

Shrinks discs



Hydraulic
shrinks discs

TAS
SCHÄFER



**Hydraulic
Actuated Products**

Description of function SHS

Shrink discs of the type SHS

The main function of a shrink disc is the safe connection of a shaft with a hub by means of friction. For example, between a drive shaft and a transmission hollow shaft. The shrink disc generates a backlash-free connection by pressing the hub onto the shaft. This connection is mainly used to transmit torque.

The shrink disc only provides the required forces, and transfers no forces or moments between shaft and hub by itself. It is not in the force flow.

It is installed by sliding the shrink disc onto the hollow shaft and the subsequent tightening of the hydraulic system. By using conical surfaces the inner diameter reduces and the radial pressure is built up. After clamping the SHS will be locked mechanically and the hydraulic

pressure will be removed. Due to this simple approach the SHS is suitable for repetitive clamping operations as they occur on a test bench, for example.

To achieve proper operation and to a sufficiently high coefficient of friction, the contact surfaces between shaft and hub must be free of grease, dry and clean. The functional surfaces of the shrink disc are equipped at the factory with lubricant. The contact surfaces between the hub and shrink disc must also be provided with grease before installation.

Product data SHS

Data sheets and CAD data:

- Our hydraulically actuated shrink discs are selected according to customer specifications or been redesigned.
- For this purpose please send us an e-mail to info@tas-schaefer.de

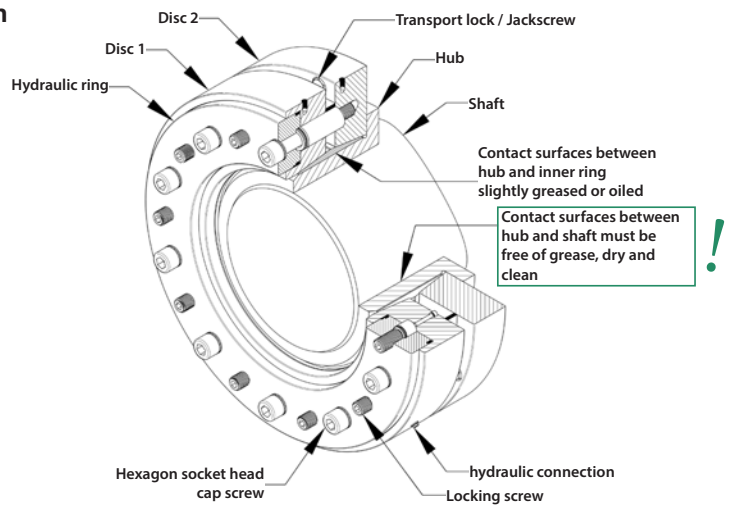
You can find the questionnaire for this product on:

www.tas-schaefer.de

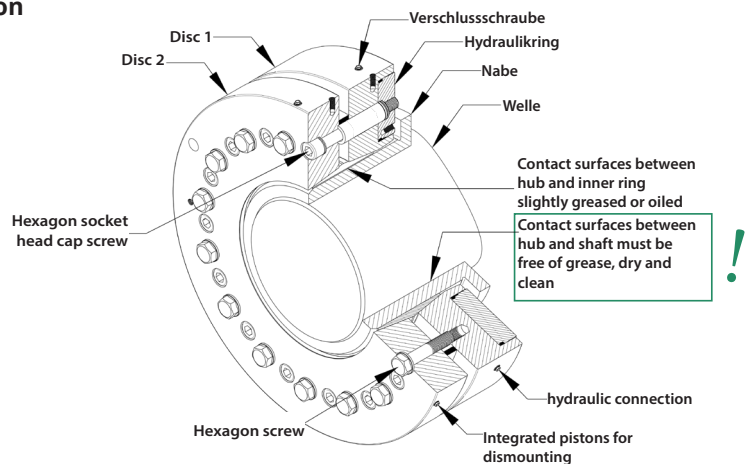
Advantages of the SHS:

- application-specific design/ customization
- relatively low pressure
- very rapid tightening / loosening, in comparison to the mechanical shrink disc
- mechanically removably, partially mechanically tensionable when hydraulic is not available
- simple design based on 3-parts shrink disc
- maintenance/repairs carried out by customer

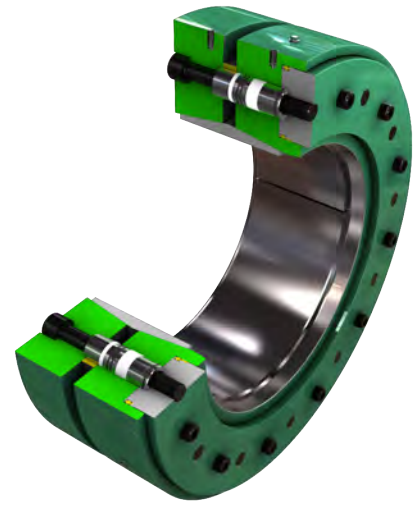
Hydraulics on the front



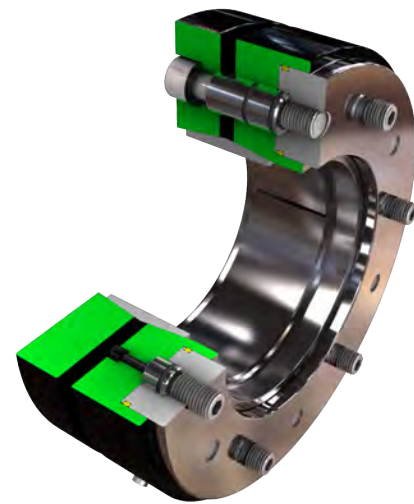
Hydraulics on the back



SHS standard



SHS-560



SHS-220 MD DT

Typical fields of application

Industrial gearboxes
Hollow shaft gearboxes
Hydraulic motors

Nominal sizes

140 - 1.000 mm

Nominal torques

20 - 10.000 kNm

Pressure range

up to 180 bar

Versions

Hydraulic on the front
Bolting on both sides

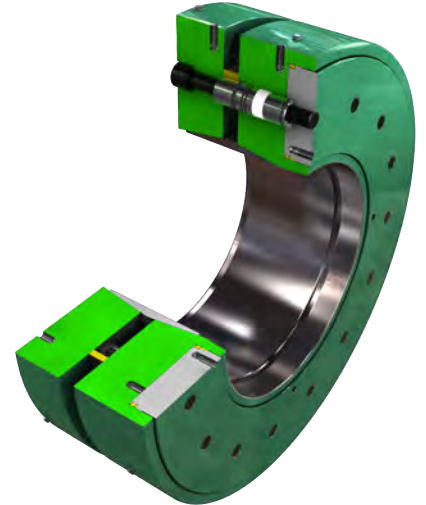
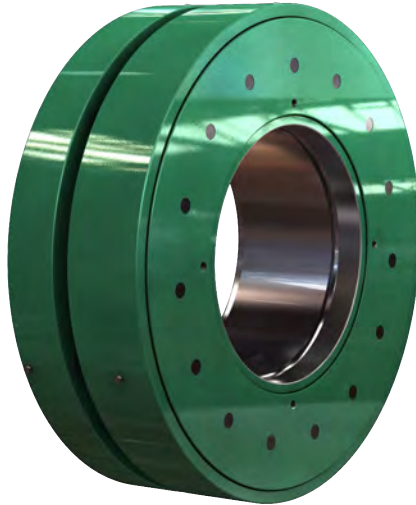
Features

simple design

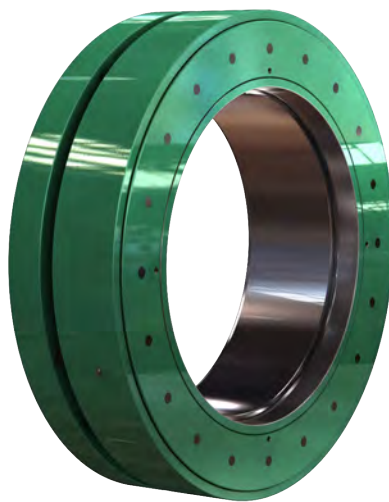
Options

improved corrosion protection

SHS Test Bench



SHS-530.2/2,5 P



SHS-1000/990 P

Typical fields of application	Gearbox test stands
Nominal sizes	140 - 1.000 mm
Nominal torques	20 - 14.000 kNm
Pressure range	up to 200 bar (up to 400 bar for dismounting)
Versions	Hydraulic on the front or on the back Bolting on both sides or on the front
Features	Optimized for permanent operation reduced wear higher safety simplified handling and maintenance
Options	Application specific customization improved corrosion protection

SHS Marine (with class approvals)



Typical fields of application	shafting
Nominal sizes	140 - 800 mm
Nominal torques	14 - 2.800 kNm
Pressure range	up to 200 bar
Versions	up to 400 bar (dismounting) Hydraulic on the front Hydraulic on the back Bolting on both sides
Features	Bolting on the front wide design reduced surface pressure high safety Application specific customization full class approvals
Options	hydraulic dismounting

SHS Wind energy

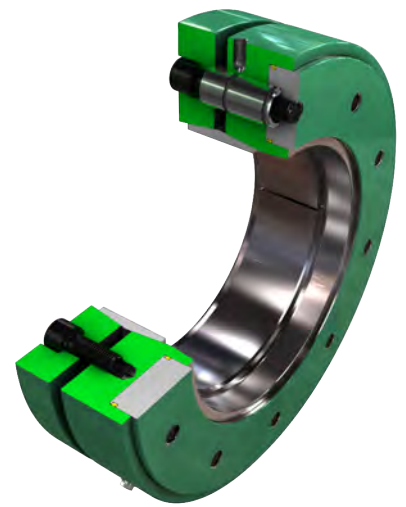
SHS-230 LR



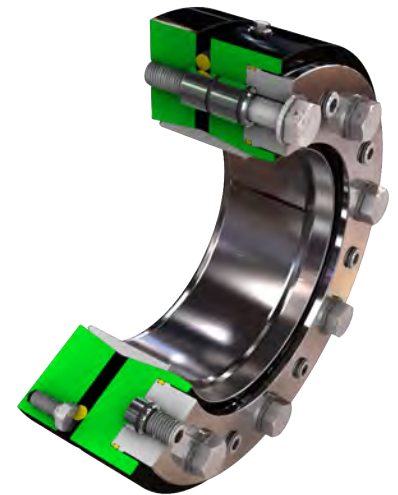
Typical fields of application	Main rotor shaft
Nominal sizes	Generator shaft
Nominal torques	140 - 1.000 mm
Pressure range	20 - 12.000 kNm up to 200 bar
Versions	Hydraulic on the front Hydraulic on the back Bolting on both sides Bolting on the front
Features	special corrosion protection Application specific customization
Options	-

SHS-530/2,5

SHS Customized



SHS-300.2 P



SHS-240.1 MD DT

Typical fields of application	Crusher Mills Shredder ... etc.
Nominal sizes	100 - 1.000 mm
Nominal torques	10 - 12.000 kNm
Pressure range	up to 200 bar up to 400 bar (dismounting)
Versions	Hydraulic on the front or on the back Bolting on both sides or on the front
Features	Application specific customization
Options	By arrangement and engineering viability

Description of function FKH

Rigid flange couplings of the type FKH

The main function of a hydraulic flange coupling (hereinafter called FKH) is the safe connection of two shafts. For example, between a drive shaft and a transmission shaft. The FKH produces a rigid and backlash-free connection between the shafts. This connection is mainly used to transmit torque, but can also absorb bending moments. The FKH is located in the power flow.

It is installed by sliding the FKH onto the shaft and the subsequent tightening of the hydraulic system. By using conical surfaces the inner diameter reduces and the radial pressure is built up. After clamping the FKH will be locked mechanically and the hydraulic pressure will be removed. Due to this simple approach, the FKH is suitable for repetitive clamping operations.

To achieve proper operation and to a sufficiently high coefficient of friction, the contact surfaces between shaft and FKH must be free of grease, dry and clean. The functional surfaces of the FKH are equipped at the factory with lubricant.

Product data

Data sheets and CAD data:

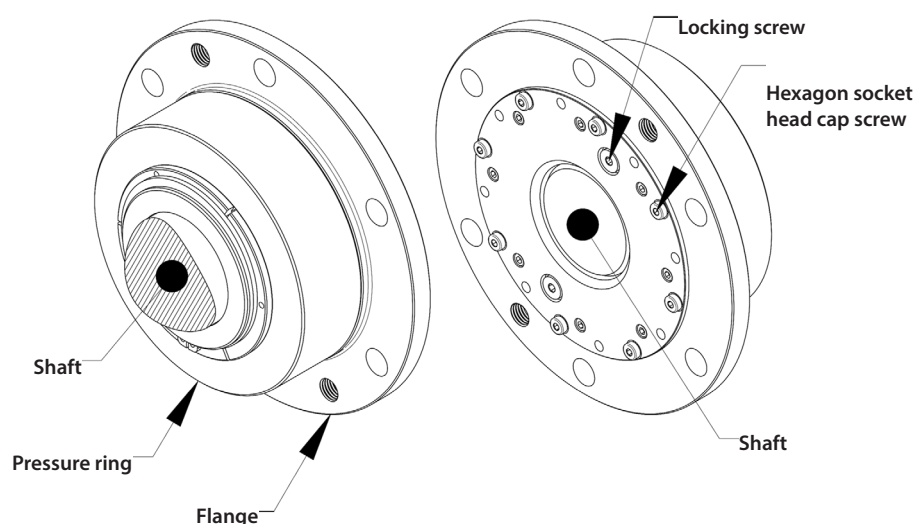
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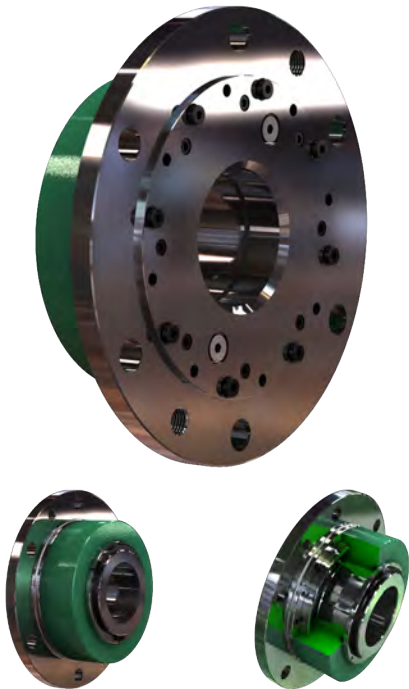
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Advantages of the FKH

- high transmittable torque and bending moments (high friction)
- application-specific design/customization
- easy mounting and adjustment because of clearance fit
- relatively low pressure (closed system)
- very rapid tightening/loosening
- simple design (single cone)
- short installation length
- also usable for shafts with keyway (should be filled)
- combination of different shaft diameters



FKH Rigid flange coupling



Typical fields of application	Conveyor drives
Nominal sizes	Agitator shaft
Nominal torques	70 - 500 mm
Pressure range	6 - 2.500 kNm up to 400 bar
Versions	standard design heavy design
Features	short installation length high stability tensionable from the shaft side desired shaft stepping closed hydraulic system mechanical lock
Options	improved corrosion protection

FKH - 090P



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



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