

ROTARY ACTUATOR RA40

Features:

- 24 V DC permanent magnet motor
- Rotation angle: Housing (article no. 65794): 75°
Housing (article no. 65795): 55°
- Rotation speed: Without torque: 0.68 Rpm
With max. torque: 0.56 Rpm
- Low noise level (max. 45 dB(A))
- End-stop switches (not adjustable)
- Protection class: IP 20
- Duty cycle max. 10% (6 min. per hour at 2 min. continuous use at full load)
- Ambient temperature +5° to +40°C
- Colour: Dark grey (RAL 7016)
- 2.3 m straight cable with DIN plug for CB9 AD type
- The RA40 actuator will be approved according to EN 60601-1 and UL 2601-1

Options:

- Protection class: IP x4 (with gaskets)



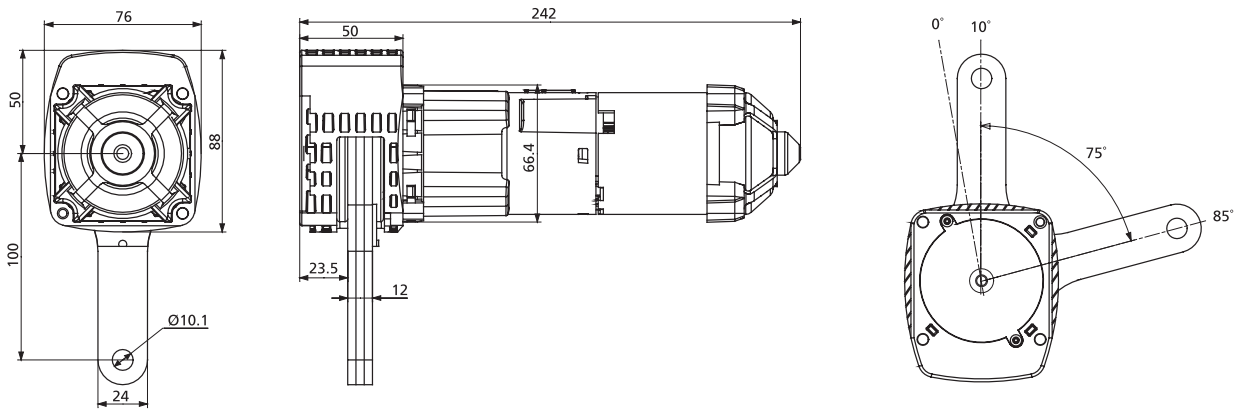
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IMPROVING EFFICIENCY

The Rotary actuator RA40 is a compact unit where the fast rotation of the electric motor is converted into a slow turning movement of a lever with a high torque.

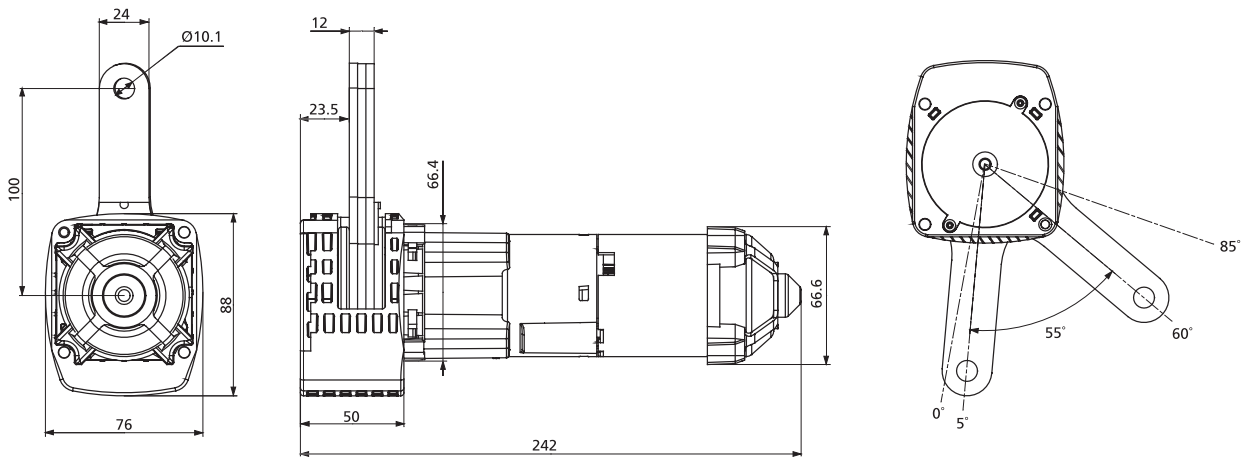
The Rotary concept gives new possibilities for specially care bed applications due to optimum freedom of design. It is possible to combine the Rotary actuator RA40 and a linear actuator in one application. The compact and powerful RA40 actuator is compatible with the control box CB9 CARELINE[®].

The RA40 actuator is designed for mounting in a profile with a high strength.

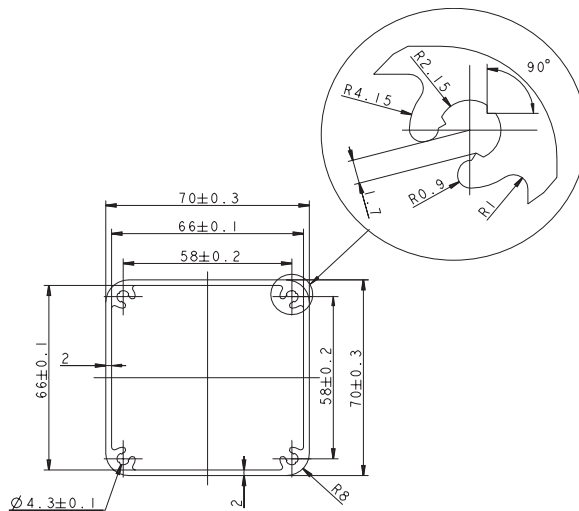
RA40 - Housing 065794



RA40 - Housing 065795



Profiles



NOTE:

As the profile must transfer 250 Nm LINAK A/S recommends that the profile is made of steel or aluminium. The customised profiles must have specific inner dimensions in order to hold the RA40 (see above drawing). The profiles are not delivered by LINAK A/S.



NOTE:

The RA40 actuator must only be mounted by the dark grey plastic housing, force equally distributed on both sides of lever. No bending must take place between the dark grey plastic housing and the rest of the actuator.

RA40

Ordering example:

40 0 0 0 0 A 0 1 0 8 5 0 0 4

Cables:

4 = Straight 2.3 m - DIN plug for CB9 AD type

Protection class

0 = IP 20
1 = IP x4 (with gaskets)

Motor type:

0 = standard 24 V

Rotation angle: For housing 065794

1085 = 10° to 85°

For housing 065795

0560 = 5° to 60°

0 = standard

Colour:

A = Dark grey RAL 7016 (standard)

Special option:

0 = none (standard)

Positioning:

0 = none

0 = standard

Housing 0 = 065794

1 = 065795

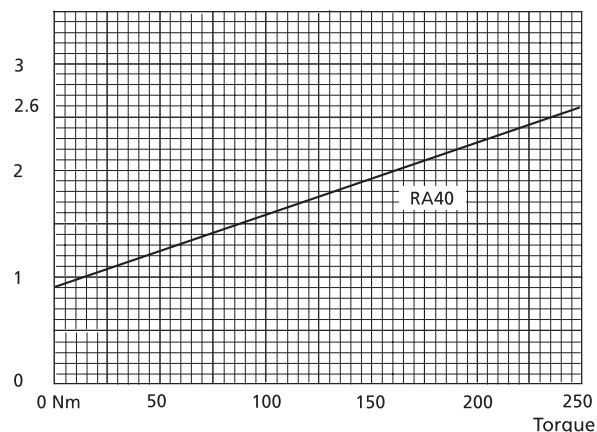
Actuator type:

40 = RA40 ROTARY actuator

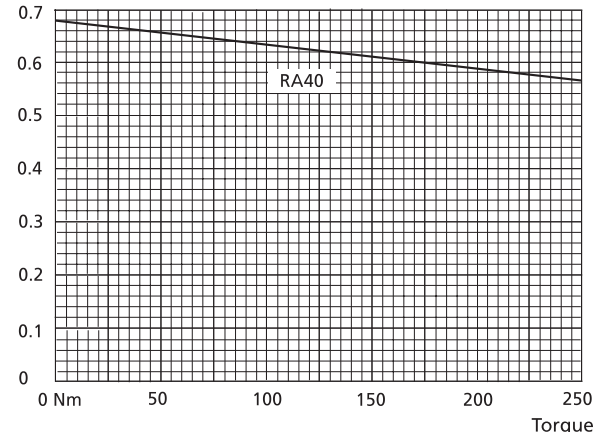
Type	Torque Max.	Self lock at full load	Speed at 0 load	Duty cycle (%)	Amp at full load
RA40	250 Nm	250 Nm	0.68 Rpm	10	2.7 Amp

Above measurements are made in connection with a CB9 AD type

Current (Amp)



Speed (Rpm)



Above data are average figures.

The measurements are made with the actuator connected to CB9 AD CARELINE®

Specifications subject to change without prior notice.
It is the responsibility of the product user to determine the suitability of LINAK A/S products for a specific application. LINAK will at point of delivery replace/repair defective products covered by the warranty if promptly returned to the factory. No liability is assumed beyond such replacement/repair.

TWINDRIVE™ TD2

Features:

- *Rotation angle foot rest $77^{\circ} \pm 3^{\circ}$*
- *Rotation angle head rest $77^{\circ} \pm 3^{\circ}$*
- *Duty cycle: 10% ~ 6 min. per hour max. 2 min. continuous use followed by 18 min. not in use*
- *Maximum speed: 0.58 Rpm with load*
- *Installation dimension: 786 mm length x 84 mm height x 107 mm width. Installation dimension on the shaft 581 ± 1 mm*
- *Colour: grey (RAL 7035)*
- *Ambient temperature: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$*
- *Storage and transport temperature: -10°C to $+70^{\circ}\text{C}$*
- *Low built-in height*
- *Low noise level*

Options:

- *External mains cut-off*
- *Emergency lowering (2 x 9V batteries)*
- *1 extra channel for an extra motor (analogue systems)*
- *Up to 2 extra channels for extra motors (only with memory and Infrared)*
- *Memory*
- *Memory and Infrared*

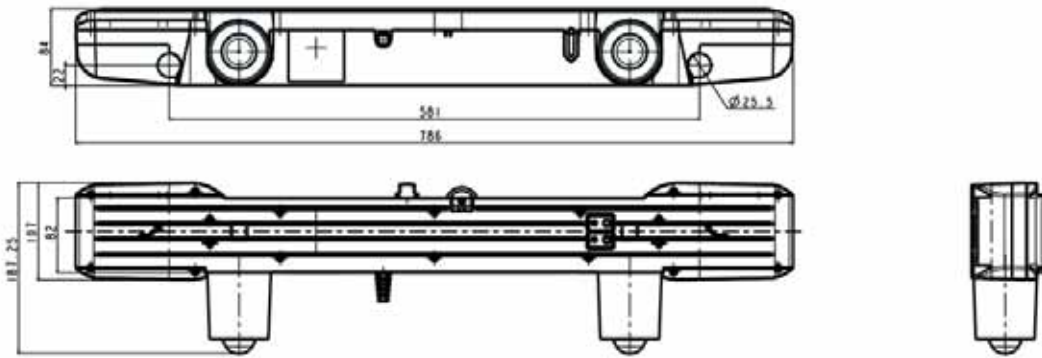


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TD2 is a completely new product, which is part of the Comfort Furniture group and has been produced to supply the growing demands for motorised systems in the leisure bed area.

TD2 is characterised by the very low built in height, which makes it unique in this market and gives much more free height under the bed than previous systems.

Dimension (mm):



Compatible actuators:

Actuators that are compatible with TD2:



LA27



LA31

The above actuators are compatible with TD2.
Up to 2 extra channels for actuators: LA27 and LA31.



LA31 with fast motor cannot be used in combination with TD2.

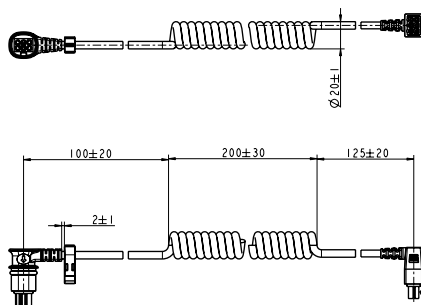


Always choose LA27 and LA31 **without** brake otherwise there will not be enough power in the 2 x 9 Volt batteries for emergency lowering. In some cases where a standard HB is to run head, foot motor and the external actuator simultaneous down it can happen that the actuator not will start if a brake is mounted. In the TD2 system with memory and infra-red the current cut-off down is not sufficient to start up the extra actuator if a brake is chosen.

Cable for LA27

The cable used together with LA27 has to ordered separately:

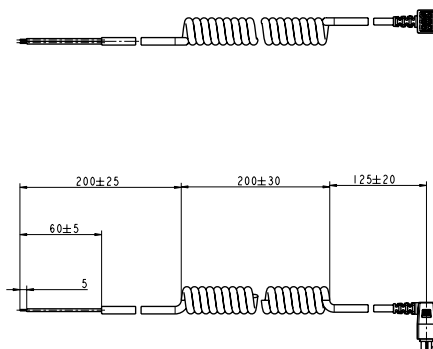
LA27
(0705816)



Cable for LA31

The cable used in combination with LA31 is not possible to choose in the respectable ordering examples for the actuator. To avoid any confusing write X when stating the cable and specify the cable as 0705825.

LA31
(0705825)



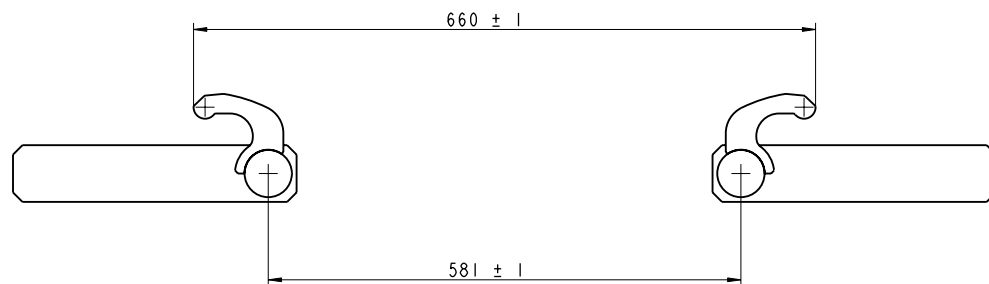
Mounting instructions for TD2:



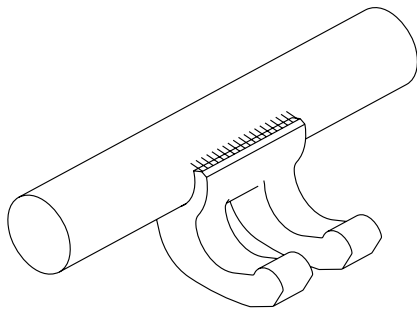
Mounting instructions for TD2:

Before mounting, both closing devices must be pulled out to their outer position by pushing them back. This gives freedom of movement to the bed bracket. Mounting is done by pushing the bed bracket into the TD2 unit and thereafter pushing the mounting brackets back again. **IMPORTANT:** be completely sure that the mounting brackets are in place before TD2 is used.

Dimensions axle distance:

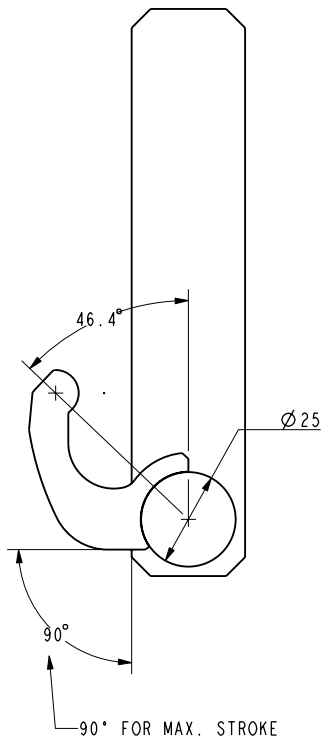


Mounting instructions (welding):



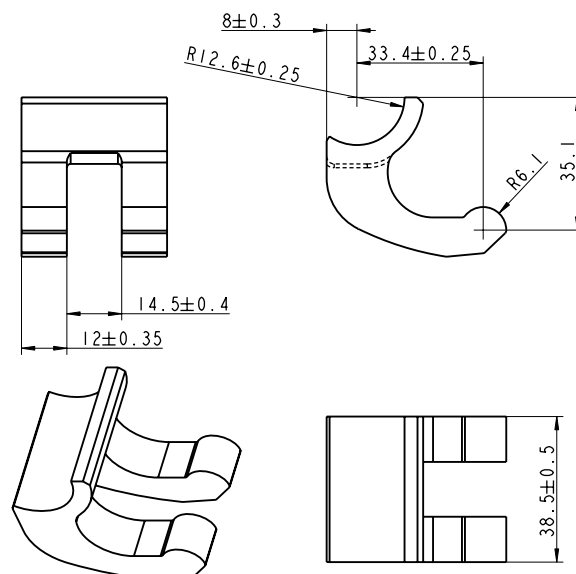
The Twist Bracket is a device, which enables force transference from the TWINDRIVE™ TD2 to the bed-frame. The bracket consists of weldable metal ZG230-450. The design of the Twist Bracket gives the TD2 a very low build-in dimension, which makes the actuator unique in the Comfort Furniture market and ensures much more free height beneath the bed.

Welding diagram:



To maintain the correct rotation angle of the headrest and the footrest it is important that the twist bracket is welded according to the above instructions. Non-compliance with the instructions could lead to a smaller angle of rotation or in a worst-case damage to TD2.

**Dimensions drawing of the twist bracket for TD2:
LINAK part number 0701033**

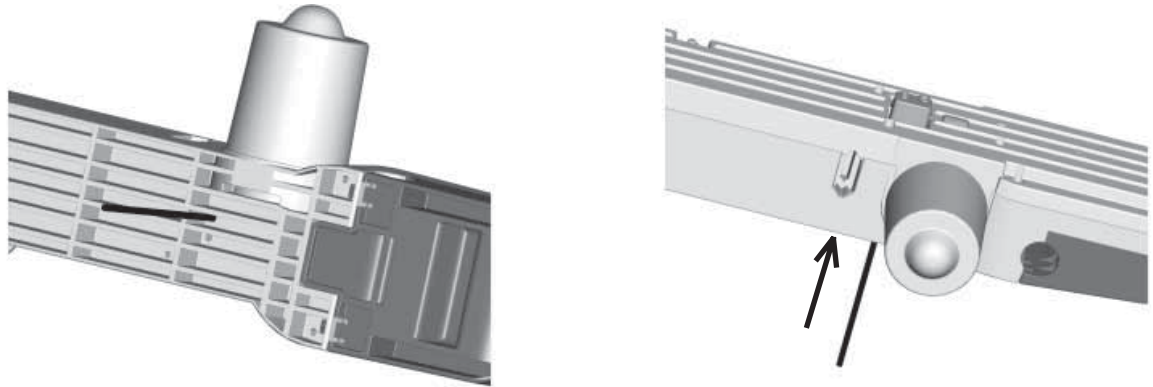


Initialisation of the TD2 memory and infrared system.



To ensure optimum drive of the systems with memory, infrared and extra channels must be run out to the outward position and in again before use. This drive (out + in) must be done without stops.

Removal / fitting of the 9V batteries:



Changing of the 9V batteries is possible by pushing the batteries upwards via the two holes in the bottom of the unit. It is necessary to use a blunt instrument with a diameter of less than \varnothing 6mm. When the batteries are visible from above they can be removed by using fingers. -Important, before removal remove the battery clips. Fitting is done by pushing the batteries into the holes remembering that the clips must be uppermost and that they are first connected when the batteries are in place.

If the battery option is chosen the system will be able to be lowered by using the simultaneous drive button on the handset during power failure. This function is only available for the head and footrest and only when the emergency lowering function is an available option.

Technical specifications:

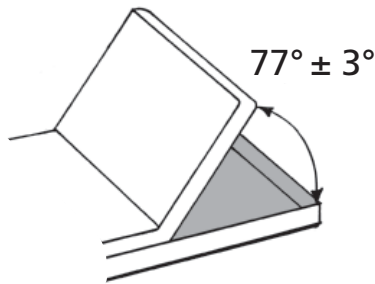
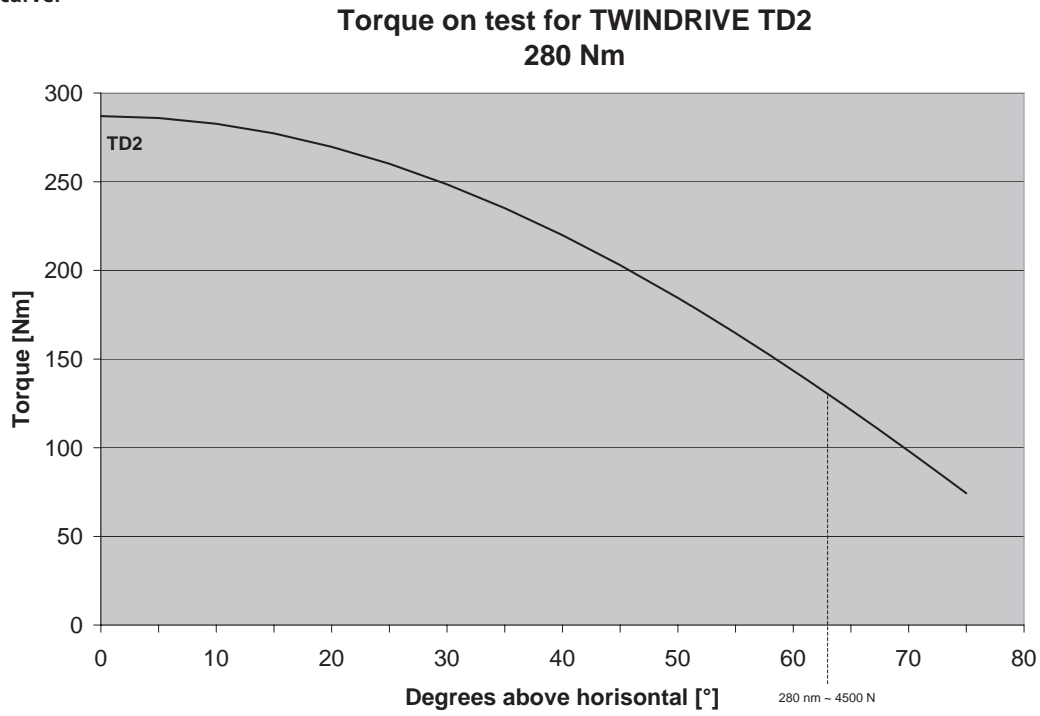
Type	Spindle pitch (mm)	Torque max. (Nm)	Speed at Max. torque (Rpm)	Duty cycle (%)
TD2	2.5	280	0,58	10

The above measurements are made in connection with internal control box and are average values.

Compability with standard handsets:

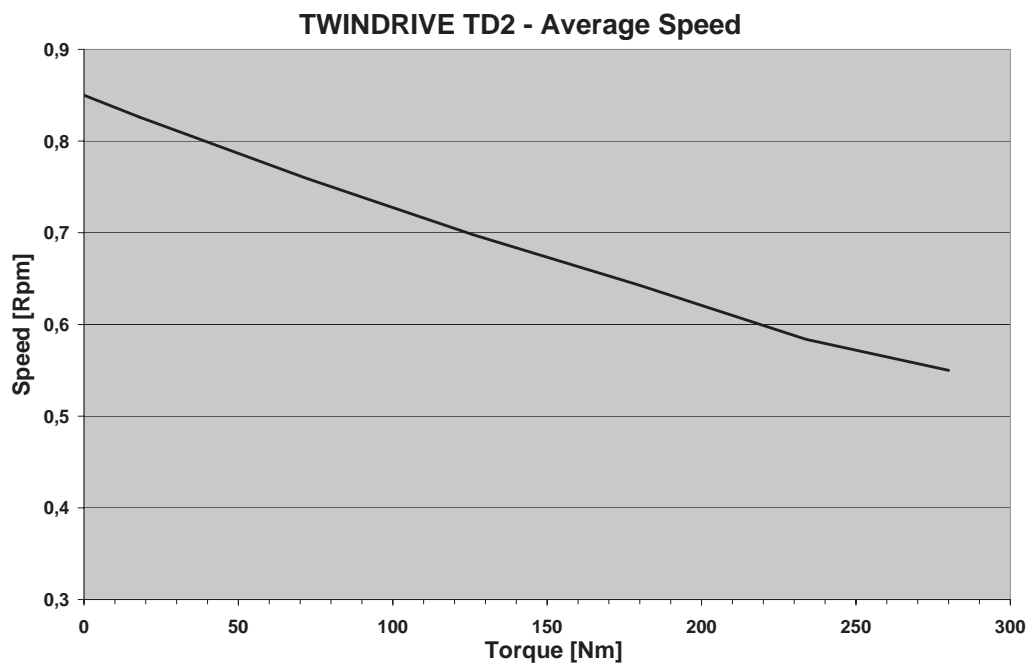
	HB10	HB20	HB20	HB20
	Analogue	Analogue "00"	Memory "B1" Receiver	Memory "C1"
TD2	yes	yes	yes	yes

Torque curve:



Maximum torque occurs with a non-linear load as prevails under use in a leisure bed. That is to say large torque during start, which lessens as the backrest is raised. This is also how the TD2 has been tested.

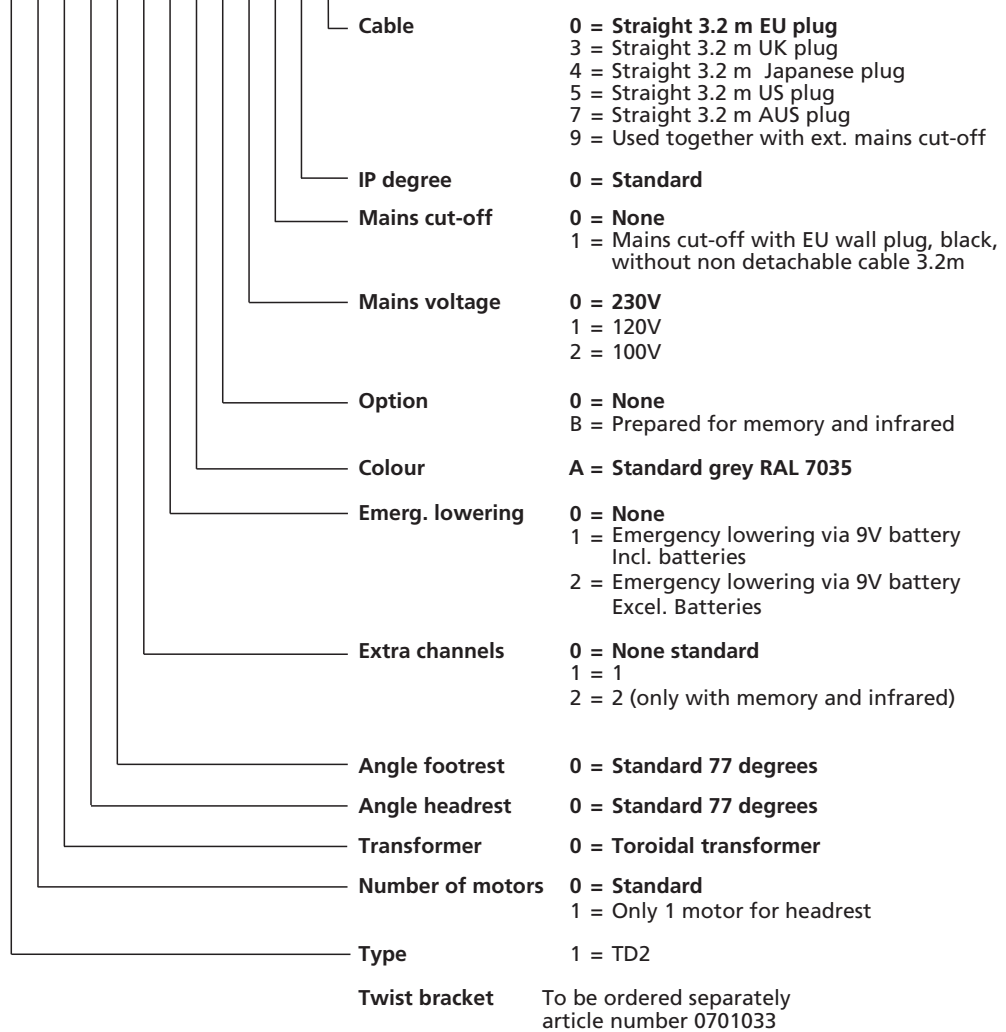
Speed curve:



TWINDRIVE™ TD2:

Ordering example:

TD 2 0 0 0 0 0 0 A 0 0 0 0 0



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TWINDRIVE™ TD1

Features:

- Angle footrest $45^{\circ} \pm 3^{\circ}$
- Angle headrest $68^{\circ} \pm 3^{\circ}$
- Compatible with HB10 and HB20
- EOP in TD1 280 version
- Toroidal Transformer in TD1 280 and EI core Transformer in TD1 220
- Duty cycle: 10% ~ 6 min. per hour max. 2 min. continuous use followed by 18 min. not in use
- Max. speed: 0.58 RPM with max. torque
- Installation dimension: 796 mm length x 90 mm height x 90 mm width. Installation dimension on the shaft 581 ± 1 mm
- Colour: Grey plastic on motor housing RAL 7035, closing device Grey RAL 7016
- Ambient temperature: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$
- Storage and transport temperature: -10°C to $+70^{\circ}\text{C}$
- Approved according to EN 60335-1
- EMC according to EN55014 -1 / EN55014 - 2
- Low built-in height
- Low noise level

Options:

- Emergency lowering (2 x 9V batteries)
- External Mains cut-off
- Internal mains cut off (only TD1 220)
- 1 extra channels for an extra motor (analogue systems)
- Up to 2 extra channels for extra motors (only TD1 280 with memory and Infrared)
- Memory (only TD1 280)
- Memory and Infrared (only TD1 280)
- Black

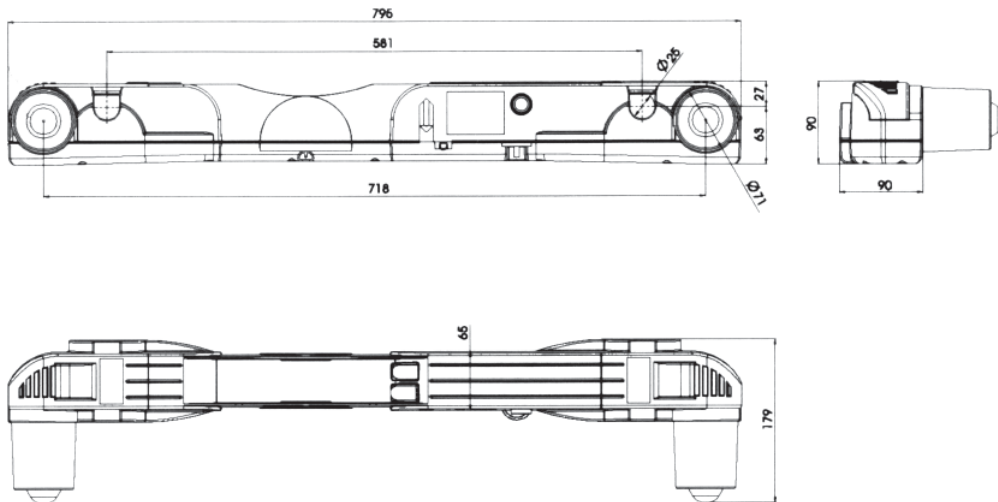


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The TWINDRIVE™ TD1 is a completely new product, which is part of the Comfort furniture group and has been produced to supply the growing demands for motorised systems in the leisure bed area.

TD1 is characterised by the very low built in height, which makes it unique in this market and gives much more free height under the bed than previous systems for e.g. storage or easy cleaning access.

Dimension (mm):



Compatible actuators:

Actuators that are compatible with TD1:



LA27



LA31



LA31 with fast motor cannot be used in combination with TD1

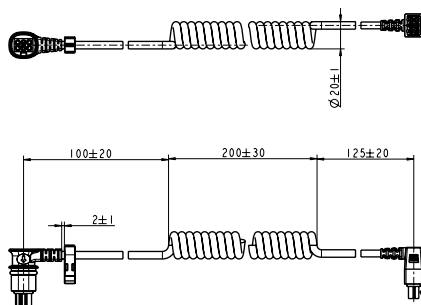


Always choose LA27 and LA31 without brake otherwise there will not be enough power in the 2 x 9 Volt batteries for emergency lowering. In some cases where a standard HB is to run head, foot motor and the external actuator simultaneous down it can happen that the actuator will not start if a brake is mounted. In the TD1 280 system with memory and infrared the current cut-off down is not sufficient to start up the extra actuator if a brake is chosen.

Cable for LA27

The cable used together with LA27 has to be ordered separately:

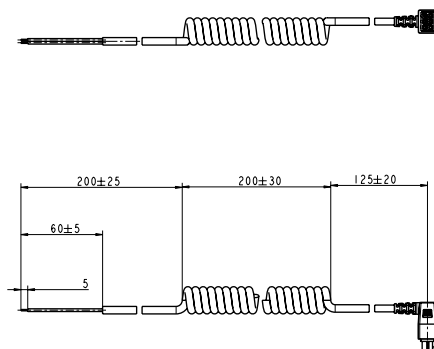
LA27
(0705816)



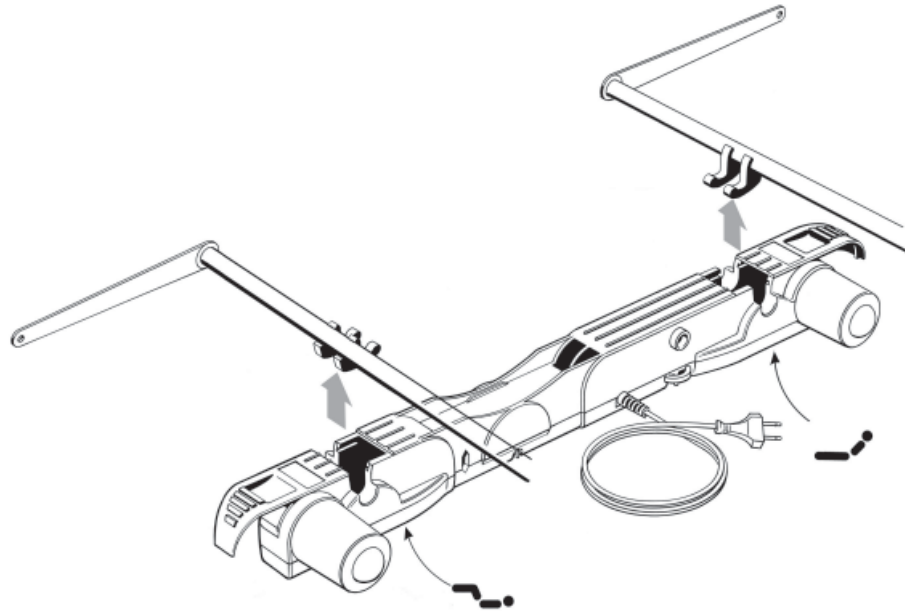
Cable for LA31

The cable used in combination with LA31 is not possible to choose in the respectable ordering examples for the actuator. To avoid any confusing write X when stating the cable and specify the cable as 0705825.

LA31
(0705825)



Mounting instructions:



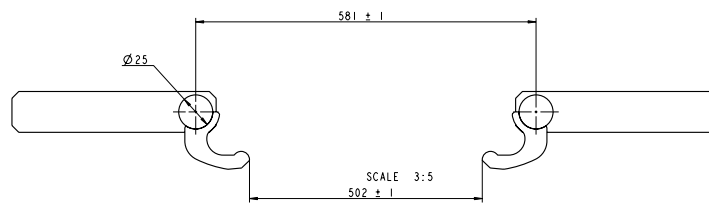
Mounting instructions for TWINDRIVE™:

Before mounting, both mounting brackets must be pulled out to their outer position by pushing them back. This gives freedom of movement to the bed bracket.

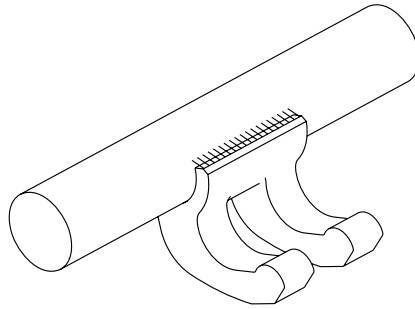
Mounting is done by pushing the bed bracket into the TD1 unit and thereafter pushing the mounting brackets back again. IMPORTANT one must be completely sure that the mounting brackets are in place before TD1 is used.

If the TD1 unit is mounted in the bed it will not be able to fall out if it is under load because the spindle nut is designed to hold it in place.

Dimensions axle distance:



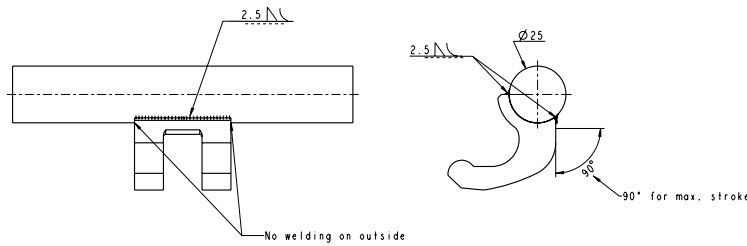
Mounting instructions (welding):



For the TD1 it is important that one does not weld on the outside of the Twist Bracket because there is not room for a welding seam in the motor housing. One may weld the bracket along the whole length of its ends.

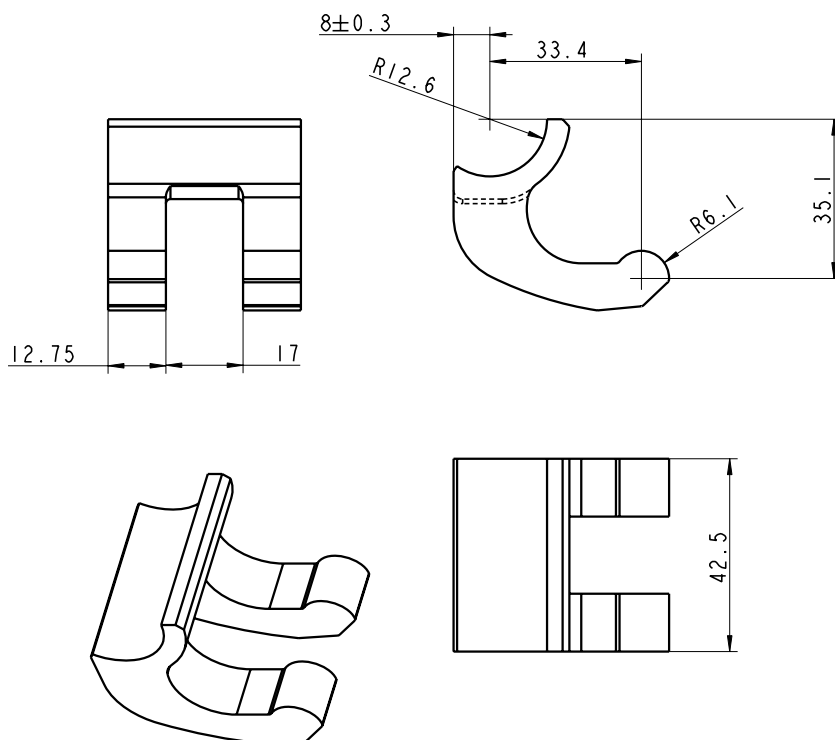
Welding diagram:

To maintain the correct angle of rotation of the head rest and the foot rest it is important that the Twist bracket is welded according to the above instructions. Non compliance with the instructions could lead to a smaller angle of rotation or in a worst case damage to TD1.



Dimensions drawing of the twist bracket:

LINAK part number 0701030

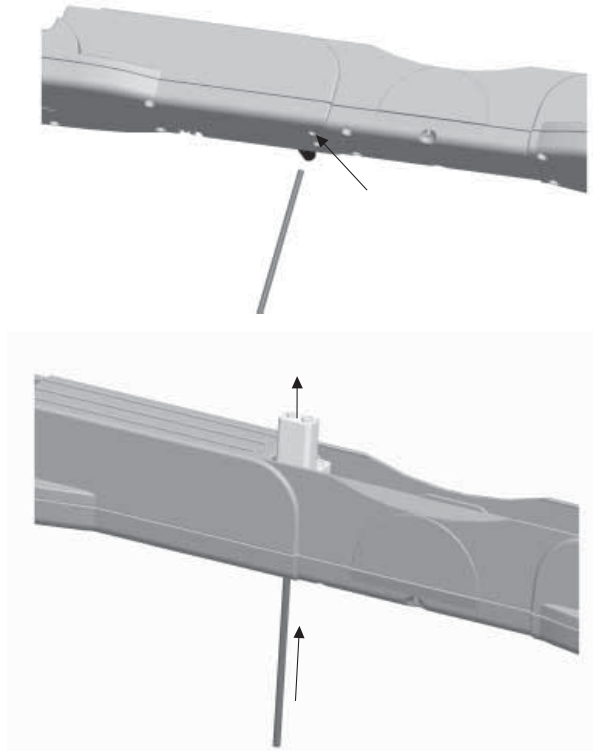


Initialisation of the TD1 memory and infrared system.



To ensure optimum drive of the systems with memory, infrared and extra channels must be run out to the outward position and in again before use. This drive (out + in) must be done without stops.

Removal / fitting of the 9V batteries:



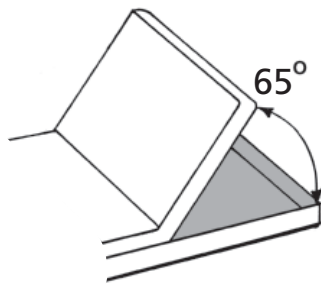
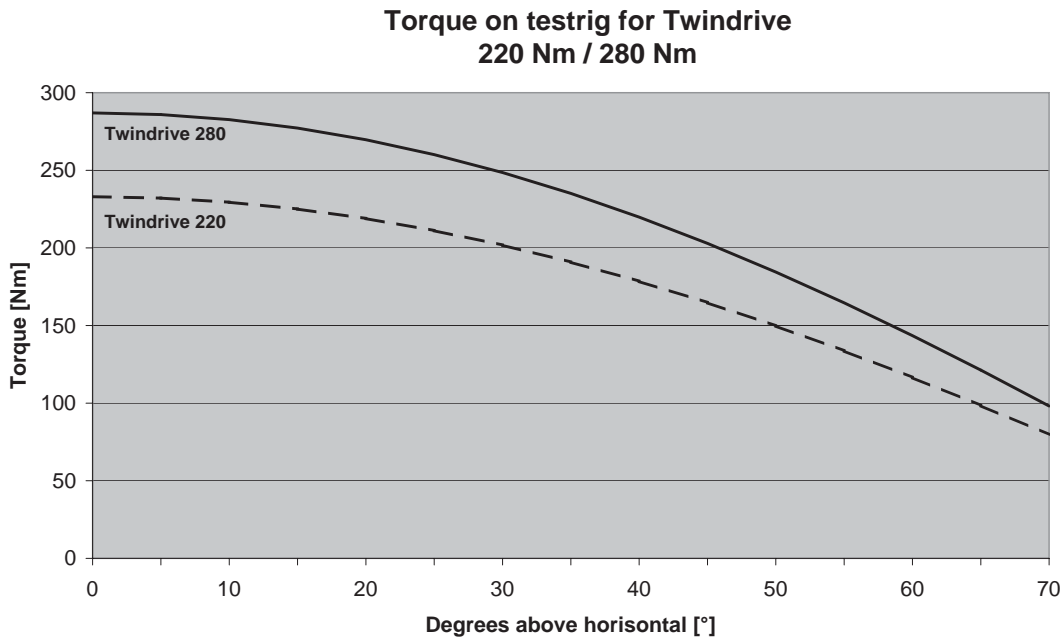
Changing of the 9V batteries is possible by pushing the batteries upwards via the two holes in the bottom of the unit. It is necessary to use a blunt instrument with a diameter of $\varnothing 6$ mm. When the batteries are visible from above they can be removed by using fingers.

Important, before removal remove the battery clips. Fitting is done by pushing the batteries into the holes remembering that the clips must be uppermost and that they are first connected when the batteries are in place.

If the battery option is chosen the system will be able to be lowered into the reset position by using the reset button on the handset during power failure.

This function is only available for the head and foot rest and only when the emergency lowering function is an available option.

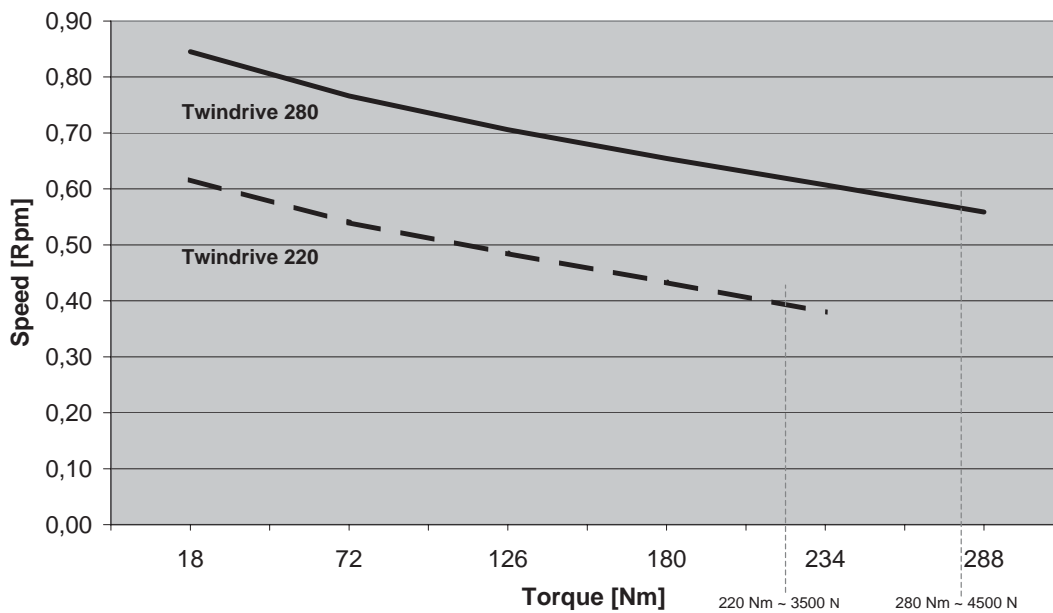
Speed diagram:



Maximum torque occurs with a non-linear load as prevails under use in a leisure bed. That is to say large torque during start, which lessens as the backrest is raised. This is also how the TD1 has been tested.

Speed curve for the TD1 analogue versions:

TWINDRIVE 1 - Speed



Technical specifications:

Type	Spindle pitch (mm)	Torsion max. (Nm)	Speed at full load (Rpm)	Duty cycle (%)
TD1 220	2.5	220	0,43	10
TD1 280	2.5	280	0,56	10

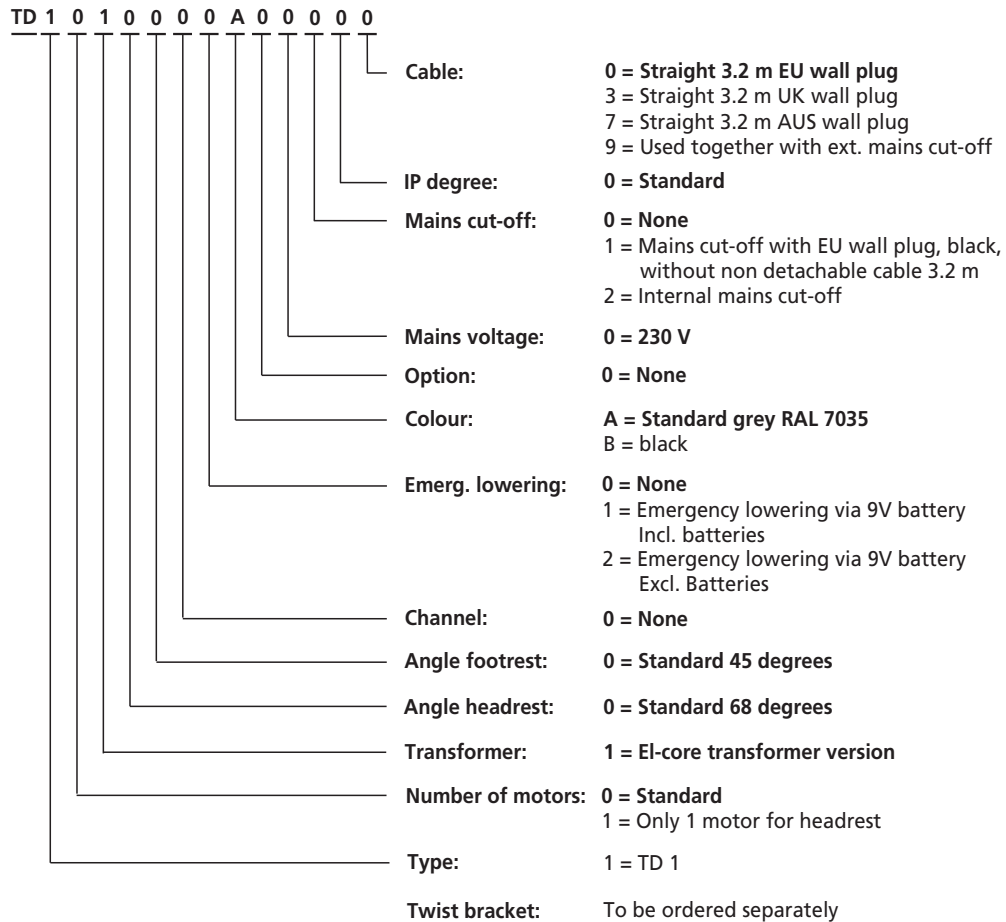
The above measurements are made in connection with internal control box and are average values.

Compability with standard handsets:

	HB10	HB20	HB20	HB20
		Analogue "00"	Memory "B1"	Memory "C1"
			Receiver	Transmitter
TD1 220	yes	Yes	no	no
TD1 280	yes	yes	yes	yes

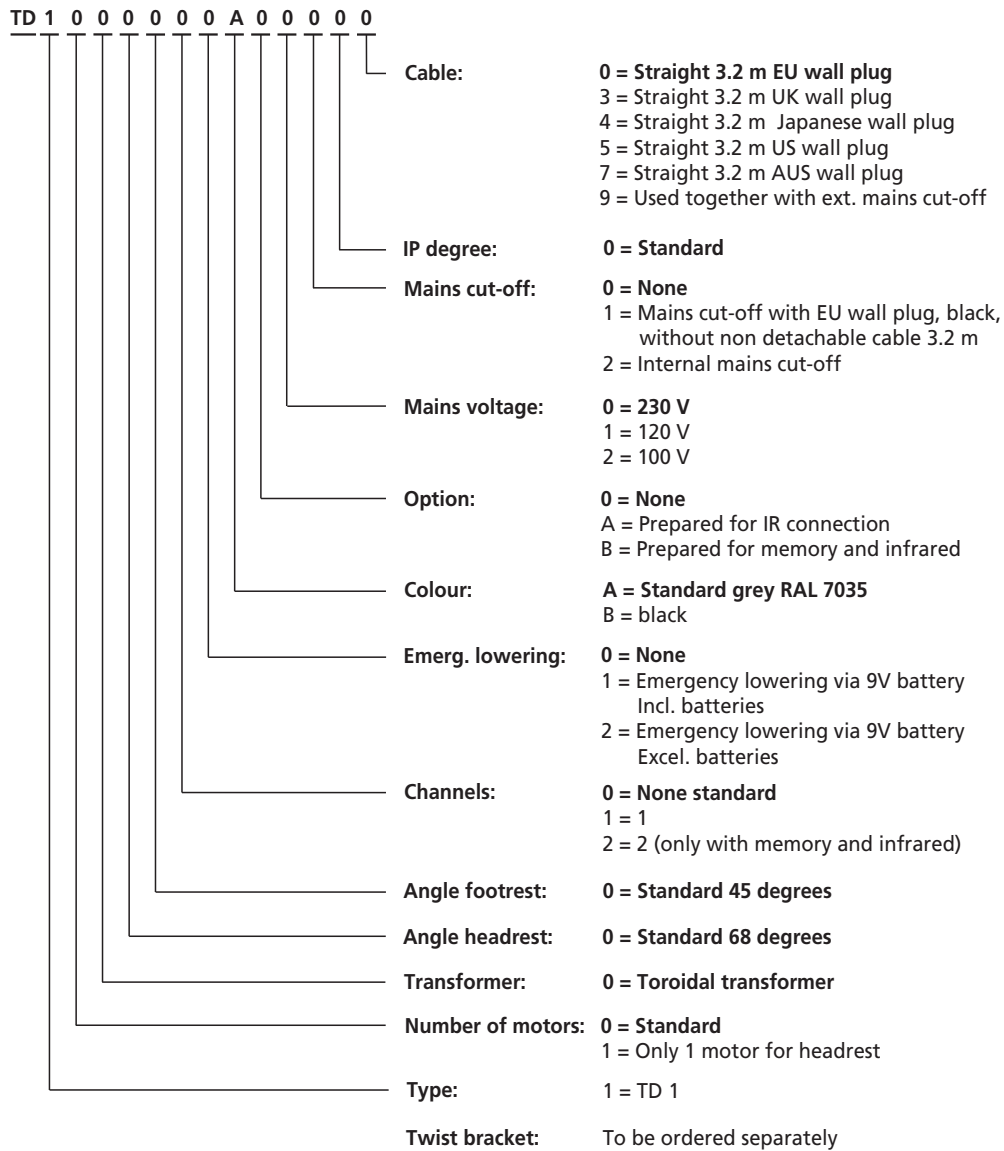
TWINDRIVE™ TD1 220:

Ordering example:



TWINDRIVE™ TD1 280:

Ordering example:



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