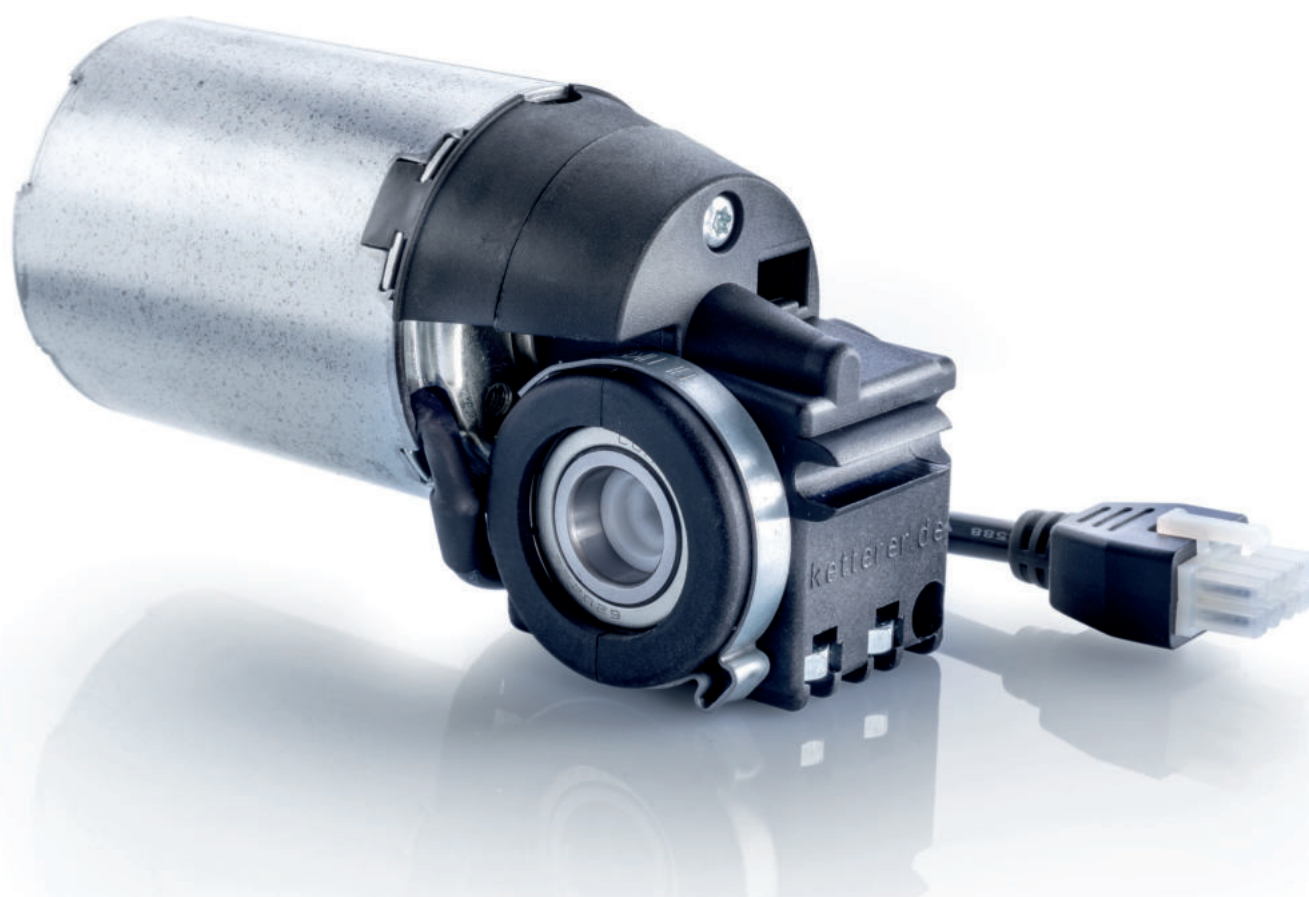


Motor Drives, Electric Motor Spindle Drives and Accessories



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Motor Drives

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Motor drive 3112



Description

Compact 12 V DC motor with worm gear and through going hexagon socket. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system. Easily adaptable via hexagon socket and anchor points.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm and 9 mm
- Good self-locking properties
- 100 mm motor cable with connector included

Variant key

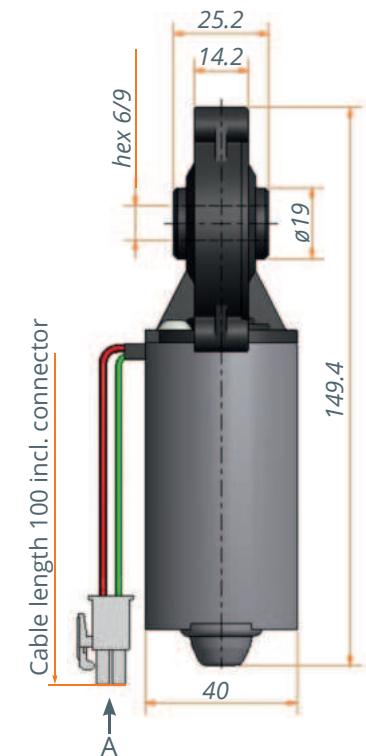
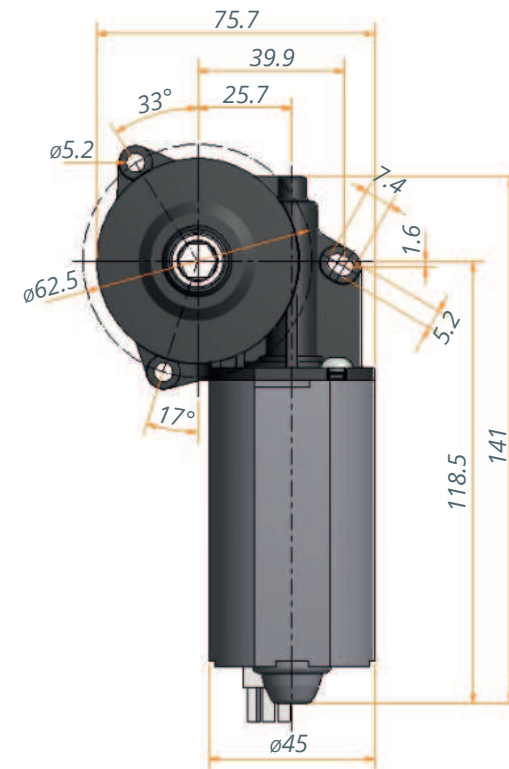
Variants are formed by different wrench widths.



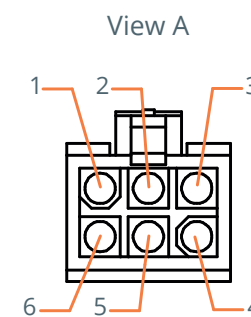
Technical data

<i>Model</i>	<i>3112.00-1009</i>	<i>3112.00-1006</i>
<i>Motor</i>	DC motor 12 V	DC motor 12 V
<i>Sensor/Power supply</i>	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
<i>Protection class</i>	IP30	IP30
<i>Idle running speed</i>	120 rpm (12 V)	120 rpm (12 V)
<i>Duty cycle idle speed</i>	20% (at 5 min.)	20% (at 5 min.)
<i>Duty cycle nominal load*</i>	20 s ON/ 240 s OFF	20 s ON/ 240 s OFF
<i>Rated torque*</i>	2.8 Nm	2.8 Nm
<i>Short term peak torque (<1s)</i>	6 Nm	6 Nm
<i>Input</i>	hex 9 mm	hex 6 mm

* Load determined for service life of 10,000 double strokes



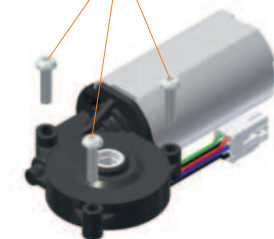
Pin assignment



- | | |
|---------------------------------|------------------------------------------------------|
| 1. Motor black - | 0,75 mm ²
PIN type AMP170364 |
| 2. Motor blue + | |
| 3. Hall sensor red +5V | 0,25 - 0,35 mm ²
PIN type
AMP170363 |
| 4. Hall sensor violet, output 2 | |
| 5. Hall sensor black - | |
| 6. Hall sensor green, output 1 | |

Mounting example:

Screw M5x20
DIN 7380 (3x)



Technical notes

- The drive requires a suitable 12 V controller.
- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

Technical data for motor drive 3112 in combination with spindle unit 3130.14

	with 3130.14-V1XEXXXHXXX	with 3130.14-V2XEXXXHXXX
Type of spindle	TR14x3 RH	SG14x16P4 RH
Duty cycle nominal load* & Stroke 500 mm	90 s ON/ 540 s OFF	25 s ON/ 300 s OFF
Max. lifting force F_1^*	900 N	400 N
Max. pulling force F_2^*	500 N	400 N
Stat. self locking	150 kg	60 kg

* Load determined for service life of 10,000 double strokes

Motor drive 3121



Description

Powerful 24 V DC motor with 2-stage worm gear with through going hexagon socket on the output.
The motor cable with AMP plug and the integrated Hall sensors allow secure connection and exact positioning of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm, 7 mm, 8 mm
- Good self-locking properties
- 220 mm motor cable with connector included
- Can be combined with most Ketterer spindle systems

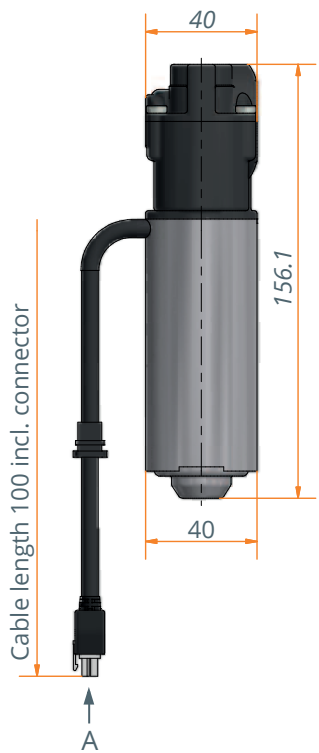
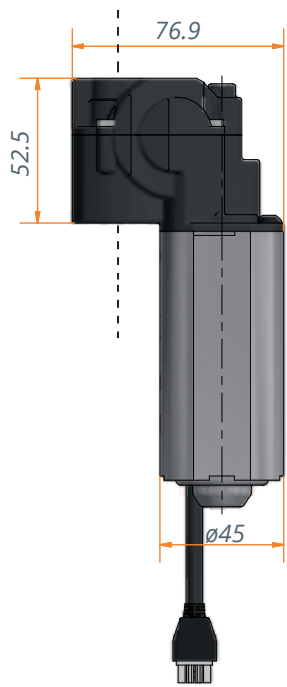
Variant key

The variants are formed by the different wrench widths of the through going hexagon socket.
The design with fork head (see spindle drive 3120.00) is available upon request.

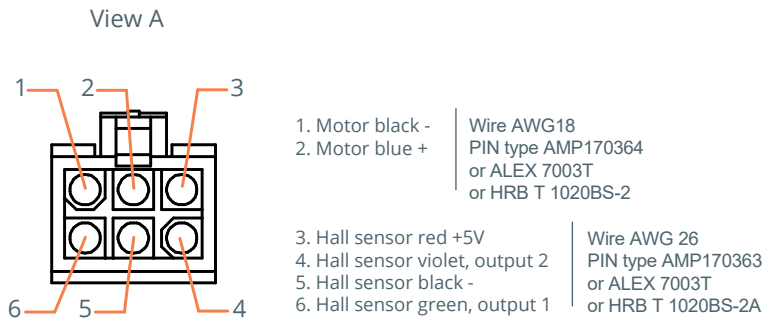
Technical data

Model	3121.00-2002	3121.00-2007	3121.00-2008
Motor	DC motor 24 V	DC motor 24 V	DC motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30	IP30
Idle running speed	150 rpm (24 V)	150 rpm (24 V)	150 rpm (24 V)
Duty cycle idle speed	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
Rated torque*	3 Nm	3 Nm	3 Nm
Duty cycle nominal load*	20 s ON 240 s OFF	20 s ON 240 s OFF	20 s ON 240 s OFF
Short term peak torque (<1sec)	4.5 Nm	4.5 Nm	4.5 Nm
Input	hex 6 mm	hex 7 mm	hex 8 mm

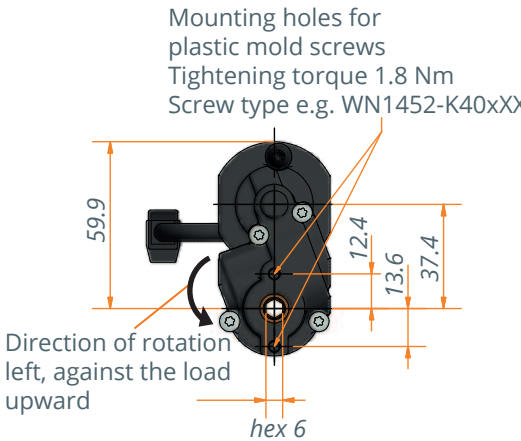
* Load determined for service life of 10,000 double strokes



Pin assignment



Installation position/mounting



Technical notes

- Please note the correct installation position of the drive! The drive is correctly mounted when it turns counterclockwise under load (see installation position/mounting).
- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- Through the controller* the system is regulated such that the speed in the entire drive working range is kept as constant as possible.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

* In combination with LogicData control box Compact-3

Motor drive 3130

Description

Compact 24 V DC motor with worm gear and continuous hexagon socket. Optimized sound characteristics due to elastic coupling and vibration damping fastening elements. Although the drive was developed for ergonomic table applications, it can be used in many other fields. The drive is designed and tested for axial pressure load. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system.

Special features

- Vibration and sound-damped design through mechanical decoupling of the spindle system
- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm and 7 mm
- Good self-locking properties
- 100 mm motor cable with connector included
- Can be combined with most Ketterer spindle systems

Variant key

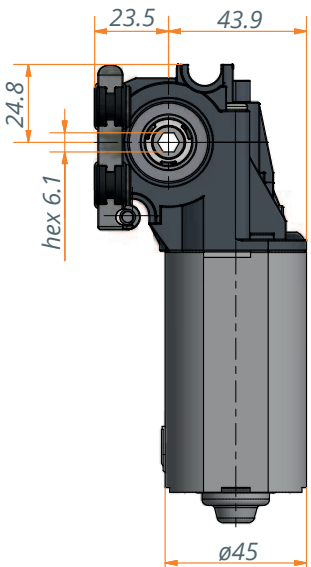
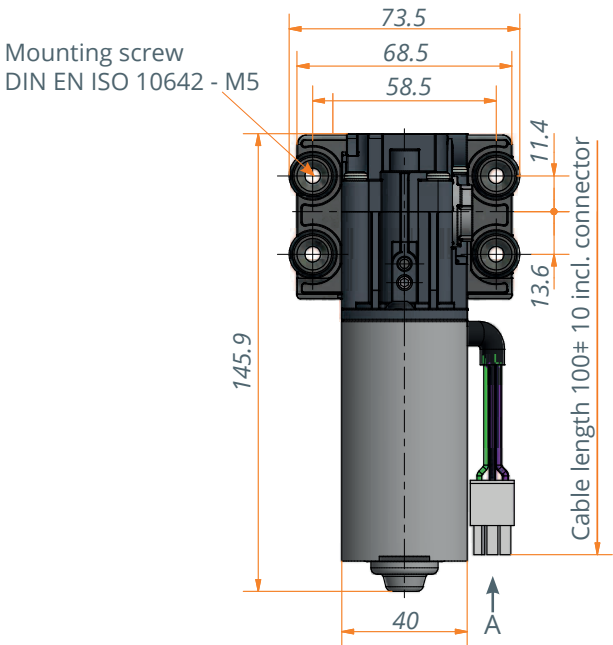
The variants are formed by the different wrench widths and by fastening variants with and without fastening plate (Variant A or Variant B).

Technical data

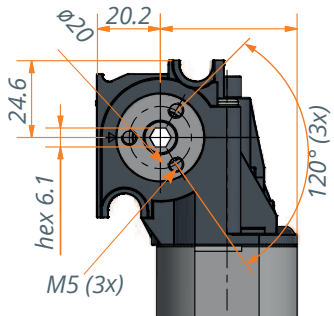
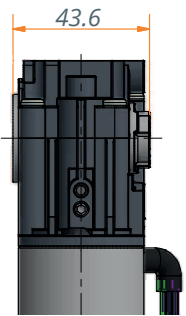
Model	3130.00-1002 Variant B	3130.00-1003 Variant B	3130.00-2002 Variant A	3130.00-2003 Variant A
Motor	DC Motor 24 V	DC Motor 24 V	DC Motor 24 V	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30	IP30	IP30
Idle running speed	120 rpm (24 V)	120 rpm (24 V)	120 rpm (24 V)	120 rpm (24 V)
Duty cycle idle speed	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
Rated torque*	3.5 Nm	3.5 Nm	3.5 Nm	3.5 Nm
Duty cycle nominal load	20 s ON 240 s OFF	20 s ON 240 s OFF	20 s ON 240 s OFF	20 s ON 240 s OFF
Short term peak torque (<1s)	6 Nm	6 Nm	6 Nm	6 Nm
Input	hex 6 mm	hex 7 mm	hex 6 mm	hex 7 mm

* Load determined for service life of 10,000 double strokes

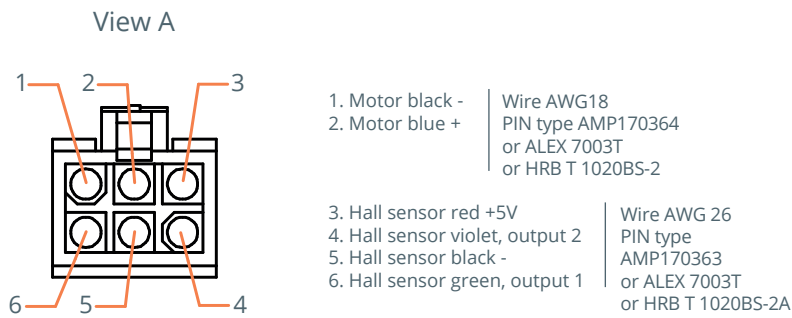
Variant A with mounting plate



Variant B without mounting plate



Pin assignment



Technical notes

- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- Through the controller* the system is regulated such that the speed in the entire drive working range is kept as constant as possible.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

* In combination with LogicData control box Compact-3

Motor drive 3133.00



Description

Compact 24 V DC motor with worm gear and continuous hexagon socket. Although the drive was developed for ergonomic table applications, it can be used in many other fields. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm, 7 mm, 9 mm
- Good self-locking properties
- Low noise
- 1000 mm motor cable with connector included
- Can be combined with all Ketterer spindle systems

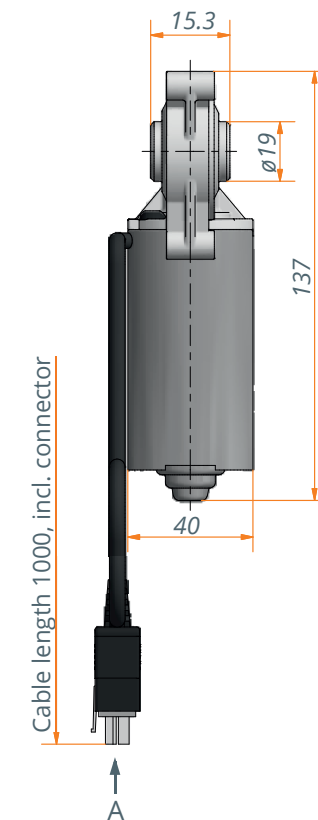
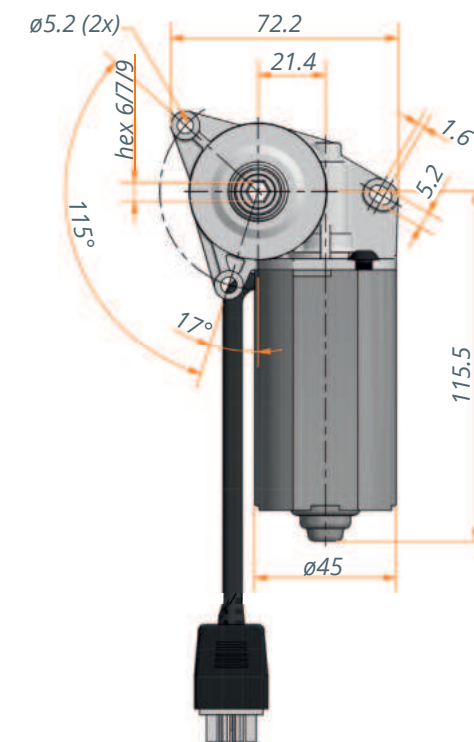
Variant key

The variants are formed by the different wrench widths.

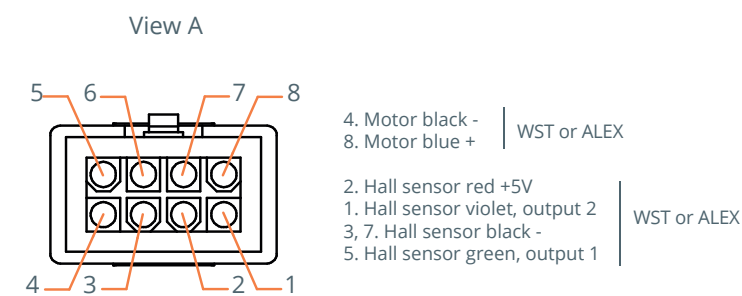
Technical data

<i>Model</i>	<i>3133.00-0016</i>	<i>3133.00-0017</i>	<i>3133.00-0011</i>
<i>Motor</i>	DC motor 24 V	DC motor 24 V	DC Motor 24 V
<i>Sensor/Power supply</i>	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
<i>Protection class</i>	IP30	IP30	IP30
<i>Idle running speed</i>	120 rpm (24 V)	120 rpm (24 V)	120 rpm (24 V)
<i>Duty cycle idle speed</i>	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
<i>Rated torque*</i>	3.5 Nm	3.5 Nm	3.5 Nm
<i>Duty cycle nominal load</i>	20 s ON 4 min OFF	20 s ON 4 min OFF	20 s ON 4 min OFF
<i>Short term peak torque (<1sec)</i>	5 Nm	5 Nm	5 Nm
<i>Input</i>	hex 6 mm	hex 7 mm	hex 9 mm

* Determined at full load for service life of 10,000 double strokes



Pin assignment

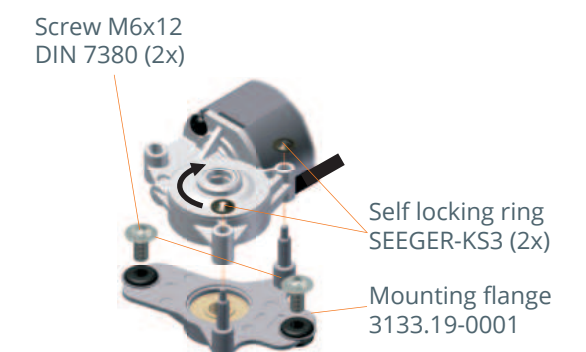


Technical notes

- To ensure secure operation the motor must be operated in the predefined installation position (see installation position/mounting).
- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- The connection position of the drive in the entire system with vibration damping elements can be beneficial. However, the functional reliability position of the drive in the application should be tested.

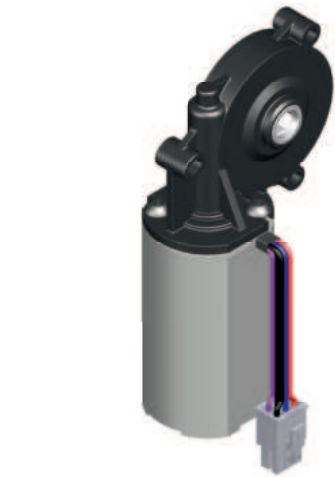
* In combination with LogicData control box Compact-3

Installation position/Mounting



- Through the controller* the system is regulated such that the speed in the entire drive working range is kept as constant as possible.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

Motor drive 3133.48



Description

Compact 24 V DC motor with worm gear and through going hexagon socket. Although the drive was developed for ergonomic table applications, it can be used in many other fields. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm and 9 mm
- High torque with minimum construction size
- Good self-locking properties
- Low noise
- 100 mm motor cable with connector included
- Can be combined with all Ketterer spindle systems

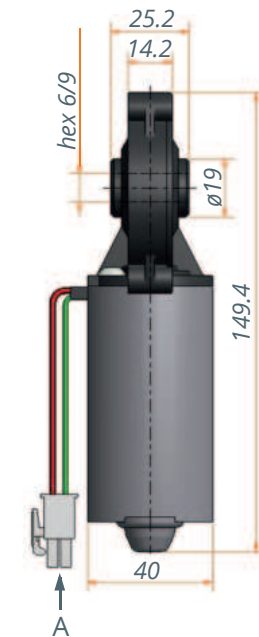
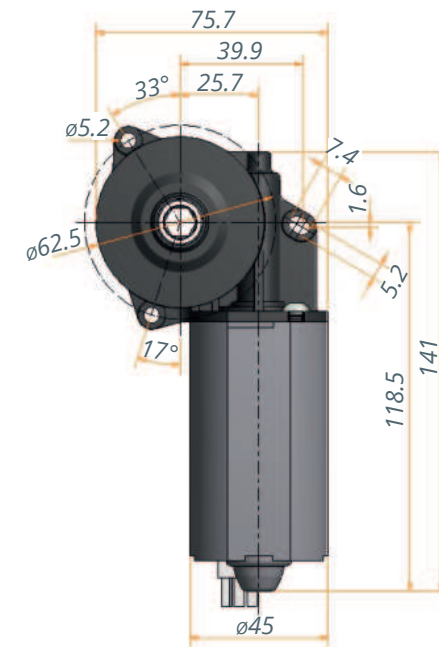
Variant key

The variants are formed by the different wrench widths.

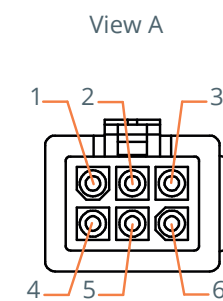
Technical data

<i>Model</i>	<i>3133.48-0009</i>	<i>3133.48-0016</i>
<i>Motor</i>	DC motor 24 V	DC motor 24 V
<i>Sensor/Power supply</i>	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
<i>Protection class</i>	IP30	IP30
<i>Duty cycle idle speed</i>	20% (at 5 min.)	20% (at 5 min.)
<i>Idle running speed</i>	100 rpm (24 V)	100 rpm (24 V)
<i>Rated torque*</i>	5 Nm	5 Nm
<i>Duty cycle nominal load</i>	20 s ON/ 240 s OFF	20 s ON/ 240 s OFF
<i>Short term peak torque (<1sec)</i>	8 Nm	8 Nm
<i>Input</i>	hex 9 mm	hex 6 mm

* Load determined for service life of 10,000 double strokes



Pin assignment



- | | |
|---------------------------------|--------------------|
| 1. Motor black - | Wire AWG18 |
| 2. Motor blue + | PIN type AMP170364 |
| | or ALEX 7003T |
| | or HRB T 1020BS-2 |
|
 | |
| 3. Hall sensor red +5V | Wire AWG 26 |
| 4. Hall sensor violet, output 2 | PIN type |
| 5. Hall sensor black - | AMP170363 |
| 6. Hall sensor green, output 1 | or ALEX 7003T |
| | or HRB T 1020BS-2A |

Installation position/Mounting



Technical notes

- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- Through the controller* the system is regulated such that the speed in the entire work area position of the drive is kept as constant as possible.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

* In combination with LogicData control box Compact-3

DC-Motor drive 3143



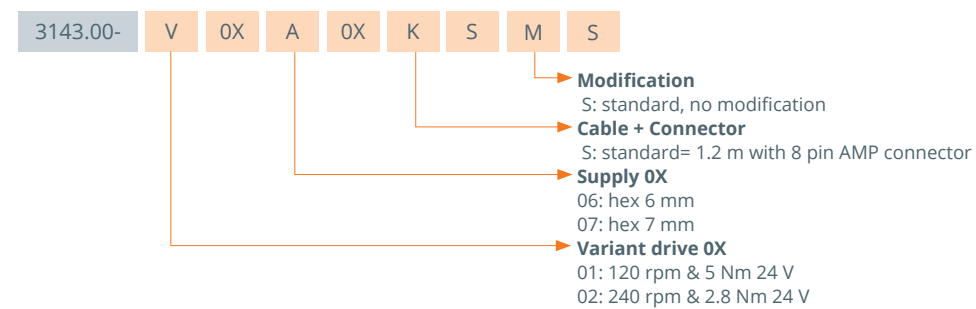
Description

Powerful 24 V DC motor with worm gear and through going hexagon socket. Although the drive was developed for ergonomic table applications, it can be used in many other fields. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Through going hexagon socket in wrench widths 6 mm, 7 mm, 9 mm
- Available as “power package” or as “high speed” variant
- 1200 mm motor cable with connector included
- Good self-locking properties
- Can be combined with all Ketterer spindle systems

Variant key

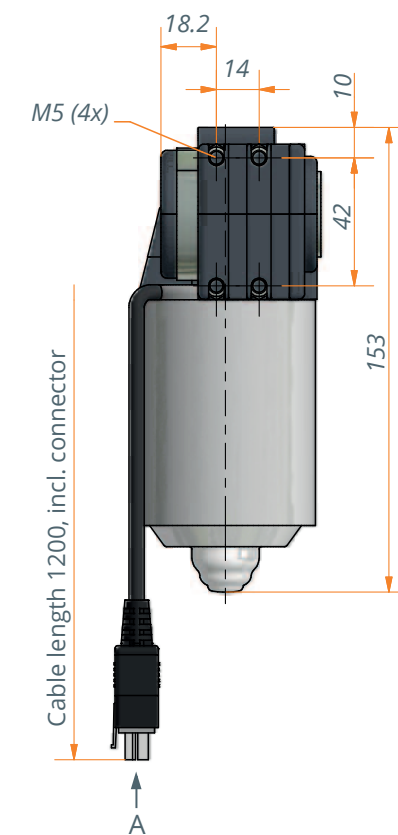
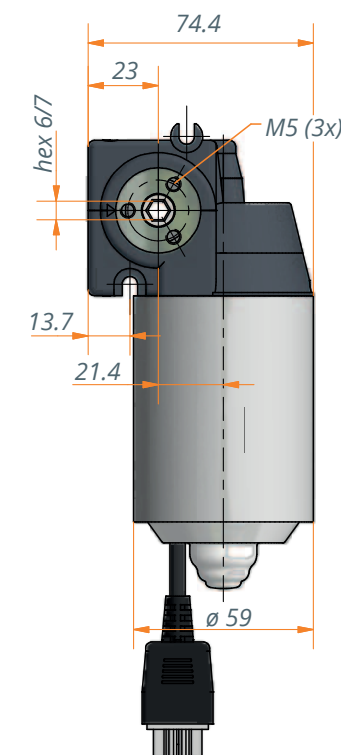


Technical data

<i>Model</i>	<i>3143.00-V01A06KSMS</i>	<i>3143.00-V01A07KSMS</i>	<i>3143.00-V02A06KSMS</i>	<i>3143.00-V02A07KSMS</i>
<i>Motor</i>	DC motor 24 V	DC motor 24 V	DC motor 24 V	DC motor 24 V
<i>Sensor/Power supply</i>	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
<i>Electric current</i>	3.9 A at 5 Nm	3.9 A at 5 Nm	4 A at 2.8 N	4 A at 2.8 Nm
<i>Protection class</i>	IP30	IP30	IP30	IP30
<i>Idle running speed</i>	115 rpm (24 V) 120 rpm *	115 rpm (24 V) 120 rpm *	230 rpm (24 V) 240 rpm *	230 rpm (24 V) 240 rpm *
<i>Duty cycle idle speed</i>	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
<i>Rated torque*</i>	5 Nm	5 Nm	2.8 Nm	2.8 Nm
<i>Duty cycle nominal load**</i>	20 s ON 240 s OFF	20 s ON 240 s OFF	20 s ON 240 s OFF	20 s ON 240 s OFF
<i>Short term peak torque (<1s)</i>	9 Nm	9 Nm	5 Nm	5 Nm
<i>Input</i>	hex 6 mm	hex 7 mm	hex 6 mm	hex 7 mm

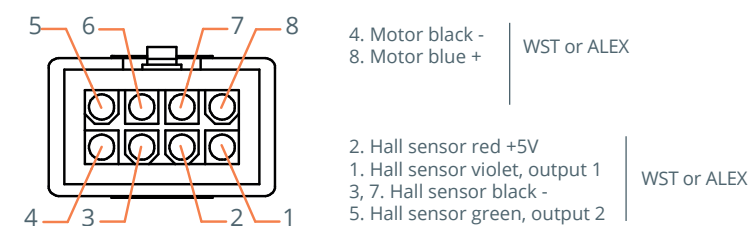
* In combination with LogicData control box Compact-3

** Load determined for service life of 10,000 double strokes



Pin assignment

View A



Technical notes

- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- Through the controller* the system is regulated such that the speed in the entire drive working range is kept as constant as possible.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

* In combination with LogicData control box Compact-3

Motor drive 4773



Description

Powerful 24 V DC motor with two worm gears and a planetary gear.
High reduction ratio makes precise control and position setting possible.

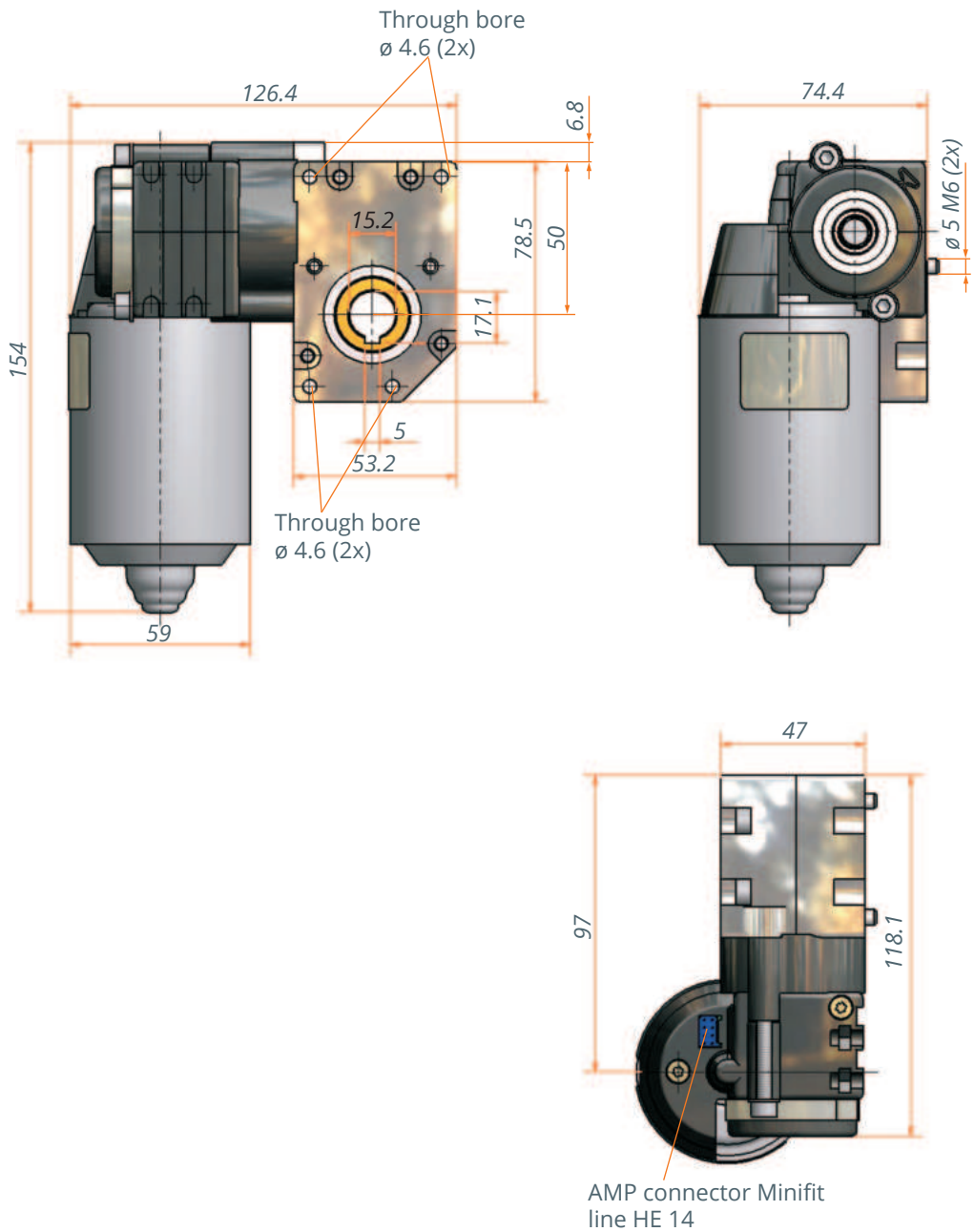
Special features

- Compact, precise gears for sophisticated position adjustment
- High reduction ratio
- High drive torque
- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Low noise

Technical data

Model	4773.00-0002
Motor	DC motor 18 V
Sensor/Power supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle idle speed	20% (at 5 min.)
Idle running speed	1 rpm (24 V) 1.5 rpm (32 V)
Max. drive torque*	40 Nm
Input	bore hole with keyway

* Load determined for service life of 10,000 double strokes



Motor drive for through going spindle 4778



Description

Powerful 24 V DC motor with worm gear, designed for non-rotating through going spindle for pushing and pulling movements. A cable with AMP plug and an integrated Hall sensor allows easy and secure control of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Different type of internal thread for through going spindles
- Good self-locking properties
- Fast and powerful
- Order spindle separately

Variant key

The variants are formed by different internal thread types for connecting the spindles.

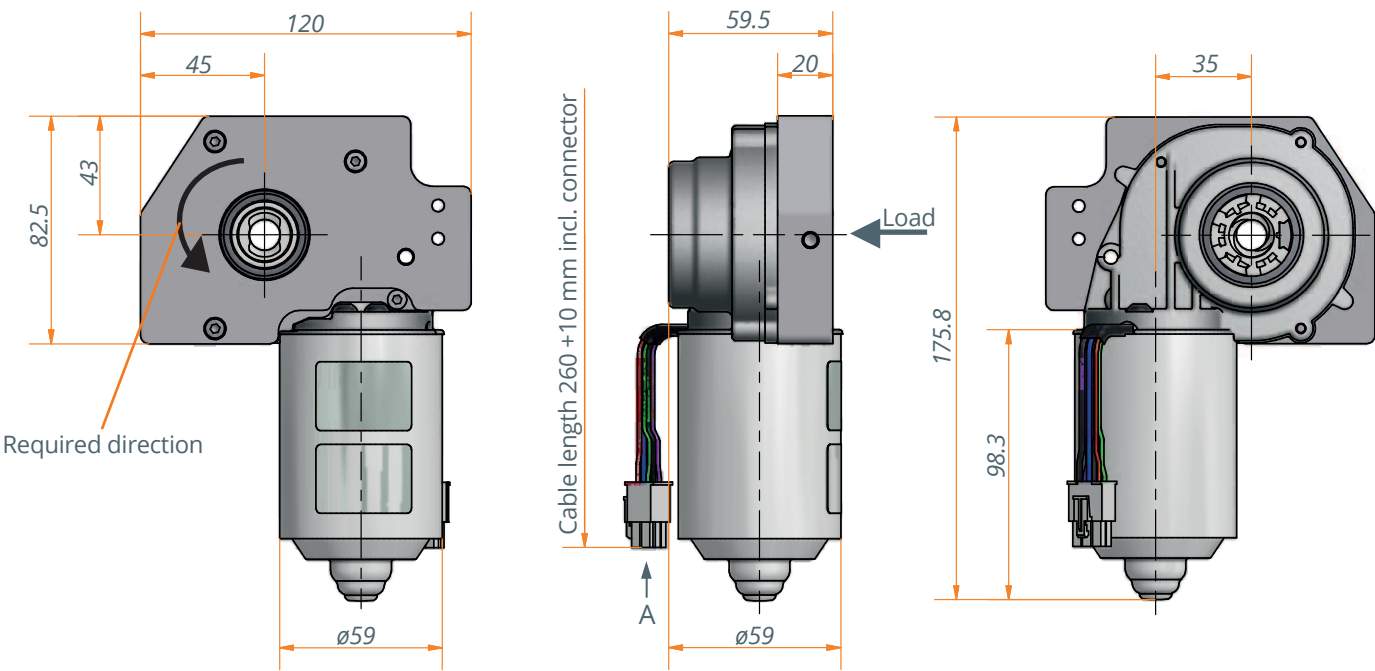
Technical data

Model	4778.00-0002	4778.00-0004	4778.00-0006
Motor	DC motor 24 V	DC motor 24 V	DC motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30	IP30
Operating temperature	0° to +30°	0° to +30°	0° to +30°
Electric current (I _N) at max. load	8 A	8 A	8 A
Idle running speed	270 rpm	270 rpm	270 rpm
Duty cycle idle speed	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
Duty cycle at max. load	10 s ON 240 s OFF	13 s ON 240 s OFF	8 s ON 240 s OFF
Max. lifting force*	1900 N	3700 N	950 N
Traverse speed (constant from F= 0 bis F _{max.})**	24 mm/s	12 mm/s	45 mm/s
Static Self locking ***	200 kg	380 kg	200 kg
Output (Inner thread)	SG16x8P4 RH	Tr16x4 RH	SG14x16P4 RH

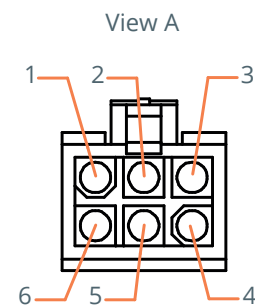
* Determined for service life of 10,000 double strokes

** The controller regulates the system in such a way that the travel speed in the entire drive working range is kept as constant as possible

*** In combination with controller, which has a short circuit brake



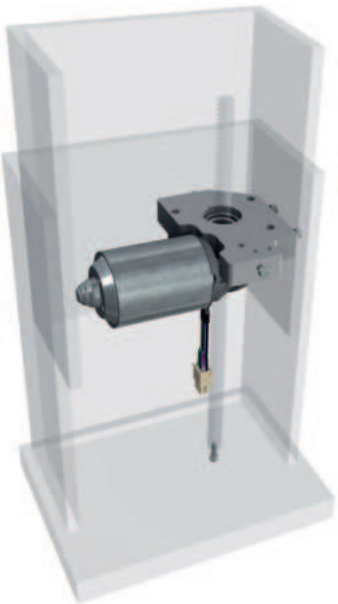
Pin assignment



PIN assignment:

- | | |
|---------------------------------|--------------------|
| 1. Motor black - | PIN type AMP170364 |
| 2. Motor blue + | |
| 3. Hall sensor red +5V | PIN type AMP170363 |
| 4. Hall sensor violet, output 2 | |
| 5. Hall sensor black - | |
| 6. Hall sensor green, output 1 | |

Installation position/Mounting



Technical notes

- Spindle is not included; must be ordered separately.
- Achtung: Note correct installation position (see installation example/position).
- The drive must be protected against lateral forces by a guide system.
- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.

Motor drive for through going spindle 4779



Description

Powerful 24 V DC motor with worm gear, designed for an axis parallel through going spindle. Ideal for integration in a lift column. The drive is only suitable for axial pressure load. A cable with standard connector and integrated Hall sensor technology permit simple and secure control of the entire system.

Special features

- Two integrated Hall sensors for measurement of the revolutions and direction of rotation
- Different type of internal thread for through going spindles
- Good self-locking properties
- Fast and powerful
- Order spindle separately

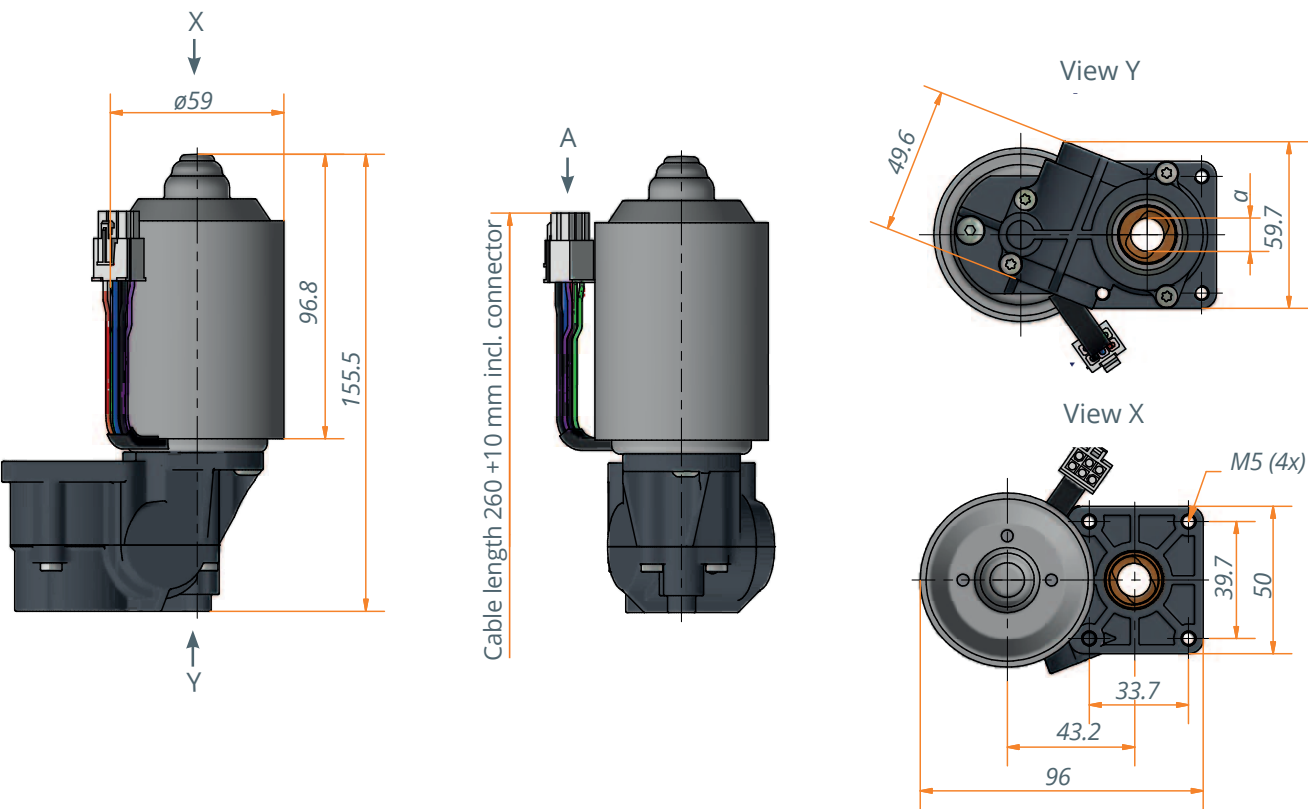
Variant key

The variants are formed by different internal thread types for connecting the spindles.

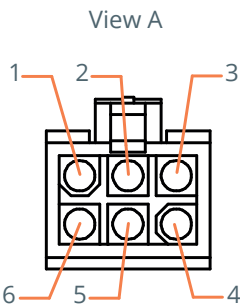
Technical data

Model	4779.00-0001	4779.00-0002	4779.00-0003
Motor	DC motor 24 V	DC motor 24 V	DC motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30	IP30
Operating temperature	0° to +30°	0° to +30°	0° to +30°
Electric current (I _N) at max. load	6,3 A	7 A	7 A
Idle running speed	133 rpm	133 rpm	133 rpm
Duty cycle idle speed	20% (at 5 min.)	20% (at 5 min.)	20% (at 5 min.)
Duty cycle nominal load*	20 s ON 240 s OFF	33 s ON 240 s OFF	16 s ON 240 s OFF
Max. lifting force	1800 N	2200 N	1500 N
Traverse speed (constant from F= 0 to F _{max})	17 mm/s	12 mm/s	24 mm/s
Static Self locking **	180 kg	220 kg	150 kg
Output (Inner thread)	SG12x12P4 RH	Tr16x8P4 RH	SG14x16P4 RH

* Load determined for service life of 10,000 double strokes
** In combination with controller, which has a short circuit brake

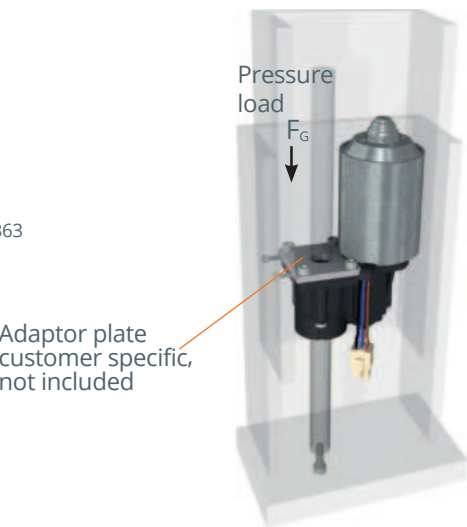


Pin assignment



- PIN assignment:**
- 1. Motor black - PIN type AMP170364
 - 2. Motor blue +
 - 3. Hall sensor red +5V
 - 4. Hall sensor violet, output 2
 - 5. Hall sensor black - PIN type AMP170363
 - 6. Hall sensor green, output 1

Installation position/Mounting

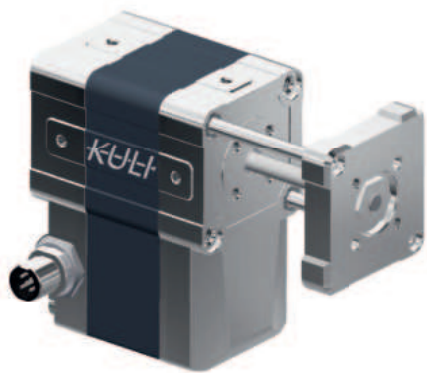


Technical notes

- Spindle not included; must be ordered separately.
- Attention: The drive is only suitable for axial pressure load. Note correct installation position (see installation example).
- The drive must be protected against lateral forces by a guide system.
- The drive working range (nominal torque) is determined for a service life of 10,000 double strokes.
- By using a controller with a short-circuit brake the holding torque position of the drive can be increased.
- The controller* regulates the system in such a way that the travel speed in the entire drive working range is kept as constant as possible.

* In combination with LogicData control box Compact-3

KuLi - electrical short stroke actuator



Description

Compact and fast electrically operated linear drive. The drive is particularly suitable for use in automation and conveying technology. The parameterization takes place via a connect box (sold separately). The control electronics are integrated.

Special features

- **Compact design:**
We achieve a stroke of 40 mm with a housing length of just 67 mm
- **Powerful and dynamic:**
Thrust/tensile forces up to 300 N, speed up to 445 mm/s
- **Easy parameterization:**
User friendly software and connect-box
- **Integrated control:**
Configuration and teach-in of the system without expert knowledge
- **Maintenance-free**

Variant key

The Kuli short-stroke linear drive is available in different variants. The variants are composed in accordance with the ordering code shown below. Please note: not all combinations of features are possible.

KuLi-	Variant	Drive
3215.00		Max. stroke – Spindle pitch
	B1	40 mm – 1 mm <i>(only with software variant EX)</i>
	B6	40 mm – 6 mm (max. 300 N and 114 mm/s or 445 mm/s and load-free)
	Assembly	
	VS	Anti-rotation device
	Plug alignment	
	R	right
	L	left
	H	back
	U	below
	Software	
	DM	Dynamic Mode: fast and low load <i>(only for B6 variant)</i>
	SM	Standard Mode: medium speed and medium load <i>(only for B6 variant)</i>
	PM	Power Mode: slow and large load <i>(only for B6 variant)</i>
	EX	Expert Mode
	Interface	
	S	Standard: analog A5 I/O 5 pol. plug
	Zulassungen	
	S	Standard CE
KuLi -	B6 -	VS - R - SM - S - S

Model	KuLi
Stroke length / Max. travel path	40 mm
Spindle pitch	6 mm (Standard) or 1 mm
Max. thrust-/tensile forces	300 N
Max. speed load-free	445 mm/s
Max. holding force (static)	500 N
Supply voltage	24 V DC + 10 % / -25 %
Max. current consumption (Peak)	up to 10 A
Power consumption	240 W
Resolution of the encoder system	+/- 0.15 mm
Repeatability ¹⁾	+/- 0.2 mm
IP protection class	IP 24 (with anti-twist device)
Ambient temperature	+5 to +42° C
Life time (10 N load) ²⁾	20 Mio. Cycles ³⁾

1) With increasing load and number of cycles, the repeat accuracy will change due to wear and tear
2) The service life can vary depending on operation and installation conditions and is load-dependent (see chart)
3) One cycle= extend-pause-retract-pause

- Shock resistance in the static state according to IEC EN 60068-2-27: 50 g 11 ms
- Vibration resistance in the static state according to IEC EN 60068-2-6: 10 - 2000 Hz 5g 10 frequency cycles
- Weight: 0.9 kg (variant with anti-twist device)
- Material: Aluminium & Zinc die-casting

Technical notes with standard-software variants DM/SM/PM

	Dynamic Mode	Standard Mode	Power Mode
Max. thrust/tensile forces	100 N	200 N	300 N
Mean speed at 40 mm	267 mm/s	160 mm/s	114 mm/s
Max. travel time for 40 mm	150 ms	250 ms	350 ms
Max. perm. cycle rate (Cycle/Min.) ¹⁾	46	29	12
Duty cycle Moving time per cycle* Holding time per cycle*	23 % 0.3 s 1 s	24 % 0.5 s 1.6 s	13 % 0.7 s 4.5 s

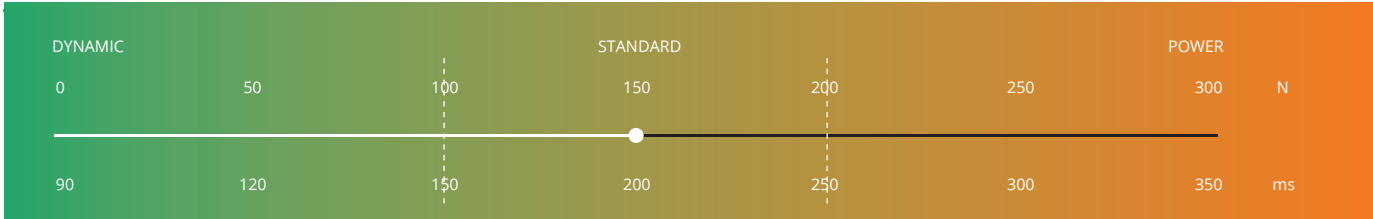
1) One cycle= extend-pause-retract-pause

Attention!

- ▶ This technical data only applies for KuLi with 6 mm spindle pitch (KuLi-B6-XX-X-EX-X-X)
- ▶ For the technical specifications for KuLi with 1 mm pitch (KuLi-B1-XX-X-EX-X-X), please consult the manufacturer
- ▶ Data determined at room temperature
- ▶ Exposure to radial forces is not allowed

Parameterization with standard-software variants

Finer force-travel time adjustments are possible with software variants KuLi-XX-X-DM/SM/PM in 50 N-increments with the help of the parameterization software by computer (if necessary).
The software can be downloaded from www.ketterer-drives.com on the product page.
Transmission of the parameterization via the connect box



Parameterization with software mode Expert (Ex)

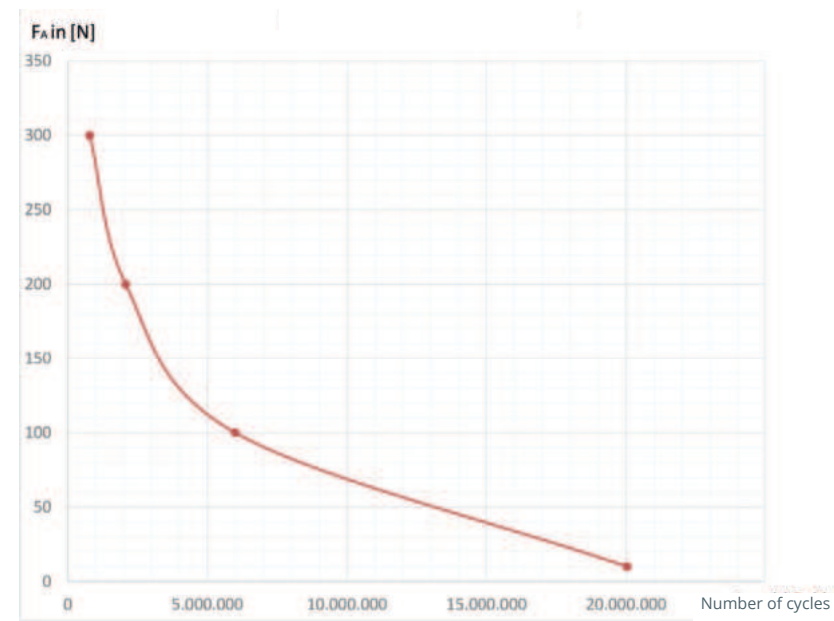
Expert Mode (KuLi-XX-XX-X-EX-X-X) offers a maximum of adjustment options to your application. Settings possible in the following areas.

	Expert Mode (6 mm)	Expert Mode (1 mm)
Thrust/tensile force	0 - 300 N	0 - 500 N
Ø Speed at 40 mm (mm/s)	445 - 114 mm/s	75 - 15 mm/s
Travel time for 40 mm (s)	0.09 - 0.35 s	0.54 - 2.67 s
Perm. number of cycles (Cycles/Min.)*	103 - 12	40 - 6

* One cycle= extend-pause-retract-pause

Chart: Dependency of service life on axial load

The service life can vary depending on operation and installation conditions and is load-dependent.

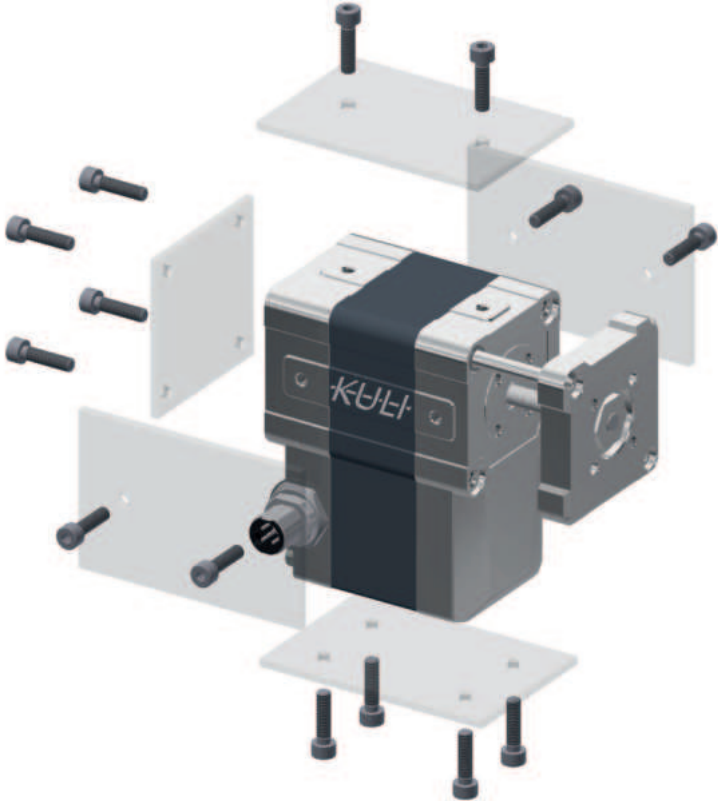


Pin Placement



The pin position can be selected flexibly to suit the application

Mounting for accessories



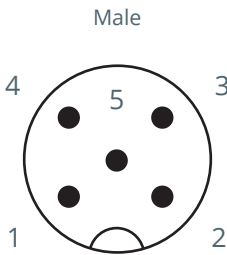
5-pin M12 connector

- M12-plug with a digital input for the command signal and with two digital output for feedback signals and position status
- According to the connector current carrying capacity definition, permanent operation of KuLi is not a permanent load for the power supply connector
- The required short-term current consumption of 10 A for KuLi is permissible for the connector operation

Plug size	M12
Number of contacts	5
Plug/ socket	Plug
Contact Gender	Male
Nominal current (current carrying capacity)*	4 A , 60 V
Coding	A
Housing alignment	Straight

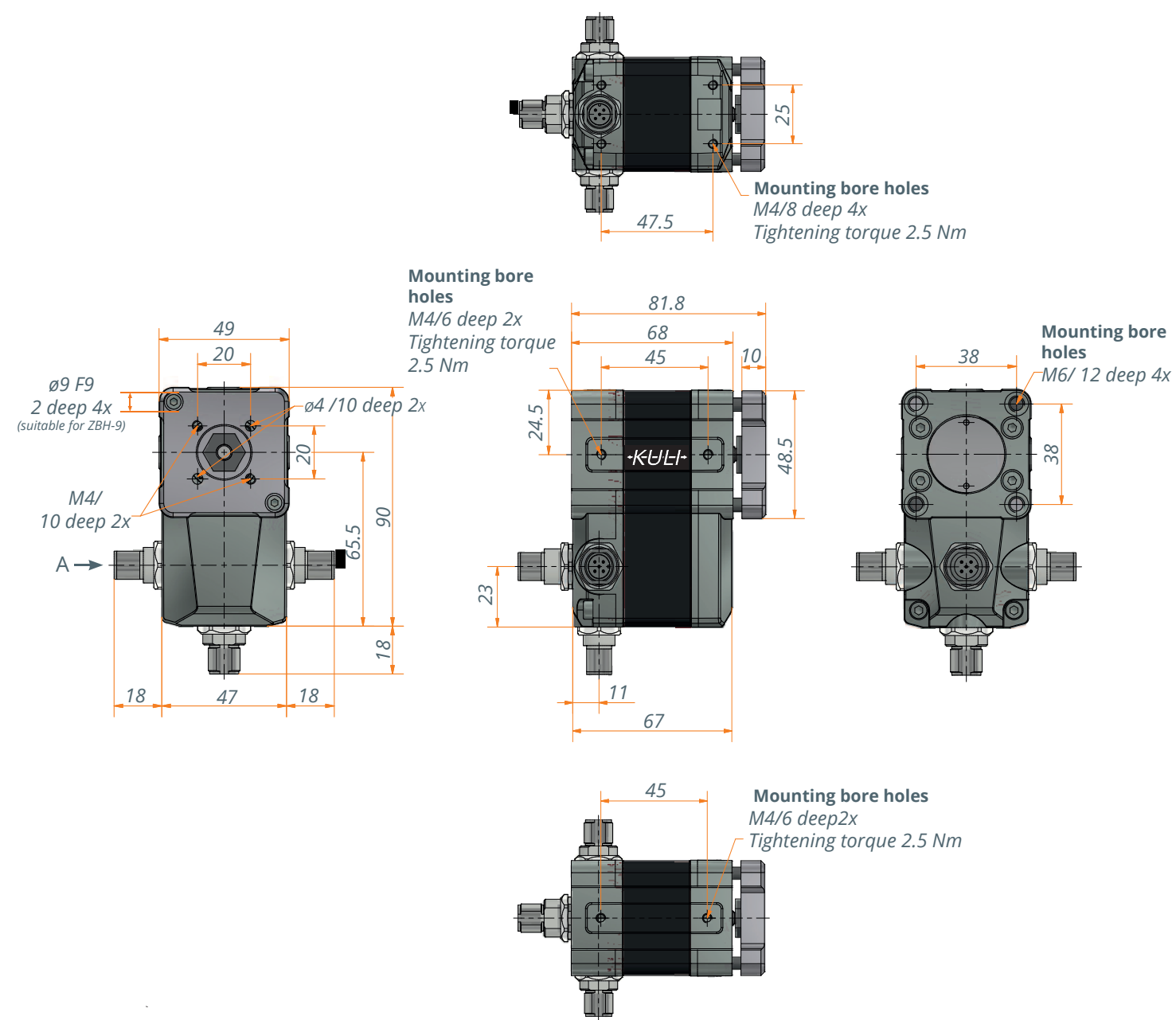
* **Current carrying capacity** determines which current can flow permanently and simultaneously via all contacts. If not all contacts are simultaneously using the maximum permissible current, a higher current can flow via individual contacts

View A



Pin-configuration KuLi
PIN 1: 24 VDC
PIN 2: S1 (RS232-TXD)
PIN 3: GND
PIN 4: Control input (RS 232-RXD)
PIN 5: S2

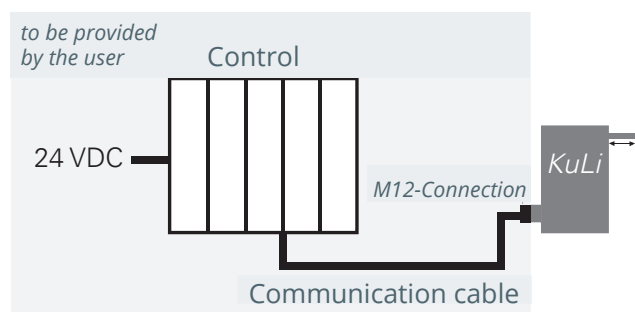
KuLi with anti-twist-device



KuLi – child’s play to operate

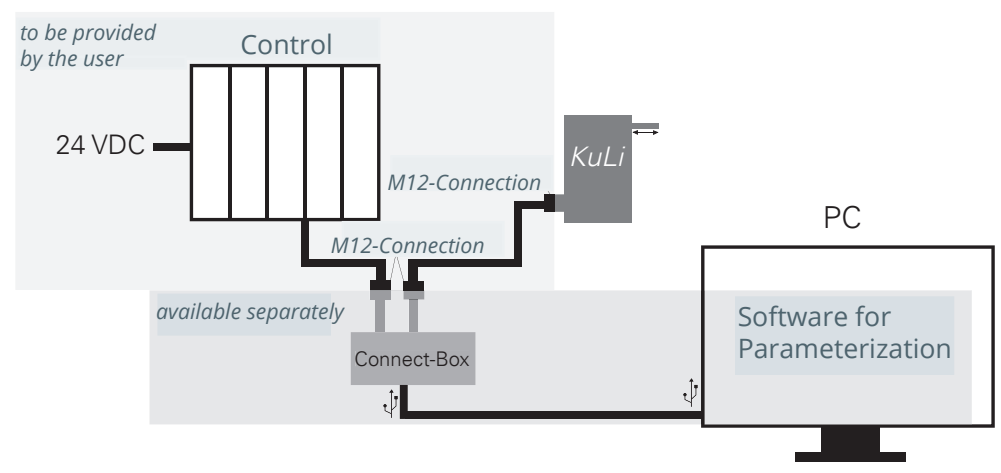
Simple I/O control:
The KuLi short-stroke linear drive can be connected to the controller with a simple M12 cable.
In I/O mode the drive is controlled via the digital input (control input).

Drive commands:
0V on the control input -> thrust rod retracts
24V on the control input -> thrust rod extends



Parameterization via the Connect Box

Simple configurations are possible by computer with the help of the Connect Box. To do this, the Connect Box is connected between the controller and the KuLi and connected by a USB cable to a computer. The software is available for download at www.ketterer-drives.com on the product page



Accessories	Order number
Connect-Box	3215.49-01

Requirements for the power supply unit

The power supply must be able to withstand the regenerative voltage up to 35 VDC.

Electric motor drive system for large umbrellas 3062



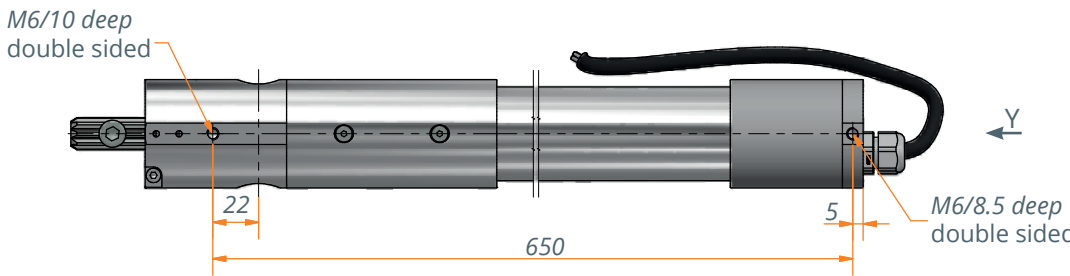
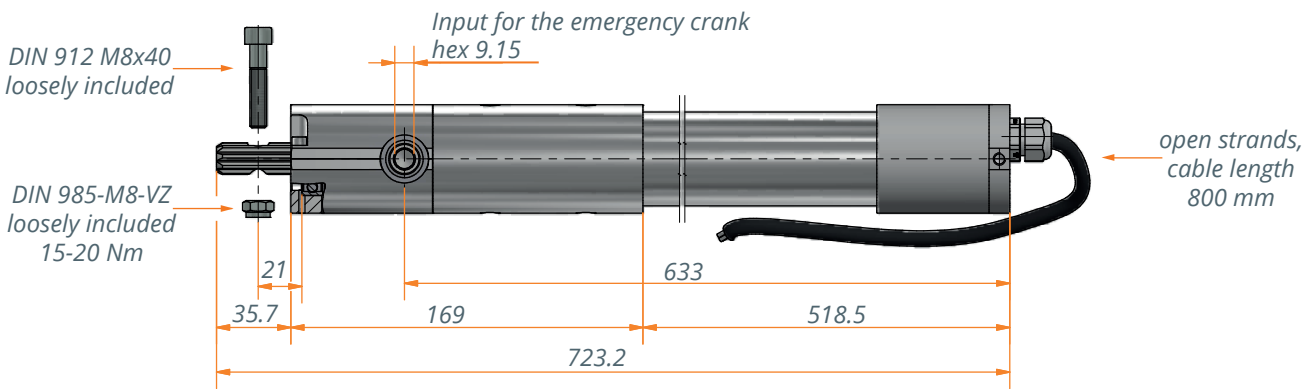
Electric motor drive system for integration into the telescopic tubing system, consisting of motor, controller, gear and operating elements. The drivetrain is designed for high push and pull forces and opens/closes the large umbrella effortlessly at the push of a button. The set also includes a hand crank for emergency operation as well as a single-channel remote control. The system can be adapted to the pole tube inner diameter (DXX > 53mm), if required by the customer.

Special features

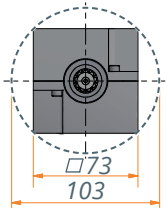
- Electric motor spindle drive, completely integrable in the pole tube
- Transmission ratio of drivetrain, electric drive – spindle $i = 1:1$
- Transmission ratio of drivetrain, crank – spindle $i = 1:4$
- Maintenance-free
- Flexibly adaptable to the customer needs:
Outer contour (min. 53 mm / max. 73 mm)

	3062.00-V01DXX
Voltage	230 V~/50 Hz
Electric current	1.0 A
Switch-on current (factor)	x 1.2
Motor power consumption	220 W
Drive output power	approx. 60 W
Rated torque / Nominal torque / peak torque	5 Nm / 7 Nm short time
Idle running speed	134 RPM
Rated speed	120 RPM @ 5 Nm
Mode of operation	2,5 min on, 45 min off
Ambient temperature / humidity	Operation: T = -10 °C to +60 °C / H max. 90% Storage: T = -15 °C to +70 °C / dry, non-condensing
Operating temperature, motor	Overheating protection with switch-off at approx. 110 °C
Protection class	IP 44
Transmission ratio <i>i</i> drivetrain electric drive - spindle	1:1
External diameter D	XX mm (Preferred variant 53 mm)
Speed of travel under nominal load	8 mm/s*
Max load peaks tensile-/compressive forces static	10,000 N

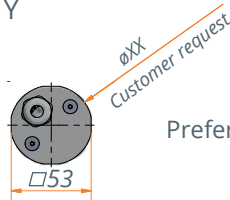
* in combination with spindle 25x4



Customized outer contour



View Y



Preferred variant of Ketterer
3062.00-V01D53

Outer contour of the drive can be realized customer-specific (DXX or QXX)
DXX max. round = Ø 73 mm
DXX min. round = Ø 53 mm
QXX max. square = □ 73 mm
103 mm > QXX > 73 mm : the outer contour has a rectangular basic shape with rounded corners.

Technical notes

- If installed vertically, it is essential to protect the drive against dripping water from above.
- The hand crank may only be used as an emergency hand crank; the drive must be disconnected from the power supply system. The planetary gear of the motor can be damaged if the hand crank is moved too quickly.
- Attention: Spindle systems with a spindle pitch of > 3 mm are no longer self-locking. Check the self-locking effect in the application!

Scope of delivery

- 1 x electric motor spindle drive, consisting of motor incl. controller and gear
- 1 x emergency hand crank with integrated ejection mechanism
- 1 x single-channel remote control



Attention: Spindle and spindle nut must be designed individually and ordered separately

Inline spindle drive 3120



Description

Motorized solution for the individual sit-stand workplace. Stepless height adjustment to customer specific stroke.
A slender design allows to integrate the complete inline actuator into the tube of a table leg.

Special features

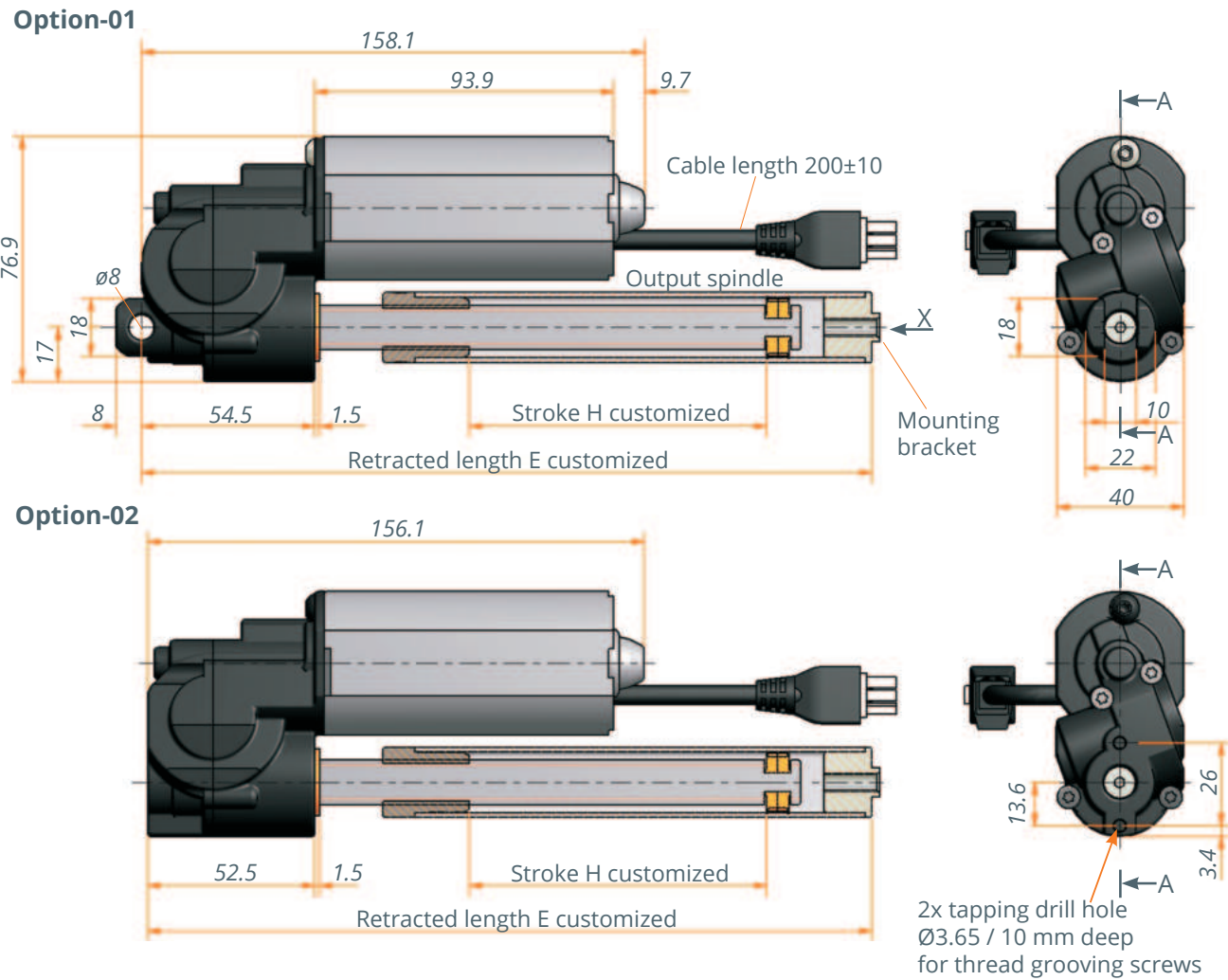
- Simple mounting
- Integrated position measuring system
- Single telescopic function
- Various spindle lengths and different spindle pitches are possible

Technical data

Model	3120.00-V01EXXXHXXX	3120.00-V02EXXXHXXX
Motor	DC Motor 24 V	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30
Duty cycle	20% (at 5 min.)	20% (at 5 min.)
Idle running speed	100 rpm (24 V) 150 rpm *	100 rpm (24 V) 150 rpm *
Max. stroke	Retracted length -111 mm	Retracted length -109 mm
Type of spindle	SG14x16P4 RH **	SG14x16P4 RH **
Max. lifting force	800 N	800 N
Max. drive torque	3 Nm	3 Nm
Movement speed	43 mm/s	43 mm/s

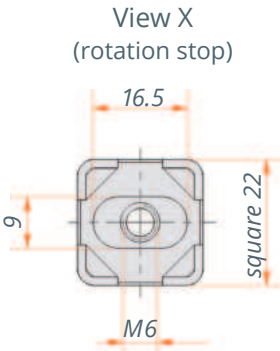
* In combination with LogicData control box Compact-3

** Further types of spindles on request



Technical notes

- Depending on the the spindle pitch, the system could back-drive.



Inline spindle drive 3122

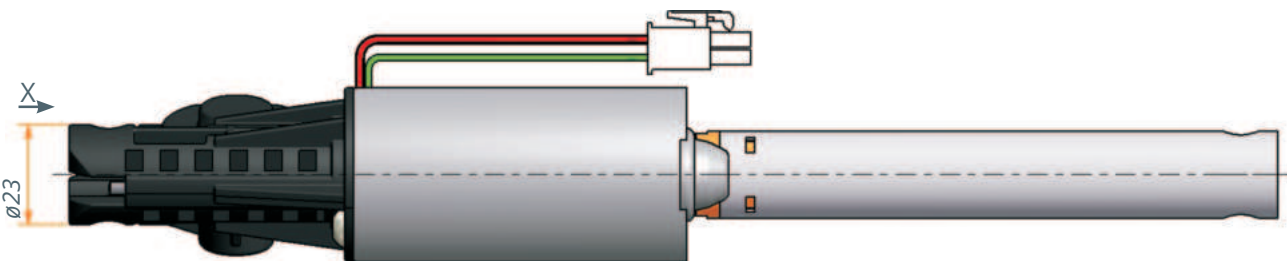
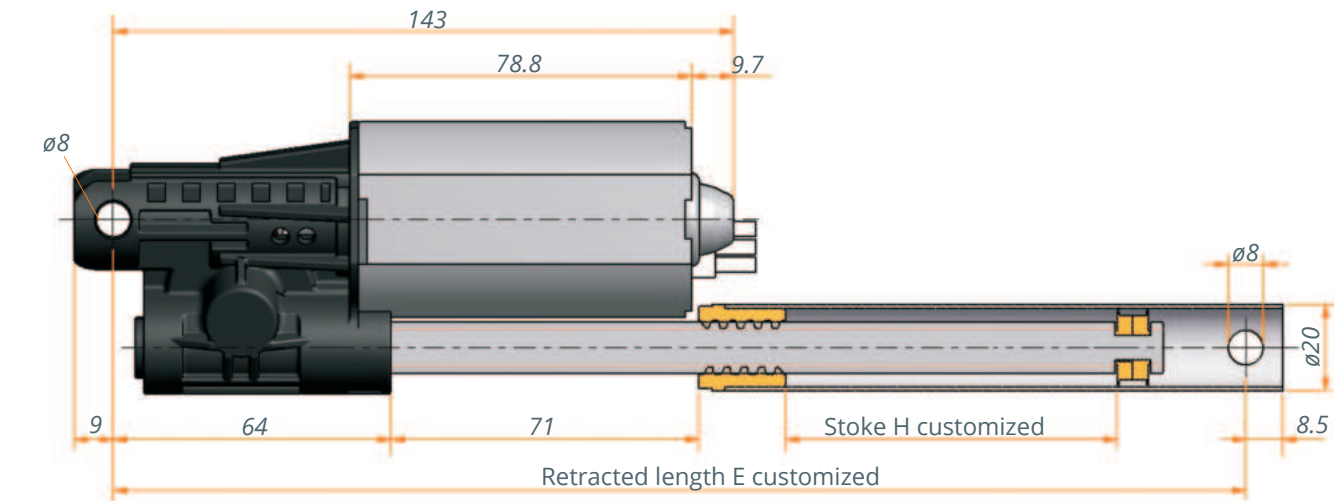


Description

Motorized solution for the individual sit-stand workplace. Stepless height adjustment to customer specific stroke.
A slender design allows to integrate the complete inline actuator into the tube of a table leg.

Special features

- Simple mounting
- Integrated position measuring system
- Single telescopic function
- Various spindle lengths and different spindle pitches are possible



Technical data

Model	3122.00-V01EXXXHXXX
Motor	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle	20% (at 5 min.)
Idle running speed	180 rpm (24 V) 180 rpm *
Max. stroke	Retracted length -171 mm
Type of spindle	SG12x16P4 RH **
Max. lifting force	600 N
Max. drive torque	2.5 Nm
Movement speed	48 mm/s

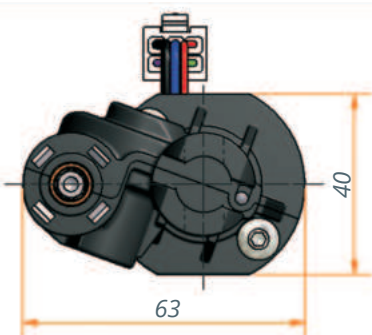
* In combination with LogicData control box Compact-3

** Further types of spindles on request

Technical notes

- Depending on the the spindle pitch, the system could back-drive

View X



Drive with throughgoing spindel 3146

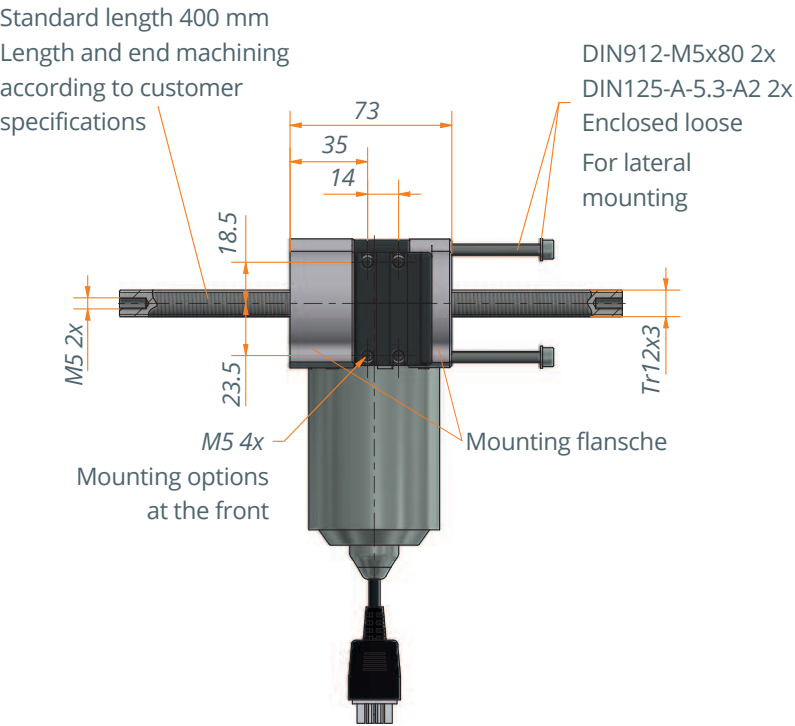
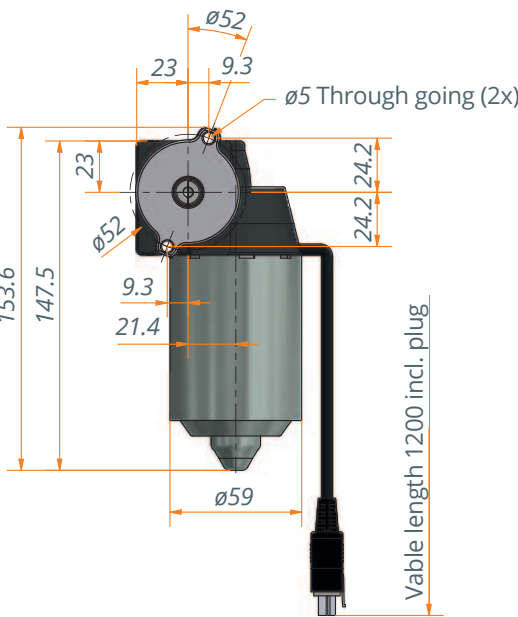


Description

Direct current motor with worm gear and through-going not rotating spindle for push and pull movements.

Special features

- Two integrated Hall sensors for detecting the rotations and the direction of rotation
- With through-going spindle TR12x3 as standard
- Other spindle types available on request
- Spindle material, finishing and length of the spindle according to customer specifications

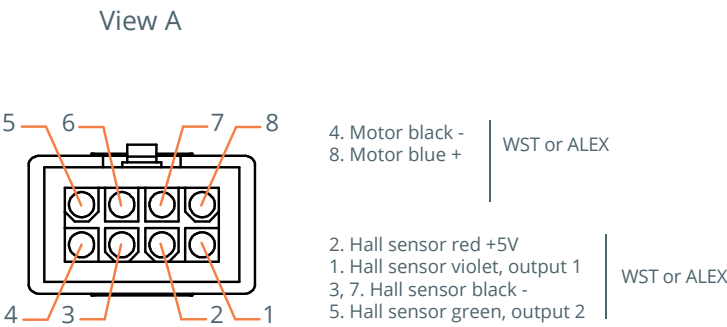


Technical data

Model	3146.00-0003
Drive motor	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle	20% (at 5 min.)
Idle running speed	115 rpm (24 V) 120 rpm *
Type of spindle	Tr12x3 RH
Spindle length	in standard 400 mm Customized lengths possible
Max. drive torque	1200 N
Movement speed	6 mm/s

* in combination with LogicData Compact-3 control box

Pin assignment



Technical notes

- Depending on the the spindle pitch, the system could back-drive
- Attention: The mounting flange are only plugged together on the motor housing. When installing them in the system, the mounting holes on the side should be used and screwed on with the screws supplied loose. If side mounting is not required, the mounting flange can simply be omitted
- The drive can be installed both horizontally and vertically

Electric drive with synchronous telescopic spindle 4114

Description

Electric motor solution for the individual sit-stand workplace. Smooth running stepless height adjustment.

Special features

- Simple mounting
- Integrated position measuring system
- Twice telescopic
- Electronic synchronisation with up to 24 actuators
- Synchronous movement of the spindle units, double stroke speed

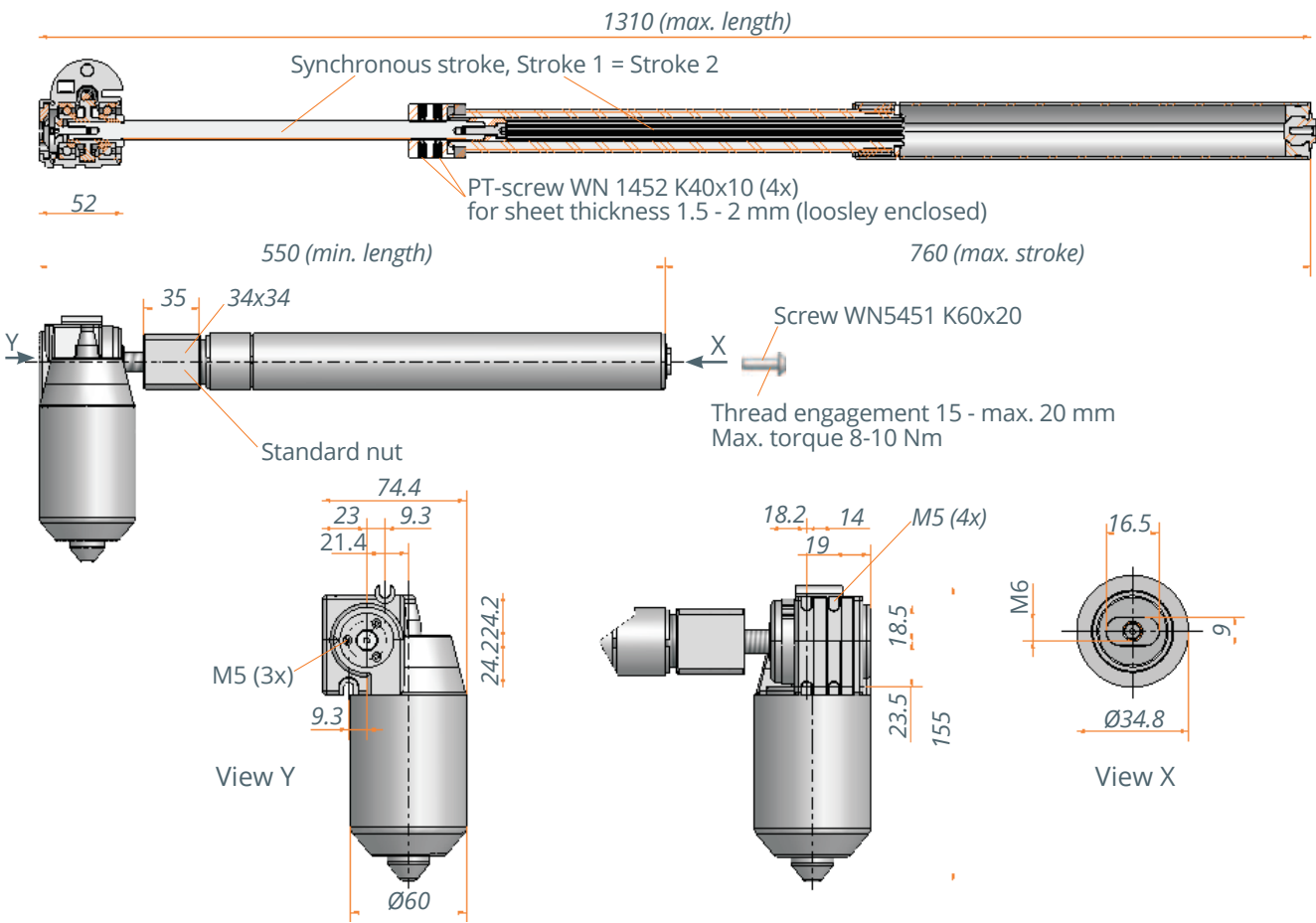


Technical data

Model	4114
Motor	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle	20% (at 5 min.)
Idle running speed	100 rpm (24 V) 150 rpm*
Max. stroke	Retracted length -170 mm x2
Type of spindle	SG25x12P6 RH**, SG12x12P4 RH
Max. lifting force	800 N
Max. drive torque	5 Nm
Movement speed	50 mm/s*

* In combination with LogicData control box Compact-3

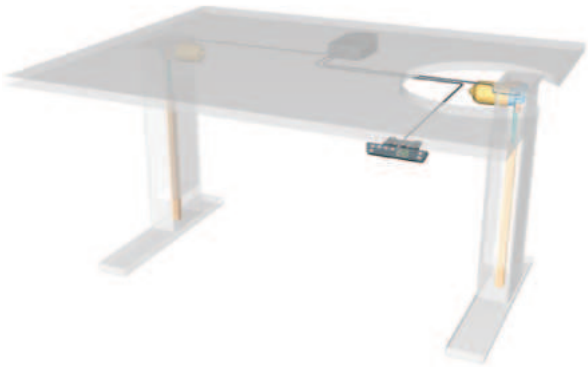
** Further types of spindles on request



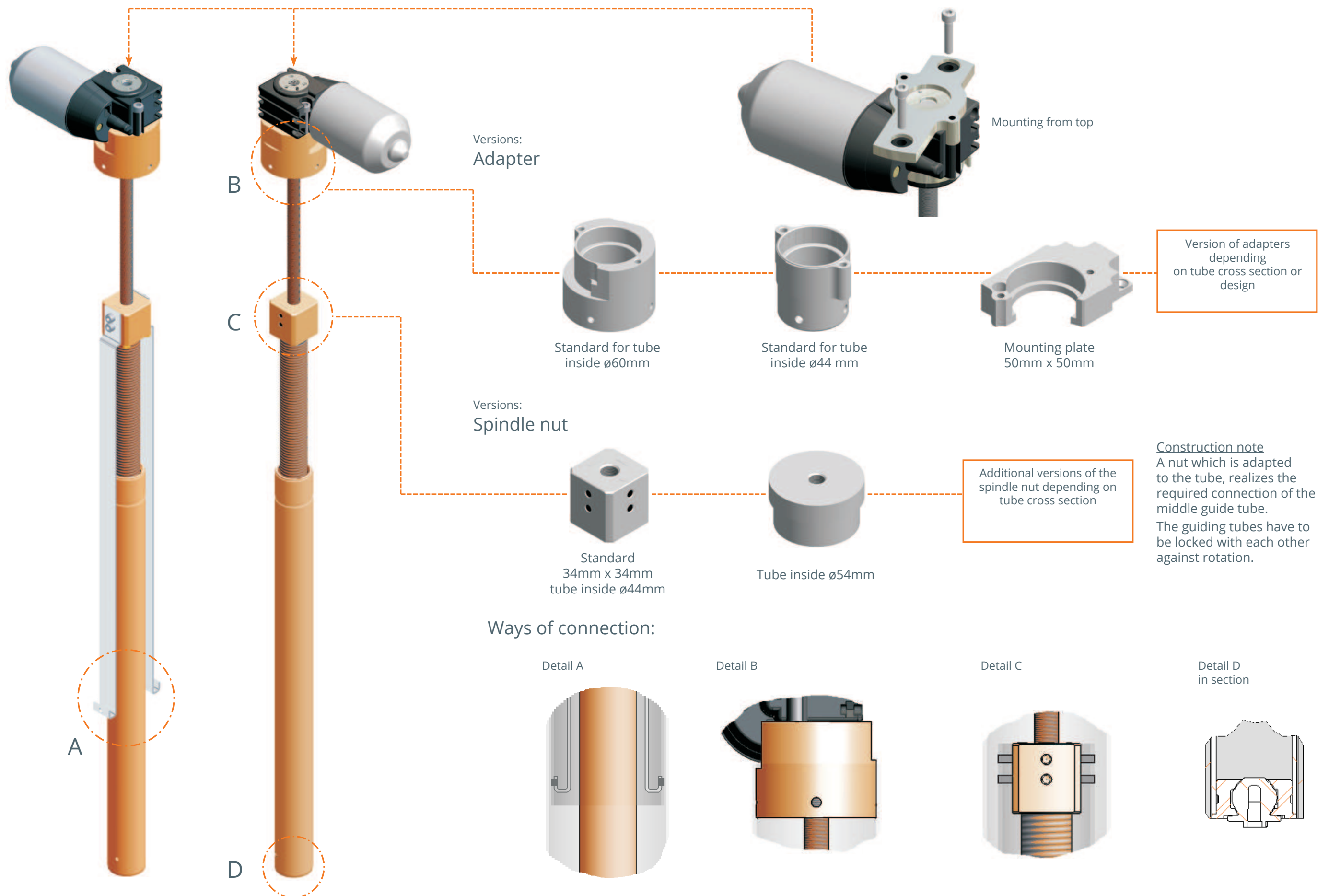
Technical notes

- Depending on the the spindle pitch, the system could back-drive.

Application example



Ways of installation



Electric spindle drive 4640



Description

Motorized solution for sit-stand workplace. Stepless height adjustment to customer specific travel distance.

Special features

- Simple mounting
- Integrated position measuring system
- Single telescopic function
- Synchronisation with up to 26 actuators
- Various spindle lengths and different spindle pitches are possible

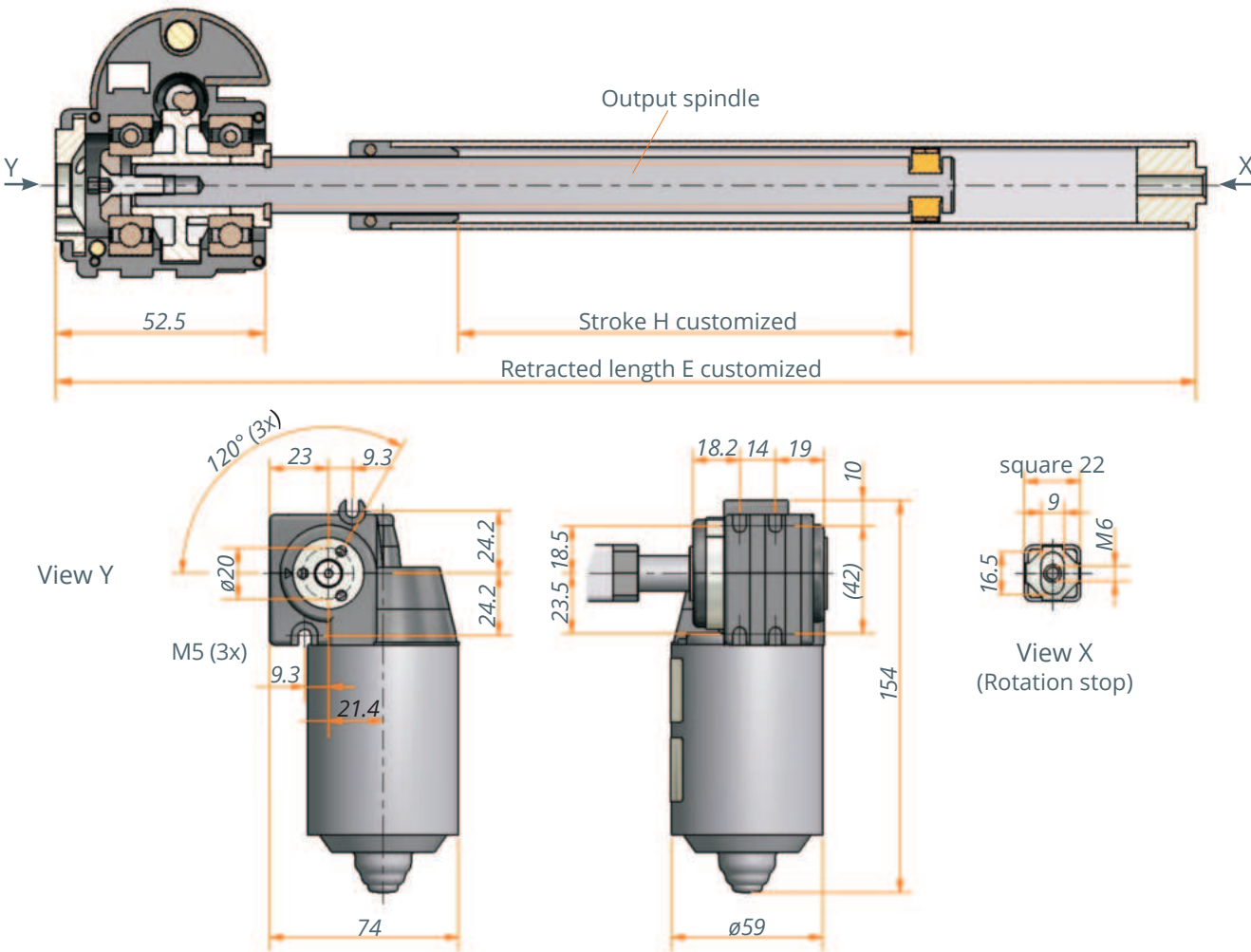


Technical data

Model	4640.00-V01EXXXHXXX
Motor	DC Motor 24 V
Sensor/Power supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle	20% (at 5 min.)
Idle running speed	100 rpm (24 V) 150 rpm *
Max. stroke	Retracted length -109 mm
Type of spindle	SG14x16P4 RH **
Max. lifting force	800 N
Max. drive torque	5 Nm
Movement speed	40 mm/s

* In combination with LogicData control box Compact-3

** Further types of spindles on request



Technical notes

- Depending on the the spindle pitch, the system could back-drive.

Application example



Electric spindle drive 4642



Description

Motorized solution for sit-stand workplaces. Stepless height adjustment to customer specific travel distance.

Special features

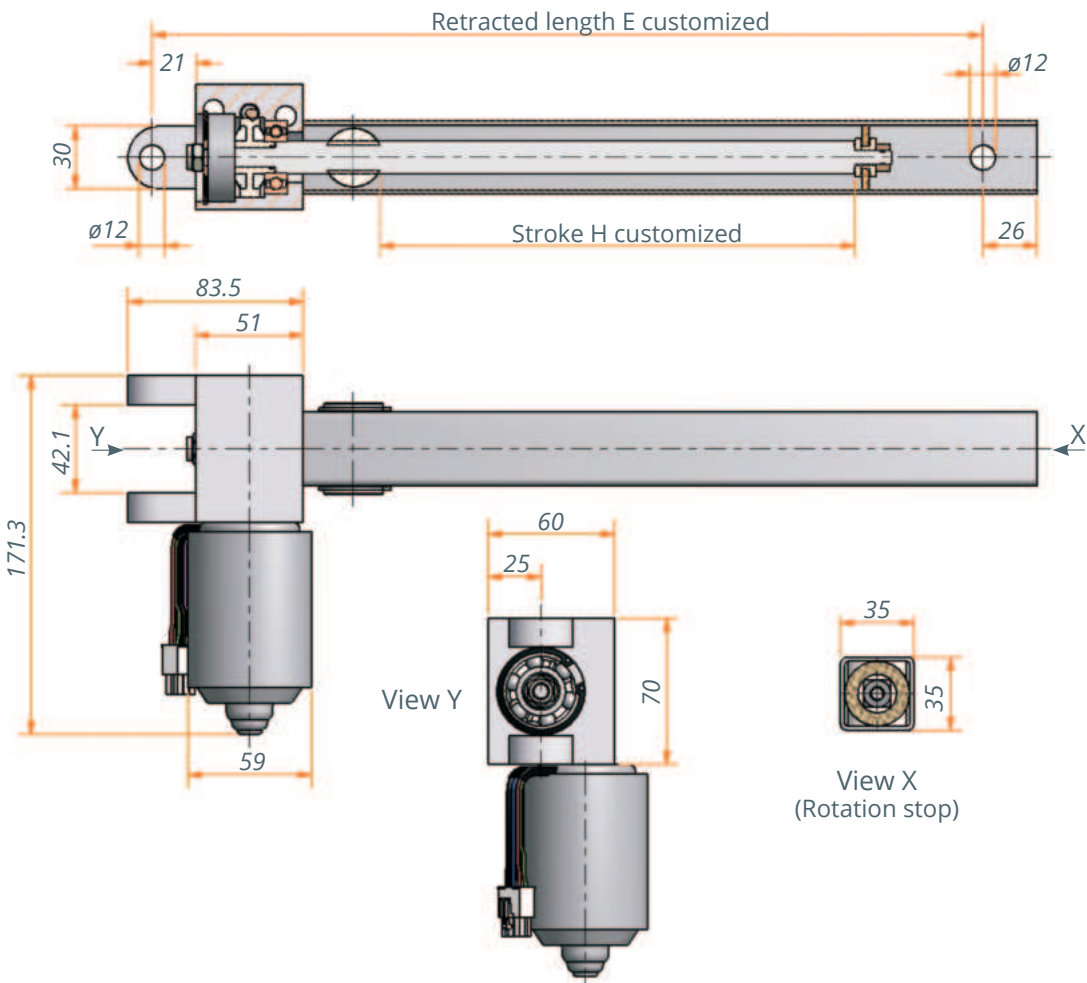
- Simple mounting
- Integrated position measuring system
- Single telescopic function
- Synchronization with up multiple actuators
- Two spindle pitches are available
- Installation length and stroke are customizable

Technical data

Model	4642.00-V01EXXXHXXX	4642.00-V02EXXXHXXX
Motor	DC Motor 18 V	DC Motor 18 V
Sensor/Power supply	Hall/5 V DC/0.3 A	Hall/5 V DC/0.3 A
Protection class	IP30	IP30
Duty cycle	20% (at 5 min.)	20% (at 5 min.)
Idle running speed	100 rpm (24 V), 150 rpm *	100 rpm (24 V), 150 rpm *
Max. stroke	Retracted length -135 mm	Retracted length -135 mm
Type of spindle	Tr16x8P4 RH**	SG14x16P4 RH **
Max. lifting force	1500 N	800 N
Max. drive torque	5 Nm	5 Nm
Movement speed	20 mm/s	40 mm/s

* In combination with LogicData control box Compact-3

** Further types of spindles on request



Technical notes

- Depending on the the spindle pitch, the system could back-drive.

Electric spindle drive 4643

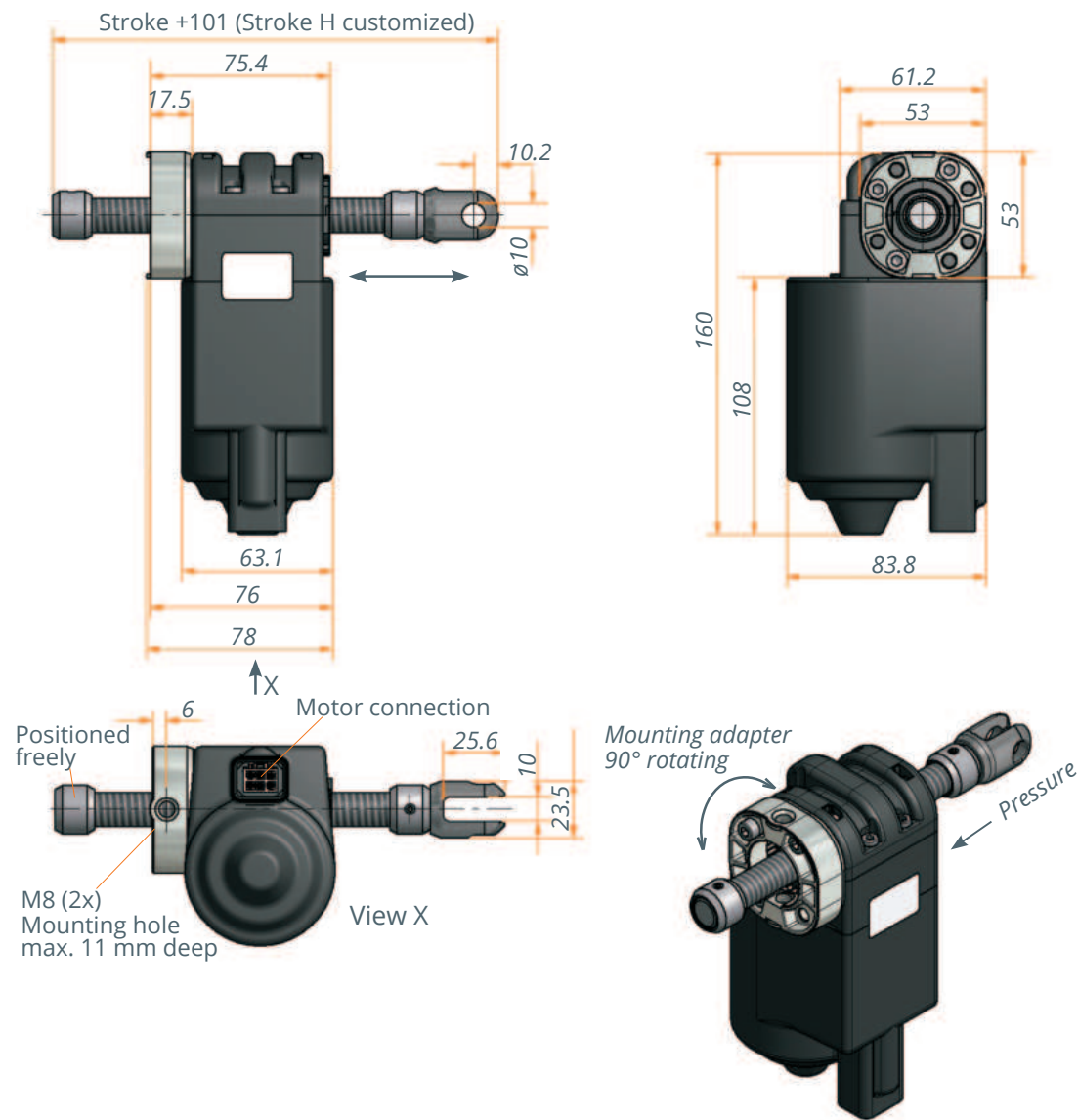


Description

Powerful motorized drive unit with push-pull spindle and electromechanical end-switches. Stroke to customer demands. By simplified control function, an additional distance measuring system is not required.

Special features

- Very powerful
- For very high holding torques
- Simple installation
- Two electromechanical end-switches
- Can be adapted easily by fork crown and mounting adapter flange



Technical data

Model	4643.00-V01EXXXHXXX
Motor	DC Motor 18 V
Sensor/Powerd supply	Hall/5 V DC/0.3 A
Protection class	IP30
Duty cycle	20% (at 5 min.)
Type of spindle	Tr14x3 RH
Max. pressure force	3000 N
Movement speed	4 mm/s*

* In combination with LogicData control box Compact-3

** Further types of spindles on request

Technical notes

- Depending on the the spindle pitch, the system could back-drive.

Control box Compact-e-3



Description

Compact is the control unit for hight adjustable workstations and is matched to all Ketterer drives.

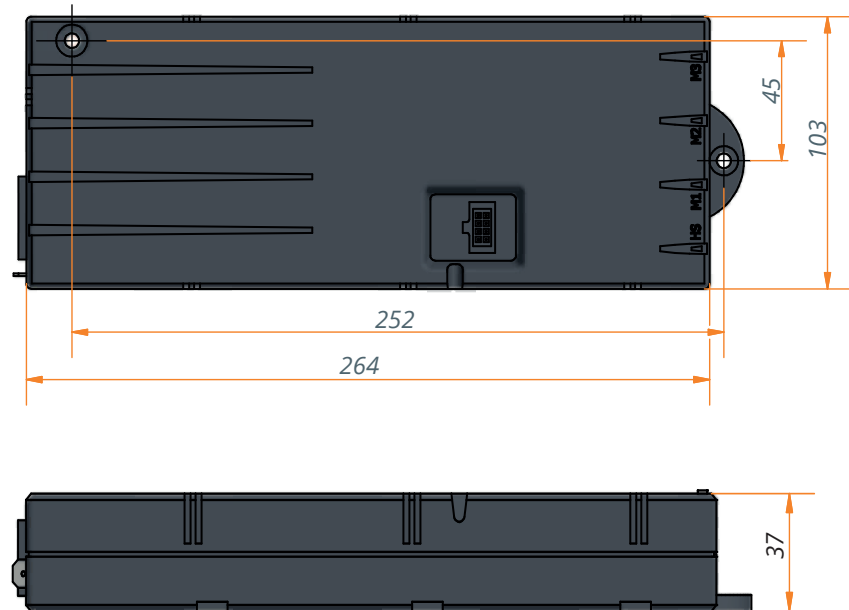
With one control unit can be controlled:

- up to three drives in parallel structure (one or two drives follow the master drive)
- two drives synchronously (drives are individually controlled)

Special features

- Control box Compact^{eco}, Firmware-Version 1.9
- Voltage supply variants: 230 V and 110 V
- Freely stroke with hand switch with display (HSU-MDF-4M2-LD or TOUCHfx) programmable
- Ketterer can preprogram a desired stroke
- Duty cycle 2 min. ON/ 18 min. OFF
- Power cable has to be ordered separately






Technical data



further details under www.logicdata.at

Control box	Description	Drives for use with
1000.49-36 / Compact-e-3-KTS-4778-EU	one to three motors parallel	(4778, 4779)**
1000.49-46 / Compact-e-3-KTS-4778-US	one to three motors parallel	
1000.49-37 / Compact-e-3-KTS-4779-EU	one to three motors parallel	
1000.49-47 / Compact-e-3-KTS-4779-US	one to three motors parallel	
1000.49-01 / Compact-e-3-KTS-4630-EU	one to three motors parallel	(3143.00-V01/ V02)* (4114, 4630, 4773) * 4643 **
1000.49-02 / Compact-e-3-2-KTT-4630-EU	two motors synchronous	
1000.49-11 / Compact-e-3-KTS-4630-US	one to three motors parallel	
1000.49-12 / Compact-e-3-2-KTT-4630-US	two motors synchronous	
1000.49-28 / Compact-e-3-KTS-3143.00-V03-EU	one to three motors parallel	3143.00-V03**
1000.49-29 / Compact-e-3-2-KTT-3143.00-V03-EU	two motors synchronous	
1000.49-38 / Compact-e-3-KTS-3143.00-V03-US	one to three motors parallel	
1000.49-39 / Compact-e-3-2-KTT-3143.00-V03-US	two motors synchronous	
1000.49-03 / Compact-e-3-KTS-3130-EU	one to three motors parallel	(3120, 3121, 3130)**
1000.49-04 / Compact-e-3-2-KTT-3130-EU	two motors synchronous	
1000.49-13 / Compact-e-3-KTS-3130-US	one to three motors parallel	
1000.49-14 / Compact-e-3-2-KTT-3130-US	two motors synchronous	
1000.49-05 / Compact-e-3-KTS-3122-EU	one to three motors parallel	3122 **
1000.49-06 / Compact-e-3-2-KTT-3122-EU	two motors synchronous	
1000.49-15 / Compact-e-3-KTS-3122-US	one to three motors parallel	
1000.49-16 / Compact-e-3-2-KTT-3122-US	two motors synchronous	
1000.49-09 / Compact-e-3-KTS-3133.00-EU	one to three motors parallel	3133.00
1000.49-10 / Compact-e-3-2-KTT-3133.00-EU	two motors synchronous	
1000.49-19 / Compact-e-3-KTS-3133.00-US	one to three motors parallel	
1000.49-20 / Compact-e-3-2-KTT-3133.00-US	two motors synchronous	
1000.49-07/ Compact-e-3-KTS-3133.48-EU	one to three motors parallel	3133.48 **
1000.49-08 / Compact-e-3-2-KTT-3133.48-EU	two motors synchronous	
1000.49-17 / Compact-e-3-KTS-3133.48-US	one to three motors parallel	
1000.49-18 / Compact-e-3-2-KTT-3133.48-US	two motors synchronous	

* Motor cable 4138.53-01/ Length 1 m or 4138.53-02/ Length 2 m
** Motor cable 3122.53-02/ Length 1.75 m

Power cable	Connector
3143.53-22 / Power cable LOG-CBL-PWK	plug for control with 3-pin Schuko - Europe 
3143.53-23 / Power cable LOG-CBL-PWK-UK	for control with 3-pin plug - UK 
3143.53-24 / Power cable LOG-CBL-PWK-DK	for control with 3-pin plug - Denmark 
3143.53-25 / Power cable LOG-CBL-PWK-SW	for control with 3-pin plug - Schweiz 
3143.53-28 / Power cable LOG-CBL-PWK-USA	for control with 3-pin plug - USA 

Technical notes

- For stroke programming or changing on site a hand switch with display is always required (see hand control and motor cables)
- Please note the permissible duty cycle of the controller. If the operating times are exceeded the controller switches off automatically
- Attention: Electric drives usually have a shorter-duty cycle than controllers and are thus system-leading.

Hand control for controller Compact and motor cables



Ketterer's range of accessories offers a large selection of hand switches in various designs, with or without display, with simple or touch buttons and various motor cables to suit the respective Ketterer drives.

Special features

- Stepless adjustment
- User-defined and application-oriented control of your stepless adjustment
- Can be used with the Compact controller and all Ketterer motor drives

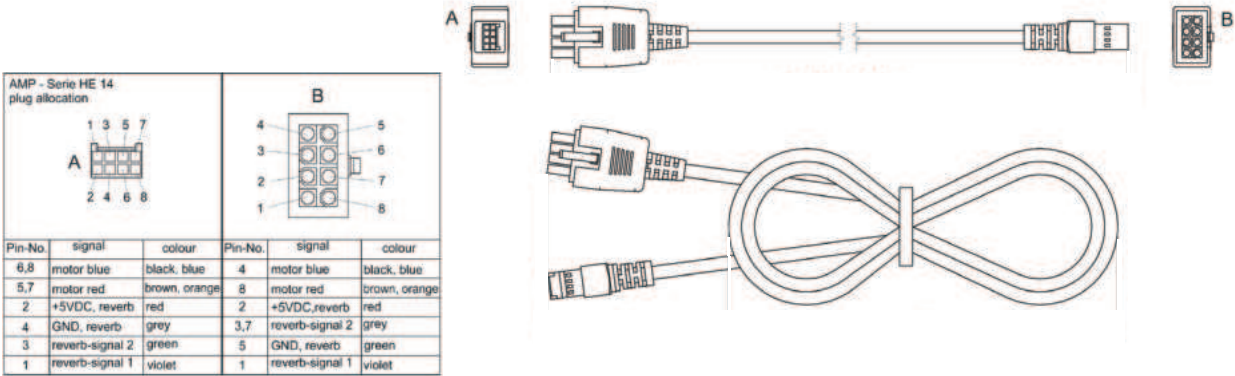
Technical data

Motor cable	For use with drives
4138.53-01/ Length 1 m	4630, 4773
4138.53-02/ Length 2 m	
3122.53-02/ Length 1,75 m	4643, 3120, 3121, 3122, 3133.48

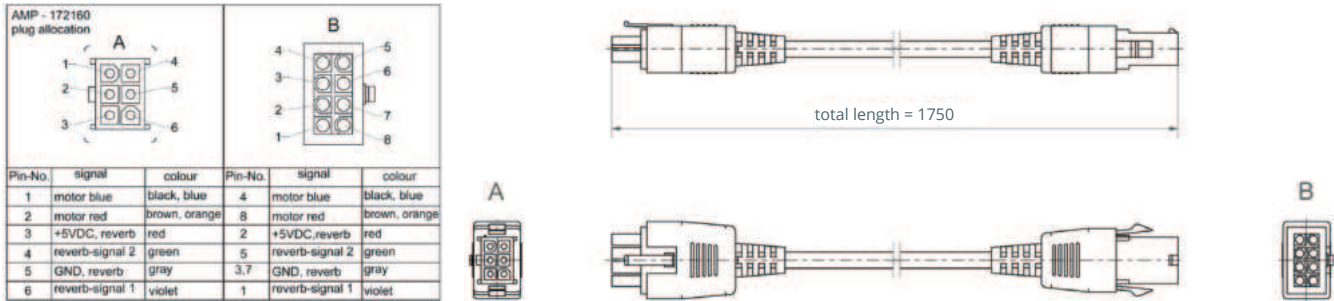
Hand switch	Description
3143.47-50/ HSU-C-FL-SM-LD	Switch with display and four memory positions, stroke heights and two up-down buttons, free programmable
3143.47-48/ TOUCH-FX-MDF-KM-LD	Switch with display and four memory positions, with touch & click function
3143.47-30/ HSM-OD-2-LD	Simple hand control, up-down
3143.47-42/ TOUCH-Basic-UD-2-LD	Simple hand control up-down, with touch function
3143.47-0003/ Receiver, remote control	RF remote control consisting of RF receiver, remote control (including battery and mounting screws), and manual

* Further details under <http://www.logicdata.at>

Motor cable 4138.53-01: 1 m long
4138.53-02: 2 m long



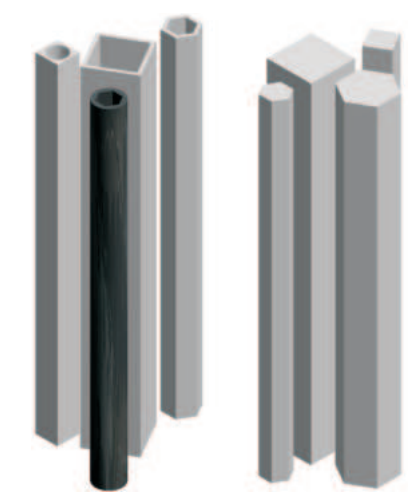
Motor cable 3122.53-02: 1.75 m long



Technical notes

- Hand switches with touch function require the Compact controller with firmware Version 1.9
- For stroke programming or changing the travel on site a hand switch with display is always required

Profile tubes - Profile rods



Description

You get profile rods and profile tubes as rods in a length of 3 m.

Special features

- Profile rods are made of steel and drawn according to DIN EN 10278 (hexagon bars)
- Profile rods are made of steel and drawn according to DIN EN 10278 (square bars)
- Profile tubes are made of steel, brass or aluminium (black anodized) and drawn according to DIN EN 10305
- Further profile rods, profile tubes, special lengths and machining on request

Profile tubes drawn according to DIN EN 10305

Item number Steel version	Item number Brass version	Item number Aluminium black (anodised) Aluminium-tube DIN 17611 / quality E6	Outer dimension	Inner dimension
209R0.08.0-6kt5	-	-	Ø8	hex 5 mm
209R0.09.0-6kt6-SL	-	-	Ø9	hex 6 mm
209R0.10.0-6kt6	-	-	Ø10	hex 6 mm
209R0.10.0-6kt7	-	-	Ø10	hex 7 mm
209R0.12.0-4kt7	203R0.12.0-4kt7	-	Ø12	square 7 mm
-	203R0.12.0-4kt8	-	Ø12	square 8 mm
209R0.12.0-6kt6	-	201R0.12.0-6kt6SL*	Ø12	hex 6 mm
-	-	201R0.12.0-6kt7*	Ø12	hex 7 mm
-	-	201R0.12.0-6kt8*	Ø12	hex 8 mm
209R6.09.0-6kt6	-	-	hex 9 mm	hex 6 mm
209R6.12.0-6kt9	-	-	hex 12 mm	hex 9 mm

* Due to the manufacturing process, the aluminium tubes with inner profile always have a slight twist. Therefore, it cannot be ruled out that a 6kt profile bar will jam when pushed through.

Profil rods drawn according to DIN EN 10278 (hexagon and square bars)

Item number Steel version	Item number Brass version	Outer dimension
209S4.06.0	203V4.06.0	square 6mm
209S6.05.0		hex 5 mm
209S6.06.0		hex 6 mm
209S6.07.0		hex 7 mm
209S6.08.0	203V6.08.0	hex 8 mm
209S6.09.0		hex 9 mm
209S6.12.0	203V6.12.0	hex 12 mm

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