

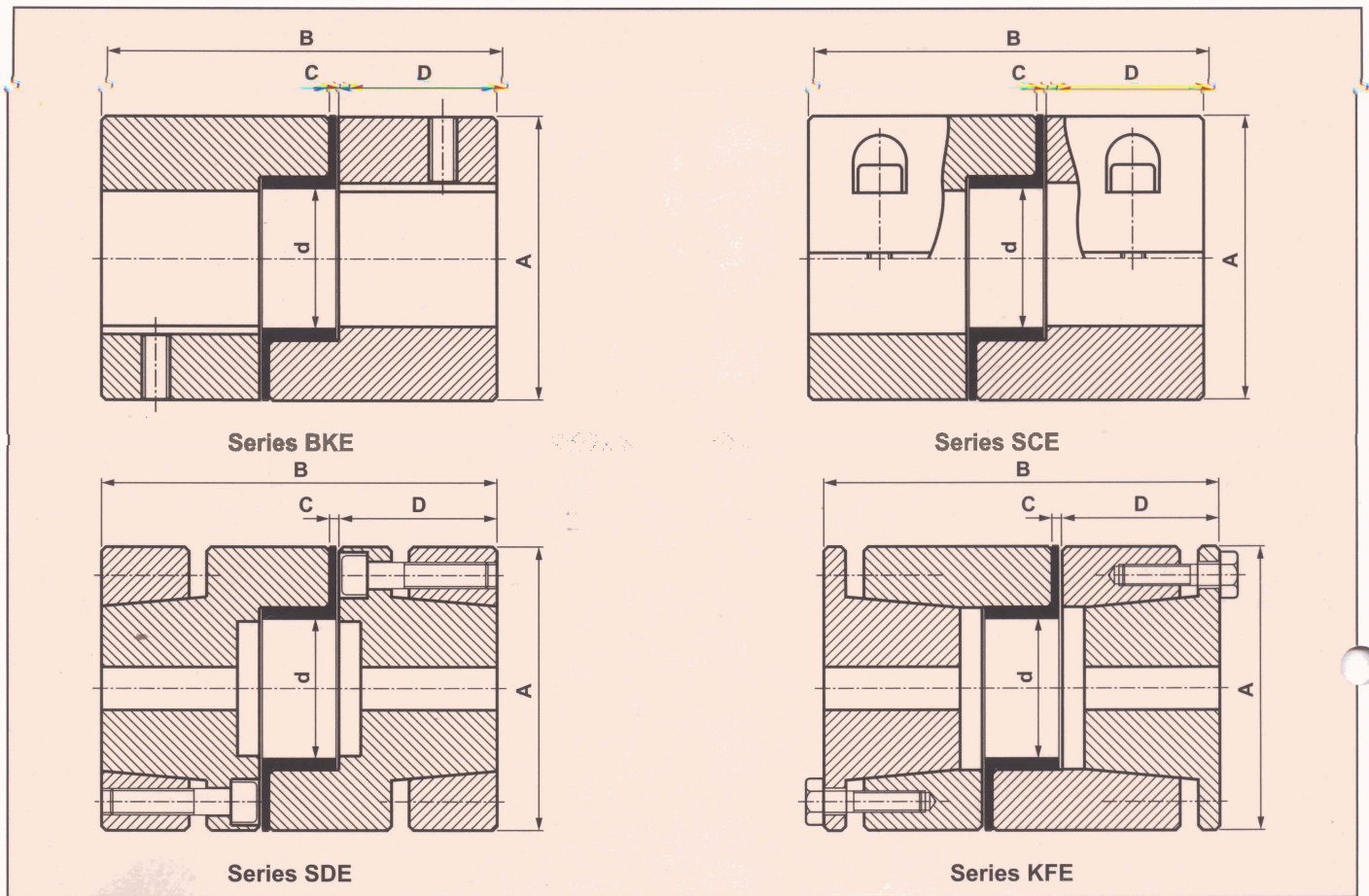
servostar™

Backlash-free Elastomeric Coupling



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Servostar couplings are precision backlash-free couplings for synchronous positioning applications. The servostar couplings can damp harmful vibrations to provide backlash-free torque transmission with a high torsional stiffness. A variety of high performance polyurethane star inserts with varying damping characteristics are available to cover a full range of resonance frequency problems.

The servostar coupling is available in four basic designs :

Series BKE

Couplings with Bore, Keyway / set screws.

Series SCE

Couplings with Split Clamping Hubs

Series SDE

Couplings with Shrink Discs

Series KFE

Couplings with Kwik-Fix conical bushings

Ordering Code

servostar SCE - 101-30 / 20H7/ 25H7

Series _____
 Size _____
 Bore Dia - 1 _____
 Bore Dia - 2 _____

Size	Nominal Torque (Nm)				Max. Speed (rpm)		Bore (mm)		Dimensions (mm)					Mass per Hub at max. bore (kg)			Moment of Inertia per Hub at max. bore (x 10 ⁻⁶ kgm ²)			Screw Tightening Torque (Nm)	
	Yellow (80 A)	Red (90 A)	Blue (95 A)	Green (50 D)	BKE SCE	SDE KFE	Min.	Max.	A	D	C	B	d	BKE SCE	SDE	KFE	BKE SCE	SDE	KFE	SCE	SDE KFE
65-12	4	6	8	-	12000	15000	6	12	27	19	1	50	-	0.026	-	-	3	-	-	1.5	-
85-16	8	12	16	-	10000	14000	10	16	36	26.5	2	66	-	0.066	-	-	13	-	-	4	-
91-22	-	15	22	30	9000	13000	10	22	44.5	26.5	2	66	-	0.093	0.133	0.229	29	42	70	10	1.5
101-30	-	40	60	70	7000	12000	10	30	54	32.5	2	78	20	0.130	0.211	0.367	65	102	177	10	6
105-36	-	90	150	180	6000	10000	10	36	65	36	2	90	25	0.250	0.414	0.944	173	293	601	25	10
115-45	-	165	280	330	5000	8500	15	45	85	46	3	114	30	0.574	0.936	1.432	666	1106	1669	25	10
120-50	-	225	300	450	4000	7000	20	50	96	50	3	125	30	2.134	1.830	1.973	2781	2676	2921	50	25
160-60	-	300	400	600	3600	5000	20	60	115	57	3	139	40	3.492	3.006	3.206	7375	6290	6789	120	70
175-65	-	400	550	750	3600	5000	20	65	127	65	3	155	47	4.835	4.182	4.467	12360	11000	11460	120	70

Series BKE / SCE - Sizes 120-50 to 175-60 only in steel.

Series KFE - Standard coupling hubs in CI with Kwik-Fix Bushings in Steel. Complete couplings in steel also available on request.

Series SDE - Sizes 91-22 to 115-45 - hubs in aluminium alloy and shrink discs in steel. Sizes 120-50 to 175-60 - complete couplings in steel.

Size	Insert		Shaft Misalignment		
	Colour Code	Shore Hardness	Radial (mm)	Axial (mm)	Angular (deg)
65-12	Yellow	80A	0.20		1.0
	Red	90A	0.16	0.6	0.9
	Blue	95A	0.10		0.8
85-16	Yellow	80A	0.20		1.0
	Red	90A	0.16	1.0	0.9
	Blue	95A	0.10		0.8
91-22	Red	90A	0.16		1.0
	Blue	95A	0.10	1.2	0.9
	Green	50D	0.07		0.8
101-30	Red	90A	0.17		1.0
	Blue	95A	0.12	1.4	0.9
	Green	50D	0.09		0.8
105-36	Red	90A	0.18		1.0
	Blue	95A	0.14	1.5	0.9
	Green	50D	0.10		0.8
115-45	Red	90A	0.20		1.0
	Blue	95A	0.15	1.6	0.9
	Green	50D	0.11		0.8
120-50	Red	90A	0.22		1.0
	Blue	95A	0.16	1.7	0.9
	Green	50D	0.13		0.8
160-60	Red	90A	0.25		1.0
	Blue	95A	0.20	1.8	0.9
	Green	50D	0.14		0.8
175-65	Red	90A	0.32		1.2
	Blue	95A	0.24	1.8	1.0
	Green	50D	0.17		0.9

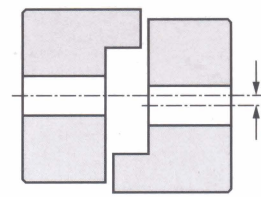
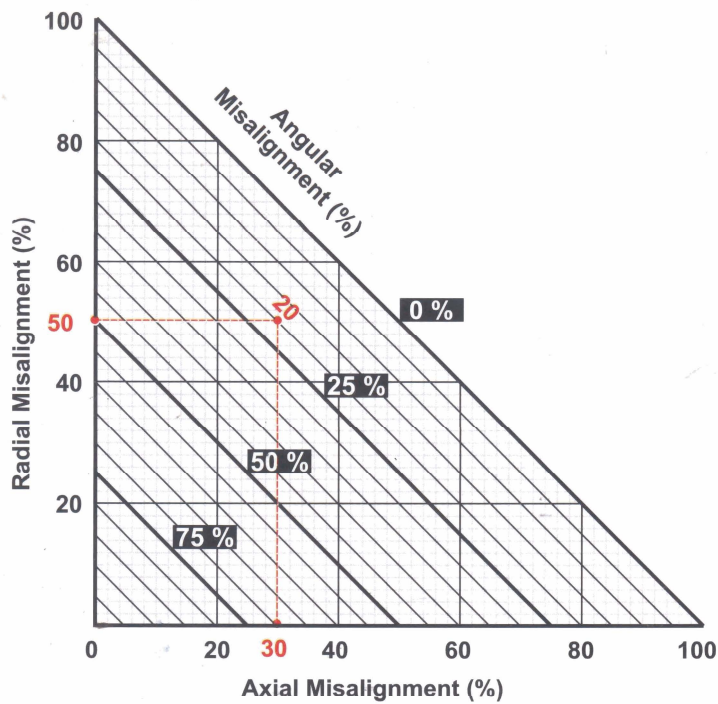


Coupling Bores and corresponding torque (Nm) transmission capability of split clamping (Series SCE) hubs.

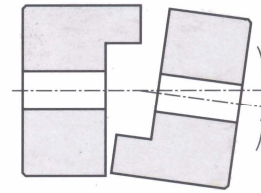
Size	φ6	φ8	φ9	φ10	φ12	φ14	φ15	φ16	φ19	φ20	φ22	φ24	φ25	φ28	φ30	φ32	φ35	φ38	φ40	φ42	φ45	φ48	φ50	φ55	φ60	φ65
65-12	2.4	2.8	3.5	4	4.7																					
85-16			8	9	11	14	16	18																		
91-22				20	25	32	33	35	40	46	50															
101-30							32	35	40	42	48	52	55	60												
105-36									75	80	90	98	100	115	120	130	140									
115-45										80	90	98	100	115	120	130	140	160	165	175	190					
120-50													100	115	120	130	140	160	165	175	190	200	215			
160-60																	240	260	275	290	300	330	340	350	375	400
175-65																		275	290	300	340	340	350	375	400	450

Coupling Bores & corresponding torque (Nm) transmission capability of shrink disc (Series SDE) / kwik-fix (Series KFE) hubs

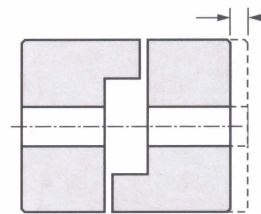
Size	φ10	φ12	φ14	φ15	φ16	φ19	φ20	φ22	φ24	φ25	φ28	φ30	φ32	φ35	φ38	φ40	φ42	φ45	φ48	φ50	φ55	φ60	φ65	
91-22	35	40	50	60	65	75	80	85																
101-30				45	52	70	75	80	100	120	130													
105-36					120	130	145	165	185	200	215	250	280	302	332									
115-45							180	200	226	240	280	318	360	395	450	485	520	570						
120-50										260	295	350	400	470	550	660	700	740	790					
160-60														370	400	500	650	750	850	900				
175-65														400	500	650	750	800	900	950	980	1000	1150	



Radial Misalignment



Angular Misalignment



Axial Misalignment

Servostar backlash-free couplings are capable of absorbing the static and dynamic misalignments which inevitably occur between two nominally in-line rotating shafts. Accurate initial alignment will enhance the service life of the coupling. The maximum permissible misalignments must not exceed the independent value of each type of misalignment indicated in this catalog. In case a combination of different misalignments occur simultaneously, then, the sum of the actual misalignments as a percentage of the maximum value must not exceed 100%.

Installation Instructions :

Ensure that the shaft ends and the bores in the hubs are clean and free from any trace of oil or grease. Cleaning the bore and the shaft with trichloroethylene will improve the frictional locking of the shaft and the bore.

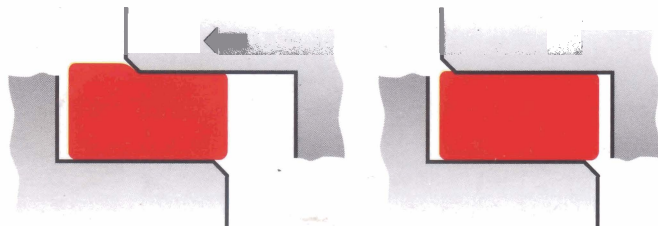
Mount the coupling hubs on the shafts. If keys are used, insert the keys.

For series **SCE**, tighten the socket screw of the clamping hub to the tightening torque shown in the technical data.

For series **SDE**, tighten the shrink disc bolts uniformly in diametrically opposite sequence to the tightening torque shown in the technical data.

For series **KFE**, tighten the hexagon bolts in diametrically opposite sequence in several steps to the tightening torque shown in the technical data.

To dismantle **SDE/KFE** hubs, slacken all the screws and insert them into the ejector holes and tighten the screws uniformly until the system dismantles.



Pretensioning during Assembly

Put the star insert into one of the hubs. Push the other coupling half together by applying an axial force so that the star insert is pressed to create a pretension. The star insert element ensures a backlash-free torque transmission. To ease the assembly, petroleum jelly may be applied on the star insert.

Maintain the gap dimension "C" between the hubs, as shown in the technical data.

We reserve the right to make alterations due to technical developments and change in designs.



National Engineering Company

J - 225, MIDC, Bhosari, Pune 411026 (India)
 Tel.: 91-20-27474529 Fax : 91-20-27470229
 Email : nenco@vsnl.com
 www.nenco.org

