

**ES2**

# PRESS FIT ELASTOMER WITH CLAMPING HUB

1 - 1,800 Nm



## ABOUT

### MATERIAL

- ▶ **Clutch system:** hardened steel
- ▶ **Hub D1:** up to size 450 high strength aluminum, size 800 and up steel
- ▶ **Hub D2:** up to size 60 high strength aluminum, size 150 and up steel
- ▶ **Elastomer insert:** wear resistant thermally stable TPU

### ORDERING EXAMPLE

see page 105

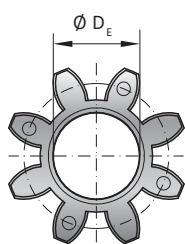
### DESIGN

Two clamping hubs with one clamping

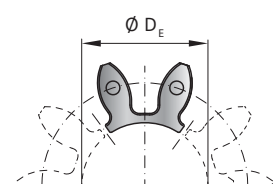
screw in each and concave driving jaws. Backlash free, vibration damping, electrically isolating elastomer insert press fit into the jaw sets. Clutch system: spring loaded ball-detent principle.

### AVAILABLE FUNCTION SYSTEMS

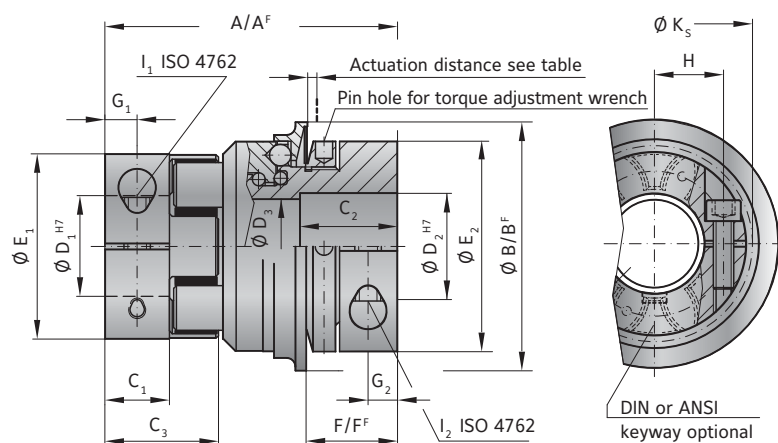
- ▶ **W** = Single position / automatic re-engagement (standard)
- ▶ **D** = Multi-position / automatic re-engagement
- ▶ **G** = Load holding / load blocking
- ▶ **F** = Full disengagement / manual re-engagement



Size 5-800 elastomer insert type A / B



Size 1500 includes 5x elastomer segments type A / B



## MODEL ES2

Size	5		10		20		60		150		300		450		800		1500		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Type (Elastomer insert)																			
Rated torque (Nm)	$T_{KN}$	9	12	12.5	16	17	21	60	75	160	200	325	405	530	660	950	1100	1950	2450
Max. torque* (Nm)	$T_{Kmax}$	18	24	25	32	34	42	120	150	320	400	650	810	1060	1350	1900	2150	3900	4900
Adjustment range possible from -to (Nm)	$T_{KN}$	1-3 or 3-6		2-6 or 4-12		10-25 or 20-40		10-30 or 25-80		20-70 or 45-150 or 80-180		100-200 or 150-240 or 200-320		80-200 or 200-350 or 300-500		400-650 or 500-800 or 600-900		600-850 or 700-1200 or 1000-1800	
Adjustment range ("F" Version) possible from -to (Nm)	$T_{KN}^F$	2.5 - 4.5		2-5 or 5-10		8-20 or 16-30		20-40 or 30-60		20-60 or 40-80 or 80-150		120-180 or 100-300 or 180-300		60-150 or 100-300 or 250-500		200-400 or 450-800		1000-1250 or 1250-1500	
Overall length (mm)	A	50		60		86		96		106		140		164		179		245	
Overall length ("F" Version) (mm)	A <sub>F</sub>	50		60		86		96		108		143		168		190		257	
Actuation ring Ø (mm)	B	35		45		65		73		92		120		135		152		174	
Outside diameter of actuation ring ("F" Version) (mm)	B <sub>F</sub>	42		51.5		70		83		98		132		155		177		187	
Clamping fit length (mm)	C <sub>1</sub>	8		10.3		17		20		21		31		34		46		88	
Fit length (mm)	C <sub>2</sub>	14		16		27		31		35		42		51		45		86	
Length of hub (mm)	C <sub>3</sub>	16.7		20.7		31		36		39		52		57		74		120	
Inside diameter from Ø to Ø H7 (mm)	D <sub>1</sub>	4 - 12.7		5 - 16		8 - 25		12 - 32		19 - 36		20 - 45		28 - 60		35 - 80		35 - 90	
Inside diameter from Ø to Ø H7 (mm)	D <sub>2</sub>	6 - 14		6 - 20		12 - 30		15 - 32		19 - 42		30 - 60		35 - 60		40 - 75		50 - 80	
Diameter Ø (mm)	D <sub>3</sub>	14.1		20.1		24.1		32.1		36.1		58.1		60.1		60.1		68.1	
Inside diameter (Elastomer insert) (mm)	D <sub>E</sub>	10.2		14.2		19.2		26.2		29.2		36.2		46.2		60.5		79	
Diameter of the hub (mm)	E <sub>1</sub>	25		32		42		56		66.5		82		102		136.5		160	
Diameter of the hub (mm)	E <sub>2</sub>	19		40		55		66		81		110		123		132		157	
Distance (mm)	F	15		17		24		28		31		35		45		50		63	
Distance ("F" Version) (mm)	F <sub>F</sub>	14		16		22		29		30		35		43		54		61	
Distance (mm)	G <sub>1</sub>	4		5		8.5		10		11		15		17.5		23		36	
Distance (mm)	G <sub>2</sub>	5		5		7.5		9.5		11		13		17		18		22.5	
Distance between centers (mm)	H <sub>1</sub>	8		10.5		15		21		24		29		38		50.5		2x 57	
Screws (ISO 4762)	I <sub>1</sub>	M3		M4		M5		M6		M8		M10		M12		M16		2x M16	
Tightening torque (Nm)	I <sub>1</sub>	2		4.5		8		15		35		70		120		290		300	
Distance between centers D2 side (mm)	H <sub>2</sub>	10		15		19		23		27		39		41		48		2x 55	
Screws (ISO 4762)	I <sub>2</sub>	M4		M4		M6		M8		M10		M12		M16		2x M16		2x M20	
Tightening torque (Nm)	I <sub>2</sub>	4		4.5		15		40		70		130		200		250		470	
Diameter with screwhead (mm)	K <sub>S</sub>	25		32		44.5		57		68		85		105		139		155	
Approx. weight (kg)	J	0.2		0.3		0.6		1.0		2.4		5.8		9.3		14.3		26	
Moment of inertia (10 <sup>-3</sup> kgm <sup>2</sup> )	J <sub>ges</sub>	0.02		0.06		0.25		0.7		2.3		11		22		33.5		185	
Actuation distance (mm)	L	0.8		1.2		1.5		1.7		1.9		2.2		2.2		2.2		3.0	

For information on shaft misalignment, torsional stiffness, and other details about the elastomer inserts see page 105. A<sub>F</sub>, B<sub>F</sub>, L<sub>F</sub> = Full disengagement/manual re-engagement version (F)  
\* Maximum transmittable torque of the clamping hub depends on the bore diameter see table on page 105.