

Made for Motion



DMC 1150 V







DECKEL MAHO

## PERFECT CONNECTION IN MACHINE TOOLS

Solutions for Positioning Units



# Meeting the conditions of highly dynamic drives – our drive components.

Products						
Applications	ROTEX®	ROTEX® GS	TOOLFLEX®	ROTEX® GS HP	RADEX®-NC	RADEX®-NC HT
Turning lathes	■	■	■		■	■
Milling machines	■	■	■	■	■	■
Grinding machines	■	■	■	■	■	■
Test benches		■		■	■	■
Main spindle drives		■		■		
Feed drives		■	■		■	■
Chain tool-changing systems					■	■
Automation technology		■	■		■	■
Positioning		■	■		■	■
Shaft encoders		■	■			



## ROTEX® Torsionally flexible jaw coupling

- Flexible, damping vibrations
- For torques up to 35,000 Nm
- Axial plug-in, easy assembly
- Fail-safe
- Maintenance-free, easy visual inspection
- Spider material T-PUR



## ROTEX® GS Backlash-free servo couplings

- Backlash-free jaw coupling damping torsional vibrations
- For torques from 0.2 to 5,850 Nm
- Axial plug-in, maintenance-free, fail-safe
- Electrically insulating
- Ambient temperatures from – 50 °C to + 150 °C possible (depending on spider)











## ROTEX® GS HP Backlash-free servo couplings

- For severely high speeds (up to a circumferential speed of 175 m/s)
- Backlash-free torque transmission
- Short dimensions
- High torque density
- Low noise by minimum air turbulence due to the closed design



## COUNTEX® Shaft encoder coupling

- Backlash-free, torsionally stiff shaft encoder coupling
- Maintenance-free
- Axial plug-in
- Electrically insulating
- Shaft diameter up to ø14 possible
- Ambient temperatures from – 40 °C to + 160 °C possible

							
COUNTEX®	KTR-STOP® NC	SYNTEX®-NC	SYNTEX®-NC with ROTEX®-GS	SYNTEX®-NC with TOOLFLEX®	Level and temperature switch	Plate heat exchangers	CLAMPEX®
	■	■	■	■	■	■	
	■	■	■	■	■	■	
					■	■	
					■		
	■	■	■	■			■
		■	■	■			■
■		■	■	■		■	■
■		■	■	■			■
■							



### RADEX®-NC Servo lamina couplings

- Backlash-free, torsionally stiff servo lamina coupling
- For torques from 2.5 to 300 Nm
- Maintenance-free
- Ambient temperatures up to + 200 °C possible
- Couplings for automation technology, power transmission, medical technology



### RADEX®-NC HT Servo lamina couplings

- Backlash-free, torsionally stiff, maintenance-free
- Ambient temperatures up to + 200 °C possible
- Hub material: aluminium
- Lamina material: steel
- Hub types: clamping ring hubs with block assembly and clamping hub (positive-locking and non-positive)



### TOOLFLEX® Metal bellow-type couplings

- Backlash-free, torsionally stiff metal bellow-type coupling
- For torques from 0.1 to 600 Nm
- Maintenance-free
- Not fail-safe
- Ambient temperatures up to 200 °C possible (depending on size)
- Coupling for power transmission, automation technology, medical technology, packaging technology, machine tools



### KTR-STOP® NC Hydraulic clamping systems

- Passive braking and clamping system with fail-safe function
- Absorption of axial loads
- Multifunctional use
- Usable as plug-in system
- For manifold applications (machine tools, general engineering, etc.)
- Hydraulically released system



## **SYNTEX®-NC** Backlash-free overload systems

- Overload system up to 550 Nm
- Backlash-free and torsionally stiff
- Low mass moment of inertia
- Short reaction times
- High power density
- Clamping ring type easy to assemble
- Available as a ratchet or synchronous type

SYNTEX®-NC is a backlash-free overload coupling with low weight and mass moment of inertia. Large bore diameters and a clamping ring design easy to assemble are further features of the highly compact overload coupling. In addition SYNTEX®-NC can be combined with backlash-free ROTEX® GS or torsionally stiff TOOLFLEX® S.



## **SYNTEX®-NC** with backlash-free ROTEX® GS



## **SYNTEX®-NC** with torsionally stiff TOOLFLEX® S



## **Tank including accessories and thermal management**

- Oil level sight glasses in different versions available from stock
- Level and temperature switch in different versions available from stock
- Simple temperature switches available from stock
- Plate heat exchangers and air coolers available from stock
- Tanks made of aluminium and steel available from stock



## **CLAMPEX®** Clamping elements

- Backlash-free shaft-hub-connection
- Transmittable torques from 6 Nm to 1,640,000 Nm
- Centering of shaft and hub via the clamping set
- No additional hub centering required
- Simultaneous transmission of torque and axial force

ROTEX® GS HP –  
backlash-free servo coupling

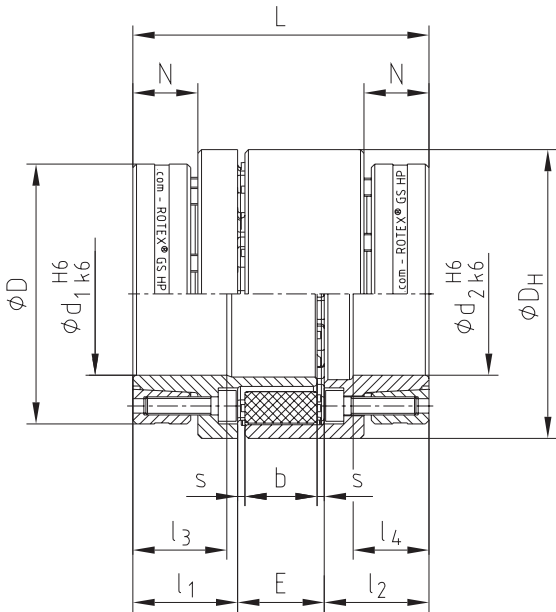
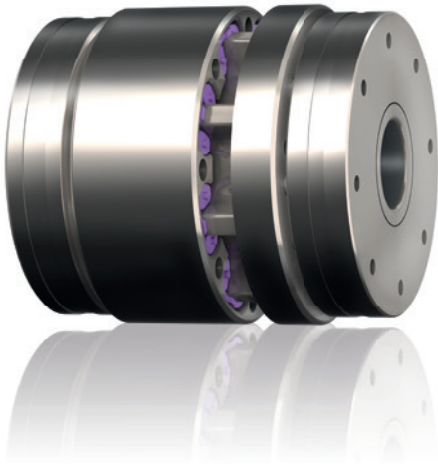
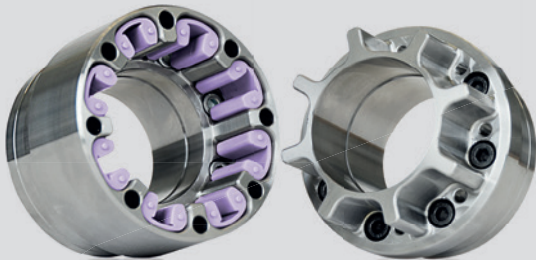
Highly accurate  
closed coupling system



ROTEX® GS HP is a backlash-free, axial plug-in, flexible jaw coupling developed for high-speed drives.

The servo coupling has a circular and closed shape reducing radial deformation of the hub geometry. Moreover, with this coupling generation a spider is done without, instead individual elastomers are incorporated between the cams. They are kept in position and shape by the coupling's closed structure – even with circumferential speeds up to 175 metres per second.

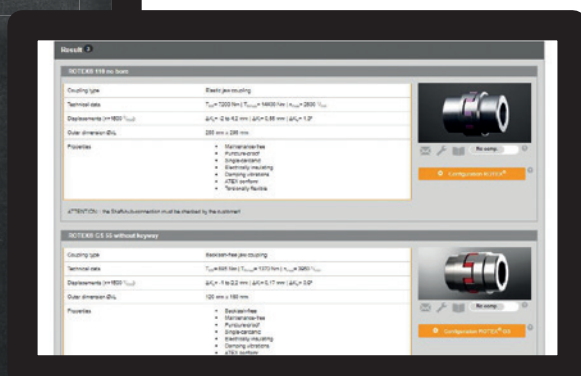
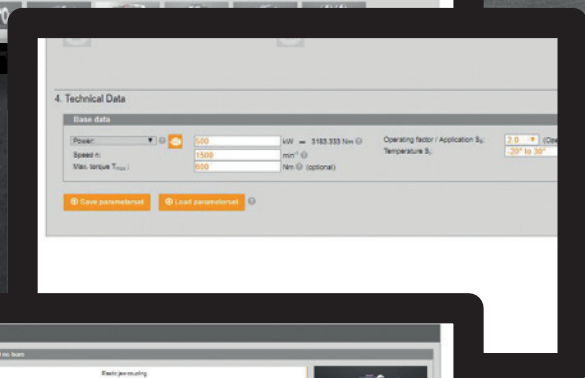
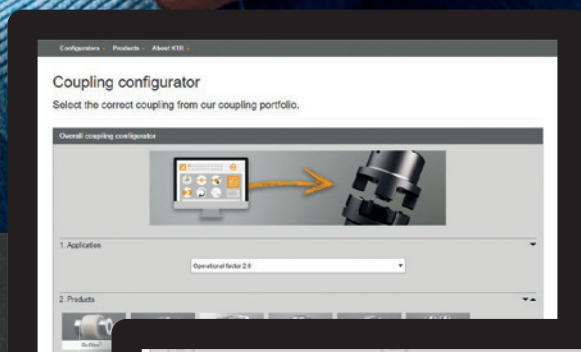
In addition the large number of elastomer segments transmitting the torque reduce the surface pressure on every single elastomer which allows to transmit high torques with a small outside diameter of the coupling.



ROTEX® GS HP - clamping ring hubs/clamping ring material steel																		
Size	Spider GS torque $T_{KN}$ [Nm] for 98 ShA-GS/52 ShD-GS		Max. speed [rpm]	Dimensions [mm]										Clamping screws DIN EN ISO 4762			Weight per hub with max. bore [kg]	Mass moment of inertia of coupling with max. bore [kgm²]
	$T_{KN}$	$T_{K max}$		Max. $d_1, d_2$	$D_H$	D	L	$l_1, l_2$	$l_3, l_4$	N	E	b	s	M	z = number	$T_A$ [Nm]		
24	100	200	59.000	25	55	48	73	25	18	15	24	20	2	5	5	7,7	0,74	0,000317
28	160	320	47.000	35	65	58	78	27	17	17	24	20	2	5	6	7,7	1,02	0,000653
38	400	800	39.000	45	80	76	82	29	18	18	24	20	2	5	8	7,7	1,54	0,001534
42	475	950	35.000	51	95	82	99	36	24	24	27	22	2,5	6	8	13	2,59	0,003441
48	550	1100	30.000	55	105	92	101	37	25	25	27	22	2,5	6	9	13	3,39	0,005481
55	725	1450	26.000	60	120	105	103	38	26	26	27	22	2,5	6	10	13	6,84	0,009172

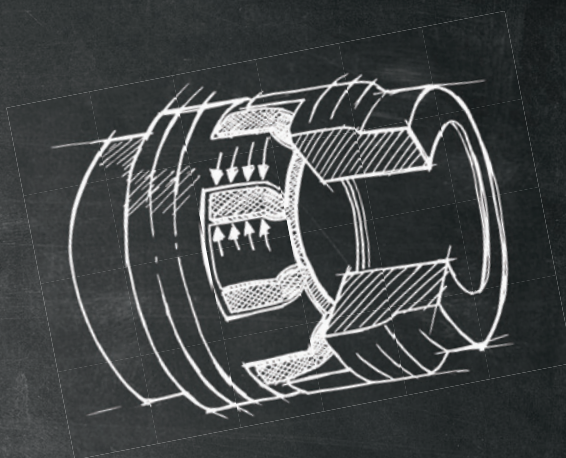


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