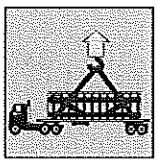
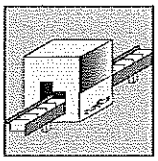
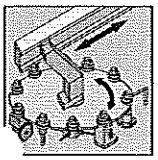


3.0.0 Transport und Abladehinweise WBZ 8-481-30-0010

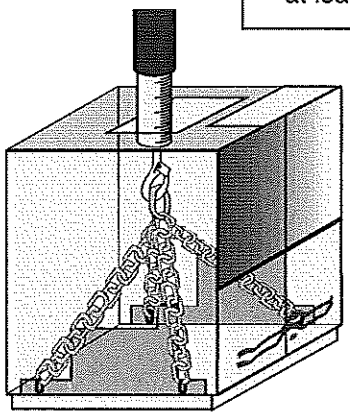


5.1.1 Processing center WBZ 8-481-51-1200



5.5.4 12-part Tool Holder 9-081-55-4130

= at least 5000 Kg



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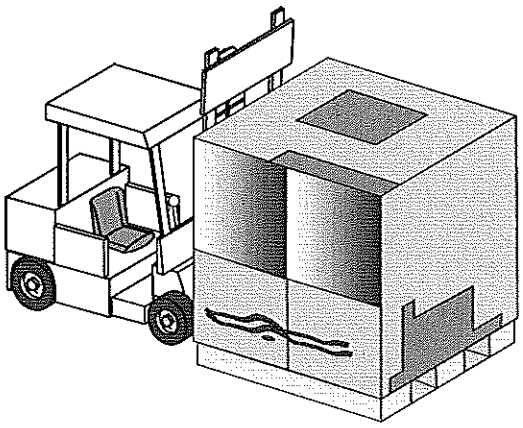

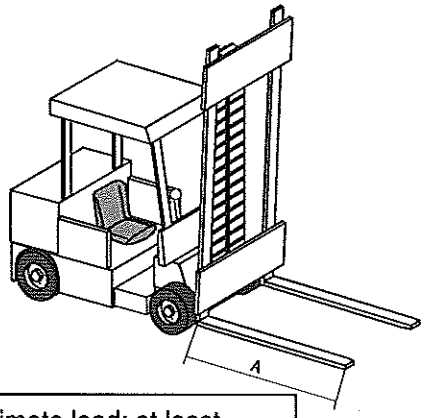

Ultimate load: at least 5000 Kg more

A = at least 200 cm

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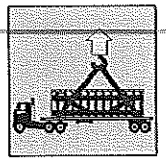
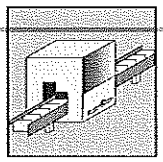
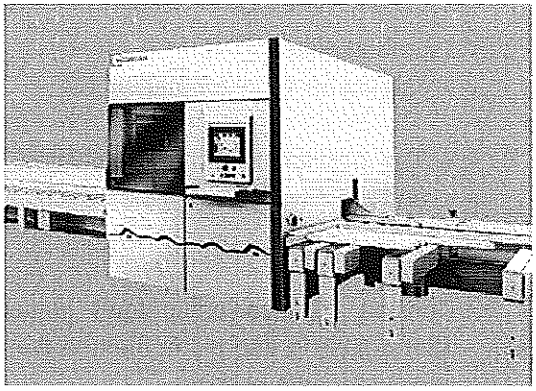




With the processing center, custom sizes are automatically created for transoms, crosspieces and top and bottom beams.

Features	Values
Type WBZ 100, 120, 150	
Line voltage	400 V
Frequency	50 Hz
Control voltage	230 VAC
	24 VDC
Abutting cross-section	VDE as for group 2
Pneumatic pressure	8 bar
Quality	DIN ISO 8473-1 class 2
Air consumption approx.	3000 Nl/min
Weight approx.	4200 kg



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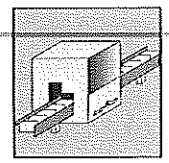
Note:
If FI is used – universal safety switches with 300 mA breaking current must be used

Contents:



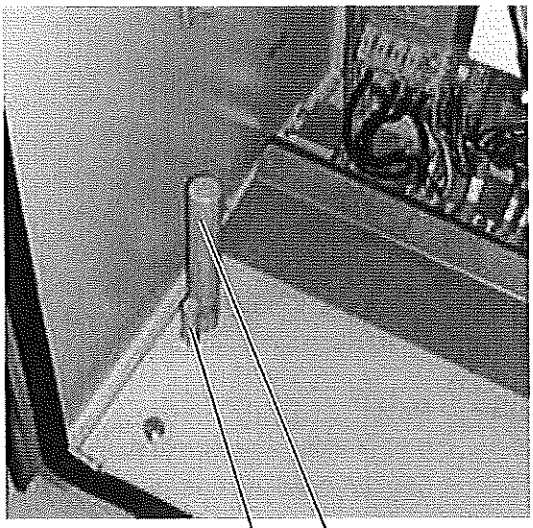
1 Adjustment tools

Positioning tools

1 x round material **1.1**
1 x adjustment tool for marker **1.2**

- The positioning tools are painted yellow and are always kept in the switch cabinet.

Caution:
Remove the positioning tools immediately after adjusting and place them in the switch cabinet for safe keeping.
➔ **Risk of collision!**



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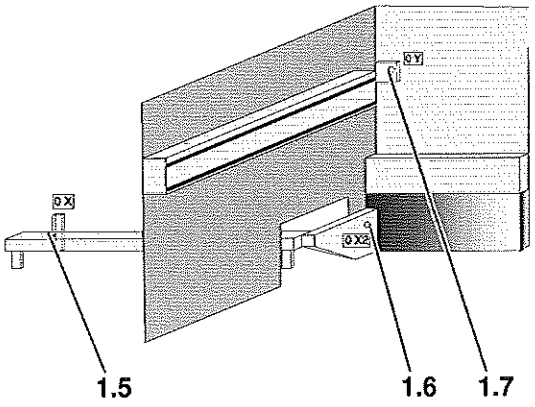
Adjustment tool for X / Y axes

Round material **1.1** Ø 30 mm, length 200 mm

Adjustment tool	Weinmann - No.
	3-613-31-1350

The positions
- **1.5** for axis X
- **1.6** for axis X2
- **1.7** for axis Y



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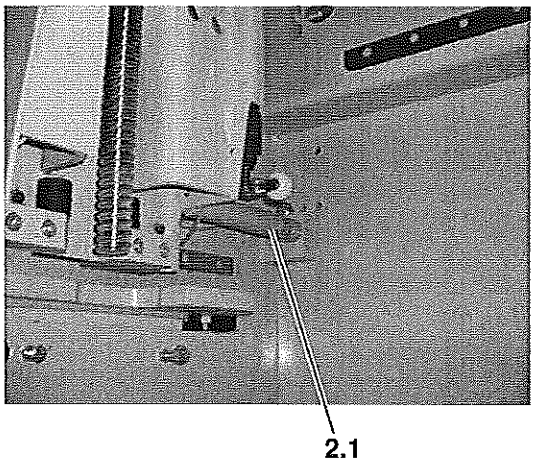
1.1 Positioning tool for Y axis

- ➢ Screw adjustment tool **2.1** into the M8 thread provided for this purpose
- ➢ Carefully push the unit against the adjustment tool **2.1** by hand
- ⇨ The dimension Y = "0" will appear in the NC menu
- ➢ If the deviation is larger, reset "0" and ☎ notify **SERVICE**
- ➢ After adjusting, remove adjustment tool **2.1**



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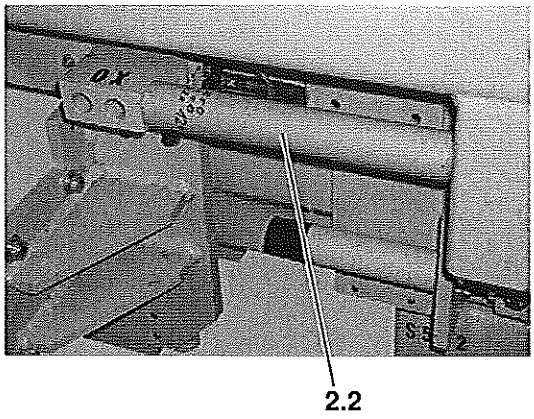
1.2 Positioning tool for X axis

- ➢ Screw adjustment tool **2.2** into the M8 thread provided for this purpose
- ➢ Carefully push the unit against the adjustment tool **2.2** by hand
- ⇨ The dimension X = "0" will appear in the NC menu
- ➢ If the deviation is larger, reset "0" and ☎ notify **SERVICE**
- ➢ After adjusting, remove adjustment tool **2.2**



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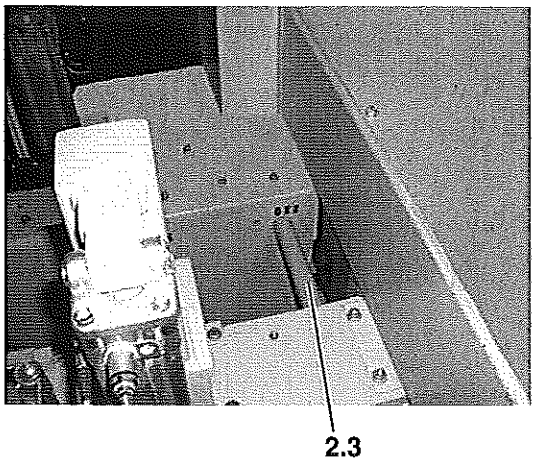
1.3 Positioning tool for X2 axis

- ➢ Screw adjustment tool **2.3** into the M8 thread provided for this purpose
- ➢ Carefully push the unit against the adjustment tool **2.3** by hand
- ⇨ The dimension
  X2 = "124"
  will appear in the NC menu
- ➢ If the deviation is larger, reset the position and ☎ notify **SERVICE**
- ➢ After adjusting, remove adjustment tool **2.3**



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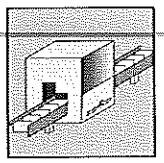
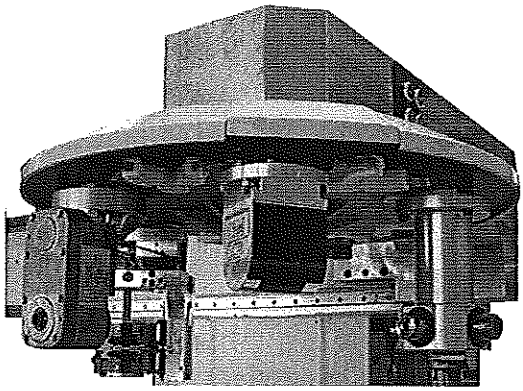


In the 12-part tool holder, tools, units and appliances are made available for automatic changing in the main spindle.

Features	Values
Type of magazine	Disc
Tool chuck	HSK-F63
Unit chuck	HOMAG interface 9-002-04-3360
Number of magazine slots	12
Pitch circle Ø	540 mm
Total weight of tool load max.	60 kg
Unit weight max.	10 kg
Tool / unit Ø max.	300 mm
Tool-/ unit height (from HSK) max.	320 mm



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Contents:

The settings and steps described below may be carried out by trained service personnel only!

1 Mechanical commissioning

Tool list, rigid tool holder

- Frame water level
  (frame length max. 120 mm)
- Caliper gauge
- Measuring device (4-204-00-0346)
- 2 strap elements M12 (4-005-16-0418)
- Carrying loop
- Shackle

Tool list, drive up tool holder

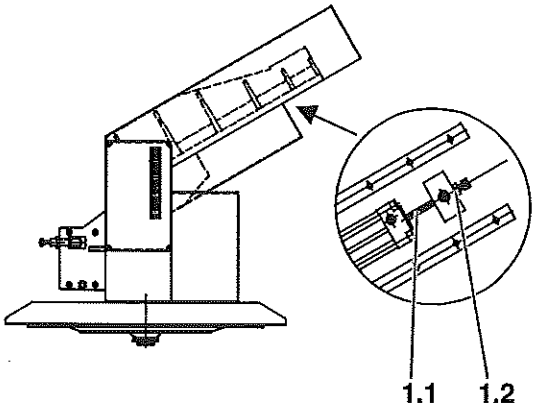
- Frame water level
  (frame length max. 120 mm)
- Caliper gauge
- Measuring device (4-204-00-0346)
- Goose neck wrench DIN 1810 B 58-62
  (4-014-05-0027)
- Offset screwdriver DIN 911 SW12
  (4-014-06-0010)
- 2 strap elements M12 (4-005-16-0418)
- Carrying loop
- Shackle

Tool list, traveling tool holder

- Frame water level
  (frame length max. 120 mm)
- Caliper gauge
- Measuring device (4-204-00-0346)
- 2 goose neck wrenches DIN 1810 B 40/42
- 2 strap elements M12 (4-005-16-0418)
- Carrying loop
- Shackle

1.1 Mechanical assembly

For drive up model, only lift the tool holder, when the lift is in the lower position and secured. In order to secure the lift, the transport safety device
(3-015-08-8982) must be mounted.
The clamping screw **1.1** must touch the pneumatic cylinder, but must not damage the base of the cylinder. It must be fixed using the nut **1.2** after being adjusted.



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1.1	Clamping screw
1.2	Nut

Caution:
Never lift the tool holder without a transport safety device!

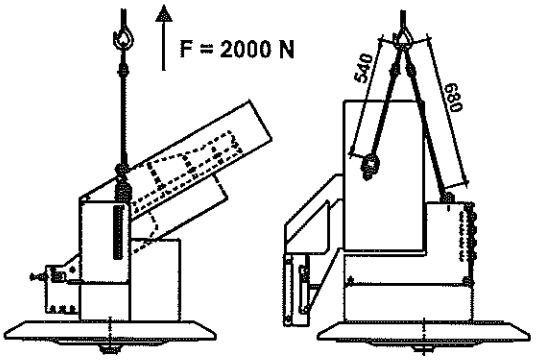
➢ Screw in the strap elements (4-005-16-0418) into both M12 threads (min. 15 mm screw-in depth).

Caution:
Ring bolts must not be used, because they can come loose and no longer have the necessary strength.

➢ Affix the tool holder according to the graphic. The following variants can be used as a hanger:
- Lifting gear with adjustable rope lengths and hooks
- Guide loops through crane hooks and mount to the strap elements using shackles.

➔ All lifting gears must be authorized for the indicated weights.

Drive up tool holder:



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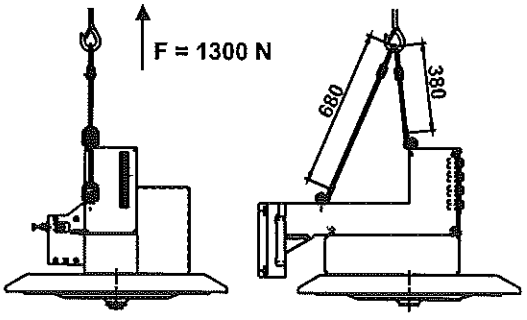
Rigid tool holder:



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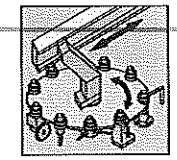


Note:
Only for rigid and drive up model!

- Use a Ø 12 mm adapter pin in outboard support and feather key (3-003-11-4520) in flange surface of the tool holder (securing the tool holder in the Z direction).

- Screw the tool holder onto the outboard support

- Disconnect the tool holder from the crane and remove the strap elements again

Caution:
For the drive up model, remove the transport safety device before commissioning!

- Transport safety device remains with the customer. Strap elements are part of the transport safety devices of the machine and are returned to the factory.

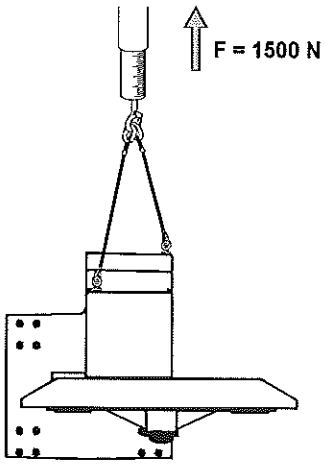
Note:
Only for the traveling model.

- Affix the tool holder according to the graphic. The following variants can be used as a hanger:
  - Lifting gear with adjustable rope lengths and hooks
  - Guide loops through crane hooks and mount to the strap elements using shackles.

➔ All lifting gears must be authorized for the indicated weights.

- ➢ Slightly tighten screws from the wheel nozzle guides and clamp
- ➢ Lift tool holder and carefully move it to the guide rails
- ➢ Close the clamp and tighten the screws
- ➢ Mount the cable trail
- ➢ Connect the electrical and pneumatic connections to the tool holder
- ➢ Connect tool holder with the draw-in spindle (➔ see preset change dimensions)

Traveling tool holder:



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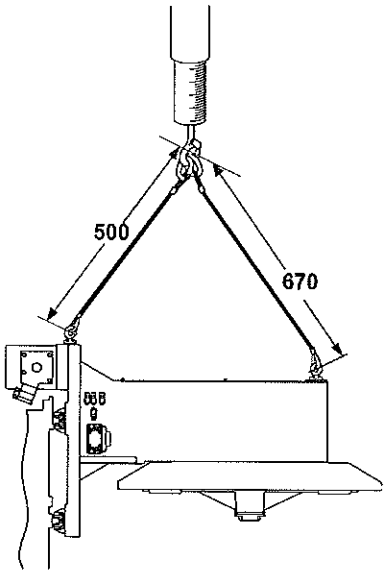

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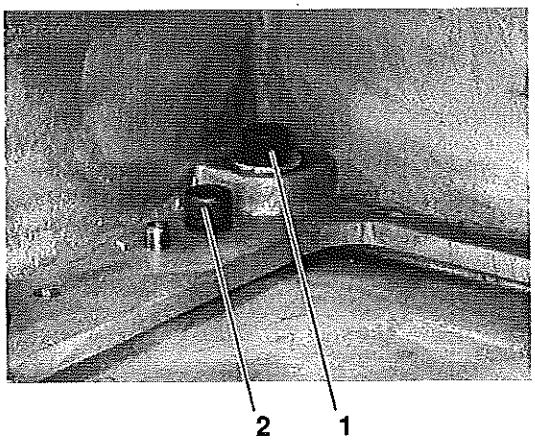
1.2 Alignment

Remove claw on slot 1 and set frame water level on the aluminum disc to be processed.
Permissible deviation:
± 0.1 mm/m (tool holder empty)

The angle of the tool holder can be aligned as follows between the distance and the cover disc:

- Remove the 4 tension screws **1**
- Lower tool holder with the 4 auxiliary screws **2** completely by 2 mm (so that the tool holder cannot be distorted during alignment)
- Lower further at the respective positions, until the tool holder is aligned. (Lower the disc a maximum of 8 mm)
- Attach pressure screws **3** to the cover disc. (All 4 pressure screws at the same time, as otherwise the casting will be distorted)
- Screw the 4 tension screws **1** in again and tighten
- Check angularity with the frame water level and correct if necessary
- The 4 auxiliary screws **2** must not be tightened, as otherwise the casting will be distorted



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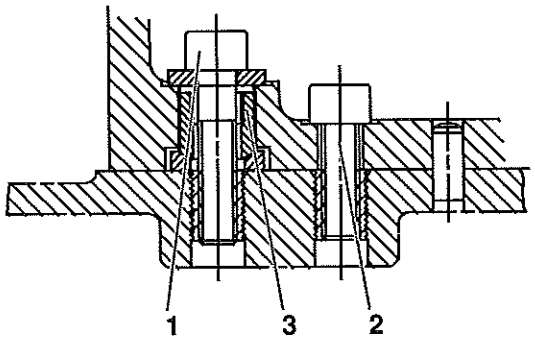

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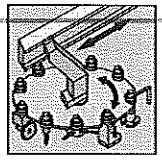
1	Tension screw
2	Auxiliary screw
3	Pulling screw

Caution:
Hasberg strips or similar surfaces must not be placed on the interfacing to the outboard support.



Preset change dimensions

Note:
Only for rigid and drive up model!

- Connect electrical and pneumatic supply lines.

Caution:
For the drive up model, the transport safety device must be removed ahead of time.

- Use measuring device (4-204-00-0346) for slot 1 and tighten the standard HSK tool chuck in the main spindle.

- Move the axes by hand into the tool position
- Turn the Z axis upward / downward using the Allen wrench
- Move the Y axis by hand
- Loosen the tension screws and turn the X-position disc by hands (max. ± 2 mm)

Note:
The tool holder is no longer set mechanically in X!

Read the current position of the axes using the control unit and enter it as the change position.

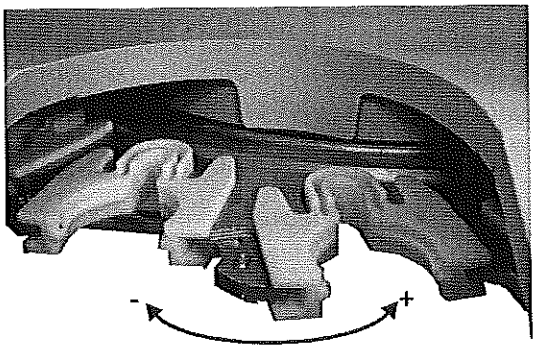
Checking the change dimensions

Reference the tool holder again.

Using measuring devices (4-204-00-0346), check the change position on slot 1.

Permissible deviations:

Axis direction	Permissible tolerance	Remarks
X	± 0,1	
Y	± 0,1	
Z	-0,5...-0,7	Tool holder is easily over-pressured with a tightened spring chuck



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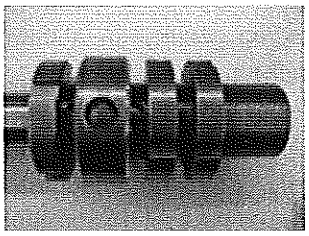
If tolerances are not reached, the change dimensions must be altered accordingly.

Preset change dimensions

Note:
Only for the traveling model!

- Connect electrical and pneumatic supply lines.

- Turn back the groove nuts for notching the ring on the sleeve until the full length of the slot is clearly visible
- Move the sleeve so that the right is centered on the slot
- Connect the groove nuts on both sides against the ring, and tighten by hand
- Turn back the groove nut for notching the sleeve on the threaded bushing of the cross carriage approximately 40 mm
- Screw in the sleeve in the threaded bushing; remaining overhang on the sleeve: 75 mm
- Turn the rod (approx. 20° from the vertical) until the indexing notch is level with the position of the bolt on the cylinder
- Reduce the pneumatic pressure indexing to 3 bar
- Pneumatically close the indexing in the change position
- The bolt must click into place in the indexing notch of the rod. Check by turning the rod slightly
- Raise the pneumatic pressure indexing to 6 bar
- Connect the groove nut in this position to the threaded bushing, and tighten carefully (the rod must no longer twist)
- Open indexing
- Check for true alignment of the rod in the housing bore of indexing. The rod must not be distorted in any way. To correct the true alignment, the housing can be aligned to the flange of the holder after loosening the screws



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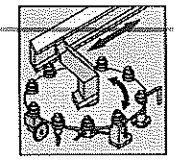


- Reduce the pneumatic pressure to 3 bar
- Pneumatically close indexing
- The sliding carriage should be moved until the bolt clicks into place in the index notch of the rod
- Insert the measuring device 4-204-00-0346 in the tool holder and the standard HSK chuck in the spindle
- Use the caliper gauge to measure the offset and move the ring (carefully loosen the groove nuts or push using them), until the changing position in X direction has been reached
- Secure and tighten the groove nuts uniformly
- Loosen the indexing pneumatically and slightly move the tool holder again as well as check the true alignment of the rod

Caution:
Disc (3-004-19-0208) must be screwed onto the rod (position monitoring / securing during loss of pressure to the pneumatic system)

- Set change dimension in Y and Z direction ➔ See rigid and drive up model

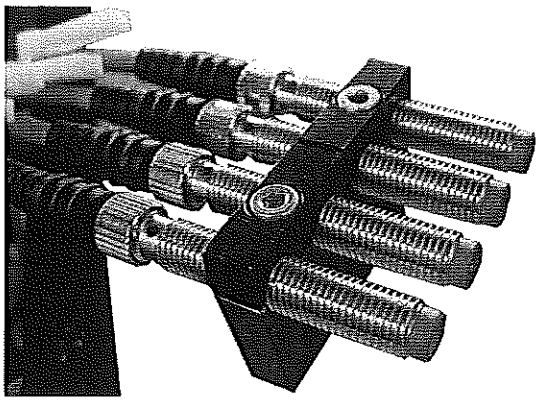
2 Troubleshooting

2.1 Mechanical troubleshooting

The tool holder is delivered fully mounted and checked by the supplier. If the tool holder has been damaged or needs repair, it must be replaced in its entirety and refurbished by the supplier.

Slot monitoring initiator setting

- Turn the disc to any slot
- Using the caliper gauge, measure the depth gauge on the disc between the holder joint face for the initiator, and the upper edge of the initiator cam
- Screw in the initiators in the holder Overhang while screwed in = depth gauge determined - 1 mm
- Clamp initiators in the holder using 2x M4 screws
- Set the holder on the cover joint face and tighten both M6 screws



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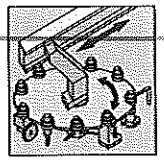
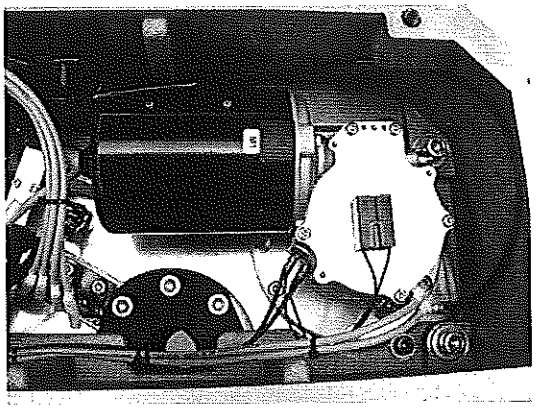


Drive

To remove:

- Loosen 3x M6 screws and remove the drive from above



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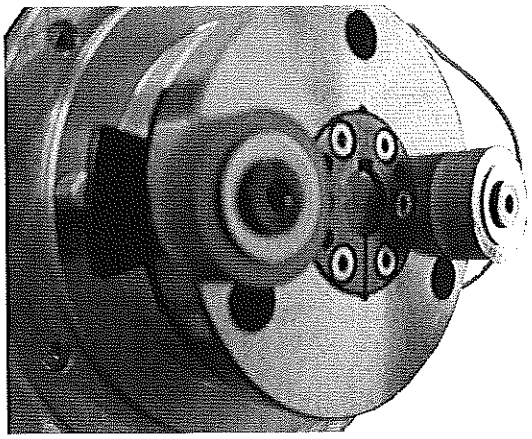
To install:

- Turn the Geneva rollers on the drive until the switch lug is centered on the initiator.
- Turn the disc to slot 1 (center the Geneva curve in the drive opening). Insert the drive so that the Geneva rollers engage in the Geneva curve and the bores are truly aligned with the bolted connections.
- Tighten 3x M6 screws

Caution:
The disc must not have any rotational play after installation!



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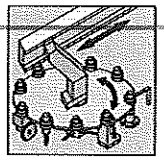


Chuck disc

To remove:

- Loosen groove nut from the positional shaft

To install

- Tighten the groove nut (until it can be felt on the block)

Caution:

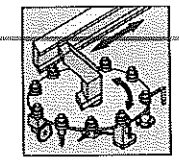
For tool holders of model 0 and 1 (see type plate), do not turn the groove nut on the block, but tighten to 120 Nm and then check for ease of movement of the disc.

Squeaking disc:

- Lubricate the seal between chuck disc and cover disc.

Grease for bearing:
Grease DIN 51825
HOMAG No. 4-017-02-0035

Axial runout:
max. 0.4 mm



Lift for drive up model

To ventilate:

The tool holder will remain in the upper position even if the pressure drops (unlocking check valve)

If the tool holder needs to be manually lowered, the compressed air supply must be connected and the valve must be activated manually. It is not possible to lower it without a compressed air supply.

Lower mechanical stopper:

2 mm before the end position cylinder stopper

Shock absorbers:

2 mm residual stroke after mechanical stopper

Initiators:

- Switching distance = 0,8 mm
- Switching point max. 0.5 mm before end position

3 Disassembling the tool holder

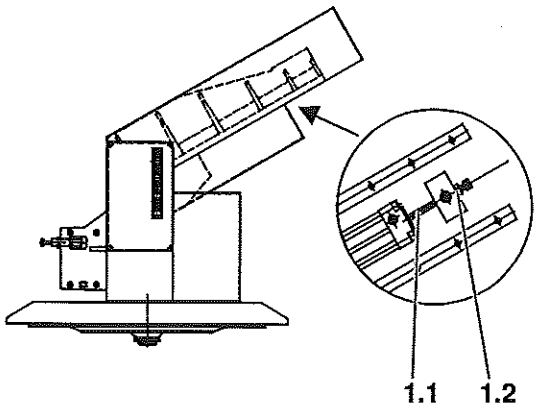
List of tools

- 2 strap elements M12 (4-005-16-0418)
- Carrying loop
- 2 shackles
- Transport safety device (3-015-08-3982)
- 1 cap screw (M10x25)
- 1 cap screw (M10x120)
- 1 hex nut (M10)

Mechanical disassembly

For drive up model, only lift the tool holder, when the lift is in the lower position and secured. In order to secure the lift, the transport safety device (3-015-08-3982) must be mounted.

The clamping screw **1.1** must touch the pneumatic cylinder, but must not damage the base of the cylinder. It must be fixed using the nut **1.2** after being adjusted.



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1.1	Clamping screw
1.2	Nut

Caution:
Never lift the tool holder without a transport safety device!

- Screw in the strap elements (4-005-16-0418) into both M12 threads (min. 15 mm screw-in depth).

Caution:
Ring bolts must not be used, because they can come loose and no longer have the necessary strength.

- Affix the tool holder according to the graphic. The following variants can be used as a hanger:
  - Lifting gear with adjustable rope lengths and hooks
  - Guide loops through crane hooks and mount to the strap elements using shackles.

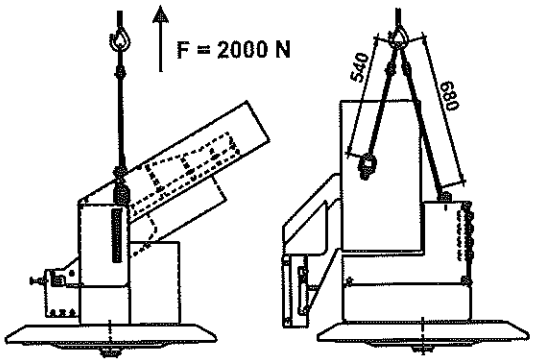
➔ All lifting gears must be authorized for the indicated weights.

- Unscrew the tool holder from the outboard support (6 M10 cap screws) and release from guide rails

- Place tool holder on transport pallet, secure to prevent tipping and then disconnect from the crane.

- Transport safety device of the drive up tool holder remains mounted for transport. Remove strap elements

Drive up tool holder:



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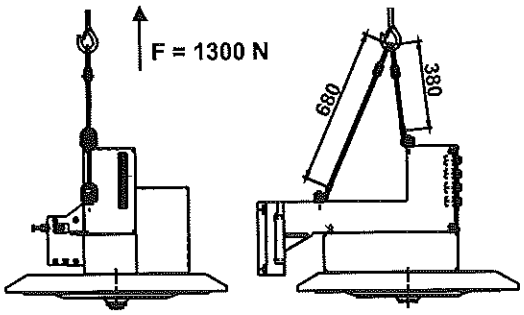
Rigid tool holder:



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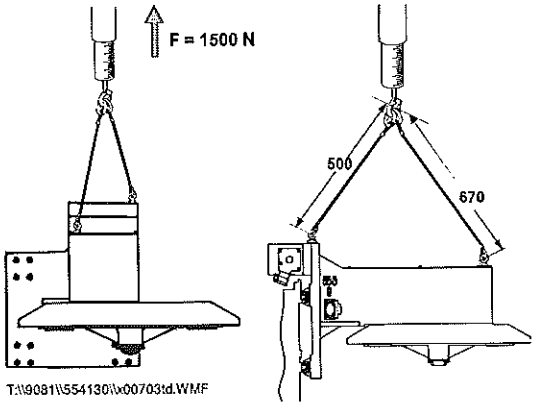
Traveling tool holder:



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