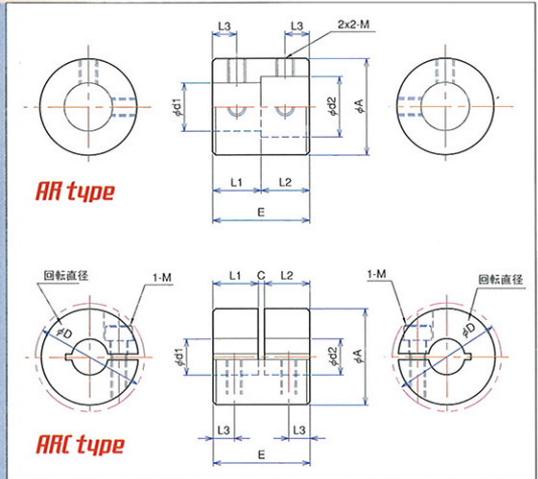
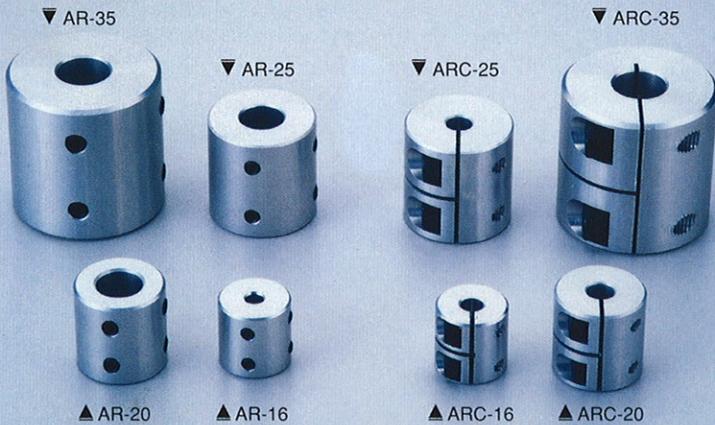


RIGID リジットカップリング COUPLINGS

AR/ARC type アルミ合金製 Aluminum alloy type



寸法図：Package Outline

型番 Size	最大軸径 Max. bore dia $d_1 \times d_2$ (mm)	伝達 トルク Torque (N-cm)	最高 回転数 Max. Rotation (min-1)	寸法 Dimensions (mm)								ボルト締付 トルク Fastening Torque (N-cm)	注) 慣性モーメント Moment of Inertia (N-cm ²) [GD ² :N-cm ²]	注) 1組分重量 Weight (gr)	
				A	L ₁	L ₂	C	E	L ₃	M	D				
AR Type	AR-16	10	50	10,000	16	8	8	—	16	4	M3	—	—	0.027 {0.110}	8.72
	AR-20	12	100	10,000	20	10	10	—	20	5	M4	—	—	0.083 {0.334}	17.0
	AR-25	15	180	10,000	25	12.5	12.5	—	25	6	M4	—	—	0.255 {1.019}	33.3
	AR-35	22	550	10,000	35	17.5	17.5	—	35	8.5	M5	—	—	1.370 {5.480}	91.3
ARC Type	ARC-16	6	50	5,000	16	7.5	7.5	1	16	3.5	M2.6	18	54.2	0.026 {0.103}	8.17
	ARC-20	9	100	5,000	20	9.5	9.5	1	20	4.5	M3	23	83.2	0.079 {0.318}	16.2
	ARC-25	11	180	5,000	25	12	12	1	25	6	M4	29	197.2	0.245 {0.980}	32
	ARC-35	17	550	5,000	35	17	17	1	35	8.5	M5	38	385.1	1.335 {5.340}	88.9

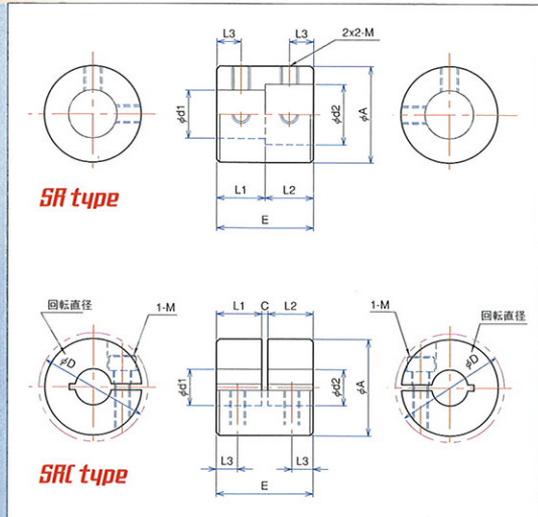
型番 Size	標準在庫穴径 (公差H8) Standard bores in stock $\{d_1 \times d_2\}$ (mm)	
AR Type	AR-16	3×3, 4×4, 5×5, 5×6, 6×6, 6×8, 8×8, 10×10
	AR-20	5×5, 5×6, 6×8, 8×8, 10×10, 12×12
	AR-25	6×6, 6×8, 8×8, 10×10, 12×12, 15×15
	AR-35	8×8, 10×10, 12×12, 14×14, 15×15, 16×16, 18×18, 20×20
ARC Type	ARC-16	3×3, 4×4, 5×5, 6×6
	ARC-20	5×5, 5×6, 6×6, 8×8
	ARC-25	6×6, 6×8, 8×8, 10×10
	ARC-35	8×8, 10×10, 12×12, 14×14, 15×15, 16×16

- 注) 1. 慣性モーメント、GD2および1組分重量は内径のあいていない中実ボスで計算してあります。
2. ご注文の際は、型番・穴径をご指示ください。
例：ARC-25、(6×6)
3. 使用材質：AR,ARC=アルミ合金となります。
4. D寸法は回転時の最大外径を示します。

- Note : 1) Solid boss without hole used to calculate the moment of inertia, GD2 and weight of assembly.
2) When ordering, please specify the size and bore diameter. (Example:MF-030 (8×10))
3) Materials in use : Aluminum alloy for AR and ARC.
4) The D dimension indicates the maximum outside diameter during rotation.

SR/SRC type

ステンレス製
Stainless Steel type



寸法図：Package Outline

型番 Size	最大軸径 Max. bore dia d ₁ ×d ₂ (mm)	伝達 トルク Torque (N·cm)	最高 回転数 Max. Rotation (min ⁻¹)	寸法 Dimensions (mm)								ボルト締付 トルク Fastening Torque (N·cm)	注) 慣性モーメント Moment of Inertia (N·cm ²) {GD ² :N·cm ² }	注) 1組分重量 Weight (gr)	
				A	L ₁	L ₂	C	E	L ₃	M	D				
SR Type	SR-16	10	50	10,000	16	8	8	—	16	4	M3	—	—	0.079 {0.318}	25.3
	SR-20	12	100	10,000	20	10	10	—	20	5	M4	—	—	0.242 {0.967}	49.3
	SR-25	15	180	10,000	25	12.5	12.5	—	25	6	M4	—	—	0.737 {2.951}	96.3
	SR-35	22	550	10,000	35	17.5	17.5	—	35	8.5	M5	—	—	3.969 {15.875}	264.3
SRC Type	SRC-16	6	50	5,000	16	7.5	7.5	1	16	3.5	M2.6	18	67.7	0.075 {0.300}	23.9
	SRC-20	9	100	5,000	20	9.5	9.5	1	20	4.5	M3	23	104.0	0.179 {0.718}	36.6
	SRC-25	11	180	5,000	25	12	12	1	25	6	M4	29	246.5	0.705 {2.819}	92
	SRC-35	17	550	5,000	35	17	17	1	35	8.5	M5	38	481.4	3.842 {15.371}	255.9

型番 Size	標準在庫穴径 (公差H8) Standard bores in stock {d ₁ ×d ₂ } (mm)	
SR Type	SR-16	3×3, 4×4, 5×5, 5×6, 6×6, 6×8, 8×8, 10×10
	SR-20	5×5, 5×6, 6×8, 8×8, 10×10, 12×12
	SR-25	6×6, 6×8, 8×8, 10×10, 12×12, 15×15
	SR-35	8×8, 10×10, 12×12, 14×14, 15×15, 16×16, 18×18, 20×20
SRC Type	SRC-16	3×3, 4×4, 5×5, 6×6
	SRC-20	5×5, 5×6, 6×6, 8×8
	SRC-25	6×6, 6×8, 8×8, 10×10
	SRC-35	8×8, 10×10, 12×12, 14×14, 15×15, 16×16

- 注) 1. 慣性モーメント、GD2および1組分重量は内径のあいていない中実ボスで計算してあります。
 2. ご注文の際は、型番・穴径をご指示ください。例：SRC-25 (8×8)
 3. 使用材質：SR,SRC=ステンレスとなります。
 4. D寸法は回転時の最大外径を示します。

- Note: 1) Solid boss without hole used to calculate the moment of inertia, GD2 and weight of assembly.
 2) When ordering, please specify the size and bore diameter. (Example: SRC-25 (8×8))
 3) Materials in use: Stainless steel for SR and SRC.
 4) The D dimension indicates the maximum outside diameter during rotation.

MJ

メカジョイント® シリーズ

リジッドカップリング Rigid coupling

(高剛性・高トルクタイプ) (for high torque and rigidity)

炭素鋼
Carbon steel

高トルク
High torque

CAD
2D

CAD
3D



特長

Features

1. 軸径φ20～φ150までのサイズを ラインアップ

Wide range of models for shaft diameters ranging from φ20 to φ150mm.

2. 高い許容伝達トルク

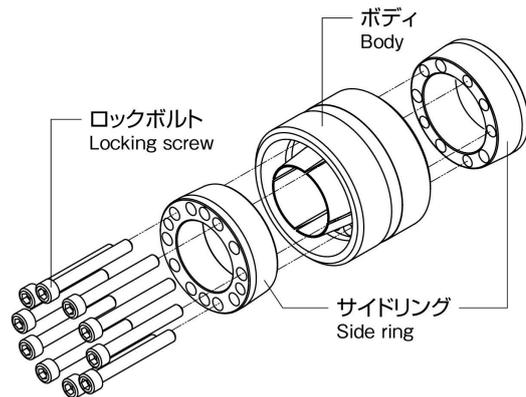
High torque transmission capacity.

3. 耐スラスト荷重が大きい

Handles large thrust loads.

構造

Structure



仕様

Specifications

型 式 Type	最大許容トルク Maximum torque capacity	許容スラスト荷重 Thrust capacity	締付トルク Tightening torque	価 格 Price
	N・m	N	N・m	¥
MJ-20	240	24100	15.7	10,000
MJ-22	320	29800	15.7	11,000
MJ-25	400	31300	15.7	11,900
MJ-28	440	34500	15.7	13,000
MJ-30	470	37600	15.7	13,400
MJ-32	605	40100	15.7	14,500
MJ-35	705	47400	15.7	14,900
MJ-40	1165	63900	39.3	16,200
MJ-45	1490	72100	39.3	17,600
MJ-50	1940	79400	39.3	19,400
MJ-55	2055	95000	39.3	20,900
MJ-60	2370	109800	39.3	21,800
MJ-65	2890	117800	39.3	23,400
MJ-70	4575	142700	78.5	27,000
MJ-75	4780	148100	78.5	31,000
MJ-80	5370	160000	78.5	35,300
MJ-90	6910	166200	78.5	38,600
MJ-100	8620	184300	78.5	45,400
MJ-110	10110	188800	78.5	55,800
MJ-120	17090	247300	137.3	67,200
MJ-130	17715	257700	137.3	82,800
MJ-140	20620	283200	137.3	97,200
MJ-150	22050	305700	137.3	120,000

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CAD data [2D (DXF・DWG) 3D (ACIS・STEP)] CAD data downloadable here:

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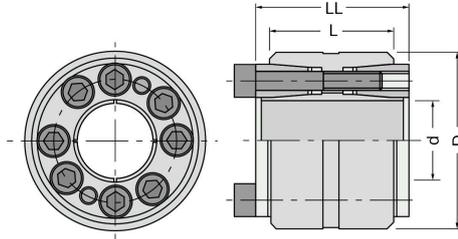




材質/表面処理

Material/Surface treatment

	材 質 Material	表面処理 Surface treatment
ボディ Body	SCM 440相当 Equivalent to SCM 440	—
サイドリング Side ring	SCM 440相当 Equivalent to SCM 440	—
ボルト Screw	SCM 435	黒色酸化被膜 Black oxidation coating



寸法

Sizes

単位 Unit: mm

型 式 Type	寸 法 Sizes				ロックボルト Locking screw		質 量 Weight kg
	d	D	L	LL	サイズ Size	本数 pcs	
MJ-20	20	48	39	49	M6 × 40	6	0.65
MJ-22	22	56	39	49	M6 × 40	8	0.78
MJ-25	25	56	39	49	M6 × 40	8	0.625
MJ-28	28	60	41	51	M6 × 40	8	0.755
MJ-30	30	63	44	54	M6 × 45	10	0.844
MJ-32	32	66	46	56	M6 × 50	10	1
MJ-35	35	70	47	59	M6 × 50	10	1.235
MJ-40	40	82	51	62	M8 × 55	10	1.625
MJ-45	45	87	53	65	M8 × 60	10	1.88
MJ-50	50	95	55	67	M8 × 60	10	2.24
MJ-55	55	102	55	67	M8 × 60	12	2.55
MJ-60	60	108	56	68	M8 × 65	12	2.86
MJ-65	65	113	59	71	M8 × 65	14	3.46
MJ-70	70	123	61	75	M10×65	12	4.06
MJ-75	75	128	63	77	M10×65	12	4.26
MJ-80	80	135	65	81	M10×70	14	4.95
MJ-90	90	142	67	83	M10×70	14	5.3
MJ-100	100	153	71	83	M10×75	16	6.19
MJ-110	110	169	73	87	M10×75	16	7.4
MJ-120	120	186	74	90	M12×75	16	9.5
MJ-130	130	196	76	90	M12×80	16	10.25
MJ-140	140	207	78	94	M12×80	18	11.5
MJ-150	150	217	80	96	M12×80	18	12

N カップ® シリーズ

リジッドカップリング Rigid coupling

(ナットタイプ) (Nut type)



S45C相当
Equivalent to S45C



無電解ニッケルメッキ
Electroless nickel plating



ステンレス
Stainless steel

特長

Features

- 1. 軸径φ6~φ35までのサイズをラインアップ**
Wide range of models for shaft diameters ranging from φ6 to φ35mm.
- 2. 低慣性モーメント**
Low moment of inertia.
- 3. 締め付け時間短縮**
Time-saving installation.
- 4. コストダウン**
Cost reduction.

仕様

Specifications

型式 Type	スタンダード Standard		無電解ニッケルメッキ・SUS Electroless nickel plating		慣性モーメント Moment of inertia kg・m ²	締め付トルク Tightening torque N・m	S45C 価格 Price ¥	Ni 価格 Price ¥	SUS 価格 Price ¥
	最大許容トルク Maximum torque capacity N・m	許容スラスト荷重 Thrust capacity N	最大許容トルク Maximum torque capacity N・m	許容スラスト荷重 Thrust capacity N					
N - 6 - 6	7.8	833	5.4	583	4.24×10 ⁻⁸	11.8	2,700	6,750	7,500
N - 8 - 8	9.8	1128	6.8	789	8.25×10 ⁻⁷	13.7	3,000	7,000	7,500
N - 9 - 9	11.8	1520	8.2	1060	1.98×10 ⁻⁶	15.7	3,000	7,000	7,500
N - 10 - 10	15.7	1804	10.9	1260	2.08×10 ⁻⁶	19.6	3,000	7,000	7,500
N - 11 - 11	19.6	1912	13.7	1330	3.75×10 ⁻⁶	24.5	3,000	7,000	7,500
N - 12 - 12	37.3	2010	26.1	1400	3.75×10 ⁻⁶	29.4	3,500	7,500	8,750
N - 14 - 14	41.2	2442	28.8	1700	7.50×10 ⁻⁶	34.3	3,500	7,500	8,750
N - 15 - 15	49.0	2942	34.3	2050	1.00×10 ⁻⁵	39.2	3,500	7,500	8,750
N - 16 - 16	54.9	3275	38.4	2290	1.45×10 ⁻⁵	49.0	3,700	7,600	9,250
N - 17 - 17	60.8	3687	42.5	2580	1.93×10 ⁻⁵	53.9	3,800	7,700	9,500
N - 18 - 18	68.6	3942	48.0	2750	2.48×10 ⁻⁵	58.8	4,000	7,850	10,000
N - 19 - 19	75.5	4364	52.8	3050	3.25×10 ⁻⁵	63.7	4,100	8,000	10,250
N - 20 - 20	88.2	4952	61.7	3460	3.50×10 ⁻⁵	68.6	4,200	8,000	10,500
N - 22 - 22	103.0	5491	72.1	3840	5.00×10 ⁻⁵	78.4	4,200	8,000	10,500
N - 24 - 24	123.0	6080	86.1	4250	7.25×10 ⁻⁵	83.3	4,300	8,100	10,750
N - 25 - 25	157.0	7159	109.9	5010	9.00×10 ⁻⁵	88.2	4,500	8,250	11,250
N - 30 - 30	177.0	11768	-	-	8.75×10 ⁻⁵	127	6,000	-	-
N - 35 - 35	206.0	11768	-	-	1.55×10 ⁻⁴	167	6,000	-	-

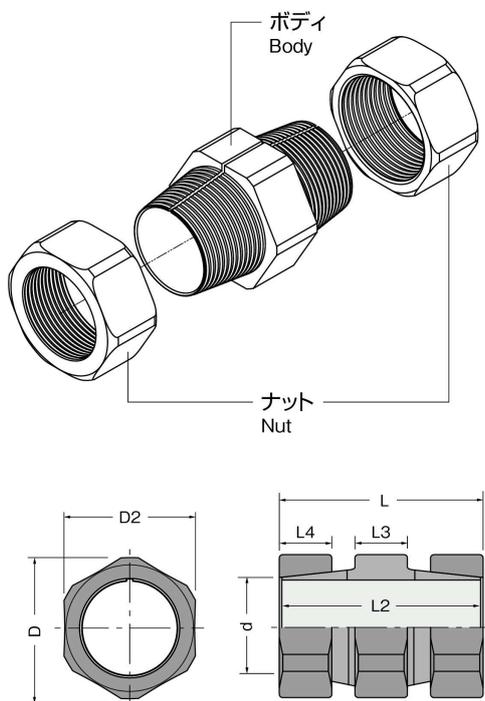
※特注品(軸径サイズの違う異軸径タイプも製作可能です)
 ※特注品(N-30-30、N-35-35の無電解ニッケルメッキ仕様ならびにSUS 316仕様も製作可能です)
 ※Customized type (Different shaft diameter on each end type can be manufactured.)
 ※Customized type (Electroless nickel plating types, SUS 316 can be applied to N-30-30 and N-35-35.)

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構造



材質／表面処理

スタンダード Standard	材質 Material	表面処理 Surface treatment
ボディ Body	S45C相当 Equivalent to S45C	黒色表面処理 Black surface treatment
ナット Nut	S45C相当 Equivalent to S45C	黒色表面処理 Black surface treatment
無電解ニッケルメッキ Electroless nickel plating	材質 Material	表面処理 Surface treatment
ボディ Body	S45C相当 Equivalent to S45C	無電解ニッケルメッキ Electroless nickel plating
ナット Nut	S45C相当 Equivalent to S45C	無電解ニッケルメッキ Electroless nickel plating
ステンレス Stainless steel	材質 Material	表面処理 Surface treatment
ボディ Body	SUS 304相当 Equivalent to SUS 304	—
ナット Nut	SUS 304相当 Equivalent to SUS 304	—

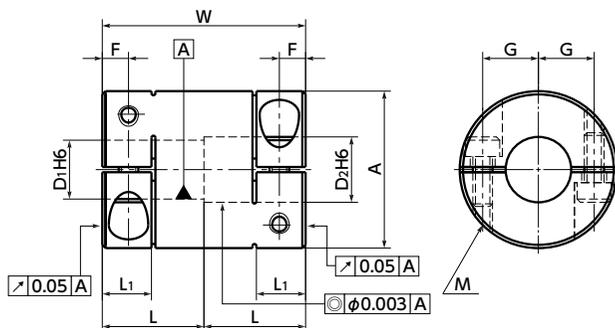
※特注品N-30-30-S、N-35-35-Sのナットにはかじり付き防止用の特殊コーティング（色：黒）を施してあります。
※The screw of customized types N-30-30-S and N-35-35-S are coated (Color: Black) to prevent galling.

寸法

単位 Unit: mm

型式 Type	寸法 Sizes							質量 Weight g
	d	D	D2	L	L2	L3	L4	
N - 6 - 6	6	13.0	12	21.5	20.5	5.5	5.5	13
N - 8 - 8	8	15.0	14	23.0	21.0	6.0	6.0	18
N - 9 - 9	9	18.5	17	25.5	23.5	6.5	7.0	30
N - 10 - 10	10	18.5	17	27.4	25.4	7.0	7.5	30
N - 11 - 11	11	21.0	19	31.0	29.0	8.0	9.0	43
N - 12 - 12	12	21.0	19	32.0	30.0	8.0	9.0	41
N - 14 - 14	14	24.6	22	36.0	34.0	9.0	10.0	60
N - 15 - 15	15	25.0	23	39.5	37.5	9.5	11.5	75
N - 16 - 16	16	26.0	24	41.0	39.0	10.0	12.0	100
N - 17 - 17	17	28.5	26	43.0	41.0	11.0	12.5	115
N - 18 - 18	18	30.0	27	45.0	43.0	12.0	12.5	130
N - 19 - 19	19	32.0	29	47.0	45.0	12.0	13.5	150
N - 20 - 20	20	32.5	30	50.0	48.0	13.0	14.5	160
N - 22 - 22	22	35.0	32	52.0	50.0	14.0	15.0	190
N - 24 - 24	24	38.5	35	54.0	52.0	14.0	16.0	230
N - 25 - 25	25	40.0	36	57.0	55.0	15.0	17.0	260
N - 30 - 30	30	45.0	41	65.0	63.0	17.0	17.0	350
N - 35 - 35	35	51.0	46	71.0	69.0	19.0	19.0	480

XRP-C



Dimensions

Unit : mm

Part Number	A	L	L1	W	F	G	M	Screw Tightening Torque (N·m)
XRP-16C	16	10	5	20	2.6	5	M2	0.5
XRP-19C	19	13	6.5	26	3.5	6.25	M2.5	1
XRP-24C	24	15	7	30	3.75	7.75	M3	1.5
XRP-34C	34	20	8	40	4	12	M3	1.5
XRP-39C	39	24	10	48	5	14.5	M4	2.5

Part Number	Standard Bore Diameter		
	D1	D2	D2
XRP-16C	5 - 5	5 - 6	6 - 6
XRP-19C	6 - 6	6 - 8	8 - 8
XRP-24C	8 - 8	8 - 10	10 - 10
XRP-34C	10 - 10	10 - 12	12 - 12
XRP-39C	12 - 12	12 - 14	15 - 15

- All products are provided with hex socket head cap screws.
- Recommended tolerance of applicable shaft diameter is h6.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.257

Additional Keyway at Shaft Hole → P.788

Cleanroom Wash & Packaging → P.792

Change to Stainless Steel Screw → P.790

Please feel free to contact us

Available / Add'l charge

Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated torque*1 (N·m)	Max. torque*1 (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment of Inertia*2 (kg·m ²)	Mass*2 (g)
XRP-16C	6	1	2	39000	3.1×10^{-7}	9
XRP-19C	8	2.5	5	33000	8.0×10^{-7}	15
XRP-24C	10	4.5	9	26000	2.7×10^{-6}	32
XRP-34C	15	7.5	15	18000	1.4×10^{-5}	87
XRP-39C	18	10	20	16000	3.9×10^{-5}	140

*1 Correction of rated torque and max. torque due to load fluctuation is not required.

*2 These are values with max. bore diameter.

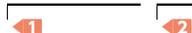
● Comparison of rated torque

Values of rated torque and max. torque for **XRP** have been changed. Usage under the condition of higher torque than before is allowed.

Part Number	Before Change		After Change	
	Rated torque (N·m)	Max. torque (N·m)	Rated torque (N·m)	Max. torque (N·m)
XRP-16C	0.6	1.2	1	2
XRP-19C	1.4	2.8	2.5	5
XRP-24C	2.3	4.6	4.5	9
XRP-34C	2.8	5.6	7.5	15
XRP-39C	4.7	9.4	10	20

● Part number specification

XRP-24C-8-10



MRG / MRGS Rigid coupling - Standard type

WEB Selection Tool
 WEB CAD Download
 Zero Backlash
 High torque
 High Rigidity
 SUS Stainless steel

Structure

● Set screw type

MRG Aluminum alloy hub → P.212

Hex Socket Set Screw



Main Body

MRGS Made of all stainless steel → P.212



● Clamping type

MRG-C Aluminum alloy hub → P.214

Hex Socket Head Cap Screw



MRGS-C Made of all stainless steel → P.214



● Split type

MRG-W Aluminum alloy hub → P.216



MRGS-W Made of all stainless steel → P.216



● Related Products

Rigid coupling with high precision **XRP** is available. → P.206



● Applicable motors

	MRG	MRGS
Servomotor	⊙	⊙
Stepping motor	⊙	⊙
General-purpose motor	—	—

⊙: Excellent ○: Very good

● Property

	MRG	MRGS
Zero Backlash	⊙	⊙
High Torque	⊙	○
High Torsional Stiffness	⊙	⊙
Corrosion Resistance (All S.S.)	—	⊙

⊙: Excellent ○: Very good

- These are rigid-type couplings.
- Light weight and ultra small moment of inertia. High response.
- There are two types of units made of aluminum alloy or all stainless steel.
- There are three attachment methods: set screw type, clamping type, and split type.
- Sizes of $\phi 40$ - $\phi 65$ in outside diameter have been added.

● Application

High precision XY stage/Machine tool/Cleaning equipment

● Material/Finish

RoHS Compliant

	MRG / MRG-C / MRG-W	MRGS / MRGS-C / MRGS-W
Main Body	A2017 Alumite Treatment	SUS303
Hex Socket Set Screw	SCM435 Ferrosferric Oxide Film	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosferric Oxide Film	SUSXM7

● Part number specification

MRG-16W-5-6

Product Code size Bore Diameter

Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole → P.788

Cleanroom Wash & Packaging → P.792

Change to Stainless Steel Screw → P.790

Please feel free to contact us

Available / Add'l charge

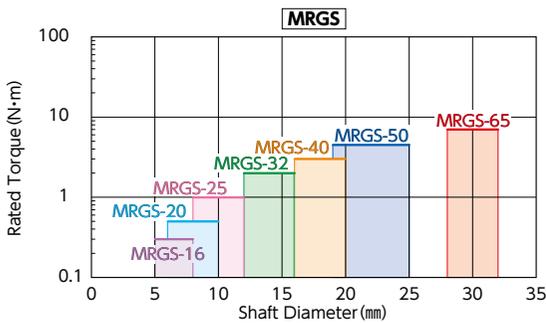
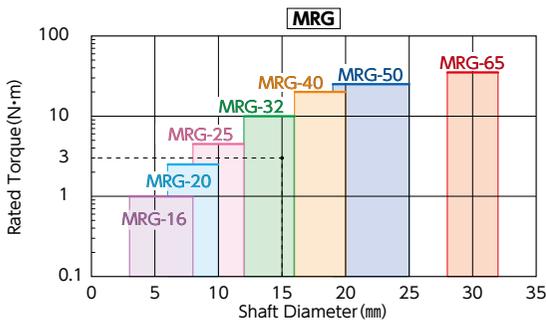
Available / Add'l charge



Selection

- Selection based on shaft diameter and rated torque

The area bounded by the shaft diameter and rated torque indicates the selection size.



- Selection example

In case of selected parameters of shaft diameter of ϕ 15 and load torque of $3 \text{ N} \cdot \text{m}$, the selected size is

MRG-32.

MLR-C/MLRS-C Rigid coupling - Clamping type

WEB Selection Tool

WEB CAD Download



Zero Backlash

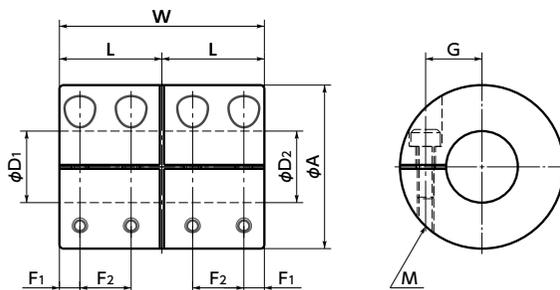


High Rigidity



SUS Stainless steel

MLR-C Made of aluminum alloy

MLRS-C Made of all stainless steel


Dimensions

Unit : mm

Part Number	A	L	W	F ₁	F ₂	G	M	Screw Tightening Torque (N·m)	Standard Bore Diameter D ₁ -D ₂						
									5 - 5	5 - 6	6 - 6				
MLR-16C	16	11	22	2.5	5.5	5	M2	0.5	5 - 5	5 - 6	6 - 6				
MLR-20C	20	12	24	2.5	6	7	M2	0.5	6 - 6	6 - 8	8 - 8				
MLR-25C	25	18	36	4.5	9	9	M2.5	1	8 - 8	8 - 10	10 - 10	12 - 12			
MLR-32C	32	20	40	4	10	11	M3	1.5	10 - 10	10 - 12	10 - 14	12 - 12	12 - 14	14 - 14	15 - 15
MLRS-16C	16	11	22	2.5	5.5	5	M2	0.5	5 - 5	5 - 6	6 - 6				
MLRS-20C	20	12	24	2.5	6	7	M2	0.5	6 - 6	6 - 8	8 - 8				
MLRS-25C	25	18	36	4.5	9	9	M2.5	1	8 - 8	8 - 10	10 - 10	12 - 12			
MLRS-32C	32	20	40	4	10	11	M3	1.5	10 - 10	10 - 12	10 - 14	12 - 12	12 - 14	14 - 14	15 - 15

- All products are provided with hex socket head cap screws.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. → P.257

Additional Keyway at Shaft Hole → P.788

Cleanroom Wash & Packaging → P.792

Change to Stainless Steel Screw → P.790

Please feel free to contact us

Available / Add'l charge

Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated torque*1 (N·m)	Max. torque*1 (N·m)	Max. Rotational Frequency (min ⁻¹)	Moment of Inertia*2 (kg·m ²)	Mass*2 (g)
MLR-16C	6	1	2	39000	3.4×10^{-7}	10
MLR-20C	8	2.5	5	31000	9.2×10^{-7}	18
MLR-25C	12	4.5	9	25000	3.4×10^{-6}	38
MLR-32C	15	10	20	19000	1.0×10^{-5}	70
MLRS-16C	6	0.3	0.6	39000	8.9×10^{-7}	25
MLRS-20C	8	0.5	1	31000	2.5×10^{-6}	45
MLRS-25C	12	1	2	25000	9.2×10^{-6}	100
MLRS-32C	15	2	4	19000	2.7×10^{-5}	180

*1 Correction of rated torque and max. torque due to load fluctuation is not required.

*2 These are values with max. bore diameter.

- Part number specification

MLR-16C-5-5

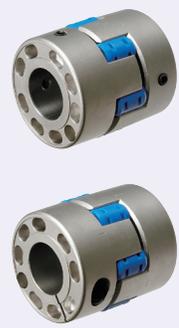
◀ 1

◀ 2

Jaw Couplings

Set Screw / Clamping

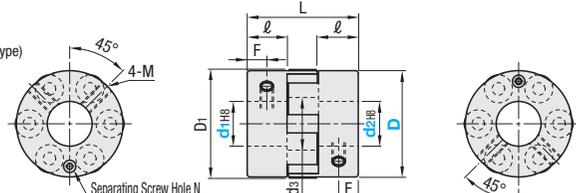
■ **Features:** Deals high torque and has significantly little backlash because the spacer is assembled by press-fitting. Suitable for transfer mechanism using servo motors, since the overall length is short and spacer absorbs the shocks of direction reversals.



RoHS

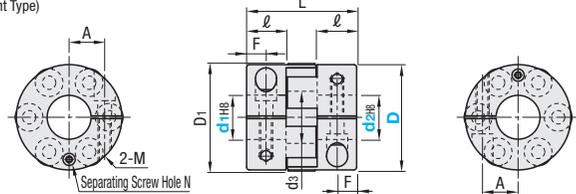
■ **Set Screw**

MMJN (High Rigidity)
MMJP (Misalignment Tolerant Type)



■ **Clamping**

MMJCN (High Rigidity)
MMJCP (Misalignment Tolerant Type)



Type	Standard Bore	Hub Material	Spacer Material	Surface Treatment	Accessory
Set Screw	MMJN	Aluminum	Nylon (Black)	Electroless Nickel Plating	Set Screw
	MMJP	Diecast	Polyurethane (Blue)	Nickel Plating	Hex Socket Head Cap Screw
Clamping	MMJCN	Aluminum	Nylon (Black)	Electroless Nickel Plating	Set Screw
	MMJCP	Diecast	Polyurethane (Blue)	Nickel Plating	Hex Socket Head Cap Screw

Operating Temperature: -20°C ~ 60°C
 Tolerances for d1 and d2 are values before slit machining.
 The lateral, angular, and axial misalignment values shown are for each occurring individually. When multiple misalignments are occurring simultaneously, the allowable maximum value of each will be reduced to 1/2.
 For the selection criteria and alignment procedures, see **P1061**.
 A separation of hub is possible by fitting commercially available bolt into the separating screw hole.

■ **Set Screw**

Part Number	Type	D	d1, d2 Selection (d1 ≤ d2)				D1	d3	L	ℓ	F	Set Screw			Separating Tap Dia. N	Unit Price
			M	Tightening Torque (N·m)	Tap Dia. N											
MMJN MMJP		55	15	16	18	20	24	56	27	60	21	10.5	M6	8	M4	
		70	18	20	24	28	30	72	35	75	26	13	M8	16	M5	
		95	24	28	30	35	40	97	46	100	35.5	17.5	M10	33	M6	

■ **Clamping**

Part Number	Type	D	d1, d2 Selection (d1 ≤ d2)				D1	d3	L	ℓ	F	A	Clamp Screw			Separating Tap Dia. N	Unit Price
			M	Tightening Torque (N·m)	Tap Dia. N												
MMJCN MMJCP		55	15	16	18	20	24	56	27	60	21	10.5	18.5	M6	15	M4	
		70	18	20	24	28	30	72	35	75	26	13	24	M8	32	M5	
		95	24	28	30	35	40	97	46	100	35.5	17.5	32	M10	65	M6	

■ **Set Screw (High Rigidity)**

Part Number	Type	D	Allowable Torque (N·m)	Angular Misalignment (°)	Lateral Misalignment (mm)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Movable Axial Misalignment (mm)	Mass (g)
MMJN		55	80	1	0.1	8000	11000	1.0x10 ⁻⁴	±0.5	300
		70	120	0.15	11000	8000	4.0x10 ⁻⁴	±0.7	600	
		95	180	0.15	20000	6000	1.0x10 ⁻³	±1.0	1200	

(Misalignment Tolerant Type)

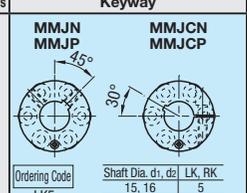
Part Number	Type	D	Allowable Torque (N·m)	Angular Misalignment (°)	Lateral Misalignment (mm)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Movable Axial Misalignment (mm)	Mass (g)
MMJP		55	20	2	0.3	600	11000	1.0x10 ⁻⁴	±0.5	300
		70	40	0.4	1200	8000	4.0x10 ⁻⁴	±0.7	600	
		95	80	0.4	4000	6000	1.0x10 ⁻³	±1.0	1200	

■ **Clamping (High Rigidity)**

Part Number	Type	D	Allowable Torque (N·m)	Angular Misalignment (°)	Lateral Misalignment (mm)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Movable Axial Misalignment (mm)	Mass (g)
MMJCN		55	80	1	0.1	8000	8000	1.0x10 ⁻⁴	±0.5	300
		70	120	0.15	11000	6000	4.0x10 ⁻⁴	±0.7	600	
		95	180	0.15	20000	4000	1.0x10 ⁻³	±1.0	1200	

⚠ The allowable torque varies depending on temperature. See **P.1062**.

■ **Keyway**



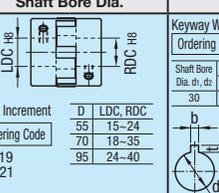
Ordering Code: LK5, RK5

Shaft Dia. d1, d2: LK, RK

15, 16	5
18, 20	6
24, 30	8
35	10
40	12

⚠ Cannot be combined with shaft bore change (LDC, RDC) alterations.
 ⚠ For key dimensions, refer to the following.

■ **Shaft Bore Dia.**



Ordering Code: LDC19, RDC21

1mm Increment: D, LDC, RDC

55	15-24
70	18-35
95	24-40

Code: LK (Left Shaft), RK (Right Shaft), LDC (Left Shaft), RDC (Right Shaft), LKH (Left Shaft), KRH (Right Shaft)

■ **Keyway Dimension**

Shaft Dia. d1, d2	LK Reference Dia.	b	t	Key Nominal Dim. (mm)
15, 16	5	5	2.3	5x5
18, 20	6	6	2.8	6x6
24-30	8	8	3.3	8x8
35	10	10	4.0	10x10
40	12	12	4.8	12x12

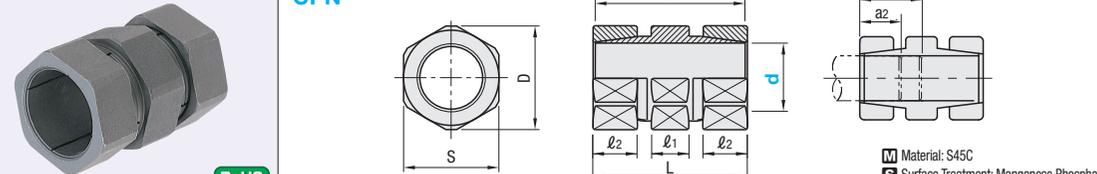
⚠ The allowable torque varies depending on temperature. See **P.1062**.

N Coupling / Chain Coupling

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

■ **N Coupling**

CPN



RoHS

Material: S45C
Surface Treatment: Manganese Phosphate

Part Number	Type	S	D	ℓ	ℓ1	ℓ2	L	Shaft Insertion Depth (mm)		Tightening Torque (N·m)	Moment of Inertia GD ² (kg·m ²)	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 ⁻⁶	7.8	833	13		
7	14	15	20.5	5.5	5.5	21.9	10.25	7.5	12.7	5.25x10 ⁻⁷	8.8	981	17.5		
8	14	15	21	6	6	23	10.5	7.5	13.7	8.25x10 ⁻⁷	9.8	1128	18		
9	17	18.5	23.5	6.5	7	25.5	11.75	8.5	15.7	1.98x10 ⁻⁶	11.8	1520	30		
10	17	18.5	25.4	7	7.5	27.4	12.7	9.2	19.6	2.08x10 ⁻⁶	15.7	1804	30		
11	19	21	29	8	9	31	14.5	10.5	24.5	3.75x10 ⁻⁶	19.6	1912	43		
12	19	21	30	8	9	32	15	11	29.4	3.75x10 ⁻⁶	37.3	2010	41		
14	22	24.6	34	9	10	36	17	12.5	34.3	7.50x10 ⁻⁶	41.2	2442	60		
15	23	25	37.5	9.5	11.5	39.5	18.75	14	39.2	1.00x10 ⁻⁵	49	2942	75		
16	24	26	39	10	12	41	19.5	14.5	49	1.45x10 ⁻⁵	54.9	3275	100		
17	26	28.5	41	11	12.5	43	20.5	15	53.9	1.93x10 ⁻⁵	60.8	3687	115		
18	27	30	43	12	12.5	45	21.5	15.5	58.8	2.48x10 ⁻⁵	68.6	3942	130		
19	29	32	45	12	13.5	47	22.5	16.5	63.7	3.25x10 ⁻⁵	75.5	4364	150		
20	30	32.5	48	13	14.5	50	24	17.5	68.6	3.50x10 ⁻⁵	88.2	4952	160		
22	32	35	50	14	15	52	25	18	78.4	5.00x10 ⁻⁵	103	5491	190		
24	35	38.5	52	14	16	54	26	19	83.3	7.25x10 ⁻⁵	123	6080	230		
25	36	40	55	15	17	57	27.5	20	88.2	9.00x10 ⁻⁵	157	7159	260		
30	41	45	63	17	17	65	31.5	23	127	8.75x10 ⁻⁵	177	11768	350		
35	46	51	69	19	19	71	34.5	25	167	1.55x10 ⁻⁴	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.

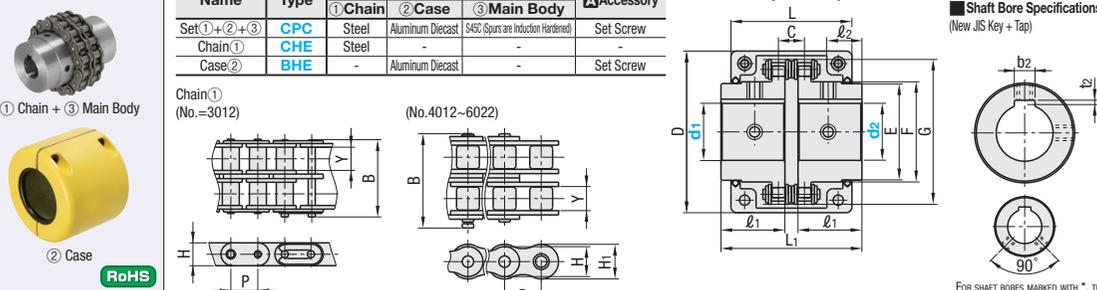
Ordering Example

Part Number: **CPN10**

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

■ **Chain Coupling**

CPN



Operating Temperature: -10°C ~ 60°C

Name	Type	Material	Accessory
Set (①+②+③)	CPC	Steel	Aluminum Diecast, S45C (Sprockets are Induction Hardened)
Chain ①	CHE	Steel	-
Case ②	BHE	Aluminum Diecast	Set Screw

Shaft Bore Specifications (New JIS Key + Tap)

■ **Set**

Part Number	Type	No.	d1, d2 Selection (d1 ≤ d2)	Mass (kg)	D	E	F	G	L1	ℓ1	ℓ2	C	Max. Rotational Speed (r/min)	Allowable Torque (N·m) at less than 50rpm	Unit Price					
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'	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	Type	No.	Chain only					Mass (kg)	Unit Price
			P	H	H1	B	Y		
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	Type	No.	Case only			Unit Price
			D	L	Mass (kg)	
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. d1, d2 | Keyway b x t2 | Set Screw M |
|------------------------|---------------|-------------|
| 14-17 | 5x2.3 | 6 |
| 18-22 | 6x2.8 | 6 |
| 24-30 | 8x3.3 | 8 |
| 32-38 | 10x3.3 | 8 |
| 40-42 | 12x3.3 | 8 |
| 45-50 | 14x3.8 | 10 |
| 55 | 16x4.3 | 12 |
- **TOLERABLE MISALIGNMENTS**
- Angular α = 0.5° or Less
 - Lateral ε = 1% or less of chain pitch

Rigid Couplings

Set Screw, Clamping

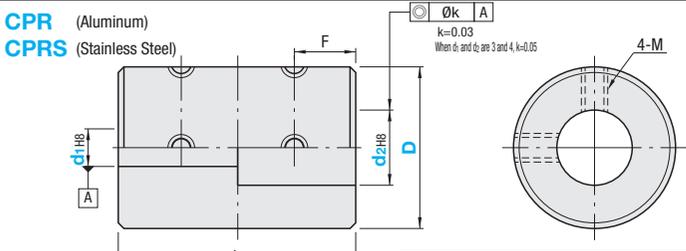
The rigid type cannot tolerate any lateral and angular misalignments. Adequate centering is required before use.

Set Screw



RoHS

CPR (Aluminum)
CPRS (Stainless Steel)



For the selection criteria and alignment procedures, see **P.1061**

Type	Material	Surface Treatment	Accessory
CPR	Aluminum Alloy	Clear Anodize	Set Screw
CPRS	Stainless Steel	-	

Part Number	Type	D	d ₁ , d ₂ Selection (d ₁ ≤ d ₂)				L	M (Coarse)	F	Unit Price	
			3	4	5	6				CPR	CPRS
CPR (Aluminum)	16	3	4	5	6	24	M3	6			
	20	5	6	8	10	30	M3	7			
CPRS (Stainless Steel)	25	8	10	11	12	36	M4	9			
	32	12	14	15	16	41	M4	10			
CPR (Aluminum)	40	15	16	18	20	44	M5	10.5			

Part Number	Allowable Torque (N·m)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Screw Tightening Torque (N·m)	Mass (g)
CPR (Aluminum)	16	0.3	24000	4.4x10 ⁻⁷	11
	20	0.5	19000	1.3x10 ⁻⁶	20
	25	1	15000	3.9x10 ⁻⁶	39
	32	2	12000	1.2x10 ⁻⁵	71
CPRS (Stainless Steel)	40	4	4000	1.5x10 ⁻⁵	120
	16	0.3	24000	1.2x10 ⁻⁶	28
	20	0.5	19000	3.5x10 ⁻⁶	54
	25	1	15000	1.0x10 ⁻⁵	100
32	2	12000	3.1x10 ⁻⁵	190	

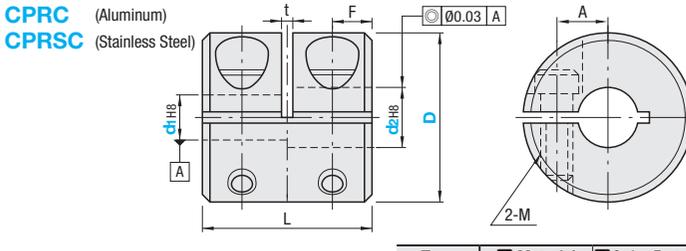
Recommended Tolerance of Applicable Shaft Diameter: h6 and h7

Clamping



RoHS

CPRC (Aluminum)
CPRSC (Stainless Steel)



For the selection criteria and alignment procedures, see **P.1061**

Type	Material	Surface Treatment	Accessory
CPRC	Aluminum Alloy	Clear Anodize	Hex Socket Head Cap Screw
CPRSC	Stainless Steel	-	

Part Number	Type	D	d ₁ , d ₂ Selection (d ₁ ≤ d ₂)				L	M (Coarse)	A	t	F	Unit Price	
			5	6	8	10						CPRC	CPRSC
CPRC (Aluminum)	16	5	6			16	M2.5	5		3.75			
	20	6	8			20	M2.5	6.5	1	4.75			
CPRS (Stainless Steel)	25	8	10			25	M3	9		6			
	32	10	12	14		32	M4	11		7.75			
CPRC (Aluminum)	40	14	15	16	18	44	M5	13	1.5	10.5			
	50	18	20	24		55	M6	16	2	13			

Part Number	Allowable Torque (N·m)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Screw Tightening Torque (N·m)	Mass (g)
CPRC (Aluminum)	16	0.3	9500	3.0x10 ⁻⁷	9
	20	0.5	7600	8.7x10 ⁻⁷	15
	25	1	6100	2.7x10 ⁻⁶	29
	32	2	4800	7.1x10 ⁻⁶	61
CPRS (Stainless Steel)	40	4	4000	1.5x10 ⁻⁵	120
	50	6	4000	7.0x10 ⁻⁵	240
	16	0.3	9500	8.0x10 ⁻⁷	22
	20	0.5	7600	2.4x10 ⁻⁶	41
25	1	6100	7.3x10 ⁻⁶	1.5	80
32	2	4800	2.5x10 ⁻⁵	2.5	160

Ordering Example: Part Number - Shaft Bore Dia. d₁ - Shaft Bore Dia. d₂
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Rigid Couplings

Split, Clamping Long

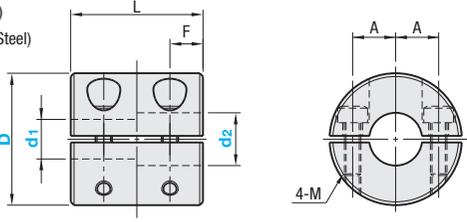
The rigid type cannot tolerate any lateral and angular misalignments. Adequate centering is required before use.

Split



RoHS

CPSR (Aluminum)
CPSRS (Stainless Steel)



For the selection criteria and alignment procedures, see **P.1061**

Type	Material	Surface Treatment	Accessory
CPSR	Aluminum Alloy	Clear Anodize	Hex Socket Head Cap Screw
CPSRS	Stainless Steel	-	

Part Number	Type	D	d ₁ , d ₂ Selection (d ₁ ≤ d ₂)				L	F	A	M	Unit Price	
			5	6	8	10					CPSR	CPSRS
CPSR (Aluminum)	16	5	6			16	3.75	5	M2.5			
	20	6	8			20	4.75	6.5	M2.5			
CPSRS (Stainless Steel)	25	8	10			25	6	9	M3			
	32	10	12	14		32	7.75	11	M4			

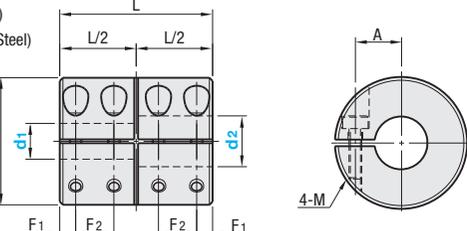
Part Number	Allowable Torque (N·m)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Screw Tightening Torque (N·m)	Mass (g)
CPSR (Aluminum)	16	0.3	39000	3.2x10 ⁻⁷	8.8
	20	0.5	31000	8.7x10 ⁻⁷	15
	25	1	25000	2.7x10 ⁻⁶	29
	32	2	19000	9.3x10 ⁻⁶	61
CPSRS (Stainless Steel)	16	0.3	39000	8.2x10 ⁻⁷	22
	20	0.5	31000	2.4x10 ⁻⁶	41
	25	1	25000	7.3x10 ⁻⁶	80
	32	2	19000	2.5x10 ⁻⁵	160

Clamping Long



RoHS

CPND (Aluminum)
CPNDS (Stainless Steel)



For the selection criteria and alignment procedures, see **P.1061**

Type	Material	Surface Treatment	Accessory
CPND	Aluminum Alloy	Clear Anodize	Hex Socket Head Cap Screw
CPNDS	Stainless Steel	-	

Part Number	Type	D	d ₁ , d ₂ Selection (d ₁ ≤ d ₂)				L	F ₁	F ₂	A	M	Unit Price	
			5	6	8	10						CPND	CPNDS
CPND (Aluminum)	16	5	6			22	2.5	5.5	5	M2			
	20	6	8			24	6	7					
CPNDS (Stainless Steel)	25	8	10			36	4.5	9	9	M2.5			
	32	10	12	14		40	4	10	11	M3			

Part Number	Allowable Torque (N·m)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m ²)	Screw Tightening Torque (N·m)	Mass (g)
CPND (Aluminum)	16	0.3	39000	3.4x10 ⁻⁷	10
	20	0.5	31000	9.2x10 ⁻⁷	18
	25	1	25000	3.4x10 ⁻⁶	38
	32	2	19000	1.0x10 ⁻⁵	70
CPNDS (Stainless Steel)	16	0.3	39000	8.9x10 ⁻⁷	25
	20	0.5	31000	2.5x10 ⁻⁶	45
	25	1	25000	9.2x10 ⁻⁶	100
	32	2	19000	2.7x10 ⁻⁵	180

Ordering Example: Part Number - Shaft Bore Dia. d₁ - Shaft Bore Dia. d₂
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