

# SP3

## WITH EXTERNAL CLAMPING RING

60 - 10,000 Nm

NEW



High speed

### PROPERTIES

#### FEATURES

- ▶ very high balancing quality due to symmetrical design
- ▶ high operating speeds
- ▶ extremely smooth running

#### MATERIAL

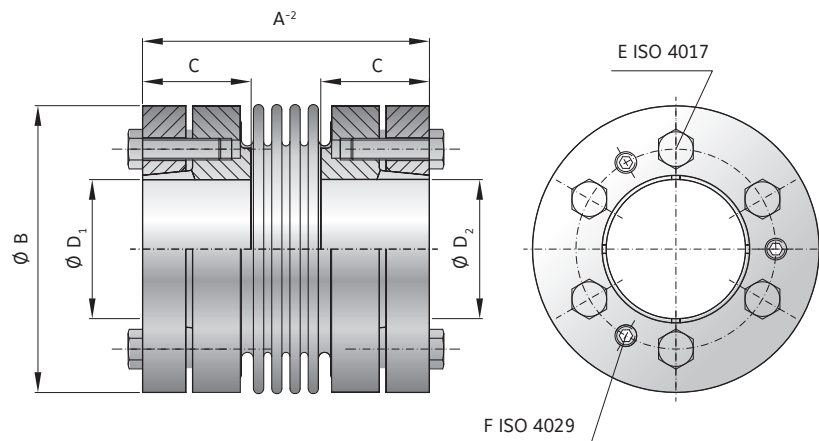
- ▶ **Bellows:** high grade stainless steel
- ▶ **Hubs and clamping ring:** steel

#### DESIGN

Two precision machined clamping ring hubs mounted concentrically to a flexible bellows. Brief overloads of up to 1.5x the rated torque are acceptable.

#### FIT CLEARANCE

Overall shaft / hub tolerance 0.01 - 0.025 mm



### MODELL SP3

SERIE		60	150	200	300	500	800	1500	4000	6000	10000						
Rated torque (Nm)	$T_{KN}$	60	150	200	300	500	800	1,500	4,000	6,000	10,000						
Overall length (mm)	$A^{-2}$	66   76	75   87	76   88	89   103	97   111	117	133	195	250	300						
Outside diameter (mm)	B	66	81	90	110	124	133	157	200	253	300						
Fit length (mm)	C	25	30	32	36	40	40	53	65	86	95						
Inside diameter possible from $\emptyset$ to $\emptyset$ H7 (mm)	$D_1/D_2$	14-32	18-35	20-42	22-55	25-60	32-60	42-75	50-100	60-140	70-180						
Fastening screw ISO 4017	E	6 x M5	6 x M6	6 x M6	6 x M8	6 x M8	6 x M10	6 x M10	6 x M12	6 x M16	8 x M16						
Tightening torque of the fastening screw (Nm)		8.5	14	14	30	35	50	60	120	260	295						
Jack screw ISO 4017	F	3 x M5	3 x M6	3 x M6	3 x M8	3 x M8	3 x M10	3 x M10	3 x M12	3 x M16	4 x M16						
Moment of inertia ( $10^{-3}$ kgm <sup>2</sup> )	$J_{ges}$	0.58   0.60	1.6   1.62	2.42   2.52	6.38   6.56	10.35   10.67	10.9	24.3	107.9	466.2	1187.4						
Approximate weight (kg)		0.9   0.92	1.7   1.8	2.1   2.2	3.52   3.6	4.73   4.83	4.9	7.9	19.0	45.0	80.5						
Torsional stiffness ( $10^3$ Nm/rad)	$C_t$	76   55	175   110	191   140	450   350	510   500	780	1,304	3,400	5,700	10,950						
Axial $\pm$ (mm)	max. values	1.5	2	2	3	2	3	2.5	3.5	2.5	3.5	3.5	3.5	3.5	3.0	3.0	
Lateral $\pm$ (mm)		0.2	0.25	0.2	0.25	0.25	0.3	0.25	0.3	0.3	0.35	0.35	0.35	0.35	0.4	0.4	0.4
Angular $\pm$ (degree)		1	1.5	1	1.5	1	1.5	1	1.5	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Axial spring stiffness (N/mm)	$C_a$	72	48	82	52	90	60	105	71	70	48	100	320	565	1,030	985	
Lateral spring stiffness (N/mm)	$C_l$	1,200	420	1,500	435	2,040	610	3750	1,050	2,500	840	2,000	3,600	6,070	19,200	21,800	
Speed standard (min <sup>-1</sup> )	n	22,500	16,500	16,500	13,500	12,500	10,000	8,000	6,000	5,000	3,000						

\* Recommended fit pairing H7 / k6; H6 / j5 (short spindle); starting at  $\emptyset$ 55 G7 / m6

ORDERING EXAMPLE	SP3	150	87	20	32	XX
Model	●					Special designation only (e.g. non-standard bore tolerance)
Size		●				
Overall length mm			●			
Bore D1 H7				●		
Bore D2 H7					●	

For custom features place an XX at the end of the part number and describe the special requirements (e.g. SP3 / 150 / 87 / 20 / 32 / XX)

BELLOWS COUPLINGS BK