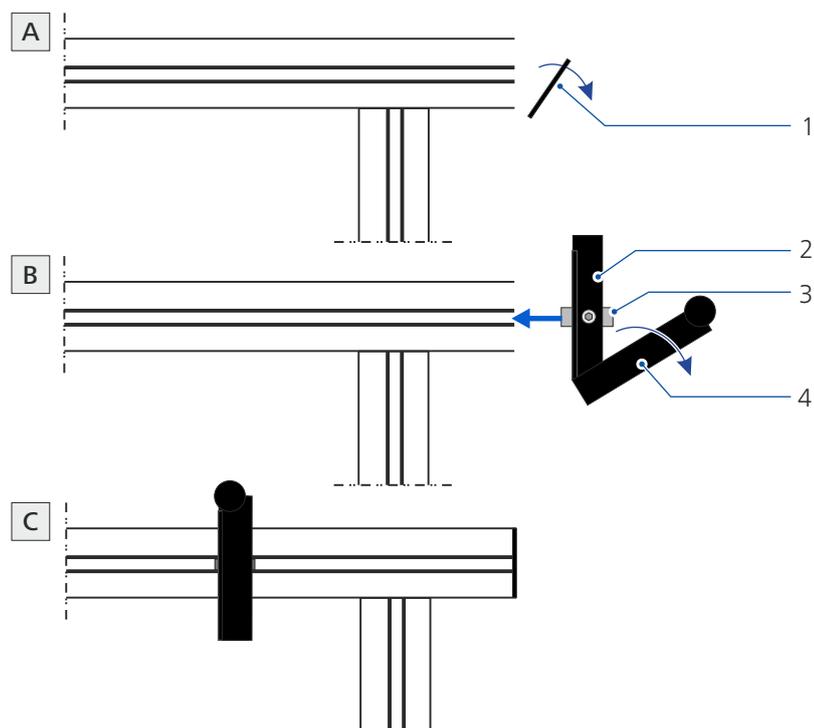
- A Cap
- B VAST holder; top view
- C VAST holder; front view
- 1 Slot nut

- 2 Screw; M6 x16
- 3 Holder cover
- 4 Brush for cleaning the adapter plate

- 1 Remove the cap. **[A]**
- 2 Move the holder cover in the direction of the arrow and slightly loosen both hexagon socket screws slightly; do *not* remove them completely from the slot nut. **[3.2]**
- 3 Slide the holder onto the rail.
The machine key must be properly inserted in the profile rail.
- 4 Proceed in the same way when sliding the other holders onto the rail.
The permissible number of holders depends on the probing system and the length of the profile rail.
- 5 Reattach the cap to the rail.
- 6 Distribute several holders evenly on the profile rail and align horizontally.
- 7 Tighten the screws. **[2]**

Procedure for RDS, CSC, and DSC

In principle, the same procedure is carried out for the stylus system holders for articulating systems.



Mounting an RDS holder

- A Profile rail without holder
 - B Mounting procedure
 - C Profile rail with holder
- 1 Cap of the profile rail
 - 2 RDS holder
 - 3 Slot nut with hexagon socket screw; M6 x16
 - 4 Swiveling holder cover

Qualifying the holders

The holders must be qualified in the following cases:

When to qualify?	Which holders are to be qualified?
When a new changer rack is installed	Qualify all holders.
If a holder is added	Qualify the new holder.
When the position of a holder changes	
A holder is moved on the profile rail.	Qualify the new holder.
The height of a profile rail was changed.	Qualify all holders on the profile rail.
Position of the changer rack was changed.	Qualify all holders on the changer rack.

For more information on qualification, please refer to the operating instructions for the measuring software.

5

Care

This chapter contains:

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Changer rack

Vacuum the changer rack and the holders and clean them with a mild cleaning agent.

- Remove all cleaning agent residue.

6

Disposal

This chapter contains:

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Disposal

The components of the changer racks can be sent in to facilities specialized in recycling reusable materials.

Glossary

Term	Explanation
DIN	Acronym for »Deutsches Institut für Normung« (German Standardization Institute)
MSR	Acronym for »Multi Sensor Rack«

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Webshop

In the webshop, you will find:

- Probe accessories

Examples: styli, extensions, adapter plates.

- CMM accessories

Examples: changer racks, clamping devices, reference spheres.

- Training material

Examples: books, learning videos.

If the desired component is not available in the webshop, please contact the support.

See <https://shop.metrology.zeiss.de>

