

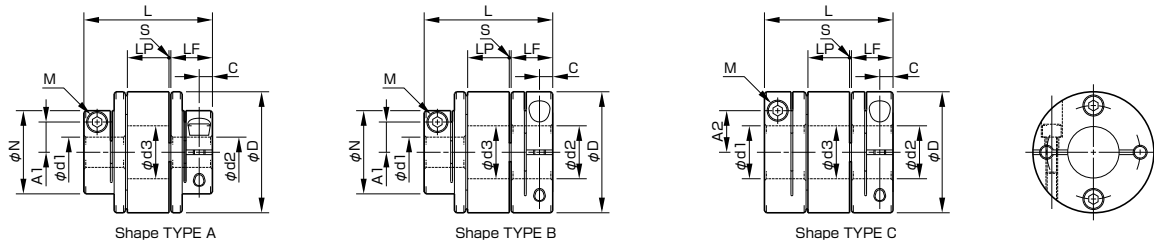
# SERVOFLEX SFR – Datasheet

## Specifications

Model	Shape type	Rated torque [N·m]	Misalignment			Max. rotation speed [min <sup>-1</sup> ]	Torsional stiffness [N·m/rad]	Axial stiffness [N/mm]	Moment of inertia [kg·m <sup>2</sup> ]	Mass [kg]
			Parallel [mm]	Angular [°]	Axial [mm]					
SFR-030SA1	A	5	0.2	1.5	±0.3	10000	396	413	6.62 × 10 <sup>-6</sup>	0.048
	B								8.65 × 10 <sup>-6</sup>	0.054
	C								10.76 × 10 <sup>-6</sup>	0.063
SFR-035SA1	C	10	0.2	1.5	±0.3	10000	607	416	26.98 × 10 <sup>-6</sup>	0.105
	A								25.37 × 10 <sup>-6</sup>	0.103
	B								31.96 × 10 <sup>-6</sup>	0.114
SFR-040SA1	B	12	0.2	1.5	±0.3	10000	1128	605	38.64 × 10 <sup>-6</sup>	0.128
	C								31.96 × 10 <sup>-6</sup>	0.114
	A								85.36 × 10 <sup>-6</sup>	0.216
SFR-050SA1	B	25	0.2	1.5	±0.3	10000	2775	658	105.75 × 10 <sup>-6</sup>	0.234
	C								128.36 × 10 <sup>-6</sup>	0.263
	A								85.36 × 10 <sup>-6</sup>	0.216

- Check the Standard Bore Diameters as there may be limitations on the rated torque caused by the holding power of the coupling shaft section.
- Higher rpm possible with balancing.
- Torsional stiffness values are analysis values for the element taken at a temperature of 20 °C.
- The moment of inertia and mass are specified for the maximum bore diameter.

## Dimensions



Model	Shape type	d1 [mm]		d2 [mm]		D [mm]	N [mm]	L [mm]	LF [mm]	LP [mm]	S [mm]	A1 [mm]	A2 [mm]	C [mm]	d3 [mm]	M Quantity - Nominal dia.	Tightening torque [N·m]
		Min.	Max.	Min.	Max.												
SFR-030SA1	A	5	10	5	10	34	21.6	37.8	12.4	11	1	8	—	3.75	15.5	1-M3	1.5 ~ 1.9
	B	5	10	Over 10	16		21.6					12.5					
	C	Over 10	15	Over 10	16		—					—					
SFR-035SA1	C	6	18	6	19	39	—	48	15.5	15	1	—	14	4.5	18.5	1-M4	1.5 ~ 1.9
	A	8	15	8	15	44	29.6	48	15.5	15	1	11	—	4.5	23.5	1-M4	3.4 ~ 4.1
	B	8	15	Over 15	24		29.6					17					
C	Over 15	22	Over 15	24	—		17										
SFR-050SA1	A	8	19	8	19	56	38	59.8	20.5	17.4	0.7	14.5	—	6	29.5	1-M5	7.0. ~ 8.5
	B	8	19	Over 19	30		38					22					
	C	Over 19	28	Over 19	30		—					22					

• The d3 dimension is the inner diameter of the element. For d2 dimension exceeding this value, shaft can be inserted only up to LF dimension to the d2 side hub.



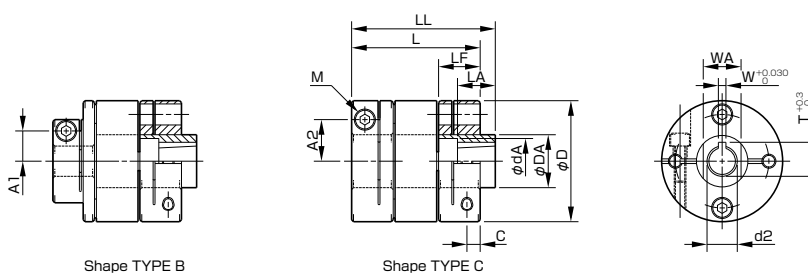
# Options Tapered shaft supported

## Specifications

Model	Shape type	Rated torque [N·m]	Misalignment			Max. rotation speed [min <sup>-1</sup> ]	Torsional stiffness [N·m/rad]	Axial stiffness [N/mm]	Moment of inertia [kg·m <sup>2</sup> ]	Mass [kg]
			Parallel [mm]	Angular [°]	Axial [mm]					
SFR-040SA1-□ B-11BC	B C	12	0.15	1.5	± 0.3	10000	1125	605	39.95 × 10 <sup>-6</sup> 42.24 × 10 <sup>-6</sup>	0.162 0.174
SFR-050SA1-□ B-11BC	B C	25	0.15	1.5	± 0.3	10000	2775	658	111.04 × 10 <sup>-6</sup> 133.26 × 10 <sup>-6</sup>	0.297 0.325
SFR-050SA1-□ B-14BC	B C	25	0.15	1.5	± 0.3	10000	2775	658	118.21 × 10 <sup>-6</sup> 141.08 × 10 <sup>-6</sup>	0.328 0.369
SFR-050SA1-□ B-16BC	B C	25	0.15	1.5	± 0.3	10000	2775	658	124.92 × 10 <sup>-6</sup> 147.53 × 10 <sup>-6</sup>	0.366 0.395

- Check the Standard Bore Diameters as there may be limitations on the rated torque caused by the holding power of the coupling shaft section.
- Higher rpm possible with balancing.
- Torsional stiffness values are analysis values for the element taken at a temperature of 20 °C.
- The moment of inertia and mass are specified for the maximum bore diameter.

## Dimensions



Model	d1 [mm]	W [mm]	T [mm]	WA [mm]	LA [mm]	dA [mm]	DA [mm]	LL [mm]	D [mm]	L [mm]	LF [mm]	C [mm]	A1 [mm]	A2 [mm]	M Qty - Nominal dia.
SFR-040SA1-□ B-11BC	11	4	12.2	18	16	17	22	58	44	48	15.5	4.5	11	17	1-M4
SFR-050SA1-□ B-11BC	11	4	12.2	18	16	17	22	64.8	56	59.8	20.5	6	14.5	22	1-M5
SFR-050SA1-□ B-14BC	14	4	15.1	24	19	22	28	69.8	56	59.8	20.5	6	14.5	22	1-M5
SFR-050SA1-□ B-16BC	16	5	17.3	24	29	26	30	79.8	56	59.8	20.5	6	14.5	22	1-M5

• For other dimensions, see dimensions for SFR MODEL

## Standard Bore Dimensions

Nominal bore diameter		Standard (option) bore diameter, d1/d2 [mm] and related rated torque [N·m]																	
		8	9	9.525	10	11	12	13	14	15	16	17	18	19	20	22	25	28	30
Shaft tolerance	h7 (h6-g6) B	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	j6 (Option) J													○	○	○	○	○	○
	k6 (Option) K	○	○						○	○				○	○	○			
SFR-040SA1-□ B-11BC		9	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SFR-050SA1-□ B-11BC		18	20	22	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFR-050SA1-□ B-14BC		18	20	22	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFR-050SA1-□ B-16BC		18	20	22	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- The shaft tolerance for standard bore diameter is h7 (h6 or g6): designation B.
- Shaft tolerances j6/k6: designations J/K are optional, and are only supported for bore diameters marked with ○.
- Bore diameters marked with ● or numbers are supported as the standard bore diameters. Please contact Miki Pulley regarding special arrangements which may be possible for other bore diameters.
- Bore diameters whose fields contain numbers are restricted in their rated torque by the holding power of the shaft connection component because the bore diameter is small. The numbers indicate the rated torque [N·m].

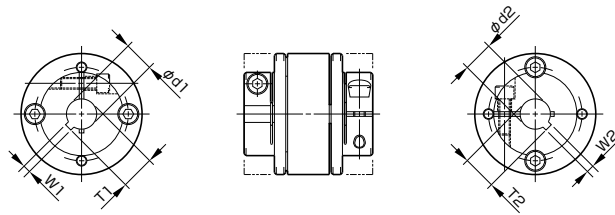
How to Place an Order

SFR-050SA1-12B-14BC

Size \_\_\_\_\_ [d2]BC  
 Bore diameter d1 \_\_\_\_\_ BC: Taper adapter \*Select d2 for BC.  
 Supported shaft tolerance  
 B: h7 (h6,g6) , (Option K: k6 , J: j6)

# Options Keyway

## Keyway Standards



H9 keyway										JS9 keyway																									
Nominal bore dia. Shaft diameter	Shaft tolerance			Bore dia. d1 · d2 [mm]	Keyway width W1 · W2 [mm]	Keyway height T1 · T2 [mm]	Nominal bore dia. Shaft diameter	Shaft tolerance			Bore dia. d1 · d2 [mm]	Keyway width W1 · W2 [mm]	Keyway height T1 · T2 [mm]	Nominal bore dia. Shaft diameter	Shaft tolerance			Bore dia. d1 · d2 [mm]	Keyway width W1 · W2 [mm]	Keyway height T1 · T2 [mm]															
	h7	j6	k6					h7	j6	k6					h7	j6	k6																		
8	BH	—	KH	8	3	<sup>+0.025</sup> <sub>0</sub>	9.4	<sup>+0.3</sup> <sub>0</sub>	17	BH	—	—	17	5	<sup>+0.030</sup> <sub>0</sub>	19.3	<sup>+0.3</sup> <sub>0</sub>	8	BJ	—	KJ	8	3	±0.0125	9.4	<sup>+0.3</sup> <sub>0</sub>	17	BJ	—	—	17	5	±0.0150	19.3	<sup>+0.3</sup> <sub>0</sub>
9	BH	—	KH	9	3	<sup>+0.025</sup> <sub>0</sub>	10.4	<sup>+0.3</sup> <sub>0</sub>	18	BH	—	—	18	6	<sup>+0.030</sup> <sub>0</sub>	20.8	<sup>+0.3</sup> <sub>0</sub>	9	BJ	—	KJ	9	3	±0.0125	10.4	<sup>+0.3</sup> <sub>0</sub>	18	BJ	—	—	18	6	±0.0150	20.8	<sup>+0.3</sup> <sub>0</sub>
10	BH	—	—	10	3	<sup>+0.025</sup> <sub>0</sub>	11.4	<sup>+0.3</sup> <sub>0</sub>	19	BH	JH	KH	19	6	<sup>+0.030</sup> <sub>0</sub>	21.8	<sup>+0.3</sup> <sub>0</sub>	10	BJ	—	—	10	3	±0.0125	11.4	<sup>+0.3</sup> <sub>0</sub>	19	BJ	JJ	KJ	19	6	±0.0150	21.8	<sup>+0.3</sup> <sub>0</sub>
11	BH	—	—	11	4	<sup>+0.030</sup> <sub>0</sub>	12.8	<sup>+0.3</sup> <sub>0</sub>	20	BH	—	—	20	6	<sup>+0.030</sup> <sub>0</sub>	22.8	<sup>+0.3</sup> <sub>0</sub>	11	BJ	—	—	11	4	±0.0150	12.8	<sup>+0.3</sup> <sub>0</sub>	20	BJ	—	—	20	6	±0.0150	22.8	<sup>+0.3</sup> <sub>0</sub>
12	BH	—	—	12	4	<sup>+0.030</sup> <sub>0</sub>	13.8	<sup>+0.3</sup> <sub>0</sub>	22	BH	JH	KH	22	6	<sup>+0.030</sup> <sub>0</sub>	24.8	<sup>+0.3</sup> <sub>0</sub>	12	BJ	—	—	12	4	±0.0150	13.8	<sup>+0.3</sup> <sub>0</sub>	22	BJ	JJ	KJ	22	6	±0.0150	24.8	<sup>+0.3</sup> <sub>0</sub>
13	BH	—	—	13	5	<sup>+0.030</sup> <sub>0</sub>	15.3	<sup>+0.3</sup> <sub>0</sub>	24	BH	JH	KH	24	8	<sup>+0.036</sup> <sub>0</sub>	27.3	<sup>+0.3</sup> <sub>0</sub>	13	BJ	—	—	13	5	±0.0150	15.3	<sup>+0.3</sup> <sub>0</sub>	24	BJ	JJ	KJ	24	8	±0.0180	27.3	<sup>+0.3</sup> <sub>0</sub>
14	BH	—	KH	14	5	<sup>+0.030</sup> <sub>0</sub>	16.3	<sup>+0.3</sup> <sub>0</sub>	25	BH	—	—	25	8	<sup>+0.036</sup> <sub>0</sub>	28.3	<sup>+0.3</sup> <sub>0</sub>	14	BJ	—	KJ	14	5	±0.0150	16.3	<sup>+0.3</sup> <sub>0</sub>	25	BJ	—	—	25	8	±0.0180	28.3	<sup>+0.3</sup> <sub>0</sub>
15	BH	—	—	15	5	<sup>+0.030</sup> <sub>0</sub>	17.3	<sup>+0.3</sup> <sub>0</sub>	28	BH	JH	—	28	8	<sup>+0.036</sup> <sub>0</sub>	31.3	<sup>+0.3</sup> <sub>0</sub>	15	BJ	—	—	15	5	±0.0150	17.3	<sup>+0.3</sup> <sub>0</sub>	28	BJ	JJ	—	28	8	±0.0180	31.3	<sup>+0.3</sup> <sub>0</sub>
16	BH	—	KH	16	5	<sup>+0.030</sup> <sub>0</sub>	18.3	<sup>+0.3</sup> <sub>0</sub>	30	BH	—	—	30	8	<sup>+0.036</sup> <sub>0</sub>	33.3	<sup>+0.3</sup> <sub>0</sub>	16	BJ	—	KJ	16	5	±0.0150	18.3	<sup>+0.3</sup> <sub>0</sub>	30	BJ	—	—	30	8	±0.0180	33.3	<sup>+0.3</sup> <sub>0</sub>

• We can also handle standards not listed above. Please contact Miki Pulley.

## Standard Bore Diameter

		Standard (option) bore diameter, d1/d2 [mm] and related rated torque [N·m]																		
Nominal bore diameter		8	9	9.525	10	11	12	13	14	15	16	17	18	19	20	22	24	25	28	30
Shaft tolerance	h7 (h6 · g6)	B	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	j6 (Option)	J												○		○	○		○	
	k6 (Option)	K	○	○						○		○			○		○	○		
SFR-030SA1	d1	●	●	●	●	●	●	●	●	●										
	d2	●	●	●	●	●	●	●	●	●	●									
SFR-035SA1	d1	●	●	●	●	●	●	●	●	●	●	●	●							
	d2	●	●	●	●	●	●	●	●	●	●	●	●	●						
SFR-040SA1	d1	9	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	d2	9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SFR-050SA1	d1	18	20	22	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	d2	18	20	22	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

• The shaft tolerance for standard bore diameter is h7 (h6 or g6): designation B.

• Shaft tolerances j6/k6: designations J/K are optional, and are only supported for bore diameters marked with ○.

• Bore diameters marked with ● or numbers are supported as the standard bore diameters. Please contact Miki Pulley regarding special arrangements which may be possible for other bore diameters.

• Bore diameters whose fields contain numbers are restricted in their rated torque by the holding power of the shaft connection component because the bore diameter is small. The numbers indicate the rated torque [N·m].

### How to Place an Order

SFR-050SA1-12BH-14KJ

Size ———  
 Bore diameter d1 (Small diameter) ———  
 Affixing method ———  
 BH: h7(h6,g6) shaft + H9 keyway

Affixing method ———  
 KJ: k6 shaft + JS9 keyway  
 Bore diameter d2 (Large diameter) ———

\* For nominal bore diameter, select d1 (small diameter) -d2 (large diameter) in that order.

\* If d1=d2 (same diameters), select B, J, and K in that order.

B · J · K · BH · BJ · JH · JJ · KH · KJ