

# SJC Series

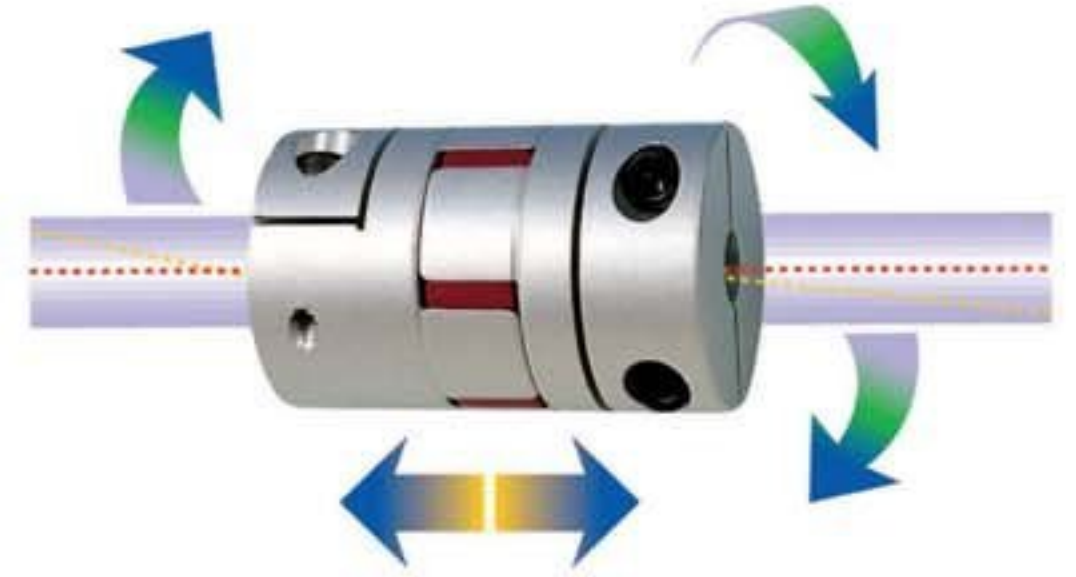
## Zero Backlash Jaw Coupling



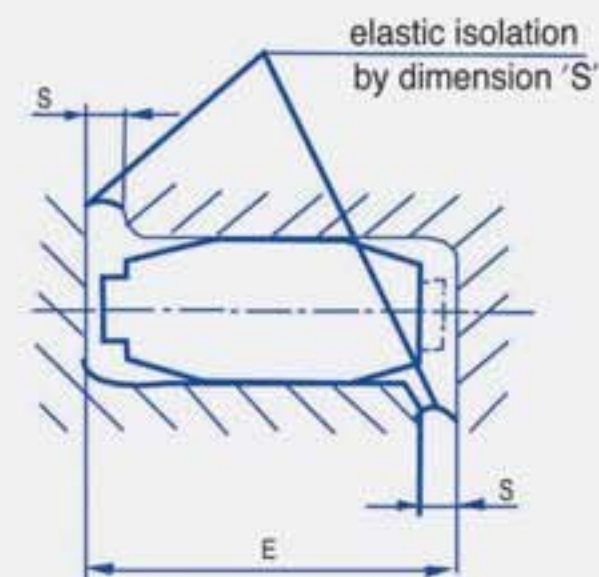
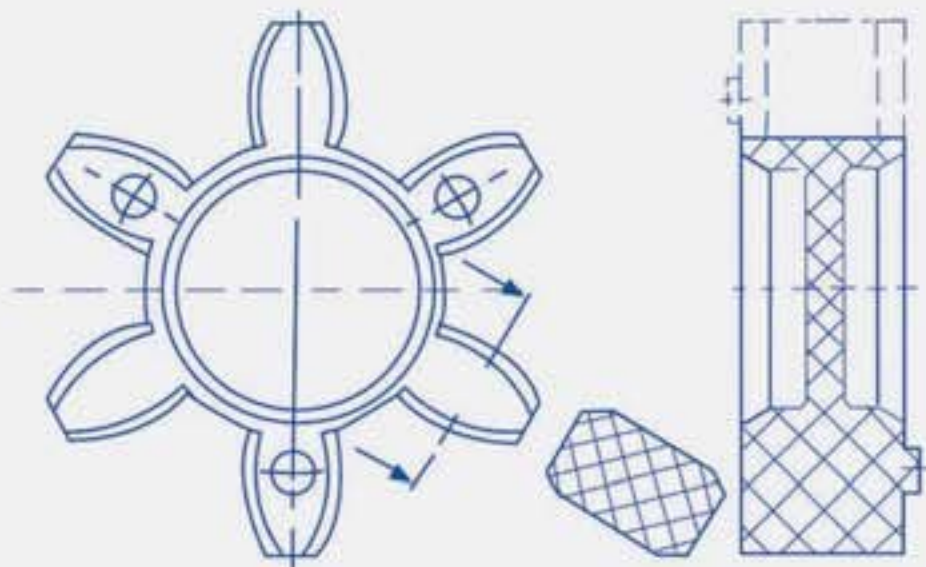
JAW COUPLING of SI has such characteristic that can not be found in other couplings because of its unique construction. It means that the coupling has compound features such as the characteristic of zero backlash metal spring coupling and the characteristic of coupling with common rubber elastic material.

### Features

- Zero backlash coupling
- Excellent durability and rigidity against high torsion
- Maintenance and repair are unnecessary and lubrication is not required
- Elastic spider reduces impact of pit load
- Identical regular and reverse rotational characteristics
- Resistance against oil and insulation against electricity
- Operational temperature: -20°C ~ 70°C



### Sleeve



SI sleeve is made into non through sleeve that is unique. And teeth of sleeve are made into crown type order to easy assembly. The column of sleeve is longer than that of other products, so assembly of this product is not loose.  
 \*There is the through sleeve that is processed after injection molding in order to easy assembly

※ elastic isolation by dimension when the coupling is assembled



(Outside Diameter  $\phi$  14~  $\phi$  30)



(Outside Diameter  $\phi$  40)



(Outside Diameter  $\phi$  55~  $\phi$  100)

### Application

- Electric motor
- Position controlling - positioning
- Robot system
- Direct drive of boring and grinding machine
- Machining center (machine tool)
- Medical equipment
- Servo Motor
- X-Y and X-Y-Z axle driving
- Deceleration Motor

### Structure & Material



# SJC Series Zero Backlash Jaw Coupling

## Selection Method of SJC Series

Therefore, SJC Series coupling can be divided into 2 purposes of zero backlash method to deliver rotation angle and method to deliver torque mainly. Since each sleeve with different hardness has different characteristic, select appropriate coupling.

### 1. Main purpose is to deliver zero backlash

When using coupling in low torque range in order to deliver rotation angle, same zero backlash characteristic that metal spring coupling offers can be used. In addition, it has the function of absorbing torsion vibration that common coupling can not offer. When it is used for zero backlash, rotation transfer torque becomes less than the torque listed in the table. Please refer to the table below. Even though torque limit for zero backlash torque is same in 2 sleeves, a sleeve with higher hardness can get higher performance concerning the necessary responsiveness to deliver rotation angle accurately.

### 2. Main purpose to deliver torque

SJC type coupling can be used for higher torque than metal coupling in that it delivers torque by contracting the sleeve. Therefore, it can be applied to general industrial machine such as pump that does not need zero backlash. Even though SJC couplings are standardized in different sleeves, green sleeve with lower hardness has lower usual torque and maximum torque while red sleeve with higher hardness has higher usual torque and maximum torque. On the contrary, misalignment limit is larger in green sleeve and smaller in red sleeve. Please, select proper sleeve for use.

Sleeve		Attachment						
Hardness(JIS A)	Color	SET SCREW TYPE				CLAMP TYPE		
92	Green	SJC -  - GR				SJC -  C - GR		
98	Red	SJC -  - RD				SJC -  C - RD		

Product Number	Sleeve (JIS A)	Zero Backlash (N.m)	Rated Torque (N·m)	Max Torque (N·m)	Twisting Hardness (N.m/rad)	Parallel (mm)	Angle (°)	End-Play (mm)
SJC-14	GR	92	1.2	2.4	14	0.1	1.0	+0.6
	RD	98	2	4	22	0.1		0
SJC-20	GR	92	3	6	29	0.15	1.0	+0.8
	RD	98	5	10	55	0.15		0
SJC-25	GR	92	5	10	45	0.15	1.0	+1.0
	RD	98	9	18	80	0.1		0
SJC-30	GR	92	7.5	15	73	0.15	1.0	+1.0
	RD	98	12.5	25	130	0.1		0
SJC-40	GR	92	10	20	570	0.1	1.0	+1.2
	RD	98	17	34	1.200	0.1		0
SJC-55	GR	92	35	70	1.600	0.15	1.0	+1.4
	RD	98	60	120	2.600	0.1		0
SJC-65	GR	92	95	190	3.000	0.15	1.0	+1.5
	RD	98	160	320	4.900	0.1		0
SJC-80	GR	92	190	380	6.500	0.15	1.0	+1.5
	RD	98	320	640	11.000	0.1		0
SJC-100	GR	92	300	600	7.000	0.15	1.0	+2.0
	RD	98	600	1.200	30.000	0.1		0

## How to order product

**SJC - 20 - GR**

$\phi 6$

×

$\phi 8$

Product No.

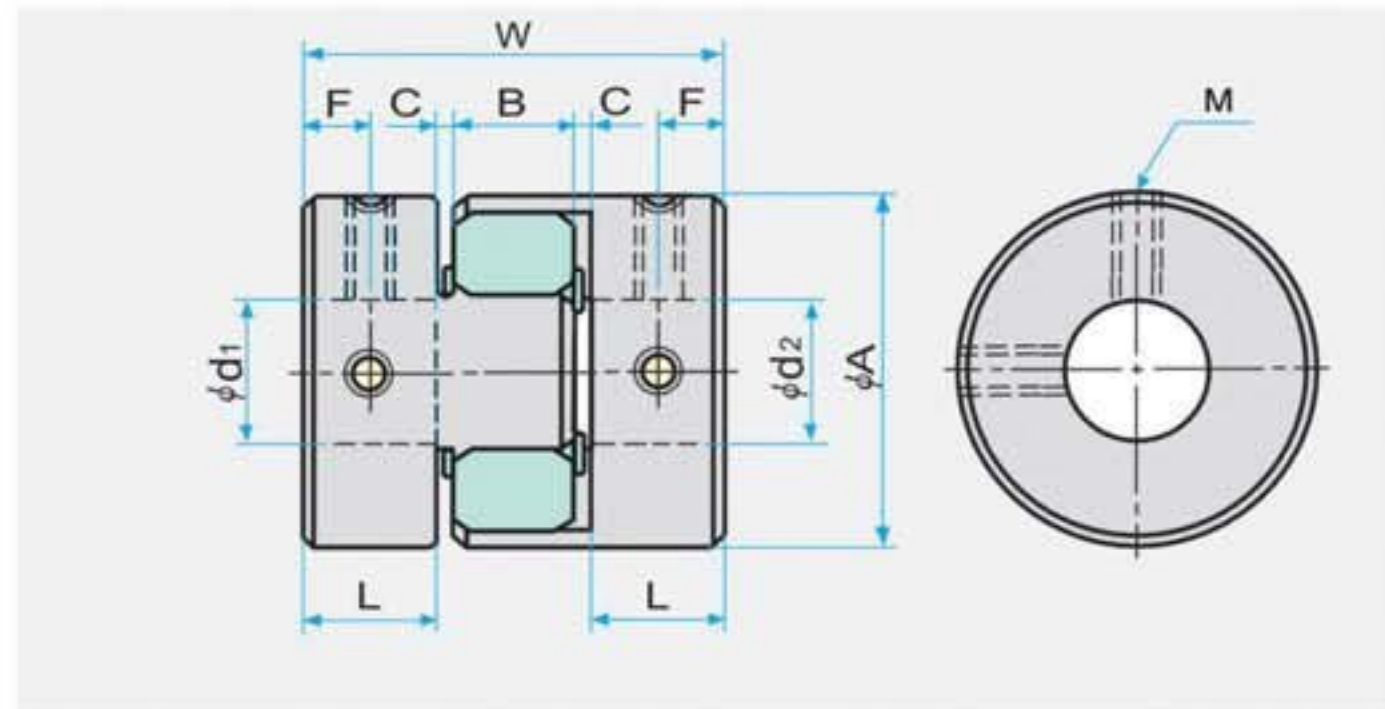
Shaft Dia

Shaft Dia

※ Please, specify the diameters of both shaft ends in the order form.

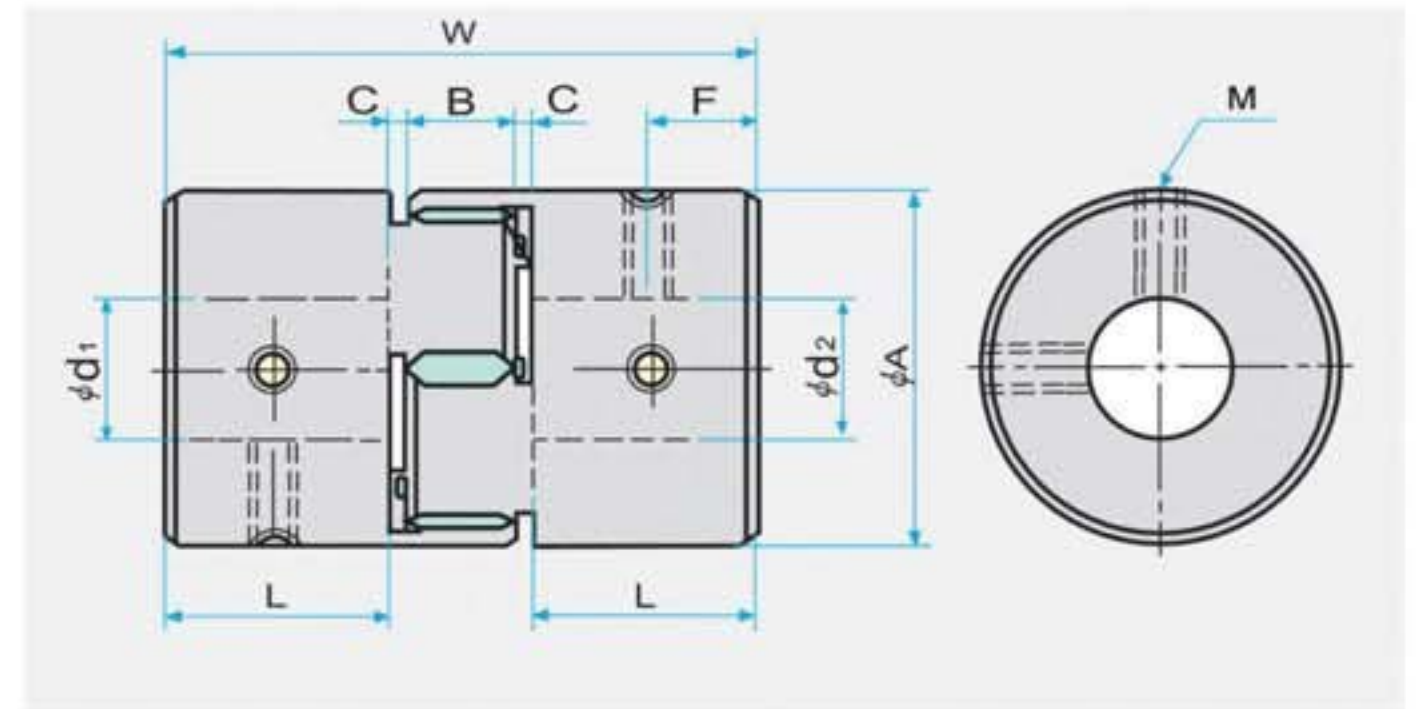
# SJC Series Zero Backlash Jaw Coupling

 (SET SCREW TYPE)



(Outside Diameter  $\phi$  14~ $\phi$  30)

 (SET SCREW TYPE)





(Outside Diameter  $\phi$  40)


## Standards & Performance

Product Number	A	L	W	B	C	F	M	Wrench Torque (N.m)	Max·Bore (mm)	Rated Torque (N·m)	Max Torque (N·m)	Max·RPM (min <sup>-1</sup> )	Moment of inertia (kg·m <sup>2</sup> )	Static Torsional Stiffness (N.m/rad)	Parallel (mm)	Angle (°)	End-Play (mm)	mass (g)
SJC-14 GR	14	7	22	6	1	3.5	M3	0.6	6.35	1.2	2.4	27,000	2.1 × 10 <sup>-7</sup>	14	0.15	1.0	+0.6 0	7.3
SJC-20 GR	20	10	30	8	1	5	M3	0.6	9.525	3	6	19,000	1.0 × 10 <sup>-6</sup>	29	0.15	1.0	+0.8 0	18
SJC-25 GR	25	10	32.5	9	1.25	5	M4	1.7	12	5	10	15,000	2.4 × 10 <sup>-6</sup>	45	0.15	1.0	+1.0 0	25
SJCA-30 GR	30	11.3	35	10	1.5	5.5	M4	1.7	14	7.5	15	13,000	5.9 × 10 <sup>-6</sup>	73	0.15	1.0	+1.0 0	46
SJCB-30 GR	30	15.8	44	10	1.5	7.7	M4	1.7	14	7.5	15	13,000	7.2 × 10 <sup>-6</sup>	73	0.15	1.0	+1.0 0	53
SJCA-40 GR	40	19.5	55	12	2	9	M5	4	18	10	20	9,600	3.1 × 10 <sup>-5</sup>	570	0.1	1.0	+1.2 0	125
SJCB-40 GR	40	25	66	12	2	11.5	M5	4	18	10	20	9,600	4.0 × 10 <sup>-5</sup>	570	0.1	1.0	+1.2 0	150
SJC-14 RD	14	7	22	6	1	3.5	M3	0.6	6.35	2	4	27,000	2.1 × 10 <sup>-7</sup>	22	0.1	1.0	+0.6 0	7.3
SJC-20 RD	20	10	30	8	1	5	M3	0.6	9.525	5	10	19,000	1.0 × 10 <sup>-6</sup>	55	0.1	1.0	+0.8 0	18
SJC-25 RD	25	10	32.5	9	1.25	5	M4	1.7	12	9	18	15,000	2.4 × 10 <sup>-6</sup>	80	0.1	1.0	+1.0 0	25
SJCA-30 RD	30	11.3	35	10	1.5	5.5	M4	1.7	14	12.5	25	13,000	5.9 × 10 <sup>-6</sup>	130	0.1	1.0	+1.0 0	46
SJCB-30 RD	30	15.8	44	10	1.5	7.7	M4	1.7	14	12.5	25	13,000	7.2 × 10 <sup>-6</sup>	130	0.1	1.0	+1.0 0	53
SJCA-40 RD	40	19.5	55	12	2	9	M5	4	18	17	34	9,600	3.1 × 10 <sup>-5</sup>	1200	0.1	1.0	+1.2 0	125
SJCB-40 RD	40	25	66	12	2	11.5	M5	4	18	17	34	9,600	4.0 × 10 <sup>-5</sup>	1200	0.1	1.0	+1.2 0	150

## Standard Inner diameter

Product Number	(d <sub>1</sub> , d <sub>2</sub> ) Standard INNER Diameter (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								●	●	●	●	●	●	●	●	●	●	●

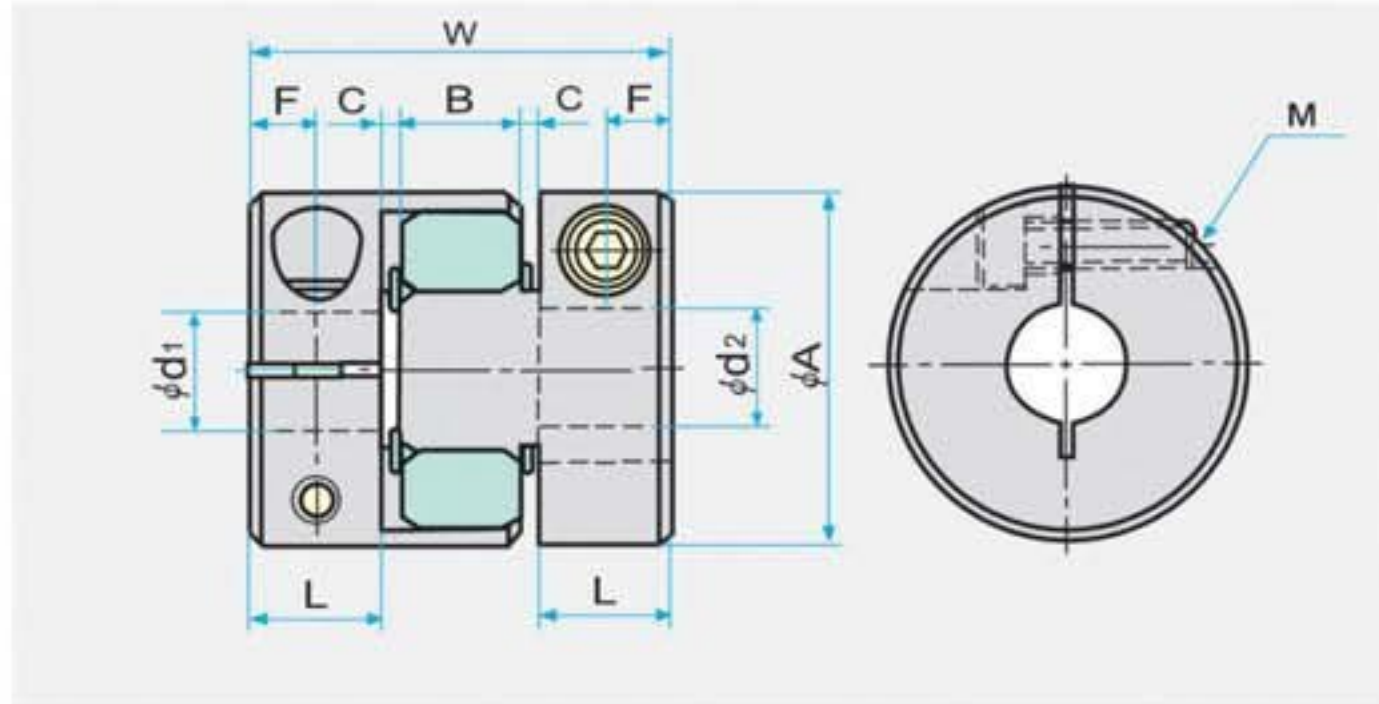
 INNER diameter INCH type is also available.  
 KEY TYPE is also available

 Non standard inner diameter product is also available

# SJC Series Zero Backlash Jaw Coupling

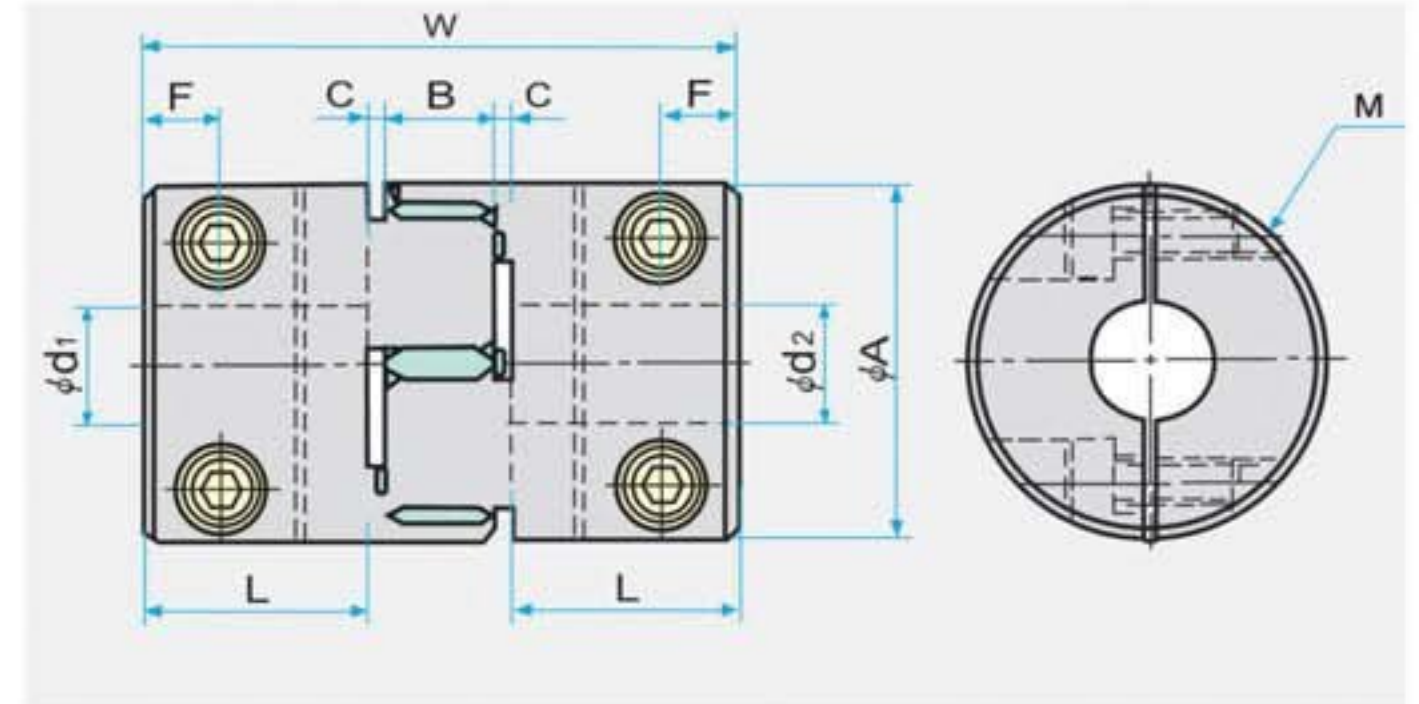


## (CLAMP TYPE)



(Outside Diameter φ 14~φ 30)

## (CLAMP TYPE)



(Outside Diameter φ 40)

## Standards & Performance

Product Number	A	L	W	B	C	F	M	Wrench Torque (N.m)	Max · Bore (mm)	Rated Torque (N·m)	Max Torque (N·m)	Max · RPM (min <sup>-1</sup> )	Moment of inertia (kg · m <sup>2</sup> )	Static Torsional Stiffness (N.m/rad)	Parallel (mm)	Angle (°)	End-Play (mm)	mass (g)
SJC-14C GR	14	7	22	6	1	3.5	M2	0.5	5	1.2	2.4	11,000	1.6 × 10 <sup>-7</sup>	14	0.15	1.0	+0.6 0	6
SJC-20C GR	20	10	30	8	1	5	M2.6	1	8	3	6	7,600	1.1 × 10 <sup>-6</sup>	29	0.15	1.0	+0.8 0	19
SJC-25C GR	25	10	32.5	9	1.25	5	M3	1.8	12	5	10	6,200	2.4 × 10 <sup>-6</sup>	45	0.15	1.0	+1.0 0	25
SJCA-30C GR	30	11.3	35	10	1.5	5.5	M4	5	14	7.5	15	5,100	6.2 × 10 <sup>-6</sup>	73	0.15	1.0	+1.0 0	50
SJCB-30C GR	30	15.8	44	10	1.5	5.5	M4	5	14	7.5	15	5,100	7.5 × 10 <sup>-6</sup>	73	0.15	1.0	+1.0 0	55
SJCA-40C GR	40	19.5	55	12	2	6.7	M5	9	18	10	20	3,800	3.1 × 10 <sup>-5</sup>	570	0.1	1.0	+1.2 0	135
SJCB-40C GR	40	25	66	12	2	8.5	M5	9	18	10	20	3,800	3.9 × 10 <sup>-5</sup>	570	0.1	1.0	+1.2 0	160
SJC-14C RD	14	7	22	6	1	3.5	M2	0.5	5	2	4	11,000	1.6 × 10 <sup>-7</sup>	22	0.1	1.0	+0.6 0	6
SJC-20C RD	20	10	30	8	1	5	M2.6	1	8	5	10	7,600	1.1 × 10 <sup>-6</sup>	55	0.1	1.0	+0.8 0	19
SJC-25C RD	25	10	32.5	9	1.25	5	M3	1.8	12	9	18	6,200	2.4 × 10 <sup>-6</sup>	80	0.1	1.0	+1.0 0	25
SJCA-30C RD	30	11.3	35	10	1.5	5.5	M4	5	14	12.5	25	5,100	6.2 × 10 <sup>-6</sup>	130	0.1	1.0	+1.0 0	50
SJCB-30C RD	30	15.8	44	10	1.5	5.5	M4	5	14	12.5	25	5,100	7.5 × 10 <sup>-6</sup>	130	0.1	1.0	+1.0 0	55
SJCA-40C RD	40	19.5	55	12	2	6.7	M5	9	18	17	34	3,800	3.1 × 10 <sup>-5</sup>	1200	0.1	1.0	+1.2 0	135
SJCB-40C RD	40	25	66	12	2	8.5	M5	9	18	17	34	3,800	3.9 × 10 <sup>-5</sup>	1200	0.1	1.0	+1.2 0	160

## Standard Inner diameter

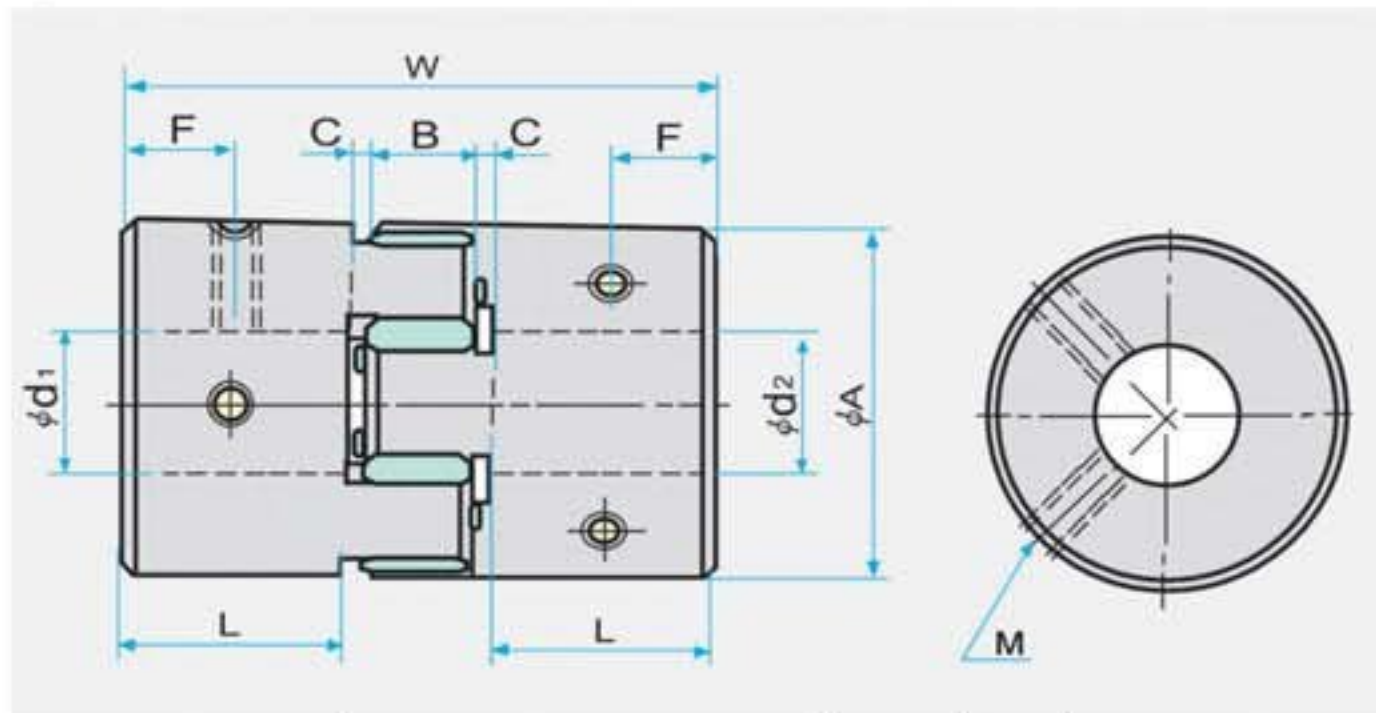
Product Number	(d <sub>1</sub> , d <sub>2</sub> ) Standard INNER Diameter (mm)																
	3	4	4. <sup>5</sup>	5	6	6. <sup>35</sup>	7	8	9. <sup>525</sup>	10	11	12	14	15	16	18	19
SJC-14C	●	●	●	●													
SJC-20C		●	●	●	●	●	●	●									
SJC-25C				●	●	●	●	●	●								
SJC-30C					●	●	●	●	●	●	●	●	●				
SJC-40C								●	●	●	●	●	●	●	●	●	●

INNER diameter INCH type is also available.  
KEY TYPE is also available

Non standard inner diameter product is also available

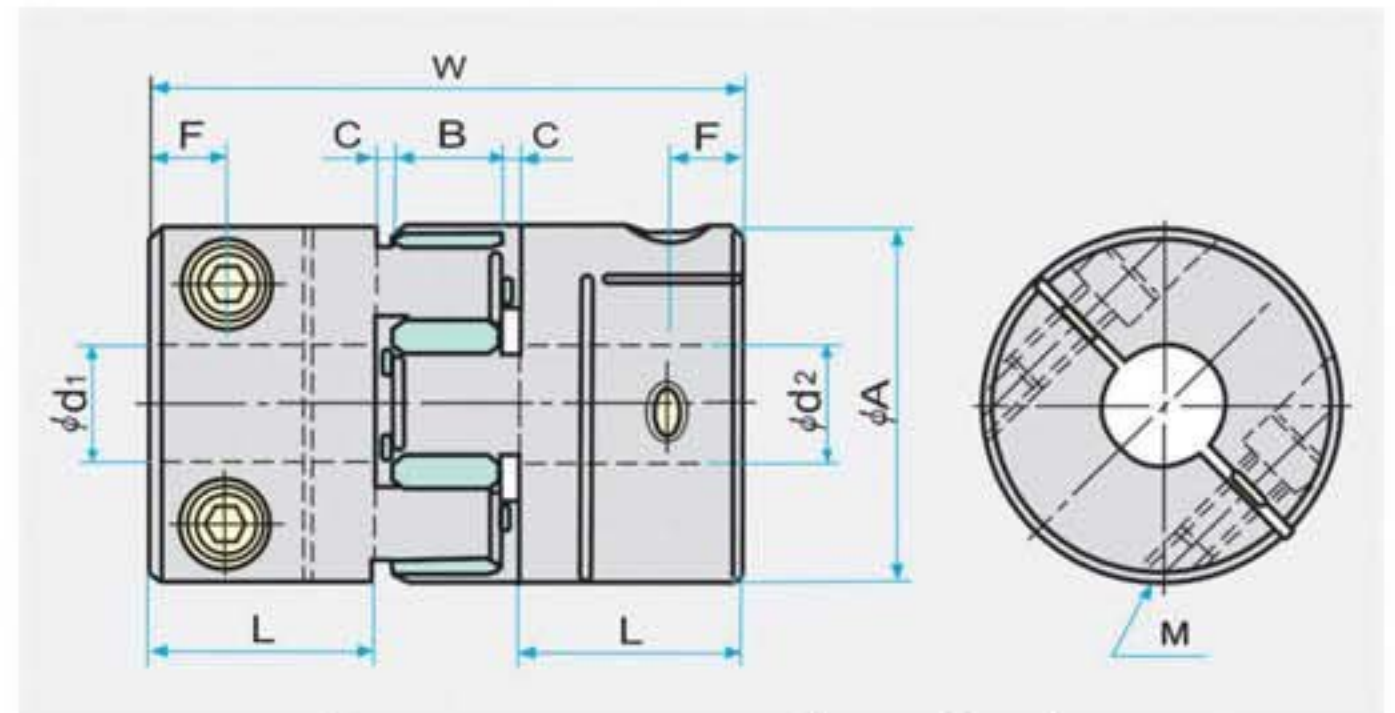
# SJC Series Zero Backlash Jaw Coupling

## SJC-■■-GR(RD) (SET SCREW TYPE)



(Outside Diameter Ø55~Ø100)

## SJC-■■C-GR(RD) (CLAMP TYPE)



(Outside Diameter Ø55~Ø100)

## Standards

Product Number	A	L	W	B	C	F	M	Wrench Torque (N.m)
SJC-55 GR	55	30	78	14	2	14	6	7
SJC-65 GR	65	35	90	15	2.5	17	8	17
SJC-80 GR	80	45	114	18	3	22	8	17
SJC-100 GR	104	56	140	21	3.5	27	10	30
SJC-55C GR	55	30	78	14	2	10.5	6	15
SJC-65C GR	65	35	90	15	2.5	13	8	35
SJC-80C GR	80	45	114	18	3	15	8	35
SJC-100C GR	104	56	140	21	3.5	20	12	120
SJCM-55C GR	55	21	59	14	2	10.5	6	15
SJCM-65C GR	65	22	63	15	2.5	11	8	35
SJCM-80C GR	80	32	88	18	3	16	10	70
SJCM-100C GR	104	34	94	21	3.5	17.5	12	120
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SJC-55 RD	55	30	78	14	2	14	6	7
SJC-65 RD	65	35	90	15	2.5	17	8	17
SJC-80 RD	80	45	114	18	3	22	8	17
SJC-100 RD	104	56	140	21	3.5	27	10	30
SJC-55C RD	55	30	78	14	2	10.5	6	15
SJC-65C RD	65	35	90	15	2.5	13	8	35
SJC-80C RD	80	45	114	18	3	15	8	35
SJC-100C RD	104	56	140	21	3.5	20	12	120
SJCM-55C RD	55	21	59	14	2	10.5	6	15
SJCM-65C RD	65	22	63	15	2.5	11	8	35
SJCM-80C RD	80	32	88	18	3	16	10	70
SJCM-100C RD	104	34	94	21	3.5	17.5	12	120

## Standard Inner diameter

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

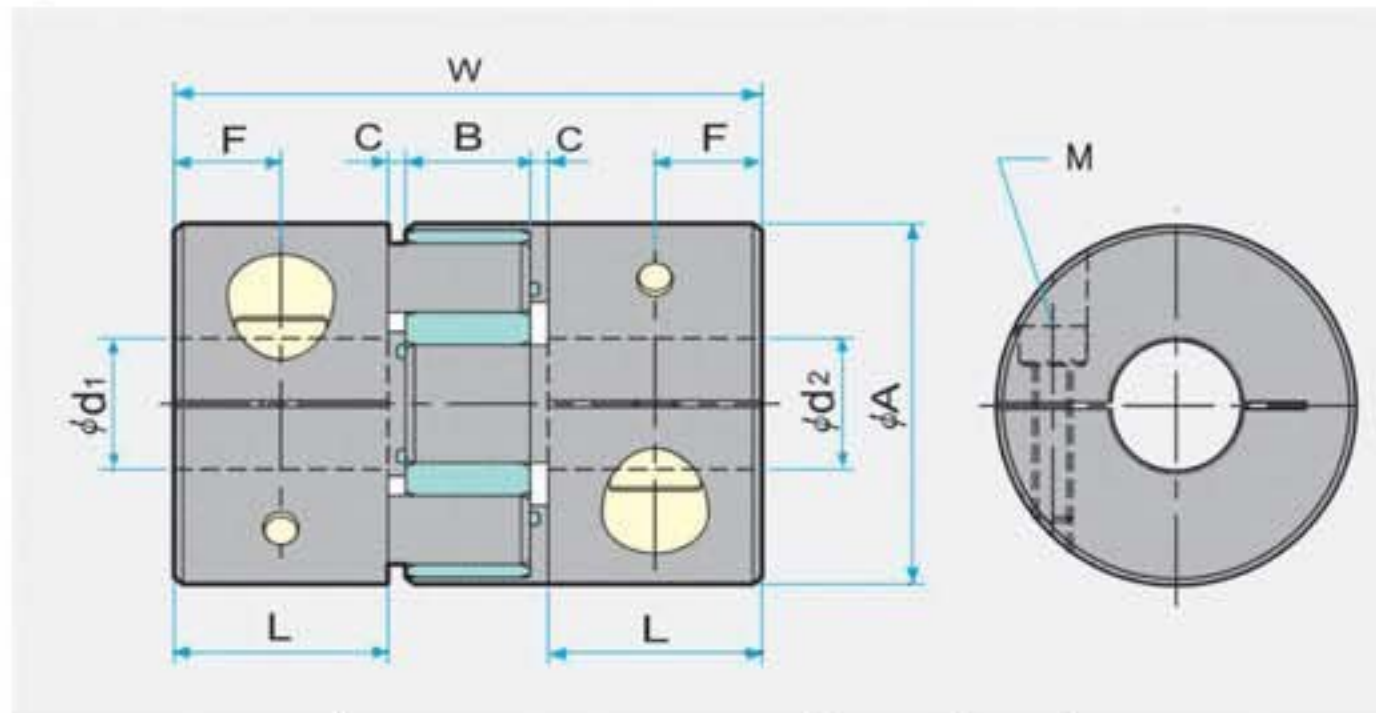
INNER diameter INCH type is also available.

Non standard inner diameter product is also available

KEY TYPE is also available

# SJC Series Zero Backlash Jaw Coupling

## SJCM-■■■C-GR(RD) (CLAMP TYPE)



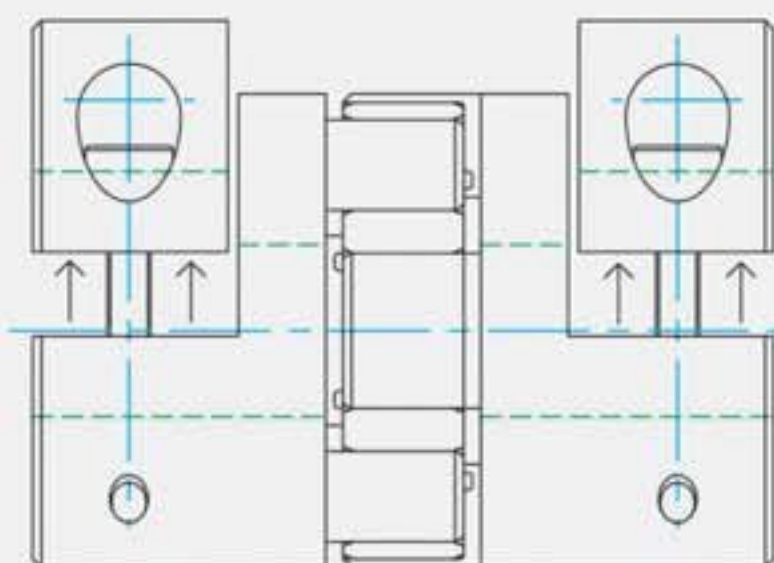
(Outside Diameter  $\varnothing 55 \sim \varnothing 100$ )



(SJCM CLAMP)

## Performance

Product Number	Max · Bore (mm)	Rated Torque (N · m)	Max Torque (N · m)	Max · RPM (min <sup>-1</sup> )	Moment of inertia (kg · m <sup>2</sup> )	Static Torsional Stiffness (N.m/rad)	Parallel (mm)	Angle (°)	End-Play (mm)	mass (g)
SJC-55 GR	30	35	70	7,000	$1.7 \times 10^{-4}$	1.600	0.15	1	$+1.4_0$	350
SJC-65 GR	35	95	190	6,000	$3.9 \times 10^{-4}$	3.000	0.15	1	$+1.5_0$	570
SJC-80 GR	45	190	380	5,000	$1.1 \times 10^{-3}$	6.500	0.15	1	$+1.5_0$	1.150
SJC-100 GR	60	300	600	4,000	$4.8 \times 10^{-3}$	7.000	0.15	1	$+2.0_0$	2.650
SJC-55C GR	30	35	70	3,200	$1.6 \times 10^{-4}$	1.600	0.15	1	$+1.4_0$	330
SJC-65C GR	35	95	190	2,700	$3.8 \times 10^{-4}$	3.000	0.15	1	$+1.5_0$	560
SJC-80C GR	45	190	380	2,200	$1.0 \times 10^{-3}$	6.500	0.15	1	$+1.5_0$	1.050
SJC-100C GR	60	300	600	3,000	$4.6 \times 10^{-3}$	7.000	0.15	1	$+2.0_0$	2.550
SJCM-55C GR	30	35	70	4,000	$1.3 \times 10^{-4}$	1.600	0.15	1	$+1.4_0$	280
SJCM-65C GR	35	95	190	3,500	$2.6 \times 10^{-4}$	3.000	0.15	1	$+1.5_0$	400
SJCM-80C GR	45	190	380	3,000	$8.7 \times 10^{-4}$	6.500	0.15	1	$+1.5_0$	860
SJCM-100C GR	60	300	600	3,000	$3.1 \times 10^{-3}$	7.000	0.15	1	$+2.0_0$	1.700
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SJC-55 RD	30	60	120	7,000	$1.7 \times 10^{-4}$	2.600	0.1	1	$+1.4_0$	350
SJC-65 RD	35	160	320	6,000	$3.9 \times 10^{-4}$	4.900	0.1	1	$+1.5_0$	570
SJC-80 RD	45	320	640	5,000	$1.1 \times 10^{-3}$	11.000	0.1	1	$+1.5_0$	1.150
SJC-100 RD	60	600	1.200	4,000	$4.8 \times 10^{-3}$	30.000	0.1	1	$+2.0_0$	2.650
SJC-55C RD	30	60	120	3,200	$1.6 \times 10^{-4}$	2.600	0.1	1	$+1.4_0$	330
SJC-65C RD	35	160	320	2,700	$3.8 \times 10^{-4}$	4.900	0.1	1	$+1.5_0$	560
SJC-80C RD	45	320	640	2,200	$1.0 \times 10^{-3}$	11.000	0.1	1	$+1.5_0$	1.050
SJC-100C RD	60	600	1.200	3,000	$4.6 \times 10^{-3}$	30.000	0.1	1	$+2.0_0$	2.550
SJCM-55C RD	30	60	120	4,000	$1.3 \times 10^{-4}$	2.600	0.1	1	$+1.4_0$	280
SJCM-65C RD	35	160	320	3,500	$2.6 \times 10^{-4}$	4.900	0.1	1	$+1.5_0$	400
SJCM-80C RD	45	320	640	3,000	$8.7 \times 10^{-4}$	11.000	0.1	1	$+1.5_0$	860
SJCM-100C RD	60	600	1.200	3,000	$3.1 \times 10^{-3}$	30.000	0.1	1	$+2.0_0$	1.700



※It is possible to order the CLAMP Split Type in Outside Diameter  $\varnothing 55 \sim \varnothing 100$



(CLAMP Split Type)



(SJC CLAMP)