



## e-drive 1

### Start and drive assistance for hospital and care beds

#### Forward-looking

The average patient weight has doubled around the globe since 1980. Hospital and care bed manufacturers responded to this and introduced beds with higher safe workloads on the market.

Nursing staff must be able to easily move these beds although the loads are higher. For this reason, we developed the **e-drive 1** System in cooperation with LINAK.

#### Makes work easier

The core of this drive system is a DC gear motor that transmits its power to the drive wheel. The TENTE **e-drive 1** system assists the user to move beds with heavy loads in an easier way. The starting and moving in forward and backward direction as well as the stopping is clearly facilitated.

In addition to the easier handling, time can be saved and days of user sickness caused by the high stress can be minimised.

The drive wheel is mounted centrally to the bed and equipped with the LINAK CUDM control unit.

In standby, the **e-drive** is powered up to maintain the flexibility in the patient room.

If the drive system is activated, the drive wheel is lowered to the floor and the **e-drive** facilitates the start-up.

The **e-drive 1** System is designed for indoor use on level floors.

#### Housing:

Made of pressed steel, zinc plated

#### Wheel:

UFF

Wheel centre: Solid rubber, non-marking,  
Shore: 63 A

Wheel size: 125 mm Ø

#### Advantages

- Effortless starting and stopping of heavy medical beds
- Easier manoeuvrability
- Applying the **e-drive** saves time
- High-quality tested system for immediate service
- Maintenance-free
- Lowers the risk of injuries and minimises days lost through user sickness



### Technical data:

Installation height:	170 mm
Length:	280 mm
Width:	188 mm
Height (retracted):	140 mm
Maximum surface unevenness:	± 30 mm
Floor contact pressure:	400 N
Weight:	3 kg
Protection grade:	IP X4

### Travel motor:

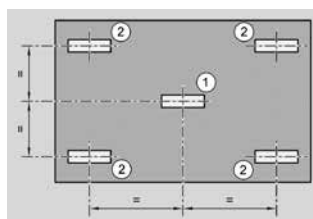
Rated voltage:	24 V DC
Nominal torque:	4 Nm
Nominal rotation speed:	174.49 min <sup>-1</sup>
Nominal output:	73.1 W
Nominal current:	7.0 A
Duty cycle:	Continuous operation S1
Maximum speed:	4 km/h
Sound energy (travel):	45 dB(A)

### Servomotor:

Rated voltage:	24 V DC
Nominal torque:	4 Nm
Nominal rotation speed:	35.29 min <sup>-1</sup>
Nominal output:	14.8 W
Nominal current:	3.5 A
Duty cycle:	Intermittent S3
Sound energy (switching):	80 dB(A)

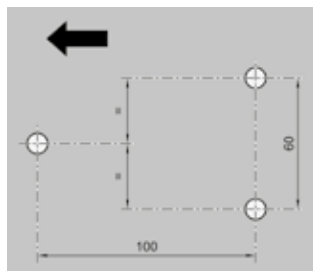
### Fitting the e-drive

The mounting plate on the hospital bed must be located such that the device's drive wheel (1) is aligned centrally to the available hospital bed castors (2).



The mounting plate must be at least 10 mm thick.

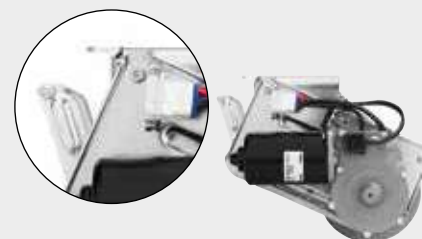
Three securing holes with a diameter of 9 mm or three M8 threaded holes must be available in the mounting plate to secure the device. The location of the securing holes is dependent on the desired main direction of travel (see arrow).



### Emergency release:

If the power supply cuts out while the castor is lowered, the castor can be raised by hand using the integrated lever.

The emergency release will be automatically reset during the motor's reference run as soon as power is available again.



### The overall system consists of:

- Drive wheel (TENTE)
- Control unit (LINAK)
- Battery (LINAK)
- Handset (LINAK)



Development of the e-drive system was implemented jointly by LINAK and TENTE. While LINAK provided the system control expertise, TENTE brought its leading know-how in manufacturing a wide range of quality castors and wheels.

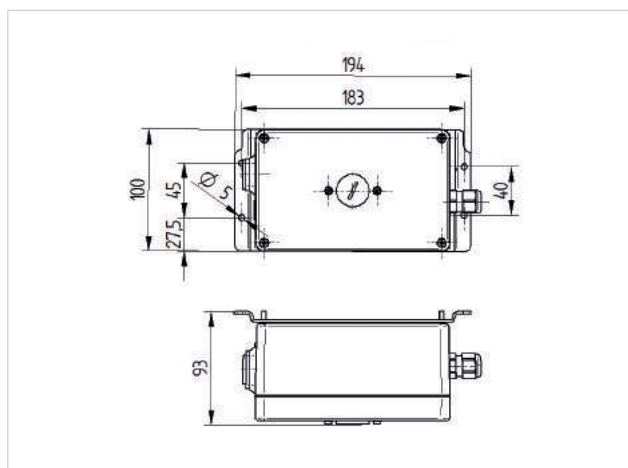
## e-drive 1 control unit

Code number: 00061633 LV

e-drive 1 control unit 24 V without battery cables

### Technical data

Power supply required	24 V DC
Cable layout	flexible to the components, PLUG & PLAY
Cable length	1 m to drive unit
Updates	USB interface for firmware and parameter updates
Assembly	individual assembly through integrated mounting plate
Dimensions	see drawing
Weight	1.5 kg
Power input	16 A
Operational safety	complies with EN ISO 13849
Reverse voltage protection	integrated into connectors
Protection grade	IP X4 (splashes of water from all sides, all plugs plugged in)
Permissible ambient temperatures	operating temperature 5 to 40° C, atmospheric humidity 90 %, non-condensing
Permissible storage temperatures	- 20 to 50° C



# Product datasheet e-drive 1



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## e-drive 1 drive actuation

Code number: 00061635 KK

e-drive 1 drive actuation 125 24 V

Housing: robust galvanized steel housing. The wheels can be replaced by the customer. A replacement-kit can be ordered separately. Maintenance-free.

### Technical data

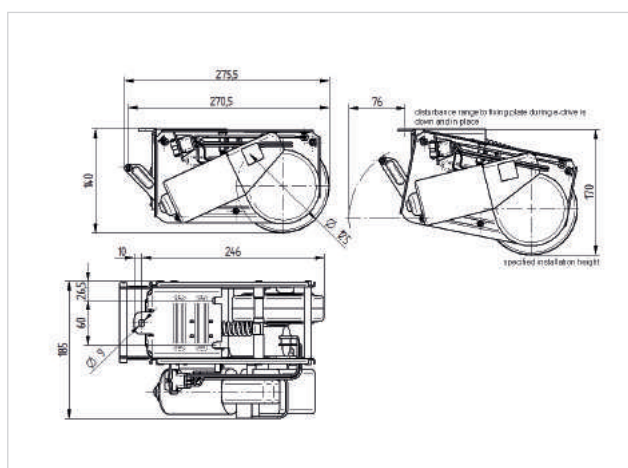
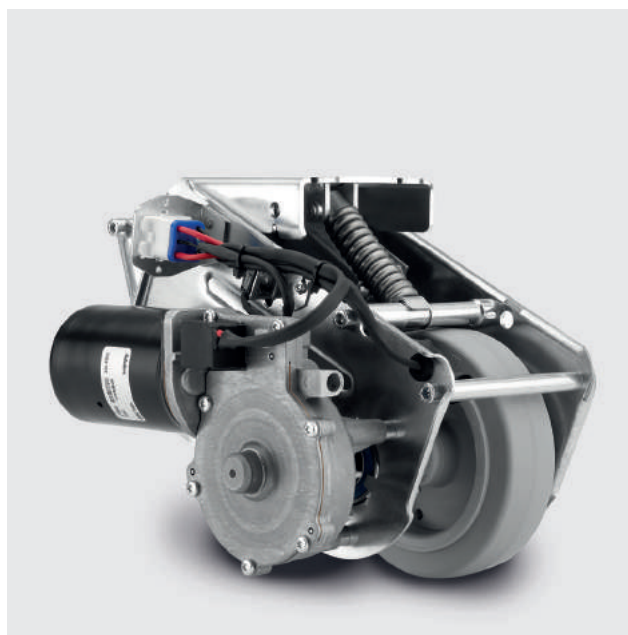
Wheel	UFF, solid rubber, non-marking, Shore 63A
Wheel size	125 mm
Width of tread	35 mm
Installation height	170 mm
Length	max. 315 mm (emergency release actuated)
Emergency release	mechanical
Width	190 mm
Travel motor	24 V DC
Directions of travel	forwards / reverse
Height (folded in)	140 mm
Floor compensation	+/- 30 mm
Max. traversable threshold height	15 mm
Max. lifting force / downforce	400 N
Weight	6 kg

### Travel motor

Rated voltage	24 V DC
Nominal torque	4 Nm
Nominal output	73.1 W
Nominal rotation speed	174.50 min/-1
Nominal current	7.0 A
Duty cycle	S1 + S4
Max. speed	4 km/h

### Servo motor

Rated voltage	24 V DC
Nominal torque	4 Nm
Nominal output	14.8 W
Nominal rotation speed	35.3 min/-1
Nominal current	3.5 A
Duty cycle	periodical S3



Permissible operating conditions	operating temperature 5 to 40° C, atmospheric humidity 90 %, non-condensing
Permissible storage temperature	- 20 to 50° C
Protection grade	IP X4 (splashes of water from all sides, all plugs plugged in)

# Product datasheet e-drive 1



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## e-drive 1, handle

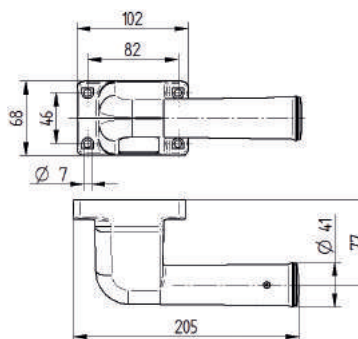
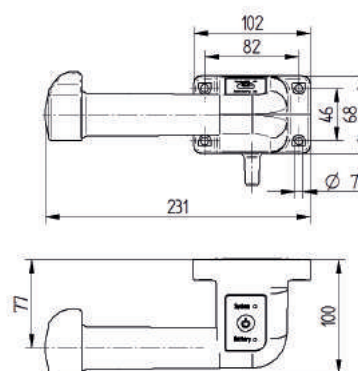
Code number: 00061637 LV

e-drive 1 handle SET 24 V e-drive 1

Set consisting of two ergonomically designed handles. One control handle with system and battery status, LED display and one hand grip. Fitting sets have to be ordered separately!

### Technical data

Fitting options	for tube fitting from 27 – 35mm, for fitting on flat surfaces
Handle material	glass-fibre reinforced PA
Handle dimensions	see drawing
Cable length	3.0 m including plug, PLUG & PLAY
Speed control	continious variable, forwards and backwards
Controller	safety-tested in accordance with DIN ISO 13849
Service life of controller	2 mil. cycles
Controller axle rotation angle	+/- 40°
Positions of thumb depression on controller	adjustable in 22.5° steps
Permissible operating conditions	operating temperature 5 to 40° C, atmospheric humidity 90 %, non-condensing
Permissible storage temperature	- 20 to 50° C
Protection grade	IP X4 (splashes of water from all sides, all plugs plugged in)





# Product datasheet e-drive 1



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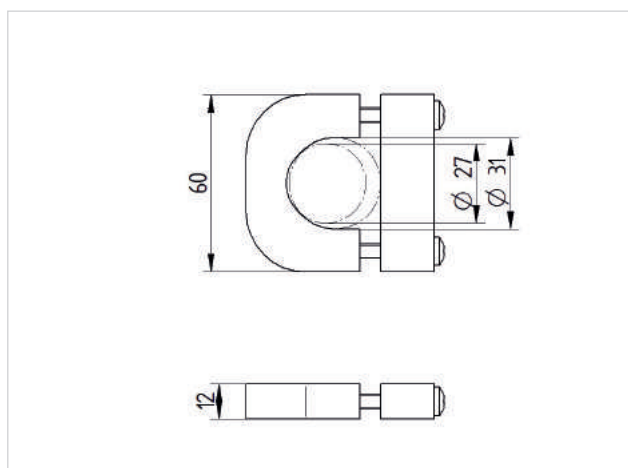
## e-drive 1, fitting material for handle $\varnothing$ 27–31mm

Code number: 00061735 KK

Fitting material for handle 24 V,  $\varnothing$  27–31 mm

### Technical data

Fitting	for tube fitting
$\varnothing$ tube	round tube $\varnothing$ 27–31 mm
Material	Aluminium
Set consists of	4 pcs. clamps 4 pcs. clamping devices 8 screws M6x35
Dimensions	see drawing



# Product datasheet e-drive 1



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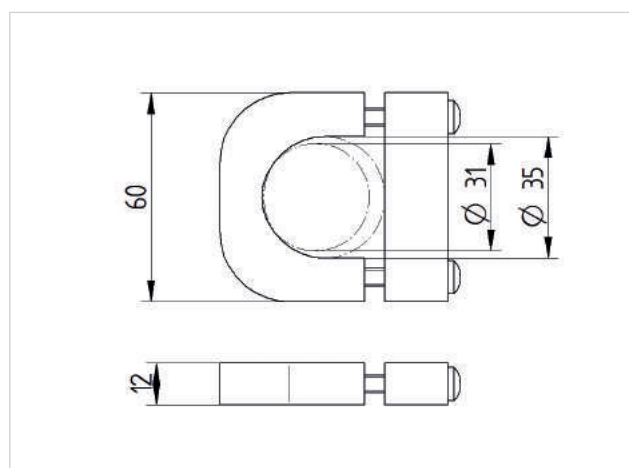
## e-drive 1, fitting material for handle $\varnothing$ 31–35mm

Code number: 00061737 KK

Fitting material for handle 24 V,  $\varnothing$  31–35 mm

### Technical data

Fitting	for tube fitting
$\varnothing$ tube	31–35 mm
Material	Aluminium
Set consists of	4 pcs. clamps 4 pcs. clamping devices 8 screws M6x35
Dimensions	see drawing



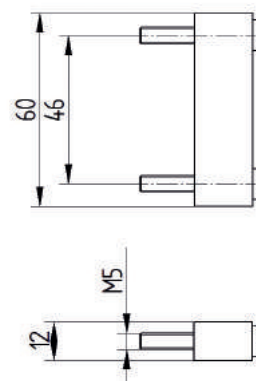
## e-drive 1, fitting material for handle, surface fitting

Code number: 00061743 KK

Fitting material for handle 24 V, surface fitting

### Technical data

Fitting	for even surfaces
Material	Aluminium
Set consists of	4 pcs. clamping devices
Dimensions	see drawing





# Product datasheet e-drive 1



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## e-drive 1, accu-pack

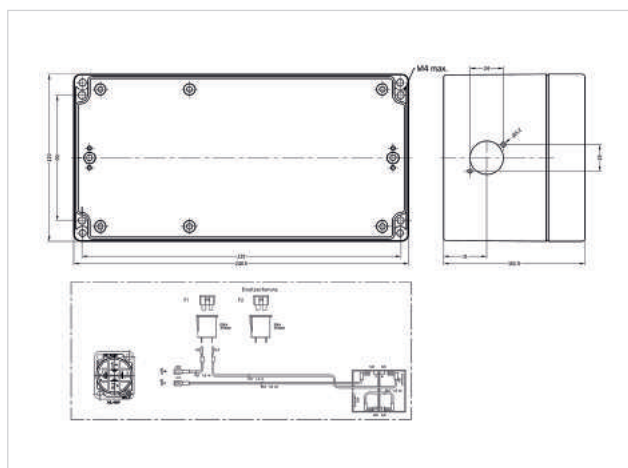
Code number: 00039656 LV

e-drive 1 accu-pack

Robust, maintenance-free

### Technical data

Battery capacity	4.5 Ah
Battery type	lead gel/fleece batteries
Output voltage	24 V DC
Built-in fuse	20 A
Connecting plug	PLUG & PLAY (in combination with our battery cable)
Weight	3.5 kg
Dimensions	see drawing
Assembly	individual fitting through integrated mounting holes
Protection grade	IP X4 (splashes of water from all sides, all plugs plugged in)
Permissible operating temperatures	operating temperature 5 to 40° C, atmospheric humidity 90 %, non-condensing
Permissible storage temperatures	- 20 to 50° C



## e-drive 1, battery cable

Code number: 00061755 LV

Battery cable e-drive 1

### Technical data

Cable length	2.5 m with plug at each end
Protection grade	IP X4 (splashes of water from all sides, plugged in)
Suitable for	e-drive 1 accu-pack



## e-drive 1, charger for rechargeable batteries

Code number: 00039655 LV

e-drive 1 charger for rechargeable batteries 24 V

### Technical data

Charging time	approx. 6 hours for 4.5 Ah batteries
Suitable for	lead gel/fleece batteries
Further technical data	fitted with special plug TENTE e-drive 1

