

# PRESS FIT ELASTOMER WITH CLAMPING HUB

## 1 - 1,800 Nm

### PROPERTIES

#### 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

DETAILS FOR ELASTOMER INSERTS see page 72/73

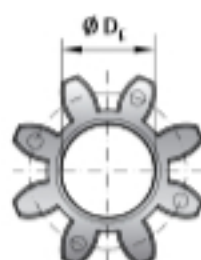
#### DESIGN

Two clamping hubs with one clamping

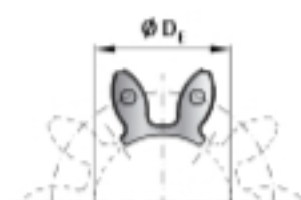
screw in each and concave driving jaws. Backlash free, vibration damping, electrically isolating elastomer insert press fit into the jaw sets. Clutch system: spring loaded ball-detent principle.

#### AVAILABLE FUNCTION SYSTEMS

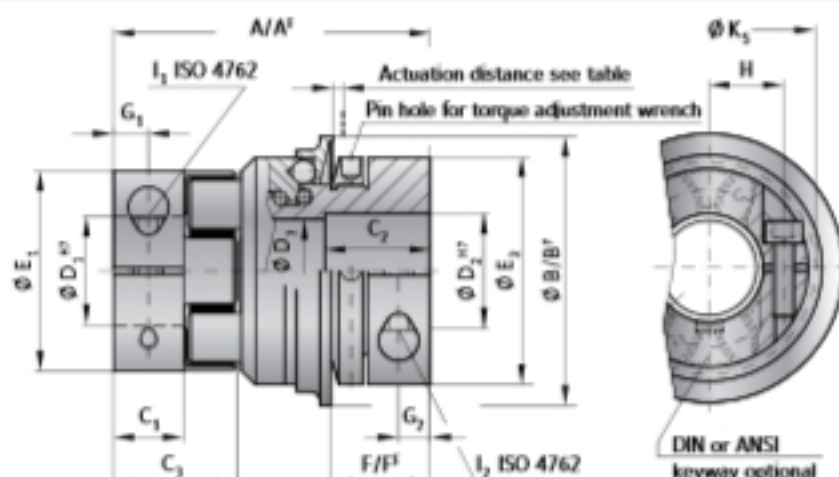
- ▶ **W** = Single position / automatic re-engagement (standard)
- ▶ **D** = Multi-position / automatic re-engagement
- ▶ **G** = Load holding / load blocking
- ▶ **F** = Full disengagement / manual re-engagement



Size 5-80 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)	$T_{rk}$	9	12	12.5	16	17	21	60	75	160	200	325	405	530	660	950	1100	1950	2450
Max. torque* (Nm)	$T_{lim}$	18	24	25	32	34	42	120	150	320	400	650	810	1060	1350	1900	2150	3900	4900
Adjustment range possible from -to (Nm)	$T_{sk}$	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)	$T_{sk}^f$	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 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)	$A_f$	50	60	86	96	108	143	168	190	257									
Actuation ring $\phi$ (mm)	B	35	45	65	73	92	120	135	152	174									
Outside diameter of actuation ring (*F* Version) (mm)	$B_f$	42	51.5	70	83	98	132	155	177	187									
Clamping fit length (mm)	$C_1$	8	10.3	17	20	21	31	34	46	67									
Fit length (mm)	$C_2$	14	16	27	31	35	42	51	45	16									
Length of hub (mm)	$C_3$	16.7	20.7	31	36	39	52	57	74	120									
Inside diameter from $\phi$ to $\phi$ H7 (mm)	$D_1$	4 - 12.7**	5 - 16**	8 - 25	12 - 32	19 - 36	20 - 45	28 - 60	35 - 80	35 - 90									
Inside diameter from $\phi$ to $\phi$ H7 (mm)	$D_2$	6 - 14**	6 - 16**	12 - 30	15 - 32	19 - 42	30 - 60	35 - 60	40 - 75	50 - 80									
Diameter $\phi$ (mm)	$D_3$	14.1	20.1	24.1	32.1	36.1	58.1	60.1	60.1	68.1									
Inside diameter (Elastomer insert) (mm)	$D_4$	10.2	14.2	19.2	26.2	29.2	36.2	46.2	60.5	79									
Diameter of the hub (mm)	$E_1$	25	32	42	56	66.5	82	102	136.5	160									
Diameter of the hub (mm)	$E_2$	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)	$F_c$	14	16	22	29	30	35	43	54	61									
Distance (mm)	$G_1$	4	5	8.5	10	11	15	17.5	23	36									
Distance (mm)	$G_2$	5	5	7.5	9.5	11	13	17	18	22.5									
Distance between centers (mm)	$H_1$	8	10.5	15	21	24	29	38	50.5	2x 57									
Screws (ISO 4762)	$I_1$	M3	M4	M5	M6	M8	M10	M12	M16	4x M16***									
Tightening torque (Nm)	$I_1$	2	4.5	8	15	35	70	120	290	300									
Distance between centers D2 side (mm)	$H_2$	10	15	19	23	27	39	41	48	2x 55									
Screws (ISO 4762)	$I_2$	M4	M4	M6	M8	M10	M12	M16	2x M16	2x M20									
Tightening torque (Nm)	$I_2$	4	4.5	15	40	70	130	200	250	470									
Diameter with screwhead (mm)	$K_5$	25	32	44.5	57	68	85	105	139	155									
Approx. weight (kg)	$J_{est}$	0.2	0.3	0.6	1.0	2.4	5.8	9.3	14.3	26									
Moment of inertia ( $10^{-3}$ kgm <sup>2</sup> )	$J_{est}$	0.02	0.06	0.25	0.7	2.3	11	22	33.5	185									
Actuation distance (mm)		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', B', L' = Full disengagement / manual re-engagement version (F)