

optional
stainless steel

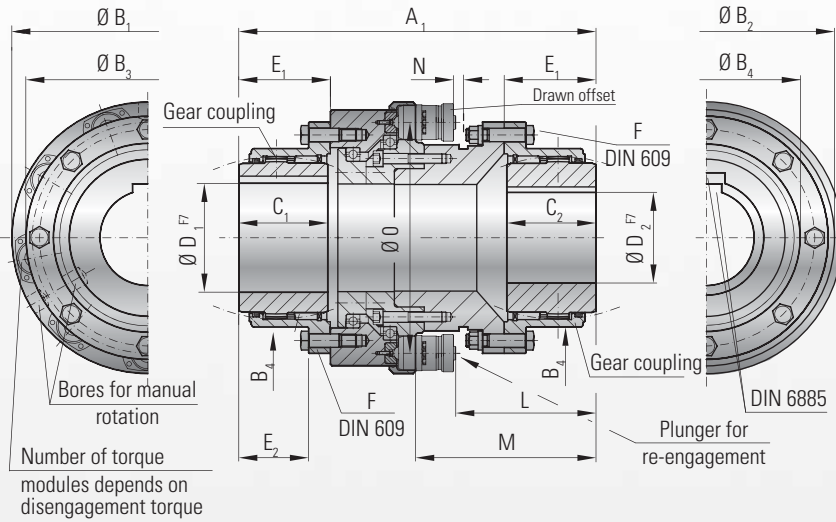
Full disengagement



MODEL ST 4

TORQUE LIMITER

with integral gear coupling



Material:

Torque limiter: High-strength, nitro-carburized steel

Gear coupling ends: Extremely wear resistant tooth geometry made from high-strength alloyed steel (surface nitro-carburized)

Design: with keyway or spline connection. Gear coupling for misalignment compensation. Torque modules evenly spaced around the circumference. Field adjustable within the selected range.

Temperature range: -30 to +120° C

Service life:

Infinite life and maintenance free when operated within the technical specifications.

Fit tolerance:

Tolerance between hub and shaft 0.02 – 0.07 mm

Balancing: Standard balancing G16 (higher speeds upon request)

MODEL ST 4		Series											
		10			25			60			160		
Adjustment range available from - to (KNm)		1-6	2-10	6-18	2-8	4-15	10-25	8-18	15-35	30-60	20-50	40-100	80-160
		3 x ST 15	6 x ST 15	9 x ST 15	3 x ST 15	6 x ST 15	9 x ST 15	3 x ST 30	6 x ST 30	9 x ST 30	3 x ST 70	6 x ST 70	9 x ST 70
Overall length (mm)	A ₁	377			430			615			850		
Flange OD (ST portion) (mm)	B ₁	270			318			459			648		
Mounting flange (ST portion) (mm)	B ₂	259			298			418			618		
Flange diameter (gear coupling) (mm)	B ₃	234			274			380			506		
Hub diameter (gear coupling) (mm)	B ₄	181			209			307			426		
Fit length/keyway length (mm)	C _{1/2}	90			105			150			220		
Bore diameter Ø – Ø F7 (mm)	D _{1/2}	40-112*			55-132*			90-198*			150-275*		
Length (mm)	E ₁	92.5			108			154			225		
Length (mm)	E ₂	70			79			116			196		
Screw DIN 609 12.9 (mm)	F	8 x M16			8 x M20			10 x M20			16 x M24		
Tightening torque (Nm)		280			650			650			1100		
Distance (mm)	L	146			172			237			320		
Distance (mm)	M	196			222			306			412		
Actuation path (mm)	N	4			4			7.5			10		
Bolt circle diameter ST (mm)	O	220			270			376			532		
Moment of inertia (approx.) D max. (10 ⁻³ kgm ²)		545			1298			7547			39742		
Speed max. (1/min.)		2700			2300			1800			1500		
Approx. weight at D max. (kg)		69			115			325			870		
Axial (mm)		4			5			6			8		
Lateral (mm)		6			7			8			10		
Angular (Degrees)		1.2			1.2			1.2			1.2		

* larger bore diameters upon request.

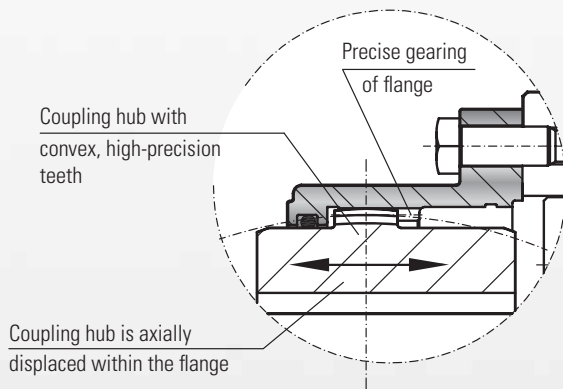
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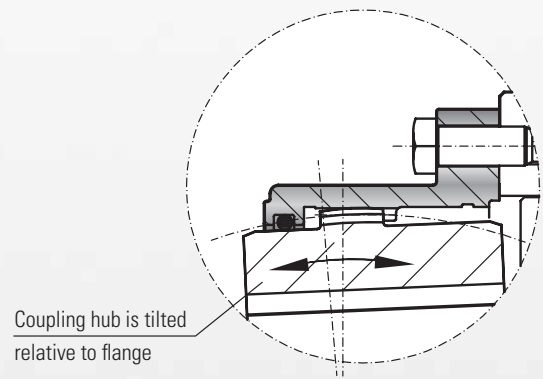
Function of the gear coupling

Shaft misalignment is compensated for through the high precision gearing of the coupling hub and flange. The gearing transmits the torque with minimal backlash and a high degree of torsional rigidity. The precise geometry of the gearing ensures the performance of the coupling.

The gearing compensates for lateral, angular, and axial misalignment.

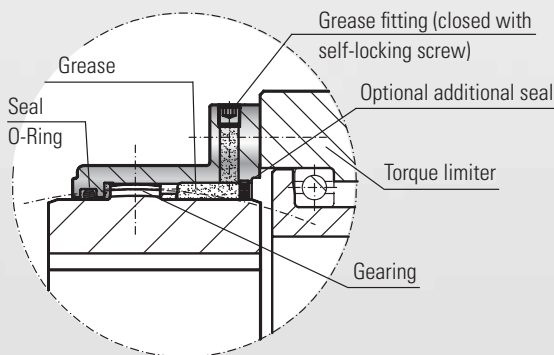


Axial misalignment



Angular and lateral misalignment

Maintenance and lubrication



Recommended lubricants

Note: The lubrication of the gearing is very important to the service life of the gear coupling.

An additional seal (optional) ensures the lubrication of the gearing over a long period of time.

Lubricant: High performance grease

Normal speed and operating load		High speed and operating load	
Castrol	Impervia MDX	Caltex	Coupling Grease
Esso	Fibrax 370	Klüber	Klüberplex GE 11-680
Klüber	Klüberplex GE 11-680	Mobil	Mobilgrease XTC
Mobil	Mobilux EPO	Shell	Albida GC1
Shell	Alvania grease EP R-O or ER 1	Texaco	Coupling Grease
Total	Specis EPG		

Ordering example

ST4 / 025 / 10-25 / 15 / 100 / 120 / xx

Model
Series
Adjustment range (KNm)
Disengagement torque (KNm)
Bore Ø D₁ F7
Bore Ø D₂ F7
Non-standard (e.g. stainless steel)

For easier handling, the coupling will be shipped unassembled.