Curved Jaw

IN THIS SECTION:

- CJ Series
- GS Series

Warnings

WARNING

Failure to observe the following warnings could cause the power transmission product to break and parts to be thrown with sufficient force to cause serious injury or death.

Selection. Do not exceed catalog ratings. Refer to the Lovejoy catalog for proper selection, sizing, horsepower, torque range, and speed range of these products.

Installation. Proper maintenance, handling, and shop practices are critical. Follow all installation instructions included with the product and provided by your equipment manufacturer, and all applicable federal, state, and local regulations concerning the safe operation and maintenance of manufacturing equipment.

Operation. Avoid sudden shock loads during start up and operation.

Do not operate a coupling assembly with improper alignment or bolt torque or with damaged or worn elastomeric elements. Inspect the assembly for these conditions shortly after initial operation and periodically thereafter.

The coupling assembly should operate quietly and smoothly. If the coupling assembly vibrates or makes a beating sound, shut down the equipment immediately and recheck the alignment.

Disclaimer

This catalog is provided solely to give you analysis tools and data to assist you in your product selection. Product performance is affected by many factors beyond the control of Lovejoy. Therefore, you must validate the suitability and feasibility of all product selections for your applications.

Lovejoy does not manufacture or sell power transmission products for elevators, man lifts, or other devices that carry people. We make no representation or warranty concerning such uses disclaim all liability for harm that might result from the use of our products in those applications.

Lovejoy products are sold subject to Lovejoy terms and conditions of sale (view at www.lovejoy-inc.com/resources), which include our limited warranty and remedy. Please consult with your Lovejoy engineer for more information and assistance.

Every reasonable effort has been made to ensure the accuracy of the information in this writing, but no liability is accepted for errors, omissions or for any other reason.

If you have any questions, contact the Lovejoy Engineering Department at 1-630-852-0500 or email appleng@lovejoy-inc.com.

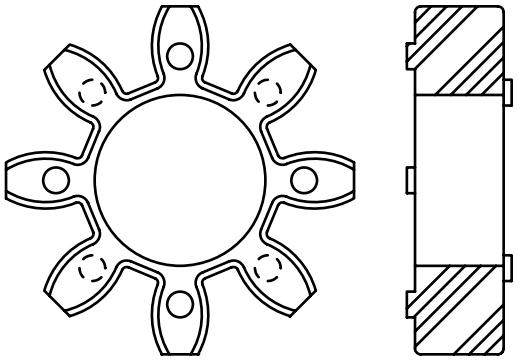
Table of Contents

The Curved Jaw Design

- Three piece design that is easy to assemble
- The curved jaw design incorporates both radial and axial curvature (crowning) to the elastomer (spider)
- Hubs are offered in sintered iron, steel, aluminum, cast iron and nodular iron materials
- Four different urethane elastomers available
- No metal to metal contact and no lubrication required
- Fail safe design due to the jaw in compression design (continues to function after the elastomer fails)
- The CJ series covers a torque range of 67 to 221,260 in-lbs

Elastomers

- Four types of spiders are available for the CJ Series of couplings
- Urethane spiders provide high abrasion resistance and elasticity, along with good damping characteristics
- The spiders are offered in a variety of shore hardnesses, each providing a different level of torque capacity, damping, and chemical resistance
- The 92A shore insert (yellow) is the standard, offering excellent torque carrying capacity
- The 80A shore insert (blue) offers the best damping characteristics
- The 95/98A shore spider (red) offers higher torque than the standard 92 shore, but retains greater damping capacity compared to the 64D shore insert (green)
- The 64D shore insert is offered for high humidity environments, higher temperatures, and offers the highest torque capacity
- The standard curved jaw spider design has a hole in the center to accommodate small between shaft end measurements
- The 80A, 92A, and 95/98A shore spiders have a temperature capacity of 212° F
- The 64D shore spider has a temperature capacity of 230° F
- The curved jaw spider's urethane material also resists oil, dirt, sand, grease, moisture, many solvents, as well as atmospheric effects of ozone



Standard Spider Design

CJ Series Elastomer Recommendation Chart

Spider Type	Application types requiring:
80 shore A (Blue)	Good dampening properties
92 shore A (Yellow)	General & hydraulic applications
95/98 shore A (Red)	High torque requirements
64 shore (Green)	High humidity environments

CJ Series Elastomer Performance Data

Spider Type	Color	Material	Temperature Range		Stock	Misalignment (inches)			Typical Applications
			Normal	Maximum	Sizes	Angular	Parallel	Axial	
80 Shore A	Blue	Polyurethane	-40° to 212° F	-40° to 248° F	14-180	.9 - 1.3 deg	.008 - .027	.039 - .252	Good dampening properties
92 Shore A	Yellow	Polyurethane	-40° to 212° F	-50° to 248° F	14-180	.9 - 1.3 deg	.008 - .027	.039 - .252	General & hydraulic
95/98 Shore A	Red	Polyurethane	-40° to 212° F	-40° to 248° F	14-180	.9 - 1.3 deg	.008 - .027	.039 - .252	High torque requirements

CJ Series Special Elastomer Data

Spider Type	Color	Material	Temperature Range		Stock	Misalignment (inches)			Typical Applications
			Normal	Maximum	Sizes	Angular	Parallel	Axial	
64 Shore D	Green	Polyurethane	-30° to 230° F	-30° to 266° F	14-180	.9 - 1.3 deg	.008 - .027	.039 - .252	High humidity environments

Step 1: Determine the nominal torque (Tkn) of your application:

$$\text{Tkn (in-lbs)} = \frac{\text{HPx63025}}{\text{RPM}}$$

Step 2: Calculate your Application Service Factor using the charts below. The total Service Factor (K) will be:

K = K1 x K2 x K3

Step 3: Calculate the design torque (DTkmax) of your application.

Design Torque (DTkmax) = Tkn x K (in-lbs)

Step 4: Using the Elastomer Torque Ratings Tables on pages CJ-6 and CJ-7 select the urethane shore hardness which best corresponds to your relative damping needs in the application.

Step 5: Next find the columns listing Tkn and Tkmax values listed in Nm and compare them against the DTkmax figure for your application. Make sure that the spider/coupling size values are larger than the application values.

Step 6: Once the size is selected using the torque values, check the table on page CJ-9 to make sure the bore size needed will fit in the coupling.

Step 7: Double check the overall dimensions of the coupling to ensure that it will fit in the space allowed for the coupling in the application.

*This selection process is based on application factors only. A selection process is also available using DIN 740 part 2 standard. Consult with Lovejoy Engineering for details.

CJ

Application Service Factor (K1)

Application Service Factor	Service Factor (K1)
Uniform operation with small masses to be accelerated. Hydraulic and centrifugal pumps, light generators, blowers, fans, ventilators, belt/screw conveyors.	1.0
Uniform operation with medium masses to be accelerated. Sheet metal bending machines, wood working machines, mills, textile machines, mixers.	1.2
Irregular operation, with medium masses to be accelerated. Rotating ovens, printing presses, generators, shredders, winders, spinning machines, pumps for viscous fluids.	1.3
Irregular operation and shocks, with medium masses to be accelerated concrete mixers, drop hammers, cable cars, paper mills, compression pumps, propeller pumps, rope winders, centrifuges.	1.4
Irregular operation and very heavy shocks, with large masses to be accelerated. Excavators, hammer mills, piston pumps, presses, rotary boring machines, shears, forge presses, stone crushers.	1.6
Irregular operation and very heavy shocks, with very large masses to be accelerated. Piston type compressors and pumps without speed variations, heavy roll sets, welding machines, brick presses, stone crushers.	1.8

Note: ■ If people are transported, Lovejoy does not recommend and will not warranty the use of the coupling.

Application Service Factor for Starts per Hour (K2)

Starts Per Hour	100	200	400	800
Service Factor (K2)	1.0	1.2	1.4	1.6

Application Service Factor for Ambient Temperature (K3)

Ambient Temperature	-30° to 30° C	40° C	60° C	80° C
Service Factor (K3)	1.0	1.2	1.4	1.6

Definition of Terms

Tkn	Nominal rated coupling torque
Tkmax	Maximum torque of the coupling
P[kW]	Power in kilowatts
RPM[1/min]	Revolutions per minute
Nm	Newton meters
DTkmax	Maximum torque of the application
Tkw	Varying load of an application in kilowatts
Pkw	Allowable power loss
BX Hub	Extended length hub

⚠ WARNING

Failure to follow these cautions could create a risk of injury.

You must refer to page CJ-2 for Important Safety Instructions and Precautions for the selection and use of these products.
Failure to follow the instructions and precautions can result in severe injury or death.

CJ Series Elastomer Torque Rating

Performance Data

CJ Series Elastomer Torque Ratings

Size	Maximum Speed RPM	Wind-Up Angle @ Nominal Torque	Wind-Up Angle @ Maximum Torque	Torque Nominal in-lbs	Torque Maximum in-lbs	Torque Nominal Nm	Torque Maximum Nm	Rated HP @ 1200 RPM	Rated HP @ 1800 RPM
Urethane Spider - 92 Shore A (Yellow)									
14	19,000	6.4°	10°	66	133	7	15	1.2	1.9
19/24	14,000			88	177	10	20	1.7	2.5
24/32	10,600			310	620	35	70	5.9	8.9
28/38	8,500			840	1,680	95	190	16.0	24.0
38/45	7,100			1,680	3,360	190	380	32.0	45.0
42/55	6,000			2,345	4,690	265	530	45.0	65.0
48/60	5,600			2,740	5,480	310	619	52.0	75.0
55/70	4,750	3.2°	5°	3,625	7,250	410	819	69.0	100.0
65/75	4,250			5,530	11,060	625	1 250	105.0	150.0
75/90	3,550			11,320	22,650	1 279	2 559	215.0	320.0
90/100	2,800			21,240	42,480	2 400	4 799	400.0	600.0
100/110	2,500			29,200	58,400	3 299	6 598	550.0	825.0
110/125	2,240			42,480	84,960	4 799	9 599	800.0	1,210.0
125/145	2,000			58,850	117,700	6 649	13 298	1,120.0	1,680.0
Urethane Spider - 98/95 Shore A (Red)									
14	19,000	6.4°	10°	111	221	13	25	2.1	3.2
19/24	14,000			150	300	17	34	2.5	4.0
24/32	10,600			530	1,000	60	113	10.0	15.0
28/38	8,500			1,415	2,830	160	320	25.0	40.0
38/45	7,100			2,875	5,750	325	650	55.0	80.0
42/55	6,000			3,980	7,960	450	899	75.0	110.0
48/60	5,600			4,645	9,290	525	1 050	85.0	125.0
55/70	4,750	3.2°	5°	6,060	12,120	685	1 369	115.0	170.0
65/75	4,250			8,320	16,640	940	1 880	150.0	225.0
75/90	3,550			16,990	33,980	1 920	3 869	320.0	480.0
90/100	2,800			31,860	63,720	3 600	7 199	600.0	900.0
100/110	2,500			43,805	87,610	4 949	9 898	800.0	1,250.0
110/125	2,240			63,720	127,440	7 199	14 398	1,280.0	1,820.0
125/145	2,000			88,500	177,000	9 999	19 997	1,685.0	2,525.0
Urethane Spider - 80 Shore A Sizes 14 - 38 (Blue)									
14	19,000	6.4°	10°	35	71	4	8	1.0	2.0
19/24	14,000			43	86	5	10	1.0	3.0
24/32	10,600	3.2°	5°	151	301	17	34	3.0	9.0
28/38	8,500			407	814	46	92	8.0	12.0
38/45	7,100			823	1,637	93	185	16.0	47.0

CJ Series Elastomer Torque Rating

Performance Data

CJ Series Elastomer Torque Ratings *Continued*

Size	Maximum Speed RPM	Wind-Up Angle @ Nominal Torque	Wind-Up Angle @ Maximum Torque	Torque Nominal in-lbs	Torque Maximum in-lbs	Torque Nominal Nm	Torque Maximum Nm	Rated HP @ 1200 RPM	Rated HP @ 1800 RPM
Urethane Spider 64 Shore D (Green)									
19/24	14,000	2.5°	3.6°	185	370	21	42	3.5	5.0
24/32	10,600			660	1,320	75	149	12.5	18.0
28/38	8,500			1,770	3,540	200	400	30.0	50.0
38/45	7,100			3,585	7,170	405	810	65.0	100.0
42/55	6,000			4,955	9,910	560	1 120	90.0	140.0
48/60	5,600			5,795	11,590	655	1 309	110.0	165.0
55/70	4,750			7,300	14,600	825	1 650	125.0	200.0
65/75	4,250			10,395	20,790	1 174	2 349	190.0	290.0
75/90	3,550			21,240	42,480	2 400	4 799	400.0	600.0
90/100	2,800			39,825	79,650	4 499	8 999	750.0	1 125.0
100/110	2,500			54,735	109,470	6 184	12 368	1 040.0	1 550.0
110/125	2,240			79,650	159,300	8 999	17 998	1 515.0	2 275.0
125/145	2,000			110,630	221,260	12 499	24 998	2 100.0	3 160.0

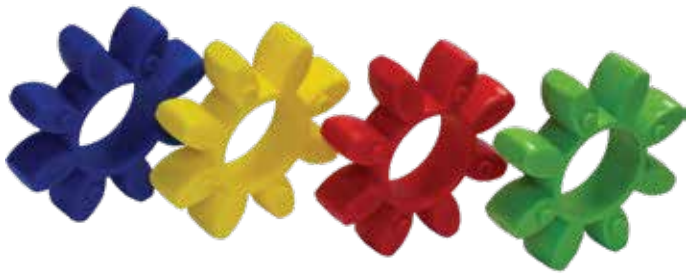
CJ Series Spider UPC Number Selection Table

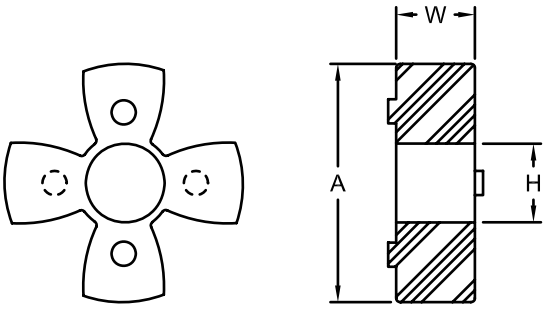
Size	Blue 80 Shore A	Yellow 92 Shore A	Red 95/98 Shore A	Green 64 Shore D
14	61460	61446	62067	–
19	61461	61447	62068	72256
24	61462	61448	62069	72257
28	61463	61449	62070	72258
38	61464	61450	62071	72259
42	61465	61451	62072	72260
48	61466	61452	62073	72261
55	–	61453	62074	72262
65	–	61454	62075	72264
75	–	61455	62076	72266
90	–	61456	62077	72268
100	–	61457	62078	72270
110	–	61458	62079	72273
125	–	61459	62080	72276

Note: ■ When referencing a Lovejoy UPC number in this table, include 685144 as a prefix to the number shown, e.g. 68514461460.

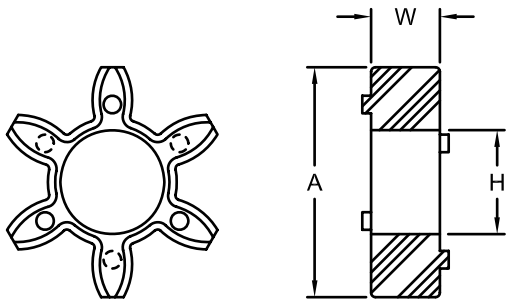
Curved Jaw Coupling Spiders Dimensional Data

Size	A		H		W	
	in	mm	in	mm	in	mm
14	1.18	30	0.39	10	0.39	10
19/24	1.57	40	0.71	18	0.47	12
24/32	2.16	55	1.06	27	0.55	14
28/38	2.56	65	1.15	29	0.59	15
38/45	3.15	80	1.50	38	0.71	18
42/55	3.74	95	1.81	46	0.79	20
48/60	4.13	105	2.01	51	0.83	21
55/70	4.72	120	2.36	60	0.87	22
65/75	5.31	135	2.68	68	1.02	26
75/90	6.30	160	3.15	80	1.18	30
90/100	7.87	200	3.94	100	1.34	34
100/110	8.86	225	4.45	113	1.50	38
110/125	10.04	255	5.00	127	1.65	42
125/145	11.42	290	5.79	147	1.81	46

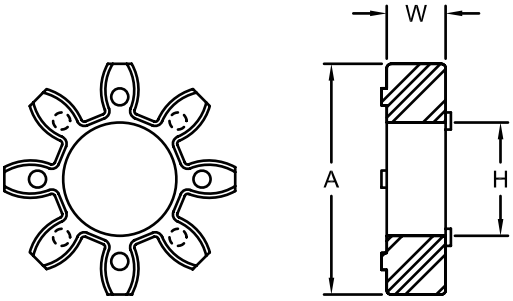




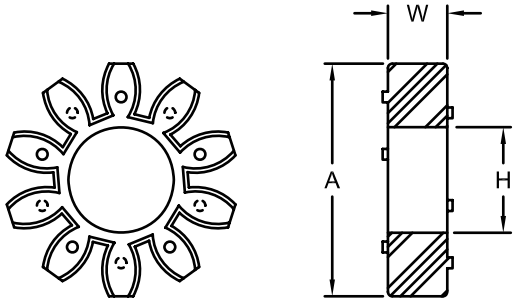
CJ 14



CJ 19/24



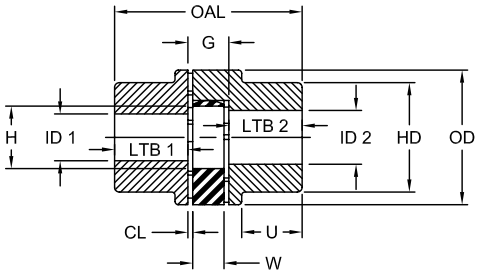
CJ 24/32 - 65/75



CJ 75/90 - 125/145

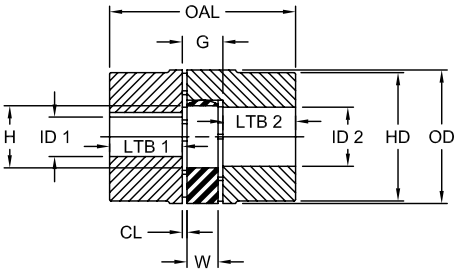
CJ Series Powder Metal / Steel
Dimensional Data

The Curved Jaw coupling consists of two standard hubs and one spider.



Configuration One – 2 A Hubs

Curved Jaw Coupling



Configuration One – 2 B Hubs

CJ

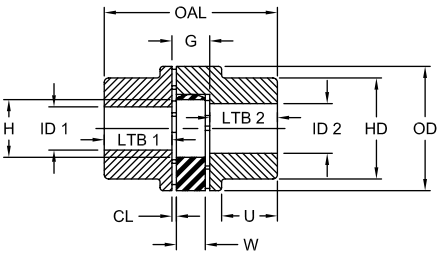
CJ Series Powder Metal / Steel Dimensional Data

Size	Hub Style	OAL in	G in	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore* in	ID1 - ID2 Max Bore* mm	LTB1 - LTB2 in	H in	CL in	U in	W in	OD in	HD in
14	B Style	1.38	0.51	S	S	0.63	16	0.43	0.39	0.06	—	0.39	1.18	—
	BX Style	1.97	0.51	S	S	0.63	16	0.73	0.39	0.06	—	0.39	1.18	—
19/24	A Style	2.60	0.63	S	S	0.75	19	0.98	0.71	0.08	0.79	0.47	1.57	1.26
	B Style	2.60	0.63	0.71	18	0.94	24	0.98	0.71	0.08	—	0.47	1.57	—
	BX Style	3.54	0.63	S	S	0.94	24	1.46	0.71	0.08	—	0.47	1.57	—
24/32	A Style	3.07	0.70	0.47	12	0.95	24	1.18	1.06	0.08	0.94	0.55	2.20	1.57
	B Style	3.07	0.70	0.87	18	1.25	32	1.18	1.06	0.08	—	0.55	2.20	—
	BX Style	4.65	0.70	0.47	12	1.25	32	1.97	1.06	0.08	—	0.55	2.20	—
28/38	A Style	3.54	0.79	0.47	12	1.10	28	1.38	1.18	0.10	1.10	0.59	2.56	1.89
	B Style	3.54	0.79	0.87	22	1.50	38	1.38	1.18	0.10	—	0.59	2.56	—
	BX Style	5.51	0.79	0.47	12	1.50	38	2.36	1.18	0.10	—	0.59	2.56	—
38/45	A Style	4.49	0.94	0.47	12	1.50	38	1.77	1.50	0.12	1.46	0.71	3.15	2.60
	B Style	4.49	0.94	1.38	35	1.75	45	1.77	1.50	0.12	—	0.71	3.15	—
	BX Style	6.46	0.94	0.47	12	1.75	45	2.76	1.50	0.12	—	0.71	3.15	—
42/55	A Style	4.96	1.02	0.47	12	1.65	42	1.97	1.81	0.12	1.57	0.79	3.74	2.95
	B Style	4.96	1.02	0.55	14	2.13	55	1.97	1.81	0.12	—	0.79	3.74	—
	BX Style	6.93	1.02	0.47	12	2.13	55	2.95	1.81	0.12	—	0.79	3.74	—
48/60	A Style	5.51	1.10	0.47	12	1.88	48	2.20	2.01	0.14	1.77	0.83	4.13	3.35
	B Style	5.51	1.10	1.02	26	2.31	60	2.20	2.01	0.14	—	0.83	4.13	—
	BX Style	7.40	1.10	0.47	12	2.31	60	3.15	2.01	0.14	—	0.83	4.13	—
55/70	A Style	6.30	1.18	0.47	12	2.13	55	2.56	2.36	0.16	2.05	0.87	4.72	3.86
	B Style	6.30	1.18	1.89	48	2.75	70	2.56	2.36	0.16	—	0.87	4.72	—
	BX Style	8.27	1.18	0.47	12	2.75	70	3.54	2.36	0.16	—	0.87	4.72	—
65/75	A Style	7.28	1.38	0.47	12	2.50	65	2.95	2.68	0.18	1.85	1.02	5.31	4.53
	B Style	7.28	1.38	2.28	58	2.94	75	2.95	2.68	0.18	—	1.02	5.31	—
	BX Style	9.25	1.38	0.47	12	2.94	75	3.94	2.68	0.18	—	1.02	5.31	—
75/90	A Style	8.27	1.57	0.47	12	2.94	75	3.35	3.15	0.20	2.09	1.18	6.30	5.31
	B Style	8.27	1.57	1.97	50	3.50	90	3.35	3.15	0.20	—	1.18	6.30	—
	BX Style	10.24	1.57	1.97	50	3.50	90	4.33	3.15	0.20	—	1.18	6.30	—
90/100	A Style	9.65	1.77	0.47	12	3.50	90	3.94	3.94	0.22	2.44	1.34	7.87	6.30
	B Style	9.65	1.77	3.11	79	3.94	100	3.94	3.94	0.22	—	1.34	7.87	—
	BX Style	11.61	1.77	3.11	79	3.94	100	4.92	3.94	0.22	—	1.34	7.87	—

Notes:
- * indicates: Maximum bore may be achieved through the use of a shallow keyway.
- CL = Distance between spider and hub face.
- Max Bore refers to maximum straight bore with keyway allowed in hub.
- S = Solid hub with no bore.
- OD is equal to HD for B style aluminum sizes: 19, 24, and 28.
- W = Spider thickness.
- Outside diameter of spider equal to OD.
- H = Inside diameter of spider.
- BX Style = B style hub with a longer length through bore.

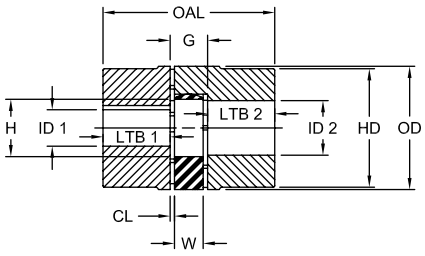
CJ Series Aluminum, Cast Iron, Nodular Iron
Dimensional Data

The Curved Jaw coupling consists of two standard hubs and one spider.



Configuration One – 2 A Hubs

Curved Jaw Coupling



Configuration One – 2 B Hubs

CJ Series Aluminum Dimensional Data

Size	Hub Style	OAL in	G in	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore* in	ID1 - ID2 Max Bore* mm	LTB1 - LTB2 in	H in	CL in	U in	W in	OD in	HD in
14	B Style	1.38	0.51	S	S	0.63	16	0.43	0.39	0.06	—	0.39	1.18	—
	BX Style	1.97	0.51	S	S	0.63	16	0.73	0.39	0.06	—	0.39	1.18	—
19/24	A Style	2.60	0.63	S	S	0.75	19	0.98	0.71	0.08	0.79	0.47	1.57	1.26
	B Style	2.60	0.63	S	S	0.94	24	0.98	0.71	0.08	—	0.47	1.57	—
	BX Style	3.54	0.63	S	S	0.94	24	1.46	0.71	0.08	—	0.47	1.57	—
24/32	A Style	3.07	0.70	0.47	12	0.95	24	1.18	1.06	0.08	0.94	0.55	2.20	1.57
	B Style	3.07	0.70	0.87	18	1.25	32	1.18	1.06	0.08	—	0.55	2.20	—
	BX Style	4.65	0.70	0.47	12	1.25	32	1.97	1.06	0.08	—	0.55	2.20	—
28/38	A Style	3.54	0.79	0.47	12	1.10	28	1.38	1.18	0.10	1.10	0.59	2.56	1.89
	B Style	3.54	0.79	0.87	22	1.50	38	1.38	1.18	0.10	—	0.59	2.56	—
	BX Style	5.51	0.79	0.47	12	1.50	38	2.36	1.18	0.10	—	0.59	2.56	—
38/45	A Style	4.49	0.94	0.47	12	1.50	38	1.77	1.50	0.12	1.46	0.71	3.15	2.60
	B Style	4.49	0.94	1.38	35	1.75	45	1.77	1.50	0.12	—	0.71	3.15	—
	BX Style	6.46	0.94	0.47	12	1.75	45	2.76	1.50	0.12	—	0.71	3.15	—
42/55	A Style	4.96	1.02	0.47	12	1.65	42	1.97	1.81	0.12	1.57	0.79	3.74	2.95
	B Style	4.96	1.02	1.02	26	2.13	55	1.97	1.81	0.12	—	0.79	3.74	—
	BX Style	6.93	1.02	0.47	12	2.13	55	2.95	1.81	0.12	—	0.79	3.74	—
48/60	A Style	5.51	1.10	0.47	12	1.88	48	2.20	2.01	0.14	1.77	0.83	4.13	3.35
	B Style	5.51	1.10	1.02	26	2.31	60	2.20	2.01	0.14	—	0.83	4.13	—

CJ Series Cast Iron / Nodular Iron Dimensional Data

Size	Hub Style	OAL in	G in	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore* in	ID1 - ID2 Max Bore* mm	LTB1 - LTB2 in	H in	CL in	U in	W in	OD in	HD in
55/70	A Style	6.30	1.18	0.71	18	2.17	55	2.56	2.36	0.16	2.05	0.87	4.72	3.86
	B Style	6.30	1.18	1.89	48	2.76	70	2.56	2.36	0.16	—	0.87	4.72	—
65/75	A Style	7.28	1.38	0.47	12	2.56	65	2.95	2.68	0.18	1.85	1.02	5.31	4.53
	B Style	7.28	1.38	2.28	58	2.95	75	2.95	2.68	0.18	—	1.02	5.31	—
75/90	A Style	8.27	1.57	0.47	12	2.95	75	3.35	3.15	0.20	2.09	1.18	6.30	5.31
	B Style	8.27	1.57	1.97	50	3.54	90	3.35	3.15	0.20	—	1.18	6.30	—
90/100	A Style	9.65	1.77	0.47	12	3.54	90	3.94	3.94	0.22	2.44	1.34	7.87	6.30
	B Style	9.65	1.77	3.11	79	3.94	100	3.94	3.94	0.22	—	1.34	7.87	—
100	B Style	10.63	1.97	1.57	40	4.33	110	4.33	4.45	0.24	—	1.50	8.86	7.87
110	B Style	11.61	2.17	2.36	60	4.92	125	4.72	5.00	0.26	—	1.65	10.04	9.06
125	B Style	13.39	2.36	2.36	60	5.71	145	5.51	5.79	0.28	—	1.81	11.42	10.43

Notes:
- * indicates: Maximum bore may be achieved through the use of a shallow keyway.
- CL = Distance between spider and hub face.
- Max Bore refers to maximum straight bore with keyway allowed in hub.
- S = Solid hub with no bore.
- OD is equal to HD for B style aluminum sizes: 19, 24, and 28.
- W = Spider thickness.
- Outside diameter of spider equal to OD.
- H = Inside diameter of spider.

The Curved Jaw coupling consists of two standard hubs and one spider.

CJ Series – Metric Aluminum, Powder Metal and Cast Iron UPC Number Selection Table

Size	Keyway Size	Aluminum (A)	Powder Metal (PM)								Cast Iron (CI)					
		14	19/24	24/32	28/38	38/45	42/55		48/60		55/70		65/75		75/90	
		B Hub	B Hub	B Hub	B Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub
RSB*		71577	61154	60880	60881	60882	62414	62048	62415	62059	62416	62060	62417	62061	62418	62062
8mm	2 x 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9mm	3 x 1.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10mm	3 x 1.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11mm	4 x 1.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12mm	4 x 1.8	—	—	—	70186	—	—	—	—	—	—	—	—	—	—	—
14mm	5 x 2.3	—	—	—	69376		—	—	—	—	—	—	—	—	—	—
15mm	5 x 2.3	—	—	—	71983	—	—	—	—	—	—	—	—	—	—	—
16mm	5 x 2.3	—	—	—	68549	—	—	—	—	—	—	—	—	—	—	—
18mm	6 x 2.8	—	—	—	71984	—	—	—	—	—	—	—	—	—	—	—
19mm	6 x 2.8	—	61156	—	61109	—	—	—	—	—	—	—	—	—	—	—
20mm	6 x 2.8	—	65080	—	61164	—	—	—	—	—	—	—	—	—	—	—
22mm	6 x 2.8	—	—	67509	66855	—	—	—	—	—	—	—	—	—	—	—
24mm	8 x 3.3	—	61157	61104	61110	—	—	—	—	—	—	—	—	—	—	—
25mm	8 x 3.3	—	—	61105	61165	—	66257	—	—	—	—	—	—	—	—	—
26mm	8 x 3.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28mm	8 x 3.3	—	—	61106	61111	—	62049	—	—	—	—	—	—	—	—	—
30mm	8 x 3.3	—	—	68739	61112	—	62050	—	72031	—	—	—	—	—	—	—
32mm	10 x 3.3	—	—	—	65320	—	62051	—	66897	—	—	—	—	—	—	—
34mm	10 x 3.3	—	—	—	—	—	67238	—	—	—	—	—	—	—	—	—
35mm	10 x 3.3	—	—	—	67223	—	62052	—	72032	—	72040	—	69563	—	—	—
38mm	10 x 3.3	—	—	—	61113	—	62053	—	68037	—	71385	—	70240	—	—	—
40mm	12 x 3.3	—	—	—	—	69493	66824	70922	69280	—	70056	—	69293	—	—	—
42mm	12 x 3.3	—	—	—	—	60906	69800	62054	72033	—	72041	—	70376	—	—	—
45mm	14 x 3.8	—	—	—	—	66765	—	62055	69326	—	—	—	68074	—	—	—
48mm	14 x 3.8	—	—	—	—	—	—	62056	72034	71933	—	—	70344	—	—	—
50mm	14 x 3.8	—	—	—	—	—	—	62057	72035	66826	72043	—	69481	—	64121	—
55mm	16 x 4.3	—	—	—	—	—	—	62058	—	72036	72044	67513	71739	—	72051	—
60mm	18 x 4.4	—	—	—	—	—	—	—	—	69787	—	69219	68170	—	64744	—
65mm	18 x 4.4	—	—	—	—	—	—	—	—	—	—	66195	72050	67335	72052	—
70mm	20 x 4.9	—	—	—	—	—	—	—	—	—	—	72047	—	70231	65816	—
75mm	20 x 4.9	—	—	—	—	—	—	—	—	—	—	—	—	—	72058	—
80mm	22 x 5.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68826
90mm	25 x 5.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	77760

Notes:
- * indicates: RSB maybe supplied as a solid hub or rough stock bore.
- When referencing a Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

CJ Series Aluminum / Steel BX
Item Selection

The Curved Jaw coupling consists of two standard hubs and one spider.

CJ Series – Metric Aluminum UPC Number Selection Table

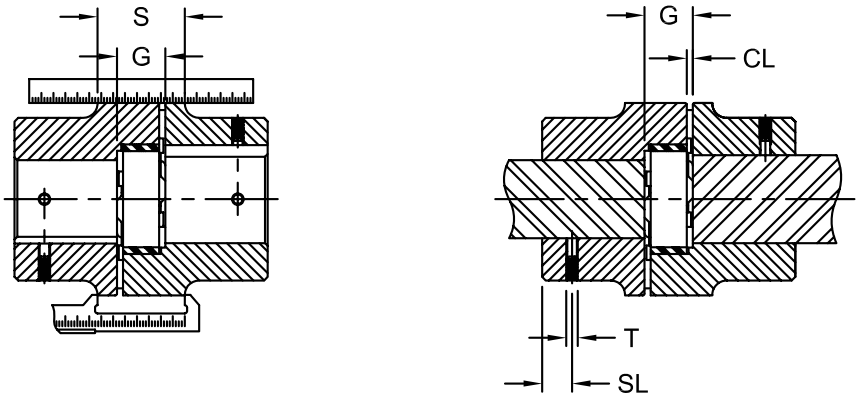
Size	Keyway Size	Aluminum												
		14	19/24		24/32		28/38		38/45		42/55		48/60	
		B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub	A Hub	B Hub
RSB*	No Keyway	71577	71441	71442	71443	71444	71445	71446	71447	71448	71449	71450	71451	71452
6mm	2 x 1	71942	—	—	—	—	—	—	—	—	—	—	—	—
8mm	2 x 1	71943	—	—	—	—	—	—	—	—	—	—	—	—
9mm	3 x 1.4	71944	—	—	—	—	—	—	—	—	—	—	—	—
10mm	3 x 1.4	71945	71951	—	—	—	—	—	—	—	—	—	—	—
11mm	4 x 1.8	71946	71952	—	—	—	—	—	—	—	—	—	—	—
12mm	4 x 1.8	71947	71953	—	—	—	—	—	—	—	—	—	—	—
14mm	5 x 2.3	71948	71954	—	71961	—	71971	—	—	—	—	—	—	—
15mm	5 x 2.3	71949	71950	—	71962	—	—	—	—	—	—	—	—	—
16mm	5 x 2.3	—	71956	—	71963	—	71972	—	—	—	—	—	—	—
18mm	6 x 2.8	—	—	—	71964	—	71973	—	—	—	—	—	—	—
19mm	6 x 2.8	—	71957	—	71965	—	71974	—	—	—	—	—	—	—
20mm	6 x 2.8	—	—	71958	71966	—	71975	—	71986	—	—	—	—	—
24mm	8 x 3.3	—	—	—	71967	—	71976	—	71987	—	—	—	—	—
25mm	8 x 3.3	—	—	71959	—	71968	71977	—	71988	—	—	—	—	—
28mm	8 x 3.3	—	—	—	—	71969	71978	—	71989	—	—	—	—	—
30mm	8 x 3.3	—	—	—	—	—	71979	—	71990	—	—	—	—	—
32mm	10 x 3.3	—	—	—	—	—	—	71980	71991	—	72009	—	—	—
35mm	10 x 3.3	—	—	—	—	—	—	—	71992	—	72010	—	72021	—
38mm	10 x 3.3	—	—	—	—	—	—	71981	71993	—	72011	—	72022	—
40mm	12 x 3.3	—	—	—	—	—	—	71982	—	71994	72012	—	72023	—
42mm	12 x 3.3	—	—	—	—	—	—	—	—	71995	72013	—	72024	—
45mm	14 x 3.8	—	—	—	—	—	—	—	—	—	—	72014	72025	—
48mm	14 x 3.8	—	—	—	—	—	—	—	—	—	—	72015	—	—
50mm	14 x 3.8	—	—	—	—	—	—	—	—	—	—	72016	72026	—
55mm	16 x 4.3	—	—	—	—	—	—	—	—	—	—	72017	72027	72028
60mm	18 x 4.4	—	—	—	—	—	—	—	—	—	—	72019	—	72029
65mm	18 x 4.4	—	—	—	—	—	—	—	—	—	—	72020	—	72030

Notes: ■ * indicates: RSB maybe supplied as a solid hub or rough stock bore.
■ When referencing a Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

CJ Series – Metric Steel BX Style UPC Number Selection Table

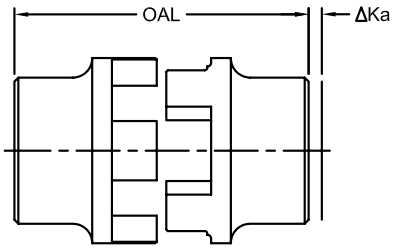
Size	Keyway Size	Steel BX Style							
		14	19/24	24/32	28/38	38/45	42/55	48/60	55/70
Solid	No Keyway	72062	72066	72067	72070	72073	72076	72080	72082
14mm	5 x 2.3	72063	—	—	—	—	—	—	—
19mm	6 x 2.8	—	72064	—	—	—	—	—	—
24mm	8 x 3.3	—	72065	72068	—	—	—	—	—
28mm	8 x 3.3	—	—	72069	—	—	—	—	—
30mm	8 x 3.3	—	—	—	72071	—	—	—	—
40mm	12 x 3.3	—	—	—	72072	72074	—	—	—
45mm	14 x 3.8	—	—	—	—	72075	—	—	—
55mm	16 x 4.3	—	—	—	—	—	72078	—	—

Note: ■ When referencing a Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

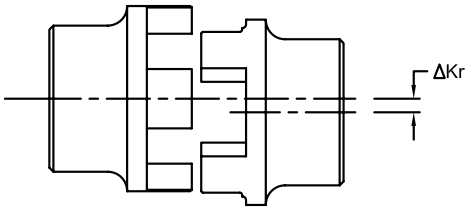


CJ Series Installation and Misalignment Capabilities

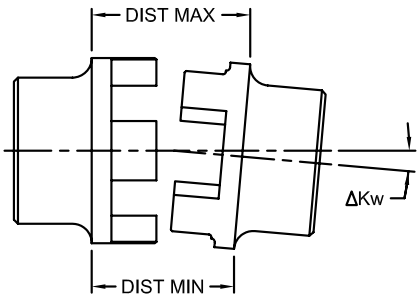
Size: / Dimensions	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
G	0.51	0.63	0.70	0.79	0.94	1.02	1.10	1.18	1.38	1.57	1.77	1.97	2.17	2.36	2.56	2.95	3.35
CL	0.06	0.08	0.08	0.1	0.12	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.30	0.35	0.41
H	0.39	0.71	1.06	1.18	1.50	1.81	2.01	2.36	2.68	3.15	3.94	4.45	5.00	5.79	6.50	7.48	8.66
S	—	1.02	1.18	1.34	1.57	1.81	1.97	2.20	2.48	2.83	3.27	3.62	4.06	4.57	5.00	5.71	6.42



Axial Displacement



Radial Displacement



Angular Displacement

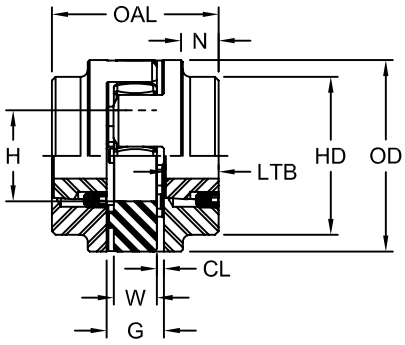
CJ Series Displacement For Displacement / Misalignment (inches)

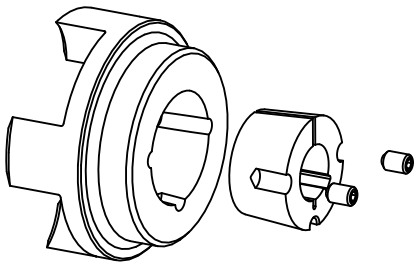
Size:	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
Max Axial Displacemnet (ΔKa)	0.04	0.047	0.055	0.06	0.07	0.079	0.082	0.87	0.102	0.12	0.133	0.15	0.165	0.18	0.19	0.22	0.25
Max Radial Displacement (ΔKr)	0.007	0.008	0.009	0.01	0.011	0.012	0.014	0.014	0.016	0.018	0.019	0.02	0.021	0.024	0.024	0.025	0.027
Kw Max angular displacement n=1500 [1/min] in deg (ΔKw)	1.2	1.2	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2
Angular Displacement	0.03	0.03	0.04	0.05	0.07	0.07	0.08	0.09	0.11	0.13	0.17	0.19	0.22	0.25	0.26	0.3	0.35
Set Screw Information																	
Set Screw Size (T)* (in)	8-32	10-24	10-24	5/16-18	5/16-18	5/16-18	5/16-18	3/8-16	3/8-16	3/8-16	3/8-16	1/2-13	5/8-11	5/8-11	—	—	—
Set Screw Location (SL)	5mm	10mm	10mm	15mm	15mm	20mm	20mm	20mm	20mm	25mm	30mm	30mm	35mm	40mm	—	—	—

Note: ■ *indicates: Set screw size can vary with bore/keyway.

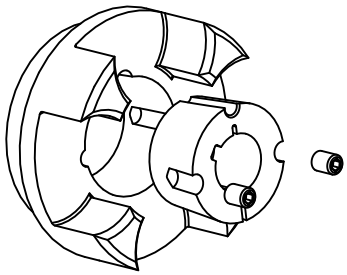
The values regarding displacement are provided assuming normal operating conditions (i.e. temperature, torque with nominal rating of the coupling, speed/RPM rating of the coupling, and misalignment). Careful installation (i.e. alignment) and periodic inspection should be provided to provide the optimum life of the coupling. Special consideration should be given as to the position of the shafts and the amount of axial movement the coupling will be exposed to. The more accurate the alignment of the coupling, will result in greater life of the elastomer. A coupling guard and rotating equipment safety procedures should always be followed. Please consult the Lovejoy web site at www.lovejoy-inc.com for assembly instructions of the curved jaw coupling.

Taper Lock
Dimensional Data





Reverse Mount



Front Mount

Taper Loc Dimensional Data

Size	Taper Clamping Bushing	OAL in	N in	H in	LTB in	CL in	W in	G in	OD in	HD in	Fixing screw for taper bushing				
											Diameter in	Length in	# of Screws	Tightening Torque in-lbs	Nm
28	1108	2.60	—	1.18	0.91	0.01	0.59	0.79	2.56	2.56	0.25	1/2	2	50	6
38	1108	2.76	0.59	1.50	0.91	0.12	0.71	0.94	3.15	3.07	0.25	1/2	2	50	6
42	1610	3.07	0.63	1.81	1.02	0.12	0.79	1.02	3.74	3.70	0.38	5/8	2	177	20
48	1615	4.17	1.10	2.01	1.54	0.14	0.83	1.10	0.59	4.09	0.38	5/8	2	177	20
55	2012	3.78	0.79	2.36	1.30	0.16	0.87	1.18	4.72	4.65	0.44	7/8	2	274	31
75	2517	5.67	1.42	3.15	2.05	0.20	1.18	1.57	6.30	5.31	0.50	1	2	434	49
	3020										0.63	1-1/4		814	92

Taper Bushing Bore Reference Chart (Taper Loc Bushings Not Provided by Lovejoy)

Size of Taper Bushes	Available Bore Sizes (inches)															
1108	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	—	—	—	—	—	—	—
1610	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16	1-1/4	1-5/16	1-3/8	1-7/16
1615	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16	1-1/4	1-5/16	1-3/8	1-7/16
2012	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16	1-1/4	1-5/16	1-3/8	1-7/16
2517	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16	1-1/4	1-5/16	1-3/8	1-7/16	1-1/2
3020	7/8	1-3/16	1	1-1/8	1-3/16	1-1/4	1-5/16	1-5/8	1-7/16	1-1/2	1-9/16	1-5/8	1-11/16	1-3/4	1-13/16	1-7/8

Taper Bushing Bore Reference Chart (Taper Loc Bushings Not Provided by Lovejoy) ***Continued***

Size of Taper Bushes	Available Bore Sizes (inches)														
1108	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1610	1-1/2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1615	1-1/2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2012	1-1/2	1-9/16	1-5/8	1-11/16	1-3/4	1-13/16	1-7/8	—	—	—	—	—	—	—	—
2517	1-9/16	1-5/8	1-11/16	1-3/4	1-13/16	1-7/8	1-15/16	2	2-1/16	2-1/8	2-3/16	2-1/4	2-5/8	2-3/8	—
3020	1-15/16	2	2-1/16	2-1/8	2-3/16	2-1/4	2-15/16	2-3/8	2-7/16	2-1/2	2-5/8	2-11/16	2-3/4	2-13/16	2-7/8

GS Series

Overview / Performance

The GS Series Curved Jaw coupling offers zero backlash capability in a 3-piece design. The coupling is provided assembled under prestress. The GS Series can be used in a variety of different applications requiring precision and accuracy.

The GS Series spider features a straight center of the spider tooth, providing higher stiffness due to coupling prestress. The crowning of the ends of the spider legs allows for misalignment, while the curved jaws and solid spider center provide high-speed capability.

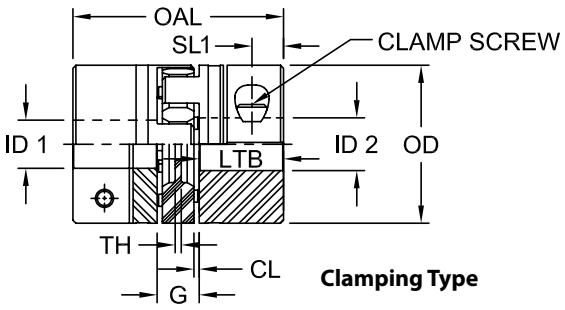
The jaws of the hubs and the spider legs are chamfered to provide easy assembly. The GS Series coupling design also allows the blind assembly in tight spaces. Raised spider dots on the legs of the spider ensure proper spacing of hubs and spider.

The GS Series coupling has spiders available in four different shore hardnesses. Each spider offers benefits for different vibratory, environmental, and torque transmission requirements.

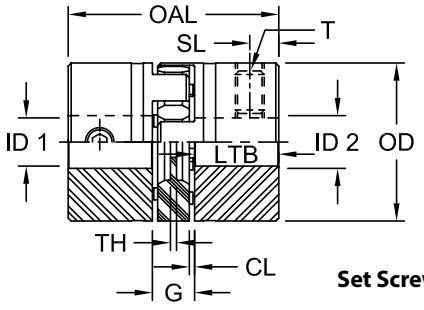
The GS Curved Jaw coupling consists of two hubs and one spider.

Features

- Simple 3 piece jaw design
- Aluminum and steel material hubs
- Clamping and locking device hubs available
- Four different types of urethane shores to choose from



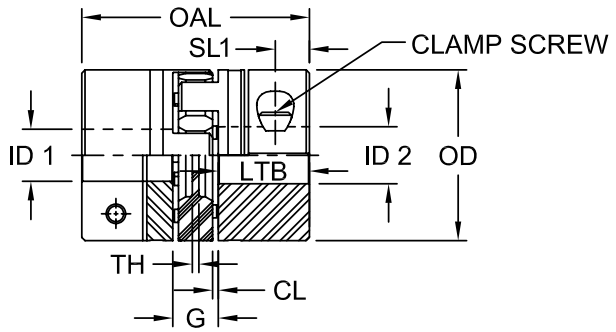
Clamping Type



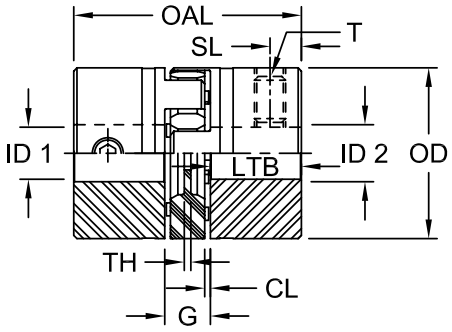
Set Screw Type

GS Series Elastomer Performance Data

Spider Type	Color	Material	Temperature Range		Sizes Available	Typical Applications
			Normal	Maximum		
80 Shore A GS	Blue	Urethane	-50° to 176° F	-80° to 248° F	14-24	Electric measuring systems
92 Shore A GS	Yellow	Urethane	-40° to 194° F	-50° to 248° F	14-55	Electric measuring systems and control systems
95/98 Shore A GS	Red	Urethane	-30° to 194° F	-40° to 248° F	14-55	Positioning drives, main spindle drives, high load applications
64 Shore D GS	Green	Urethane	-20° to 230° F	-30° to 248° F	14-55	High load applications torsionally stiff spider material



Clamping Type



Set Screw Type

GS Series Dimensional Data

Size	Material	OAL in	OAL mm	LTB in	LTB mm	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore** in	ID1 - ID2 Max Bore** mm	OD in	OD mm	Set Screw / Clamp Screw Size mm
14	Aluminum	1.378	35	0.433	11	0.197	5	0.625*	16*	1.181	30	M3
19/24	Aluminum	2.598	66	0.984	25	0.315	8	0.945	24	1.575	40	M2.6
24/32	Aluminum	3.071	78	1.181	30	0.472	12	1.260	32	2.165	55	M4
28/38	Aluminum	3.543	90	1.378	35	0.709	18	1.496	38	2.559	65	M2.6
38/45	Aluminum	4.488	114	1.772	45	0.709	18	1.772	45	3.150	80	M5
42/55	Steel	4.961	126	1.969	50	0.709	18	2.165	55	3.740	95	M3
48/60	Steel	5.512	140	2.205	56	0.709	18	2.362	60	4.134	105	M6
55/70	Steel	6.299	160	2.559	65	1.024	26	2.756	70	4.724	120	M4

Notes:
- *indicates: Without keyway.
- ** indicates: Consult with Lovejoy Engineering for proper sizing of clamp and double split clamp hubs.
- Specify keyway size if needed when ordering.
- Specify bore sizes ID1 and ID2 when ordering.

GS Series Dimensional Data — *Continued*

Size	Material	SL1 in	Clamp Screw Size mm	SL in	T Set Screw Size in	TH in	TH mm	CL in	CL mm	G in	G mm
14	Aluminum	0.20	M3	0.20	8-32	0.059	1.5	0.039	1.0	0.512	13
19/24	Aluminum	0.47	M2.6	0.39	10-24	0.079	2.0	0.079	2.0	0.630	16
24/32	Aluminum	0.55	M4	0.39	10-24	0.079	2.0	0.079	2.0	0.709	18
28/38	Aluminum	0.59	M2.6	0.59	5/16-18	0.098	2.5	0.098	2.5	0.787	20
38/45	Aluminum	0.79	M5	0.59	5/16-8	0.118	3.0	0.118	3.0	0.945	24
42/55	Steel	0.79	M3	0.79	5/16-8	0.118	3.0	0.118	3.0	1.024	26
48/60	Steel	0.87	M6	0.79	5/16-8	0.138	3.5	0.138	3.5	1.102	28
55/70	Steel	0.98	M4	0.79	3/8-16	0.157	4.0	0.157	4.0	1.181	30

Typical Applications

Measurement And Control Systems

The torsional stiffness of the GS Series coupling provides zero backlash needed for the accuracy for measurement and control systems. Utilizing proper coupling service factors in coupling selections and elastomer pre-stress provide a coupling solution with zero (or minimal) backlash.

Servo And Positioning Drives

The GS Series provides a zero backlash, flexible connection for servo and positioning drives. An added benefit of the GS Series is its damping capabilities. For applications that have vibrations at critical speeds, the GS Series coupling can provide a zero backlash solution for vibration problems.

Main Spindle Drives

The GS Series coupling is used in main spindle drives for machine tools. Torque spikes and cyclical loading are handled by the GS Series by damping or by shifting the vibratory frequency range to a non-critical speed range.

GS Series Service Factors

Temperature Factor

	-30° to 30° C	40° C	60° C	80° C
K3	1	1,2	1,4	1,8

Torsional Stiffness Factor

	Main Spindle Drive Of Machine	Positioning Drive	Shaft Encoders, Angle Encoders
K4	2-5	3-8	10

Shock Load Factors

	K5
Light Shock Loads	1,0
Medium Shock Loads	1,4
Heavy Shock Loads	1,8

Calculation Formula

Rated nominal torque T_{kn} (in-lbs) $= \frac{HP \times 63025}{RPM}$

Rotational inertia coefficient (driver) $= \frac{\text{Moment of inertia (driver)}}{\text{Moment of inertia (driver)} + \text{Moment of inertia (driven)}}$

Rotational inertia coefficient (driven) $= \frac{\text{Moment of inertia (driven)}}{\text{Moment of inertia (driver)} + \text{Moment of inertia (driven)}}$

Check the nominal torque for the application against the rating for the coupling:

T_{kn} > Rated torque of machine x K3 x K4

Peak Torque

Shock load (driver side) = Peak torque (driver) x rotational inertia coefficient (driver) x K5

Shock load (driven side) = Peak torque (driven) x rotational inertia coefficient (driven) x K5

Check the peak torque for the application against the rating for the coupling (page CJ-20), checking both driver and driven sides:

T_{kmax} > Peak Torque (driver or driven side) x K3 x K4

GS Series Performance / Torque Ratings

Performance Data

GS Series Performance Data

Size	Spider Durometer	Maximum Speed for Clamping Styles: Clamping Hub RPM	Set Screw Hub RPM	Locking Device Hub RPM	Torque: Tkn in-lbs	Tkmax in-lbs	Static Torsional Stiffness [in-lb /rad]	Dynamic Torsional Stiffness [in-lb /rad]	Radial Stiffness [in-lb /rad]	Complete Coupling Max Bore w/o Keyway: Weight lbs	Polar Moment of Inertia J [in-lb /rad]
14	80 Sh A	12,700	15,900	25,400	35.4	70.8	532.8	1,593	874	0.098	57
	92 Sh A				66.4	132.8	1,014.0	3,044	1,920		
	98 Sh A				110.6	221.3	1,521.0	4,540	3,452		
	64 Sh D				141.6	283.2	2,072.0	6,212	4,892		
19/24	80 Sh A	9,550	11,900	19,000	43.4	86.7	3,042.0	6,115	3,326	0.306	374
	92 Sh A				88.5	177.0	5,071.0	15,222	6,401		
	98 Sh A				150.5	300.9	7,606.0	22,833	11,487		
	64 Sh D				185.9	371.7	70,976.0	32,922	16,745		
24/32	92 Sh A	6,950	8,850	13,800	309.8	619.5	12,673.0	38,019	8,458	0.621	965
	98 Sh A				531.0	1,062.0	18,257.0	54,772	14,630		
	64 Sh D				663.8	1,327.0	26,355.0	79,065	21,123		
28/38	92 Sh A	5,850	7,350	11,700	840.8	1,681.0	20,284.0	60,852	10,173	1.178	3,691
	98 Sh A				1,416.0	2,832.0	30,426.0	91,278	18,288		
	64 Sh D				1,770.0	3,540.0	38,497.0	115,492	24,849		
38/45	92 Sh A	4,750	5,950	9,550	1,681.0	3,363.0	40,568.0	121,705	12,430	2.112	7,485
	98 Sh A				2,876.0	5,752.0	63,366.0	190,151	25,146		
	64 Sh D				3,584.0	7,168.0	93,279.0	279,837	36,999		
42/55	92 Sh A	4,000	5,000	8,050	2,345.0	4,690.0	55,755.0	128,236	13,887	8.324	40,639
	98 Sh A				3,982.0	7,965.0	169,920.0	424,800	31,833		
	64 Sh D				4,956.0	9,912.0	244,083.0	610,207	41,548		
48/60	92 Sh A	3,600	4,550	7,200	2,743.0	5,487.0	69,472.0	159,786	14,745	11.317	68,782
	98 Sh A				4,646.0	9,292.0	197,974.0	494,936	33,890		
	64 Sh D				5,798.0	11,593.0	320,370.0	800,925	47,286		
55/70	92 Sh A	3,150	3,950	6,350	3,628.0	7,257.0	84,075.0	193,372	17,031	16.993	135,334
	98 Sh A				6,062.0	12,124.0	210,630.0	52,675	38,210		
	64 Sh D				7,301.0	14,602.0	366,921.0	917,302	52,852		

Torque Ratings for Clamp Style GS Series Hubs (C and DSC)

Size	5/16 in-lbs	3/8 in-lbs	7/16 in-lbs	1/2 in-lbs	9/16 in-lbs	5/8 in-lbs	11/16 in-lbs	3/4 in-lbs	7/8 in-lbs	15/16 in-lbs	1 in-lbs	1-3/32 in-lbs
19	221	239	239	257	266	274	283	283	310	—	—	—
24	—	301	310	319	336	345	345	345	363	381	398	407
28	—	—	—	708	717	717	743	752	770	805	814	859
38	—	—	—	—	814	832	859	867	876	920	929	965
42	—	—	—	—	—	—	—	—	2,053	2,159	2,177	2,257
48	—	—	—	—	—	—	—	—	—	—	3,478	3,584
55	—	—	—	—	—	—	—	—	—	—	—	—

Torque Ratings for Clamp Style GS Series Hubs (C and DSC) — *Continued*

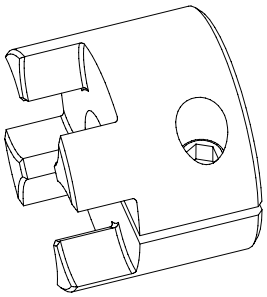
Size	1-3/16 in-lbs	1-1/4 in-lbs	1-3/8 in-lbs	1-1/2 in-lbs	1-9/16 in-lbs	1-5/8 in-lbs	1-3/4 in-lbs	1-7/8 in-lbs	1-15/16 in-lbs	2-1/8 in-lbs	2-5/16 in-lbs	2-1/2 in-lbs
19	—	—	—	—	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—	—	—	—	—
28	876	903	929	965	—	—	—	—	—	—	—	—
38	991	1,000	1,044	1,080	1,089	1,115	1,151	—	—	—	—	—
42	2,301	2,354	2,425	2,505	2,549	2,602	2,664	2,735	—	—	—	—
48	3,655	3,726	3,841	3,938	4,018	4,089	4,186	4,301	4,372	4,549	—	—
55	—	4,186	4,301	4,407	4,487	4,549	4,655	4,770	4,841	5,018	5,195	5,381

GS Series Hub Design (Descriptions)

The GS Series coupling features different hub designs for different application situations. Each type offers specific benefits for different types of applications. The clamping styles offer the benefit of minimal to zero backlash.

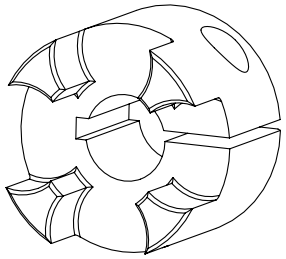
Clamping Hub With Single Slot Without Keyway (C)

Zero backlash, clamping style for torque transmission. Torque capacity of hub depends on bore size. Available standard for sizes GS 14-19.



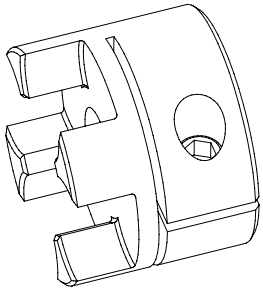
Clamping Hub With Single Slot With Keyway (CWK)

Zero backlash, clamping style with keyway for torque transmission. Usable in applications featuring reversing loads. Available standard for sizes GS 14-19.



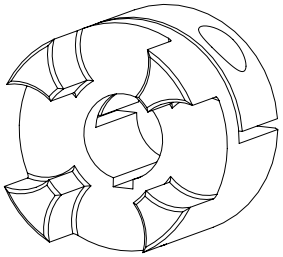
Clamping Hub With Double Slot Without Keyway (DSC)

Transmits torque utilizing a double split clamp to attach hub to shaft. Zero or minimum backlash. Torque capacity of coupling determined by bore size. Available standard for sizes GS 24-55.



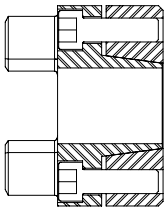
Clamping Hub With Double Slot With Keyway (DSCK)

Transmits torque utilizing a double split clamp to attach hub to shaft. Zero or minimum backlash. Available standard for sizes GS 24-55.



Hub With Frictional Locking (LD)

This hub utilizes a shaft locking device to allow for shaft engagement. This design features bolts tightened on the jaw side of the hub. Available for sizes GS 14-55.



GS Series Spider UPC Number Selection Table

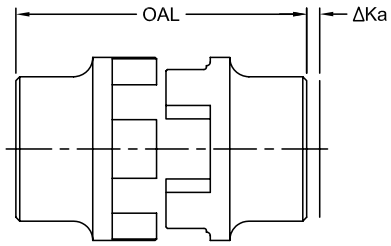
Size	Blue 80 Shore A GS	Yellow 92 Shore A GS	Red 95/98 Shore A GS	Green 64 Shore D GS
14	72241	67248	67249	72242
19	72243	67250	67251	72244
24	73886	67252	67253	72245
28	—	67254	67255	72246
38	—	67256	67257	72247
42	—	67258	67259	72248
48	—	67260	67261	72249
55	—	72250	72251	72252

Note: ■ When referencing a Lovejoy UPC number in this table, include 685144 as a prefix to the number shown, e.g. 68514472241.

CJ

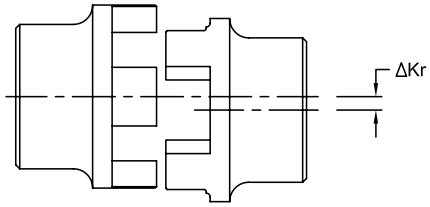
GS Series Misalignment Information

The GS Series coupling handles the following types of misalignment: axial, angular, and radial. The coupling retains its zero backlash properties due to its spider design.



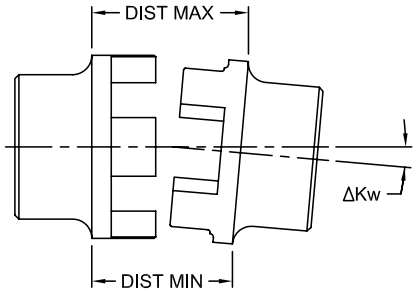
Axial Misalignment

Axial misalignment can be caused by different shaft tolerances or by thermal expansion of shafts. The GS Series coupling handles axial misalignment while keeping reactionary forces low.



Radial Misalignment

Radial misalignment can be defined as a measure of the offset distance between the centerlines of the driving and driven shafts. This type of misalignment, due to the forces involved, causes the highest stress.



Angular Misalignment

Angular misalignment can be defined as a measure of the angle between the centerlines of the driving and driven shafts, where those centerlines would intersect approximately halfway between shaft ends. The GS Series coupling can handle a specific amount of angular misalignment for each given size (refer to chart on right).

GS Series Misalignment Data

Size	Spider Shore	Misalignment ΔKa Axial (in)	ΔKr Radial (in)	ΔKw Angular
14	80	+0.039 -0.019	0.008	1.1°
	92		0.006	1.0°
	98		0.003	0.9°
	64		0.002	0.8°
19	80	+0.047 -0.019	0.006	1.1°
	92		0.004	1.0°
	98		0.002	0.9°
	64		0.001	0.8°
24	92	+0.055 -0.019	0.005	1.0°
	98		0.004	0.9°
	64		0.003	0.8°
28	92	+0.059 -0.027	0.006	1.0°
	98		0.004	0.9°
	64		0.003	0.8°
38	92	+0.070 -0.027	0.007	1.0°
	98		0.005	0.9°
	64		0.003	0.8°
42	92	+0.078 -0.039	0.007	1.0°
	98		0.005	0.9°
	64		0.004	0.8°
48	92	+0.082 -0.039	0.009	1.0°
	98		0.006	0.9°
	64		0.004	0.8°
55	92	+0.086 -0.039	0.009	1.0°
	98		0.007	0.9°
	64		0.005	0.8°