

## Product overview



Safety couplings  
Torque limiters

# MECHANICAL TORQUE LIMITERS

## Friction torque limiter DF



Sliding safety coupling where a plate wheel, pulley or other transmission component is interposed between two friction rings. Upon reaching the torque sliding ensures continuity in the transmission without damaging the components.

- Simple and compact solution
- Suitable for dusty conditions without need of timing between gearbox and output
- Silent overload without vibration
- Protection in both directions of rotation
- Up to 23,000 Nm of torque and 140 mm bore

## Torque limiter (balls) EDF



Safety coupling with the transmission of motion by means of hardened balls inserted directly in the drive element, obtaining a simple, compact and competitive device. The disengagement occurs quickly and safely allowing the stop of the transmission if the calibrated torque is exceeded.

- Reduced torsional backlash
- Version with 360° phase re-engagement available
- Possibility of combining a microswitch / proximity to stop the engine
- Suitable for use in damp and oily
- Up to 1,450 Nm torque / 55 mm maximum bore

## Torque limiter (rollers) DSR



Safety coupling with the transmission of motion through rollers that allow complete disengagement when the calibrated torque is reached permitting a quick stop of the transmission due to micro-EM1. Suitable for transmitting high torque with high reliability and compact size.

- Precise torque setting by adjusting the radially balanced locking nut
- Equidistant re-engagement in phase or at 360°
- Suitable for oily and wet environments
- Maintenance-free
- Up to 12,000 Nm torque / 120 mm maximum bore

## Torque limiter (balls, backlash free) DSS/SG



A ball safety coupling with high technology and precision. Provides backlash free transmission of motion with high sensitivity of reaction and an immediate release without peak load prior to release. The device can be adjusted by changing the pressure of the springs in the negative.

- Exact torque regulation through a balanced radial nut
- Re-engagement in equidistant phase or 360°
- Maintenance free
- Up to 1,200 Nm torque / 65 mm maximum bore

# MECHANICAL TORQUE LIMITERS

## Torque limiter free rotation DSS/SG/RF



A backlash free safety coupling with free rotation and low residual torque suitable for high speed transmission. The disengagement is instantaneous once the torque is reached, the calibration is adjusted by changing the pressure of the springs. The re-engagement is manual, quick and reliable.

- Absence of torsional play during the transmission of motion
- Fine-tuning the torque through a balanced radial ring
- No residual torque after disengagement
- Possibility of combining a switch / proximity to stop the engine
- Up to 1,200 Nm torque / 65 mm maximum bore

## Torque limiter for reducers PR



Safety coupling to be mounted between the motor and gearbox with flange B5 spacer. Available in sliding and disengage versions. The location of the limiter between the motor and gearbox requires a smaller size of device with also reduces costs.

- Safety joint made of steel, aluminum spacer completely machined
- Anti-corrosion treatment standard phosphate on the torque limiter
- The device worked for IEC motors and gears
- Disengaging instant to overcome the torque set
- Up to 2,600 Nm torque / 55 mm maximum bore

## Modular torque limiters DSM



A robust torque limiter with modular torque adjustment. Free rotation after overload permits high rotational speeds with also high torque settings and large shaft diameters can be accommodated. The torque modules can be individually adjusted and re-engagement of the unit is quick and easy.

- Free rotation after disengagement without residual torque
- Compact and robust design
- Maintenance free
- Up to 9,000 Nm torque / 140 mm maximum bore

## Axial force limiters DSA



Safety coupling with linear limitation of force. Releasing both in compressive and tension once it reaches the calibration force. The setting force can be adjusted by turning the adjuster nut onto the springs and re-engagement is automatic. Possibility of connecting linear motion also very distant from each other.

- Made of steel fully turned with special high mechanical strength
- No axial play
- Free rides in tension and compression after release
- Maintenance free
- Up to 7,000 Nm torque

# PNEUMATIC CLUTCHES

## Roller phase pneumatic clutch DSR/F/AP



A friction clutch or roller with torque adjustment even during operation. Ability to disengage the drive and driven by pneumatic or electrical impulse. Low residual torque after disengagement. Calibration adjustable by changing the pressure (pneumatic) air supply. Transmission through rollers with re-engagement in phase 360° (equidistant on request, 30°, 45°, ...). Free rotation for long periods after overload.

- Arranged to add a microswitch / proximity to stop the motor drive
- Maintenance free
- Up to 30,000 Nm torque / 120 mm maximum bore

## Friction pneumatic clutch DSF/TF/AP



The motion is transmitted by friction and the set torque is kept constant. As tensioner, brake and torque limiter.

- Available with special friction rings for specific requirements
- Available in a version to stop the transmission after an overload
- Up to 875 Nm torque / 65 mm maximum bore

## FURTHER COUPLINGS FROM OUR PRODUCT RANGE

### Shrink discs / Internal lockin units



### Rigid coupling



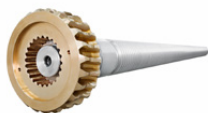
### Flexible couplings



# FLOHR - PRODUCTS OVERVIEW

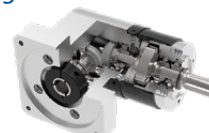
## Gears

- Spiral toothed bevel gears
- Bevel gears
- Worm gears
- Spur gears
- Special gears



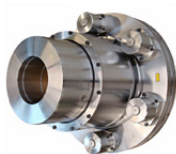
## Gear Technology

- Bevel gearboxes
- Angle-planetary gearboxes
- Worm gearboxes
- Cam drives and indexing units
- Cam components
- Special gearboxes



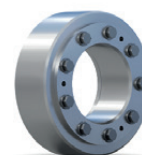
## Couplings

- Rigid and flexible couplings
- Frictional connections
- Drum-coupling
- Gear-couplings
- Safety couplings



## Friction connections

- Shrink discs
- Shaft couplings
- Flange couplings
- Locking units



## Clamping technology

- Manual and pneumatic clamping solutions
- Power clamps
- Pivot units
- End effector solutions
- Linear units
- Grippers



## Belt drives

- V-belt and flat belt pulleys
- Flywheels
- Special pulleys
- Motor clamping systems
- Drive belts
- Customer designed castings
- Accessories



## Sensor systems

- Incremental encoders
- Magnetic encoders
- Absolute encoders
- Electronic overspeed switches
- Electronic position switches
- Universal encoder systems
- Systems



## Contract manufacturing

- Turning, milling, grinding
- Grooving and broaching
- Balancing
- Calculation and design
- Assembly
- Service and repair



  
INDUSTRIETECHNIK GMBH

### FLOHR Germany

FLOHR INDUSTRIETECHNIK GmbH  
Im Unteren Tal 1  
D-79761 Waldshut-Tiengen  
Phone: +49 (0) 77 51 / 87 31 0  
info@flohr-industrietechnik.de  
www.flohr-industrietechnik.de

### FLOHR Switzerland

FLOHR INDUSTRIETECHNIK GmbH  
Zilistude 164  
CH-5465 Mellikon  
Phone: +41 (0) 56 / 267 08 10  
info@flohr.ch  
www.flohr.ch

### FLOHR Austria

FLOHR INDUSTRIETECHNIK  
Bucherstraße 37b  
A-6922 Wolfurt  
Phone: +43 (0) 5572 / 372 158  
info@flohr.at  
www.flohr.at