

INSTRUCTIONS FOR USE
IFU CODE: 43

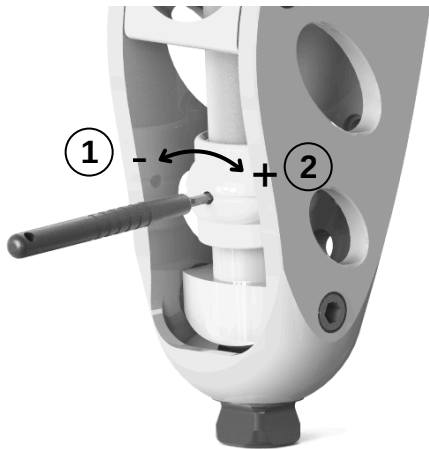


Hydraulic Knee Joint

KN200



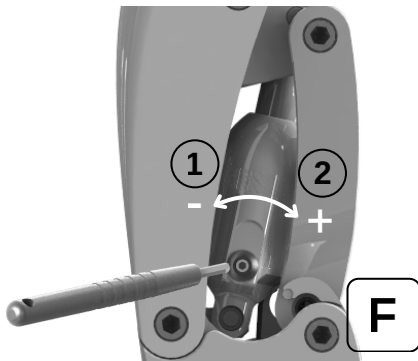
Fig. 1 (Stance Phase Resistance Adjustment)



1 Decreasing stance phase resistance

2 Increasing stance phase resistance

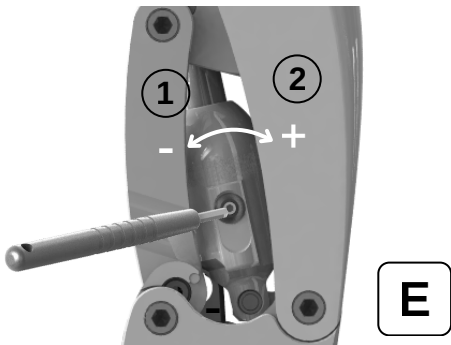
Fig. 2 (Flexion Resistance Adjustment)



1 Decreasing swing phase flexion resistance

2 Increasing swing phase flexion resistance

Fig. 3 (Extension Resistance Adjustment)



1

Decreasing swing phase extension resistance

2

Increasing swing phase extension resistance

Fig. 4 (Scope of Delivery)

1



2



3



4

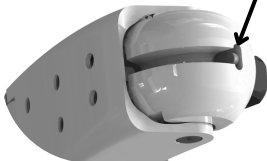


Fig. 5 (Bench Alignment of the Prosthesis)

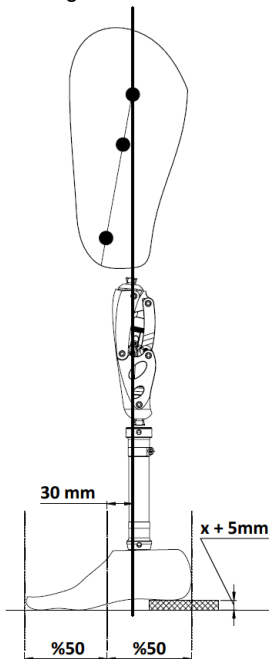
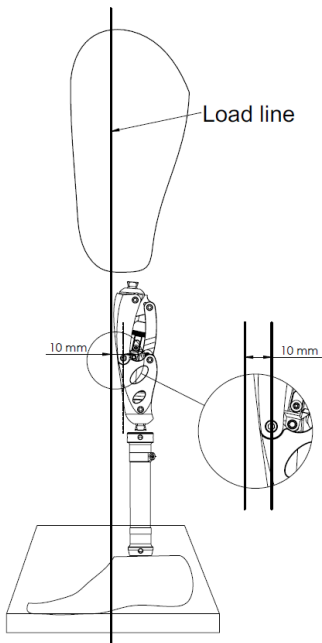


Fig. 6



INFORMATION

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- Please read this document carefully before using the product.
- Instruct the user in the appropriate and safe use of the product.
- Follow the safety instructions to avoid injuries and damage to the product.
- Please keep this document in a safe place.

Contents

1. Description	1
2. Assembly & Setting Instructions	2
3. Environmental Conditions	5
4. Service Life	6
5. General Safety Instructions	6
6. Maintenance	7
7. Scope of Delivery	7

1. Description

Advanced Polycentric Geometry: Specifically designed with a 5-bar linkage system to ensure maximum stability during the stance phase and increased ground clearance during the swing phase.

Integrated Hydraulic Control: Provides smooth and natural gait patterns by adaptively controlling swing phase resistance at varying walking speeds.

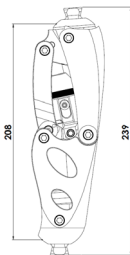
Stance Phase Flexion: Features a physiological "pre-flexion" mechanism that absorbs impact during heel strike, reducing stress on the residual limb and back.

Precision Resistance Adjustment

High Stability Control: The multi-axial center of rotation offers a high level of safety, making it ideal for users requiring reliable support during weight-bearing.

1.1. Features

Product Name	KN200
Advised Activity Level	K2 – K3
Material	Aluminum
Max. User Weight	125 kg
Max. Flexion Angle	150°
Product Weight	865 g
System Height	208 mm
Total Height	239 mm



2. Assembly & Setting Instructions



Important Considerations During Adjustment

- **Small Steps:** Test by turning the adjustment screws only 1/4 turn or less at a time. Hydraulic systems can react strongly to small changes.
- **Sequence:** Typically, the Stance Phase is adjusted first for safety, followed by the Flexion Phase adjustment, and finally the Extension Phase adjustment.
- **Speed Test:** After making the adjustments, ask the user to walk at different speeds (slow, normal, fast); the hydraulic structure of the KN200 knee joint must adapt to the speed changes.

2.1 Stance Phase Resistance Adjustment (Fig.1)

The following table summarizes the effects on the system based on the rotation direction of the Stance Phase adjustment on the KN200 unit:

Turn the screw (+)	Resistance Increases (Stiffens)	For heavier users or active users seeking a more stable/rigid stance.
Turn the screw (-)	Resistance Decreases (Softens)	For lighter users or those seeking more comfortable/soft shock absorption.

2.2 Flexion Resistance Adjustment (Fig.2)

Determines how quickly the knee flexes backward during swing.

Increase flexion resistance if the user is walking fast, decrease it if they are walking slowly. Increase resistance if the knee is "heel-striking" too much backward (excessive heel rise).

Turn the screw (+)	Resistance Increases	Reduces heel rise speed at the start of the swing phase.
Turn the screw (-)	Resistance Decreases	Swing phase starts more easily, beneficial for lower walking speeds.

2.3 Extension Resistance Adjustment (Fig.3)

Turning the adjustment tool (shown in Figure 3) increases or decreases the extension resistance during the extension phase. This allows the speed during the extension phase to be adjusted as desired.

Increase resistance if the knee makes a very loud thudding sound when it fully extends. Reduce resistance if the knee cannot keep up with the full extension and remains bent.

Turn the screw (+)	Resistance Increases	Slows down the knee as it reaches full extension; reduces terminal impact.
Turn the screw (-)	Resistance Decreases	The knee reaches full extension (lock) faster.

2.4 Bench Alignment of the Prosthesis (Fig.5, Fig.6)

For the dynamic performance of the prosthesis and the safety of the user, the following alignment criteria must be strictly followed during the assembly phase:

Alignment Steps:

I. Heel Height Adjustment:

When mounting the foot component, the heel height of the shoe must be taken into account. Place the necessary spacer under the heel according to the "**x + 5 mm**" formula indicated in Fig. 5 and Fig. 6.

II. Establishing the Reference Line:

Establish a vertical alignment line (load line). This line should pass approximately 10 mm off-center from the rotation center of the KN200 knee joint. See Fig. 6 for a detailed illustration.

III. 30 mm Axial Offset:

There must be a **30 mm** axial offset (anterior displacement) between the vertical reference line (passing through the

knee center) and the weight center (reference point) of the foot/shoe. This offset is critical for knee stability and swing phase transitions. See Fig. 5 for a detailed illustration.

IV. Socket Positioning:

The socket should be mounted at the appropriate flexion angle and aligned with the vertical reference line according to the patient's requirements.

3. Environmental Conditions

Acceptable Environmental Conditions
Fresh water (Splash & Rain)
Temperature use range: -10 °C to +45°C
Transportation, storage: -20 °C to +60°C
Humidity: Allowable relative humidity 20% to 90%, non-condensing
Solvent-free cleaning agent available on the market

Unsuitable Environmental Conditions
Salt water, sweat, urine, acids e.g.
Sand, dust, highly hygroscopic particles (e.g., talcum)
Mechanical vibrations, impacts
Cleaning agents containing solvents

4. Service Life

The service life of the product is about 3 years. This duration depends on the daily activity of the user.

5. General Safety Instructions

CAUTION!



To avoid the risk of injury and product damage, do not use for longer than the service life of the product.

The suitability of the device to the patient and the prosthesis should be evaluated by a healthcare professional.

The device must be fitted and adjusted by a healthcare professional.

There is a danger of pinching and injuring your finger or skin.

Do not insert your hand into the joint mechanism!

Avoid using this product in unsuitable environmental conditions. If the product has been exposed to unsuitable environmental conditions, check for damage.

Do not use the product that is damaged, has limited functionality or is in doubtful condition. Ensuring that appropriate measures are taken (e.g. control, cleaning, repair, replacement by the authorized workshop or manufacturer).

To prevent mechanical damage, exercise caution when handling the product.

Use the product for a single patient to avoid injuries and product damage.

The product must only be used in combination with compatible prosthetic components approved by the prosthetist. Using the product with unsuitable combinations may result in possible injury.

If unusual movement, looseness, or noise is detected, contact the rehabilitation center that fitted the prosthesis.

6. Maintenance

1. After the first 30 days of use, the prosthesis parts should be visually inspected and function checked.
2. Inspect the entire prosthesis for wear during normal consultations.
3. This prosthesis and its components should be checked for function by a prosthetist at regular intervals every year. If the recommendations are followed properly, there is no risk. If necessary, readjust the settings according to the user.

7. Scope of Delivery

Image No.*	Description	Quantity
1	KN200 Knee Joint	1
2	IFU 43 (Instructions for Use)	1
3	2 mm Allen KN200 adjustment tool	1
4	Spare Bumper	1

(*In Figure 4, you can see the products numbered.)



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