

Beam Couplings

CL1 Miniature Series

- One-piece metallic beam coupling
- Zero backlash, flexible shaft
- Spiral and parallel cut designs available
- Accommodates misalignment and shaft endplay
- Identical clockwise and counterclockwise rotational characteristics
- Available in aluminum or stainless steel
- Multiple bore and shaft connecting configurations



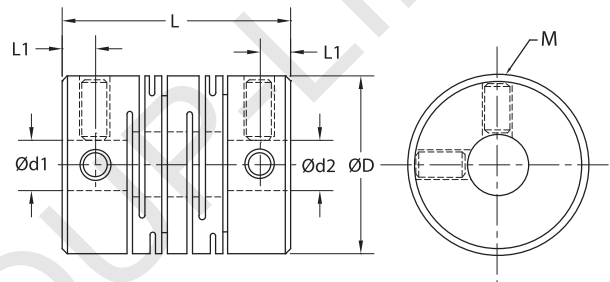
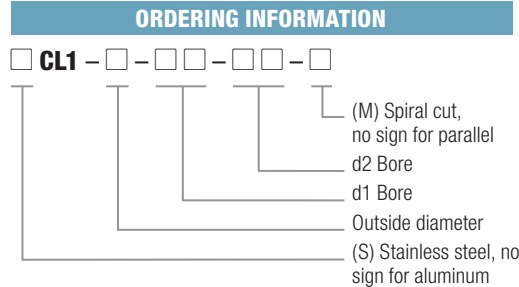
Aluminum



Stainless Steel

CL1 OPTIONS

- Aluminum 6061
- Stainless Steel 303
- Spiral
- Parallel
- Setscrew



Parallel shown; spiral and parallel dimensions are identical.

CL1 PARALLEL AND SPIRAL DIMENSIONS

Model	Bore Range ($\phi d1-\phi d2$)		ϕD	L	L1	M	Wrench Torque
	Parallel and Spiral Models						
	in	mm	mm	mm	mm	metric	Nm
CL1-M15 SCL1-M15	0.12-0.20	3-5	15.5	21	2.6	M3	0.7
CL1-15 SCL1-15	0.12-0.20	3-5	15.5	23	3.1	M3	0.7
CL1-17 SCL1-17	0.16-0.24	4-6	17.5	23	3.1	M3	0.7
CL1-19 SCL1-19	0.20-0.31	5-8	19.5	24.5	3.5	M4	1.5

CL1 PARALLEL AND SPIRAL SPECIFICATIONS

Model	Rated Torque		Max. Torque		Max. Speed	Moment of Inertia	Static Torsional Stiffness	Errors of Eccentricity (mm)		Errors of Shaft Angularity ($^{\circ}C$)		Errors of Shaft Endplay (mm)	Mass (g)
	lb-in	Nm	lb-in	Nm				rpm	kg \cdot m 2	Nm/rad	Parallel		
CL1-M15	1.77	0.2	3.54	0.4	13000	3.0×10^{-7}	35	0.1	0.12	1.5	2	± 0.15	10
CL1-15	1.77	0.2	3.54	0.4	13000	3.2×10^{-7}	36	0.1	0.12	1.5	2	± 0.15	10
CL1-17	2.65	0.3	5.31	0.6	12000	6.1×10^{-7}	65	0.1	0.12	1.5	2	± 0.25	12
CL1-19	3.54	0.4	7.08	0.8	10000	8.5×10^{-7}	100	0.1	0.12	1.5	2	± 0.25	14
SCL1-M15	2.65	0.3	5.31	0.6	13000	8.7×10^{-7}	70	0.1	0.12	1.5	2	± 0.15	28
SCL1-15	2.65	0.3	5.31	0.6	13000	8.9×10^{-7}	72	0.1	0.12	1.5	2	± 0.15	30
SCL1-17	3.54	0.4	7.08	0.8	12000	1.5×10^{-6}	160	0.1	0.12	1.5	2	± 0.25	34
SCL1-19	7.96	0.9	15.93	1.8	10000	2.0×10^{-6}	205	0.1	0.12	1.5	2	± 0.25	40

Beam Couplings

CL2 Series



Aluminum



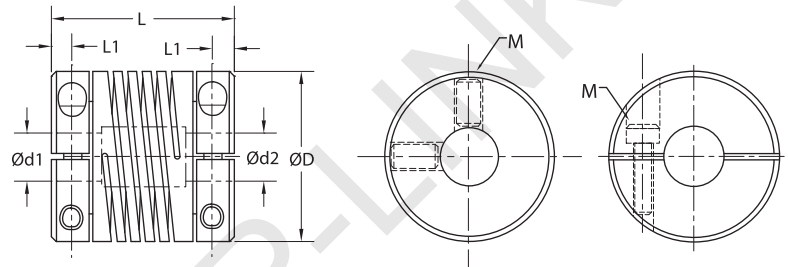
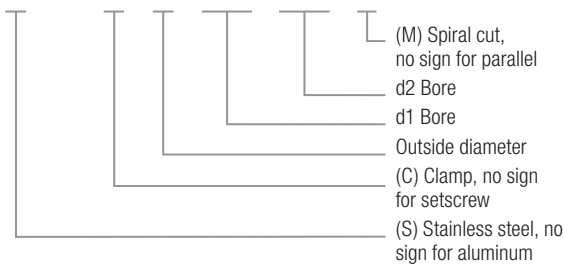
Stainless Steel

CL2 OPTIONS

- Aluminum 6061
- Stainless Steel 303
- Spiral
- Parallel
- Setscrew
- Clamp

ORDERING INFORMATION

CL2 - □ - □ - □ - □ - □ - □



Spiral shown; spiral and parallel dimensions are identical.

CL2 PARALLEL AND SPIRAL DIMENSIONS

Model	Bore Range (Ød1-Ød2)		ØD	L		L1		M		Wrench Torque	
	Setscrew and Clamp			Setscrew	Clamp	Setscrew	Clamp	Setscrew	Clamp	Setscrew	Clamp
	in	mm		mm	mm	mm	mm	metric	metric	Nm	Nm
CL2-075 SCL2-075	0.11-0.25	3-6.35	19.1	19.1	22.9	2.55	3.1	M3	M2.5	0.7	1
CL2-100 SCL2-100	0.19-0.39	5-10	25.4	25.4	31.8	3.55	4.15	M4	M3	1.7	1.5
CL2-112 SCL2-112	0.23-0.50	6-12.7	28.6	28.6	38.1	3.6	5	M5	M3	1.7	2
CL2-150 SCL2-150	0.31-0.59	8-15	38.1	38.1	41.3	4.15	5.9	M5	M5	3.8	4
CL2-200 SCL2-200	0.47-0.74	12-19	50.8	50.8	51	5.25	6.7	M6	M6	4	7.5

CL2 PARALLEL AND SPIRAL-SETScrew SPECIFICATIONS

Model	Rated Torque		Max. Torque		Max. Speed	Moment of Inertia (kg•m ²)		Static Torsional Stiffness	Errors of Eccentricity (mm)		Errors of Shaft Angularity (°C)		Errors of Shaft Endplay	Mass (g)	
	lb-in	Nm	lb-in	Nm		rpm	Parallel		Spiral	Nm/rad	Parallel	Spiral		Parallel	Spiral
CL2-075	4.42	0.5	8.85	1.0	10000	6.6X10 ⁻⁷	6.9x10 ⁻⁷	110	0.1	0.1	1.5	2	±0.15	12	12
CL2-100	12.30	1.4	24.78	2.8	10000	2.6X10 ⁻⁶	2.8x10 ⁻⁶	170	0.1	0.1	1.5	2	±0.15	26	28
CL2-112	14.10	1.6	28.32	3.2	8000	4.9X10 ⁻⁶	5.1x10 ⁻⁶	260	0.1	0.1	1.5	2	±0.15	42	44
CL2-150	37.10	4.2	74.34	8.4	8000	1.9X10 ⁻⁵	2.1x10 ⁻⁵	330	0.15	0.1	1.5	2	±0.15	76	78
CL2-200	79.60	9.0	159.30	18.0	6000	8.9X10 ⁻⁵	9.0x10 ⁻⁵	560	0.15	0.1	1.5	2	±0.15	128	130
SCL2-075	8.85	1.0	17.70	2.0	10000	2.1X10 ⁻⁶	2.2x10 ⁻⁶	230	0.1	0.1	1.5	2	±0.15	34	36
SCL2-100	19.40	2.2	38.94	4.4	10000	6.8X10 ⁻⁶	7.0x10 ⁻⁶	320	0.1	0.1	1.5	2	±0.15	74	76
SCL2-112	27.43	3.1	54.87	6.2	8000	2.2X10 ⁻⁵	2.3x10 ⁻⁵	790	0.1	0.1	1.5	2	±0.15	118	120
SCL2-150	66.37	7.5	132.75	15.0	8000	8.2X10 ⁻⁵	8.3x10 ⁻⁵	980	0.15	0.1	1.5	2	±0.15	212	214
SCL2-200	123.90	14.0	247.80	28.0	6000	2.1X10 ⁻⁴	2.7x10 ⁻⁴	1450	0.15	0.1	1.5	2	±0.15	358	362

Beam Couplings

CL2 Series

CL2 PARALLEL AND SPIRAL-CLAMP SPECIFICATIONS

Model	Rated Torque		Max. Torque		Max. Speed	Moment of Inertia (kg•m ²)		Static Torsional Stiffness	Errors of Eccentricity (mm)	Errors of Shaft Angularity (°C)		Errors of Shaft Endplay	Mass (g)	
	lb-in	Nm	lb-in	Nm		rpm	Parallel			Spiral	Nm/rad		Parallel and Spiral	Parallel
CL2-C075	4.42	0.5	8.85	1.0	8000	9.0x10 ⁻⁷	9.0X10 ⁻⁷	110	0.1	1.5	2	±0.15	14	14
CL2-C100	12.30	1.4	24.78	2.8	6000	2.5x10 ⁻⁶	2.6X10 ⁻⁶	170	0.1	1.5	2	±0.15	32	34
CL2-C112	14.10	1.6	28.32	3.2	5000	8.8x10 ⁻⁶	8.9X10 ⁻⁶	260	0.1	1.5	2	±0.15	46	48
CL2-C150	37.10	4.2	74.34	8.4	4500	3.0x10 ⁻⁵	3.2X10 ⁻⁵	330	0.1	1.5	2	±0.15	92	96
CL2-C200	79.60	9.0	159.30	18.0	4500	9.6x10 ⁻⁵	9.8X10 ⁻⁵	560	0.1	1.5	2	±0.15	136	140
SCL2-075	8.85	1.0	17.70	2.0	8000	2.3x10 ⁻⁶	2.4X10 ⁻⁶	230	0.1	1.5	2	±0.15	40	40
SCL2-C100	19.40	2.2	38.94	4.4	6000	7.2x10 ⁻⁶	7.3X10 ⁻⁶	320	0.1	1.5	2	±0.15	90	96
SCL2-C112	27.43	3.1	54.87	6.2	5000	2.4x10 ⁻⁵	2.6X10 ⁻⁵	790	0.1	1.5	2	±0.15	128	134
SCL2-C150	66.37	7.5	132.75	15.0	4500	8.4x10 ⁻⁵	8.6X10 ⁻⁵	980	0.1	1.5	2	±0.15	256	268
SCL2-C200	123.90	14.0	247.80	28.0	4500	2.8x10 ⁻⁴	3.0X10 ⁻⁴	1450	0.1	1.5	2	±0.15	380	392

Beam Couplings

CL7 Series



Aluminum



Stainless Steel

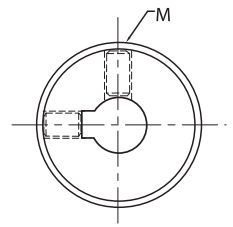
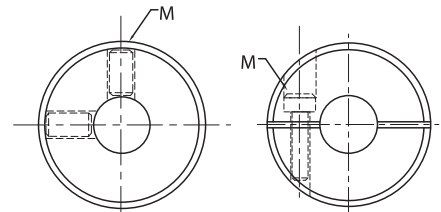
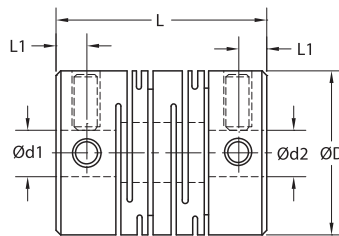
CL7 OPTIONS

- Aluminum 6061
- Stainless Steel 303
- Parallel
- Setscrew
- Clamp
- Keyway & Setscrew

ORDERING INFORMATION

CL7 - □ - □ - □ - □ - □ - □

- d2 Bore
- d1 Bore
- Outside Diameter
- (C) Clamp, (K) Keyway, no sign for setscrew
- (S) Stainless steel, no sign for aluminum



*Keyway available in the following sizes: 32, 40, 50, and 63

CL7 SETSCREW KEYWAY AND CLAMP DIMENSIONS

Model	Bore Range ($\phi d1-\phi d2$)				ϕD	L	L1		M		Wrench Torque	
	Setscrew and Clamp		Keyway				Setscrew, Clamp and Keyway		Setscrew Keyway	Clamp	Setscrew Keyway	Clamp
	in	mm	in	mm	mm	mm	mm	mm	metric	metric	Nm	Nm
CL7-12 SCL7-12	0.11-0.19	3-5	N/A	N/A	12	18.5	2.5	2.5	M2.5	M2	0.5	0.5
CL7-16 SCL7-16	0.15-0.25	4-6.35	N/A	N/A	16	23	3	3.25	M3	M2.5	0.7	1
CL7-20 SCL7-20	0.19-0.37	5-9.52	N/A	N/A	20	26	3	3.75	M3	M2.5	0.7	1
CL7-25 SCL7-25	0.31-0.47	8-12	N/A	N/A	25	31	4	4.25	M4	M3	1.7	1.5
CL7-32 SCL7-32	0.39-0.55	10-14	0.39-0.55	10-14	32	41	6	6	M4	M4	1.7	2.5
CL7-40 SCL7-40	0.39-0.70	10-18	0.47-0.70	12-18	40	56	8.5	8.5	M5	M5	4	4
CL7-50 SCL7-50	0.47-0.94	12-19	0.55-0.78	14-20	50	71	10.5	10.5	M6	M6	7	8
CL7-63 SCL7-63	0.55-0.94	14-24	0.70-1.18	18-30	63	90	13	13	M8	M8	15	16

CL7 SETSCREW KEYWAY AND CLAMP SPECIFICATIONS

Model	Rated Torque		Max. Torque		Max. Speed (rpm)		Moment of Inertia ($kg \cdot m^2$)		Static Torsional Stiffness (Nm/rad)		Errors of Eccentricity (mm)	Errors of Shaft Angularity ($^{\circ}C$)	Errors of Shaft Endplay	Mass (g)	
	lb-in	Nm	lb-in	Nm	Setscrew	Clamp Keyway*	Setscrew Keyway*	Clamp	Setscrew Keyway*	Clamp	Setscrew Keyway and Clamp			Setscrew Keyway*	Clamp
CL7-12	4.42	0.5	8.85	1.0	30000	10000	8.2×10^{-8}	7.6×10^{-8}	33	34	0.1	1.5	± 0.3	4	4
CL7-16	7.08	0.8	14.16	1.6	22000	9300	3.2×10^{-7}	3.2×10^{-7}	46	46	0.1	1.5	± 0.3	8	8
CL7-20	9.73	1.1	19.47	2.2	18000	7500	8.8×10^{-6}	8.8×10^{-6}	115	118	0.1	1.5	± 0.3	16	18
CL7-25	12.30	1.4	24.78	2.8	14000	6000	2.5×10^{-6}	2.5×10^{-6}	165	167	0.15	1.5	± 0.35	28	32
CL7-32	24.78	2.8	49.56	5.6	10000	4600	9.5×10^{-6}	9.6×10^{-6}	270	228	0.15	1.5	± 0.35	62	66
CL7-40	55.75	6.3	111.51	12.6	9400	3600	3.1×10^{-5}	3.2×10^{-5}	345	346	0.2	1.5	± 0.35	134	138
CL7-50	97.35	11.0	194.70	22.0	7600	3000	1.0×10^{-5}	9×10^{-5}	580	580	0.2	1.5	± 0.35	266	272
CL7-63	194.70	22.0	389.40	44.0	6000	2200	3.0×10^{-4}	3.1×10^{-4}	830	843	0.2	1.5	± 0.35	500	530
SCL7-12	7.08	0.8	14.16	1.6	30000	10000	2.0×10^{-7}	2.1×10^{-7}	60	62	0.1	1.5	± 0.3	12	14
SCL7-16	9.73	1.1	19.47	2.2	22000	9300	8.3×10^{-7}	8.9×10^{-7}	80	83	0.1	1.5	± 0.3	22	26
SCL7-20	14.16	1.6	28.32	3.2	18000	7500	2.2×10^{-6}	2.4×10^{-6}	235	246	0.1	1.5	± 0.3	40	48
SCL7-25	19.47	2.2	38.94	4.4	14000	6000	6.7×10^{-6}	7.0×10^{-6}	315	315	0.15	1.5	± 0.35	74	78
SCL7-32	48.67	5.5	97.35	11.0	10000	4600	2.5×10^{-5}	2.6×10^{-5}	837	845	0.15	1.5	± 0.35	162	174
SCL7-40	76.99	8.7	153.99	17.4	9400	3600	8.6×10^{-5}	8.9×10^{-5}	980	990	0.2	1.5	± 0.35	354	372
SCL7-50	141.60	16.0	283.20	32.0	7600	3000	2.6×10^{-4}	2.7×10^{-4}	1385	1380	0.2	1.5	± 0.35	710	760
SCL7-63	336.30	38.0	672.60	76.0	6000	2200	8.2×10^{-4}	8.7×10^{-4}	1795	1790	0.2	1.5	± 0.35	1310	1410

*Keyway available in the following sizes: 32, 40, 50, and 63