

# SJC Series

## Zero Backlash Jaw Coupling



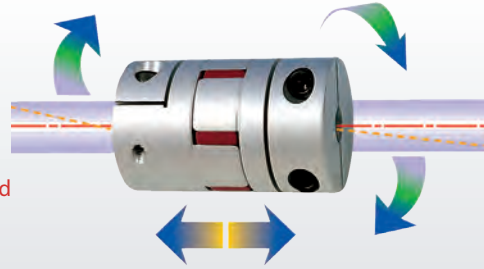
'SI, CO' mark(Trademark : 40-2012-0061376) indicates that the authenticity is certified.  
'SJC' (Trademark : 40-2012-0044881) is the original trademark for SUNGIL's Jaw Coupling.

SUNGIL's Jaw coupling has a unique hub and sleeve structure, so it has maximized the advantages of zero backlash metallic coupling and common coupling with rubber elastic material.

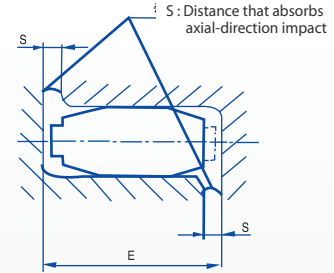
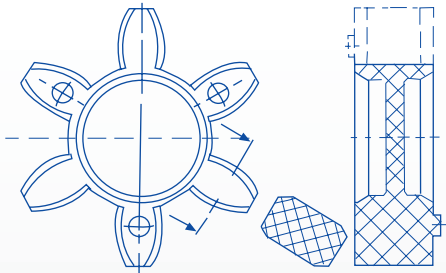


### Features

- Structure is manufactured with pre-load on Sleeve
- Zero backlash (low operational torque environment)
- Excellent durability and torsional stiffness
- Absorbs parallel and angular misalignment and vibration through Sleeve
- Identical CW and CCW rotational characteristics
- Oil resistance, electric insulation
- Operational temperature: -30℃~80℃
- Several holes are machined hub's inside surface for the well-balanced product



### Sleeve



- ※ SUNGIL's sleeve is different from other sleeves because the center is non-penetrative. The teeth are made in a form shape by considering the dimensions (tolerance) of them very carefully, so there is no clearance and backlash on operation
- ※ There is penetrative sleeve that is machined after molding for easy assembly

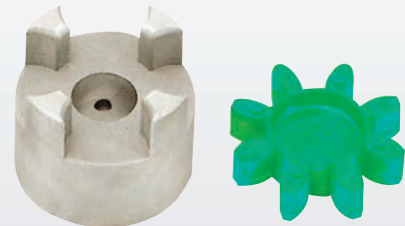
- ※ S : Distance that absorbs axial-direction impact. Sungil's Jaw coupling is assembled with special tools for the uniform distance.



Out Diameter Size  $\phi$  14~ $\phi$  30



Out Diameter Size  $\phi$  40

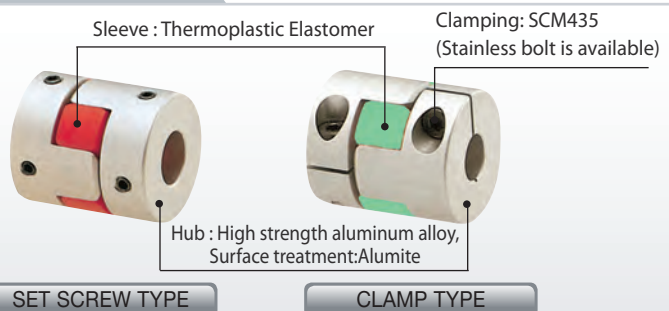


Out Diameter Size  $\phi$  55~ $\phi$  100

### Application

- Position controlling-positioning
- Robot system
- Boring and grinding machine
- Machining center (machine tool)
- Medical equipment
- Servo Motor
- X-Y and X-Y-Z axle driving
- Reduction geared motor

### Structure & Material



SRB Series

SOH Series

SD Series

SHD Series

SRG Series

SCJ Series

SFC Series

SJC Series

SHR Series

# SJC Series

## Zero Backlash Jaw Coupling

### Selection Method

SJC coupling has 2 different usages. One for transmitting angular rotation with zero backlash and another for transmitting extremely high torque. Choose the appropriate coupling because we have 2 different sleeves with different physical characteristics.

#### 1. To transmit rotation with zero backlash mainly

In order to transmit angular rotation and control for the main purpose in low torque range, the same characteristic, metal spring coupling having zero backlash can be used. In addition, it can absorb torsional vibration which you cannot get from general couplings. To use for zero backlash, the operating torque is less than the rated torque on the table. (Refer to the table below) For zero backlash, the permissible torque is the same for 2 sleeves. However, for accurate transmission concerning necessary responsiveness, higher strength is required for sleeves.

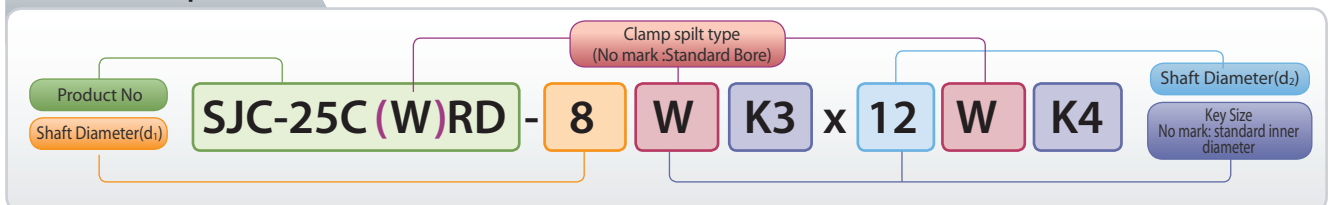
#### 2. To transmit extremely high torque mainly

SJC type coupling can be used for higher torque compared with metal coupling because it transmits torque by compressing sleeve. Therefore, it can be applied to general industrial machines such as pump that does not need zero backlash seriously. SJC couplings sleeves are offered in two different types, green sleeve which has lower strength is used in lower rated and maximum torque condition, while a red sleeve has higher values. On the contrary, the green sleeve's misalignment permissible value is higher than the red sleeve's and thus, this type of sleeve is more suitable for absorbing vibration or impact. So, select the proper sleeve for your use.

Sleeve			Fastening way	
Hardness (Shore D)	Color	Material	SET SCREW TYPE	CLAMP TYPE
55D (98A)	Green	Hytrel	SJC - □ □ - GR	SJC - □ □ C - GR
64D	Red	Hytrel	SJC - □ □ - RD	SJC - □ □ C - RD

Product Number	Sleeve Hardness	For Zero Backlash (N · m)	Rated Torque (N · m)	Max Torque (N · m)	Torsional Stiffness (N · m/rad)	Permissible Parallel Misalignment (mm)	Permissible Parallel Misalignment (°)	Permissible End-play (mm)
SJC-14	GR 55D (98A)	0,2	1,6	3,6	20	0,05	1,0	+0,6 -0,2
	RD 64D		2	4	30	0,03		
SJC-20	GR 55D (98A)	0,2	4	8	40	0,07	1,0	+0,8 -0,3
	RD 64D		5	10	65	0,05		
SJC-25	GR 55D (98A)	0,35	8	10	180	0,07	1,0	+1,0 -0,4
	RD 64D		10	20	220	0,05		
SJC-30	GR 55D (98A)	0,5	10	20	180	0,08	1,0	+1,0 -0,5
	RD 64D		14	28	220	0,06		
SJC-40	GR 55D (98A)	1,2	16	32	1,200	0,06	1,0	+1,2 -0,6
	RD 64D		18	36	2,000	0,04		
SJC-55	GR 55D (98A)	-	45	90	2,500	0,09	1,0	+1,4 -0,6
	RD 64D		60	120	4,000	0,06		
SJC-65	GR 55D (98A)	-	120	240	4,000	0,1	1,0	+1,5 -0,6
	RD 64D		180	360	8,000	0,08		
SJC-80	GR 55D (98A)	-	240	480	10,000	0,1	1,0	+1,5 -0,6
	RD 64D		320	640	20,000	0,08		
SJC-100	GR 55D (98A)	-	300	600	20,000	0,15	1,0	+2,0 -0,6
	RD 64D		600	1,200	40,000	0,1		

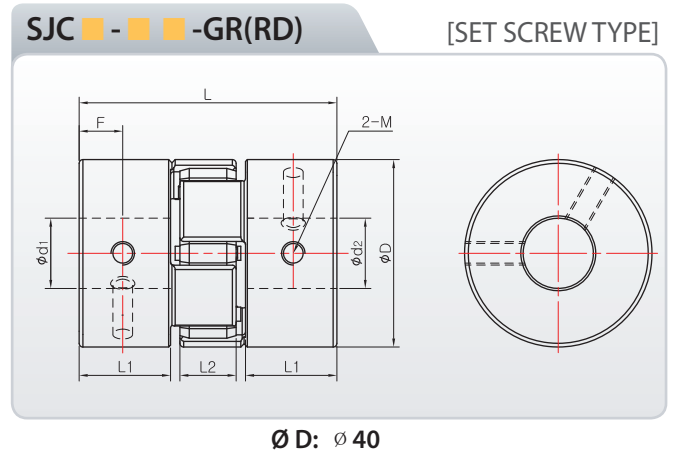
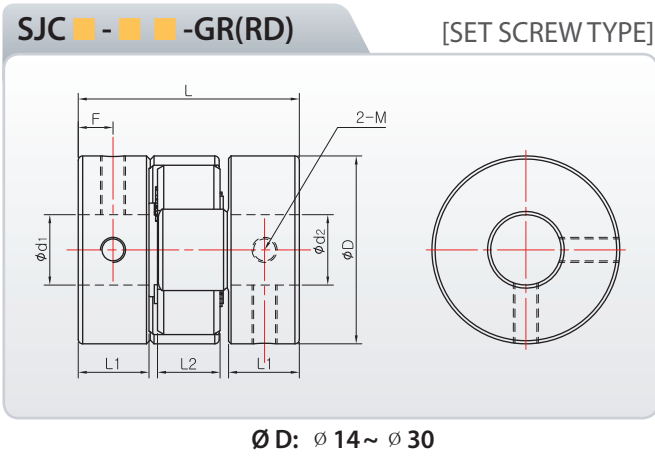
### How to order product



- ※ Please mark each inner diameter size.      ※ When you order 'penetrate-type sleeve', please mark 'penetrate-type'.
- ※ The following is the size of the inner diameter of penetrate-type sleeves.  
SJC-14=Ø4.5, SJC-20=Ø7, SJC-25=Ø7.6, SJC-30=Ø9.6, SJC-40=Ø15.5, SJC-55=Ø25.3, SJC-65=Ø26.7, SJC-80=Ø30.8, SJC-100=Ø50.5
- ※ Clamp split type is available for SJC-30C, SJC-40C, SJC-55C, SJC-65C, SJC-80C and SJC-100C. Please mark 'W' right behind the bore diameter where you want to separate.

# SJC Series Zero Backlash Jaw Coupling

Please, download CAD DATA from [www.sungilfa.com](http://www.sungilfa.com)



## Dimensions & Performance

Product Number	Dimension ( $\pm 0,3$ )					Fastening Bolt M	Fastening Torque (N · m)	Max. RPM ( $\text{min}^{-1}$ )	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia ( $\text{kg} \cdot \text{m}^2$ )	Mass (g)	Permissible Misalignment		
	D	L	L <sub>1</sub>	L <sub>2</sub>	F									Angle (°)	Parallel (mm)	End-Play (mm)
SJC-14 GR	14	22	7	6	3,45	M3	0,7	27,000	3,2	1,6	20	$1,9 \times 10^{-7}$	6,7	1,0	0,05	+0,6 -0,2
SJC-20 GR	20	30	10	8	4,65	M3	0,7	19,000	8	4	40	$1,0 \times 10^{-6}$	18,3	1,0	0,07	+0,8 -0,3
SJC-25 GR	25	31,25	10	9	4,95	M4	1,7	15,000	16	8	180	$2,7 \times 10^{-6}$	30	1,0	0,07	+1,0 -0,4
SJCA-30 GR	30	35,3	11,3	10	5,55	M4	1,7	13,000	20	10	180	$6,2 \times 10^{-6}$	46	1,0	0,08	+1,0 -0,4
SJCB-30 GR	30	44,7	16	10	7,25	M4	1,7	13,000	20	10	180	$8,2 \times 10^{-6}$	60	1,0	0,08	+1,0 -0,4
SJCA-40 GR	40	55	19,5	12	9,3	M5	4	9,600	32	16	1,200	$3,3 \times 10^{-5}$	132	1,0	0,06	+1,2 -0,5
SJCB-40 GR	40	66	25	12	11,6	M5	4	9,600	32	16	1,200	$4,0 \times 10^{-5}$	163	1,0	0,06	+1,2 -0,5
SJC-14 RD	14	22	7	6	3,45	M3	0,7	27,000	4	2	30	$2,1 \times 10^{-7}$	6,7	1,0	0,03	+0,6 -0,2
SJC-20 RD	20	30	10	8	4,65	M3	0,7	19,000	10	5	65	$1,0 \times 10^{-6}$	18,4	1,0	0,05	+0,8 -0,3
SJC-25 RD	25	31,25	10	9	4,95	M4	1,7	15,000	20	10	220	$2,4 \times 10^{-6}$	30	1,0	0,05	+1,0 -0,4
SJCA-30 RD	30	35,3	11,3	10	5,55	M4	1,7	13,000	28	14	220	$5,9 \times 10^{-6}$	46	1,0	0,06	+1,0 -0,4
SJCB-30 RD	30	44,7	16	10	7,25	M4	1,7	13,000	28	14	220	$7,2 \times 10^{-6}$	60	1,0	0,06	+1,0 -0,4
SJCA-40 RD	40	55	19,5	12	9,3	M5	4	9,600	36	18	2,000	$3,1 \times 10^{-5}$	132	1,0	0,04	+1,2 -0,5
SJCB-40 RD	40	66	25	12	11,6	M5	4	9,600	36	18	2,000	$4,0 \times 10^{-5}$	163	1,0	0,07	+1,2 -0,5

\* Mass and mass moment of inertia are measured with max. bore size

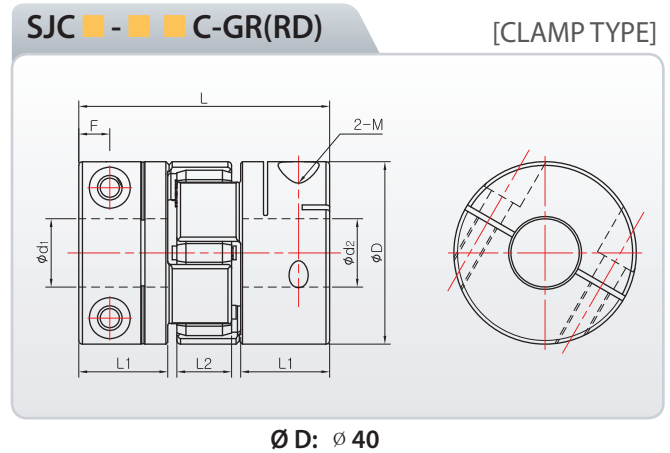
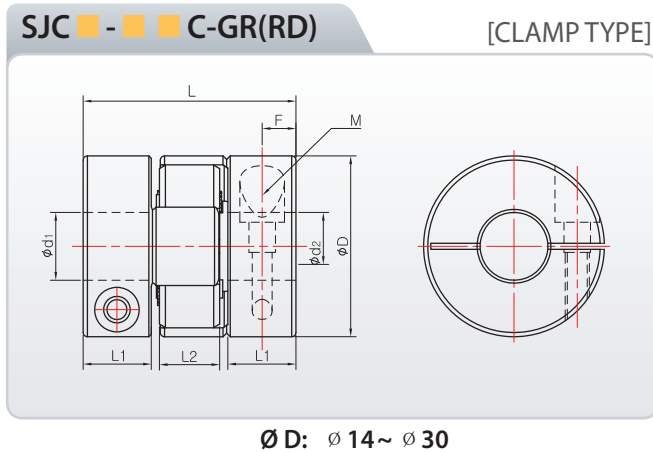
## Standard Inner diameter

Product Number	Standard Inner Diameter ( $d_1, d_2$ , unit:mm)																	
	3	4	4,5	5	6	6,35	7	8	9,525	10	11	12	14	15	16	18	19	20
SJC-14	●	●	●	●														
SJC-20		●	●	●	●	●	●	●										
SJC-25				●	●	●	●	●	●	●								
SJC-30					●	●	●	●	●	●	●	●	●					
SJC-40								●	●	●	●	●	●	●	●	●		

- For the inner diameter, INCH type is available
- Nonstandard inner diameter is also available
- Keyway is available
- The recommendation for shaft tolerance is h7.

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### Dimensions & Performance

Product Number	Dimension ( $\pm 0,3$ )					Fastening Bolt M	Fastening Torque (N · m)	Max-RPM ( $\text{min}^{-1}$ )	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia ( $\text{kg} \cdot \text{m}^2$ )	Mass (g)	Permissible Misalignment		
	D	L	L <sub>1</sub>	L <sub>2</sub>	F									Angle (°)	Parallel (mm)	End-Play (mm)
SJC-14C GR	14	22	7	6	3,5	M2	0,5	22,000	3,2	1,6	20	$1,6 \times 10^{-7}$	6	1,0	0,05	+ 0,6 - 0,2
SJC-20C GR	20	30	10	8	4,95	M2,6	1	15,000	8	4	40	$1,1 \times 10^{-6}$	19	1,0	0,07	+ 0,8 - 0,3
SJC-25C GR	25	31,25	10	9	4,95	M3	1,7	13,000	16	8	180	$2,4 \times 10^{-6}$	25	1,0	0,07	+ 1,0 - 0,4
SJCA-30C GR	30	35,3	11,3	10	5,6	M4	3,5	10,000	20	10	180	$6,2 \times 10^{-6}$	50	1,0	0,08	+ 1,0 - 0,4
SJCB-30C GR	30	44,7	16	10	5,4	M4	3,5	10,000	20	10	180	$7,5 \times 10^{-6}$	55	1,0	0,08	+ 1,0 - 0,4
SJCA-40C GR	40	55	19,5	12	6,8	M5	8	8,500	32	16	1,200	$3,1 \times 10^{-5}$	135	1,0	0,06	+ 1,2 - 0,5
SJCB-40C GR	40	66	25	12	8,4	M5	8	8,500	32	16	1,200	$3,9 \times 10^{-5}$	160	1,0	0,06	+ 1,2 - 0,5
SJC-14C RD	14	22	7	6	3,5	M2	0,5	22,000	4	2	30	$1,6 \times 10^{-7}$	6	1,0	0,03	+ 0,6 - 0,2
SJC-20C RD	20	30	10	8	4,95	M2,6	1	15,000	10	5	65	$1,1 \times 10^{-6}$	19	1,0	0,05	+ 0,8 - 0,3
SJC-25C RD	25	31,25	10	9	4,95	M3	1,7	13,000	20	10	220	$2,4 \times 10^{-6}$	25	1,0	0,05	+ 1,0 - 0,4
SJCA-30C RD	30	35,3	11,3	10	5,6	M4	3,5	10,000	28	14	220	$6,2 \times 10^{-6}$	50	1,0	0,06	+ 1,0 - 0,4
SJCB-30C RD	30	44,7	16	10	5,4	M4	3,5	10,000	28	14	220	$7,5 \times 10^{-6}$	55	1,0	0,06	+ 1,0 - 0,4
SJCA-40C RD	40	55	19,5	12	6,8	M5	8	8,500	36	18	2,000	$3,1 \times 10^{-5}$	135	1,0	0,04	+ 1,2 - 0,5
SJCB-40C RD	40	66	25	12	8,4	M5	8	8,500	36	18	2,000	$3,9 \times 10^{-5}$	160	1,0	0,04	+ 1,2 - 0,5

\* Mass and mass moment of inertia are measured with max. bore size

### Standard Inner diameter

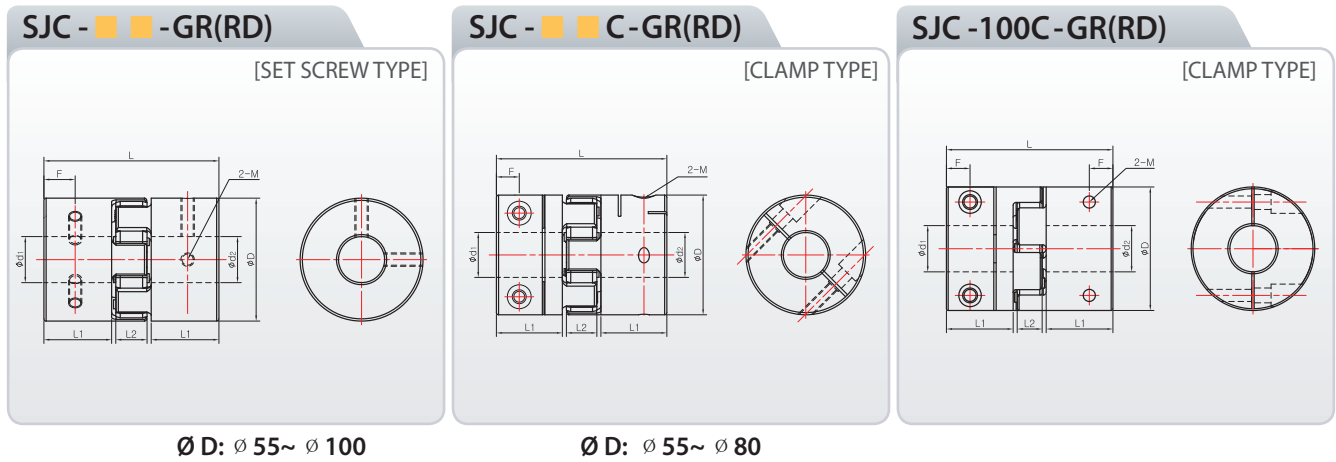
Product Number	Standard Inner Diameter ( $d_1, d_2$ , unit:mm)																	
	3	4	4,5	5	6	6,35	7	8	9,525	10	11	12	14	15	16	18	19	20
SJC-14C	●	●	●	●														
SJC-20C		●	●	●	●	●	●	●										
SJC-25C				●	●	●	●	●	●	●								
SJC-30C					●	●	●	●	●	●	●	●	●					
SJC-40C								●	●	●	●	●	●	●	●	●		

- For the inner diameter, INCH type is available
- Nonstandard inner diameter is also available
- Keyway is available
- The recommendation for shaft tolerance is h7.

# SJC Series

## Zero Backlash Jaw Coupling

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### Dimensions & Performance

Product Number	Dimension (±0,3)					Fastening Bolt M	Fastening Torque (N · m)	Max· RPM (min <sup>-1</sup> )	Max Torque (N · m)	Rated Torque (N · m)	Torsional Stiffness (N · m/rad)	Moment of Inertia (kg · m <sup>2</sup> )	Mass (g)	Permissible Misalignment		
	D	L	L <sub>1</sub>	L <sub>2</sub>	F									Angle (°)	Parallel (mm)	End-Play (mm)
SJC-55 GR	55	78,3	30,3	14	14	M6	7	7,500	90	45	2,500	1,7 × 10 <sup>-4</sup>	344	1	0,09	+1,4 -0,5
SJC-65 GR	65	90,3	35,3	15	17,2	M8	15	6,000	240	120	4,000	3,7 × 10 <sup>-4</sup>	535	1	0,1	+1,5 -0,6
SJC-80 GR	80	114,2	45,2	18	21,7	M8	15	5,000	480	240	10,000	1,1 × 10 <sup>-3</sup>	1,150	1	0,1	+1,5 -0,6
SJC-100 GR	104	140,2	56,2	21	27,25	M10	25	4,000	600	300	20,000	4,8 × 10 <sup>-3</sup>	2,650	1	0,1	+2,0 -0,6
SJC-55C GR	55	78,3	30,3	14	10,5	M6	13	6,500	90	45	2,500	1,6 × 10 <sup>-4</sup>	330	1	0,09	+1,4 -0,5
SJC-65C GR	65	90,3	35,3	15	12,45	M8	30	5,500	240	120	4,000	3,8 × 10 <sup>-4</sup>	560	1	0,1	+1,5 -0,6
SJC-80C GR	80	114,2	45,2	18	14,7	M10	50	4,500	480	240	10,000	1,0 × 10 <sup>-3</sup>	1,050	1	0,1	+1,5 -0,6
SJC-100C GR	104	140,2	56,2	21	19,9	M12	90	3,500	600	300	20,000	4,6 × 10 <sup>-3</sup>	2,550	1	0,15	+2,0 -0,6
SJC-55 RD	55	78,3	30,3	14	14	M6	7	7,500	120	60	4,000	1,7 × 10 <sup>-4</sup>	344	1	0,06	+1,4 -0,5
SJC-65 RD	65	90,3	35,3	15	17,2	M8	15	6,000	360	180	8,000	3,9 × 10 <sup>-4</sup>	535	1	0,08	+1,5 -0,6
SJC-80 RD	80	114,2	45,2	18	21,7	M8	15	5,000	640	320	20,000	1,1 × 10 <sup>-3</sup>	1,150	1	0,08	+1,5 -0,6
SJC-100 RD	104	140,2	56,2	21	27,25	M10	25	4,000	1,200	600	40,000	4,8 × 10 <sup>-3</sup>	2,650	1	0,1	+2,0 -0,6
SJC-55C RD	55	78,3	30,3	14	10,5	M6	13	6,500	120	60	4,000	1,6 × 10 <sup>-4</sup>	330	1	0,6	+1,4 -0,5
SJC-65C RD	65	90,3	35,3	15	12,45	M8	30	5,500	360	180	8,000	3,8 × 10 <sup>-4</sup>	560	1	0,08	+1,5 -0,6
SJC-80C RD	80	114,2	45,2	18	14,7	M10	50	4,500	640	320	20,000	1,0 × 10 <sup>-3</sup>	1,050	1	0,08	+1,5 -0,6
SJC-100C RD	104	140,2	56,2	21	19,9	M12	90	3,500	1,200	600	40,000	4,6 × 10 <sup>-3</sup>	2,550	1	0,1	+2,0 -0,6

\* Mass and mass moment of inertia are measured with max. bore size

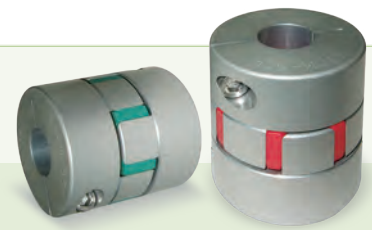
### Standard Inner diameter

Product Number	Standard Inner Diameter(d <sub>1</sub> , d <sub>2</sub> , unit:mm)																			
	10	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	40	45	50	60
SJC-55 □		●	●	●	●	●	●	●	●	●	●	●								
SJC-65 □				●	●	●	●	●	●	●	●	●	●	●	●	●				
SJC-80 □				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SJC-100 □								●	●	●	●	●	●	●	●	●	●	●	●	●

- For the inner diameter, INCH type is available
- Nonstandard inner diameter is also available
- Keyway is available
- The recommendation for shaft tolerance is h7.

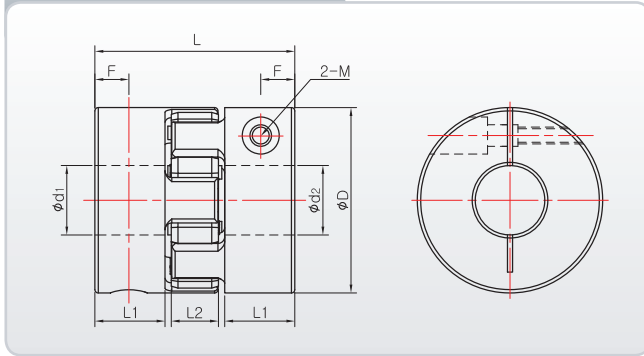
# SJC Series

## Zero Backlash Jaw Coupling



### SJCM - C-GR(RD)

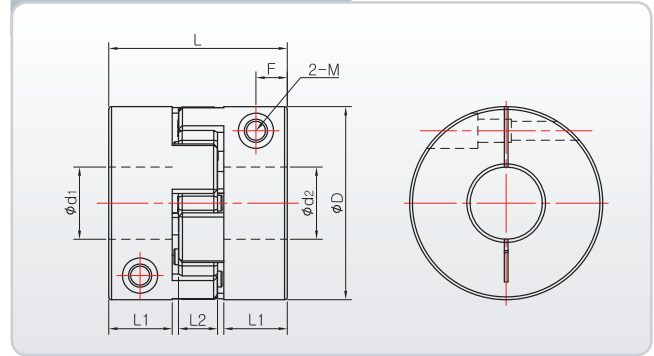
[CLAMP M TYPE]



ØD: Ø 55~ Ø 80

### SJCM -100C-GR(RD)

[CLAMP M TYPE]



### Dimensions & Performance

Product Number	Dimension (±0.3)					Fastening Bolt M	Fastening Torque (N·m)	Max-RPM (min <sup>-1</sup> )	Max Torque (N·m)	Rated Torque (N·m)	Torsional Stiffness (N·m/rad)	Moment of Inertia (kg·m <sup>2</sup> )	Mass (g)	Permissible Misalignment		
	D	L	L <sub>1</sub>	L <sub>2</sub>	F									Angle (°)	Parallel (mm)	End-Play (mm)
SJCM-55C GR	55	59.3	20.8	14	10.1	M6	13	4,000	90	45	2,500	1.3 × 10 <sup>-4</sup>	280	1	0.09	+1.4 -0.5
SJCM-65C GR	65	63.3	21.8	15	10.45	M8	30	3,500	240	120	4,000	2.6 × 10 <sup>-4</sup>	400	1	0.1	+1.5 -0.6
SJCM-80C GR	80	87.2	31.7	18	15.5	M10	50	3,000	480	240	10,000	8.7 × 10 <sup>-4</sup>	860	1	0.1	+1.5 -0.6
SJCM-100C GR	104	96.2	34.2	21	16.9	M12	90	3,000	600	300	7,000	3.1 × 10 <sup>-3</sup>	1,700	1	0.15	+2.0 -0.6
SJCM-55C RD	55	59.3	20.8	14	10.1	M6	13	4,000	120	60	4,000	1.3 × 10 <sup>-4</sup>	280	1	0.06	+1.4 -0.5
SJCM-65C RD	65	63.3	21.8	15	10.45	M8	30	3,500	360	180	8,000	2.6 × 10 <sup>-4</sup>	400	1	0.08	+1.5 -0.6
SJCM-80C RD	80	87.2	31.7	18	15.5	M10	50	3,000	640	320	20,000	8.7 × 10 <sup>-4</sup>	860	1	0.08	+1.5 -0.6
SJCM-100C RD	104	96.2	34.2	21	16.9	M12	90	3,000	1,200	600	40,000	3.1 × 10 <sup>-3</sup>	1,700	1	0.1	+2.0 -0.6

\* Mass and mass moment of inertia are measured with max. bore size

### Standard Inner diameter

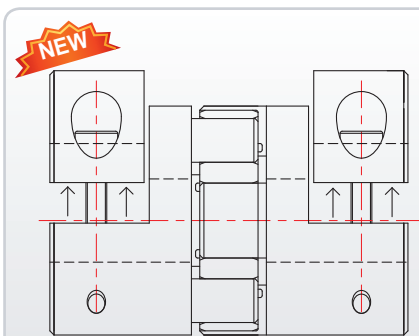
Product Number	Standard Inner Diameter(d <sub>1</sub> , d <sub>2</sub> , unit:mm)																			
	10	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	40	45	50	60
SJCM-55C		●	●	●	●	●	●	●	●	●	●	●	●							
SJCM-65C				●	●	●	●	●	●	●	●	●	●	●	●	●				
SJCM-80C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SJCM-100C								●	●	●	●	●	●	●	●	●	●	●	●	●

■ For the inner diameter, INCH type is available

■ Nonstandard inner diameter is also available

■ Keyway is available

■ The recommendation for shaft tolerance is h7.



※ It is possible to order the CLAMP Split Type for outer Diameter Size Ø30-Ø100 (Ø 30 is available B TYPE)  
 ※ It is impossible for SJC series.



CLAMP SPLIT TYPE



GENERAL CLAMP TYPE

