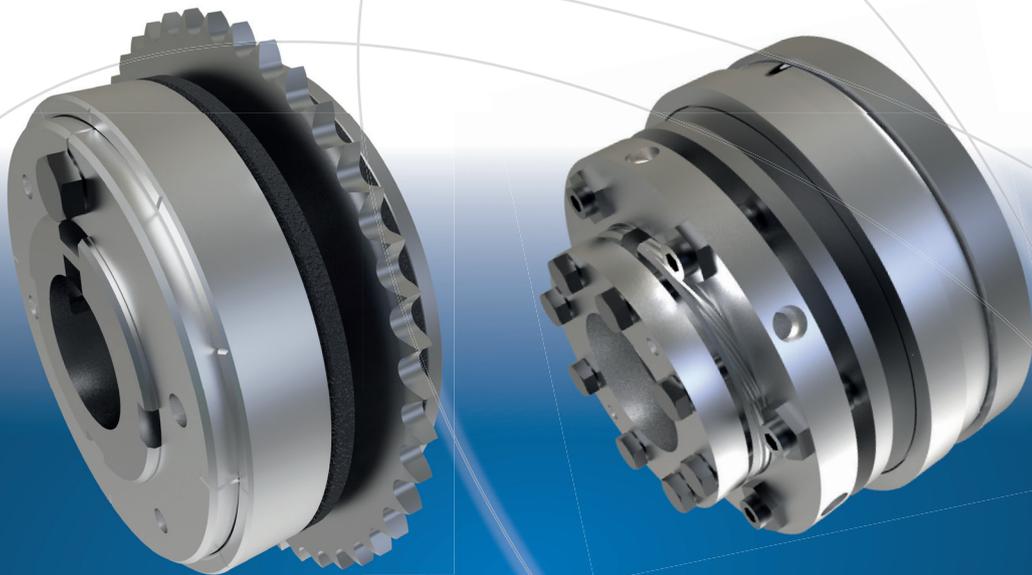




your reliable partner



Torque Limiters

We safeguard the movements of this world



The Christian Mayr mill-construction business – founded in 1897.



Communications Centre mayr.com – opened in 2018.

Specialists in power transmission for more than a century

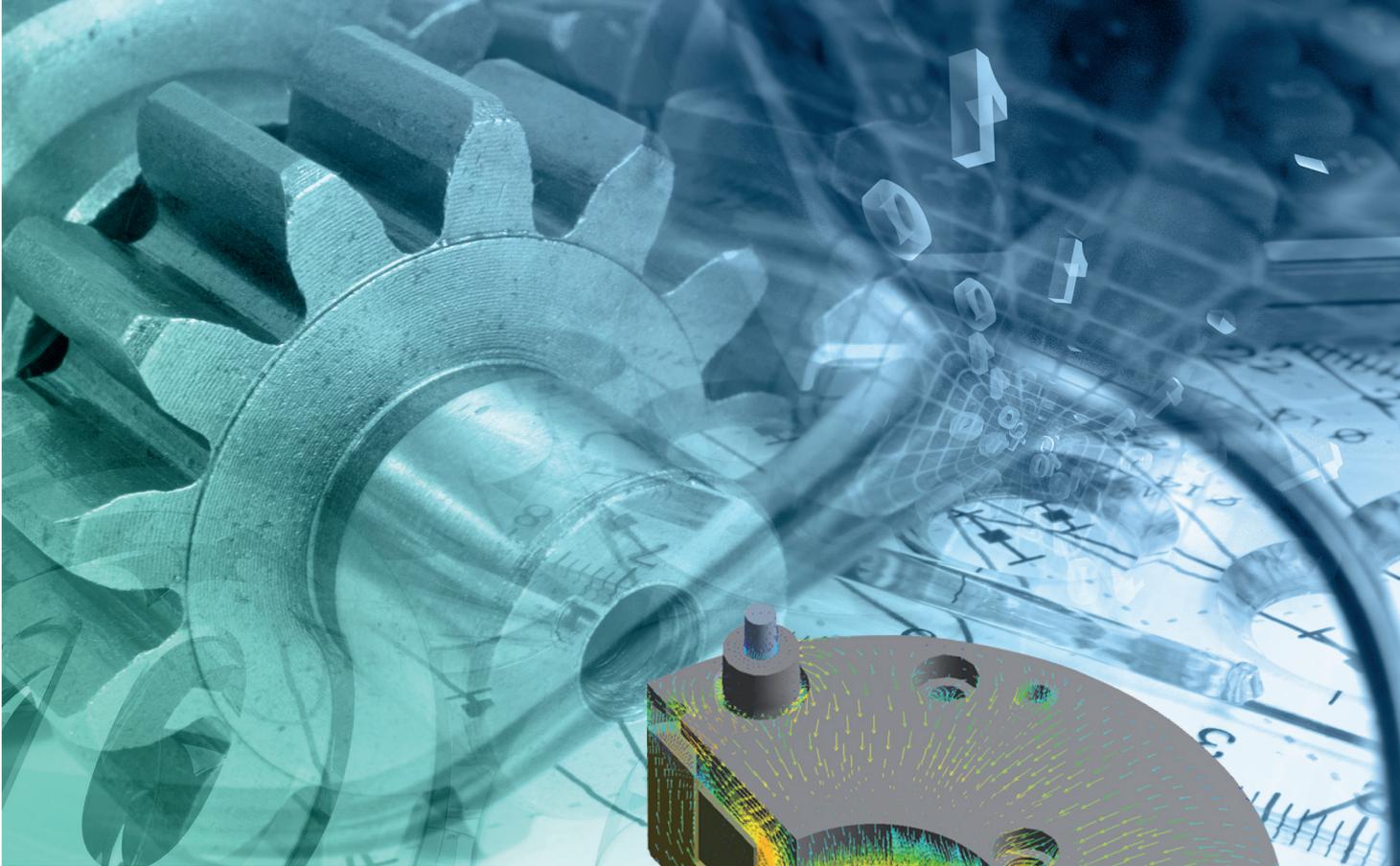
mayr[®] power transmission is one of the most traditional and yet most innovative German companies in the field of power transmission. From modest beginnings in the year 1897, the family enterprise from the Allgäu region has developed into the world market leader. Today, approximately 700 employees work at the headquarters in Mauerstetten; about 1200 employees work for the company worldwide.

An unsurpassed standard product range

mayr[®] power transmission offers an extensive variety of torque limiters, safety brakes, backlash-free shaft misalignment compensation couplings and high-quality DC drives. Regarding customer-specific requirements, too, the company possesses the expertise to develop customized and economical solutions. This is why numerous renowned machine manufacturers trust in holistic solutions by *mayr*[®] power transmission.

Represented worldwide

With eight subsidiaries in Germany, sales offices in the USA, France, Great Britain, Italy, Singapore and Switzerland as well as 40 additional country representatives, *mayr*[®] is available in all important industrial areas, guaranteeing optimum customer service around the globe.



Tradition and innovation – the best of both worlds

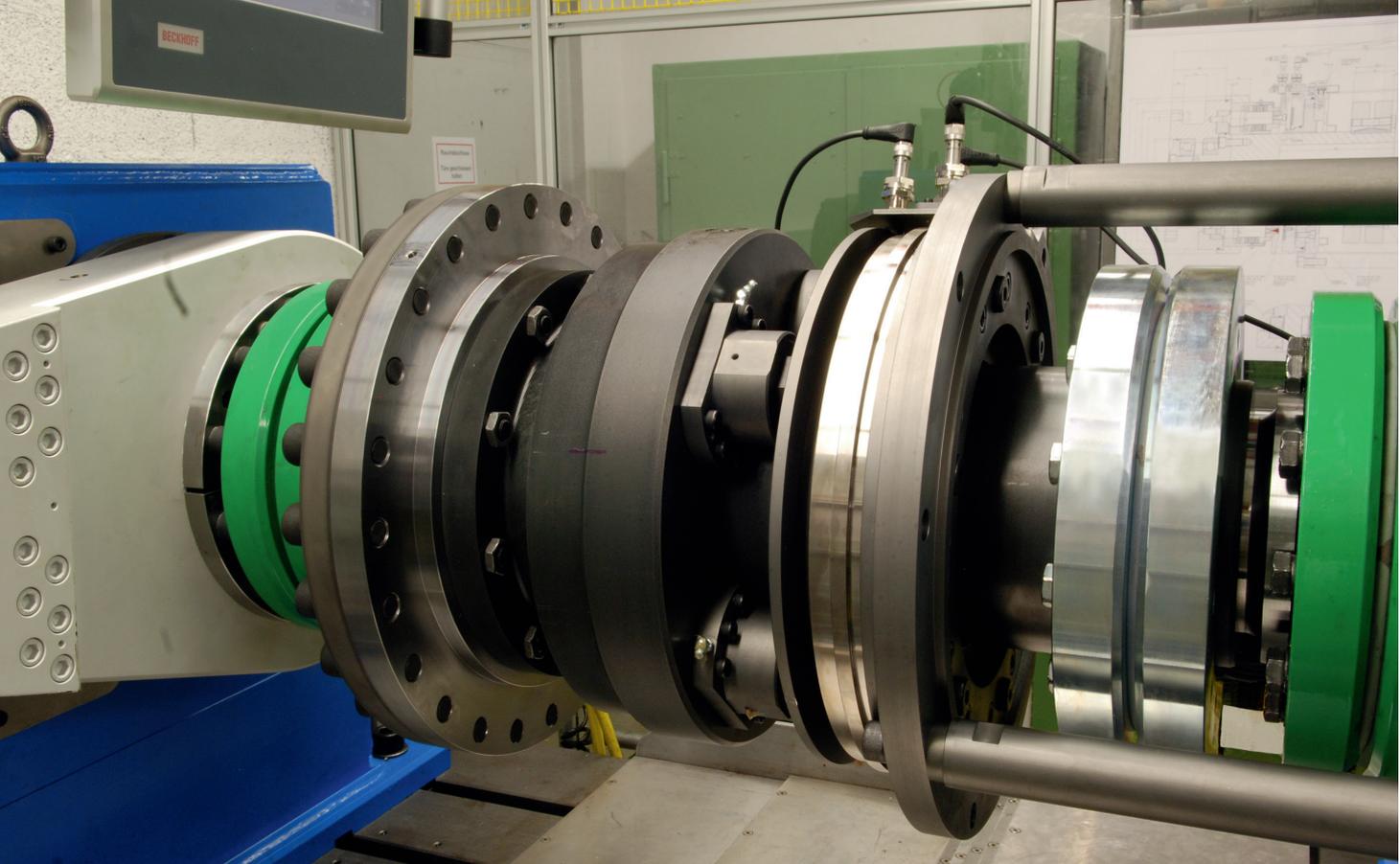
Tradition and innovation do not contradict each other - on the contrary. They are the two supporting pillars which have guaranteed stability and reliability for generations. Long-term stability, independence as well as a good reputation and satisfied customers are important values for a family enterprise rich in tradition.

Therefore, we place emphasis on:

- Tested product quality,
- Optimum customer service,
- Comprehensive know-how,
- Global presence,
- Successful innovations,
- Effective cost management.

By pursuing our own objective of always offering our customers the technologically most advanced and most economical solution, we have been able to gain the trust of many leading industrial companies from all branches and from all over the world as a reliable partner.

Place your trust in our know-how and our more than 50 years of experience in torque limiters, safety brakes and shaft couplings.



Tested quality and reliability

mayr® products are subject to meticulous quality inspections. These include quality assurance measures during the design process as well as a comprehensive final inspection. Only the best, tested quality leaves our factory. All products are rigorously tested on calibrated test stands, and adjusted precisely to the requested values. An electronic database in which the measurement values are archived together with the associated serial numbers guarantees 100 % traceability. On request, we confirm the product characteristics with a test protocol.

The certification of our quality management according to DIN EN ISO 9001:2015 confirms the quality-consciousness of our colleagues at every level of the company.

Never compromise on safety

We make no compromises where safety is concerned. Only top products of a perfect quality guarantee that no people are injured or machines damaged in case of malfunctions, collisions and other hazardous situations. The safety of your employees and machines is our motivation to always provide the best and most reliable clutches, couplings or brakes.

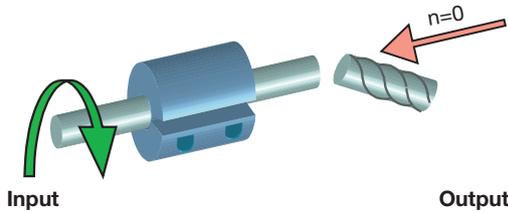
mayr® power transmission holds numerous ground-breaking patents, and is the global market or technological leader for

- application-optimised **safety brakes**, for example for passenger elevators, stage technology and gravity loaded axes
- **torque limiters** to protect against expensive overload damage and production losses and
- backlash-free **servo couplings**.

No overload protection means a high risk of damage 

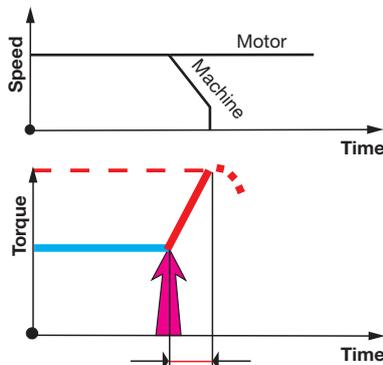
Situation

The input and output sides are connected firmly to each other (material-locking) in the drive line. There are no frictionally-locking or positive-locking connections which could give way without destruction on overload. Current changes in the motor cannot be monitored or processed.



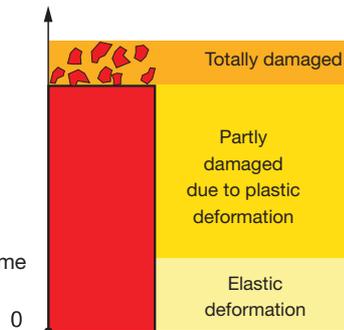
Speed and Torque Paths

After a collision, the torque increases very rapidly to values which can be much higher than the operating torque. This overload leads to breaks in the drive line. The motor continues to run; the machine speed falls to 0.



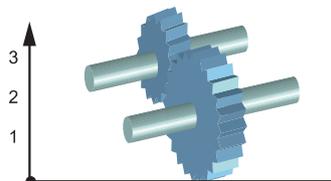
Risk of Damage

Collisions without overload protection usually lead to the machine being completely damaged. The weakest link in the drive line breaks. The machine is no longer operational and downtime will last until the repairs have been carried out.



Dimensioning

Heavy, solid and slow-running constructions with high safety factors are necessary in order to keep collision factors as low as possible.



Costs

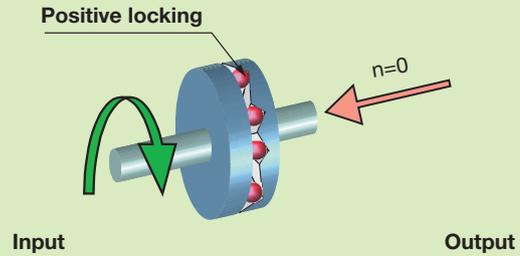
- Expensive replacement parts
- Complicated repairs
- Long downtimes



Perfect overload protection with EAS[®]-clutches 

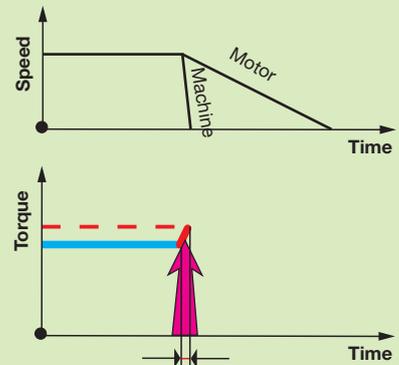
Situation

EAS[®]-clutches combine input and output-sides using positive locking and limit the torque accurately to the set value. These clutches work with an extremely high setting and repeat accuracy.



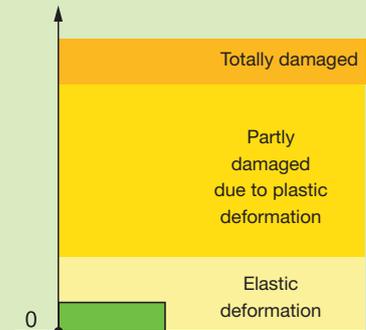
Speed and Torque Paths

On overload, the clutch disengages and separates input and output as quickly as possible. The stored rotatory energy is disconnected and runs free. A limit switch registers clutch disengagement and switches off the drive.



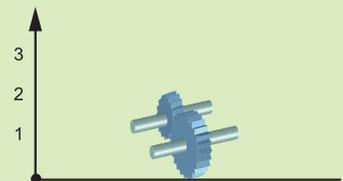
Risk of Damage

The high accuracy and exact torque limitation mean that the drive line is not damaged. All components remain within the elastic deformation range.



Dimensioning

Small and light constructions are possible due to accurate torque limitation and exact predictions on component load.



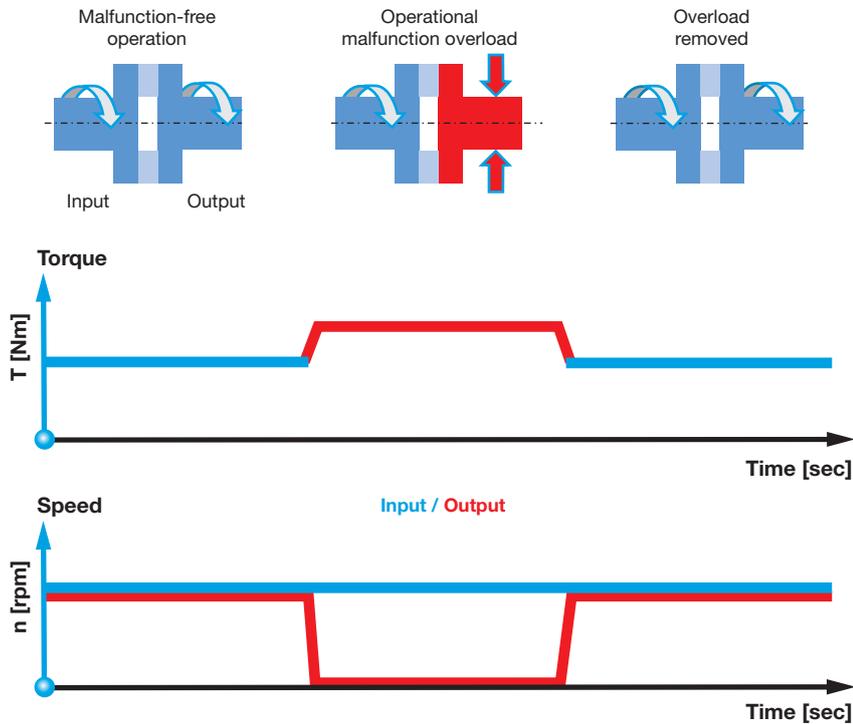
Costs

Costs incurred due to damage or wear are no longer to be expected. After a short downtime to remove the overload, the system can be re-started.



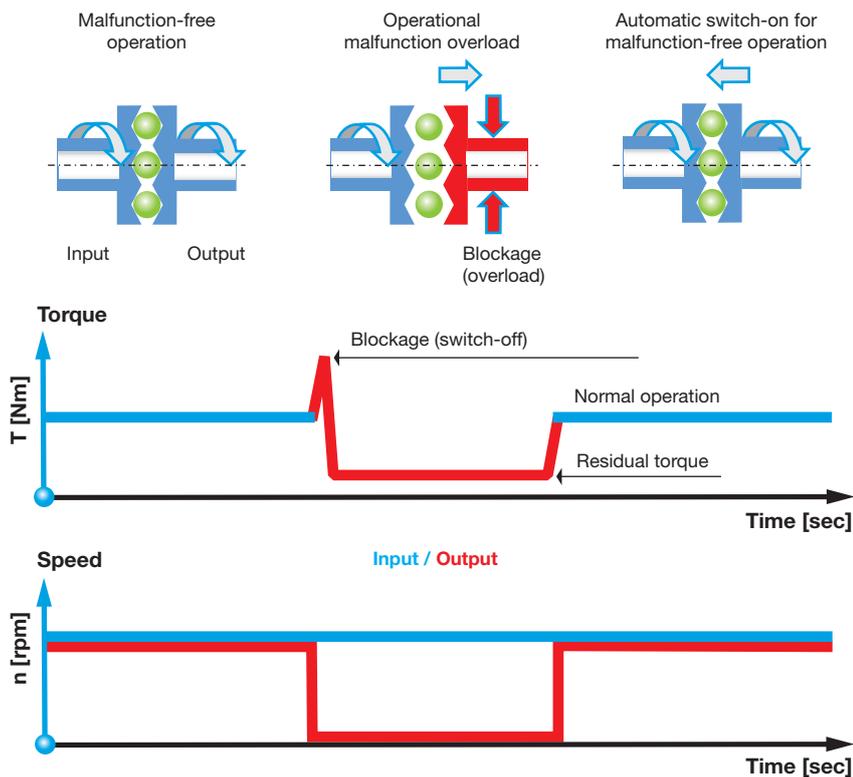
Load holding torque limiters

Example 1: Torque and speed paths of a **load holding frictionally-locking** torque limiter



Load separating torque limiters

Example 2: Torque and speed paths of a **load separating ratchetting** torque limiter



ROBA[®]-slip hub the load holding frictionally-locking torque limiter

Performance Characteristics

- **Slipping on overload. The device can continue operation immediately after elimination of the overload**
- Torque transmission due to frictional locking
- Simple to install and handle
- Torque can be adjusted easily and steplessly using adjustment tables
- High-quality friction materials provide lowest-possible wear
- Low friction value tolerance due to optimized construction and materials
- Excellent repeat accuracy



ROBA[®]-slip hub for ensuring safety for conveyor belts in a bottle-filling plant

Designs

- Standard design for narrow drive elements e.g. single-row chain sprockets
- ROBA[®]-max for very wide drive elements and for elements with a small diameter
- With rustproof friction linings for operation outside, in humid conditions or for longer downtimes
- With a clamping hub for fast, cost-saving installation
- With a needle bearing for drive elements with high radial loads, a high slipping frequency and high demands on the shaft run-out accuracy
- With a flexible or torsionally rigid coupling for connection of two shafts and to compensate for shaft misalignment

Applications

- Test stands
- Crusher
- Extruder
- General mechanical engineering
- Conveyor technology
- Filling plants

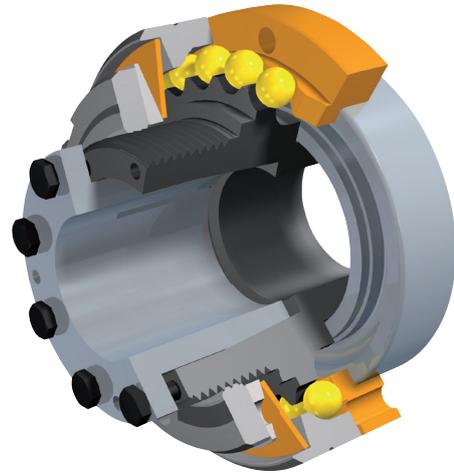
| Technical Data, Dimensions | | | Size | | | | | | | | | | | | | |
|----------------------------|-----------|-------|--------|--------|----------|----------|----------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|
| | | | 0 | 01 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Limit torques for overload | M_G | [Nm] | 2 – 30 | 6 – 90 | 14 – 200 | 26 – 400 | 50 – 800 | 110 – 1600 | 140 – 2100 | 240 – 2400 | 400 – 4000 | 680 – 6800 | 1200 – 12000 | 2000 – 20000 | 3400 – 34000 | 5000 – 50000 |
| Operating speed | n_{max} | [rpm] | 8500 | 6600 | 5600 | 4300 | 3300 | 2700 | 2200 | 1900 | 1600 | 1300 | 1100 | 920 | 780 | 690 |
| Outer diameter | | [mm] | 45 | 58 | 68 | 88 | 115 | 140 | 170 | 200 | 240 | 285 | 350 | 415 | 490 | 555 |
| Minimum bore | | [mm] | 7 | 12 | 12 | 15 | 19 | 25 | 30 | 40 | 48 | 60 | 57 | 80 | 90 | 100 |
| Maximum bore | | [mm] | 20 | 22 | 25 | 35 | 45 | 55 | 65 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |
| Length | | [mm] | 33 | 45 | 52 | 57 | 68 | 78 | 92 | 102 | 113 | 115 | 162 | 185 | 222 | 250 |

For detailed technical data and dimensions, please see catalogue **ROBA[®]-slip hubs: K.123.V_ _ _ _**

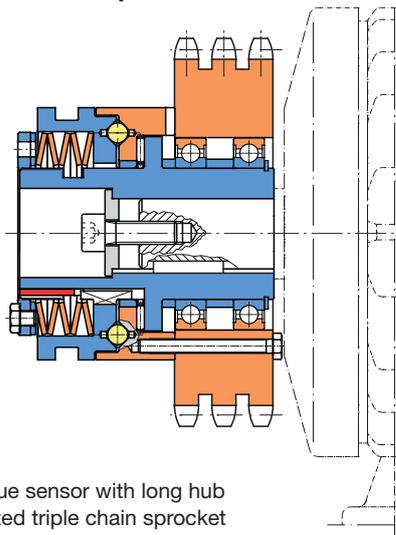
EAS®-torque sensor / EAS®-compact®-torque sensor the load holding positive-locking torque limiter

Performance Characteristics

- Emits a signal immediately on overload, but does not separate the masses (no mechanical overload protection) — ideal for vertical applications
- Connects the input and the output via positive locking in all operating conditions fail-safe
- Torque can be adjusted easily and steplessly using the scaled adjusting nut



Installation Example



EAS®-torque sensor with long hub and mounted triple chain sprocket

Designs

- Flange design for mounting bearing-supported drive elements such as chain sprockets, toothed wheels and pulleys
- Design with integrated bearing for simple symmetrical and narrow drive elements. Simple, ready-to-mount clutch
- Design with a long hub for wide drive elements (see Installation Example)
- Designs with flexible couplings for connection of two shafts and to compensate for shaft misalignment

Applications

- Vertical drives
- Hoists
- All drives in which separation of the shafts is not permitted

| Technical Data, Dimensions | | | Size | | | | | | | | | |
|----------------------------|---------------|-------|--------------------|----------|----------|----------|-----------|------------|------------|------------|------------|--------------|
| | | | EAS®-torque sensor | | | | | | | | | |
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Limit torques for overload | M_G | [Nm] | 5 – 40 | 12 – 100 | 25 – 200 | 50 – 400 | 100 – 800 | 175 – 1400 | 300 – 2400 | 500 – 4000 | 850 – 6800 | 1500 – 12000 |
| Maximum speed | n_{max} | [rpm] | 6500 | 4300 | 3580 | 3000 | 2500 | 2050 | 1800 | 1470 | 1250 | 920 |
| Outer diameter | | [mm] | 55 | 82 | 100 | 120 | 146 | 176 | 200 | 240 | 285 | 380 |
| Minimum bore | | [mm] | 8 | 11 | 15 | 19 | 25 | 30 | 40 | 50 | 60 | 70 |
| Maximum bore | | [mm] | 20 | 25 | 35 | 45 | 55 | 65 | 75 | 100 | 120 | 150 |
| Length | Flange design | [mm] | 38.5 | 52 | 61 | 78 | 99.5 | 113.5 | 119 | 141 | 172 | 190 |

Technical Data and Dimensions of the special design EAS®-compact®-torque sensor on request

For detailed technical data and dimensions, please see catalogue [EAS®-standard: K.407.V _ _ _ _](#)

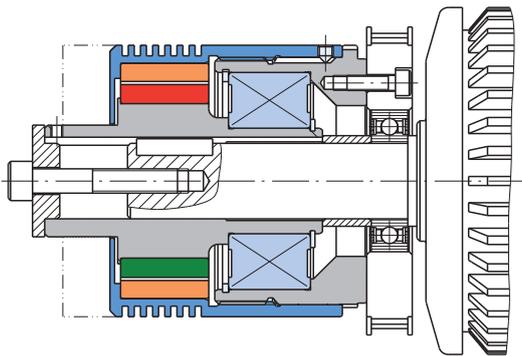
ROBA[®]-contitorque the load holding, magnetic torque limiter

Performance Characteristics

- Long-term continuous torque due to magnetic hysteresis principle
- Wear and maintenance-free
- Torques are transmitted contactlessly and synchronously via magnetic forces
- Precise torque limiting on overload
- Torque can be adjusted easily and steplessly using the scale marked with torque values
- Can be used as a clutch or brake
- Low weight and mass moment of inertia



Installation Example



The clutch is secured directly onto the motor shaft and the pulley is bearing-mounted separately using the deep groove ball bearing (used as a clutch for torque limitation).

Designs

- Two torque ranges per construction size for most accurate torque graduation
- Rustproof stainless steel design
- Sealed; can be used in foodstuffs plants
- Design with rustproof hysteresis-capping head: ROBA[®]-capping head

Applications

- In test stand technology, this device can simulate defined loads
- Can be used to screw on closing caps of any kind
- Force limitation for coiling and uncoiling procedures
- Torque limitation in different power transmission applications
- Rail / switch plate adjustments (railway)

| Technical Data, Dimensions | | | Size | | | | |
|----------------------------|-----------|-------|-----------|-----------|---------|---------|----------|
| | | | 1 | 2 | 3 | 4 | 5 |
| Limit torques for overload | M_G | [Nm] | 0.1 – 0.8 | 0.1 – 1.6 | 0.1 – 3 | 0.2 – 6 | 0.5 – 12 |
| Maximum speed | n_{max} | [rpm] | 4000 | 3500 | 3000 | 3000 | 3000 |
| Outer diameter | | [mm] | 62 | 77 | 90 | 113 | 145 |
| Minimum bore | | [mm] | 10 | 12 | 15 | 18 | 20 |
| Maximum bore | | [mm] | 14 | 20 | 25 | 38 | 50 |
| Length | | [mm] | 83 | 98 | 110 | 129 | 160 |

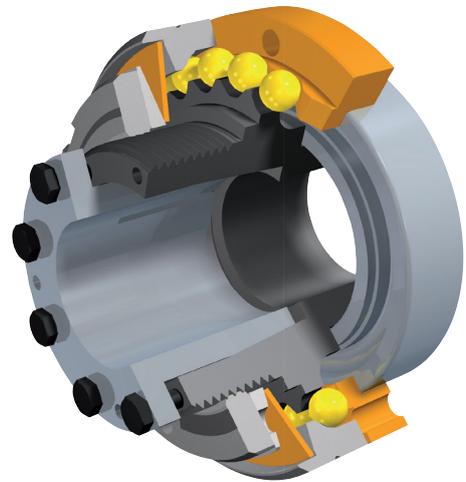
For detailed technical data and dimensions, please see catalogue

ROBA[®]-contitorque: K.150.V_ _ _
ROBA[®]-capping head: P.151000.V_ _ _

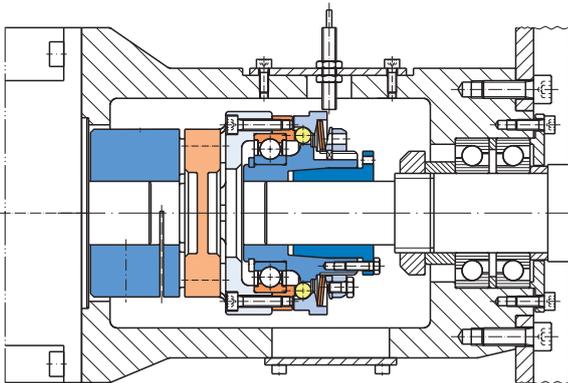
EAS[®]-compact[®] / EAS[®]-NC the load separating ratchetting torque limiter

Performance Characteristics

- Separates immediately, re-engages automatically
- Transmits the torque backlash-free in normal operation
- Separates input and output in milliseconds on overload
- Electrical signal emittance on overload
- High switch-off and repeat accuracy
- Torque can be adjusted easily and steplessly using adjustment tables
- Re-engagement every 15° or synchronously after 360°
- High rigidity



Installation Example



The EAS[®]-compact[®] with a backlash-free, torsionally flexible and vibration-damping shaft coupling for the connection of two shafts. The coupling compensates for axial, radial and angular shaft misalignments.

Designs

- Flange clutches with single or double bearings for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets
- Design with a long hub for mounting very wide drive elements. An additional bearing on the hub using a roller bearing or a plain bearing is possible
- Combinations with torsionally rigid or flexible couplings for the connection of two shafts; compensation of shaft misalignment

Applications

- General drive technology
- Automation technology
- Machine tools
- Packing machines
- Printing and paper machines
- Foodstuffs technology
- Conveyor technology
- Drinks industry

| Technical Data, Dimensions | | | Size | | | | | | | |
|----------------------------|---------------|-------|------------|--------|----------|----------|----------|----------|----------|------------|
| | | | 03 | 02 | 01 | 0 | 1 | 2 | 3 | 4 |
| Limit torques for overload | M_G | [Nm] | 0.65 – 3.8 | 2 – 15 | 5 – 62.5 | 10 – 125 | 20 – 250 | 40 – 500 | 70 – 875 | 120 – 1500 |
| Maximum speed | n_{max} | [rpm] | 4000 | 4000 | 4000 | 3000 | 2500 | 2000 | 1200 | 800 |
| Outer diameter | | [mm] | 45 | 50 | 70 | 85 | 100 | 115 | 135 | 166 |
| Minimum bore | | [mm] | 6 | 8 | 10 | 15 | 22 | 28 | 32 | 40 |
| Maximum bore | | [mm] | 12 | 16 | 20 | 25 | 35 | 45 | 55 | 65 |
| Length | Flange design | [mm] | 28.5 | 34.5 | 47 | 56 | 67 | 73 | 86 | 130 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-compact[®]: K.490.V_..._](#)

EAS[®]-compact[®] rustproof the load separating ratchetting torque limiter

Performance Characteristics

- Separates immediately, re-engages automatically
- Transmits the torque backlash-free in normal operation
- Separates input and output in milliseconds on overload
- High switch-off and repeat accuracy
- Simple torque adjustment
- Re-engagement synchronously after 360°
- Long service lifetime due to hardened functional components
- Use of lubricants with approval for the food industry



EAS[®]-compact[®] rustproof in a filling machine for cream cheese

Designs

- Rustproof, open design:
EAS[®]-compact[®]-R clutch, completely made of rustproof stainless steel; identical in design with the EAS[®]-compact[®] standard
- Rustproof, sealed design:
EAS[®]-compact[®]-RA clutch, completely rustproof, enclosed due to rustproof seal; no penetration of cleaning liquids or any other media, no grease leakage
- Flange clutches with single bearings for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets

Applications

- Foodstuffs technology
- Process engineering
- Chemical industry

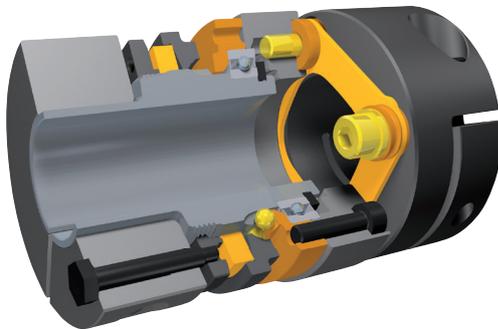
| Technical Data, Dimensions | | | Size | | | |
|----------------------------|------------------|-------|----------|----------|----------|----------|
| | | | 0 | 1 | 2 | 3 |
| Limit torques for overload | M _G | [Nm] | 10 – 100 | 20 – 200 | 40 – 400 | 70 – 700 |
| Maximum speed | n _{max} | [rpm] | 3000 | 2500 | 2000 | 1200 |
| Outer diameter | Sealed design | [mm] | 90 | 105 | 120 | 140 |
| | Open design | [mm] | 80 | 95 | 110 | 130 |
| Minimum bore | | [mm] | 15 | 22 | 28 | 32 |
| Maximum bore | | [mm] | 25 | 35 | 45 | 55 |
| Length | Sealed design | [mm] | 64 | 77 | 88 | 98 |
| | Open design | [mm] | 56 | 67 | 73 | 86 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-compact[®]-R: P.49A.V_...](#)

EAS[®]-smartic[®] the load separating ratchetting torque limiter

Performance Characteristics

- Separates immediately, re-engages automatically
- Very easy and quick installation via the clamping ring hub by tightening one single screw
- Permanent backlash-free torque transmission
- Good dynamic characteristics
- Economical and reliable
- Simple and safe torque adjustment via a graduation scale with a directly readable torque indication
- Highest possible transmission security due to keyway and clamping ring hub
- High torque range from 6 – 100 % of the maximum torque
- Adjustment of the different torques possible by re-layering the cup springs already installed without reducing/adding the number of springs



EAS[®]-smartic[®] combined with the backlash-free, torsionally rigid disk pack coupling ROBA[®]-DS

Designs

- Flange clutches for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets
- Combinations with a backlash-free flexible coupling for the connection of two shafts; compensation of shaft misalignment and damping of critical vibrations
- Combinations with a backlash-free torsionally rigid coupling for the connection of two shafts; compensation of shaft misalignment and high torsional spring rigidity

Applications

- General drive technology
- Automation technology
- Machine tools
- Packing machines
- Printing and paper machines
- Foodstuffs technology
- Conveyor technology
- Drinks industry

| Technical Data, Dimensions | | | Size | | | | |
|----------------------------|-------------------------------------|------------------|----------|---------|----------|----------|------|
| | | | 01 | 0 | 1 | 2 | |
| Limit torques for overload | M _e | [Nm] | 2.7 – 60 | 5 – 120 | 10 – 240 | 20 – 500 | |
| Maximum speed | Flange design, clamping ring hub | n _{max} | [rpm] | 3000 | 3000 | 2500 | 2000 |
| Outer diameter | | [mm] | 59 | 72 | 88 | 104 | |
| Minimum bore | | [mm] | 10 | 14 | 19 | 20 | |
| Maximum bore | | [mm] | 22 | 32 | 42 | 50 | |
| Length | | [mm] | 51 | 56 | 65 | 75 | |

For detailed technical data and dimensions, please see catalogue [EAS[®]-smartic[®]: K.481.V_..._](#)

EAS®-HTL

the load separating, ratchetting or disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
- Re-engages automatically (ratchetting and synchronous clutch design)
- Slows down freely (overload clutch design)
- EAS®-compact® in a housing with IEC or NEMA flanges (housing protection IP53)
- Integrated limit switch for switch-off in case of overload
- Cost-effective, closed unit
- Easy installation due to standardised connection dimensions and short design
- Fail-safe and reliable due to protection against mechanical damage, corrosion, penetration of dirt and washing out of grease
- Solid housing
Hanging loads can be attached to it
- Backlash-free torque transmission
- Torque adjustment possible



Designs

- Enclosed in an IEC or NEMA flanged housing
- Synchronous, ratchetting or overload clutch designs

Applications

- Foodstuffs technology
- Process engineering
- Chemical industry

| Technical Data, Dimensions | | | Size | | | |
|----------------------------|-----------|-------|---------------------------------|--------------------|-----------------|--------------------|
| | | | Synchronous, ratchetting clutch | | Overload clutch | |
| | | | IEC 63 – 180 | NEMA 56C – 256TC | IEC 80 – 315 | NEMA 56C – 256TC |
| Limit torques for overload | M_G | [Nm] | 2 – 700 | 5 – 400 | 5 – 2400 | 5 – 400 |
| Maximum speed | n_{max} | [rpm] | 4000 | 4000 | 8000 | 8000 |
| Outer diameter | | [mm] | 140 – 350 | 180 – 250 | 200 – 660 | 180 – 250 |
| Minimum bore | | | 11 mm | 0.625 inch | 19 mm | 0.625 inch |
| Maximum bore | | | 48 mm | 1.625 inch | 80 mm | 1.625 inch |
| Length | | | 55 – 126 mm | 3.070 – 5.280 inch | 81 – 266 mm | 3.070 – 5.280 inch |

For detailed technical data and dimensions, please see catalogue [EAS®-HTL: P.HTL.V_...](#)

EAS[®]-reverse the disengaging torque limiter with automatic re-engagement

Performance Characteristics

- Residual torque-free disconnection in case of overload
- Automatic re-engagement through reversal of direction of rotation
- Easy handling
- Completely sealed
- Robust double bearing
- Torque steplessly adjustable with scaled adjusting nut
- Extremely low-backlash (< 0.05°)
- Hardened functional components
- Housing with standard IEC or NEMA dimensions
- Temperature range from -30 °C to +80 °C
- Optionally available with brake disk
- Optionally available with switching disk + cover ring



EAS[®]-reverse
flange design

Designs

- EAS[®]-reverse with bearing-supported flange for direct mounting of drive elements
- Combinations with flexible, positive locking couplings for the connection of two shafts
- EAS[®]-reverse in housing with standard-conform dimensions

Applications

- Heavy machine industry
- Conveyor technology



EAS[®]-reverse double shaft design with a flexible, positive locking coupling (with switching disk + cover ring)



EAS[®]-reverse in housing with standard-conform dimensions

| Technical Data, Dimensions | | | Size | | | |
|----------------------------|------------------|-------|-----------------------------------------|------------|------------|------------|
| | | | EAS [®] -reverse flange design | | | |
| | | | 3 | 4 | 5 | 6 |
| Limit torques for overload | M _G | [Nm] | 75 – 750 | 125 – 1250 | 250 – 2500 | 500 – 6000 |
| Maximum speed | n _{max} | [rpm] | 3600 | 2000 | 2000 | 2000 |
| Outer diameter | | [mm] | 152 | 170 | 222 | 280 |
| Minimum bore | | [mm] | 17 | 20 | 30 | 40 |
| Maximum bore | | [mm] | 40 | 50 | 75 | 100 |
| Length | | [mm] | 128 | 148 | 170 | 218 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-reverse: P.4100.V_..._...](#)

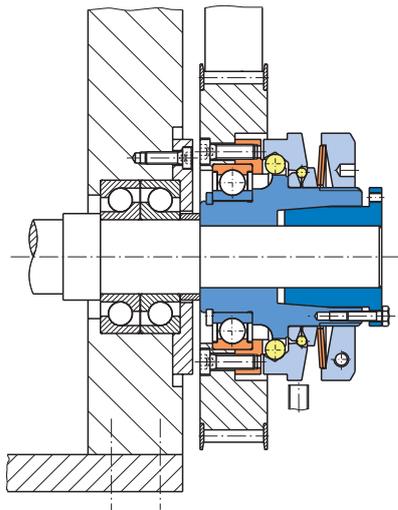
EAS[®]-compact[®]-F the load separating disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
- Slows down freely
- Exact and reproducible responses
- Re-engagement either by hand or via remote control
- Torque can be adjusted easily and steplessly using adjustment tables
- Operation possible with or without limit switch for overload recognition
- Transmits the torque backlash-free in normal operation



Installation Example



EAS[®]-compact[®]-F with a short hub: The clutch interrupts the transmission between the motor and the toothed belt pulley on overload and remains disengaged.

Designs

- Flange clutch with integrated ball bearing for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets
- If requested, a device with a long hub and double mounting bearing for very wide drive elements is available
- Combinations with flexible couplings for the connection of two shafts; compensation of shaft misalignment
- Combinations with a backlash-free torsionally rigid coupling for the connection of two shafts; compensation of shaft misalignment and high torsional spring rigidity

Applications

- General drive technology
- Automation technology
- Machine tools
- Packing machines
- Printing and paper machines
- Foodstuffs technology
- Conveyor technology
- Drinks industry

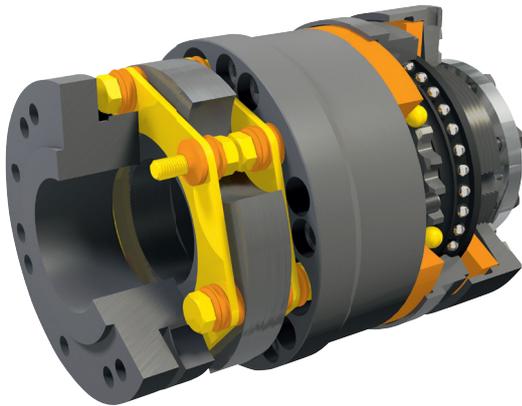
| Technical Data, Dimensions | | | Size | | | | | | |
|----------------------------|--------------------------------|-------|----------|----------|----------|----------|-----------|------------|------------|
| | | | 01 | 0 | 1 | 2 | 3 | 4 | 5 |
| Limit torques for overload | M _G | [Nm] | 5 – 62.5 | 10 – 125 | 20 – 250 | 40 – 500 | 80 – 1000 | 120 – 1500 | 240 – 3000 |
| Maximum speed | n _{max} | [rpm] | 8000 | 7000 | 6000 | 5000 | 4000 | 3500 | 3000 |
| Outer diameter | | [mm] | 70 | 85 | 100 | 115 | 135 | 175 | 225 |
| Minimum bore | | [mm] | 10 | 15 | 22 | 32 | 35 | 40 | 45 |
| Maximum bore | Flange design, cone bushing | [mm] | 20 | 25 | 35 | 45 | 55 | 65 | 85 |
| Length | | [mm] | 52 | 63 | 73 | 81 | 93 | 160 | 193 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-compact[®]-F: K.4190.V_..._](#)

EAS®-compact®-F for high-speed applications the load separating disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
- Slows down freely
- Positive locking overload clutch
- Complete separation
- Synchronous re-engagement
- Balanced when completely installed
- Diverse mounting variations
- High torsional rigidity
- High performance density
- Low mass moment of inertia
- High speeds of up to 12000 rpm



EAS®-compact®-F for high-speed applications
combined with the torsionally rigid disk pack coupling ROBA®-DS

Designs

- Flange Design
- Combinations with a torsionally rigid misalignment-flexible all-steel coupling (ROBA®-DS coupling) for the connection of two shafts; compensation of shaft misalignment

Applications

- Test stands
- For high-speed applications

| Technical Data, Dimensions | | | Size | | | | |
|----------------------------|---------------|-------|----------|----------|----------|----------|-----------|
| | | | 01 | 0 | 1 | 2 | 3 |
| Limit torques for overload | M_e | [Nm] | 5 – 62.5 | 10 – 125 | 20 – 250 | 40 – 500 | 80 – 1000 |
| Maximum speed | n_{max} | [rpm] | 12000 | 10000 | 9000 | 7000 | 6000 |
| Outer diameter | | [mm] | 70 | 85 | 100 | 115 | 135 |
| Minimum bore | | [mm] | 10 | 15 | 22 | 32 | 35 |
| Maximum bore | | [mm] | 20 | 25 | 35 | 45 | 55 |
| Length | Flange design | [mm] | 62 | 76 | 90 | 100 | 112 |

For detailed technical data and dimensions, please see catalogue [EAS®-compact®-F: K.4190.V_..._...](#)

EAS[®]-HSE

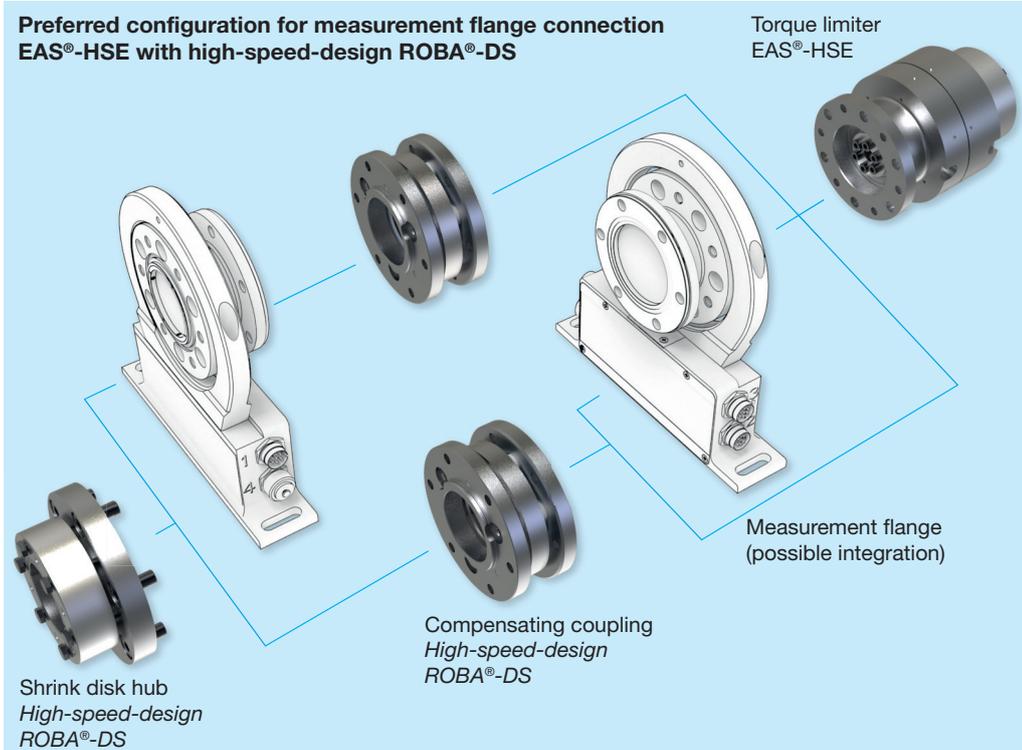
the load separating disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
 - Slows down freely
 - Positive locking overload clutch
 - Synchronous re-engagement
 - Components manufactured with high precision
 - Flexible mounting directly on the measurement flange
 - High torsional rigidity
 - Compact, with a high performance density
 - High speeds of up to 25000 rpm
- Torques from 45 Nm to 11200 Nm in the standard design



EAS[®]-HSE
Module



Designs

- EAS[®]-HSE Module
- EAS[®]-HSE for measurement flange connection (with high-speed-design ROBA[®]-DS coupling)
- Combinations with a torsionally rigid misalignment-flexible all-steel coupling (from standard series ROBA[®]-DS coupling) for the connection of two shafts; compensation of shaft misalignment

Applications

- High-torque test stands
- High-speed applications

| Technical Data, Dimensions | | | Size | | | | | | | |
|----------------------------|-----------|-------|------------------------------|----------|------------|------------|------------|------------|-------------|--------------|
| | | | EAS [®] -HSE Module | | | | | | | |
| | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Limit torques for overload | M_G | [Nm] | 45 – 270 | 93 – 560 | 125 – 1000 | 250 – 1500 | 325 – 2600 | 500 – 4000 | 1150 – 7000 | 1400 – 11200 |
| Maximum speed | n_{max} | [rpm] | 25000 | 22000 | 16000 | 14000 | 12000 | 11000 | 10000 | 8000 |
| Outer diameter | | [mm] | 99 | 100 | 125 | 135 | 170 | 185 | 205 | 250 |
| Minimum bore | | [mm] | 20 | 25 | 35 | 35 | 42 | 42 | 70 | 70 |
| Maximum bore | | [mm] | 36 | 45 | 65 | 60 | 80 | 80 | 95 | 120 |
| Length | | [mm] | 130 | 128 | 145 | 165 | 190 | 220 | 250 | 280 |

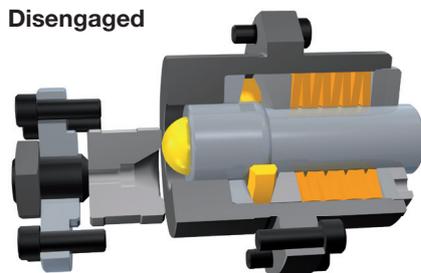
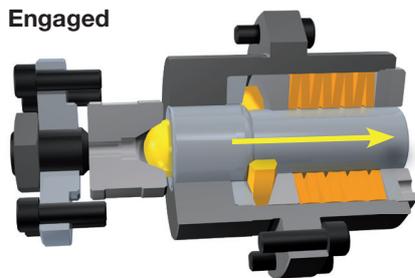
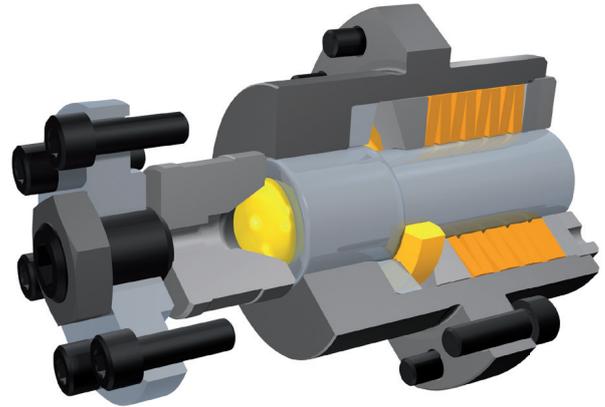
For detailed technical data and dimensions, please see catalogue

EAS[®]-HSE: P.4130.V_..._

EAS®-elements the load separating disengaging elements

Performance Characteristics

- Separates immediately on overload
- Slows down freely
- Maximum performance density
- Release forces can be adjusted easily and steplessly
- Simple and fast engagement
- Large number of disengagement actions
- On overload, the entire system can be stopped by a speed monitor



Designs

- EAS®-elements for installation in two bearing-supported flanges facing each other or for integration into existing constructions
- As EAS®-HT torque limiter component
- For customer-specific constructions
- Rustproof design on request

Applications

- Conveyor belts
- Crushers
- Rolling mills
- Underground mining / mining
- Raw material extraction

| Technical Data, Dimensions | | | Size | | | | |
|----------------------------|----------|------|------------|-----------|-----------|----------|----------|
| | | | 02 | 01 | 0 | 1 | 2 |
| Circumferential force | F_u | [kN] | 0.22 – 2.5 | 1 – 5 | 1.8 – 38 | 5 – 75 | 4 – 150 |
| Axial force | F_{ax} | [kN] | 0.2 – 2.25 | 0.9 – 4.5 | 1.62 – 20 | 4.5 – 40 | 3.6 – 80 |
| Outer diameter | | [mm] | 31.2 | 41.6 | 85 | 110 | 150 |
| Length | | [mm] | 56 | 77.5 | 127 | 163 | 243 |

For detailed technical data and dimensions, please see catalogue

EAS®-HT: K.4050.V _ _ _ _

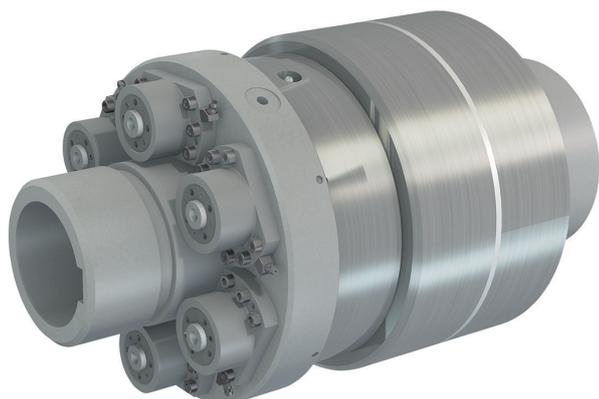
EAS®-HT short bearing-supported hub the load separating disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
- Slows down freely
- Designed for high torques
- Robust and with long service lifetime
- Individual constructional design according to the customer's requests
- Re-engagement either by hand or via remote control
- Torque can be adjusted easily and steplessly using adjustment tables
- On overload, the entire system can be stopped by a speed monitor



EAS®-HT
short bearing-supported hub



EAS®-HT lastic

(EAS®-HT short bearing-supported hub combined with a flexible, positive-locking coupling)

Designs

- Short bearing-supported hub for direct mounting onto drive elements
- Combinations with flexible couplings for the connection of two shafts; damping of impact loads
- Rustproof design on request
- Cold climate clutch design on request (special design, overload protection up to -48 °C)

| Technical Data, Dimensions | | | Size | | | |
|----------------------------|---------------|-------|-------------------------------------|----------|--------|----------|
| | | | EAS®-HT short bearing-supported hub | | | |
| | | | 7 | 8 | 9 | 10 |
| Limit torques for overload | M_G | [kNm] | 1.4 – 8.5 | 1.7 – 14 | 4 – 28 | 5.2 – 42 |
| Maximum speed | n_{max} | [rpm] | 3000 | 2800 | 2500 | 2200 |
| Outer diameter | | [mm] | 265 | 304 | 350 | 450 |
| Bore | EAS®-hub side | [mm] | 100 | 130 | 160 | 200 |
| Length | | [mm] | 228 | 270 | 340 | 392 |

For detailed technical data and dimensions, please see catalogue

EAS®-HT: K.4050.V_..._...

EAS®-HT, flange design the load separating disengaging torque limiter



EAS®-HT backlash-free
(EAS®-HT flange design combined with a disk pack coupling)



EAS®-HT lastic bolt
(EAS®-HT flange design combined with a flexible, positive-locking coupling)



EAS®-HT toothed coupling
(EAS®-HT flange design combined with a toothed coupling with crowned teeth cutting)



EAS®-HT
flange design

Designs

- The compact, ready for installation flange design can easily be integrated into the drive line
- Combinations with flexible couplings for the connection of two shafts; damping of impact loads
- Combinations with a toothed coupling for the connection of two shafts; high misalignment compensation capability, temperature-resistant
- Combination with a backlash-free torsionally rigid coupling for the connection of two shafts; compensation of shaft misalignment and high torsional spring rigidity

Applications

Heavy duty applications; used for example in

- shovel excavators
- dredgers
- turbine construction
- water lock drives
- rolling mills
- steel plants

| Technical Data, Dimensions | | | Size | | | | | | |
|----------------------------|------------------|-------|-----------------------|-----------|---------|-----------|----------|-----------|-----------|
| | | | EAS®-HT flange design | | | | | | |
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| Limit torques for overload | M_G | [kNm] | 7.5 – 15 | 12.5 – 25 | 20 – 40 | 37.5 – 75 | 70 – 140 | 125 – 250 | 220 – 440 |
| Maximum speed | n_{max} | [rpm] | 2000 | 1750 | 1500 | 1250 | 1000 | 900 | 750 |
| Outer diameter | | [mm] | 275 | 320 | 380 | 455 | 545 | 620 | 720 |
| Bore | Toothed coupling | [mm] | 95 | 130 | 150 | 185 | 210 | 285 | 340 |
| Length | | [mm] | 226 | 243 | 298 | 312 | 328 | 476 | 485 |

For detailed technical data and dimensions, please see catalogue

EAS®-HT: K.4050.V _ _ _ _

EAS[®]-dutytorque the load separating disengaging torque limiter

Performance Characteristics

- Separates immediately on overload
- Slows down freely
- High reliability due to robust mechanics
- High switch-off and repeat accuracy
- Simple and fast re-engagement
- Can be disassembled radially without moving the motor
- High balance quality
- Extensive, adjustable torque ranges
- Large shaft bores
- Long service lifetime
- Separable shaft coupling
- Minimum maintenance requirements
- Compact design

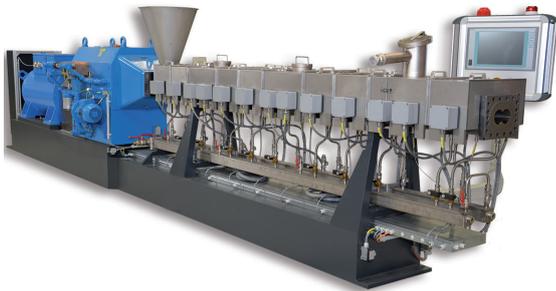


Designs

- Disengaging torque limiter with a mounted, plug-in elastomer compensating coupling for the connection of two shafts and to compensate for shaft misalignment
- Disengaging torque limiter without attachment (overload module)

Applications

- Extruders



The operating conditions for extruders place maximum demands on drive systems: Only special, optimised clutches for torque limitation, such as the EAS[®]-dutytorque, guarantee reliable protection in case of overload.

| Technical Data, Dimensions | | | Size | | | | | | | |
|----------------------------|----------------------------|-------|-----------|-----------|------------|------------|------------|------------|-------------|-------------|
| | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Limit torques for overload | M _G | [Nm] | 70 – 1400 | 70 – 1400 | 150 – 2800 | 150 – 4000 | 150 – 5600 | 800 – 9000 | 800 – 12000 | 800 – 17000 |
| Maximum speed | n _{max} | [rpm] | 3500 | 3000 | 3000 | 2750 | 2500 | 2250 | 2000 | 1750 |
| Outer diameter | | [mm] | 194 | 214 | 240 | 240 | 265 | 330 | 330 | 370 |
| Maximum bore | EAS [®] -hub side | [mm] | 90 | 90 | 120 | 120 | 120 | 140 | 140 | 140 |
| | Flexible side | [mm] | 85 | 95 | 95 | 100 | 115 | 130 | 135 | 160 |
| Length | | [mm] | 368 | 381.5 | 472 | 510.5 | 512.5 | 636 | 654.5 | 685 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-dutytorque: K.4043.V](#)

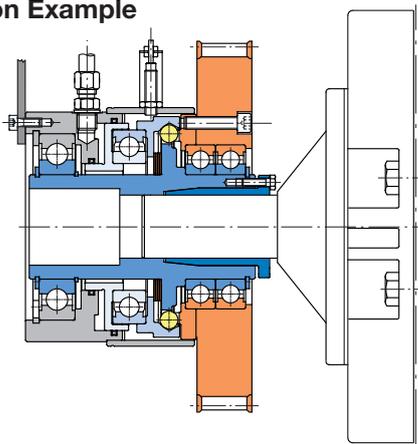
EAS®-Sp the load separating switchable and controllable torque limiter

Performance Characteristics

- Separates immediately on overload at the controlled switch-off torque
- Pneumatically switchable and controllable
- Synchronous coupling after each full turn
- High switch-off and repeat accuracy
- Torque can be steplessly adjusted via compressed air
- Optimum torque adaptation possible in every production process phase
- Application-tailored switching and control devices for optimum use of function and performance range



Installation Example



EAS®-Sp clutch mounted onto the shaft end:
The clutch is axially secured via a cone bushing and allows a backlash-free torque connection from shaft to hub.

Designs

- Pneumatic clutch with steplessly adjustable torque using the amount of air pressure
- Flange clutches with two integrated ball bearings for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets
- Combinations with a torsionally rigid flexible coupling for the connection of two shafts; compensation of shaft misalignment
- Designed for automated machines with changing operating conditions or changing cycle sequences and speeds

Applications

- Filling machines
- Printing machines
- Packing machines
- Conveyor technology

| Technical Data, Dimensions | | | Size | | | | | | |
|----------------------------|--------------------------|-------|--------|---------|----------|----------|-----------|------------|------------|
| | | | 01 | 0 | 1 | 2 | 3 | 4 | 5 |
| Limit torques for overload | M_e | [Nm] | 4 – 40 | 15 – 75 | 25 – 150 | 50 – 200 | 100 – 500 | 200 – 1000 | 500 – 2500 |
| Maximum speed | n_{max} | [rpm] | 5000 | 4000 | 2500 | 2000 | 2000 | 1500 | 500 |
| Outer diameter | | [mm] | 76 | 90 | 115 | 130 | 160 | 200 | 285 |
| Minimum bore | Flange design, keyway | [mm] | 10 | 12 | 15 | 20 | 20 | 25 | 38 |
| Maximum bore | | [mm] | 20 | 22 | 35 | 42 | 50 | 65 | 95 |
| Length | | [mm] | 87 | 105 | 126 | 135 | 153 | 185 | 260 |

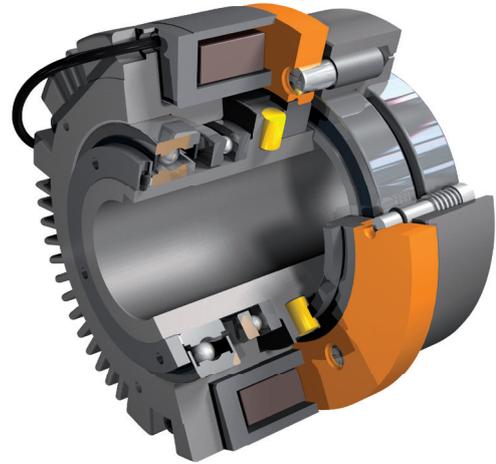
For detailed technical data and dimensions, please see catalogue [EAS®-Sp/EAS®-Sm/Zr: K.406.V](#)

EAS[®]-Sm / EAS[®]-Zr

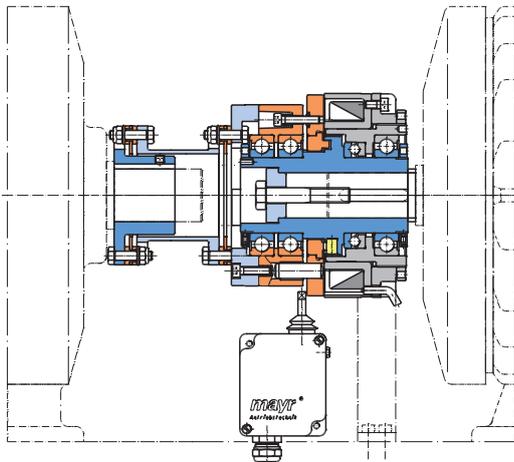
the load separating switchable and controllable torque limiter

Performance Characteristics

- Separates immediately on overload at the controlled switch-off torque
- Electrically switchable and controllable
- Synchronous coupling after each full turn on EAS[®]-Sm
- Coupling in 15°-steps on EAS[®]-Zr
- High switch-off and repeat accuracy
- Torque can be steplessly adjusted via current
- Optimum torque adaptation possible in every production process phase
- Application-tailored switching and control devices for optimum use of function and performance range



Installation Example



EAS[®]-Sm with torsionally rigid flexible all-steel coupling positioned between the motor and the gearbox. When the clutch disengages, the armature disk moves axially and operates the limit switch.

Designs

- Electromagnetic clutch with steplessly adjustable torque using the current
- Flange clutches with two integrated ball bearings for direct mounting onto drive elements such as pulleys, toothed wheels and chain sprockets
- Design with cover for dusty and dirty operation areas
- Combinations with a torsionally rigid flexible coupling for the connection of two shafts; compensation of shaft misalignment
- Designed for automated machines with changing operating conditions or changing cycle sequences and speeds

Applications

- Filling machines
- Printing machines
- Packing machines
- Conveyor technology

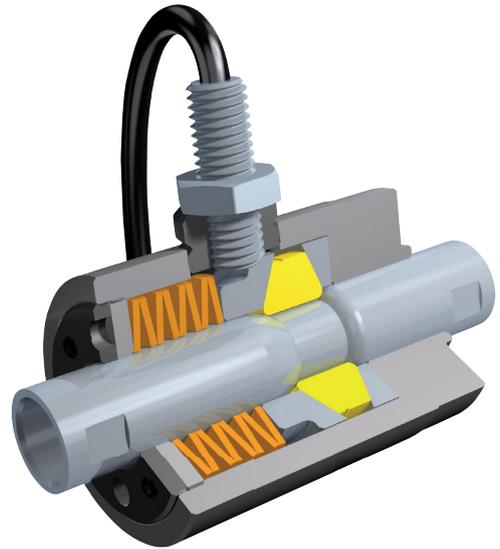
| Technical Data, Dimensions | | | Size | | | | |
|----------------------------|--------------------------|-------|--------|---------|----------|----------|-----------|
| | | | 0 | 1 | 2 | 3 | 4 |
| Limit torques for overload | M _G | [Nm] | 6 – 25 | 12 – 50 | 25 – 100 | 50 – 200 | 100 – 375 |
| Maximum speed | n _{max} | [rpm] | 4000 | 3000 | 2500 | 2000 | 2000 |
| Outer diameter | | [mm] | 115 | 135 | 155 | 180 | 210 |
| Minimum bore | Flange design, keyway | [mm] | 9 | 14 | 19 | 22 | 24 |
| Maximum bore | | [mm] | 22 | 35 | 42 | 50 | 60 |
| Length | | [mm] | 100 | 110 | 125 | 140 | 155 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-Sp/EAS[®]-Sm/Zr: K.406.V](#)

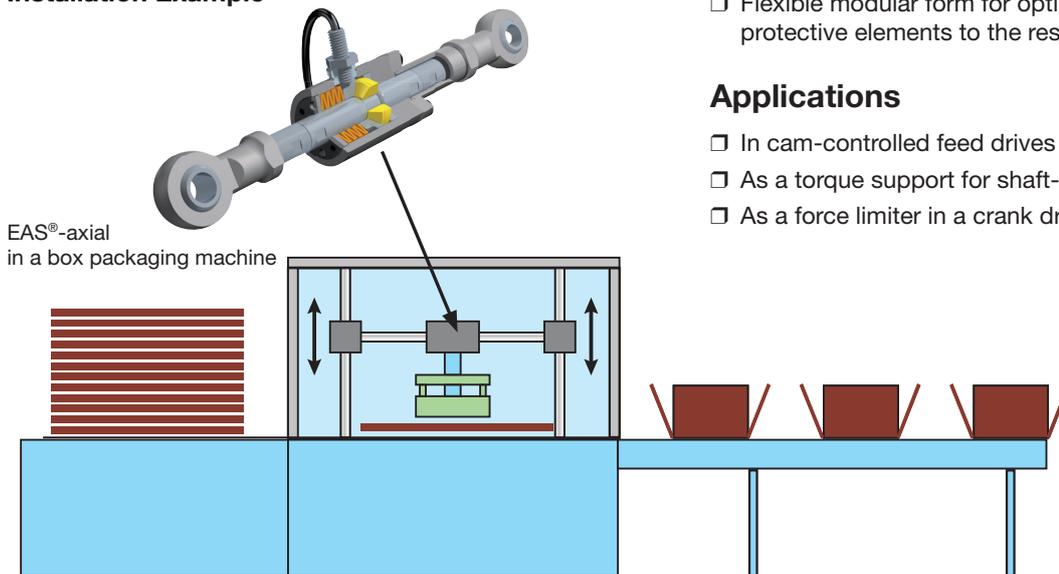
EAS[®]-axial the load separating torque limiter for linear movements

Performance Characteristics

- Separates immediately on overload
- Re-engages synchronously
- Transmits the forces backlash-free up to the adjusted release force
- High axial rigidity
- Reliably limits tensile and compressive forces
- Re-engages automatically exactly at the place of disengagement
- Free stroke in both tensile and compressive direction can be defined by the user
- Release force can be steplessly adjusted



Installation Example



Designs

- Flexible modular form for optimum adaptation of the protective elements to the respective application

Applications

- In cam-controlled feed drives
- As a torque support for shaft-mounted gearboxes
- As a force limiter in a crank drive

| Technical Data, Dimensions | | | Size | | | | | | | |
|-------------------------------------------------------|---------------|------|----------------|------------|------------|-------------|-----------|-----------|-------------|-------------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Release forces | F_A | [kN] | 0.075 - 0.8 | 0.2 - 2 | 0.3 - 5 | 0.6 - 12 | 3 - 30 | 6 - 70 | 12 - 150 | 30 - 300 |
| Free stroke (in tensile and/or compressive direction) | | [mm] | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 1000 |
| Outer diameter | | [mm] | 30 | 37 | 48 | 68 | 95 | 120 | 160 | 240 |
| Length | Basic element | [mm] | 52 | 75 | 95 | 130 | 190 | 230 | 350 | 460 |

For detailed technical data and dimensions, please see catalogue [EAS[®]-axial: K.403.C.V_ _ _ _](#)

Limit Switch

Type 055.00_5

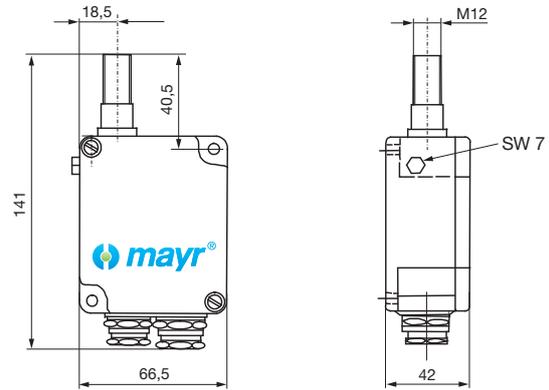
Contactless actuation



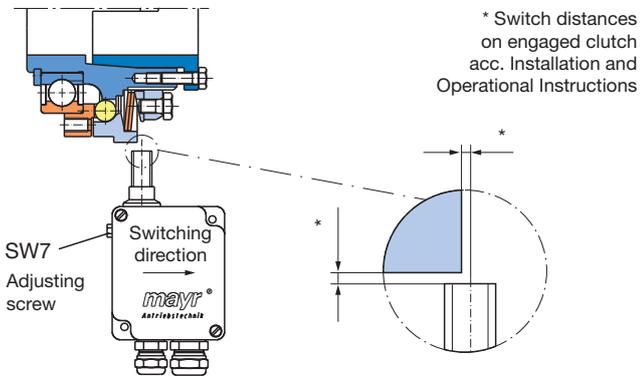
Characteristics

- Registration of axial and radial disengagement movements
- Either internal or external NAMUR sensor
- Floating contacts
- Adjustable zero point
- Robust light metal housing

Detail drawing



Installation example



Approvals



Type 055.012.6

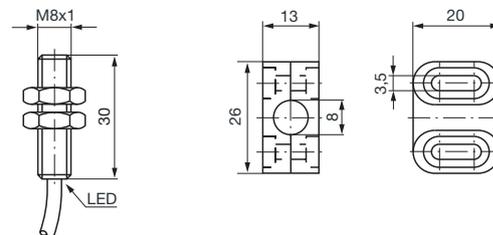
Contactless actuation



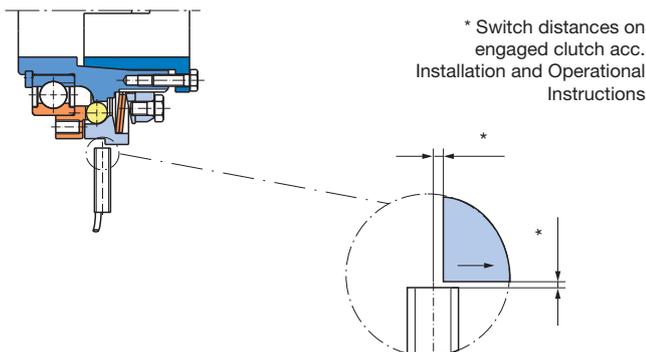
Characteristics

- Registration of axial disengagement movements
- PNP NO contact
- Cost-effective

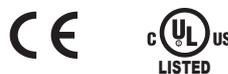
Detail drawing



Installation example



Approvals



Limit Switch

Type 055.000.5

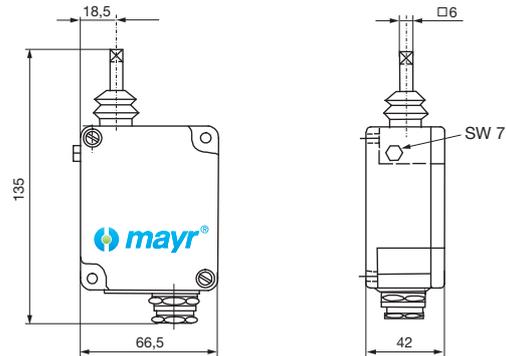
Mechanical actuation



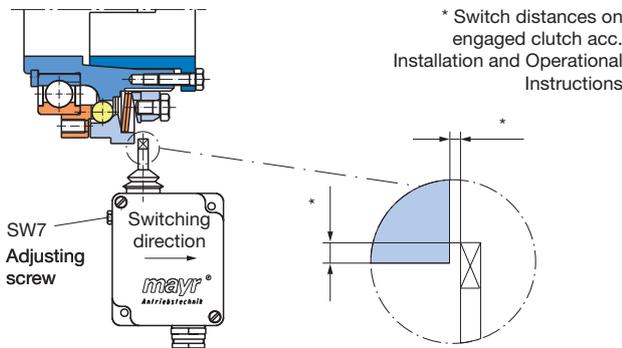
Characteristics

- Registration of axial disengagement movements
- Adjustable zero point
- Robust light metal housing

Detail drawing



Installation example



Approvals



Type 055.010.6

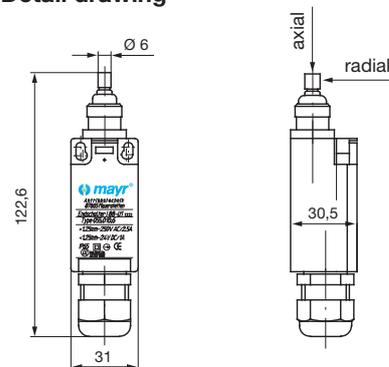
Mechanical actuation, multi-directional



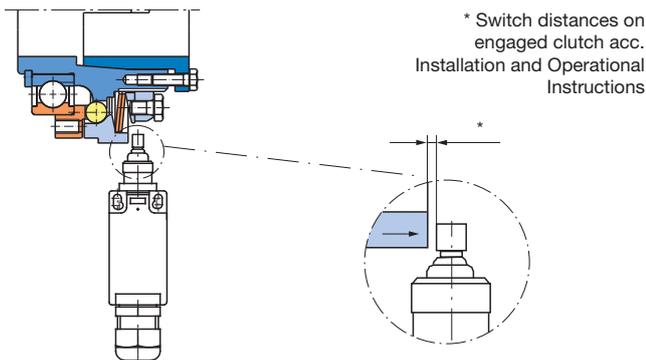
Characteristics

- Registration of axial and radial disengagement movements
- Positive opening contacts ☺

Detail drawing



Installation example



Approvals



Headquarters

Chr. Mayr GmbH + Co. KG
Eichenstraße 1, D-87665 Mauerstetten
Tel.: +49 83 41/8 04-0, Fax: +49 83 41/80 44 21
www.mayr.com, E-Mail: public.mayr@mayr.com



Service Germany/Austria

Baden-Württemberg

Esslinger Straße 7
70771 Leinfelden-Echterdingen
Tel.: 07 11/78 26 26 40
Fax: 07 11/78 26 26 39

Bavaria

Industriestraße 51
82194 Gröbenzell
Tel.: 0 81 42/50 19 808

Chemnitz

Bornaer Straße 205
09114 Chemnitz
Tel.: 03 71/4 74 18 96
Fax: 03 71/4 74 18 95

Franken

Unterer Markt 9
91217 Hersbruck
Tel.: 0 91 51/81 48 64
Fax: 0 91 51/81 62 45

Kamen

Herbert-Wehner-Straße 2
59174 Kamen
Tel.: 0 23 07/24 26 79
Fax: 0 23 07/24 26 74

North

Schiefer Brink 8
32699 Extertal
Tel.: 0 57 54/9 20 77
Fax: 0 57 54/9 20 78

Rhine-Main

Kohlhäuser Str. 3-5
36043 Fulda
Tel.: 06 61/96 21 02 15

Austria

Pummerinplatz 1, TIZ I, A27
4490 St. Florian, Austria
Tel.: 0 72 24/2 20 81-12
Fax: 0 72 24/2 20 81 89

Branch office

China

Mayr Zhangjiagang
Power Transmission Co., Ltd.
Fuxin Road No.1298, Yangshe Town
215637 Zhangjiagang
Tel.: 05 12/58 91-75 67
Fax: 05 12/58 91-75 66
info@mayr-ptc.cn

France

Mayr France S.A.S.
Z.A.L. du Minopole
Rue Nungesser et Coli
62160 Bully-Les-Mines
Tel.: 03.21.72.91.91
Fax: 03.21.29.71.77
contact@mayr.fr

Great Britain

Mayr Transmissions Ltd.
Valley Road, Business Park
Keighley, BD21 4LZ
West Yorkshire
Tel.: 0 15 35/66 39 00
Fax: 0 15 35/66 32 61
sales@mayr.co.uk

Italy

Mayr Italia S.r.l.
Viale Veneto, 3
35020 Saonara (PD)
Tel.: 049/879 10 20
Fax: 049/879 10 22
info@mayr-italia.it

Japan

Mayr Japan LLC
2F, 1-1-9 Nihonbashi Kakigara-cho,
Chuo-ku Tokyo, 103-0014 Japan
Tel.: 03/35 27-29 00
Fax: 03/35 27-26 61
public.mayr@mayr.co.jp

Singapore

Mayr Transmission (S) PTE Ltd.
No. 8 Boon Lay Way Unit 03-06,
TradeHub 21
Singapore 609964
Tel.: 00 65/65 60 12 30
Fax: 00 65/65 60 10 00
info@mayr.com.sg

Switzerland

Mayr Kupplungen AG
Tobeläckerstraße 11
8212 Neuhausen am Rheinfluss
Tel.: 0 52/6 74 08 70
Fax: 0 52/6 74 08 75
info@mayr.ch

USA

Mayr Corporation
10 Industrial Avenue
Mahwah
NJ 07430
Tel.: 2 01/4 45-72 10
Fax: 2 01/4 45-80 19
info@mayrcorp.com

Representatives

Australia

Drive Systems Pty Ltd.
8/32 Melverton Drive
Hallam, Victoria 3803
Australien
Tel.: 0 3/97 96 48 00
info@drivesystems.com.au

India

National Engineering
Company (NENCO)
J-225, M.I.D.C.
Bhosari Pune 411026
Tel.: 0 20/27 13 00 29
Fax: 0 20/27 13 02 29
nenco@nenco.org

Netherlands

Groneman BV
Amarilstraat 11
7554 TV Hengelo OV
Tel.: 074/2 55 11 40
Fax: 074/2 55 11 09
aandrijftechniek@groneman.nl

Poland

Wamex Sp. z o.o.
ul. Pozaryskiego, 28
04-703 Warszawa
Tel.: 0 22/6 15 90 80
Fax: 0 22/8 15 61 80
wamex@wamex.com.pl

South Korea

Mayr Korea Co. Ltd.
15, Yeondeok-ro 9beon-gil
Seongsan-gu
51571 Changwon-si
Gyeongsangnam-do. Korea
Tel.: 0 55/2 62-40 24
Fax: 0 55/2 62-40 25
info@mayrkorea.com

Taiwan

German Tech
Component Co., Ltd.
No.10-3, Ln. 358, Sec. 1,
Hemu Rd., Shengang Dist.,
429012 Taichung City
Tel.: +886 (4) 25150566
Fax: +886 (4) 25152413
abby@zfgta.com.tw

Czech Republic

BMC - TECH s.r.o.
Hviezdoslavova 29 b
62700 Brno
Tel.: 05/45 22 60 47
Fax: 05/45 22 60 48
info@bmc-tech.cz

Turkey

Representative Office Turkey
Kucukbakkalkoy Mah.
Brandium Residence R2
Blok D:254
34750 Atasehir - Istanbul, Turkey
Tel.: 02 16/2 32 20 44
Fax: 02 16/5 04 41 72
info@mayr.com.tr

More representatives:

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