

Modular knee joints

The function of modular knee joints is of special importance for the prosthetic fitting. During the stance phase, knee stability is the most important aspect; the joint must not buckle at heel strike. During the swing phase, the motion of the shin section of the prosthesis must be controlled.

For mechanical knee components, the technical possibilities to achieve stance phase control range from a locked joint, especially for geriatric fittings, to weight-dependent friction control or a polycentric design – also with elastic stance phase flexion, e.g. in the 3R60. Hydraulic stance phase control is made possible with components such as the 3R80.

With electronic knee joints in the C-Leg product line, the hydraulics to secure the stance phase are controlled by a microprocessor.

Swing phase control is realised, for example, by means of flexible extension assists that are independent of the walking speed. On the other hand, the pneumatic and hydraulic damping elements create speed-dependent motion resistance and adjust themselves to the gait rhythm. Based on measured data, the C-Leg adapts to the current walking situation in real time.

The selection of a suitable mechanically or electronically controlled knee joint depends on a variety of factors such as the amputation level, condition of the residual limb, overall physical condition, weight and environment surrounding the patient. Older prosthesis wearers with reduced mobility require a high degree of knee stability. Here, easy handling and wearer comfort are more important than dynamic aspects.

The knee joint and prosthetic foot must be regarded as a functional unit, so that these components should be coordinated.

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 646D339  647G340=1

3R41 Ottobock modular monocentric locking knee joint

With the 3R41, the latest in synthetic material technology is conquering lower limb prosthetics. The next generation of the traditional locking knee joint offers additional advantages, is moisture-resistant, lightweight and especially resistant to wear. Transfemoral amputees with very low activity levels and the highest need for safety benefit from the easy handling of the innovative release mechanism in particular; it can even be triggered under partial load.

The lower joint section is equipped with a Ø 30 mm tube clamp.



Article number	3R41
Mobility grade	1
Material	Fibre-reinforced polyamide
Distal connection	Tube clamp Ø 30 mm
Proximal connection	Pyramid adapter
Knee flexion angle	150°
System height	24 mm
proximal system height to alignment reference point	12 mm
distal system height to alignment reference point	12 mm
Weight	385 g
Max. body weight	125 kg

- Use the 3S107 Foam Cover for the 3R41.
- Accessory the pages 169, 174, 186

Functions and Benefits

The innovative locking mechanism automatically secures the joint at full extension and the user can hear and feel the lock latch engage. The joint can be unlocked using the pull cable or by pressing the lock latch (patella). In developing this knee joint, special attention was paid to the balanced relationship between the unlocking force and the load on the prosthesis in order to make handling even safer.

Through the use of plastics, the joint is particularly lightweight, wear-resistant and easy to maintain. It is also resistant against humidity and splashed water, offering the user greater flexibility.

Its modern design has functional advantages as well. The front plastic flap prevents pinching the fingers in the joint gap and also protects the cosmetic foam cover.




3R40 Modular lightweight single axis knee joint with lock

The upper joint section with pyramid adapter and lower joint section with tube clamp are connected through an axis. The adjustable manual lock in the lower joint section secures the joint in the extension position. The lock is released using the lock cable.



Article number	3R40
Mobility grade	1
Material	Aluminium
Distal connection	Tube clamp Ø 30 mm
Proximal connection	Pyramid Adapter
Knee flexion angle	155°
System height	23 mm
proximal system height to alignment reference point	1 mm
distal system height to alignment reference point	22 mm
Weight	290 g
Max. body weight	100 kg



 647G82

- Use the 3R24 or 3S124 Foam Cover for the 3R40. Fabrication of a customised cosmetic foam cover is possible.
See Page 275

Accessory the pages 169, 174, 186

Single components for 3R40 as spare parts

4D16 Single component pack

Article number	4D16
for	3R40
Consisting of	1 plastic cap 2 set screws 1 lock bale with cable guide 5 pcs. perlon cable 1 threaded fitting, short 1 cable clamp 1 plastic ring 2 stops 1 pad button with thread 1 lamination plate with bore hole 1 lock slide

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647G34

Modular single axis knee joint, with lock and extension assist

The upper and lower joint sections are connected through the knee axis by bushings and ball bearings. The adjustable lock secures the joint in extension. The lock is released using the lock cable. Locking occurs automatically at full extension with assistance from the extension assist spring.



Article number	3R33	3R17
Mobility grade	1	
Material	Titanium	Stainless steel
Distal connection	Pyramid Adapter	
Proximal connection	Pyramid Adapter	
Knee flexion angle	120°	
System height	43 mm	
proximal system height to alignment reference point	6 mm	
distal system height to alignment reference point	37 mm	
Weight	530 g	695 g
Max. body weight	125 kg	150 kg

- Use the 3R24 or 3S124 Foam Cover for the 3R33 and 3R17. Fabrication of a customised cosmetic foam cover is possible.
See Page 275

Single components for 3R33 and 3R17 as spare parts

4D10 Single component pack

Article number	4D10
for	3R33, 3R17
Consisting of	1 plastic cap 2 bushings 1 compression spring 1 set screw 1 safety plate 1 oval head countersunk screw 1 rubber bumper 2 ball thrust bearings 2 compression springs 2 spring guide pins 2 set screws 1 spring guide housing 1 tab guide pin

4F18=N lock + accessories as spare parts

4D11 Single component pack

Article number	4D11
for	4F18=N
Consisting of	1 lock slide 1 threaded fitting, short 1 cable clamp 5 pcs. perlon cable 2 pad buttons and thread 1 lamination plate with bore hole

Accessories for 3R41, 3R40, 3R33, 3R17 and 3R93

- Order separately as necessary.

4F34 Locking unit

For use both left and right, adjustable for push and pull. Can be used instead of the factory-installed 4F18=N Lock Slide.

Article number	4F34
Consisting of	1 housing 1 grip 1 cover 1 oval head screw 1 clamping bushing 2 raised head wood screws 1 Allen wrench



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647H84

Modular monocentric knee joint with friction brake, with extension assist and protective sleeve

The swing block is connected to the upper joint section through the swing axis and with the lower joint section through the knee axis and acts as a load-dependent brake. This together with proper knee alignment secures the stance phase. To control the swing phase, the axis friction and the spring force of the extension assist are adjustable.



Article number	3R49	3R15
Mobility grade	1 + 2	
Material	Titanium	Stainless steel
Distal connection	Pyramid Adapter	
Proximal connection	Pyramid Adapter	
Knee flexion angle	150°	
System height	9 mm	
proximal system height to alignment reference point	8 mm	
distal system height to alignment reference point	1 mm	
Weight	360 g	490 g
Max. body weight	100 kg	

- Use the 3R6 or 3S106 Foam Cover for the 3R49 and 3R15. Fabrication of a customised cosmetic foam cover is possible.
See Page 275

Single components for 3R49 and 3R15 as spare parts



21Y70=N Protective sleeve

External sleeve made of injection-moulded granulate to protect the knee joint, extension assist unit and cosmetic foam cover or clothing.

Article number	21Y70=N
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4D1 Single component pack

Article number	4D1
Consisting of	1 brake bushing 1 stop 1 bumper 2 bearing washers (large) 2 bearing washers (small) 2 lock rings 2 stops 1 safety device for bushing 1 axis screw 8 play adjustment washers

Ottobock habermann modular polycentric knee joint with internal extension assist



Article number	3R36	3R20
Mobility grade	1 + 2	
Material	Titanium	Stainless steel
Distal connection	Pyramid Adapter	
Proximal connection	Pyramid Adapter	
Knee flexion angle	110°	
System height	41 mm	
proximal system height to alignment reference point	- 3 mm	
distal system height to alignment reference point	44 mm	
Weight	445 g	820 g
Max. body weight	100 kg	

- Use the 3R24 or 3S124 foam cover for the 3R36 and 3R20. Fabrication of a customised cosmetic foam cover is possible.
See Page 275



647G72

Single components for 3R36 and 3R20 as spare parts

4D13 Single component pack

Article number	4D13
Consisting of	1 plastic cap 1 cap screw 1 knee stop, complete 1 extension bumper 1 pin for extension assist 1 extension assist spring 1 adjustment screw 1 ball 2 lock nuts 2 axis pins 4 bearing washers 4 rounded washers

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646D527

647G525

3R93 Modular friction brake knee joint with lock

The modern therapy knee joint

The 3R93 is a monocentric knee joint with a load-dependent brake mechanism and an optional locking function. An integrated, adjustable extension assist spring controls the swing phase.



Article number	3R93-1
Mobility grade	1 + 2
Material	Aluminium
Distal connection	Tube clamp, 34 mm Ø
Proximal connection	Pyramid Adapter
Knee flexion angle	130°
System height	82 mm
proximal system height to alignment reference point	8 mm
distal system height to alignment reference point	74 mm
Weight	760 g
Max. body weight	125 kg

Scope of delivery

- 710H10=2X3
- 4F18=N Lock slide
- 4G650

Use the 3S107 or 3S106 Foam Cover for the 3R93-1. Fabrication of a customised cosmetic foam cover is possible.



The 3R93 effectively supports the therapy process following the amputation. This makes it the right knee joint from the first standing and walking exercises with the interim prosthesis all the way to the definitive fitting. Thanks to its design, the 3R93-1 can be used as a locked knee joint with manual lock release and as a knee joint with friction brake once the prosthesis wearer's mobility has increased.

When the locking function is activated, it secures the joint in the extended position. The user pulls on a cable to release the joint so it can bend for sitting.

The locking function can also be permanently deactivated by the prosthetist.

When the locking function is permanently deactivated, knee stability is achieved through the brake mechanism that blocks the joint in the flexion direction under load. The brake activates when load is applied to the heel and stabilises the prosthesis during the entire stance phase. The brake also offers the desired security when stepping down with a slightly flexed knee joint. The braking action can be adjusted easily and reproducibly (Fig. 1).

To initiate the swing phase, the user relieves the load on the prosthesis which deactivates the brake. The integrated extension assist spring (Fig. 2), which can be optimally adjusted from the outside, controls the pendulum motion of the prosthetic lower leg.





Practical recommendation:

The 3R93 Modular Friction Brake Knee Joint with Lock is not suitable for patients with:

- Hip disarticulation
- Hemipelvectomy
- Bilateral amputation

Accessories for 3R93

• Order separately as necessary.

2R77 Tube adapter

The tube adapters are available in 2 different lengths.



≤ 150 kg

Article number	2R77
Diameter	34 mm
Material	Stainless steel
Min. system height	77 mm
Max. system height	472 mm
Weight	370 g
Max. body weight	150 kg



647G180=1

2R58 Tube adapter

The tube adapters are available in 2 different lengths.



≤ 150 kg

Article number	2R58
Diameter	34 mm
Material	Titanium
Min. system height	77 mm
Max. system height	472 mm
Weight	330 g
Max. body weight	150 kg



647G180=1

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4F34 Locking unit

For use both left and right, adjustable for push and pull. Can be used instead of the factory-installed 4F18=N Lock Slide.

Article number	4F34
Consisting of	1 housing 1 grip 1 cover 1 oval head screw 1 clamping bushing 2 raised head wood screws 1 Allen wrench



4D29 Single component pack for sealing sleeve

Article number	4D29
Consisting of	Isopropyl alcohol 1 leg spring left right 4 safety caps 1 sealing sleeve 1 felt strip

Single components for 3R93 as spare parts



710H10=2X3 Adjustment wrench

Article number	710H10=2X3
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4G650 Pull cable, complete

Article number	4G650
Consisting of	1 perlon cable 1 cable clamp 1 simplex hook 1 expansion spring 1 threaded fitting, short



4F18=N Lock slide

complete

Article number	4F18=N
Consisting of	1 lock slide (4F17=N) 1 pad button with thread 1 lamination plate with bore hole

3R90 Modular knee joint with friction brake, monocentric with mechanical extension assist

The innovative load-dependent brake mechanism offers targeted safety for the patient. Heel strike activates the brake and provides high stability in the stance phase. The swing phase can be controlled by means of a mechanical extension assist which, integrated in the lower section of the joint, has a progressively acting spring combination.



Article number	3R90
Mobility grade	1 + 2
Material	Aluminium
Distal connection	Tube Clamp
Proximal connection	Pyramid Adapter
Knee flexion angle	135°
System height	97 mm
proximal system height to alignment reference point	8 mm
distal system height to alignment reference point	89 mm
Weight	745 g
Max. body weight	125 kg

- Use the 3S107 Foam Cover for the 3R90 and 3R92. Fabrication of a customised cosmetic foam cover is possible.
See Page 276

Two combined spring elements form the integrated mechanical extension assist of the 3R90. The interaction of the springs results in an extension assist effect dependent on the knee angle. It can be preset to one of 5 different levels by means of a ratchet unit.



646D338

647G113



Practical recommendation:

When fitting users with mobility grade 1, the following applies: these knee joints with friction brake are contraindicated for unsure patients who are unable to systematically use the braking mechanism during the gait cycle i.e. to lock the knee joint at heel contact and unlock it when the forefoot is loaded.

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646D338

647G113



Practical recommendation:
When fitting users with mobility grade 1, the following applies: these knee joints with friction brake are contraindicated for unsure patients who are unable to systematically use the braking mechanism during the gait cycle i.e. to lock the knee joint at heel contact and unlock it when the forefoot is loaded.

3R92 Modular knee joint with friction brake, monocentric with pneumatic swing phase control

Same brake mechanism as the 3R90. The lower joint section is formed as a pneumatic cylinder. To control the swing phase, flexion and swing phase damping of the progressively acting dual-chamber pneumatic system are individually adjustable.

Extension and flexion damping of the integrated dual-chamber pneumatics in the 3R92 can be regulated with a screwdriver in the accustomed manner.



Article number	3R92
Mobility grade	2 + 3
Material	Aluminium
Distal connection	Tube Clamp
Proximal connection	Pyramid Adapter
Knee flexion angle	135°
System height	154 mm
proximal system height to alignment reference point	8 mm
distal system height to alignment reference point	146 mm
Weight	895 g
Max. body weight	125 kg

- Use the 3R107 Foam Cover for the 3R92. Fabrication of a customised cosmetic foam cover is possible.
See Page 276

Accessories for 3R90/3R92

Order separately as necessary.

2R77 Tube adapter



Article number	2R77
Diameter	34 mm
Material	Stainless steel
Min. system height	77 mm
Weight	370 g
Max. body weight	150 kg



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646D560

647G556
647H536



Reference number	3R78
Mobility grade	2 + 3
Material	Aluminium
Distal connection	Tube clamp Ø30 mm
Proximal connection	Pyramid Adapter
Knee flexion angle	150°
System height	156 mm
proximal system height to alignment reference point	-7 mm
distal system height to alignment reference point	163 mm
Weight	750 g
Max. body weight	100 kg

- Use the 3R6 or 3S106 Foam Cover for the 3R78. Fabrication of a customised cosmetic foam cover is possible. Page 274

Single-chamber pneumatics control the swing phase

In the swing phase, the smooth yet powerful single-chamber pneumatics – one chamber each for flexion and extension damping – do not run out of air, even at various walking speeds. Harmonious flexion and extension movements, and therefore an approximation of the physiological gait pattern, are made possible. Here the joint geometry effectively shortens the prosthesis during swing through, resulting in more ground clearance.

3R106 Modular polycentric knee joint with pneumatic swing phase control

The stance phase is secured due to the 4-axis joint design. Power dual-chamber pneumatics with integrated extension assist spring ensure harmonious pendulum movements of the prosthetic lower leg, even at higher walking speeds.

Advantages of 3R106

- The upper joint section and lower joint section are connected by the anterior links and the mid-joint section to form a four-bar linkage. In the extended position, the instantaneous pivot point is located clearly above the joint and behind the load line. Therefore, the modern polycentric structure reliably stabilises the knee joint during stance phase and provides for increased ground clearance during the swing phase – thus enhancing the user's confidence in the prosthesis as a whole.
- Advantageous swing phase damping characteristics, especially easy initiation of the swing phase, harmonious extension stop for a natural gait with reduced energy consumption.
- Flexion and extension damping are individually adjustable. To reduce the force of the extension assist, the extension assist spring can simply be replaced by a weaker one that is additionally included in the delivery.
- The wide flexion angle of 170° and the light weight also provide for high comfort, e.g. when bicycling, getting into a car, kneeling or sitting.
- Suitable for all amputation levels with various proximal connection versions.

- Use the 3R107 Foam Cover for the 3R106. Fabrication of a customised cosmetic foam cover is possible. See Page 276



 646D649

 647G208



Article number	3R106	3R106=HD*	3R106=ST	3R106=KD
Mobility grade	2 + 3			
Material	Aluminium			
Distal connection	Tube Clamp Ø 30 mm			
Proximal connection	Pyramid Adapter	Pyramid Adapter (10° inclined)	Threaded Connector	Lamination Anchor
Knee flexion angle	170°			
System height	162 mm	164 mm	180 mm	184 mm
proximal system height to alignment reference point	-6 mm	-4 mm	12 mm	16 mm
distal system height to alignment reference point	168 mm			
Weight	760 g	790 g	765 g	755 g
Scope of delivery	All versions of the 3R106 Modular Knee Joint are supplied with a Ø 30 mm tube adapter and an additional, weaker extension assist spring.			
Max. body weight	100 kg			

* Using the especially adapted version of the 3R106=HD is mandatory when fitting prosthesis wearers with hip disarticulation or hemipelvectomy; using the 4R39 Torsion Adapter is also recommended.

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Single components for 3R106 as spare parts

4D3 Single component pack

Article number	4D3
for	3R106
Consisting of	1 stop 4 truss head screws 4 two-hole nuts 3 set screws, Allen head



3R60 Modular polycentric EBS knee joint with hydraulic swing phase control

The main objective of prosthetic fittings is to achieve the best possible replacement of various functions offered by the sound limb. At Ottobock, we strive to continuously get closer to this objective through intensive research and the development of modern knee joints.

In the field of mechanical knee components, we have taken a big step in this direction with the 3R60 EBS* – with distinction!

Get to know the next generation of the 3R60 which has proven itself thousands of times. With improved EBS* function for controlled knee flexion at heel strike and new, powerful swing phase control hydraulics.

Comfort and safety are ensured by the unique characteristic of the EBS elastic flexion unit, which simulates the biomechanics of the natural gait.

Available with 4 different connections.

- Use the 3R107 Foam Cover for the 3R60. Fabrication of a customised cosmetic foam cover is possible.
See Page 276

646S1=24.04

647G167



Article number	3R60	3R60=HD*	3R60=ST	3R60=KD
Mobility grade	2 + 3			
Material	Aluminium			
Distal connection	Pyramid Adapter			
Proximal connection	Pyramid Adapter	Pyramid Adapter (10° inclined)	Threaded Connector	Lamination Anchor
Knee flexion angle	175°		125°	145°
System height	171 mm	174 mm	189 mm	193 mm
proximal system height to alignment reference point	-2 mm	1 mm	16 mm	20 mm
distal system height to alignment reference point	173 mm			
Weight	845 g	880 g	845 g	940 g
Max. body weight	125 kg			

* Using the especially adapted version of the 3R60=HD is mandatory when fitting prosthesis wearers with hip disarticulation; using the 4R86 Torsion Adapter is also recommended.

3R60-PRO Modular EBSspro polycentric knee joint with hydraulic swing phase control

Comfort and safety are ensured by the unique characteristic of the advanced ergonomically balanced stride unit EBS^{PRO}, which simulates the biomechanics of the natural gait. Available with 4 different connections.

- The proven design allows controlled stance phase flexion of up to 15° and thus comfortable walking with high safety even on rough terrain and on inclines of up to 10°.
- Progressive damping of stance phase flexion as well as stance phase extension provides for harmonious, natural movements under load.
- Possible for the first time: adaptation of stance phase flexion to various everyday situations.
- The EBS^{PRO} function reduces stress on both limbs. In addition, it reduces the forces acting on the residual limb, pelvis and spine while closely approximating a sound, physiological gait pattern.
- The 5-axis design provides greater protection in high-risk situations: the wearer can always flex the joint in controlled manner without delay or prior full extension, so there is less risk of falling than with geometrically locking knee joints.
- Easy initiation of the swing phase and progressive damping for focused control of the pendulum motion of the lower leg.
- Low weight and a very large flexion angle of 175° for greater freedom of movement.
- Adjustment of prosthetic alignment using the movable pyramid adapter, e.g. to adapt to flexion contractures.
- All amputation levels can be fitted thanks to individual connectors.
- Attractive and natural cosmetic appearance.

- Use the 3R107 Foam Cover for the EBS^{PRO}. Fabrication of a customised cosmetic foam cover is possible. See Page 276



646D303

647G381



Article number	3R60-PRO	3R60-PRO=HD*	3R60-PRO=KD	3R60-PRO=ST
Mobility grade	2 + 3			
Material	Aluminium			
Distal connection	Pyramid Adapter			
Proximal connection	Pyramid adapter (movable)	Pyramid Adapter (10° inclined)	Lamination Anchor	Threaded Connector
Knee flexion angle	175°		145°	125°
System height	150 mm		169 mm	165 mm
proximal system height to alignment reference point	2 mm		21 mm	17 mm
distal system height to alignment reference point	148 mm			
Weight	770 g		840 g	750 g
Max. body weight	75 kg			

* Using the especially adapted version of the 3R60-PRO=HD is mandatory for hip disarticulation fittings

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646D776 647G403=1
647H515

3R80 Modular monocentric knee joint with rotary hydraulics

The 3R80 with its unique rotation hydraulics principle is now also approved for prosthesis wearers with a body weight of up to 150 kg (330 lbs). With the 3R80, both the stance and the swing phase are controlled by the hydraulics. For example, walking down stairs step-over-step and walking down inclines are effectively supported by closely approximating a physiological gait pattern, even at various walking speeds.



≤ 150 kg

Article number	3R80	3R80=ST
Mobility grade	3 + 4	
Material	Aluminium	
Distal connection	Tube Clamp Ø 34 mm,	
Proximal connection	Pyramid Adapter	Threaded Connector
Knee flexion angle	150°	
System height	163 mm	179 mm
proximal system height to alignment reference point	28 mm	44 mm
distal system height to alignment reference point	135 mm	
Weight	1240 g	1225 g
Scope of delivery	2R57=16-285-WF Tube Adapter Ø 34 mm More powerful extension assist spring Quick Reference Guide	
Max. body weight	150 kg	

- Use the 3S107 Foam Cover for the 3R80.
Fabrication of a customised cosmetic foam cover is possible.
See Page 276

Single components for 3R80 as spare parts



647G180=1



≤ 150 kg

Article number	2R77
Diameter	34 mm
Min. system height	77 mm
Max. system height	472 mm
Weight	370 g
Max. body weight	150 kg

2R58 Tube adapter



≤ 150 kg

Article number	2R58
Diameter	34 mm
Material	Titanium
Min. system height	77 mm
Max. system height	472 mm
Weight	330 g
Max. body weight	150 kg



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646S1=7.04 647G817

3R95 Modular knee joint, monocentric, with hydraulic swing phase control

Small, lightweight and with powerful linear hydraulics for swing phase control. Particularly well suited for highly active users. Also available as the 3R95=1 with especially adapted characteristics for prosthesis wearers with a body weight less than 75 kg (165 lbs). Here the hydraulics for swing phase control are adapted to the lower pendulum mass and length compared to the 3R95. The joint housing has a dorsal recess to allow for a larger flexion angle.



Article number	3R95	3R95=1
Mobility grade	3 + 4	
Material	Aluminium	
Distal connection	Pyramid Adapter	
Proximal connection	Pyramid Adapter	
Knee flexion angle	135°	155°
System height	62 mm	
proximal system height to alignment reference point	6 mm	
distal system height to alignment reference point	56 mm	
Weight	360 g	340 g
Max. body weight	150 kg	75 kg

- Use the 3R24 or 3S124 Foam Cover for the 3R95/3R95=1. Fabrication of a customised cosmetic foam cover is possible.
See Page 275

Single components for 3R95 and 3R95=1 as spare parts

4D17 Single component pack

Article number	4D17
for	3R95, 3R95=1
Consisting of	1 oval head countersunk screw 1 extension stop bumper

3R55 Modular polycentric knee joint with hydraulic swing phase control

Upper and lower joint sections are connected to one another by linkage bars. Stance phase stability is achieved through polycentric kinematics. The swing phase is controlled by the built-in hydraulic cylinder. Flexion and extension resistance are independently adjustable.



Article number	3R55
Mobility grade	3 + 4
Material	Titanium
Distal connection	Pyramid Adapter
Proximal connection	Pyramid Adapter
Knee flexion angle	110°
System height	90 mm
proximal system height to alignment reference point	9 mm
distal system height to alignment reference point	81 mm
Weight	720 g
Max. body weight	125 kg

- Use the 3R6 or 3S106 Foam Cover for the 3R55. Fabrication of a customised cosmetic foam cover is possible.
See Page 274



647H30

Single components for 3R55 as spare parts

4D19 Single component pack

Article number	4D19
for	3R55
Consisting of	2 stops 1 damper protection 2 attachment nipples, short 1 attachment nipple, long 4 slotted bushings 4 Belleville spring washers 2 lock rings 2 lock nuts

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647H20

Modular knee joints for knee disarticulation

Modular knee joints designed exclusively for knee disarticulation are described in the following section. KD joint versions that are also offered with a pyramid adapter (3R60, 3R106, C-Leg product line) can be found with the help of our quick search feature on the pages 179-180, 190.

Modular knee joint for knee disarticulation, polycentric, with manual lock

The upper joint section with coupling unit and lower joint section with pyramid adapter are connected to one another by anterior and posterior linkage bars. The detachable lamination anchor connects the knee to the prosthetic socket. The adjustable lock secures the knee in extension. The lock is released using the lock cable.



Article number	3R32	3R23
Mobility grade	1	
Material	Titanium	Stainless steel
Distal connection	Pyramid Adapter	
Proximal connection	Lamination Anchor	
Knee flexion angle	110°	
System height	99 mm	
proximal system height to alignment reference point	17 mm	
distal system height to alignment reference point	82 mm	
Weight	655 g	880 g
Max. body weight	125 kg	

- ▶ Use the 6R6 (3R6, 3S106) Foam Cover for the 3R32 and 3R23. Fabrication of a customised cosmetic foam cover is possible.
See the pages 273-274

Accessories for 3R32/3R23

- ▶ Order separately as necessary.



4F34 Locking unit

For use both left and right, adjustable for push and pull. Can be used instead of the factory-installed 4F18=N Lock Slide.

Article number	4F34
Consisting of	1 housing 1 grip 1 cover 1 oval head screw 1 clamping bushing 2 raised head wood screws 1 Allen wrench

Single components for 3R32 and 3R23 as spare parts

4D9 Single component pack

Article number	4D9
Consisting of	4 slotted bushings 4 Belleville spring washers 2 lock rings 3 set screws 2 lock nuts 2 stops 4 truss head screws 4 two-hole nuts

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647G44

Modular knee joint for disarticulation, polycentric, with mechanical extension assist

The upper joint section with lamination anchor and lower joint section are connected by anterior and posterior linkage bars. The detachable lamination anchor connects the knee to the prosthetic socket. Stance phase stability is achieved through polycentric kinematics. The extension assist spring and axial friction are both continuously adjustable.



Article number	3R30	3R21
Mobility grade	1 + 2	
Material	Titanium	Stainless steel
Distal connection	Pyramid Adapter	
Proximal connection	Lamination Anchor	
Knee flexion angle	110°	
System height	99 mm	
proximal system height to alignment reference point	17 mm	
distal system height to alignment reference point	82 mm	
Weight	655 g	1010 g
Max. body weight	125 kg	

- Use the 6R6 (3R6) Cosmetic Foam Cover for the 3R30 and 3R21. Fabrication of a customised cosmetic foam cover is possible.
See the pages 273-274

Single components for 3R30 and 3R21 as spare parts

4D7 Single component pack

Article number	4D7
Consisting of	4 slotted bushings 4 Belleville spring washers 1 set screw 2 lock rings 2 lock nuts 2 stops 1 extension assist spring 1 bearing for extension assist 1 guide for extension assist 1 plastic guide 1 knob for extension assist 4 truss head screws 4 two-hole nuts 2 set screws

3R46 Modular knee joint for disarticulation, polycentric, with hydraulic swing phase control

The upper joint section and lower joint section with pyramid adapter are connected to one another by anterior and posterior linkage bars. The detachable lamination anchor connects the knee to the prosthetic socket. Stance phase stability is achieved through polycentric kinematics. The swing phase is controlled by the built-in hydraulic cylinder. Flexion and extension resistance are independently adjustable.



Article number	3R46
Mobility grade	3 + 4
Material	Titanium
Distal connection	Pyramid Adapter
Proximal connection	Lamination Anchor
Knee flexion angle	110°
System height	99 mm
proximal system height to alignment reference point	17 mm
distal system height to alignment reference point	82 mm
Weight	740 g
Max. body weight	125 kg

- Use the 6R6 (3R6) Foam Cover for the 3R46.
Fabrication of a customised cosmetic foam cover is possible.
See the pages 273-274



647G94

Single components for 3R46 as spare parts

4D18 Single component pack

Article number	4D18
Consisting of	2 stops 4 truss head screws 4 two-hole nuts 1 damper protection 2 attachment nipples, short 1 attachment nipple, long 4 slotted bushings 4 Belleville spring washers 3 set screws 2 lock rings 2 lock nuts

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