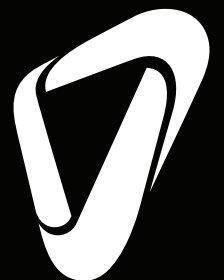
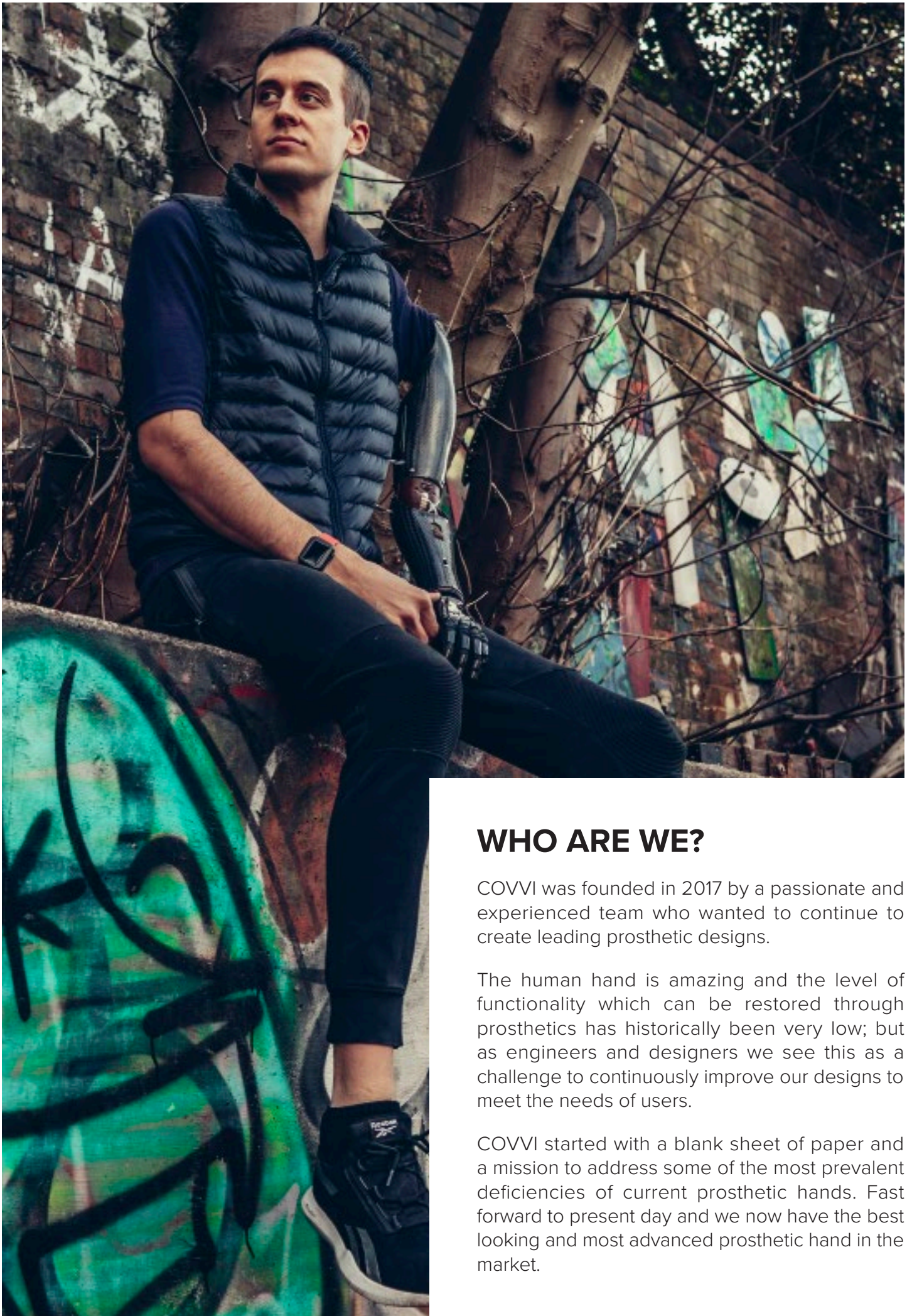




**COVVI**  
Partners in Prosthetics



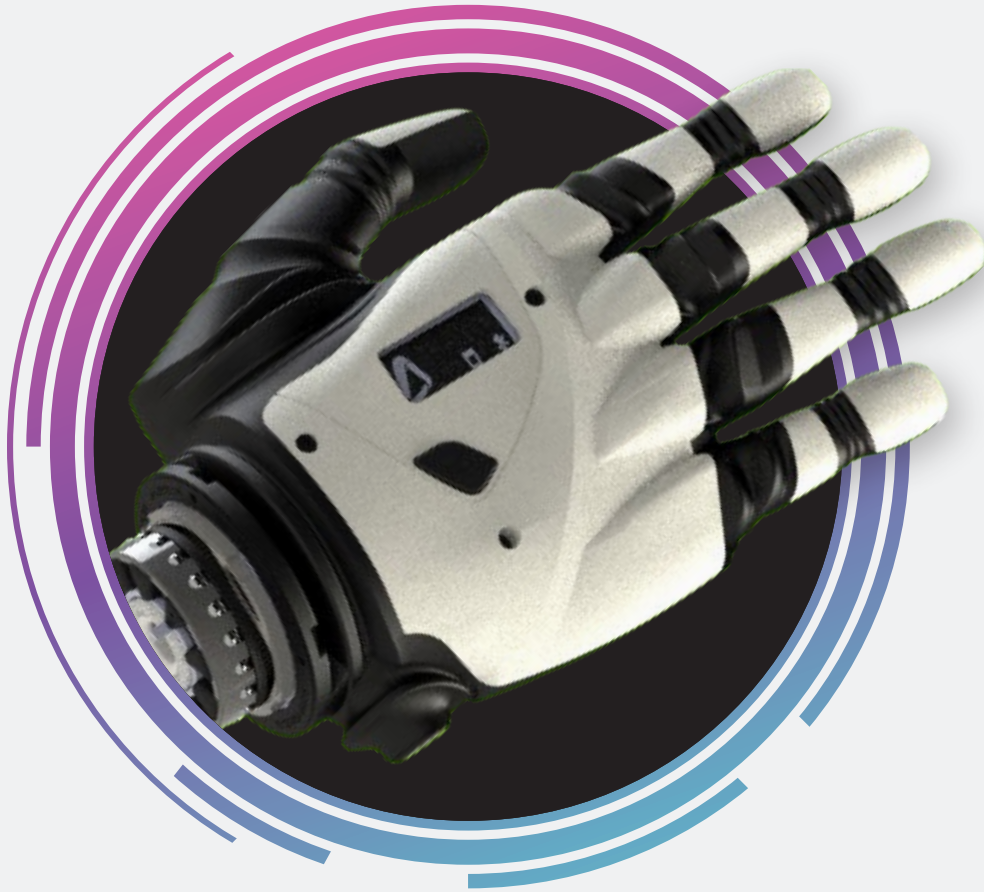


## WHO ARE WE?

COVVI was founded in 2017 by a passionate and experienced team who wanted to continue to create leading prosthetic designs.

The human hand is amazing and the level of functionality which can be restored through prosthetics has historically been very low; but as engineers and designers we see this as a challenge to continuously improve our designs to meet the needs of users.

COVVI started with a blank sheet of paper and a mission to address some of the most prevalent deficiencies of current prosthetic hands. Fast forward to present day and we now have the best looking and most advanced prosthetic hand in the market.



## WHAT DEFINES US?

COVVI is a portmanteau of the Latin 'Coperor' and 'Vita', translating as 'working together' and 'life'.

# CO+[V]VI

Our name was formulated to reflect our single driving intention to change multiple lives together forever through harnessing endless connections to make anything possible. With our name came our 'delta' logo, which also has meaningful origins as a symbol of change and doing things differently.





## THE PATH TO THE COVVI HAND

The COVVI Hand was born from a genuine passion for prosthetics and helping others. Through 10 years of working in the industry alongside clinicians and listening to users we have developed a sincere appreciation for how difficult prosthetics are to use and how poor devices do not address or resolve this. After the initial excitement of a new device, these frustrations frequently result in the prosthetic device being rejected, which we see as a personal failure. In today's world there are so many products and designs that we simply do not need, yet in the field of prosthetics so much is still to be done.



As a team we could not envisage more rewarding work than developing a cutting-edge prosthetic hand that overcomes as many of these issues as possible, so we made it our absolute mission to do so. We truly want to reduce the restrictions and limitations prosthetic users face every day.

We designed our hand with you in the forefront of our minds and we want it to be an invaluable tool in your life. Our two main goals were to make it functional and robust, and we are confident it not only enables the easy performance of daily tasks but can withstand anything life throws at it!

We always aim to develop desirable products, which is why we use only the best materials and pride ourselves on our unrivalled industrial design.

**“ After years of hard work, drive, and passion it makes us immensely proud to see our design working as intended and actively simplifying people’s lives. ”**



Cast Aluminium Digit Components

Stainless Steel Finger Link

Stainless Steel Finger Chassis

ESD Pathway

Machined Aluminium Wrist Housing

High Chromium Steel Wrist Plate

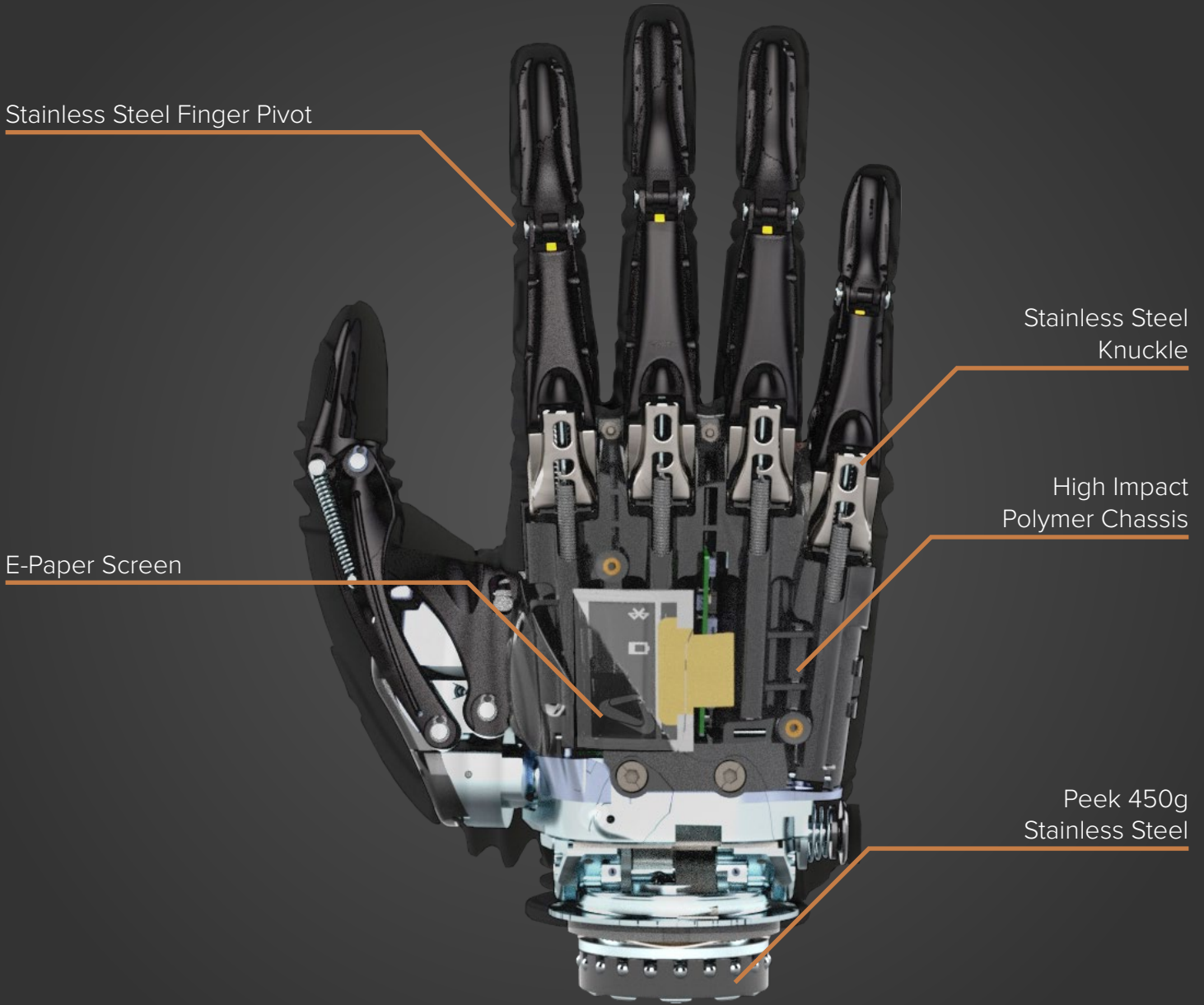
Stainless Steel Thumb Pivot

## ENGINEERING BEHIND THE HAND

Our hand size range is suitable for all adults and most adolescents. We started with the small COVVI Hand before building bigger. This ensured we did not compromise on any functionality across the size range where in the past engineers had always started big and tried to shrink their design down, which was challenging to do without losing some of the hand's function.

We are extremely proud of our compact design and cannot wait to see you bring it to life!





**Note:** This infographic below should only be used as a guide. Please take measurements of hands from clinical data. The COVVI Hand includes the flex wrist. **TASKA** is owned by 5TH ELEMENT LIMITED, **Bebionic** is owned by Otto Bock HealthCare GmbH, **i-Limb** is owned by Touch Bionics Limited



# COVVI GLOVE OVERVIEW

Touch Screen Compatibility with the Index Finger

FSR's in all the Fingertips

Flexible Glove

Thicker Palmar Region

EQD - Electric Quick Disconnect

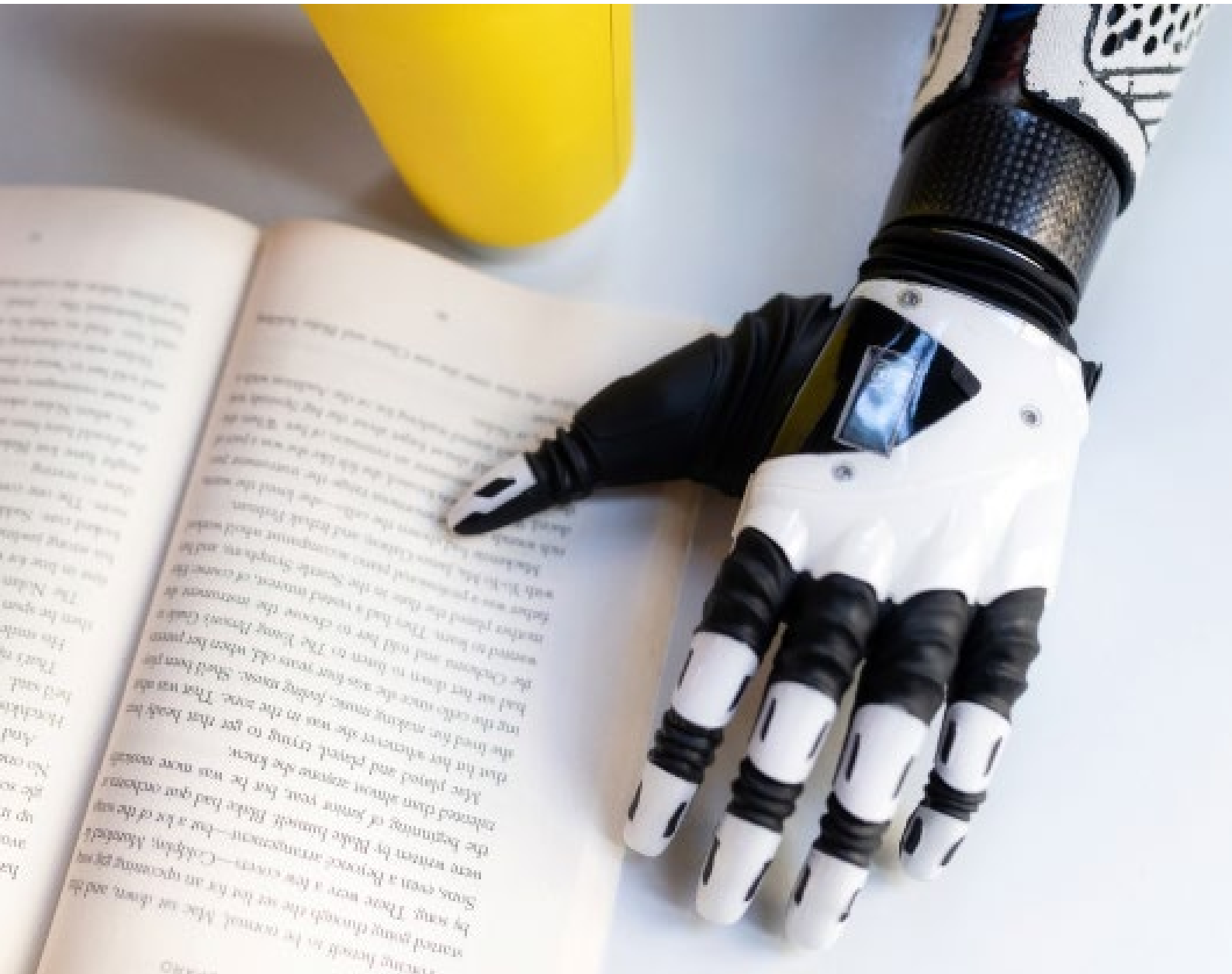
Optimised Fingertip Geometry

Hardened 60A Shore Fingertips

E-Paper Screen

Dorsal Button

Wrist Lock Button





## COLOUR OPTIONS

With our hand, we went down a radical route to design something that users can customise in a way that speaks to their personality. Something that is undeniably them.

We designed the COVVI Hand based on measured data collated from human hands to give it a more anatomically proportionate and natural form with novel colours and materials to create a concept that you will be proud to wear. We offer a black glove with four striking cover colours for you to choose from.



**CARBON BLACK**



**ROSE GOLD**



**TITAN GREY**



**WHITE**



## WHY COVVI?

The COVVI Hand combines an extraordinary level of functionality with a captivating design to offer you the best prosthetic hand on the market.

## PASSIVELY FLEXING FINGERS AND THUMB

All the fingers and thumb have passive flex with a spring-loaded feature which provides impact protection, reducing the likelihood of damages and repairs as the hand flexes out of the way. All the digits are manufactured from stainless steel and aluminium for increased strength and the index finger is touch screen compatible.

All 5 actuators are located in the base of the palm where they are protected by the hand chassis, so they are less likely to be damaged and the weight of the hand is more proximal and therefore better distributed allowing users to have better overall control of their prosthesis.

# INTEGRATED FLEX WRIST

The COVVI hand has the lowest profile flex wrist available which is integrated into all hands, rather than being a separate part with an additional cost, weight, and length. It measures 14mm in length and like the fingers it is spring-loaded, so the prosthesis is a lot more natural and instinctive to use as the free flex state allows the hand to move with the user without myo-inputs.

The mechanism is incorporated into the hand chassis so adds no additional build height which makes it an ideal solution for those users who would like the flex wrist feature but are limited on space and weight as it will not affect symmetry with their sound side.

It features a wrist locking button which locks the wrist into 3 positions: 30° flexion, 30° extension and a neutral position. This feature has been a favourite among users primarily because it facilitates certain tasks such as eating or driving, but also because it returns a certain degree of movement back to them so they no longer need to overcompensate with their shoulder and body which provides a large reduction in the associated compensatory muscle pain. The flexion position is ideal for when eating, the extension position is ideal for when using a computer while the neutral position provides a stable platform for heavy lifting.



**-30° Extension**

**0° Neutral**

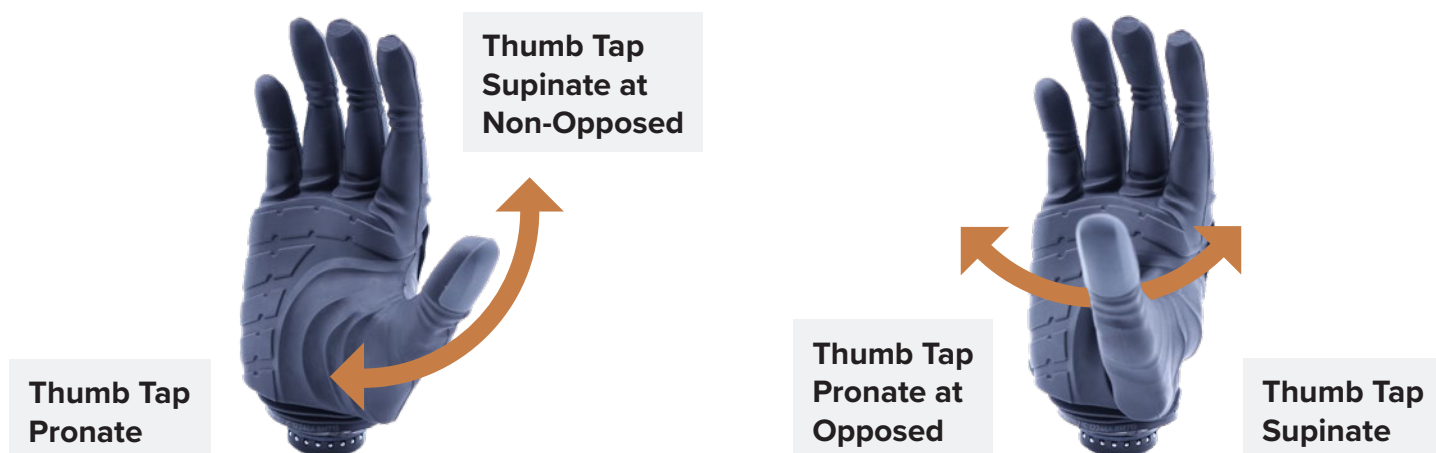
**30° Flexion**



# THUMB TAP/POWERED ROTATION

The thumb has powered rotation so automatically switches between non-opposed and opposed positions. But it also has a novel thumb tap which is a quick, intuitive way to change grips or tables. Laterally tap the side of the thumb to trigger the rocker switch and activate the powered rotation without the need for a myo-input. The thumb will rotate between non-opposed and opposed positions depending on which grip is assigned next.

This can be assigned to any function. We have seen this be incredibly valuable to bilateral users who can simply tap the thumb on the side of their leg, or a hard surface and it will give them fast access to all the grips.



## For a Left Hand

**Opposed to Non-Opposed** - Tap the Right side of the thumb to move it left

**Non-Opposed to Opposed** - Tap the Left side of the thumb to move it right

## For a Right Hand

**Opposed to Non-Opposed** - Tap the Left side of the thumb to move it right

**Non-Opposed to Opposed** - Tap the Right side of the thumb to move it left



## E-PAPER SCREEN

The COVVI Hand has an E-Paper Screen which shows important hand information. It always shows the current grip and table the hand is in, so users never get lost in their setup.

It requires no power to display and little power to change display, so it doesn't drain user's batteries!

## REMOTE SOFTWARE UPDATES

To keep hands up to date with the latest features, we offer quarterly software updates which can be done remotely without the need for the hand to come back to our office. These updates can be downloaded from the cloud onto the hand and it takes around 30 minutes to update it. These firmware updates include improvements, bug fixes and new features.

Users can also save their configurations to the cloud so they always have a backup.



# MULTIPLE GRIP SWITCH TRIGGERS AND GRIPS

The COVVI Hand has numerous switching options to give you fast access to a multitude of grips. To change grips or tables you can assign an open/open, long open hold or co-contraction signal, use the dorsal button, the force sensitive resistors in the fingertips and the pronate/supinate thumb tap.

We have 14 available grips to help you go about your daily life listed below.

## OPPOSED GRIPS

### Power Grip

This is a stable grip for when holding heavier items, but it is also great for daily and manual tasks such as carrying bags, pushing a shopping trolley, or mowing the lawn.



### Precision Grip (Open & Close)

These two grips use the thumb and index finger to give a reliable and fast method of picking up, holding, and using small objects with precision.

In precision open the fingers remain extended and allow you to get the hand close to the object. In precision closed, the fingers close to give you better visibility of the item you are picking up.



### Trigger Grip

This grip is for the use of trigger operated objects such as hairdryers, spray bottles, a power drill or electronic garden tools.



## Tripod Grip

This grip is useful for grasping a variety of everyday items. Active finger tracking ensures a reliable and stable grip.



## Rock Grip

This grip is not a functional grip. It allows you to do the 'rock' sign.



## Glove Grip

This grip is to aid dressing and undressing. It makes the hand as slim as possible to make it easier to put on clothing, for example, pulling a jacket sleeve onto your arm.



# NON-OPPOSED GRIPS

## Finger Point Grip

This grip enables you to press buttons, ring a doorbell, use a smartphone, or point out directions.



## Tap Grip

This grip is very similar to the finger point grip but has the additional function of an active button press.

The index finger moves up and down.



## Key/Card Grip

This grip is ideal for holding thin objects like keys, credit cards or paper, but it can also be used in domestic tasks such as carrying plates or holding a knife.



## Mouse Grip

This grip is specifically designed for using a mouse.





## Column Grip

This grip is ideal for a variety of tasks such as pressing buttons, calling lifts, or turning light switches on and off.



## Relaxed Grip

This grip provides a natural resting position for when the hand is not in use.

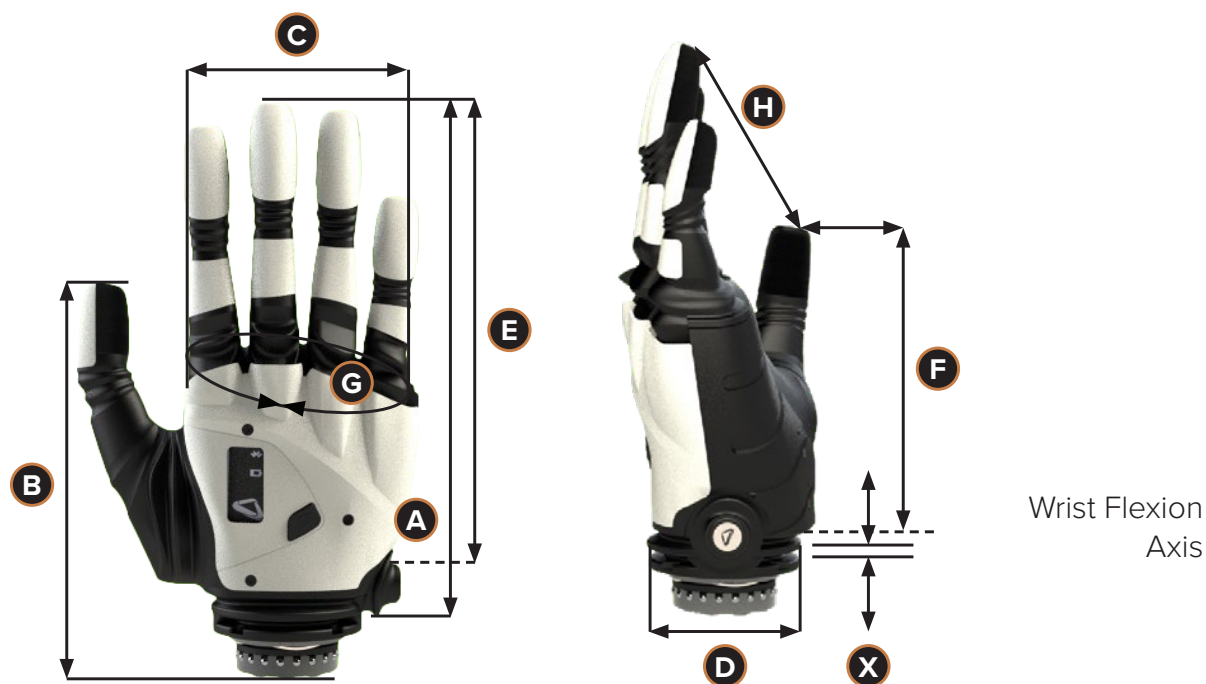


## Phone Grip

This grip is not a functional grip. It is to imitate holding a phone.



# TECHNICAL INFORMATION



Dimensions	Key	Small		Medium		Large	
		Inches	mm	Inches	mm	Inches	mm
Middle Fingertip to Hand Base	A	6.61	165	7.25	184	7.75	196
Thumb Tip to Hand Base	B	4.46	110	4.5	114.5	4.8	124
Max Chassis Width	C	2.76	70	3	75	3.1	80
Diameter of Chassis at Wrist	D	1.85	47	1.85	47	1.9	50
Palm Circumference	G	7.3	190	7.6	195	7.8	200
Maximum Opening Width - Tripod Grip	H	4.4	110	4.4	115	4.8	120
Thumb Swing Through Angle		81°	81°	81°	81°	81°	81°
Middle Fingertip to Flex Axis	E	6.2	158	6.8	175	7.4	187
Thumb Tip to Flex Axis	F	4	102	4.1	103.5	4.4	113
EQD Only	X	0.98	3	0.98	3	0.98	3

# TECHNICAL INFORMATION

<b>COVVI Hand Voltage</b>	7V to 8.4V DC
<b>Maximum Current Consumption</b>	5A (Max. Constant) 7A (Max. peak, 50ms duration)
<b>Device Weight</b>	570g / 1.25 lbs
<b>Maximum Hand Load Limit (A)</b>	90kg / 198 lbs across knuckle
<b>Maximum Hand Load Limit (B)</b>	32kg / 71 lbs across the fingers
<b>Maximum Finger Load Limit</b>	16kg / 35 lbs
<b>Full Open to Full Close</b>	0.7 seconds to achieve grip
<b>Tripod Grip</b>	0.4 seconds to achieve grip
<b>Tripod Grip Force</b>	45N / 10 lbf
<b>Power Grip Force</b>	80N / 18 lbf
<b>Key Grip Force</b>	22N / 5 lbf



Maximum Hand Load Limit (A) with force applied upwards

**90kg / 198 lbs over the knuckles**



Maximum Hand Load Limit (B) picking weight up

**32kg / 71 lbs**



**Avoid pressure on the thumb**



# COVVI GO APP

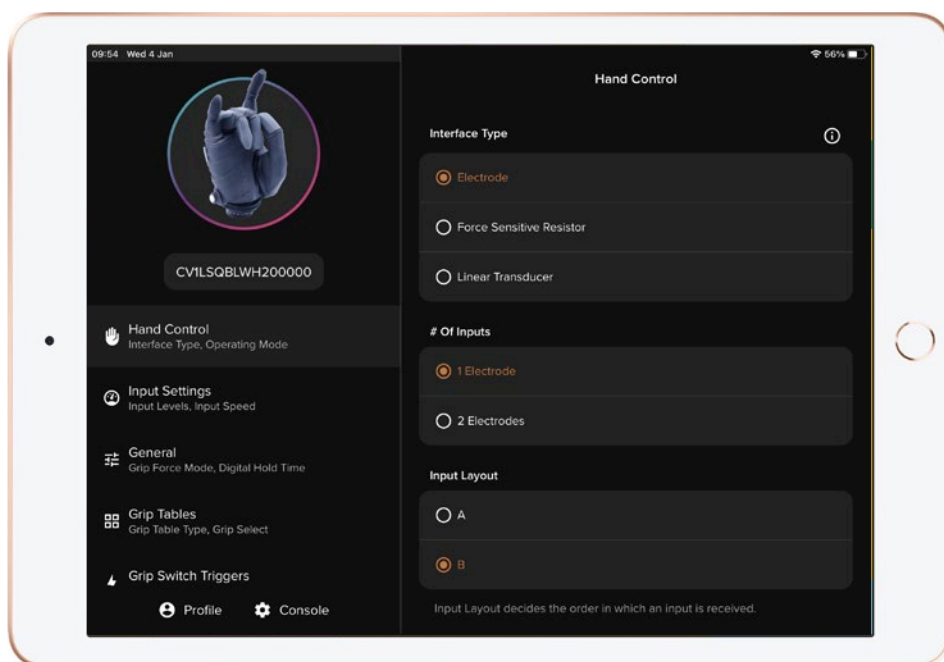
Everything you need to configure a COVVI Hand is within the COVVI Go App, which is compatible with iOS version 12.0+ and Android version 8.0+. The App has been designed to support you and your patient through every step of their journey, being designed from the ground-up to be easy to configure, which helps your patients get the most out of the hand. For those users who have experience with prosthetics, the COVVI Hand has a default setup combining the functionality of other prosthetic devices on the market for efficient interchangeability. For new users, as they become more familiar with their hand, they can test out different setups and make any changes in the App to best suit their daily activities and lifestyle.

## REGISTRATION

To access all the features in the App, you first need to register an account with COVVI. On our website [www.covvi.com](http://www.covvi.com), in the 'COVVI GO APP' dropdown section in the side menu, click on Register Your Interest. Fill out the registration form with all the information requested and click on Submit Request.

## HAND CONTROL

The COVVI Go App is a very simple and designed to make it easy to setup a new hand. The hand will have a default setup preloaded, but in the Hand Control section, clinicians and users can make changes to the hand's configuration to tailor it to their preferences and daily requirements. All features and options are explained so you fully understand everything you select.



# REMOTE ASSIST

This innovative feature allows our experienced team to provide real-time support to users and implement any software changes to any hand, anywhere. This helps to eliminate the need for users to go into the clinic for minor issues and updates; ultimately ensuring that time together can be used on more comprehensive support.

Once a call with a trained technician is arranged, the user will be provided with a unique 6-digit Session ID which they will input into the app. Once they have joined a session they will be prompted to connect to their hand, after which everything will then happen remotely from the COVVI representative's side.

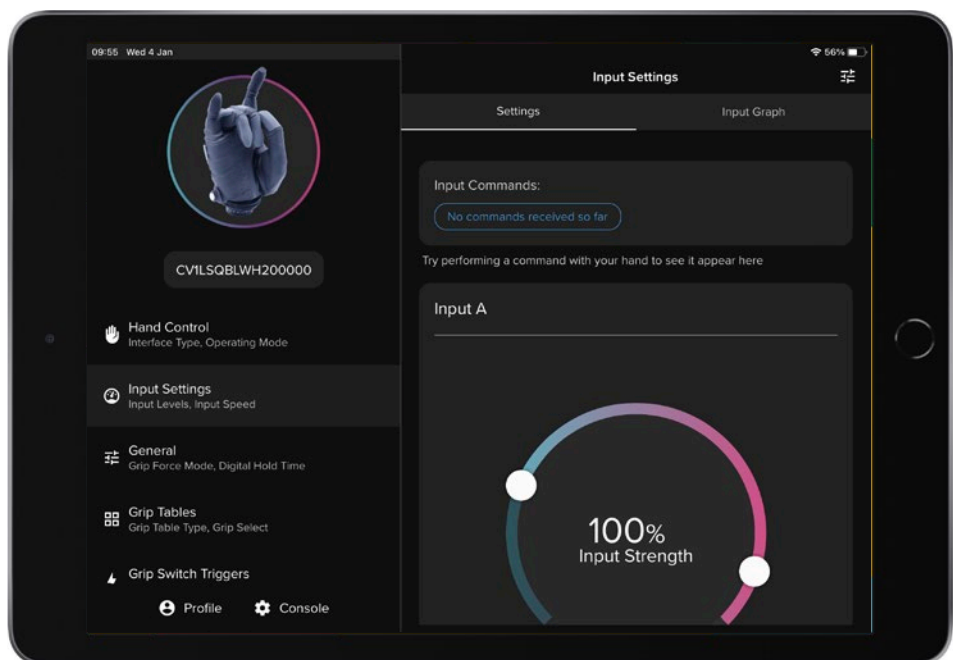
# CONFIG LIBRARY

The Config Library allows users to save configurations to the cloud. This is extremely useful when testing out different configurations, as there will always be a setup users know works for them that they can revert back to later. You can also upload these to the cloud and download them to new devices, which saves a lot of time when a user is switching to a new/loaner hand.

# INPUT SETTINGS

The Input Settings allows clinicians and users to test their signals to make any changes to the thresholds to map the speed of the hand to the signals they produce. It ensures users can comfortably operate their hand before programming the grip tables and triggers.

There are three adjustable thresholds for both Input A and Input B; the On, Max and Co-contraction thresholds. The On threshold shows the signal strength needed for the hand to move and the Max threshold shows the signal strength needed for the hand to move at full speed. The Co-contraction threshold will only appear on the Input Graph if you map the Co-contraction grip switch trigger.



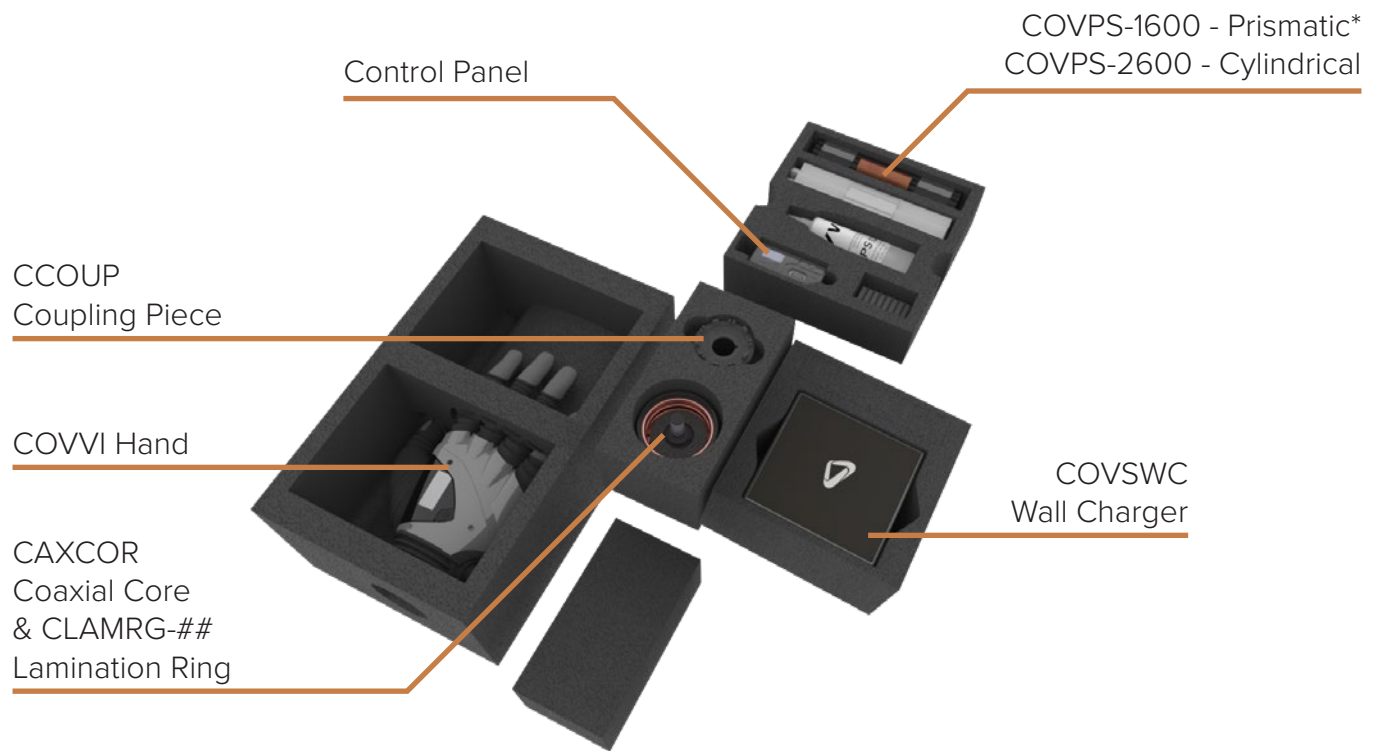
# THE POWER SUPPLY

There are two Power Supply systems available: 2600mAh cylindrical cells with a system weight of 104 grams ideal for users with a short residual limb, and 1600mAh prismatic flat cells with a system weight of 74 grams and a web connecting the cells. This web allows the batteries to be folded, without bending the cells, to follow the contours of the inside of the prosthetic socket. This system is ideal for users with a long residual limb.

Both Power Supplies come with a Control Panel which weighs 16 grams. It has USB-C charging, the 1600mAh Power Supply takes under three hours to charge and the 2600mAh Power Supply takes four hours to charge.

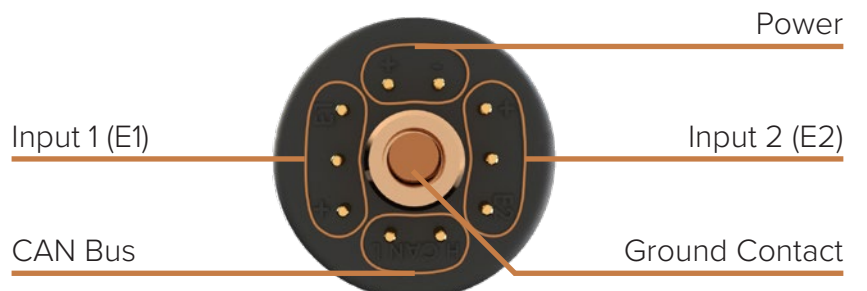
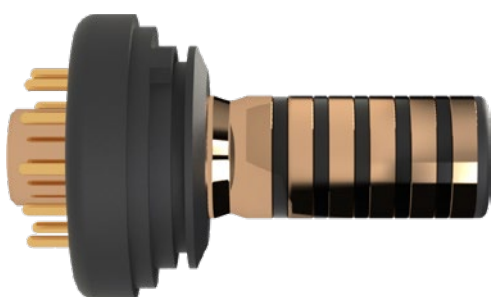
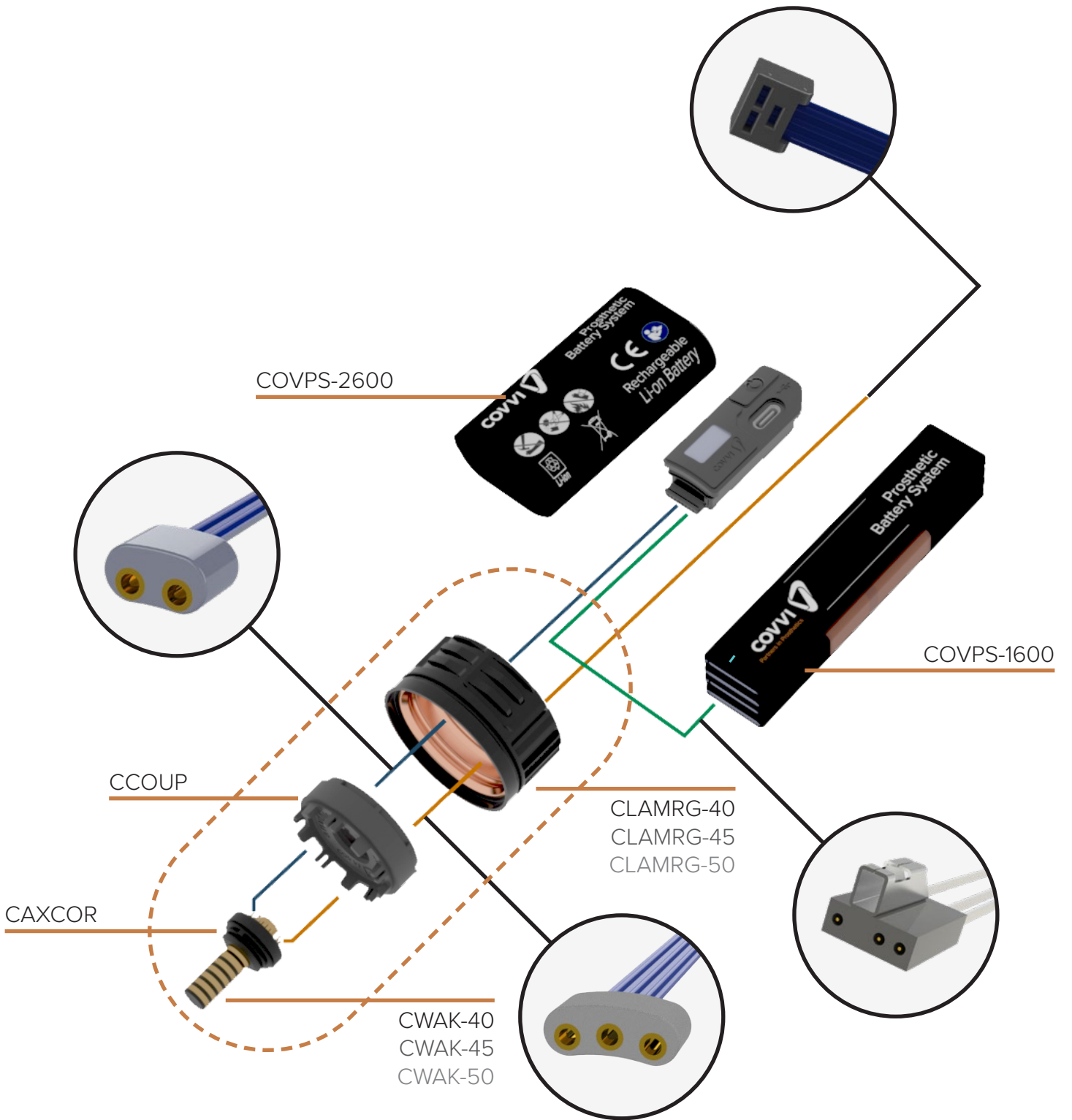


# THE ADVANTAGE KIT



**\*COVPS-1600 Shown**

# COVVI COMPONENTRY





# ORDER CODES

Hand Variant	Code	Description
Small Left Hand - Black Glove, Rose Gold Cover	CV1LSQBLRG	LH SML QD BLK GLV RG CVR
Small Left Hand - Black Glove, Carbon Black Cover	CV1LSQBLCA	LH SML QD BLK GLV CA CVR
Small Left Hand - Black Glove, Titan Grey Cover	CV1LSQBLTG	LH SML QD BLK GLV TG CVR
Small Left Hand - Black Glove, White Cover	CV1LSQBLWH	LH SML QD BLK GLV WH CVR
Small Right Hand - Black Glove, Rose Gold Cover	CV1RSQBLRG	RH SML QD BLK GLV RG CVR
Small Right Hand - Black Glove, Carbon Black Cover	CV1RSQBLCA	RH SML QD BLK GLV CA CVR
Small Right Hand - Black Glove, Titan Grey Cover	CV1RSQBLTG	RH SML QD BLK GLV TG CVR
Small Right Hand - Black Glove, White Cover	CV1RSQBLWH	RH SML QD BLK GLV WH CVR
Medium Left Hand - Black Glove, Rose Gold Cover	CV1LMQBLRG	LH MED QD BLK GLV RG CVR
Medium Left Hand - Black Glove, Carbon Black Cover	CV1LMQBLCA	LH MED QD BLK GLV CA CVR
Medium Left Hand - Black Glove, Titan Grey Cover	CV1LMQBLTG	LH MED QD BLK GLV TG CVR
Medium Left Hand - Black Glove, White Cover	CV1LMQBLWH	LH MED QD BLK GLV WH CVR
Medium Right Hand - Black Glove, Rose Gold Cover	CV1RMQBLRG	RH MED QD BLK GLV RG CVR
Medium Right Hand - Black Glove, Carbon Black Cover	CV1RMQBLCA	RH MED QD BLK GLV CA CVR
Medium Right Hand - Black Glove, Titan Grey Cover	CV1RMQBLTG	RH MED QD BLK GLV TG CVR
Medium Right Hand - Black Glove, White Cover	CV1RMQBLWH	RH MED QD BLK GLV WH CVR
Large Left Hand - Black Glove, Rose Gold Cover	CV1LLQBLRG	LH LG QD BLK GLV RG CVR
Large Left Hand - Black Glove, Carbon Black Cover	CV1LLQBLCA	LH LG QD BLK GLV CA CVR
Large Left Hand - Black Glove, Titan Grey Cover	CV1LLQBLTG	LH LG QD BLK GLV TG CVR
Large Left Hand - Black Glove, White Cover	CV1LLQBLWH	LH LG QD BLK GLV WH CVR
Large Right Hand - Black Glove, Rose Gold Cover	CV1RLQBLRG	RH LG QD BLK GLV RG CVR
Large Right Hand - Black Glove, Carbon Black Cover	CV1RLQBLCA	RH LG QD BLK GLV CA CVR
Large Right Hand - Black Glove, Titan Grey Cover	CV1RLQBLTG	RH LG QD BLK GLV TG CVR
Large Right Hand - Black Glove, White Cover	CV1RLQBLWH	RH LG QD BLK GLV WH CVR

# ORDER CODES

Component	Code	Description
<b>SDU Tower</b>	COVSDU	COVVI SDU TOWER, BASE, WALL CHARGER
<b>100mm Electrode Cables</b>	CELCAB-100	2 x ELECTRODE CABLE 100
<b>300mm Electrode Cables</b>	CELCAB-300	2 x ELECTRODE CABLE 300
<b>600mm Electrode Cables</b>	CELCAB-600	2 x ELECTRODE CABLE 600
<b>1000mm Electrode Cables</b>	CELCAB-1000	2 x ELECTRODE CABLE 1000
<b>Coaxial Core</b>	CAXCOR	COAXIAL CORE
<b>Coupling Piece</b>	CCOUP	COUPLING PIECE
<b>40mm Lamination Ring</b>	CLAMRG-40	LAMINATION RING 40MM
<b>45mm Lamination Ring</b>	CLAMRG-45	LAMINATION RING 45MM (for small & medium hands)
<b>50mm Lamination Ring</b>	CLAMRG-50	LAMINATION RING 50MM (for large hands)
<b>Wrist Assembly Kit:</b>		COAXIAL CORE, COUPLING PIECE, LAMINATION RING
<b>40mm Wrist Assembly Kit</b>	CWAKT-40	WRIST ASSEMBLY KIT 40 (coaxial core, coupling piece and lamination ring)
<b>45mm Wrist Assembly Kit</b>	CWAKT-45	WRIST ASSEMBLY KIT 45 (coaxial core, coupling piece and lamination ring)
<b>50mm Wrist Assembly Kit</b>	CWAKT-50	WRIST ASSEMBLY KIT 50 (coaxial core, coupling piece and lamination ring)
<b>Battery Kit</b>	COVPS-1600	1 x BATTERY, USB-C WALL CHARGER, USB-C CONTROL PANEL
<b>Battery Kit</b>	COVPS-2600	1 x BATTERY, USB-C WALL CHARGER, USB-C CONTROL PANEL
<b>Spare Batteries</b>	COVSB-1600	1 x SPARE BATTERY (1600mAh 7.4V)
<b>Spare Batteries</b>	COVSB-2600	1 x SPARE BATTERY (2600mAh 7.4V)
<b>Spare Wall Charger</b>	COVSWC	SPARE WALL CHARGER

# ORDER CODES

Advantage Kit Combination	Code	Description
40mm Lam Ring, 100mm Cables, 1600mAh Power Supply	AK140116	AK 40MM 100MM 1600 PS
40mm Lam Ring, 300mm Cables, 1600mAh Power Supply	AK140316	AK 40MM 300MM 1600 PS
40mm Lam Ring, 600mm Cables, 1600mAh Power Supply	AK140616	AK 40MM 600MM 1600 PS
40mm Lam Ring, 1000mm Cables, 1600mAh Power Supply	AK140X16	AK 40MM 1000MM 1600 PS
45mm Lam Ring, 100mm Cables, 1600mAh Power Supply	AK145116	AK 45MM 100MM 1600 PS
45mm Lam Ring, 300mm Cables, 1600mAh Power Supply	AK145316	AK 45MM 300MM 1600 PS
45mm Lam Ring, 600mm Cables, 1600mAh Power Supply	AK145616	AK 45MM 600MM 1600 PS
45mm Lam Ring, 1000mm Cables, 1600mAh Power Supply	AK145X16	AK 45MM 1000MM 1600 PS
50mm Lam Ring, 100mm Cables, 1600mAh Power Supply	AK150116	AK 50MM 100MM 1600 PS
50mm Lam Ring, 300mm Cables, 1600mAh Power Supply	AK150316	AK 50MM 300MM 1600 PS
50mm Lam Ring, 600mm Cables, 1600mAh Power Supply	AK150616	AK 50MM 600MM 1600 PS
50mm Lam Ring, 1000mm Cables, 1600mAh Power Supply	AK150X16	AK 50MM 1000MM 1600 PS
40mm Lam Ring, 100mm Cables, 2600mAh Power Supply	AK140116	AK 40MM 100MM 2600 PS
40mm Lam Ring, 300mm Cables, 2600mAh Power Supply	AK140316	AK 40MM 300MM 2600 PS
40mm Lam Ring, 600mm Cables, 2600mAh Power Supply	AK140616	AK 40MM 600MM 2600 PS
40mm Lam Ring, 1000mm Cables, 2600mAh Power Supply	AK140X16	AK 40MM 1000MM 2600 PS
45mm Lam Ring, 100mm Cables, 2600mAh Power Supply	AK145116	AK 45MM 100MM 2600 PS
45mm Lam Ring, 300mm Cables, 2600mAh Power Supply	AK145316	AK 45MM 300MM 2600 PS
45mm Lam Ring, 600mm Cables, 2600mAh Power Supply	AK145616	AK 45MM 600MM 2600 PS
45mm Lam Ring, 1000mm Cables, 2600mAh Power Supply	AK145X16	AK 45MM 1000MM 2600 PS
50mm Lam Ring, 100mm Cables, 2600mAh Power Supply	AK150116	AK 50MM 100MM 2600 PS
50mm Lam Ring, 300mm Cables, 2600mAh Power Supply	AK150316	AK 50MM 300MM 2600 PS
50mm Lam Ring, 600mm Cables, 2600mAh Power Supply	AK150616	AK 50MM 600MM 2600 PS
50mm Lam Ring, 1000mm Cables, 2600mAh Power Supply	AK150X16	AK 50MM 1000MM 2600 PS



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