Dual Motor Telescoping Column - Telemag TLT

Complimenting the already known product range of Magnetic telescoping columns in AC/DC technology, Magnetic proudly presents the new dual motor TELEMAG TLT.

These powerful and fast telescoping columns are equipped with two spindle motors. The dual motor TLT is available with nominal loads up to 4000 N and a push speed up to 42 mm/sec.

The TELEMAG TLT is extremely well suited for applications with small retraced lenghts and great push forces. The new control unit KOM3T is custom made for the TLT and is equipped with a current limit board to stop the drive, if necessary, in the end positions as well as at excessiv loads. The actuators are operated by the wide range of remotes from our sales program.

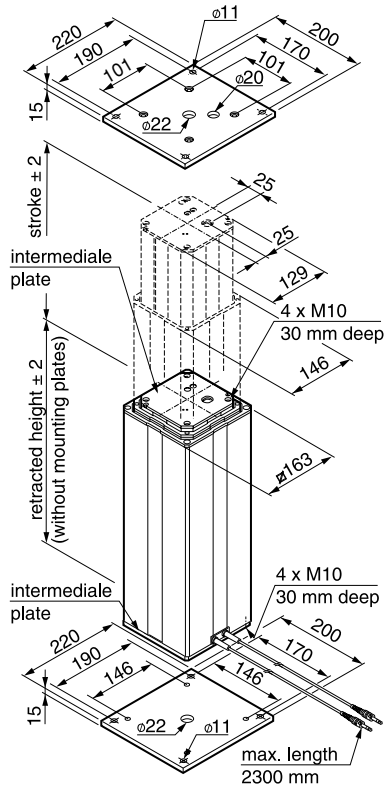
TELEMAG telescoping columns have successfully proven their worth in medical, furniture, ergonomic as well as in industrial applications during years of use. For further information, please do not hesitate to contact us.

Accessories and options:
- hall encoder 8 pulses/rev.
- integrated current cut-off
- mounting plates

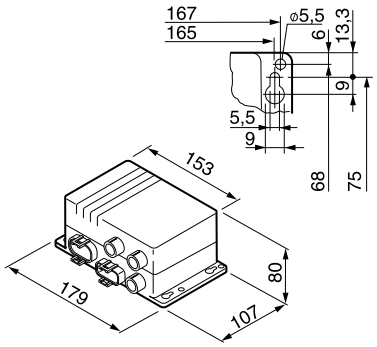
Subject to technical modifications.

Technical data:	Type	TLT10-C1	TLT10-B1	TLT10-C2	TLT10-A1	TLT10-A2*
Push force (max.)	N	1000	2000	2000	3000	4000
Speed	mm/s	25 - 36	13-19	25-42	11 - 16	13 - 19
Stroke	mm	300 - 700	300 - 700	300 - 700	300 - 700	300 - 700
Retracted lengths 3-section	mm	320 - 520	320-520	390-590	320 - 520	390 - 590
Voltage	VDC	24	24	24	24	24
Current consumption	A	2 x 4A	2x4A	2x4,5A	2x3,5A	2x3,5A
Duty cycle: intermittent operation	Int.	1 / 9	1 / 9	1 / 9	1 / 9	1 / 9
Ambient temperature	oC	+ 10 / + 40	+ 10 / + 40	+ 10 / + 40	+ 10 / + 40	+ 10 / + 40
Protection class	IP	40	40	40	40	40
Weight	kg	15 - 30	15 - 30	15 - 30	15 - 30	15 - 30

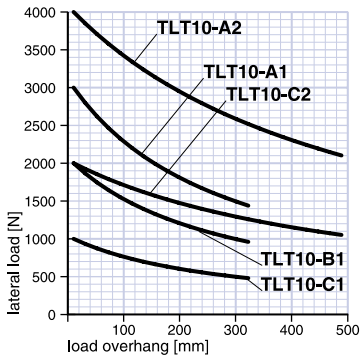
1 mm ≙ 0,03937 inch
*A2 units have a three times static safety factor for strokes 600 & 700 mm



TELEMAG 3-section



Control unit KOM3T



Lateral load diagram

Stroke and retracted lengths:

Type	Stroke mm/inch	Retracted length mm/inch
TLT1.-.13..	300/11,81	320/12,60
TLT1.-.14..	400/15,75	370/14,57
TLT1.-.15..	500/19,69	420/16,54
TLT1.-.16..	600/23,62	470/18,51
TLT1.-.17..	700/27,56	520/20,48

Type	Stroke mm/inch	Retracted length mm/inch
TLT1.-.23..	300/11,81	390/15,35
TLT1.-.24..	400/15,75	440/17,32
TLT1.-.25..	500/19,69	490/19,29
TLT1.-.26..	600/23,62	540/21,26
TLT1.-.27..	700/27,56	590/23,23

Telescopic drive TELESMART

TXG

Technical data:	Type	TXG9	TXG8	TXG5	TXG4	TXG1
Version		Stand-Alone	Stand-Alone	Stand-Alone	Stand-Alone	Slave
Push force (max.)*	N	1500	1500	1500	1500	1500
Speed	mm/s	17 – 23	17 – 23	17 – 23	17 – 23	17 – 23
Stroke (in step of 100)	mm	200 – 600	200 – 600	200 - 600	200 - 600	200 - 600
Block height, 2 x	mm	380 – 780	380 – 780	380 – 780	380 – 780	380 – 780
Voltage	V / Hz	230 / 50	230 / 50	120 / 50/60	120 / 50/60	24DC
Current consumption	A	0,9	0,9	1,8	1,8	5
Duty cycle: Intermittent mode	Int.	1 / 9	1 / 9	1 / 9	1 / 9	1 / 9
Ambient temperature	°C	+10 / +40	+10 / +40	+10 / +40	+10 / +40	+10 / +40
Protection/Insulation Class	IP	30/I	30/II	30/I	30/II	30/-
Weight	kg	9 – 14	9 – 14	9 – 14	9 – 14	8 – 13

* See Load diagrams on page 2

Description

TELESMART lifting columns consist of two design aluminium profiles, one inside the other, which are extended and retracted by means of an integrated linear actuator.
The outer surface of the stylish aluminium profile is matt anodised. The no-play sliding devices ensure the profiles can be extended and retracted without friction, even in the case of eccentric loads.
TELESMART lifting columns have been designed to handle compressive loads.
The actuator takes the form of a DC motor with worm gear, whose rotary motion is converted into a linear motion by means of a spindle nut system. The linear actuator is self-locking in every orientation and has been designed for intermittent operation. A thermal link is installed to protect the actuator against overheating and will trip in the event of an overload. Actuators which have no mains connection („slave“) are protected against overload by means of a suitable control unit or master-actuator. The stroke is limited by the integrated limit switches at the terminal positions.
Both ends of the column can be used for power supply and control purposes.

Control

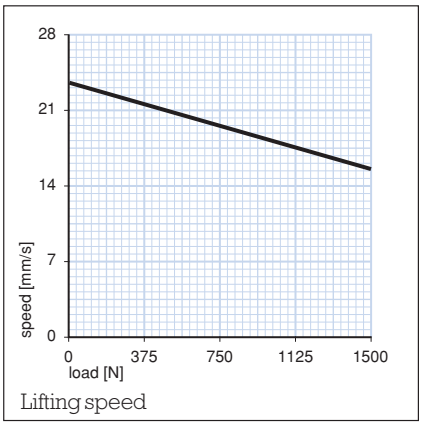
The control unit for the TELESMART lifting column is integrated into the actuator. There is therefore no need for any additional control unit to be fitted externally. An integrated microprocessor control unit is also available as an optional extra which can be used for up to two actuators working in parallel and/or for memory functions.
Electrical connection
There are 3 different TELESMART models.
- Protection class II (standard)
- Protection class I with feedthrough power cable and protective conductors (max. 6A,250V/50–60Hz)(optional)
- 24 V DC version (optional)

The electrical connections are labelled on the actuator. Simply connect the power cable and control cable to the appropriate connectors.
Electrical cordsets must be laid and secured so as to prevent any damage caused by crushing, bending or tension.

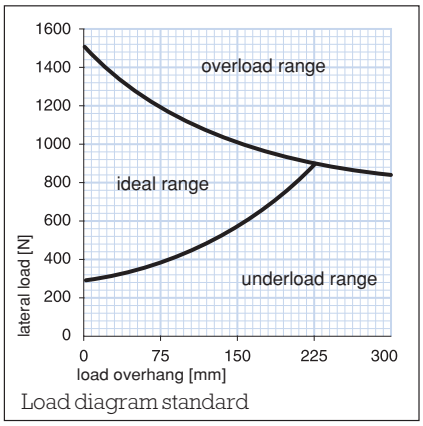
Control devices
A number of cutting-edge desk, hand or foot switches are available for controlling the TELESMART lifting column.

We recommend the following Magnetic control devices:
- COMFODESK foot switch
  Type: STF01-0V3000-0000
  Type: STF02-0V3000-0000
  Type: STF03-0V3000-3700
- COMFODESK desk switch
  Type: STA01-WV6MAU-X100
  (for use without memory)
  Type: STA03-WV6MAU-3700
  (for use with memory)
- ECOMAG hand switch
  Type: EHE11-1110B-000
  (for use without memory)

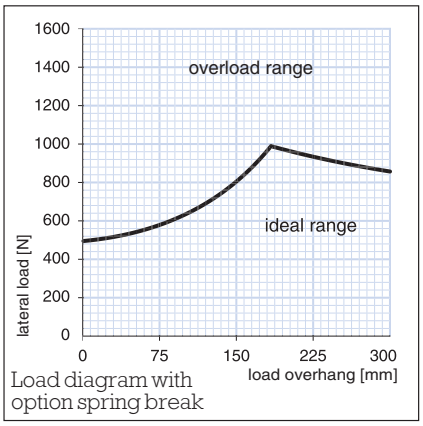
Installation
The TELESMART lifting column is secured to the moving construction elements at the top and bottom of the telescopic column using 4 M6x40 bolts (DIN 7500) in each case, tightening torque 10 Nm. The bolts are screwed in to a minimum of 25 mm.
TELESMART lifting columns can be mounted either directly or by using 10 mm-thick aluminium fastening plates which are available as optional extras.
More information concerning the installation you'll find in the Technical Instructions.



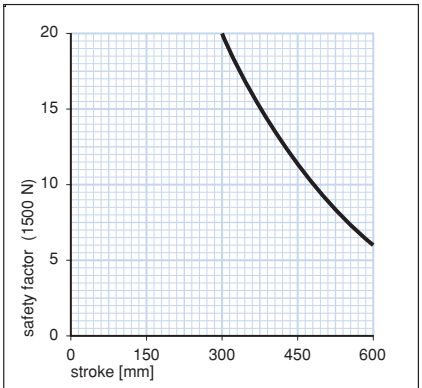
Lifting speed



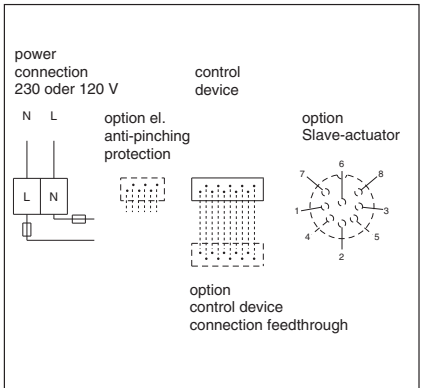
Load diagram standard



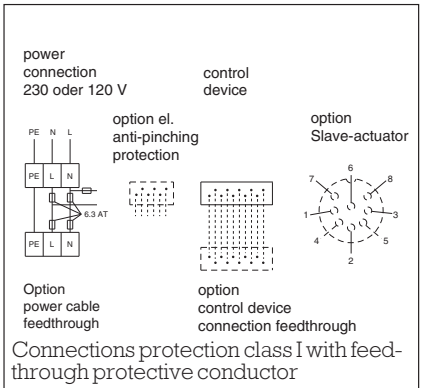
Load diagram with option spring break



Lead screw buckling



Connections protection class II



Connections protection class I with feed-through protective conductor (not connected to telescopic column)

Note:

- The total load in parallel operation must not exceed the maximum load of a single TELESMART lifting column.
- If fastening plates are not used, the auxiliary plates on the TELESMART must be supported over their entire area.
- If the user uses his own fastening plates, these must be drilled in accordance with the dimension drawing.
- The auxiliary plate is screw-connected and must not be removed.
- Where loads are eccentric, adhere to the lifting force diagram or contact the manufacturer.
- At the terminal position, there is a risk of crushing between the fastening plate and the end of the tube.
- The Technical Manual must be observed when putting the unit into service.

Maintenance

During its service life the TELESMART requires no maintenance. The service life depends on type and application. Faulty actuators may only be opened and repaired at our factory.

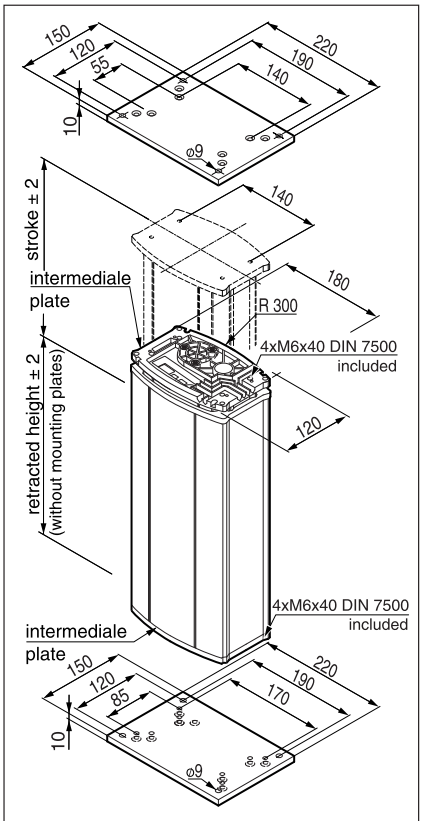
Options

The TELESMART lifting column can be supplied with the following additional functions:

- Control device connection feed-through
- Power cable feedthrough
- Connection for external electrical anti-pinching protection
- Parallel operation for 2 actuators
- Memory functions
- Encoder
- Customer-specific choice of colours

Accessories

- Country-specific power cables
- Fastening plates (aluminium)



TXG dimension drawing

TELEMAG
telescopic drives

TLC 12Z . . .

Technical data:	Type	TLC 12ZWAS	TLC 12ZWAK	TLC 12ZWDS	TLC 12ZWDK
Push force max. (pull optional)	N	4000	4000	4000	4000
Speed	mm/s	11	11	11	11
Stroke	mm	200-700	200-700	255-700	255-700
Retracted height	mm	375-875	375-875	315-760	315-760
Telescopic column version		2-section	2-section	3-section	3-section
Voltage	V/50 Hz	230	230	230	230
Power consumption	W	890	890	890	890
Current consumption	A	4.1	4.1	4.1	4.1
Duty cycle: intermittent operation	Int.	1 min./37 min.[1]	1 min./37 min.[1]	1 min./37 min.[1]	1 min./37 min.[1]
Duty cycle: short-time operation	KB	2 min.[1]	2 min.[1]	2 min.[1]	2 min.[1]
Ambient temperature °C		+10°/+40°	+10°/+40°	+10°/+40°	+10°/+40°
Degree of protection	IP	30	30	30	30
Type of control		electrical	pneumatic	electrical	pneumatic
Weight	kg	15.2-24.5	15.2-24.5	18.3-30.5	18.3-30.5

[1] measured by 253 V

Description

The TELEMAG telescopes consist of two or three square aluminium sections inserted in one another which are telescoped and retracted by an integrated linear drive.
The outer surface of the special aluminium sections is dull anodized. The slideways being free of play ensure low-friction retraction and telescoping even with eccentric loading.
A special electric motor with hollow shaft the rotational movement of which is transformed into a linear movement by a lead screw/nut system, is used as drive. The linear drive is self-locking in every position and is designed for intermittent operation.
The motor winding is prevented from overheating by a thermal protection device which interrupts on overheating and switches back on after the motor cools down. The stroke is limited by built-in limit switches in the end positions.
The TELEMAG telescope is controlled either electrically through external switches or by the specially developed pneumatic safety control elements.

The TELEMAG telescopes are available in two versions:
- 2-section telescope
- 3-section telescope: lower retracted

Electrical connection

The mains connection and control can be provided alternatively above or below with the plug supplied according to the diagram. 3 x 0.75 mm cables are led through the TELEMAG telescopic column.
In the case of mains supply from above, it is essential that the bottom connection socket is locked with the sealing piece. The plug and sealing piece must snap in audibly.
Electrical connection cables must be run and fastened so that damage due to crushing, bending or tension is not possible.

a) Electrical control
The TELEMAG telescopes (WAS / WDS) are controlled by operating elements provided by the customer according to the diagram. Several drives must never be connected in parallel.
A separate switch-over contact must be provided for each drive and in each case only one switch-over and one mains connection version may be used. The switch-over contacts L1 and L2 must be mutually interlocked.

b) Pneumatic control
The TELEMAG telescopes (WAK / WDK) are controlled without current by the

Installation

The TELEMAG drive is fastened to the structural elements to be moved at the top and bottom of the telescopic column by means of 4 M10 bolts each (strength class 10.9), tightening torque 40 Nm. The thread reach is at least 25 mm.
The telescopic column can be installed either directly or with 15 mm thick aluminium mounting plates available as accessories.
The technical notes must be observed on commissioning.
Applications which do not exclude danger to persons must be provided with guards by the user.

Note:
- If no mounting plates are used, the auxiliary plates on the bottom of the TELEMAG must be supported accordingly. (Minimum plate thickness 15 mm)
- If you want to use your own mounting plates, drill these according to the dimension diagram. (Minimum plate thickness 15 mm)

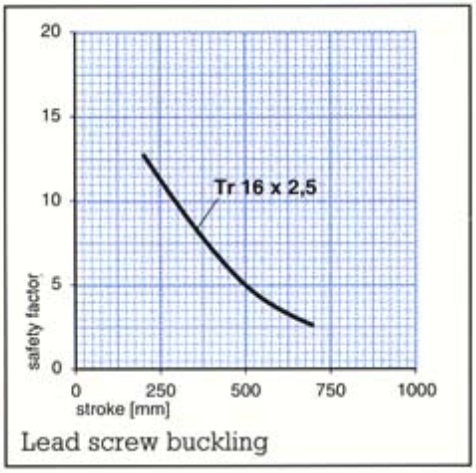
- 2-section telescope
- 3-section telescope: lower retracted height for the same stroke or larger stroke at the same retracted height respectively, higher eccentric loading.

The TELEMAG telescopes are designed for push operation.
In applications with pull loads, a factory modification of the auxiliary plate is required.

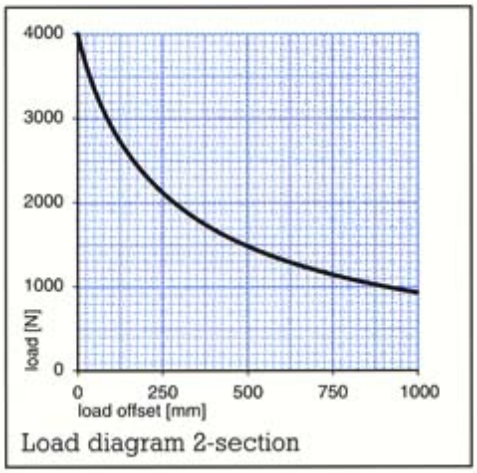
b) Pneumatic control

The TELEMAG telescopes (WAK / WDK) are controlled without current by the special pneumatic operating elements. The pneumatic line can be max. 1.5 m long. All electrical control elements are installed protected in the TELEMAG telescope. Thus a very high degree of safety is achieved for the operating personnel.
Please refer to Info 530E, 2945 for operating elements.

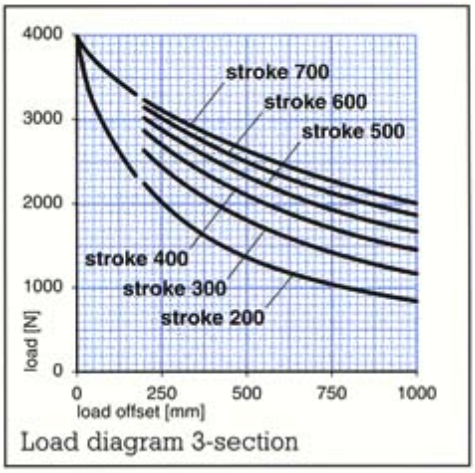
plates, drill these according to the dimension diagram. (Minimum plate thickness 15 mm)
- The auxiliary plate is bolted on and must not be removed.
- In the case of eccentric loading, you must observe the stroke - force diagram or consult the factory.
- There is a risk of injury by crushing between the mounting plate and tube end in the retracted end position.



Lead screw buckling

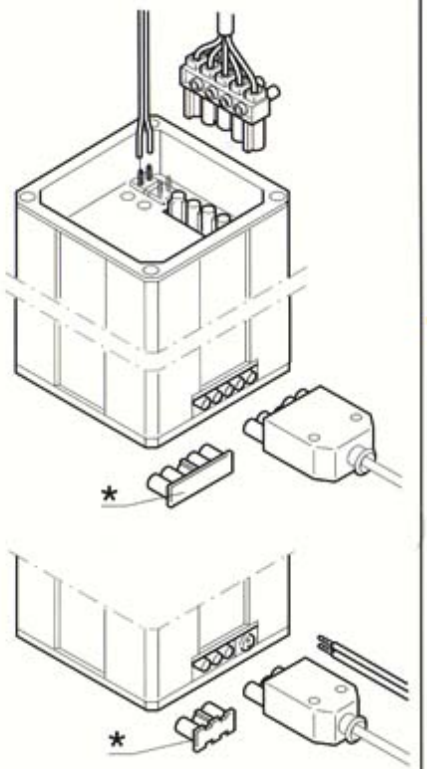


Load diagram 2-section

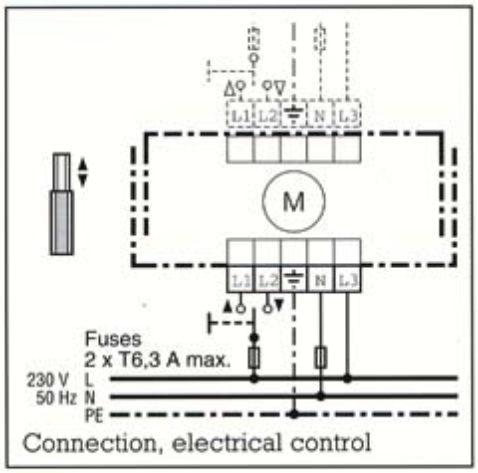


Load diagram 3-section

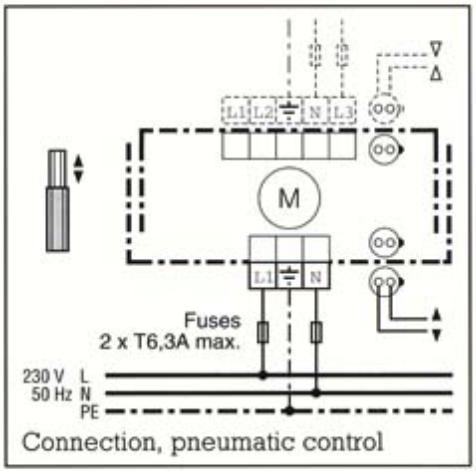
For top connection: You must absolutely lock the bottom connection socket with the sealing piece *! The plug or sealing piece must snap in audibly.



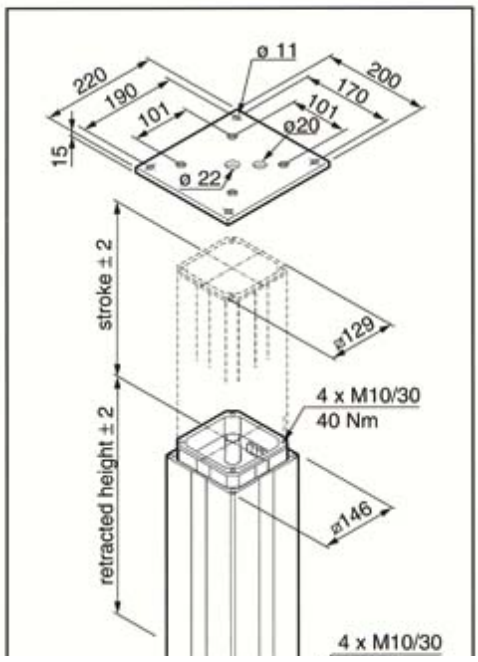
Connection, electric/pneumatic

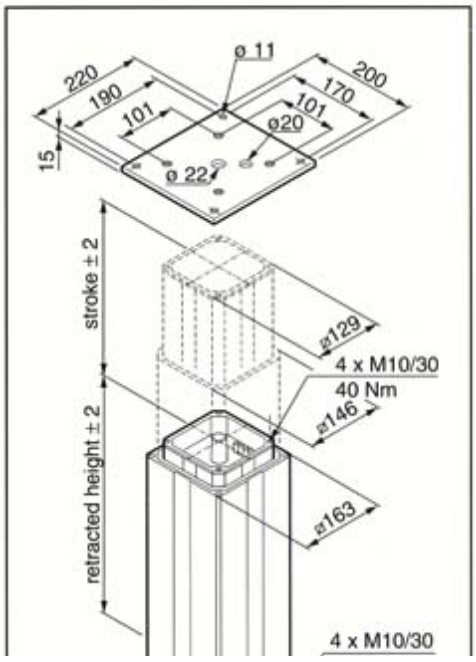


Connection, electrical control



Connection, pneumatic control





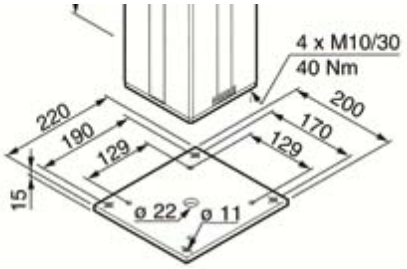
Maintenance

The sliding surfaces of the telescopic tubes can be lubricated with BP Energol GR-XP 220 (150) special lubricant.
Defective drives may be repaired only in

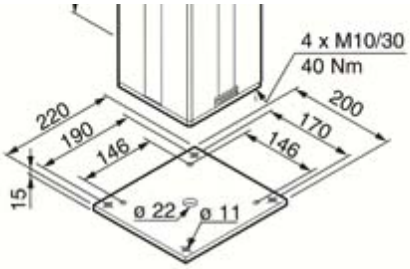
GR-XP 220 (150) special lubricant. Defective drives may be repaired only in our factory.

Accessories

Pulse encoder, potentiometers, signal contacts, special stroke settings, special voltages (UL version), pneumatic control switch, mounting plates etc. are available on request, refer to the type key.



TELEMAG 2-section



TELEMAG 3-section

telescopic drives TELEMAG 24 V DC

TLG. A / B / C ..

Technical data :	Type	TLG1.-A	TLG1.-B	TLG1.-C
Push force max.	N	4000	2500	1500
Speed	mm/s	10	13	25
Stroke	mm	200-700	200-700	200-700
Retracted hight 2-section	mm	380-880	380-880	380-880
Retracted hight 3-section	mm	380-880	380-880	380-880
Voltage	V DC	24	24	24
Current consumption	A	6,5	6,5	6,5
Duty cycle: intermittent operation	Int.	1 min./9 min.	1 min./9 min.	1 min./9 min.
Duty cycle: short time operation	KB	2,5 min.	2,5 min.	2,5 min.
Ambient temperature	°C	+10/+40	+10/+40	+10/+40
Degree of protection		IP30	IP30	IP30
Weight	kg	15-30	15-30	15-30
Design of telescopic column		2- or 3-section acc. to type key	2- or 3-section acc. to type keyl	2- or 3-section acc. to type key

Description

The TELEMAG telescopes consist of two or three square aluminium sections inserted in one another which are telescoped and retracted by an integrated linear drive.
The outer surface of the special aluminium sections is dull anodized. The slide ways which are free of play ensure low-friction retraction and telescoping even with eccentric loading. A special direct current motor with worm gearing, the rotational movement of which is transformed into a linear movement by a lead screw / nut System, is used as drive. The linear drive is self~locking in every position and is designed for intermittent operation. The drive moves into the end positions against stops and does not have limit switches. The mains supply and control are made through the KOM or MCU control unit and control elements separately developed for this. The drives are protected by the control unit against overload by an current cut-off circuit.
if the drive is not operated with a KOM or MCU control unit but with an extemal control unit or batteries, then the TELEMAG must be equipped with a integrated or external current cut-off board, since otherwise the drive could be damaged.
In operation with overload or on exceeding the specified duty cycle, the drive can be destroyed because of overheating.
The TELEMAG telescopes are available in two versions:
2-section telescope and 3-section telescope: higher eccentric bading.

The TELEMAG telescopes are designed for push operation.

Electrical connection

The electrical connection is made simply with thejack plug on the KOM control unit or on the MCU mobile control unit. Since the telescopic drives have no limit switches, the maximum permissible current is monitored by the control unit and is switched off if necessary. Thus an overload is not possible when a KOM or MCU control unit is used.
Furthermore, it is possible to operate up to two TELEMAG telescopic drives independently of one another with one control unit. An in-step control must be used for parallel running applications, special TELEMAG with pulse encoders are available for this.
Electrical connection or supply cables must be run and fastened so that damage due to crushing, bending or tension is not possible. A long supply cable must have a sufficiently large cross-section to prevent a possible voltage drop.

Control

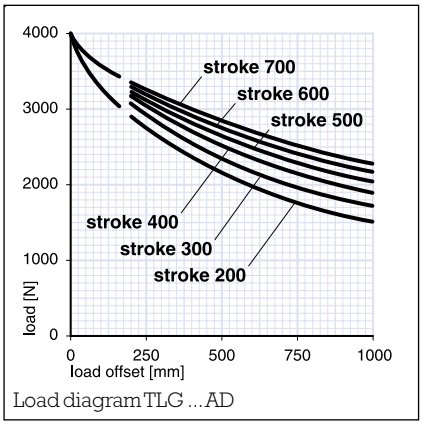
A large number of modern elegant handheld or foot switches, which have been developed especially for the TELEMAG, are available for controlling the TELEMAG direct current drives, please refer to 530E, 2940.

Installation

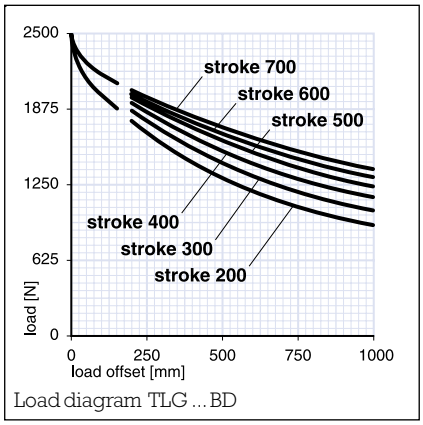
The TELEMAG drive is fastened to the structural elements to be moved at the top and bottom of the telescopic column by means of 4 M1O bolts each (strength class 10.9), tightening torque 40 Nm. The thread reach is at least 30 mm.
The telescopic column can be installed either directly or with 15 mm thick aluminium mounting plates available as accessories.
The technical notes must be observed on commissioning.
Applications which do not exclude danger to persons must be provided with guards by the user.

Note:

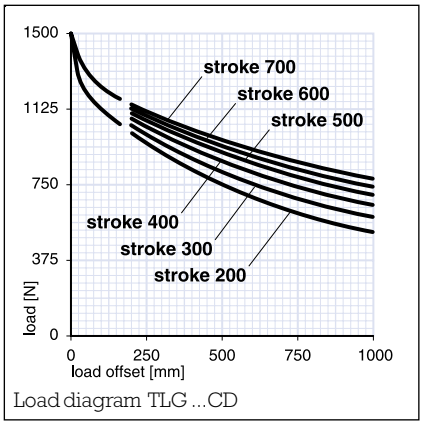
- if no mounting plates are used, the auxiliary plates on the bottom of the TELEMAG must be supported accordingly. (Minimum plate thickness 15 mm)
- If you want to use your own mounting plates, drill these according to the dimension diagram. (Minimum plate thickness 15 mm)
- Both auxiliary plates are bolted on and must not be removed.
- In the case of eccentric loading, you must observe the stroke - force diagram or consult the factory.
- There is a risk of injury by crushing between the mounting plate and tube end in the retracted end position.



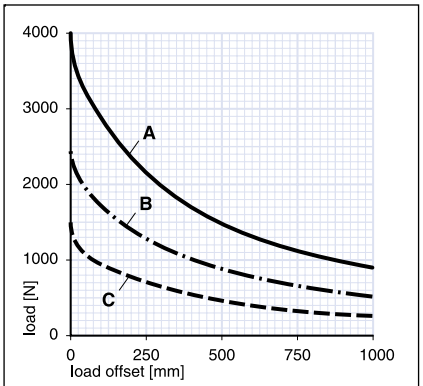
Load diagram TLG ... AD



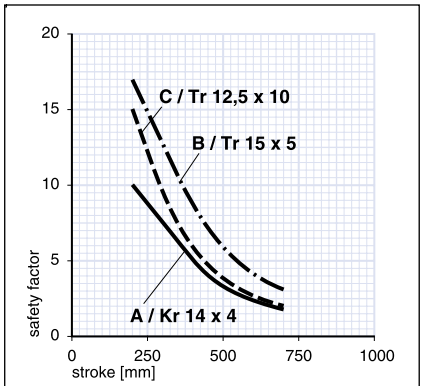
Load diagram TLG ... BD



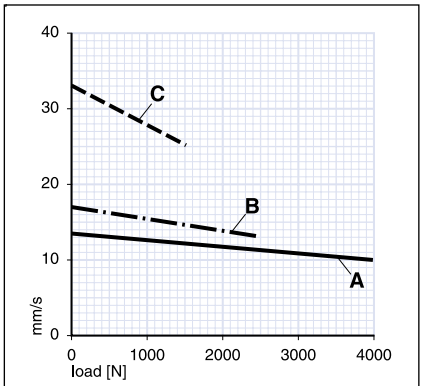
Load diagram TLG ... CD



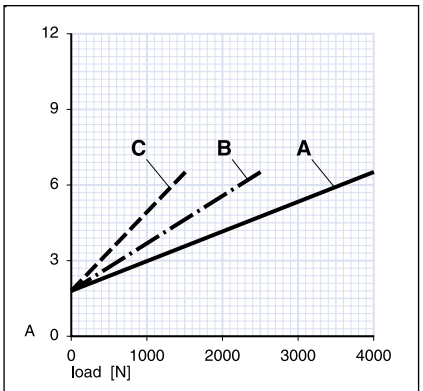
Load diagram TLG...AA/BA/CA



Lead screw buckling



Stroke speed 24 V DC



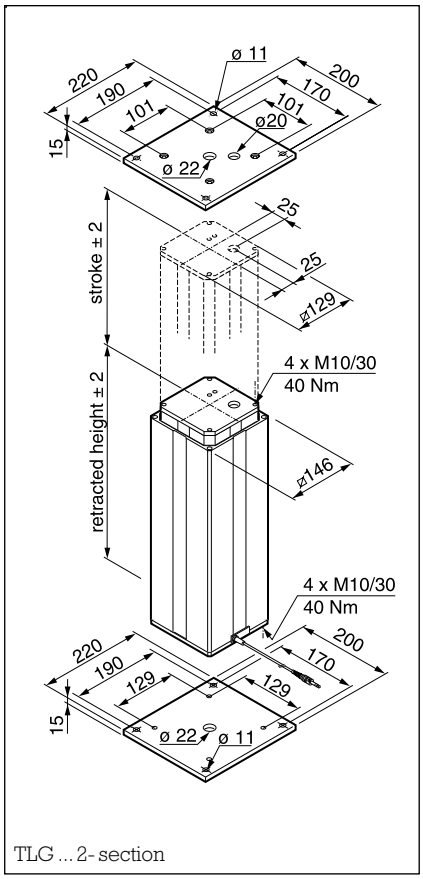
Current consumption 24 V DC

Maintenance

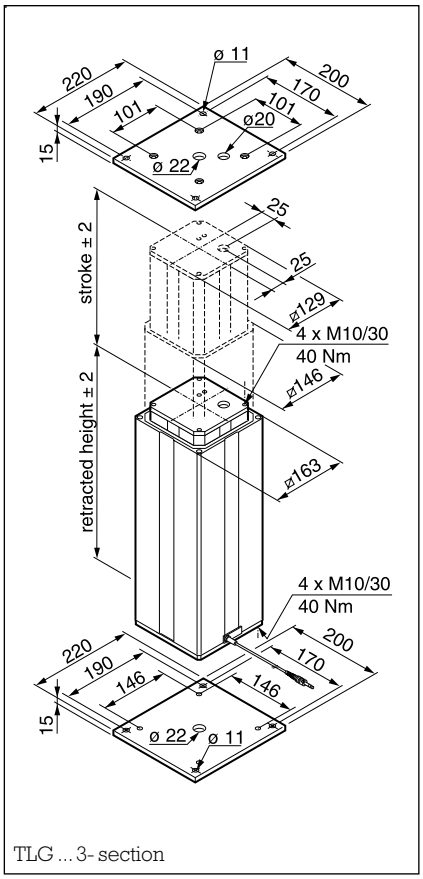
The sliding surfaces of the telescopic tubes can be lubricated with BP Energol GR-XP 220 (150) special lubricant. Defective drives may be repaired only in our factory.

Accessories

Pulse encoder (Hall sensor), potentiometer, special stroke settings, mounting plates etc. are available on request, refer to the type key.



TLG ... 2- section



TLG ... 3- section

TELEMAG
telescopic drives

THC 8A . . .

Technical data:	Type	THC 8AWAS	THC 8AWAK	THC 8AWDS	THC 8AWDK
Push force max. (pull optional)	N	1800	1800	1800	1800
Speed	mm/s	12	12	12	12
Stroke	mm	200-700	200-700	230-700	230-700
Retracted height	mm	355-855	355-855	290-760	290-760
Telescopic column version		2-section	2-section	3-section	3-section
Voltage	V/50 Hz	230	230	230	230
Power consumption	W	500	500	500	500
Current consumption	A	2.2	2.2	2.2	2.2
Duty cycle: intermittent operation	Int.	1 min./27 min.[1]	1 min./27 min.[1]	1 min./27 min.[1]	1 min./27 min.[1]
Duty cycle: short-time operation	KB	2 min.[1]	2 min.[1]	2 min.[1]	2 min.[1]
Ambient temperature °C		+10°/+40°	+10°/+40°	+10°/+40°	+10°/+40°
Degree of protection	IP	30	30	30	30
Type of control		electrical	pneumatic	electrical	pneumatic
Weight	kg	7.9 - 13.5	7.9 - 13.5	8.6 - 17.5	8.6 - 17.5

[1] measured by 253 V

Description

The TELEMAG telescopes consist of two or three square aluminium sections inserted in one another which are telescoped and retracted by an integrated linear drive.
The outer surface of the special aluminium sections is dull anodized. The slideways being free of play ensure low-friction retraction and telescoping even with eccentric loading.
A special electric motor with hollow shaft the rotational movement of which is transformed into a linear movement by a lead screw/nut system, is used as drive. The linear drive is self-locking in every position and is designed for intermittent operation. The motor winding is prevented from overheating by a thermal protection device which interrupts on overheating and switches back on after the motor cools down. The stroke is limited by built-in limit switches in the end positions.
The TELEMAG telescope is controlled either electrically through external switches or by the specially developed pneumatic safety control elements.

The TELEMAG telescopes are available in two versions:
- 2-section telescope
- 3-section telescope: lower retracted height for the same stroke or larger stroke at the same retracted height respectively, higher eccentric loading.

Electrical connection

The mains connection and control can be provided alternatively above or below with the plug supplied according to the diagram. 3 x 0.75 mm cables are led through the TELEMAG telescopic column.
In the case of mains supply from above, it is essential that the bottom connection socket is locked with the sealing piece. The plug and sealing piece must snap in audibly.
Electrical connection cables must be run and fastened so that damage due to crushing, bending or tension is not possible.

a) Electrical control
The TELEMAG telescopes (WAS / WDS) are controlled by operating elements provided by the customer according to the diagram. Several drives must never be connected in parallel.
A separate switch-over contact must be provided for each drive and in each case only one switch-over and one mains connection version may be used. The switch-over contacts L1 and L2 must be mutually interlocked.

b) Pneumatic control
The TELEMAG telescopes (WAK / WDK) are controlled without current by the special pneumatic operating elements. The pneumatic line can be max. 1.5 m long.
All electrical control elements are installed

Installation

The TELEMAG drive is fastened to the structural elements to be moved at the top and bottom of the telescopic column by means of 4 M6 bolts each (strength class 10.9), tightening torque 9 Nm. The thread reach is at least 20 mm.
The telescopic column can be installed either directly or with 10 mm thick aluminium mounting plates available as accessories.
The technical notes must be observed on commissioning.
Applications which do not exclude danger to persons must be provided with guards by the user.

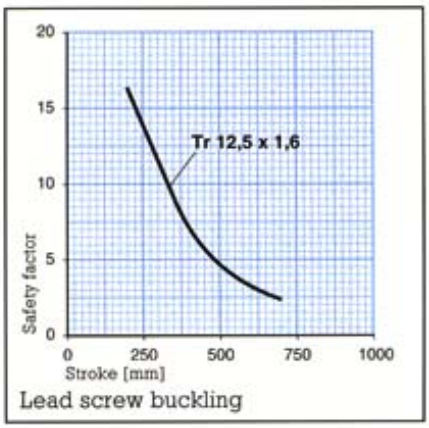
Note:
- If no mounting plates are used, the auxiliary plates on the bottom of the TELEMAG must be supported accordingly. (Minimum plate thickness 10 mm)
- If you want to use your own mounting plates, drill these according to the dimension diagram. (Minimum plate thickness 10 mm)
- The auxiliary plate is bolted on and must not be removed.
In the case of eccentric loading, you

height for the same stroke of larger stroke at the same retracted height respectively, higher eccentric loading.

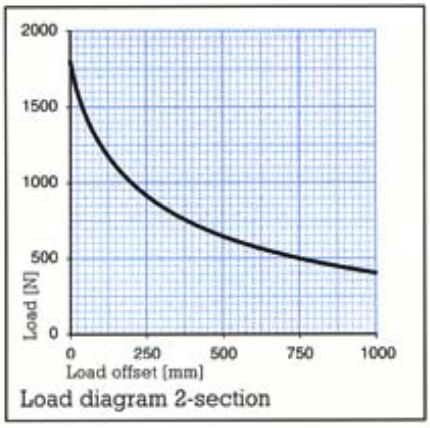
The TELEMAG telescopes are designed for push operation.
In applications with pull loads, a factory modification of the auxiliary plate is required.

special pneumatic operating elements. The pneumatic line can be max. 1.5 m long. All electrical control elements are installed protected in the TELEMAG telescope. Thus a very high degree of safety is achieved for the operating personnel.
Please refer to Info 530E, 2945 for operating elements.

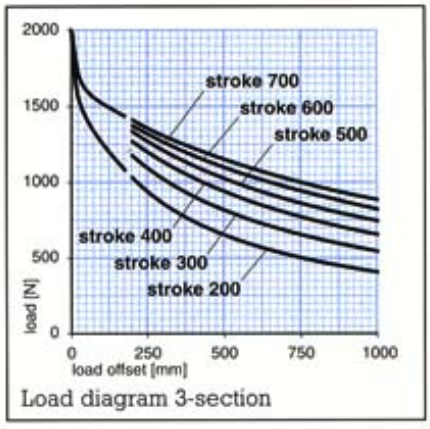
- The auxiliary plate is bolted on and must not be removed.
- In the case of eccentric loading, you must observe the stroke - force diagram or consult the factory.
- There is a risk of injury by crushing between the mounting plate and tube end in the retracted end position.



Lead screw buckling

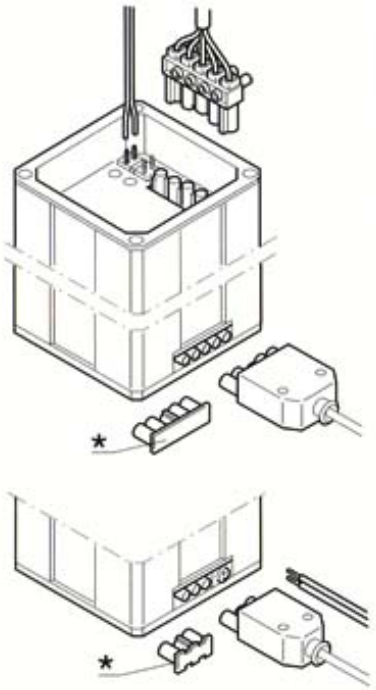


Load diagram 2-section

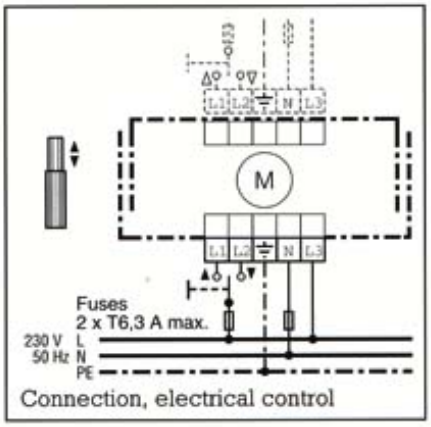


Load diagram 3-section

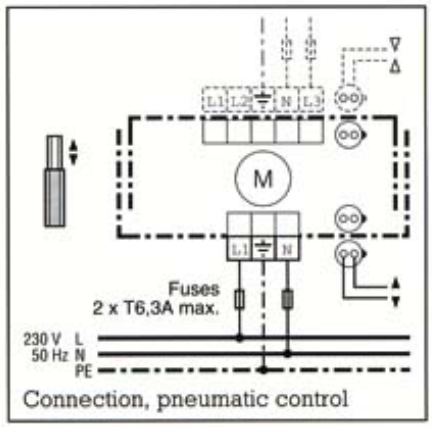
For top connection: You must absolutely lock the bottom connection socket with the sealing piece *! The plug or sealing piece must snap in audibly.



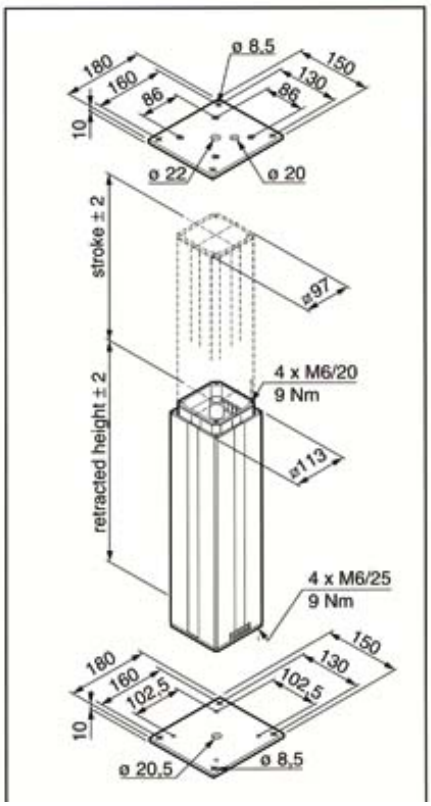
Connection, electric/pneumatic

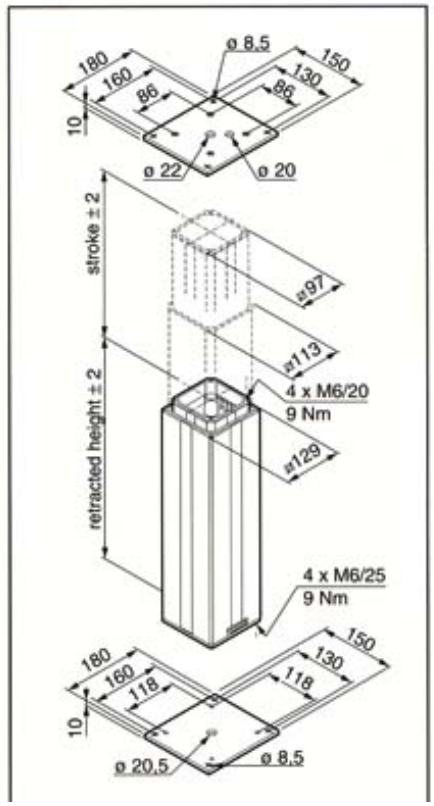


Connection, electrical control



Connection, pneumatic control





Maintenance

The sliding surfaces of the telescopic tubes can be lubricated with BP Energol GR-XP 220 (150) special lubricant.
Defective drives may be repaired only in our factory.

Accessories

Pulse shaft encoder, potentiometers, signal contacts, special stroke settings, special voltages (UL version), pneumatic control switch, mounting plates etc. are

special voltages (UL version), pneumatic control switch, mounting plates etc. are available on request, refer to the type key.

TELEMAG 2-section

TELEMAG 3-section