

UCM/UCS COUPLING



- Couplings for UTM III/UTM II/UTMV
- Connecting to external shafts accurately.
- Preventing rotational resonance, and improving accuracy of torque measurement. (Rubber type)

Structure of product code

UCM15-3*5G

- Material type (G : Rubber, M : Metal)
- D1*D2
- Diameter ϕA ($\phi 15$, $\phi 19$, $\phi 25$, . . .)
- Length type (M : Middle, S : Short)

Specifications

Type	Max. diameter (mm)	Max. torque (Nm)	Max. speed (rpm)	Inertia moment (kgm ²)	Torsional rigidity (Nm/rad)	Allowable eccentricity (mm)	Allowable deflection angle (°)	Allowable endplay (mm)	Weight (g)
UCM15	6	2.2	42000	2.7×10^{-7}	43	0.15	1.5	± 0.2	8
UCS15		1		2.0×10^{-7}	25				7
UCM19	8	4.2	33000	8.4×10^{-7}	88	0.15	1.5	± 0.2	14
UCS19		1.6		6.2×10^{-7}	63				12
UCM25	12	8	25000	3.0×10^{-6}	170	0.15	1.5	± 0.2	28
UCS25		4.6		2.3×10^{-6}	125				25
UCM30	15	12.6	21000	6.9×10^{-6}	220	0.20	1.5	± 0.3	45
UCS30		6.6		5.5×10^{-6}	160				39
UCM34	16	16	18000	1.3×10^{-5}	390	0.20	1.5	± 0.3	65
UCS34		11		1.0×10^{-5}	350				62
UCM39	20	27	16000	2.7×10^{-5}	520	0.20	1.5	± 0.3	98
UCS39		14		2.1×10^{-5}	440				85
UCM44	22	36	14000	4.2×10^{-5}	640	0.20	1.5	± 0.3	136
UCM56	28	70	11000	1.4×10^{-4}	1500	0.20	1.5	± 0.3	276

Type	TYPE	Max. diameter (mm)	Max. torque (Nm)	Max. speed (rpm)	Inertia moment (kgm ²)	Torsional rigidity (Nm/rad)	Allowable eccentricity (mm)	Allowable deflection angle (°)	Allowable endplay (mm)	Weight (kg)
UCM65B	I	35	80	10000	2.44×10^{-4}	6.50×10^4	0.02	1.0	± 0.46	0.53
	II				4.01×10^{-4}	8.70×10^4				0.68
UCM80B	I	45	140	10000	7.25×10^{-4}	1.26×10^5	0.02	1.0	± 0.58	0.98
	II				1.15×10^{-3}	1.57×10^5				1.25
UCM90B	I	50	250	10000	1.43×10^{-3}	2.17×10^5	0.02	1.0	± 0.64	1.57
	II				2.19×10^{-3}	2.70×10^5				1.91
UCM125B	I	65	613	10000	0.76×10^{-2}	0.67×10^6	0.02	1.0	± 0.9	4.64
	II				1.26×10^{-2}	0.94×10^6				5.91
UCM155B	I	80	1197	8000	2.20×10^{-2}	1.52×10^6	0.02	1.0	± 1.1	8.4
	II				3.59×10^{-2}	2.05×10^6				10.8
UCM200B	I	90	3200	8000	7.10×10^{-2}	3.13×10^6	0.02	1.0	± 1.47	15.06

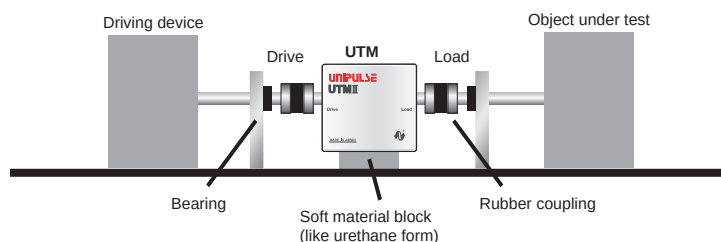
Type	Max. diameter (mm)	Max. torque (Nm)	Max. speed (rpm)	Inertia moment (kgm ²)	Torsional rigidity (Nm/rad)	Axial spring constant (N/mm)	Allowable deflection angle (°)	Allowable endplay (mm)	Weight (kg)
UCM260	90	6880	3400	248.75×10^{-3}	1.078×10^7	612	1	± 0.7	35.3

How to use couplings

UTM III/UTM II shafts are connected to drive-side and load-side shafts with rubber couplings as shown in the below.

If the load and driving devices have bearing internally, the bearings in the figure are unnecessary.

A soft block made of urethane and so on should be put between the main frame of UTM III/UTM II and the base plate (to hold the main frame of UTM III/UTM II loosely).



* Please contact us if you need couplings for UTM II -10000Nm and key groove types.

* Please use suitable couplings based on applications of torque measurement. You may seek the advice of sales representatives.

correspondence table

■ : Rubber type coupling ● : Metal type coupling (○ : TYPE II)

External dimension

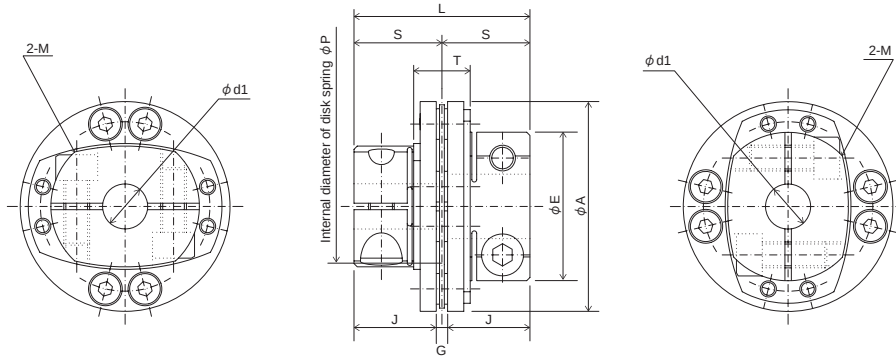
■ UCM15 to 56 ■ UCS15 to 39



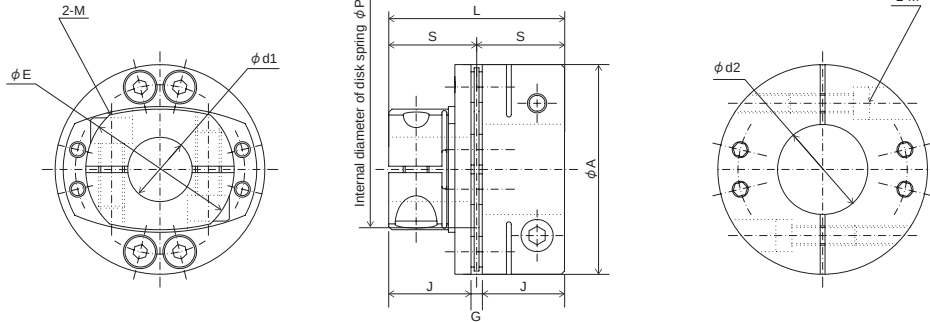
Shaft tolerance should be h6 or h7.

■ UCM65B,80B,90B

■ TYPE I



■ TYPE II



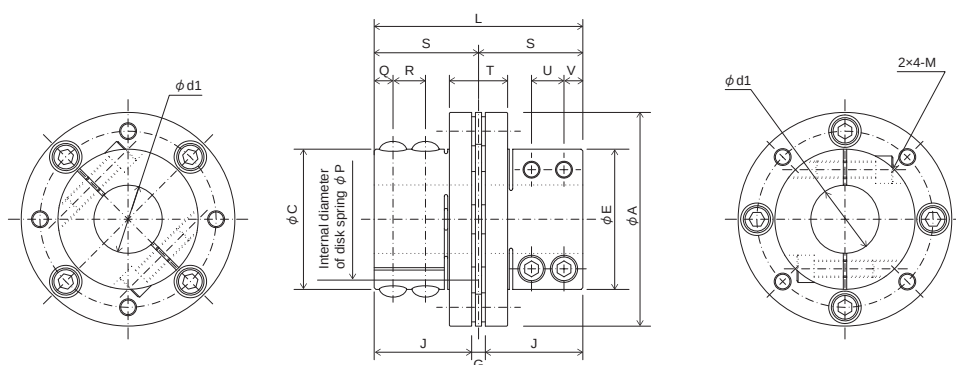
Unit mm

Supported UTMⅢ/UTMⅡ/UTMV measurement range(Nm)	Model	TYPE	d1	d2	A	E	P	L	S	T	J	G	M	d1*d2	Screw tightening torque (Nm)
20, 50	UCM65B	I	14 to 25	—	65	46	36	54.5	27.25	17.5	25.5	3.5	~ φ 20 : M8 φ 22 ~ : M6	14*20 15*20 16*20 18*20 19*20 20*20 20*22 20*24 20*25	M8 : 34.3 M6 : 13.7
		II	28 to 35	—						—				20*28 20*30 20*32 20*35	
100	UCM80B	I	15 to 35	—	80	59	46	67.5	33.75	20.5	32	3.5	~ φ 28 : M10 φ 30 ~ : M8	15*25 16*25 18*25 19*25 20*25 22*25 24*25 25*25 25*28 25*30 25*32 25*35	M10 : 67.6 M8 : 34.3
		II	38 to 45	—						—				25*38 25*40 25*42 25*45	
200	UCM90B	I	19 to 35	—	90	64	51	77	38.5	28	36.5	4	~ φ 35 : M10 φ 38 ~ : M8	19*30 20*30 22*30 24*30 25*30 28*30 30*30 30*32 30*35	M10 : 67.6 M8 : 34.3
		II	38 to 50	—						—				30*38 30*40 30*42 30*45 30*48 30*50	

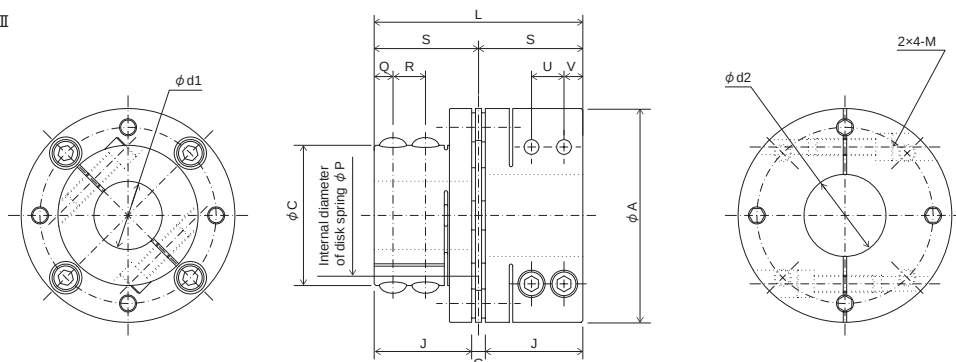
Shaft tolerance should be h6 or h7.

■ UCM125B,155B,200B

■ TYPE I



■ TYPE II



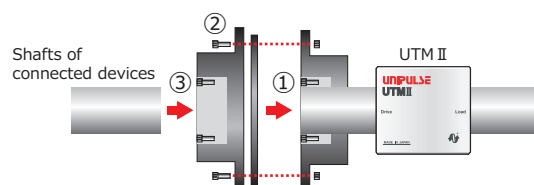
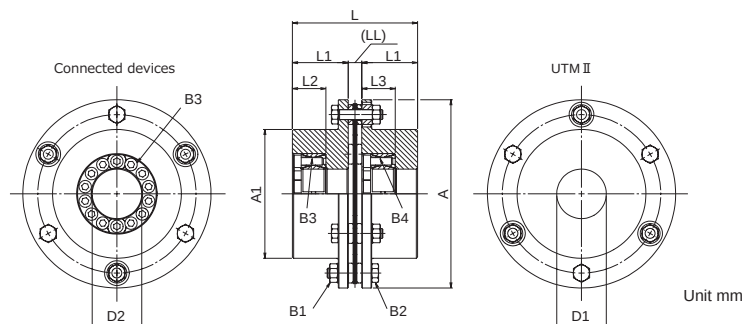
Unit mm

Supported UTM III/UTM II/UTMV measurement range(Nm)	Model	TYPE	d1	d2	A	E	C	P	L	S	T	Q	R	U	V	J	G	M	d1*d2	Screw tightening torque (Nm)
500	UCM125B	I	30 to 45	—	125	82	82	66	122	61	34	11	19	19	11	57	8	M10	30*40, 32*40, 35*40, 38*40, 40*40, 40*42, 40*45	67.6
		II		48 to 65		—					—								40*48, 40*50, 40*55, 40*60, 40*65	
1000	UCM155B	I	40 to 60	—	155	104	104	86	141	70.5	41	12.5	22	22	12.5	66	9	M12	40*60, 42*60, 45*60, 48*60, 50*60, 55*60, 60*60	118
		II		65 to 80		—					—								60*65, 60*70, 60*75, 60*80	
1000, 2000	UCM200B	I	60 to 90	—	200	138	138	125	168	84	48	15	26	26	15	78	12	M14	60*60, 60*65, 60*70, 60*75, 60*80, 60*85, 60*90, 65*70, 70*70, 70*75, 70*80, 70*85, 70*90	186

Shaft tolerance should be h6 or h7.

■ UCM220,260

■ Means of attachment



Numbers on figure show the order of fastening bolts of couplings.

Corresponding measurement range of UTM II/UTMV (Nm)	Model	A	A1	L	L1	L2	L3	LL	Hexagon nuts B1	Reamer bolt B2	Clamping bolt		D1*D2
5000	UCM260	262	166	223	100	39	39	23	M20	M20	B3	B4	70*75, 70*80, 90*80, 90*85, 90*90
											M10	M10	

Recommended size tolerance of shaft diameter is h9.