

PRODUCT INFORMATION

FORMA

 125 - 150 kg

 154 - 207 mm

 125 - 150 mm



TENTE

BETTER MOBILITY. BETTER LIFE.

HOUSINGS

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WHEELS

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BETTER MOBILITY IN PREMIUM QUALITY

TENTE believes in smart mobility solutions which noticeably improve people's lives and their working environment. TENTE has developed many customer-focused solutions which increase productivity, ensure safety and open up new horizons in matters of design, durability as well as environmental friendliness. Leading manufacturers and companies of different industries rely on these competencies and our high production quality.

On the following pages you will find technical information about our Forma product family. We will also demonstrate the added value this mobility solution offers to your organisation. Features include:

High shock-absorbing

Protect the sensitive technology of your application from impact when driving over obstacles.

Different locking possibilities

Locking is achievable in a number of formats. All castors are available with an individual brake. The integration into a central locking system can be made classically via a stem fitting with hexagonal cam or by using the drive rod on a horizontal lever.

Quiet and smooth actuation

Very low actuation forces ensure smooth and quiet operation.

FORMA



FEATURES



Optimised manoeuvrability

Good rolling and pivoting properties despite shock-absorbing effect.



Chemical-resistant components

Resistant to many cleaning agents and chemical substances.



Washable

Versions with bearings made of stainless steel can be provided upon request.



Strong stance

The castor offers high torsional stiffness and minimised play in the locked position.



Colour matching

Colours can be adapted to match the product design. Please contact us for your desired colour.

Standard colours:

-  White
-  Light grey
-  Grey
-  Dark grey



MRI suitability

Low residual magnetism castors (made of stainless steel) are available for magnetic resonance imaging (MRI). More information are available upon request.



Non-hazardous materials

Non-hazardous materials are used in order to comply with the RoHS directive and REACH regulation of the European Union. These castors do not contain polycyclic aromatic hydrocarbons or chromium (VI).



Ergonomic locking

Individual lockable castors have two optional easy-to-reach foot pedals for locking and releasing the castor.

HOUSINGS



FEATURES



Good directional stability

The directional lock provides an improved steering around corners, as well as a smooth moving in a straight line over long distances.



Efficient central lock

The integration into a central locking system can be made classically via a stem fitting with hexagon or by drive rod on a horizontal actuation lever.



Practical system solution

In addition to the castor, TENTE also supplies accessories for central locking via hexagonal cam. See page 24.



High loads

The castors are optionally available with heavy-duty wheels that allow a castor to be loaded up to 300 kg dynamic load capacity. If requested, further Information will be provided.



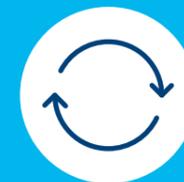
Multistage switching function

Up to three locking positions are available: directional lock, total lock or neutral. These locking positions are available in various combinations.



Strong construction

The housing is made of powder-coated die-cast aluminium.



Easy swivelling

Two high-quality bearings are integrated in the swivel head.



Low cleaning effort

Castors are quick and easy to clean thanks to their mainly smooth surfaces.



Stable stance

The total lock ensures simultaneous locking of the wheels and the swivel bearing with minimal play.

HOUSINGS

The highly stable housings are made of powder-coated die-cast aluminium, with two high-quality bearings in the swivel head. The variants shown here are examples. As the Forma series consists of a modular system, almost all fittings and functions of the castor can be combined with each other. Please contact us for your individual requirements.



Swivel castor
Wheel and housing can be freely turned and swivelled for easy manoeuvrability.



Directional lock
The directional lock improves steering around bends, as well as better movement in a straight line over long distances.



Wheel brake
The wheel lock with pedal is suitable for a manual operation and therefore prevent unintended movement.



Total lock
Total lock for simultaneously locking the wheel and swivel housing for a secure stance.



Combined wheel brake and directional lock
Both, wheel lock and directional lock systems on the same castor can be operated separately.

COMBINED LOCK



Different foot pedal versions

To lock and release the castor, you can choose between two different types of foot pedal: a classic single pedal for releasing and actuating the lock or the double pedal ("Dual Pedal"). The particularly ergonomic "Dual Pedal" individually actuates and releases the locking device via two easily accessible pedals. The foot only has to be moved downwards to actuate and release the lock.



Central total lock
Simultaneous locking of the wheel and swivel bearing are available for a secure standing with more than one castor.

CENTRAL LOCKING



Central directional lock and total lock
A user-friendly central lock for simultaneous locking of more than one castor. The combined directional lock improves steering around bends, as well as movement in a straight line over long distances. The total lock is used for a simultaneous locking of the wheel and swivel bearing to ensure secure standing.



Central directional lock and wheel lock
A user-friendly central lock for simultaneous locking of more than one castor. The combined directional lock improves steering around bends, as well as movement in a straight line over long distances. The wheel lock prevents unintended movement.



Central wheel lock and wheel lock
A user-friendly central lock for simultaneous locking of more than one castor. The wheel lock prevents unintended movement.



Different central locking mechanisms

Central locking is achievable in a number of formats. Either by using an horizontal actuation lever which can be located at different positions or classically via a stem with a hexagonal cam.

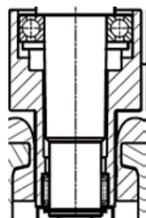
Technical data and availability

										
Description	Housing type	Swivel castor	Swivel castor with directional lock	Swivel castor central total lock and directional lock	Swivel castor with wheel brake	Swivel castor with central total lock	Swivel castor with total lock	Swivel castor with combined wheel brake and directional lock	Swivel castor with central directional lock and wheel lock	Swivel castor with central wheel lock and wheel lock
	Article description	6940	6941	6944	6945	6946	6947	694C	694G	694H
	Housing material	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated	Alu die-casting, powder coated
	Swivel bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing	Precision ball bearing
	Available fittings	Plate or stem	Plate or stem	Plate or stem	Plate or plug-in fitting	Stem	Plate	Plate	Plate, stem or threaded stem	Plate
	Locking via	-	Single or dual foot pedal	Plate or stem with actuation lever or different stems with cam	Single or dual foot pedal	Plate or stem with actuation lever or different stems with cam	Single or dual foot pedal	Combined foot pedal	Plate or stem with actuation lever or different stems with cam	Plate or stem with actuation lever or different stems with cam
Swivel interference	Wheel Ø 125 mm	218 mm	274 mm	218 mm	234 mm	218 mm	274 mm	234 mm	218 mm	218 mm
	Wheel Ø 150 mm	274 mm	326 mm	274 mm	274 mm	274 mm	326 mm	274 mm	274 mm	274 mm

Items with this sign "-" are not available in our standard range. Please contact us.

** Castors with one pedal for locking and releasing has 234 mm swivel interference and the castor version with two pedals for locking and releasing has 218 mm swivel interference.

Swivel bearing



Precision ball bearing for best manoeuvrability.



Standard colour:

-  White
-  Light grey
-  Grey
-  Dark grey

Please contact us for your desired colour.



Directional lock

Locking position 2 x 180°. 360° on request.

Customisable castor

As the Forma series consists of a modular system, almost all fittings and functions of the castor can be combined with each other. Please contact us for your individual requirements.

WHEELS



FEATURES



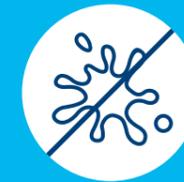
Low-vibration transport

Wheels with high damping properties ensure low-vibration transport, also during patient transfer.



High shock absorbing

Protect the sensitive technology of your application from impact when driving over obstacles.



Non-staining operation

Non-staining on contact with floors during long standing periods.



Protective seal

Sealed wheel bearings to protect against spray water and dirt.



Non-marking

Our wheels are designed with reduced abrasion and leave no marks and requires less cleaning.



Quiet movement

The Careprene material ensures that the wheels run very quietly.



Options

Forma Careprene™ wheels are made from proprietary Neoprene™ rubber. The rubber is an insulator which is why the wheels will not produce static electricity. This fulfills most requirements of different risk classes. Antistatic and conductive versions are available on demand.



Integrated cable protection

The castors are optionally available with cable pusher.

WHEELS

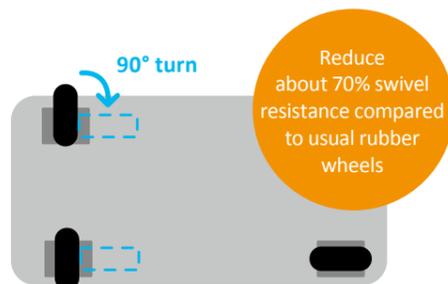
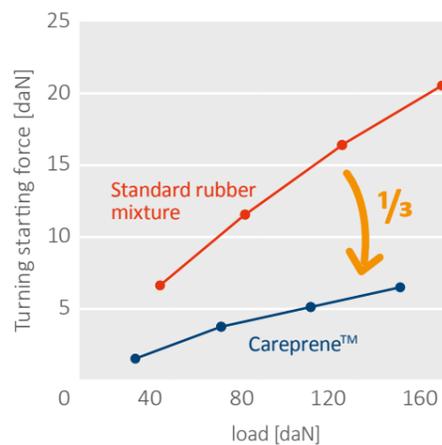
Thanks to the high material thickness of the tread and the high-quality Careprene™ material according to the TENTE formula, these wheels are highly shock-absorbing. This protects the sensitive technology of your application from impacts when driving over obstacles. The combination of precision ball bearings, elastic Careprene™ material and contact surface with optimised rolling resistance, ensures a quiet working environment and silent running. Durability, stability and washability are basic requirements.

The Careprene™ wheel material with special TENTE formula stands out from other rubber mixtures on the market due to its excellent rolling and swivelling properties. For particularly heavy-duty applications, Careprene wheels are also available in a different Shore hardness. Special heavy duty wheels are also available which increases the dynamic load capacity of a caster up to 300 kg.



Elastech wheels with Careprene™ tread material
A quiet rolling wheel with a non-staining and non-marking elastic tyre for smooth handling properties. Highly shock-absorbing.

Swivel resistance - comparison test



Careprene™ material mixture

Load	[daN] ([kgf])	33.8 (34.4)	67.5 (68.9)	101.3 (103.3)	135.0 (137.7)
Turning starting force	[daN] ([kgf])	1.75 (1.79)	3.69 (3.76)	5.29 (5.40)	5.99 (6.11)
Turning resistance coefficient		0.052	0.055	0.052	0.044

Standard rubber mixture

Load	[daN] ([kgf])	40.0 (40.8)	80.0 (81.6)	120.0 (122.4)	160.0 (163.2)
Turning starting force	[daN] ([kgf])	7.05 (7.19)	12.92 (13.118)	17.29 (17.64)	20.76 (21.18)
Turning resistance coefficient		0.176	0.162	0.144	0.130

Technical data and availability

		Elastech	Elastech	Elastech antistatic
Description	Product name	Elastech	Elastech	Elastech antistatic
	Article description	UFP	UFP	XLP
	Tread material	Careprene™ elastic rubber, non-marking	Careprene™ elastic rubber, non-marking	Careprene™ elastic tire, vulcanized, non-marking
	Tread hardness	60 Shore A	75 Shore A	60 Shore A
	Wheel body material	Polyamide	Polyamide	Polyamide
	Temperature range	-20 °C / +120 °C	-20 °C / +120 °C	-20 °C / +120 °C
	Width of tread	18 mm	18 mm	18 mm
	Antistatic	-	-	●
Bearing type	Precision ball bearing	●	●	●
	Wheel Ø 125 mm	125 kg	140 kg	125 kg
Load capacity	Wheel Ø 150 mm	135 kg	150 kg	135 kg

Items with this sign "●" are available. Items with this sign "-" are not available in our standard range. Please contact us. The mentioned load capacity is only valid for the Forma castors.



Aesthetic housing design
As an alternative to our standard housing, we offer a concave housing profile for all Forma castors in 150 mm wheel diameter.



Load capacity

The load capacity depends on the housing and wheel. It has been tested and fulfils the requirements according to EN 12531 at a speed of 4 km/h. When using four castors, you can calculate the necessary load capacity as follows: the sum of the weight of your application plus the additional load divided by three castors.

$$\frac{\text{Weight of application} + \text{load}}{3} = \text{Load capacity of one castor}$$

FITTINGS



FEATURES



Quiet and smooth actuation

The Forma has very low switching and actuating forces and quiet switching.



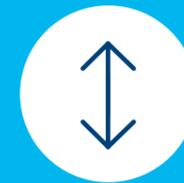
Highly customisable

Switching angles, brake and actuation forces are adaptable to your needs.



Fast assembly

Quicker assembly can be achieved thanks to the easy plug-in fitting solution.



Height adjustment

Stem available with external thread for height levelling.

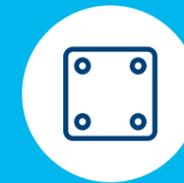


Plate fitting

Plate fittings with central locking functions are available.



Customised fitting sizes

Plate and stem fittings can be customised on request.



Different central locking mechanisms

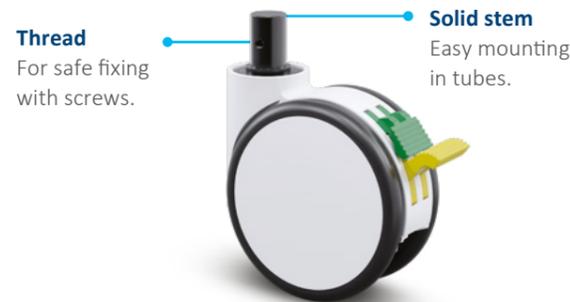
The central locking is possible in several ways. Either via a horizontally movable actuation lever or classically via a combination of stem with hexagonal cam.

STEM FITTINGS

To ensure easy attachment to round profile bars, we offer a range of stem fittings. The stems are highly customisable – you can choose from a range of different sizes and locking functions. Very low actuation forces also ensure a smooth and quiet operation at all times.

Stems with central locking function

The locking function can be activated via stem with hexagonal cam or stem with actuation lever. Very low actuation forces ensure a smooth and quiet operation. The switching angles, type of locking and actuation forces are adaptable to your needs. Please contact us for more information.



Easy mounting

The castors feature coloured marks to identify the mounting direction for efficient mounting. Available switching positions of the hexagonal cam are 25°, 30° and 45°.

Technical data and availability

Description	Fitting type	Solid stem*	Stem with actuation lever for central directional lock and total lock**	Threaded stem with actuation lever for central directional lock and total lock	Stem with cam for central directional lock and total lock**	Stem with cam for central directional lock and total lock**
	Article description	R05-28	R33-32 L30	S33 Q1-L30	R26-28	R36-32
	Actuation style	-	L Total lock R Directional lock	L Total lock R Directional lock	UP Directional lock Total lock DN	UP Directional lock Total lock DN
	Thread for fixing screw	2 x M8	3 x M6	-	4 x M8	4 x M6
	Thread position from bottom	19 mm	7 mm	-	19 mm	7 mm
	Keyway	-	-	●	-	-
	Height adjustable	-	-	●	-	-
	Stem Ø	28 mm	32 mm	M39-1.5	28 mm	32 mm
	Stem length	40 mm	38 mm	57 mm	97 mm	50 mm
	Thread in lever	-	1 x M6	1 x M6	-	-
Shifting angles for actuation forces	-	30°	30°	45°	30°	
Overall height	Wheel Ø 125 mm / housing type	154 mm / 6940 190 mm / 6941	-	-	154 mm / 6946	154 mm / 6944
	Wheel Ø 150 mm / housing type	177 mm / 6940 205 mm / 6941	177 mm	195 mm	177 mm / 6944 177 mm / 694G	177 mm / 6944 177 mm / 694G

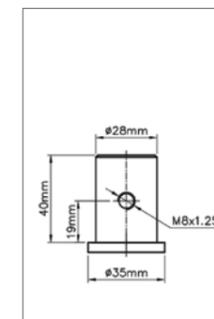
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* Castors with solid stem can be locked by a foot pedal. See housing page.

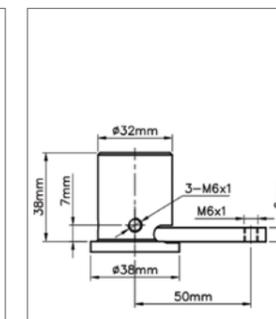
** Optional wheel lock instead of total lock.

Technical drawings

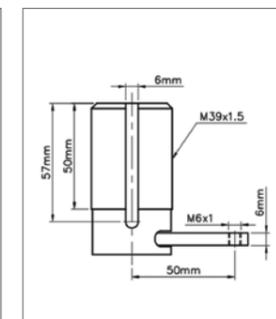
R05-28



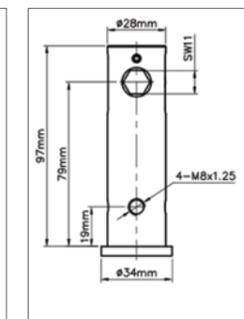
R33-32 L30



S33 Q1-L30



R26-28



R36-32

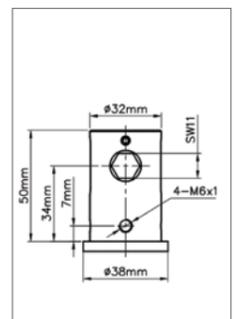


PLATE FITTINGS

As an alternative to the stem with hexagonal cam, we also offer plate fittings with a lever for central locking. One of the main advantages of the plate fitting is a lower installation height within your application. The various functions can be activated by a horizontally moving operating lever. The plates are made out of steel with a silver zinc plated or black e-coated finish for high corrosion protection.



Technical data and availability

Description	Fitting type	Swivel plate	Swivel plate	Swivel plate with actuation lever for central directional lock, total lock** and free movement	Swivel plate with actuation lever for central directional lock, total lock** and free movement
	Article description	P33	P33	P33 L1-L30	P33 Q1-L30
	Actuation lever	-	-	Lever across to short side of plate	Lever across to long side of plate
	Lever lengths	-	-	Short or long lever	Short or long lever
	Shifting angles for actuation forces	-	-	30°	30°
	Size of plate	64 x 92 mm	64 x 92 mm	64 x 92 mm	64 x 92 mm
	Plate hole centres	73 x 43 mm	73 x 43 mm	73 x 43 mm	73 x 43 mm
	Plate hole Ø	Round holes 9 mm, other plates on request	Round holes 9 mm, other plates on request	Round holes 9 mm, other plates on request	Round holes 9 mm, other plates on request
Overall height	Wheel Ø 125 mm	166 mm*	166 mm* or 180 mm	-	180 mm
	Wheel Ø 150 mm	176 mm* or 202 mm	207 mm	202 mm	207 mm

Items with this sign "-" are not available in our standard range. Please contact us.
 * Castors with plate P33 with overall height of 166 mm or 176 mm are with foot pedal.
 ** Optional wheel lock instead of total lock.

Technical drawings

Plate P33, round holes

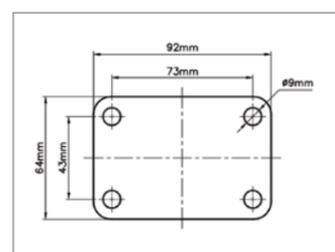


Plate P33, slotted holes

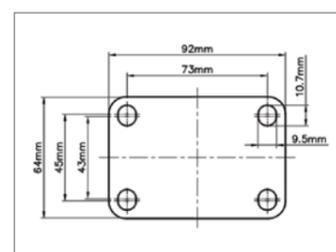


Plate P33 L1-L30, short lever

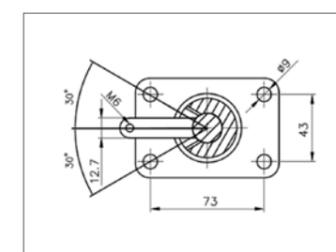


Plate P33 Q1-L30, short lever

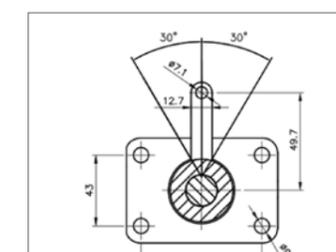
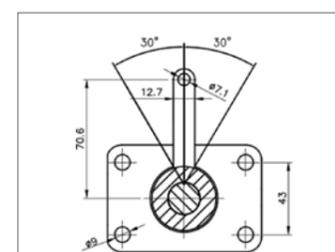


Plate P33 Q1-L30, long lever



PLUG-IN STEM FITTINGS

The Forma castor is also available with a solid plug-in fitting to allow for quicker assembly and a secure connection. This fitting is efficient and easy to install. The hexagonal socket offers the possibility to realize a rotation lock to secure the position of directional and total lock.

Plug-in fitting

Fast and efficient assembly thanks to the easy plug-in fitting. The solid circlip stem is the 'male' part and the customer designs the 'female' part.



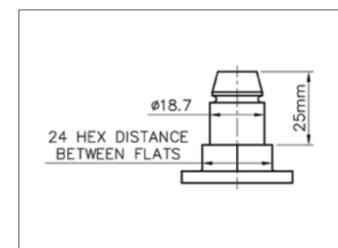
Technical data and availability

Description	Fitting type	Circlip stem with hexagon socket
	Article description	B33-18,7
	Stem measurements (Ø x Length)	19 x 25 mm
Overall height	Wheel Ø 125 mm	-
	Wheel Ø 150 mm	164 mm

Items with this sign "-" are not available in our standard range. Please contact us.

Technical drawings

B33-18,7



ADDITIONAL FEATURES



High adaptability

No matter what your requirements are for the castor or fitting, the Forma castor can be customised to suit your needs.



Low wear

The wheel lock is internal rather than the normal locking mechanism on the wheel tread. This increases the lifecycle of the wheel due to less wear and tear.



Tested quality

Tested in our own test laboratory for compliance with European standards.



Easy locking

Optional: The Forma family is optionally available with an electronic remote control and can be connected and controlled via a customer-specific control system on your unit. Please contact us for further information.



High loads

The castors are optionally available with heavy-duty wheels that allow a castor to be loaded up to 300 kg dynamic load capacity. Please contact us for further information.

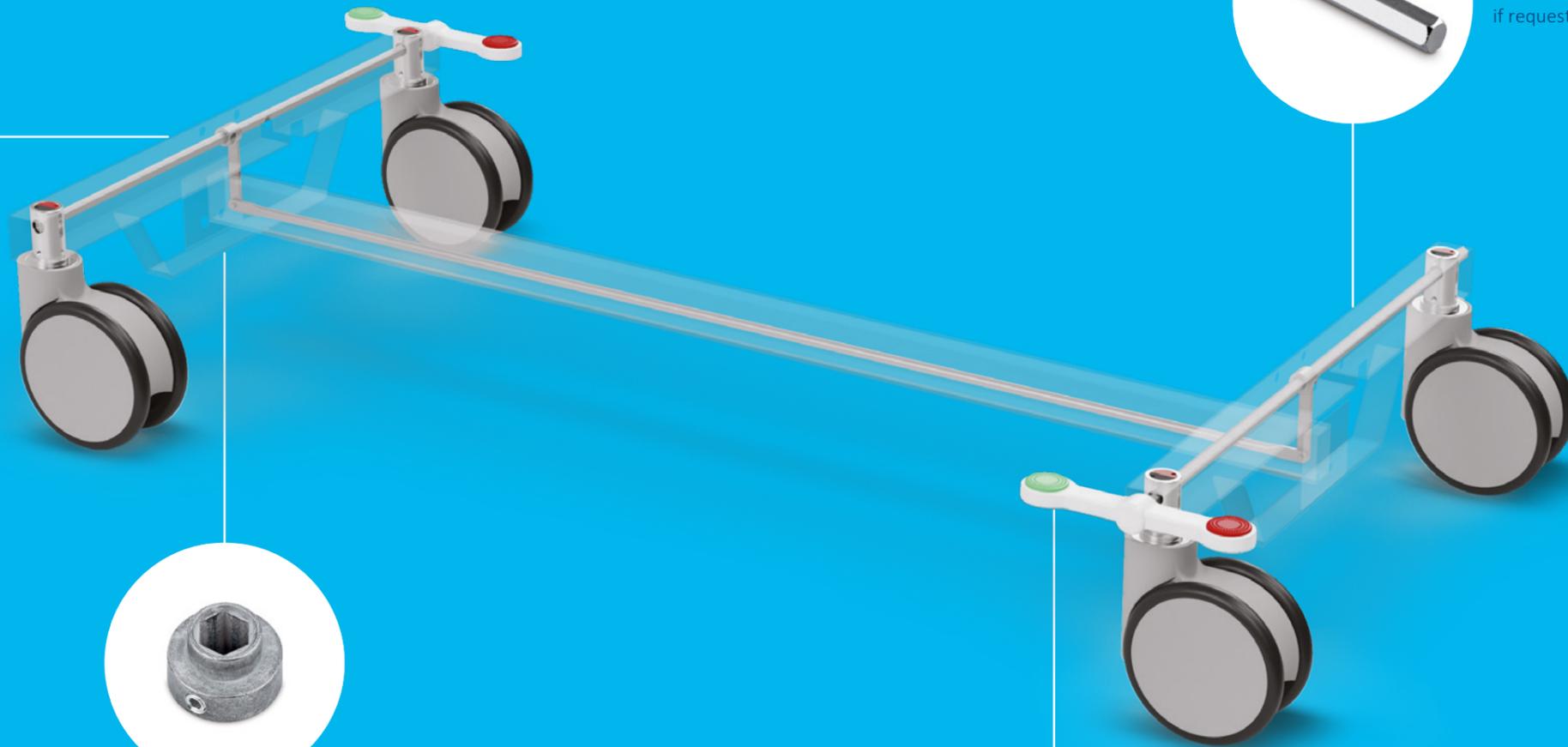
ACCESSORIES FOR CENTRAL LOCKING STEMS WITH CAM

Our central locking components offer a practical solution for your needs. Please contact us for further advice.



Change lever

This is used to connect the transmission bar from the foot end to the head end. It is available in three different sizes.

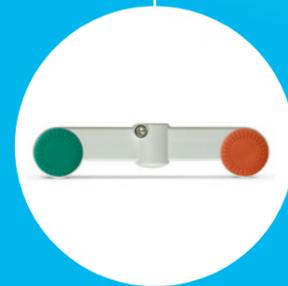


Bearing guide



Profile bar

Available in different lengths, if requested.



TENTE lever

A stainless steel screw is provided with all change levers. These are available as a single or double lever for the right and left side. Plugs are available in different colours.



Optional: adaptor for customer levers

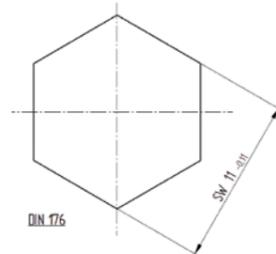
This round adaptor is suitable for customer made levers.

TECHNICAL DATA ACCESSORIES

Profile bar



i	Article description	Profile bar
	Wrench size	11
	Material	Zinc-plated steel
	Length	On request



TENTE levers



Description	Change lever type	Double lever	Lever	Lever
	Article description	Double lever	Lever	Lever 180
	Compatible with product	30° or 45°	30° or 45°	30° or 45°
	Material	Fibreglass-reinforced polyamide	Fibreglass-reinforced polyamide	Fibreglass-reinforced polyamide
	Version	Left version Right version	Left version	Right version
	Width	41,5 mm	41,5 mm	41,5 mm
	Length	191,5 mm	95,75 mm	95,75 mm

Standard lever colours

More colours on request.

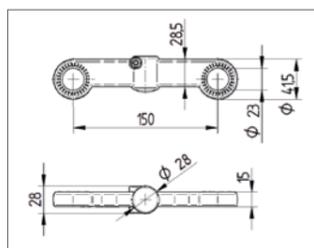
- RAL 7035
- Eloxal silver

Standard plug colours

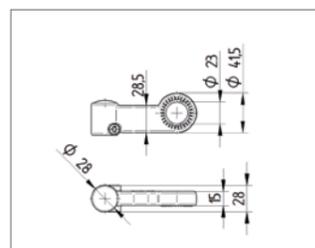
More colours on request.

- RAL 6016
- RAL 3016
- RAL 9011

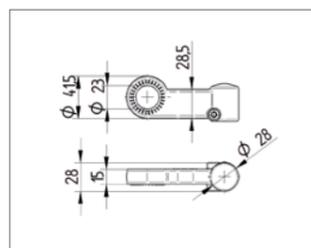
Double lever



Lever, left version



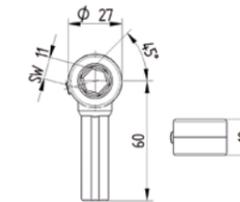
Lever 180, right version



Adaptor for customer levers



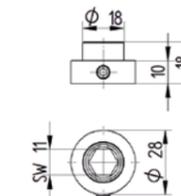
i	Article description	Adaptor
	Wrench size	11
	Material	Zinc die cast



Bearing guide



i	Article description	Bearing guide
	Wrench size	11
	Material	Zinc die cast

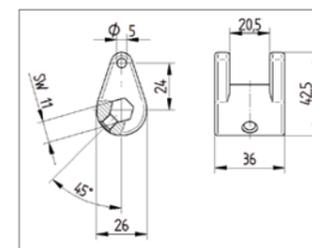


Change lever

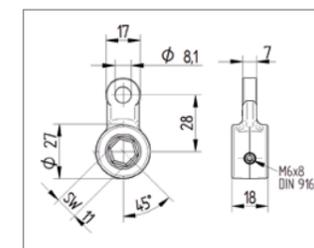


i	Article description	Change lever	Change lever	Change lever
	Wrench size	11	11	11
	Material	Zinc die cast	Zinc die cast	Zinc die cast
	Length	24 mm	28 mm	65 mm

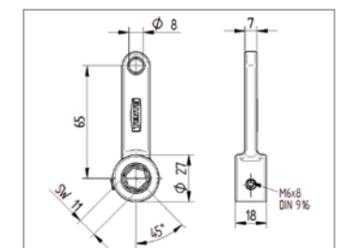
Change lever 24 mm length



Change lever 28 mm length



Change lever 65 mm length



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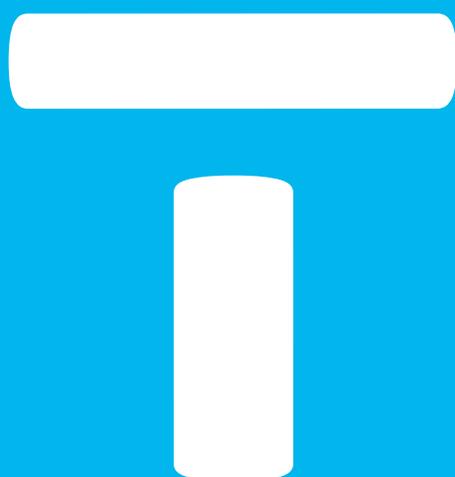
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