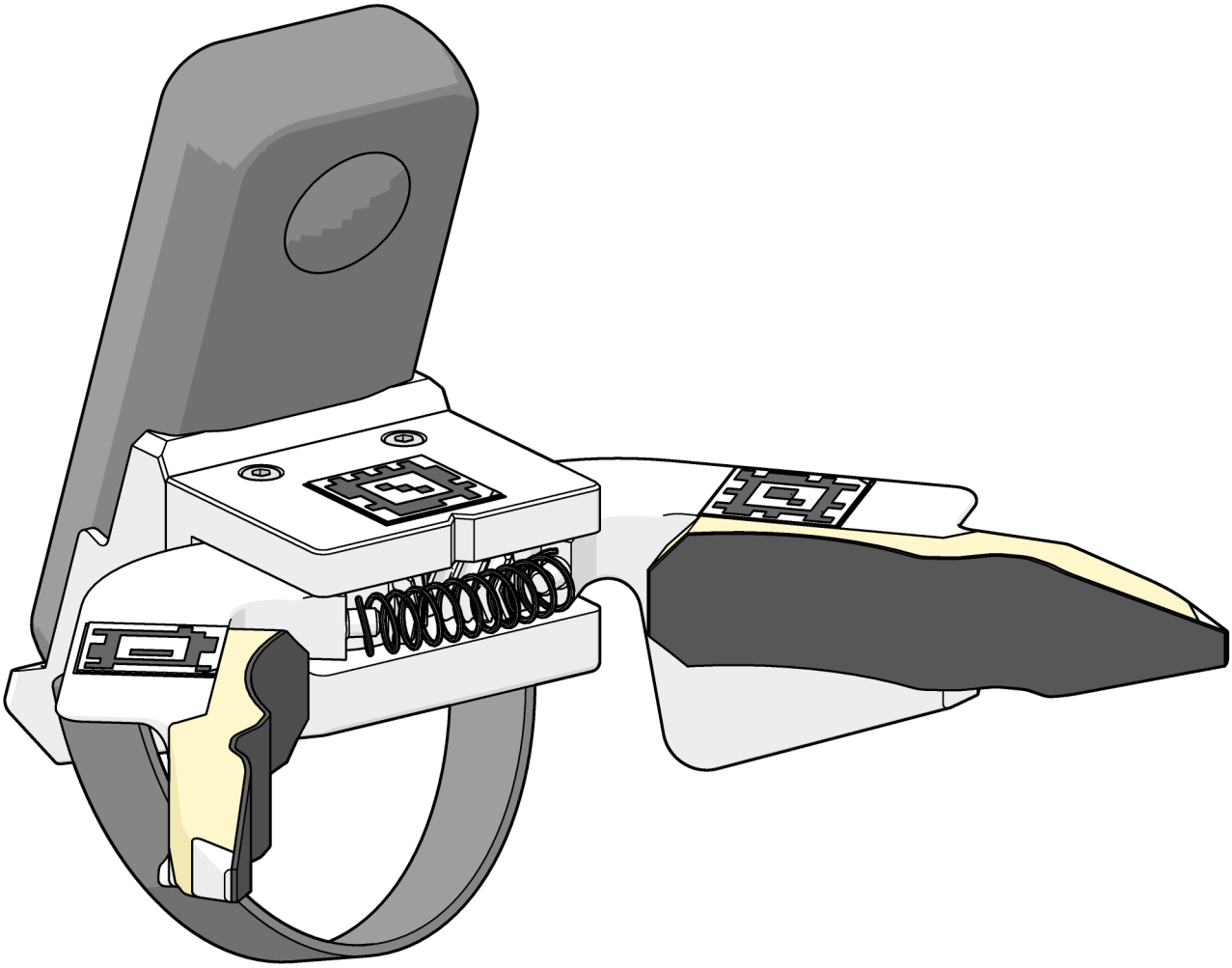
SPECIALIST

Handheld gripper



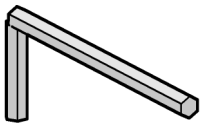
Print and assembly

specialist_handheld

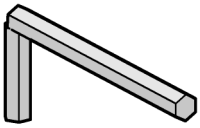
Tools



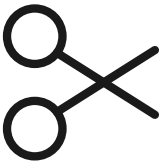
PLA · TPU 95A



2.0 mm



2.5 mm



≈ 5 h print

≈ 6 min assembly

Soft tips

The tip nuts sit in soft TPU.
Tighten the M3×10 screws until the tip does not move. Do not tighten them more.

Gear timing

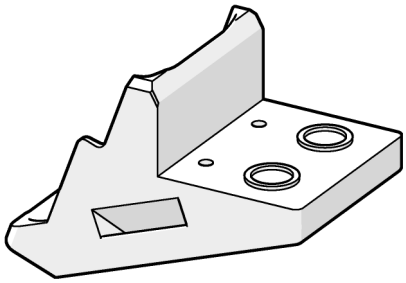
Mesh the finger gears with both fingers at the same angle (step 5).

Tags

Left-hand gripper: 2000 base, 2001 left finger, 2002 right finger.
Right-hand gripper: 2003 base, 2004 left finger, 2005 right finger.
Print the tags from the tag sheet at the end. Before you cut them, check their size.

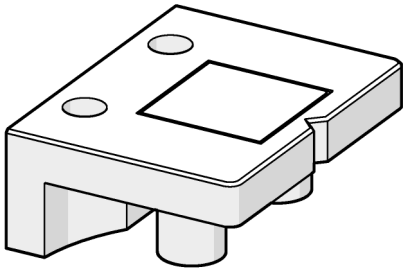
Print

A 1x



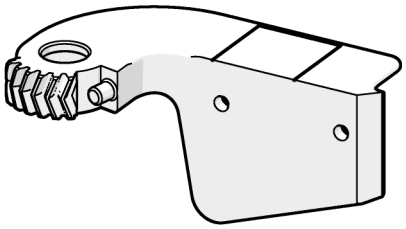
PLA

B 1x



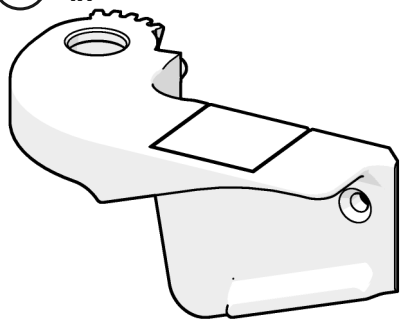
PLA

C 1x



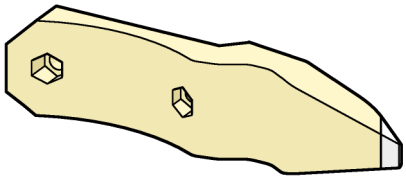
PLA

D 1x



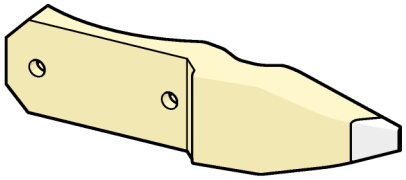
PLA

E 1x



TPU 95A + PLA

F 1x



TPU 95A + PLA

Two-material tips

Tips E and F each have a PLA nail at the front end and a TPU 95A body.
In the slicer, import each tip as one object with two parts.
Assign PLA to the nail and TPU 95A to the body.
Set the infill of the body to 100 %.

CAD · Onshape

Print plates · MakerWorld

Hardware

1:1

2x 

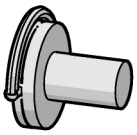
M3×25
ISO 4762

4x 

M3×10
ISO 10642

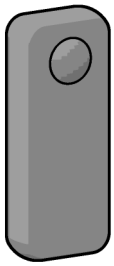
6x 

M3
ISO 4032

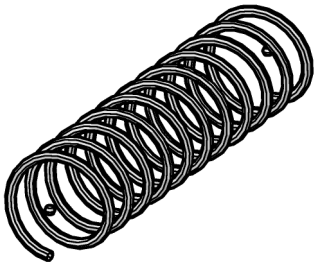
1x 

1/4"-20 × 10 mm
D-ring camera screw

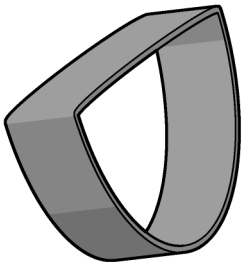
Parts

1x 

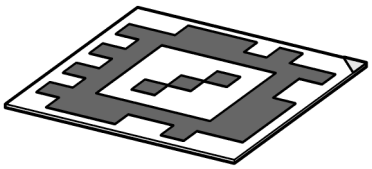
Insta360 X3

1x 

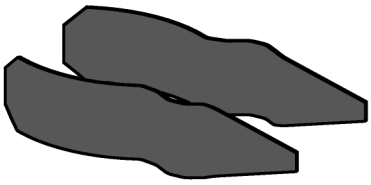
Compression spring
Ø9 × 35 mm

1x 

Elastic band
up to 25 mm wide

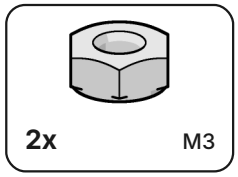
3x 

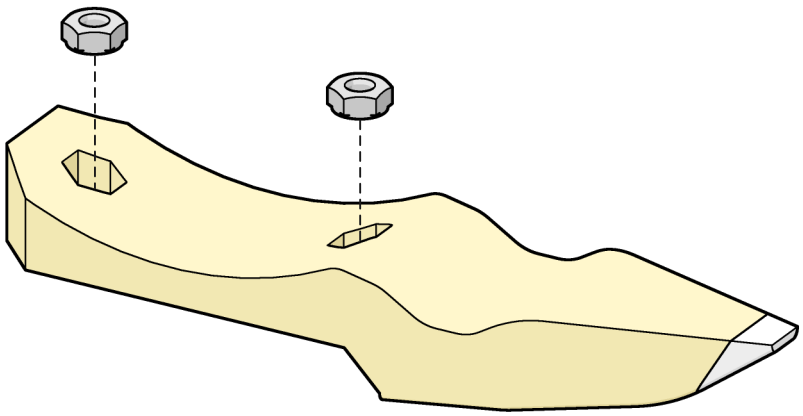
AprilTag sticker
tagStandard41h12 · 20 mm · tag sheet at the end

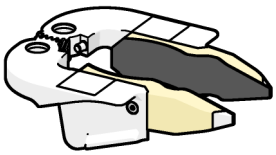
2x 

Grip tape
3M TB641 · template at the end

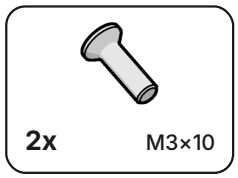
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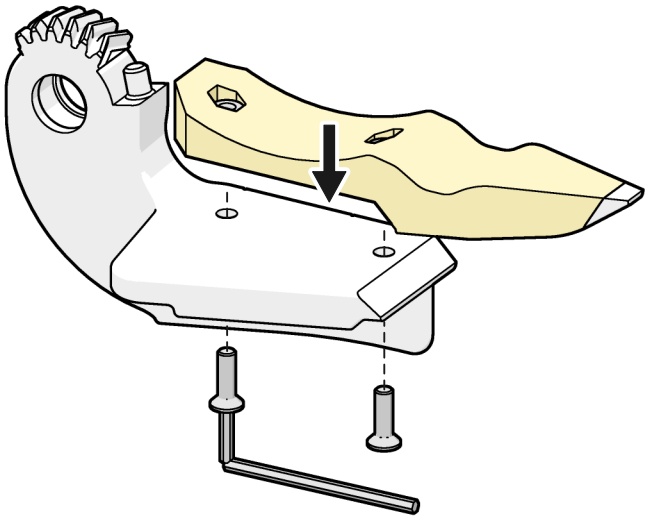




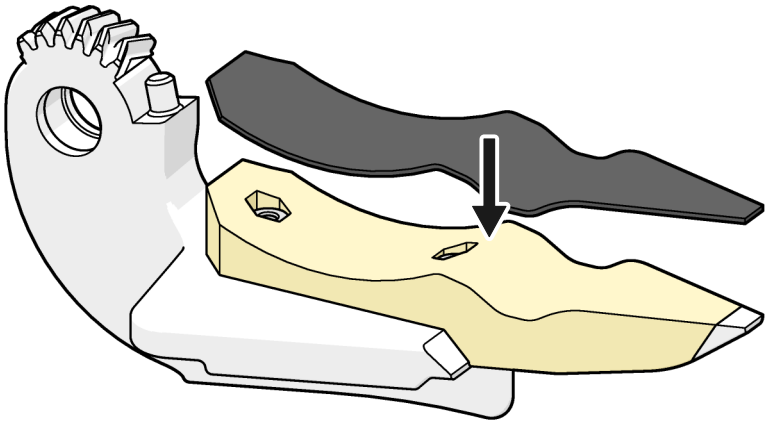


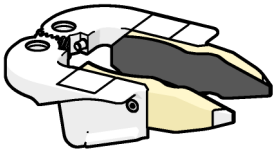
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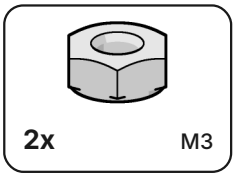
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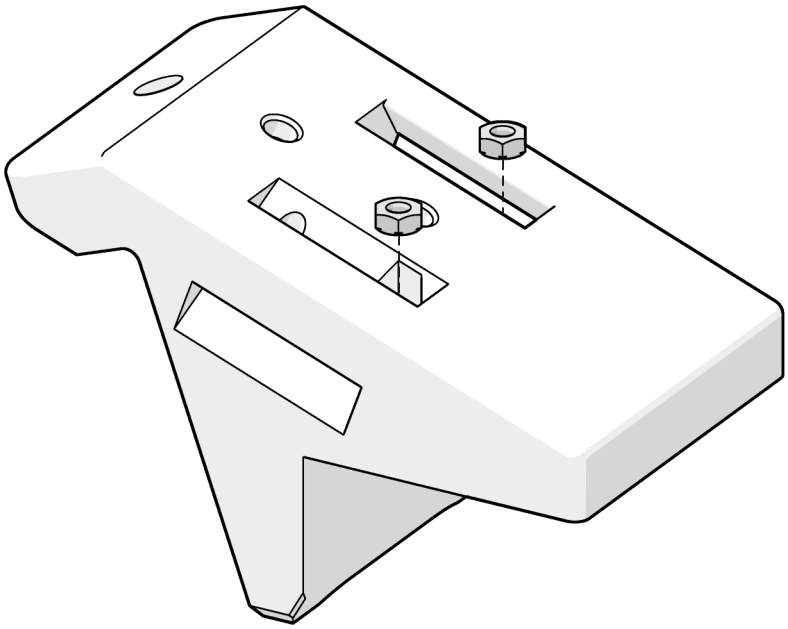




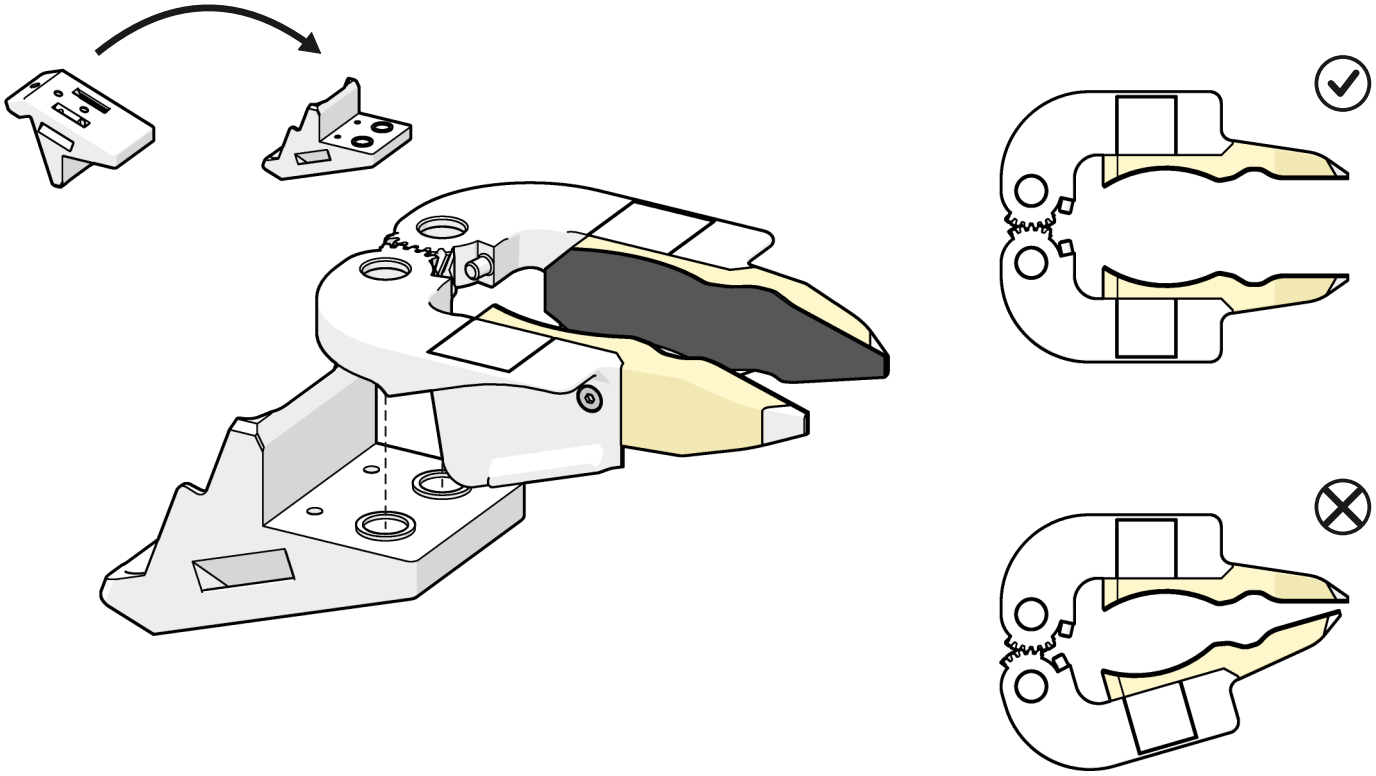
2x

4

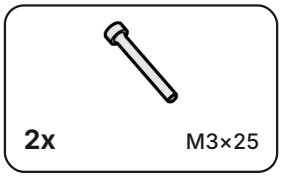


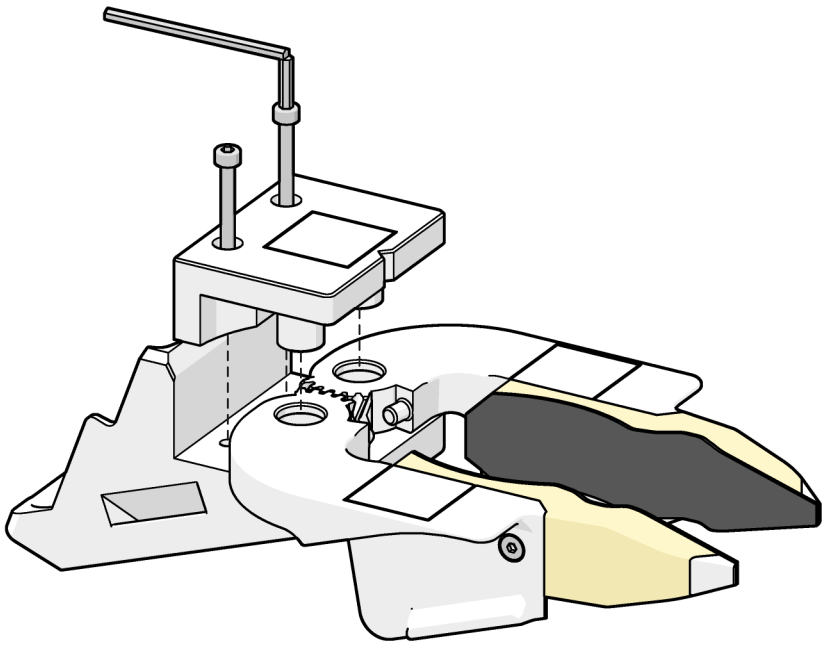


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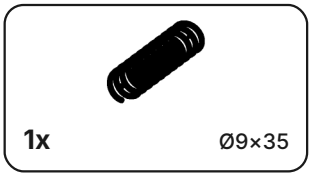


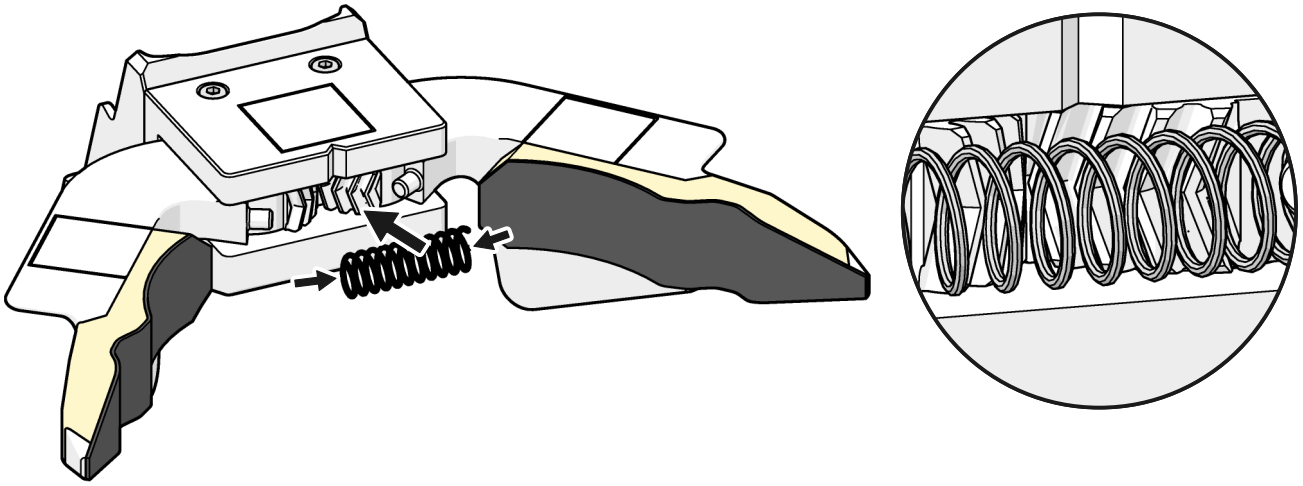
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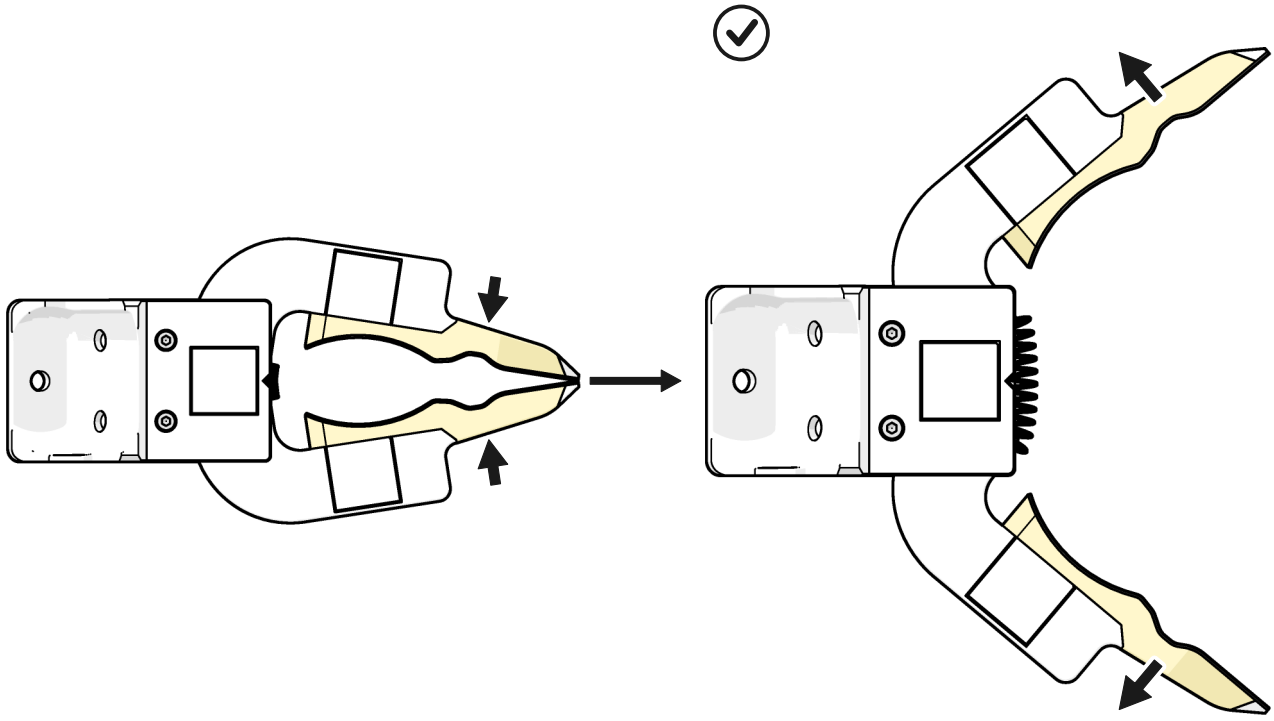


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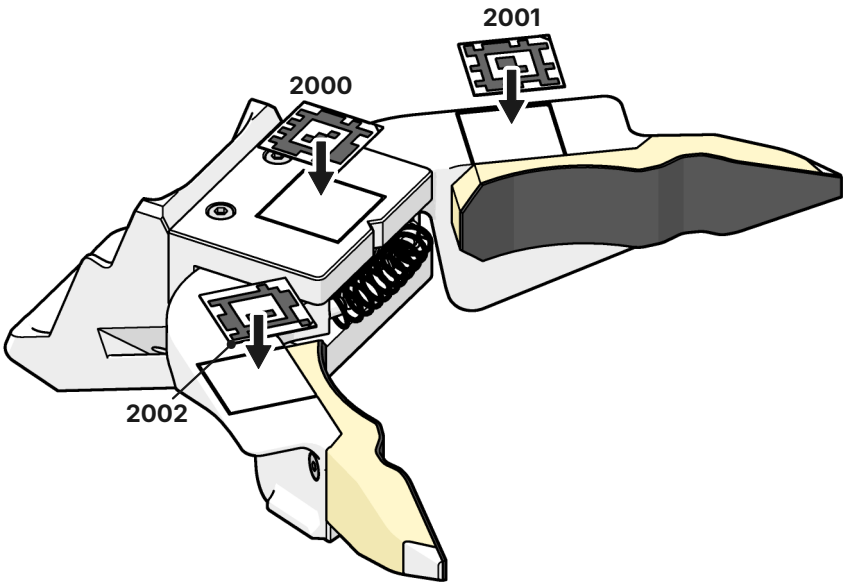


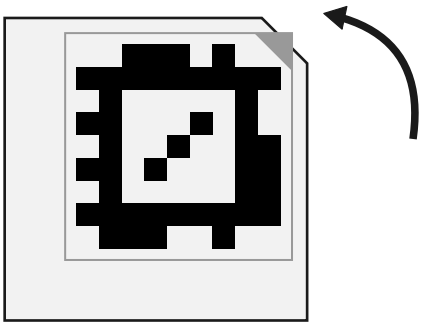


8



9

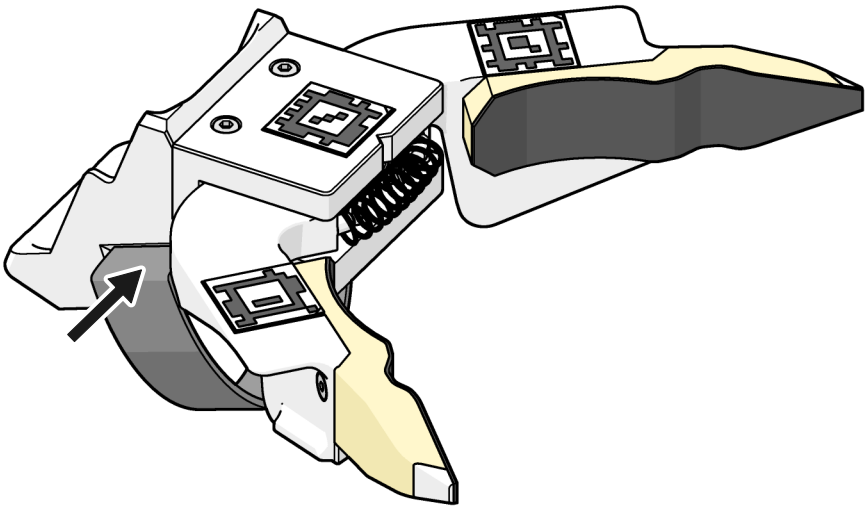




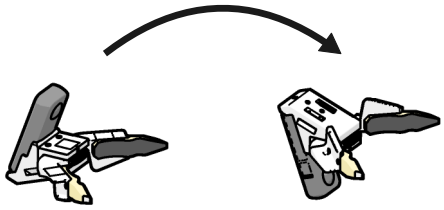
2003 · 2004 · 2005

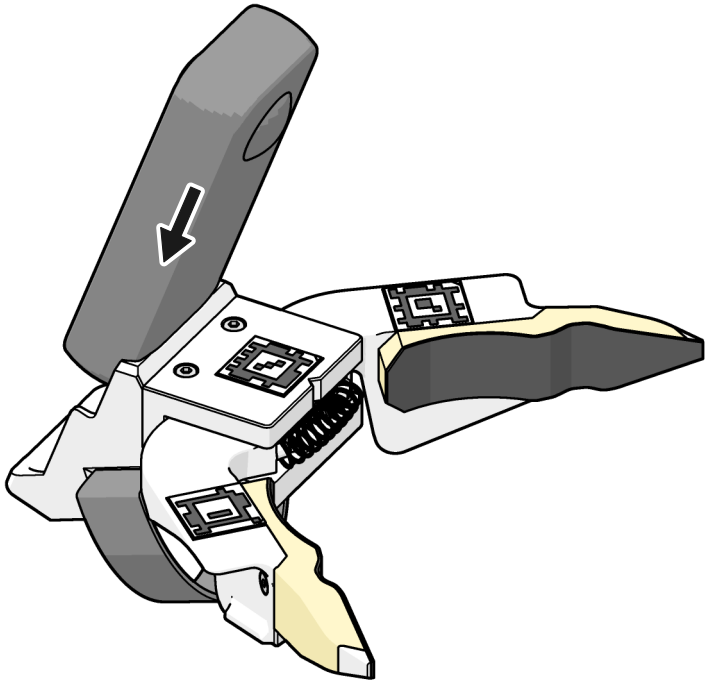
on the right-hand gripper

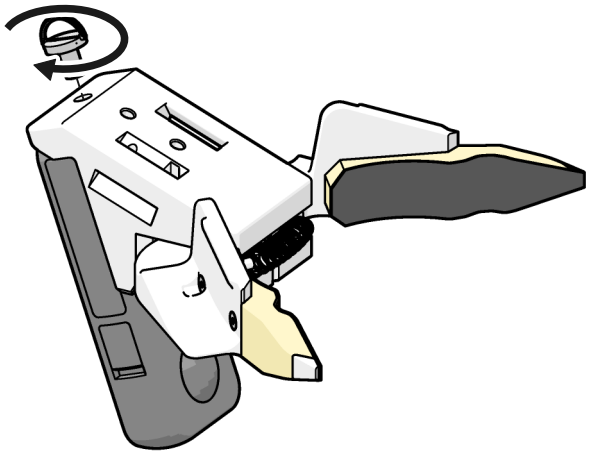
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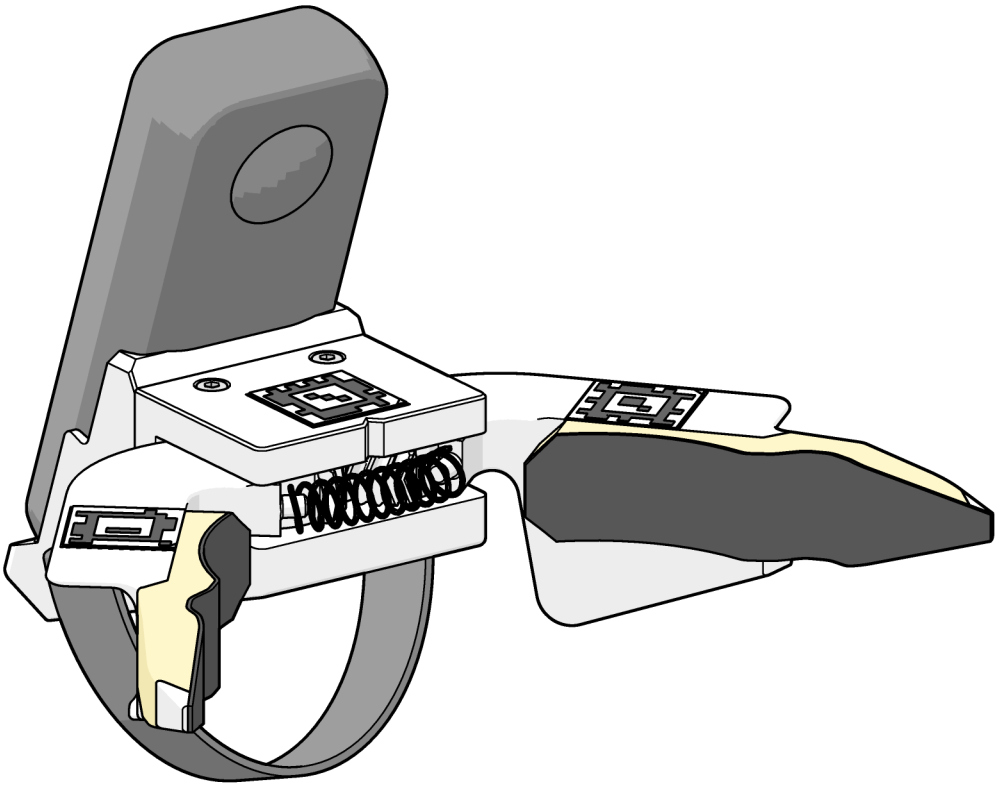


11







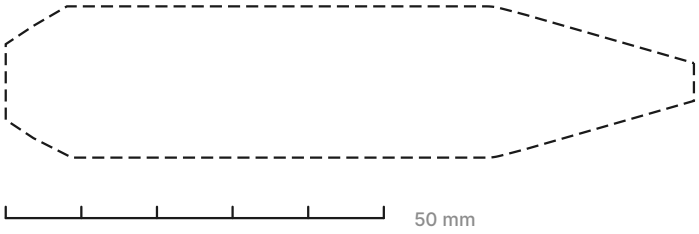


Grip tape

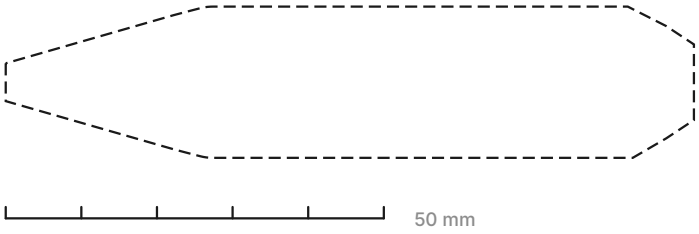
1:1

Print this page at 100 %. Cut the 3M TB641 tape along the dashed lines.
Outline F is the mirror image of outline E.

E



F

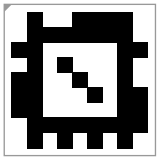


AprilTags

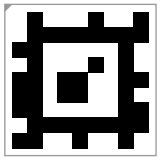
1:1

Print this page at 100 %. Check the tag size on the next page. Then cut along the gray lines.

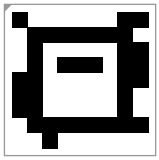
Left-hand gripper



2000
base

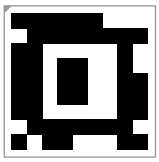


2001
left finger

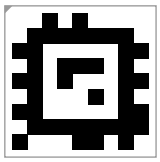


2002
right finger

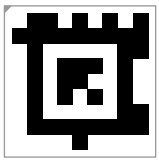
Right-hand gripper



2003
base



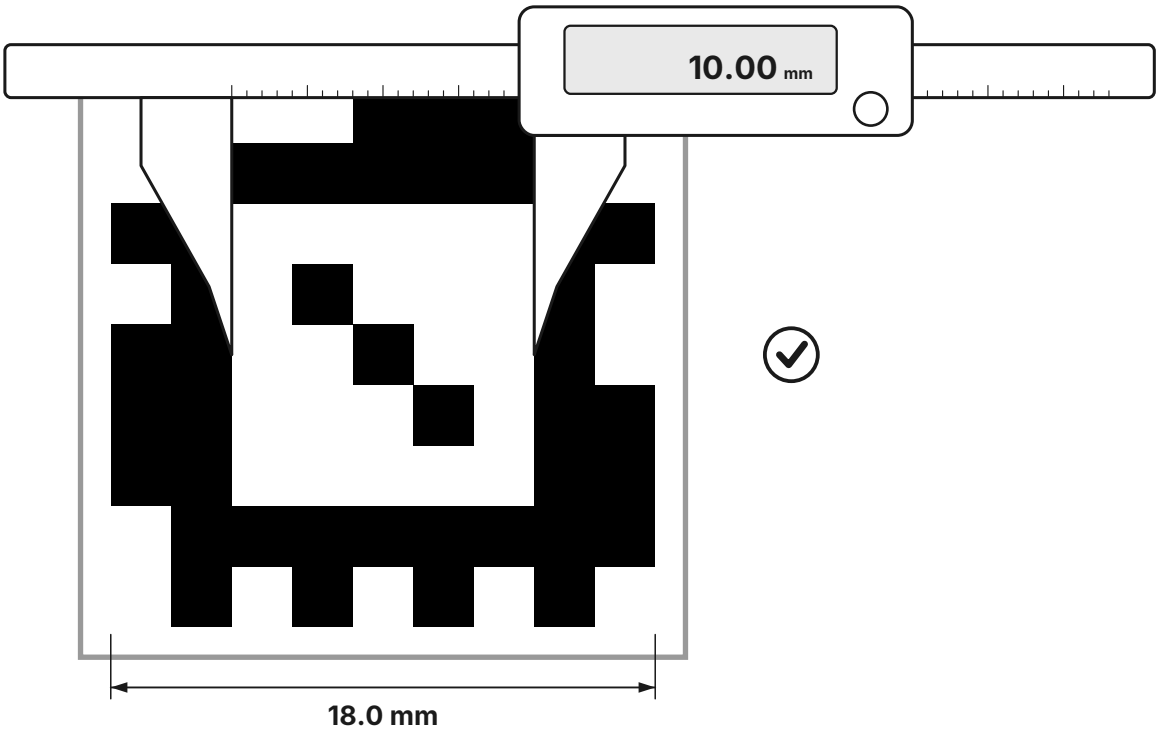
2004
left finger



2005
right finger

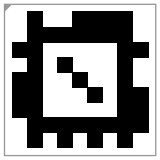
Check the tag size

4:1



Measured anything else?

Your printer changed the scale. Print the tag sheet again at 100 % (Actual size). Do not use Fit to page.



10.0 mm



9.4 mm