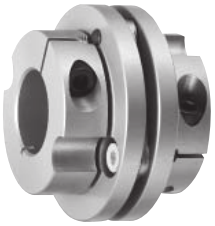
NES Series ECHT-FLEX® Couplings

Low moment of inertia & high torsional stiffness



When low moment of inertia is needed

Low Inertia Hub

With its unique stepped design, the hub achieves the ultimate in low inertia.

When high torsional stiffness is needed

Straight Hub

This model offers exceptionally high torsional stiffness.

For taking advantage of both types

Low Inertia x Straight Hub

This model combines a low inertia hub and straight hub.

Features

Low inertia moment

The hub adopts light-weight and highly durable extra super duralumin. Our original hub geometry is used to achieve a low moment of inertia. This is ideal for high acceleration/deceleration operation of servomotors and other applications.

High torsional stiffness

With its high torsional stiffness and excellent following capacity for servomotors, our straight hub is ideal for precision control applications.

High torque and secure clamping force

The clamping force on shafts is improved by using our original clamp geometry.

Wide lineup of 56 models and 3,252 possible bore combinations

With 56 models and 3,252 possible bore combinations, the low inertia hub type and straight hub type together form a peerless lineup meeting a wide range of needs.

No backlash

All torque is transmitted via friction coupling to eliminate backlash. Together with its high torsional stiffness, this feature makes the NES Series ideal for precision positioning applications.

Easy to install

The hub on both sides is centered using a special jig, and assembled while ensuring concentricity. The NES Series adopts a clamping method for connection with the shaft, allowing the hub to be clamped onto the shaft by simply tightening one clamp bolt on each hub.

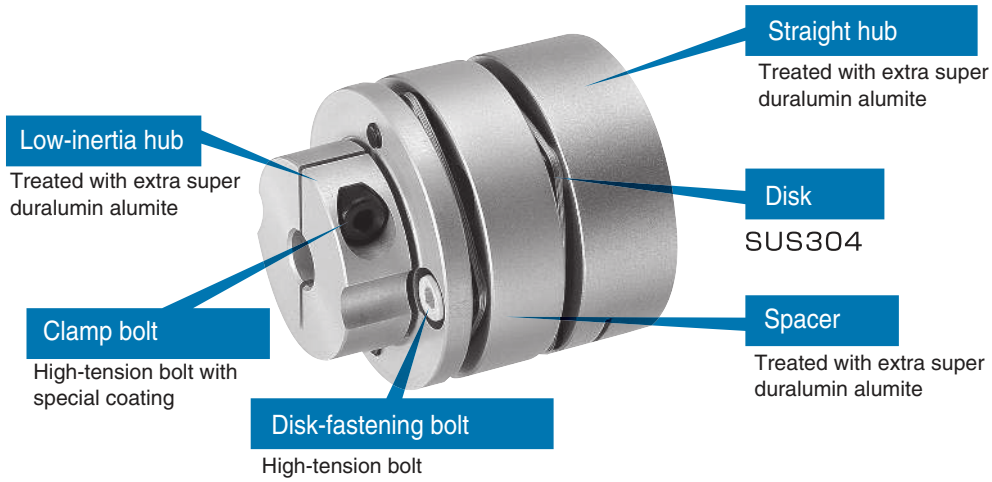
Environmentally friendly

The NES Series meets the requirements of RoHS directives, as well as harmful chemical substance regulations of JIG, PFOS, and SVHCs (15 substances).

Example applications

- Coupling with compact servomotors and stepping motors in semiconductor manufacturing equipment
- Coupling with servomotors and ball screws in machine tools
- Industrial robots, electronic devices, precision instruments

Structure



Model Number

Spacer type

NES 30 W - N 10 C X N 12 C

- NES: Series
- 30: Size
- W: Spacer type
- N 10 C: Hub type (N : Straight hub, D : Low-inertia hub) / Bore diameter ('6.3' for 6.35 mm bore diameter, and '9.5' for 9.525 mm bore diameter.)
- X N 12 C: Clamp type

Note: Place the smaller bore diameter in front.

Single disk type

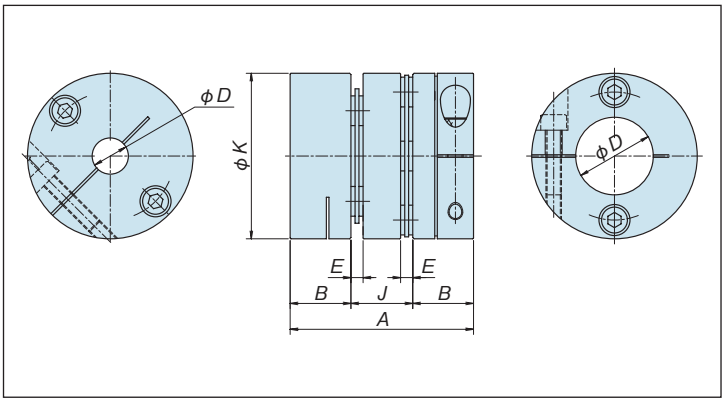
NES 30 S - N 10 C X N 12 C

- NES: Series
- 30: Size
- S: Single disk type
- N 10 C: Hub type (N : Straight hub, D : Low-inertia hub) / Bore diameter ('6.3' for 6.35 mm bore diameter, and '9.5' for 9.525 mm bore diameter.)
- X N 12 C: Clamp type

Note: Place the smaller bore diameter in front.

Transmission Capacity/Dimensions

Spacer type: straight hub x straight hub



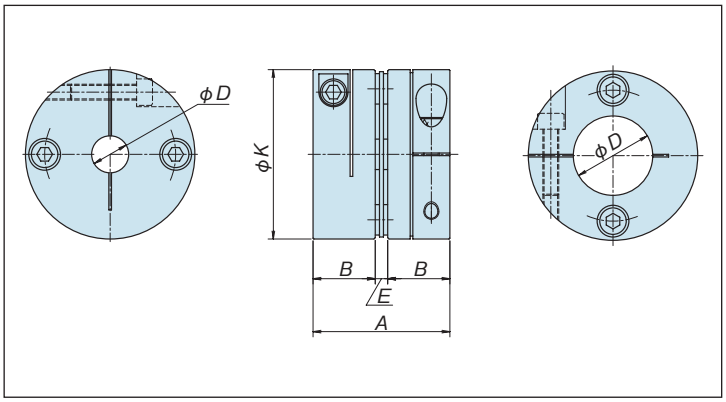
Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min^{-1}	Note 4) Bore diameter φD mm		Dimensions mm						Torsional stiffness N·m/rad {kgf·m/rad}		Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight g	Note 2) Moment of inertia kg·m²
			Range of bore diameters	Standard bore diameter	A	B	E	φK	J	Through shaft allowable max. diameter	Whole coupling	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm		
NES07W	0.7 {0.07}	18000	4 to 6	Refer to the table of standard bore diameter (in the table below).	18.9	7.5	0.85	16	3.9	6	210 {21}	600 {61}	87 {8.9}	1.4	0.05	±0.24	9	0.32×10⁻⁶
NES15W	1.5 {0.15}	18000	4 to 8		26	8.9	1.1	19	8.2	6.5	420 {43}	1300 {130}	47 {4.8}	2.0	0.12	±0.36	17	0.90×10⁻⁶
NES20W	2.0 {0.20}	18000	5 to 10		31.7	11	1.1	24	9.7	10	1000 {100}	2800 {290}	43 {4.4}	2.0	0.15	±0.60	32	2.7 ×10⁻⁶
NES30W	3.0 {0.31}	18000	6 to 16		35.6	11.8	1.5	31	12	13	1600 {160}	4200 {430}	24 {2.4}	2.0	0.18	±0.80	53	8.0 ×10⁻⁶
NES50W	5.0 {0.51}	18000	6 to 16		40	12.5	1.5	34	15	13	2100 {210}	6500 {660}	25 {2.6}	2.0	0.24	±0.80	76	14 ×10⁻⁶
NES70W	7.0 {0.71}	18000	8 to 20		45.5	15	1.75	37	15.5	16	4600 {470}	9500 {970}	29 {3.0}	2.0	0.24	±0.90	97	21 ×10⁻⁶
NES100W	10 {1.0}	15000	8 to 22		48.1	15.7	2.6	44	16.7	17	6200 {630}	15000 {1500}	33 {3.4}	2.0	0.25	±1.1	160	47 ×10⁻⁶
NES250W	25 {2.6}	10000	10 to 25		59	20	3	55	19	22	11000 {1100}	22000 {2200}	11 {1.1}	2.0	0.28	±1.4	320	140 ×10⁻⁶
NES800W	80 {8.2}	10000	14 to 30		70.9	23.5	4.7	64	23.9	25	23000 {2300}	39000 {4000}	27 {2.8}	2.0	0.34	±1.4	510	320 ×10⁻⁶
NES1300W	130 {13}	10000	20 to 35		97.9	31.5	5.2	82	34.9	35	46000 {4700}	110000 {11000}	33 {3.4}	2.0	0.52	±1.8	1200	1100 ×10⁻⁶
NES2000W	200 {20.4}	9000	25 to 45		98.6	30.5	5.6	92	37.6	45	60000 {6120}	270000 {27600}	43 {4.4}	2.0	0.56	±1.4	1300	1700 ×10⁻⁶
NES3000W	300 {30.6}	8000	35 to 50		102	31.2	7.6	104	39.2	50	68000 {6940}	300000 {30600}	64 {6.5}	2.0	0.55	±1.8	1800	2960 ×10⁻⁶

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The columns with values in the table below are the standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Standard bore diameter and transmission torque by bore diameter (N·m)

Model No.	Bolt size	Tightening torque N·m {kgf·m}	Standard bore diameter (mm)																														
			4	5	6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50
NES07	M2	0.50 {0.04}	0.7	0.7	0.7																												
NES15	M2	0.50 {0.04}	1.3	1.5	1.5	1.5	1.5	1.5																									
NES20	M2.5	1.0 {0.10}		2	2	2	2	2	2	2	2																						
NES30	M2.5	1.0 {0.10}			3	3	3	3	3	3	3	3	3	3	3	3																	
NES50	M3	1.9 {0.19}			5	5	5	5	5	5	5	5	5	5	5	5																	
NES70	M3	1.9 {0.19}						7	7	7	7	7	7	7	7	7	7	7	7	7													
NES100	M4	3.8 {0.39}						10	10	10	10	10	10	10	10	10	10	10	10	10	10												
NES250	M4	3.8 {0.39}									25	25	25	25	25	25	25	25	25	25	25	25	25										
NES800	M6	12 {1.22}												80	80	80	80	80	80	80	80	80	80	80	80								
NES1300	M6	12 {1.22}																		107	118	130	130	130	130	130	130						
NES2000	M8	30 {3.1}																					200	200	200	200	200	200	200	200	200		
NES3000	M8	30 {3.1}																									300	300	300	300	300	300	300

Single disk type: straight hub x straight hub

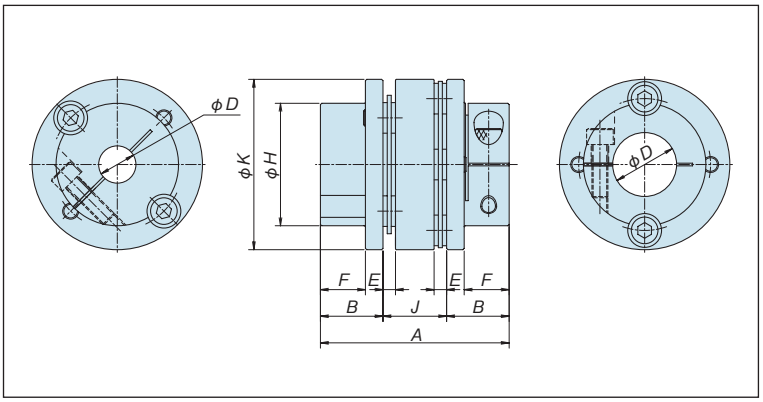


Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min^{-1}	Note 4) Bore diameter φD mm		Dimensions mm				Torsional stiffness N·m/rad {kgf·m/rad}		Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight g	Note 2) Moment of inertia $kg·m^2$
			Range of bore diameters	Standard bore diameter	A	B	E	φK	Whole coupling	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm		
NES07S	0.7 {0.07}	18000	4 to 6	Refer to the table of standard bore diameter (in the previous page).	15.85	7.5	0.85	16	430 {44}	1200 {120}	170 {17}	0.7	0.02	±0.12	7	$0.26×10^{-6}$
NES15S	1.5 {0.15}	18000	4 to 8		18.4	8.9	1.1	19	780 {80}	2600 {270}	93 {9.5}	1.0	0.02	±0.18	12	$0.63×10^{-6}$
NES20S	2.0 {0.20}	18000	5 to 10		23.1	11	1.1	24	1800 {180}	5600 {570}	86 {8.8}	1.0	0.02	±0.30	23	$1.9×10^{-6}$
NES30S	3.0 {0.31}	18000	6 to 16		25.1	11.8	1.5	31	3700 {380}	8400 {860}	48 {4.9}	1.0	0.02	±0.40	37	$5.5×10^{-6}$
NES50S	5.0 {0.51}	18000	6 to 16		26.5	12.5	1.5	34	4500 {460}	13000 {1300}	51 {5.2}	1.0	0.02	±0.40	49	$8.8×10^{-6}$
NES70S	7.0 {0.71}	18000	8 to 20		31.75	15	1.75	37	7400 {760}	19000 {1900}	58 {5.9}	1.0	0.02	±0.45	66	$14×10^{-6}$
NES100S	10 {1.0}	15000	8 to 22		34	15.7	2.6	44	10000 {1000}	30000 {3000}	65 {6.6}	1.0	0.02	±0.55	110	$32×10^{-6}$
NES250S	25 {2.6}	10000	10 to 25		43	20	3	55	19000 {1900}	44000 {4500}	21 {2.1}	1.0	0.02	±0.70	220	$100×10^{-6}$
NES800S	80 {8.2}	10000	14 to 30		51.7	23.5	4.7	64	39000 {4000}	78000 {8000}	52 {5.3}	1.0	0.02	±0.70	350	$220×10^{-6}$
NES1300S	130 {13}	10000	20 to 35		68.2	31.5	5.2	82	77000 {7900}	220000 {22000}	65 {6.6}	1.0	0.02	±0.90	790	$780×10^{-6}$
NES2000S	200 {20.4}	9000	25 to 45		66.6	30.5	5.6	92	110000 {11200}	540000 {55100}	67 {6.8}	1.0	0.02	±0.70	880	$1140×10^{-6}$
NES3000S	300 {30.6}	8000	35 to 50		70	31.2	7.6	104	150000 {15300}	610000 {62200}	85 {8.6}	1.0	0.02	±0.90	1200	$1990×10^{-6}$

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The values in the bottom table on the previous page are standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Transmission Capacity/Dimensions

Spacer type: low inertia hub x low inertia hub



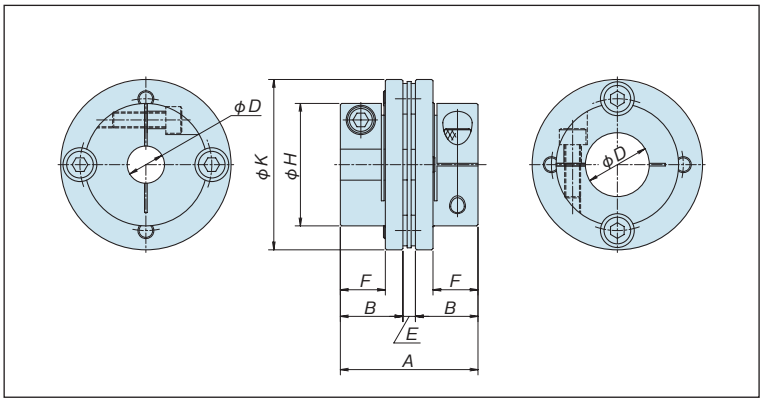
Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min^{-1}	Note 4) Bore diameter φD mm		Dimensions mm								Torsional stiffness N·m/rad {kgf·m/rad}		Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight g	Note 2) Moment of inertia $kg·m^2$
			Range of bore diameters	Standard bore diameter	A	B	E	F	H	φK	J	Through shaft allowable max. diameter	Whole coupling	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm		
NES50W	5.0 {0.51}	18000	5 to 10	Refer to the table of standard bore diameter (in the table below).	37	12.5	1.5	9.3	21.5	34	12	10	1600 {160}	6500 {660}	25 {2.6}	2.0	0.18	±0.80	52	$7.1×10^{-6}$
NES70W	7.0 {0.71}	18000	8 to 14		45.5	15	1.75	11.8	26	37	15.5	14	2700 {280}	9500 {970}	29 {3.0}	2.0	0.24	±0.90	76	$12.8×10^{-6}$
NES100W	10 {1.0}	15000	8 to 15		48.1	15.7	2.6	11.5	29.5	44	16.7	15	4600 {470}	15000 {1500}	33 {3.4}	2.0	0.25	±1.1	125	$28.8×10^{-6}$
NES250W	25 {2.6}	10000	10 to 20		59	20	3	14.4	38	55	19	20	8400 {860}	22000 {2200}	11 {1.1}	2.0	0.28	±1.4	230	$83.1×10^{-6}$
NES800W	80 {8.2}	10000	14 to 24		70.9	23.5	4.7	16.9	46	64	23.9	24	17000 {1700}	39000 {4000}	27 {2.8}	2.0	0.34	±1.4	380	188 $×10^{-6}$
NES1300W	130 {13}	10000	19 to 32		97.9	31.5	5.2	22.6	54	82	34.9	32	28000 {2900}	110000 {11000}	33 {3.4}	2.0	0.52	±1.8	810	671 $×10^{-6}$
NES2000W	200 {20.4}	9000	25 to 35		98.6	30.5	5.6	21.6	69	92	37.6	35	46000 {4700}	270000 {27600}	43 {4.4}	2.0	0.56	±1.4	1140	1230 $×10^{-6}$
NES3000W	300 {30.6}	8000	32 to 42		101.6	31.2	7.6	21	79	104	39.2	42	49000 {5000}	300000 {30600}	64 {6.5}	2.0	0.55	±1.8	1580	2230 $×10^{-6}$

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The columns with values in the table below are the standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Standard bore diameter and transmission torque by bore diameter (N·m)

Model No.	Bolt size	Tightening torque N·m {kgf·m}	Standard bore diameter (mm)																										
			5	6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42
NES50	M3	1.9 {0.19}	5	5	5	5	5	5	5	5																			
NES70	M3	1.9 {0.19}					7	7	7	7	7	7	7																
NES100	M4	3.8 {0.39}					10	10	10	10	10	10	10	10															
NES250	M4	3.8 {0.39}								25	25	25	25	25	25	25	25	25	25										
NES800	M6	12 {1.22}											80	80	80	80	80	80	80	80	80								
NES1300	M6	12 {1.22}																105	105	110	115	120	125	130	130				
NES2000	M8	30 {3.1}																				200	200	200	200	200			
NES3000	M8	30 {3.1}																							235	245	255	260	265

Single disk type: low inertia hub x low inertia hub

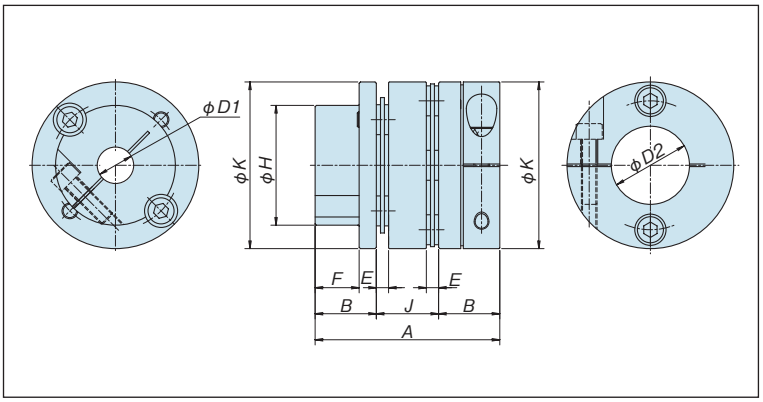


Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min⁻¹	Note 4) Bore diameter φD mm		Dimensions mm						Torsional stiffness N·m/rad {kgf·m/rad}		Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight	Note 2) Moment of inertia
			Range of bore diameters	Standard bore diameter	A	B	E	F	H	φK	Whole coupling	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm	g	kg·m²
NES50S	5.0 {0.51}	18000	5 to 10	Refer to the table of standard bore diameter (in the previous page).	26.5	12.5	1.5	9.3	21.5	34	2700 {280}	13000 {1300}	51 {5.2}	1.0	0.02	±0.40	34	3.9×10⁻⁶
NES70S	7.0 {0.71}	18000	8 to 14		31.75	15	1.75	11.8	26	37	3500 {360}	19000 {1900}	58 {5.9}	1.0	0.02	±0.45	46	6.8×10⁻⁶
NES100S	10 {1.0}	15000	8 to 15		34	15.7	2.6	11.5	29.5	44	6400 {650}	30000 {3000}	65 {6.6}	1.0	0.02	±0.55	78	15.9×10⁻⁶
NES250S	25 {2.6}	10000	10 to 20		43	20	3	14.4	38	55	12000 {1200}	44000 {4500}	21 {2.1}	1.0	0.02	±0.70	150	45.6×10⁻⁶
NES800S	80 {8.2}	10000	14 to 24		51.7	23.5	4.7	16.9	46	64	25000 {2600}	78000 {8000}	52 {5.3}	1.0	0.02	±0.70	250	114 ×10⁻⁶
NES1300S	130 {13}	10000	19 to 32		68.2	31.5	5.2	22.6	54	82	37000 {3800}	220000 {22000}	65 {6.6}	1.0	0.02	±0.90	490	367 ×10⁻⁶
NES2000S	200 {20.4}	9000	25 to 35		66.6	30.5	5.6	21.6	69	92	71000 {7200}	540000 {55100}	67 {6.8}	1.0	0.02	±0.70	700	670 ×10⁻⁶
NES3000S	300 {30.6}	8000	32 to 42		70	31.2	7.6	21	79	104	81000 {8300}	610000 {62200}	85 {8.6}	1.0	0.02	±0.90	980	1260 ×10⁻⁶

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The values in the bottom table on the previous page are standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Transmission Capacity/Dimensions

Spacer type: low inertia hub x straight hub



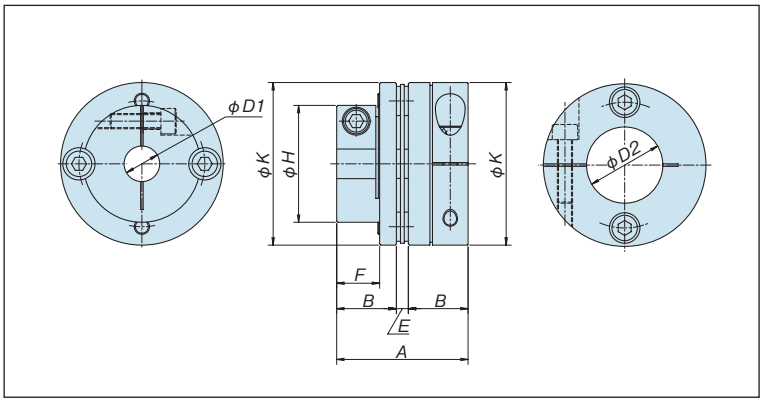
Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min^{-1}	Note 4) Bore diameter φD1 mm		Note 4) Bore diameter φD2 mm		Dimensions mm								Torsional stiffness N·m/rad {kgf·m/rad}	Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight	Note 2) Moment of inertia
			Range of bore diameters	Standard bore diameter	Range of bore diameters	Standard bore diameter	A	B	E	F	H	φK	J	Through shaft allowable max. diameter	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm	g	kg·m²
NES50W	5.0 {0.51}	18000	5 to 10	Refer to the table of standard bore diameter (in the table below).	6 to 16	Refer to the table of standard bore diameter (in the next page).	37	12.5	1.5	9.3	21.5	34	12	13	6500 {660}	25 {2.6}	2.0	0.18	±0.80	59	9.2×10⁻⁶
NES70W	7.0 {0.71}	18000	8 to 14		8 to 20		45.5	15	1.75	11.8	26	37	15.5	16	9500 {970}	29 {3.0}	2.0	0.24	±0.90	85	16.1×10⁻⁶
NES100W	10 {1.0}	15000	8 to 15		8 to 22		48.1	15.7	2.6	11.5	29.5	44	16.7	17	15000 {1500}	33 {3.4}	2.0	0.25	±1.1	140	35.8×10⁻⁶
NES250W	25 {2.6}	10000	10 to 20		10 to 25		59	20	3	14.4	38	55	19	22	22000 {2200}	11 {1.1}	2.0	0.28	±1.4	260	105 ×10⁻⁶
NES800W	80 {8.2}	10000	14 to 24		14 to 30		70.9	23.5	4.7	16.9	46	64	23.9	25	39000 {4000}	27 {2.8}	2.0	0.34	±1.4	430	235 ×10⁻⁶
NES1300W	130 {13}	10000	19 to 32		20 to 35		97.9	31.5	5.2	22.6	54	82	34.9	35	110000 {11000}	33 {3.4}	2.0	0.52	±1.8	950	860 ×10⁻⁶
NES2000W	200 {20.4}	9000	25 to 35		25 to 45		98.6	30.5	5.6	21.6	69	92	37.6	45	270000 {27600}	43 {4.4}	2.0	0.56	±1.4	1230	1450 ×10⁻⁶
NES3000W	300 {30.6}	8000	32 to 42		35 to 50		101.6	31.2	7.6	21	79	104	39.2	50	300000 {30600}	64 {6.5}	2.0	0.55	±1.8	1700	2560 ×10⁻⁶

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The columns with values in the table below are the standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Standard bore diameter and transmission torque by bore diameter (N·m)
Low inertia hub (φD1)

Model No.	Bolt size	Tightening torque N·m {kgf·m}	Standard bore diameter φD1 (mm)																											
			5	6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42
NES50	M3	1.9 {0.19}	5	5	5	5	5	5	5	5																			
NES70	M3	1.9 {0.19}					7	7	7	7	7	7	7																
NES100	M4	3.8 {0.39}					10	10	10	10	10	10	10	10															
NES250	M4	3.8 {0.39}								25	25	25	25	25	25	25	25	25	25										
NES800	M6	12 {1.22}											80	80	80	80	80	80	80	80	80								
NES1300	M6	12 {1.22}																105	105	110	115	120	125	130	130				
NES2000	M8	30 {3.1}																				200	200	200	200	200			
NES3000	M8	30 {3.1}																							235	245	255	260	265

Single disk type: low inertia hub x straight hub



Model No.	Allowable torque N·m {kgf·m}	Note 1) Max. rotation speed min⁻¹	Note 4) Bore diameter φD1 mm		Note 4) Bore diameter φD2 mm		Dimensions mm						Torsional stiffness N·m/rad {kgf·m/rad}	Axial spring constant N/mm {kgf/mm}	Note 3) Allowable misalignment			Note 2) Weight g	Note 2) Moment of inertia kg·m²
			Range of bore diameters	Standard bore diameter	Range of bore diameters	Standard bore diameter	A	B	E	F	H	φK	Disk only		Angular misalignment deg	Parallel misalignment mm	End play mm		
NES50S	5.0 {0.51}	18000	5 to 10	Refer to the table of standard bore diameter (in the previous page).	6 to 16	Refer to the table of standard bore diameter (in the table below).	26.5	12.5	1.5	9.3	21.5	34	13000 {1300}	51 {5.2}	1.0	0.02	±0.40	41	6 ×10⁻⁶
NES70S	7.0 {0.71}	18000	8 to 14		8 to 20		31.75	15	1.75	11.8	26	37	19000 {1900}	58 {5.9}	1.0	0.02	±0.45	55	10.1×10⁻⁶
NES100S	10 {1.0}	15000	8 to 15		8 to 22		34	15.7	2.6	11.5	29.5	44	30000 {3000}	65 {6.6}	1.0	0.02	±0.55	91	22.9×10⁻⁶
NES250S	25 {2.6}	10000	10 to 20		10 to 25		43	20	3	14.4	38	55	44000 {4500}	21 {2.1}	1.0	0.02	±0.70	180	70.7×10⁻⁶
NES800S	80 {8.2}	10000	14 to 24		14 to 30		51.7	23.5	4.7	16.9	46	64	78000 {8000}	52 {5.3}	1.0	0.02	±0.70	300	160 ×10⁻⁶
NES1300S	130 {13}	10000	19 to 32		20 to 35		68.2	31.5	5.2	22.6	54	82	220000 {22000}	65 {6.6}	1.0	0.02	±0.90	630	556 ×10⁻⁶
NES2000S	200 {20.4}	9000	25 to 35		25 to 45		66.6	30.5	5.6	21.6	69	92	540000 {55100}	67 {6.8}	1.0	0.02	±0.70	790	887 ×10⁻⁶
NES3000S	300 {30.6}	8000	32 to 42		35 to 50		70	31.2	7.6	21	79	104	610000 {62200}	85 {8.6}	1.0	0.02	±0.90	1100	1600 ×10⁻⁶

Notes 1. The maximum rotation speed does not take dynamic balance into consideration.
2. The weight and moment of inertia are the values at maximum bore diameter.
3. Each allowable misalignment is based on the assumption that both of the other two misalignment values are 0 (zero).
4. The columns with values in the table below are the standard bore diameters. The figures indicate transmission torques.
5. Recommended tolerance for mounting shaft is h7. However, shaft diameters of 35 mm support servomotor shafts with a tolerance of $^{+0.010}_{0}$.

Standard bore diameter and transmission torque by bore diameter (N·m)
Straight hub (φD2)

Model No.	Bolt size	Tightening torque N·m {kgf·m}	Standard bore diameter φD2 (mm)																												
			6	6.35	7	8	9	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50
NES50	M3	1.9 {0.19}	5	5	5	5	5	5	5	5	5	5	5	5																	
NES70	M3	1.9 {0.19}				7	7	7	7	7	7	7	7	7	7	7	7	7													
NES100	M4	3.8 {0.39}				10	10	10	10	10	10	10	10	10	10	10	10	10	10												
NES250	M4	3.8 {0.39}							25	25	25	25	25	25	25	25	25	25	25	25	25										
NES800	M6	12 {1.22}										80	80	80	80	80	80	80	80	80	80	80	80								
NES1300	M6	12 {1.22}																107	118	130	130	130	130	130	130						
NES2000	M8	30 {3.1}																			200	200	200	200	200	200	200	200	200		
NES3000	M8	30 {3.1}																							300	300	300	300	300	300	300

Keyway Machining Service

A keyway type (clamp + keyway) and a type with an adapter for tapered shafts can also be manufactured. Contact us for more information.

Product Selection

See page 57 for the product selection.

Handling and Shaft Mounting

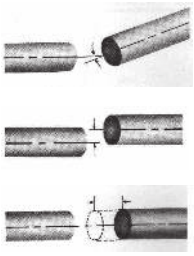
1. Handling the coupling

Read the instruction manual carefully to understand the proper method of handling couplings. Since NES Series ECHT-FLEX couplings are delivered as a completed assembly (finished bore), the coupling can be directly mounted to your equipment. Mount the coupling to the shaft according to the following procedure.
When mounting the coupling, be careful not to apply excess force to the coupling, and be sure not to drop the coupling.
Never loosen the hexagon socket head bolt that fastens the disk.
The operating temperature range is –30 to 100°C.

2. Mounting the coupling to a shaft

(1) Use a cloth to wipe any dust and oil completely off the surface of the target shaft and the coupling mounting surface.

(2) Center the shaft to mount the coupling on, then attach the coupling to it. When attaching the coupling, insert the shaft all the way to the clamp hub end face.
The coupling's allowable angular misalignment, allowable parallel misalignment and allowable end play (shaft direction displacement) are all correlated to each other. Increasing one factor decreases the others, so the factors need to be considered together. Perform the centering adjustment while referring to the following instructions.



Angular misalignment

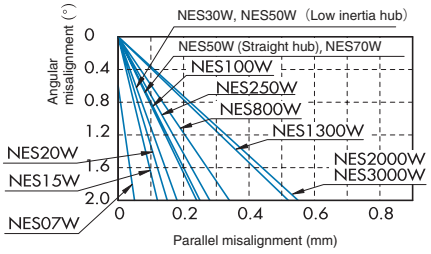
Parallel misalignment

End play

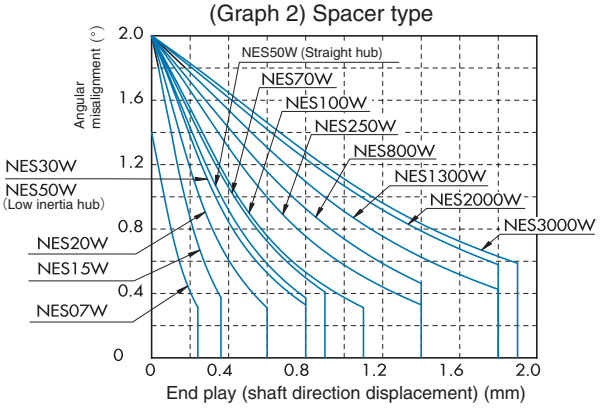
<When using the spacer type>

Convert the parallel misalignment into an angular misalignment (Graph 1).
Apply the total of the converted value and angular misalignment to the angular misalignment shown in Graph 2.
Adjust the centering condition so that the misalignment does not exceed the range specified for each size.

(Graph 1) Spacer type



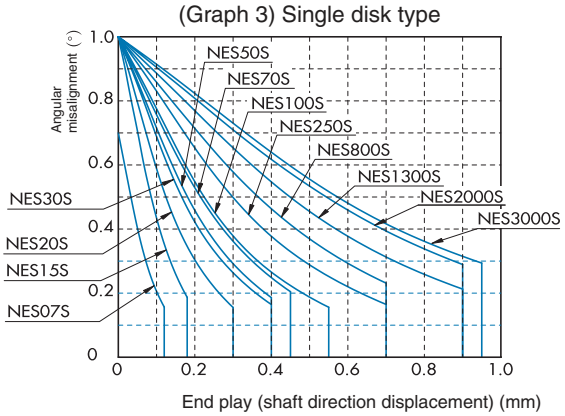
(Graph 2) Spacer type



<When using the single disk type>

The single disk type can only absorb a very small amount of parallel misalignment, so should be centered mainly by adjusting the angular misalignment and end play (shaft direction displacement).
Graph 3 shows the correlation between a coupling's allowable angular misalignment and allowable end play (shaft direction displacement).
Adjust the centering condition so that the misalignment does not exceed the range specified for each size.

(Graph 3) Single disk type



(3) Make sure that the mounted coupling can be moved in the rotating and axial directions with only a light force when the clamp bolt is loosened. If the coupling cannot be moved smoothly, re-adjust the centering condition in Step (2).

(4) Tighten clamp bolts to the tightening torques shown in the table below.

Model No.	NES07	NES15	NES20	NES30	NES50	NES70	NES100	NES250	NES800	NES1300	NES2000	NES3000
Clamp bolt size	M2	M2	M2.5	M2.5	M3	M3	M4	M4	M6	M6	M8	M8
Tighteningtorque N·m {kgf·m}	0.50 {0.05}	0.50 {0.05}	1.0 {0.10}	1.0 {0.10}	1.9 {0.19}	1.9 {0.19}	3.8 {0.39}	3.8 {0.39}	12 {1.22}	12 {1.22}	30 {3.1}	30 {3.1}

Innovation in Motion

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