Backlash-free Servo-insert Coupling Assembly Instructions

Installation

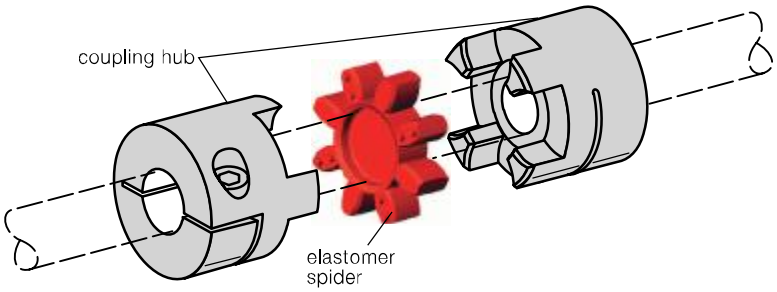
Clean and degrease both shaft surface and coupling hub bores. Re-check shaft diameters and coupling bores for proper tolerances.

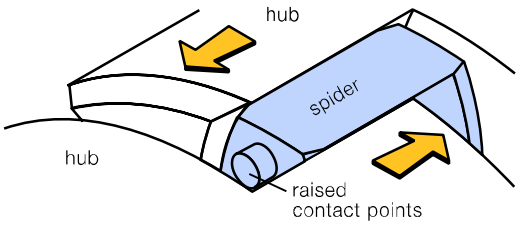
Slide a coupling hub onto each shaft and proceed to torque the screws of one clamp ring or shrink disc after checking axial dimensions. Refer to the technical data to assure correct screw tightening torque.

Firmly press elastomer spider into one of the two hubs. Because of the interference fit, the force necessary to install the spider may be quite high, therefore a PU tolerant grease such as Vaseline may be applied to ease assembly. The edges of the spider and the jaws of the coupling hubs are both chamfered to ease assembly.

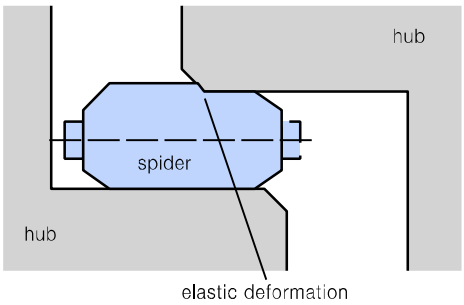
Raised contact points visible on the front and back side of the elastomer spider help maintain proper spacing between the two hubs assuring electrical isolation and full angular misalignment capabilities.

Carefully push the coupling hubs together while maintaining the necessary spacing, tighten the screws of the remaining clamp ring or shrink disc to the recommended torque. The function of the gap is to prevent the coupling hubs from restraining theaxial movement of the spider. This ensures optimum life of the coupling and spider.

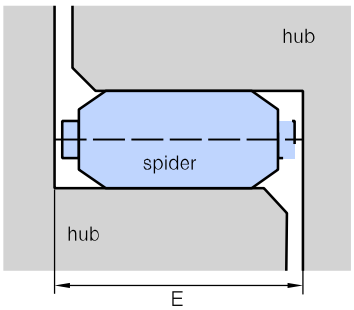




While mounting



Backlash free after final assembly preloaded



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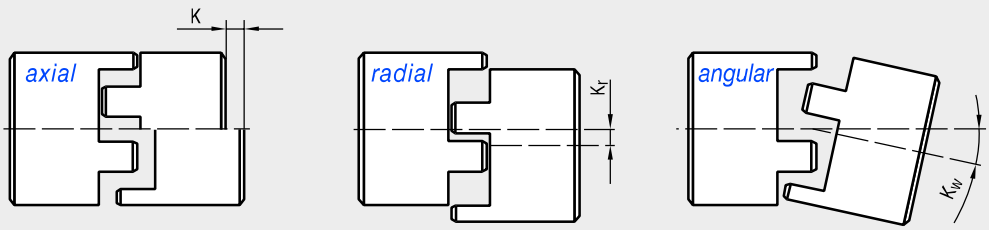
Types of misalignment



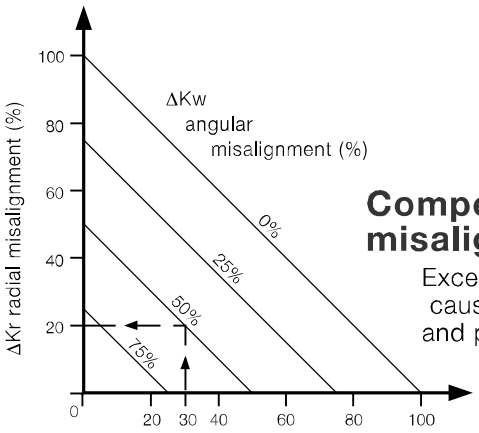
Alignment

The picture above shows the (3) types of misalignment. The mounted coupling needs to be aligned. The more accurate the initial alignment, the better the coupling can absorb additional misalignment during operation, thereby assuring optimum lifetime and quiet running conditions. If all (3) types of misalignment occur simultaneously, each type must not reach the maximum allowable value.
The combined impact of the actual misalignment types, expressed as a percentage of the maximum allowable value, must not exceed 100%. The diagram below shows the combined misalignment.

Removal

Remove the locking screws, e.g. on the motor. Pull the drive unit, including the jaw coupling apart. Inspect the spider for wear and if necessary, insert a new spider or one with a different shore hardness.
After loosening the keyless clamp ring or shrink disc, the hubs can be removed.

Please contact us for detailed installation and removal instructions.



Compensation of misalignment

Excessive misalignment will cause accelerated wear and premature failure.

Misalignments

Typ	elast. Spider	Shore-scale	Misalignment type mm axial ΔKa[1)]	mm radial ΔKr	scale angular ΔKw
5	80	A	+0,4 -0,2	0,12	1,1°
	92	A		0,06	1,0°
	98	A		0,04	0,9°
7	80	A	+0,6 -0,3	0,15	1,1°
	92	A		0,10	1,0°
	98	A		0,06	0,9°
	64	D		0,04	0,8°
9	80	A	+0,8 -0,4	0,19	1,1°
	92	A		0,13	1,0°
	98	A		0,08	0,9°
	64	D		0,05	0,8°
14	80	A	+1,0 -0,5	0,21	1,1°
	92	A		0,15	1,0°
	98	A		0,09	0,9°
	64	D		0,06	0,8°
19	80	A	+1,2 -0,5	0,15	1,1°
	92	A		0,10	1,0°
	98	A		0,06	0,9°
	64	D		0,04	0,8°
24	92	A	+1,4 -0,5	0,14	1,0°
	98	A		0,10	0,9°
	64	D		0,07	0,8°
28	92	A	+1,5 -0,7	0,15	1,0°
	98	A		0,11	0,9°
	64	D		0,08	0,8°
38	92	A	+1,8 -0,7	0,17	1,0°
	98	A		0,12	0,9°
	64	D		0,09	0,8°
42	92	A	+2,0 -1,0	0,19	1,0°
	98	A		0,14	0,9°
	64	D		0,10	0,8°
48	92	A	+2,1 -1,0	0,23	1,0°
	98	A		0,16	0,9°
	64	D		0,11	0,8°

[1)] The Ka values need to be added to the dimension L of the coupling selected