

MK4

BLIND MATE WITH RADIAL SET SCREWS

0.5 - 10 Nm

PROPERTIES



FEATURES

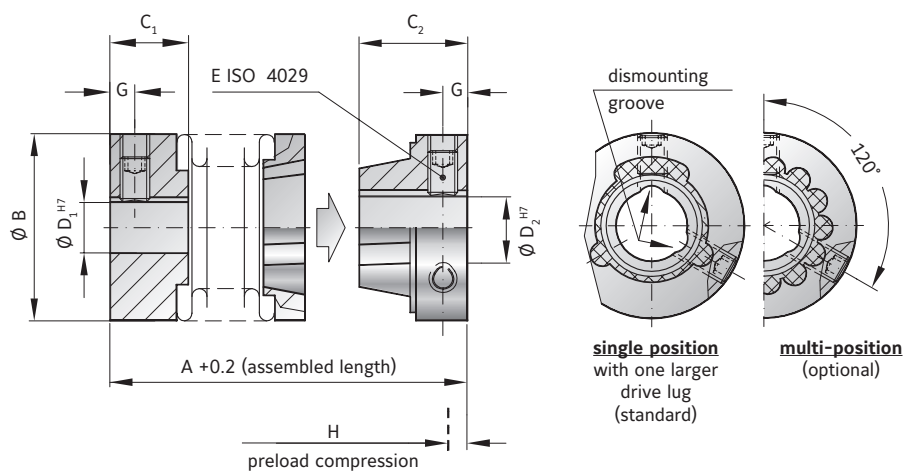
- ▶ easy installation and removal
- ▶ electrically and thermally isolating
- ▶ absolutely backlash free assembly

MATERIAL

- ▶ **Bellows:** high grade stainless steel
- ▶ **Hubs:** aluminium
- ▶ **Tapered male segment:** high strength plastic

DESIGN

Two hubs with radial set screws, one of which has a tapered male projection for blind mate connection. Speeds up to 20,000 rpm; over 20,000 with finely balanced version.



MODEL MK4

SIZE			5			15		20			45		100	
Rated torque	(Nm)	T_{KN}	0.5			1.5		2			4.5		10	
Overall length (inserted)	(mm)	$A^{+0.2}$	22	25	28	26	31	28	33	37	39	47	46	56
Outside diameter	(mm)	B	15			19		25			32		40	
Fit length	(mm)	C_1	6.5			7.5		11			13		15	
Fit length	(mm)	C_2	9			10		11			14		16	
Inside diameter possible from \emptyset to $\emptyset H7$	(mm)	D_1	3-9			3-12		3-16			6-22		6-28	
Inside diameter possible from \emptyset to $\emptyset H7$	(mm)	D_2	3-6.35			3-9		3-12.7			6-16		6-20	
Clamping screw ISO 4029		E	1xM3			2xM3		2xM4			2xM5		2xM6	
Tightening torque of the fastening screw	(Nm)	E	1.3			1.3		2.5			4		6	
Distance	(mm)	G	2			2		2.5			3.5		4	
Preload compression	(mm)	H	0.4			0.5		0.5			0.7		1	
Axial recovery force at max. preload compression	(N)		5	3	2	4	3	3	4	3	15	10	25	30
Moment of inertia	(gcm ²)	J_{ges}	2.0	2.2	2.5	5.5	6.0	21	23	25	80	85	200	210
Torsional stiffness	(Nm/rad)	C_T	280	210	170	750	700	1200	1300	1200	7000	5000	9050	8800
Axial*	(mm)	Max. values	0.4	0.5	0.6	0.5	0.7	0.5	0.6	0.7	0.7	1	1	1.2
Lateral	(mm)		0.15	0.2	0.25	0.15	0.2	0.15	0.2	0.25	0.2	0.25	0.2	0.3
Angular	(degree)		1	1.5	2	1.5	1.5	1.5	1.5	2	1.5	2	1.5	2

* in addition to maximum pretensioning

ORDERING EXAMPLE	MK4	20	37	8	9.53	XX
Model	●					
Size		●				
Overall length mm			●			
Bore D1 H7				●		
Bore D2 H7					●	

Special designation only (e.g. special bore tolerance).

For custom features place an XX at the end of the part number and describe the special requirements (e.g. MK4 / 20 / 37 / 8 / 9.53 / XX; XX=finely balanced for 25,000 rpm)

DESCRIPTION OF THE ELASTOMER INSERTS OF THE ECOLIGHT® SERIES




Type	Shore hardness	Color	Material	Relative damping (ψ)	Temperature range	Features
A	98 Sh A	red	TPU	0.4 - 0.5	-30°C to +100°C	high damping
B	64 Sh D	green	TPU	0.3 - 0.45	-30°C to +100°C	high torsional stiffness
C	80 Sh A	yellow	TPU	0.3 - 0.4	-30°C to +100°C	very high damping

FUNCTION

The equalizing element of the TX coupling is the elastomer insert. It absorbs vibration while transmitting torque. The elastomer defines the characteristics of the entire drive system.

Due to a special convex tooth geometry of the elastomer insert, greater shaft misalignment can be compensated for. Changing the Shore hardness of the elastomer allows the ECOLIGHT coupling to be optimized for ideal torsional characteristics.

BORE DIAMETER DEPENDS ON HUB STRUCTURE

Size	2	10	20	60	150	300
 Structure I from - to	solid hub no special structure	6 - 12.9	10 - 14.9	16 - 20.9	19 - 26.9	20 - 28.9
 Structure II from - to	solid hub no special structure	13 - 16	15 - 19.9	21 - 25.9	27 - 33.9	29 - 38.9
 Structure III from - to	solid hub no special structure		20 - 24	26 - 30	34 - 38	39 - 45

ORDERING EXAMPLE	TX1	60	A	20	24	XX
Model	●					Special designation only (e.g. special bore / keyway dimensions).
Size		●				
Elastomer insert type			●			
Bore D1 H8				●		
Bore D2 H8					●	
For custom features place an XX at the end of the part number and describe the special requirements (e.g. TX1 / 60 / A / 20 / 24 / XX; XX="D" holes per drawing)						