MRG / MRGS Rigid Coupling

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

Structure

● Set screw type

MRG Aluminum alloy hub ➡ P.213

MRGS Made of all stainless steel ➡ P.213

● Clamping type

MRG-C Aluminum alloy hub ➡ P.215

MRGS-C Made of all stainless steel ➡ P.215

● Split type

MRG-W Aluminum alloy hub ➡ P.217

MRGS-W Made of all stainless steel ➡ P.217

● Recommended applicable motor

	MRG	MRGS
Servomotor	◎	◎
Stepping motor	◎	◎
General-purpose motor	–	–

◎: Excellent ○: Very good △: Available

● 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 ϕ40 - ϕ65 in outside diameter have been added.

● Application

High precision XY stage/Machine tool/Cleaning equipment

● Material/Finish

RoHS2 Compliant

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

● Related Products

Rigid coupling with high precision **XRP** is available.
➡ P.207

● Part number specification

MRG - 16W - 5-6

Product Code | size | Bore Diameter

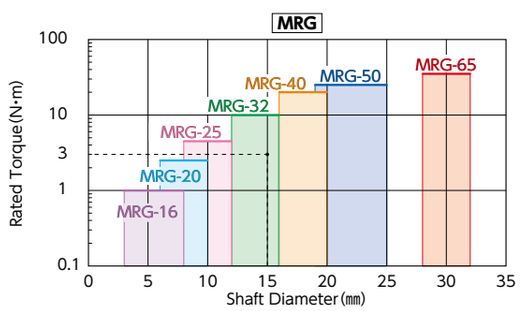
Please refer to dimensional table for part number specification.

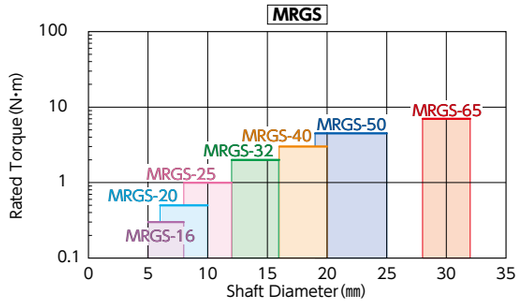
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

Selection

● Selection based on shaft diameter and rated torque

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





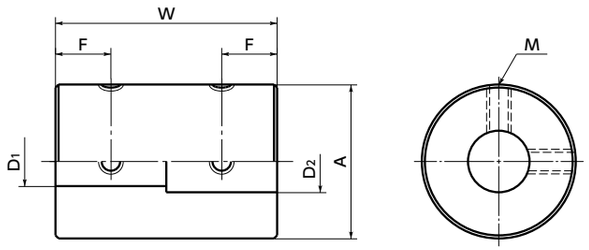
● Selection example

In case of selected parameters of shaft diameter of ϕ 15 and load torque of 3 N・m, the selected size is **MRG-32**.

MRG / MRGS Rigid coupling - Set screw type

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

MRG Made of aluminum alloy
MRGS Made of all stainless steel



Dimensions • Performance

Unit : mm

Part Number 1	A	W	F	M	Screw Tightening Torque (N • m)	Standard Bore Diameter (dimensional allowance H8) D1 • D2 2															
						3	4	5	6	8	10	12	15	16	18	19	20	25	28	30	32
MRG-16	16	24	6	M3	0.7	●	●	●	●												
MRG-20	20	30	7	M3	0.7				●	●	●										
MRG-25	25	36	9	M4	1.7					●	●	●									
MRG-32	32	41	10	M4	1.7							●	●	●							
MRG-40	40	44	10.5	M5	4									●	●	●	●				
MRG-50	50	53	12	M6	7											●	●	●			
MRG-65	65	65	16	M8	15														●	●	●
MRGS-16	16	24	6	M3	0.7			●	●												
MRGS-20	20	30	7	M3	0.7				●	●	●										
MRGS-25	25	36	9	M4	1.7					●	●	●									
MRGS-32	32	41	10	M4	1.7							●	●	●							
MRGS-40	40	44	10.5	M5	4									●	●	●	●				
MRGS-50	50	53	12	M6	7											●	●	●			
MRGS-65	65	65	16	M8	15														●	●	●

- All products are provided with hex socket set screws.
- In a case where the bore diameter is ϕ 4 or less, the set screw is used in only one place.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

Performance

Part Number	Max. Bore Diameter (mm)	Rated torque*1 (N • m)	Max. Rotational Frequency (min^{-1})	Moment of Inertia*2 ($kg \cdot m^2$)	Mass*2 (g)
MRG-16	8	1	39000	4.4×10^{-7}	11
MRG-20	10	2.5	31000	1.3×10^{-6}	20
MRG-25	12	4.5	25000	3.9×10^{-6}	39
MRG-32	16	10	19000	1.2×10^{-5}	71
MRG-40	20	20	15000	2.8×10^{-5}	114
MRG-50	25	25	12000	8.4×10^{-5}	215
MRG-65	32	35	9000	2.9×10^{-4}	450
MRGS-16	8	0.3	39000	1.2×10^{-6}	28
MRGS-20	10	0.5	31000	3.5×10^{-6}	54
MRGS-25	12	1	25000	1.0×10^{-5}	100
MRGS-32	16	2	19000	3.1×10^{-5}	190
MRGS-40	20	3	15000	8.1×10^{-5}	326
MRGS-50	25	4.5	12000	2.4×10^{-4}	658
MRGS-65	32	7	9000	8.4×10^{-4}	1290

*1 : Correction of rated torque due to load fluctuation is not required.
*2 : These are values with max. bore diameter.

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

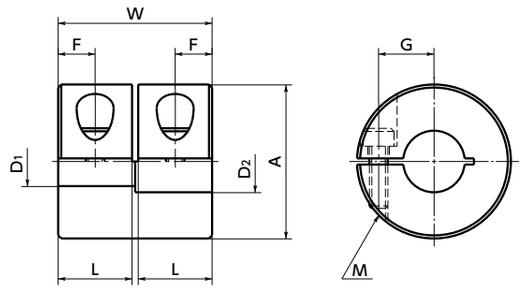
- Part number specification

MRGS-40 - 18-20
1 2

MRG-C / MRGS-C Rigid coupling - Clamping type

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

MRG-C Made of aluminum alloy
MRGS-C Made of all stainless steel



Dimensions • Performance

Unit : mm

Part Number 1	A	W	L	F	G	M	Screw Tightening Torque (N•m)	Standard Bore Diameter D1 • D2 2													
								5	6	8	10	12	14	15	16	18	19	20	25	28	30
MRG-16C	16	16	7.5	3.75	5	M2.5	1	●	●												
MRG-20C	20	20	9.5	4.75	6.5	M2.5	1		●	●											
MRG-25C	25	25	12	6	9	M3	1.5			●	●										
MRG-32C	32	32	15.5	7.75	11	M4	2.5				●	●	●								
MRG-40C	40	40	19.5	9.5	14	M5	4							●	●	●					
MRG-50C	50	50	24.4	12	18	M6	8										●	●			
MRG-65C	65	65	31.9	16	23	M8	16												●	●	●
MRGS-16C	16	16	7.5	3.75	5	M2.5	1	●	●												
MRGS-20C	20	20	9.5	4.75	6.5	M2.5	1		●	●											
MRGS-25C	25	25	12	6	9	M3	1.5			●	●										
MRGS-32C	32	32	15.5	7.75	11	M4	2.5				●	●	●								
MRGS-40C	40	40	19.5	9.5	14	M5	4							●	●	●					
MRGS-50C	50	50	24.4	12	18	M6	8										●	●			
MRGS-65C	65	65	31.9	16	23	M8	16												●	●	●

- 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.258

Performance

Part Number	Max. Bore Diameter (mm)	Rated torque*1 (N•m)	Max. Rotational Frequency (min^{-1})	Moment of Inertia*2 ($kg \cdot m^2$)	Mass*2 (g)
MRG-16C	6	1	39000	3.0×10^{-7}	8.3
MRG-20C	8	2.5	31000	8.7×10^{-7}	15
MRG-25C	10	4.5	25000	2.7×10^{-6}	29
MRG-32C	14	10	19000	7.1×10^{-6}	51
MRG-40C	18	20	15000	2.4×10^{-5}	104
MRG-50C	24	25	12000	7.5×10^{-5}	197
MRG-65C	30	35	9000	2.8×10^{-4}	446
MRGS-16C	6	0.3	39000	8.0×10^{-7}	22
MRGS-20C	8	0.5	31000	2.4×10^{-6}	41
MRGS-25C	10	1	25000	7.3×10^{-6}	80
MRGS-32C	14	2	19000	2.5×10^{-5}	160
MRGS-40C	18	3	15000	7.0×10^{-5}	297
MRGS-50C	24	4.5	12000	2.1×10^{-4}	563
MRGS-65C	30	7	9000	8.1×10^{-4}	1270

*1 : Correction of rated torque due to load fluctuation is not required.
*2 : These are values with max. bore diameter.

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

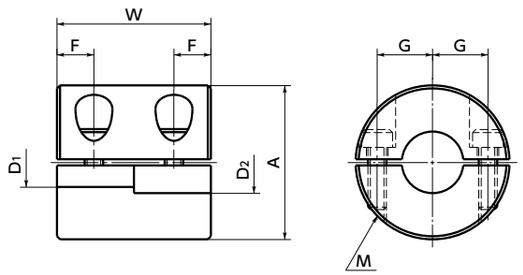
- Part number specification

MRG-32C - 12-14
1 2

MRG-W / MRGS-W Rigid coupling - Split type

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

MRG-W Made of aluminum alloy
MRGS-W Made of all stainless steel



Dimensions • Performance

Unit : mm

Part Number ◀1	A	W	F	G	M	Screw Tightening Torque (N • m)	Standard Bore Diameter D1 • D2 ◀2												
							5	6	8	10	12	14	15	16	18	19	20	25	28	30
MRG-16W	16	16	4	5	M2.5	1	●	●												
MRG-20W	20	20	5	6.5	M2.5	1		●	●											
MRG-25W	25	25	6	9	M3	1.5			●	●										
MRG-32W	32	32	8	11	M4	2.5				●	●	●								
MRG-40W	40	40	9.5	14	M5	4							●	●	●					
MRG-50W	50	50	12	18	M6	8										●	●			
MRG-65W	65	65	16	23	M8	16												●	●	●
MRGS-16W	16	16	4	5	M2.5	1	●	●												
MRGS-20W	20	20	5	6.5	M2.5	1		●	●											
MRGS-25W	25	25	6	9	M3	1.5			●	●										
MRGS-32W	32	32	8	11	M4	2.5				●	●	●								
MRGS-40W	40	40	9.5	14	M5	4							●	●	●					
MRGS-50W	50	50	12	18	M6	8										●	●			
MRGS-65W	65	65	16	23	M8	16												●	●	●

- All products are provided with hex socket head cap screws.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
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. Rotational Frequency (min^{-1})	Moment of Inertia*2 ($kg \cdot m^2$)	Mass*2 (g)
MRG-16W	6	1	39000	3.2×10^{-7}	8.8
MRG-20W	8	2.5	31000	8.7×10^{-7}	15
MRG-25W	10	4.5	25000	2.7×10^{-6}	29
MRG-32W	14	10	19000	9.3×10^{-6}	61
MRG-40W	18	20	15000	2.3×10^{-5}	99
MRG-50W	24	25	12000	7.1×10^{-5}	189
MRG-65W	30	35	9000	2.7×10^{-4}	428
MRGS-16W	6	0.3	39000	8.2×10^{-7}	22
MRGS-20W	8	0.5	31000	2.4×10^{-6}	41
MRGS-25W	10	1	25000	7.3×10^{-6}	80
MRGS-32W	14	2	19000	2.5×10^{-5}	160
MRGS-40W	18	3	15000	6.7×10^{-5}	285
MRGS-50W	24	4.5	12000	2.0×10^{-4}	541
MRGS-65W	30	7	9000	7.7×10^{-4}	1220

*1 : Correction of rated torque due to load fluctuation is not required.
*2 : These are values with max. bore diameter.

- Part number specification

MRGS-25W - 8-8
◀1　◀2