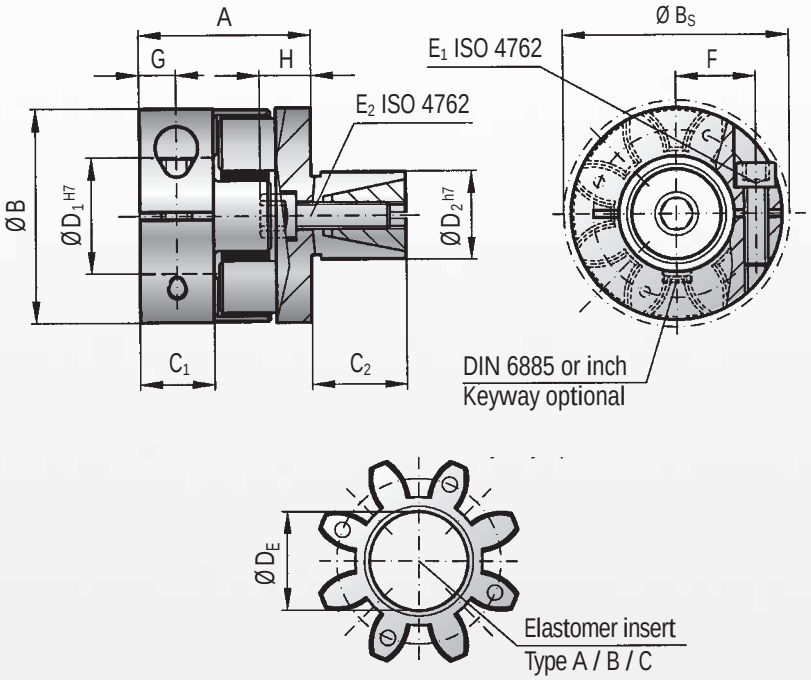
optional stainless steel

MODEL **EK7**

BACKLASH FREE ELASTOMER COUPLINGS

with expanding shaft



Properties:
- short compact design
- easy mounting
- concentrically machined hubs
- axial installation with expanding shaft
- backlash free
- electrically isolating

Material:
Clamping hub: up to series 450 high strength aluminum, from series 800 and up steel
Expanding shaft & cone: steel
Elastomer insert: precision molded, wear resistant, and thermally stable polymer

Design:
Two coupling hubs are concentrically machined with curved jaws
One side with clamping hub and screw per ISO 4762
One side with expanding shaft and internally tapered clamping element

Speeds: See table below
*Please contact R+W
ISO 2.5 balance grade available

Tolerance:
Overall clearance between shaft and hub 0.01 to 0.05 mm
Suggested bore tolerance for expanding shaft ISO H7

Model EK7			Series																								
			5			10			20			60			150			300			450			800		
Type (Elastomer insert)			A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Rated torque	(Nm)	T_{KN}	9	12	2	12,5	16	4	17	21	6	60	75	20	160	200	42	325	405	84	530	660	95	950	1100	240
Max. torque**	(Nm)	T_{Kmax}	18	24	4	25	32	6	34	42	12	120	150	35	320	400	85	650	810	170	1060	1350	190	1900	2150	400
Overall length	(mm)	A	22			28			40			46			51			68			76			94		
Outside diameter	(mm)	B	25			32			42			56			66.5			82			102			136.5		
Outside diameter with screw head	(mm)	B_S	25			32			44.5			57			68			85			105			139		
Mounting length	(mm)	C_1	8			10.3			17			20			21			31			34			46		
Mounting length	(mm)	C_2	12			20			25			27			32			45			55			60		
Inside diameter range H7	(mm)	D_1	4 - 12.7			5 - 16			8 - 25			12 - 32			19 - 36			20 - 45			28 - 60			35 - 80		
Outside diameter range h7	(mm)	D_2	10 - 16			13 - 25			14 - 30			23 - 38			26 - 42			38 - 60			42 - 70			42 - 80		
Inside diameter of elastomer	(mm)	D_E	10.2			14.2			19.2			26.2			29.2			36.2			46.2			60.5		
Clamping screw (ISO 4762)		E_1	M3			M4			M5			M6			M8			M10			M12			M16		
Tightening torque	(Nm)		2			4			8			15			35			70			120			290		
Clamping screw (ISO 4762)		E_2	M4			M5			M6			M8			M10			M12			M16			M16		
Tightening torque	(Nm)		4			9			12			32			60			110			240			300		
Distance between centers	(mm)	F	8			10.5			15.5			21			24			29			38			50.5		
Distance	(mm)	G	4			5			8,5			10			11			15			17.5			23		
Length	(mm)	H	7			7			10			11			16			20			27			27		
Moment of inertia D_1	(10^{-3} kgm^2)	J_1	0.002			0.003			0.01			0.04			0.08			0.3			0.66			8		
Moment of inertia D_2	(10^{-3} kgm^2)	J_2	0.002			0.01			0.04			0.1			0.2			1			2.6			9		
Approx. weight	(kg)		0.04			0.05			0.12			0.3			0.5			0.9			1.5			7.6		
Speed standard	(min^{-1})		15,000			13,000			12,500			11,000			10,000			9,000			8,000			4,000		
*Speed balanced	($10^3 min^{-1}$)		57	65	43	53	63	40	45	60	35	31	31	25	22	26	18	22	26	16	16	17	12	13	13	8

Information about static and dynamic torsional stiffness as well as max. possible misalignment see page 5

1 Nm = 8.85 in lbs

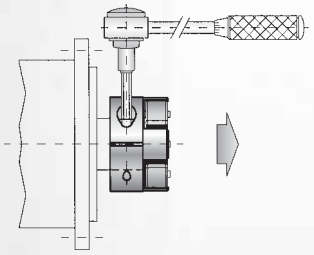
** Maximum transmittable torque depends on the bore diameter (overall clearance between shaft and hub 0.01 to 0.05 mm; shaft oiled)

optional stainless steel

TECHNICAL INFORMATION EK7

Mounting of the clamping hub:
Slide the coupling hub onto the shaft to the correct axial position. Tighten the clamping screw to the specified tightening torque E_1.

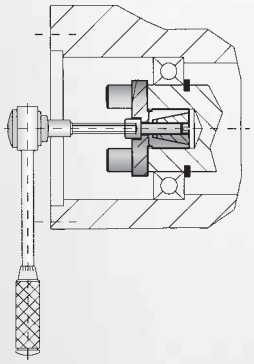
See page 10/collumn E_1.



Dismounting of the clamping hub:
Loosen the clamping screw E_1.

Mounting of the expanding shaft:
Push the shaft hub into the bore, at the right axial position thighten the mounting screw to the specified tightening torque E_2.

See page 10/collumn E_2

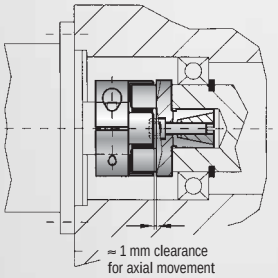


Dismounting of the expanding shaft:
Loosen the fastening screw E_2 a few turns.

Apply axial pressure to the screw head, sliding the cone out of its sleeve.

The shaft is now loose and can be dismounted.

Advantage:
Lateral access holes for screw tightening are not necessary with EK7 couplings. The unique assembly screw design (shown at right) allows for easy axial mounting and dismounting of the coupling hub.



CAUTION:
The elastomer insert must have clearance to slide axially for the compensation of axial misalignment.

Maximum transmittable torque of the clamping hub depends on the bore diameter

Series	Ø 3	Ø 4	Ø 5	Ø 8	Ø 16	Ø 19	Ø 25	Ø 30	Ø 32	Ø 35	Ø 45	Ø 50	Ø 55	Ø 60	Ø 65	Ø 70	Ø 75	Ø 80
5		1,5	2	8														
10			4	12	32													
20				20	35	45	60											
60					50	80	100	110	120									
150						120	160	180	200	220								
300						200	230	300	350	380	420							
450								420	480	510	600	660	750	850				
800										700	750	800	835	865	900	925	950	1000

Higher torque through additional keyway possible.

Ordering example

EK7 / 20 / A / 24 / 19.05 / XX

- Model
- Series
- Type Elastomer insert
- Bore Ø D1 H7
- Shaft Ø D2 h7
- Non standard e.g. finely balanced

All data is subject to change without notice.