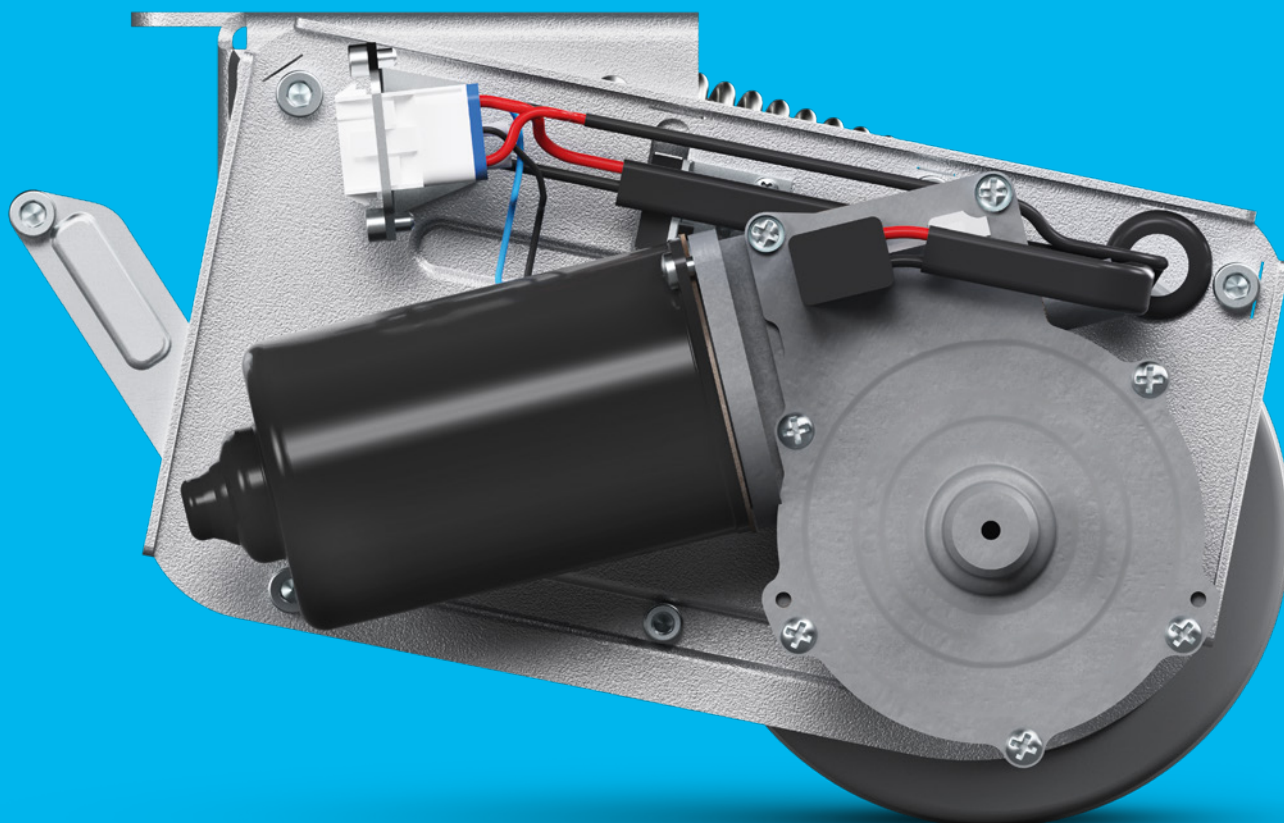
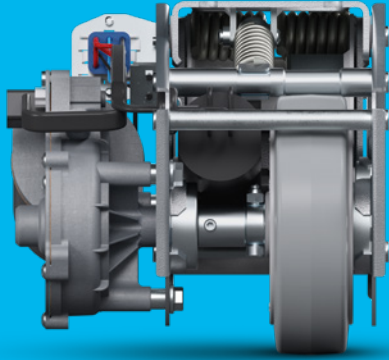


PRODUCT INFORMATION

E-DRIVE FLEX



BETTER MOBILITY. BETTER LIFE.



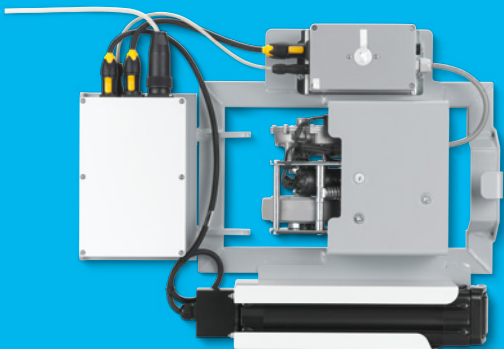
ADVANTAGES AND SYSTEM

PAGES: 4-13



TECHNICAL DATA

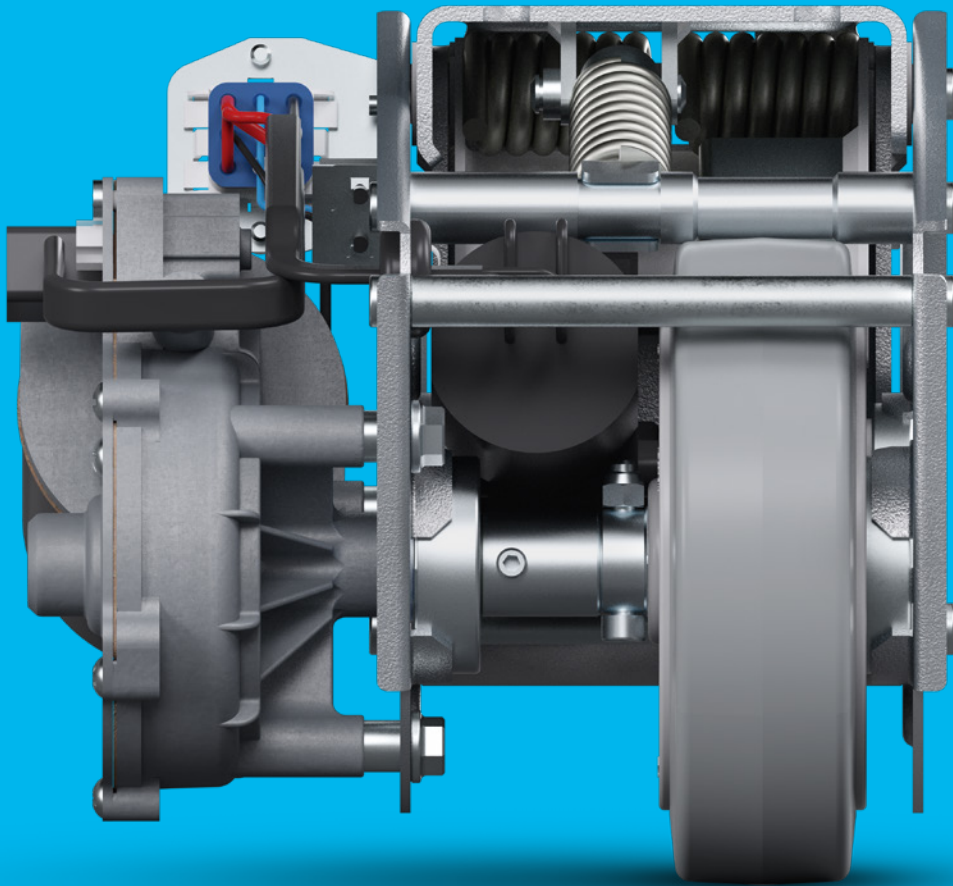
PAGES: 14-23



CUSTOMISING

PAGES: 24-27

ADVANTAGES

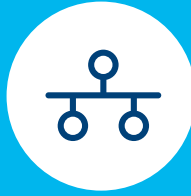


FEATURES



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.



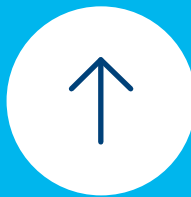
User-friendly assembly

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



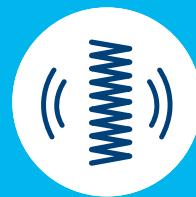
Reliable electronics

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



Optimised steering mechanism

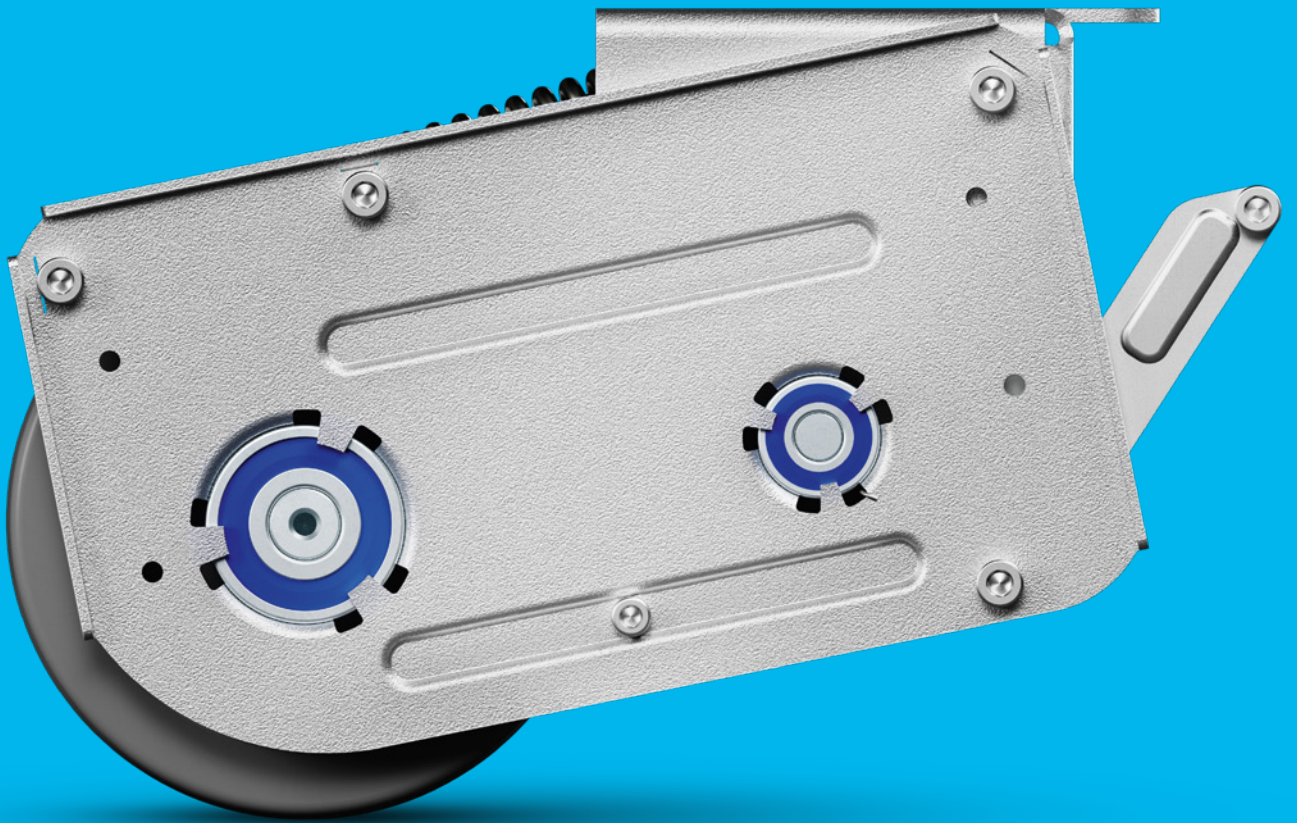
Fifth wheel allows for improved steering in both curved and straight line paths over long distances.



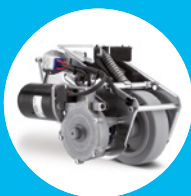
Low-vibration transport

Extra soft wheels with good shock-absorbing properties.

SYSTEM



COMPONENTS



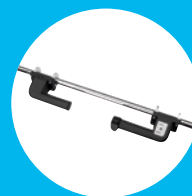
Drive unit
See page 15

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.



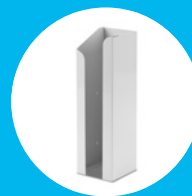
Mounting kit
See page 19

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

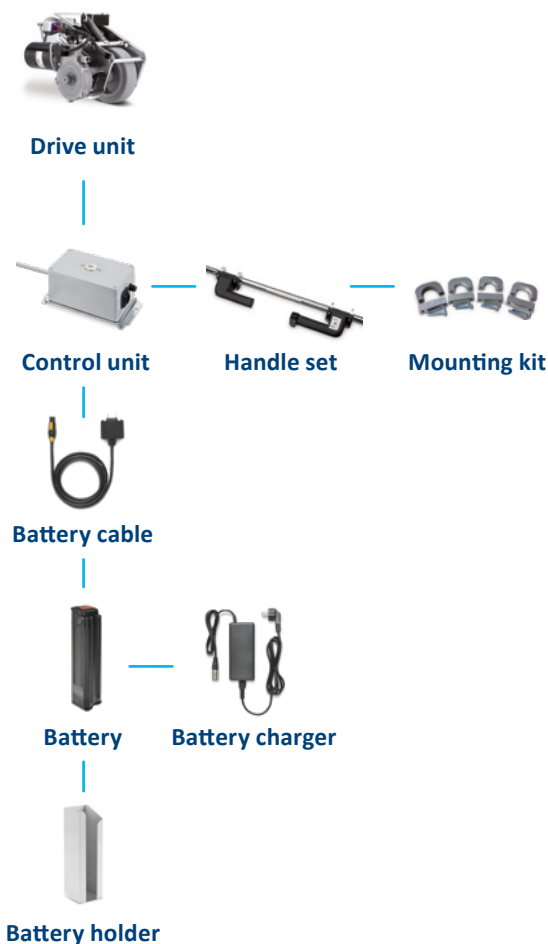
Different lengths available.

SET 1: E-DRIVE FLEX

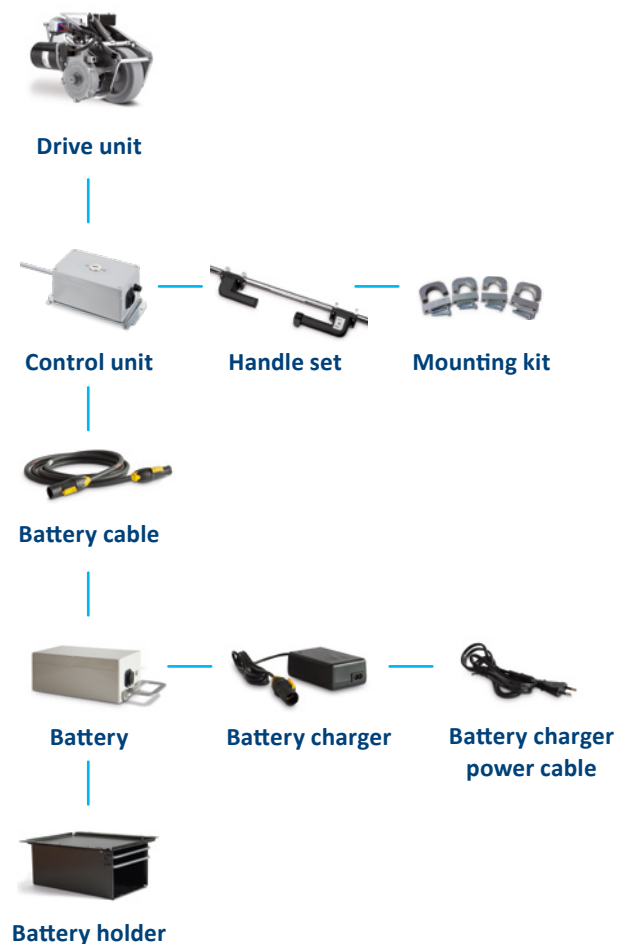
THRUST FORCE MAX. 25 daN

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

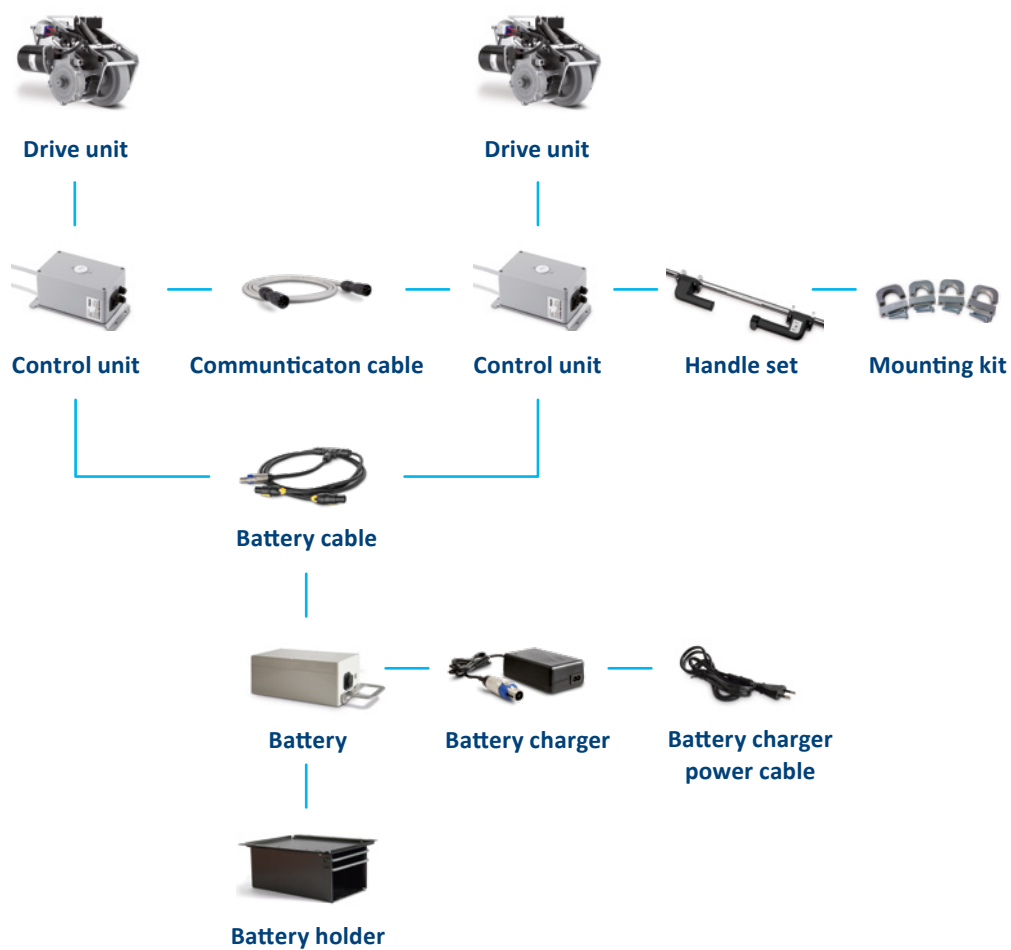


SET 2: E-DRIVE FLEX TWIN

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

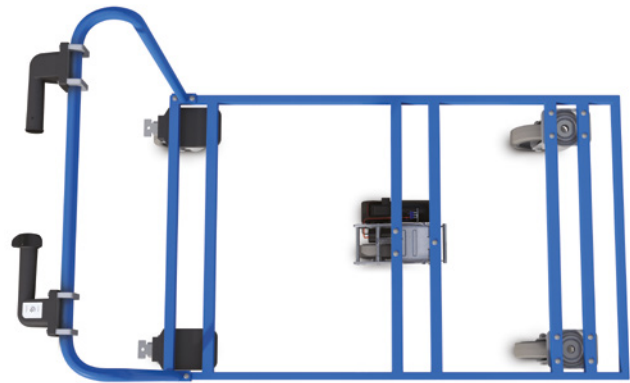


MOUNTING E-DRIVE FLEX

There are different ways to position the E-Drive flex under your application. But, no matter which position you choose, E-Drive 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.

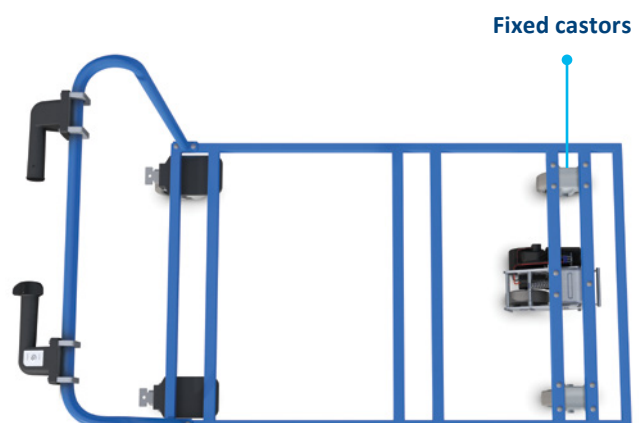
Mounting position for applications with 4 swivel castors

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.



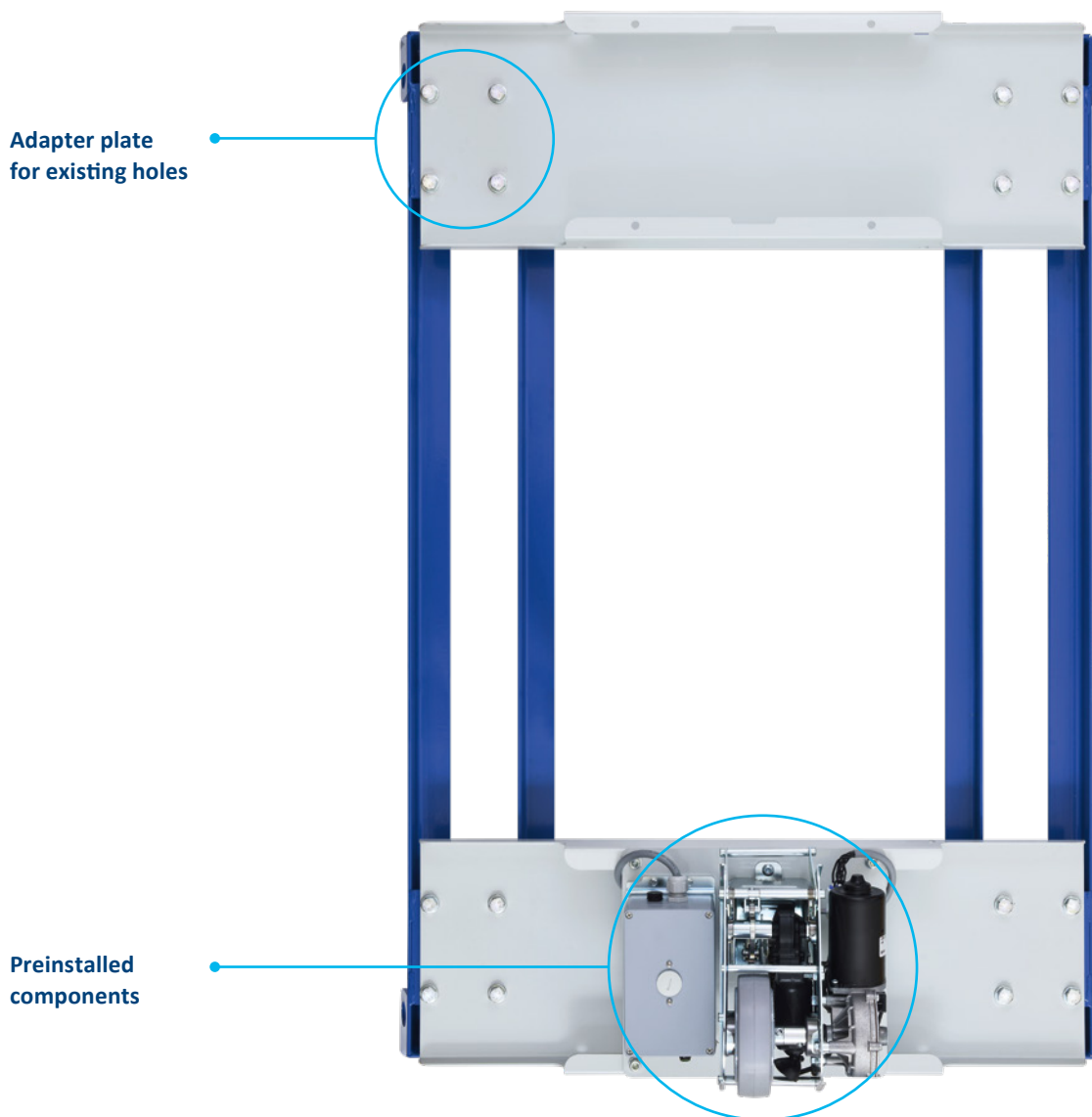
Application example of E-Drive flex

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

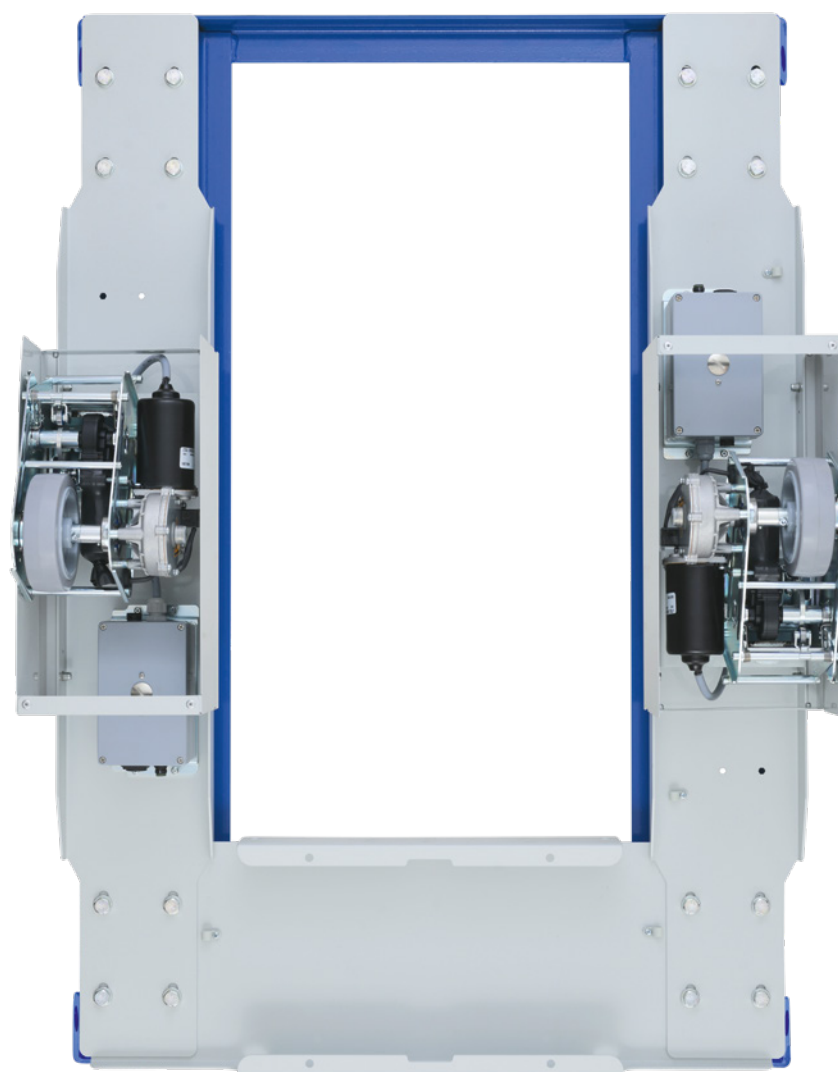
PLUG-AND-PLAY MOUNTING SET

E-DRIVE FLEX

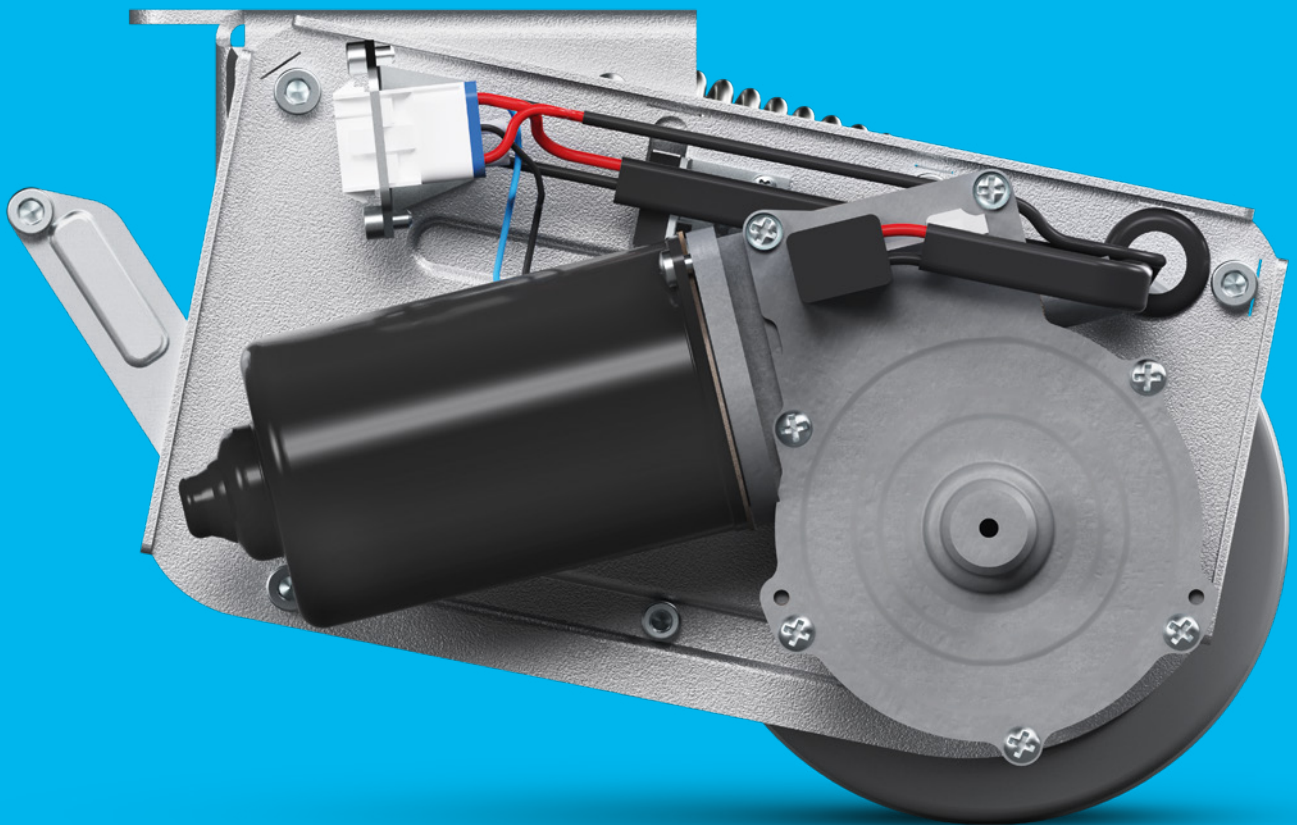
Wherever possible, the existing assembly holes of the trolley are used for the integration of E-Drive flex. Thanks to adapter plates, it is an easy plug-and-play solution. This is true for both the E-Drive flex and E-Drive flex twin. We also offer customised solutions in case these systems can't be implemented.



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 spray 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 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 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.



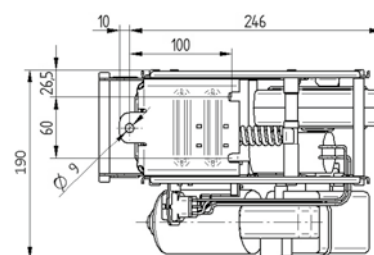
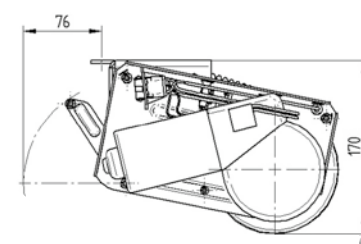
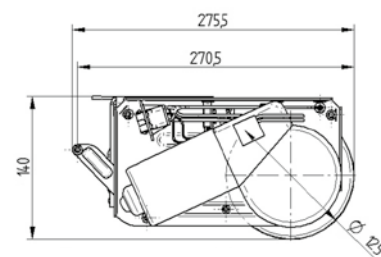
Starting assistance

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.



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 63A
		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	± 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 to 40 °C, Air humidity 90 %, non-condensing
		Permissible storage temperature	-20 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 ⁻¹

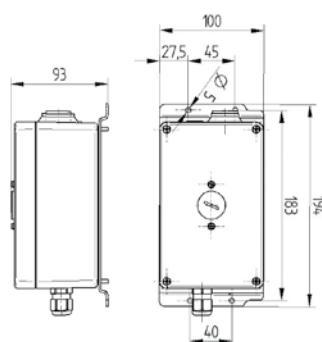
Drive unit actuator

<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 ⁻¹



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 operating temperature	Operating temperature 5 - 50° C (recommend 15 - 50° C), atmospheric humidity 90 %, noncondensing	Operating temperature 5 - 50° C (recommend 15 - 50° C), atmospheric humidity 90 %, noncondensing
	Permissible storage temperature	-20° C / +45° C	-20° C / +45° C
	Communication cable needed	No	Yes



Communication cable



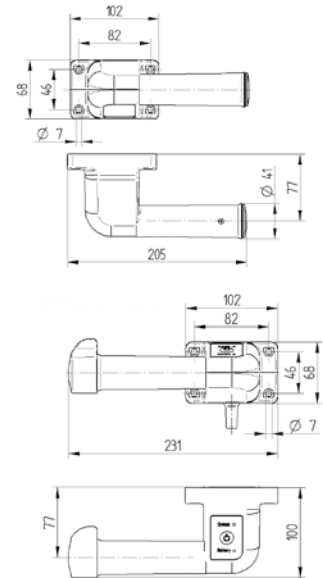
<div>i</div> <div>Description</div>	Article description	EDUZ 493
	Compatible with	E-Drive flex twin
	Cable length	1 m

Handle set



Example of a mounted handle on a tube.

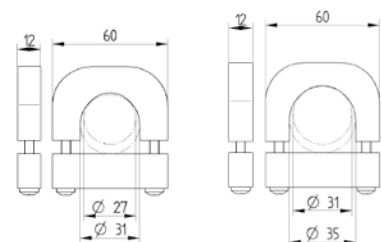
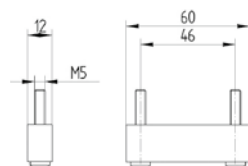
Description	i	Article description	EDUZ300
		Compatible with	E-Drive flex and E-Drive flex twin
		Set components	Two ergonomically designed handles, one with and one without function
		Fitting options	For tube fitting from 27 - 35 mm or for fitting on flat surfaces
		Handle material	Glass-fibre reinforced polyamide
		Speed control	Continuous variable, forwards and backward
		Controller	Safety-tested in accordance with DIN ISO 13849
		Service life of controller	2 million Cycles
		Controller axle rotation angle	+40° C / -40° C
		LED-functionality	Shows the status of the drive unit



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

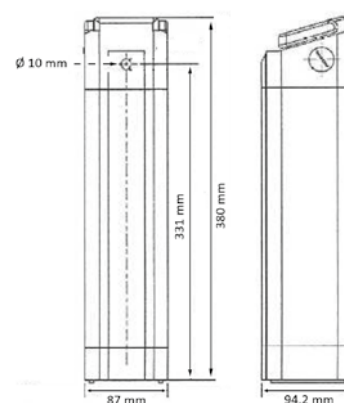
Choose between two different battery technologies according to your needs and your application.

LITHIUM-ION BATTERY SET



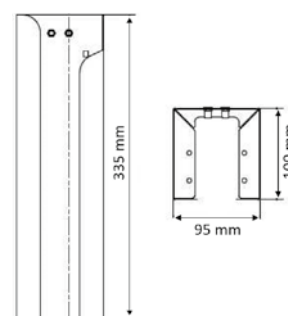
Battery

Description	i	Article description	EDUZ212
		Compatible with	E-Drive flex
		Nominal capacity	10,4 Ah
		Battery type	Lithium-ion battery
		Output 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.

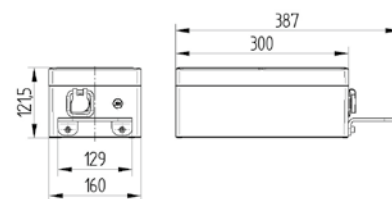


LEAD-ACID BATTERY SET

Battery



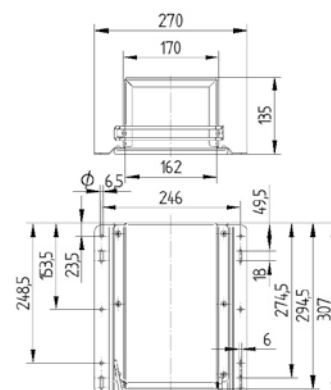
Description	Article description	EDUZ210	EDUZ214
	Compatible with	E-Drive flex	E-Drive flex twin
	Nominal capacity	14 Ah	14 Ah
	Battery type	Lead batteries AGM closed	Lead batteries AGM closed
	Output voltage	24 V DC	24 V DC
	Built-in fuse	15 A	2 x 15 A
	Weight	9,5 kg	9,5 kg
	Measurements	160 x 121,5 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	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, four pieces of clamping blocks and installation guide



Battery charger power cable



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

Battery charger



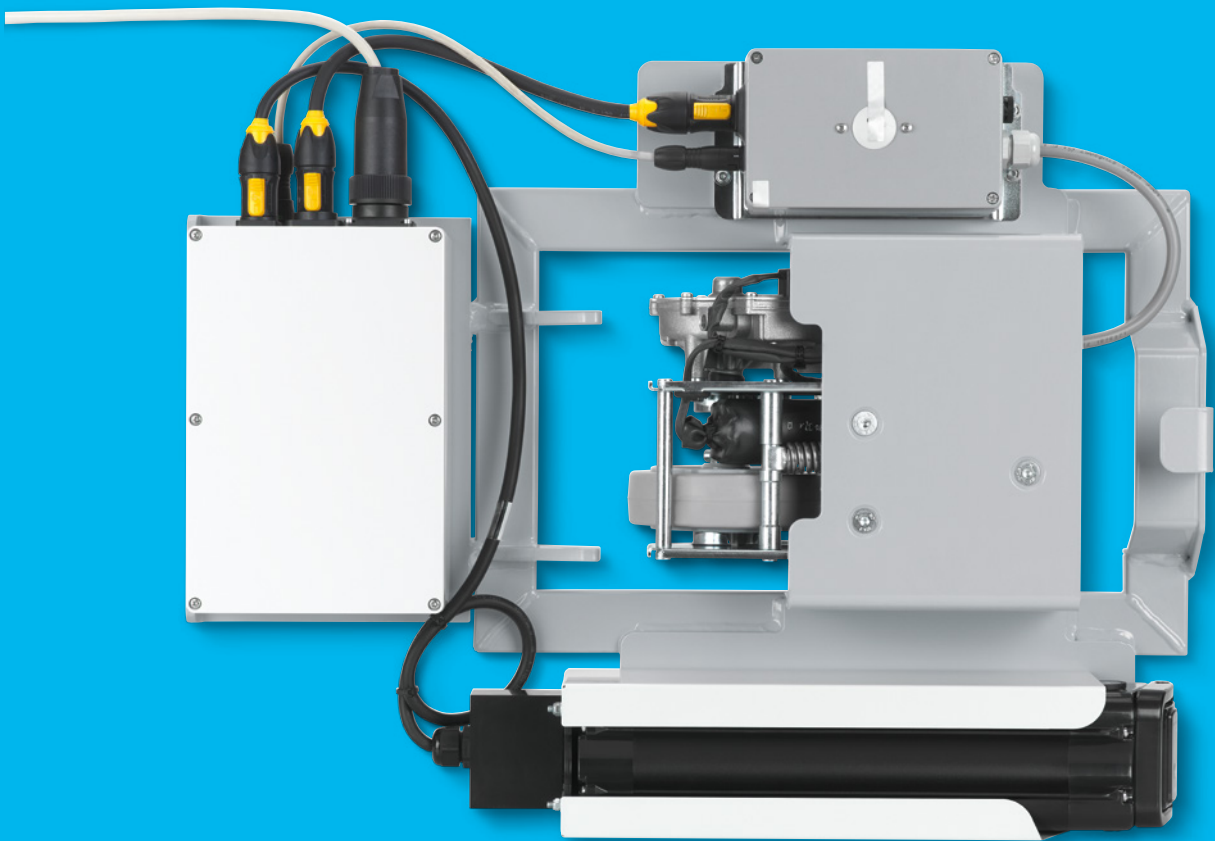
Description	Article description	EDUZ511	EDUZ514
	Compatible with	E-Drive flex	E-Drive flex twin
	Charging time	Approx. 5 hours for 14 Ah batteries	Approx. 5 hours for 14 Ah batteries

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 suit the needs 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.



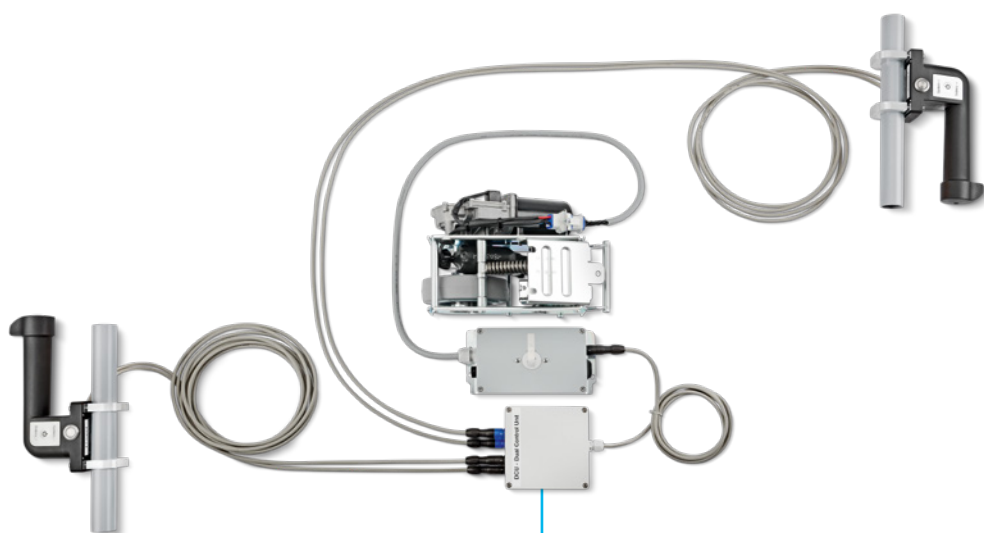
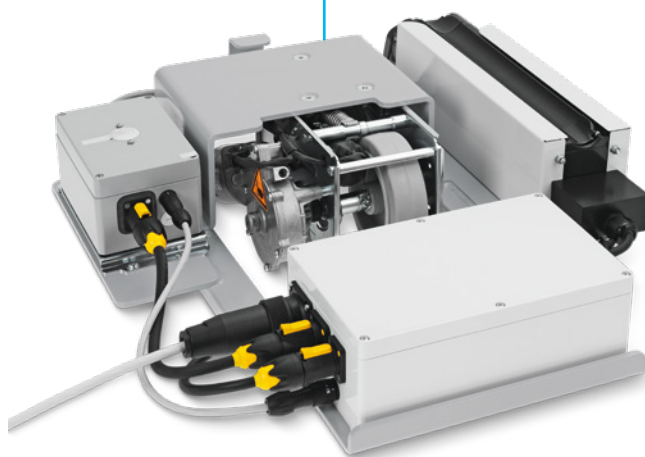
7. Implementation

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.

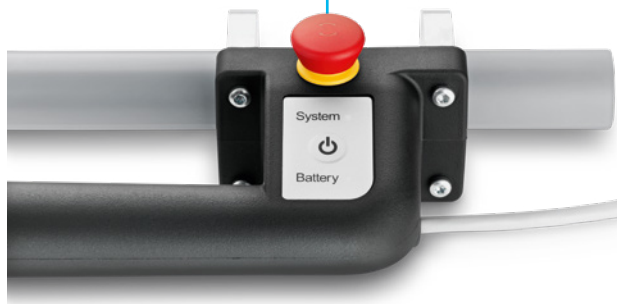


Adaption of components to the user behaviour

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