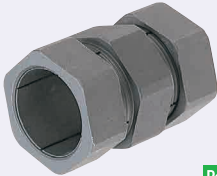


# N Coupling / Chain Coupling

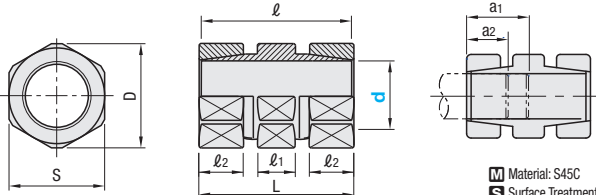
■ **Features:** Easy to tighten the shaft by nut alone, and able to handle thrust load.

■ **N Coupling**



RoHS10

CPN



M Material: S45C  
S Surface Treatment: Manganese Phosphate

Part Number	S	D	l	l <sub>1</sub>	l <sub>2</sub>	L	Shaft Insertion Depth (mm)		Tightening Torque (N·m)	Moment of Inertia GD <sup>2</sup> (kg·m <sup>2</sup> )	Allowable Torque (N·m)	Max. Allowable Thrust (N)	Mass (g)	Unit Price
							Standard a1	Minimum a2						
6	12	13	20.5	5.5	5.5	21.5	10.25	7.5	11.8	4.24x10 <sup>-6</sup>	7.8	833	13	
7	14	15	20.5	5.5	5.5	21.9	10.25	7.5	12.7	5.25x10 <sup>-7</sup>	8.8	981	17.5	
8	14	15	21	6	6	23	10.5	7.5	13.7	1.98x10 <sup>-7</sup>	9.8	1128	18	
9	17	18.5	23.5	6.5	7	25.5	11.75	8.5	15.7	1.98x10 <sup>-6</sup>	11.8	1520	30	
10	17	18.5	25.4	7	7.5	27.4	12.7	9.2	19.6	2.08x10 <sup>-6</sup>	15.7	1804	30	
11	19	21	29	8	9	31	14.5	10.5	24.5	3.75x10 <sup>-6</sup>	19.6	1912	43	
12	19	21	30	8	9	32	15	11	29.4	3.75x10 <sup>-6</sup>	37.3	2010	41	
14	22	24.6	34	9	10	36	17	12.5	34.3	7.50x10 <sup>-6</sup>	41.2	2442	60	
15	23	25	37.5	9.5	11.5	39.5	18.75	14	39.2	1.00x10 <sup>-5</sup>	49	2942	75	
16	24	26	39	10	12	41	19.5	14.5	49	1.45x10 <sup>-5</sup>	54.9	3275	100	
17	26	28.5	41	11	12.5	43	20.5	15	53.9	1.93x10 <sup>-5</sup>	60.8	3687	115	
18	27	30	43	12	12.5	45	21.5	15.5	58.8	2.48x10 <sup>-5</sup>	68.6	3942	130	
19	29	32	45	12	13.5	47	22.5	16.5	63.7	3.25x10 <sup>-5</sup>	75.5	4364	150	
20	30	32.5	48	13	14.5	50	24	17.5	68.6	3.50x10 <sup>-5</sup>	88.2	4952	160	
22	32	35	50	14	15	52	25	18	78.4	5.00x10 <sup>-5</sup>	103	5491	190	
24	35	38.5	52	14	16	54	26	19	83.3	7.25x10 <sup>-5</sup>	123	6080	230	
25	36	40	55	15	17	57	27.5	20	88.2	9.00x10 <sup>-5</sup>	157	7159	260	
30	41	45	63	17	17	65	31.5	23	127	8.75x10 <sup>-5</sup>	177	11768	350	
35	46	51	69	19	19	71	34.5	25	167	1.55x10 <sup>-4</sup>	206	11768	480	

■ **Details of the Product**

- Keyless - Locking by Friction: Allows high-accuracy mounting with no backlash. Easy phase matching. Omission of keyway machining contributes to total cost saving.
- High Torque Transmission / High Thrust Load Capacity: Allows combined load of torque and thrust.
- Easy Locking with a Nut: It is easy to mount where a space is limited. Requires no space in axial direction.
- Keywayed shafts can be used also. (15 ~ 20% less allowable torque)

■ **Precautions for Use**


- Tightening torque control is required. (A torque wrench is recommended.)
- Replace the Teflon tape on the threads for reuse.
- Use shafts with h7 tolerance and S8 or better surface roughness.
- Shaft Insertion Depth Standard a1 (in the table) is recommended. Minimum a2 is required.

Ordering Example


Part Number  
**CPN10**

■ **Features:** Dual row roller chains and sprockets construction has excellent torque transmission efficiency.

■ **Chain Coupling**



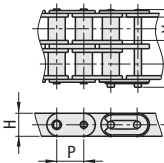
① Chain + ③ Main Body



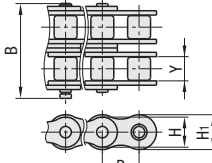
② Case

Name	Type	Material			Accessory
		① Chain	② Case	③ Main Body	
Set (①+②+③)	<b>CPC</b>	Steel	Aluminum Diecast	S45C (Spurs are Induction Hardened)	Set Screw
Chain ①	<b>CHE</b>	Steel	-	-	-
Case ②	<b>BHE</b>	-	Aluminum Diecast	-	Set Screw

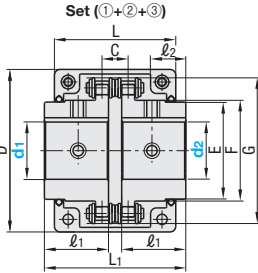
Chain ① (No.=3012)



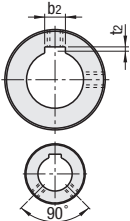
(No.4012~6022)



Set (①+②+③)



Shaft Bore Specifications (New JIS Key + Tap)



FOR SHAFT BORES MARKED WITH \*, THE SET SCREW LOCATIONS ARE AS SHOWN.

Operating Temperature: -10°C ~ 60°C

■ **Set**

Part Number	d <sub>1</sub> , d <sub>2</sub> Selection (d <sub>1</sub> ≤d <sub>2</sub> )		Mass (kg)	D	E	F	G	L <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	C	Max. Rotational Speed (r/min)	Allowable Torque (N·m) at less than 50rpm	Unit Price
	Type	No.												
3012	14'	16"	0.6	69	25	26.5	45	64.8	29.8	16	10.2	250	100	
4012	14	15 16 17 18 19 20 22'	0.9	77	33	36	62	79.4	36	17	14.4	250	218	
4014	17	18 19 20 22 24 25 28' 30"	1.2	84	43	45	69	79.4	36	17	14.4	200	296	
4016	19	20 22 24 25 28 30 32	1.7	92	48	51	77	87.4	40	23	14.4	200	386	
5014	20	22 24 25 28 30 32 35	2.3	101	53	56	86	99.7	45	24	18.1	150	563	
5016	22	24 25 28 30 32 35 38 40	3.1	111	60	63	96	99.7	45	24	18.1	150	735	
5018	30	32 35 38 40 42 45	3.8	122	70	73	106	99.7	45	24	18.1	150	931	
6018	40	42 45 48 50 55	7.0	142	85	88	127	123.5	56	28	22.8	100	1,754	
6022	48	50 55	11.7	168	110	115	152	123.5	56	28	22.8	100	2,372	

■ **Separate Item**

Part Number	Chain only									
	Type	No.	Number of Links	P	H	H <sub>1</sub>	B	Y	Mass (kg)	Unit Price
3012		12		9.525	8.1	8.1	23.85	5.72	0.1	
4012		12		12.70	10.41	12.06	32.78	7.90	0.2	
4014		14		12.70	10.41	12.06	32.78	7.90	0.2	
4016		16		12.70	10.41	12.06	32.78	7.90	0.3	
5014		14		15.875	13.01	15.08	41.45	9.54	0.4	
5016		16		15.875	13.01	15.08	41.45	9.54	0.5	
5018		18		15.875	13.01	15.08	41.45	9.54	0.6	
6018		18		19.05	15.64	18.09	52.30	12.7	1.0	
6022		22		19.05	15.64	18.09	52.30	12.7	1.3	

Part Number	Case only					
	Type	No.	D	L	Mass (kg)	Unit Price
3012		69	63	0.3		
4012		77	72	0.3		
4014		84	75	0.4		
4016		92	75	0.4		
5014		101	85	0.5		
5016		111	85	0.6		
5018		122	85	0.8		
6018		142	106	1.2		
6022		168	117	1.8		

■ **Keyway Dimensions**

Shaft Bore Dia. d, d <sub>2</sub>	Keyway b×t <sub>2</sub>	Set Screw M
14~17	5×2.3	6
18~22	6×2.8	6
24~30	8×3.3	8
32~38	10×3.3	8
40~42	12×3.8	8
45~50	14×3.8	10
55	16×4.3	12

- **TOLERABLE MISALIGNMENTS**
- Angular α = 0.5° or Less
  - Lateral ε = 1% or less of chain pitch