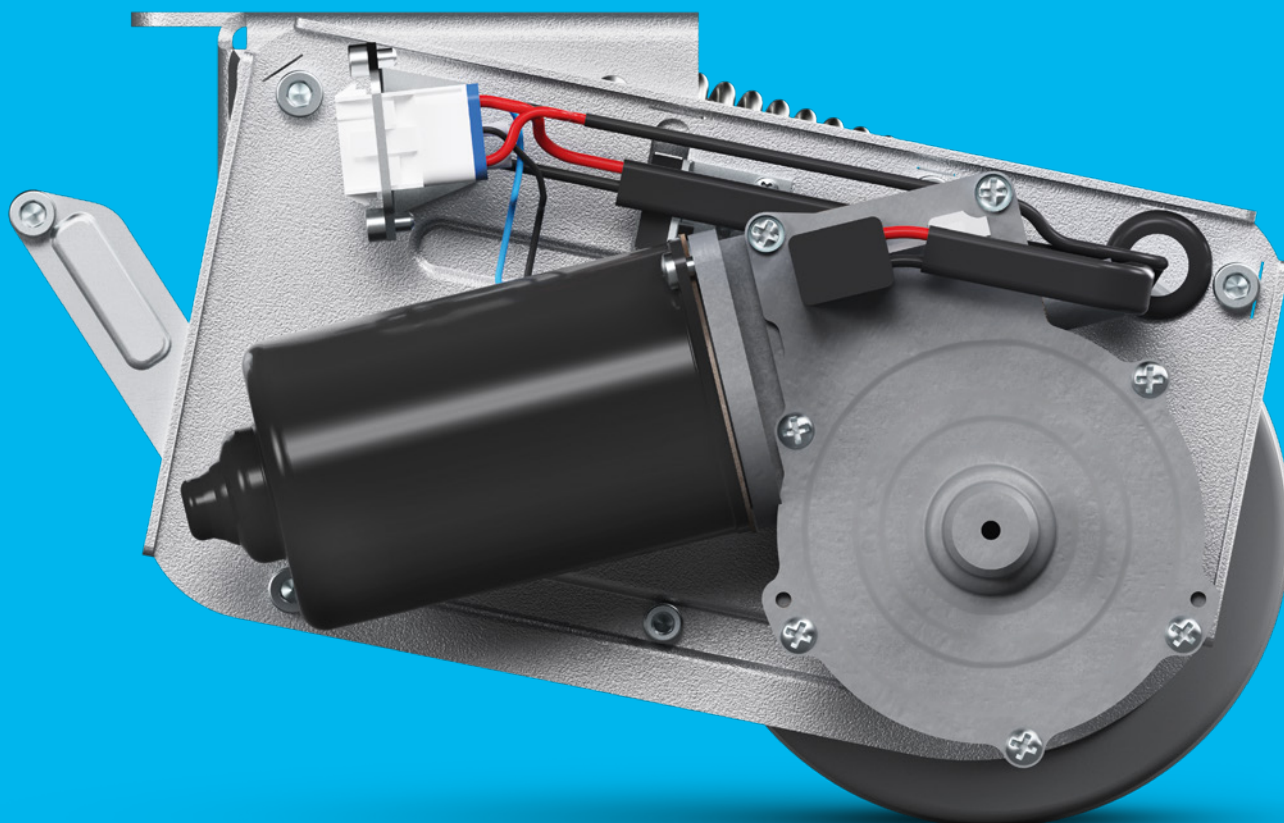
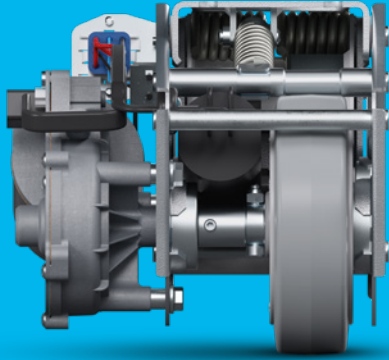


# PRODUCT INFORMATION

## E-DRIVE FLEX

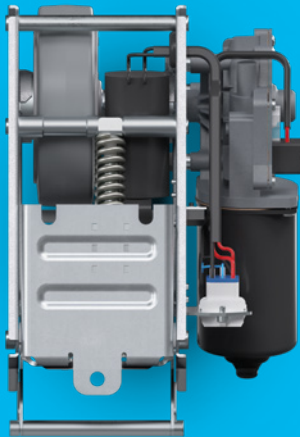


BETTER MOBILITY. BETTER LIFE.



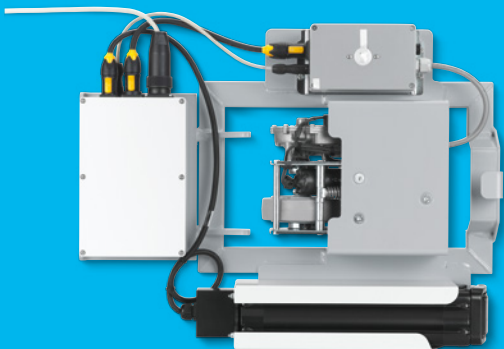
## ADVANTAGES AND SYSTEM

PAGES: 4-13



## TECHNICAL DATA

PAGES: 14-23



## CUSTOMISING

PAGES: 24-27

# BETTER MOBILITY IN PREMIUM QUALITY

TENTE stands for smart mobility solutions which noticeably improve people's lives and their work environment. TENTE solutions increase productivity, ensure safety and open up new horizons in matters of design, durability as well as environmental friendliness. Our high production values can be relied on by leading manufacturers and companies from different industries.

This guide will provide all of the technical information you need to get an understanding of our E-Drive flex system. It will also demonstrate the value that this system could add to your organisation. Among others:

## Increased productivity

E-Drive flex helps to make design operational procedures more efficient and, as a result, to realise cost savings.

## High flexibility

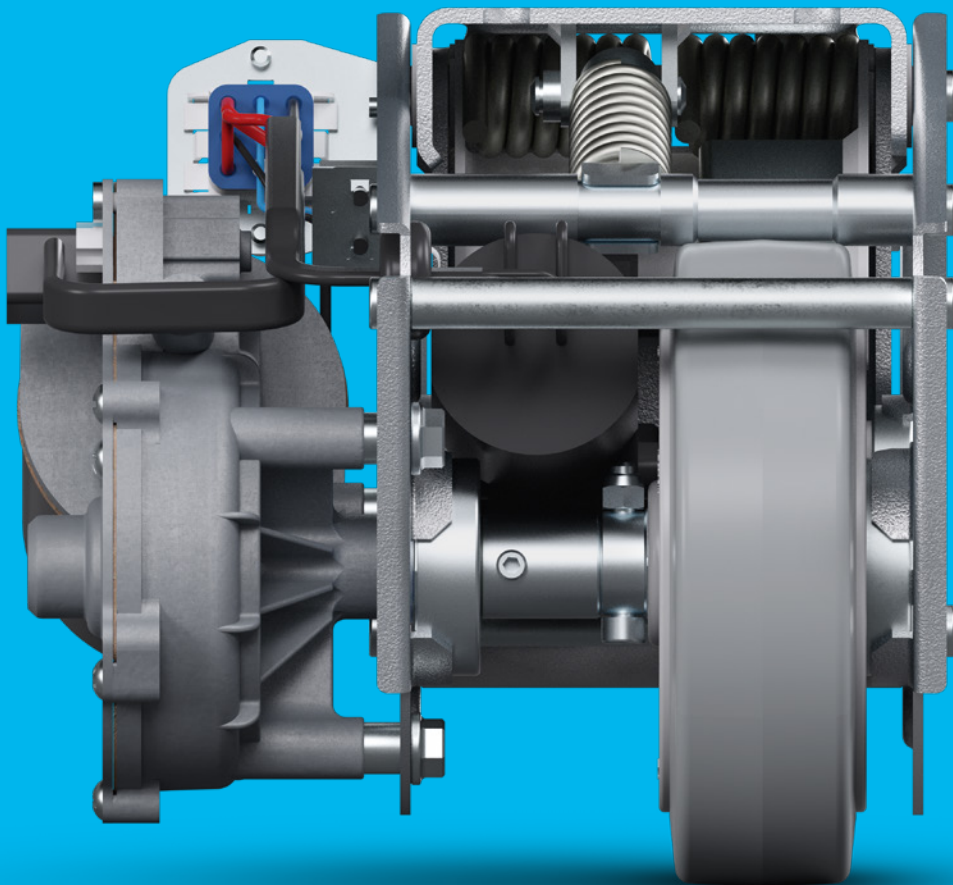
Thanks to the lifting motor, E-Drive flex can be switched on as required and has no ground contact when in standby position. The practical system also makes it easy to integrate this into existing transport devices.

## Improved ergonomics

The ergonomic system helps to prevent ailments to the neck, back, shoulders and hands among users – especially in times of high demographic change. Your investment in E-Drive flex will quickly bear fruit through fewer illness-related absences.



# ADVANTAGES

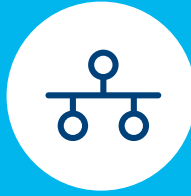


# FEATURES



## Flexible use

The lifting motor makes it easy to switch on and off as required. No ground contact in standby position.



## Practical system solution

Due to its extremely compact design, the system solution can be easily integrated to existing transport devices.



## Accelerated processes

Faster start-up with heavy loads to accelerate operating processes.



## Ergonomic operation

Ergonomically designed hand control unit with system and battery status LED display. One-button operation.



## Optimal ground contact

High contact force between the wheel and the floor with a compensation function for uneven floors.



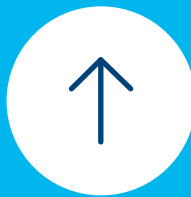
## User-friendly assembly

Hand-held control unit can be attached flexibly in a vertical or horizontal position.



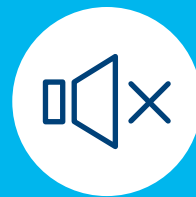
## Reliable electronics

Infinitely variable speed regulation (forwards and backwards) through safety-tested drive switches.



## Optimised steering mechanism

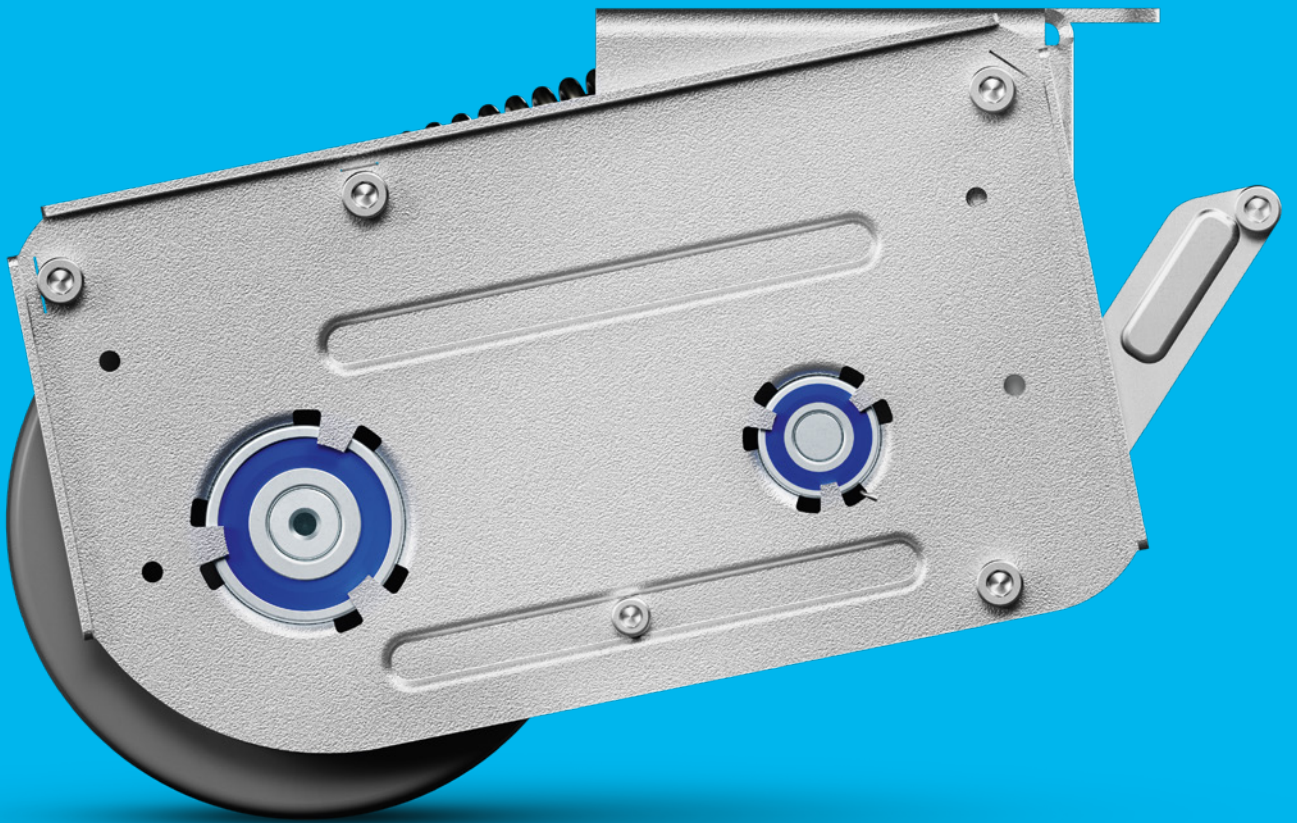
Fifth wheel allows for improved steering in both curved and straight line paths over long distances.



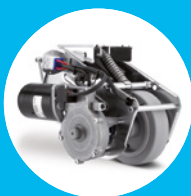
## Quiet rolling

Soft wheel version for a quiet working environment.

# SYSTEM



# COMPONENTS



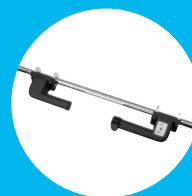
**Drive unit**  
**See page 15**

Motorised drive unit with powerful motor and reversible wheel.



**Control unit**  
**See page 18**

Precise management of the complete setup.



**Handle set**  
**See page 19**

Ergonomically designed with easy and intuitive operation.



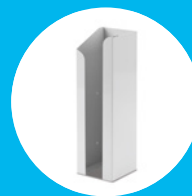
**Mounting kit**  
**See page 19**

Different mounting options available for easy installation.



**Battery**  
**See page 20/22**

Choose between lithium-ion or lead-acid battery technology.



**Battery holder**  
**See page 20/22**

Perfectly suitable for the chosen battery.



**Battery charger**  
**See page 21/23**

Matching charger for high speed loading.



**Battery cable**  
**See page 21/23**

Different lengths available.

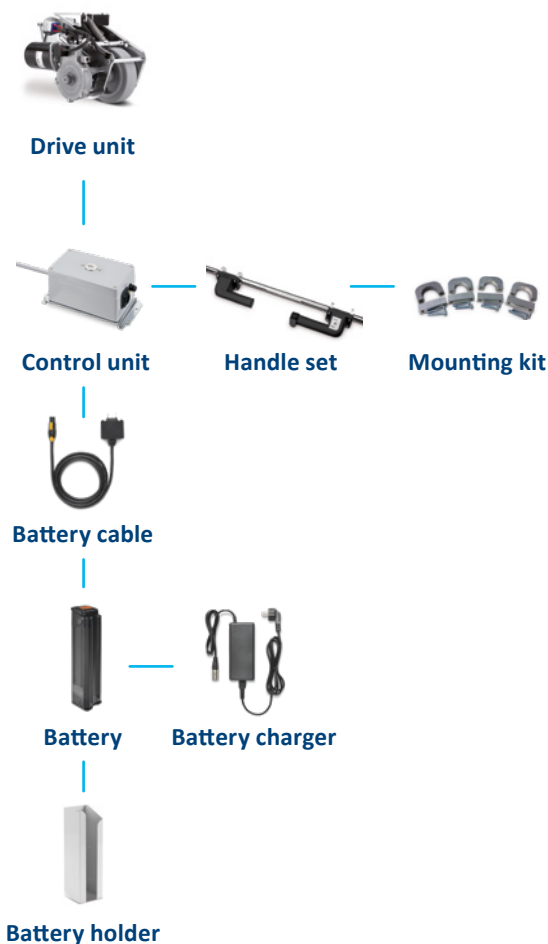


# SET 1: E-DRIVE FLEX

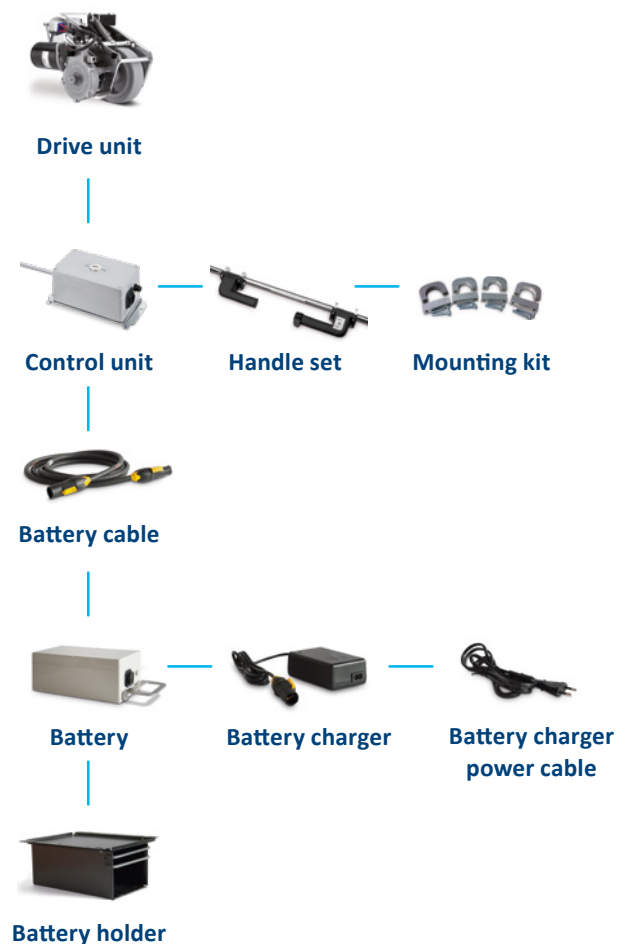
## THRUST FORCE MAX. 25 daN

The drive unit works like a fifth wheel and gives perfect directional stability even when four swivel castors are used. The system is activated via the control unit by pushing the button on the handle. The drive unit lowers down and is ready for operation. The infinite variable speed regulation (forwards and backwards) allows for optimal use. The required energy is being delivered through a high performing, rechargeable battery. You can choose between lithium-ion or lead-acid battery technology. The system is activated and deactivated with the touch of a button. Once the drive unit is lifted, the trolley has total free movement and can be manoeuvred in narrow spaces.

### Set components with lithium-ion battery set



### Set components with lead-acid battery set



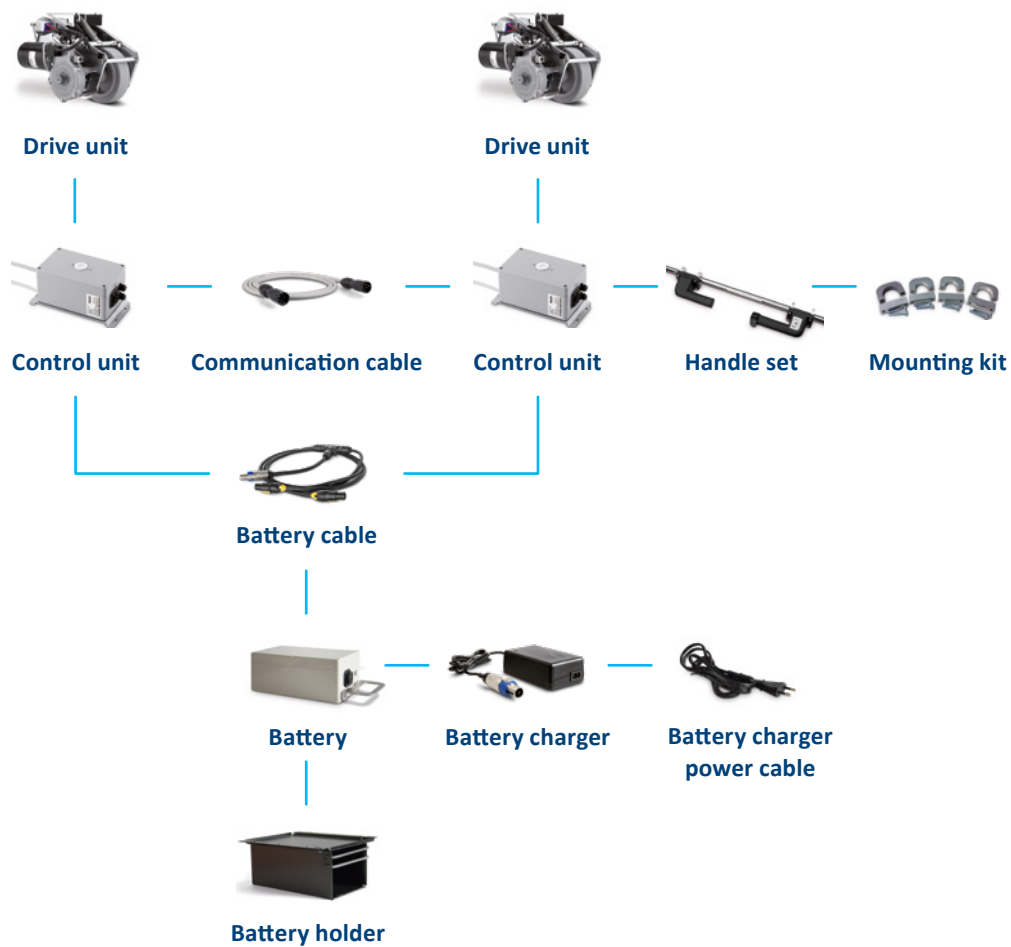


# SET 2: E-DRIVE FLEX TWIN

## THRUST FORCE MAX. 50 daN

For more thrust force, two drive units can be used to reach double power. A synchronous drive is being ensured by two interconnected control units. Both drive units are operated with a single handle.

### Set components with lead-acid battery set



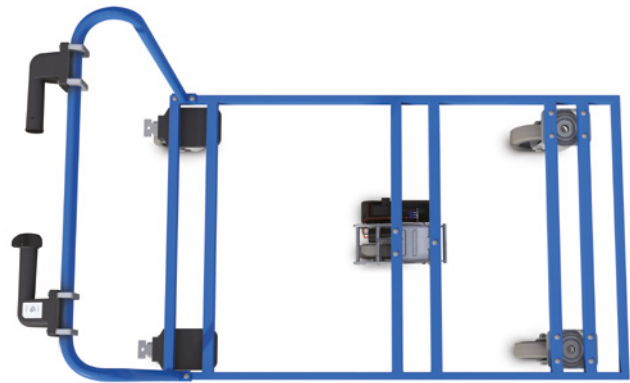
# MOUNTING

## E-DRIVE FLEX

There are different ways to position the E-Drive flex under your application. But, no matter which position you choose, E-Drive flex assures high directional stability. As soon as E-Drive flex is lifted, the trolley is totally free in movement and can be manoeuvred into narrow spaces.

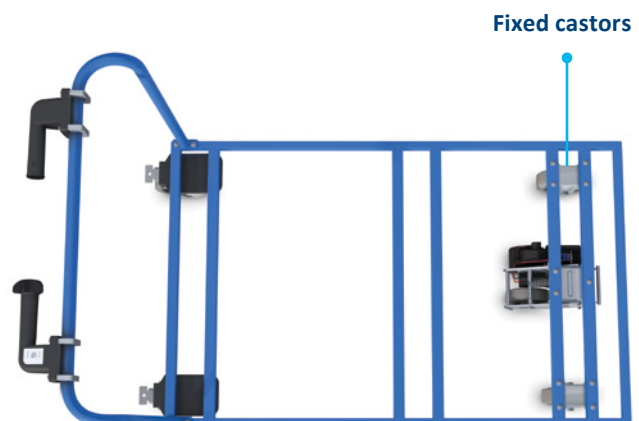
### Mounting position for applications with 4 swivel castors

When having a trolley with four swivel castors, E-Drive flex is best placed in the middle of the trolley between front and rear axle.



### Mounting position for applications with 2 swivel and 2 fixed castors

When having a trolley with two swivel and two fixed castors, E-Drive flex is best placed between the two fixed castors.



# E-DRIVE FLEX TWIN

## Mounting position for applications with E-Drive flex twin

When using E-Drive flex twin both drive units are best placed in the middle of the trolley between front and rear axle.



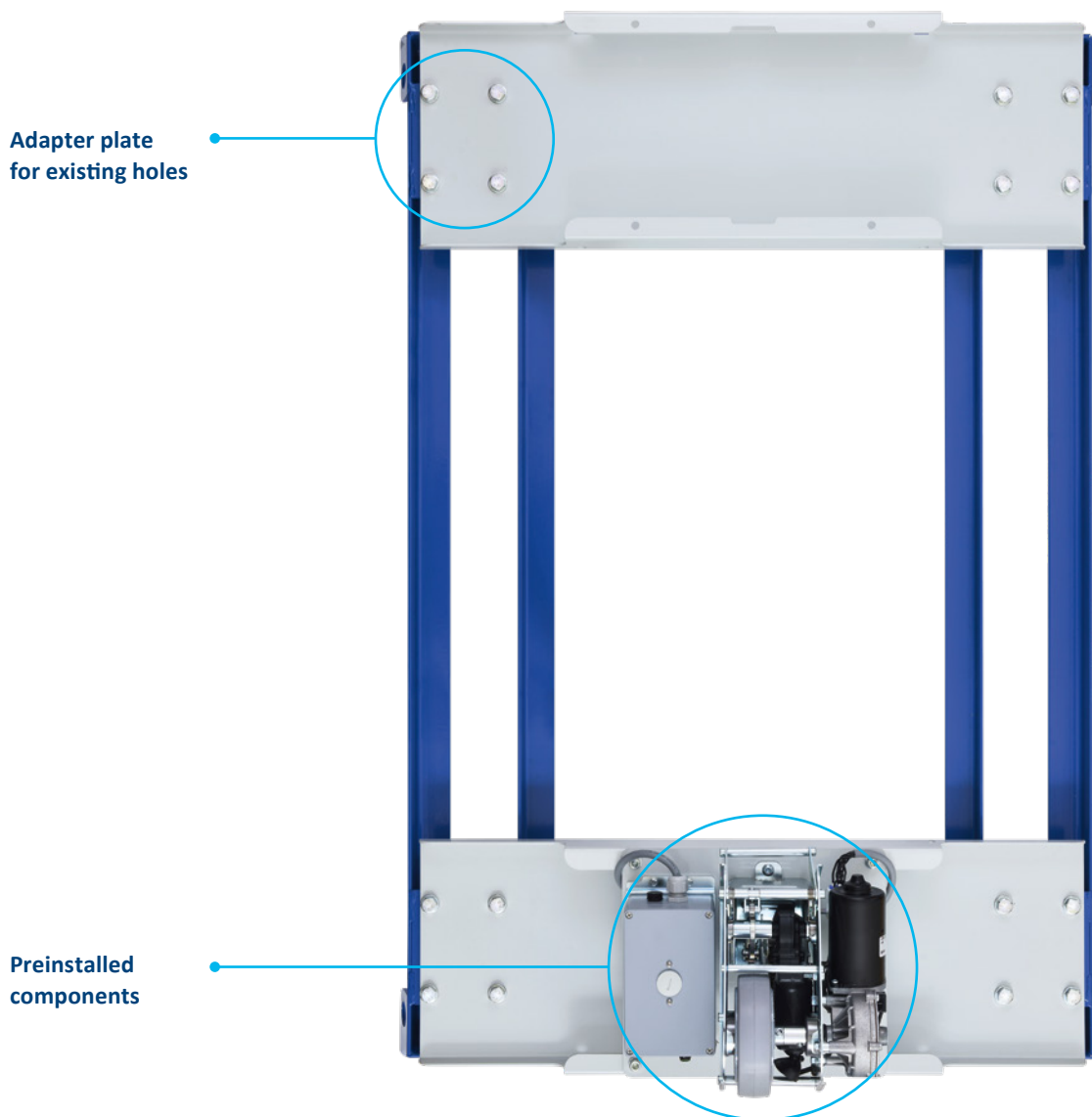
### Application example of E-Drive flex

Foldable transport trolley with all E-Drive flex components. The battery displayed here is the lithium-ion battery set.

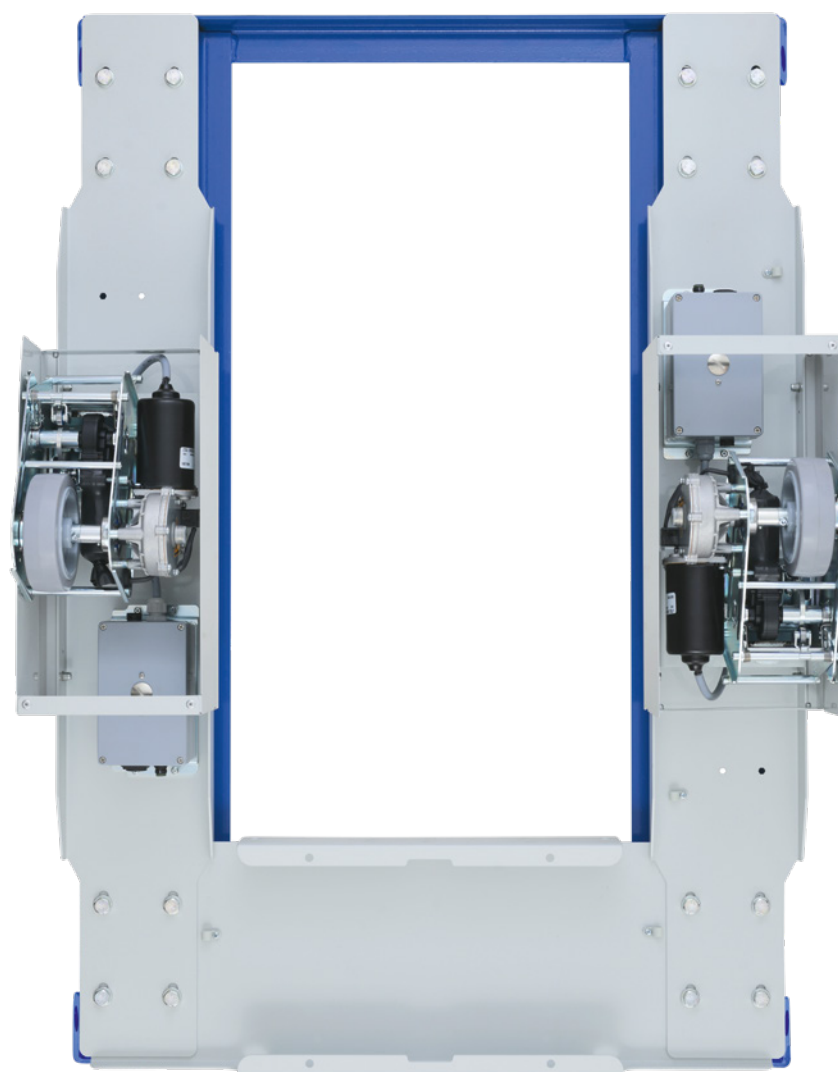
# PLUG-AND-PLAY MOUNTING SET

## E-DRIVE FLEX

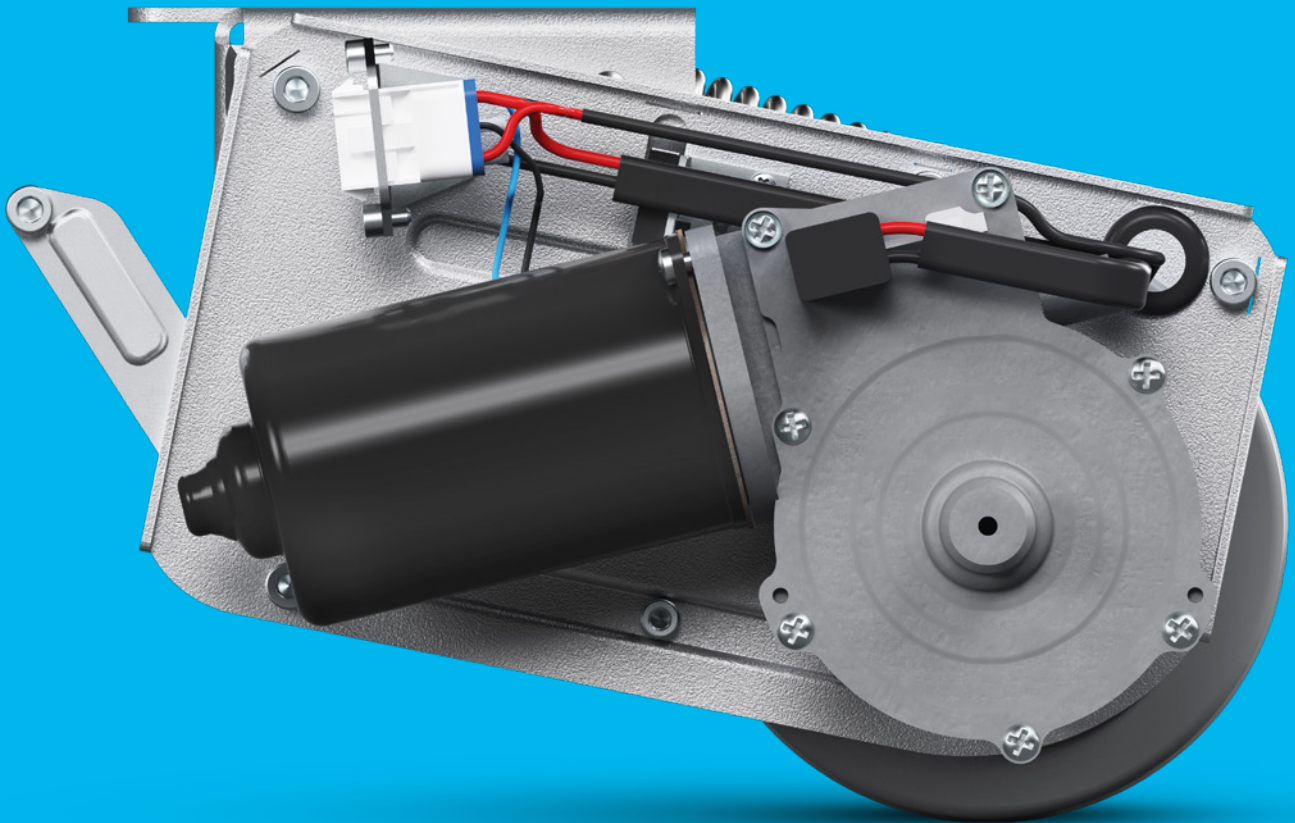
Wherever possible, the existing assembly holes of the trolley are used for the integration of E-Drive flex. Thanks to adapter plates, it is an easy plug-and-play solution. This is true for both the E-Drive flex and E-Drive flex twin. We also offer customised solutions in case these systems can't be implemented.



# E-DRIVE FLEX TWIN



# TECHNICAL DATA



# STANDARD COMPONENTS

## Drive Unit

The housing of the driving unit is made of zinc plated pressed steel which makes it robust. The durable construction of the driving unit also assures a complete protection against splash water (IPX4).

The wheel of the driving unit is made of soft rubber that allows smooth rolling and ensures a quiet, noise-reduced working environment. Furthermore, the shock-absorbing properties ensure the outstanding performance of the wheel.

Additionally, our E-Drive flex control unit has a certified operating reliability: It fulfills the standard conformity according to DIN EN 13849.

E-Drive flex is very flexible in use. According to the application and environment, E-Drive flex can act as starting assistance, or can be used in permanent mode.



### **Permanent mode\***

E-Drive flex permanently supports the movement of the transport device. This gives the transport device a high directional stability. With a simple push of a button, the drive unit can be lifted up.

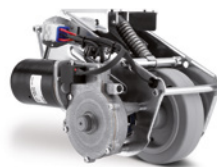


### **Starting assistance**

E-Drive flex overcomes the starting torque without manual effort. The driving unit gives a temporary support to set the trolley in movement. Afterwards, it automatically lifts up again and allows a free movement of the trolley in all directions.

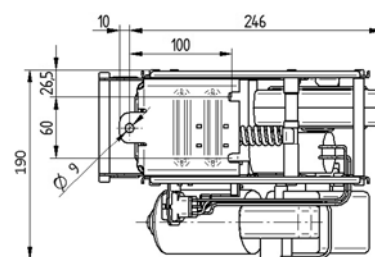
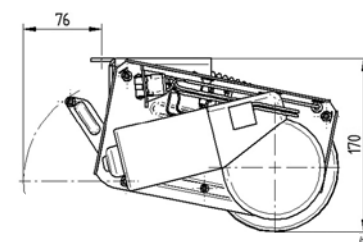
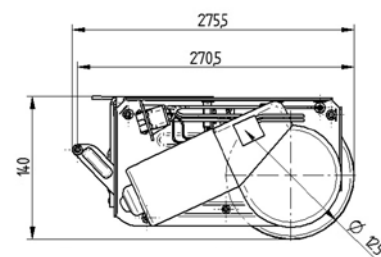
\* The rated operating mode's permissible driving time (S3 ED 30 % 45 minutes) is 13,5 minutes in this mode, i. e. 30 % of 45 minutes.





## Drive unit

Description	i	Article description	EDUAUFF125P60
		Length	Max. 315 mm (emergency release actuated)
		Width	190 mm
		Height in home position	140 mm
		Installation height	170 mm
		Wheel diameter	125 mm, wear limit $\varnothing$ 115 mm
		Wheel width	35 mm
		Wheel tread	Solid rubber, non-marking, Shore A 63
		Weight	Approx. 6 kg
		Maximum thrust force	25 daN E-Drive flex 50 daN E-Drive flex twin
		Max. lifting force / contact pressure force	400 N
		Maximum speed	4 km/h
		Rated operating modes	S3 ED 30 % 45 min: permanent mode (as-delivered state) S4: Starting assistance (optional)
		Directions of travel	Forwards and backwards
		Ground clearance	30 mm
		Maximum ground unevenness	$\pm 15$ mm
		Emergency release	Mechanical
		Constant lateral force when in contact with the floor	400 N
		Protection type	IPX4 (splash water from all sides)
		Permissible ambient temperatures	Operating temperature 5 °C to 40 °C, Air humidity 90 %, non-condensing
		Permissible storage temperature	-20 °C to 50 °C
		Audible acoustic energy	IEC 60601-2-52, Section 201.9.6.2.1
		Switching	80 dB (A)
		Driving	45 dB (A)



## Drive unit travel motor

<div>i</div> <div>Description</div>	Nominal voltage	24 V DC
	Nominal current	7,0 A
	Nominal output	73,1 W
	Nominal torque	4 N m
	Nominal speed	174,5 min <sup>-1</sup>

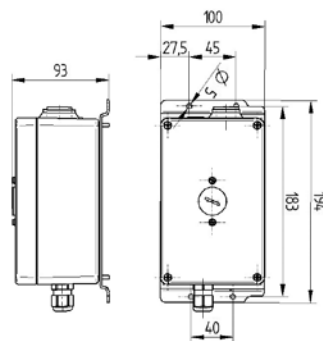
## Drive unit actuator

<div>i</div> <div>Description</div>	Nominal voltage	24 V DC
	Nominal current	3,5 A
	Nominal output	14,8 W
	Nominal torque	4 N m
	Nominal speed	35,3 min <sup>-1</sup>



## Control unit

<div>i</div> <div>Description</div>	Article description	EDUZ110	EDUZ113
	Compatible with	E-Drive flex	E-Drive flex twin
	Required power supply	24 V DC	24 V DC
	Cable length	1 m to the drive unit	1 m to the drive unit
	Updates	USB interface for firmware and parameter updates	USB interface for firmware and parameter updates
	Power input	16 A	16 A
	Permissible ambient conditions for operation	0 °C to +40 °C, atmospheric humidity 90 %, noncondensing	0 °C to +40 °C, atmospheric humidity 90 %, noncondensing
	Permissible ambient temperature for storage	-10 °C bis +40 °C	-10 °C bis +40 °C
	Communication cable needed	No	Yes



## Communication cable



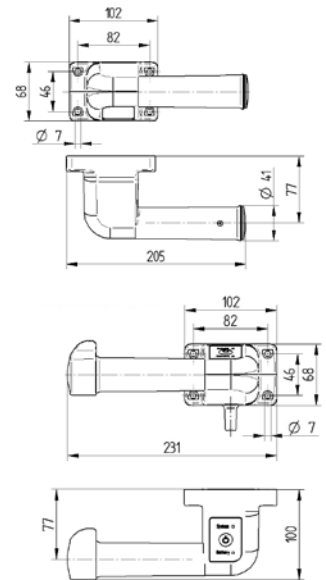
<div>i</div> <div>Description</div>	Article description	EDUZ493
	Compatible with	E-Drive flex twin
	Cable length	1 m

## Handle set



Example of a mounted handle on a tube.

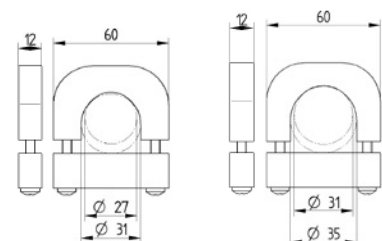
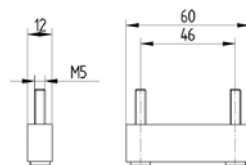
Description	i	Article description	EDUZ300
		Compatible with	E-Drive flex and E-Drive flex twin
		Set components	Two ergonomically designed handles, one with and one without function
		Fitting options	For tube fitting from 27 - 35 mm or for fitting on flat surfaces
		Handle material	Glass-fibre reinforced polyamide
		Speed control	Continuously variable, forwards and backwards
		Controller	Safety-tested in accordance with DIN ISO 13849
		Service life of controller	2 million cycles
		Controller axle rotation angle	+40° / -40°
		LED-functionality	Shows the status of the drive unit
		Permissible ambient conditions for operation	0 °C to +40 °C, atmospheric humidity 90 %, noncondensing
		Permissible ambient temperature for storage	-10 °C to +40 °C
		Protection type	IPX4 (splash water from all sides) when horizontally mounted



## Mounting kits for handles



Description	i	Article description	EDUZ740	EDUZ730
		Compatible with	E-Drive flex and E-Drive flex twin	E-Drive flex and E-Drive flex twin
		Fitting type	For even surfaces	For tube fittings
		Material	Aluminium	Aluminium
		Set consists of	4 pieces of clamping blocks	4 pieces clamps, 4 pieces clamping devices, 8 screws M6 × 35
		Available for tube-Ø	—	27 - 31 mm 31 - 35 mm



# BATTERY SETS

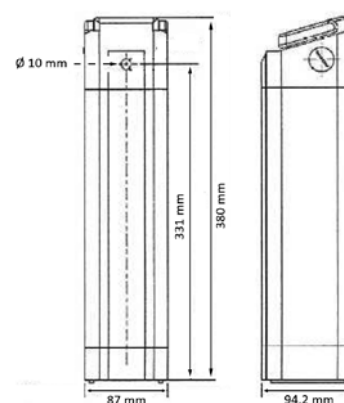
Choose between two different battery technologies according to your needs and your application.

## LITHIUM-ION BATTERY SET



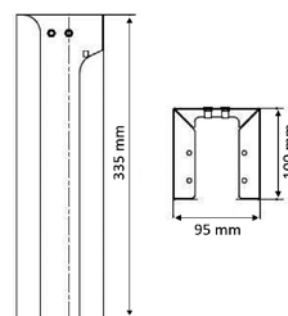
### Battery

Description	i	Article description	EDUZ212
		Compatible with	E-Drive flex
		Nominal capacity	10,4 Ah
		Battery type	Lithium-ion battery
		Nominal voltage	24 V DC
		Built-in fuse	15 A
		Weight	2,4 kg
		Measurements	87 x 94,2 x 380 mm (W x D x H)
		Connecting plug	Plug-and-play in combination with our battery cable



### Battery holder

Description	i	Article description	EDUZ712
		Compatible with	E-Drive flex
		Fitting	For even and round surfaces
		Material	Steel, powder-coated, light grey RAL 7035
		Set consists of	Battery holder, mounting material and installation guide





## Battery charger

<div> <div>i</div> <div>Description</div> </div>	Article description	EDUZ512
	Compatible with	E-Drive flex
	Charging time	Approx. 6 hours for 10,4 Ah batteries



## Battery cable

<div> <div>i</div> <div>Description</div> </div>	Article description	EDUZ402
	Compatible with	E-Drive flex
	Length	1 m or 2 m with plug at each end

### Uninterrupted processes

Uninterrupted use can be guaranteed thanks to the position of the battery, which makes it easy to replace.

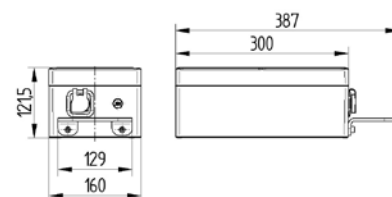


# LEAD-ACID BATTERY SET

## Battery



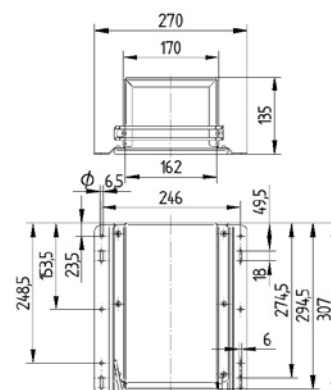
Description	i Article description	EDUZ210	EDUZ214
	Compatible with	E-Drive flex	E-Drive flex twin
	Nominal capacity	14 Ah	14 Ah
	Battery type	Lead batteries AGM closed	Lead batteries AGM closed
	Nominal voltage	24 V DC	24 V DC
	Built-in fuse	15 A	2 x 15 A
	Weight	9,5 kg	9,5 kg
	Measurements	160 x 121,5 x 387 mm (W x D x H)	160 x 121,5 x 387 mm (W x D x H)
	Connecting plug	Plug-and-play in combination with our battery cable for E-Drive flex	Plug-and-play in combination with our battery cable for E-Drive flex twin



## Battery holder



Description	i Article description	EDUZ710
	Compatible with	E-Drive flex and E-Drive flex twin
	Fitting	For even surfaces
	Material	Pressed steel
	Set consists of	Battery holder and installation guide





## Battery charger power cable



Description	Article description	EDUZ400
	Compatible with	E-Drive flex and E-Drive flex twin
	Plug version	EU and US plug

## Battery charger



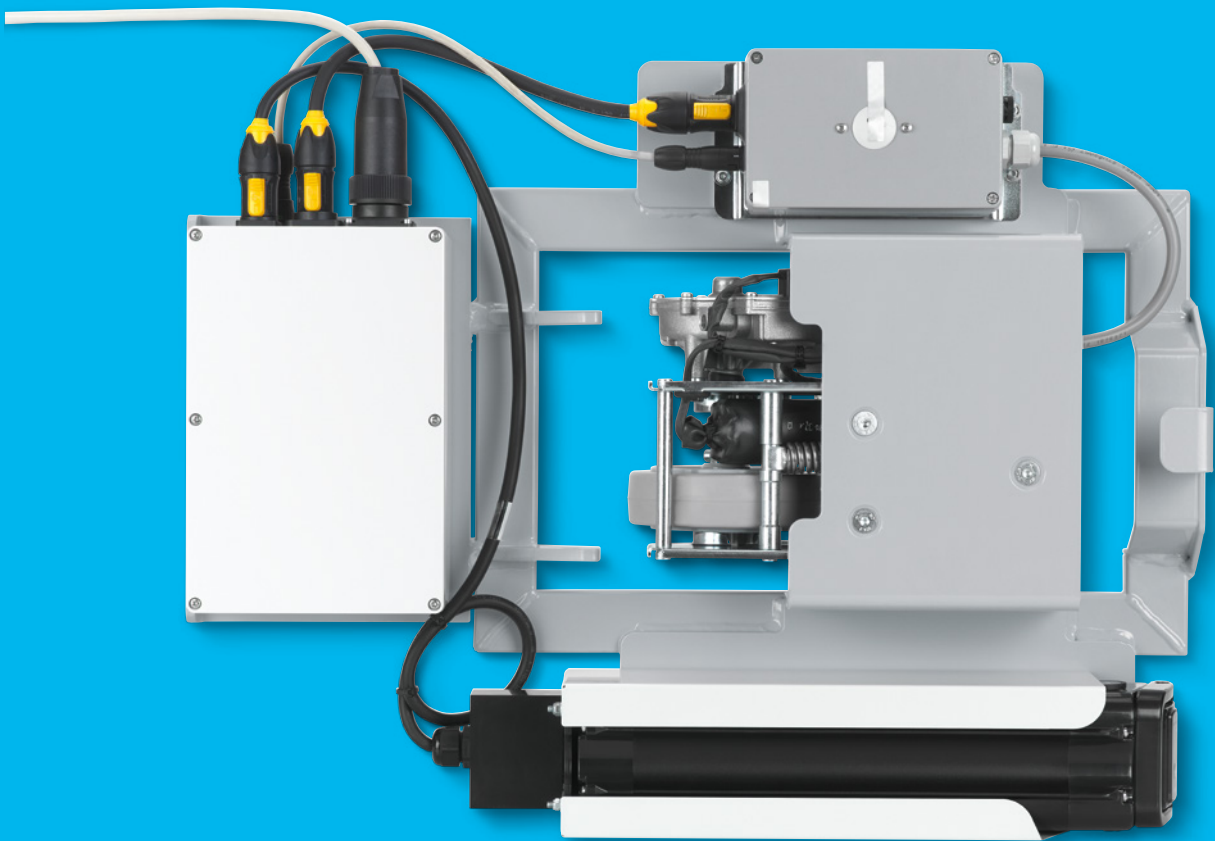
Description	Article description	EDUZ511	EDUZ514
	Compatible with	E-Drive flex	E-Drive flex twin
	Charging time	Approx. 6 hours for 14 Ah batteries	Approx. 6 hours for 14 Ah batteries

## Battery cable



Description	Article description	EDUZ400	EDUZ414
	Compatible with	E-Drive flex	E-Drive flex twin
	Length	1,5 m or 3 m with plug at each end	2 m connection to batteries 0,4 m connection to control unit

# CUSTOMISING



# PROCESS

The E-Drive flex system offers a great opportunity of customisation. All settings can be adapted to the requirements of your business and your project. You can also adjust the way in which the components are used and this system integrates with your existing applications. We analyse your processes and user behaviour to find the best solution for you. We have defined a process which involves consultation, integration, training and project realisation to ensure customisation can be achieved.



## 1. Analysis

We make an on-site analysis of your processes and application.



## 2. Concept phase

We set the target specifications, create a concept and set a time schedule.



## 3. Presentation concept

We present you our solution and a prototype for release.



## 4. Prototyping

We modify your application or build up a pilot series for a testing phase.



## 5. Testing

You can test our solution in your business environment to identify possible improvements.



## 6. Serial production

When you're happy with our solution, we begin serial production. If required, we can take over CE declaration of conformity.



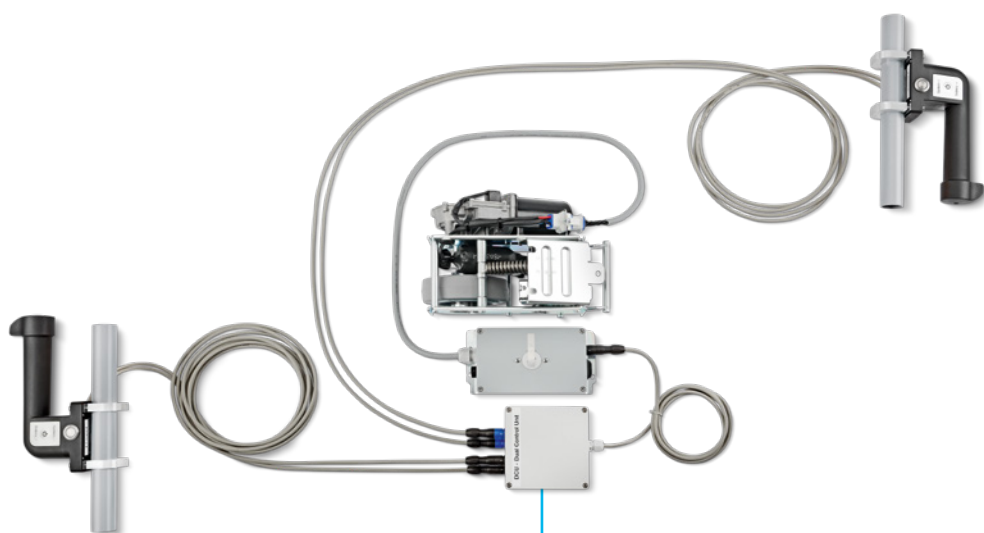
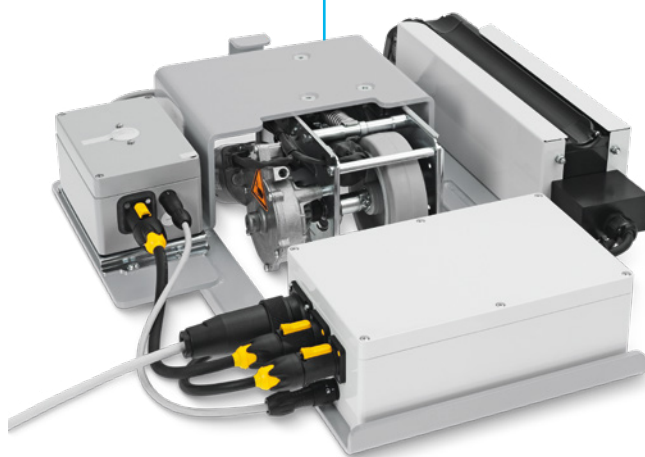
## 7. Implementation

We implement our solution on all your applications and train your users and engineers.

# CUSTOMISED SOLUTIONS EXAMPLES

## Carrier module for easy retrofitting

Easy plug-and-play solution with all E-Drive flex components to be fitted to an existing trolley.



## Adaption of components to the user behaviour

Integrated set with two handles, enabling the user to push or pull the trolley from both sides to increase efficiency.

**Emergency button for more safety**

The standard handle is optional available with built-in emergency button which stops the E-Drive flex system.



**Simple integration in customer's application**

Customised handle with built-in thumb wheel integrated in trolley pipe.

Find your local contact on our website:  
[www.tente.com/locations](http://www.tente.com/locations)

# DIVERSITY WITH A SYSTEM

## OUR CASTORS

All of our products have their own specific qualities and strengths. Whether it's high design standards, specialist applications or exceptional load capacities – our range can meet your needs and can be adapted to fit different models.

From the correct dimensions and technical specifications to the required configuration, our product families are able to offer the ideal solution – whatever you need. Contact us for more information or visit our website: [www.tente.com](http://www.tente.com)

E-Drive



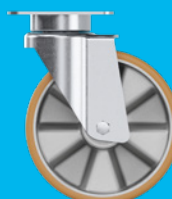
⌀ 125 mm

Alpha



⌘ 70 - 500 kg  
⌀ 80 - 200 mm

Delta



⌘ 300 - 600 kg  
⌀ 125 - 200 mm

Delta twin



⌘ 600 - 750 kg  
⌀ 125 - 200 mm

Zeta



⌘ 300 - 800 kg  
⌀ 125 - 250 mm

Kappa



⌘ 300 - 2.000 kg  
⌀ 80 - 300 mm

Kappa flex



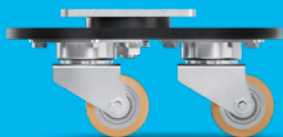
⌘ 360 - 750 kg  
⌀ 160 - 200 mm

Omikron



⌘ 900 - 11.000 kg  
⌀ 100 - 500 mm

Radiata



1.200 - 1.500 kg  
80 mm

Scout



150 - 350 kg  
160 - 200 mm

Integral



100 - 150 kg  
100 - 200 mm

Integral twin



125 - 250 kg  
100 - 150 mm

Linea clinic



150 - 200 kg  
125 - 150 mm

Aviana care



100 kg  
75 mm

Aviana



75 mm

Agila



40 - 100 kg  
50 - 150 mm

Agila twin



50 - 100 kg  
50 - 75 mm

Stora



60 - 160 kg  
75 - 160 mm

Mono



30 - 70 kg  
50 - 100 mm

Galea



60 - 100 kg  
100 - 125 mm

Levina



60 - 100 kg  
75 - 150 mm

Linea



40 - 150 kg  
50 - 150 mm

Anika



40 - 50 kg  
55 - 75 mm

Lumina



30 - 100 kg  
35 - 75 mm

Stylea



40 - 100 kg  
35 - 100 mm

Smiles



40 kg  
50 mm

Compacta



10 - 55 kg  
14 - 50 mm



# EXPERTISE THAT INSPIRES

## CONTACT US

We are a globally operating company supporting you on five continents. This means on-site support with service on a level playing field – along with in-depth knowledge. Additionally, our solution experts will advise you on the best mobility concept for your needs. Go here to find your nearest TENTE location: [www.tente.com/locations](http://www.tente.com/locations)

## INCREASE YOUR EFFICIENCY

Our intelligent mobility solutions help you save time, effort, energy, and operating expenses. This allows you to improve your operating methods and working conditions, thereby optimising your processes and ensuring higher productivity, profitability and safety. Ask for our solutions catalogue or read about how our customers benefit from our tailor-made solutions on our website: [www.tente.com/solutions](http://www.tente.com/solutions)

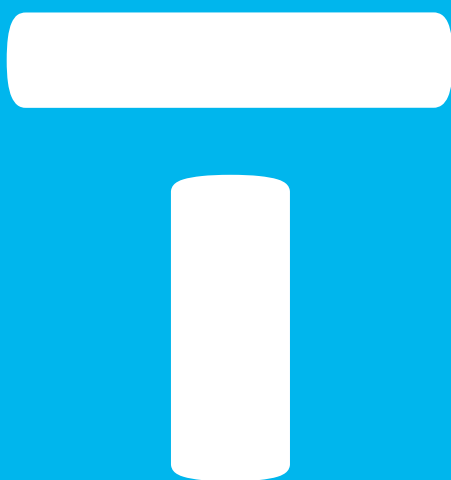
## SAVE DEVELOPMENT TIME

On our website you will find technical drawings, product data sheets and 2D and 3D CAD files in various formats: [www.tente.com/e-drive](http://www.tente.com/e-drive)

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