

TAS
SCHÄFER

hydraulic
actuated
products

In-house development

Own manufacturing

Sole distributor in Germany

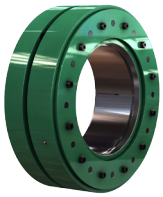
Working with distributors worldwide



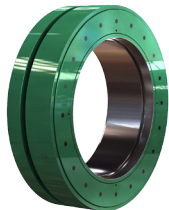
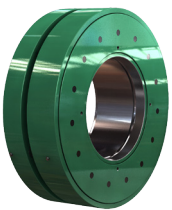
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Overview

Hydraulic shrink disc SHS



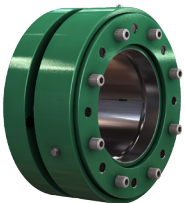
Standard



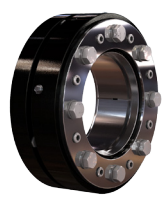
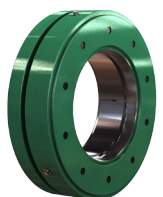
Test stand



Wind energy



Naval (with class approvals)

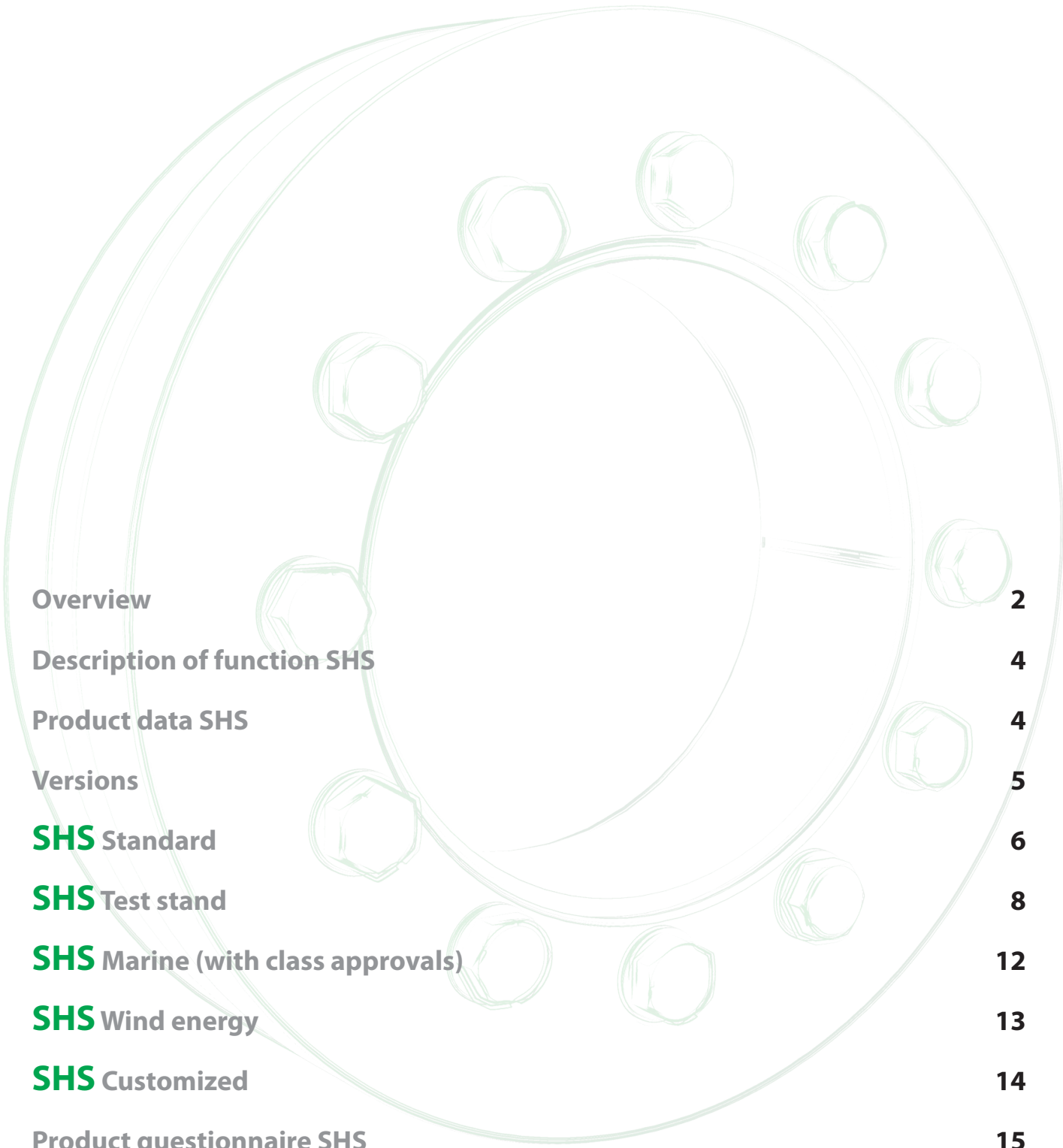


Customized

Hydraulic rigid flange coupling



FKH



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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.

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

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.

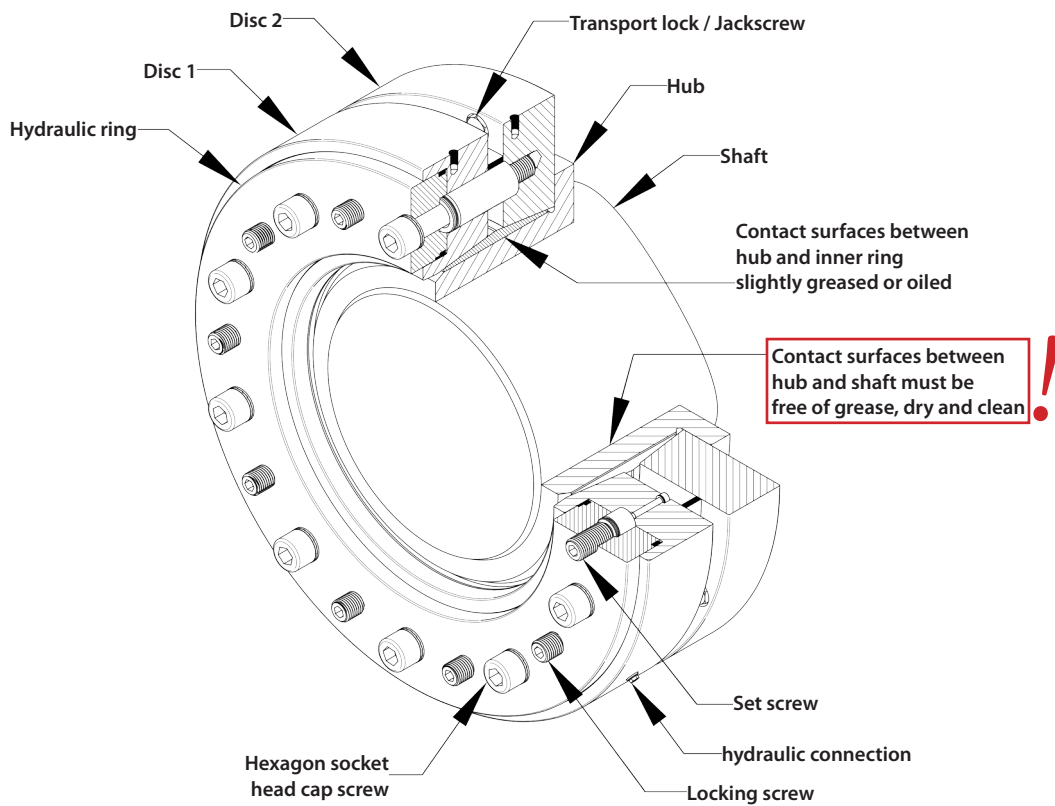
Product data SHS

Data sheets and CAD data

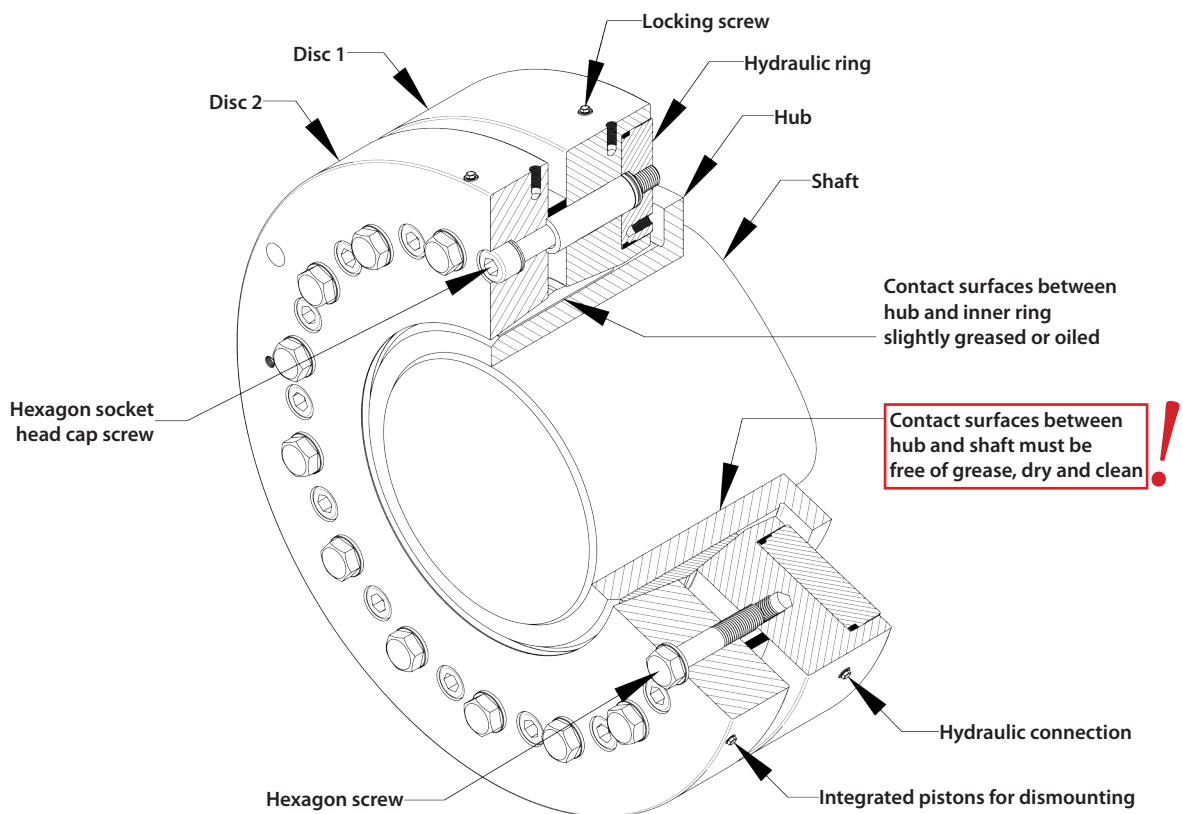
Our hydraulically tensible shrink discs are selected according to customer specifications or been redesigned. For this purpose please fill in the questionnaire (*see page 15*) and send it to info@tas-schaefer.de.

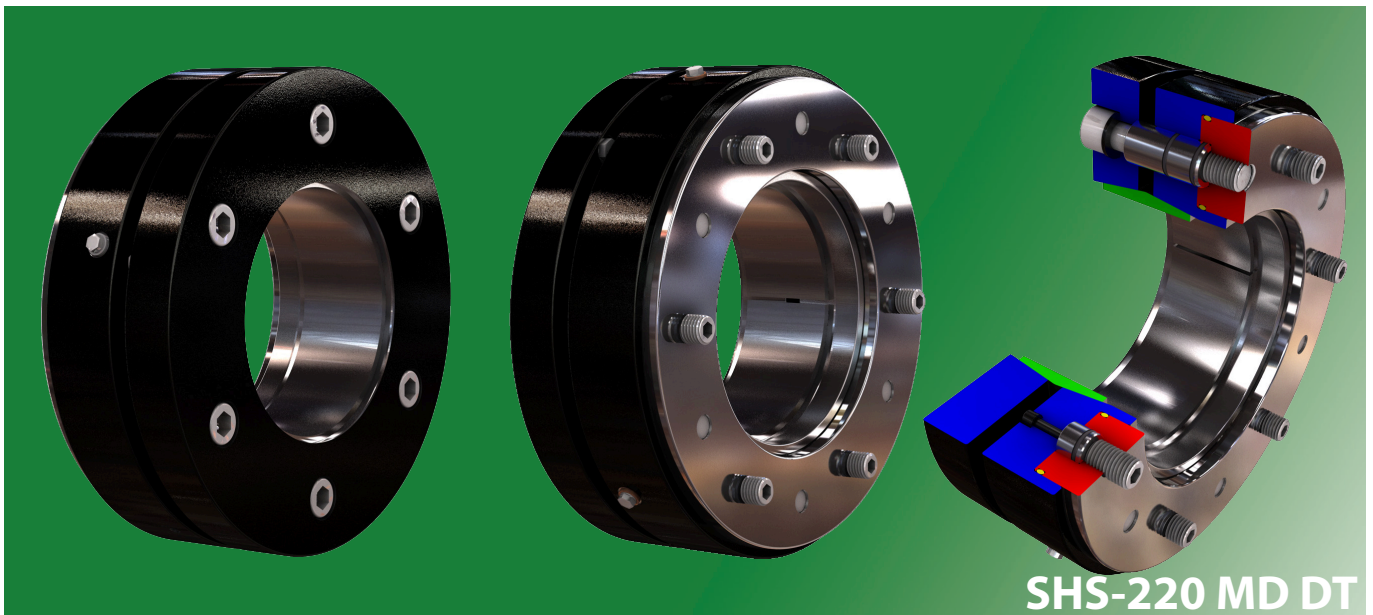
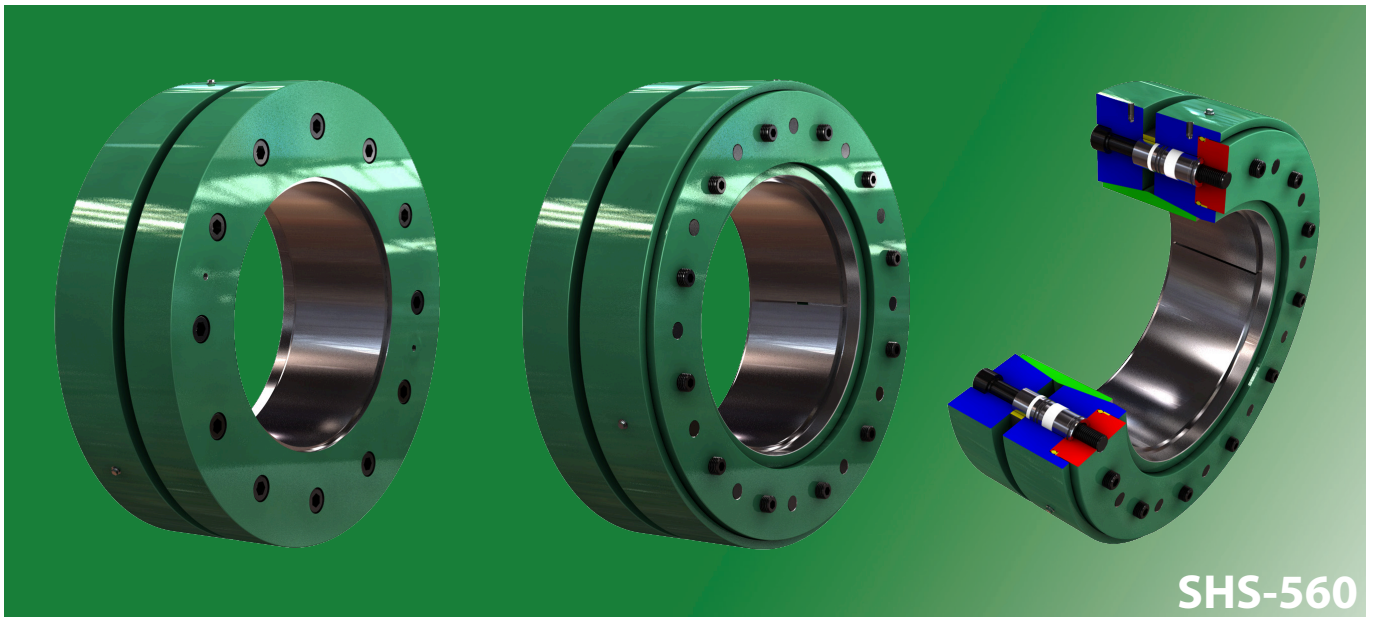
Versions

Hydraulics on the front

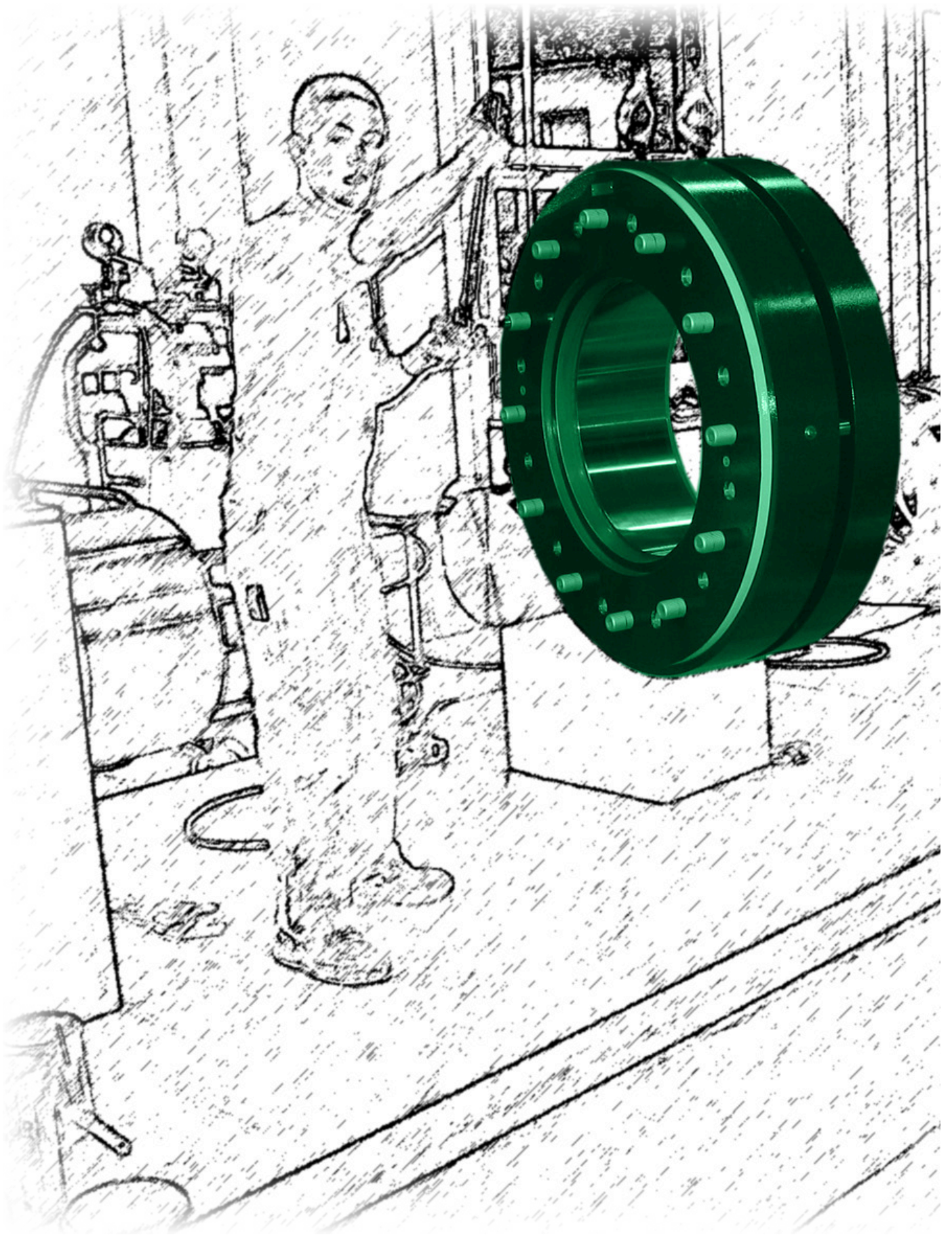


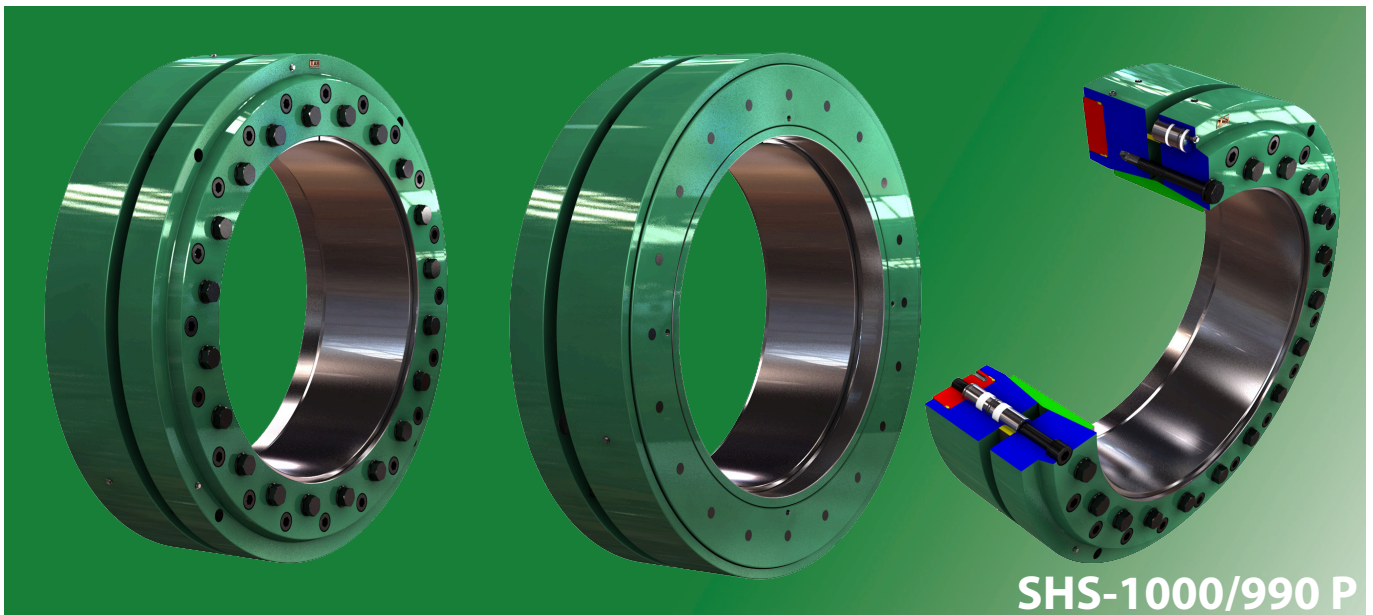
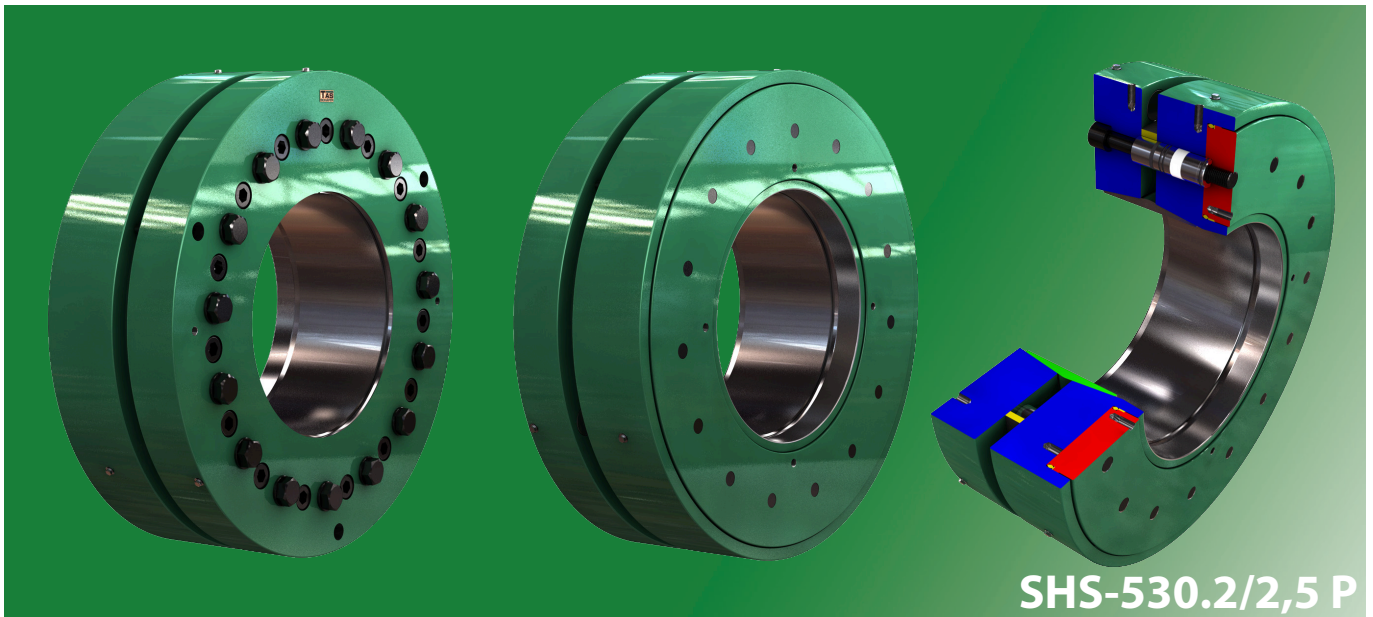
Hydraulics on the back



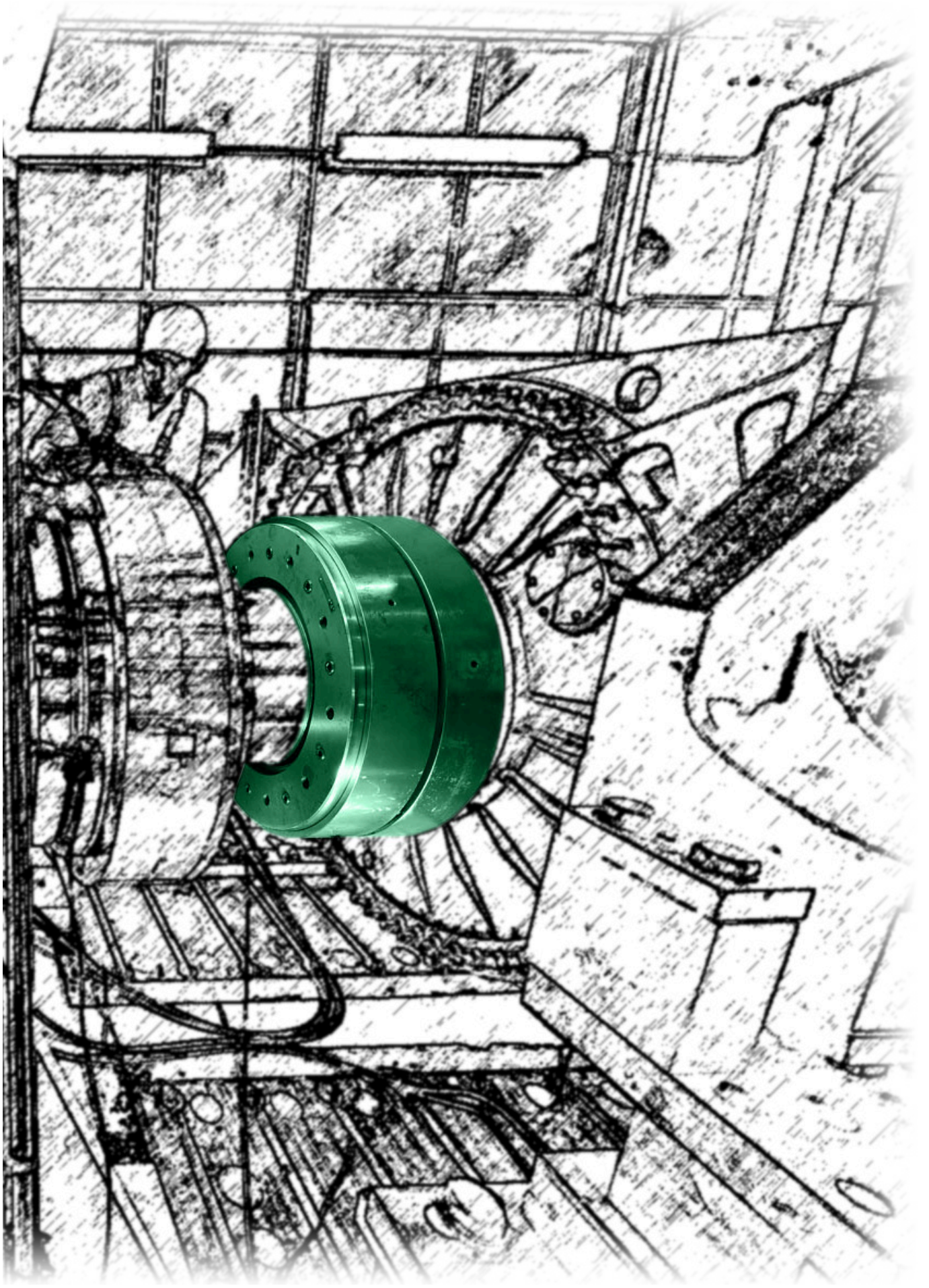


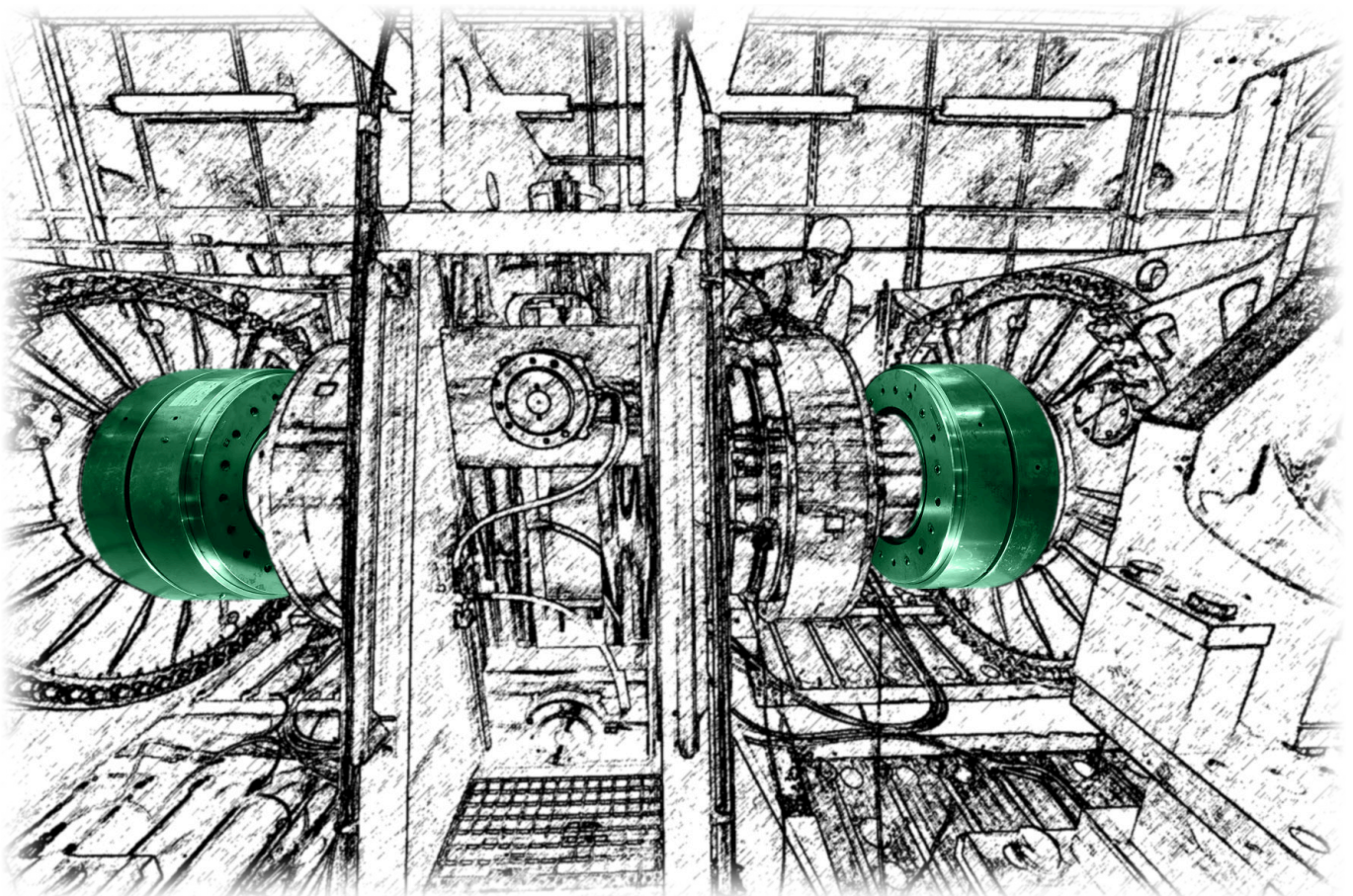
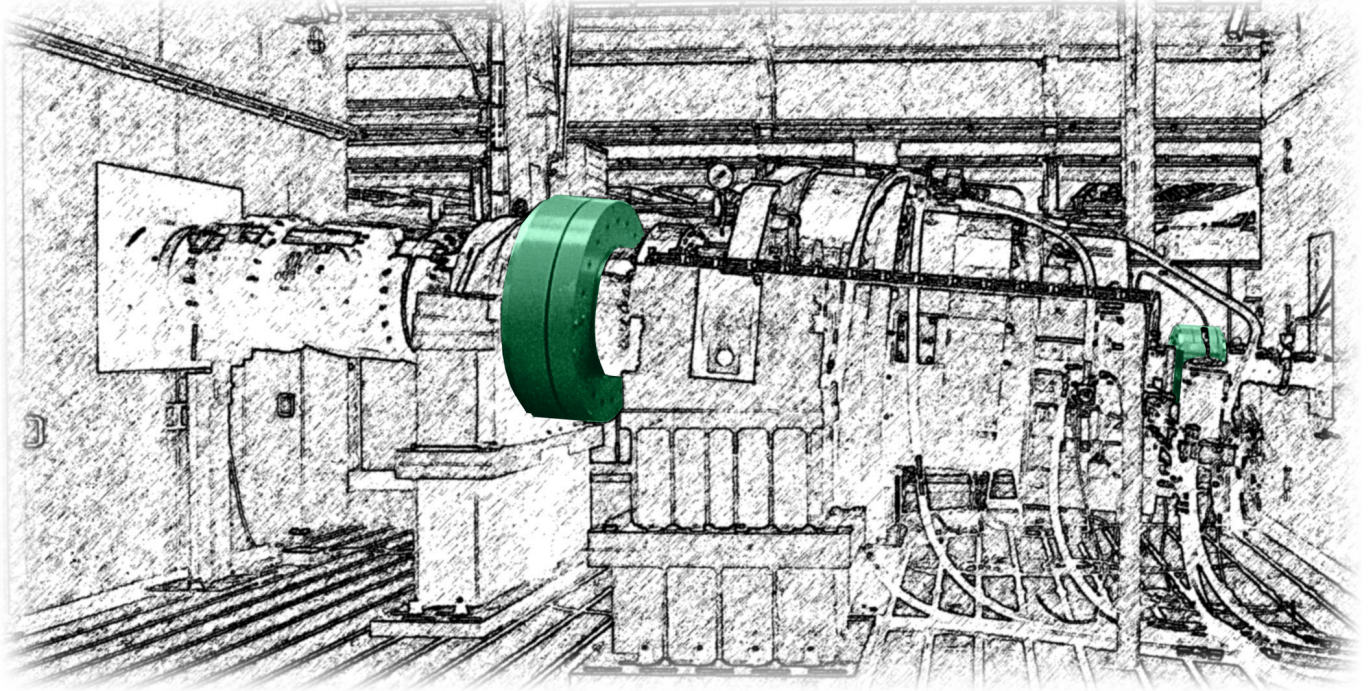
Typical fields of application	Industrial gearboxes Hollow shaft gearboxes Hydraulic motors
Nominal sizes	140 - 1.000 mm
Nominal torques	20 - 10.000 kNm
Pressure range	up to 180 bar
Versions	Hydraulic on the front Bolting on both sides
Features	simple design
Options	improved corrosion protection

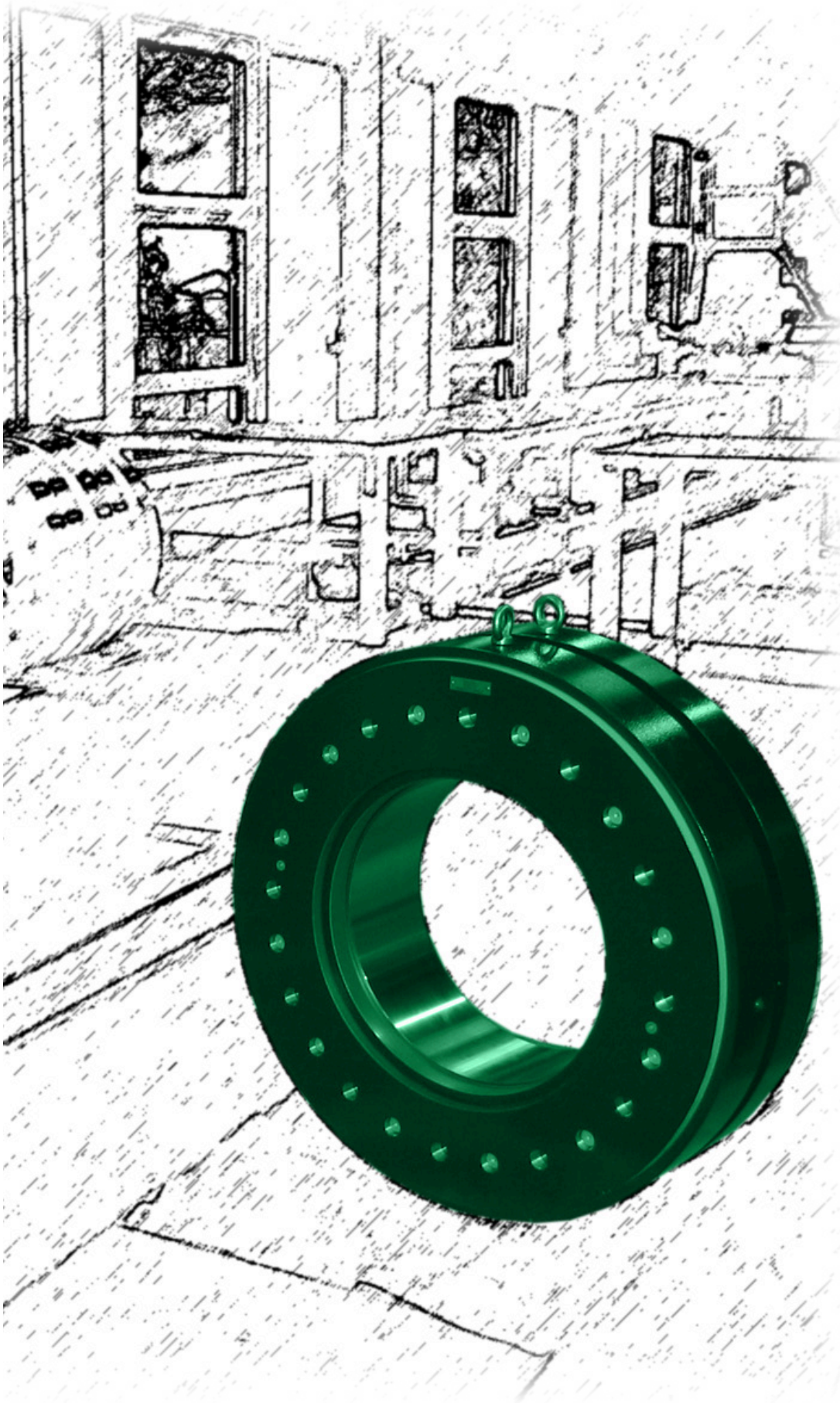


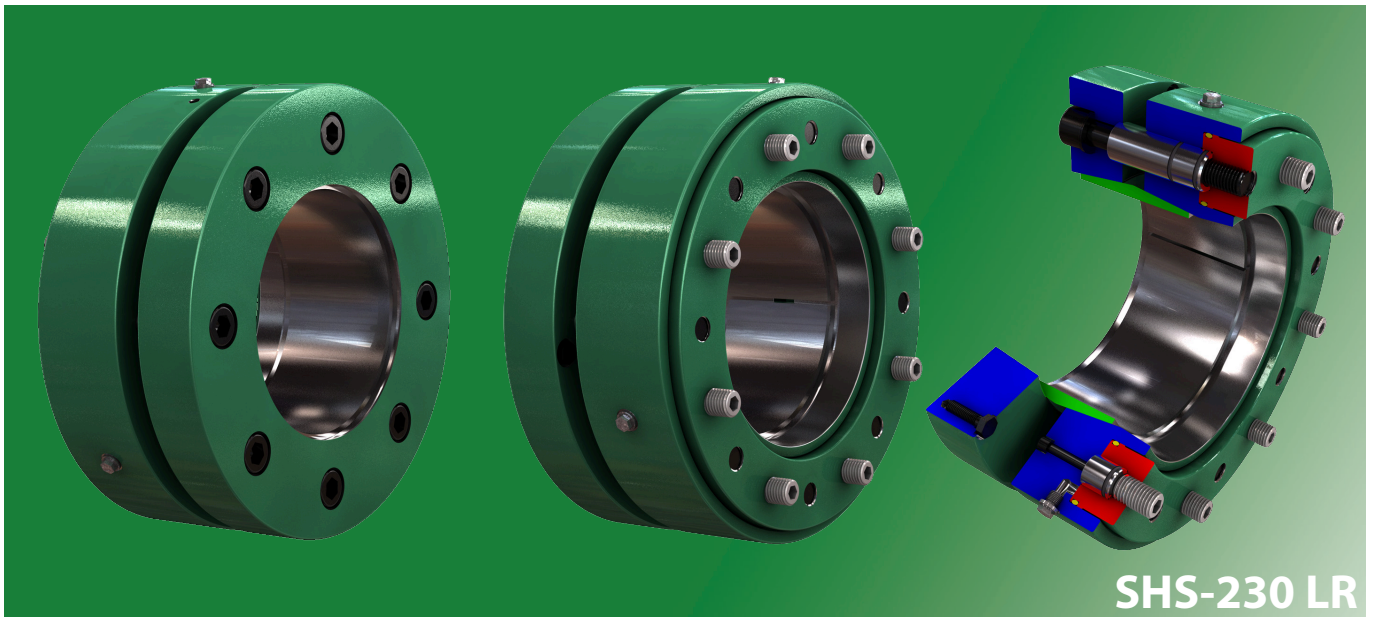


Typical fields of application	Gearbox test stands
Nominal sizes	140 - 1.000 mm
Nominal torques	20 - 14.000 kNm
Pressure range	up to 200 bar (up to 400 bar for dismounting)
Versions	Hydraulic on the front or on the back Bolting on both sides or on the front
Features	Optimized for permanent operation reduced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



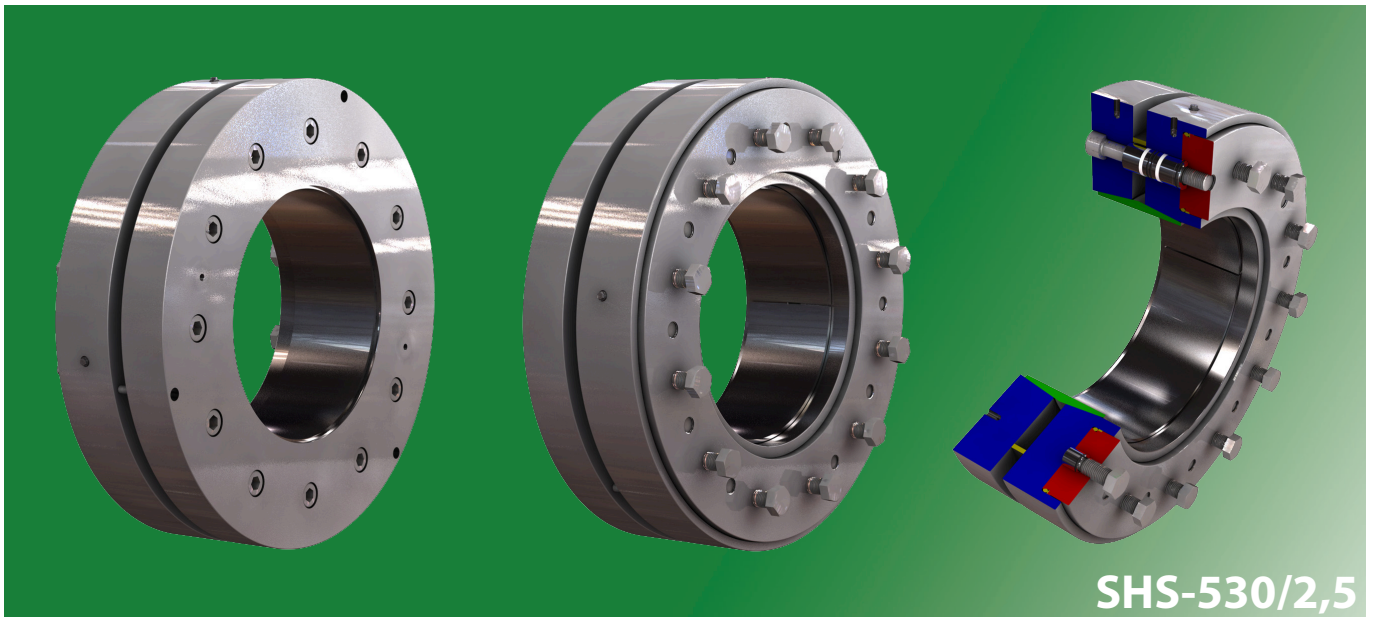






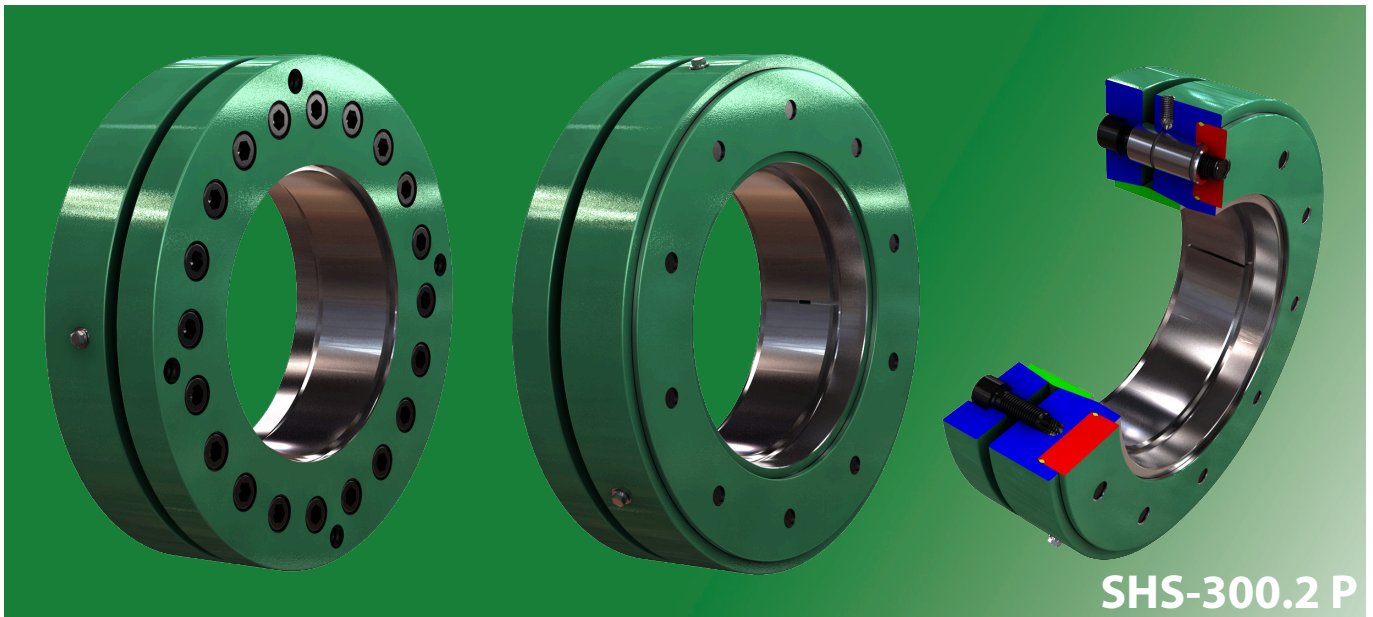
SHS-230 LR

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

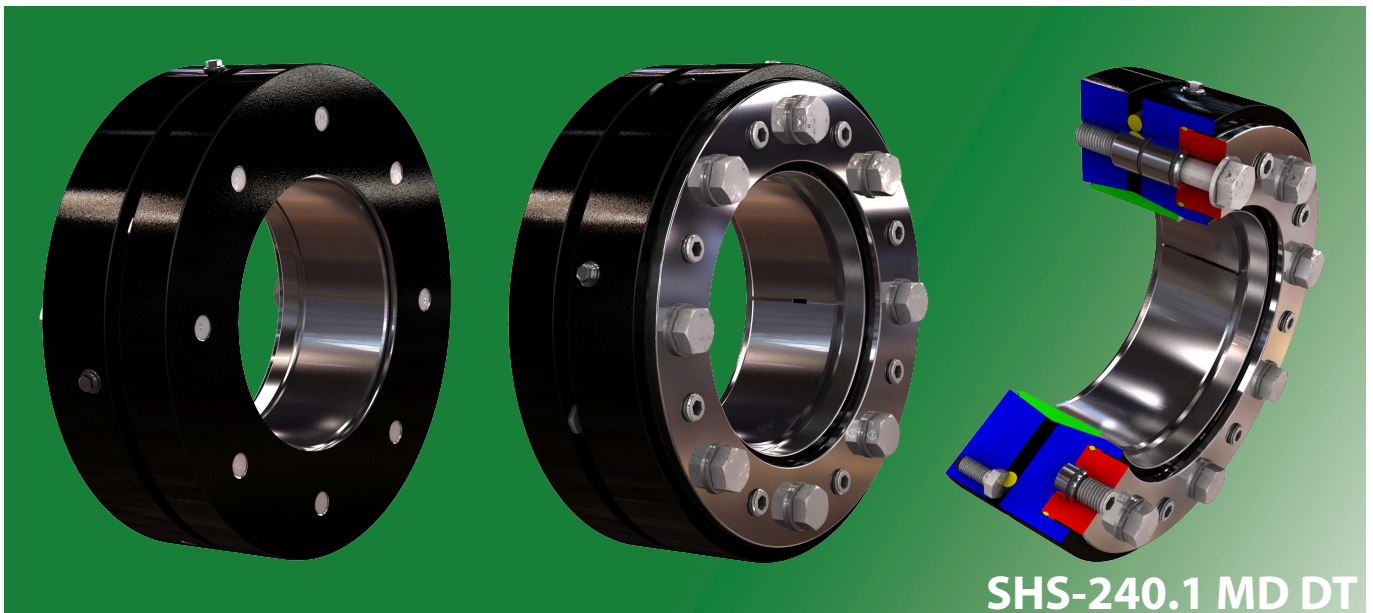


SHS-530/2,5

Typical fields of application	Main rotor shaft Generator shaft
Nominal sizes	140 - 1.000 mm
Nominal torques	20 - 12.000 kNm
Pressure range	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-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.

Advantages of the FKH:

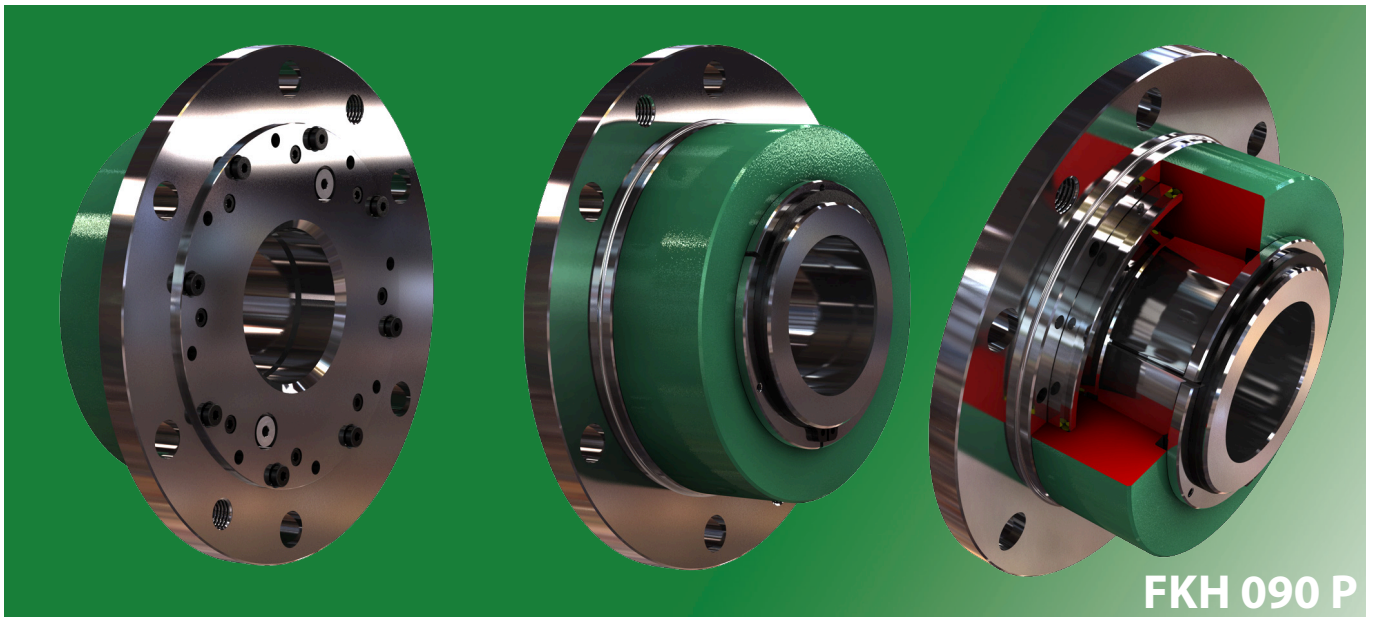
- high transmittable torque and bending moments (high friction)
- application-specific design/customization
- easy mounting and adjustment because of clearance fit
- relatively low pressure (closed system)
- very rapid tightening/loosening
- simple design (single cone)
- short installation length
- also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

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 FKH

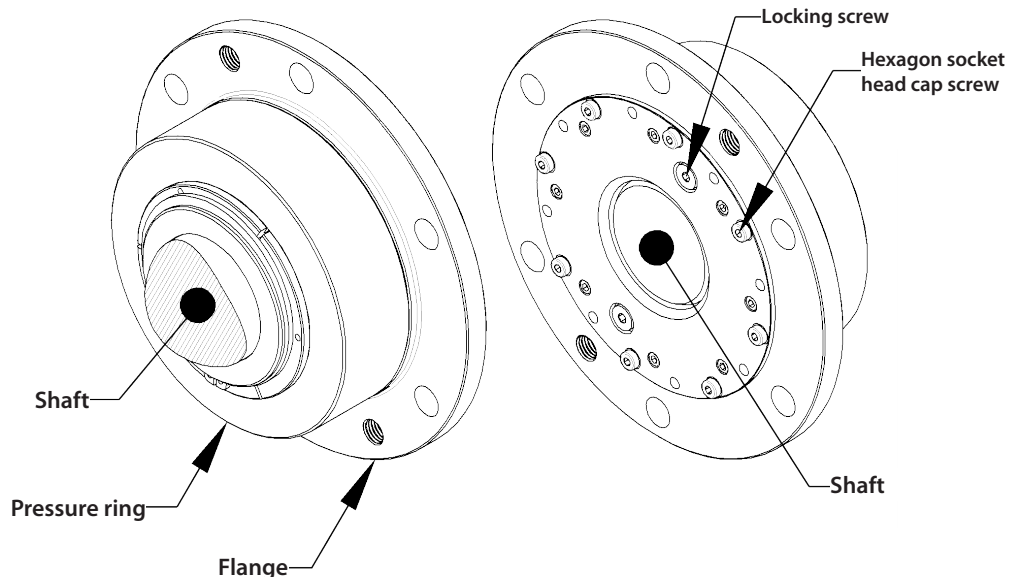
Data sheets and CAD data

Our hydraulically tensible rigid flange couplings are selected according to customer specifications or been redesigned. For this purpose please fill in the questionnaire (see pages 18/19) and send it to info@tas-schaefer.de.



FKH 090 P

Typical fields of application	Conveyor drives Agitator shaft
Nominal sizes	70 - 500 mm
Nominal torques	6 - 2.500 kNm
Pressure range	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



Company _____

Date _____

Address _____

Reference _____

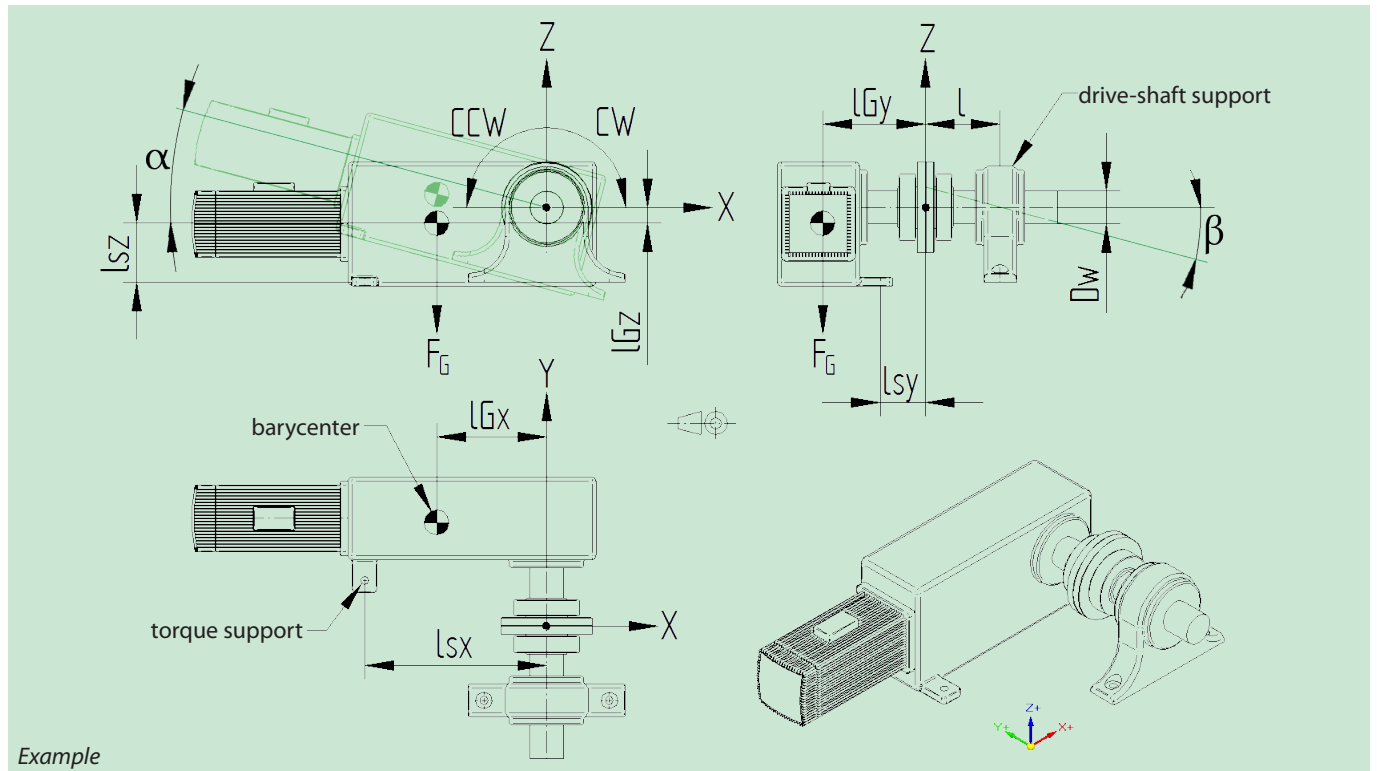
TAS Schäfer GmbH

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Germany

Using a "flying" drive (typical arrangement for conveyor drives), creates bending moment. Information about weight, COG, torque-arm, rotational direction and type of torque support are very important to evaluate the bending loads. All information is needed to do this calculation completely!



Example

Drivetrain mass	F_G [N]	<input type="text"/>		
Shaft extension	l [mm]	<input type="text"/>		
Position of barycenter (COG)	l_{Gx} [mm]	<input type="text"/>	l_{Gy} [mm]	<input type="text"/>
	min.	<input type="text"/>		<input type="text"/>
	max. ⁽¹⁾	<input type="text"/>	⁽¹⁾	<input type="text"/>
Position torque support	l_{sx} [mm]	<input type="text"/>	l_{sy} [mm]	<input type="text"/>
	min.	<input type="text"/>		<input type="text"/>
	max. ⁽¹⁾	<input type="text"/>	⁽¹⁾	<input type="text"/>

⁽¹⁾ only if variable

Direction of rotation:

CW (clockwise)

CCW (counterclockwise)

CW/CCW (both directions)

Torque support design:

fixed

flexible

variable

Angle of drivetrain α [°] alterable from to

Backstop:

without

at drive

not at drive

Further details

Rigidity of torque support [N/mm]

Enabled movement X_{\pm} [mm] Y_{\pm} [mm]

Shaft bending under load β [minute]

Max. shaft run-out (manufacturing): radial [mm] angle [minute]

Brake:

without

at drive

not at drive

Examples for torque support mounting

Fixed: stationary (screws, bolts fastening, ...)

Flexible: freely movable or possible slight movements (rubber bearing, ...)

Variable: movable in a defined direction (rail system, swinging support, ...)

This form is also available on our website at - www.tas-schaefer.de



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