



2FGP20

Schulung





Wiederholung des Gelernten

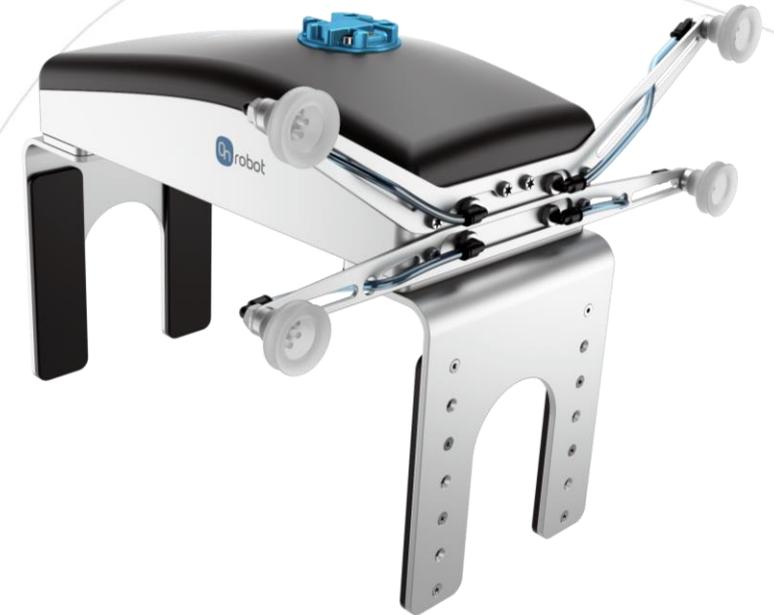
Kaufen -> Erhalten -> Installieren -> Programmieren

A screenshot of the OnRobot website's 'LEARN ONROBOT' section. The page has a blue header with the OnRobot logo and navigation links. Below the header, there's a white section with the title 'LEARN ONROBOT', a 'Recent added content' dropdown, and a 'Search to learn' search bar. A blue bar below contains the text 'Select which area you wish to Learn more about'. Three menu items are listed: 'Applications', 'Products', and 'Robot integration', each with a dropdown arrow. The 'Robot integration' item is highlighted. Below this, there's a white card with the text 'Learn how to integrate and operate OnRobot solutions on a wide range of major robot brands' and an image of a robotic arm on a workbench.

Wiederholen des Gelernten

Inhalt

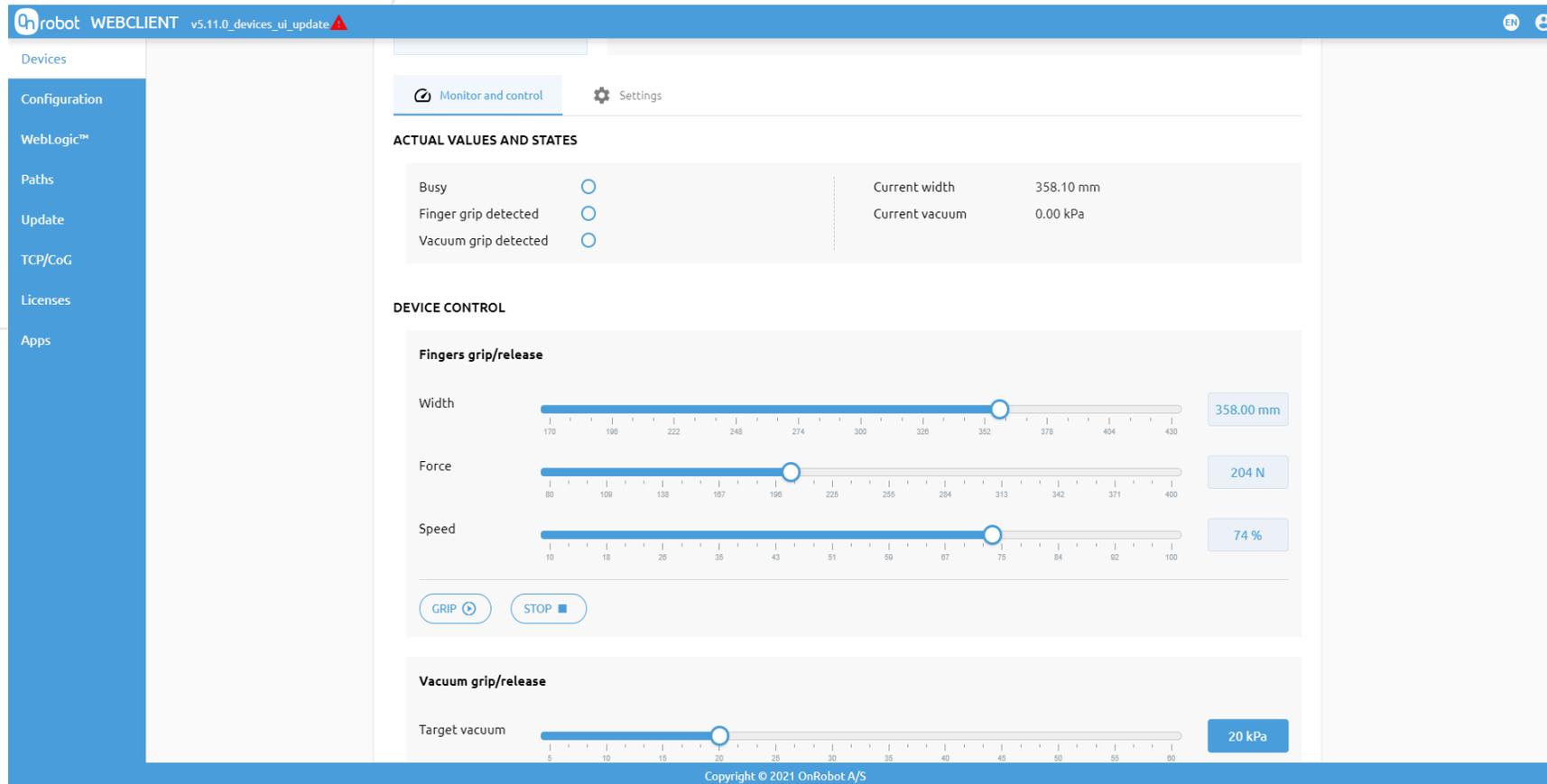
- 2FGP20 - Erste Schritte
- 2FGP20 - Mechanische und elektrische Einrichtung
- 2FGP20 - Funktionen



Funktionen des 2FGP20

Live-Demonstration

Vorstellung der Funktionen



The screenshot displays the OnRobot WebClient interface for the 2FGP20 robot. The interface is divided into a left sidebar and a main content area. The sidebar contains navigation options: Devices, Configuration, WebLogic™, Paths, Update, TCP/CoG, Licenses, and Apps. The main content area is titled 'Monitor and control' and includes a 'Settings' gear icon. It is organized into several sections:

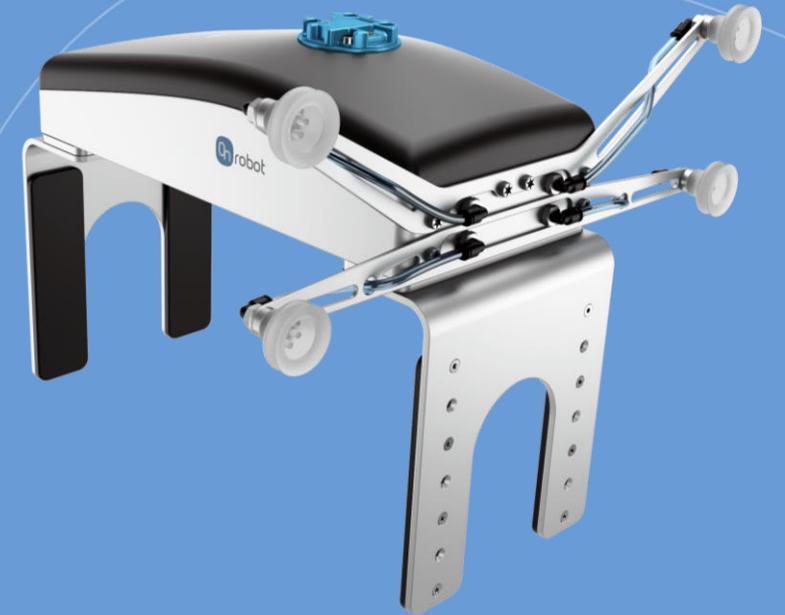
- ACTUAL VALUES AND STATES:** This section contains three status indicators (Busy, Finger grip detected, Vacuum grip detected) with circular checkboxes, and two data points: 'Current width' at 358.10 mm and 'Current vacuum' at 0.00 kPa.
- DEVICE CONTROL:** This section is further divided into two sub-sections:
 - Fingers grip/release:** Features three horizontal sliders for 'Width' (set to 358.00 mm), 'Force' (set to 204 N), and 'Speed' (set to 74 %). Below the sliders are 'GRIP' and 'STOP' buttons.
 - Vacuum grip/release:** Features a horizontal slider for 'Target vacuum' (set to 20 kPa).

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Schulungsübungen

2FGP20



2FGP20

- 1** **AUFGABE 1 – Einstellung der Finger**
- 2** **AUFGABE 2 – Greifen und Lösen der Finger über den Web Client**
- 3** **AUFGABE 3 – Bedienung des Vakuums über den Web Client**

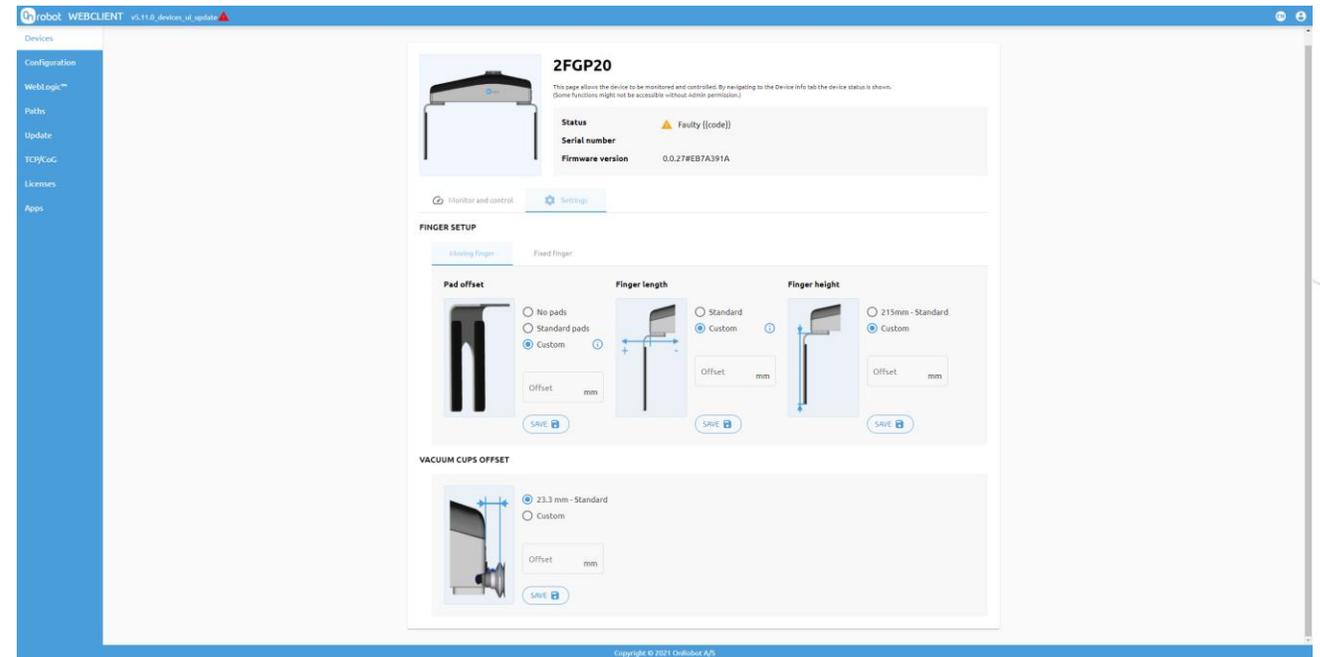
AUFGABE 1

Einstellung der Finger

Beschreibung:

Stellen Sie die korrekten
Fingerspitzenpositionen ein:

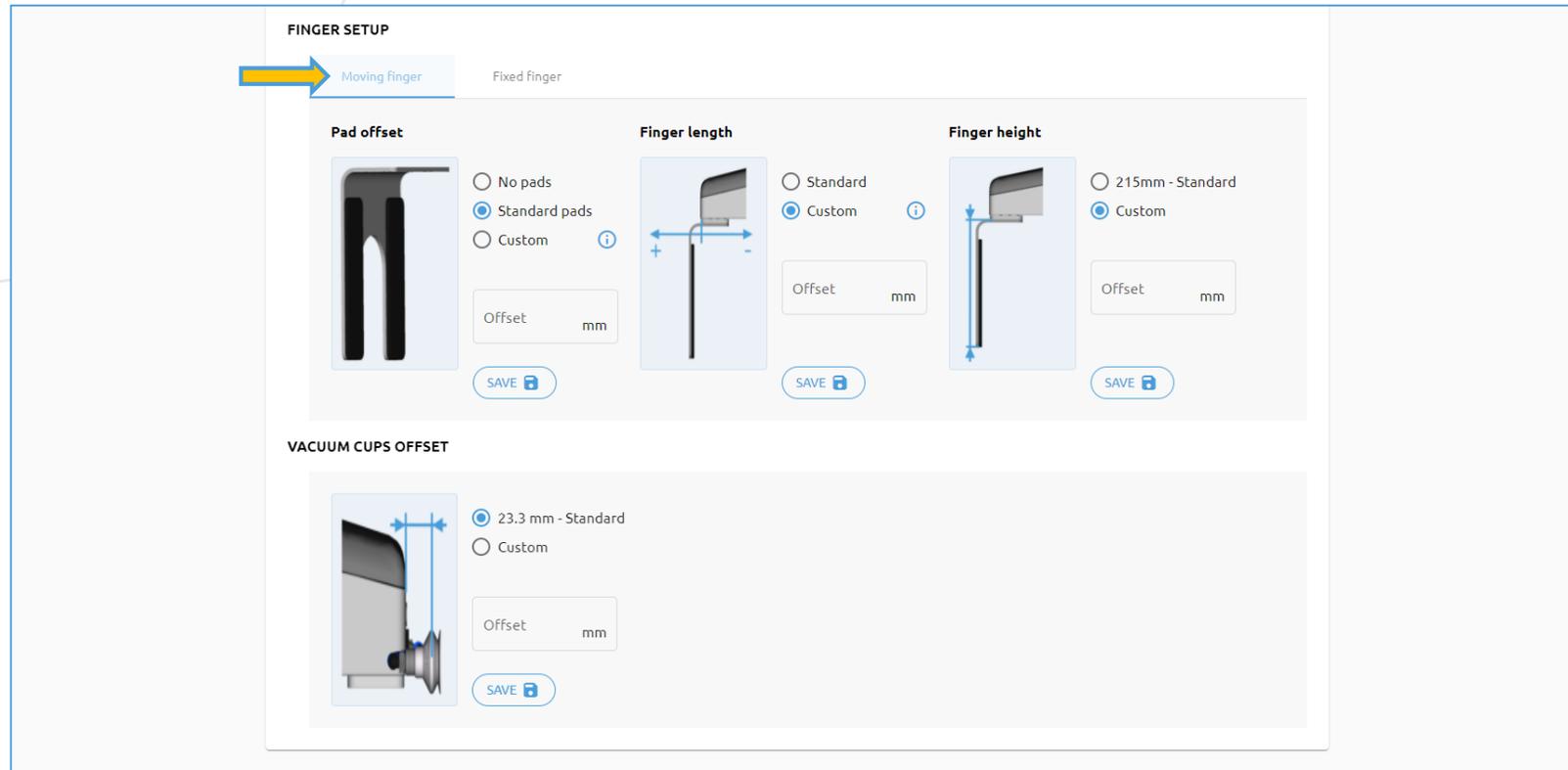
1. Öffnen Sie den Web Client.
2. Klicken Sie auf „Geräte“ und dann auf „Einstellungen“.



AUFGABE 1

Lösung – Schritt 1

Navigieren Sie zu Fingereinstellung und drücken Sie „Finger bewegen“.



FINGER SETUP

Moving finger | Fixed finger

Pad offset

- No pads
- Standard pads
- Custom

Offset mm

SAVE

Finger length

- Standard
- Custom

Offset mm

SAVE

Finger height

- 215mm - Standard
- Custom

Offset mm

SAVE

VACUUM CUPS OFFSET

- 23.3 mm - Standard
- Custom

Offset mm

SAVE

AUFGABE 1

Lösung – Schritt 2

Wählen Sie den Pad-Versatz, in diesem Fall Standard-Pads.

FINGER SETUP

Moving finger Fixed finger

Pad offset **Finger length** **Finger height**

No pads
 Standard pads
 Custom

Offset mm

SAVE

Standard
 Custom

Offset mm

SAVE

215mm - Standard
 Custom

Offset mm

SAVE

VACUUM CUPS OFFSET

23.3 mm - Standard
 Custom

Offset mm

SAVE

AUFGABE 1

Lösung – Schritt 3

Wählen Sie die Fingerlänge, in diesem Fall Standard-Pads.

FINGER SETUP

Moving finger Fixed finger

Pad offset **Finger length** **Finger height**

No pads
 Standard pads
 Custom

Offset mm

SAVE

Standard
 Custom

Offset mm

SAVE

215mm - Standard
 Custom

Offset mm

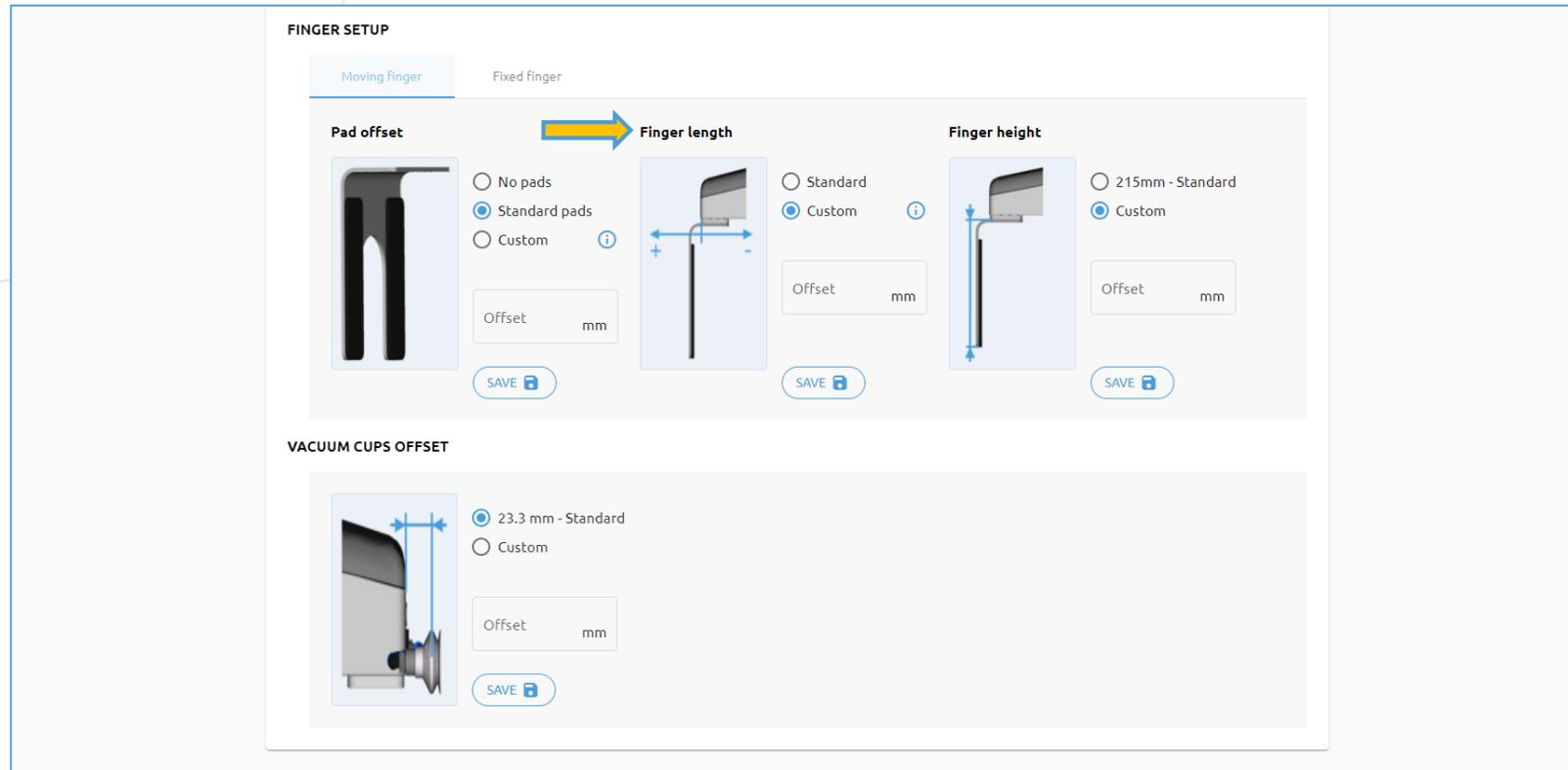
SAVE

VACUUM CUPS OFFSET

23.3 mm - Standard
 Custom

Offset mm

SAVE



AUFGABE 1

Lösung – Schritt 4

Wählen Sie die Fingerhöhe, in diesem Fall Standard-Pads.

FINGER SETUP

Moving finger Fixed finger

Pad offset

No pads
 Standard pads
 Custom

Offset mm

SAVE

Finger length

Standard
 Custom

Offset mm

SAVE

Finger height

215mm - Standard
 Custom

Offset mm

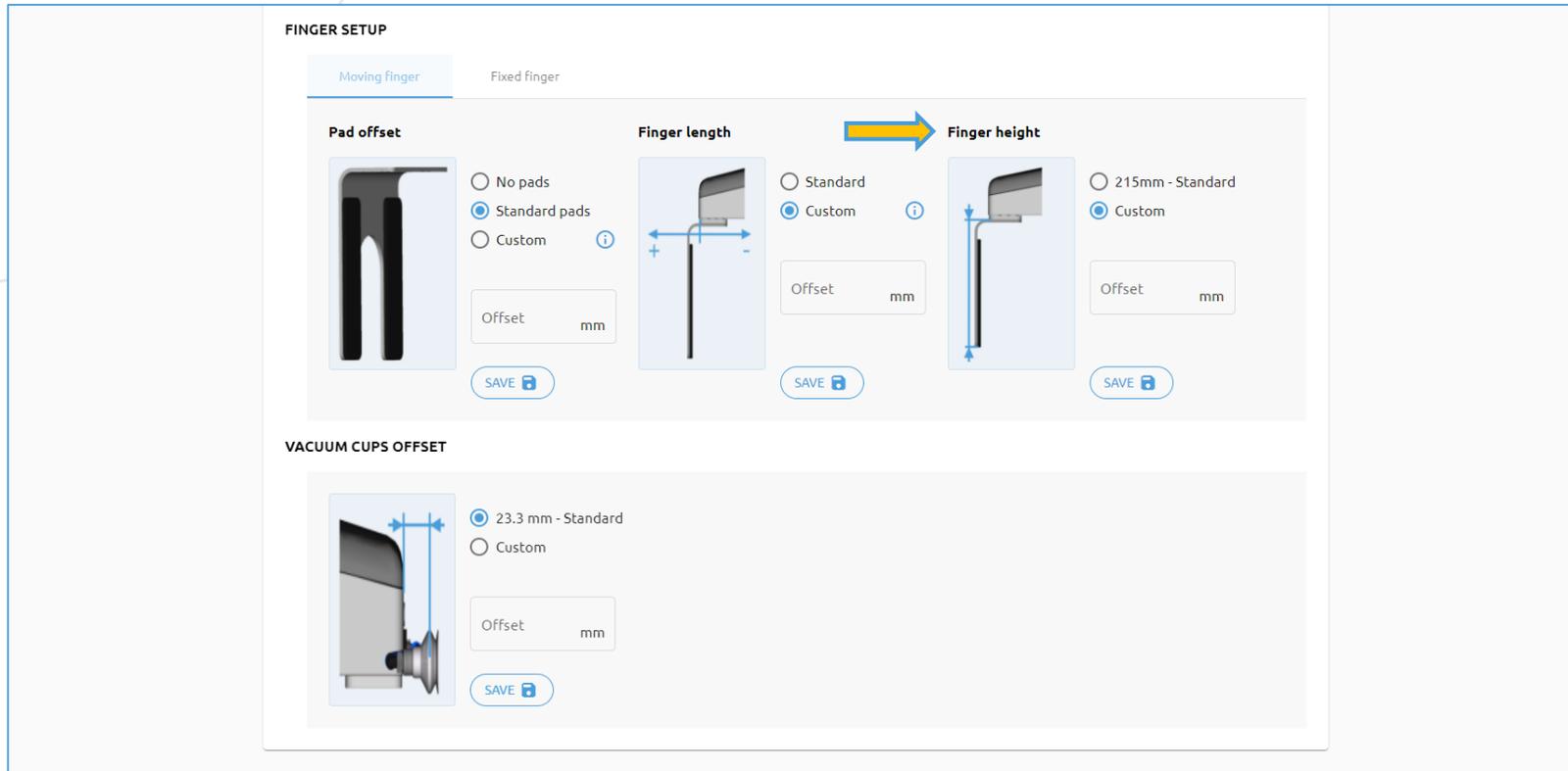
SAVE

VACUUM CUPS OFFSET

23.3 mm - Standard
 Custom

Offset mm

SAVE



AUFGABE 1

Lösung – Schritt 5

Wählen Sie den feststehenden Finger entsprechend den vorhergehenden Schritten aus.

FINGER SETUP

Moving finger  Fixed finger

Pad offset

No pads
 Standard pads
 Custom

Offset mm

SAVE

Finger length

Standard
 Custom

Offset mm

SAVE

Finger height

215mm - Standard
 Custom

Offset mm

SAVE

VACUUM CUPS OFFSET

23.3 mm - Standard
 Custom

Offset mm

SAVE

AUFGABE 1

Lösung – Schritt 6

Wählen Sie die Standard-Saugnapfe mit 23,3 mm.

FINGER SETUP

Moving finger Fixed finger

Pad offset

- No pads
- Standard pads
- Custom

Offset mm

SAVE

Finger length

- Standard
- Custom

Offset mm

SAVE

Finger height

- 215mm - Standard
- Custom

Offset mm

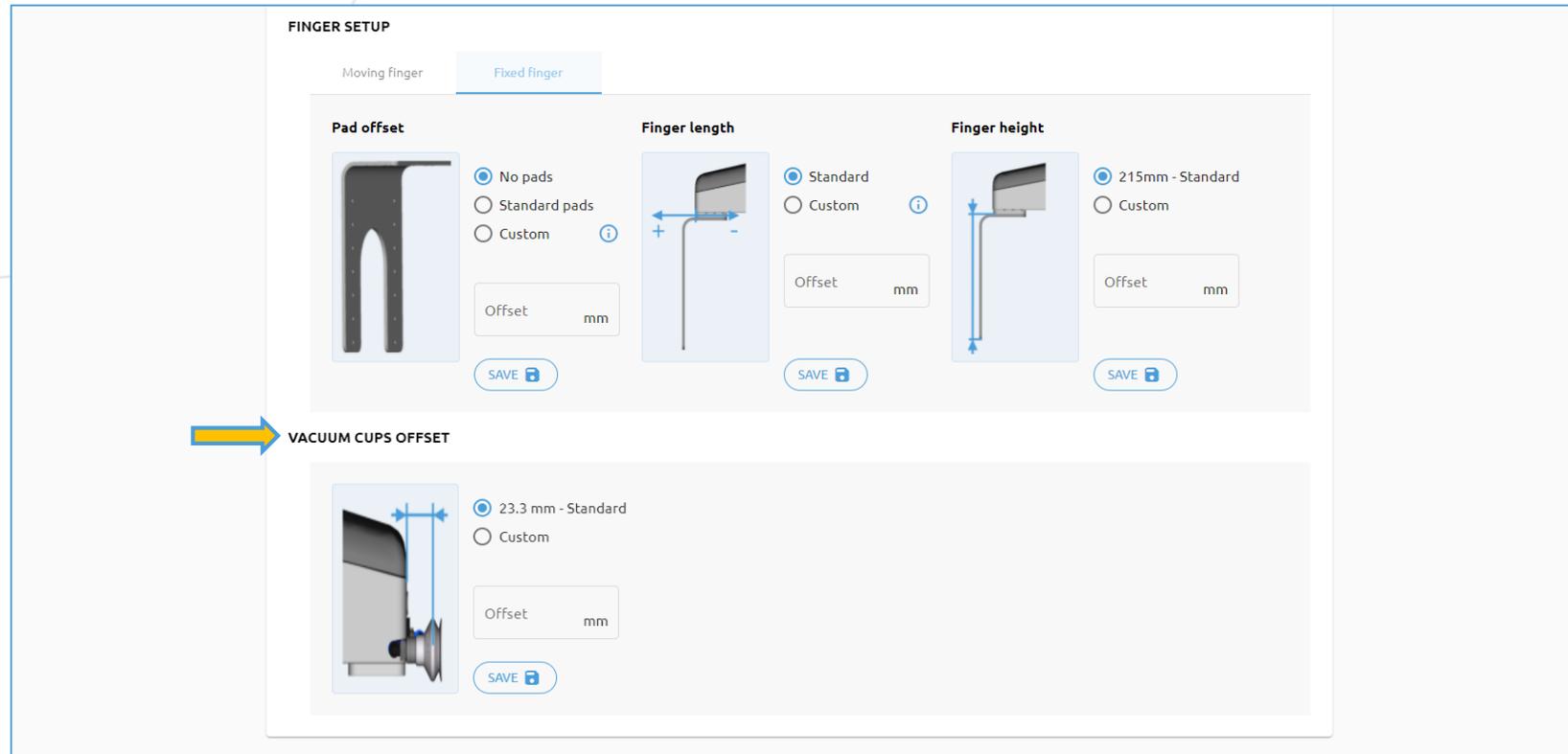
SAVE

VACUUM CUPS OFFSET

- 23.3 mm - Standard
- Custom

Offset mm

SAVE



2FGP20

- 1 **AUFGABE 1 – Einstellung der Finger**
- 2 **AUFGABE 2 – Greifen und Lösen der Finger über den Web Client**
- 3 **AUFGABE 3 – Bedienung des Vakuums über den Web Client**

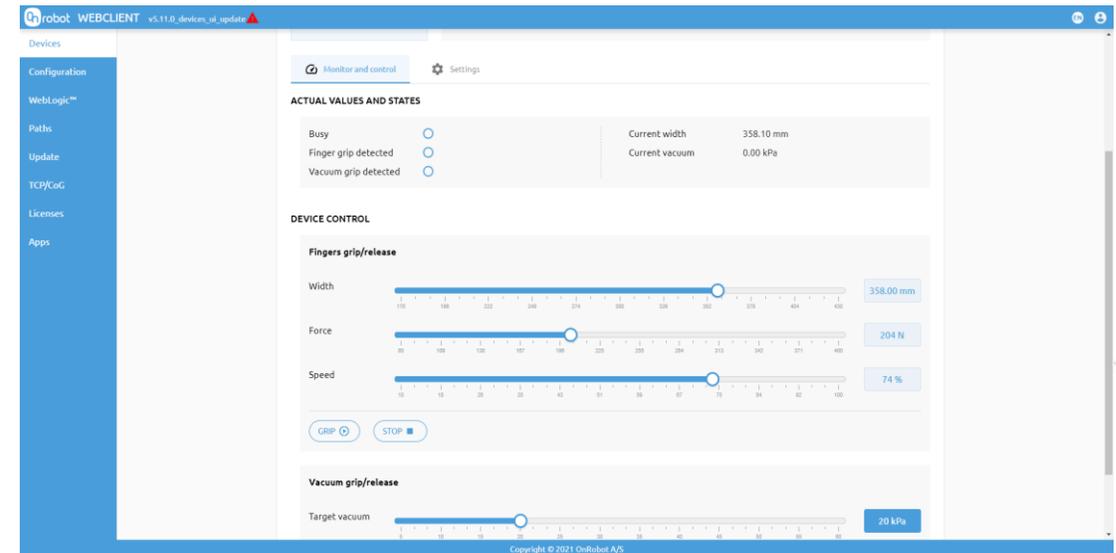
AUFGABE 2

Greifen und Lösen der Finger

Beschreibung:

Greifen Sie ein benutzerdefiniertes Teil mit den Fingern und lassen Sie es wieder los:

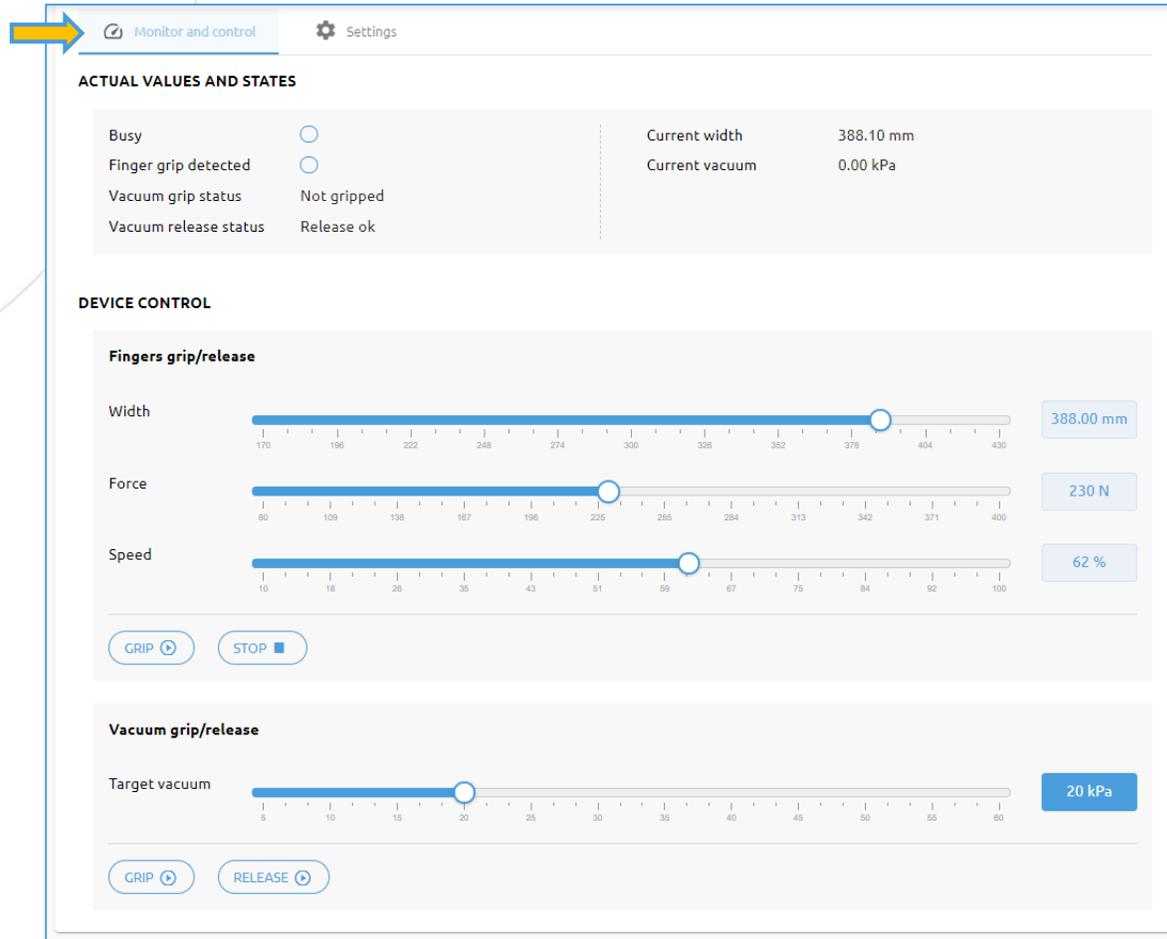
- 1. Messen Sie die Breite Ihres Teils.**
- 2. Stellen Sie die exakte Breite ein und versuchen Sie, das Teil zu greifen.**
- 3. Verringern Sie die Breite um 10 mm und greifen Sie das Teil erneut.**
- 4. Beobachten Sie die Ergebnisse.**



AUFGABE 2

Lösung – Schritt 1

Öffnen Sie Ihren Web Client und klicken Sie auf die Registerkarte „Überwachen und Steuern“.



Monitor and control Settings

ACTUAL VALUES AND STATES

Busy	<input type="radio"/>	Current width	388.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		

DEVICE CONTROL

Fingers grip/release

Width: 388.00 mm

Force: 230 N

Speed: 62 %

GRIP STOP

Vacuum grip/release

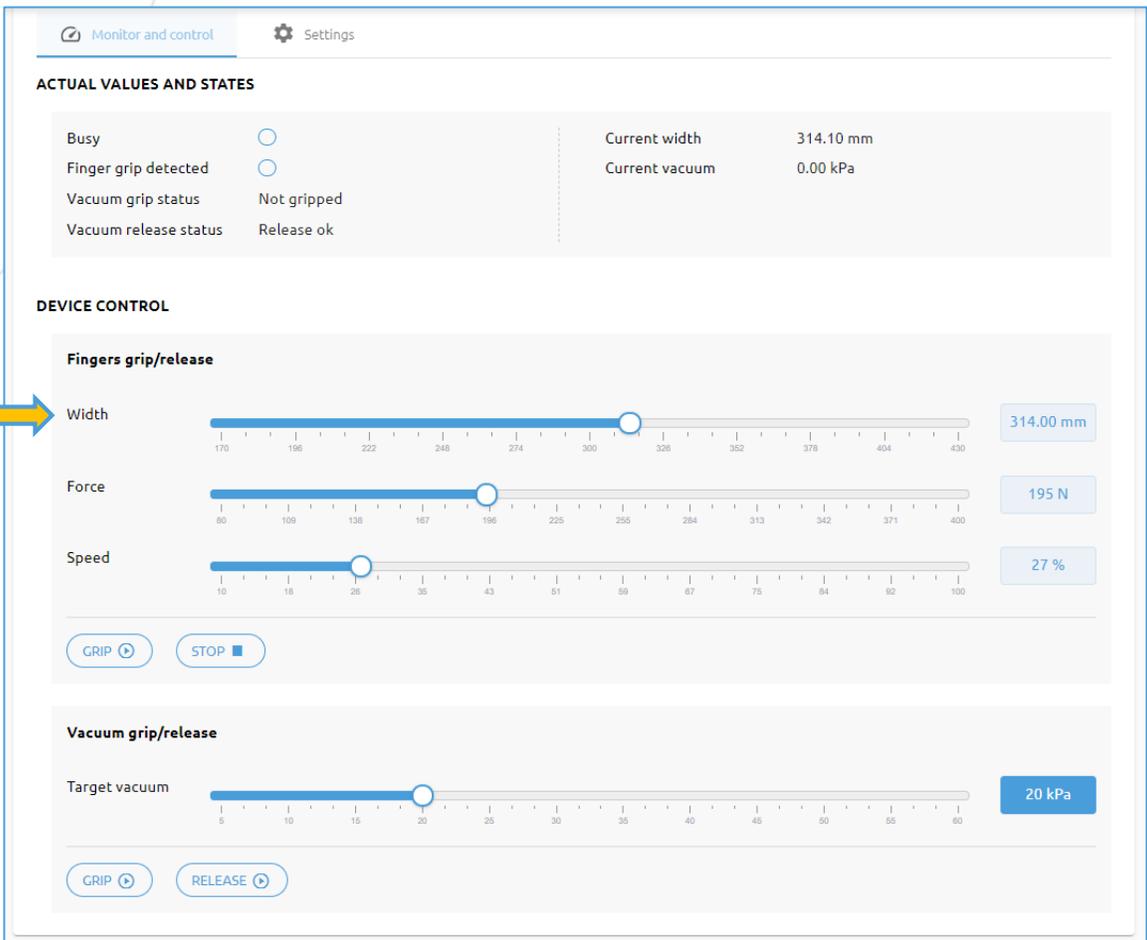
Target vacuum: 20 kPa

GRIP RELEASE

AUFGABE 2

Lösung – Schritt 2

Messen Sie die Teilebreite und stellen Sie sie ein (in diesem Fall 314 mm).



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into several sections:

- ACTUAL VALUES AND STATES:** A table showing the current status of the gripper.

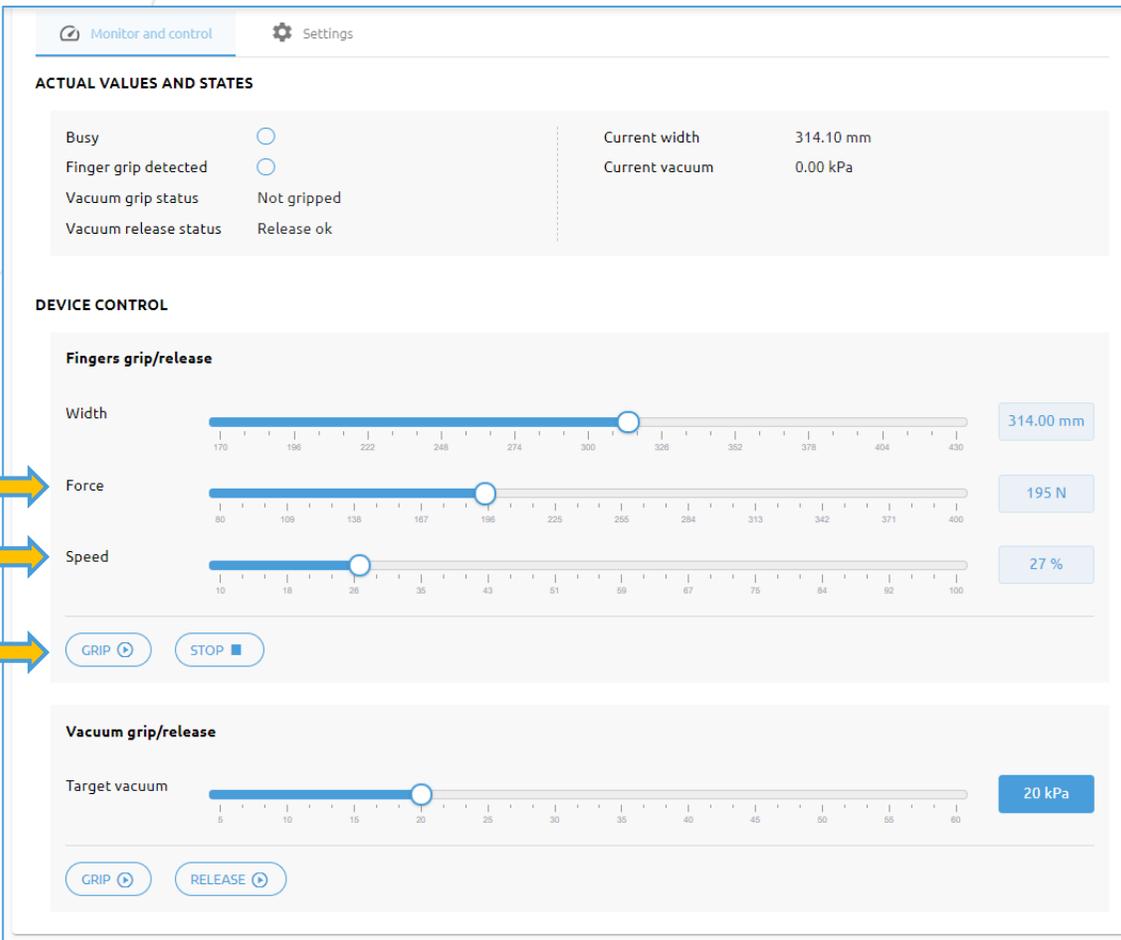
Busy	<input type="radio"/>	Current width	314.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		
- DEVICE CONTROL:** A section for adjusting the gripper's parameters.
 - Fingers grip/release:** Contains three sliders: 'Width' (set to 314.00 mm), 'Force' (set to 195 N), and 'Speed' (set to 27%). A yellow arrow points to the 'Width' slider.
 - Vacuum grip/release:** Contains a 'Target vacuum' slider set to 20 kPa.

At the bottom of the 'Fingers grip/release' section, there are 'GRIP' and 'STOP' buttons. At the bottom of the 'Vacuum grip/release' section, there are 'GRIP' and 'RELEASE' buttons.

AUFGABE 2

Lösung – Schritt 3

Stellen Sie die Geschwindigkeit auf 27 % und die Kraft auf 195 N ein und drücken Sie „Greifen“.



The screenshot displays the 'Monitor and control' interface for a robot. It is divided into two main sections: 'ACTUAL VALUES AND STATES' and 'DEVICE CONTROL'.

ACTUAL VALUES AND STATES:

- Busy:
- Finger grip detected:
- Vacuum grip status: Not gripped
- Vacuum release status: Release ok
- Current width: 314.10 mm
- Current vacuum: 0.00 kPa

DEVICE CONTROL:

Fingers grip/release:

- Width: Slider set to 314.00 mm (range 170-430)
- Force: Slider set to 195 N (range 80-400)
- Speed: Slider set to 27% (range 10-100)

Vacuum grip/release:

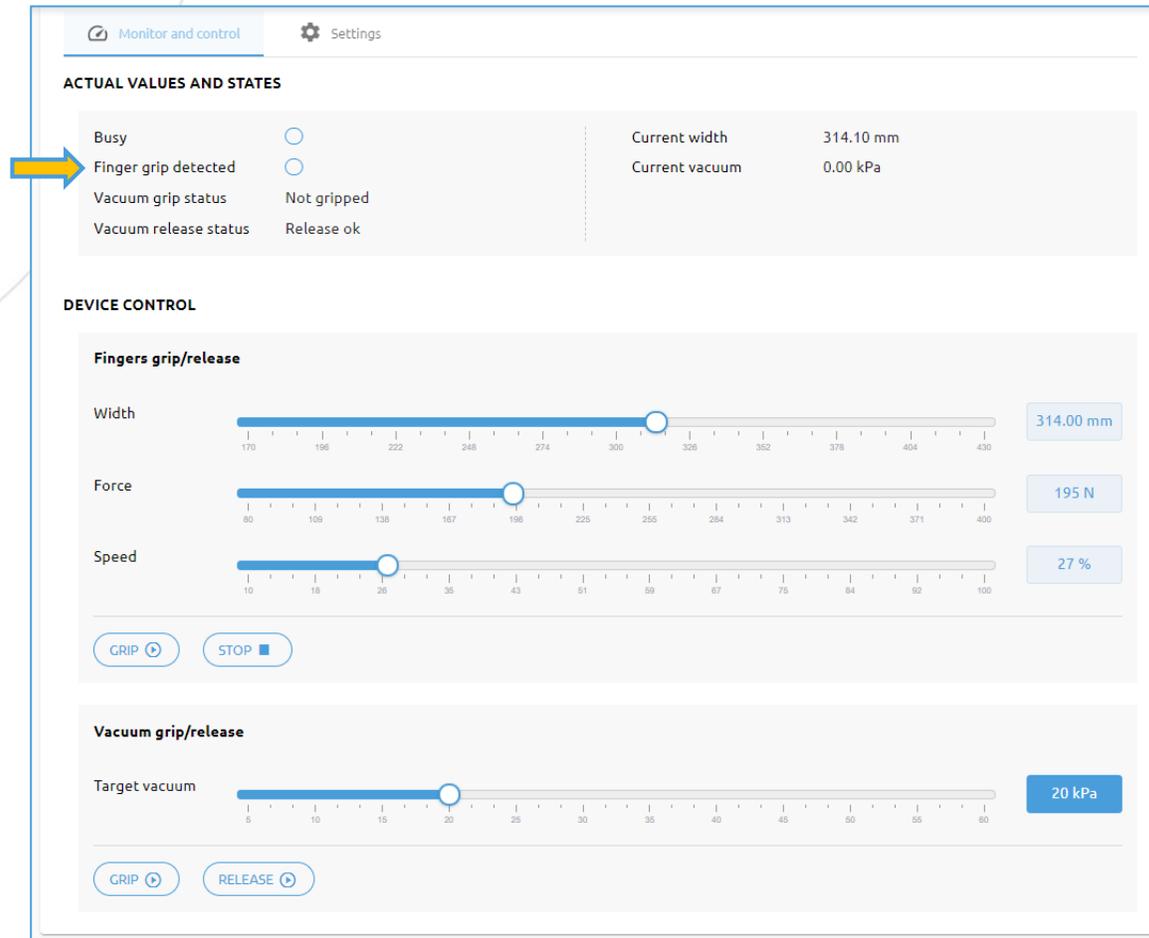
- Target vacuum: Slider set to 20 kPa (range 5-60)

Control buttons include 'GRIP' and 'STOP' for the fingers section, and 'GRIP' and 'RELEASE' for the vacuum section. Three yellow arrows on the left point to the Force, Speed, and GRIP buttons.

AUFGABE 2

Lösung – Schritt 4

Es wird kein Fingergriff erkannt -> Kein Griff



Monitor and control Settings

ACTUAL VALUES AND STATES

Busy	<input type="radio"/>	Current width	314.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		

DEVICE CONTROL

Fingers grip/release

Width: 314.00 mm

Force: 195 N

Speed: 27 %

GRIP STOP

Vacuum grip/release

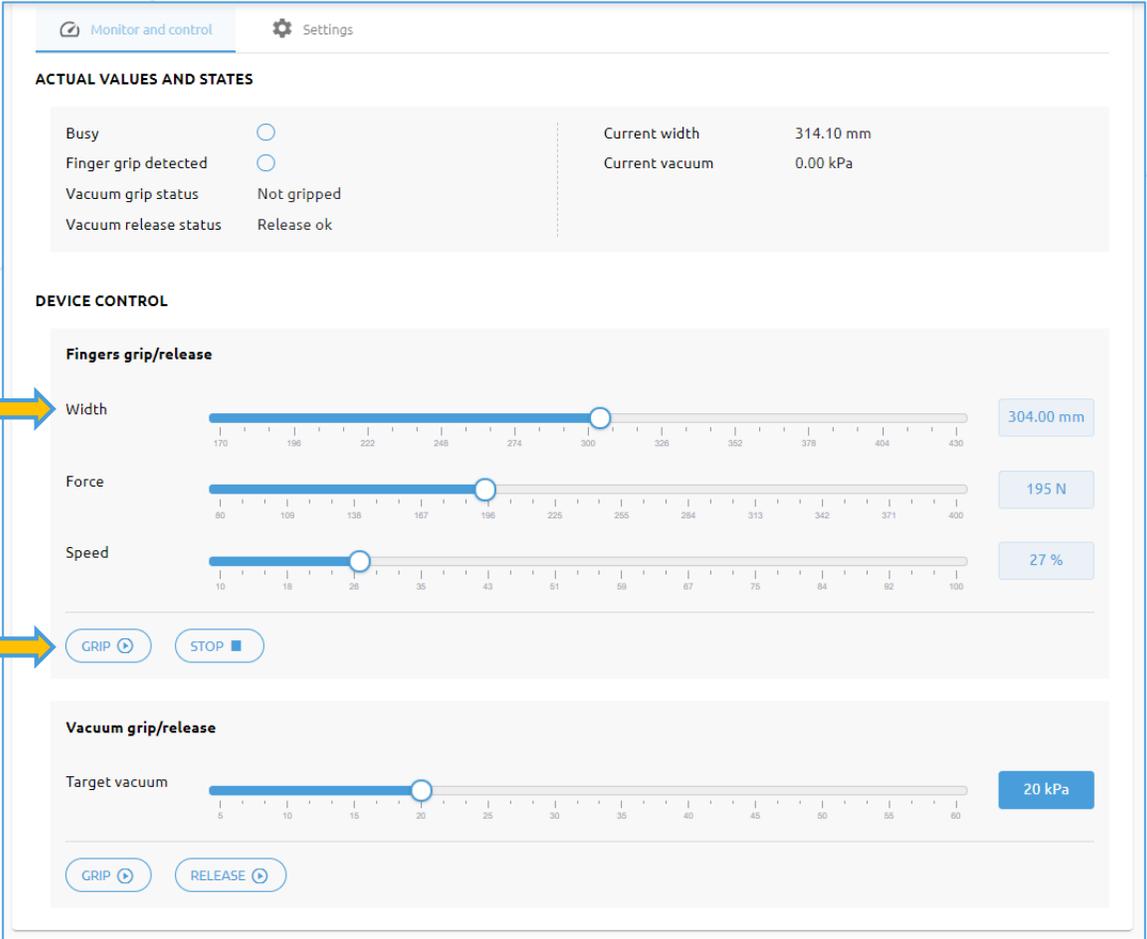
Target vacuum: 20 kPa

GRIP RELEASE

AUFGABE 2

Lösung – Schritt 5

Verringern Sie die Breite um 10 mm und drücken Sie „Greifen“.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into several sections:

- ACTUAL VALUES AND STATES:** A table showing the current status of the gripper.

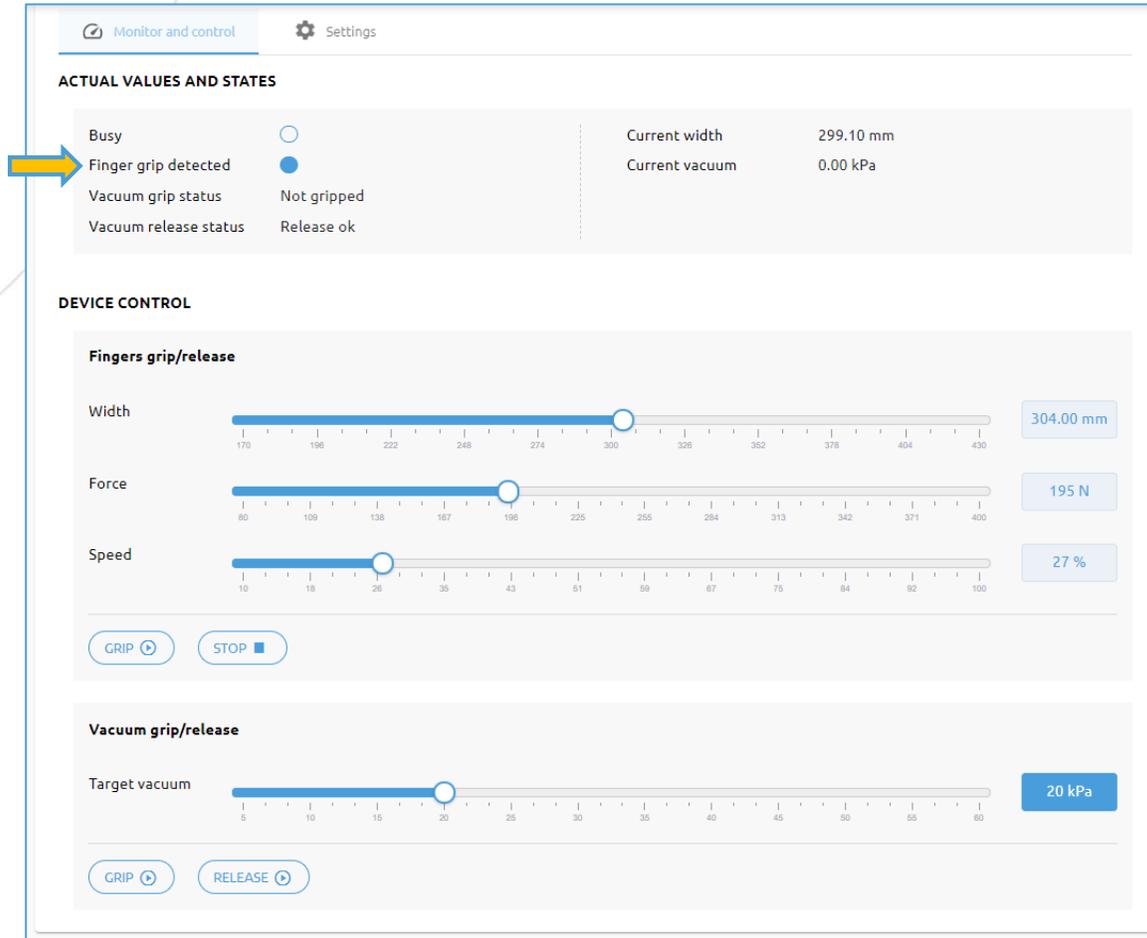
Busy	<input type="radio"/>	Current width	314.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		
- DEVICE CONTROL:** A section for adjusting the gripper's parameters.
 - Fingers grip/release:** Contains three sliders: Width (set to 304.00 mm), Force (set to 195 N), and Speed (set to 27%).
 - Buttons:** A 'GRIP' button with a play icon and a 'STOP' button with a square icon are located below the sliders.
- Vacuum grip/release:** Contains a 'Target vacuum' slider set to 20 kPa and 'GRIP' and 'RELEASE' buttons.

Two yellow arrows point to the 'Width' slider and the 'GRIP' button, indicating the required actions for step 5.

AUFGABE 2

Lösung – Schritt 6

Die Kennzeichnung „Fingergriff erkannt“ wird aktiviert.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. A yellow arrow points to the 'Finger grip detected' status indicator, which is a blue circle, indicating it is active. The interface is divided into several sections:

- ACTUAL VALUES AND STATES:** A table showing the current status of various parameters.

Busy	<input type="radio"/>	Current width	299.10 mm
Finger grip detected	<input checked="" type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		
- DEVICE CONTROL:** A section for adjusting the gripper's operation.
 - Fingers grip/release:** Three sliders for Width (304.00 mm), Force (195 N), and Speed (27%).
 - Vacuum grip/release:** A slider for Target vacuum (20 kPa).
 - Buttons for GRIP and STOP (under Fingers) and GRIP and RELEASE (under Vacuum).

2FGP20

- 1 **AUFGABE 1 – Einstellung der Finger**
- 2 **AUFGABE 2 – Greifen und Lösen der Finger über den Web Client**
- 3 **AUFGABE 3 – Bedienung des Vakuums über den Web Client**

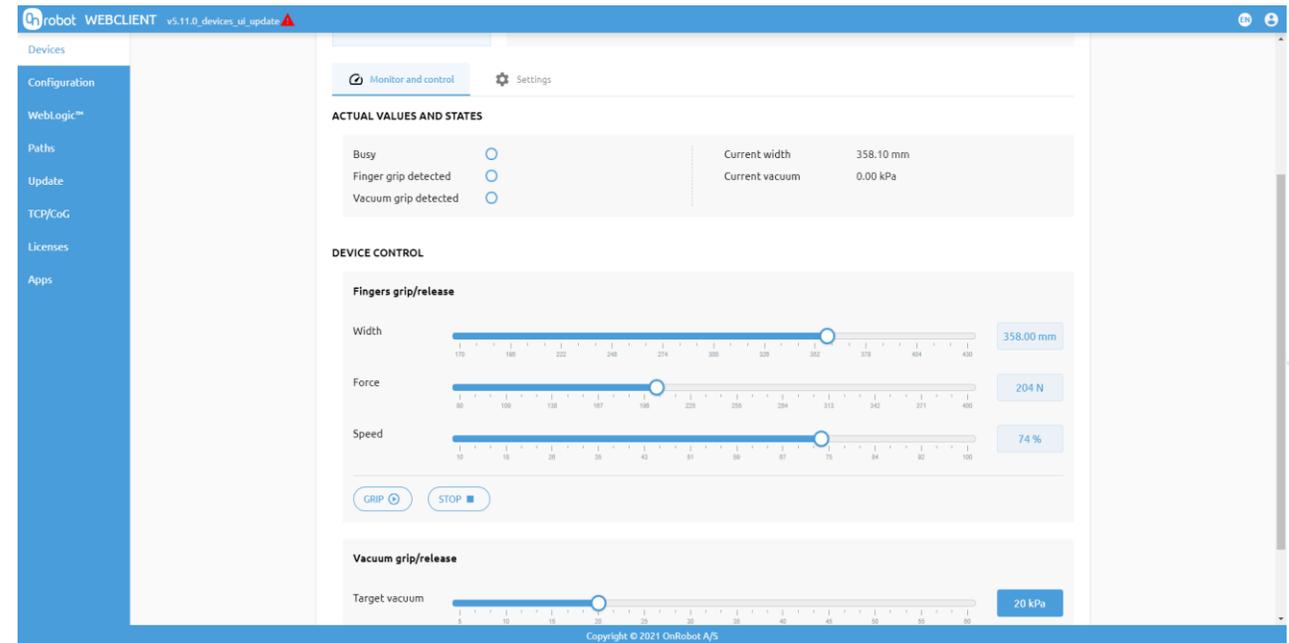
AUFGABE 3

Bedienung des Vakuums

Beschreibung:

Bedienen Sie das Vakuum am 2FGP20:

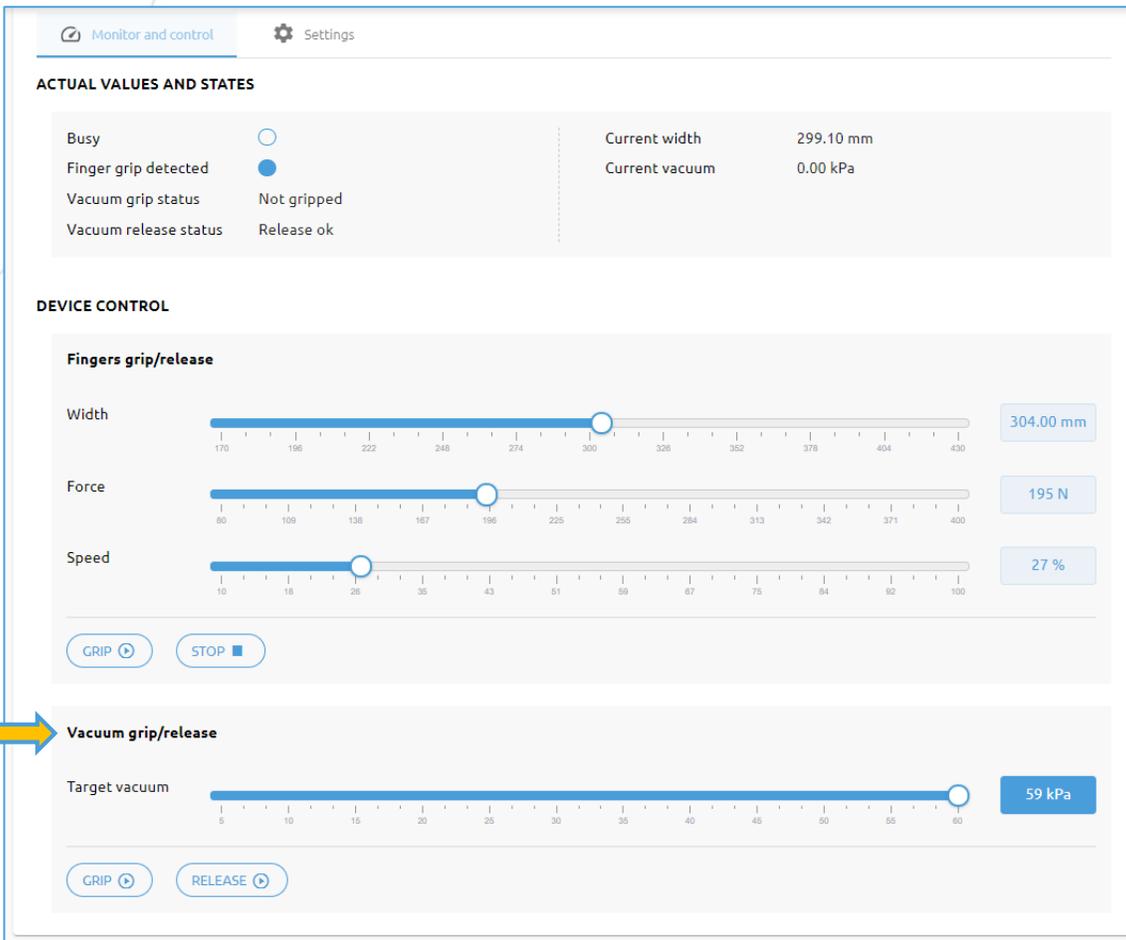
- 1. Stellen Sie das maximale Vakuum ein.**
- 2. Messen Sie die Vakuumstufe.**
- 3. Stellen Sie das Vakuum entsprechend der vorher gemessenen Stufe ein.**



AUFGABE 3

Lösung – Schritt 1

Navigieren Sie zur Registerkarte „Überwachen und Steuern“ und wählen Sie „Vakuumgriff/Lösen“.



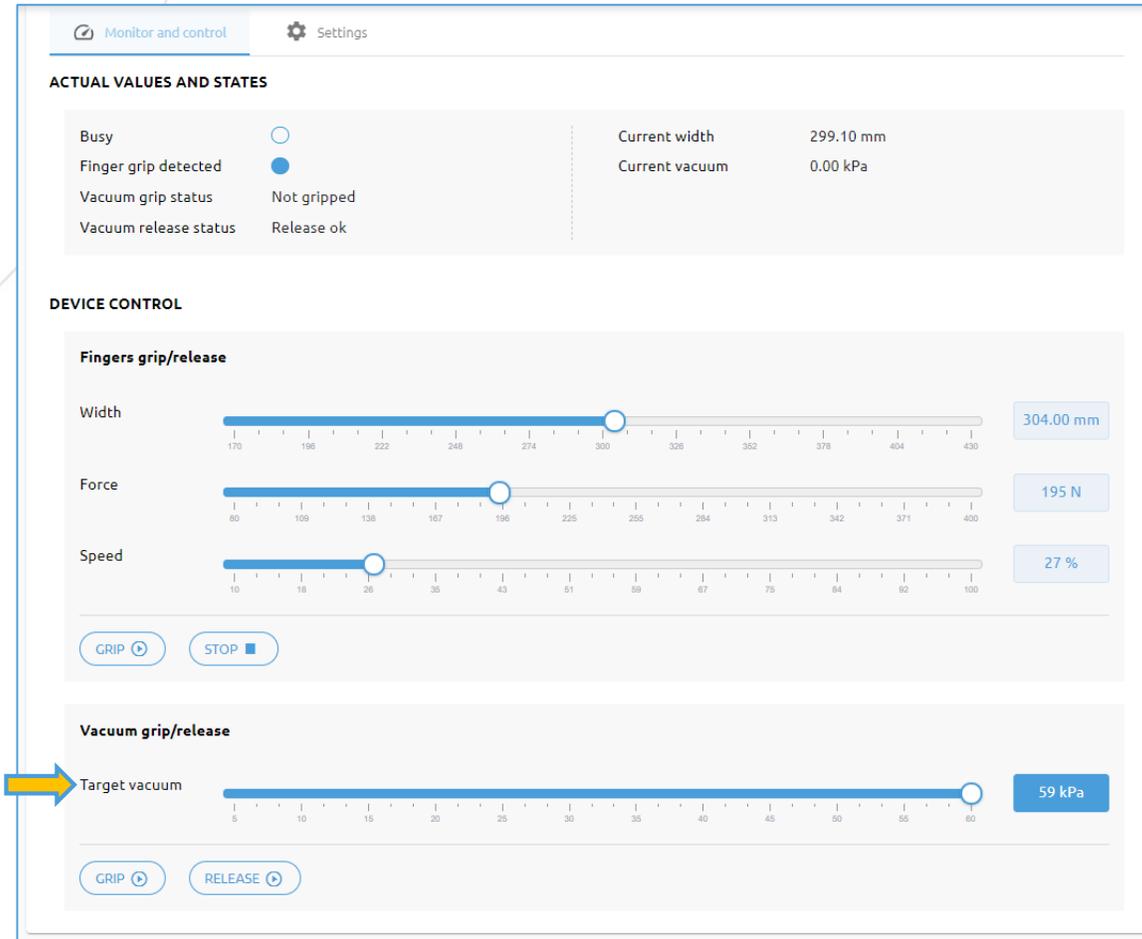
The screenshot displays the 'Monitor and control' interface with the following sections:

- ACTUAL VALUES AND STATES:**
 - Busy:
 - Finger grip detected:
 - Vacuum grip status: Not gripped
 - Vacuum release status: Release ok
 - Current width: 299.10 mm
 - Current vacuum: 0.00 kPa
- DEVICE CONTROL:**
 - Fingers grip/release:**
 - Width: Slider from 170 to 430 mm, set at 304.00 mm
 - Force: Slider from 80 to 400 N, set at 195 N
 - Speed: Slider from 10 to 100 %, set at 27 %
 - Buttons: GRIP (play icon), STOP (square icon)
 - Vacuum grip/release:** (highlighted with a yellow arrow)
 - Target vacuum: Slider from 5 to 60 kPa, set at 59 kPa
 - Buttons: GRIP (play icon), RELEASE (stop icon)

AUFGABE 3

Lösung – Schritt 2

Stellen Sie sicher, dass die maximale Vakuumstufe ausgewählt ist.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into several sections:

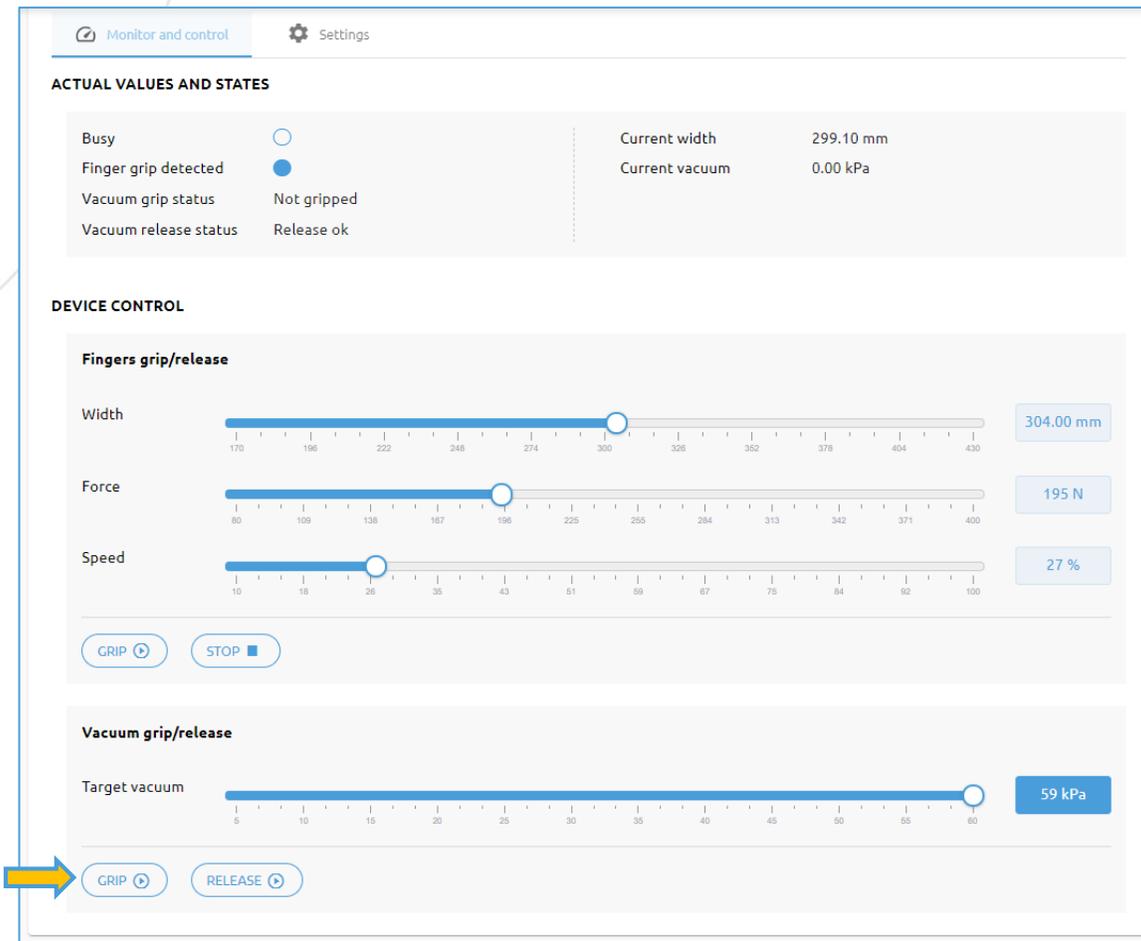
- ACTUAL VALUES AND STATES:** A table showing the current status of the gripper.

Busy	<input type="radio"/>	Current width	299.10 mm
Finger grip detected	<input checked="" type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		
- DEVICE CONTROL:** A section for adjusting the gripper's parameters.
 - Fingers grip/release:** Three sliders for Width (304.00 mm), Force (195 N), and Speed (27 %).
 - Vacuum grip/release:** A slider for Target vacuum (59 kPa), highlighted with a yellow arrow. Below it are 'GRIP' and 'RELEASE' buttons.

AUFGABE 3

Lösung – Schritt 3

Drücken Sie „Greifen“.



Monitor and control Settings

ACTUAL VALUES AND STATES

Busy	<input type="radio"/>	Current width	299.10 mm
Finger grip detected	<input checked="" type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		

DEVICE CONTROL

Fingers grip/release

Width: 304.00 mm

Force: 195 N

Speed: 27%

GRIP STOP

Vacuum grip/release

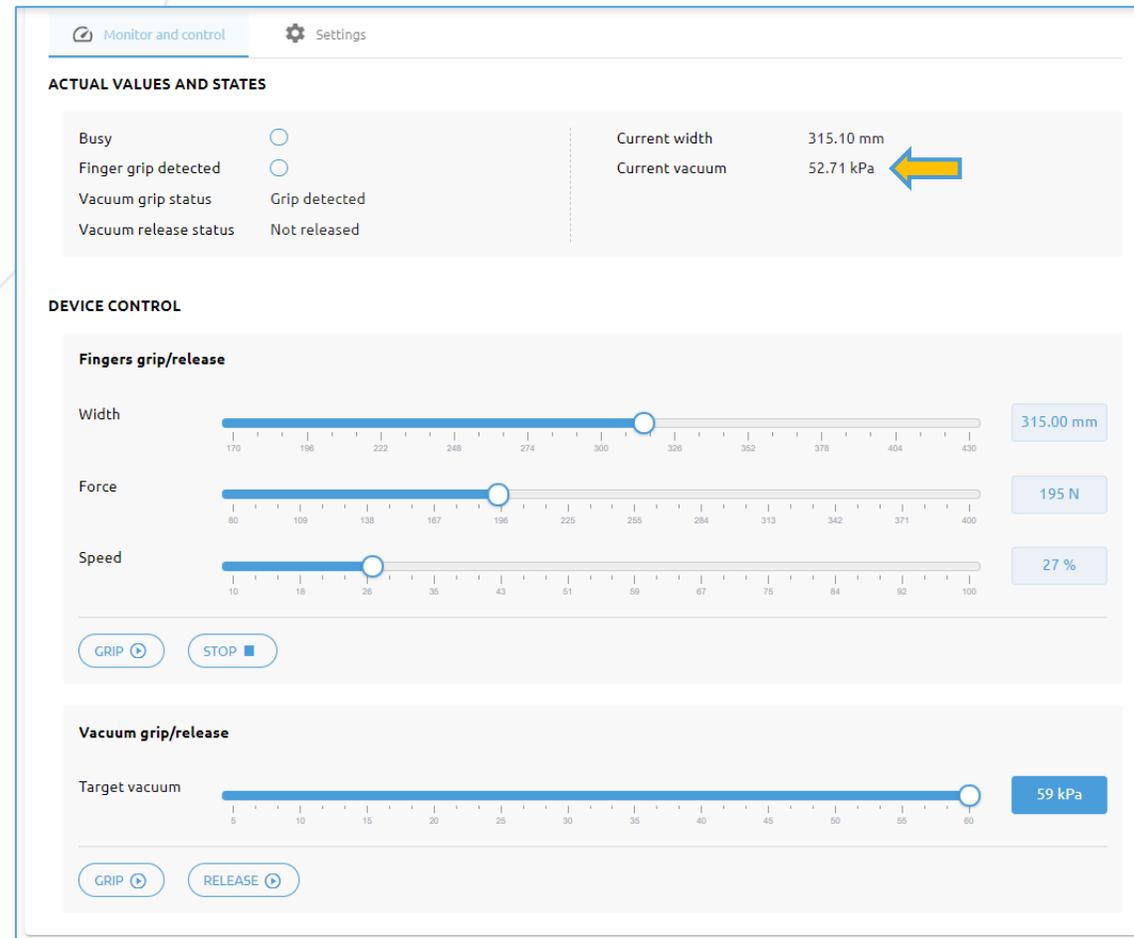
Target vacuum: 59 kPa

GRIP RELEASE

AUFGABE 3

Lösung – Schritt 4

Messen Sie die Vakuumstufe, in diesem Fall 52,71 kPa.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into two main sections: 'ACTUAL VALUES AND STATES' and 'DEVICE CONTROL'.

ACTUAL VALUES AND STATES

Busy	<input type="radio"/>	Current width	315.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	52.71 kPa
Vacuum grip status	Grip detected		
Vacuum release status	Not released		

DEVICE CONTROL

Fingers grip/release

- Width: 315.00 mm (Slider range: 170 to 430)
- Force: 195 N (Slider range: 80 to 400)
- Speed: 27 % (Slider range: 10 to 100)

Vacuum grip/release

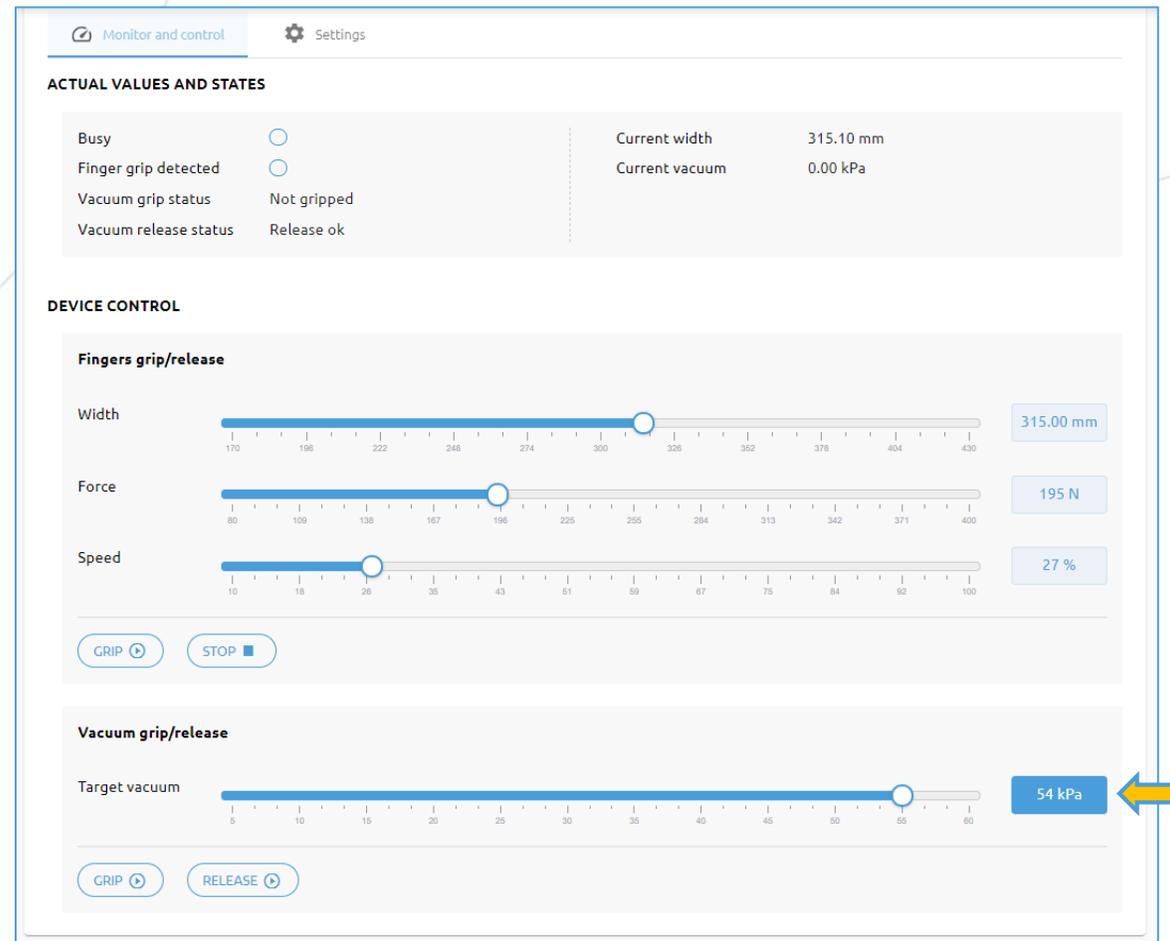
- Target vacuum: 59 kPa (Slider range: 5 to 60)

Buttons for 'GRIP' and 'STOP' are located below the Fingers grip/release section, and 'GRIP' and 'RELEASE' buttons are below the Vacuum grip/release section.

AUFGABE 3

Lösung – Schritt 5

Stellen Sie die Vakuumstufe auf 54 kPa ein.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into several sections:

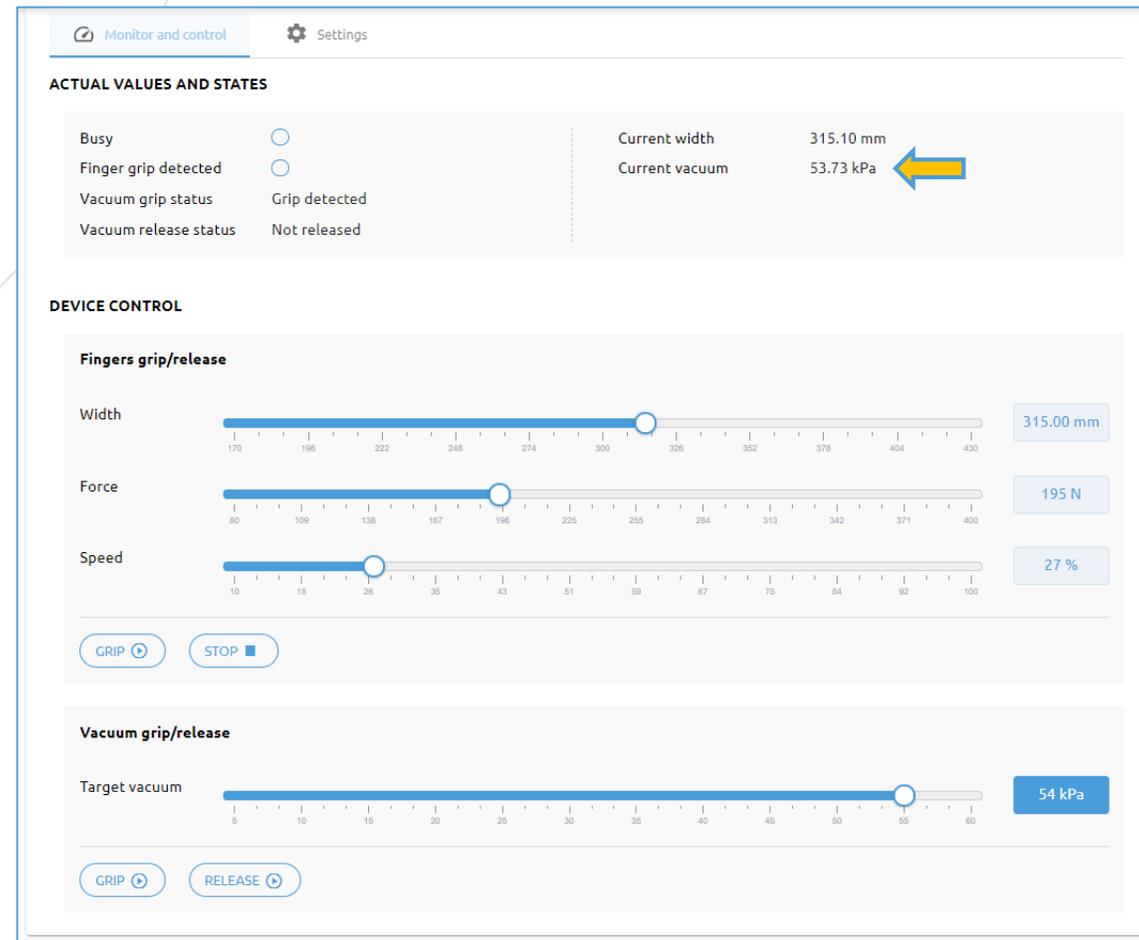
- ACTUAL VALUES AND STATES:** A table showing the current status of the gripper.

Busy	<input type="radio"/>	Current width	315.10 mm
Finger grip detected	<input type="radio"/>	Current vacuum	0.00 kPa
Vacuum grip status	Not gripped		
Vacuum release status	Release ok		
- DEVICE CONTROL:** A section for adjusting the gripper's parameters.
 - Fingers grip/release:** Three sliders for Width (315.00 mm), Force (195 N), and Speed (27 %).
 - Vacuum grip/release:** A slider for Target vacuum, which is currently set to 54 kPa. A yellow arrow points to this value.

AUFGABE 3

Lösung – Schritt 6

Drücken Sie „Greifen“ und messen Sie die Vakuumstufe.



The screenshot displays the 'Monitor and control' interface for a robotic gripper. It is divided into two main sections: 'ACTUAL VALUES AND STATES' and 'DEVICE CONTROL'.

ACTUAL VALUES AND STATES:

- Busy:
- Finger grip detected:
- Vacuum grip status: Grip detected
- Vacuum release status: Not released
- Current width: 315.10 mm
- Current vacuum: 53.73 kPa (highlighted with a yellow arrow)

DEVICE CONTROL:

Fingers grip/release:

- Width: Slider set to 315.00 mm (range 170-430)
- Force: Slider set to 195 N (range 80-400)
- Speed: Slider set to 27% (range 10-100)
- Buttons: GRIP (play icon), STOP (square icon)

Vacuum grip/release:

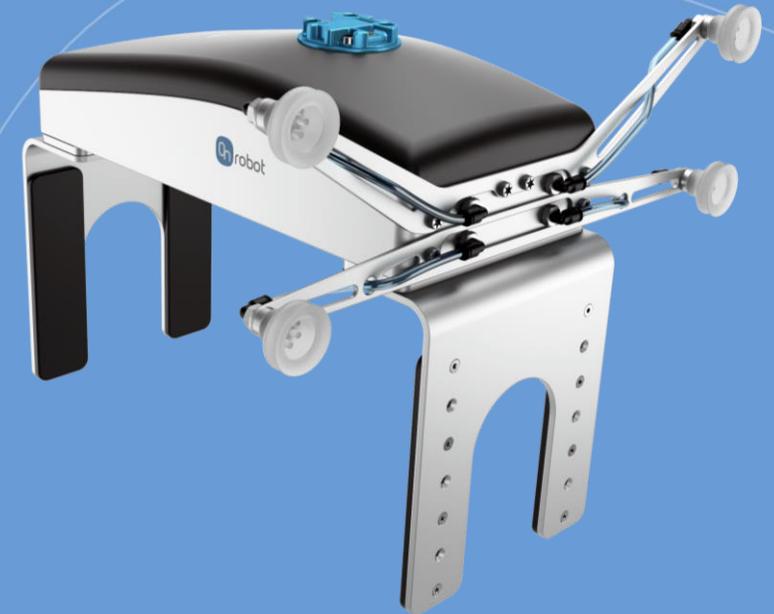
- Target vacuum: Slider set to 54 kPa (range 5-60)
- Buttons: GRIP (play icon), RELEASE (stop icon)



Weitere Informationen

Wenn Sie weitere Informationen benötigen, wenden Sie sich bitte an Ihren OnRobot-Vertreter oder besuchen Sie unsere Website

www.onrobot.com



Greifer 2FGP20

- Lassen sich die Finger bewegen, während man ein Werkstück mit Vakuum hält?
- Gibt es Einschränkungen, wenn der Greifer an Werkzeuganschlüsse an Fanuc-CRX, Kassow, URe, UR-CB3 angeschlossen ist?
- Ist externes Greifen möglich?
- Kann die Bremse aktiviert werden, wenn die Zielkraft nicht erreicht wurde?
- Messen beide Finger die aktuelle Greifkraft?
- Kann die Greifkraft abgelesen werden, wenn die Bremse aktiviert ist?

Greifer 2FGP20

- Lassen sich die Finger bewegen, während man ein Werkstück mit Vakuum hält?
 - ✓ **Nein, das ist nicht möglich.**
- Gibt es Einschränkungen, wenn der Greifer an Werkzeuganschlüsse an Fanuc-CRX, Kassow, URe, UR-CB3 angeschlossen ist?
 - ✓ **Ja, weitere Informationen finden Sie im Handbuch zum jeweiligen Roboter.**
- Ist internes Greifen möglich?
 - ✓ **Nein, es ist nur externes Greifen möglich.**
- Kann die Bremse aktiviert werden, wenn die Zielkraft nicht erreicht wurde?
 - ✓ **Nein, das ist nicht möglich.**
- Messen beide Finger die aktuelle Greifkraft?
 - ✓ **Nein, nur der sich bewegende Finger misst.**
- Kann die Greifkraft abgelesen werden, wenn die Bremse aktiviert ist?
 - ✓ **Ja, dieser Wert kann immer abgelesen werden.**