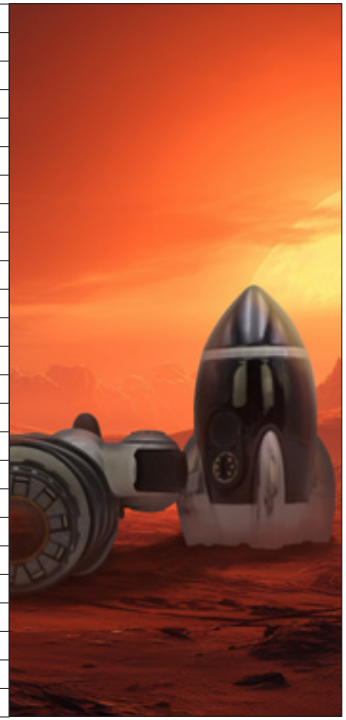
MyoRocket®

Technical Manual

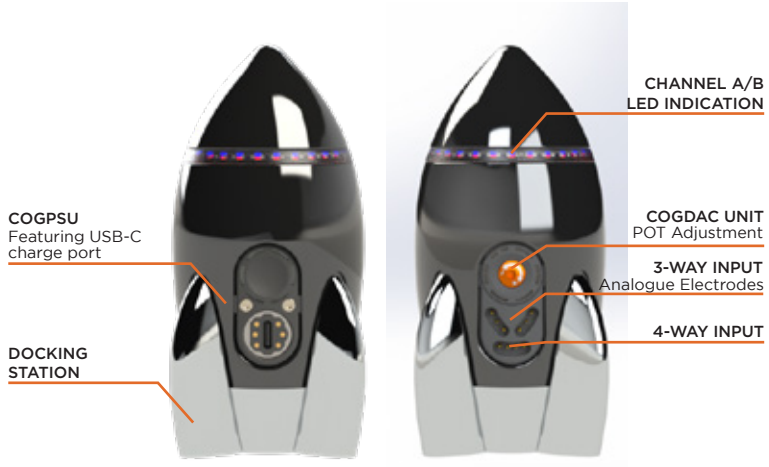
REBEL

Powered by AM Healthcare Group

1.0 Table of Contents



2.0 Introduction



This is the all brand new MyoRocket® which features the Rebel Bionics Power Supply Unit (COGPSU-3350), Analogue to digital conversion unit (COGDAC/EL2). There is also the option to add Rebel Bionics digital electrodes for the full experience!

All information about COGPSU & COGDAC can be found in the following manuals:

Rebel Bionics - COGDAC-3350
Rebel Bionics - COGDAC-EL/2

They can also be found on **www.rebelbionics.com**

2.0 Introduction

The MyoRocket® can be locked onto any conventional myoelectric wrist unit with an I2C bus communication. By simply pushing the into a lamination ring, the rocket does not rotate once locked in.

The electronic connection is achieved via the central coaxial core which resembles the conventional coaxial core inside the EQD of a myoelectric terminal device.

3.0 What's In The Box?

#	PART NO.	DESCRIPTION	Q.
1	**B10-A024**	MYO ROCKET	1
2	**B13-A004 (A)**	ELECTRODE CH. A	1
	B13-A004 (B)	ELECTRODE CH. B	
3	**B13-A005**	4 WAY DIGITAL CABLE	1
4	**B10-0108**	ELECTRODE HOLDER	4
5	**B10-0100**	ELECTRODE CUFF	1

*The Power Adapter is found inside the cuff.

6	**B10-0061**	USB-C POWER SUPPLY
7	**B10-0062**	US ADAPTER
8	**B10-0065**	UK ADAPTER
9	**B10-0063**	AUS/NZ ADAPTER
10	**B10-0064**	EU ADAPTER

4.0 Safety Precautions - MyoRocket

Please read the following safety precautions prior to fitting the Rebel Power Supply.

WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with a protective earth.

Please make sure the Power Supply is OFF before connecting/disconnecting the MyoRocket® to avoid damage to the device.

This product is not designed to be disassembled or serviced. Rebel Bionics have the right to void the warranty of all products that have any type of modification or damage caused by any unauthorized or untrained personnel.

Any damage caused by intentional harm or neglect will not be covered under the warranty.

Do NOT attempt to use the MyoRocket® while the batteries are charging. When the batteries are charging, the power will automatically turn off. If for any reason the power does not turn off while charging, using the prosthetic device can be potentially unsafe.

Do NOT use the MyoRocket® if there is any visible sign of damage to the Power Supply charger, Power Plug and/or Cables.

Do NOT expose the MyoRocket® to an open flame or submerge it in water. This could damage the screen and affect the battery's ability to hold charge.

DO NOT USE IN AREAS OF HIGH EMC DISCHARGE

Any drop in performance, any component getting hot, making new and unusual noises is evident, please remove immediately.

Clean with hot soapy water, Do NOT use any solvents or abrasives to clean the charge point as this might cause damage.

Individuals who are exposed to hazardous environments that contain flammable liquid or gas should NOT use this device when in those environments.

Ensure access to wall plug to enable easy isolation if required.

No known contraindications.

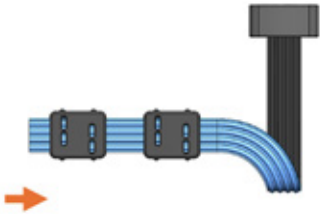
The designed service life of the charge point is 5 years, cells to be changed on an annual basis.

This product uses semiconductors that can be damaged by electrostatic discharge (ESD).

It is advised to disconnect the battery if the limb is unlikely to be used for some time or is being shipped, or stored.

5.0 Connecting Digital Electrodes to Myorocket

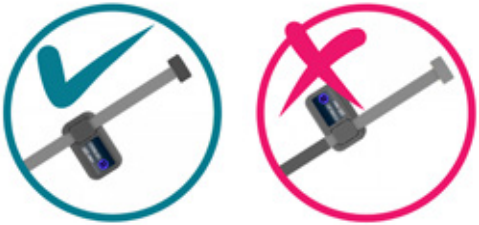
STEP 1



Take the digital cable and slide the two IDC connectors onto the cable.
Ensure the side with the four holes faces the blue side of the cable.

PLEASE NOTE: Ensure blue side of cable is facing the correct way or the electrode system will not work.

5.1 Check Orientation of Cable



PLEASE NOTE: Failure to orient the 4-way cable as shown will result in the DAC not identifying the electrodes.

STEP 2

PRESS FIRMLY the IDC connector to the electrode dagger pins.

To ensure the 4-Way is connected you will need to exert a firm amount of force. This will ensure the cable maintains a uniform connection and does not run the risk of falling out of the electrode during usage.

It is recommended to place the electrode under a peice of foam and press firmly the IDC connector into the electrode until it feels slightly sub-flush.

Ensure the cable orientation is as shown in the image.

Failure to connect the 4-way connector in the correct orientation will lead to the electrode system not functioning correctly.

Multiple electrodes are designed to be fitted to a single cable. Position the four way curved connector close to where the DAC is mounted and wrap the cable around the socket. Trim the cable at the far side of the far electrode. Its not important whether the cable goes A to B or vise versa.

DO NOT trim the cable while the power is ON.

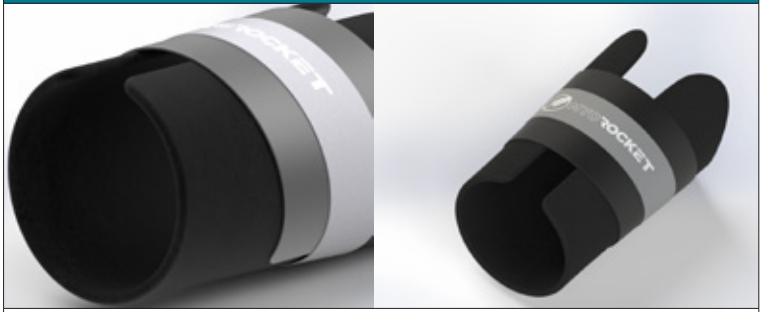
STEP 3

Place the electrodes in the required position as provided by the perforations on the strap. The numbers and letters are to give you a guide on where each electrode is placed.

STEP 4

Ensure the buckle is attached correctly to the strap. Position your arm in between the electrode sites and push the button clasps into a perforated hole on the band to secure. Adjust the tightness on your arm as required.

STEP 5



Connect the 4-way cable to the port on the MyoRocket as shown. Ensure the connection is secure before proceeding.

6.0 Safety Precautions - Electrodes

Please read the following safety precautions prior to fitting the Cogent Electrode System.

The Rebel Electrode System should only be fitted by a certified prosthetist.

Please make sure the Power Supply is OFF before shortening the 4-way digital cable.

This product is not designed to be disassembled or serviced. Rebel Bionics have the right to void the warranty of all products that have any type of modification or damage caused by any unauthorised or untrained personnel. Any damage caused by intentional harm or neglect will not be covered under the warranty.

Do NOT expose the Rebel Electrode System to an open flame.

Clean with hot soapy water, Do NOT use any solvents or abrasives to clean the DAC or electrodes as this might cause damage.

Individuals who are exposed to hazardous environments that contain flammable liquid or gas should NOT use this device when in those environments.

Ensure access to wall plug to enable easy isolation if required.

This product uses semiconductors that can be damaged by electrostatic discharge (ESD).

The designed service life of the Rebel Electrode System (COGDAC/EL2) is 5 years.

7.0 System Specification

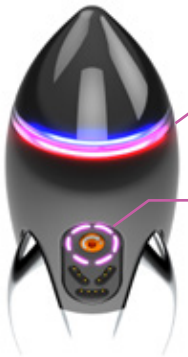
PART NUMBER	MYOROCKET	
BATTERY CAPACITY	3350mAh	
NOMINAL VOLTAGE	7.4V	
MAX. CURRENT DRAW	7A	
CHARGE PORT DIMENSIONS	120mm (A) x 77mm (B)	4.72” (A) x 3” (B)

7.0 System Specification

SYSTEM WEIGHT	273grams, 201.6grams (without base)	9.63oz, 7.1oz (without base)
USB-C POWER SUPPLY	FRIWO Gerätebau GmbH - NEO006.0-I-X-05 P No.: 1960559	
	Nominal Input Voltage	100-240V AC +/-10%
	Nominal Output Current:	1400mA
	Nominal Output Voltage:	5V DC +5% / -5%
OPERATIONAL AND STORAGE HUMIDITY	Maximum 80% humidity, non-condensing	
CHARGE TEMP RANGE	-10°C to +45°C	14°F to 113°F
DISCHARGE TEMP RANGE	-20°C to +60°C	-4°F to +140°F
STORAGE TEMP RANGE	-20°C to +60°C	-4°F to +140°F
PRESSURE RANGE	700-1060 hPA	

8.0 Instructions - Power Module

Greater than 1 second hold turns on MyoRocket. 6x purple will illuminate clockwise and then go blank. You will then also see the clockwise illumination of the MyoRocket® LED. When Power is sent to the system with both electrodes are identified, 6x purple will illuminate clockwise and then go blank. Everytime the connection is reset or reconnected, the DAC will return an illumination.	



POWER UP

Blue & Red LED's will illuminate followed by a positive sounding buzzer.

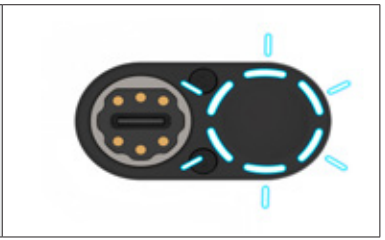
DAC Illumination

DAC illumination signals both Channel A and Channel B electrodes have been read.

8.1 Turning the MyoRocket Off

Greater than 1 second hold turns off limb power. 6x purple will illuminate anticlockwise and then go blank.	

8.2 Charging the MyoRocket

To charge the device connect the provided Mains AC USB-C connector or use the right-angle magnetic charger with a Mains AC USB-C power adapter. If charging correctly, all 6x cyan will pulse slowly.	

8.3 Charge Indication

QUICK PRESS (less 1.5s) to view battery charge level for 2.5 secs, then will go out.

At least 96% charge level	At least 80% charge level
	
At least 64% charge level	**At least 48% charge level**
	

8.3 Charge Indication

At least 32% charge level	At least 16% charge level
	

Less than 5% charge level

Lower LED will flash red when the battery is lower than 5%.
This doesnt require a button press.

8.4 Battery Health Indication

2x QUICK PRESS (first within 1.5s and the second within 1.5s) enters the battery health indication display. This will appear for 2.5 secs, then will go out.

The following displays what to expect the battery level indication to be at various states.

6x Orange LED's: 100% Capacity	5x Orange LED's: 90% Capacity
	
4x Orange LED's: 80% Capacity	3x Orange LED's: 70% Capacity
	

8.4 Battery Health Indication

2x Orange LED's: 60% Capacity	1x Orange LED's: 50% Capacity
	
Recommended: Change battery cells	Must Change Battery cells

8.5 Full System Reset

To enable Full System Reset, you will need the Limb Power OFF and not charging.

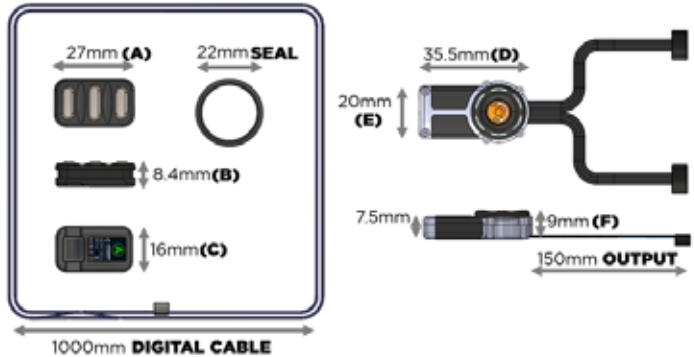
2x QUICK PRESS within a 1.5 second sucession will skip through to the Full System Reset Indication.

6x Further presses within a 1.5 second sucession illuminates the LED's in a clockwise direction one by one.

Final press it will flash aqua marine and flash blue twice. This confirms the system is complete reset.

A FULL RESET WILL BE REQUIRED IF THE BATTERY IS SWAPPED.

9.0 Digital Electrode Specification



PART NUMBER	COGDAC/EL2	
WORKING VOLTAGE	6V-8.4V	
MAX. CURRENT DRAW	<200mA	
ELECTRODE DIMENSIONS	27mm (A) x 8.4mm (B) x 16mm (C)	2" (A) x 0.7" (B) x 0.5" (C)
DAC DIMENSIONS	35.5mm (D) x 20mm (E) x 9mm (F)	2.7" (D) x 1.6" (E) x 0.8" (F)
SYSTEM WEIGHT	*grams	*oz
STORAGE & OPERATIONAL HUMIDITY	Maximum 80% humidity, non-condensing	
STORAGE & OPERATIONAL TEMPERATURE RANGE	-20°C to +60°C	-4°F to +140°F
PRESSURE RANGE	700-1060 hPA	

10.0 Instructions - Digital Electrodes

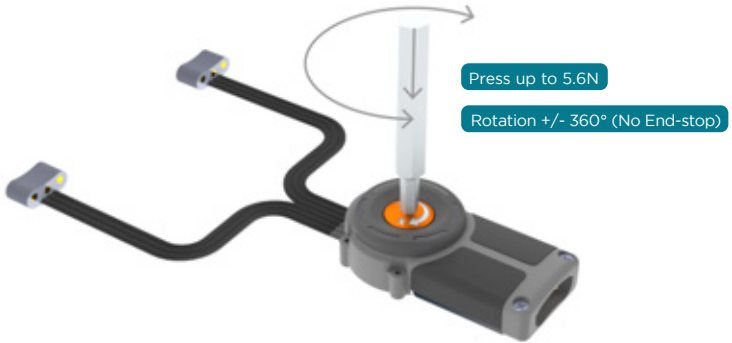
When using the DAC button, it is advised to use a 2.5mm Allen Key at all times, to avoid risk in damage and avoid improper use and disatisfaction of the device.

10.1 DAC Button Functions

You MUST press firmly whenever you press the DAC button.
Ensure when you press the button it is straight and not twisted.

SINGLE PRESS (Up to 1.5 secs.) / This makes a selection.

HOLD PRESS (3-5 secs.) / This confirms a selection.



10.2 DAC - Power Up

When Power is sent to the system with both electrodes are identified, 6x purple will illuminate clockwise and then go blank. Everytime the connection is reset or reconnected, the DAC will return an illumination.	

10.3 DAC - Electrode Identification

If an electrode is not correctly identified during the intial connection. The DAC will return a single Red LED. Bottom LED: **Channel A** Next LED: **Channel B** If an electrode is identified during the initialisation, the DAC will return a corresponding Green LED. Please check your connections, ensuring the pin-outs are aligned.	

10.4 Electrode Modes

Standard Mode	Automatic Mode
	
This mode allows the clinician to manually adjust the gain levels and is shown by a single green LED.	This mode allows automatic gain adjustment and is shown by two amber LED's. This can only be done by a clinician.

Boost Mode	
	This mode is selectable by the user and gives a +25% boost to the manually selected levels. This is to aid with user fatigue. TO ACTIVATE BOOST MODE: Press and hold button for 2 seconds until the 3 LED's flash blue, then release. When in this mode the 3x BLUE LEDS remain illuminated. De-activate boost mode – press and hold button for 2 seconds until the 3 LED's go out, then release. You are now in standard mode, in this mode there is no illumination. If the limb power is turned off, the boost mode will be cancelled and return to standard mode.

10.5 Clinical Adjustment Modes

A long press for greater than 3 seconds enters the clinical set up mode. You wil be presented by a flashing green light, this is to select manual mode.

Entering Manual Mode	
	A single green light will now be flashing, Press and hold up to 5 seconds will confirm that mode.

Entering Automatic Mode	
	From the single flashing green light of the manual gain mode, press the button for less then 1.5 second. There should be now 2x LED's flashing amber. Press and hold up to 5 seconds will confirm that mode.

10.5.1 Manual Adjustment

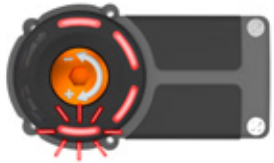
The 2x colours equate to the 2x electrodes:

Red LED is for Electrode 1 (CHANNEL A)

Blue LED is for Electrode 2 (CHANNEL B)

Quick Press (less 1.5s) swaps between the two electrodes.

10.5.1 Manual Adjustment



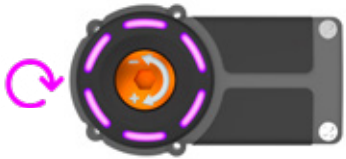
To adjust the electrode, use a 2.5mm Allen Key and rotate the central orange segment of the switch.

Clockwise increases the gain, Anti-clockwise reduces the gain.

There is no physical end stop.
There are six segments and four levels per Segment:

Blank (0%),
Slow flash (33%)
Fast Flash (66%), Solid (100%)

So there are 24 gain levels.



Once the preferred gain level is selected for both electrode sites, Press and Hold the button for up to 5 seconds.

The DAC will display six purple rings to signify the process is complete.

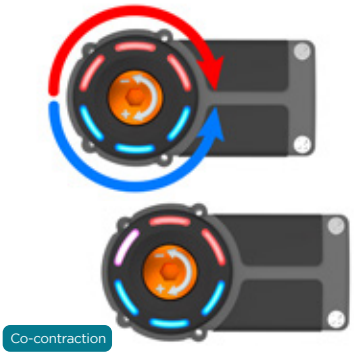
10.5.2 Automatic Adjustment

This is a method to simplify the gain setting process. The user is asked to provide a resting, weak signal followed by a maximum, strong signal . The signals the users is able to achieve will set the gain levels.	
	The user must now provide a weak, resting signal for 1 second. While satisfied with the resting signal, Press the button (less than 1.5s) to move to the next step. The aim is to ensure the DAC LED indication is as low as possible.
	The user must hold a strong signal. While satisfied with the strong signal, Press the button (less than 1.5s) to move to the next step. The aim is to ensure the DAC LED rings are fully indicated at this signal. Hold the button for greater than 3 seconds to confirm E1 settings.

10.5.2 Automatic Adjustment

	The user must now provide a weak, resting signal for 1 second. While satisfied with the resting signal, Press the button (less than 1.5s) to move to the next step. The aim is to ensure the DAC LED indication is as low as possible.
	The user must hold a strong signal. While satisfied with the strong signal, Press the button (less than 1.5s) to move to the next step. The aim is to ensure the DAC LED rings are fully indicated at this signal. Hold the button for greater than 3 seconds to confirm E2 settings.

10.5.2 Automatic Adjustment



The user can now view each electrode channel signal via the LED indication. A purple LED signifies Co-contraction and direction shows whether it is towards E1 or E2.

If the user is satisfied with the selected signals for E1 and E2, they can confirm the settings by pressing the button for greater than 3 seconds.

If the user is not satisfied with the selected signals for E1 and E2, they can press the button for less than 1.5 seconds which will return to the beginning of the automatic gain adjustment.

Once the preferred gain level is selected for both electrode sites, Press and Hold the button for up to 5 seconds.

The DAC will display six purple rings to signify the process is complete.

10.5.2 Automatic Adjustment

All Rebel Bionics products are covered by a 24-month manufacturer's warranty included which takes effect from the date of fitting. Products are subject to be evaluated for warranty. Rebel Bionics is not responsible for normal wear, and/or damage caused by excessive force, and/or excessive usage beyond the technical design and/or beyond its reasonable means. Rebel Bionics warrants its products against defects in material and workmanship within the warranty period. Limitation in those instances where changes, alterations or modifications are made in materials at the request or instruction of the customer, the customer agrees not to claim or commence suit against Rebel Bionics based on any such disclaimed warranties.

Our obligation is limited only to the repair or replacement of defective parts within the warranty period or, at the sole discretion of Rebel Bionics, to refund the purchase price of a full refund, partial refund, or no refund, depending on the condition of the return.

Our commitment is limited only to the repair or replacement of defective parts within the warranty period. The original warranty period resumes when the defective part is replaced. Rebel Bionics has the right to void the warranty of all products that have any type of modifications or damage caused by any unauthorised or untrained personnel. Any form of abuse, neglect, and excessive damage that is caused by usage outside the intended design and technical specifications, and/or any modifications made towards Rebel Bionics products will null and void all warranties.

To the fullest extent permitted by law Rebel Bionics Ltd. and its affiliates, directors, officers, employees, partners, contractors, or agents will not be liable for any losses or damages whether direct, indirect, incidental, special, punitive, or consequential resulting from the use of the Rebel, irrespective of whether the Clinician or User has been advised or otherwise might have anticipated the possibility of such loss or damage.

Rebel Bionics Ltd. and its affiliates, directors, officers, employees, partners, contractors, or agents shall not be responsible for strikes, labour slowdowns, war, terrorism, riots, severe weather conditions, natural disasters, acts of God or any other forces beyond the reasonable control of Rebel Bionics which may result in direct, indirect, incidental, special, punitive, or consequential losses or damage.

11.0 Disposal

Please check your local regulations prior to disposing any items to avoid having a detrimental impact on health and the environment.

12.0 Symbols used

Symbol	Title	Description	Standard	Ref. No. of symbol
	Manufacturer	Indicates the medical device manufacturer	ISO 15223-1	5.5.1
	Consult instructions for use	Indicates the need for the user to consult the instructions for use.	ISO 15223-1	5.4.3
	Keep Dry	Indicates medical device kept away from moisture	ISO 15223-1	5.3.4
	Temperature Limit	Indicates temperature the medical device can be exposed	ISO 15223-1	5.3.7

Symbol	Title	Description	Standard	Ref. No. of symbol
	Humidity limitation	Indicates the range of humidity to which the medical device can be safely exposed.	ISO 15223-1	5.3.8
	Type BF applied part	Indicates an electrical medical device that complies as Type B	IEC 60601-1 IEC 60601-1 IEC 60878 ISO 9687:2015	5334
	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician	Device is prescription use only by a designated healthcare professional	None; this is symbol generated by the company	21 CFR 801
	Caution	Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.	ISO 15223-1	5.4.4
		This product contains electrical and electronic components that may contain materials which, if disposed of with general waste, could be damaging to the environment. Residents of the European Union must follow specific disposal or recycling instructions for this product. Residents outside of the European Union must dispose of or recycle this product in accordance with local laws or regulations that apply.	IS EN 50419	Fig. 1

Symbol	Title	Description	Standard	Ref. No. of symbol
	Bluetooth®	Bluetooth® wireless or enabled technology	Trademarks of Bluetooth Special Interest Group (SIG)	N/A
	Follow instructions for use	Refer to instruction manual/ booklet	IEC TR 60878	N/A
IP 22	Ingress Protection Level	Protection against solid foreign objects of 12.5 mm diameter and greater, and protection against vertically falling water drops when tilted up to 15 degrees.	IEC 60601-1	Table D.3, Symbol 2
	FCC Part 15	Electromagnetic interference from the device is under limits approved by the Federal Communications Commission.	Federal Communications Commission	N/A
	Complies with Australian Radio communications requirements.	Complies with Australian Radio communications requirements.	AS/NZS 4417.1	N/A
	CE Mark	For European Compliance	93/42/EEC Medical Devices Directive	Annex XXII
	Recycling	Battery is recyclable - follow local recycling & reclaiming procedures	ISO 7000	1135

Symbol	Title	Description	Standard	Ref. No. of symbol
	China RoHS Mark	China RoHS Mark I logo. Product does not contain toxic and hazardous sub-stances or elements above the clip level in any material or application including those exempt from the requirements of the EU RoHS Directive.	SJ/T11364-2006	N/A
	Recycling under the Waste Disposal Act	Subject to recycling under the Waste Disposal Act.	Environmental Protection Administration, R.O.C. (Taiwan)	N/A
SN	Serial Number	Indicates a unique identifier used for identification and traceability purposes	ISO 7000 / IEC 60417	N/A
MD	Medical Device	Indicates the product is a medical device	ISO 15223-1	N/A
UDI	Unique Device Identifier	A unique numeric code that identifies the labeler and the specific version of the device.	ISO 15223-1:2021	N/A
EU REP	European Union Representative	Indicates the authorized representative in the European Community/European Union.	ISO 15223-1:2016 Reference no 5.1.2	N/A
	Non Sterile	Indicates a medical device that has not been subjected to a sterilization process.	ISO 15223- 1:2016 Reference no. 5.2.7. (ISO 7000-2609)	N/A
	Single Patient - Multiple use	To indicate that the medical device may be used multiple times (multiple procedures) on a single patient	ISO/DIS 15223-1:2020(E) Ref no. 5.4.12. (ISO 7000-3706)	N/A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

13.0 Declaration of Conformity

Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 concerning Medical Devices. The undersigned declares that the products described in this document meet the Council provisions that apply to them and the CE Mark may be affixed.

General Product Name	Rebel MyoRocket
Legal Manufacturer	Rebel Bionics Ltd. Unit 5a, Balm Road Industrial Estate, Beza Street, Hunslet, Leeds, LS10 2BG
Manufacturers SRN	Not Yet Available
Basic UDI-DI	TBA
GMDN Code	36534
Variants	As per Appendix II (Available upon Request)
Intended Purpose	To be used exclusively for providing exoprosthetic fittings of the upper limbs.
MDR Classification	Class 1 [Rule 13]
Notified Body	N/A
CE Certificate	N/A
EU Authorised Representative	ADVENA LTD. Tower Business Centre, 2nd Flr. Tower Street, Swatar, BKR 4013 Malta
EU Authorised SRN	MT-AR-000000234
Medical Device Regulation Assessment Route	In conformity with Annexes II and III and have drawn up the DoC in accordance with Article 19 of the Medical Device Regulation.

Ted Varley,
Managing Director
2nd April 2024

Who is the natural and legal person with responsibility for the design, manufacture, packaging and labelling before the device is placed on the market under this manufacturer's name regardless of whether these operations are carried out by the manufacturer or on his behalf by a third party.

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Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 concerning Medical Devices. The undersigned declares that the products described in this document meet the Council provisions that apply to them and the CE Mark may be affixed.

General Product Name	COGDAC/EL2
Legal Manufacturer	Rebel Bionics Ltd. Unit 5a, Balm Road Industrial Estate, Beza Street, Hunslet, Leeds, LS10 2BG
Manufacturers SRN	Not Yet Available
Basic UDI-DI	TBA
GMDN Code	63118
Variants	As per Appendix II (Available upon Request)
Intended Purpose	To be used exclusively for providing exoprosthetic fittings of the upper limbs.
MDR Classification	Class IIB [Rule 9]
Notified Body	N/A
EC Certificate	N/A
EC Authorised Representative	ADVENA LTD. Tower Business Centre, 2nd Flr. Tower Street, Swatar, BKR 4013 Malta
EC Authorised SRN	MT-AR-000000234
Medical Device Regulation Assessment Route	In conformity with Annexes II and III and have drawn up the DoC in accordance with Article 19 of the Medical Device Regulation.

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Managing Director
2nd April 2024

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Version 1.0

July 2025

REBEL

Powered by AM Healthcare Group

REBEL BIONICS LTD.

Unit 5a, Balm Road Industrial Estate, Beza Street,
Hunslet, Leeds, LS10 2BG

EU REP

ADVENA LTD.

Tower Business Centre, 2nd Flr. Tower Street,

Swatar, BKR 4013 Malta

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