

kBox4 Manual

Pro, Lite & Active



EXXENTRIC

Exxentric
kBox4 Manual
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WARNING

Like any exercise program, it is important that users are capable of performing exercises on this exercise equipment and have verified this with their personal physician.

For Your Safety

Please read and understand the user manual and warning labels prior to use.

- Inspect the machine including the drive belt before use. Damaged or worn parts and warning labels **must** be replaced. See user manual for how to change and cut the drive belt. Do not modify the machine or repair it with non OEM parts.
- Flywheels may get slippery when wet. When lifting flywheels, use a secure two-handed grip.
- Before you start training, make sure the pulley block snap shackle is properly closed and connected.
- The machine and accessories are intended for strength training only. Do not use them in any other way.
- The kBox can deliver a supramaximal* workload. Do not exercise at an intensity above your physical capacity. Start at a submaximal** intensity until you are familiar with the equipment.
- Always place the kBox on its feet on a level ground or floor surface during use.
- The machine might get slippery when wet. Use clean shoes and dry off the machine with a cloth if it is wet.
- The device is not suitable for children or animals.

During Use

Personal injuries may occur if the relevant precautions are not observed.

- Keep away from moving and/or rotating parts.
- Use shoes to avoid friction burns from the spinning flywheels or drive belt during use. Never stop a spinning flywheel with your bare hand as it may cause friction burns.
- **Never step off the kBox while the flywheels are moving.** Make sure the flywheels come to a complete stop before you end the exercise, disconnect, or step off.
- Both feet should be placed on the kBox during exercise if it's not fixed to the ground.
- Do not let the pulley block hit the kBox, absorb the eccentric load **before** it hits the device.
- If you feel dizzy or experience pain, stop exercising immediately.
- Never stop an exercise in top position.
- Exercising at maximum intensity may cause temporary staggering and uncontrolled body movements due to fatigue. Exercise caution to prevent falling.
- If you have balancing problems, be sure to have support from a spotter or fixed object like a wall.
- Exxentric takes no responsibility for any injuries that may occur while using this product.

*) Supramaximal means higher than maximal. This means higher loads than your muscles can produce themselves in a shortening (concentric) action.

***) Submaximal means below maximal. In this case, we would recommend below 75% of maximum intensity.




CONTENTS

This manual covers a description of the Kinetic Box, or kBox, a Multi-Exercise Flywheel Device, a guide to its use, and how to maintain it.

Always check exxentric.com/support for the latest info and manuals.

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SPECIFICATIONS

	Active	Lite	Pro
Minimum dimensions (bounding box)			
Width	76 cm (30")	76 cm (30")	98 cm (39")
Depth	51 cm (20")	51 cm (20")	63 cm (25")
Height	21 cm (8.3")	21 cm (8.3")	23 cm (9.1")
Top surface dimensions			
Width	69 cm (27")	69 cm (27")	90 cm (35")
Depth	44 cm (17")	44 cm (17")	55 cm (22")
Area	0.30 m ² (3.2 sq. ft)	0.30 m ² (3.2 sq. ft)	0.50 m ² (5.3 sq. ft)
Materials			
Chassis	Steel	Aluminium	Aluminium
Flywheel	Steel	Steel	Steel
Color	Anodic Bronze	Midnight Blue, Jet Black	
Features			
kMeter II built-in	Optional*	Yes	Yes
Drive belt auto-retract	Yes	Yes	Yes
Quick change flywheel	Yes	Yes	Yes
Foot block option**	Yes	Yes	Yes
No. of flywheels mounted	1-2	1-4	1-4
Inertia range	0.005 - 0.10 kgm ²	0.005 - 0.20 kgm ²	0.005 - 0.28 kgm ²
Inertia factor ***	x20	x40	x56
Range of motion	180 cm (71")	180 cm (71")	180 cm (71")
Flywheel options (kgm²)			
XS - 0.005	Yes	Yes	Yes
S - 0.010	Yes	Yes	Yes
M - 0.025	Yes	Yes	Yes
L - 0.050	Yes	Yes	Yes
XL - 0.070	-	-	Yes
Weight of machine	15 kg (33 lbs)	9.5 kg (21 lbs)	15.5 kg (34 lbs)
Maximum weight allowed on kBox	200 kg (441 lbs)	200 kg (441 lbs)	200 kg (441 lbs)

*) Active is kMeter II ready. It can be pre-installed from the factory or later by the customer.

**) Pro has a larger platform and more positions for individual adjustment of the foot blocks. Included with kBox4 Active, Lite and Pro platforms: angle adjuster, tool kit, printed manual, spare drive belt, flywheel protection for mounted flywheels, built-in kMeter II (Lite and Pro only).

***) Inertia factor means the highest possible inertia divided by the lowest possible inertia.

INTRODUCTION

Detailed overview in printed manual.

Color of parts may have slight variations depending on batch.

What is the kBox?

The kBox is a self-contained, compact exercise platform for various strength movements.

This device utilises the moment of inertia of the flywheels to provide a high and variable resistance in both the concentric and eccentric* movements of the user.

*) Concentric muscle action is when the muscle is being shortened during action and an eccentric muscle action is when the muscle is being elongated during action. In some literature, concentric and eccentric are called positive (shortening) and negative (lengthening) phase.

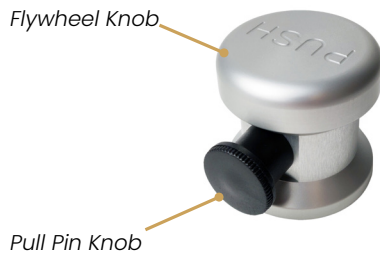
How it Works

The kBox has an adjustable-length drive belt wound around a shaft located beneath the platform. Different combinations of flywheels are mounted on the end of the shaft.

Using hand grips or a harness attached to the pulley block, the user pulls to accelerate the flywheel, then resists to decelerate the flywheel as the belt winds in the other direction.

All kBox models have a recoil auto-retract system. The drive belt length adjustment button allows for quick adjustments of the belt length for the type of strength work desired. Push the button to release and adjust the length or just push the button to automatically retract the belt. An extension belt is used for overhead exercises, for example, military press.

The Flywheel



There are five differently sized flywheels, with inertia 0.005, 0.010, 0.025, 0.050, and 0.070 kgm².

They all fit the kBox4 Pro, and all but the 0.070 kgm² fit the kBox4 Lite and Active. You can mount up to four flywheels on the kBox4 Lite and Pro, and two flywheels on the kBox4 Active.

Do not try to mount more than the maximum capacity of flywheels.

Experimentation will determine which configuration is required for your level of training. Mounting or changing flywheels is done by releasing the flywheel knob by pulling the pull pin knob on its side, removing the flywheel knob, changing flywheels and securing them by pushing the flywheel knob back on until it makes a clicking noise.

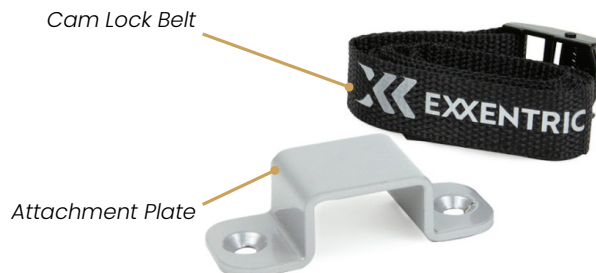
Tip! If the black pull pin knob is hard to pull out you can push the flywheel knob in whilst pulling the black pull pin knob out.

*) With the advanced flywheel knob you can attach 4 flywheels to the kBox4 Active and 6 flywheels to the kBox4 Pro and Lite. This will mean a larger range of inertia for each device.

Floor Attachment Kit

If training without both feet on the kBox, the platform must be attached to the floor or weighed down so it cannot move.

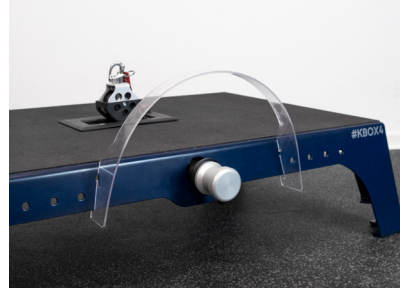
The floor attachment kit consists of an attachment plate and a cam lock belt. This package is sold separately and can be used to attach the kBox to the floor. The attachment plate will need to be fixed to the floor or a heavy wooden board. The kBox will then be anchored to the plate by the belt. You may wish to purchase extra floor attachment kits if you wish to secure the kBox to the floor in multiple places.



Flywheel Protection

The flywheel protection should be assembled after unpacking the kBox.

This is highly recommended in order to protect against injury. First remove the plastic film, then bend and hook the cover under the bottom of the kBox and then in the holes in the front of the chassis. See pictures below.



Foot Block

The foot block can be positioned straight or at an angle and is secured by sliding the pins into the holes in the front and the back of the kBox chassis.

The angle, along with the rubber mat, will provide extra friction and stability for your foot when performing lateral movements. The foot block can also be turned around so the side without the rubber mat is facing inwards. This can be useful as a guide to help keep your foot placement consistent for vertical movements.



Angle Adjuster

The angle adjuster allows for more horizontal actions in training (e.g. bent over row, swings).

Hook the angle adjuster around the drive belt and then hook the angle adjuster onto the kBox. The location for the placement is indicated with a sticker. The link below will lead you to a video showing the angle adjuster in use. The angle adjuster is included with every kBox.

<https://bit.ly/2YzzQVc>



FEATURES

Principle of the kBox

The kBox is a 'multi-exercise flywheel device'. Which muscle is being exercised depends on which exercise is being performed.

Through muscle force you accelerate and decelerate a flywheel (or flywheels). Exercises with high intensity and high forces stimulate muscles to increase in size and the nervous system to increase activation of the muscles. These effects together increase strength over time if the exercise is repeated regularly.

Resistance

The resistance is variable and unlimited.

The flywheel has a specified inertia and there is no upper limit to how much kinetic energy you can produce in the flywheel motion. You can think of the flywheel as a weight that weighs more if you put more effort into lifting it. Resistance is variable so if you pull less, the flywheel will resist less.

Every repetition in a set can be maximal instead of only the last one, which is the case with traditional weights. This results in a higher training efficiency, earlier onset of strength increase and hypertrophy*.

The potentially higher exertion on the kBox may lead to a need for longer resting periods between sessions to fully recover.

*) Hypertrophy refers to an increase in muscular size achieved through exercise.

Eccentric Loading

The kBox provides for increased eccentric workloads.

The skeletal muscles can produce more force in the eccentric, or negative phase. This is difficult to take advantage of with traditional weights, which always weigh the same.

If you accelerate the flywheel during the concentric, or lifting phase and then decelerate in a shorter amount of time, you will have to produce a higher eccentric force. This will be similar to lifting weights that would normally be too heavy to lift, unless assisted by a training partner, but executing the eccentric (lengthening) phase by yourself. Check out the Excentric Online Academy for more information on eccentric overload.



<https://academy.excentric.com>

Mobility

The kBox is mobile in comparison to traditional weights.

Squatting with the kBox is equivalent to traditional squats which would require a barbell and weights up to or beyond 500 lbs (227 kg) for a strong lifter, which is practically impossible to carry around. In addition, with the kBox you don't need rubber mats or racks. Furthermore, you do not need spotters to be able to do a 1 RM (one-repetition maximum). All of this is possible with the kBox which weighs about 22 kg (48 lbs) with one flywheel included and it can be carried and transported easily in an ordinary car. The kBox4 Lite can even be checked in as luggage when flying.

Ergonomics

Pressure on the shoulders and upper back is a limiting factor for many people when performing traditional barbell squats.

With the kBox, you are able to work out maximally or closer to maximum intensity since the harness distributes the pressure over the shoulders and reduces the pressure and torque on the lumbar spine.



User Environment

The kBox is quieter when training meaning the area does not have to be equipped with sound reducing materials.

There is a much lower risk of collision, meaning more people can work out in a smaller room without the risk of interfering with each other and causing injuries.

USAGE

Please visit the Exxentric Online Academy for the free getting started course, including demos, video tutorials, the kMeter intro course, and more.

<https://academy.exxentric.com>



Important



Whenever you use the kBox, make sure to absorb all the energy in the downward phase and come to a complete stop before the pulley block hits the kBox, causing damage to the device.

Foot Placement

Feet are placed differently depending on which exercise you are performing.

Make sure the drive belt goes smoothly into the device and reposition yourself if it goes against the edges or twists. Use the foot block for restricting your stance, lateral push movements or heel support during calf press. If you are not standing on the device with both feet, weigh down the kBox or secure it to the floor with the attachment kit.



Pulley Block Snap Shackle

Make sure the snap shackle is properly closed before you start training.

The pin in the release function must go through the hole in the clasp completely, as seen in the photo to the left. The snap shackle makes it possible to have an emergency release, just attach a cord in the snap shackle pin for the athlete or trainer to hold and pull to release.

Using the Harness



Attach the harness to the pulley block with the harness ends turned inwards (red double-stitched sides towards each other).

Be sure the harness fits well and is not too loose (various sizes are available). The straps shouldn't slip down over the shoulders and the horizontal strap should go around your lower back. The horizontal strap should be tightened with the buckle at the front.

Use the red drive belt length adjustment button to set the belt length to allow the belt to fully reach the upper end of the exercise movement.

For beginners and rehab patients doing lower body exercises, **the top position should be just before all active joints are fully extended.** For experienced users, there can be some slack in the top position to minimize strain on the belt and hook at the reversal point. **Remember not to stop the movement in an extended position** when the flywheel is spinning, as this will put strain on your joints if hyperextended.

Bend your knees slightly and take up the slack in the belt using your hand to rotate the flywheel and rewind some of the belt. Next, accelerate the flywheel by starting the exercise at a lower intensity. Accelerate the flywheel at every repetition. After two to four repetitions you should have reached your desired training intensity.

Perform your training set, usually 6-12 repetitions at desired intensity.



Decelerate the flywheel on the way down and stop at the bottom. Slowly return to your start position and **let the flywheel stop completely.** Detach the harness, step off the platform and prepare yourself for the next set. Make sure you get an adequate amount of rest between sets.

Using the Hip Belt



The hip belt can be used differently depending on your preferences.

1. Place the hip belt above your hips and tighten it. Attach the pulley block to the small loop. A solution for flexible “ass to grass” squatters.
2. Place the hip belt on your hips and attach yourself to the pulley block using the bigger loop on the hip belt. Only recommended if doing squats above 90 degrees.

Note: When attaching the pulley block to the smaller loop, it enables:

- 1) A spotter to hold the bigger loop in the back for extra safety or
- 2) Options for overload variations.



Using the Grip/Bar



Attach the desired grip or bar to the pulley block and position your feet as described above.

Use the drive belt length adjustment button to set the top position for the actual exercise. As with the harness, for beginners and rehab patients doing upper body exercises, the top position should be just before all active joints are fully extended. For experienced users, there can be some slack in the top position to minimize strain on the belt at the reversal point. Remember not to stop the movement in an extended position as this will put strain on your joints.

Put the flywheel in motion to roll up the belt. Accelerate the flywheel by starting the exercise at a lower intensity. Accelerate the flywheel at every repetition. After two to four repetitions, you should have reached your desired training intensity.

Perform your training set, usually 6-12 repetitions.

Decelerate and stop the flywheel on the way down. Don't put down the handle or grip before the flywheel(s) has come to a complete stop. Rest accordingly.

Selecting Inertia

Inertia will dictate the speed and hence the type of resistance training you are doing.

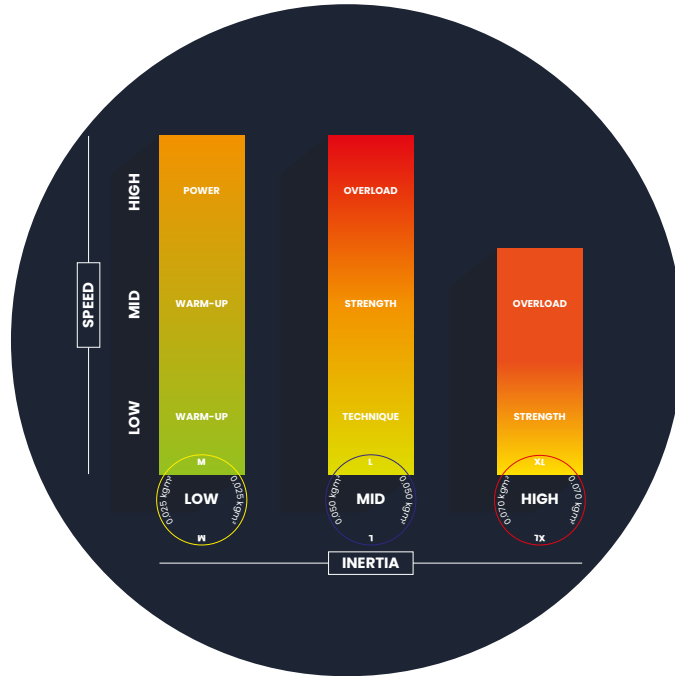
Lower inertia equals higher speed and lower force and, higher power vs higher inertia. For max strength, slow and controlled movements with high force and low speed are warranted and hence require more inertia.

The flywheel workout zones can be helpful, if you want to read more about this, please go to:



<https://bit.ly/2NENUNE>

FLYWHEEL WORKOUT ZONES



Warm-up

Low intensity and low to medium inertia

Power

Max intensity at low inertia

Technique

Medium inertia and low intensity

Strength

Medium to high intensity at medium to high inertia

Higher Inertia

More eccentric overload

For all Exentric devices, we want to stress that new exercises and users should be taught using **MEDIUM** inertia and **LOW INTENSITY**.

Since this will be slow, controlled and submaximal forces, it is easier to correct and there is less risk of injury or technical error. When the technique is correct, increase the intensity and/or lower the inertia for higher speed and more power.



For more information and advice visit the Exentric Online Academy.

<https://academy.exentric.com>

KBOX MAINTENANCE

Drive Belt Cautions

The drive belt and its attachment to the shaft is the most sensitive part of the kBox. **Be attentive to wear and check regularly.**

When the belt shows signs of wear and tear, trim the end by cutting off the damaged area or replace it with an original spare drive belt.

For recommendations on how to prolong the lifespan of your drive belt, please refer to our videos on best practices, found here:

www.exxentric.com/support/manuals/

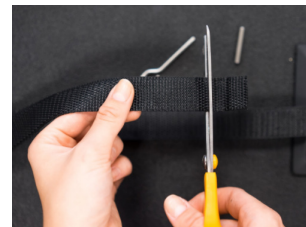
Trimming a Worn Belt

If damage occurs close to the shaft it is possible to cut off the damaged end and reattach the new end. Procedure:

1. Unwind all of the belt from the shaft.
2. Use the 3 mm hex key to push the belt through the shaft and remove the lock pin.
3. Cut off the damaged belt. Harden the new end with a lighter.
4. Fold the belt around the lock pin and pull the belt and pin into the wider groove in the shaft.
5. The belt automatically locks into the groove when you pull it firmly.

For a video tutorial, please go to:

www.exxentric.com/support/maintenance/trim-belt-kbox4/



Replacing the Drive Belt

Follow the steps below to complete the replacement:

1. Detach the drive belt from the shaft by pushing out the lock pin using the 3 mm hex key.
2. Remove the pulley block and make a knot on the drive belt.
3. Push the belt adjustment lever and pull the free end of the belt through the opening in the platform.
4. Flip the kBox over. Pull the belt out from the auto retract until you see the metal hook. Disconnect the old belt and fix the hook onto the kBox4 chassis so the spring can't retract.
5. Remove the old belt completely. Take a new belt and attach it to the metal hook and let it slide gently into the auto retract.
6. Thread the free end back through the hole in the chassis and the locking mechanism and make a knot.
7. Flip the kBox back.
8. Put the belt through the pulley block and lock it in the shaft with the lock pin.



For a video tutorial, please go to:

www.exxentric.com/support/maintenance/replace-belt-kbox4/

Maintenance of Screws

The kBox center parts (shaft, bearings and flanges) are subjected to heavy and repetitive forces.

We recommend that you inspect the screws and tighten them quarterly.



For a video tutorial, please go to:

www.exxentric.com/support/maintenance/

Toolkit

(Found on the shaft cover underneath the kBox)

3mm hex key

Used for flanges/shaft position screws and to remove the lock pin.

Extra lock pin

For drive belt.



KMETER

Overview

The kMeter Module allows you to connect your smartphone or tablet with your kBox and get live training feedback.

The kBox4 Pro and kBox4 Lite have the kMeter II built-in. The kBox4 Active is prepared for the kMeter II but it is an optional extra that can be ordered and assembled from the factory or bought at a later time and installed by the user. The kMeter II uses two 1.5 volt AA batteries.

How it Works

The kMeter Module sends wireless data over Bluetooth to the corresponding iOS or Android app.

The App uses rotational data and user-input of inertia to calculate and present the power in real-time and set a summary containing a wide range of metrics. Users can also input training data after a completed set. All data can be stored in an online database for later viewing in the app or to be exported to Excel.

The kMeter II has a sample rate of 10.000 Hz and receives 64 impulses per revolution of the flywheel. This means it can accurately sample data up to rotational speeds of 155 revolutions/second.



Exxentric

Download the App in App Store and Google Play.



App Store



Google Play



The kMeter II (art. no. 20002) is CE-marked according to 2014/53/EU Radio Equipment Directive, and FCC and ISED-certified.

About the kMeter



For information about the metrics and their precision, and how to connect the kMeter module with the app, check out the kMeter II Quick Start Guide or the Exxentric Online Academy:

<https://academy.exxentric.com>

KBOX ACCESSORIES

Flywheel	0.005, 0.010, 0.025, 0.050 and 0.070* kgm ² *0.070 kgm ² flywheel is not compatible with the kBox4 Lite and the kBox4 Active
kMeter II	If not built-in from factory
kGrips	Two single grips
kBar	Ultra light bar
Foot Block Short	For Active and Lite
Foot Block Long	For Pro
Advanced Flywheel Knob	
Floor Attachment Kit	
Exxentric Ankle Cuffs	Two single pieces
Exxentric Hip Belt	Small-Medium, Medium-Large
Exxentric Harness	XXS, XS, S, M, L, XL, XXL
Exxentric Head Harness	
Extension Strap	For overhead movements and ROM restrictions
Exxentric Accessory Rack	Floor model or wall-mounted
Exxentric Flywheel Bag	
Elevation Blocks	
Decline Board	
Rotational Sling	
Spare Drive Belts	

Accessories included with all kBoxes:

Spare Drive Belt, Flywheel Protection, Angle Adjuster

Visit exxentric.com for more info on products and accessories!

SUPPORT

More Information

For downloading the latest manuals, instructions and tutorials:

www.exxentric.com/support

For maintenance procedures or to continue reading this manual:

www.exxentric.com/maintenance

For blog posts covering flywheel science and physiology:

www.exxentric.com/news

For demos, getting started tutorials, the kMeter intro course, and more, check out:

<https://academy.exxentric.com>

(Register with your email to use this free service)

Assistance

For any problems concerning our products or apps, please go to the relevant link below:



Technical Support

exxentric.com/technical-support



App Support

exxentric.com/app-support



Exxentric

App for iOS and Android. Shows real-time data from the kMeter and kMeter II module.

For more information, see the previous kMeter section.



App Store



Google Play



Flywheel Training

For iOS and Android. Inspirational guide for new users.

Get access to tutorials, create a program and get started!

WARRANTY

January 1, 2022

- 1) THE TERMS AND CONDITIONS' APPLICABILITY. This Agreement applies only to the sale of products in new condition in the EU or in a market where a certified dealer is established. For the individual consumer, warranty runs from the original delivery date for two years in parallel with a three-year legal guarantee. For trade companies, warranty runs for two years from the original delivery date and with the conditions set out in this agreement.
- 2) PARTIES OBLIGATIONS. Exxentric undertake - with the exception of the cases specified in paragraph 5 below - in case of malfunction or damage to the product to replace defective parts. More extensive repairs are to be carried out by an Exxentric designated service center.
- 3) WHAT CONSTITUTES AN ERROR. Errors are professionally determined deviations from the normal standard that manifests itself during the period specified in paragraph 1. The product is considered defective if it differs in the manner stated above and is not, according to Exxentric, likely to have been defected due to accident or circumstances that are otherwise attributable to the buyer.
- 4) TROUBLESHOOTING. Rectification of defects or delivery of replacement parts will take place within a reasonable time after the buyer notified the error and, if so requested by Exxentric, made the product available to the action of a designated service centre. What is considered a reasonable time is determined by the buyer's need for the product, the nature and scope of the error, difficulties in determining the error and access to spare parts and engineering capacity.
- 5) LIMITATION OF SELLER / EXXENTRIC'S COMMITMENT. Exxentric's responsibility does not cover the product's consumable parts and wear parts such as for example drive belts, extension straps, rubber protectors for the pulley block, snap hooks, rubber mats and pads. Also, the warranty does not cover what is considered as normal wear and tear, normal corrosion, or defects in paint or other coatings. Also, the buyer may not claim rectification for deficiencies which the seller can show were caused by for example:
 - that repair or service was done elsewhere than at an authorized Exxentric service center
 - that non OEM components were used
 - that use of the product continued after the defect was first noticed
 - that the product has been used in ways for which it is not designed or sized
 - that the product has been abused
 - that the product has not been used with normal care
 - that the care regulations as per existing instructions have not been carefully observed.
- 6) TRANSPORT SAFETY AND TRANSPORTATION EXPENSE. For repair of extensive defects, the purchaser shall bring the product to a designated service center. Buyer shall, after the defect has been remedied, pick up the product from the seller or the designated service center. The product can also be dispatched by the buyer to the seller or to the designated service center. Such transportation shall be at the buyer's sole risk and expense. Replacement parts which the buyer can be expected to replace on his/her own are delivered free of charge to the buyer.
- 7) LIMITATIONS OF LIABILITY. For the individual consumer, the limitation of liability as stated in the current applicable Consumer sales rules applies. The buyer is therefore not entitled to compensation beyond what is covered under (2). For commercial customers, Exxentric's liability is limited to what is stated in this agreement. The buyer, therefore, is not entitled to compensation for economic damages beyond the terms specified above, ie not for personal injury or property damage. Buyer is reminded once again the importance of the product being handled with care and in accordance with the operating manual's instructions!

DISPUTES. Disputes concerning the interpretation or application of this Warranty Agreement shall in the first instance be resolved by agreement between the parties. If such an agreement can not be reached, the dispute shall be settled finally by arbitration at the Stockholm Chamber of Commerce Arbitration Institute (the Institute). The Rules for Expedited Arbitrations shall apply unless the Institute with regard to the case, the amount in dispute and other circumstances, determines the rules of the Stockholm Chamber of Commerce Arbitration Institute shall apply to proceedings. In the latter case, the Institute shall also decide whether the arbitral tribunal shall be composed of one or three arbitrators.


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