



**GAMES FOR HEALTH EUROPE
2025**

GETINGE

Vessel Harvesting Gaming System

VASOVIEW

CHRIS HEGER

COO - Bestronics Development
Project Manager - Vasoview

BESTRONICS

Development

Our Mission

Our aim. The ethics that guide us everyday.

We design, develop and manufacture smart products and IoT systems. From idea to production and beyond.

International tech talents under one roof in Europe's biggest ecosystem for innovation: Brainport.

● Electronic Design

● IoT Development

● Cloud Applications

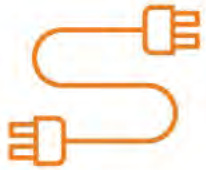
● Embedded Software

● Product Design

● IoT Sensors

Our Team

37 Designers & Engineers.



Electronic Engineering
Team



Embedded Software
Team



Mechanical & Industrial Design
Team



Web, App & Cloud
Team



Innovation
& Project Management

Our Company

Part of Bestronics Group



Bestronics Development

- R&D
- Product design
- Software design
- Electronic design
- Embedded Software design
- IoT development
- IoT sensors

**Bestronics Brainport
Industry Campus (BIC)**

Prototype production line
with Summa College

Bestronics
PCB assembly

Bestronics Gemini
PCB assembly

Bestronics 25
Product assembly

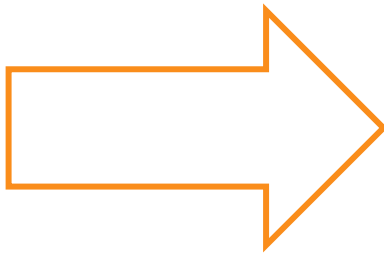
Bestronics Development
Cloud and product support

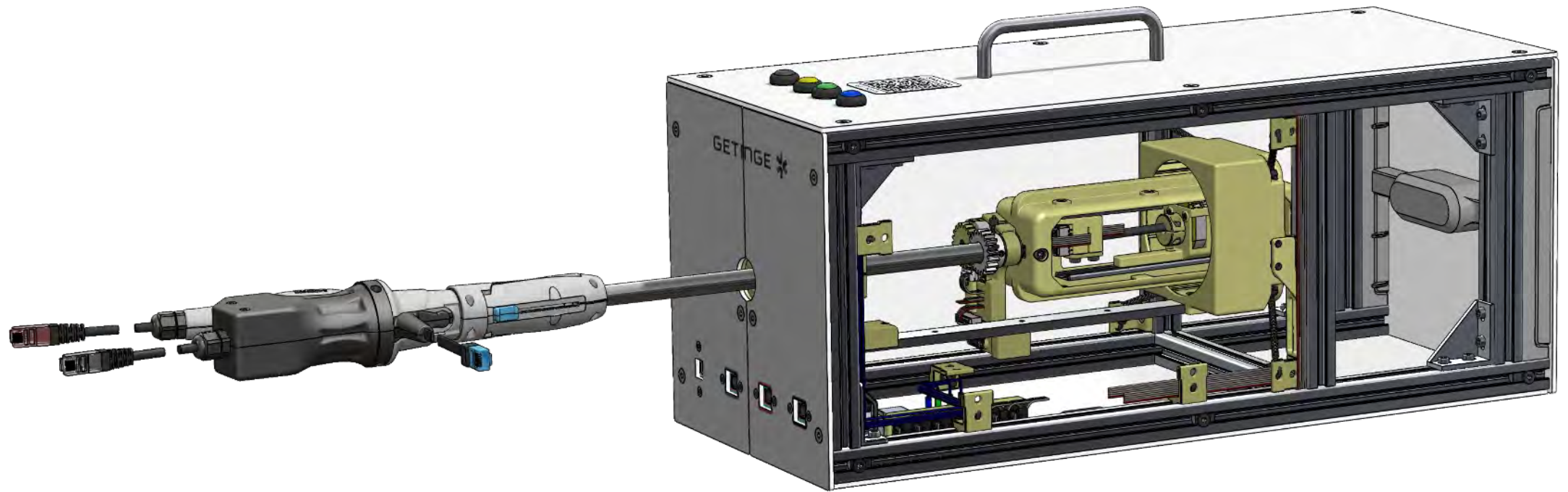
MISSION

Design and produce a game controller for Getinge

The logo for BESTRONiCS is displayed in white, uppercase letters. The letter 'O' is replaced by a stylized orange circular icon with a central dot and a horizontal line through it, resembling a power button or a signal indicator. The background of the slide features a pattern of small orange dots arranged in a grid-like fashion, with some dots missing or faded, creating a textured effect.

BESTRONiCS

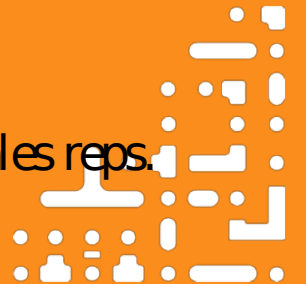




Challenges

From surgical procedure to joystick

- 0** **CAPTURE ALL**
Define movements & sensors/methods to capture them
- 1** **MOVEMENTS**
- 0** **SHOULD FEEL LIKE THE**
Mimic the tissue resistance
- 2** **REAL THING**
- 0** **ONE TIME USE INTO LASTING**
Surgical tool is used once. Training tool will be used many times.
- 3** **PRODUCT**
- 0** **NO PRODUCTION**
Limitation in production techniques. Who makes them?
- 4** **VOLUMES**
- 0** **TRANSPORT, TRANSPORT,**
Walking, Cars, Trucks, Planes, FedEx, Customs, Sales reps.
- 5** **TRANSPORT**



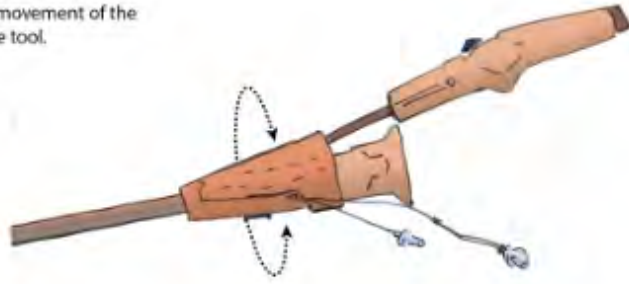
DESIGN

From a one time use product
to a long lasting game controller

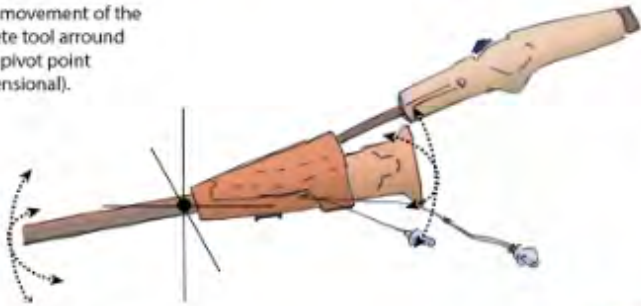
The logo for BESTRONICS is displayed in a white, sans-serif font. The word "BESTRONICS" is written in all caps. The letter "O" is replaced by a stylized orange icon of a game controller, featuring a central circle with a dot and two curved lines extending from the sides, resembling a joystick or directional pad.

BESTRONICS

A_1
Circular movement of the complete tool.



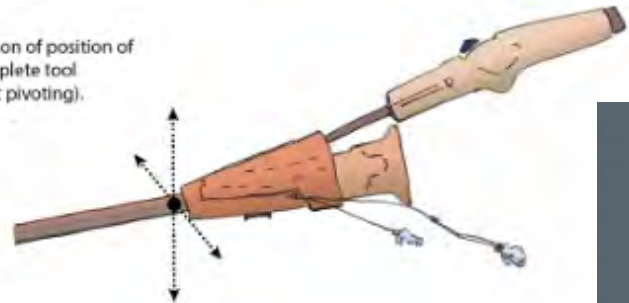
A_2
Pivotal movement of the complete tool around central pivot point (2 dimensional).



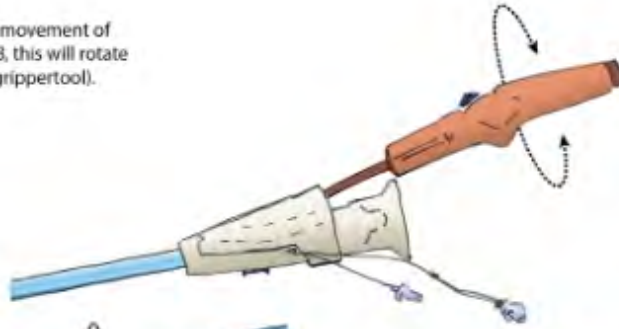
A_3
Linear movement of the complete tool over longitudinal axel of the metal shaft.



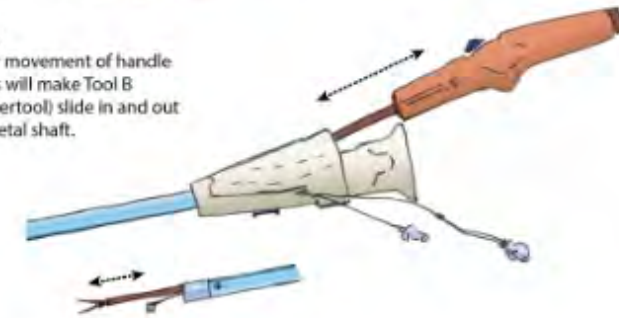
A_4
Translation of position of the complete tool (without pivoting).



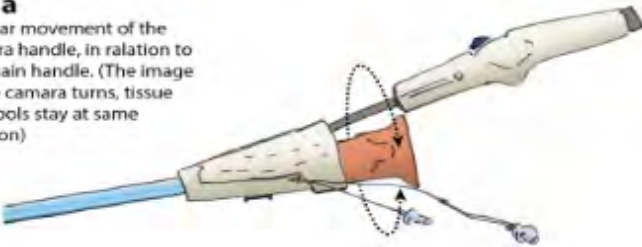
B_1
Circular movement of handle B, this will rotate Tool B (grippertool).



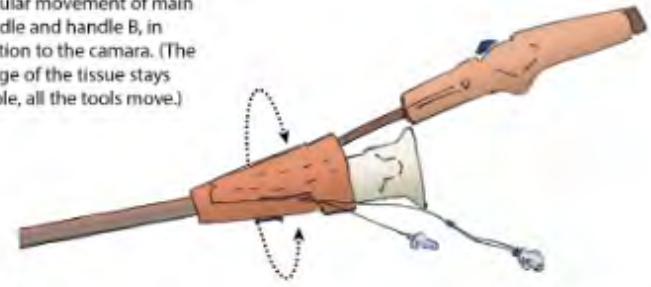
B_2
Linear movement of handle B. This will make Tool B (grippertool) slide in and out the metal shaft.



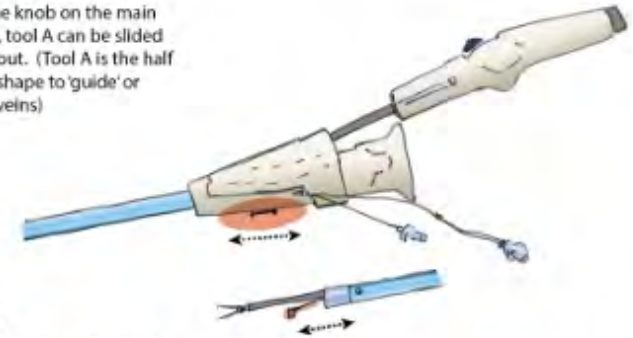
C_1a
Circular movement of the camera handle, in relation to the main handle. (The image of the camera turns, tissue and tools stay at same location)



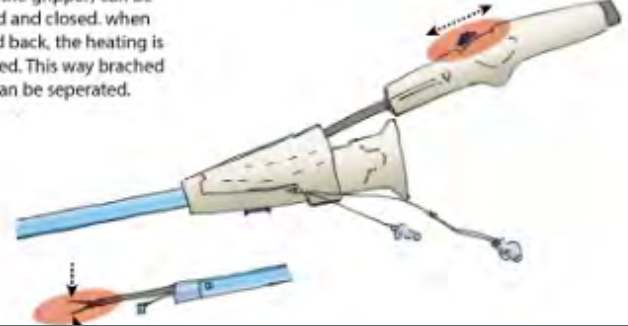
C_1b
Circular movement of main handle and handle B, in relation to the camera. (The image of the tissue stays stable, all the tools move.)



D_1
With the knob on the main handle, tool A can be slid in and out. (Tool A is the half circular shape to 'guide' or follow veins)

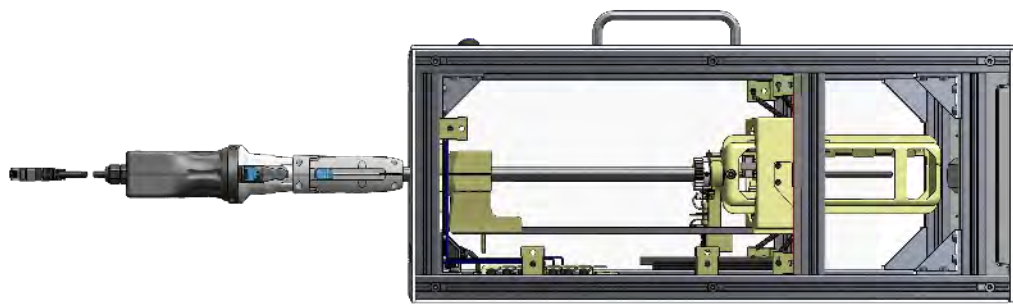
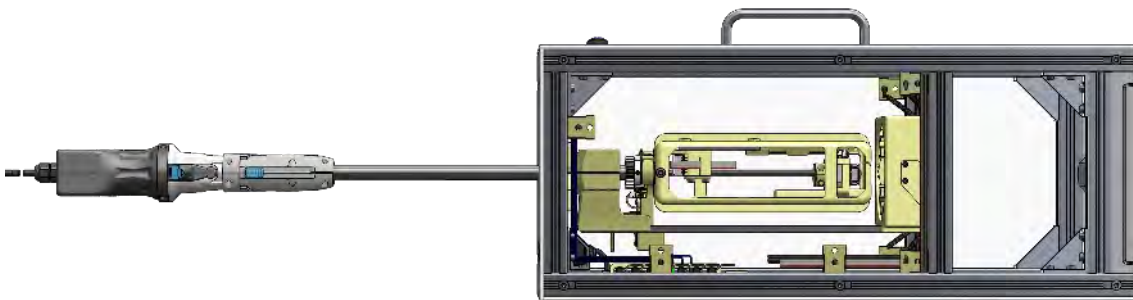
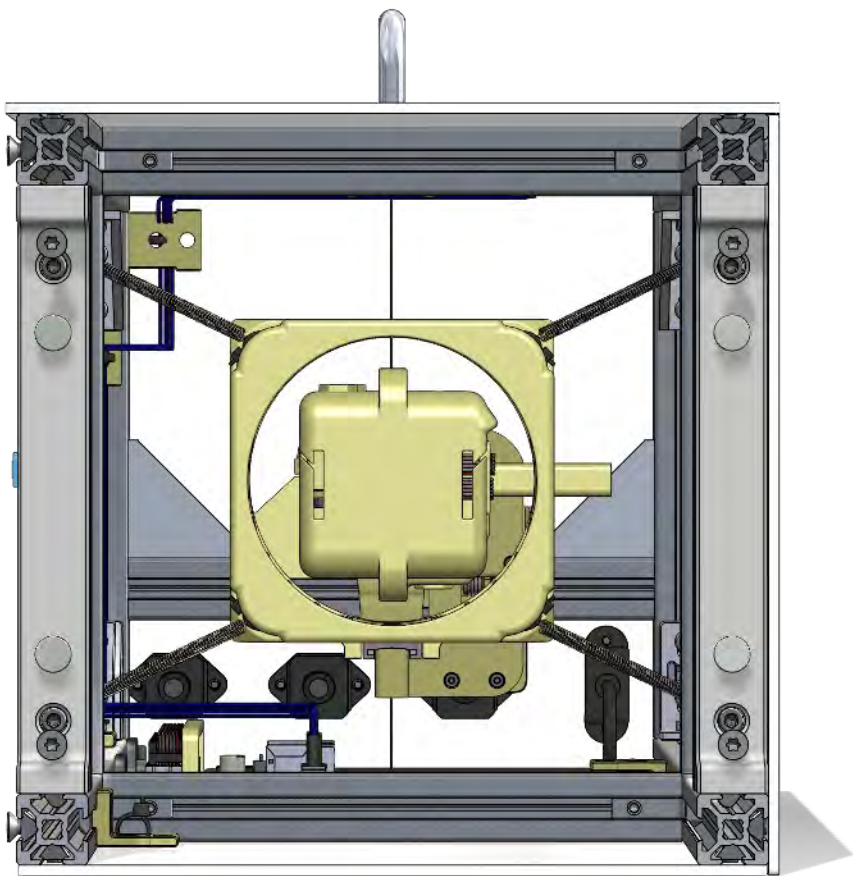


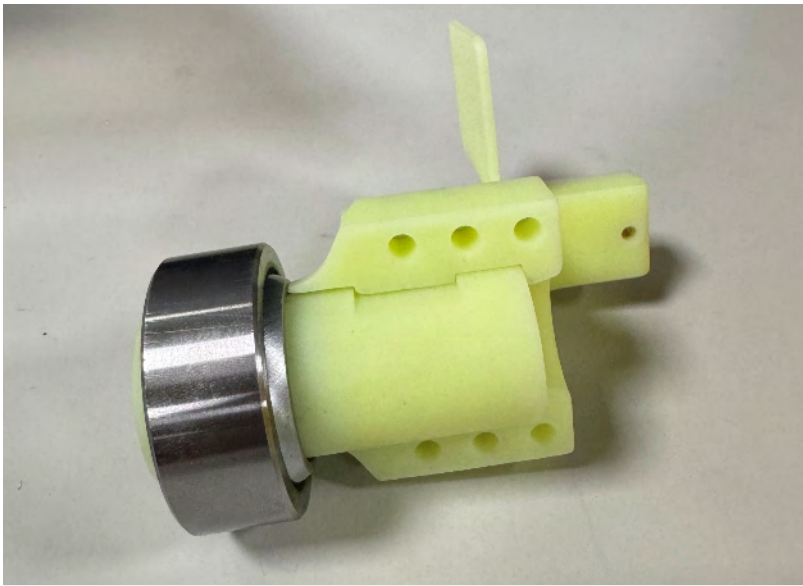
D_2
With the knob on handle B, tool B (the gripper) can be opened and closed. when pushed back, the heating is activated. This way brached veins can be separated.



SENSORS

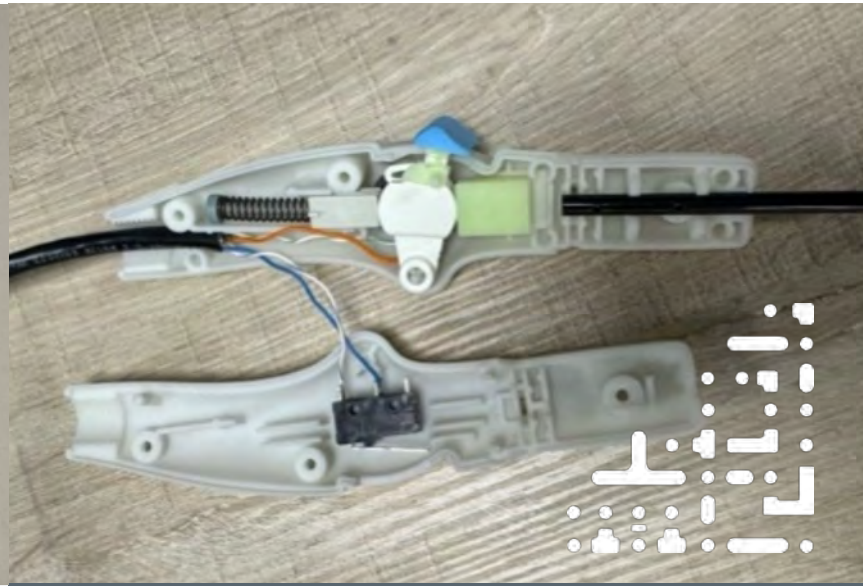
**5 - TIME OF FLIGHT
SENSORS
3 - INDUSTRIAL ROTATION
SENSORS
2 - SPRING BUTTONS**





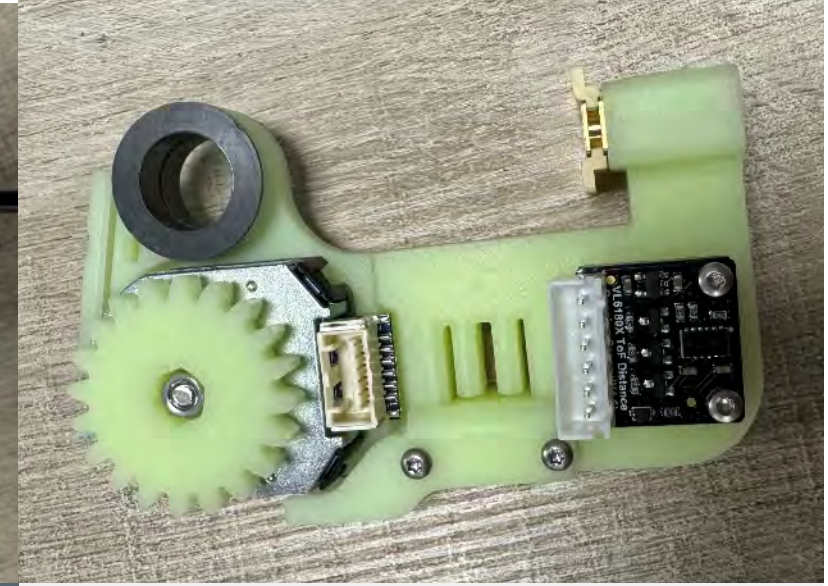
3D PRINTING

- **BRITTLE**
- **NOT STRONG ENOUGH TO HOLD SCREWS**
- **MATERIAL DETERIORATES FROM SWEAT**
- **LOSES ITS COLOUR**



INTEGRATE SENSORS

- **ORIGINAL PARTS HAVE NO ROOM FOR SENSORS, BUTTONS, CABLES, ETC.**
- **KEEP THE OUTER SHAPES**
- **FIT IN SENSORS & CABLES**
- **MAINTAIN FUNCTIONALITY**
- **INDUSTRIAL GRADE SENSORS**



TRANSFORM

- **USE GEARS TO TRANSFORM MOVEMENTS INTO OTHER MOVEMENTS THAT CAN BE MEASURED**
- **LIMIT CERTAIN MOVEMENTS**
 - **ADD RESISTANCE TO MOVEMENTS**

CABIES

SENSORS AND BUTTONS NEED CABIES FOR POWER AND DATA.

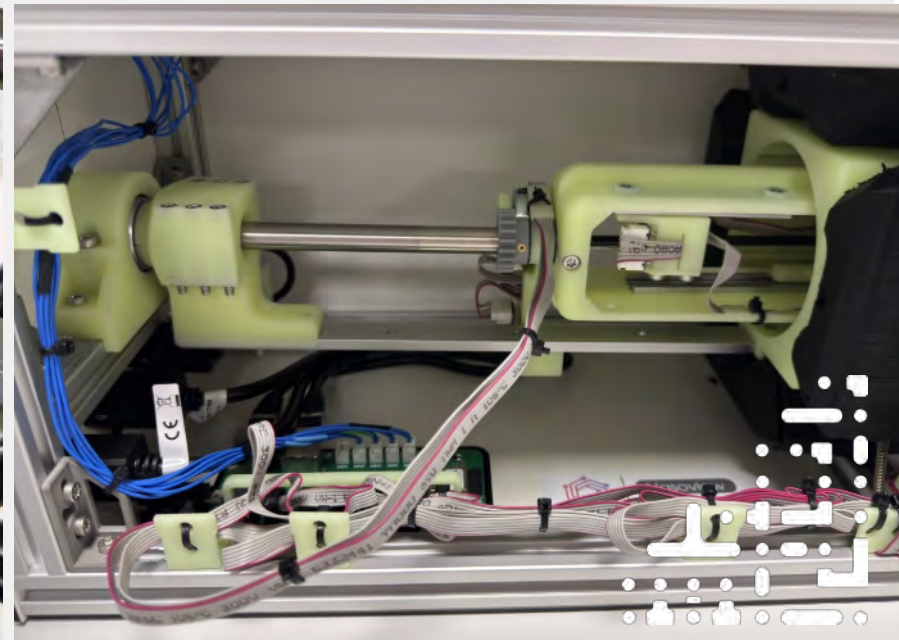
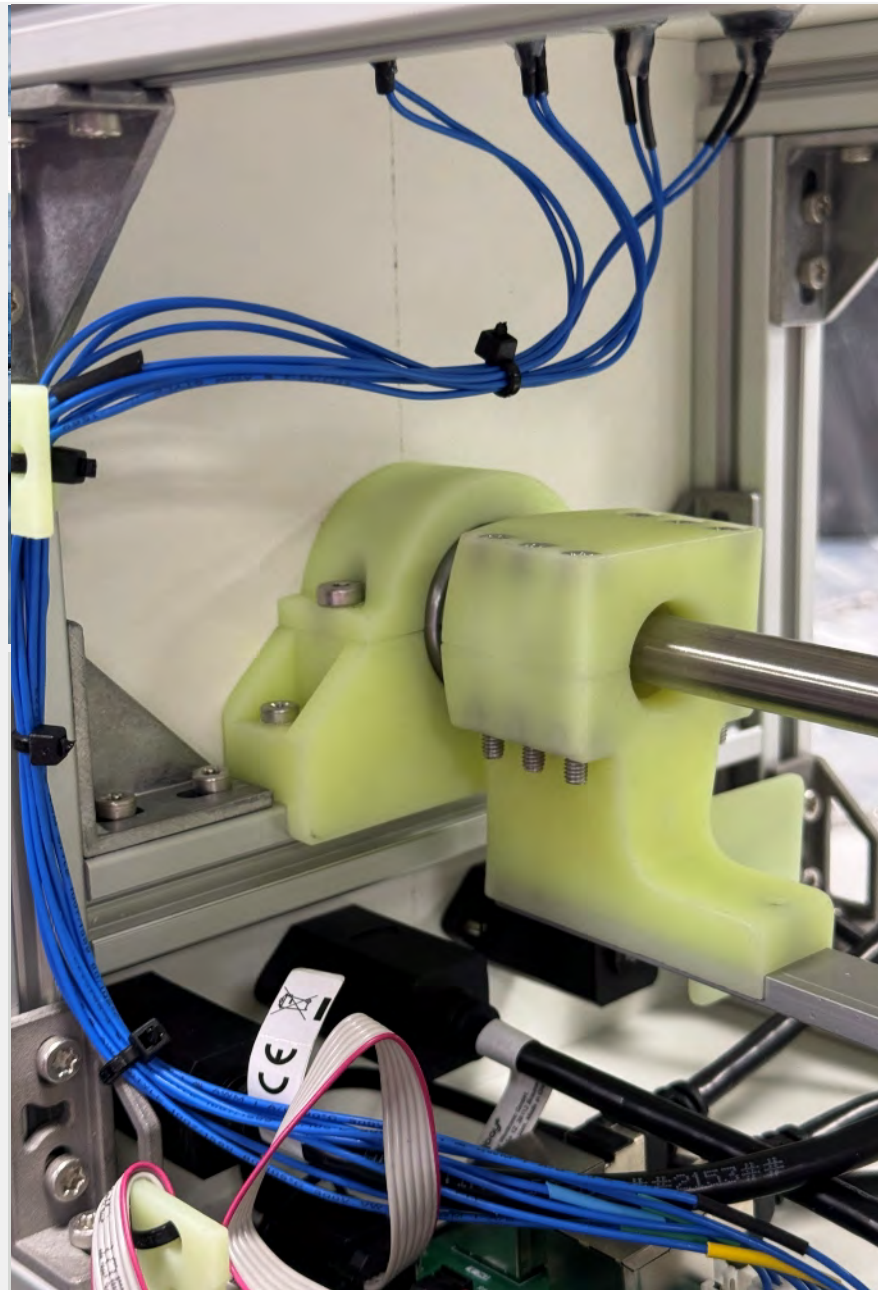
MANY CABIES THROUGHTOUT THE DEVICE AND INTO A LOT OF PARTS.

CABIES CANNOT GET ENTANGLED.

CABIES CANNOT PUT TENSION ON CONNECTIONS OR PULL ON SENSORS.

CABIES NEED SPACE TO MOVE WITH THE DEVICE.

CABIES NEED TO MOVE OUT OF THE WAY WHEN EXECUTING MOVEMENTS.



PRODUCTI

ON PARTS:

1 90 DIFFERENT PARTS

720 PARTS IN TOTAL

36 SUPPLIERS

372 PAGES LONG ASSEMBLY

DOCUMENT

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1.4.1. 2020 CORNER BRACKET MODIFIED SUB-ASSEMBLY A-S000359_01

Components

ITEM	COMPONENT	QUANTITY	PART NUMBER
1.5	2020 CORNER BRACKET MODIFIED ASSEMBLY A-S000359_01		
1.5.1	CORNER BRACKET DOUBLE 20X20 MODIFIED	1	P-S000360_00
1.5.2	SOCKET HEAD BOLT M4X8 TX	3	F-S900041
1.5.3	M4 SPRING T-NUT 2020	3	F-S900186_00



Figure 3 2020 Corner Bracket

Assembly Guide

Stap	Gereedschap	Beschrijving	Foto's
1		Plaats SOCKET HEAD BOLT M4X8 TX (F-S900041) aan de binnenkant van CORNER BRACKET DOUBLE 20X20 MODIFIED (P-S000360_00). Draai M4 SPRING T-NUT 2020 (F-S900186_00) aan de buitenkant van de bracket los vast over de schroef.	
2		Herhaal 3 keer stap 1	
3		Herhaal stap 1 en 2. Je hebt nu 2 complete corner brackets.	

VasoView Gaming System
www.bestronics.dev

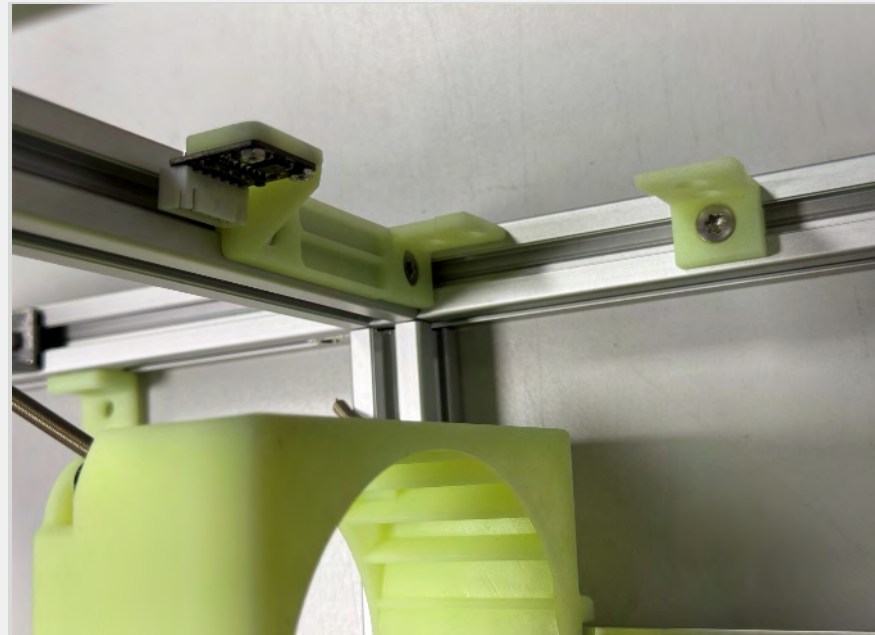
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VasoView Gaming System Assembly Guide



Version V0.4
Date 28.03.2025
www.bestronics.dev



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Assembly Guide

Stappen	Gereedschap	Beschrijving	Foto's
		Plaats 2x HEX NUT M2 (F-S900018) in GEAR SLIDER (S000587_00)	
	Torx TX6	Leg AMT2238-V BACK (P-S000104) op GEAR SLIDER (S000587_01). Zet het geheel vast met 2x ROUNDED BOLT M2X6 TX (F-S900065_00). Draai 2x aan met Torx TX6	
		Klik AMT2238-6350S ASSEMBLY (P-S000246) op AMT2238-V BACK (P-S000104)	

VasoView Gaming System
www.bestronics.dev

TRANSPORT

The misery called shipping



BESTRONiCS

TRANSPORT

WALKING WITH THE DEVICE
THROUGH HOSPITALS

SALES REPS DRIVING
THROUGH THE COUNTRY

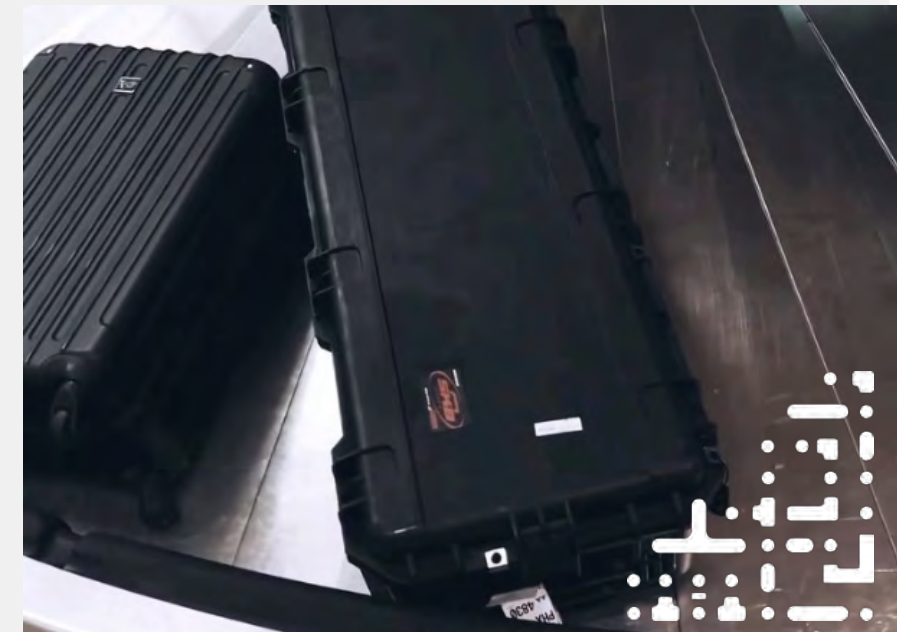
TRANSPORTING ALL OVER THE
WORD:

CARS, FORKIFTS, TRUCKS,
BOATS, PLANES

BAGGAGE HANDLING
WAREHOUSE HANDLING

CUSTOMS

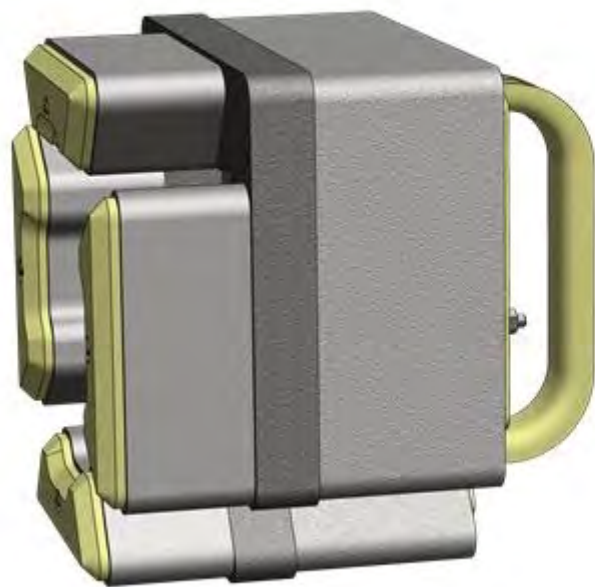
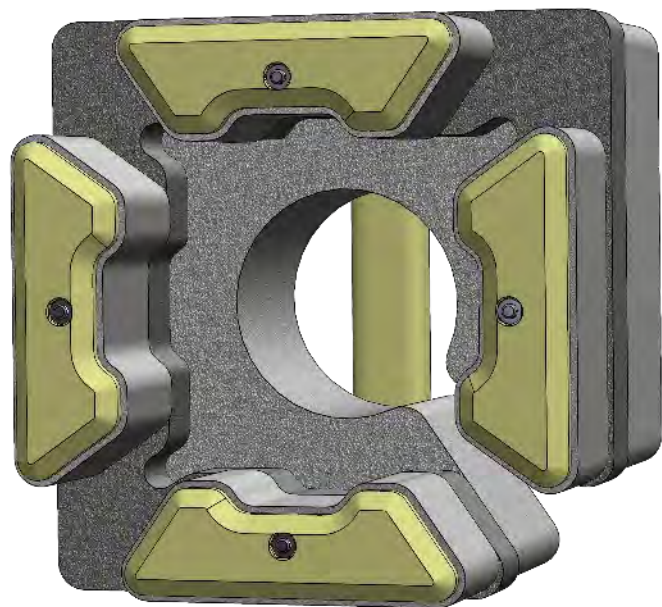
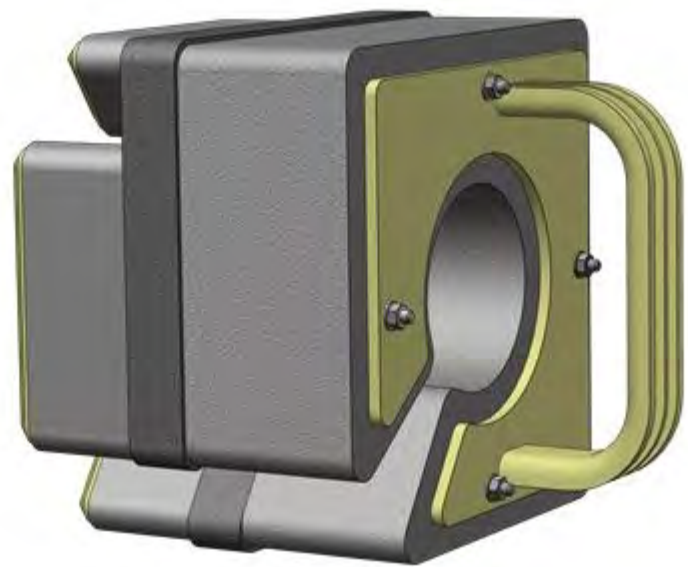
IT TOOK US A FULL YEAR TO GET
IT TO A LEVEL TO SURVIVE
SHIPPING.

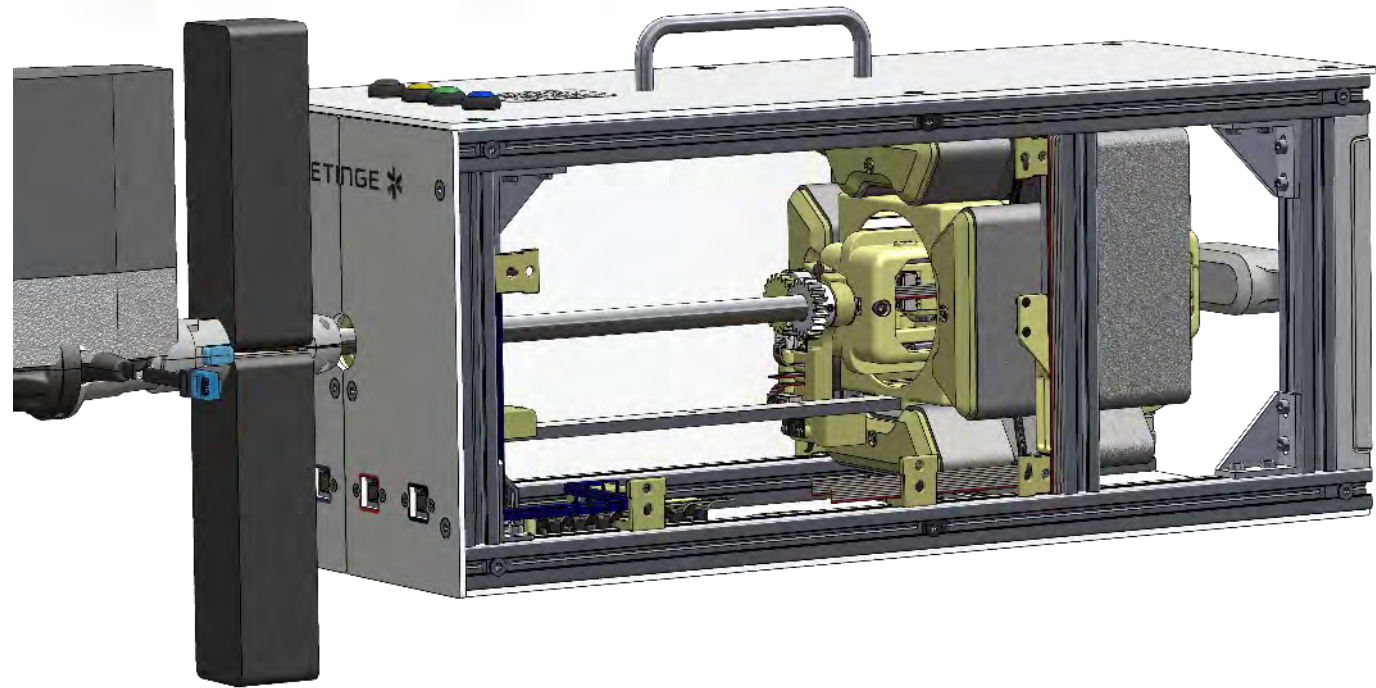




FRAGILE

HANDLE WITH CARE





THANK YOU!

BESTRONICS



GAMES FOR HEALTH

EUROPE

2025