

mediroyal 

Orthoses are our passion

MEDIROYAL TONUS®



TONUS 



Mediroyal TONUS™ – Anti Tonus-splint with dynamic wrist- & fingerextension

Mediroyal TONUS™ is a new dynamic splint for tonus reduction for patients with spasticity. It combines a rigid frame that can be adjusted individually to the patient in combination with an inflatable air bladder, which provides both individual support to the MCP-arch as well as dynamic finger and wrist extension. Mediroyal TONUS™ is also available in two versions, one with a fixed bladder and a second one with the possibility to adjust ulnar and radial deviation.



TONUS 







The function of TONUS™

The Mediroyal TONUS™ splint provides a unique treatment option with both stabilizing flexion of the wrist as well as providing dynamic extension to the wrist- and fingers in combination with supporting the MCP-arch. Patients with spasticity usually end up in a flexion pattern over the wrist and fingers that can further trigger spasticity. In order to reduce spasticity it's

important to stabilize the wrist flexion and at the same time provide support over the MCP-arch to open the fingers and to provide constant and even stretch over the flexor tendons. This is an effective way to reduce tonus on the patient and to reach a long-term stretch that aims to make the stretch reflex in the muscle spool less hyper sensitive.





The TONUS™ Platform

The platform has a special design like a guitar, to prevent pressure from the straps once the cover is mounted. The wings of the platform protect the straps from cutting into the lower arm, which can trigger spasticity. The platform has a padded surface to decrease the risk for pressure. The outside of the platform has a hook

receivable material that the straps can be secured onto to provide more stability. The platform can be bent individually in the longitudinal way but not in the transversal way. Available in three lengths; -the short Pediatric/Geriatric, -the Standard and the -Extra Long for extra lever arm stability.



TONUS™ Rotation Adapter

The TON406 model has a rotation adapter built in to adjust ulnar- and radial deviation. This provides an opportunity to more specific extension stretch over affected flexor tendons and to compensate for ulnar- or radial deviation. The adapter can be adjusted individually and then secured in place with the screw driver included.



RG-Bladder TON405/TON406



C-Bladder TON407



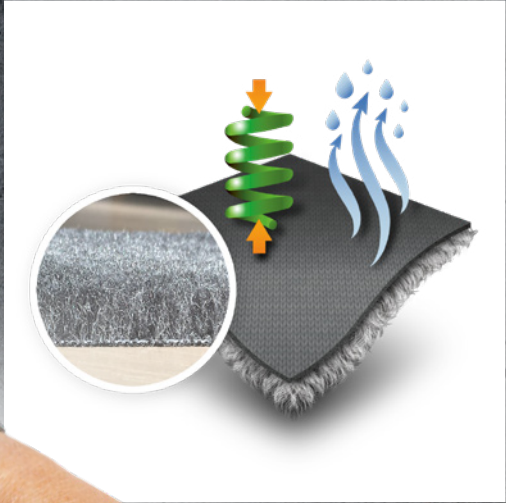
TONUS™ Two different bladder designs

There are two bladders designs available. The RG-bladder provides a functional ring grip for the thumb. The C-bladder provides a larger circular support. Both designs provide a good support to the ulnar part of the arch that will adjust individually to the MCP arch when inflated.



The TONUS™ Adapter

The bladder is mounted onto an adapter which makes it possible to replace or switch bladders if needed. The adapter is protected by a bumper made from CR and is available in two sizes; Standard and Pediatric/ Geriatric.



The TONUS™ material has been specially developed to provide both a good ventilation, humidity control and pressure absorption. Neurological patients have a very sensitive skin. Moisture in combination with pressure can effectively cause skin breakdown. We spent almost 2 years to develop the new material, that combine specially treated ecological wool from Norway and New Zealand and a hollow PES fiber that enhances moisture transportation from the skin surface. The wool is excellent to regulate temperature and transport moisture. The new TONUS™ material is machine washable at 60 degrees Celsius to maintain a good hygienic condition on the patient.




All the splints come with a special laundry bag that has been developed for the cover.



Measurement Chart

Measurement taken as the hand width over the MCP joints

Size mm	Pediatric 45–90	Standard 90–130	Extra long 90–130	

The TONUS™ Splints are available in the following designs:

TONUS™ RG Ring Grip, Fixed Bladder

TON405-PL	Pediatric/Geriatric size ring grip bladder, Short platform, Left
TON405-PR	Pediatric/Geriatric size ring grip bladder, Short platform, Right
TON405-SL	Standard size ring grip bladder, Standard platform, Left
TON405-SR	Standard size ring grip bladder, Standard platform, Right
TON405-XL	Standard size ring grip bladder, Extra Long platform, Left
TON405-XR	Standard size ring grip bladder, Extra Long platform, Right

TONUS™ RG Ring Grip, Rotation adapter

TON406-PL	Pediatric/Geriatric size ring grip bladder, Short platform with rotation adapter, Left
TON406-PR	Pediatric/Geriatric size ring grip bladder, Short platform with rotation adapter, Right
TON406-SL	Standard size ring grip bladder, Standard platform with rotation adapter, Left
TON406-SR	Standard size ring grip bladder, Standard platform with rotation adapter, Right
TON406-XL	Standard size ring grip bladder, Extra Long platform with rotation adapter, Left
TON406-XR	Standard size ring grip bladder, Extra Long platform with rotation adapter, Right

TONUS™ C Circular Shape, Fixed Bladder

TON407-SL	Standard size Circular bladder, Standard platform, Left
TON407-SR	Standard size Circular bladder, Standard platform, Right
TON407-XL	Standard size Circular bladder, Extra Long platform, Left
TON407-XR	Standard size Circular bladder, Extra Long platform, Right

TONUS™ Replacement Covers – The TONUS™ Replacement Covers can be ordered separately:

TONUS™ Cover for RG – Ring Grip, Fixed Bladder

TON405-CPL	Pediatric/Geriatric size Cover, Left for RG-platform
TON405-CPR	Pediatric/Geriatric size Cover, Right for RG-platform
TON405-CSL	Standard size Cover, Left for RG-platform
TON405-CSR	Standard size Cover, Right for RG-platform
TON405-CXL	X-Long size Cover, Left for RG-platform
TON405-CXR	X-Long size Cover, Right for RG-platform

TONUS™ Cover for RG – Ring Grip, Rotation Bladder

TON406-CPL	Pediatric/Geriatric size Cover, Left for RG-platform
TON406-CPR	Pediatric/Geriatric size Cover, Right for RG-platform
TON406-CSL	Standard size Cover, Left for RG-platform
TON406-CSR	Standard size Cover, Right for RG-platform
TON406-CXL	X-Long size Cover, Left for RG-platform
TON406-CXR	X-Long size Cover, Right for RG-platform

TONUS™ Cover for C –Circular Shape, Fixed Bladder

TON407-CSL	Standard size Cover, Left for C-platform
TON407-CSR	Standard size Cover, Right for C-platform
TON407-CXL	X-Long size Cover, Left for C-platform
TON407-CXR	X-Long size Cover, Right for C-platform

TONUS™ Components – The TONUS™ Components can be bought separately for maintenance and updates:

TON490	TONUS™ Replacement Pump, blue
TON491	TONUS™ Bumper for adapter on TON405BS and TON407BS
TON491-P	TONUS™ Bumper for adapter on TON405BP
TON492-B	TONUS™ Replacement Screws/Plastic washer, for TON405/TON407
TON492-G	TONUS™ Replacement Screws/Plastic washer for TON406
TON493	TONUS™ Laundry bag
TON494	TONUS™ Screw Driver for TON406
TON405BP	TONUS™ RG-Bladder Pediatric/Geriatric with adapter, fits TON405/TON406
TON405BS	TONUS™ RG Bladder Standard/X-Long with Adapter, fits TON405/TON406
TON407BS	TONUS™ C-Bladder Standard/X-Long with adapter, fits TON407

Mediroyal TONUS™ Hand Roll

The TONUS™ Hand Roll is excellent in assisting to open the fingers and reduce pressure over the palmar area. Patients that have been suffering from severe contractures for a long period of time will eventually have an increased risk for problems with volar hygiene and pressure problems in the volar area and the finger tips. This might lead to problems with skin breakdown and local wound infections. The TONUS™ Hand Roll can be used for both for pressure prevention as well as assisting finger extension. The reduction of spasticity is quite limited as the wrist joint is not stable. However the TONUS™ Hand Roll can be used together with a wrist brace in order to stabilize the wrist.



Application is easy. Examine the patient and locate the pressure problem areas. If there is an open wound present in the area, make sure that the wound has been cleaned and covered with a wound dressing before applying the TONUS™ Hand roll. Sometimes it might be beneficial to flex the wrist slightly before inserting the hand roll as this shortens the flexor tendons. Deflate the bladder completely with the black tip of the pump. Insert the bladder with the cover into the palm. Insert the clear tip of the pump into the valve and inflate the bladder. The fingers should be extended so they release the pressure in the palmar area. There might be a good idea to maximum inflate the bladder and then release the over-pressure with the black tip of the bladder to make it softer. The strap is used to anchor the hand roll to the wrist if spasticity fluctuates.

Indications: Spasticity, finger contractures and pressure problems over the fingers or in the palmar area.

TONUS™ Hand Roll – Available in a universal size in Left or Right version

TON403-L	TONUS™ Hand Roll, Standard size, Left
TON403-R	TONUS™ Hand Roll, Standard size, Right

Replacement covers are available and are sold separately

TON403-CL	TONUS™ Hand Roll Replacement cover, Standard size, Left
TON403-CR	TONUS™ Hand Roll Replacement cover, Standard size, Right



Finger separation strap for TONUS™

The finger separation strap for TONUS™ has been designed to provide finger separation in combination with ulnar/radial adjustment of the hand. The finger loops are made from the breathable and soft Ventus™ material that provides maximum comfort for the patient. In each end of the strap there are NRX® micro hook parts that can be attached onto the inside of the platform. If the patient tends to slide to the ulnar side you attach the radial strap first then securing the ulnar part. Once the straps are attached, the slight tension in combination with the stability in wrist flexion will position the patient in a reflex inhibitory position – RIP.

Indications: Finger separation problems, hygienic problems between the fingers, pressure problems and ulnar/radial deviation.

Finger separation strap for TONUS™

TON812-U Finger separation strap for TONUS™, Universal size

TONUS™ splint in combination with NRX® Strap

The NRX® Strap can be used in combination with the TONUS™ Splint to provide individual extension to a specific finger or supination assist. The NRX® Strap can easily be adjusted individually to the patient and secured on the splint by using the enclosed NRX® micro hooks. The NRX® Strap is available in different qualities.

For more information, visit www.mediroyal.se.



NRX BY MEDIROYAL
STRAP



TONUS™ splint in combination with ErixThree® Neuro

The shoulder joint is the base joint for the upper extremity and its position influence the complete joint chain from shoulder to the finger joints. The shoulder joint position is important in order to reduce spasticity. ErixThree® Neuro has been designed to provide support to the shoulder joint

and to provide a posterior safe position to reduce anterior subluxation. The ErixThree® Neuro can also be combined with the NRX® Strap for supination assist.

For more information, visit www.mediroyal.se.



erixthree®
NEURO SHOULDER





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The TONUS™ design is patented in several countries under EP3269338A1, US20180014959A1

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