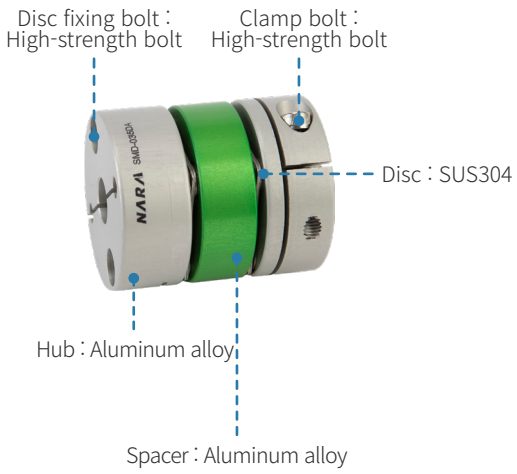
SMD Torsionally rigid servo disc coupling

Features

- Metal plate type flexible coupling.
- Stainless single disc allows angular misalignment and axial displacement, if two discs are applied, also parallel misalignment is allowed.
- Characteristics of forward and reverse rotation are iIdentical.
- Excellent torsional rigidity.
- The most suitable coupling for servo motors.

Structure

Single Disc Type



Two Discs Type

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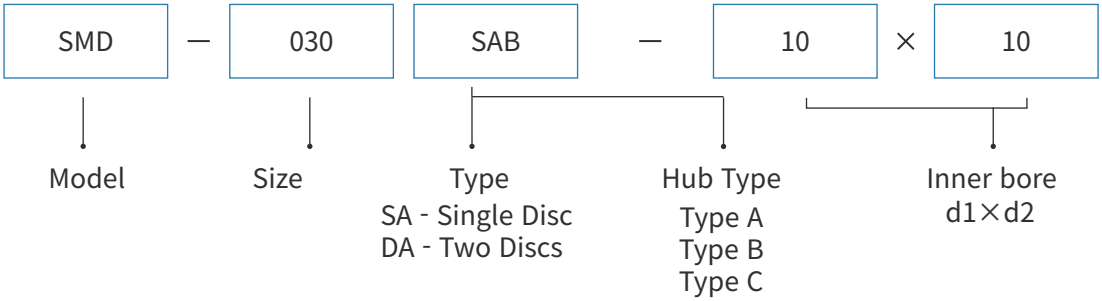
How to order



Standard Bores Diameter

Model	Standard bores diameter d1-d2(mm)																									
	4	5	6	6.35	8	9	9.525	10	12	14	15	15.875	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45
SMD-010SA/DA	●	●	●	●	●																						
SMD-020SA/DA		●	●	●	●	○	○	○																			
SMD-030SA/DA			○	●	●	●	●	●	●	●																	
SMD-035SA/DA					●	●	●	●	●	●	●	○	●														
SMD-040SA/DA						○	○	●	●	●	●	○	●	●	●												
SMD-050SA/DA									●	●	●	○	●	●	●	●	●	●	●								
SMD-060SA/DA										○	○	○	○	○	●	●	●	●	●	●	●						
SMD-080SA/DA																○	○	○	●	○	●	○	●				
SMD-090SA/DA																			○	○	○	○	○	○	○		
SMD-100SA/DA																							○	○	○	○	○

※ Standard type is always available in stock. ※ Contact us when ordering

Allowable Transmission torque (Tc) for fixing with clamp bolt

Model	Standard bores diameter d1×d2(mm) and Allowable Transmission torque (Nm)																									
	4	5	6	6.35	8	9	9.525	10	12	14	15	15.875	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45
SMD-010SA/DA	2	2	2	2	2																						
SMD-020SA/DA		3.2	3.6	3.6	4	4	4	4																			
SMD-030SA/DA			4.4	4.4	5	5.4	5.5	5.7	7.6	8.3																	
SMD-035SA/DA					11	12	12	13	14	15	15	16	16														
SMD-040SA/DA						11	11	12	13	14	14	17	18	19	19												
SMD-050SA/DA									25	27	28	28	28	30	31	38	40	42	43								
SMD-060SA/DA										51	53	54	54	57	58	59	75	78	79	83	86						
SMD-080SA/DA																123	128	134	136	143	148	151	157				
SMD-090SA/DA																			222	232	239	243	253	262	268		
SMD-100SA/DA																							275	285	291	297	306

Note)
1. Shaft tolerances are based on h7, transmitted torque may be decreased in case of small shaft size.
2. According to operating condition(Fixing type, Acc./Dec. Frequency, Temperature), Transmission Torque may be decreased, Therefore it is recommended to apply after testing with actual mounting to the devices.

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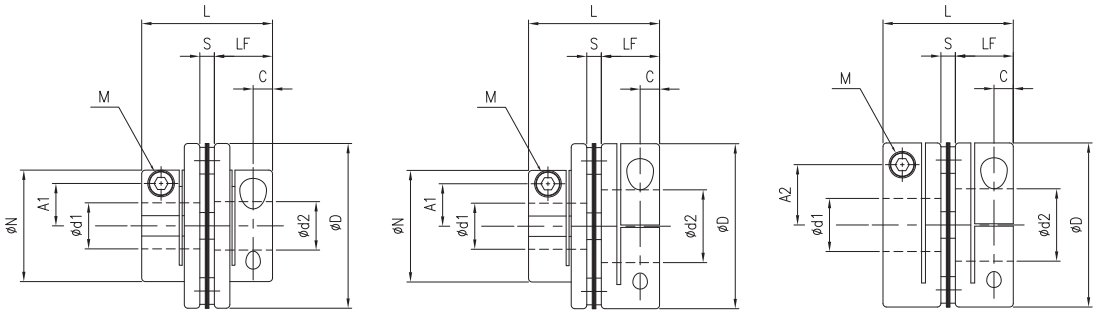
Specifications/ Dimensions



A Type B Type C Type

1. Contact NARA if a larger model than the below dimensions is required. 2. Recommended shaft tolerance is h7.
3. Specifications and Dimensions in the Catalog might be modified without any notice for performance improvement, Contact NARA before using the couplings.

Specifications(SMD-SA)

Model	Rated Torque (Nm)	Max Torque (Nm)	Max speed (rpm)	Torsional stiffness (Nm/rad)	Axial stiffness (N/mm)	Type	Moment of inertia (kgm^2)	Maximum allowable misalignment			Mass (g)
								Parallel misalignment (mm)	Angular misalignment (°)	Axial displacement (mm)	
SMD-010SA	1	2	10,000	220	140	C	0.75×10^{-6}	0.02	1	±0.1	14
SMD-020SA	1.5	3	10,000	1,600	64	C	2.45×10^{-6}	0.02	1	±0.15	25
SMD-030SA	4	8	10,000	3,200	64	A	3.80×10^{-6}	0.02	1	±0.2	31
						B	5.99×10^{-6}				40
						C	8.16×10^{-6}				50
SMD-035SA	7	14	10,000	7,000	90	C	18×10^{-6}	0.02	1	±0.25	80
SMD-040SA	10	20	10,000	8,800	80	A	15.5×10^{-6}	0.02	1	±0.3	70
						B	22.6×10^{-6}				90
						C	29.7×10^{-6}				110
SMD-050SA	25	50	10,000	18,000	48	A	50.6×10^{-6}	0.02	1	±0.4	150
						B	75.4×10^{-6}				180
						C	100×10^{-6}				220
SMD-060SA	60	120	10,000	36,000	76.4	A	131.6×10^{-6}	0.02	1	±0.45	260
						B	199.6×10^{-6}				330
						C	267.7×10^{-6}				400
SMD-080SA	100	200	10,000	52,800	54.8	C	736.5×10^{-6}	0.02	1	±0.55	750
SMD-090SA	180	360	10,000	170,000	122	C	1160×10^{-6}	0.02	1	±0.6	1130
SMD-100SA	250	500	10,000	250,000	160	C	1180×10^{-6}	0.02	1	±0.7	1330

Dimensions(SMD-SA)

Model	D	N	L	LF	LP	S	A1	A2	C	M	Bolt tightening torque (Nm)	Type	d1		d2	
													Min	Max	Min	Max
SMD-010SA	19	-	20.2	9	-	2.2	-	6.5	3.3	M2.5	1	C	4	8	4	8
SMD-020SA	26	-	22.5	10.5	-	1.5	-	9.5	3.5	M2.5	1	C	5	10	5	10
SMD-030SA	34	22	28	13	-	1.6	8	-	4	M3	1.5	A	6	10	6	10
							8	12.5				B	6	10	12	14
		-					-	12.5				C	12	14	12	14
SMD-035SA	39	-	32.3	15	-	2.3	-	13.5	4.5	M4	3.4	C	8	16	8	16
SMD-040SA	44	30	34	16	-	2.5	11	-	5	M4	3.4	A	9	15	9	15
							11	16				B	9	15	15	19
		-					-	16				C	15	19	15	19
SMD-050SA	56	38	43	20	-	2.8	14.5	-	7	M5	7	A	11	19	11	19
							14.5	21				B	11	19	20	25
							-	21				C	20	25	20	25
SMD-060SA	68	46	54	24	-	6	17.5	-	8	M6	14	A	14	20	14	20
							17.5	25				B	14	20	22	30
							-	25				C	22	30	22	30
SMD-080SA	83	-	67.5	30	-	7.5	-	28	9	M8	30	C	20	35	20	35
SMD-090SA	94	-	67.5	30	-	7.5	-	34	9	M8	30	C	25	40	25	40
SMD-100SA	104	-	68.3	30	-	8.3	-	39	9	M8	30	C	35	45	35	45

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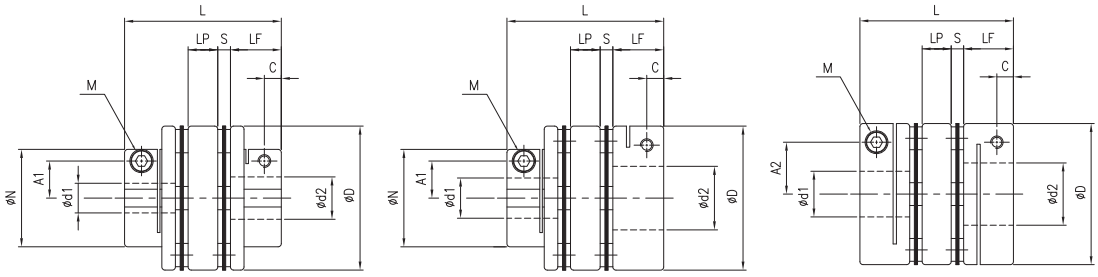
Specifications/ Dimensions



A Type　　B Type　　C Type

1. Contact NARA if a larger model than the below dimensions is required.　　2. Recommended shaft tolerance is h7.
3. Specifications and Dimensions in the Catalog might be modified without any notice for performance improvement, Contact NARA before using the couplings.

Specifications(SMD-DA)

Model	Rated Torque (Nm)	Max Torque (Nm)	Max speed (rpm)	Torsional stiffness (Nm/rad)	Axial stiffness (N/mm)	Type	Moment of inertia (kg m²)	Maximum allowable misalignment			Mass (g)
								Parallel misalignment (mm)	Angular misalignment (°)	Axial displacement (mm)	
SMD-010DA	1	2	10,000	170	70	C	1.0×10^{-6}	0.12	2	±0.2	19
SMD-020DA	1.5	3	10,000	1,000	32	C	3.41×10^{-6}	0.15	2	±0.3	35
SMD-030DA	4	8	10,000	2,100	32	A	6.93×10^{-6}	0.17	2	±0.4	50
						B	9.1×10^{-6}				58
						C	11.3×10^{-6}				67
SMD-035DA	7	14	10,000	4,000	45	C	30.3×10^{-6}	0.23	2	±0.5	140
SMD-040DA	10	20	10,000	5,300	40	A	27.5×10^{-6}	0.23	2	±0.6	113
						B	34.6×10^{-6}				130
						C	41.7×10^{-6}				146
SMD-050DA	25	50	10,000	10,800	24	A	86.6×10^{-6}	0.28	2	±0.8	222
						B	111.3×10^{-6}				256
						C	136.1×10^{-6}				290
SMD-060DA	60	120	10,000	22,800	38.2	A	230.9×10^{-6}	0.35	2	±0.9	400
						B	298.9×10^{-6}				470
						C	366.9×10^{-6}				540
SMD-080DA	100	200	10,000	37,800	27.4	C	1070×10^{-6}	0.52	2	±1.1	1080
SMD-090DA	180	360	10,000	85,000	61	C	1640×10^{-6}	0.52	2	±1.2	1200
SMD-100DA	250	500	10,000	125,000	80	C	3770×10^{-6}	0.52	2	±1.4	1450

Dimensions(SMD-DA)

Model	D	N	L	LF	LP	S	A1	A2	C	M	bolt tightening torque (Nm)	Type	d1		d2	
													min	max	min	max
SMD-010DA	19	-	27.4	9	5	2.2	-	6.5	3.3	M2.5	1	C	4	8	4	8
SMD-020DA	26	-	30	10.5	6	1.5	-	9.5	3.5	M2.5	1	C	5	10	5	10
SMD-030DA	34	22	37.2	13	8	1.6	8	-	4	M3	1.5	A	6	10	6	10
							8	12.5				B	6	10	12	14
		-					-	12.5				C	12	14	12	14
SMD-035DA	39	-	46.6	15	12	2.3	-	13.5	4.5	M4	3.4	C	8	16	8	16
SMD-040DA	44	30	48	15.5	12	2.5	11	-	5	M4	3.4	A	9	15	9	15
							11	16				B	9	15	15	19
		-					-	16				C	15	19	15	19
SMD-050DA	56	38	58.6	20	13	2.8	14.5	-	7	M5	7	A	11	19	11	19
							14.5	21				B	11	19	20	25
		-					-	21				C	20	25	20	25
SMD-060DA	68	46	74	24	14	6	17.5	-	8	M6	14	A	14	20	14	20
							17.5	25				B	14	20	22	30
		-					-	25				C	22	30	22	30
SMD-080DA	83	-	97	30	22	7.5	-	28	9	M8	30	C	20	35	20	35
SMD-090DA	94	-	97	30	22	7.5	-	34	9	M8	30	C	25	40	25	40
SMD-100DA	104	-	98.6	30	22	8.3	-	39	9	M8	30	C	35	45	35	45