



Mechatronics

Bansbach
ez-Wheel
Ringfeder
Sindby

www.bibus.uk

BIBUS - 'Supporting your Success'

Over 60 years' experience in our core business disciplines; Technology, Metals and Electronics have meant we have built excellent trading partnerships with market leading manufactures to offer our customers quality products and expertise in all areas.

BIBUS (UK) Ltd

As a Technological Subsidiary of BIBUS Holding AG our customers benefit from our expertise in the field of Mechatronics, Pneumatics and Environmental Technologies. Dedicated product managers located across the UK help us support our customers with excellent service, expertise and skills.

Our Aim

We constantly strive to strengthen our position among suppliers and manufacturers to offer customers quality products at competitive prices in the shortest possible lead time.

Efficient Logistics

High degree of availability of stocked items, intercompany support and frequent shipments from manufactures with modern warehousing systems ensures an efficient flow of goods.

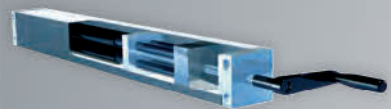
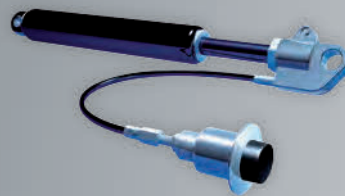
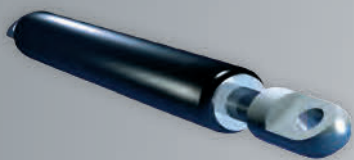
Expertise

By working with manufacturers our product managers are fully trained to be able to offer technical support and knowledge to help our customers overcome their problems.

Quality

Quality and the relevant qualifications go without saying at BIBUS.





- More than 40 years developing and manufacturing gas springs.
- Offer fast, efficient and cost effective service.
- Made-to-order gas springs to match customer's exact requirements.
- Expanding portfolio ranging from quick ship gas springs to hydraulic linear actuators.
- Diligent monitoring, technologically advanced manufacturing processes and an aggressive testing program ensures quality gas springs.

Quick Ship Gas Springs



Reference	Stroke (+/-2mm)	Force (N/m)	Extended (+/-2mm)
QS-12-20	20	10 - 180	72
QS-12-30	30	10 - 180	92
QS-12-40	40	10 - 180	112
QS-12-50	50	10 - 180	132
QS-12-60	60	10 - 180	152
QS-12-80	80	10 - 180	192
QS-12-100	100	10 - 180	232
QS-12-120	120	10 - 180	272
QS-12-150	150	10 - 180	332
QS-15-20	20	20 - 400	67
QS-15-40	40	20 - 400	107
QS-15-50	50	20 - 400	127
QS-15-60	60	20 - 400	147
QS-15-80	80	20 - 400	187
QS-15-100	100	20 - 400	227
QS-15-120	120	20 - 400	267
QS-15-150	150	20 - 400	327
QS-15-200	200	20 - 400	427
QS-19-50	50	50 - 700	164
QS-19-100	100	50 - 700	264
QS-19-150	150	50 - 700	364
QS-19-200	200	50 - 700	464
QS-19-250	250	50 - 700	564
QS-19-300	300	50 - 700	664
QS-22-50	50	80 - 1300	164
QS-22-100	100	80 - 1300	264
QS-22-150	150	80 - 1300	364
QS-22-200	200	80 - 1300	464
QS-22-250	250	80 - 1300	564
QS-22-300	300	80 - 1300	664
QS-22-350	350	80 - 1300	764
QS-22-400	400	80 - 1300	864
QS-22-450	450	80 - 1300	964
QS-22-500	500	80 - 1300	1064
QS-22-550	550	80 - 1300	1164
QS-22-600	600	80 - 1300	1264
QS-22-650	650	80 - 1300	1364
QS-22-700	700	80 - 1300	1464

Diameter rod / Body: 4mm / 12mm, Ø 6mm / Ø 15mm, Ø 8mm / Ø 19mm, Ø 8mm / Ø 22mm

Valve: Integrated

Connection: Threaded rod / body: M4 X 4, M5 X 5, M8 X 9 / M8 X 8

Progressivity: Approx. 21 - 39%

Depreciation & Speed: Normal Speed - 10mm Damping / Low Speed - High damping 20 - 70mm

Material: Ceramic processing on the rod - black epoxy paint on body

Quick Ship Gas Springs



Reference	Stroke (+/-2mm)	Force (N/m)	Extended (+/-2mm)
QS-28-100	100	150 - 2500	262
QS-28-150	150	150 - 2500	362
QS-28-200	200	150 - 2500	462
QS-28-250	250	150 - 2500	562
QS-28-300	300	150 - 2500	662
QS-28-350	350	150 - 2500	762
QS-28-400	400	150 - 2500	862
QS-28-450	450	150 - 2500	962
QS-28-500	500	150 - 2500	1062
QS-28-550	550	150 - 2500	1162
QS-28-600	600	150 - 2500	1262
QS-28-650	650	150 - 2500	1362
QS-28-700	700	150 - 2500	1462
QS-28-750	750	150 - 2500	1562
QS-40-100	100	500 - 5000	317
QS-40-150	150	500 - 5000	417
QS-40-200	200	500 - 5000	517
QS-40-300	300	500 - 5000	717
QS-40-400	400	500 - 5000	917
QS-40-500	500	500 - 5000	1117
QS-40-600	600	500 - 5000	1317
QS-40-800	800	500 - 5000	1717
QS-40-1000	1000	500 - 5000	2117

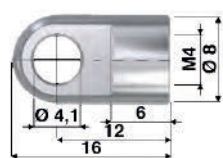
Diameter rod / Body: 14mm / 28mm, Ø 20mm / Ø 40mm
Valve: Integrated
Connection: Threaded rod / body: M10 X9 / M10 X 13, MF15 X 14
Progressivity: Approx. 45 - 52%
Depreciation & Speed: Low speed - High damping 30 - 70mm
Material: Ceramic processing on the rod - black epoxy paint on body



Gas Spring Accessories

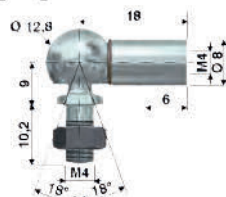
M4 Accessories - QS-12-Series

S1 Hinge Eye



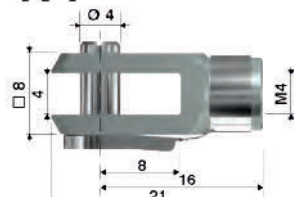
Max. force: 370N

F4 Elbow Joint



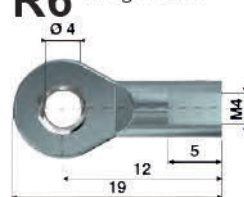
Max. force: 370N

N4 Clevis



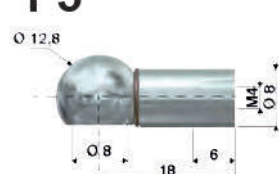
Max. force: 370N

R6 Hinge Head



Max. force: 370N

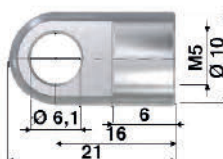
F5 Ball Socket



Max. force: 370N

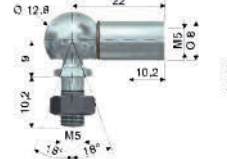
M5 Accessories - QS-15-Series

S2 Hinge Eye



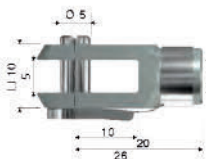
Max. force: 800N

B3 Elbow Joint



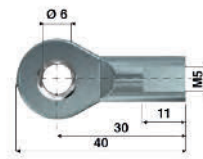
Max. force: 500N

G5 Clevis



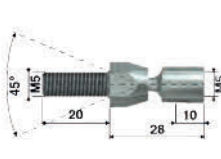
Max. force: 800N

R7 Hinge Head



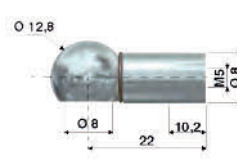
Max. force: 800N

G6 Ball Joint



Max. force: 500N

J3 Ball Socket



Max. force: 500N

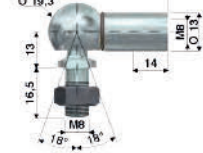
M8 Accessories - QS-19-Series - QS-22-Series

S3 Hinge Eye



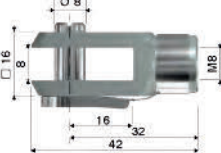
Max. force: 3000N

A3 Elbow Joint



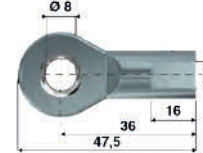
Max. force: 1300N

C5 Clevis



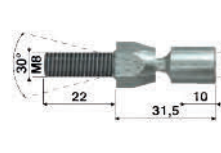
Max. force: 3000N

A7 Hinge Head



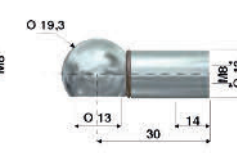
Max. force: 3000N

B6 Ball Joint



Max. force: 1200N

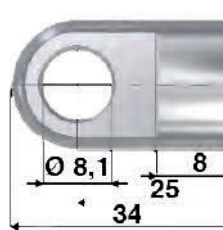
P3 Ball Socket



Max. force: 1300N

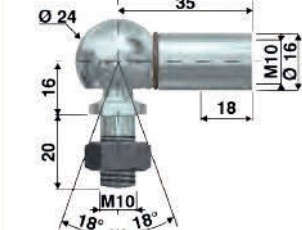
M10 Accessories - QS-28-Series

S4 Hinge Eye



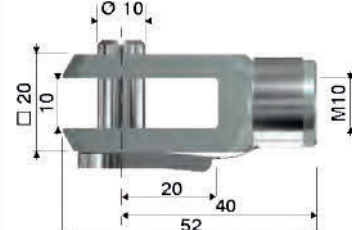
Max. force: 10000N

A4 Elbow Joint



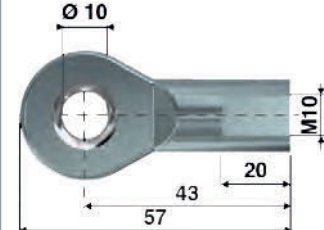
Max. force: 2500N

D9 Clevis



Max. force: 10000N

A8 Hinge Head



Max. force: 8000N

M14 Accessories - QS-40-Series

S5 Hinge Eye



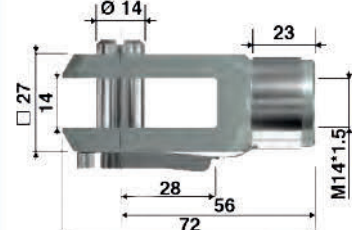
Max. force: 10000N

B4 Elbow Joint



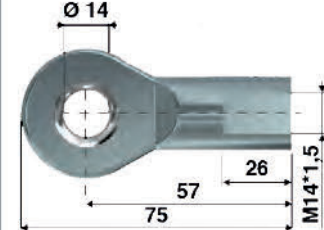
Max. force: 3000N

L5 Clevis



Max. force: 10000N

C8 Hinge Head



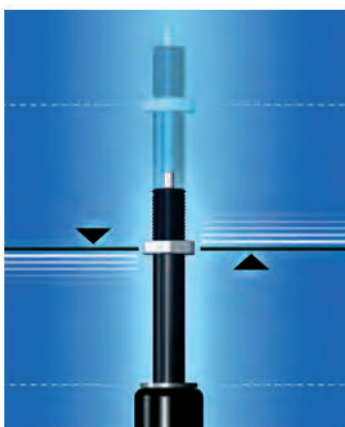
Max. force: 8000N

CONTROLLED PUSHING, LIFTING AND ADJUSTING UP TO ABSOLUTELY RIGID LOCKING IN BOTH DIRECTIONS

When considerable forces influence moving construction parts, reliable locking is important. The piston rod of the lockable easylift® gas spring can be adjusted in every required position of the entire stroke by actuating the release pin. Depending on the occurring forces in your application, we can fit your lockable easylift® gas spring for different load limits in a reasonable way. In this production program, the easylift® absolutely rigid locking in both directions gas spring is a worldwide recognized innovation.

The main benefits of our easylift® lockable springs is the independence of an external energy source, the comprehensive measures, and the damped, controlled movement. Combined with Bansbach low friction forces and high reliability, easylift® lockable springs are a quality solution to many application needs. As always, we make sure that you will receive your lockable gas springs with the requested size and force within the shortest time.

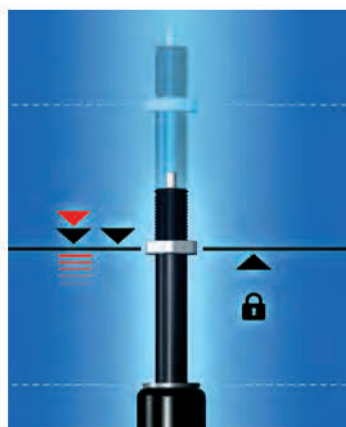
For more information, please see below the four basic models and further function variations listed on the website.



TYPE B

This type of cylinder has a bi-directional lock. Depending on an applied external force, there is movement of the piston rod when the cylinder is in any position apart from shut (closed), the piston rod will return to the preset locked position, this results in a "bounce" effect.

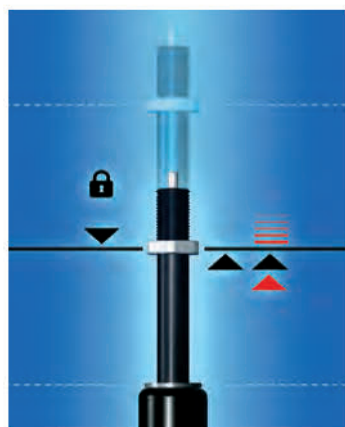
Applications: height adjustable office / breakfast bar chair.



TYPE K

This type of cylinder has a bi-directional lock. If a sufficient external force is applied on the gas spring, this will allow the movement of the piston rod in a compressed direction without external actuation.

Applications: backrest adjustment.



TYPE P

This type of cylinder has a bi-directional lock. Function identical to the model "K" but with the external forces being reversed for manual movements of the piston rod.

Applications: hospital beds - headrest and leg rest (especially if there is significant compression loads)



TYPE KX

This type of cylinder has a bi-directional lock. For this model, the advantages of the type "K" and "P" are combined in a single spring. Completely rigid locking in both directions.

Applications: hospital beds, adjustable seating, guarding, safety hatches etc..

easyE-line



Linear in-line actuators

With the easyE-line, you receive an in-line actuator with a very slim design. Due to the linear layout of motor, gear and spindle, a very slim design for installation is achieved. With an outer diameter of 35, 50 and 60 mm, the actuators fit into nearly every application. And this is possible with forces up to 10,000N (easyE-60).

FEATURES:

Stroke length: 50, 100, 150, 200, 250, 300, 350, 400, 500 and 750mm (others on request)

Materials:

Motor and actuator tube are powder coated steel or stainless steel

Piston rod is aluminum (easyE-35) or stainless steel (easyE-50 and easyE-60)

Front and rear brackets are PA, aluminum or stainless steel

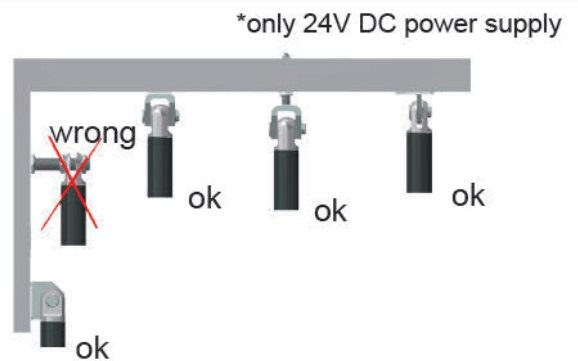
Protection class: IP66 (standard), harsh environment (according to IP68 and IP69)

Temperature: Standard (-5°C - +70°C), Low (-40°C - +70°C)

easyE-Line - In-line Actuators

Gear ratio	C*	D	E	F	G	H
easyE-35						12/24VDC
Force 24V (dyn. push and pull) [N]	120	400	600	900	1600	2200
Speed at maximum load [mm/s]	33	16	12	7,5	4	3
Force 12V (dyn. push and pull) [N]	-	400	600	900	1500	2000
Speed at maximum load [mm/s]	-	16	9	7,5	3,5	2,5
Current at maximum load: 12VDC (max 14 VDC) = 24VDC (max 28 VDC)						
easyE-50						12/24VDC
Force 24V (dyn. push and pull) [N]	500	1750	2200	3100	4500	4500
Speed at maximum load [mm/s]	70	20	17	12	6	4
Force 12V (dyn. push and pull) [N]	-	1400	1700	2400	4500	4500
Speed at maximum load [mm/s]	-	14	10	6	3	3,5
Current at maximum load: 12VDC (max 14 VDC) = 16A (ratio C-F), 14A (G), 9A (H), 24VDC (max 28VDC) = 8A (C-F), 7A (G), 4,5A (H)						
easyE-60						24VDC
Force 24V (dyn. push and pull) [N]		1900	4300	6600	8100	10000
Speed at maximum load [mm/s]		26	12	8	6	5
Current at maximum load:						1,5A

Max. load limited for stroke > 400mm:
1000N (easyE-35), 2000N (easyE-50), 5000N (easyE-60)



Axial backlash: +/- 0,5mm, generally length tolerance +/- 1mm

	EL	Clevis rear	Hall	UL/ EN60.601	harsh env.	Emergency lowering/spline	ØZ1	ØZ2	ØKS
easyE-35									
Gear ratio: C, D, E, F	stroke+160*	+10	+10	+10	+11	-	Ø35	Ø28	Ø20
Gear ratio: G, H	stroke+170*								
easyE-50									
Gear ratio: C, D, E, F	stroke+240**	-	+15	+15	+14	+23 / +6	Ø50	Ø40	Ø30
Gear ratio: G, H	stroke+255**								
easyE-60									
Gear ratio: all ratios	stroke+358***	-	+15	-	+25	+31 / +10	Ø60	Ø50	Ø35

*If stroke >400mm: EL+7mm, if stroke >700mm: EL+42mm

**If stroke >750mm: EL+100mm (on request)

***If stroke >400mm: EL+25mm (non Harsh-Environment-version)

Choose your actuator:

1. Model:

- ☐ easyE-35
- ☐ easyE-50
- ☐ easyE-60

2. Stroke length:

- ☐ 50, 100, 150, 200, 250, 300,
350, 400, 500 and 750mm (others on request)

3. Gear ratio:

- ☐ C, D, E, F, G, H (speed and load see table)

4. Voltage:

- ☐ 12V DC (only easyE-35 and easyE-50)
- ☐ 24V DC

6. Cable length:

- ☐ 1m - 9m (others on request)

7. Connector:

- ☐ no connector
- ☐ Molex minifit

8. Material:

- ☐ Standard steel
- ☐ AISI 316

9. Protection class:

- ☐ IP66 (standard)
- ☐ harsh environment (according to IP68 and IP69)

10. Certification:

- ☐ For medical applications:
IEC60601-1, ANSI/AAMI/ES60601-1,
CAN/CSA-22.2 No60601-1 (only 24 V DC)
(Operation temperature: +5°C to +48°C)

11. Hall sensor:

- ☐ no (standard)
- ☐ yes (cable will change)

12. Low noise:

- ☐ no (standard)
- ☐ yes (not available in stainless steel)

13. Colour:

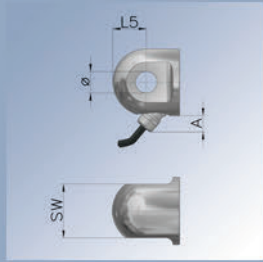
- ☐ Black (standard)
Available in all RAL colors

14. Connecting parts:



easyE-Line - In-line Actuators

Motor side connecting parts

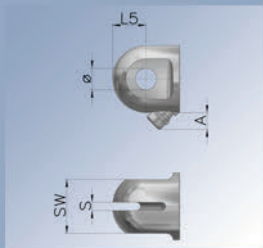


Code	Ø	L5	SW	A	Material	Max static load
easyE-35	(mm)	(mm)	(mm)	(mm)		
A1M	10 ^{+0,2} ₀	17,5	28	6	Alu	5400 N
B1M	10 ^{+0,2} ₀	17,5	28	-	Polyamid (PA)	2000 N
C1M	10 ^{+0,2} ₀	17,5	28	6	stainless steel (316)	5400 N
easyE-50						
A2M	16 ^{+0,2} ₀	25	40	12,3	Alu	16800 N
B2M	16 ^{+0,2} ₀	25	40	-	Polyamid (PA)	4700 N
C2M	16 ^{+0,2} ₀	25	40	12,3	stainless steel (316)	16800 N
easyE-60						
A3M	16 ^{+0,2} ₀	30	50	12,3	Alu	18100 N
C3M	16 ^{+0,2} ₀	30	50	12,3	stainless steel (316)	18100 N

with spherical bearings



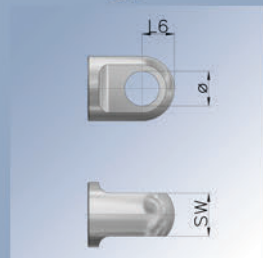
Code	Ø	L5	SW	A	Material	Max static load
easyE-35	(mm)	(mm)	(mm)	(mm)		
E1M	8 ^{-0,008} ₀	17,5	28	-	Alu	5400 N
easyE-50						
E2M	12 ^{-0,008} ₀	25	40	-	Alu	11000 N
easyE-60						
E3M	15 ^{-0,008} ₀	30	50	12	Alu	11000 N
J3M	15 ^{-0,008} ₀	30	50	12	stainless steel (316)	11000 N



PA-connecting parts are not available for gear ratio G and H

Code	Ø	L5	SW	A	S	Material	Max static load
easyE-35	(mm)	(mm)	(mm)	(mm)	(mm)		
F1M	10 ^{+0,2} ₀	17,5	28	6	6,2	Alu	5400 N
G1M	10 ^{+0,2} ₀	17,5	28	-	4,2	Polyamid (PA)	2000 N
H1M	10 ^{+0,2} ₀	17,5	28	6	6,2	stainless steel (316)	5400 N
easyE-50							
F2M	16 ^{+0,2} ₀	25	40	12,3	6,2	Alu	16800 N
G2M	16 ^{+0,2} ₀	25	40	-	6,2	Polyamid (PA)	4700 N
H2M	16 ^{+0,2} ₀	25	40	12,3	6,2	stainless steel(316)	16800 N
easyE-60							
F3M	16 ^{+0,2} ₀	30	50	14	8,2	Alu	18100 N
H3M	16 ^{+0,2} ₀	30	50	14	8,2	stainless steel(316)	18100 N

Piston rod side connecting parts

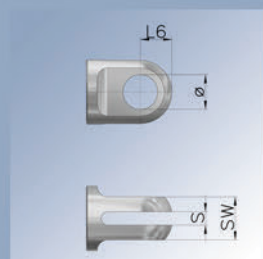


Code	Ø	L6	SW	Material	Max static load
easyE-35	(mm)	(mm)	(mm)		
A1K	10 ^{+0,2} ₀	10	13	Alu	5400 N
B1K	10 ^{+0,2} ₀	10	13	Polyamid (PA)	2000 N
C1K	10 ^{+0,2} ₀	10	13	stainless steel (316)	5400 N
easyE-50					
A2K	16 ^{+0,2} ₀	15	20	Alu	16800 N
B2K	16 ^{+0,2} ₀	15	20	Polyamid (PA)	4700 N
C2K	16 ^{+0,2} ₀	15	20	stainless steel (316)	16800 N
easyE-60					
A3K	16 ^{+0,2} ₀	17,5	25	Alu	18100 N
C3K	16 ^{+0,2} ₀	17,5	25	stainless steel (316)	18100 N

with spherical bearings



Code	Ø	L6	SW	Material	Max static load
easyE-35	(mm)	(mm)	(mm)		
E1K	8 ^{-0,008} ₀	12	18	Alu	5400 N
easyE-50					
E2K	12 ^{-0,008} ₀	15	20	Alu	11000 N
easyE-60					
E3K	15 ^{-0,008} ₀	20	28	Alu	11000 N
J3K	15 ^{-0,008} ₀	20	28	stainless steel (316)	11000 N



Code	Ø	L6	SW	S	Material	Max static load
easyE-35	(mm)	(mm)	(mm)	(mm)		
F1K	10 ^{+0,2} ₀	10	15	6,2	Alu	5400 N
G1K	10 ^{+0,2} ₀	10	13	4,2	Polyamid (PA)	2000 N
H1K	10 ^{+0,2} ₀	10	15	6,2	stainless steel (316)	5400 N
easyE-50						
F2K	16 ^{+0,2} ₀	15	20	6,2	Alu	16800 N
G2K	16 ^{+0,2} ₀	15	20	6,2	Polyamid (PA)	4700 N
H2K	16 ^{+0,2} ₀	15	20	6,2	stainless steel (316)	16800 N
easyE-60						
F3K	16 ^{+0,2} ₀	17	25	8,2	Alu	18100 N
H3K	16 ^{+0,2} ₀	17	25	8,2	stainless steel (316)	18100 N

Controllers:

EEL-S1

For 1-3 actuators



FEATURES:

- Plug and play solutio
- Handset or external switch
- for easyE-35 and easyE-5

TECHNICAL DETAILS:

- Supply: 230
- Output voltage: 24

EEL-S2-1

For 1 actuator



FEATURES:

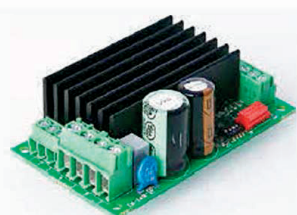
- Adjustable start and stop ramp
- Adjustable current limit
- Continuous-mode, impulse-mod
- Easy interfacing to PLC etc
- DIN-rail fittabl
- Hall sensors not supporte

TECHNICAL DETAILS:

- Supply: 10 to 35VD
- Output voltage = supply voltag
- Over voltage protection: 40
- Idle current: Approx. 15 mA
- Driving current: 10 A continuous, 16 A with duty cycle 50%, Max 16 A on duty 2 min

EEL-S2-2

For 1 actuator



FEATURES:

- Precise position control fro analog voltage input
- Adjustable start and stop ramp
- Settable current limi
- High momentary load capacit
- DIN-rail base fittabl
- "Position reached" - signa
- Hall sensors necessar

TECHNICAL DETAILS:

- Supply: 10 to 35VD
- Output voltage = supply voltag
- Actuator current continuous max: 15A
- Current limit adj.: 0.1-20
- Overheat limit: 100°
- Hall input freq.: Max 1kHz
- Input control logic (pos.): High=4-30 , Low=0-1V or open

EEL-S2-3

For 2 actuators



FEATURES:

- Synchronized operation o 2 actuators
- Current and temperature protectio
- Settable drive spee
- Adjustable start- and stop ramp
- Easy setting with serial interfac
- Autobalance feature
- Hall sensors necessar

TECHNICAL DETAILS:

- Supply: 10 to 35VD
- Output voltage = supply voltag
- Quiescent current: 15m
- Motor current: 2x10 cont. 2x20A, 25% duty
- Current limit: 1-20
- Pulse input freq. max.: 1kHz
- Pulse inputs pull- up/down: 10k
- Control inputs: 0-1V=OFF; 4-30V=O

EEL-S3

EEL-S4

For 1-4 actuators



FEATURES:

- Battery powered for mobile us
- 24VDC NiMH or Li-Ion batter
- Customized colors and foil design
- Wired handse

EEL-S3:

- 1 actuato
- up- and down functio

EEL-S4:

- Adjustable current limit in and out
- Adjustable calibration speed and current
- Adjustable virtual min/max-position
- Individual or synchronous operation for drive 1-4 actuator

TECHNICAL DETAILS:

- Supply: 24VDC NiMH or Li-Ion batter
- Output voltage: 24
- Idle current: < 5m
- Current limit: 8A/ch max. total 12
- Ramps 0-3 se
- Connector type Molex Mini-Fit 6 pi



- Founded in 2009 and awarded a top ten position in the handling awards 2014.
- Fully embedded motor, batteries and drive controls removing all the peripherals, wire sets and connectors through wireless control.
- Specifically designed and manufactured for Industrial and Medical application with load or person transporting capabilities.
- Operational indoor and outdoor over an extended temperature range.

Load Handling

The ez-Wheel range of electric wheels with integrated control, batteries and drives are the ideal solution for handling equipment and for the transportation of heavy loads, up to and including 1 tonne.

The drive control system integrated into the ez-Wheel design helps with propulsion and control on gradients, which improves safety.

With the ez-Wheel designed for a wide temperature range, and also with IP65 rating as standard, it is ideally capable for both internal and external use, and is extremely well suited for cold chain logistic solutions.



Healthcare equipment



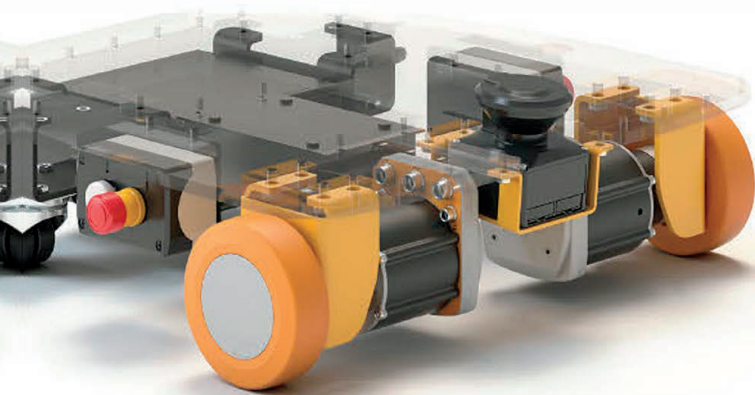
The ez-Wheel solution is ideally suited for a whole host of medical transportation requirements, from hospital beds and patient trolleys to carts and equipment trolleys.

With a silent operating system, the ez-Wheel is not intrusive in patient environments.

By incorporating the ez-Wheel product your equipment is easier and more comfortable to handle and manoeuvre.

By utilising nickel-metal hydride battery (NiMH) battery packs you are not hindered by multiple charging. Total loss of power will not reduce the life span of the battery packs. The ez-Wheel has also been specifically designed to “free wheel” with no additional friction for the operator.





SWD® Starter Kit

The Starter Kit is designed to facilitate and accelerate the development of AGVs and AMRs using ez-Wheel's exclusive SWD® Safety Wheel Drive technology.

Pre-assembled with a safety scanner, an on-board computer and a 24V rechargeable battery, the Starter Kit platform is ready to use: start developing your mobile robot right away!

The ARM iMX6 processor-based embedded computer comes with a Linux OS supporting the ROS open-source meta system, and all the drivers needed to run the platform.

The Starter Kit offers all the exclusive safety features of the SWD® Safety Wheel Drive range such as SIL2 / PLd certified motion control, ensuring development in accordance with the ISO 3691-4 driverless truck standard.



Motorization	SWD® Core
Sensor	Scanner LiDAR SIL2 / PLd
Processor	ARM iMX6
Speed range	0 to 3 km/h
Battery	24 V – 9 Ah
OS	Linux / ROS

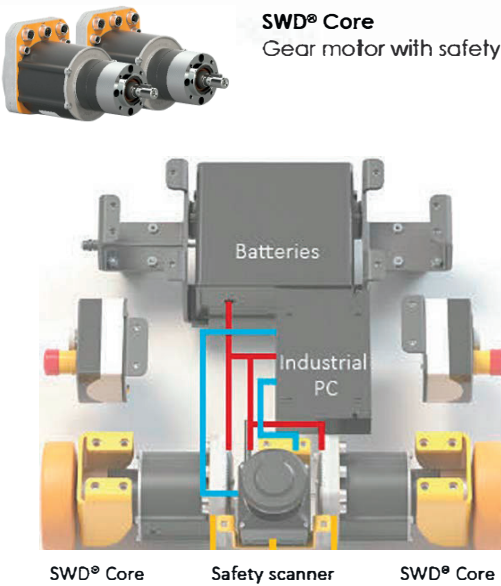
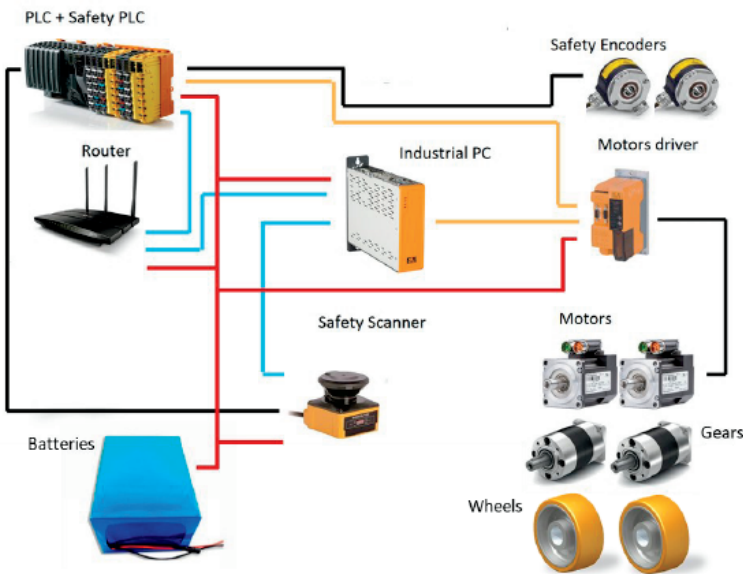
BENEFITS

- ✓ Adaptable generic components
- ✓ Reduction in the number of components VS a classic AMR
- ✓ SIL2 / PLd certified in accordance with the ISO 3691-4 standard

CONVENTIONAL SOLUTION

VS

SOLUTION WITH SWD® TECHNOLOGY



Series 150 Kit

Ez-wheel offers you a new electric wheel model that also integrates the motor and battery. This model will provide your load and passenger transport equipment with electrical assistance for the movement of loads up to 1000 kg. In addition, you will also have the possibility to drive up to two synchronized wheels.

- Wheel Diameter 150 mm
- Speed 1 to 5km/h (adjustable)
- Maximum driving speed 8km/h
- Battery capacity 70 Wh (1 battery) - 140 Wh (2 batteries)
- Recharge time 1.5 h (for 90% of a battery)

Complete kit includes:

- Wired industrial 150 series wheel (IP43 protection) with 1 internal battery (ezKIT150I-1) or 2 internal batteries (ezKIT150I-2)
- 1.8A charger
- Rotating handle
- Remote on/off button with LED
- Cable for remote support (with mounting plate) 2m
- Cable 3m wheel-handle and 3m wheel-on/off button
- Anti-crush button



Series 160 Kit

The 160 series integrate motor and batteries in an extremely compact format. The wheel is designed with reduced height to fit any low chassis. The robust hub fairing protects all components from knocks and splashing. The 160 series is available with wire connections or with external batteries to allow junctions to other electrical peripherals.

- Wheel Diameter 160 mm
- Speed 1 to 5km/h (adjustable)
- Moves up to 500kg
- Waterproof
- Wired version / External battery version

Complete kit includes:

- 160M+ series wheel with 1 or 2 internal batteries (IP66)
- Charger 1.8 A MASCOT1A8FR
- ezARH rotary handle
- Impulse remote on/off button with LED ezSPBC-BD
- 2m remote charging cable ezCC2M/160
- 3m cable between wheel-handle and between wheel-on/off button



Series 300 Kit

The series 300 can be fitted immediately on any vehicle chassis or mobile equipment. No electrical connection is needed since the wheel is self-powered by the built-in battery and driven by a wireless connection. The electric motor provides exceptional clearance capability and equipment fitted with the motor can carry loads of several hundred kilograms.

- Wheel Diameter 300 mm
- Speed 1 to 12km/h (adjustable)
- Moves up to 1000kg
- Waterproof
- Wireless
- 5 years maintenance-free lifespan

Complete kit includes:

- 4A charger MASCOT4AFR
- ezW300I/WR Cordless Industrial 300 Series Wheel (IP54)
- ezMCS/H horizontal suspended screen
- ezMAR anti-rotation washer
- ezRTH/W cordless tiller head (IP54)
- Charging Y cable (wheel + drawbar head) ezCYC





150 Series ezW150I / ezW150M

All the components necessary for traction are built into the housing: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.

Ø 150mm

1000 kg moved

IP43

92 sh.A Bickel® Extrathane flat profile

Weight

Thanks to the reinforced cast iron housing and wheel hub, the Series 150 wheel can withstand knocks and severe vibration and enables the wheel to carry some load.

10 kg

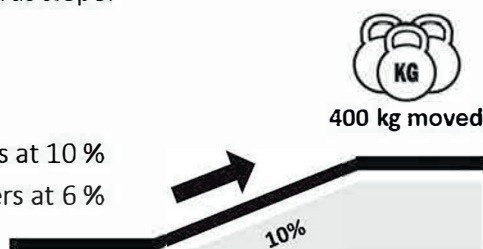
Wheel weight

400 kg

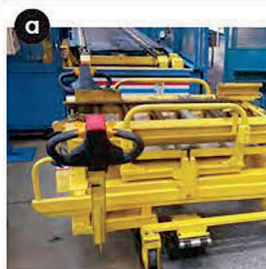
Vertical load
up to 5 km/h

On a PRM standards slope:

- 2 meters at 10 %
- 10 meters at 6 %



Application examples



- Conveyor transfer car
- Tool trolley
- Scissor lift trolley

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-10°C
+40°C

Functional
temperatures range

2Y.
3Y.

Maintenance period
in years

Uses

- industrial trolleys
- rolling equipment for factories
- mobile workstations and tools

Technical features

Diameter	150 mm
Speed range	0 to 5 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	15 daN at 4 km/h
Maximum rolling speed	8 km/h
Battery capacity	0 - 70 - 140 Wh
Wheel weight	10 kg
Options	Parking brake /B Additional battery

Motor

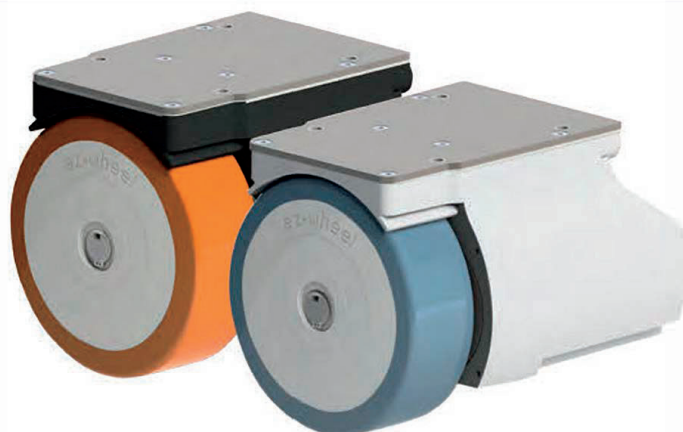


Technology	BLDC PM
Gearbox	2-stage helical
Indicative lifespan	3000 h / 10000 km 1000 000 starts/stops
Nominal Speed	166 rpm (4,7 km/h)
Nominal power	170 W (S3, 15% duty cycle, 5 min max)
Peak Torque	27 Nm

Battery



Electro-chemistry	Ni-MH long life
Energy	70 Wh (1 battery) 24 VDC - 3 Ah 140 Wh (2 batteries) 24 VDC - 6 Ah
Indicative lifespan	2-3 years
Recharge mode	- Charger - External power
Minimum charging time	1.5 hours (to 90%)



160 Series ezW160I / ezW160M

All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life batteries, a power controller ensuring optimum motor control, battery management and a control interface.

Ø 158 mm

750 kg moved

IP66

70 sh.A Polyurethane flat profile

Weight

The robust assembly can withstand knocks and severe vibration. The wheel is designed to be installed as a fifth wheel with a suspension.

6 kg

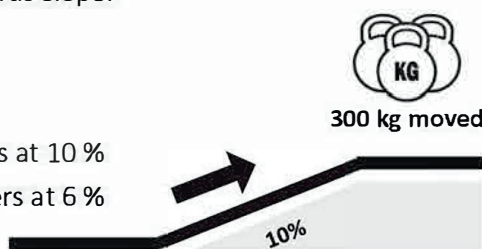
Wheel weight

50 kg

Vertical load
up to 5 km/h

On a PRM standards slope:

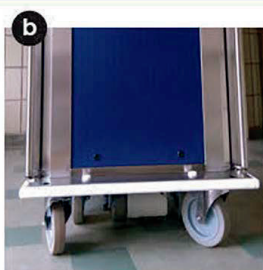
- 2 meters at 10 %
- 10 meters at 6 %



Application examples



a. Transfer chair



b. Hot & cold food cart



c. Catering trolley

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-10°C
+40°C

Functional
temperatures range

2Y.
3Y.

Maintenance period
in years

Uses

- catering trolleys
- transfer chairs and beds
- rolling equipment for hospitals

Technical features

Diameter	158 mm
Speed range	0 to 5 km/h
Peak pushing effort	27 daN Moves 750 kg
Nominal performance	9 daN at 5 km/h
Maximum rolling speed	8 km/h
Battery capacity	0 - 70 - 140 Wh
Wheel weight	6 kg
Options	Additional battery

Motor



Technology	BLDC PM
Gearbox	2-stage helical
Indicative lifespan	2000 h / 5000 km 600 000 starts/stops
Nominal Speed	167 rpm (5 km/h)
Nominal power	130 W (S1)
Peak Torque	22 Nm

Battery



Electro-chemistry	Ni-MH long life
Energy	70 Wh (1 battery) 24 VDC - 3 Ah 140 Wh (2 batteries) 24 VDC - 6 Ah
Indicative lifespan	2-3 years
Recharge mode	- Charger - External Power
Minimum charging time	1.5 hours (to 90%)



300 Series ezW300I / ezW300M

All the components necessary for traction are built into the wheel: an electric gear motor, high energy and long-life series, a power controller ensuring optimum motor control, battery management and a control interface.

Ø 300 mm
1000 kg moved
IP54
PU 80 sh.A flat profile

Weight

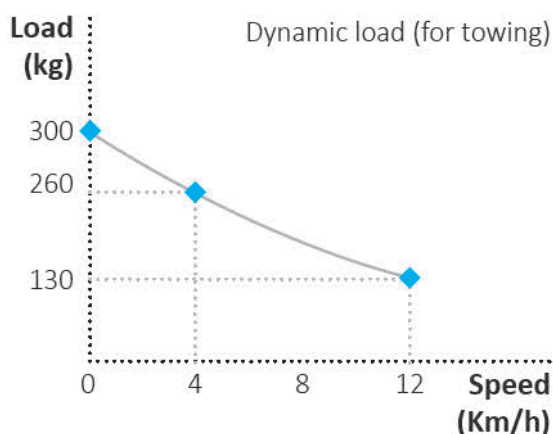
The robust assembly can withstand knocks and severe vibration and enables the wheel to carry some load.

17 kg

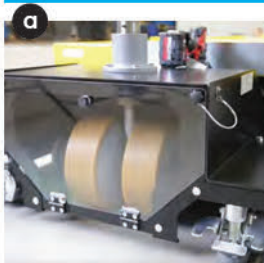
Wheel weight
/WR

18 kg

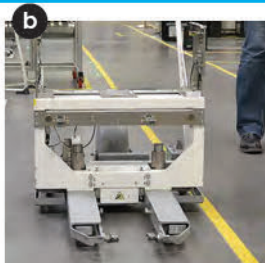
Wheel weight
/CCR



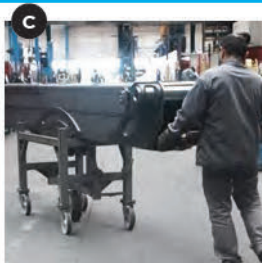
Application examples



a. Heavy duty platform



b. Special machinery



c. Heavy load carrier

Conditions of use

The wheel can be used inside or outside, over a wide range of temperatures. The components – including the battery – do not need any inspection or maintenance over the product's whole lifespan.

-20°C
+60°C

Functional
temperatures range

5Y.
7Y.

Maintenance period
in years

Uses

- industrial handling tools
- towed rolling equipment
- trolley
- pusher/puller

Technical features

Diameter	300 mm
Speed range	0 to 9 km/h
Peak pushing effort	35 daN Moves 1000 kg
Nominal performance	12 daN at 6 km/h
Maximum rolling speed	12 km/h
Battery capacity	240 Wh
Wheel weight	17 kg
Function	Regen

Motor



Technology	BLDC PM
Gearbox	1-stage helical
Indicative lifespan	5000 h / 15000 km 1500 000 starts/stops
Nominal Speed	110 rpm (6,2 km/h)
Nominal power	200 W (S1)
Peak Torque	52 Nm

Battery

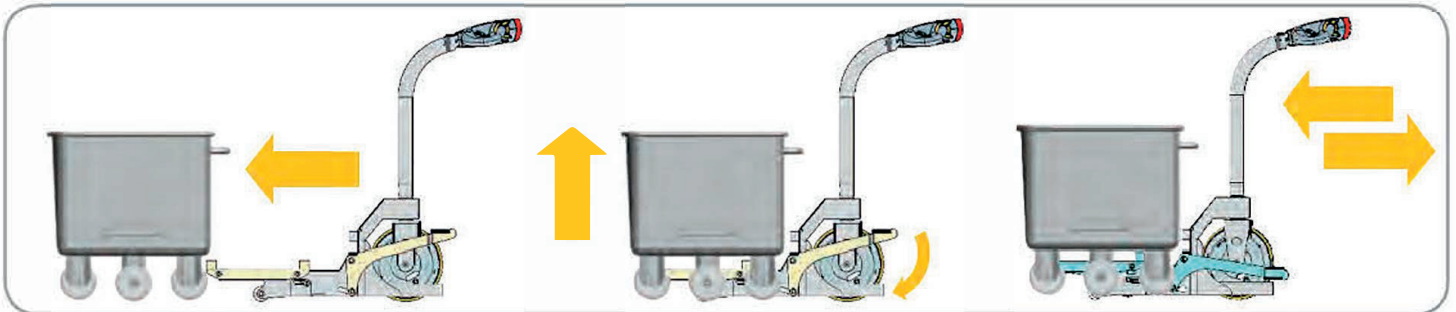


Electro-chemistry	Ni-MH long life
Energy	240 Wh 24 VDC - 10 Ah
Indicative lifespan	5-8 years
Recharge mode	- Charger - Towing /WR /CCR - External power
Minimum charging time	2.5 hours (to 90%)

Puller - Pusher DIN9797

DIN9797 making handling easier and less hazardous in the food processing industry

- Fully compliant to DIN9797 standards
- State of the art drive system with wireless controls
- Ergonomically Design
- Load capacity of upto 400kg
- Adjustable speed upto 6km/h
- Gradual Start
- IP 65 Wheel

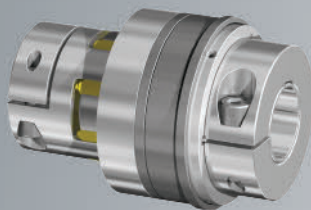
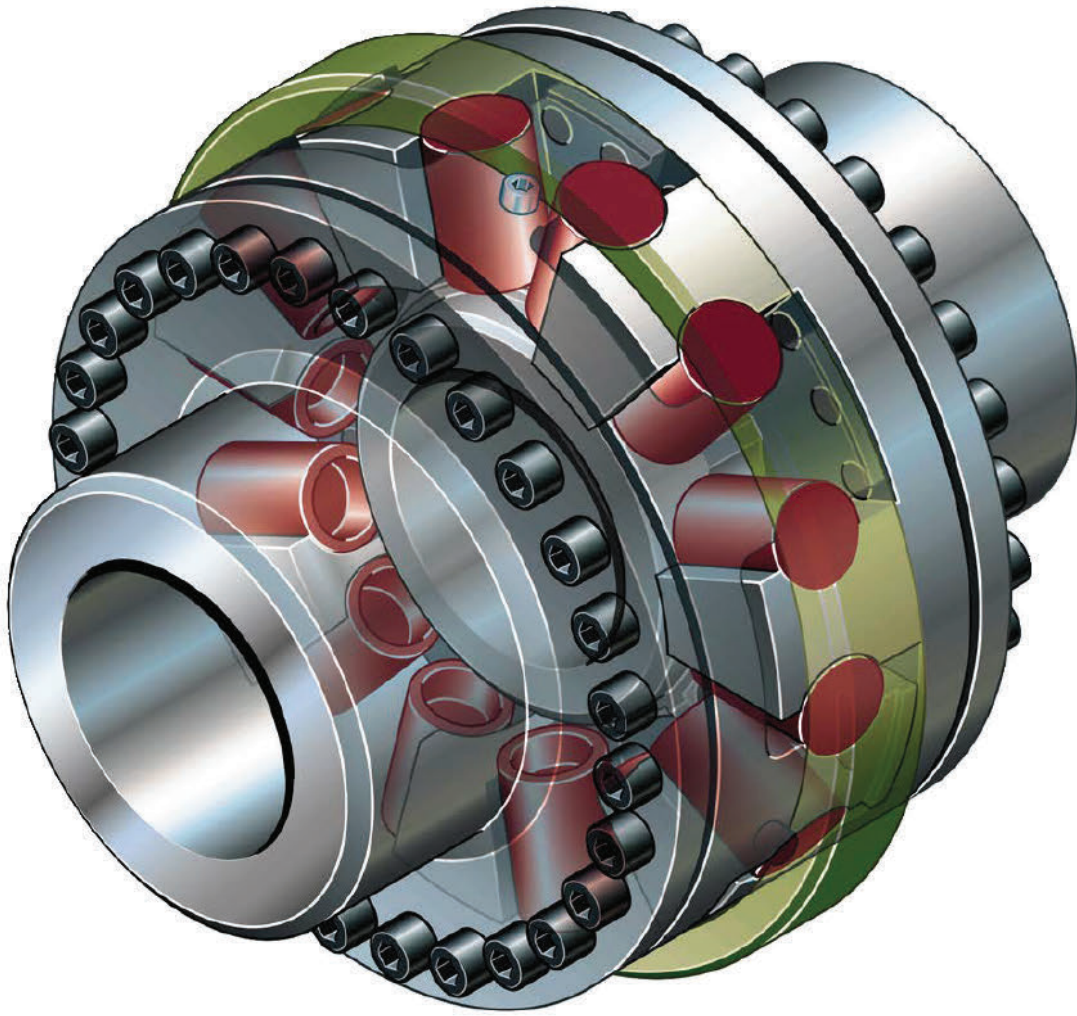


Puller - Pusher Easy Troll

An advanced technology coupled with an easy operating principle make the Easy Troll the ideal trolley.




- Ergonomically designed
- Pull Capacity of upto 1000kg
- Reduced working noise
- Adjustable speed upto 6km/h
- Gradual Start
- Industrial / Medical version
- Operational indoors / outdoors
- IP65 Wheel








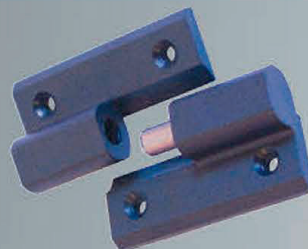
- Founded in 1922
- Innovative brand holding several registered patents and copyrights.
- Partner for performance for over 100 years
- Excellent know-how for maximum performance & reliability
- Optimal balance of costs and benefits
- Short reaction times and high product availability

Locking Assemblies, Shrink Discs & Couplings

Locking Assemblies	Shrink Discs	Friction Springs
 <ul style="list-style-type: none"> • Internal clamping connection • Secure transmission of torques and bending loads as well as axial and radial loads • Backlash, wear and maintenance-free • Extensive standard program for shaft diameters from 6 to 1,000 mm • Application-specific customized solutions • Available also in stainless steel 	 <ul style="list-style-type: none"> • External clamping connection • Secure transmission of torques and bending loads as well as axial and radial loads • Backlash, wear and maintenance-free • Extensive standard program for shaft diameters from 6 to 800 mm • Application-specific customized solutions • Available also in stainless steel 	 <ul style="list-style-type: none"> • Spring columns consisting of outer and inner rings • High spring work at low weight and volume • High damping capability • Spring work and damping effect independent from load speed • Overload-safe in block position • Maintenance-free and temperature-independent • Parallel and serial arrangement of springs • Individual designs for specific use cases

GWE	TNM	TNS
 <ul style="list-style-type: none"> • Backlash-free, pluggable, fail-safe • Vibration and oscillation damping • Compensation of shaft misalignment • Torques from 0.5 to 2,000 Nm • Easily exchangeable elastomers of various hardnesses • Available also in stainless steel 	 <ul style="list-style-type: none"> • Torsionally elastic, pluggable, fail-safe • Vibration and oscillation damping • Compensation of shaft misalignment • Torques from 25 to 97,500 Nm • Wide range of variants due to modular design • Easily exchangeable elastic intermediate rings of various hardnesses 	 <ul style="list-style-type: none"> • Torsionally elastic, pluggable, fail-safe • Vibration and oscillation damping • Compensation of shaft misalignment • Torques from 25 to 97,500 Nm • Wide range of variants due to modular design • Easily exchangeable elastic intermediate rings of various hardnesses

More models and information available on request

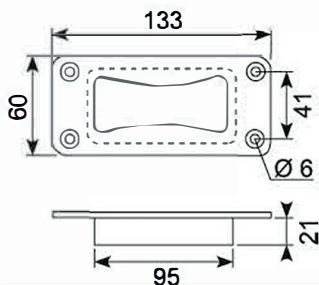


- More than 75 years experience in the field of rubber profile, edges, matting and component fittings and fixtures.
- Over 7000 standard stock items available.
- Wide product range suitable for a wide range of sectors from aviation, automotive, trains, trailers to industrial machinery.
- Continually working with customers to develop new products for either stock or custom-made jobs
- Strict quality regulations in place to maintain high levels of quality.

Sindby Products Example Application

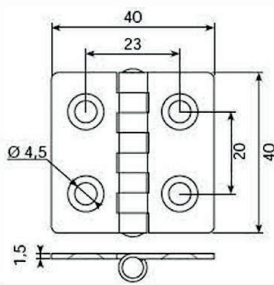
Grab Handle

Double sided
Flush-Fit
Black Synthetic Material



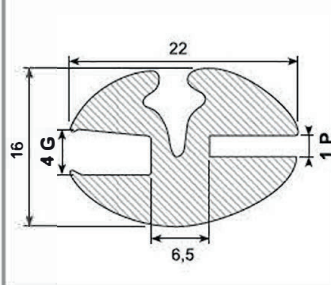
Stainless Steel Hinge

Acid Proof 316 steel
Finish: Polished
Thickness: 2mm



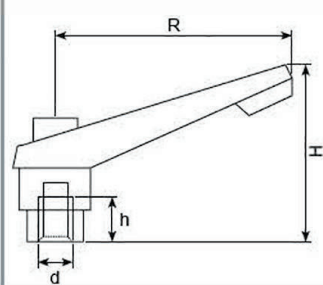
EPDM Glazing Section

Colour: Black
Hardness: SH 65
Minimum Radius: 80mm



Adjustable Handle

Material: Zinc Alloy
Colour: Black
Variety of Sizes Available



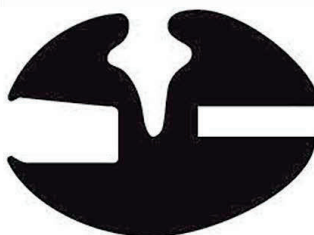
23.250



50.330343



32.2014

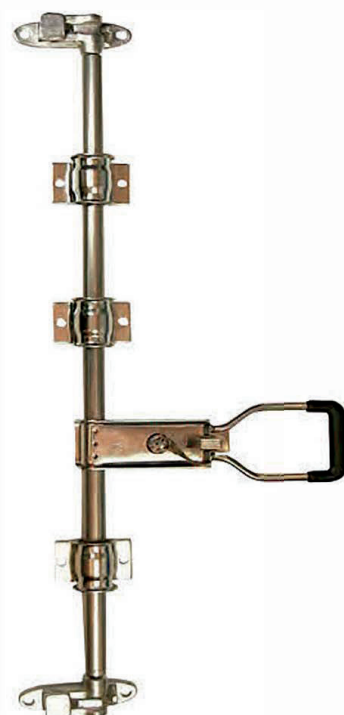


18.7012320B



Rod Latch

An assembly of quality products to construct an industry standard locking system.
Ideal for trailers, containers and lorries.



50.DL5051SS - Keeper



50.DL3030SS - Clamp



50.DL3070 - Clamp



50.DL2050SS - Lock

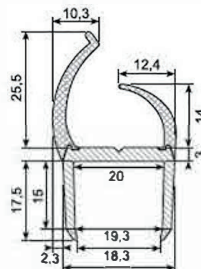


50.DL5071SS - Cam



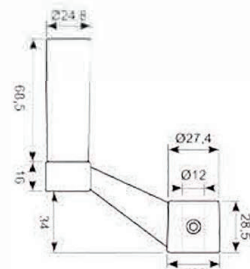
Special Profile

Colour: Grey
Co-ex Profile: 55mm
Length: 3m



Revolving Handle

Colour: Black
Revolving Handle with Removable long knob



54.710700

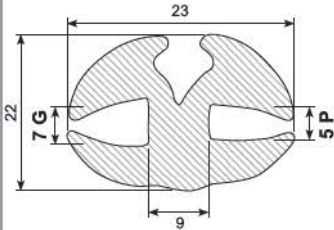


18.14255



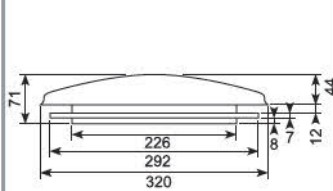
EPDM Glazing Section

Colour: Black
Hardness: SH 65
Minimum Radius: 100mm



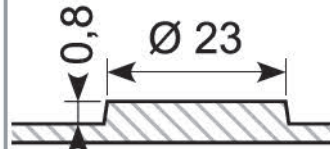
Roof Extractor

Suction: 350m²
Blowing: 420m²
Power: 12/24V DC



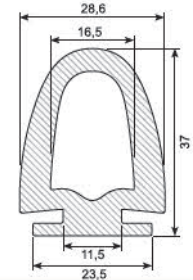
Studded Flooring

Colour: Black
Hardness: SH 80
Size: 10m X 1.2m



EPDM Special Profile

Colour: Black
Hardness: SH 65
Length: 5m



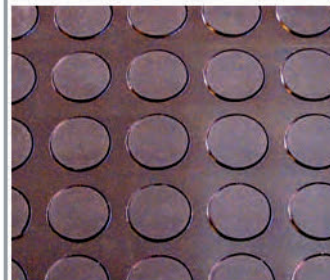
32.057



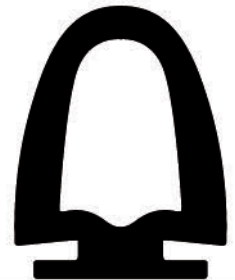
29.180024



38.427-3

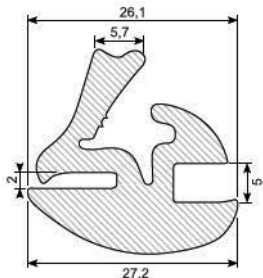


30.324SB



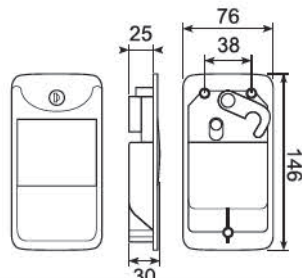
EPDM Glazing section

Colour: Black
Hardness: SH 65
Minimum Radius: 80mm



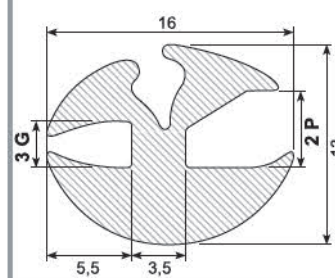
Lock Assembly

Exterior Lock Assembly
Painted Black
2 Keys Supplied



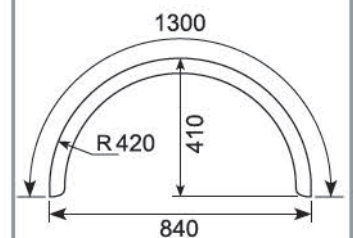
EPDM Glazing section

Colour: Black
Hardness: SH 65
Minimum Radius: 30mm



Mud Guard

Full Mudguard
Plastic
Variety of Sizes Available



32.1025SK



15.403S



32.924



52.DK1510

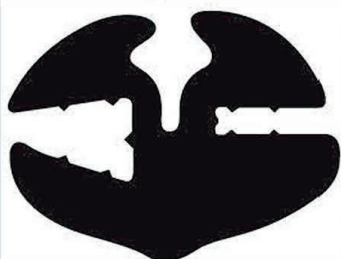


Sindby Product Range

Rubber Profile

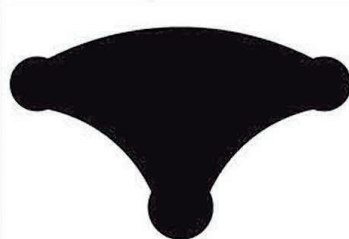
32.016

EPDM Glazing Section



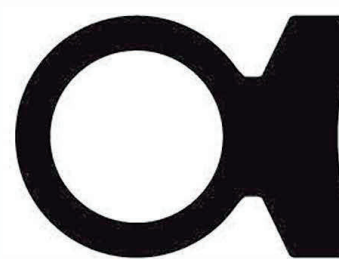
32.309

PVC Filler Strip



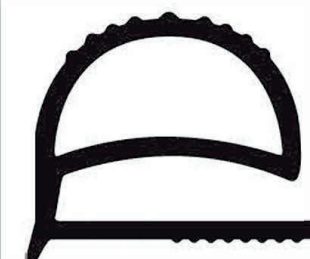
30.7651

Balloon Profile



30.6487

PVC P-Profile



Rubber Matting

38.345522

Fingerip Mat



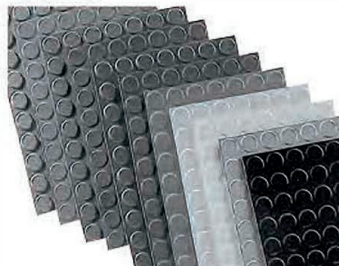
38.946730

Ergo Ring Matting



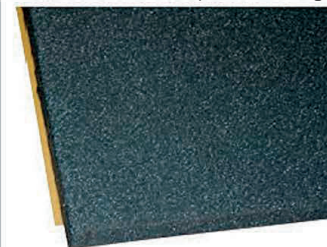
37.490

NR Mats



48.621

Plain Sound Absorption Matting



Hinges

50.330345

Acid Proof Hinge



20.091

Lift-Off Moulded Hinge



50.013030S

Greased Nipple Hinge



50.034

Steel Welding Hinge



Handles and Locks

10.535

Recess Locking T-handle in Pan



18.14256

Black Zinc Adjustable Handle



18.637

Spring Loaded Handle



50.DL2121-2

Stainless Steel Paddle Lock



Miscellaneous

30.ShoreA

Hardness Meter



29.100117

Heater



51.850012

12 VDC Winch



Dock Shelter

Retractable Dock Shelter



Engineering
Logistics
Service



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