

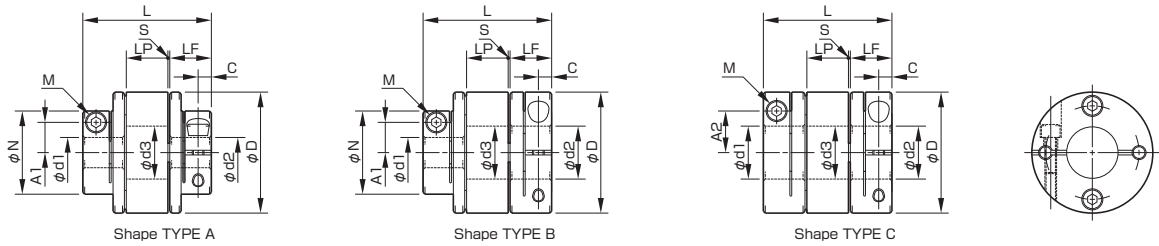
SFR MODEL

Specifications

Model	Shape type	Rated torque [N·m]	Misalignment			Max. rotation speed [min ⁻¹]	Torsional stiffness [N·m/rad]	Axial stiffness [N/mm]	Moment of inertia [kg·m ²]	Mass [kg]
			Parallel [mm]	Angular [°]	Axial [mm]					
SFR-005SA1	C	0.6	0.15	1.5	±0.2	10000	30	241	0.32 × 10 ⁻⁶	0.009
SFR-010SA1	C	1	0.15	1.5	±0.2	10000	47	245	0.73 × 10 ⁻⁶	0.014
SFR-020SA1	C	2	0.15	1.5	±0.2	10000	178	392	3.11 × 10 ⁻⁶	0.032
SFR-025SA1	C	4	0.2	1.5	±0.3	10000	254	430	4.88 × 10 ⁻⁶	0.038
SFR-030SA1	A	5	0.2	1.5	±0.3	10000	396	413	6.62 × 10 ⁻⁶	0.048
	B	5	0.2	1.5	±0.3	10000	396	413	8.65 × 10 ⁻⁶	0.054
SFR-035SA1	C	5	0.2	1.5	±0.3	10000	396	413	10.76 × 10 ⁻⁶	0.063
	C	10	0.2	1.5	±0.3	10000	607	416	26.98 × 10 ⁻⁶	0.105
SFR-040SA1	A	12	0.2	1.5	±0.3	10000	1128	605	25.37 × 10 ⁻⁶	0.103
	B	12	0.2	1.5	±0.3	10000	1128	605	31.96 × 10 ⁻⁶	0.114
SFR-050SA1	C	12	0.2	1.5	±0.3	10000	1128	605	38.64 × 10 ⁻⁶	0.128
	A	25	0.2	1.5	±0.3	10000	2775	658	85.36 × 10 ⁻⁶	0.216
SFR-050SA1	B	25	0.2	1.5	±0.3	10000	2775	658	105.75 × 10 ⁻⁶	0.234
	C	25	0.2	1.5	±0.3	10000	2775	658	128.36 × 10 ⁻⁶	0.263

* Types A / B / C are automatically specified according to the combination of bore diameters you select, and cannot be specified by the customer. * Check the standard bore diameter list as rated torque may be restricted by the holding power of the shaft connection component. * Max. rotation speed does not take into account dynamic balance. * Torsional stiffness values are analysis values for the element taken at a temperature of 20°C. * The moment of inertia and mass are measured 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-005SA1	C	3	5	3	6	16	-	22.7	7.85	6.4	0.3	-	4.8	2.5	5.5	1-M2	0.4 ~ 0.5
SFR-010SA1	C	3	7	3	8	19	-	25.4	9.15	6.6	0.25	-	5.8(6)	3.15	7.5	1-M2.5(M2)	1.0 ~ 1.1 (0.4 ~ 0.5)
SFR-020SA1	C	4	10	4	11	26	-	31.8	10.75	8.9	0.7	-	9.5	3.3	10.5	1-M2.5	1.0 ~ 1.1
SFR-025SA1	C	5	13	5	14	29	-	32.3	10.75	9.4	0.7	-	11	3.3	13.5	1-M2.5	1.0 ~ 1.1
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	34	21.6	37.8	12.4	11	1	8	12.5	3.75	15.5	1-M3	1.5 ~ 1.9
SFR-035SA1	C	Over 10	15	Over 10	16	34	-	37.8	12.4	11	1	-	12.5	3.75	15.5	1-M3	1.5 ~ 1.9
SFR-035SA1	C	6	18	6	19	39	-	48	15.5	15	1	-	14	4.5	18.5	1-M4	3.4 ~ 4.1
SFR-040SA1	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	44	29.6	48	15.5	15	1	11	17	4.5	23.5	1-M4	3.4 ~ 4.1
SFR-040SA1	C	Over 15	22	Over 15	24	44	-	48	15.5	15	1	-	17	4.5	23.5	1-M4	3.4 ~ 4.1
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	56	38	59.8	20.5	17.4	0.7	14.5	22	6	29.5	1-M5	7.0 ~ 8.5
	C	Over 19	28	Over 19	30	56	-	59.8	20.5	17.4	0.7	-	22	6	29.5	1-M5	7.0 ~ 8.5

* Types A / B / C are automatically specified according to the combination of bore diameters you select, and cannot be specified by the customer. * 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. * The nominal diameter of the clamping bolt M is equal to the quantity minus the nominal diameter of the screw threads, where the quantity is for a hub on one side. * The figures in parentheses () for the SFR-010 are the values when d2 is ø8 mm.



Standard bore diameters

Nominal bore diameter		Standard (option) bore diameter, d1/d2 [mm] and restricted rated torque [N·m]																											
		3	4	5	6	6.35	7	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-005SA1	d1	●	●	●																									
	d2	●	●	●	●																								
SFR-010SA1	d1	●	●	●	●	●	●																						
	d2	●	●	●	●	●	●	●																					
SFR-020SA1	d1		●	●	●	●	●	●	●	●	●																		
	d2		●	●	●	●	●	●	●	●	●	●																	
SFR-025SA1	d1			2.1	●	●	●	●	●	●	●	●	●	●															
	d2			2.1	●	●	●	●	●	●	●	●	●	●	●														
SFR-030SA1	d1			2.8	3.4	●	●	●	●	●	●	●	●	●	●	●													
	d2			2.8	3.4	●	●	●	●	●	●	●	●	●	●	●	●												
SFR-035SA1	d1				5	5	6.6	●	●	●	●	●	●	●	●	●	●	●	●	●									
	d2				5	5	6.6	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
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.
- * 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-030SA1-10B-14K

Size
Bore diameter d1
(Small diameter)
Bore diameter d2
(Large diameter)

Supported shaft tolerance
B : h7(h6,g6)Shaft (Option J : j6Shaft , K : k6Shaft)
* 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.

Option Tapered shaft supported

Allows coupling via a clamp hub when a taper adapter is mounted on the tapered shaft of a servo motor.

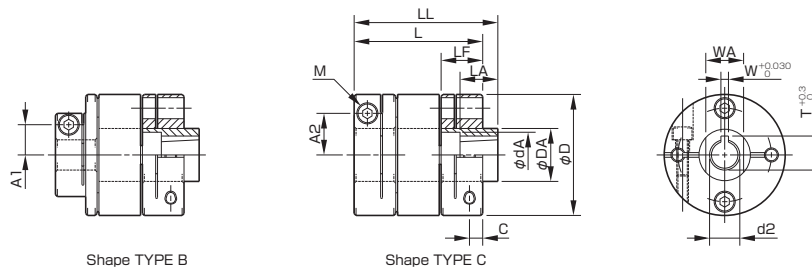


Specifications

Model	Shape type	Rated torque [N · m]	Misalignment			Max. rotation speed [min ⁻¹]	Torsional stiffness [N · m/rad]	Axial stiffness [N/mm]	Moment of inertia [kg · m ²]	Mass [kg]
			Parallel [mm]	Angular [°]	Axial [mm]					
SFR-040SA1-□B-11BC	B	12	0.2	1.5	±0.3	10000	1128	605	35.95 × 10 ⁻⁶	0.162
	C	12	0.2	1.5	±0.3	10000	1128	605	42.24 × 10 ⁻⁶	0.174
SFR-050SA1-□B-11BC	B	25	0.2	1.5	±0.3	10000	2775	658	111.04 × 10 ⁻⁶	0.297
	C	25	0.2	1.5	±0.3	10000	2775	658	133.26 × 10 ⁻⁶	0.325
SFR-050SA1-□B-14BC	B	25	0.2	1.5	±0.3	10000	2775	658	118.21 × 10 ⁻⁶	0.328
	C	25	0.2	1.5	±0.3	10000	2775	658	141.08 × 10 ⁻⁶	0.369
SFR-050SA1-□B-16BC	B	25	0.2	1.5	±0.3	10000	2775	658	124.92 × 10 ⁻⁶	0.366
	C	25	0.2	1.5	±0.3	10000	2775	658	147.53 × 10 ⁻⁶	0.395

* Types B / C are automatically specified according to the bore diameter you select, and cannot be specified by the customer. * Check the "Standard bore diameters" as rated torque may be restricted by the holding power of the shaft connection component. * Max. rotation speed does not take into account dynamic balance. * Torsional stiffness values given are measured values for the element alone. * The moment of inertia and mass are measured for the maximum bore diameter.

Dimensions



Model	d2 [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 Quantity - 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

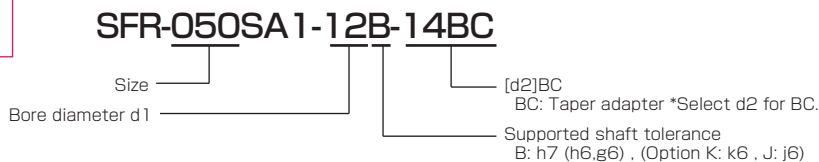
* For other dimensions, see dimensions for SFR MODEL

Standard bore diameter

Standard (option) bore diameter, d1 [mm] and restricted 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Shaft tolerance j6 (option)	J												○		○	○		○	
Shaft tolerance 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. * 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

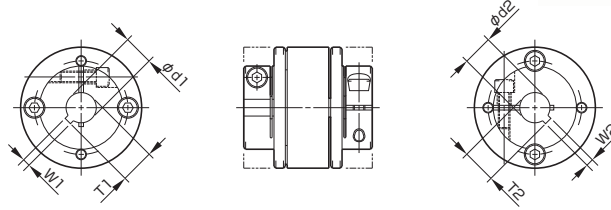


Option For keyway milling applications

If you are using a keyed shaft, we can mill a keyway in the clamping hub to your specifications.



Keyway milling standard



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

* We can also handle standards not listed above.

Standard bore diameters

Standard (option) bore diameter, d1/d2 [mm] and restricted rated torque [N·m]																			
Nominal bore dia.		8	9	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	●	●	●	●	●	●	●	●										
SFR-035SA1	d1	●	●	●	●	●	●	●	●	●	●	●	●						
SFR-040SA1	d1	9	●	●	●	●	●	●	●	●	●	●	●	●	●				
SFR-050SA1	d1	18	20	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	d2	18	20	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. * 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