RABACONDA
RIDER DEVELOPED DESIGNS

Operator's Manual

MOTORCYCLE WHEEL BALANCER DEVICE

EN-US 2024/9 - V1.1

COLOPHON

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Manual info:

These are the original instructions. The English language is binding.

Table of contents

1 PREFACE

1.1 Identification

The Rabaconda® Motorcycle Wheel Balancer Device is a nifty, advanced, efficient tool for balancing motorcycle wheels. Motorcyclists can easily use it at home, service technicians can use it in workshops or events. The tool allows you to balance wheels quickly, easily, and efficiently.

In the beginning, it takes some practice to work with it properly. Give yourself time to gain this experience by balancing a few wheels. If you still have problems, contact our Technical Support.

1.2 Features:

- Easy to carry.
- Lightweight, taking very little room in your garage, store it away on a shelf until you need it again.
- Compact carry bag for comfortable travel and compact storage.
- Side compartment on the carry bag for storing wheel balancing weights, scraper tool, and other small accessories.
- Quick set up within seconds: garage or trackside.
- Wall mount bracket with fasteners.
- Quickly adjustable between different wheel hub dimensions.
- Hand Adjustable Cone System (HACS™).
- Stainless steel ball bearings.
- A plastic wheel weight scraper tool for removing balancing weights.
- A magnet for attaching Allen Hex keys.
- Lifetime Warranty.
- 6 Months Money Back Guarantee.

1.3 Benefits

- Quickly collapsible into the carry bag for compact storage and transport.
- Perfect and convenient wheel hub centring thanks to a hand-adjustable tension mechanism.
- Wall mount for saving valuable work surface space.
- Fits into the Rabaconda® Street Bike Tire Changer's carrying bag.

1.3.1 Significant advantages of the Rabaconda® Motorcycle Wheel Balancer Device

- This Wheel Balancer Device helps you balance your wheels quickly and accurately for high-speed riding.
- Empowers you to balance your wheels whenever and wherever you need to.
- The tool helps you regain control; no more pestering your mechanic friends for help.
- The device will save you money on wheel balancing in the long run.
- The device saves time traveling to the dealership and back (and spending it riding instead!).
- It allows you to buy whatever tires you want wherever you get the best price.

2 WARRANTY UPON PURCHASE

(See also Chapter 11).

Lifetime Warranty

Lifetime warranty for manufacturer defects.

Money-back guarantee

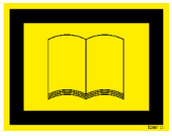
All Rabaconda® products have a money-back guarantee if you are unhappy with our tools, no questions asked. You have six months to test and become familiar with our products. Take your time!

3 INTRODUCTION

The Rabaconda® Motorcycle Wheel Balancer Device is designed for all wheel types. It is adaptable to any tire size up to 760 mm in diameter and has excellent ergonomics and low weight. It is intended for both single-sided and double-sided swingarm rear wheels.

With Rabaconda®, you can balance your wheels in no time, whether riding the street or hitting the track.

Read this Operator's Manual before operating the Balancer Device



- **Pay special attention to the safety precautions presented in this manual, as they prevent accidents causing wheel or tool damage or human injury.**
- **This tool can be dangerous. Therefore, reading this manual and watching tutorial videos on our website before the operation is essential.**
- **This manual describes characteristics unique to the Rabaconda® Motorcycle Wheel Balancer Device.**
- **In this manual, safety is a priority. You will become aware of the dangers and hazards of operating this tool by reading it.**

Using This Manual

This Operator's Manual is created to help familiarize you with safety, assembly, operation, adjustments, maintenance, and troubleshooting.

The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance. To check for updates, refer to our website or call us to speak to one of our representatives.

3.1 Explanation Documentation

Chapter 3; 'Introduction' and Chapter 4, 'Safety', are essential for anyone working on the device.

- For operators, it is essential:
  - Chapter 5: Assembling and Operation Instructions.
- For Service and Maintenance personnel is essential:
  - Chapter 5: Operation Instructions.
  - Chapter 7: Maintenance.

Owner Assistance

If customer service or spare parts are required, please contact us. Rabaconda® has trained technicians, spare parts, and equipment to service the device.

The parts on your device are specially designed; always replace these parts with genuine Rabaconda® parts. Please reference your order number or serial number when calling.

3.2 Safety Warning Messages in this Manual

Read this manual carefully before using the Tire Changer to understand how to use it correctly. If there is something in this manual you don't understand, ask Tech support to explain it.

- After reading, store the manual in a safe place, easily accessible for everyone working with the tool.
- Incorrect handling of the equipment could result in personal injury or physical damage.
- The manufacturer assumes no responsibility for any damage caused by mishandling beyond normal usage defined in this Operator's manual.

DANGER!

- **This symbol indicates a potentially and imminently hazardous situation that, if not avoided, will result in death or severe injury.**

This RED symbol indicates All DANGER notifications.

WARNING!

- **This symbol indicates a potentially hazardous situation that, if not avoided, could result in death, severe injury, or machine damage.**

This ORANGE symbol indicates All WARNING notifications.

CAUTION!

- **This symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.**

This YELLOW symbol indicates All CAUTION notifications.

NOTICE:

- **This Notice symbol shows special procedures or points out essential facts.**

- Always adhere to the recommendations and warnings in this manual. They are the recommendations of Rabaconda®. If you ignore these recommendations, there will be no warranty.

3.3 Intended Users

Intended users are well-trained, technically skilled Motorcycle Drivers or Motorcycle Technicians.

3.4 Intended Use

The Motorcycle Wheel Balancer Device is intended to balance motorcycle wheels.

3.5 Unintended Use

Unintentional use is any other use than described under 'Intended use.'

3.6 Intended Operating Conditions

- Ambient temperature: 0° to + 40°C.
- Temp. transport/storage: - 20° up to + 40°C.
- Lighting: Normal ambient lighting.

3.7 Tools and accessories

- Allen Hex keys.
- Balance weights remover tool, scraper.
- Wall mount bracket.
- Wheel truing accessory (Optional).

3.8 What is in the box

The device comes in a cardboard box.
The following parts are in the box. Please check the content.

1. This Operator's Manual.
2. Adjustable Base Plate.
3. Two Posts with Hex securing bolts.
4. Balancer Shaft with two Cones.
5. Two Allen Hex keys; 4 & 5 mm.
6. Balance Weights Remover Tool.
7. Carrying Bag.
8. Wall Mount Bracket with fasteners (4x screw + plug).

4 SAFETY

WARNINGS!

- **READ AND UNDERSTAND ALL SAFETY MEASURES AND WARNINGS BEFORE STARTING ANY OPERATION OR ADJUSTMENTS.**
- **UNTRAINED PERSONS WHO HAVE NOT THOROUGHLY READ AND UNDERSTOOD THIS MANUAL MAY NEVER APPROACH THE DEVICE.**
- **USING EXCESSIVE FORCE SHOULD BE AVOIDED AT ALL TIMES AS IT CAN LEAD TO PERSONAL INJURY OR DAMAGE TO THE WHEEL OR THE TIRE CHANGER.**

4.1 Introduction

The tool design is such that safe use is possible. Anyone who works with it must know the instructions and regulations stated in this manual.

The owner ensures users know the instructions, operating regulations, and observations.

4.2 Generally Applicable Safety Rules

This list contains general safety measures which must be complied with for personal safety reasons.

- Make sure children and animals cannot come into the device's vicinity.
- Only persons who have read and understood the operating instructions may be in the machine's vicinity.
- Unauthorized persons may not perform acts if the device is in use.
- Do not remove the brought warning decals, stickers, or markings.
- Always clean the device correctly and keep the workplace free of dirt and obstacles.
- Always ensure sufficient ambient lighting.

4.3 Personal Protective Equipment

While handling, assembling, and maintaining the Wheel Balancer Device, adhere to all recommended safety instructions and ensure that the correct Personal Protective Equipment (PPE) is used.

Always wear:

- Safety gloves for hand protection and prevention of cuts from sharp edges.
- Steel-tipped safety boots for foot protection from falling objects.
- Safety glasses for eye protection and prevent damage caused by shooting particles.
- Any other Personal Protection Clothing or Equipment required, specified, or dictated by the working environment.
- Your Company can prescribe additional (safety) instructions. This Manual does not describe how to comply with this.

4.4 Important Safety Rules for the Wheel Balancer Device

- The operator should be familiar with all functions of the device.
- Persons under 16 should NEVER operate the tool.
- Always clean the complete wheel. Rid it of dirt and grease before hanging the wheel in the unit.
- Visually inspect the tool; check all fasteners and securing parts.
- Take the time to learn proper technique and allow yourself a few wheel balancing exercises to master the device.
- Never use excessive force.
- Do not operate the device for any purpose other than what it is meant for. (See warranty for details.)

4.5 General Safety Rules for Tools and Devices

- Incorrect practice or lack of care can cause wounds, mutilation, suffocation, and other bodily injuries.
- Ensure the work area around the equipment is smooth, clean, and free from any obstacles. Keep in mind that a dangerous situation can always arise.
- Always wear safety glasses and protective shoes when carrying out the operation.
- Always use tools that are in a good state of repair. Ensure you know how to use the tools before doing any work.
- ONLY use replacement parts from the same brand as the relevant part.
- Do not use a tool if you are tired or consume alcohol or drugs, affecting your ability to work perfectly.
- Parts that rotate can cause cuts, mutilations, or strangulation.

Not Allowed Use

It is not allowed to use the Rabaconda® Wheel Balancer Device for other than motorcycle wheel balancing activities.

4.6 General Rules for Assembling

- Ensure all parts are present.
- Adhere to PPE safety regulations as described in the manual.

5 ASSEMBLING AND OPERATION

5.1 Assembling the Device

WARNING!

- **Read and understand all instructions before assembling the Wheel Balancer Device.**
- **If possible, watch tutorial videos via our website.**

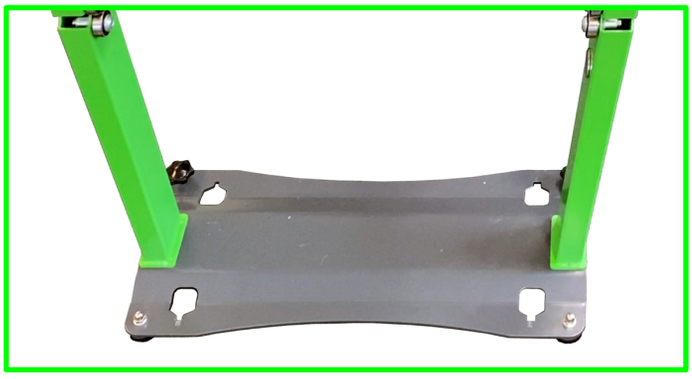
5.1.1 Assembling Preparation

- Inspect the whole tool set visually and check all vital components for damage.
- Check that the working area is relatively smooth and free of obstacles.
- Assemble the tool on a flat and stable surface.
- Keep animals far away from the workplace.

5.1.2 Fit Both Posts

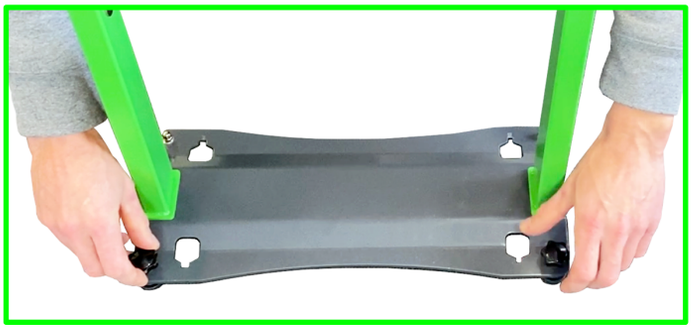
- Fit both posts one by one on the base plate as shown, Rabaconda logo outside.
- Ensure the M8x25 flanged button head bolts are partly screwed in the bottom of each post.

- Bring the first post in position and secure it by tightening the bolt; use the 5 mm Allen Hex key.
- Repeat this procedure for the second post on the other side of the base plate.



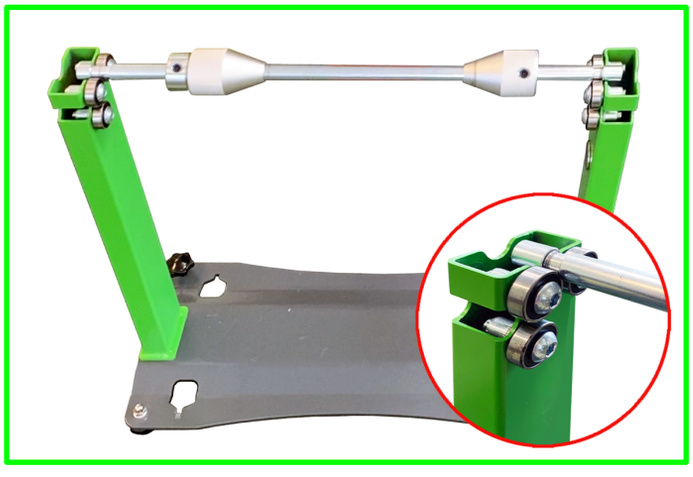
- Ensure you tighten both post bolts securely.
- Place the frame on a stable flat workbench or the floor.

5.1.3 Ensure Stable Position



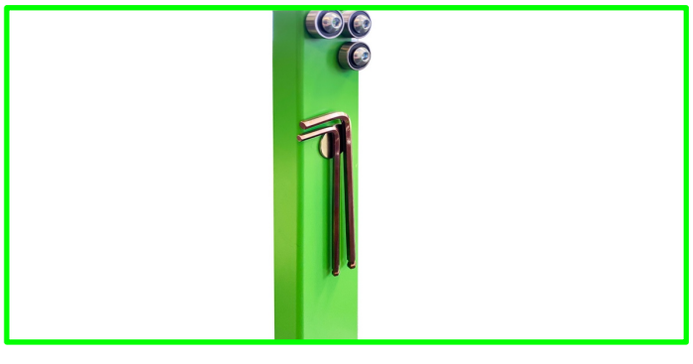
- Ensure the base plate is stable positioned, and levelled.
- If necessary, correct with both adjusting knobs in the base plate.

5.1.4 Check the Balance Shaft



- Place the balancing shaft on top of the ball bearings on the upright posts.
  The groove in the shaft must lie on the ball bearings; see the detailed figure.
- Check that the shaft rotates freely and without any resistance.
- During rotation of the shaft, check that it is perfectly straight.

5.1.5 A Magnet for the Allen Hex Keys



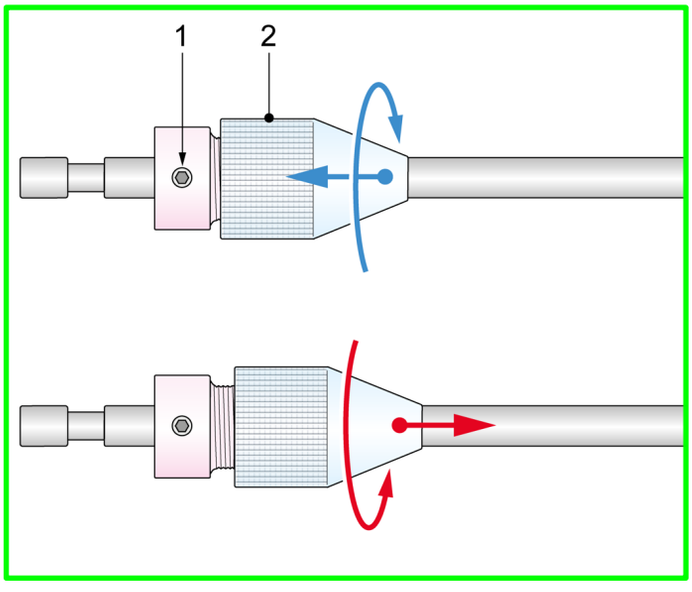
- One of the posts contains a magnet to hold both Allen Hex keys.

5.1.6 Multiple Modes of Use

You can use the balance device in two ways.
It is possible to mount the device on the wall. It requires the optional wall mounting bracket.

- For wall mounting instructions, see Chapter 6, Other Activities.

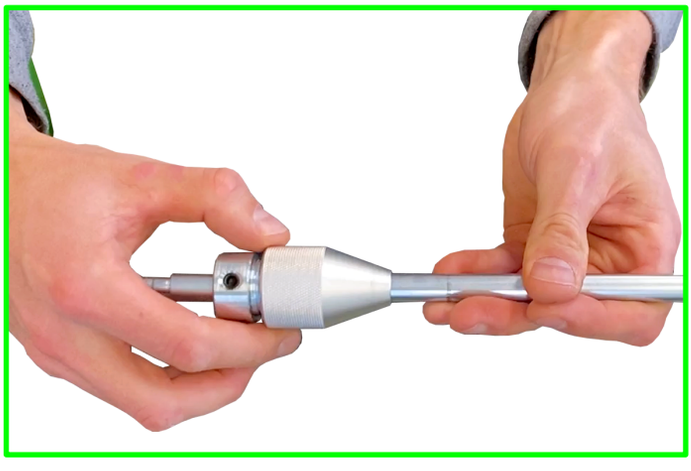
5.1.7 Explanation Clamping Mechanism with Adjustable Cone



The device has a hand-adjustable tensioning cone to achieve perfect and stable hub centering.

- Turn the hand-adjustable cone clockwise to reduce the clamping tension. Always turn the cone fully clockwise before clamping a wheel.

- Turn the hand-adjustable cone counterclockwise to increase the clamping tension. Do this after clamping a wheel to achieve perfect centering.



5.2 OPERATION INSTRUCTIONS

WARNINGS!

- **Persons under 16 should not operate the Motorcycle Wheel Balancer Device.**
- **Ensure you understand all procedures for assembling and operating the Motorcycle Wheel Balancer Device.**
- **Never operate the Motorcycle Wheel Balancer Device while under the influence of drugs or alcohol.**
- **DO NOT operate the Motorcycle Wheel Balancer Device for anything other than what it is meant for.**
- **During the balancing operation, stay balanced on both feet when using the device, avoid losing your balance, and be cautious not to cause any injuries.**
- **Any excessive force trying to remove old balancing weights off the rim considerably raises the risk of severe personal injury or damage to the rim, the wheel, or the balancing device.**

5.2.1 Human

An operator prepares the device and starts the process, as described further in this chapter.

5.2.2 Operator

Every well-skilled technical person over 16 can act as an operator. To safely use this Motorcycle Wheel Balancer Device, the operator must have the following specific professional knowledge:

- General knowledge of industrial safety procedures.
- General knowledge of operating and functioning motorcycles.
- Basic knowledge and skills regarding motorcycle service equipment.
- Basic knowledge and skills regarding motorcycle wheel change principles and processes.

5.2.3 Workplace

To balance a wheel, you need a minimum distance of one meter around the device to assemble, remove, balance, and install a wheel.

5.2.4 Prepare for Operation

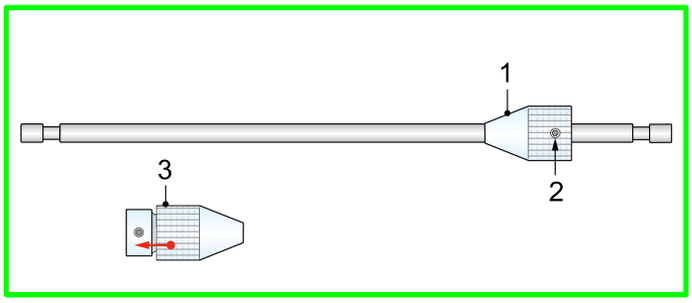
- Clean the wheel of dirt and debris to avoid incorrect balancing.
- All parts of the Balancer device that will get or might come in contact with the wheel must be clean. Swipe off all dirt and debris.
- Ensure you read this manual thoroughly.

5.2.5 Place a Wheel on the Device

We recommend you also watch the Wheel Balance tutorial video on our website.

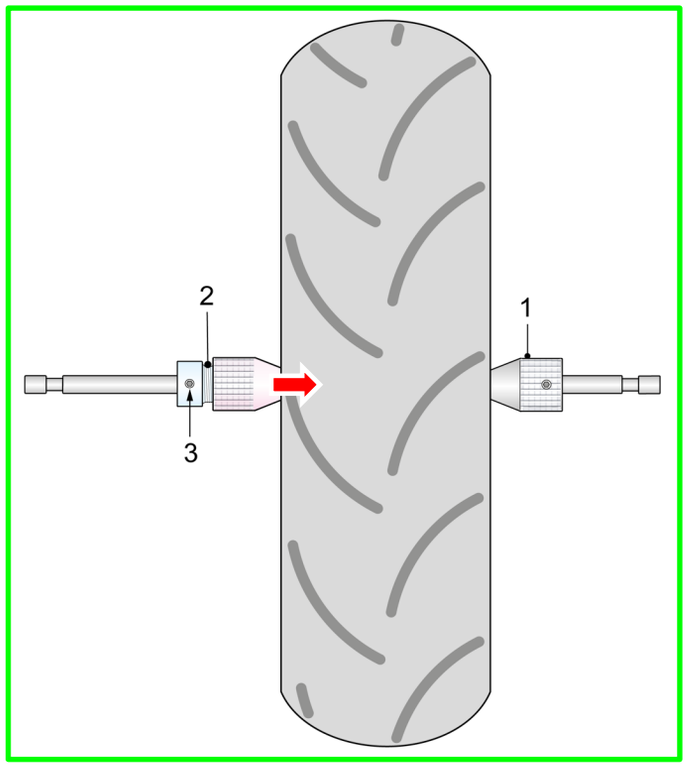
1. Clean the wheel of dirt and grease to prevent improper balancing.

2. Prepare the balancer shaft



- Move the fixed cone (1) to the desired position.
- Use the 4 mm Allen Hex key to secure the cone; tighten the socket screw (2).
- Use the Hex key to remove the adjustable cone (3).
- Screw-in the adjustable cone as far as possible.

3. Install the balancer shaft in a wheel



- Insert the shaft through the hub of the wheel.
- Press and hold the fixed cone (1) as far into the hub hole as possible.
- On the other side, slide the adjustable cone assy (2) over the shaft and insert the cone as far as possible into the hub center hole.
- Use the 4 mm Allen Hex key to tighten screw (3) for the adjustable cone assy while pressing both cones as much as possible into the hub.
- Manually turn the adjustable cone toward the hub as far as possible and hand-tighten it for maximum clamping. Hold the other cone (1) with your other hand to avoid the rotation of the shaft.
- The wheel with fitted shaft is now ready for placement on the balancer device.

- Correctly place the balancer shaft with the wheel on the ball bearings.
  The groove of the shaft must align with the running surface of the ball bearings, as shown.
- Check that the wheel with the shaft can rotate wholly smoothly and without any resistance.

5.3 Balancing a Wheel

NOTICE:
Before starting the Balancing process: • **Ensure the wheel is completely clean.** • **The tire is correctly mounted and inflated according to specifications.**

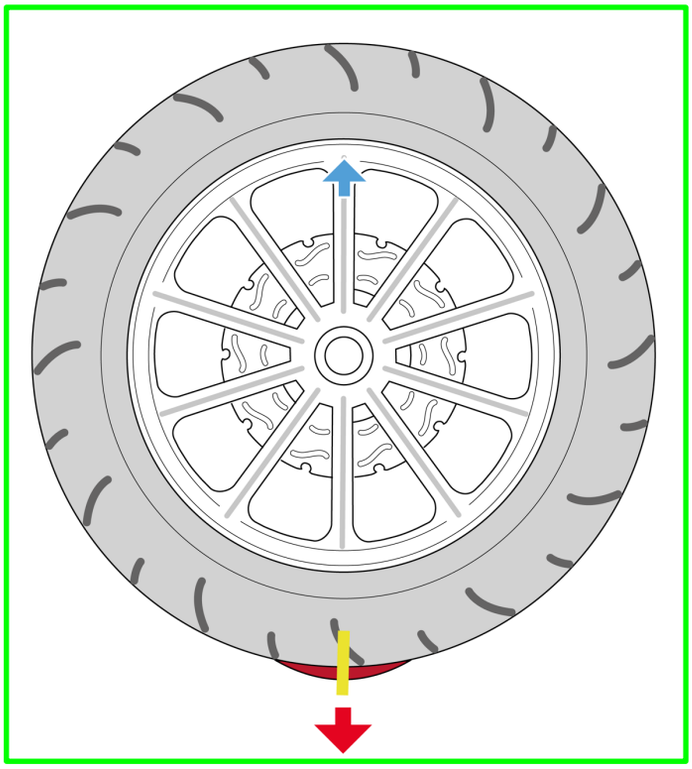
5.3.1 Check the Wheel Balance

Important Balancing Principles:

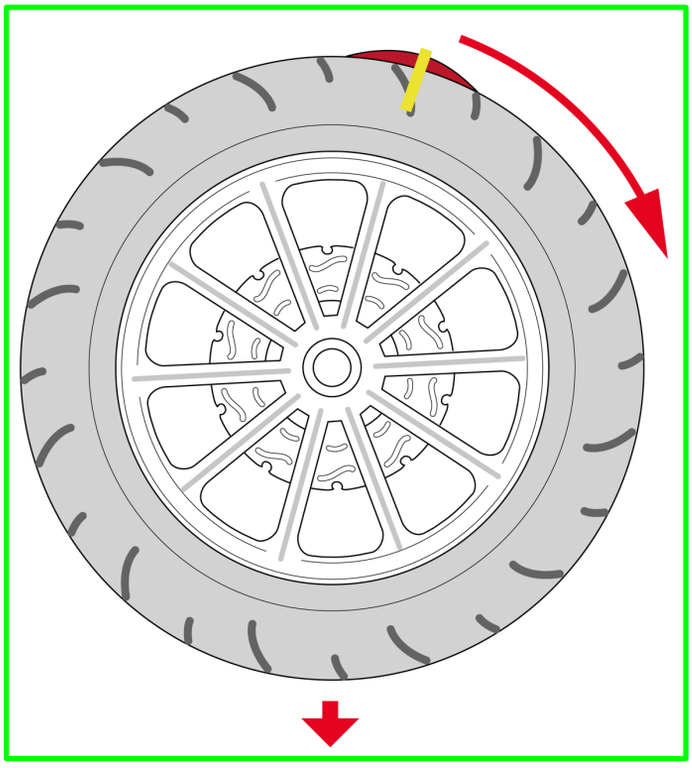
- The heaviest point of the wheel will always turn to the lowest point.
- Depending on the deviating weight size, the part of the wheel with the deviating higher weight turns slowly or quickly to the lowest point.
- Over time, you will gain the experience to decide how much weight is needed depending on the wheel's rotational speed

- Remove all old balance weights if you fitted a new tire on the rim.
  To do this, use the balance weights remover tool provided.
- Always clean completely old adhesives from the rim using an appropriate solvent.
- Carefully degrease the inside of the rim.

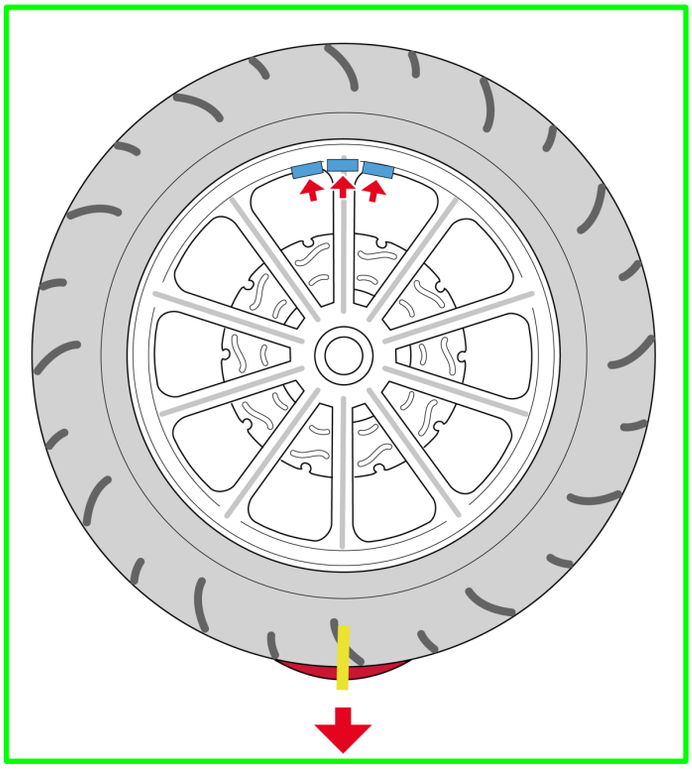
Balance weights:



- Take the time to bring the wheel to a standstill quietly.
  The heaviest point of the wheel drops to the lowest position.
- Use tape to mark the heaviest point of the wheel.

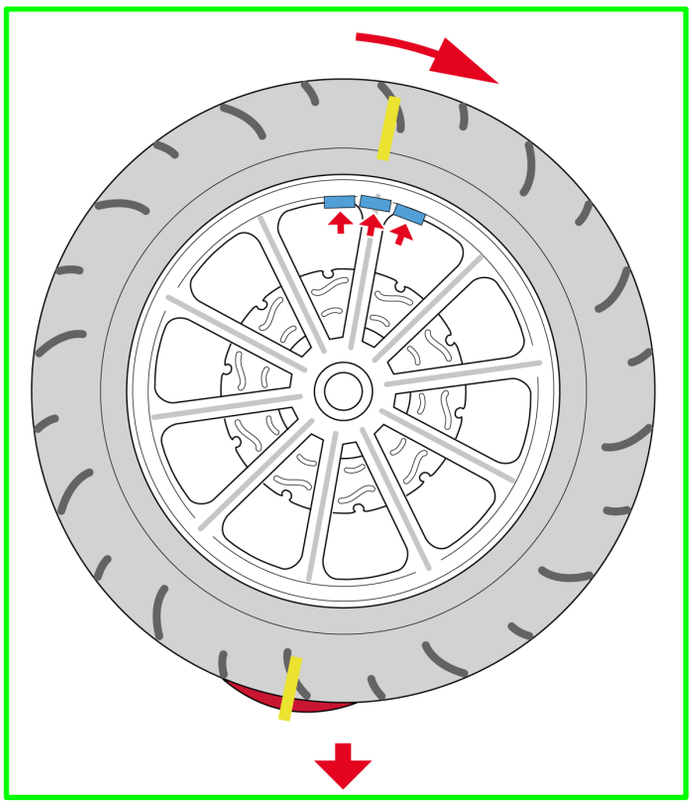


- Now turn the heaviest point upward, slightly off center.
- Now observe whether the heaviest point of the wheel moves slowly or quickly back down.
- Wait until the wheel is stationary again.
  - If the wheel turning speed was fast, choose a heavy balancing weight.
  - If the speed was slow, choose a light balancing weight.
- Use tape to mark the top side of the wheel. That is the place where you are going to put balancing weights.



- Apply a balancing weight on the top side of the rim.
  Use tape to stick the balance weight temporarily on the rim.
  For heavy weight, choose a strip of 3 pieces. For a lighter weight, choose one piece.
- Turn the wheel by hand slightly off center and see what happens. There are three possibilities:

1. The balance weight is just suitable if the wheel does not move. Try more wheel positions.
2. The applied balance weight rotates back to the top center; the weight is too light.
3. The applied balance weight turns down to the bottom side; the weight is too heavy.



- In both cases, 2 and 3, adjust the weight slightly, more or less weight.
  If necessary, you can cut off a piece of a weight element.
- The applied weight is correct if the wheel remains stationary in all positions.
- When the wheel is in balance, glue the weight elements permanently to the rim with the adhesive strip provided for this purpose. Press the weight elements firmly.
- The applied weight is correct if the wheel remains stationary in all positions.

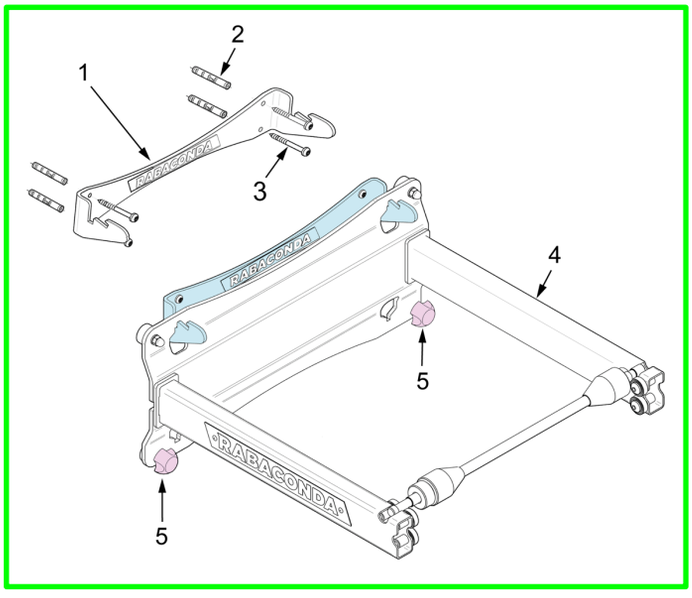
5.4 Removing the Wheel and Taking out the Shaft

- Remove the shaft with the wheel from the posts and place the assembly on the workbench or the ground.
- Untighten the adjustable cone assy by turning it in.
- Untighten the hexagonal set screw in the adjustable cone assy and slide it off the shaft.
- Pull the shaft out of the wheel hub.
- Place the adjustable cone assy back on the balancer shaft and secure it.
- Place the shaft with cones back on the posts of the balancer device to prevent damage.
- The wheel is ready for use; you can mount it on the motorcycle.
- Disassemble the device and store all parts in the supplied Rabaconda® carrying bag.

6 OTHER ACTIVITIES

Wall mounting

The wall mounting kit is included with the balancer device. The kit includes a wall bracket with screws and plugs. The image shows how you can attach the balancer device to the bracket. Always use a spirit level.



Method:

- Find a good, stable, and safe place for a wall attachment.
- Hold the wall bracket (1) in a level position against the wall.
- Use a pencil to redraw the four drill holes on the wall.
- Drill or pre-drill the four mounting holes.
- Insert the plugs (2) into the drilled holes for a stone wall.
- Use all four screws (3) to secure the wall bracket.
- Hook the Balancer device on the bracket as shown.
- Check the posts (4) for horizontal alignment.
- Use the adjustment knobs (5) in the base plate for level post alignment.

WARNING!

- **The included Wall Bracket fasteners are for concrete and stone walls. Other wall materials require different types of fixing devices. Consult your local hardware specialist to find the appropriate fasteners.**
- **After mounting, test the stability of the device regularly by applying an amount of pressure. The device should not wobble or move.**
- **Do not leave a wheel on the balancer device unattended.**

When not in use, the Wheel Balancer Device can be stored on the Wall Mount Bracket as shown on the image below.

7 MAINTENANCE AND REPAIR

This manual describes periodic maintenance that the owner can do.

GENERAL WARNINGS FOR MAINTENANCE:

- **Always perform maintenance on a level and solid surface in a well-lit, clean, and dry area.**
- **Only tool specialists with education and knowledge about this device and PPE safety procedures are entitled to maintenance or service work.**
- **Keep all device parts clean to ensure all parts fit together without problems. Dirty parts lead to damage and poor fitting.**
- **Provide adequate protection around moving or rotating parts, paying attention to the risk of pinching.**
- **Only use genuine or equivalent parts.**
- **Always use proper and good-quality tools.**

7.1 Preventive Maintenance

- Regularly check the balancing shaft for exact straightness. A crooked shaft interferes with the balancing process.
- Before and after each use, clean all outer surfaces of the ball bearings and the entire surface of the balancing shaft. Dirty surfaces can counteract the balancing process.

7.2 Ordering Parts

Contact Rabaconda® to order spare parts.
When ordering spare parts, you must always have the following information:

- Device name and Type.
- Part name.
- Part number.

7.3 Packed Transport and Storage

Essential Rules for Transport:

- Keep the device in the shipping package before assembling it.
- After use, transport the tool in the Rabaconda® carrying bag.

Essential Rules for Safe Storage:

- After use, disassemble the device and store all parts in the supplied Rabaconda® carrying bag.
- Pack with care to avoid damage.
- Store the carrying bag in a dry room.
- Avoid strong solvents or abrasives for cleaning.

8 SPARE PARTS AND WEARING PARTS

8.1 Spare Parts

When ordering Spare parts, always state the correct product name, version (refer to the number on the cover of this User manual), and part name or number.

8.2 Wearing Parts

Wearing parts are parts that usually wear out first.
For the reliable operation of a tool, it is essential that wearing parts are of high quality.
Wear parts are permanently excluded from the warranty.

Wearing parts for the Steet Bike Balancer Device:

- Carrying bag.
- Rubber base pads.
- Balance Weights Remover Tool.

9 SPECIFICATIONS

- Shaft diameter (minimum wheel hub inner diameter): 12 mm.
- Maximum hub inner diameter: 34 mm (up to 68 mm with Rabaconda® Universal Big Hub Adapter; up to 72 mm with Rabaconda® BMW Shaft Drive Type Adapter).
- Maximum tire height: 760 mm.
- Maximum hub width: 280 mm (if hub's inner diameter is 34 mm).
- Maximum tire width 370 mm.

Weight

- Net weight: 5.8 kg (excluding wall mount kit, balance weights remover tool, and carrying bag).
- Product shipping weight: 7.9 kg

Dimensions

- Assembled (L x W x H): 438 x 190 x 430 mm; 17.25 x 7.5 x 17 inches
- Carrying bag: 48 x 22 x 16 cm; 19 x 8.5 x 6.25 inches
- Shipping box: 500 x 250 x 175 mm; 19.7 x 9.8 x 6.9 inches

10 FAQ

Need to remove brake disc/rotor?

- No, you do not need to remove the rotors.

What's the minor shaft diameter?

- The standard spindle works with 12-34 mm wheel hubs. Different adapters for single-sided swingarm type wheels are available as extra accessories at rabaconda.com.

Why doesn't it have a bubble level?

The shaft has grooves that exclude any axial direction movement. The gravity always pulls the heaviest spot down, regardless of the angle of the Wheel Balancer.

11 WARRANTY

11.1 Warranty Provisions

Rabaconda® guarantees the proper functioning of the provided equipment.
However, Rabaconda® is not responsible for unsafe situations, accidents, or damage, which are the result of:

- Ignoring warnings and regulations as stated in this operator's manual.
- The use of the device for other applications or under other circumstances than stated in this documentation.
- Mutations to the machine including the application of different replacement parts as specified.
- Insufficient or careless maintenance.

11.2 Limited Warranty

This warranty is effective from 1 January 2024 and replaces all previous warranty terms issued by Rabaconda®. All previous warranty terms are null and void.

Lifetime warranty for manufacturer defects. It does not cover wearing parts of the product.

Surface finish is not guaranteed as the products are considered tools, and contact points will cause normal wear. Colors, patterns, and finishes are deemed cosmetic only and may vary.

Rabaconda® is not responsible for and will not warranty products that show obvious misuse, alteration, or abuse. You agree that Rabaconda® is the sole judge of determinations regarding such misuse, alteration, or abuse.

Warranties on structural steel parts of Rabaconda® products vary depending on the model and date of purchase.

Guarantees apply only to original purchasers and are not transferable. In the case of direct purchase from the factory, the product is automatically registered at the time of sale by the buyer(s). For products purchased from authorized dealers, the original invoice from that authorized dealer must be presented.

Evidence of purchase is required for all warranty claims. Evidence must be in the form of a copy of an original invoice/sales receipt or order confirmation e-mail showing the date of purchase in the owner's name.

Warranties only apply to Rabaconda® products and parts. The guarantee does not cover third-party products, such as rims, tires, wheels, and spokes.

The bearing system is covered for the life of the original tool, provided there is no evidence of misuse, abuse, alteration, or overloading.

Shipment of products for warranty claims from the customer to Rabaconda® and from Rabaconda® to the customer is the buyer's responsibility.

Rabaconda® reserves the right to revise, amend, modify, or withdraw the terms of this warranty policy at any time and for any reason.

Rabaconda reserves the right to determine whether to honor or deny a warranty as it deems appropriate based solely on the objective judgment of Rabaconda® specialists.

11.3 Liability

Rabaconda® can't be liable for consequential damage (business interruption, product damage, etc.).

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