

SERVOFLEX SFS S - Datasheet

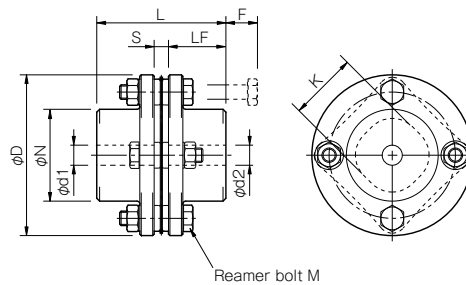
SINGLE ELEMENT TYPE / Key/Set Screw Type

Specifications

Model	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]
		Angular [°]	Axial [mm]					
SFS-05S	20	1	± 0.6	25000	16000	43	0.11 × 10 ⁻³	0.30
SFS-06S	40	1	± 0.8	20000	29000	45	0.30 × 10 ⁻³	0.50
SFS-08S	80	1	± 1.0	17000	83000	60	0.87 × 10 ⁻³	1.00
SFS-09S	180	1	± 1.2	15000	170000	122	1.60 × 10 ⁻³	1.40
SFS-10S	250	1	± 1.4	13000	250000	160	2.60 × 10 ⁻³	2.10
SFS-12S	450	1	± 1.6	11000	430000	197	6.50 × 10 ⁻³	3.40
SFS-14S	800	1	± 1.8	9500	780000	313	9.90 × 10 ⁻³	4.90

- Higher rpm possible with balancing.
- The moment of inertia and mass are specified for the maximum bore diameter.

Dimensions



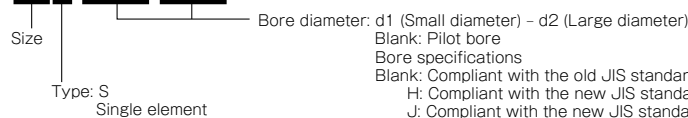
Model	d1 - d2			D	N	L	LF	S	F	K	M	Unit [mm]										
	Pilot bore	Min.	Max.																			
SFS-05S	7	8	20	56	32	45	20	5	11	24	4-M5 × 22											
SFS-06S	7	8	25	68	40	56	25	6	10	30	4-M6 × 25											
SFS-08S	10	11	35	82	54	66	30	6	11	38	4-M6 × 29											
SFS-09S	10	11	38	94	58	68	30	8	21	42	4-M8 × 36											
SFS-10S	15	16	42	104	68	80	35	10	16	48	4-M8 × 36											
SFS-12S	18	19	50	126	78	91	40	11	23	54	4-M10 × 45											
SFS-14S	20	22	60	144	88	102	45	12	31	61	4-M12 × 54											

Standard Bore Diameter

Model	Standard bore diameter d1 - d2 [mm]																											
	8	9	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	56	60
SFS-05S	●	●	●	●	●	●	●	●	●	●	●	●																
SFS-06S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
SFS-08S				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-09S				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-10S							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-12S											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-14S												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

How to Place an Order

SFS-10S-25H-30H



Material: S45C heat-treated or an equivalent

- Bore diameter: d1 (Small diameter) - d2 (Large diameter)
- Blank: Pilot bore
- Bore specifications
- Blank: Compliant with the old JIS standards (class 2) E9
- H: Compliant with the new JIS standards H9
- J: Compliant with the new JIS standards JS9
- P: Compliant with the new JIS standards P9
- N: Compliant with the new motor standards

SERVOFLEX SFS S-C - Datasheet

SINGLE ELEMENT TYPE

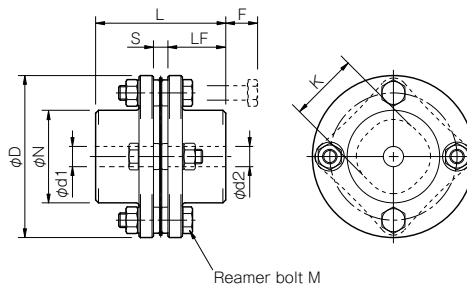
Electroless nickel coat / Key/Set Screw Type

Specifications

Model	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]
		Angular [°]	Axial [mm]					
SFS-05S-C	15	1	± 0.6	25000	16000	43	0.11 × 10 ⁻³	0.30
SFS-06S-C	30	1	± 0.8	20000	29000	45	0.30 × 10 ⁻³	0.50
SFS-08S-C	60	1	± 1.0	17000	83000	60	0.87 × 10 ⁻³	1.00
SFS-09S-C	135	1	± 1.2	15000	170000	122	1.60 × 10 ⁻³	1.40
SFS-10S-C	190	1	± 1.4	13000	250000	160	2.60 × 10 ⁻³	2.10
SFS-12S-C	340	1	± 1.6	11000	430000	197	6.50 × 10 ⁻³	3.40
SFS-14S-C	600	1	± 1.8	9500	780000	313	9.90 × 10 ⁻³	4.90

• Higher rpm possible with balancing.
 • The moment of inertia and mass are specified for the maximum bore diameter.

Dimensions



Model	d1 · d2		D	N	L	LF	S	F	K	M
	Min.	Max.								
SFS-05S-C	8	20	56	32	45	20	5	11	24	4-M5 × 22
SFS-06S-C	8	25	68	40	56	25	6	10	30	4-M6 × 25
SFS-08S-C	11	35	82	54	66	30	6	11	38	4-M6 × 29
SFS-09S-C	11	38	94	58	68	30	8	21	42	4-M8 × 36
SFS-10S-C	16	42	104	68	80	35	10	16	48	4-M8 × 36
SFS-12S-C	19	50	126	78	91	40	11	23	54	4-M10 × 45
SFS-14S-C	22	60	144	88	102	45	12	31	61	4-M12 × 54

Unit [mm]

Standard Bore Diameter

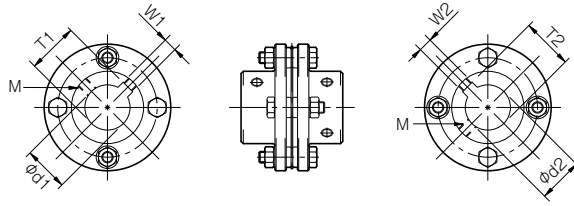
Model	Standard bore diameter d1 · d2 [mm]																											
	8	9	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	56	60
SFS-05S-C	●	●	●	●	●	●	●	●	●	●	●	●																
SFS-06S-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
SFS-08S-C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-09S-C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-10S-C							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-12S-C											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SFS-14S-C													●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

How to Place an Order

SFS-10S-C-25H-30H

Size: SFS-10S-C-25H-30H
 Type: S Single element
 Material: S45C heat-treated or an equivalent
 Bore diameter: d1 (Small diameter) - d2 (Large diameter)
 Surface finishing: -C: Electroless nickel plating
 Bore specifications: Blank: Compliant with the old JIS standards (class 2) E9
 H: Compliant with the new JIS standards H9
 J: Compliant with the new JIS standards JS9
 P: Compliant with the new JIS standards P9
 N: Compliant with the new motor standards

Standard Hole-Drillings



Unit [mm]

Models compliant with the old JIS standards (class 2)					Models compliant with the new JIS standards (H9)					Models compliant with the new JIS standards (JS9)					Models compliant with the new JIS standards (P9)				
Nominal bore diameter	Bore diameter [d1 · d2]	Keyway width [W1 · W2]	Keyway height [T1 · T2]	Set screw hole [M]	Nominal bore diameter	Bore diameter [d1 · d2]	Keyway width [W1 · W2]	Keyway height [T1 · T2]	Set screw hole [M]	Nominal bore diameter	Bore diameter [d1 · d2]	Keyway width [W1 · W2]	Keyway height [T1 · T2]	Set screw hole [M]	Nominal bore diameter	Bore diameter [d1 · d2]	Keyway width [W1 · W2]	Keyway height [T1 · T2]	Set screw hole [M]
Tolerance	H7, H8	E9	+0.3 0	—	Tolerance	H7, H8	H9	+0.3 0	—	Tolerance	H7, H8	JS9	+0.3 0	—	Tolerance	H7, H8	P9	+0.3 0	—
8	8 +0.022 0	—	—	2-M4	8H	8 +0.022 0	3 +0.025 0	9.4	2-M4	8J	8 +0.022 0	3 ± 0.0125	9.4	2-M4	8P	8 +0.022 0	3 -0.006 -0.031	9.4	2-M4
9	9 +0.022 0	—	—	2-M4	9H	9 +0.022 0	3 +0.025 0	10.4	2-M4	9J	9 +0.022 0	3 ± 0.0125	10.4	2-M4	9P	9 +0.022 0	3 -0.006 -0.031	10.4	2-M4
10	10 +0.022 0	—	—	2-M4	10H	10 +0.022 0	3 +0.025 0	11.4	2-M4	10J	10 +0.022 0	3 ± 0.0125	11.4	2-M4	10P	10 +0.022 0	3 -0.006 -0.031	11.4	2-M4
11	11 +0.018 0	—	—	2-M4	11H	11 +0.018 0	4 +0.030 0	12.8	2-M4	11J	11 +0.018 0	4 ± 0.0150	12.8	2-M4	11P	11 +0.018 0	4 -0.012 -0.042	12.8	2-M4
12	12 +0.018 0	4 +0.050 +0.020	13.5	2-M4	12H	12 +0.018 0	4 +0.030 0	13.8	2-M4	12J	12 +0.018 0	4 ± 0.0150	13.8	2-M4	12P	12 +0.018 0	4 -0.012 -0.042	13.8	2-M4
14	14 +0.018 0	5 +0.050 +0.020	16.0	2-M4	14H	14 +0.018 0	5 +0.030 0	16.3	2-M4	14J	14 +0.018 0	5 ± 0.0150	16.3	2-M4	14P	14 +0.018 0	5 -0.012 -0.042	16.3	2-M4
15	15 +0.018 0	5 +0.050 +0.020	17.0	2-M4	15H	15 +0.018 0	5 +0.030 0	17.3	2-M4	15J	15 +0.018 0	5 ± 0.0150	17.3	2-M4	15P	15 +0.018 0	5 -0.012 -0.042	17.3	2-M4
16	16 +0.018 0	5 +0.050 +0.020	18.0	2-M4	16H	16 +0.018 0	5 +0.030 0	18.3	2-M4	16J	16 +0.018 0	5 ± 0.0150	18.3	2-M4	16P	16 +0.018 0	5 -0.012 -0.042	18.3	2-M4
17	17 +0.018 0	5 +0.050 +0.020	19.0	2-M4	17H	17 +0.018 0	5 +0.030 0	19.3	2-M4	17J	17 +0.018 0	5 ± 0.0150	19.3	2-M4	17P	17 +0.018 0	5 -0.012 -0.042	19.3	2-M4
18	18 +0.018 0	5 +0.050 +0.020	20.0	2-M4	18H	18 +0.018 0	6 +0.030 0	20.8	2-M5	18J	18 +0.018 0	6 ± 0.0150	20.8	2-M5	18P	18 +0.018 0	6 -0.012 -0.042	20.8	2-M5
19	19 +0.021 0	5 +0.050 +0.020	21.0	2-M4	19H	19 +0.021 0	6 +0.030 0	21.8	2-M5	19J	19 +0.021 0	6 ± 0.0150	21.8	2-M5	19P	19 +0.021 0	6 -0.012 -0.042	21.8	2-M5
20	20 +0.021 0	5 +0.050 +0.020	22.0	2-M4	20H	20 +0.021 0	6 +0.030 0	22.8	2-M5	20J	20 +0.021 0	6 ± 0.0150	22.8	2-M5	20P	20 +0.021 0	6 -0.012 -0.042	22.8	2-M5
22	22 +0.021 0	7 +0.061 +0.025	25.0	2-M6	22H	22 +0.021 0	6 +0.030 0	24.8	2-M5	22J	22 +0.021 0	6 ± 0.0150	24.8	2-M5	22P	22 +0.021 0	6 -0.012 -0.042	24.8	2-M5
24	24 +0.021 0	7 +0.061 +0.025	27.0	2-M6	24H	24 +0.021 0	8 +0.036 0	27.3	2-M6	24J	24 +0.021 0	8 ± 0.0180	27.3	2-M6	24P	24 +0.021 0	8 -0.015 -0.051	27.3	2-M6
25	25 +0.021 0	7 +0.061 +0.025	28.0	2-M6	25H	25 +0.021 0	8 +0.036 0	28.3	2-M6	25J	25 +0.021 0	8 ± 0.0180	28.3	2-M6	25P	25 +0.021 0	8 -0.015 -0.051	28.3	2-M6
28	28 +0.021 0	7 +0.061 +0.025	31.0	2-M6	28H	28 +0.021 0	8 +0.036 0	31.3	2-M6	28J	28 +0.021 0	8 ± 0.0180	31.3	2-M6	28P	28 +0.021 0	8 -0.015 -0.051	31.3	2-M6
30	30 +0.021 0	7 +0.061 +0.025	33.0	2-M6	30H	30 +0.021 0	8 +0.036 0	33.3	2-M6	30J	30 +0.021 0	8 ± 0.0180	33.3	2-M6	30P	30 +0.021 0	8 -0.015 -0.051	33.3	2-M6
32	32 +0.025 0	10 +0.061 +0.025	35.5	2-M8	32H	32 +0.025 0	10 +0.036 0	35.3	2-M8	32J	32 +0.025 0	10 ± 0.0180	35.3	2-M8	32P	32 +0.025 0	10 -0.015 -0.051	35.3	2-M8
35	35 +0.025 0	10 +0.061 +0.025	38.5	2-M8	35H	35 +0.025 0	10 +0.036 0	38.3	2-M8	35J	35 +0.025 0	10 ± 0.0180	38.3	2-M8	35P	35 +0.025 0	10 -0.015 -0.051	38.3	2-M8
38	38 +0.025 0	10 +0.061 +0.025	41.5	2-M8	38H	38 +0.025 0	10 +0.036 0	41.3	2-M8	38J	38 +0.025 0	10 ± 0.0180	41.3	2-M8	38P	38 +0.025 0	10 -0.015 -0.051	41.3	2-M8
40	40 +0.025 0	10 +0.061 +0.025	43.5	2-M8	40H	40 +0.025 0	12 +0.043 0	43.3	2-M8	40J	40 +0.025 0	12 ± 0.0215	43.3	2-M8	40P	40 +0.025 0	12 -0.018 -0.061	43.3	2-M8
42	42 +0.025 0	12 +0.075 +0.032	45.5	2-M8	42H	42 +0.025 0	12 +0.043 0	45.3	2-M8	42J	42 +0.025 0	12 ± 0.0215	45.3	2-M8	42P	42 +0.025 0	12 -0.018 -0.061	45.3	2-M8
45	45 +0.025 0	12 +0.075 +0.032	48.5	2-M8	45H	45 +0.025 0	14 +0.043 0	48.8	2-M10	45J	45 +0.025 0	14 ± 0.0215	48.8	2-M10	45P	45 +0.025 0	14 -0.018 -0.061	48.8	2-M10
48	48 +0.025 0	12 +0.075 +0.032	51.5	2-M8	48H	48 +0.025 0	14 +0.043 0	51.8	2-M10	48J	48 +0.025 0	14 ± 0.0215	51.8	2-M10	48P	48 +0.025 0	14 -0.018 -0.061	51.8	2-M10
50	50 +0.025 0	12 +0.075 +0.032	53.5	2-M8	50H	50 +0.025 0	14 +0.043 0	53.8	2-M10	50J	50 +0.025 0	14 ± 0.0215	53.8	2-M10	50P	50 +0.025 0	14 -0.018 -0.061	53.8	2-M10
55	55 +0.030 0	15 +0.075 +0.032	60.0	2-M10	55H	55 +0.030 0	16 +0.043 0	59.3	2-M10	55J	55 +0.030 0	16 ± 0.0215	59.3	2-M10	55P	55 +0.030 0	16 -0.018 -0.061	59.3	2-M10
56	56 +0.030 0	15 +0.075 +0.032	61.0	2-M10	56H	56 +0.030 0	16 +0.043 0	60.3	2-M10	56J	56 +0.030 0	16 ± 0.0215	60.3	2-M10	56P	56 +0.030 0	16 -0.018 -0.061	60.3	2-M10
60	60 +0.030 0	15 +0.075 +0.032	65.0	2-M10	60H	60 +0.030 0	18 +0.043 0	64.4	2-M10	60J	60 +0.030 0	18 ± 0.0215	64.4	2-M10	60P	60 +0.030 0	18 -0.018 -0.061	64.4	2-M10

Models compliant with the new motor standards

Nominal bore diameter	Bore diameter [d1 · d2]	Keyway width [W1 · W2]	Keyway height [T1 · T2]	Set screw hole [M]
Tolerance	G7, F7	H9	+0.3 0	—
14N	14 +0.024 +0.006	5 +0.030 0	16.3	2-M4
19N	19 +0.028 +0.007	6 +0.030 0	21.8	2-M5
24N	24 +0.028 +0.007	8 +0.036 0	27.3	2-M6
28N	28 +0.028 +0.007	8 +0.036 0	31.3	2-M6
38N	38 +0.050 +0.025	10 +0.036 0	41.3	2-M8
42N	42 +0.050 +0.025	12 +0.043 0	45.3	2-M8
48N	48 +0.050 +0.025	14 +0.043 0	51.8	2-M10
55N	55 +0.060 +0.030	16 +0.043 0	59.3	2-M10
60N	60 +0.060 +0.030	18 +0.043 0	64.4	2-M10

Position of Set Screw

Model	Position of set screw [mm]
SFS-05	7
SFS-06	9
SFS-08	10
SFS-09	10
SFS-10	12
SFS-12	12
SFS-14	15

METAL DISC COUPLINGS

SERVOFLEX SFS S-M-C - Datasheet

SINGLE ELEMENT TYPE

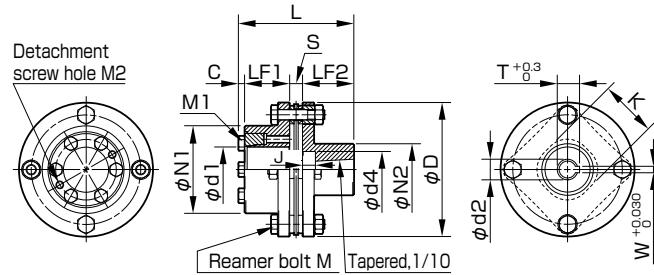
Conical Clamp Hub / Tapered Shaft Supported

Specifications

Model	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]
		Angular [°]	Axial [mm]					
SFS-06S-□ M-11C	40	1	± 0.8	5000	29000	45	0.29 × 10 ⁻³	0.60
SFS-06S-□ M-16C	40	1	± 0.8	5000	29000	45	0.34 × 10 ⁻³	0.70
SFS-08S-□ M-16C	80	1	± 1.0	5000	83000	60	0.84 × 10 ⁻³	1.20
SFS-09S-□ M-16C	180	1	± 1.2	5000	170000	122	1.50 × 10 ⁻³	1.60

• Higher rpm possible with balancing.
 • The moment of inertia and mass are specified for the maximum bore diameter.

Dimensions

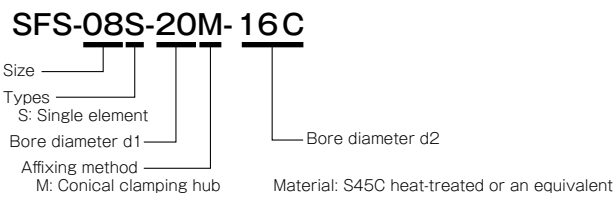


Model	Bore diameter	d1	d2	W +0.030 0	T +0.3 0	d4	J	D	N1	N2	L	LF1	LF2	LP	LS	S	C	K	M	M1	M2
SFS-06S	□ M-11C	12 · 14 · 15	11	4	12.2	18	9	68	40	30	60.8	25	25	12	24	6	4.8	30	4-M6 × 25	4-M5	2-M5
	□ M-16C	15	16	5	17.3	28	10		40	40	75.8	25	40	12	24	6	4.8	30	4-M6 × 25	4-M5	2-M5
SFS-08S	□ M-16C	15 · 16 · 20 · 22	16	5	17.3	28	10	82	54	40	80.8	30	40	12	26	6	4.8	38	4-M6 × 29	4-M6	2-M6
SFS-09S	□ M-16C	25 · 28	16	5	17.3	28	10	94	58	40	82.8	30	40	22	30	8	4.8	42	4-M8 × 36	6-M6	2-M6

• The machining tolerance for paired mounting shafts of the hub on the friction-coupled side is h7 (h6 or g6) class.

Unit [mm]

How to Place an Order



SERVOFLEX SFS S-M-M – Datasheet

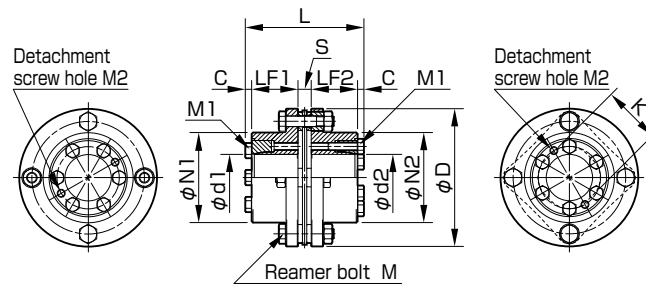
SINGLE ELEMENT TYPE / Conical Clamping Hub

Specifications

Model	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]
		Angular [°]	Axial [mm]					
SFS-06S-□M-□M	40	1	± 0.8	5000	29000	45	0.30 × 10 ⁻³	0.70
SFS-08S-□M-□M	80	1	± 1.0	5000	83000	60	0.93 × 10 ⁻³	1.30
SFS-09S-□M-□M	180	1	± 1.2	5000	170000	122	1.80 × 10 ⁻³	1.80
SFS-10S-□M-□M	250	1	± 1.4	5000	250000	160	2.70 × 10 ⁻³	2.30
SFS-12S-□M-□M	450	1	± 1.6	5000	430000	197	6.80 × 10 ⁻³	4.10
SFS-14S-35M-35M	580	1	± 1.8	5000	780000	313	14.01 × 10 ⁻³	6.40

- 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.
- The moment of inertia and mass are specified for the maximum bore diameter.

Dimensions



Model	Bore diameter	d1	d2	D	N1	N2	L	LF1	LF2	LS	S	C	K	M	M1	M2	Unit [mm]
SFS-06S	□M-□M	12·14·15	12·14·15	68	40	40	65.6	25	25	24	6	4.8	30	4-M6 × 25	4-M5	2-M5	
SFS-08S	□M-□M	15·16·20·22	15·16·20·22	82	54	54	75.6	30	30	26	6	4.8	38	4-M6 × 29	4-M6	2-M6	
SFS-09S	□M-□M	25·28	25·28	94	58	58	77.6	30	30	30	8	4.8	42	4-M8 × 36	6-M6	2-M6	
	□M-35M	25·28	35														68
SFS-10S	□M-□M	25·28·30·35	25·28·30·35	104	68	68	89.6	35	35	30	10	4.8	48	4-M8 × 36	6-M6	2-M6	
SFS-12S	□M-□M	30·35	30·35	126	78	78	101.6	40	40	38	11	5.3	54	4-M10 × 45	4-M8	2-M8	
SFS-14S	35M-35M	35	35	144	88	88	112.6	45	45	46	12	5.3	61	4-M12 × 54	6-M8	2-M8	

SFS-06		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	12M	●	●	●							
	14M		●	●							
	15M			●							

SFS-08		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	15M			●	●	●	●				
	16M				●	●	●				
	20M					●	●				
	22M						●				

SFS-09		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	25M							●	●		●
	28M								●		●

SFS-10		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	25M							●	●	●	●
	28M								●	●	●
	30M									●	●
	35M										●

SFS-12		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	30M									380	380
	35M										●

SFS-14		Standard bore diameter d2 [mm]									
		12M	14M	15M	16M	20M	22M	25M	28M	30M	35M
Standard bore diameter d1 [mm]	35M										●

- 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].
- Where a bore diameter is not given above and is small, please check first; model may be restricted in its rated torque.
- The recommended processing tolerance for paired mounting shafts is the h7 (h6 or g6) class. However, for a bore diameter of ø35, the shaft tolerance is $^{+0.010}_{-0.025}$.

Unit [mm]

How to Place an Order

SFS-10S-25M-30M

