Category List

Couplings P.17

High-Gain Rubber Couplings
➡ P.27

Disk Couplings
➡ P.63

Slit Couplings
➡ P.97

Jaw Couplings
➡ P.125

Cross Joint Couplings
➡ P.155

Oldham Couplings
➡ P.161

Bellows Couplings
➡ P.193

Serration Couplings
➡ P.205

Rigid Couplings
➡ P.207

Cleanroom, Vacuum, Heat Resistant
➡ P.225

Flexus
➡ P.249

Mechanical Parts
➡ P.251

Machine Elements P.261

Levers
➡ P.267

Knobs
➡ P.293

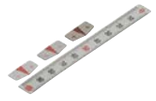
Pulls
➡ P.329

Mounting Systems for Display
➡ P.345

Set Collars/ Cross Clampers
➡ P.371

Handles/Grips
➡ P.393

Scales
➡ P.417



Stages
➡ P.434

Ball Rollers
➡ P.455

Plungers
➡ P.477

Structure Components
➡ P.499

Screws
➡ P.513

Special Screws P.547

Vacuum Application Screws
➡ P.563

Low Profile Screws・Small Head Screws
➡ P.593

High Performance S.S. Screws
➡ P.621

Titanium Screws
➡ P.633

Special Material Screws
➡ P.645

Chemical Resistance Screws
➡ P.663

Screws with Special Surface Treatment
➡ P.671

Miniature Screws
➡ P.681

Captive Screws・Full Thread Screws
➡ P.689

Functional Screws
➡ P.701

Inch Screws
➡ P.708

Tamper Resistance Screws
➡ P.713

Hexalobular Socket Head Screws
➡ P.723

Plugs
➡ P.727

Plastic Screws
➡ P.733

Washers・Lock Nuts
➡ P.780

NBK Couplings

INDUSTRIAL DYNAMICS
36 Taunton Drive Cheltenham VIC 3192
info@idyna.com.au +61 3 9585 2739
www.industrialdynamics.com.au

Select from the table ····· P.19
Select based on motor ····· P.21
Select based on device to use ····· P.22
High-Gain Rubber Couplings ····· P.27
Disk Couplings ····· P.63
Slit Couplings ····· P.97
Jaw Couplings ····· P.125
Cross Joint Couplings ····· P.155
Oldham Couplings ····· P.161
Bellows Couplings ····· P.193
Serration Couplings ····· P.205
Rigid Couplings ····· P.207
Cleanroom,Vacuum,Heat Resistance ··· P.225
Flexus ····· P.249
Mechanical Parts ····· P.251
Explanation of Terminology ····· P.254
Mounting and Maintenance ····· P.257
For better drive ····· P.259
Safety Precautions ····· P.260

Coupling Selection

1 Select from the table

2 Select based on motor ➡P.21
3 Select based on device to use ➡P.22

● Custom-made parts

Super bellows	Flexus
P.204	P.249
 Completely custom-made coupling with high precision welded bellows can be manufactured.	 This is a multifunctional part made of various materials with slits and works as a spring.

● Mechanical Parts

Photo Sensor Flange	Damper Roll
MPF	MDR
P.251	P.252
	

Couplicon®

	High-Gain Rubber Coupling							Disk-Coupling					
Product Code	XGT2	XGS2	XGL2	XGT	XGS	XGL		XHW / XHW-L	XHS	XBWS	XBSS	MDW / MDS	MHW / MHS
Page	P.29	P.29	P.29	P.45	P.45	P.45		P.65	P.71	P.77	P.83	P.89 / P.91	P.93 / P.95
Shape	Standard	Short	Long	Standard	Short	Long		Standard/Long	Short	Standard	Short	Standard/Short	Standard/Short
	 Additional Size	 Additional Size						 Additional Size	 Additional Size	 Stainless Steel	 Stainless Steel		
Zero Backlash	◎	◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎
High gain supported*	★	★	★	◎	◎	◎		○	○				
High torque	★	★	★	★	★	★		◎	◎	○	○		
High torsional stiffness	◎	◎	◎	○	○	○		★	★	◎	◎		
Allowable Misalignment	○	○	○	○	○	○		○	○	○	○	○	○
Vibration absorption	★	★	★	◎	◎	◎							

*This is available for high gain of the servomotor.

★: excellent ◎: very good ○: good

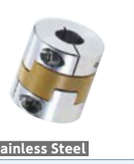
★: excellent ◎: very good ○: good

	Slit-Coupling				Jaw-Coupling			Cross Joint-Coupling	Oldham-Coupling				
Product Code	MSX	MST / MSTS	MWS / MWSS	MSXP-C-W-SP	MJC	MJS	MJB	XUT	MOR	MOM	MOL	MOS	
Page	P.97	P.105	P.115	P.123	P.125	P.139	P.147	P.155	P.161	P.173	P.187	P.187	
Shape	Standard	Standard	Short		Standard	Short	Bushing	Standard	Standard	Standard	Standard	Standard	Short
		 Stainless Steel	 Stainless Steel	 NEW	 Additional Size								
Zero Backlash	◎	◎	◎	◎	○	○			○				
High gain supported*	○				○	○	○	○					
High torque	○	○	○		◎	◎	◎		◎	★			
High torsional stiffness	◎	○	○					◎		★			
Allowable Misalignment		○		○	○	○	○	○	★	○	★	★	
Vibration absorption					◎	◎	◎	◎					

*This is available for high gain of the servomotor.

★: excellent ◎: very good ○: good

★: excellent ◎: very good ○: good

	Bellows-Coupling			Serration-Coupling	Cleanroom, Vacuum, Heat Resistant Coupling					Rigid-Coupling		
Product Code	MBB	MFB / MFBS	MWBS	MSF	XSTS	XWSS	MSXP	MOHS	MOP	XRP	MRG / MRGS	MLR / MLRS
Page	P.193	P.195	P.201	P.205	P.227	P.227	P.231	P.237	P.243	P.207	P.211	P.219
Shape	 NEW	Standard  Stainless Steel	Standard  Stainless Steel	Standard 	Standard  Stainless Steel	Short  Stainless Steel	Standard 	Standard  Stainless Steel	Standard 	Standard 	Standard  Stainless Steel	Long  Stainless Steel
Zero Backlash	◎	◎	◎		◎	◎	◎			◎	◎	◎
High gain supported*										◎	○	○
High torque					○	○				◎	◎	◎
High torsional stiffness		○								◎	◎	◎
Allowable Misalignment	○	○	◎	○	○		○	◎	◎			
Vibration absorption												

*This is available for high gain of the servomotor.

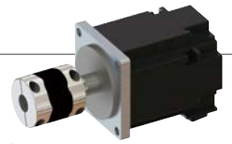
★: excellent ◎: very good ○: good

★: excellent ◎: very good ○: good

2 Select based on motor

1 Select from the table ➡P.19
3 Select based on device to use ➡P.22

Servomotor & Stepping Motor



● These are couplings suitable to the combination with servomotor or stepping motor.

● High-gain rubber type coupling XGT2 XGL2 XGS2 are superior in vibration absorption and are the most appropriate for the combination in particular with servomotor.

XGT2 XGL2 XGS2 ➡ P.29

● XHW XHS have high rigidity.
● Also applicable to servomotors with instantaneous max. torque of 350%.

XHW ➡ P.65

XHS ➡ P.71

MSX ➡ P.97

MJC ➡ P.125

XUT ➡ P.155

XRP ➡ P.207

●Selection based on the rated output of servomotor
The size of coupling to be used can be selected from the rated output of the servomotor.

Rated output (W)	Servomotor Specifications* Diameter of motor shaft (mm)	Rated torque (N・m)	Instantaneous max. torque (N・m)	Recommended Coupling size XGT2 XGL2 P.29	XHW P.65	MSX P.97	MJC-RD P.125	XUT P.155
10	5 - 6	0.032	0.096	15C	19C	16C	14C	15C
20	5 - 6	0.064	0.19	15C	19C	16C	14C	15C
30	5 - 7	0.096	0.29	19C	19C	19C	14C	20C
50	6 - 8	0.16	0.48	19C	19C	19C	20C	20C
100	8	0.32	0.95	19C	19C	19C	20C	25C
200	9 - 14	0.64	1.9	30C	27C	29C	30C	30C
400	14	1.3	3.8	30C	34C	39C	30C	35C
750	16 - 19	2.4	7.2	39C	39C	44C	40C	–

● For the specifications of each product, please refer to the corresponding product pages.
* Motor specifications are based on general values. For details, please refer to catalogs of each motor manufacturers. Recommended sizes are for the cases where reduction gears are not used.

General-purpose motor

● These are couplings suitable to the combination with general-purpose motor.

MJC ➡ P.125

MOR ➡ P.161

MOM ➡ P.173

MSF ➡ P.205

Couplicon®

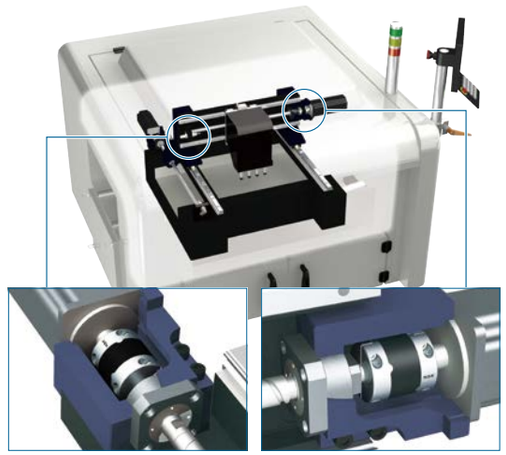
3 Select based on device to use

1 Select from the table ➡P.19
2 Select based on motor ➡P.21

Surface-Mount Machine

Improved Productivity (High Throughput)

● Selection point: reduced settling time due to the high-gain compatible servo motor

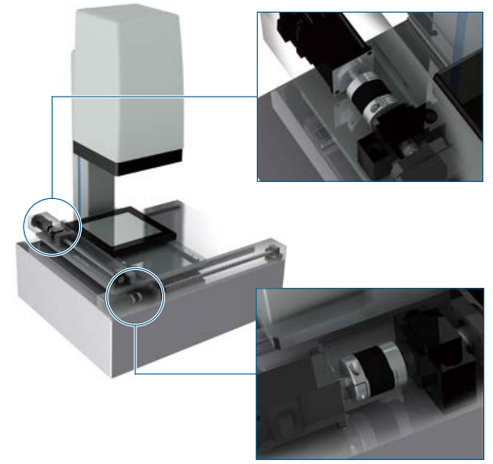


Product used: high-gain rubber type XGT2 ➡ P.29

CNC Image Measuring Instrument

Improved Measurement Speed

● Selection point: reduced settling time due to the high-gain compatible servo motor



Product used: high-gain rubber type XGT2 ➡ P.29

Genetic Testing Device

Vibration suppression and low noise of mixing shaft

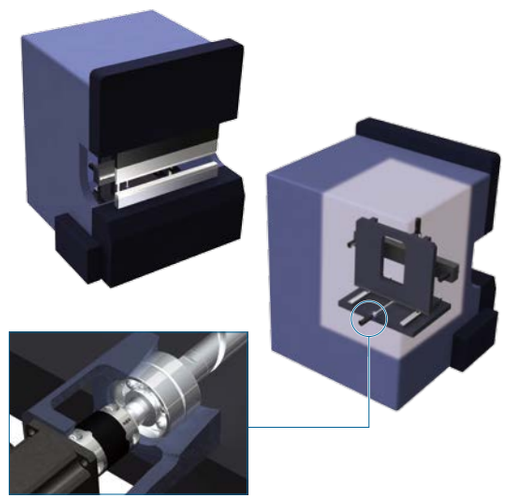
● Selection point: excellent vibration absorption

Product used: high-gain rubber type XGS2 ➡ P.29

Press Brake

Vibration suppression of back gauge

● Selection point: excellent vibration absorption



Product used: high-gain rubber type XGT2 ➡ P.29

3 Select based on device to use

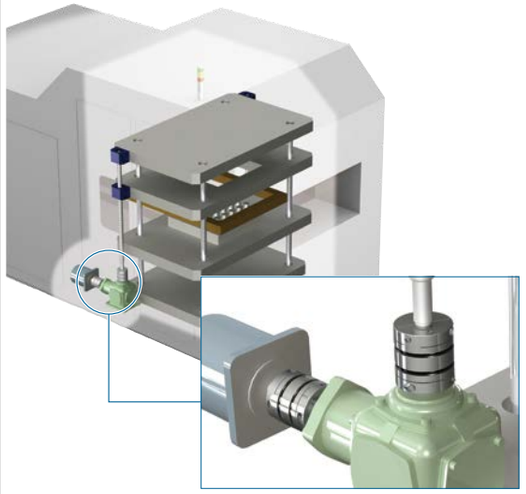
Couplicon®

1 Select from the table ➡P.19
2 Select based on motor ➡P.21

Vacuum/Compressed Air Mold for Food Containers

High torque transmission, high-precision positioning

- Selection point: high torque/high torsional rigidity

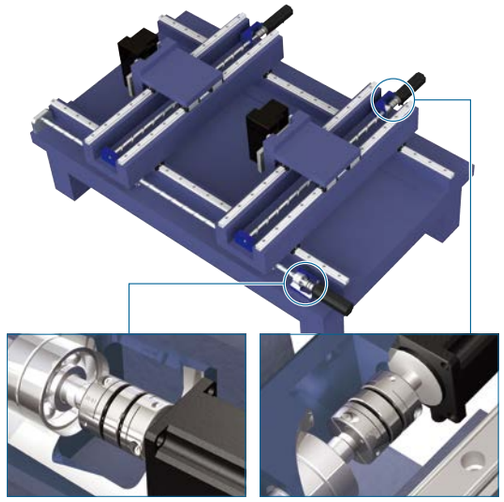


Product used: disk type XHW ➡ P.65

Next-Generation Battery Module Assembling Device

High-speed/high-precision positioning

- Selection point: high torsional rigidity



Product used: disk type XHW ➡ P.65

Medical Diagnostic Imaging Device

Stable Speed Control

- Selection point: high torsional rigidity

Product used: disk type XHW ➡ P.65

Deposition Transport Device for Solar Cells

Long distance between motor shaft and driven shaft

- Selection point: special cleanroom specifications with a longer coupling length
  ➡ P.807 Cleanroom Wash / Cleanroom Packing Service

Product used: disk type XBWS ➡ P.77

3 Select based on device to use

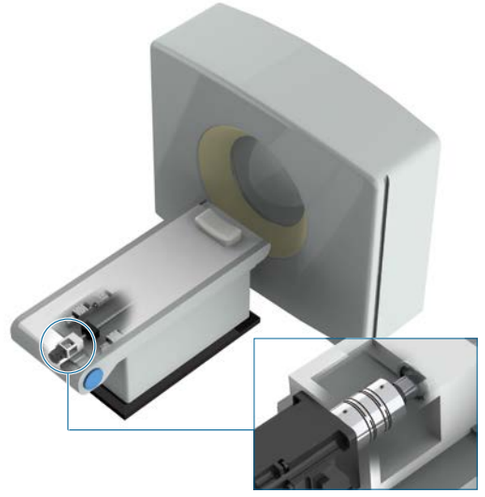
Couplicon®

1 Select from the table ➡P.19
2 Select based on motor ➡P.21

CT Scan

Corrosion Resistance

- Selection point: all-stainless steel couplings

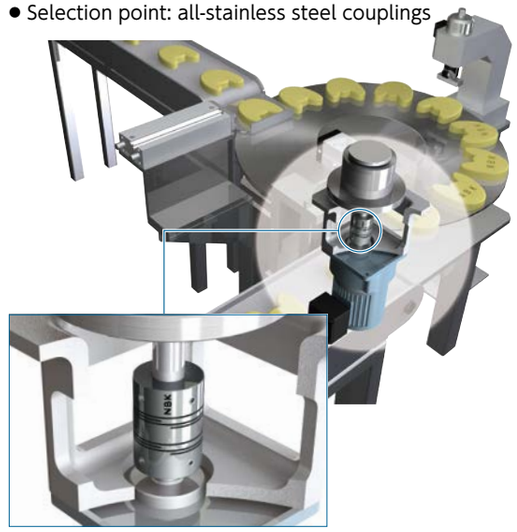


Product used: slit type MSTS ➡ P.105

Confectionery Equipment

Corrosion Resistance

- Selection point: all-stainless steel couplings

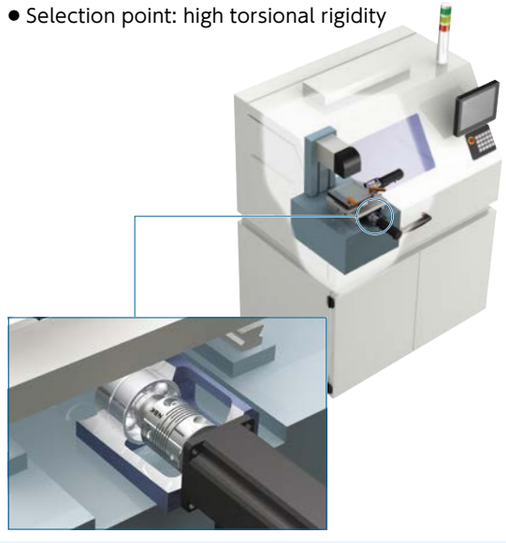


Product used: slit type MSTS ➡ P.105

Laser Marking Device

High-speed/high-precision positioning

- Selection point: high torsional rigidity

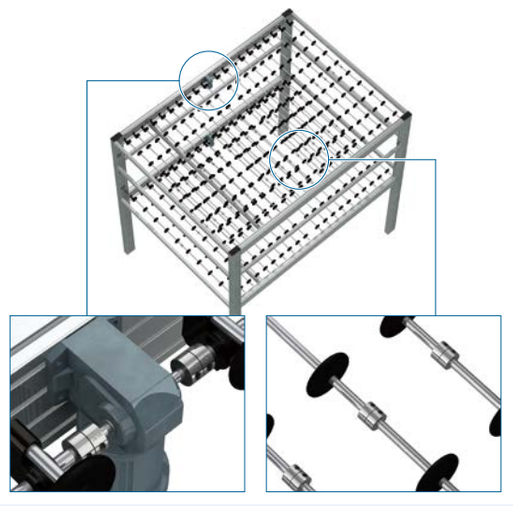


Product used: slit type MSX ➡ P.97

Large Glass Cleaning/Transport Device

Chemical Resistance

- Selection point: all-stainless steel couplings



Product used: slit type MRGS ➡ P.211

Couplicon®

3 Select based on device to use

1 Select from the table ➡P.19
2 Select based on motor ➡P.21

Machine Tools

High-speed, high-torque spindle

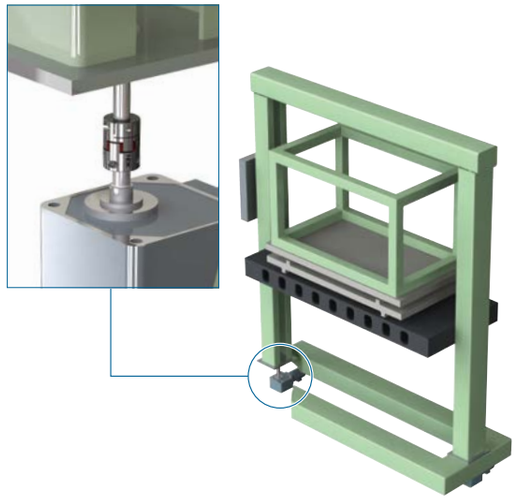
- Selection point: high-speed rotation and high-torque transmission

Product used: jaw type **MJB** ➡ P.147

FPD Transport Stocker Lifting Device

Downsized drive module

- Selection point: high torque and compact size

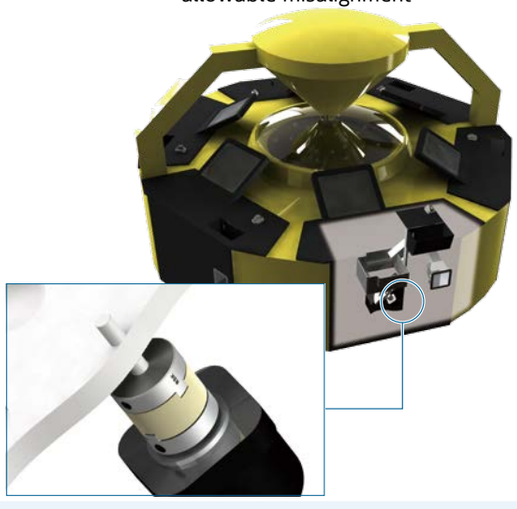


Product used: jaw type **MJC** ➡ P.125

Coin Feeder

Reduced equipment assembly and adjustment time

- Selection point: easy segmentation/large allowable misalignment

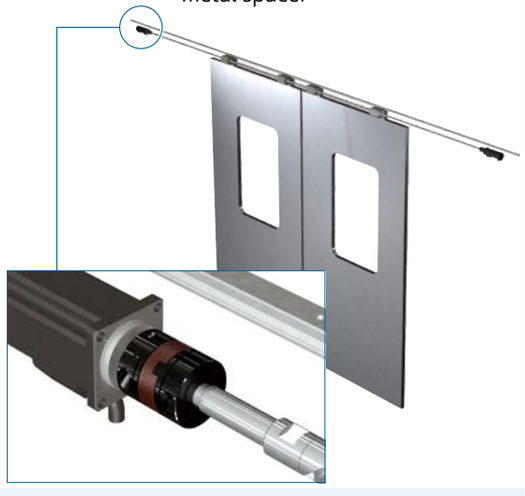


Product used: Oldham type **MOR** ➡ P.161

Airtight Sliding Door Open/Close Device

Improved reliability of equipment operation

- Selection point: high torque transmission via metal spacer



Product used: Oldham type **MOM** ➡ P.173

Couplicon®

3 Select based on device to use

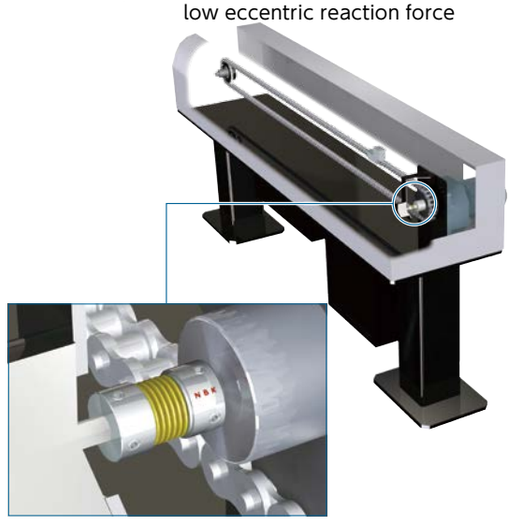
1 Select from the table ➡P.19
2 Select based on motor ➡P.21

Couplings
High-Gain Rubber Couplings
Disk Couplings
Slit Couplings
Jaw Couplings
Cross Joint Couplings
Oldham Couplings
Bellows Couplings
Serration Couplings
Rigid Couplings
Cleanroom,Vacuum, Heat Resistant
Flexus
Mechanical Parts
Terminology, Mounting, For better drive

Bar Feeder Encoder

Constant velocity and suppression of shaft radial load

- Selection point: excellent constant velocity and low eccentric reaction force

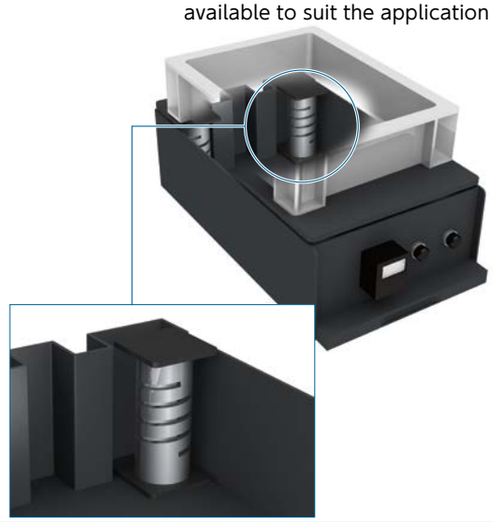


Product used: bellows type **MFB** ➡ P.195

Parts Feeder

Durability and improved positioning reproducibility

- Selection point: arbitrary spring characteristics available to suit the application

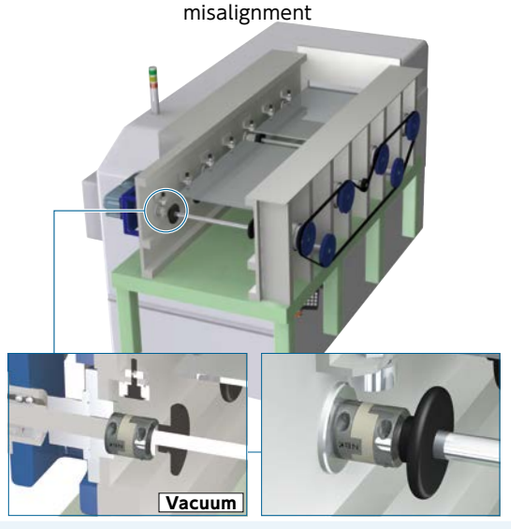


Product used: custom spring component **Flexus®** ➡P.249

In-line Vacuum Vapor Deposition Equipment

Connection of devices in vacuum chamber and external drive unit

- Selection point: low outgassing/large allowable misalignment

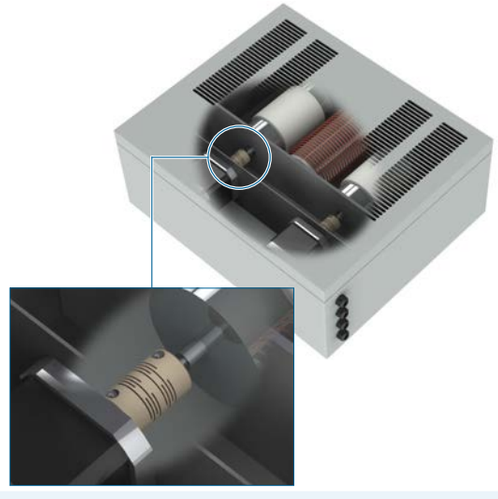


Product used: cleanroom/vacuum/heat resistant type **MOP** ➡P.243

Matching Box for RF Power

Electrical insulation of vacuum variable capacitor and stepping motor

- Selection point: zero backlash/electrical insulation



Product used: for vacuum variable capacitor/slit type **MSXP** ➡P.231

Couplicon®

Solution to High Response

High-Gain Rubber Type Coupling **XG2**

XG2 eXtraGain Patent Pending

1. Reduction of Stabilization Time

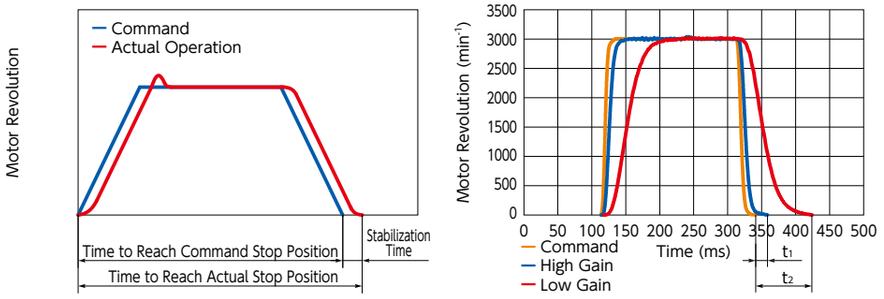
Improvement in servomotor's limit gain can reduce stabilization time.

Hunting suppression

● Bode plot

Improvement in limit gain

● Gain and stabilization time



Reduction of Stabilization Time

● Measurement of stabilization time and overshoot

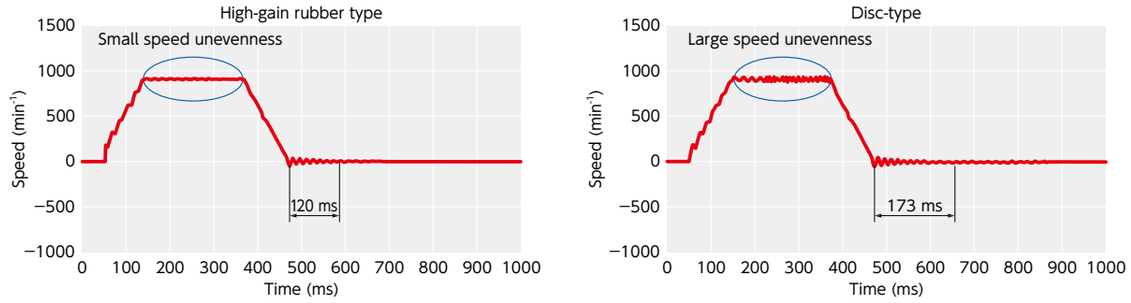
Gain*		XG2 Series 	XG Series 	Disc-type 
25	Stabilization time (ms)	12	12	12
	Overshoot (μm)	0.4	0.9	0.6
27	Stabilization time (ms)	8	8	Occurrence of hunting
	Overshoot (μm)	0.6	1	
32	Stabilization time (ms)	3	Occurrence of hunting	Occurrence of hunting
	Overshoot (μm)	1.7		

* Values after adjustment of all gains including position control gain and speed control gain (1 - 32)
● The values in the table vary depending on the test conditions.

Improved Productivity (Movie featuring comparison with disc-type is available on NBK website.)

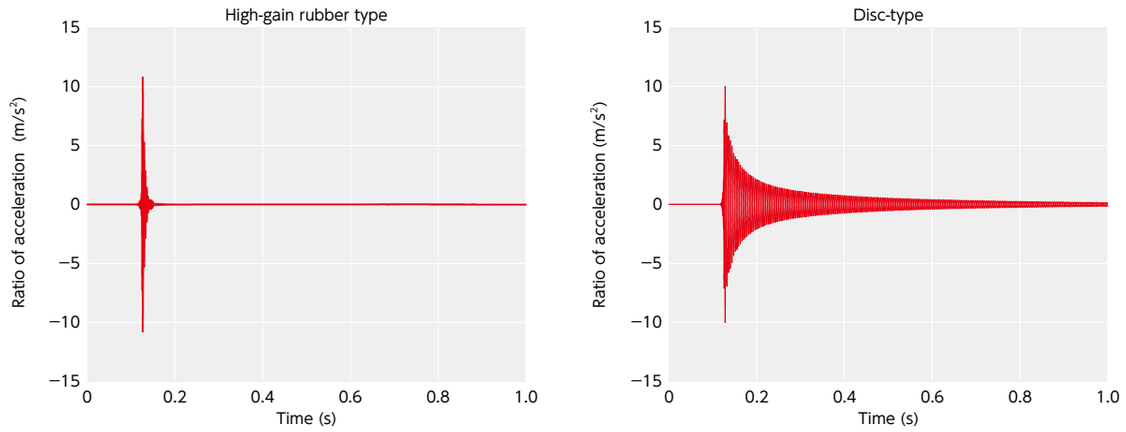
2. Speed Unevenness Suppression

Speed and torque unevenness arising from misalignment will be suppressed.



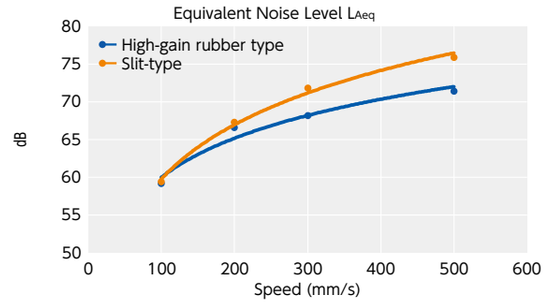
3. Vibration Suppression

High damping ratio will enable quick absorption of vibrations.



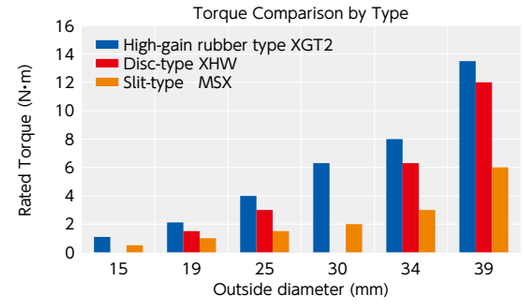
4. Quietness

Actuator drive noise can be reduced.



5. High Torque

High torque use is possible compared with disc-type and slit-type.



Couplicon®

XGT2/XGL2/XGS2 Flexible coupling - High - gain rubber type

Additional Size Patent Pending

WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque High Rigidity Vibration absorption

Structure

● Clamping type

XGT2-C Standard type ➡ P.39

XGL2-C Long type ➡ P.43

XGS2-C Short type ➡ P.41

● Internal Structure

● Recommended applicable motor

	XGT2 / XGL2 / XGS2
Servomotor	◎
Stepping Motor	◎
General-purpose motor	△

◎: Excellent ○: Very good △: Available

● Property

	XGT2 / XGL2 / XGS2
Zero Backlash	◎
For servomotor high gain	◎
High torque	◎
High Torsional Stiffness	◎
Allowable Misalignment	○
Vibration absorption	◎
Allowable operating temperature	−10℃ to 120℃

◎: Excellent ○: Very good

- High-gain flexible coupling which surpasses of **XGT** **XGL** **XGS** in performance. This is a singlepiece construction with the two aluminum hubs molded with vibration-absorbing rubber.
- He optimal damping and rigidity design enables realization of even greater servomotor gain, leading to a reduction in stabilization time.
  ➡ P.31 (Technical Information)
- Suppresses speed unevenness during stepping motor operation. ➡ P.36
- Contributes to improved productivity and quality by suppressing residual vibration during positioning.
- Features outstanding thermal, oil and chemical resistance.
  ➡ P.37 (Physical properties and chemical resistance of vibration-absorbing rubber)
- Standard type **XGT2** , Long type **XGL2** and Short type **XGS2** standardized.
- Application

Semiconductor manufacturing equipment / Mount machines / Machine tools / Packaging machines

● Material/Finish RoHS2 Compliant

	XGT2 / XGL2 / XGS2
Hub	A2017
Vibration-absorbing rubber	FKM
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Part number specification

XGT2 - 19C - 6-8

Product Code / Size / Bore Diameter

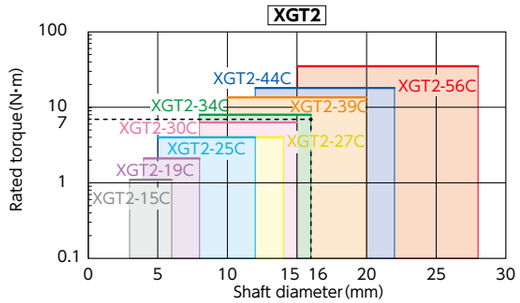
Please refer to dimensional table for part number specification.

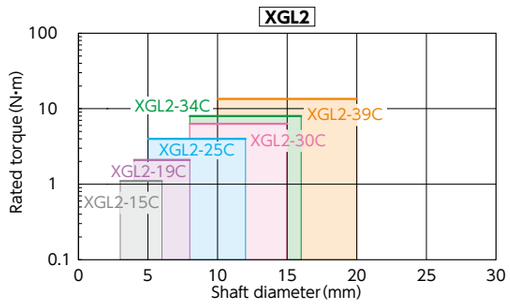
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

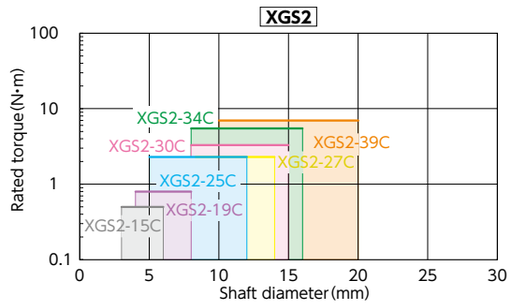
Selection

● 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 16 and load torque of 7N•m, the selection size is **XGT2-34C** .

● Selection based on the rated output of the servomotor

Rated output (W)	Servomotor specifications*1			Selection size		
	Diameter of motor shaft (mm)	Rated torque (N・m)	Instantaneous max. torque (N・m)	XGT2	XGL2	XGS2
10	5 - 6	0.032	0.096	15C	15C	15C
20	5 - 6	0.064	0.19	15C	15C	15C
30	5 - 7	0.096	0.29	19C	19C	19C
50	6 - 8	0.16	0.48	19C	19C	19C
100	8	0.32	0.95	19C	19C	25C
200	9 - 14	0.64	1.9	27C	30C	27C
400	14	1.3	3.8	27C	30C	34C
750	16 - 19	2.4	7.2	39C	39C	–

*1: Motor specifications are based on general values. For details, see the motor manufacturer's catalogs. This is the size for cases where devices such as reduction gears are not used.

Couplicon®

XGT2/XGL2/XGS2 Flexible Coupling - High - Gain Rubber Type

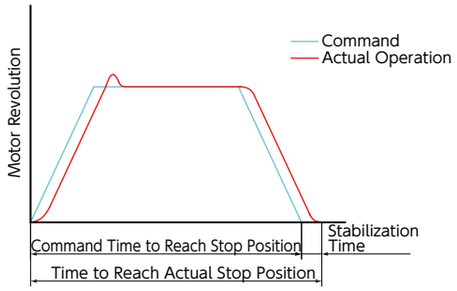
Additional Size Patent Pending

Selection Tool | CAD Download | Zero Backlash | High gain supported | High torque | High Rigidity | Vibration absorption

Technical Information

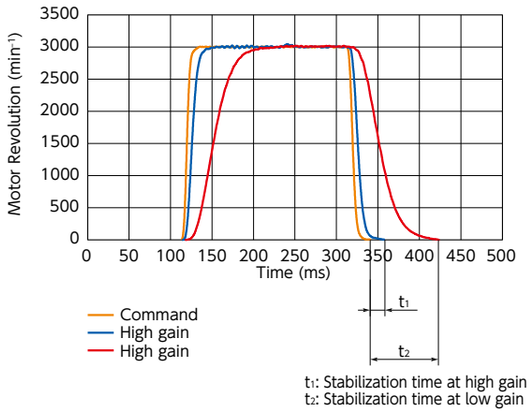
● Productivity and stabilization time

In a production facility, using servomotor's and actuator's, operating these components accurately, as directed by the program, can lead to the improvement of productivity.
Reality, in actual operation, execution of commands may be delayed. For example, when trying to stop the actuator at a predetermined position, the actuator stops somewhat later than the command. We call this delay "stabilization time."
Since the operation does not shift to next process until the actuator completely stops, it is important to shorten the stabilization time to improve productivity.



● Gain and stabilization time of servomotor

Servomotor's gain is an indicator representing to what degree the motor operation can follow the command.
Although raising the gain can reduce the stabilization time, excessive gain increases are likely to cause hunting, thereby disable the control of the servomotor.
Raising the gain while suppressing hunting requires fine adjustment of respective parameters of the servomotor.
However, when a servomotor is combined with a coupling with a metal disk type in the elastic segment, raising the gain tends to cause hunting, making it difficult to resolve the problem by fine adjustments to parameters.
When hunting occurs, it is usually recommended to change to a more rigid coupling to increase the rigidity of the rotating system.
However, in reality, it is difficult to increase the rigidity of the entire rotating system including the ball screw simply by changing the coupling. So, changing to a highly-rigid coupling such as a disk-type may not be effective.



● High-gain rubber type

XGT2 XGL2 XGS2 XGT XGL XGS

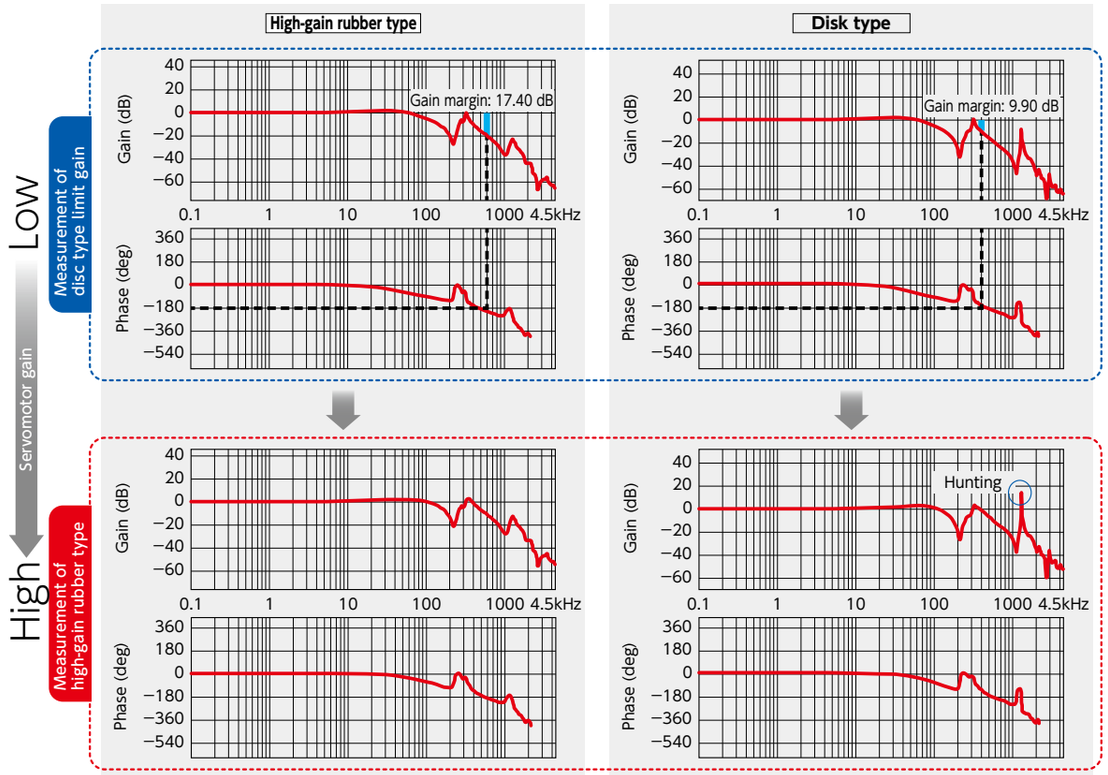
The high-gain rubber type can be used at higher gain than the disk type, enabling reduction of stabilization time.
In addition, the outstanding damping performance reduces the amount of troublesome parameter adjustments required, making it possible to make optimal actuator adjustments in a shorter time.

● Why does the high-gain rubber type allows higher gain setting than the disk type?

The main reasons can be understood from the bode plot.
Intersection point between 0 dB gain line the phase lag in the board wiring is −180 degrees is called the "gain margin".
As a general guideline, in servo systems, the gain margin should be 10 - 20 dB, and when the servomotor gain is increased, the gain margin decreases, with the risk of hunting occurs at 10 dB or lower.
A comparison at the disk type limit gain shows not only that the high-gain rubber type features a larger gain margin, but also that the gain margin is over 10 dB. This is why the high-gain rubber type allows greater servomotor gain than the disk type.
To increase the gain margin are that both coupling damping ratio and dynamic rigidity are high.
➡ P.33

Gain margin at the disk type limit gain
High-gain rubber type : 17.40 dB
Disk type : 9.90 dB

● Bode plot



- Larger gain margin compared to the disk type
- Allows higher servomotor gain settings.

- Smaller gain margin compared to the high-gainrubber type increases the risk of hunting.

Couplicon®

XGT2/XGL2/XGS2 Flexible Coupling - High - Gain Rubber Type

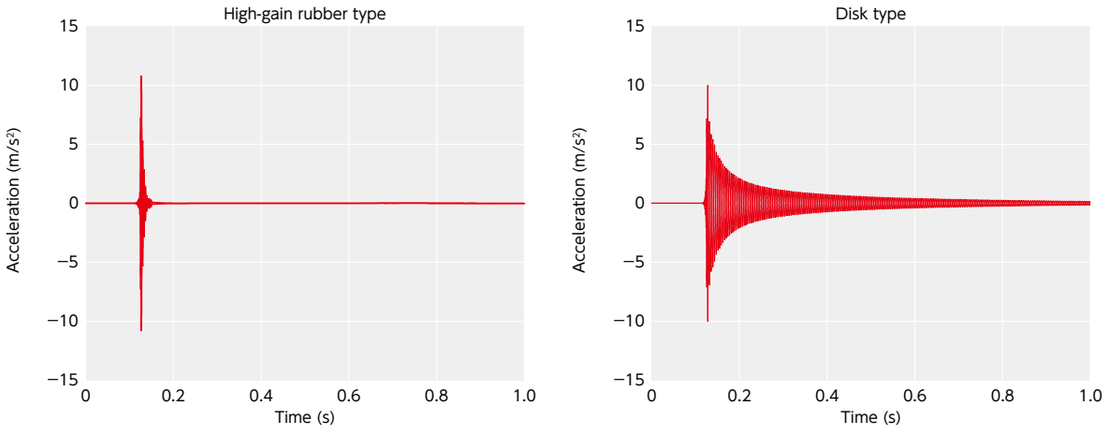
Additional Size Patent Pending

WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque High Rigidity Vibration absorption

Technical Information

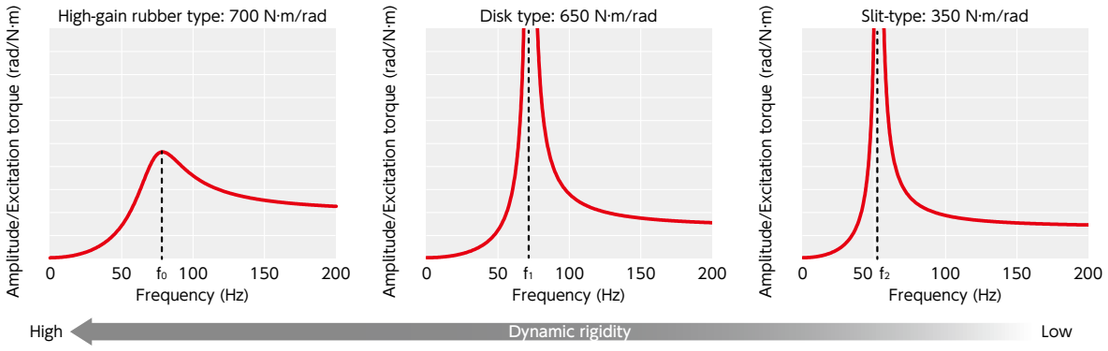
● Damping ratios of high-gain rubber and disk types

Damping ratio of high-gain rubber type is far higher than that of the disk type, enabling rapid absorption of vibration.



● Dynamic rigidity of high-gain rubber and disk types

The dynamic rigidity of the high-gain rubber type is equivalent to or higher than that of the disk type.
Dynamic rigidity (N·m/rad) = Excitation torque (N·m) / Amplitude (rad) at natural frequency (fn)



● Comparison of High-gain Rubber Type (XG2 Series/ XG Series) and Disk Type Couplings

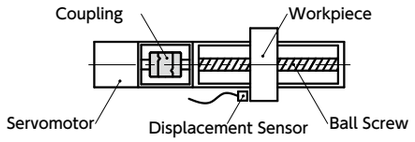
In tests using servo motors and actuators, the followings are verified.

- Stabilization time
  No differences between couplings as long as the gain is the same.
  To reduce stabilization time, higher gains enabled by the use of the high-gain rubber types, especially the XG2 series, demonstrates clear advantage against the disk type.
- Positioning accuracy/Repeated positioning accuracy
  No differences observed attributable to factors such as gain or coupling.
- Overshoot
  Normally higher gain increases the degree of overshoot. At the same gain, the XG2 series demonstrates the smallest overshoot.
- The XG2 Series allows of higher servomotor gain settings than the existing XG series, enabling shorter stabilization time.

- Test Devices
- Actuator : MCM08 Manufactured by NSK Ltd.
  ∗Ball screw lead: 10 mm
- Servomotor : HF-KP13 Mitsubishi Electric
- Test conditions

Motor revolution	: 3000min^{-1}
Acceleration/Deceleration time	: 50ms
Load on the work	: 3.0kg
Load inertia moment ratio	: 3.5

- Test Operation
  Normal rotation (1 rev) → Stop (500 ms) → Reverse rotation (1 rev)
- Test Method
  Measure the work movement with a displacement sensor and also measure the work piece's travel distance and stabilization time.



- Measurement of stabilization time, positioning accuracy and overshoot

Gain∗1		XG2 series	XG series	Disk type	Consideration
25	Stabilization time (ms)	12	12	12	This is the upper gain limit for the disk type. XG series and XG2 series have no problems.
	Positioning accuracy (mm)	0.002	0.002	0.002	
	Repeated positioning accuracy (mm)	±0.001	±0.002	±0.002	
	Overshoot (μm)	0.4	0.9	0.6	
27	Stabilization time (ms)	8	8	Occurrence of hunting	This is the upper gain limit for XG series. XG2 series have no problems. The disk type is not usable due to hunting.
	Positioning accuracy (mm)	0.002	0.003		
	Repeated positioning accuracy (mm)	±0.002	±0.002		
	Overshoot (μm)	0.6	1		
32	Stabilization time (ms)	3	Occurrence of hunting	Occurrence of hunting	The disk type and XG series are not usable due to hunting. XG2 series have no problems.
	Positioning accuracy (mm)	0.003			
	Repeated positioning accuracy (mm)	±0.001			
	Overshoot (μm)	1.7			

∗1 : Values (1 - 32) are after adjustment of all gains including Position Control Gain and Speed Control Gain.
Positioning accuracy : Positioning operation is performed and the absolute value of the difference between the target point and the actual stop position is determined. Max. value of the values found by performing this measurement from the home position at all positions within the max. stroke range.
Repeated Positioning Accuracy : Positioning is repeated 7 times from the same direction of movement to a randomly-selected point and the stopping position are measured and the difference between the max. and minimum values of the stopping position is determined. This method of measurement is applied at positions at the middle and both ends of the max. stroke range, then the max. value becomes the measured value, halved and prefixed with ±.
● The values in the table vary depending on the test conditions.

Couplicon®

XGT2/XGL2/XGS2 Flexible Coupling - High - Gain Rubber Type

Additional Size Patent Pending

Selection Tool | CAD Download | Zero Backlash | High gain supported | High torque | High Rigidity | Vibration absorption

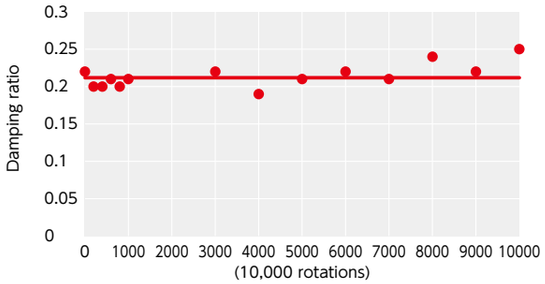
Technical Information

● Changes in performance after cycles

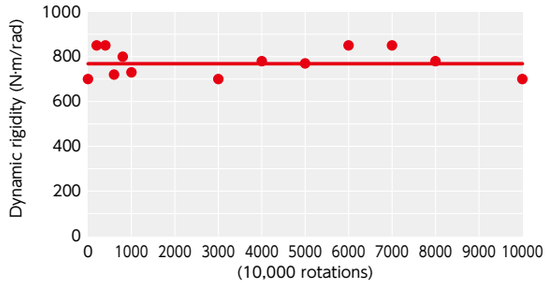
● Test Method ①
Rated torque load is applied to a coupling which rotates in a single direction, and the damping ratio and dynamic rigidity are measured.

● Test Sample
XGT2 - 25C-12 - 12

● Changes in Damping Ratio depends on the number of cycles.



● Changes in Dynamic Rigidity depends on the number of cycles.



*No changes are observed in the damping ratio or dynamic rigidity after 100,000,000 rotations.

● Test Method ②
A motor and coupling are mounted on a single-shaft actuator, the work is set in reciprocating motion and the damping ratio and dynamic rigidity are measured.

● Test Sample
XGT-25C-12 - 12

● Test Operation
Normal rotation (10 rev) → Reverse rotation (10 rev). This operation is repeated.
Stroke: 100 mm, Total travel distance: 4400 km

● Measurement of Damping Ratio and Dynamic Rigidity

	Before testing	After testing
Damping ratio	0.07	0.07
Dynamic rigidity (N・m/rad)	330	330

*No changes are observed in the coupling performance even after a total travel distance of 4400 km.

● Test Devices
Actuator : BG46 Manufactured by Nippon Bearing Co., Ltd.
*Ball screw lead: 10 mm
Servomotor : HF-KP13 Mitsubishi Electric

● Test conditions

Motor revolution	: 3000min^{-1}
Acceleration/Deceleration time	: 10ms
Load on the work	: 3.0kg
Load inertia moment ratio	: 3.5

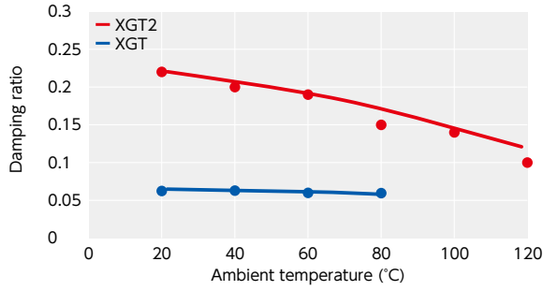
● Test Method
The damping ratio and dynamic rigidity of the coupling are measured before and after the testing.

● Temperature-triggered changes in performance

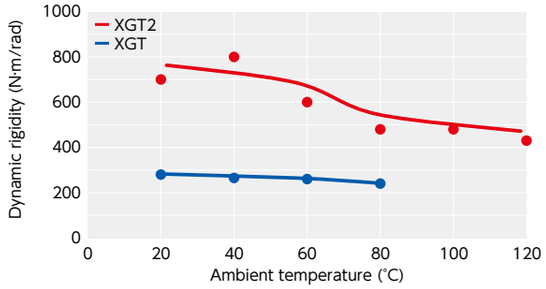
● Test Method
A coupling is left at the prescribed ambient temperature for 4 hours and damping ratio and dynamic rigidity measured.

● Test Sample
XGT2 - 25C-12 - 12、XGT-25C-12 - 12

● Temperature-triggered changes in damping ratio

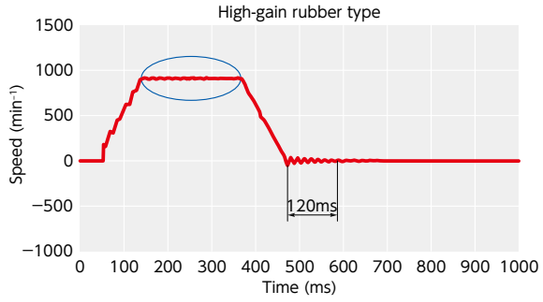


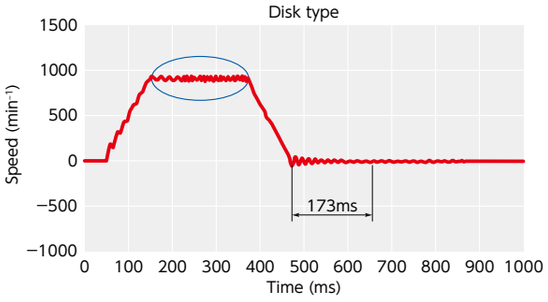
● Temperature-triggered changes in dynamic rigidity



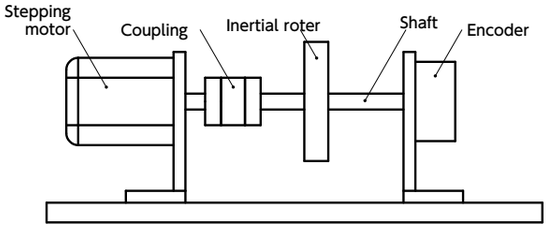
*Although the damping ratio and dynamic rigidity decrease as the temperature rises, XGT2 exceeds the damping ratio and dynamic rigidity of XGT across the entire temperature range.

● Suppressing speed unevenness Control during Stepping Motor Operation





● Test Devices
Motor : α step AR66AK-1 Manufactured by Oriental Motor Co., Ltd.
Set voltage: ————24 VDC,
Resolution: ————1000p/r
Moment of inertia: —1250×10^{-7}kg・cm^2
Encoder : RD5000 Manufactured by Nikon Corporation



● Drive Parameters

Startup speed	: 60min^{-1}
Drive speed	: 900min^{-1}
Rotation angle	: 1800°
Acceleration/Deceleration time	: 0.1s

*The high-gain rubber type is effective to suppress speed unevenness during fixed-speed rotation.

Couplicon®

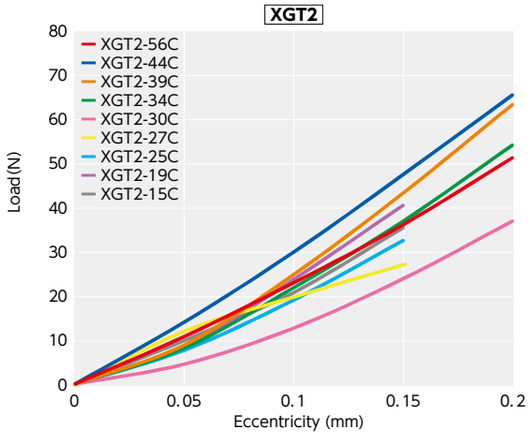
XGT2/XGL2/XGS2 Flexible Coupling - High - Gain Rubber Type

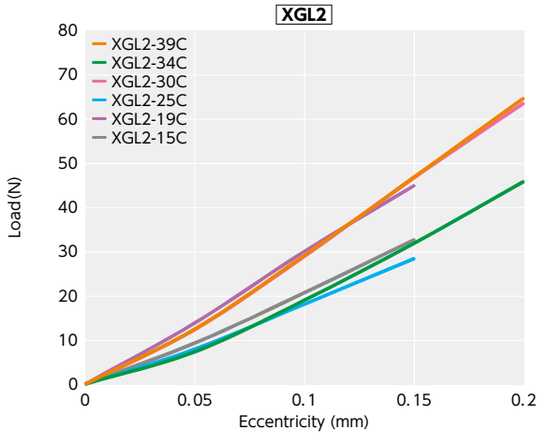
Additional Size Patent Pending

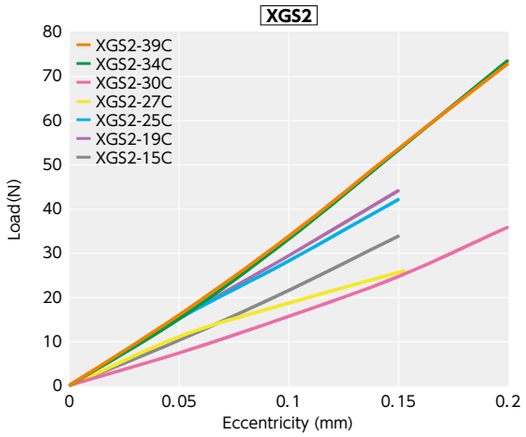
WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque High Rigidity Vibration absorption

Technical Information

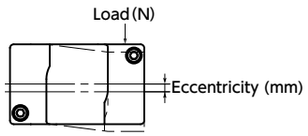
● Eccentric reaction force







This is a force generated when making **XGT2** **XGL2** **XGS2** in eccentric condition.
As the eccentric reaction force becomes smaller, the force acting on the shaft bearing also becomes smaller.

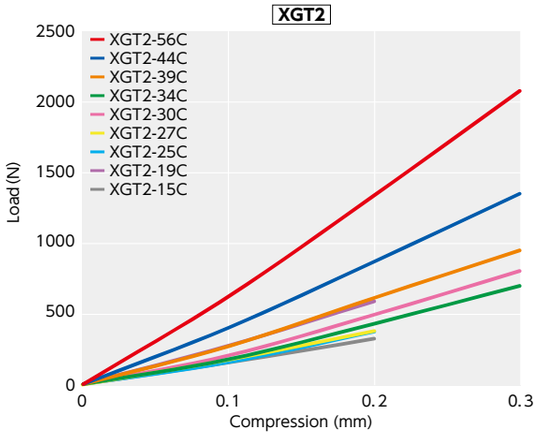


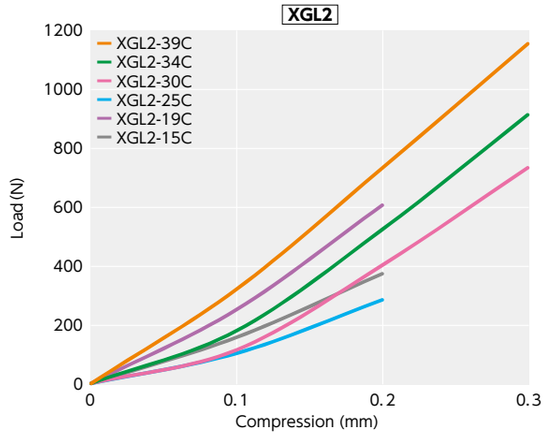
● Physical property and chemical resistance of vibration-resistance rubber (FKM)

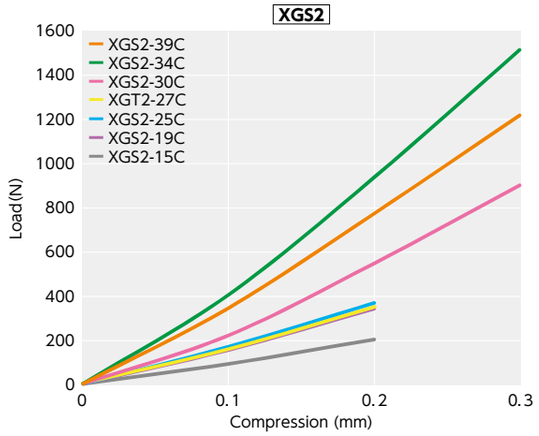
	Effect
Aging resistance	◎
Weather resistance	◎
Ozone resistance	◎
Gasoline/Gas Oil	◎
Benzene/Toluene	◎
Alcohol	◎
Ether	×～△
Ketone (MEK)	×
Ethyl acetate	×
Water	◎
Organic acid	×
High concentration inorganic acid	◎
Low concentration inorganic acid	◎
Strong alkali	×
Weak alkali	△

◎ : Very Good ○ : Available △ : Fair pending on condition
× : Not available

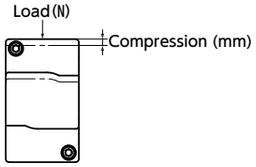
● Thrust Reaction Force







This is a force generated when compressing **XGT2** **XGL2** **XGS2** in the shaft direction. As the thrust reaction force becomes smaller, the force acting on the motor also becomes smaller.



● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque.

Unit : N・m

Part number	Bore Diameter (mm)		
	3	5	10
XGT2-15C, XGL2-15C	1		
XGT2-27C, XGL2-27C		3.8	
XGT2-39C, XGL2-39C			13.3

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in Dimension table.

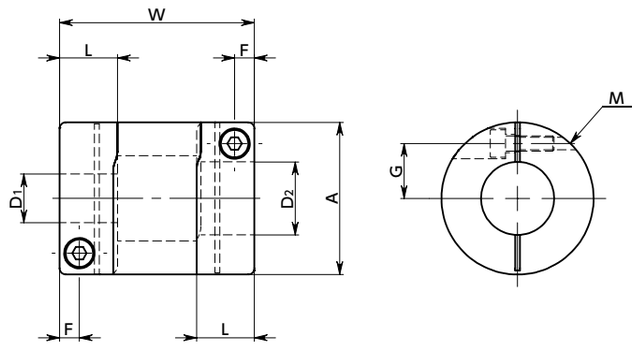
Couplicon®

XGT2 Flexible coupling - High - gain rubber type - Standard type

Additional Size Patent Pending

WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque High Rigidity Vibration absorption

XGT2-C



Dimensions

Unit : mm

Part Number ◀1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGT2-15C	15	6.5	23	2.15	5	M1.6	0.25
XGT2-19C	19	7.7	26	2.65	6.5	M2	0.5
XGT2-25C	25	9.5	32	3.25	9	M2.5	1
XGT2-27C	27	9.5	32	3.25	10	M2.5	1
XGT2-30C	30	11	36	4	11	M3	1.5
XGT2-34C	34	12	38	4	12.25	M3	1.5
XGT2-39C	39	15.5	48	4.5	14.5	M4	2.5
XGT2-44C	44	15	48	4.75	16	M4	2.5
XGT2-56C	56	19.5	60	5.5	20	M5	7

Part Number	Standard Bore Diameter D1-D2 ◀2									
XGT2-15C	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGT2-19C	4 - 5 6.35 - 8	4 - 8 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
XGT2-25C	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGT2-27C	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGT2-30C	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGT2-34C	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGT2-39C	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20
XGT2-44C	12 - 12 15 - 19	12 - 14 15 - 20	12 - 16 16 - 16	12 - 19 16 - 19	14 - 14 17 - 17	14 - 15 19 - 20	14 - 16 20 - 20	14 - 19	15 - 15	15 - 16
XGT2-56C	15 - 15	15 - 19	15 - 20	15 - 25	19 - 20	19 - 24	20 - 20	20 - 25	24 - 25	25 - 25

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGT2-15C	6	1.1	2.2	42000	2.6×10^{-7}	110	0.15	1.5	±0.2	9
XGT2-19C	8	2.1	4.2	33000	7.6×10^{-7}	240	0.15	1.5	±0.2	15
XGT2-25C	12	4	8	25000	2.7×10^{-6}	390	0.15	1.5	±0.2	29
XGT2-27C	14	4	8	23000	3.7×10^{-6}	400	0.15	1.5	±0.2	33
XGT2-30C	15	6.3	12.6	21000	6.3×10^{-6}	590	0.2	1.5	±0.3	45
XGT2-34C	16	8	16	18000	1.2×10^{-5}	890	0.2	1.5	±0.3	66
XGT2-39C	20	13.5	27	16000	2.5×10^{-5}	1100	0.2	1.5	±0.3	105
XGT2-44C	22	18	36	14000	4.1×10^{-5}	1300	0.2	1.5	±0.3	134
XGT2-56C	28	35	70	11000	1.4×10^{-4}	2500	0.2	1.5	±0.3	270

*1 : Correction of rated torque and max. torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of XGT2-C is −10℃ to 120℃.

*2 : These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−10℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 120℃	0.55

● Part number specification

XGT2-39C - 12-20

◀1 ◀2

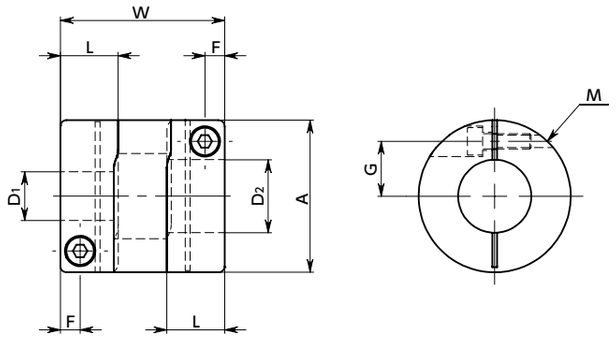
Couplicon®

XGS2 Flexible coupling - High - gain rubber type - Short type

Additional Size Patent Pending

WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque High Rigidity Vibration absorption

XGS2-C



Dimensions

Unit : mm

Part Number ◀1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGS2-15C	15	6.5	18	2.15	5	M1.6	0.25
XGS2-19C	19	7.7	20	2.65	6.5	M2	0.5
XGS2-25C	25	9.5	27	3.25	9	M2.5	1
XGS2-27C	27	9.5	27	3.25	10	M2.5	1
XGS2-30C	30	11	30	4	11	M3	1.5
XGS2-34C	34	12	35	4	12.25	M3	1.5
XGS2-39C	39	15.5	40	4.5	14.5	M4	2.5

Part Number	Standard Bore Diameter D1-D2 ◀2									
XGS2-15C	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGS2-19C	4 - 5 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8	6.35 - 8
XGS2-25C	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGS2-27C	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGS2-30C	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGS2-34C	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGS2-39C	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGS2-15C	6	0.5	42000	2.1×10^{-7}	64	0.15	1.5	±0.2	7
XGS2-19C	8	0.8	33000	5.9×10^{-7}	170	0.15	1.5	±0.2	12
XGS2-25C	12	2.3	25000	2.4×10^{-6}	290	0.15	1.5	±0.2	24
XGS2-27C	14	2.3	23000	3.2×10^{-6}	290	0.15	1.5	±0.2	28
XGS2-30C	15	3.3	21000	5.2×10^{-6}	430	0.2	1.5	±0.3	38
XGS2-34C	16	5.5	18000	1.1×10^{-5}	800	0.2	1.5	±0.3	61
XGS2-39C	20	7	16000	2.1×10^{-5}	930	0.2	1.5	±0.3	90

*1: Correction of rated torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. The allowable operating temperature of **XGS2-C** is −10℃ to 120℃.

*2: These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−10℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 120℃	0.55

- Part number specification

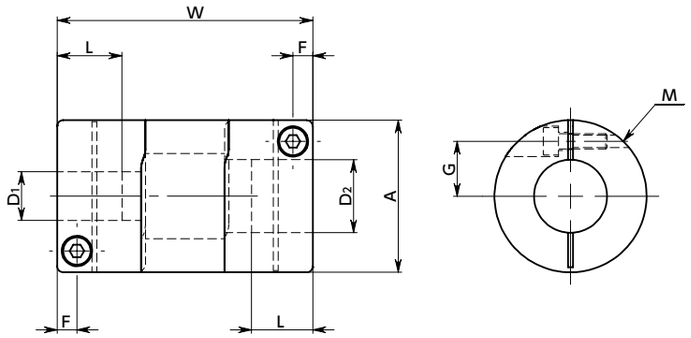
XGS2-34C - 11-12
◀1 ◀2

Couplicon®

XGL2 Flexible coupling - High - gain rubber type - Long type Patent Pending

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　High Rigidity　Vibration absorption

XGL2-C



Dimensions

Unit : mm

Part Number ①-1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGL2-15C	15	6.5	30	2.15	5	M1.6	0.25
XGL2-19C	19	7.7	34	2.65	6.5	M2	0.5
XGL2-25C	25	9.5	42	3.25	9	M2.5	1
XGL2-30C	30	11	42	4	11	M3	1.5
XGL2-34C	34	12	44	4	12.25	M3	1.5
XGL2-39C	39	15.5	55	4.5	14.5	M4	2.5

Part Number	Standard Bore Diameter D1-D2 ②-2										
XGL2-15C	3 - 5	5 - 5	5 - 6								
XGL2-19C	4 - 5	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 8	6.35 - 8	8 - 8	
XGL2-25C	5 - 8	6 - 8	6 - 10	6.35 - 8	8 - 8	8 - 10	8 - 11	8 - 12	10 - 10	10 - 12	
XGL2-30C	8 - 8	8 - 10	8 - 11	8 - 12	8 - 14	8 - 15	10 - 10	10 - 11	10 - 14	11 - 12	12 - 14
XGL2-34C	8 - 8	8 - 10	8 - 12	8 - 14	10 - 11	10 - 14	11 - 12	12 - 14	14 - 15		
XGL2-39C	10 - 10	10 - 12	10 - 14	12 - 14	14 - 15	15 - 19					

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGL2-15C	6	1.1	42000	3.6×10^{-7}	82	0.15	1.5	±0.2	11
XGL2-19C	8	2.1	33000	1.0×10^{-6}	210	0.15	1.5	±0.2	20
XGL2-25C	12	4	25000	3.8×10^{-6}	300	0.15	1.5	±0.2	40
XGL2-30C	15	6.3	21000	7.6×10^{-6}	540	0.2	1.5	±0.3	56
XGL2-34C	16	8	18000	1.4×10^{-5}	640	0.2	1.5	±0.3	78
XGL2-39C	20	13.5	16000	2.9×10^{-5}	950	0.2	1.5	±0.3	122

*1 : Correction of rated torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. The allowable operating temperature of XGL2-C is −10℃ to 120℃.

*2 : These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−10℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 120℃	0.55

● Part number specification

XGL2-15C - 5-5
①-1　②-2

Couplicon®

XGT/XGL/XGS Flexible coupling - High-gain rubber type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

Structure

● Set Screw Type

XGT Standard type ➡ P.49

XGS Short type ➡ P.55

● Single Clamping Type

XGT-CS Standard type ➡ P.51

XGS-CS Short type ➡ P.57

● Double Clamping Type

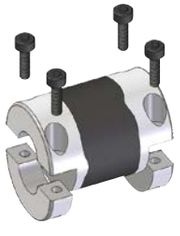
XGT-C Standard type ➡ P.53

XGL-C Long type ➡ P.61

XGS-C Short type ➡ P.59

● **XGT-C** **XGS-C** **XGL-C** Split Type

Easy to mount and remove screws.



● Material/Finish

	XGT / XGL / XGS
Hub	A2017
Vibration-absorbing rubber	HNBR
Hex Socket Head Cap Screw / Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Recommended applicable motor

	XGT / XGL / XGS
Servomotor	◎
Stepping Motor	◎
General-Purpose Motor	△

◎: Excellent ○: Very good △: Available

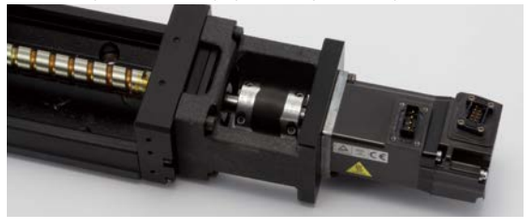
● Property

	XGT / XGL / XGS
Zero Backlash	◎
For servomotor high gain	◎
High Torque	◎
High Torsional Stiffness	○
Allowable Misalignment	○
Vibration absorption characteristics	◎
Allowable Operating Temperature	−20℃ to 80℃

◎: Excellent ○: Very good

● This is a high gain rubber type flexible coupling optimized for actuators.

● Enables you to make high precision positioning in a short time.



● A single-piece construction with the two aliminum hubs molded with vibration absorbing rubber.

● About high-gain rubber coupling and reduction of stabilization time

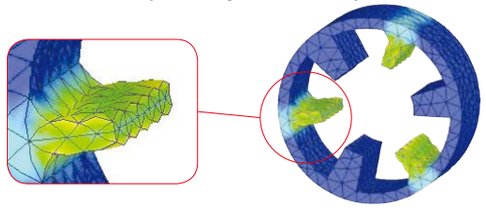
➡ P.31

● Application

Actuator / Surface-mount machine / High precision XY stage / Index table

● Internal Structure

The designed shape of vibration-absorbing rubber achieves high torsional stiffness and high torque according to the newest finite element method. This product also succeeds in elongating its life by evenly dispersing the stress focusing on around the inner diameter of the jaw throughout the entire jaw.



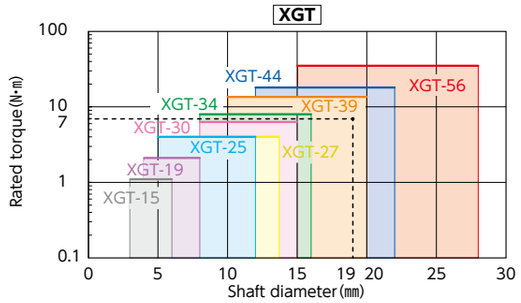
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

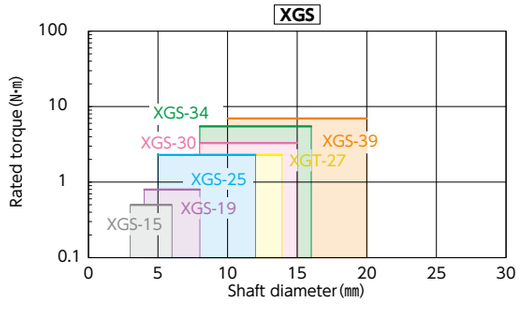
GOOD DESIGN

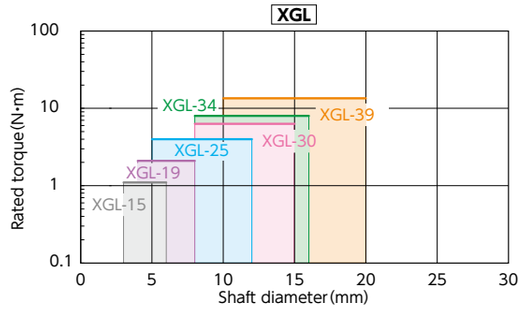
Selection

● Selection based on shaft diameter and rated torque

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







● Selection based on the rated output of the servomotor

Rated Output (W)	Servomotor Specifications*1			selection size		
	Diameter of Motor Shaft (mm)	Rated Torque (N・m)	Instantaneous Max. Torque (N・m)	XGT	XGL	XGS
10	5 - 6	0.032	0.096	15C	15C	15C
20	5 - 6	0.064	0.19	15C	15C	15C
30	5 - 7	0.096	0.29	19C	19C	19C
50	6 - 8	0.16	0.48	19C	19C	19C
100	8	0.32	0.95	19C	19C	25C
200	9 - 14	0.64	1.9	27C	30C	27C
400	14	1.3	3.8	27C	30C	34C
750	16 - 19	2.4	7.2	39C	39C	–

*1: Motor specifications are based on general values. For details, see the motor manufacturer's catalogs. This is the size for cases where devices such as reduction gears are not used.

● Selection Example

In case of selected parameters of shaft diameter of ϕ 19 and load torque of 7 N•m, the selected size is **XGT-39C**.

● Related Products

XGT2 enables further improvement of productivity by adding damping performance to **XGT**.

➡ P.29

● Part number specification

XGT - 19C - 6-8

Product code　Size　bore diameter

Please refer to dimensional table for part number specification.

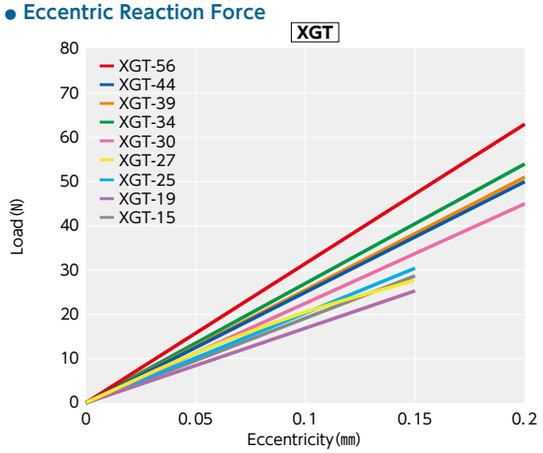
Couplicon®

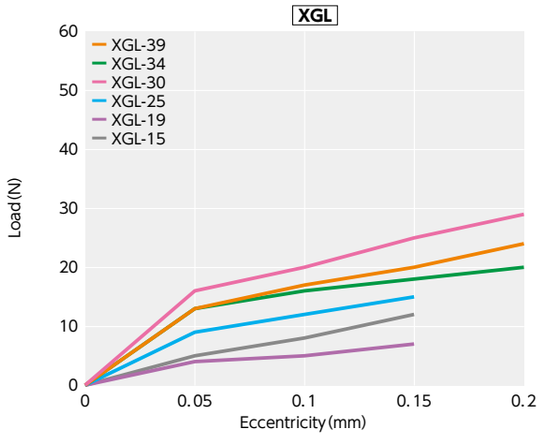
XGT/XGL/XGS Flexible coupling - High - gain rubber type

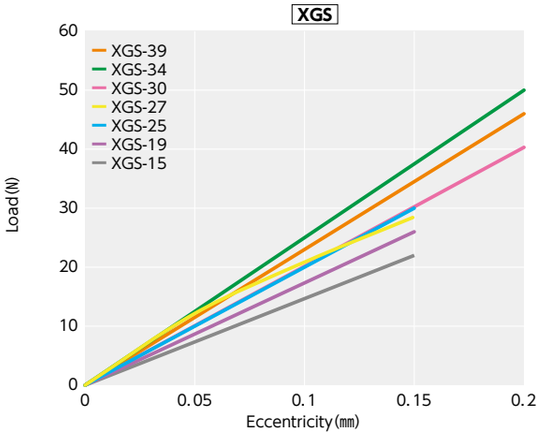
WEB Selection Tool WEB CAD Download Zero Backlash High gain supported High torque Vibration absorption

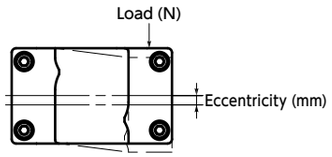
Technical Information

● Eccentric Reaction Force





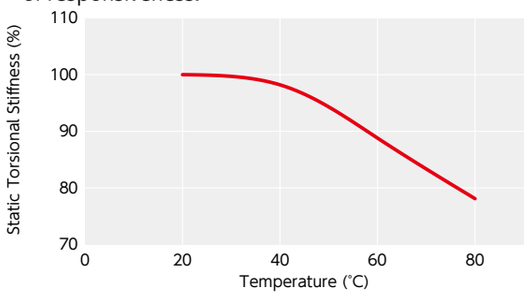




The charts show force generated when making **XGT** **XGL** **XGS** in eccentric condition. As the eccentric reaction force becomes smaller, the force acting on the shaft bearing also becomes smaller.

● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.
Before using the unit, be aware of the deterioration of responsiveness.

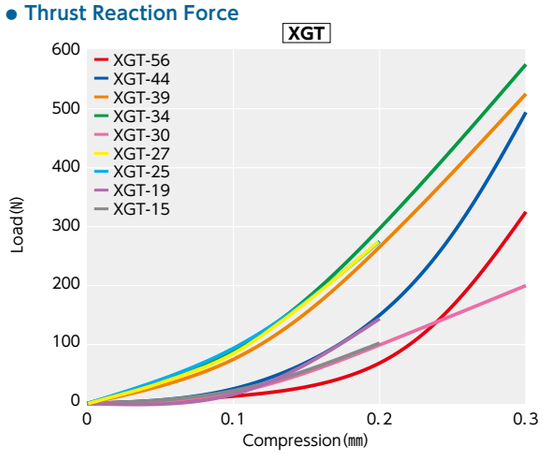


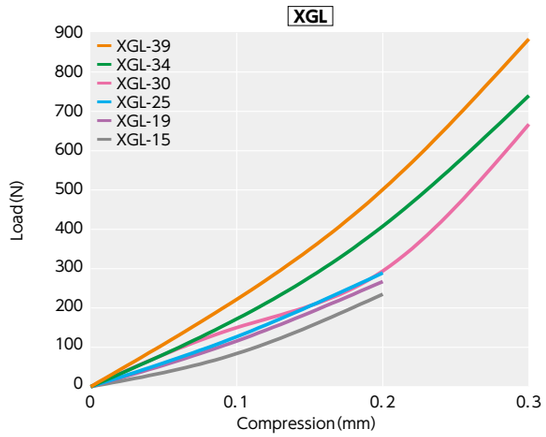
● Physical property and chemical resistance of high-gain type rubber (HNBR)

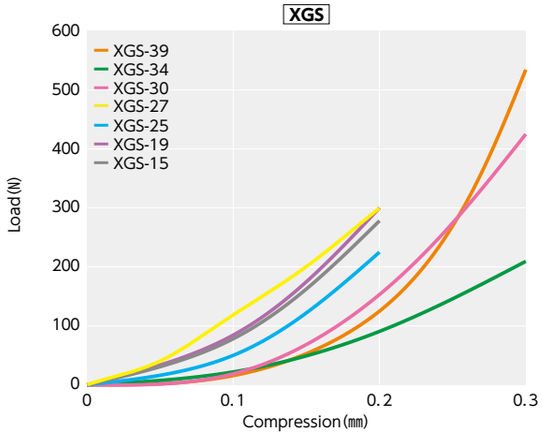
	Effect
Aging Resistance	◎
Weather Resistance	◎
Ozone Resistance	◎
Gasoline / Gas Oil	○-◎
Benzene / Toluene	△-○
Alcohol	◎
Ether	×-△
Ketone (MEK)	×
Ethyl Acetate	×-△
Water	◎
Organic Acid	◎
High concentration inorganic acid	○
Low concentration inorganic acid	◎
Strong Alkali	◎
Weak Alkali	◎

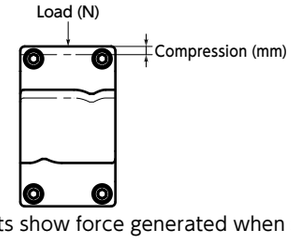
◎: Very Good ○: Available
△: Fair pending on condition ×: Not available

● Thrust Reaction Force









The charts show force generated when compressing **XGT** **XGL** **XGS** in the shaft direction. As the thrust reaction force becomes smaller, the force acting on the motor also becomes smaller.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **XGT-C** **XGT-CS** **XGS-C** **XGS-CS** **XGL-C**.

Unit : N・m

Part Number	Bore diameter (mm)			
	3	5	10	12
XGT-15C, XGL-15C	1			
XGT-15CS	1			
XGT-27CS		3.8		
XGT-39CS			13.3	
XGT-44C				16.3

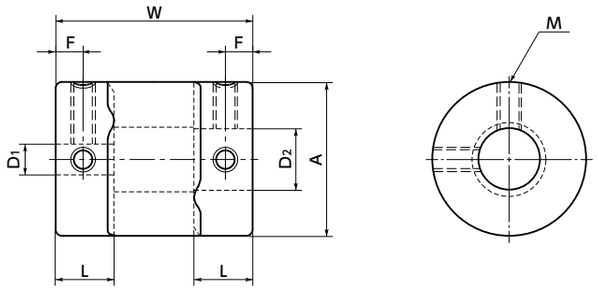
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **XGT-C** **XGT-CS** **XGS-C** **XGS-CS** **XGL-C** dimensional table.

Couplicon®

XGT Flexible coupling - High-gain rubber type - Set screw type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGT



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N・m)
XGT-15	15	6.5	23	3	M3	0.7
XGT-19	19	7.7	26	4	M3	0.7
XGT-25	25	9.5	32	5	M4	1.7
XGT-27	27	9.5	32	5	M4	1.7
XGT-30	30	11	36	5.5	M4	1.7
XGT-34	34	12	38	6	M5	4
XGT-39	39	15.5	48	8	M5	4
XGT-44	44	15	48	7.5	M6	7
XGT-56	56	19.5	60	10	M6	7

Part Number	Standard bore diameter (dimensional allowance H8) D_1-D_2 2									
XGT-15	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGT-19	4 - 5 6.35 - 8	4 - 8 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
XGT-25	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGT-27	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGT-30	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGT-34	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGT-39	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20
XGT-44	12 - 12 15 - 19	12 - 14 15 - 20	12 - 16 16 - 16	12 - 19 16 - 19	14 - 14 17 - 17	14 - 15 19 - 20	14 - 16 20 - 20	14 - 19	15 - 15	15 - 16
XGT-56	15 - 15	15 - 19	15 - 20	15 - 25	19 - 20	19 - 24	20 - 20	20 - 25	24 - 25	25 - 25

- All products are provided with hex socket set screw.
- In a case where the bore diameter is ϕ 4 or less, the setscrew is used in only one place.
- 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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGT-15	6	1.1	42000	2.6×10^{-7}	43	0.15	1.5	±0.2	9
XGT-19	8	2.1	33000	7.5×10^{-7}	88	0.15	1.5	±0.2	15
XGT-25	12	4	25000	2.7×10^{-6}	140	0.15	1.5	±0.2	29
XGT-27	14	4	23000	3.6×10^{-6}	140	0.15	1.5	±0.2	32
XGT-30	15	6.3	21000	6.3×10^{-6}	220	0.2	1.5	±0.3	46
XGT-34	16	8	18000	1.1×10^{-5}	390	0.2	1.5	±0.3	66
XGT-39	20	13.5	16000	2.4×10^{-5}	520	0.2	1.5	±0.3	103
XGT-44	22	18	14000	4.0×10^{-5}	640	0.2	1.5	±0.3	133
XGT-56	28	35	11000	1.3×10^{-4}	1500	0.2	1.5	±0.3	267

*1 : Correction of rated torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. XGT 's allowable operating temperature is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

- Part number specification

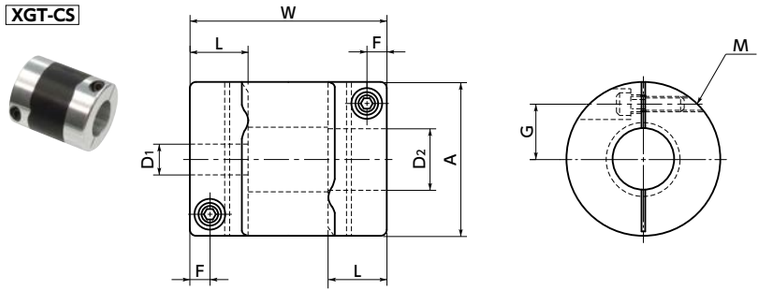
XGT-39 - 12-20
1　2

Couplicon®

XGT-CS Flexible coupling - High-gain rubber type - Single clamp type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGT-CS



Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGT-15CS	15	6.5	23	2.15	5	M1.6	0.25
XGT-19CS	19	7.7	26	2.65	6.5	M2	0.5
XGT-25CS	25	9.5	32	3.25	9	M2.5	1
XGT-27CS	27	9.5	32	3.25	10	M2.5	1
XGT-30CS	30	11	36	4	11	M3	1.5
XGT-34CS	34	12	38	4	12.25	M3	1.5
XGT-39CS	39	15.5	48	4.5	14.5	M4	2.5
XGT-44CS	44	15	48	4.75	16	M4	2.5
XGT-56CS	56	19.5	60	5.5	20	M5	7

Part Number	Standard bore diameter D1-D2 2									
XGT-15CS	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGT-19CS	4 - 5 6.35 - 8	4 - 8 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
XGT-25CS	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGT-27CS	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGT-30CS	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGT-34CS	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGT-39CS	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20
XGT-44CS	12 - 12 15 - 19	12 - 14 15 - 20	12 - 16 16 - 16	12 - 19 16 - 19	14 - 14 17 - 17	14 - 15 19 - 20	14 - 16 20 - 20	14 - 19	15 - 15	15 - 16
XGT-56CS	15 - 15	15 - 19	15 - 20	15 - 25	19 - 20	19 - 24	20 - 20	20 - 25	24 - 25	25 - 25

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGT-15CS	6	1.1	42000	2.3×10^{-7}	43	0.15	1.5	±0.2	8
XGT-19CS	8	2.1	33000	6.9×10^{-7}	88	0.15	1.5	±0.2	14
XGT-25CS	12	4	25000	2.5×10^{-6}	140	0.15	1.5	±0.2	27
XGT-27CS	14	4	23000	3.4×10^{-6}	140	0.15	1.5	±0.2	30
XGT-30CS	15	6.3	21000	6.0×10^{-6}	220	0.2	1.5	±0.3	44
XGT-34CS	16	8	18000	1.0×10^{-5}	390	0.2	1.5	±0.3	61
XGT-39CS	20	13.5	16000	2.3×10^{-5}	520	0.2	1.5	±0.3	98
XGT-44CS	22	18	14000	3.7×10^{-5}	640	0.2	1.5	±0.3	124
XGT-56CS	28	35	11000	1.2×10^{-4}	1500	0.2	1.5	±0.3	252

*1 : Correction of rated torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. XGT-CS's allowable operating temperature is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

- Part number specification

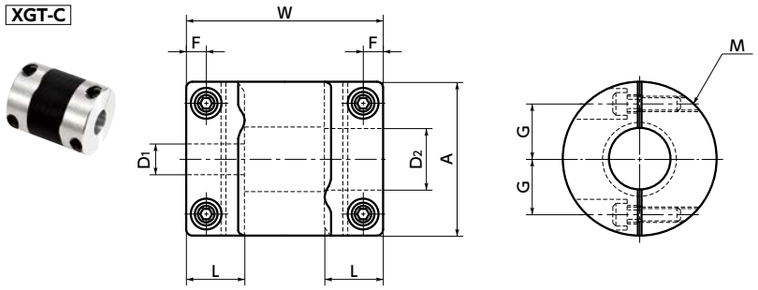
XGT-34CS - 11-12
1　2

Couplicon®

XGT-C Flexible coupling - High - gain rubber type - Standard type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGT-C



Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGT-15C	15	6.5	23	2.15	5	M1.6	0.25
XGT-19C	19	7.7	26	2.65	6.5	M2	0.5
XGT-25C	25	9.5	32	3.25	9	M2.5	1
XGT-30C	30	11	36	4	11	M3	1.5
XGT-34C	34	12	38	4	12.25	M3	1.5
XGT-39C	39	15.5	48	4.5	14.5	M4	2.5
XGT-44C	44	15	48	4.75	16	M4	2.5
XGT-56C	56	19.5	60	5.5	20	M5	7

Part Number	Standard Bore Diameter D1-D2 2									
XGT-15C	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGT-19C	4 - 5 6.35 - 8	4 - 8 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
XGT-25C	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGT-30C	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGT-34C	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGT-39C	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20
XGT-44C	12 - 12 15 - 19	12 - 14 15 - 20	12 - 16 16 - 16	12 - 19 16 - 19	14 - 14 17 - 17	14 - 15 19 - 20	14 - 16 20 - 20	14 - 19	15 - 15	15 - 16
XGT-56C	15 - 15	15 - 19	15 - 20	15 - 25	19 - 20	19 - 24	20 - 20	20 - 25	24 - 25	25 - 25

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGT-15C	6	1.1	42000	2.7×10^{-7}	43	0.15	1.5	±0.2	8
XGT-19C	8	2.1	33000	8.4×10^{-7}	88	0.15	1.5	±0.2	14
XGT-25C	12	4	25000	3.0×10^{-6}	140	0.15	1.5	±0.2	28
XGT-30C	15	6.3	21000	6.9×10^{-6}	220	0.2	1.5	±0.3	45
XGT-34C	16	8	18000	1.3×10^{-5}	390	0.2	1.5	±0.3	65
XGT-39C	20	13.5	16000	2.7×10^{-5}	520	0.2	1.5	±0.3	98
XGT-44C	22	18	14000	4.2×10^{-5}	640	0.2	1.5	±0.3	136
XGT-56C	28	35	11000	1.4×10^{-4}	1500	0.2	1.5	±0.3	276

*1 : Correction of rated torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. The allowable operating temperature of XGT-C is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

XGT-39C - 12-20

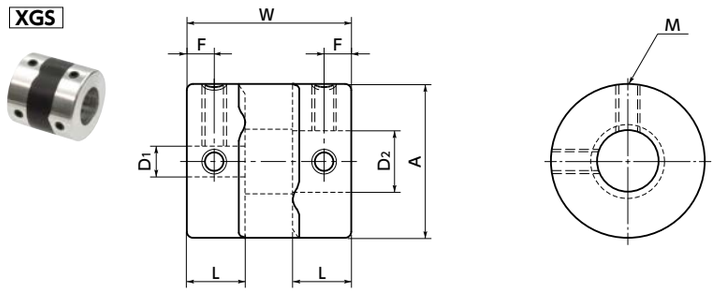
1　2

Couplicon®

XGS Flexible coupling - High-gain rubber type (short) - Set screw type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGS



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N・m)
XGS-15	15	6.5	18	3	M3	0.7
XGS-19	19	7.7	20	4	M3	0.7
XGS-25	25	9.5	27	5	M4	1.7
XGS-27	27	9.5	27	5	M4	1.7
XGS-30	30	11	30	5.5	M4	1.7
XGS-34	34	12	35	6	M5	4
XGS-39	39	15.5	40	8	M5	4

Part Number	Standard bore diameter (dimensional allowance H8) D1-D2 2									
XGS-15	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGS-19	4 - 5 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8	6.35 - 8
XGS-25	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGS-27	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGS-30	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGS-34	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGS-39	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20

- All products are provided with hex socket set screw.
- In a case where the bore diameter is ϕ 4 or less, the setscrew is used in only one place.
- 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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGS-15	6	0.5	42000	2.2×10^{-7}	25	0.15	1.5	±0.2	7
XGS-19	8	0.8	33000	6.3×10^{-7}	63	0.15	1.5	±0.2	12
XGS-25	12	2.3	25000	2.4×10^{-6}	100	0.15	1.5	±0.2	26
XGS-27	14	2.3	23000	3.2×10^{-6}	120	0.15	1.5	±0.2	29
XGS-30	15	3.3	21000	5.6×10^{-6}	160	0.2	1.5	±0.3	41
XGS-34	16	5.5	18000	1.1×10^{-5}	350	0.2	1.5	±0.3	62
XGS-39	20	7	16000	2.2×10^{-5}	440	0.2	1.5	±0.3	91

*1 : Correction of rated torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. XGS's allowable operating temperature is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

- Part number specification

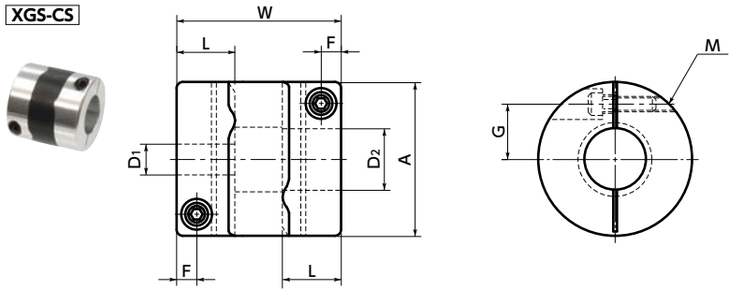
XGS-34 - 11-12
1　2

Couplicon®

XGS-CS Flexible coupling - High-gain rubber type (short) - Single clamp type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGS-CS



Dimensions

Unit : mm

Part Number ❶	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGS-15CS	15	6.5	18	2.15	5	M1.6	0.25
XGS-19CS	19	7.7	20	2.65	6.5	M2	0.5
XGS-25CS	25	9.5	27	3.25	9	M2.5	1
XGS-27CS	27	9.5	27	3.25	10	M2.5	1
XGS-30CS	30	11	30	4	11	M3	1.5
XGS-34CS	34	12	35	4	12.25	M3	1.5
XGS-39CS	39	15.5	40	4.5	14.5	M4	2.5

Part Number	Standard bore diameter D1-D2 ❷									
XGS-15CS	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGS-19CS	4 - 5 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8	6.35 - 8
XGS-25CS	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGS-27CS	5 - 6 8 - 10	5 - 8 8 - 11	5 - 14 8 - 12	6 - 6 8 - 14	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 10 - 14	6 - 12 12 - 12	6 - 14 12 - 14	8 - 8 14 - 14
XGS-30CS	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGS-34CS	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGS-39CS	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGS-15CS	6	0.5	42000	2.0×10^{-7}	25	0.15	1.5	±0.2	7
XGS-19CS	8	0.8	33000	5.7×10^{-7}	63	0.15	1.5	±0.2	11
XGS-25CS	12	2.3	25000	2.2×10^{-6}	100	0.15	1.5	±0.2	24
XGS-27CS	14	2.3	23000	3.0×10^{-6}	120	0.15	1.5	±0.2	27
XGS-30CS	15	3.3	21000	5.3×10^{-6}	160	0.2	1.5	±0.3	38
XGS-34CS	16	5.5	18000	9.9×10^{-6}	350	0.2	1.5	±0.3	58
XGS-39CS	20	7	16000	2.0×10^{-5}	440	0.2	1.5	±0.3	86

*1 : Correction of rated torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. XGS-CS 's allowable operating temperature is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

- Part number specification

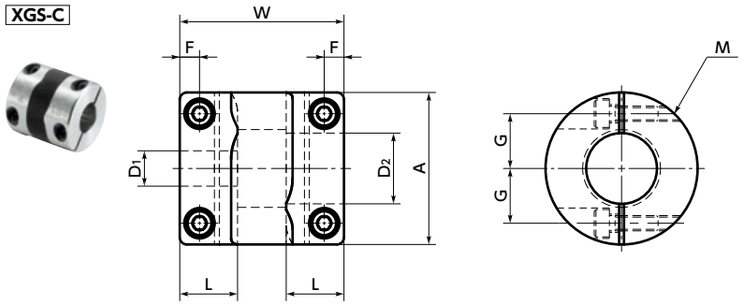
XGS-34CS - 11-12
❶ ❷

Couplicon®

XGS-C Flexible coupling - High - gain rubber type - Short type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGS-C



Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGS-15C	15	6.5	18	2.15	5	M1.6	0.25
XGS-19C	19	7.7	20	2.65	6.5	M2	0.5
XGS-25C	25	9.5	27	3.25	9	M2.5	1
XGS-30C	30	11	30	4	11	M3	1.5
XGS-34C	34	12	35	4	12.25	M3	1.5
XGS-39C	39	15.5	40	4.5	14.5	M4	2.5

Part Number	Standard Bore Diameter D1-D2 2									
XGS-15C	3 - 5	3 - 6	4 - 4	4 - 5	4 - 6	4.5 - 5	5 - 5	5 - 6	6 - 6	
XGS-19C	4 - 5 8 - 8	5 - 5	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8	6.35 - 8
XGS-25C	5 - 6 8 - 10	5 - 8 8 - 11	6 - 6 8 - 12	6 - 8 10 - 10	6 - 10 10 - 12	6 - 11 12 - 12	6 - 12	6.35 - 8	6.35 - 10	8 - 8
XGS-30C	8 - 8 10 - 15	8 - 10 11 - 12	8 - 11 12 - 12	8 - 12 12 - 14	8 - 14 12 - 15	8 - 15 14 - 14	10 - 10 14 - 15	10 - 11 15 - 15	10 - 12	10 - 14
XGS-34C	8 - 8 10 - 15	8 - 10 11 - 11	8 - 11 11 - 12	8 - 12 12 - 12	8 - 14 12 - 14	8 - 15 12 - 15	10 - 10 14 - 14	10 - 11 14 - 15	10 - 12 15 - 15	10 - 14 16 - 16
XGS-39C	10 - 10 12 - 20	10 - 12 14 - 14	10 - 14 14 - 15	10 - 15 14 - 16	10 - 16 15 - 15	12 - 12 15 - 16	12 - 14 15 - 19	12 - 15 16 - 16	12 - 16 17 - 17	12 - 19 20 - 20

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGS-15C	6	0.5	42000	2.0×10^{-7}	25	0.15	1.5	±0.2	7
XGS-19C	8	0.8	33000	6.2×10^{-7}	63	0.15	1.5	±0.2	12
XGS-25C	12	2.3	25000	2.3×10^{-6}	100	0.15	1.5	±0.2	25
XGS-30C	15	3.3	21000	5.5×10^{-6}	160	0.2	1.5	±0.3	39
XGS-34C	16	5.5	18000	1.0×10^{-5}	350	0.2	1.5	±0.3	62
XGS-39C	20	7	16000	2.1×10^{-5}	440	0.2	1.5	±0.3	85

*1 : Correction of rated torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. The allowable operating temperature of XGS-C is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

- Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

- Part number specification

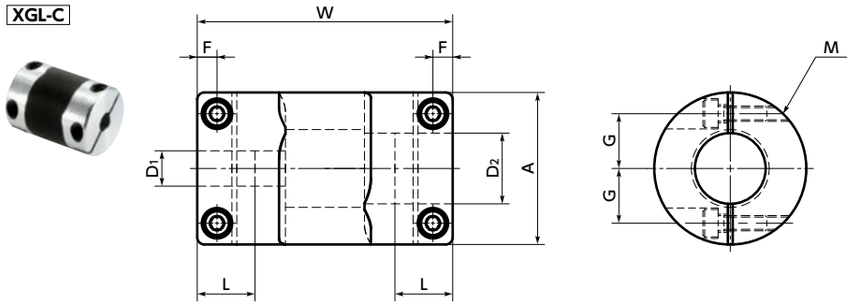
XGS-34C - 11-12
1　2

Couplicon®

XGL-C Flexible coupling - High - gain rubber type - Long type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High gain supported　High torque　Vibration absorption

XGL-C



Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XGL-15C	15	6.5	30	2.15	5	M1.6	0.25
XGL-19C	19	7.7	34	2.65	6.5	M2	0.5
XGL-25C	25	9.5	42	3.25	9	M2.5	1
XGL-30C	30	11	42	4	11	M3	1.5
XGL-34C	34	12	44	4	12.25	M3	1.5
XGL-39C	39	15.5	55	4.5	14.5	M4	2.5

Part Number	Standard Bore Diameter D1-D2 2							
XGL-15C	3 - 5	5 - 5	5 - 6					
XGL-19C	4 - 5 6.35 - 8	5 - 5 8 - 8	5 - 6	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 8
XGL-25C	5 - 8 10 - 10	6 - 8 10 - 12	6 - 10	6.35 - 8	8 - 8	8 - 10	8 - 11	8 - 12
XGL-30C	8 - 8 10 - 14	8 - 10 11 - 12	8 - 11 12 - 14	8 - 12	8 - 14	8 - 15	10 - 10	10 - 11
XGL-34C	8 - 8 14 - 15	8 - 10	8 - 12	8 - 14	10 - 11	10 - 14	11 - 12	12 - 14
XGL-39C	10 - 10	10 - 12	10 - 14	12 - 14	14 - 15	15 - 19		

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XGL-15C	6	1.1	42000	3.3×10^{-7}	32	0.15	1.5	±0.2	11
XGL-19C	8	2.1	33000	9.7×10^{-7}	77	0.15	1.5	±0.2	19
XGL-25C	12	4	25000	3.5×10^{-6}	130	0.15	1.5	±0.2	38
XGL-30C	15	6.3	21000	7.3×10^{-6}	200	0.2	1.5	±0.3	53
XGL-34C	16	8	18000	1.3×10^{-5}	280	0.2	1.5	±0.3	73
XGL-39C	20	13.5	16000	2.8×10^{-5}	450	0.2	1.5	±0.3	117

*1 : Correction of rated torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque with temperature correction factor shown in the following table. The allowable operating temperature of XGL-C is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

XGL-15C - 5-5
1　2

Stronger, Easier to Use

Disc-Type Coupling

XHW/XHS/XHW-L

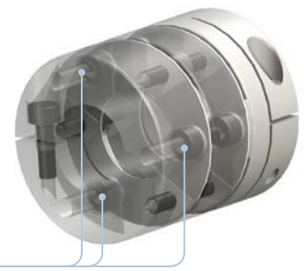
1. Transmission torque has improved by 1.5 times.

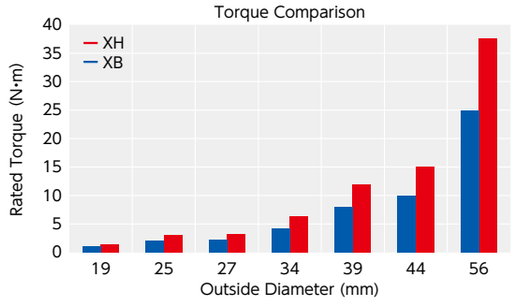
- The number of disc fixing bolts on one side, which was two for conventional XB series products, has been changed to three for XH series products.
  The increased disc fixing power has enhanced transmission torque by 1.5 times.

XB Series

Fixing Bolts for Disc

XH Series





- XH series is the successor to XB series.
- Total length / outside diameter, and max. bore diameter are the same as XBW.
- Affordable price compared with identical sizes of XB series products.

XBW Part Number	Total Length (mm)	Rated Torque (N•m)	XHW Part Number	Total Length (mm)	Rated Torque (N•m)	XHW-L Part Number	Total Length (mm)	Rated Torque (N•m)
XBW-19C	25.5	1	**XHW-19C**	25.7	1.5	**XHW-19C-L**	34	1.5
XBW-25C	32.2	2	**XHW-25C**	32.2	3	**XHW-25C-L**	42	3
XBW-27C	32.2	2.2	**XHW-27C**	32.2	3.3	**XHW-27C-L**	42	3.3
XBW-34C	37.4	4.2	**XHW-34C**	36.8	6.3	**XHW-34C-L**	44	6.3
XBW-39C	46.6	8	**XHW-39C**	46.6	12	**XHW-39C-L**	55	12
XBW-44C	46.6	10	**XHW-44C**	46.6	15	–	–	–
XBW-56C	60.4	25	**XHW-56C**	61.2	37.5	–	–	–

2. Compact and Lower Cost

- Downsizing and cost reduction of couplings can be achieved by selecting XH series when servomotors' instantaneous maximum torque improve by 350%.

Servomotor Specifications			instantaneous maximum torque (N•m)	XBW Part Number	Total Length (mm)	Rated Torque (N•m)	XHW Part Number	Total Length (mm)	Rated Torque (N•m)	XHW-L Part Number	Total Length (mm)	Rated Torque (N•m)
Rated Output (W)	Shaft Diameter (ϕ)	Rated Torque (N•m)										
100	8	0.32	1.1	**XBW-25C**	32.2	2	**XHW-19C**	25.7	1.5	**XHW-19C-L**	34	1.5
200	14	0.64	2.2	**XBW-34C**	37.4	4.2	**XHW-27C**	32.2	3.3	**XHW-27C-L**	42	3.3
400	14	1.3	4.5	**XBW-39C**	46.6	8	**XHW-34C**	36.8	6.3	**XHW-34C-L**	44	6.3
750	16 - 19	2.4	8.4	**XBW-44C**	46.6	10	**XHW-39C**	46.6	12	**XHW-39C-L**	55	12

3. Expansion of Standard Bore Diameter

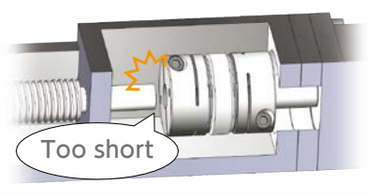
- Standard bore diameters, which are not in XB series, have been added.
  (● indicates standardized bore diameters newly added in XH series.)
  ① Minimum bore diameter has been added
  ② Inch sizes (ϕ6.35・ϕ9.525) have been added
  ③ Inside bearing diameter of ϕ17 has been added

Part Number	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28
XH-19C	●	●	●	●	●	●															
XH-25C		●	●	●	●	●	●	●	●	●											
XH-27C		●	●	●	●	●	●	●	●	●	●										
XH-34C			●	●	●	●	●	●	●	●	●	●	●								
XH-39C				●	●	●	●	●	●	●	●	●	●	●	●	●	●				
XH-44C						●	●	●	●	●	●	●	●	●	●	●	●	●			
XH-56C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

4. Standardization of Long Type XHW-L

- If the coupling cannot reach the shaft when connecting an electric actuator and a motor, usually a special product with its total length elongated is used. However, in XH series, long type XHW-L has been standardized.
- With its improved torque transmission capability, XH series will enable downsizing from conventional products. If XHW does not provide sufficient total length, use long type XHW-L instead.

XHW



Long Type XHW-L

Couplicon®

XHW / XHW-L Flexible Coupling - Disk - type

Additional Size

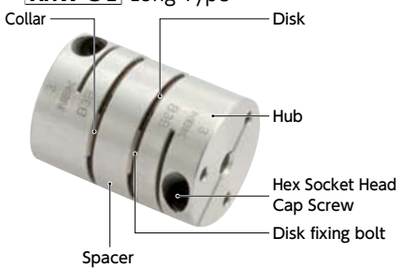
WEB Selection Tool　WEB CAD Download　Zero Backlash　High torque　High Rigidity

Structure

● Clamping type ➡ P.69

XHW-C Standard Type

XHW-C-L Long Type



● Material/Finish　RoHS2 Compliant

	XHW-C / XHW-C-L
Hub	A2017 Alumite Treatment
Spacer	A2017 Alumite Treatment
Disk fixing bolt	SCM435 Ferrosoferric Oxide Film (Black)
Disk	SUS304
Collar	SUS304
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Recommended applicable motor

	XHW / XHW-L
Servomotor	◎
Stepping Motor	◎
General-Purpose Motor	△

◎: Excellent ○: Very good △: Available

● Property

	XHW / XHW-L
Zero Backlash	◎
High gain supported	○
High Torque	◎
High Torsional Stiffness	◎
Allowable Misalignment	○

◎: Excellent ○: Very good

- This is a disk-type flexible coupling.
- High-torque specification with rated torque 1.5 times higher than conventional products.
- This is the most appropriate for a servomotor with the instantaneous max. torque of 350%.
- The stainless steel Disk allows the eccentricity, angular misalignment, and end-play.

● Application

Actuator / Surface-mount machine / High precision XY stage / Index table

● Part number specification

XHW - 34C - 10-11

Product code　Size　bore diameter

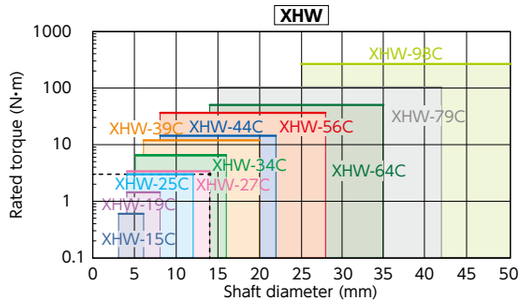
Please refer to dimensional table for part number specification.

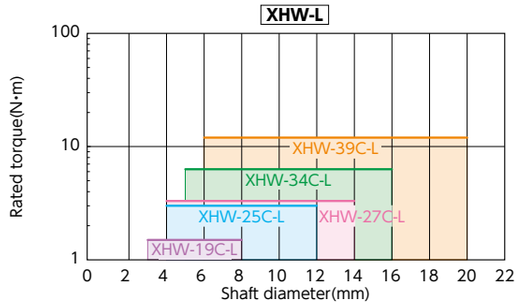
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Please feel free to contact us

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 14 and load torque of 3 N•m, the selected size is **XHW-27C**.

● Selection based on the rated output of the servomotor

XHW supports the servomotor with instantaneous max. torque increased to 350% of the rated torque and the size can be more reduced than the size of conventional product **XBW**.

Rated Output (W)	Servomotor type				Servomotor Specifications*1			selection size	
	Mitsubishi Electric Corporation	YASKAWA Electric Corporation	SANYO DENKI Co., Ltd.	KEYENCE CORPORATION	Diameter of Motor Shaft (mm)	Rated Torque (N・m)	Instantaneous Max. Torque (N・m)	XHW-C	XBW-C
100	HG-KR	SGMJV	R2	SV	8	0.32	1.1	XHW-19C	XBW-25C
200					14	0.64	2.2	XHW-27C	XBW-34C
400					14	1.3	4.5	XHW-34C	XBW-39C
750					16 - 19	2.4	8.4	XHW-39C	XBW-44C

*1: Motor specifications are based on general values. For details, see the motor manufacturer's catalogs. This is the size for cases where devices such as reduction gears are not used.

Couplicon®

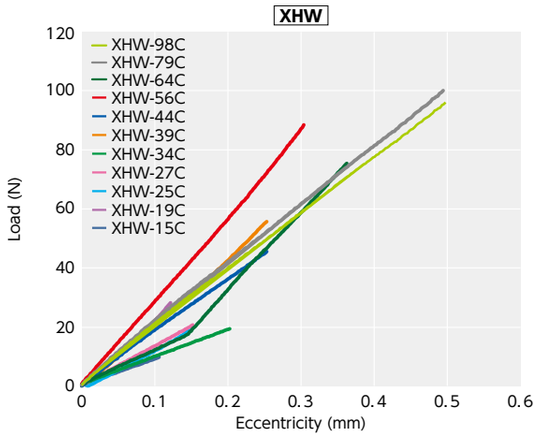
XHW / XHW-L Flexible Coupling - Disk - type

Additional Size

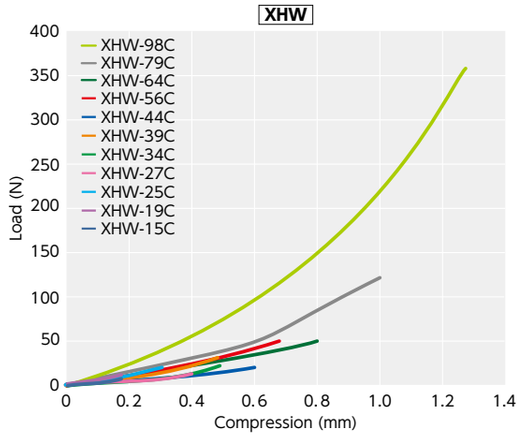
WEB Selection Tool　WEB CAD Download　Zero Backlash　High torque　High Rigidity

Technical Information

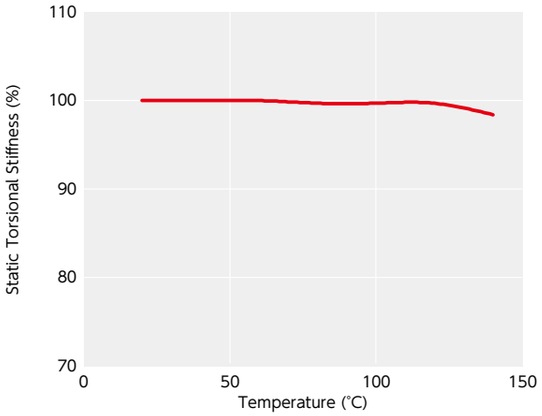
● Eccentric Reaction Force



● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **XHW** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **XHW-C** **XHW-C-L**.

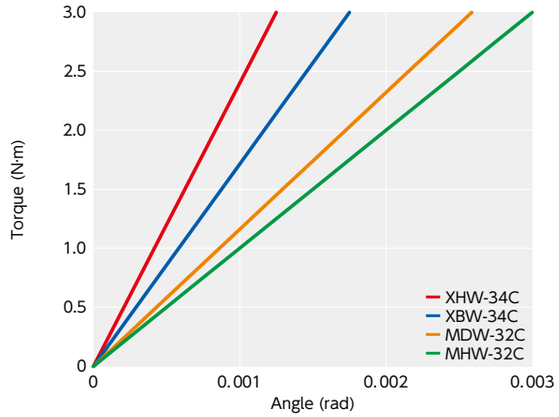
Unit : N・m

Part Number	Bore diameter (mm)								
	3	4	5	6	6.35	8	9.525	10	11
XHW-19C	0.7								
XHW-25C		2.5							
XHW-27C		2	2.9						
XHW-34C			3.5	4.9	5.5				
XHW-39C				6	8				
XHW-44C						8	13		
XHW-56C						22	34	37	
XHW-64C								23	42
XHW-19C-L	0.7								
XHW-25C-L		2.5							
XHW-27C-L		2	2.9						
XHW-34C-L			3.5	4.9	5.5				
XHW-39C-L				6	8				

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **XHW-C** **XHW-C-L** dimensional table.

● Comparison of static torsional stiffness (double disk-type)

XHW have high torsional stiffness and responsiveness.
Optimal for high-speed and precision positioning for servomotors, etc.



Couplicon®

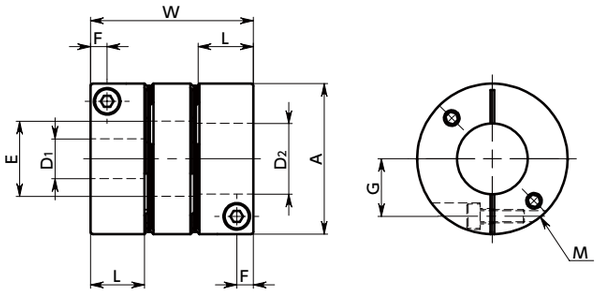
XHW-C / XHW-C-L Flexible Coupling - Disk - type

Additional Size

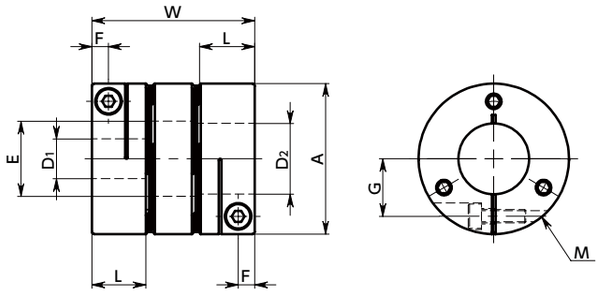
WEB Selection Tool　WEB CAD Download　Zero Backlash　High torque　High Rigidity

XHW-C

XHW-C-L



Outside diameter ϕ15



Outside diameter ϕ19 - ϕ98

Dimensions

Unit : mm

Part Number ①	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
XHW-15C	15	7.5	21.6	6.3	2.1	5	M2	0.45
XHW-19C	19	9.2	25.7	8.5	2.6	7	M2	0.5
XHW-25C	25	11	32.2	12.5	3.3	9.25	M2.5	1
XHW-27C	27	11	32.2	14.5	3.3	10.25	M2.5	1
XHW-34C	34	12.5	36.8	16.5	3.75	13	M3	1.5
XHW-39C	39	15.5	46.6	20.5	4.5	14.5	M4	3.5
XHW-44C	44	15.5	46.6	22.5	4.5	17	M4	3.5
XHW-56C	56	20.5	61.2	28.5	6	21	M5	8
XHW-64C	64	24	74.4	36	7	24	M6	13
XHW-79C	79	30	97.2	43	8.75	29	M8	28
XHW-98C	98	32	104	51	8.7	38	M8	28
XHW-19C-L	19	9.2	34	8.5	2.6	7	M2	0.5
XHW-25C-L	25	11	42	12.5	3.3	9.25	M2.5	1
XHW-27C-L	27	11	42	14.5	3.3	10.25	M2.5	1
XHW-34C-L	34	12.5	44	16.5	3.75	13	M3	1.5
XHW-39C-L	39	15.5	55	20.5	4.5	14.5	M4	3.5

Part Number	Standard Bore Diameter D1・D2 ②																											
	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	50
XHW-15C	●	●	●	●																									
XHW-19C	●	●	●	●	●	●																							
XHW-25C		●	●	●	●	●	●	●	●	●																			
XHW-27C		●	●	●	●	●	●	●	●	●	●																		
XHW-34C			●	●	●	●	●	●	●	●	●	●	●																
XHW-39C				●	●	●	●	●	●	●	●	●	●	●	●	●	●												
XHW-44C						●	●	●	●	●	●	●	●	●	●	●	●	●											
XHW-56C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
XHW-64C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
XHW-79C											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
XHW-98C																				●	●	●	●	●	●	●	●	●	●
XHW-19C-L	●	●	●	●	●	●																							
XHW-25C-L		●	●	●	●	●	●	●	●	●																			
XHW-27C-L		●	●	●	●	●	●	●	●	●	●																		
XHW-34C-L			●	●	●	●	●	●	●	●	●	●	●																
XHW-39C-L				●	●	●	●	●	●	●	●	●	●	●	●	●	●												

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XHW-15C	6	0.6	42000	3.0×10^{-7}	100	0.1	1.4	±0.2	9.4
XHW-19C	8	1.5	33000	8.8×10^{-7}	300	0.12	2	±0.2	17
XHW-25C	12	3	25000	3.4×10^{-6}	1000	0.15	2	±0.3	35
XHW-27C	14	3.3	23000	4.4×10^{-6}	1400	0.15	2	±0.4	39
XHW-34C	16	6.3	18000	1.3×10^{-5}	2500	0.2	2	±0.5	75
XHW-39C	20	12	16000	2.9×10^{-5}	4700	0.25	2	±0.5	123
XHW-44C	22	15	14000	4.7×10^{-5}	6400	0.25	2	±0.6	156
XHW-56C	28	37.5	11000	1.7×10^{-4}	12000	0.3	2	±0.7	340
XHW-64C	35	50	9800	3.3×10^{-4}	15000	0.35	2	±0.9	490
XHW-79C	42	100	7900	1.0×10^{-3}	22000	0.5	2	±1.1	1100
XHW-98C	50	280	6400	2.6×10^{-3}	47000	0.5	2	±1.3	1740
XHW-19C-L	8	1.5	33000	1.2×10^{-6}	300	0.25	2	±0.2	22
XHW-25C-L	12	3	25000	4.3×10^{-6}	1000	0.3	2	±0.3	45
XHW-27C-L	14	3.3	23000	5.8×10^{-6}	1400	0.3	2	±0.4	50
XHW-34C-L	16	6.3	18000	1.6×10^{-5}	2500	0.3	2	±0.5	89
XHW-39C-L	20	12	16000	3.4×10^{-5}	4700	0.4	2	±0.5	144

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

- Part number specification

XHW-25C-L - 8-10
① ②

Couplicon®

XHS Flexible Coupling - Single Disk Type

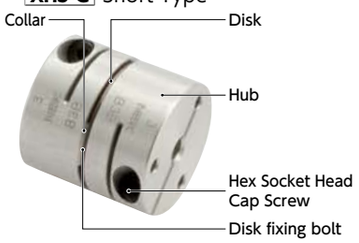
Additional Size

WEB Selection Tool　WEB CAD Download　Zero Backlash　High torque　High Rigidity

Structure

● Clamping type ➡ P.75

XHS-C Short Type



● Recommended applicable motor

	XHS
Servomotor	◎
Stepping Motor	◎
General-Purpose Motor	△

◎: Excellent ○: Very good △: Available

● Property

	XHS
Zero Backlash	◎
High gain supported	○
High Torque	◎
High Torsional Stiffness	◎
Allowable Misalignment	○

◎: Excellent ○: Very good

- This is a single disk type flexible coupling.
- High-torque specification with rated torque 1.5 times higher than conventional products.
- This is the most appropriate for a servomotor with the instantaneous max. torque of 350%.
- The stainless steel disk allows the eccentricity, angular misalignment, and end-play.

● Application

Actuator / Surface-mount machine / High precision XY stage / Index table

● Material/Finish　RoHS2 Compliant

	XHS
Hub	A2017 Alumite Treatment
Disk fixing bolt	SCM435 Ferrosoferric Oxide Film (Black)
Disk	SUS304
Collar	SUS304
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Part number specification

XHS-27C-10-11

Product code　Size　bore diameter

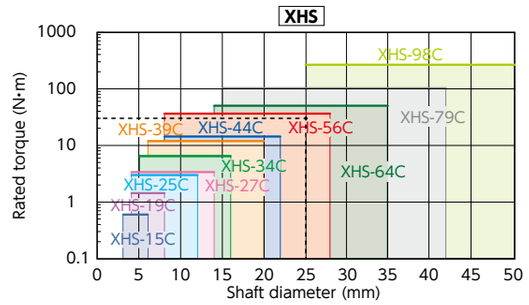
Please refer to dimensional table for part number specification.

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

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 25 and load torque of 30 N•m, the selected size is **XHS-56C**.

● Selection based on the rated output of the servomotor

XHS supports the servomotor with instantaneous max. torque increased to 350% of the rated torque and the size can be more reduced than the size of conventional product **XBS**.

Rated Output (W)	Servomotor type				Servomotor Specifications*1			selection size	
	Mitsubishi Electric Corporation	YASKAWA Electric Corporation	SANYO DENKI Co., Ltd.	KEYENCE CORPORATION	Diameter of Motor Shaft (mm)	Rated Torque (N・m)	Instantaneous Max. Torque (N・m)	XHS-C	XBS-C
100	HG-KR	SGMJV	R2	SV	8	0.32	1.1	XHS-19C	XBS-25C
200					14	0.64	2.2	XHS-27C	XBS-34C
400					14	1.3	4.5	XHS-34C	XBS-39C
750					16 - 19	2.4	8.4	XHS-39C	XBS-44C

*1： Motor specifications are based on general values. For details, see the motor manufacturer's catalogs. This is the size for cases where devices such as reduction gears are not used.

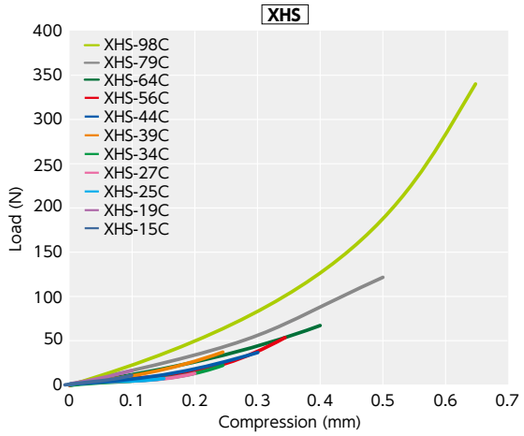
XHS Flexible Coupling - Single Disk Type

Additional Size

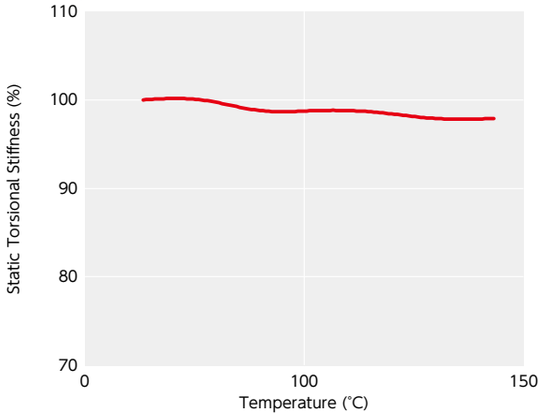
Selection Tool | CAD Download | Zero Backlash | High torque | High Rigidity

Technical Information

● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of XHS in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of XHS-C.

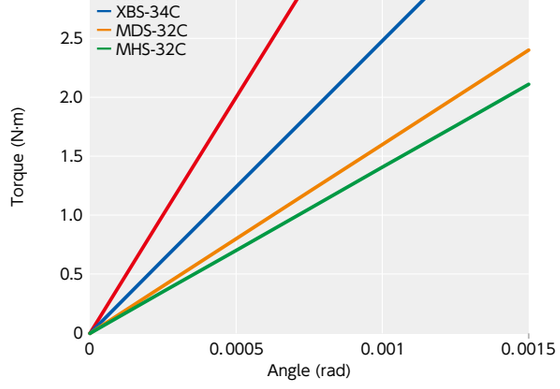
Unit : N・m

Part Number	Bore Diameter (mm)								
	3	4	5	6	6.35	8	9.525	10	11
XHS-19C	0.7								
XHS-25C		2.5							
XHS-27C		2	2.9						
XHS-34C			3.5	4.9	5.5				
XHS-39C				6	8				
XHS-44C						8	13		
XHS-56C						22	34	37	
XHS-64C								23	42

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in XHS-C dimensional table.

● Comparison of static torsional stiffness (single disk-type)

XHS have high torsional stiffness and responsiveness.
Optimal for high-speed and precision positioning for servomotors, etc.



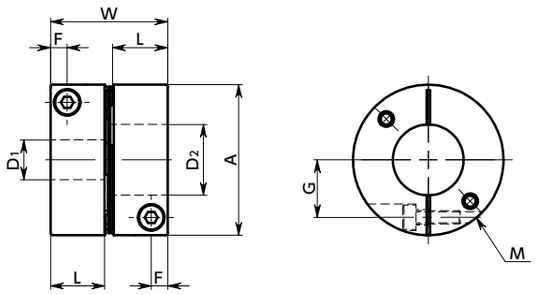
Couplicon®

XHS-C Flexible Coupling - Single Disk Type

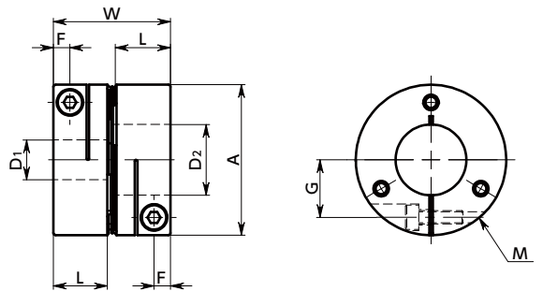
Additional Size

WEB Selection Tool | WEB CAD Download | Zero Backlash | High torque | High Rigidity

XHS-C



Outside diameter ϕ15



Outside diameter ϕ19 - ϕ98

Dimensions

Unit : mm

Part Number ◀1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XHS-15C	15	7.5	15.8	2.1	5	M2	0.45
XHS-19C	19	9.2	19.4	2.6	7	M2	0.5
XHS-25C	25	11	23.1	3.3	9.25	M2.5	1
XHS-27C	27	11	23.1	3.3	10.25	M2.5	1
XHS-34C	34	12.5	26.5	3.75	13	M3	1.5
XHS-39C	39	15.5	32.8	4.5	14.5	M4	3.5
XHS-44C	44	15.5	32.8	4.5	17	M4	3.5
XHS-56C	56	20.5	43.2	6	21	M5	8
XHS-64C	64	24	51.2	7	24	M6	13
XHS-79C	79	30	63.6	8.75	29	M8	28
XHS-98C	98	32	69	8.7	38	M8	28

Part Number	Standard Bore Diameter D1・D2 ◀2																												
	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	50
XHS-15C	●	●	●	●																									
XHS-19C	●	●	●	●	●	●																							
XHS-25C		●	●	●	●	●	●	●	●	●																			
XHS-27C		●	●	●	●	●	●	●	●	●	●																		
XHS-34C			●	●	●	●	●	●	●	●	●	●	●																
XHS-39C				●	●	●	●	●	●	●	●	●	●	●	●	●	●												
XHS-44C						●	●	●	●	●	●	●	●	●	●	●	●	●											
XHS-56C						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
XHS-64C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
XHS-79C											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
XHS-98C																				●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XHS-15C	6	0.6	42000	2.2×10^{-7}	110	0.01	0.7		6.6
XHS-19C	8	1.5	33000	6.3×10^{-7}	330	0.02	1	±0.1	13
XHS-25C	12	3	25000	2.3×10^{-6}	1200	0.02	1	±0.15	25
XHS-27C	14	3.3	23000	3.1×10^{-6}	1800	0.02	1	±0.2	27
XHS-34C	16	6.3	18000	9.2×10^{-6}	3900	0.02	1	±0.25	52
XHS-39C	20	12	16000	2.0×10^{-5}	6000	0.02	1	±0.25	84
XHS-44C	22	15	14000	3.3×10^{-5}	7900	0.02	1	±0.3	107
XHS-56C	28	37.5	11000	1.1×10^{-4}	14000	0.02	1	±0.35	233
XHS-64C	35	50	9800	2.2×10^{-4}	16000	0.02	1		328
XHS-79C	42	100	7900	6.7×10^{-4}	23000	0.02	1		748
XHS-98C	50	280	6400	1.7×10^{-3}	52000	0.02	1	±0.65	1120

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

- Part number specification

XHS-27C - 8-10
◀1 ◀2

Couplicon®

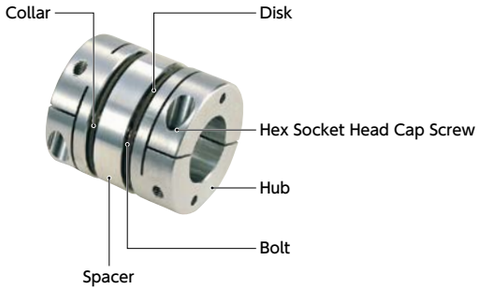
XBWS Flexible Coupling - Disk Type

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

Structure

● Clamping type ➡ P.81

XBWS-C Made of all stainless steel



● Recommended applicable motor

	XBWS
Servomotor	◎
Stepping motor	◎
General-purpose motor	△

◎: Excellent　○: Very good　△: Available

● Property

	XBWS
Zero Backlash	◎
High Torque	○
High Torsional Stiffness	◎
Allowable Misalignment	○
Corrosion Resistance (All S.S.)	◎

◎: Excellent　○: Very good

- This is a disk type flexible coupling.
- The stainless steel disk allows the eccentricity, angular misalignment and end-play.
- Wide variation of outside diameter ϕ 15 - ϕ 104 and bore diameter ϕ 3 - ϕ 50.
- **XBWS** is the all stainless steel type with stainless steel hubs.

● Application

Actuator/ Surface-mount machine/ High precision XY stage/ Index table

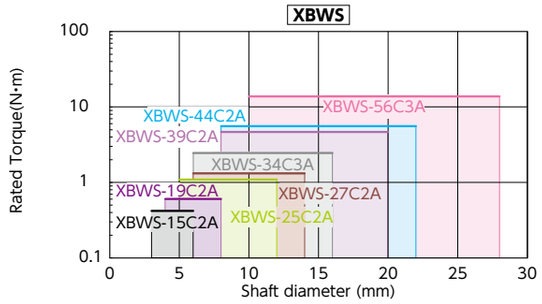
● Material/Finish　RoHS2 Compliant

	XBWS-C
Hub	SUS303
Spacer	SUS303
Bolt	SUSXM7
Disk	SUS304
Collar	SUS304
Hex Socket Head Cap Screw	SUSXM7

Selection

● Selection based on shaft diameter and rated torque

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



GOOD DESIGN

● Selection example

In case of selected parameters of shaft diameter of ϕ15 and load torque of 2 N•m, the selection size is **XBWS-34C3A**.

● Selection based on the rated output of the servomotor

Rated output (W)	Servomotor specifications*1			Selection size
	Diameter of motor shaft (mm)	Rated torque (N・m)	Instantaneous max. torque (N・m)	XBWS-C Made of all stainless steel
10	5 - 6	0.032	0.096	XBWS-15C
20	5 - 6	0.064	0.19	XBWS-15C
30	5 - 7	0.096	0.29	XBWS-19C
50	6 - 8	0.16	0.48	XBWS-19C
100	8	0.32	0.95	XBWS-25C
200	9 - 14	0.64	1.9	XBWS-34C
400	14	1.3	3.8	XBWS-39C
750	16 - 19	2.4	7.2	XBWS-56C

*1: Motor specifications are based on general values. For details, please refer to catalogs of each motor manufacturers. Recommended sizes are for the cases where reduction gears are not used.

● Related Products

The Double-Disk type Flexible Coupling **XHW** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.65

● Part number specification

XBWS - 25C2A - 8-8

Product Code　Size　Bore Diameter

Please refer to dimensional table for part number specification.

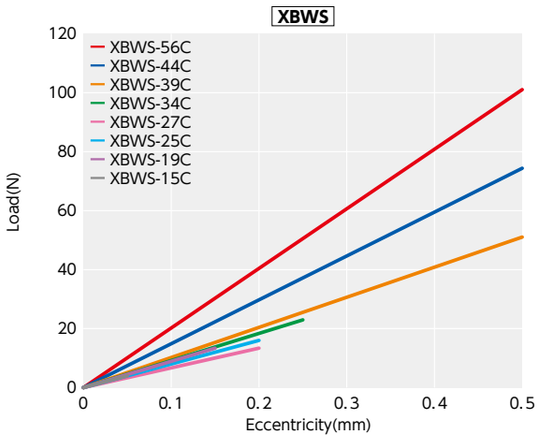
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

XBWS Flexible Coupling - Disk Type

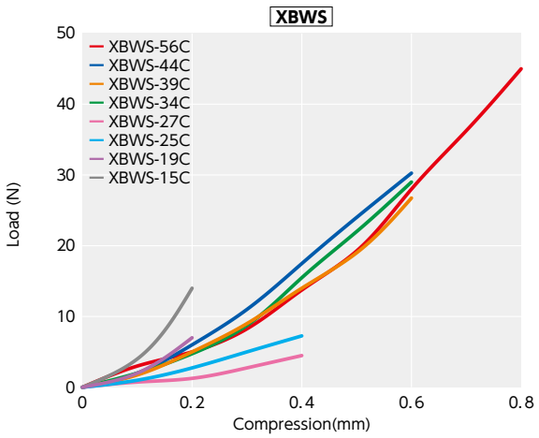
Selection Tool | CAD Download | SUS Stainless steel | Zero Backlash | High Rigidity

Technical Information

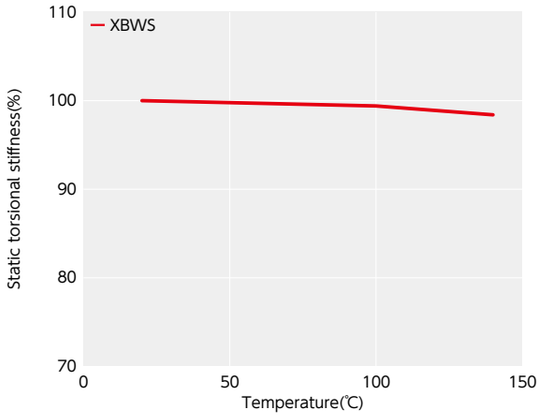
● Eccentric Reaction Force



● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **XBWS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **XBWS-C**.

Unit : N・m

Part Number	Bore Diameter (mm)		
	8	10	11
XBWS-44C2A	4.5		
XBWS-56C3A		9	13

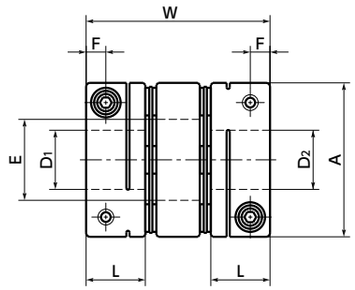
- These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **XBWS-C** Dimension table.

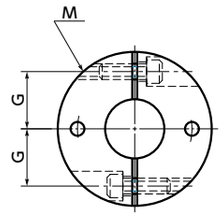
Couplicon®

XBWS-C Flexible Coupling - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Rigidity

XBWS-C Made of all stainless steel





Dimensions

Part Number ◀1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
XBWS-15C2A	15	7.5	22	6.1	2.3	5.25	M2	0.5
XBWS-19C2A	19	9	25.5	8.5	2.5	7.1	M2	0.5
XBWS-25C2A	25	11	32.2	12.5	3.5	9.25	M2.5	1
XBWS-27C2A	27	11	32.2	14.5	3.5	10.25	M2.5	1
XBWS-34C3A	34	12	37.4	16.5	4	13	M3	1.5
XBWS-39C2A	39	15	46.6	20.5	5	14.5	M4	3.5
XBWS-44C2A	44	15	46.6	23	5	17	M4	3.5
XBWS-56C3A	56	20	60.4	29	6	21.25	M5	8

Part Number	Standard Bore Diameter D1・D2 ◀2																	
	3	4	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28
XBWS-15C2A	●	●	●	●														
XBWS-19C2A		●	●	●	●													
XBWS-25C2A			●	●	●	●	●	●										
XBWS-27C2A				●	●	●	●	●	●									
XBWS-34C3A				●	●	●	●	●	●	●	●							
XBWS-39C2A					●	●	●	●	●	●	●	●	●	●				
XBWS-44C2A					●	●	●	●	●	●	●	●	●	●	●			
XBWS-56C3A						●	●	●	●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XBWS-15C2A	6	0.42	42000	5.0×10^{-7}	300	0.05	1	±0.2	20
XBWS-19C2A	8	0.6	33000	1.6×10^{-6}	550	0.15	2	±0.2	38
XBWS-25C2A	12	1.1	25000	6.1×10^{-6}	1100	0.2	2	±0.4	71
XBWS-27C2A	14	1.3	23000	8.2×10^{-6}	1300	0.2	2	±0.4	88
XBWS-34C3A	16	2.5	18000	2.5×10^{-5}	1800	0.25	2	±0.6	160
XBWS-39C2A	20	4.8	16000	5.1×10^{-5}	3500	0.3	2	±0.6	260
XBWS-44C2A	22	5.6	14000	8.9×10^{-5}	5500	0.3	2	±0.6	400
XBWS-56C3A	28	14	11000	2.9×10^{-4}	10000	0.3	2	±0.8	800

*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

XBWS-27C2A - 11-12
◀1　◀2

Couplicon®

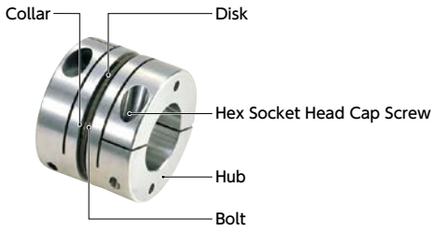
XBSS Flexible Coupling - Single - Disk Type

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

Structure

● Clamping type ➡ P.87

XBSS-C Made of all stainless steel



● Recommended applicable motor

	XBSS
Servomotor	◎
Stepping motor	◎
General-purpose motor	△

◎: Excellent　○: Very good　△: Available

● Property

	XBSS
Zero Backlash	◎
High Torque	○
High Torsional Stiffness	◎
Allowable Misalignment	○
Corrosion Resistance (All S.S.)	◎

◎: Excellent　○: Very good

- This is a disk type flexible coupling.
- It has compact design with short entire length.
- The stainless steel disk allows the eccentricity, angular misalignment and end-play.
- Wide variation of outside diameter ϕ 15 - ϕ 104 and bore diameter ϕ 3 - ϕ 50.
- **XBSS** is the all stainless steel type with stainless steel hubs.

● Application

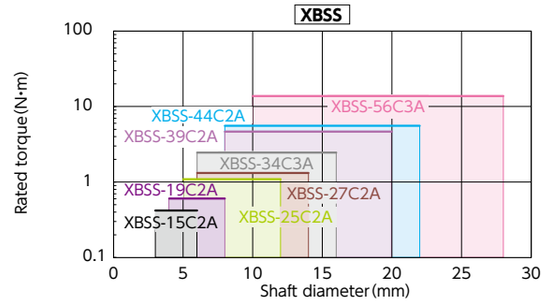
Actuator / Surface-mount machine / High precision XY stage / Index table

● Material/Finish　RoHS2 Compliant

	XBSS-C
Hub	SUS303
Bolt	SUSXM7
Disk	SUS304
Collar	SUS304
Hex Socket Head Cap Screw	SUSXM7

Selection

● Selection based on shaft diameter and rated torque



● Selection example

In case of selected parameters of shaft diameter of ϕ15 and load torque of 2 N•m, the selected size is **XBSS-34C3A**.

● Selection based on the rated output of the servomotor

Rated output (W)	Servomotor specifications*1			Selection size
	Diameter of motor shaft (mm)	Rated torque (N・m)	Instantaneous max. torque (N・m)	**XBSS-C** Made of all stainless steel
10	5 - 6	0.032	0.096	XBSS-15C
20	5 - 6	0.064	0.19	XBSS-15C
30	5 - 7	0.096	0.29	XBSS-19C
50	6 - 8	0.16	0.48	XBSS-19C
100	8	0.32	0.95	XBSS-25C
200	9 - 14	0.64	1.9	XBSS-34C
400	14	1.3	3.8	XBSS-39C
750	16 - 19	2.4	7.2	XBSS-56C

*1: Motor specifications are based on general values. For details, please refer to catalogs of each motor manufacturers. Recommended sizes are for the cases where reduction gears are not used.

GOOD DESIGN

● Related Products

The Single-Disk type Flexible Coupling **XHS** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.71

● Part number specification

XBSS - 25C2A - 8-8

Product Code　Size　Bore Diameter

Please refer to dimensional table for part number specification.

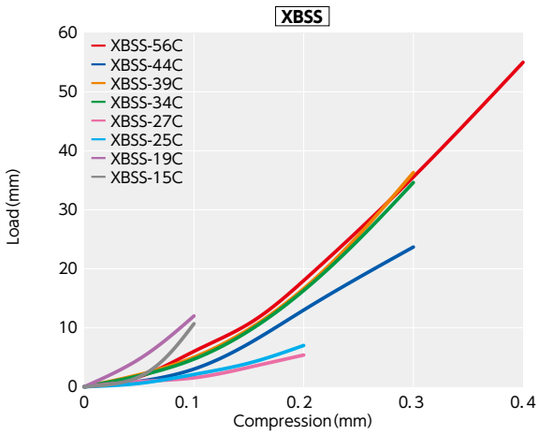
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

XBSS Flexible Coupling - Single - Disk Type

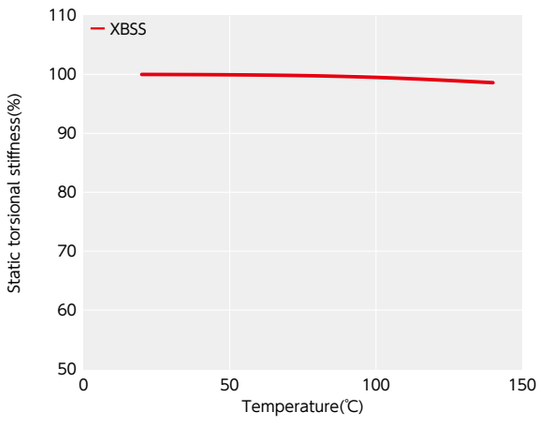
Selection Tool | CAD Download | SUS Stainless steel | Zero Backlash | High Rigidity

Technical Information

● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **XBSS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **XBSS-C**

Unit : N・m

Part Number	Bore Diameter (mm)		
	8	10	11
XBSS-44C2A	4.5		
XBSS-56C3A		9	13

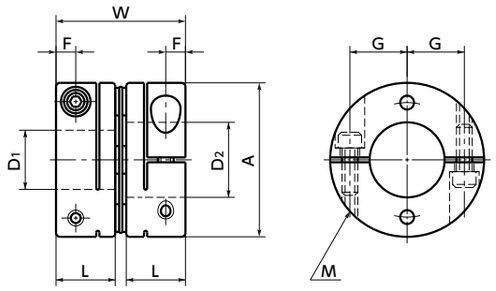
- These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **XBSS-C** Dimension table.

Couplicon®

XBSS-C Flexible Coupling - Single - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Rigidity

XBSS-C Made of all stainless steel



Dimensions

Part Number [1]	A	L	W	F	G	M	Screw Tightening Torque (N・m)
XBSS-15C2A	15	7.5	16	2.3	5.25	M2	0.5
XBSS-19C2A	19	9	19	2.5	7.1	M2	0.5
XBSS-25C2A	25	11	23.6	3.5	9.25	M2.5	1
XBSS-27C2A	27	11	23.6	3.5	10.25	M2.5	1
XBSS-34C3A	34	12	26.2	4	13	M3	1.5
XBSS-39C2A	39	15	32.8	5	14.5	M4	3.5
XBSS-44C2A	44	15	32.8	5	17	M4	3.5
XBSS-56C3A	56	20	43.2	6	21.25	M5	8

Part Number	Stock Bores D1-D2 [2]																	
	3	4	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28
XBSS-15C2A	●	●	●	●														
XBSS-19C2A		●	●	●	●													
XBSS-25C2A			●	●	●	●	●	●										
XBSS-27C2A				●	●	●	●	●	●									
XBSS-34C3A				●	●	●	●	●	●	●	●							
XBSS-39C2A					●	●	●	●	●	●	●	●	●	●				
XBSS-44C2A					●	●	●	●	●	●	●	●	●	●	●			
XBSS-56C3A						●	●	●	●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XBSS-15C2A	6	0.42	42000	2.3×10^{-7}	500	0.02	0.5	±0.1	15
XBSS-19C2A	8	0.6	33000	7.4×10^{-7}	1000	0.02	1	±0.1	29
XBSS-25C2A	12	1.1	25000	2.8×10^{-6}	1500	0.02	1	±0.2	53
XBSS-27C2A	14	1.3	23000	3.8×10^{-6}	2100	0.02	1	±0.2	67
XBSS-34C3A	16	2.5	18000	1.1×10^{-5}	3800	0.02	1	±0.3	115
XBSS-39C2A	20	4.8	16000	2.3×10^{-5}	5500	0.02	1	±0.3	185
XBSS-44C2A	22	5.6	14000	3.9×10^{-5}	7000	0.02	1	±0.3	305
XBSS-56C3A	28	14	11000	1.4×10^{-4}	15000	0.02	1	±0.4	610

*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

XBSS-39C2A - 12-14
[1] [2]

Couplicon®

MDW Flexible Coupling - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

Structure

● Clamping type

MDW-C

● Applicable motors..

	MDW
Servomotor	◎
Stepping motor	◎
General-purpose motor	◎

◎: Excellent　○: Very good

● Property

	MDW
Zero Backlash	◎
Allowable Misalignment	○

◎: Excellent　○: Very good

- This is a disk type flexible coupling.
- The stainless steel disk allows the eccentricity, and angular misalignment, and end-play.

● Application

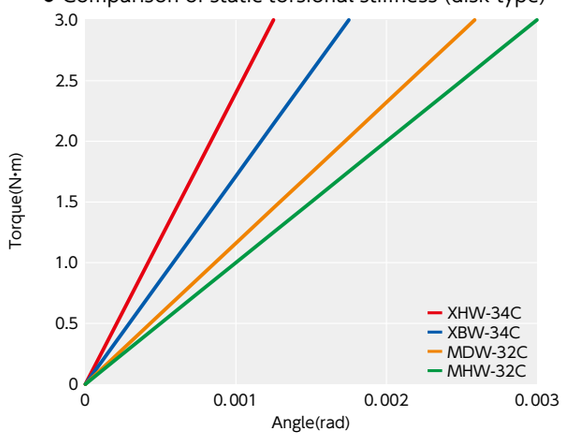
Actuator/XY stage

● Material/Finish

RoHS2 Compliant

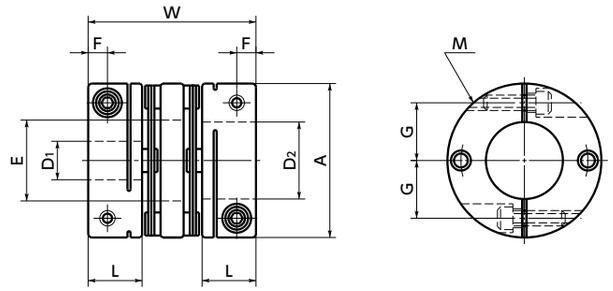
	MDW-C
Hub	A2017 Alumite Treatment
Spacer	A2017 Alumite Treatment
Disk	SUS304
Pin	SUS303
Collar	SUS303
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Comparison of static torsional stiffness (disk-type)



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

MDW-C



Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MDW-19C	19	8	27	8.5	2.5	6.5	M2	0.5
MDW-25C	25	10	31	12.5	3.5	9	M2.5	1
MDW-32C	32	12	40	16	4	11	M3	1.5
MDW-40C	40	14	44	21	5	15	M4	2.5
MDW-50C	50	18	57	26	6	18	M5	7
MDW-63C	63	20	61	35	7	24	M6	12

Part Number	Standard Bore Diameter D1・D2 2																				
	4	5	6	6.35	7	8	9	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30
MDW-19C	●	●	●		●	●																
MDW-25C			●	●		●	●	●	●	●												
MDW-32C						●		●	●	●	●	●										
MDW-40C						●		●	●	●	●	●	●	●	●	●						
MDW-50C											●	●	●	●	●	●	●	●	●	●		
MDW-63C												●	●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MDW-19C	8	0.7	33000	8.7×10^{-7}	200	0.12	1.5	±0.5	18
MDW-25C	12	1	25000	2.7×10^{-6}	450	0.12	1.5	±0.5	25
MDW-32C	15	2.5	19000	9.6×10^{-6}	1100	0.15	1.5	±0.5	60
MDW-40C	20	3.5	15000	1.9×10^{-5}	1400	0.15	1.5	±0.5	100
MDW-50C	25	9	12000	8.1×10^{-5}	2200	0.15	1.5	±0.5	210
MDW-63C	30	12.5	10000	2.1×10^{-4}	3000	0.15	1.5	±0.5	340

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

● Related Products

The Double-Disk type Flexible Coupling **XHW** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.65

● Part number specification

MDW-25C - 6-8
1　2

Couplicon®

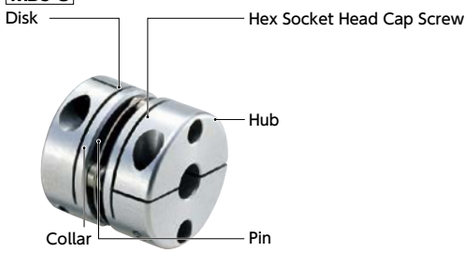
MDS Flexible Coupling - Single - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash

Structure

● Clamping type

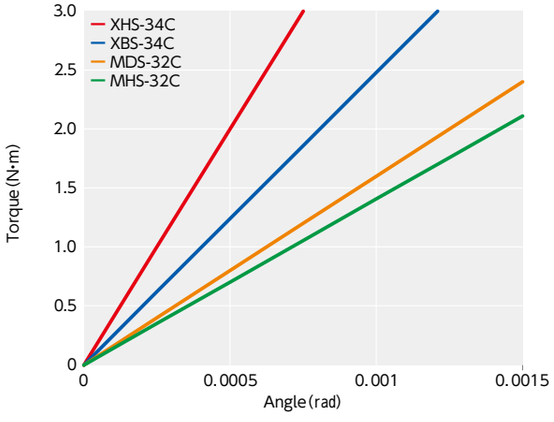
MDS-C



● Material/Finish　RoHS2 Compliant

	MDS-C
Hub	A2017 Alumite Treatment
Disk	SUS304
Pin	SUS303
Collar	SUS303
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Comparison of static torsional stiffness (single disk-type)



● Applicable motors

	MDS
Servomotor	◎
Stepping motor	◎
General-purpose motor	◎

◎: Excellent　○: Very good

● Property

	MDS
Zero Backlash	◎
Allowable Misalignment	○

◎: Excellent　○: Very good

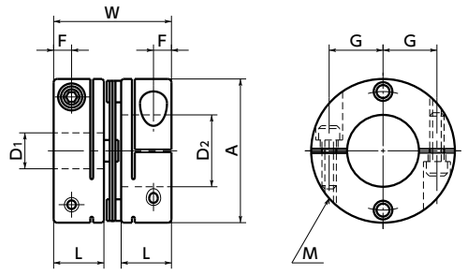
- This is a disk type flexible coupling.
- It has compact design with short entire length.
- The stainless steel disk allows the eccentricity, and angular misalignment, and end-play.

● Application

Actuator/XY stage

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

MDS-C



Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N·m)
MDS-19C	19	8	20	2.5	6.5	M2	0.5
MDS-25C	25	10	24	3.5	9	M2.5	1
MDS-32C	32	12	29	4	11	M3	1.5
MDS-40C	40	14	33	5	15	M4	2.5
MDS-50C	50	18	42	6	18	M5	7
MDS-63C	63	20	46	7	24	M6	12

Part Number	Standard Bore Diameter D1・D2 2																						
	4	5	6	6.35	7	8	9	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30
MDS-19C	●	●	●		●	●																
MDS-25C			●	●		●	●	●	●	●												
MDS-32C						●		●	●	●	●	●										
MDS-40C						●		●	●	●	●	●	●	●	●	●	●					
MDS-50C											●	●	●	●	●	●	●	●	●	●		
MDS-63C												●	●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MDS-19C	8	0.7	33000	6.3×10^{-7}	280	0.02	0.7	±0.2	9
MDS-25C	12	1	25000	2.1×10^{-6}	630	0.02	0.7	±0.2	19
MDS-32C	15	2.5	19000	7.2×10^{-6}	1600	0.02	0.7	±0.2	41
MDS-40C	20	3.5	15000	1.3×10^{-5}	2600	0.02	0.7	±0.2	68
MDS-50C	25	9	12000	6.1×10^{-5}	3100	0.02	0.7	±0.2	140
MDS-63C	30	12.5	10000	1.7×10^{-4}	4200	0.02	0.7	±0.2	250

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

● Related Products

The Single-Disk type Flexible Coupling **XHS** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.71

● Part number specification

MDS-32C - 10-12
1　2

Couplicon®

MHW Flexible Coupling - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash

Structure

● Clamping type

MHW-C

● Applicable motors

	MHW
Servomotor	–
Stepping motor	◎
General-purpose motor	◎

◎: Excellent　○: Very good

● Property

	MHW
Zero Backlash	◎
Allowable Misalignment	○

◎: Excellent　○: Very good

- This is a disk type flexible coupling.
- The stainless steel disk allows the eccentricity, and angular misalignment, and end-play.

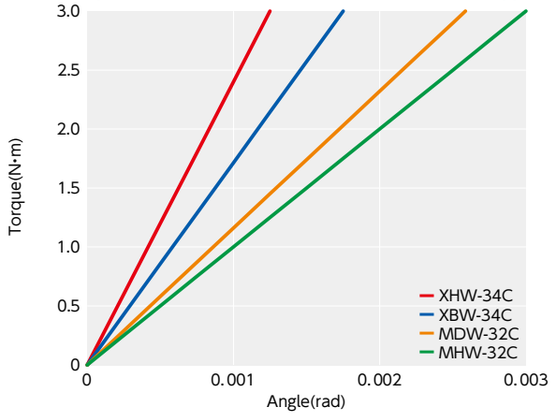
● Application

XY stage/Transport device

● Material/Finish　RoHS2 Compliant

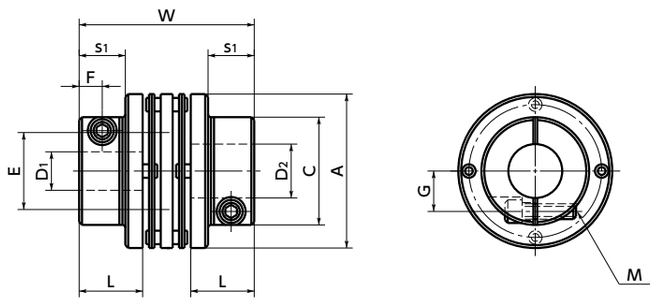
	MHW-C
Hub	A2017 Alumite Treatment
Spacer	A2017 Alumite Treatment
Disk	SUS301
Pin	SUS303
Collar	SUS303
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Comparison of static torsional stiffness (disk-type)



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

MHW-C



Dimensions

Unit : mm

Part Number 1	A	L	W	C	s1	E	F	G	M	Screw Tightening Torque (N·m)
MHW-32C	32	13.7	40	22	9	15	4	8	M3	1.5
MHW-40C	40	16.5	46	28	12	20	6	10.5	M4	2.5
MHW-50C	50	19.4	52	39	15	25	7	14.75	M5	7
MHW-63C	63	22.3	58	45	18	32	8	17	M6	12

Part Number	Standard Bore Diameter D1・D2 2											
	6	8	10	11	12	14	15	16	18	19	20	25
MHW-32C	●	●	●									
MHW-40C		●	●	●	●	●						
MHW-50C					●	●	●	●	●	●	●	
MHW-63C							●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MHW-32C	10	2	19000	6.2×10^{-6}	1000	0.15	2	±0.4	48
MHW-40C	14	4	15000	1.6×10^{-5}	1500	0.2	2	±0.5	81
MHW-50C	20	7.5	12000	4.6×10^{-5}	2000	0.2	2	±0.6	150
MHW-63C	25	10	10000	1.1×10^{-4}	2500	0.3	2	±0.8	230

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

● Related Products

The Double-Disk type Flexible Coupling **XHW** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.65

● Part number specification

MHW-32C - 8-10
1　2

Couplicon®

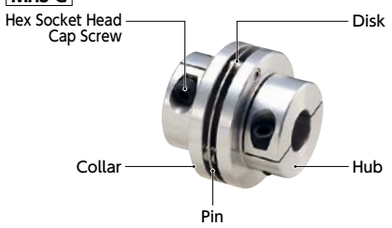
MHS Flexible Coupling - Single - Disk Type

WEB Selection Tool　WEB CAD Download　Zero Backlash

Structure

● Clamping type

MHS-C



● Applicable motors

	MHS
Servomotor	–
Stepping motor	◎
General-purpose motor	◎

◎: Excellent　○: Very good

● Property

	MHS
Zero Backlash	◎
Allowable Misalignment	○

◎: Excellent　○: Very good

- This is a disk type flexible coupling.
- The stainless steel disk allows the eccentricity, and angular misalignment and end-play.

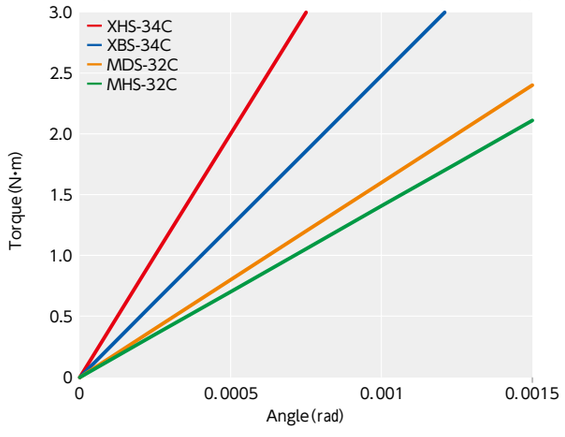
● Application

XY stage/Transport device

● Material/Finish　RoHS2 Compliant

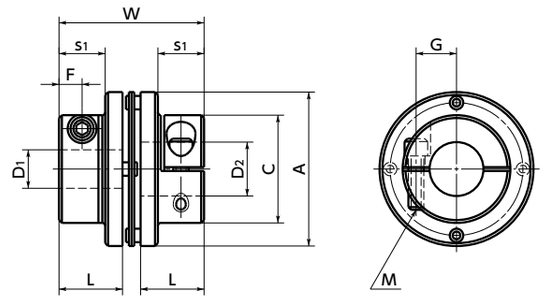
	MHS-C
Hub	A2017 Alumite Treatment
Disk	SUS301
Pin	SUS303
Collar	SUS303
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Comparison of static torsional stiffness (single disk-type)



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

MHS-C



Dimensions

Unit : mm

Part Number 1	A	L	W	C	s1	F	G	M	Screw Tightening Torque (N·m)
MHS-32C	32	13.7	32	22	9	4	8	M3	1.5
MHS-40C	40	16.5	38	28	12	6	10.5	M4	2.5
MHS-50C	50	19.4	44	39	15	7	14.75	M5	7
MHS-63C	63	22.3	50	45	18	8	17	M6	12

Part Number	Standard Bore Diameter D1・D2 2											
	6	8	10	11	12	14	15	16	18	19	20	25
MHS-32C	●	●	●									
MHS-40C		●	●	●	●	●						
MHS-50C					●	●	●	●	●	●	●	
MHS-63C							●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MHS-32C	10	2	19000	4.5×10^{-6}	1300	0.02	1	±0.2	38
MHS-40C	14	4	15000	1.2×10^{-5}	2800	0.02	1	±0.2	66
MHS-50C	20	7.5	12000	3.7×10^{-5}	3700	0.02	1	±0.2	120
MHS-63C	25	10	10000	8.4×10^{-5}	5000	0.02	1	±0.2	190

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

● Related Products

The Single-Disk type Flexible Coupling **XHS** is compatible with the servomotor with 350% instantaneous max. torque is available.
➡ P.71

● Part number specification

MHS-32C - 8-10
1　2

Couplicon®

MSX Flexible coupling - Slit - type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Rigidity

Structure

● Set Screw type

MSX ➡ P.101

● Clamping type

MSX-C ➡ P.103

● Applicable motors

	MSX
Servomotor	◎
Stepping motor	◎
General-purpose motor	◎

◎: Excellent　○: Very good

● Property

	MSX
Zero Backlash	◎
High Torque	○
High Torsional Stiffness	◎

◎: Excellent　○: Very good

- This is a metal spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- It has an extremely high torsional stiffness and low moment of inertia.
- Extra super duralumin (A7075) featuring the highest strength among aluminum alloy is adopted.
- A plate spring formed by a slit allows eccentricity, angular misalignment, and end-play to be accepted.

● Application

Actuator/High precision XY stage/Index table

● Material/Finish　RoHS2 Compliant

	MSX / MSX-C
Main Body	A7075 Alumite Treatment
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Related Products

The slit-type coupling **MSXP** in PEEK material can be used in an environment or cleanroom where heat and chemical resistance are required, such as FPD and semiconductor equipments.
➡ P.231

● Part number specification

MSX-19C-5-6

Product Code　size　Bore diameter

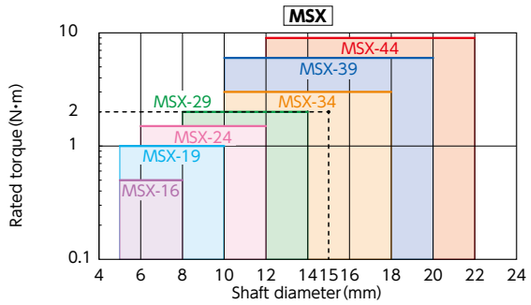
Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	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 2 N•m, the selected size is **MSX-34** or **MSX-34C**.

● Selection based on the rated output of the servomotor

Rated output (W)	Servomotor Specifications*1			Selection size	
	Diameter of motor shaft (mm)	Rated torque (N•m)	Instantaneous max. torque (N•m)	MSX Set Screw Type	MSX-C Clamping type
10	5 - 6	0.032	0.096	MSX-16	MSX-16C
20	5 - 6	0.064	0.19	MSX-16	MSX-16C
30	5 - 7	0.096	0.29	MSX-19	MSX-19C
50	6 - 8	0.16	0.48	MSX-19	MSX-19C
100	8	0.32	0.95	MSX-19	MSX-19C
200	9 - 14	0.64	1.9	MSX-29	MSX-34C
400	14	1.3	3.8	MSX-39	MSX-39C
750	16 - 19	2.4	7.2	MSX-44	MSX-44C

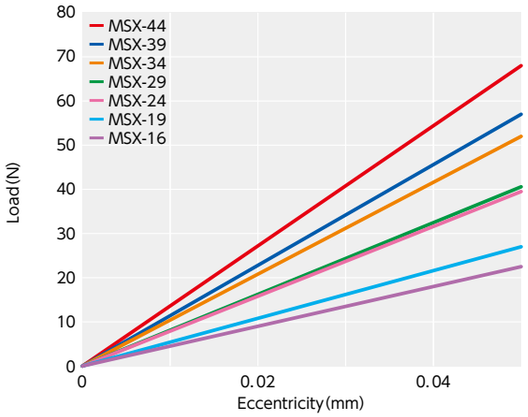
*1: Motor specifications are based on general values. For details, see the motor manufacturer's catalogs.This is the size for cases where devices such as reduction gears are not used.

MSX Flexible coupling - Slit - type

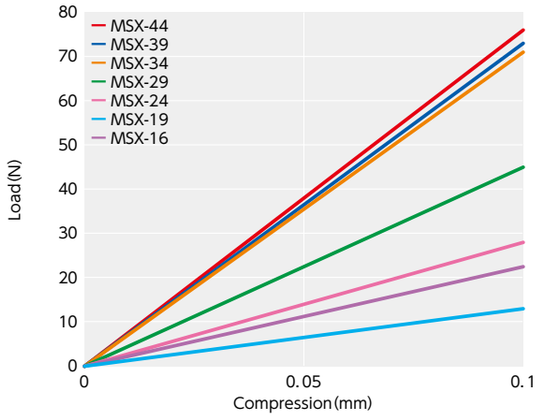
Selection Tool | CAD Download | Zero Backlash | High Rigidity

Technical Information

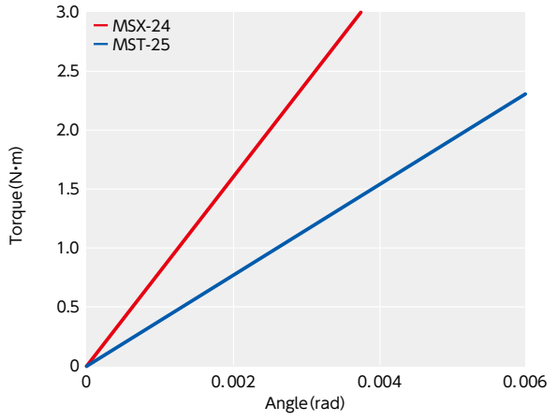
● Eccentric Reaction Force



● Thrust Reaction Force

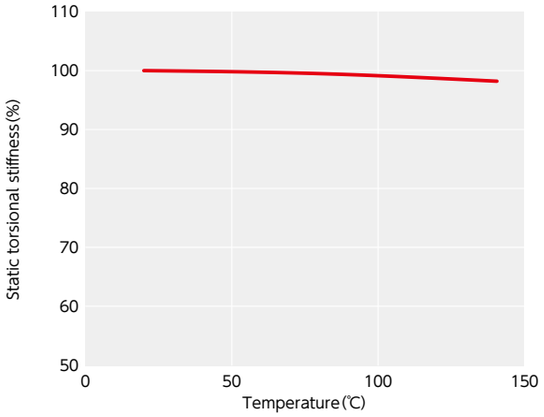


● Comparison of static torsional stiffness (slit-type)



MSX have high torsional stiffness and responsiveness.
Optimal for high-speed and precision positioning for servomotors, etc.

● Change in static torsional stiffness due to temperature

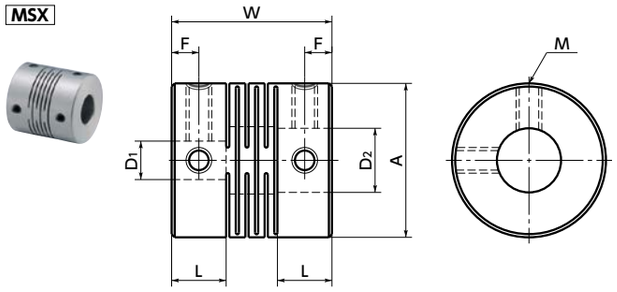


This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
MSX's change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

MSX Flexible coupling - Slit - type - Set screw type

Selection Tool | CAD Download | Zero Backlash | High Rigidity

MSX



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N·m)
MSX-16	16	6	17.4	3	M3	0.7
MSX-19	19	6.8	20	3.4	M3	0.7
MSX-24	24	8.5	25	4.25	M4	1.7
MSX-29	29	10.2	30	5.1	M4	1.7
MSX-34	34	12	35	6	M5	4
MSX-39	39	13.5	40	6.75	M5	4
MSX-44	44	15.5	45	7.75	M6	7

Part Number	Standard Bore Diameter (dimensional allowance H8) D1-D2 2							
MSX-16	5 - 5	5 - 6	6 - 6					
MSX-19	5 - 5 6.35 - 6.35	5 - 6 6.35 - 8	5 - 7 8 - 8	5 - 8 8 - 10	6 - 6 10 - 10	6 - 6.35	6 - 7	6 - 8
MSX-24	6 - 6 8 - 9.525	6 - 8 8 - 10	6 - 10 9.525 - 10	6.35 - 6.35 10 - 10	6.35 - 8 10 - 11	6.35 - 10 10 - 12	7 - 8 11 - 12	8 - 8 12 - 12
MSX-29	8 - 8 11 - 12	8 - 10 11 - 14	8 - 11 12 - 12	8 - 12 12 - 14	10 - 10	10 - 11	10 - 12	10 - 14
MSX-34	10 - 14 15 - 15	11 - 14 15 - 16	12 - 12 16 - 16	12 - 14	12 - 16	14 - 14	14 - 15	14 - 16
MSX-39	10 - 14 15 - 15	12 - 12 15 - 16	12 - 14 16 - 16	12 - 15	12 - 16	12 - 19	14 - 14	14 - 15
MSX-44	12 - 12 15 - 19	12 - 14 15 - 20	12 - 19 20 - 20	14 - 14	14 - 15	14 - 16	15 - 15	15 - 16

- All products are provided with hex socket set screw.
- 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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MSX-16	8	0.5	39000	2.8×10^{-7}	200	0.05	0.5	±0.1	7
MSX-19	10	1	33000	6.2×10^{-7}	270	0.05	0.5	±0.1	10
MSX-24	12	1.5	26000	2.0×10^{-6}	790	0.05	0.5	±0.1	22
MSX-29	14	2	21000	5.2×10^{-6}	1400	0.05	0.5	±0.1	40
MSX-34	18	3	18000	1.1×10^{-5}	2200	0.05	0.5	±0.1	64
MSX-39	20	6	16000	2.9×10^{-5}	4100	0.05	0.5	±0.1	90
MSX-44	22	9	14000	5.5×10^{-5}	5100	0.05	0.5	±0.1	133

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

- Part number specification

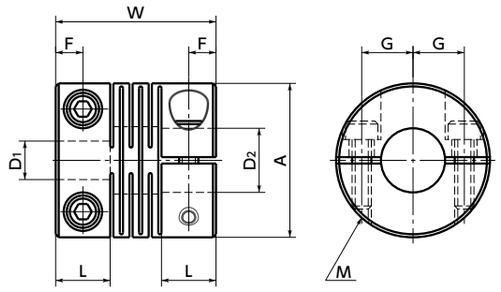
MSX-19 - 5-6
1 2

Couplicon®

MSX-C Flexible coupling - Slit - type - Clamping type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Rigidity

MSX-C Made of aluminum alloy



Dimensions

Unit : mm

Part Number ①	A	L	W	F	G	M	Screw Tightening Torque (N・m)
MSX-16C	16	6	17.4	3	4.74	M2	0.5
MSX-19C	19	6.8	20	3.4	5.6	M2.5	1
MSX-24C	24	8.5	25	4.25	8	M3	1.5
MSX-29C	29	10.2	30	5.1	9	M3	1.5
MSX-34C	34	12	35	6	11	M3	1.5
MSX-39C	39	13.5	40	6.75	14	M4	2.5
MSX-44C	44	15.5	45	7.75	16	M4	2.5

Part Number	Standard Bore Diameter D_1-D_2 ②							
MSX-16C	5 - 5	5 - 6	6 - 6					
MSX-19C	5 - 5 6.35 - 6.35	5 - 6 6.35 - 8	5 - 7 8 - 8	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
MSX-24C	6 - 6 8 - 9.525	6 - 8 8 - 10	6 - 10 9.525 - 10	6.35 - 6.35 10 - 10	6.35 - 8	6.35 - 10	7 - 8	8 - 8
MSX-29C	8 - 8 12 - 12	8 - 10	8 - 11	8 - 12	10 - 10	10 - 11	10 - 12	11 - 12
MSX-34C	10 - 14 15 - 15	11 - 14 15 - 16	12 - 12 16 - 16	12 - 14	12 - 16	14 - 14	14 - 15	14 - 16
MSX-39C	10 - 14 15 - 15	12 - 12 15 - 16	12 - 14 16 - 16	12 - 15	12 - 16	12 - 19	14 - 14	14 - 15
MSX-44C	12 - 12 15 - 19	12 - 14 15 - 20	12 - 19 20 - 20	14 - 14	14 - 15	14 - 16	15 - 15	15 - 16

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MSX-16C	6	0.5	39000	2.5×10^{-7}	200	0.05	0.5	±0.1	7
MSX-19C	8	1	33000	5.8×10^{-7}	270	0.05	0.5	±0.1	12
MSX-24C	10	1.5	26000	1.8×10^{-6}	790	0.05	0.5	±0.1	23
MSX-29C	12	2	21000	4.7×10^{-6}	1400	0.05	0.5	±0.1	41
MSX-34C	16	3	18000	1.1×10^{-5}	2200	0.05	0.5	±0.1	62
MSX-39C	20	6	16000	2.3×10^{-5}	4100	0.05	0.5	±0.1	88
MSX-44C	22	9	14000	4.3×10^{-5}	5100	0.05	0.5	±0.1	128

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

- Part number specification

MSX-39C - 14-15
① ②

Couplicon®

MST/MSTS Flexible coupling - Slit - type

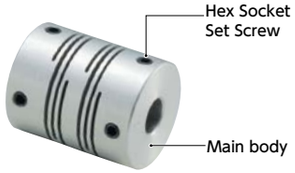
WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

Structure

● Set Screw type ➡ P.109

MST Made of aluminum alloy

MSTS Made of all stainless steel



● Clamping type ➡ P.111

MST-C Made of aluminum alloy

MSTS-C Made of all stainless steel

Outside diameter ϕ40 - ϕ63

MSTS-C

Outside diameter ϕ 12 - ϕ 32

● Set Screw + Key type ➡ P.113

MST-K Made of aluminum alloy

MSTS-K Made of all stainless steel

● Recommended applicable motor

	MST	MSTS
Servomotor	–	–
Stepping motor	◎	◎
General-purpose motor	△	△

◎: Excellent　○: Very good　△: Available

● Property

	MST	MSTS
Zero Backlash	◎	◎
High Torque	○	○
High Torsional Stiffness	○	○
Allowable Misalignment	○	○
Corrosion Resistance (All S.S.)	–	◎

◎: Excellent　○: Very good

- This is a metal spring coupling with single-piece construction. Slits are made into a cylindrical material.
- A plate spring formed by slits allows eccentricity, angular misalignment, and end-play to be accepted.
- There are two types of units made of aluminum alloy or all stainless steel.
- Wide variation of outside diameter ϕ 8 - ϕ 63.

● Application

Transport device/XY stage/Parts feeder

● Material/Finish　RoHS2 Compliant

	MST / MST-C / MST-K	MSTS / MSTS-C / MSTS-K
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

Slit-type flexible coupling **MSX** with excellent torsional stiffness is available.
➡ P.97

XSTS SUS316L material finished with clean washing and clean packaging, which is best suited for FPD and semiconductor manufacturing equipment, is available.
➡ P.227

● Part number specification

MST-32K-12-12

Product Code　Size　Bore Diameter

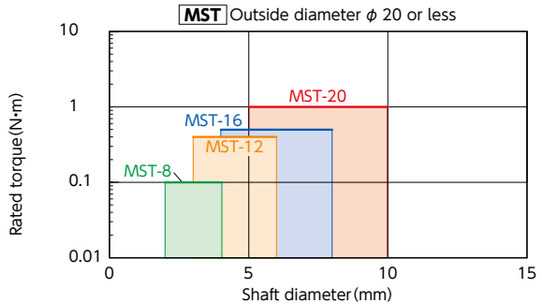
Please refer to dimensional table for part number specification.

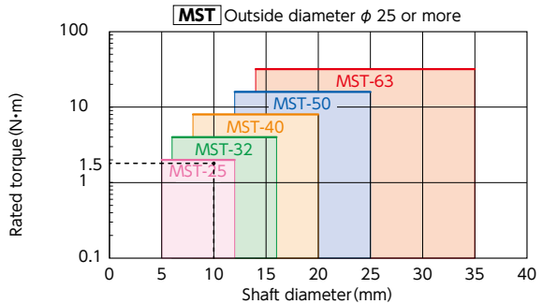
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

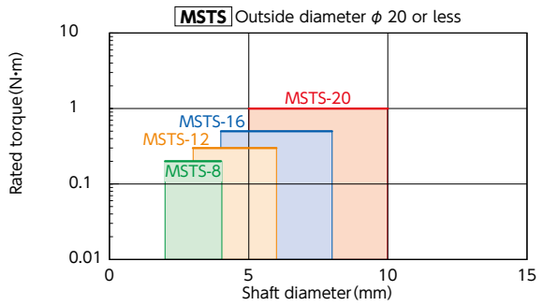
Selection

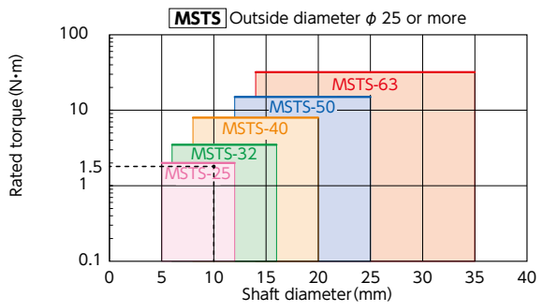
Selection based on shaft diameter and rated torque

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 10 and load torque of 1.5 N•m, the selected size for **MST** **MSTS** is **MST-25** **MSTS-25**

GOOD DESIGN

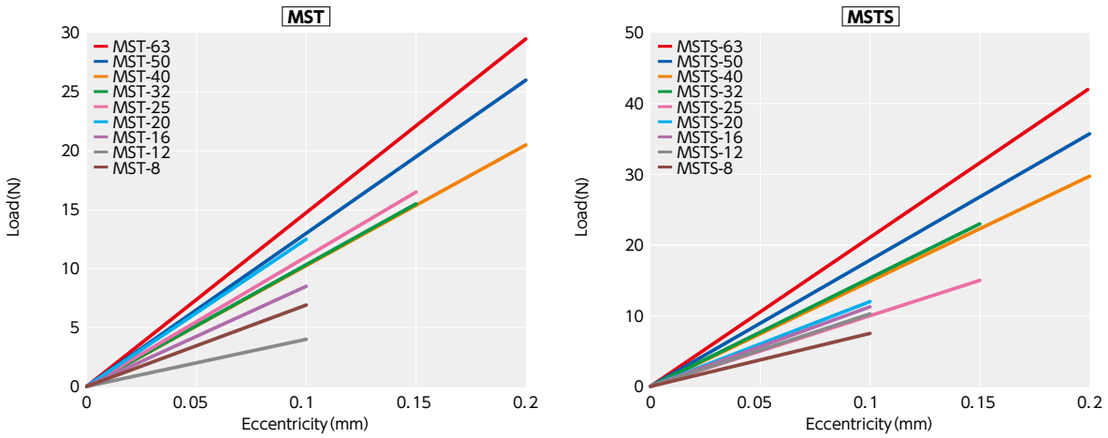
Couplicon®

MST/MSTS Flexible coupling - Slit - type

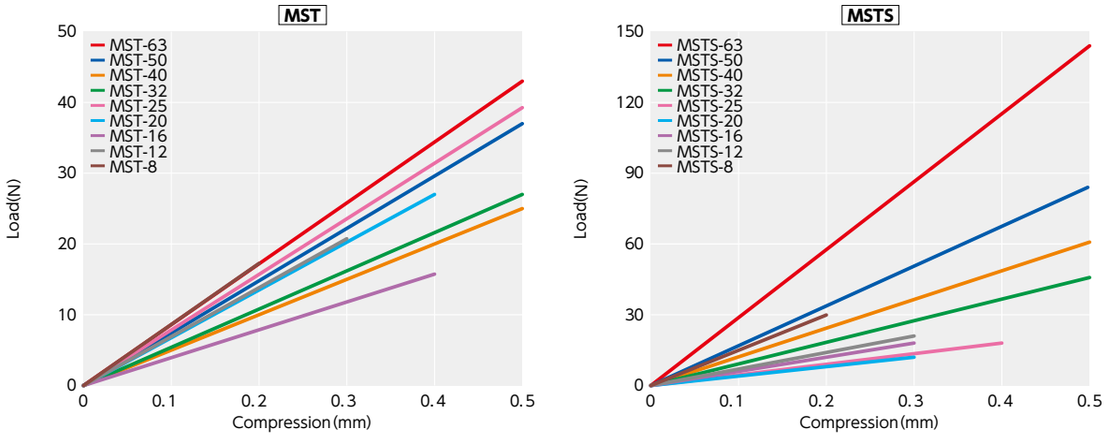
WEB Selection Tool WEB CAD Download SUS Stainless steel Zero Backlash

Technical Information

● Eccentric Reaction Force

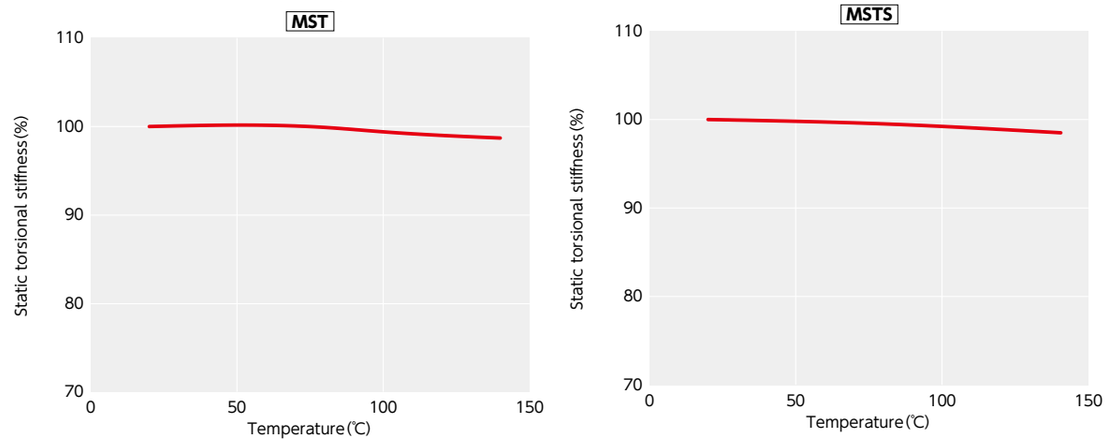


● Thrust Reaction Force



● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **MST** **MSTS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **MST-C** **MSTS-C**.

Unit : N・m

Part Number	Bore Diameter (mm)							
	5	6	6.35	8	9.525	10	11	14
MST-40C				7.1				
MSTS-25C	0.7	0.7	0.9	1.7				
MSTS-32C				1.2	2.1	2.7	2.9	
MSTS-63C								28.8

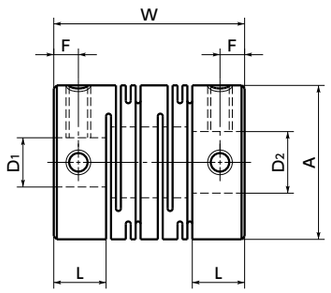
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MST-C** **MSTS-C** Dimension table.

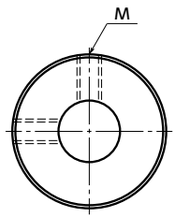
Couplicon®

MST/MSTS Flexible coupling - Slit - type - Set screw type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MST Made of aluminum alloy
MSTS Made of all stainless steel





Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N・m)
MST-8	8	3.5	14	1.7	M2	0.3
MST-12	12	5	18.5	2.5	M2.5	0.5
MST-16	16	6.5	23	3	M3	0.7
MST-20	20	7.5	26	3	M3	0.7
MST-25	25	8.5	31	4	M4	1.7
MST-32	32	12	41	6	M4	1.7
MST-40	40	17	56	8.5	M5	4
MST-50	50	21	71	10.5	M6	7
MST-63	63	26	90	13	M8	15
MSTS-8	8	3.5	14	1.7	M2	0.3
MSTS-12	12	5	18.5	2.5	M2.5	0.5
MSTS-16	16	6.5	23	3	M3	0.7
MSTS-20	20	7.5	26	3	M3	0.7
MSTS-25	25	8.5	31	4	M4	1.7
MSTS-32	32	12	41	6	M4	1.7
MSTS-40	40	17	56	8.5	M5	4
MSTS-50	50	21	71	10.5	M6	7
MSTS-63	63	26	90	13	M8	15

Part Number		Standard Bore Diameter (dimensional allowance H8) D_1-D_2 2							
MST-8	**MSTS-8**	2 - 2	2 - 3	3 - 3					
MST-12	**MSTS-12**	3 - 3	3 - 4	4 - 4	4 - 5	4.5 - 5	5 - 5	5 - 6	
MST-16	**MSTS-16**	4 - 4 6 - 6.35	4 - 5 6 - 7	4 - 6 6 - 8	4.5 - 5 6.35 - 8	5 - 5	5 - 6	5 - 8	6 - 6
MST-20	**MSTS-20**	5 - 5 6.35 - 8	5 - 6 8 - 8	5 - 8 8 - 9.525*1	6 - 6 8 - 10	6 - 6.35 10 - 10	6 - 7	6 - 8	6 - 10
MST-25	**MSTS-25**	5 - 6 8 - 9.525*1	6 - 6 8 - 10	6 - 6.35 8 - 12	6 - 8 9.525 - 10	6 - 10 10 - 10	6.35 - 8 10 - 11*1	6.35 - 10 10 - 12	8 - 8 12 - 12
MST-32	**MSTS-32**	6 - 8 10 - 12	6.35 - 8 10 - 14	8 - 8 12 - 12	8 - 10 12 - 14	8 - 12 14 - 14	9.525 - 12 14 - 16	10 - 10	10 - 11
MST-40	**MSTS-40**	8 - 9.525	10 - 10	12 - 12	14 - 14	15 - 15	16 - 16	16 - 18*1	18 - 18
MST-50	**MSTS-50**	12 - 12	14 - 14	15 - 15	16 - 18				
MST-63	**MSTS-63**	14 - 14							

- All products are provided with hex socket set screw.
- 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.

*1 : Only **MSTS-**** is standard product. For **MST-**** , use the additional modification service **BT**. ➡ P.803

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MST-8	4	0.1	78000	1.2×10^{-8}	25	0.1	2	±0.2	1.4
MST-12	6	0.4	52000	8.3×10^{-8}	45	0.1	2	±0.3	3.7
MST-16	8	0.5	39000	3.3×10^{-7}	80	0.1	2	±0.4	8.1
MST-20	10	1	31000	9.0×10^{-7}	170	0.1	2	±0.4	14
MST-25	12	2	25000	2.6×10^{-6}	380	0.15	2	±0.5	27
MST-32	16	4	19000	9.6×10^{-6}	500	0.15	2	±0.5	60
MST-40	20	8	15000	3.2×10^{-5}	700	0.2	2	±0.5	130
MST-50	25	16	12000	1.0×10^{-4}	1800	0.2	2	±0.5	260
MST-63	35	32	10000	3.2×10^{-4}	3100	0.2	2	±0.5	490
MSTS-8	4	0.2	78000	3.1×10^{-8}	50	0.1	2	±0.2	3
MSTS-12	6	0.3	52000	2.1×10^{-7}	64	0.1	2	±0.3	9.3
MSTS-16	8	0.5	39000	8.4×10^{-7}	85	0.1	2	±0.3	21
MSTS-20	10	1	31000	2.4×10^{-6}	250	0.1	2	±0.3	38
MSTS-25	12	2	25000	6.8×10^{-6}	330	0.15	2	±0.4	71
MSTS-32	16	3.5	19000	2.6×10^{-5}	850	0.15	2	±0.5	160
MSTS-40	20	8	15000	8.7×10^{-5}	1000	0.2	2	±0.5	350
MSTS-50	25	15	12000	2.7×10^{-4}	1400	0.2	2	±0.5	700
MSTS-63	35	35	10000	8.4×10^{-4}	1800	0.2	2	±0.5	1300

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

- Part number specification

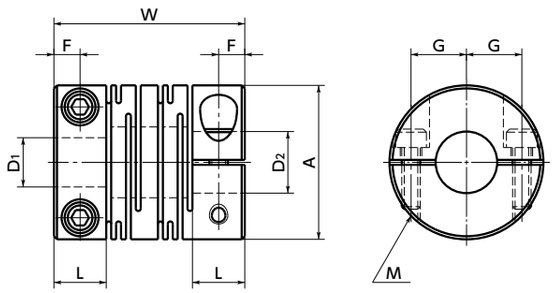
MSTS-25 - 9.525-10
1　2

Couplicon®

MST-C/MSTS-C Flexible coupling - Slit - type - Clamping type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MST-C Made of aluminum alloy
MSTS-C Made of all stainless steel
Outside diameter ϕ40 - ϕ63



Dimensions

Unit : mm

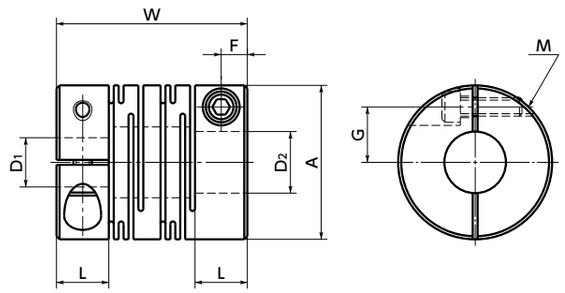
Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
MST-12C	12	5	18.5	2.5	4	M2	0.5
MST-16C	16	6.5	23	3.25	5	M2.5	1
MST-20C	20	7.5	26	3.75	6.5	M2.5	1
MST-25C	25	8.5	31	4.25	9	M3	1.5
MST-32C	32	12	41	6	11	M4	2.5
MST-40C	40	17	56	8.5	14	M5	4
MST-50C	50	21	71	10.5	18	M6	8
MST-63C	63	26	90	13	24	M8	16
MSTS-12C	12	5	18.5	2.5	4	M2	0.5
MSTS-16C	16	6.5	23	3.25	5	M2.5	1
MSTS-20C	20	7.5	26	3.75	6.5	M2.5	1
MSTS-25C	25	8.5	31	4.25	9	M3	1.5
MSTS-32C	32	12	41	6	11	M4	2.5
MSTS-40C	40	17	56	8.5	14	M5	4
MSTS-50C	50	21	71	10.5	18	M6	8
MSTS-63C	63	26	90	13	24	M8	16

Part Number		Standard Bore Diameter D_1-D_2 2							
MST-12C	**MSTS-12C**	4 - 4	4 - 5	4.5 - 5	5 - 5				
MST-16C	**MSTS-16C**	4.5 - 5	4.5 - 6	5 - 5	5 - 6	6 - 6			
MST-20C	**MSTS-20C**	5 - 6 6.35 - 8	5 - 6.35 8 - 8	5 - 7	5 - 8	6 - 6	6 - 6.35	6 - 7	6 - 8
MST-25C	**MSTS-25C**	5 - 6 8 - 9.525	6 - 6 8 - 10	6 - 6.35 9.525 - 10	6 - 8 10 - 10	6 - 10	6.35 - 8	6.35 - 10	8 - 8
MST-32C	**MSTS-32C**	8 - 8 10 - 12	8 - 9.525 10 - 14	8 - 10 12 - 12	8 - 12 12 - 14	9.525 - 10	9.525 - 12	10 - 10	10 - 11
MST-40C	**MSTS-40C**	8 - 8 15 - 16	8 - 10 16 - 16	10 - 10	12 - 12	12 - 14	14 - 14	14 - 16	15 - 15
MST-50C	**MSTS-50C**	12 - 14	14 - 14	15 - 15	16 - 16	18 - 18			
MST-63C	**MSTS-63C**	14 - 14	16 - 16	18 - 18					

- All products are provided with hex socket head cap screw.
- 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
- **MST-C** has variable slit shapes depending on the size. See the Slit Details.

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

MSTS-C Made of all stainless steel
Outside diameter ϕ12 - ϕ32



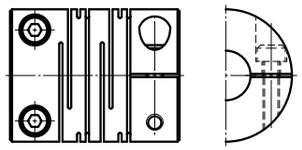
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MST-12C	5	0.4	52000	7.8×10^{-8}	45	0.1	2	±0.3	3.6
MST-16C	6	0.5	39000	3.4×10^{-7}	80	0.1	2	±0.4	9.2
MST-20C	8	1	31000	9.1×10^{-7}	170	0.1	2	±0.4	16
MST-25C	10	2	25000	2.6×10^{-6}	380	0.15	2	±0.5	28
MST-32C	14	4	19000	9.7×10^{-6}	500	0.15	2	±0.5	64
MST-40C	18	8	15000	3.3×10^{-5}	700	0.2	2	±0.5	140
MST-50C	22	16	12000	1.0×10^{-4}	1800	0.2	2	±0.5	270
MST-63C	30	32	10000	3.2×10^{-4}	3100	0.2	2	±0.5	530
MSTS-12C	5	0.3	52000	2.2×10^{-7}	64	0.1	2	±0.2	10
MSTS-16C	6	0.5	39000	9.0×10^{-7}	85	0.1	2	±0.3	25
MSTS-20C	8	1	31000	2.5×10^{-6}	250	0.1	2	±0.3	43
MSTS-25C	10	2	25000	7.1×10^{-6}	330	0.15	2	±0.4	78
MSTS-32C	14	3.5	19000	2.7×10^{-5}	850	0.15	2	±0.5	170
MSTS-40C	18	8	15000	9.0×10^{-5}	1000	0.2	2	±0.5	370
MSTS-50C	22	15	12000	2.8×10^{-4}	1400	0.2	2	±0.5	750
MSTS-63C	30	35	10000	8.8×10^{-4}	1800	0.2	2	±0.5	1400

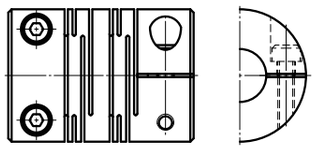
*1 : Correction of rated torque due to load fluctuation is not required.
*2 : These are values with max. bore diameter.

- Slit Details

MST-C



Outside diameter ϕ 12-ϕ 32



Outside diameter ϕ40 - ϕ63

- Part number specification

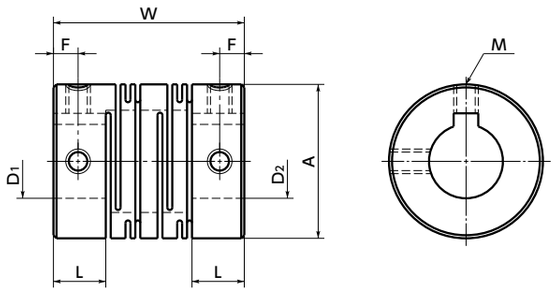
MST-40C - 12-14
1　2

Couplicon®

MST-K/MSTS-K Flexible coupling - Slit - type - Set screw + Key type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MST-K Made of aluminum alloy
MSTS-K Made of all stainless steel



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N・m)
MST-32K	32	12	41	6	M4	1.7
MST-40K	40	17	56	8.5	M5	4
MST-50K	50	21	71	10.5	M6	7
MST-63K	63	26	90	13	M8	15
MSTS-32K	32	12	41	6	M4	1.7
MSTS-40K	40	17	56	8.5	M5	4
MSTS-50K	50	21	71	10.5	M6	7
MSTS-63K	63	26	90	13	M8	15

Part Number	Standard Bore Diameter (dimensional allowance H8) D1-D2 2		
MST-32K	12 - 12	14 - 14	
MST-40K	14 - 14	16 - 16	18 - 18
MST-50K	16 - 16	18 - 18	20 - 20
MST-63K	20 - 20	25 - 25	30 - 30
MSTS-32K	12 - 12	14 - 14	
MSTS-40K	14 - 14	16 - 16	18 - 18
MSTS-50K	16 - 16	18 - 18	20 - 20
MSTS-63K	20 - 20	25 - 25	

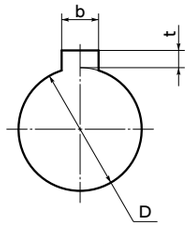
- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MST-32K	14	4	19000	9.6×10^{-6}	500	0.15	2	±0.5	59
MST-40K	18	8	15000	3.2×10^{-5}	700	0.2	2	±0.5	130
MST-50K	20	16	12000	1.0×10^{-4}	1800	0.2	2	±0.5	270
MST-63K	30	32	10000	3.2×10^{-4}	3100	0.2	2	±0.5	490
MSTS-32K	14	3.5	19000	2.6×10^{-5}	850	0.15	2	±0.5	160
MSTS-40K	18	8	15000	8.6×10^{-5}	1000	0.2	2	±0.5	340
MSTS-50K	20	15	12000	2.8×10^{-4}	1400	0.2	2	±0.5	730
MSTS-63K	30	35	10000	8.5×10^{-4}	1800	0.2	2	±0.5	1300

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

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway b Standard Dimension	Keyway b Allowance (JS9)	Keyway t Standard Dimension	Keyway t Allowance (JS9)	Key Nominal Dimension b×h
12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・20	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
25・30	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7

- Excerpt from JIS B 1301

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

MST-32K - 12-12
1　2

Couplicon®

MWS/MWSS Flexible coupling - Slit - type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

Structure

- Set Screw type ➡ P.119

MWS Made of aluminum alloy

MWSS Made of all stainless steel

- Clamping type ➡ P.121

MWS-C Made of aluminum alloy

MWSS-C Made of all stainless steel

- Recommended applicable motor

	MWS	MWSS
Servomotor	–	–
Stepping motor	◎	◎
General-purpose motor	△	△

◎: Excellent　○: Very good　△: Available

- Property

	MWS	MWSS
Zero Backlash	◎	◎
High Torque	○	○
High Torsional Stiffness	○	○
Corrosion Resistance (All S.S.)	–	◎

◎: Excellent　○: Very good

- This is a metal spring coupling with single-piece construction. Slits are made into a cylindrical material.
- A plate spring formed by slits allows angular misalignment, and end-play to be accepted.
- There are two types of units made of aluminum alloy or all stainless steel.

- Application

Transport device/XY stage/Parts feeder

- Material/Finish

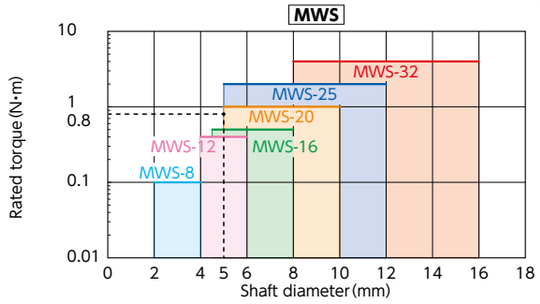
RoHS2 Compliant

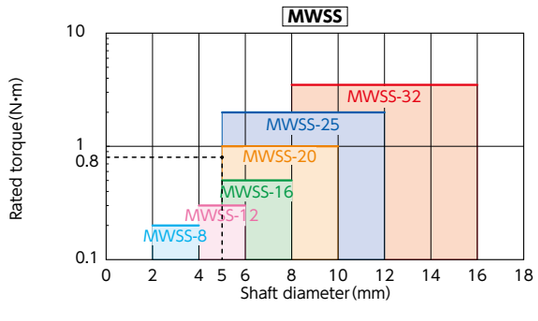
	MWS / MWS-C	MWSS / MWSS-C
Main body	A2017 Alumite Treatment	SUS303
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film	SUSXM7

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 5 and load torque of 0.8 N•m, the selected size for **MWS** **MWSS** is **MWS-20** **MWSS-20**.

Related Products

The slit-type coupling **XWSS** SUS316L material, finished with clean washing and clean packaging, which is best suited to FPD and semiconductor manufacturing equipments is available.
➡ P.227

- Part number specification

MWS-20C-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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

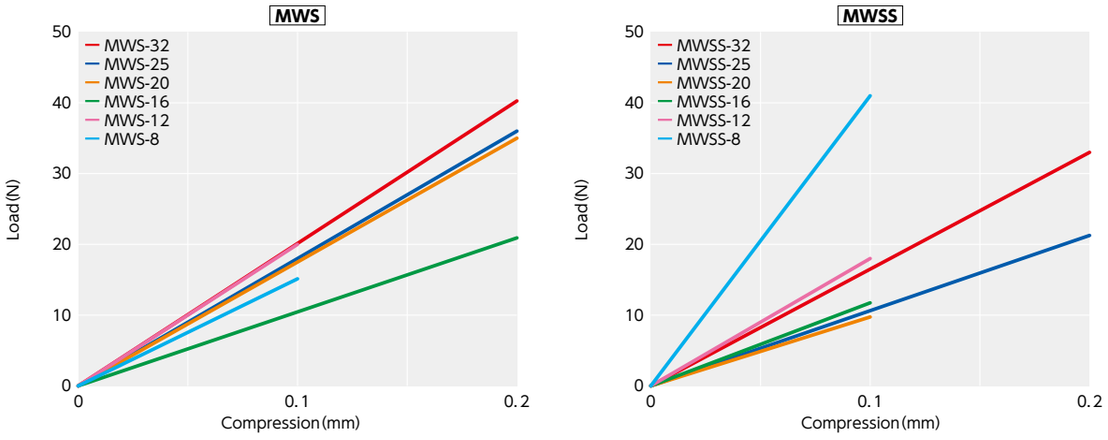
Couplicon®

MWS/MWSS Flexible coupling - Slit - type

WEB Selection Tool　WEB CAD Download　SUS Stainless steel　Zero Backlash

Technical Information

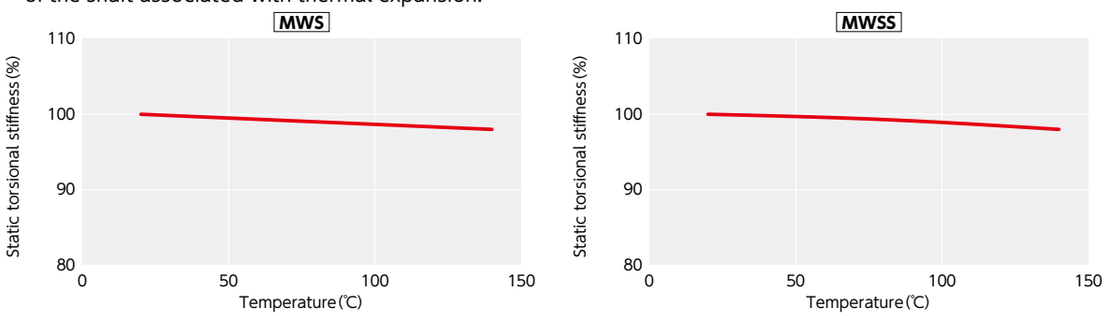
● Thrust Reaction Force



● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.

MWS **MWSS** 's change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **MWSS-C** .

Unit : N・m

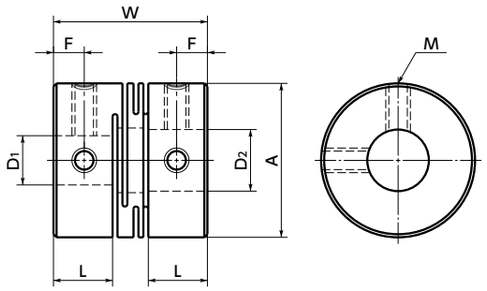
Part Number	Bore Diameter (mm)				
	5	6	8	10	12
MWSS-20C	0.9				
MWSS-25C	1.2	1.4	1.9		
MWSS-32C			1.9	2.4	3.4

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MWSS-C** Dimension table.

MWS/MWSS Flexible coupling - Slit - type - Set screw type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MWS Made of aluminum alloy
MWSS Made of all stainless steel



Dimensions

Unit : mm

Part Number 1	A	L	W	F	M	Screw Tightening Torque (N・m)	Standard Bore Diameter (dimensional allowance H8) D1-D2 2					
MWS-8	8	3.4	10	1.7	M2	0.3	2 - 2	3 - 3				
MWS-12	12	5.2	14	2.5	M2.5	0.5	4 - 4	4 - 5	4.5 - 5	5 - 5		
MWS-16	16	6.8	18	3	M3	0.7	4.5 - 5	5 - 5	5 - 6	6 - 6		
MWS-20	20	7.65	20	3	M3	0.7	5 - 6	5 - 8	6 - 6	6 - 8	8 - 8	
MWS-25	25	9.6	25	4	M4	1.7	5 - 6	6 - 6	6 - 8	8 - 8	8 - 10	10 - 10
MWS-32	32	12.6	32	6	M4	1.7	8 - 8	8 - 10	10 - 10	10 - 12	12 - 12	12 - 14
MWSS-8	8	3.4	10	1.7	M2	0.3	2 - 2	3 - 3				
MWSS-12	12	5.2	14	2.5	M2.5	0.5	4 - 4	4 - 5	4.5 - 5	5 - 5		
MWSS-16	16	6.8	18	3	M3	0.7	5 - 5	5 - 6	6 - 6			
MWSS-20	20	7.65	20	3	M3	0.7	5 - 6	5 - 8	6 - 6	6 - 8	8 - 8	
MWSS-25	25	9.6	25	4	M4	1.7	5 - 6	6 - 6	6 - 8	8 - 8	8 - 10	10 - 10
MWSS-32	32	12.6	32	6	M4	1.7	8 - 8	8 - 10	10 - 10	10 - 12	12 - 12	12 - 14

- All products are provided with hex socket set screw.
- 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.

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MWS-8	4	0.1	78000	1.0×10^{-8}	24	1	±0.1	1
MWS-12	6	0.4	52000	7.0×10^{-8}	80	1	±0.1	3.1
MWS-16	8	0.5	39000	2.8×10^{-7}	180	1	±0.2	7.4
MWS-20	10	1	31000	7.5×10^{-7}	200	1	±0.2	12
MWS-25	12	2	25000	2.3×10^{-6}	780	1	±0.2	24
MWS-32	16	4	19000	8.0×10^{-6}	1100	1	±0.2	50
MWSS-8	4	0.2	78000	2.4×10^{-8}	49	1	±0.1	2.7
MWSS-12	6	0.3	52000	1.8×10^{-7}	140	1	±0.1	7.8
MWSS-16	8	0.5	39000	7.2×10^{-7}	240	1	±0.1	18
MWSS-20	10	1	31000	2.0×10^{-6}	330	1	±0.1	32
MWSS-25	12	2	25000	6.1×10^{-6}	720	1	±0.2	63
MWSS-32	16	3.5	19000	2.1×10^{-5}	1300	1	±0.2	130

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

- Part number specification

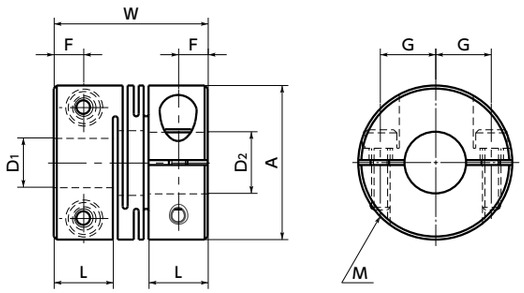
MWSS-32 - 10-12
1　2

Couplicon®

MWS-C/MWSS-C Flexible coupling - Slit - type - Clamping type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MWS-C Made of aluminum alloy



Dimensions

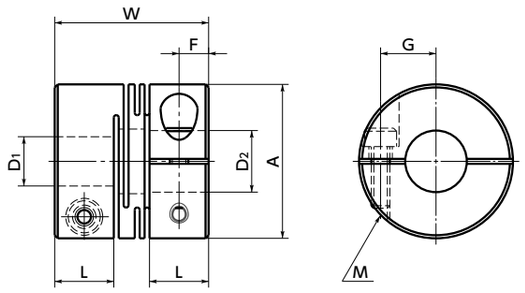
Unit : mm

Part Number 1	A	L	W	F	G	M	Screw Tightening Torque (N・m)	Standard Bore Diameter D1-D2 2						
MWS-12C	12	5.2	14	2.6	4	M2	0.5	4 - 4	4 - 5	4.5 - 5	5 - 5			
MWS-16C	16	6.8	18	3.4	5	M2.5	1	4.5 - 5	5 - 5	5 - 6	6 - 6			
MWS-20C	20	7.65	20	3.8	6.5	M2.5	1	5 - 6	5 - 8	6 - 6	6 - 8	8 - 8		
MWS-25C	25	9.6	25	4.8	9	M3	1.5	5 - 6	6 - 6	6 - 8	6 - 10	8 - 8	8 - 10	10 - 10
MWS-32C	32	12.6	32	6.3	11	M4	2.5	8 - 8	8 - 10	10 - 10	10 - 12	12 - 12	12 - 14	
MWSS-12C	12	5.2	14	2.6	4	M2	0.5	4 - 4	4 - 5	4.5 - 5	5 - 5			
MWSS-16C	16	6.8	18	3.4	5	M2.5	1	4.5 - 5	5 - 5	5 - 6	6 - 6			
MWSS-20C	20	7.65	20	3.8	6.5	M2.5	1	5 - 6	5 - 8	6 - 6	6 - 7	6 - 8	8 - 8	
MWSS-25C	25	9.6	25	4.8	9	M3	1.5	5 - 6	6 - 6	6 - 8	6 - 10	8 - 8	8 - 10	10 - 10
MWSS-32C	32	12.6	32	6.3	11	M4	2.5	8 - 8	8 - 10	10 - 10	10 - 12	12 - 14	12 - 14	

- All products are provided with hex socket head cap screw.
- 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

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

MWSS-C Made of all stainless steel



Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MWS-12C	5	0.4	52000	6.4×10^{-8}	80	1	±0.1	3
MWS-16C	6	0.5	39000	2.9×10^{-7}	180	1	±0.2	8
MWS-20C	8	1	31000	7.5×10^{-7}	200	1	±0.2	13
MWS-25C	10	2	25000	2.3×10^{-6}	780	1	±0.2	25
MWS-32C	14	4	19000	8.1×10^{-6}	1100	1	±0.2	53
MWSS-12C	5	0.3	52000	1.8×10^{-7}	140	1	±0.1	8.5
MWSS-16C	6	0.5	39000	7.8×10^{-7}	240	1	±0.1	21
MWSS-20C	8	1	31000	2.1×10^{-6}	330	1	±0.1	36
MWSS-25C	10	2	25000	6.3×10^{-6}	720	1	±0.2	69
MWSS-32C	14	3.5	19000	2.2×10^{-5}	1300	1	±0.2	150

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

- Part number specification

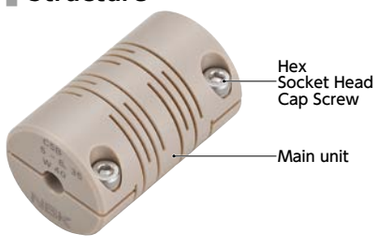
MWS-16C - 5-6
1　2

Couplicon®

MSXP-C-W-SP Coupling for Vacuum Variable Capacitor NEW

WEB Selection Tool　WEB CAD Download　Zero Backlash　Electrical Insulation

Structure



- This is a resin spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- PEEK superior in physical properties and electrical insulation is adopted.
- A plate spring formed by a slit allows eccentricity, argument, and end-play to be accepted.

- Property

	MSXP-C-W-SP
Zero Backlash	◎
Allowable Misalignment	○
Electrical Insulation	◎
Allowable Operating Temperature	−20℃ to 120℃

- Application

High frequency power / Matching box

- Material/Finish　RoHS2 Compliant

	MSXP-C-W-SP
Main unit	PEEK (Polyether ether ketone)
Hex Socket Head Cap Screw	SUSXM7

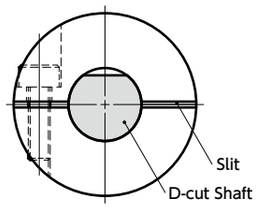
⚠ Precautions for Use

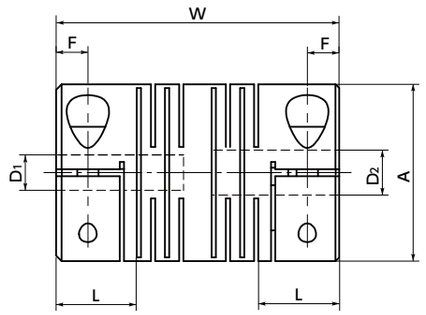
- Mounting on D-cut shaft

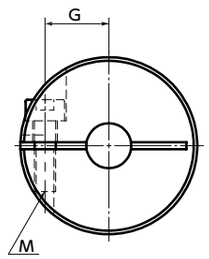
In principle, use a round shaft.

If a D-cut shaft is used, an excessive load due to tightening by the hex socket head cap screw may damage the coupling, depending on the mounting position of the D-cut surface of the shaft.

When using a D-cut shaft, mount so that the D-cut surface of the shaft avoids contact with the coupling slit as much as possible.







Dimensions

Unit : mm

Part Number 1	A	L	W	F	G	M	D1	D2	Screw Tightening Torque (N・m)
MSXP-25C-W40-5-6.35-SP3	25	11.4	40	4.5	9	M3	5	6.35	0.6

- All products are provided with hex socket head cap screw. ➡ P.258

Performance

Part Number	Rated torque*1 (N・m)	Max. torque*1 (N・m)	Max. Rotational Frequency (min^{-1})	Moment of Inertia($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment(°)	Max. Axial Misalignment (mm)	Mass(g)
MSXP-25C-W40-5-6.35-SP3	1.3	2.6	6000	1.9×10^{-6}	50	0.3	1.2	±0.33	23

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

- Part number specification

MSXP-25C-W40-5-6.35-SP3

1

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Not Available	Available / Add'l charge	Changed to the S.S. screw

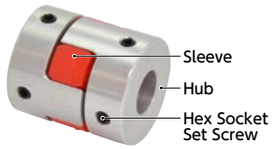
MJC Flexible Coupling - Jaw - type

Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

Couplicon®

Structure

● Set Screw Type ➡ P.131
MJC--**** Tight Fit
MJC--E**** Easy Fit



● Clamping Type ➡ P.133
MJC-CS-**** Tight Fit
MJC-CS-E**** Easy Fit

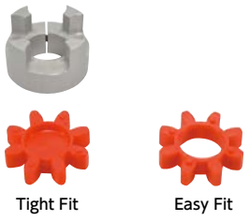
● Set Screw + Key Type ➡ P.135
MJC-K-**** Tight Fit
MJC-K-E**** Easy Fit

● Clamping + Key Type ➡ P.137
MJC-CSK-**** Tight Fit
MJC-CSK-E**** Easy Fit

● Sleeve
Outside Diameter: ϕ14 - ϕ30

Outside Diameter: ϕ40

Outside Diameter: ϕ55 - ϕ95



● Material/Finish

RoHS2 Compliant

	MJC / MJC-CS / MJC-K / MJC-CSK
Hub	A2017 Alumite Treatment
Sleeve	Polyurethane
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film (Black)
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Part number specification

MJC - 30CSK - ERD - 10-11

Product Code | Size | Sleeve Type | 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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

● Applicable motors

	Tight Fit	Easy Fit
Servomotor	◎	○
Stepping Motor	◎	◎
General-Purpose Motor	◎	◎

◎: Excellent ○: Very good

● Property

	Tight Fit	Easy Fit
Zero Backlash	○	–
High Torque	◎	◎
Allowable Misalignment	○	○
Vibration Absorption	◎	◎
Electrical Insulation	◎	◎
Assembling	○	◎
Allowable Operating Temperature	−20℃ to 60℃	−20℃ to 60℃

◎: Excellent ○: Very good

- This is a jaw type flexible coupling.
- Tight Fit enables transmission with zero backlash at low torque.
- Easy fit allows you to assemble and partition the hub and sleeve smoothly.
- Excellent flexibility allows eccentricity, angular misalignment and twisting vibration to be accepted.
- It has electrical insulation. Resistance value: Not less than 2 MΩ
- There are four types of sleeve hardness. Please select desirable units according to usage conditions including torque and misalignment.

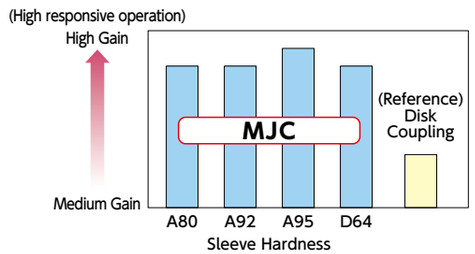
● Sleeve Type

Sleeve Type	Sleeve Hardness (JIS)			
	A80	A92	A98	D64
Tight Fit	BL	WH	RD	GR
Easy Fit	EBL	EWH	ERD	EGR

Small ← Rated Torque / Max. Torque → Large
Large ← Allowable Misalignment → Small

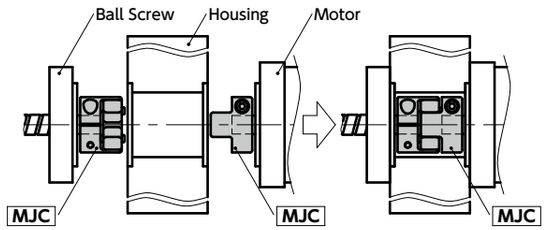
● Tight Fit
The hub and sleeve are press-fit and can be used under zero backlash*1.Since the sleeve's vibration absorption can raise the gain of a servomotor, this unit can achieve high responsive operation exceeding the Disk coupling.

*1: For the torque used under zero backlash, please refer to dimensional table.



● Tight Fit Applications
XY stage / Index table / Machine tool / Injection molding machine

● Easy Fit
This unit allows you to easily assemble and partition the hub and sleeve. This allows you to reduce the time of assembling the unit and maintenance.It is possible to mount a hub on the shaft in advance and easily assemble the unit even in a location where the coupling is less-visible.



● Easy Fit Applications
Transport device / Mixer / Ventilator / Pump / Dispenser

Couplicon®

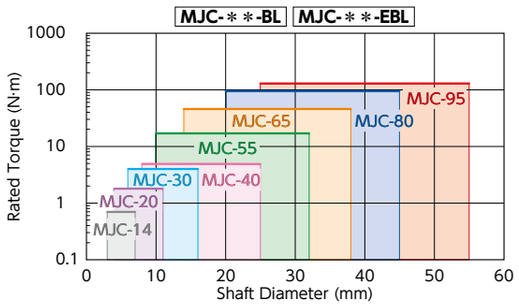
MJC Flexible Coupling - Jaw - type

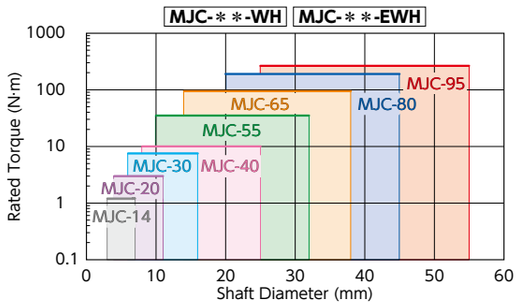
Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

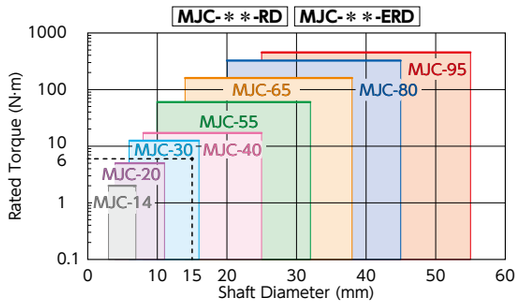
Selection

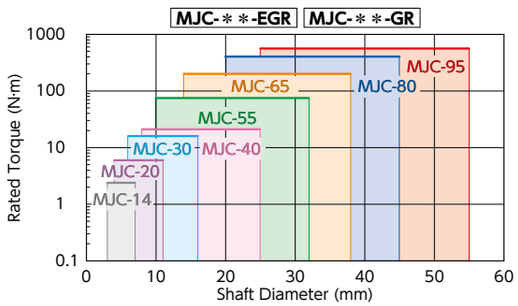
● Selection based on shaft diameter and rated torque

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 ϕ15 and load torque of 6 N•m, the selected size for **[MJC-＊＊-RD]**, **[MJC-＊＊-ERD]** is **[MJC-30-RD]**, **[MJC-30-ERD]**.

● Selection based on the rated output of the servomotor

Rated Output (W)	Servomotor Specifications			Selection Outside Diameter Size			
	Diameter of Motor Shaft (mm)	Rated Torque (N・m)	Instantaneous Max. Torque (N・m)	MJC-**-BL MJC-**-EBL	MJC-**-WH MJC-**-EWH	MJC-**-RD MJC-**-ERD	MJC-**-GR MJC-**-EGR
10	5 - 6	0.032	0.096	14	14	14	14
20	5 - 6	0.064	0.19	14	14	14	14
30	5 - 7	0.096	0.29	14	14	14	14
50	6 - 8	0.16	0.48	20	20	20	20
100	8	0.32	0.95	20	20	20	20
200	9 - 14	0.64	1.9	30	30	30	30
400	14	1.3	3.8	30	30	30	30
750	16 - 19	2.4	7.2	–	40	40	40

● Motor specifications are based on general values.For details, see the motor manufacturer's catalogs.This is the size for cases where devices such as reduction gears are not used.

● Selection Example

In case of motor specification of shaft diameter of ϕ9 and rated torque of 0.64 N•m, the selected size of **[MJC-＊＊-BL]** is as follows.

- Set Screw Type —— **[MJC-30-BL]**
- Clamping Type —— **[MJC-30CS-BL]**
- Set Screw + Key Type —— **[MJC-30K-BL]**
- Clamping + Key Type —— **[MJC-30CSK-BL]**

Couplicon®

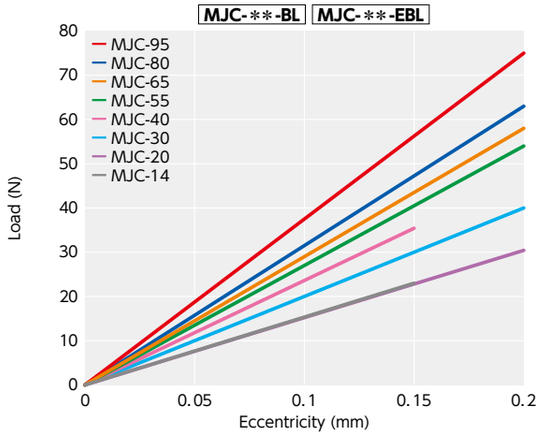
MJC Flexible Coupling - Jaw - type

Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

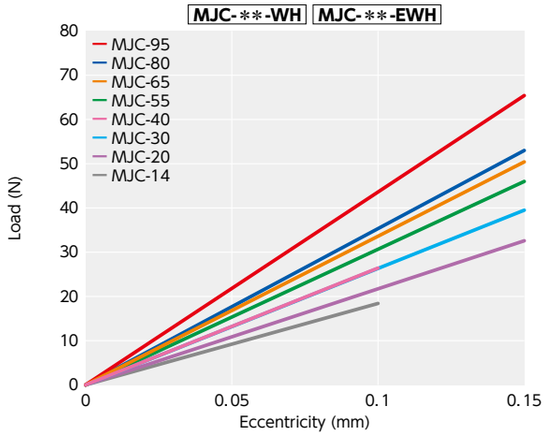
Technical Information

● Eccentric Reaction Force

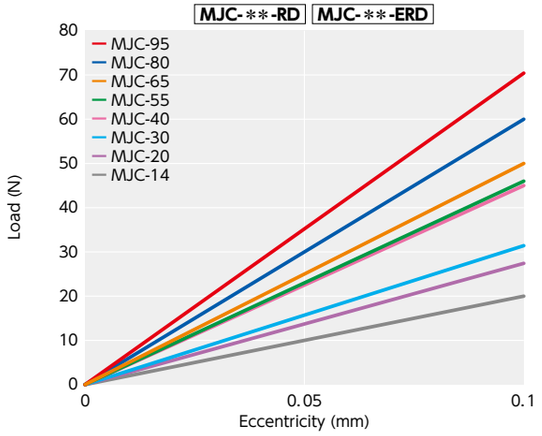
MJC--BL** **MJC-**-EBL**



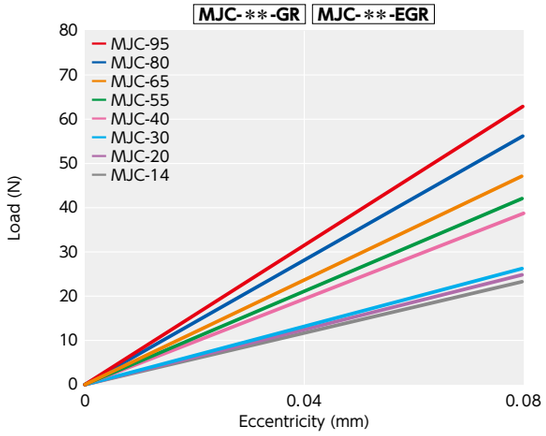
MJC--WH** **MJC-**-EWH**



MJC--RD** **MJC-**-ERD**

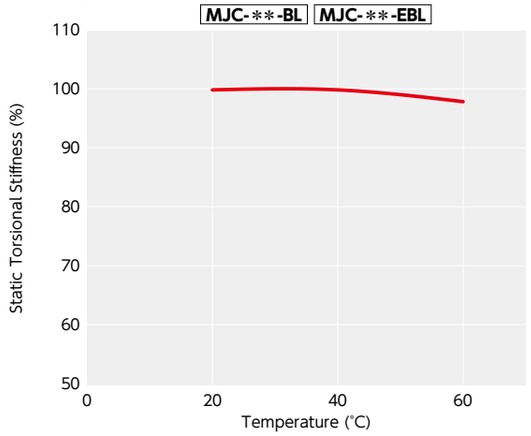


MJC--GR** **MJC-**-EGR**

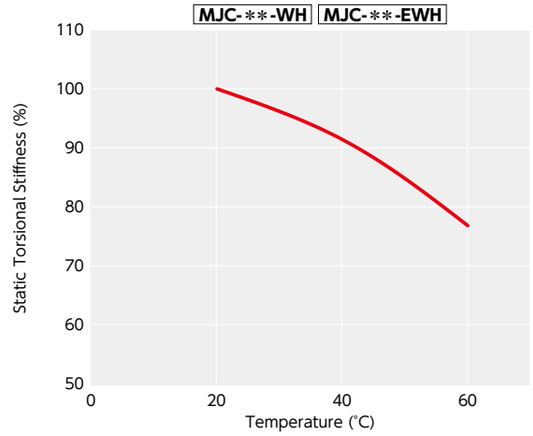


● Change in static torsional stiffness due to temperature

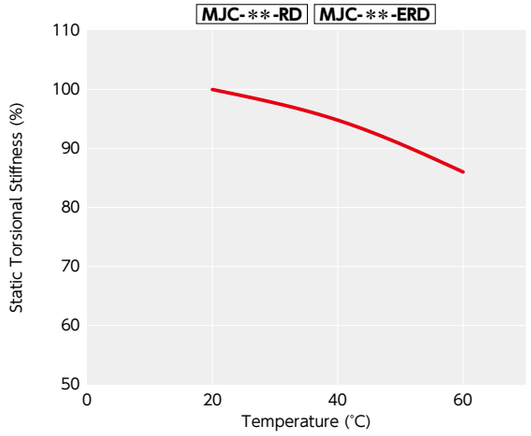
MJC--BL** **MJC-**-EBL**



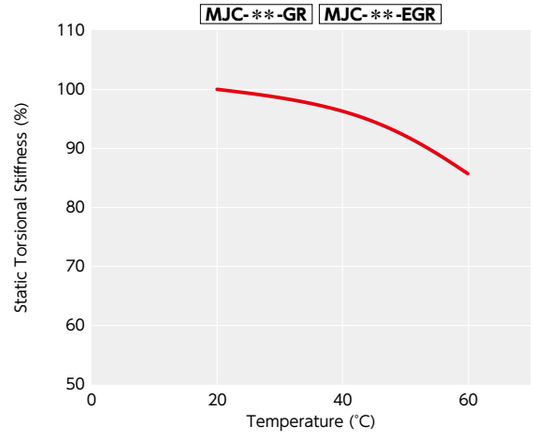
MJC--WH** **MJC-**-EWH**



MJC--RD** **MJC-**-ERD**



MJC--GR** **MJC-**-EGR**



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.
Before using the unit, be aware of the deterioration of responsiveness.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the max. torque of **MJC-CS**.

Unit : N・m

Part Number	Bore Diameter (mm)																														
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55
MJC-14CS	0.8	1.4	1.7	2.1	1.3	1.4	1.5																									
MJC-20CS		3.4	4.1	4.9	6.4	6.9	7.9	9.4	5.1	6	8																					
MJC-30CS					4	4.9	6.6	9.3	13.4	14.6	17.3	20	15.3	21.2	27.2																	
MJC-40CS								18	23.2	24.8	28.2	31.7	38.5																			
MJC-55CS									29.9	33	39.5	46	59	65.5	72	78.5	85	91.5	98	111	124	130		117	124							
MJC-65CS													104	118	133	148	162	177	192	221	251	265	310	339	368	185	200					
MJC-80CS																			151	170	189	198	227	246	265	293	322	341	360	500		
MJC-95CS																						347	415	460	500	500	500	500	500	500	500	500

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MJC-CS** dimensional table.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the max. torque of **MJC-CS**.

Unit : N・m

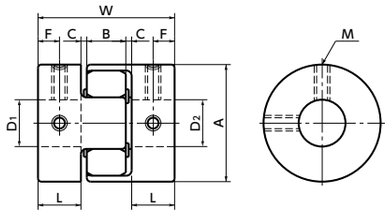
Part Number	Bore Diameter (inch)																					
	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
MJC-14CS	0.9	1.9	1.4																		
MJC-20CS		4.5	6.9	9.3	5.1																
MJC-30CS			4.9	9.1	13.4	17.6	7.5	17	26.4												
MJC-40CS				17.7	23.2	28.6	34.1	39.5													
MJC-55CS					29.9	40.2	50.5	60.8	71.1	81.5	91.8	102	112	122	133	112	123				
MJC-65CS							85	108	131	155	178	201	225	248	271	318	365	184	200		
MJC-80CS								96	111	126	141	157	172	187	202	232	262	292	322	353	500
MJC-95CS												249	285	320	356	428	500	500	500	500	500

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MJC-CS** dimensional table.

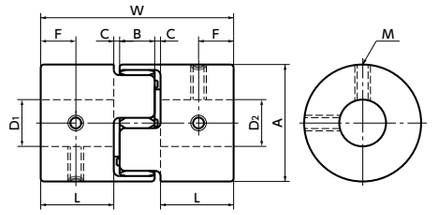
Couplicon®

MJC Flexible coupling - Jaw-type - Set screw type

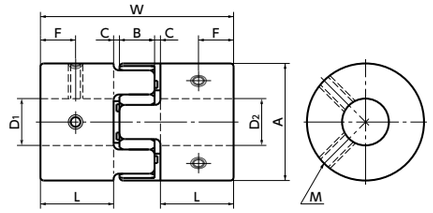
WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation



Outside Diameter: ϕ14 - ϕ30

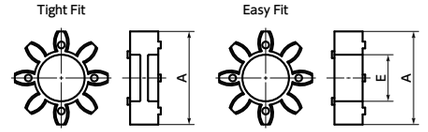


Outside Diameter: ϕ40



Outside Diameter: ϕ55 - ϕ95

● Sleeve Details



● Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

Dimensions

Unit : mm

Part Number ◀1	A	L	W	B	C*1	Sleeve E	F	M	Screw Tightening Torque (N・m)
MJC-14	14	7	22	6	1	4.5	3.5	M3	0.7
MJC-20	20	10	30	8	1	7	5	M3	0.7
MJC-30	30	11	35	10	1.5	11	5.5	M4	1.7
MJC-40	40	25	66	12	2	18	12.5	M5	4
MJC-55	55	30	78	14	2	27.5	15	M6	7
MJC-65	65	35	90	15	2.5	31	17.5	M8	15
MJC-80	80	45	114	18	3	37	22.5	M8	15
MJC-95	95	50	126	20	3	45.5	25	M8	15

*1 : Use with C Dimension

Part Number	Standard metric bore diameter (dimensional allowance H8) D1・D2 ◀3																													
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55
MJC-14	●	●	●	●	●	●	●																								
MJC-20		●	●	●	●	●	●	●	●	●	●																				
MJC-30					●	●	●	●	●	●	●	●	●	●	●																
MJC-40								●	●	●	●	●	●	●	●	●	●	●	●	●	●										
MJC-55										●	●	●	●	●	●	●	●	●	●	●	●	●	●								
MJC-65													●	●	●	●	●	●	●	●	●	●	●	●	●						
MJC-80																		●	●	●	●	●	●	●	●	●	●	●			
MJC-95																					●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard inch bore diameter (dimensional allowance H7) D1・D2 ◀3																						
	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
MJC-14	●	●	●																		
MJC-20		●	●	●	●																
MJC-30			●	●	●	●	●	●	●												
MJC-40				●	●	●	●	●	●	●	●										
MJC-55					●	●	●	●	●	●	●	●	●	●	●						
MJC-65							●	●	●	●	●	●	●	●	●	●	●	●	●		
MJC-80											●	●	●	●	●	●	●	●	●	●	●
MJC-95															●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- In a case where the bore diameter are ϕ3,ϕ4 and ϕ 1/8, the setscrew is used in only one place.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with set screw type for one side and clamping type or other type for the other side is available upon request.

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

Performance

Part Number	Sleeve ◀2 Tight Fit	Sleeve ◀2 Easy Fit	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque (N・m)	Max. Rotational Frequency (min-1)	Moment*2 of Inertia (kg・m2)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
MJC-14	BL	EBL	7	0.7	1.4	0.1	45000	2.0 x 10-7	8	0.15	1	+0.6 0	6.6	A80
MJC-20	BL	EBL	11	1.8	3.6	0.2	31000	1.1 x 10-6	16	0.2	1	+0.8 0	17	
MJC-30	BL	EBL	16	4	8	0.5	21000	6.2 x 10-6	46	0.2	1	+1.0 0	44	
MJC-40	BL	EBL	25	4.9	9.8	1.2	15000	3.7 x 10-5	380	0.15	1	+1.2 0	130	
MJC-55	BL	EBL	32	17	34		11000	1.6 x 10-4	1400	0.2	1	+1.4 0	320	
MJC-65	BL	EBL	38.1	46	92		9000	3.6 x 10-4	2800	0.2	1	+1.5 0	520	
MJC-80	BL	EBL	45	95	190		7000	1.1 x 10-3	3200	0.2	1	+1.8 0	1000	
MJC-95	BL	EBL	55	130	260		6000	2.3 x 10-3	3600	0.2	1	+2.0 0	1500	
MJC-14	WH	EWH	7	1.2	2.4	0.1	45000	2.0 x 10-7	14	0.1	1	+0.6 0	6.6	A92
MJC-20	WH	EWH	11	3	6	0.2	31000	1.1 x 10-6	29	0.15	1	+0.8 0	17	
MJC-30	WH	EWH	16	7.5	15	0.5	21000	6.2 x 10-6	73	0.15	1	+1.0 0	44	
MJC-40	WH	EWH	25	10	20	1.2	15000	3.7 x 10-5	570	0.1	1	+1.2 0	130	
MJC-55	WH	EWH	32	35	70		11000	1.6 x 10-4	1600	0.15	1	+1.4 0	320	
MJC-65	WH	EWH	38.1	95	190		9000	3.6 x 10-4	3000	0.15	1	+1.5 0	520	
MJC-80	WH	EWH	45	190	380		7000	1.1 x 10-3	5300	0.15	1	+1.8 0	1000	
MJC-95	WH	EWH	55	265	530		6000	2.3 x 10-3	6200	0.15	1	+2.0 0	1500	
MJC-14	RD	ERD	7	2	4	0.1	45000	2.0 x 10-7	22	0.1	1	+0.6 0	6.6	A98
MJC-20	RD	ERD	11	5	10	0.2	31000	1.1 x 10-6	55	0.1	1	+0.8 0	17	
MJC-30	RD	ERD	16	12.5	25	0.5	21000	6.2 x 10-6	130	0.1	1	+1.0 0	44	
MJC-40	RD	ERD	25	17	34	1.2	15000	3.7 x 10-5	1200	0.1	1	+1.2 0	130	
MJC-55	RD	ERD	32	60	120		11000	1.6 x 10-4	2600	0.1	1	+1.4 0	320	
MJC-65	RD	ERD	38.1	160	320		9000	3.6 x 10-4	4900	0.1	1	+1.5 0	520	
MJC-80	RD	ERD	45	325	650		7000	1.1 x 10-3	6500	0.1	1	+1.8 0	1000	
MJC-95	RD	ERD	55	450	900		6000	2.3 x 10-3	8900	0.1	1	+2.0 0	1500	
MJC-14	GR	EGR	7	2.4	4.8	0.1	45000	2.0 x 10-7	66	0.08	1	+0.6 0	6.6	D64
MJC-20	GR	EGR	11	6	12	0.2	31000	1.1 x 10-6	87	0.08	1	+0.8 0	17	
MJC-30	GR	EGR	16	16	32	0.5	21000	6.2 x 10-6	200	0.08	1	+1.0 0	44	
MJC-40	GR	EGR	25	21	42	1.2	15000	3.7 x 10-5	3000	0.08	1	+1.2 0	130	
MJC-55	GR	EGR	32	75	150		11000	1.6 x 10-4	9000	0.08	1	+1.4 0	320	
MJC-65	GR	EGR	38.1	200	400		9000	3.6 x 10-4	13000	0.08	1	+1.5 0	520	
MJC-80	GR	EGR	45	405	810		7000	1.1 x 10-3	14000	0.08	1	+1.8 0	1000	
MJC-95	GR	EGR	55	560	1120		6000	2.3 x 10-3	15000	0.08	1	+2.0 0	1500	

*1 : Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJC 's allowable operating temperature is −20℃ to 60℃.

*2 : These are values with max. bore diameter.

*3 : For transmission with Zero Backlash, please use a tight fit sleeve.

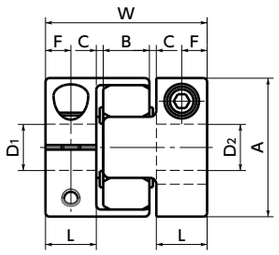
● Part number specification

MJC-95 - EBL - 40-45
◀1 ◀2 ◀3

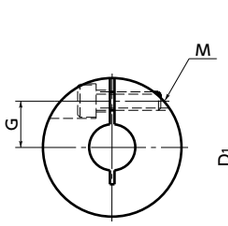
Couplicon®

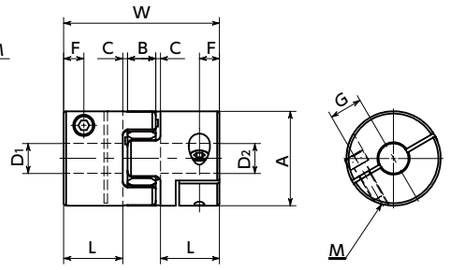
MJC-CS Flexible coupling - Jaw-type - Clamping type

WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation

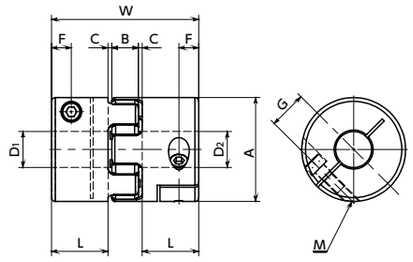


Outside Diameter: ϕ14 - ϕ30





Outside Diameter: ϕ40



Outside Diameter: ϕ55 - ϕ95

Dimensions

Unit : mm

Part Number ❶	Bore Diameter	A	L	W	B	C*1	Sleeve E	F	G	M	Screw Tightening Torque (N・m)
MJC-14CS	3 - 5	14	7	22	6	1	4.5	3.5	4	M2	0.5
	6 - 7								5	M1.6	0.25
MJC-20CS	4 - 8	20	10	30	8	1	7	5	6.5	M2.5	1
	9.525 - 11								7.5	M2	0.5
MJC-30CS	6 - 12	30	11	35	10	1.5	11	5.5	10	M4	3.5
	12.7 - 16								11	M3	1.5
MJC-40CS	7.9375 - 20	40	25	66	12	2	18	8.5	14	M5	8
	22 - 25								15.75	M4	3.5
MJC-55CS	9.525 - 28	55	30	78	14	2	27.5	10.5	20	M6	13
	30 - 32								21	M5	8
MJC-65CS	12.7 - 32	65	35	90	15	2.5	31	13	24	M8	28
	34.925 - 38.1								25	M6	13
MJC-80CS	19.05 - 42	80	45	114	18	3	37	15	30	M8	28
	45								31		
MJC-95CS	0.05	95	50	126	20	3	45.5	18	34	M10	55
	50 - 55								36		

*1： Use with C Dimension

Part Number	Standard metric bore diameter D1・D2 ❸																													
	3	4	4.5	5	6	6.35	7	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55
MJC-14CS	●	●	●	●	●	●	●																								
MJC-20CS		●	●	●	●	●	●	●	●	●	●																				
MJC-30CS					●	●	●	●	●	●	●	●	●	●	●																
MJC-40CS								●	●	●	●	●	●	●	●	●	●	●	●	●	●										
MJC-55CS										●	●	●	●	●	●	●	●	●	●	●	●	●	●								
MJC-65CS													●	●	●	●	●	●	●	●	●	●	●	●	●	●					
MJC-80CS																		●	●	●	●	●	●	●	●	●	●	●	●		
MJC-95CS																					●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard inch bore diameter D1・D2 ❸																					
	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
MJC-14CS	●	●	●																		
MJC-20CS		●	●	●	●																
MJC-30CS			●	●	●	●	●	●	●												
MJC-40CS				●	●	●	●	●	●	●	●										
MJC-55CS					●	●	●	●	●	●	●	●	●	●	●						
MJC-65CS							●	●	●	●	●	●	●	●	●	●	●	●	●		
MJC-80CS											●	●	●	●	●	●	●	●	●	●	●
MJC-95CS															●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and set screw type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

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

Performance

Part Number	Sleeve ❷ Tight Fit	Sleeve ❷ Easy Fit	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque(N・m)	Max.Rotational Frequency (min-1)	Moment*2 of Inertia (kg・m2)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
MJC-14CS	BL	EBL	7	0.7	1.4	0.1	45000	1.9 x 10-7	8	0.15	1	+0.6 0	6.2	A80
MJC-20CS	BL	EBL	11	1.8	3.6	0.2	31000	1.0 x 10-6	16	0.2	1	+0.8 0	16	
MJC-30CS	BL	EBL	16	4	8	0.5	21000	6.0 x 10-6	46	0.2	1	+1.0 0	42	
MJC-40CS	BL	EBL	25	4.9	9.8	1.2	15000	3.6 x 10-5	380	0.15	1	+1.2 0	130	
MJC-55CS	BL	EBL	32	17	34		11000	1.6 x 10-4	1400	0.2	1	+1.4 0	310	
MJC-65CS	BL	EBL	38.1	46	92		9000	3.5 x 10-4	2800	0.2	1	+1.5 0	500	
MJC-80CS	BL	EBL	45	95	190		7000	1.0 x 10-3	3200	0.2	1	+1.8 0	1000	
MJC-95CS	BL	EBL	55	130	260		6000	2.3 x 10-3	3600	0.2	1	+2.0 0	1600	
MJC-14CS	WH	EWH	7	1.2	2.4	0.1	45000	1.9 x 10-7	14	0.1	1	+0.6 0	6.2	A92
MJC-20CS	WH	EWH	11	3	6	0.2	31000	1.0 x 10-6	29	0.15	1	+0.8 0	16	
MJC-30CS	WH	EWH	16	7.5	15	0.5	21000	6.0 x 10-6	73	0.15	1	+1.0 0	42	
MJC-40CS	WH	EWH	25	10	20	1.2	15000	3.6 x 10-5	570	0.1	1	+1.2 0	130	
MJC-55CS	WH	EWH	32	35	70		11000	1.6 x 10-4	1600	0.15	1	+1.4 0	310	
MJC-65CS	WH	EWH	38.1	95	190		9000	3.5 x 10-4	3000	0.15	1	+1.5 0	500	
MJC-80CS	WH	EWH	45	190	380		7000	1.0 x 10-3	5300	0.15	1	+1.8 0	1000	
MJC-95CS	WH	EWH	55	265	530		6000	2.3 x 10-3	6200	0.15	1	+2.0 0	1600	
MJC-14CS	RD	ERD	7	2	4	0.1	45000	1.9 x 10-7	22	0.1	1	+0.6 0	6.2	A98
MJC-20CS	RD	ERD	11	5	10	0.2	31000	1.0 x 10-6	55	0.1	1	+0.8 0	16	
MJC-30CS	RD	ERD	16	12.5	25	0.5	21000	6.0 x 10-6	130	0.1	1	+1.0 0	42	
MJC-40CS	RD	ERD	25	17	34	1.2	15000	3.6 x 10-5	1200	0.1	1	+1.2 0	130	
MJC-55CS	RD	ERD	32	60	120		11000	1.6 x 10-4	2600	0.1	1	+1.4 0	310	
MJC-65CS	RD	ERD	38.1	160	320		9000	3.5 x 10-4	4900	0.1	1	+1.5 0	500	
MJC-80CS	RD	ERD	45	325	650		7000	1.0 x 10-3	6500	0.1	1	+1.8 0	1000	
MJC-95CS	RD	ERD	55	450	900		6000	2.3 x 10-3	8900	0.1	1	+2.0 0	1600	
MJC-14CS	GR	EGR	7	2.4	4.8	0.1	45000	1.9 x 10-7	66	0.08	1	+0.6 0	6.2	D64
MJC-20CS	GR	EGR	11	6	12	0.2	31000	1.0 x 10-6	87	0.08	1	+0.8 0	16	
MJC-30CS	GR	EGR	16	16	32	0.5	21000	6.0 x 10-6	200	0.08	1	+1.0 0	42	
MJC-40CS	GR	EGR	25	21	42	1.2	15000	3.6 x 10-5	3000	0.08	1	+1.2 0	130	
MJC-55CS	GR	EGR	32	75	150		11000	1.6 x 10-4	9000	0.08	1	+1.4 0	310	
MJC-65CS	GR	EGR	38.1	200	400		9000	3.5 x 10-4	13000	0.08	1	+1.5 0	500	
MJC-80CS	GR	EGR	45	405	810		7000	1.0 x 10-3	14000	0.08	1	+1.8 0	1000	
MJC-95CS	GR	EGR	55	560	1120		6000	2.3 x 10-3	15000	0.08	1	+2.0 0	1600	

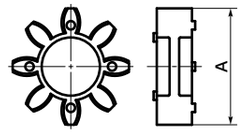
*1： Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJC-CS's allowable operating temperature is −20℃ to 60℃.

*2： These are values with max. bore diameter.

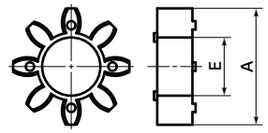
*3： For transmission with Zero Backlash, please use a tight fit sleeve.

● Sleeve Details

Tight Fit



Easy Fit



● Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

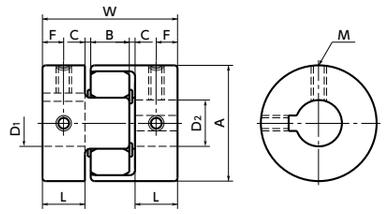
● Part number specification

MJC-30CS - GR - 7-8
❶ ❷ ❸

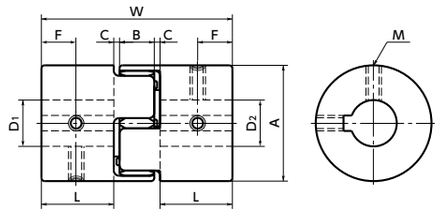
Couplicon®

MJC-K Flexible Coupling - Jaw-type - Set Screw + Key Type

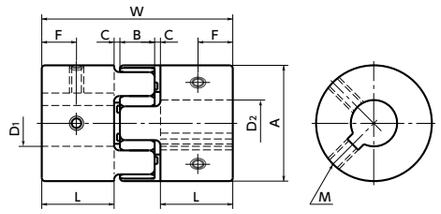
WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation



Outside Diameter: ϕ30



Outside Diameter: ϕ40



Outside Diameter: ϕ55 - ϕ95

Dimensions

Unit : mm

Part Number [1]	A	L	W	B	C*1	Sleeve E	F	M	Screw Tightening Torque (N・m)
MJC-30K	30	11	35	10	1.5	11	5.5	M4	1.7
MJC-40K	40	25	66	12	2	18	12.5	M5	4
MJC-55K	55	30	78	14	2	27.5	15	M6	7
MJC-65K	65	35	90	15	2.5	31	17.5	M8	15
MJC-80K	80	45	114	18	3	37	22.5	M8	15
MJC-95K	95	50	126	20	3	45.5	25	M8	15

Part Number	Standard Bore Diameter (dimensional allowance H8) D1・D2 [3]																						
	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55
MJC-30K	●	●	●	●	●	●																	
MJC-40K	●	●	●	●	●	●	●	●	●	●	●	●											
MJC-55K	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
MJC-65K				●	●	●	●	●	●	●	●	●	●	●	●	●	●						
MJC-80K									●	●	●	●	●	●	●	●	●	●	●	●			
MJC-95K												●	●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard Bore Diameter (dimensional allowance H7) D1・D2 [3]														
	1 / 2	9 / 16	5 / 8	11 / 16	3 / 4	13 / 16	7 / 8	15 / 16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
MJC-30K	●	●	●												
MJC-40K	●	●	●	●	●										
MJC-55K	●	●	●	●	●	●	●	●	●						
MJC-65K	●	●	●	●	●	●	●	●	●	●	●	●	●		
MJC-80K					●	●	●	●	●	●	●	●	●	●	●
MJC-95K									●	●	●	●	●	●	●

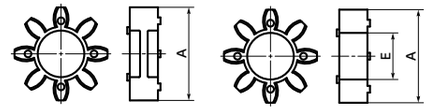
- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with key type for one side and clamping type or other type for the other side is available upon request.

● Part number specification

MJC-40K - EGR - 11-12
[1] [2] [3]

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

● Sleeve Details



● Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

Performance

Part Number	Sleeve [2] Tight Fit	Sleeve [2] Easy Fit	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque(N・m)	Max. Rotational Frequency (min-1)	Moment*2 of Inertia (kg・m2)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
MJC-30K	BL	EBL	16	4	8	0.5	21000	6.1 x 10-6	46	0.2	1	+1.0 0	43	A80
MJC-40K	BL	EBL	25	4.9	9.8	1.2	15000	3.6 x 10-5	380	0.15	1	+1.2 0	130	
MJC-55K	BL	EBL	32	17	34		11000	1.6 x 10-4	1400	0.2	1	+1.4 0	310	
MJC-65K	BL	EBL	38.1	46	92		9000	3.6 x 10-4	2800	0.2	1	+1.5 0	510	
MJC-80K	BL	EBL	45	95	190		7000	1.1 x 10-3	3200	0.2	1	+1.8 0	1000	
MJC-95K	BL	EBL	55	130	260		6000	2.3 x 10-3	3600	0.2	1	+2.0 0	1500	
MJC-30K	WH	EWH	16	7.5	15	0.5	21000	6.1 x 10-6	73	0.15	1	+1.0 0	43	A92
MJC-40K	WH	EWH	25	10	20	1.2	15000	3.6 x 10-5	570	0.1	1	+1.2 0	130	
MJC-55K	WH	EWH	32	35	70		11000	1.6 x 10-4	1600	0.15	1	+1.4 0	310	
MJC-65K	WH	EWH	38.1	95	190		9000	3.6 x 10-4	3000	0.15	1	+1.5 0	510	
MJC-80K	WH	EWH	45	190	380		7000	1.1 x 10-3	5300	0.15	1	+1.8 0	1000	
MJC-95K	WH	EWH	55	265	530		6000	2.3 x 10-3	6200	0.15	1	+2.0 0	1500	
MJC-30K	RD	ERD	16	12.5	25	0.5	21000	6.1 x 10-6	130	0.1	1	+1.0 0	43	A98
MJC-40K	RD	ERD	25	17	34	1.2	15000	3.6 x 10-5	1200	0.1	1	+1.2 0	130	
MJC-55K	RD	ERD	32	60	120		11000	1.6 x 10-4	2600	0.1	1	+1.4 0	310	
MJC-65K	RD	ERD	38.1	160	320		9000	3.6 x 10-4	4900	0.1	1	+1.5 0	510	
MJC-80K	RD	ERD	45	325	650		7000	1.1 x 10-3	6500	0.1	1	+1.8 0	1000	
MJC-95K	RD	ERD	55	450	900		6000	2.3 x 10-3	8900	0.1	1	+2.0 0	1500	
MJC-30K	GR	EGR	16	16	32	0.5	21000	6.1 x 10-6	200	0.08	1	+1.0 0	43	D64
MJC-40K	GR	EGR	25	21	42	1.2	15000	3.6 x 10-5	3000	0.08	1	+1.2 0	130	
MJC-55K	GR	EGR	32	75	150		11000	1.6 x 10-4	9000	0.08	1	+1.4 0	310	
MJC-65K	GR	EGR	38.1	200	400		9000	3.6 x 10-4	13000	0.08	1	+1.5 0	510	
MJC-80K	GR	EGR	45	405	810		7000	1.1 x 10-3	14000	0.08	1	+1.8 0	1000	
MJC-95K	GR	EGR	55	560	1120		6000	2.3 x 10-3	15000	0.08	1	+2.0 0	1500	

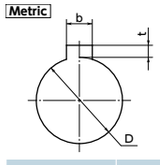
*1: Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJC-K's allowable operating temperature is −20℃ to 60℃.

*2: These are values with max. bore diameter.

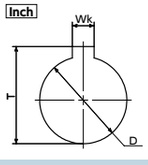
*3: For transmission with Zero Backlash, please use a tight fit sleeve.

● Details of Shaft Hole

Metric



Inch



Unit : mm

Standard Bore Diameter D	keyway b Standard Dimension	keyway b allowance (JS9)	keyway t Standard Dimension	keyway t allowance	Key Nominal Dimension b x h
10・11・12	4	±0.0150	1.8	+0.1 0	4×4
14・15・16	5	±0.0150	2.3	+0.1 0	5×5
18・19・20・22	6	±0.0150	2.8	+0.1 0	6×6
24・25・28・30	8	±0.0180	3.3	+0.2 0	8×7
32・35・38	10	±0.0180	3.3	+0.2 0	10×8
40・42	12	±0.0215	3.3	+0.2 0	12×8
45・48・50	14	±0.0215	3.8	+0.2 0	14×9
55	16	±0.0215	4.3	+0.2 0	16×10

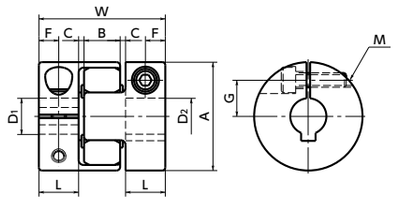
Unit : inch

Standard Inch Bore Diameter D	Keyway Wk Standard Dimension	Keyway Wk Allowance	Keyway T Standard Dimension	Keyway T Allowance
1/2	1 / 8	+0.002 0	0.560	+0.01 0
9/16	1 / 8	+0.002 0	0.623	+0.01 0
5/8	3 / 16	+0.002 0	0.709	+0.01 0
11/16	3 / 16	+0.002 0	0.773	+0.01 0
3/4	3 / 16	+0.002 0	0.837	+0.01 0
13/16	3 / 16	+0.002 0	0.900	+0.01 0
7/8	3 / 16	+0.002 0	0.964	+0.01 0
15/16	1 / 4	+0.002 0	1.051	+0.01 0
1	1 / 4	+0.002 0	1.114	+0.01 0
1 1/8	1 / 4	+0.002 0	1.241	+0.01 0
1 1/4	1 / 4	+0.002 0	1.367	+0.01 0
1 3/8	5 / 16	+0.002 0	1.518	+0.01 0
1 1/2	3 / 8	+0.002 0	1.669	+0.01 0
1 5/8	3 / 8	+0.002 0	1.796	+0.01 0
1 3/4	3 / 8	+0.002 0	1.922	+0.01 0

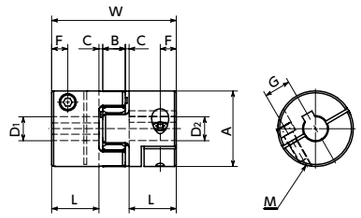
Couplicon®

MJC-CSK Flexible Coupling - Jaw-type - Clamping + Key Type

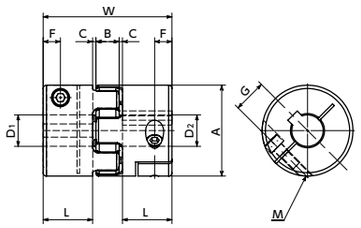
WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation



Outside Diameter: ϕ30

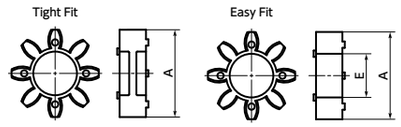


Outside Diameter: ϕ40



Outside Diameter: ϕ55 - ϕ95

● Sleeve Details



● Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

Dimensions

Unit : mm

Part Number 1	Bore Diameter	A	L	W	B	C*1	Sleeve E	F	G	M	Screw Tightening Torque (N・m)
MJC-30CSK	10 - 12	30	11	35	10	1.5	11	5.5	10	M4	3.5
	14 - 16								11	M3	1.5
MJC-40CSK	10 - 20	40	25	66	12	2	18	8.5	14	M5	8
	22 - 25								15.75	M4	3.5
MJC-55CSK	10 - 28	55	30	78	14	2	27.5	10.5	20	M6	13
	30 - 32								21	M5	8
MJC-65CSK	12.7 - 32	65	35	90	15	2.5	31	13	24	M8	28
	34.925 - 38.1								25	M6	13
MJC-80CSK	19.05 - 42	80	45	114	18	3	37	15	30	M8	28
	44.45 - 45								31		
MJC-95CSK	25 - 48	95	50	126	20	3	45.5	18	34	M10	55
	50 - 55								36		

*1 : Use with C Dimension

Part Number	Standard metric bore diameter D1・D2 3																					
	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55
MJC-30CSK	●	●	●	●	●	●																	
MJC-40CSK	●	●	●	●	●	●	●	●	●	●	●	●											
MJC-55CSK	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
MJC-65CSK				●	●	●	●	●	●	●	●	●	●	●	●	●	●						
MJC-80CSK									●	●	●	●	●	●	●	●	●	●	●	●			
MJC-95CSK												●	●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard inch bore diameter D1・D2 3														
	1 / 2	9 / 16	5 / 8	11 / 16	3 / 4	13 / 16	7 / 8	15 / 16	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4
MJC-30CSK	●	●	●												
MJC-40CSK	●	●	●	●	●										
MJC-55CSK	●	●	●	●	●	●	●	●	●						
MJC-65CSK	●	●	●	●	●	●	●	●	●	●	●	●	●		
MJC-80CSK					●	●	●	●	●	●	●	●	●	●	●
MJC-95CSK									●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping + key type for one side and clamping type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

● Part number specification

MJC-80CSK - EWH - 22-24
1　2　3

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

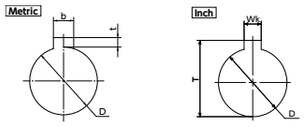
Part Number	Sleeve 2		Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque(N・m)	Max. Rotational Frequency (min-1)	Moment*2 of Inertia (kg・m2)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
	Tight Fit	Easy Fit												
MJC-30CSK	BL	EBL	16	4	8	0.5	21000	5.9 x 10-6	46	0.2	1	+1.0 0	41	A80
MJC-40CSK	BL	EBL	25	4.9	9.8	1.2	15000	3.5 x 10-5	380	0.15	1	+1.2 0	130	
MJC-55CSK	BL	EBL	32	17	34		11000	1.5 x 10-4	1400	0.2	1	+1.4 0	300	
MJC-65CSK	BL	EBL	38.1	46	92		9000	3.5 x 10-4	2800	0.2	1	+1.5 0	490	
MJC-80CSK	BL	EBL	45	95	190		7000	1.0 x 10-3	3200	0.2	1	+1.8 0	990	
MJC-95CSK	BL	EBL	55	130	260		6000	2.3 x 10-3	3600	0.2	1	+2.0 0	1500	
MJC-30CSK	WH	EWH	16	7.5	15	0.5	21000	5.9 x 10-6	73	0.15	1	+1.0 0	41	A92
MJC-40CSK	WH	EWH	25	10	20	1.2	15000	3.5 x 10-5	570	0.1	1	+1.2 0	130	
MJC-55CSK	WH	EWH	32	35	70		11000	1.5 x 10-4	1600	0.15	1	+1.4 0	300	
MJC-65CSK	WH	EWH	38.1	95	190		9000	3.5 x 10-4	3000	0.15	1	+1.5 0	490	
MJC-80CSK	WH	EWH	45	190	380		7000	1.0 x 10-3	5300	0.15	1	+1.8 0	990	
MJC-95CSK	WH	EWH	55	265	530		6000	2.3 x 10-3	6200	0.15	1	+2.0 0	1500	
MJC-30CSK	RD	ERD	16	12.5	25	0.5	21000	5.9 x 10-6	130	0.1	1	+1.0 0	41	A98
MJC-40CSK	RD	ERD	25	17	34	1.2	15000	3.5 x 10-5	1200	0.1	1	+1.2 0	130	
MJC-55CSK	RD	ERD	32	60	120		11000	1.5 x 10-4	2600	0.1	1	+1.4 0	300	
MJC-65CSK	RD	ERD	38.1	160	320		9000	3.5 x 10-4	4900	0.1	1	+1.5 0	490	
MJC-80CSK	RD	ERD	45	325	650		7000	1.0 x 10-3	6500	0.1	1	+1.8 0	990	
MJC-95CSK	RD	ERD	55	450	900		6000	2.3 x 10-3	8900	0.1	1	+2.0 0	1500	
MJC-30CSK	GR	EGR	16	16	32	0.5	21000	5.9 x 10-6	200	0.08	1	+1.0 0	41	D64
MJC-40CSK	GR	EGR	25	21	42	1.2	15000	3.5 x 10-5	3000	0.08	1	+1.2 0	130	
MJC-55CSK	GR	EGR	32	75	150		11000	1.5 x 10-4	9000	0.08	1	+1.4 0	300	
MJC-65CSK	GR	EGR	38.1	200	400		9000	3.5 x 10-4	13000	0.08	1	+1.5 0	490	
MJC-80CSK	GR	EGR	45	405	810		7000	1.0 x 10-3	14000	0.08	1	+1.8 0	990	
MJC-95CSK	GR	EGR	55	560	1120		6000	2.3 x 10-3	15000	0.08	1	+2.0 0	1500	

*1 : Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJC-CSK's allowable operating temperature is −20℃ to 60℃.

*2 : These are values with max. bore diameter.

*3 : For transmission with Zero Backlash, please use a tight fit sleeve.

● Details of Shaft Hole



Unit : mm

Standard Metric Bore Diameter D	Keyway b		Keyway t		Key Nominal Dimension b x h
	Standard Dimension	Allowance (JS9)	Standard Dimension	Allowance	
10・11・12	4	±0.0150	1.8	+0.1 0	4×4
14・15・16	5	±0.0150	2.3	+0.1 0	5×5
18・19・20・22	6	±0.0150	2.8	+0.1 0	6×6
24・25・28・30	8	±0.0180	3.3	+0.2 0	8×7
32・35・38	10	±0.0180	3.3	+0.2 0	10×8
40・42	12	±0.0215	3.3	+0.2 0	12×8
45・48・50	14	±0.0215	3.8	+0.2 0	14×9
55	16	±0.0215	4.3	+0.2 0	16×10

Unit : inch

Standard Inch Bore Diameter D	Keyway Wk		Keyway T	
	Standard Dimension	Allowance	Standard Dimension	Allowance
1/2	1 / 8	+0.002 0	0.560	+0.01 0
9/16	1 / 8	+0.002 0	0.623	+0.01 0
5/8	3 / 16	+0.002 0	0.709	+0.01 0
11/16	3 / 16	+0.002 0	0.773	+0.01 0
3/4	3 / 16	+0.002 0	0.837	+0.01 0
13/16	3 / 16	+0.002 0	0.900	+0.01 0
7/8	3 / 16	+0.002 0	0.964	+0.01 0
15/16	1 / 4	+0.002 0	1.051	+0.01 0
1	1 / 4	+0.002 0	1.114	+0.01 0
1 1/8	1 / 4	+0.002 0	1.241	+0.01 0
1 1/4	1 / 4	+0.002 0	1.367	+0.01 0
1 3/8	5 / 16	+0.002 0	1.518	+0.01 0
1 1/2	3 / 8	+0.002 0	1.669	+0.01 0
1 5/8	3 / 8	+0.002 0	1.796	+0.01 0
1 3/4	3 / 8	+0.002 0	1.922	+0.01 0

Couplicon®

MJS Flexible Coupling - Jaw-type (Short)

WEB Selection Tool | WEB CAD Download | High torque | Vibration absorption | Electrical Insulation

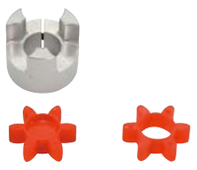
Structure

● Clamping Type ➡ P.143
MJS-CS-**** Tight Fit
MJS-CS-E**** Easy Fit

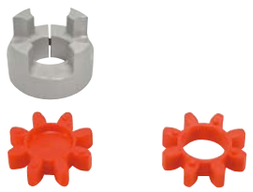
● Clamping + Key Type ➡ P.145
MJS-CSK-**** Tight Fit
MJS-CSK-E**** Easy Fit

● Sleeve

Outside Diameter: ϕ40



Outside Diameter: ϕ55 - ϕ95



● Applicable motors

	Tight Fit	Easy Fit
Servomotor	◎	○
Stepping Motor	◎	◎
General-Purpose Motor	◎	◎

◎: Excellent ○: Very good

● Property

	Tight Fit	Easy Fit
Zero Backlash	○	–
High Torque	◎	◎
Allowable Misalignment	○	○
Vibration Absorption	◎	◎
Electrical Insulation	◎	◎
Assembling	○	◎
Allowable Operating Temperature	−20℃ to 60℃	−20℃ to 60℃

◎: Excellent ○: Very good

- This is a jaw type flexible coupling.
- It is a short type and more compact than **MJC**.
- Tight Fit enables transmission with zero backlash at low torque.
- Easy fit allows assembling and separation of hubs.
- Excellent flexibility allows eccentricity, angular misalignment and twisting vibration to be accepted.
- It has electrical insulation. Resistance value: Not less than 2 MΩ

● Sleeve Type

Sleeve Type	Sleeve Hardness (JIS) A80	A92	A98	D64
Tight Fit	BL	WH	RD	GR
Easy Fit	EBL	EWH	ERD	EGR

Small ← Rated Torque / Maximum Torque → Large
Large ← Allowable Misalignment → Small

● Material/Finish

RoHS2 Compliant

	MJS-CS / MJS-CSK
Hub	A2017 Alumite Treatment
Sleeve	Polyurethane
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Part number specification

MJS-40CSK-ERD-10-11

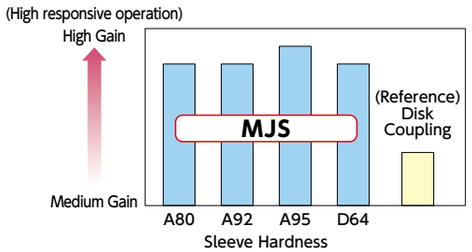
Product Code | Size | Sleeve Type | bore diameter

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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

● Tight Fit
The hub and sleeve are press-fit and can be used under zero backlash*1.Since the sleeve's vibration absorption can raise the gain of a servomotor, this unit can achieve high responsive operation exceeding the Disk coupling.

*1: For the torque used under zero backlash, please refer to Performance table.



● Tight Fit Applications
XY stage / Index table / Machine tool / Injection molding machine

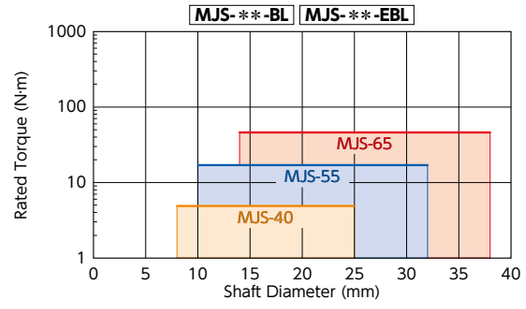
● Easy Fit
This unit allows you to easily assemble and partition the hub and sleeve.
This allows you to reduce the time of assembling the unit and maintenance.
It is possible to mount a hub on the shaft in advance and easily assemble the unit even in a location where the coupling is less-visible.

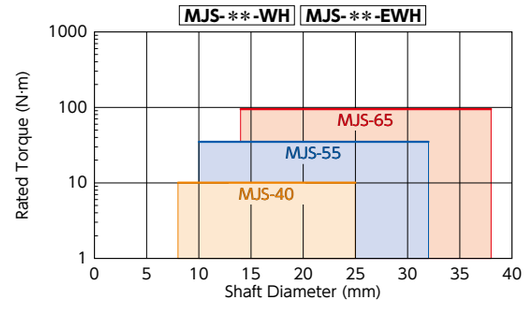
● Easy Fit Applications
Transport device / Mixer / Ventilator / Pump / Dispenser

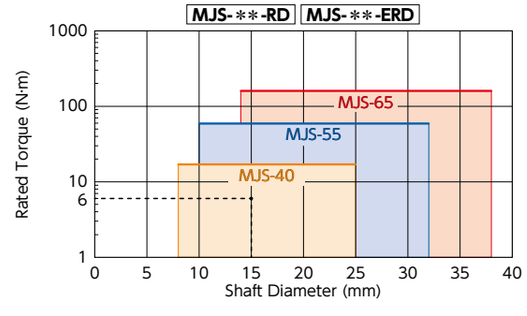
Selection

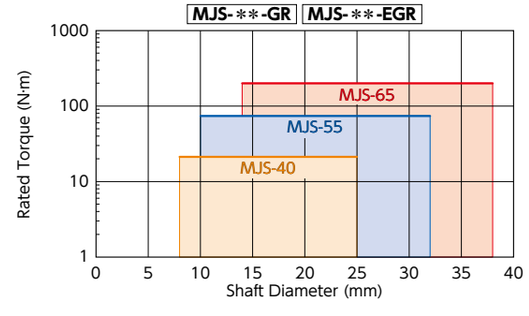
● **Selection based on shaft diameter and rated torque**

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 ϕ15 and load torque of 6 N•m, the selected size for **MJS-**CS-RD**, **MJS-**CS-ERD** is **MJS-40CS-RD**, **MJS-40CS-ERD**.

Couplicon®

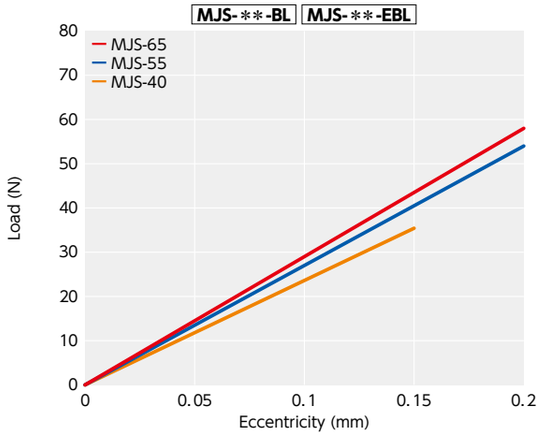
MJS Flexible Coupling - Jaw-type (Short)

Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

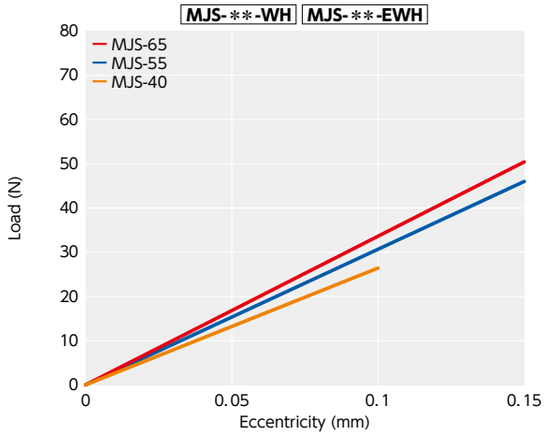
Technical Information

● Eccentric Reaction Force

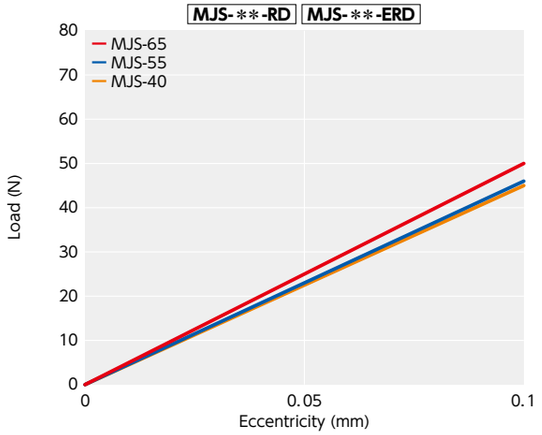
MJS--BL** **MJS-**-EBL**



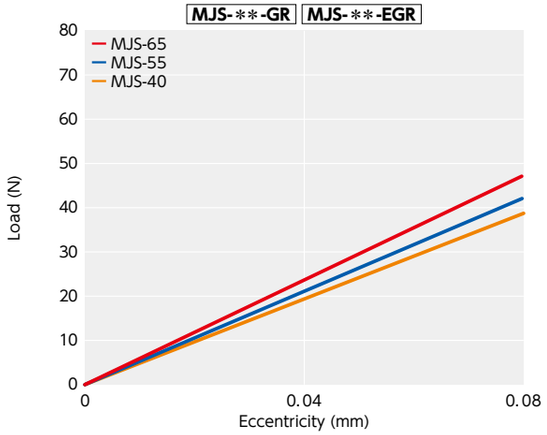
MJS--WH** **MJS-**-EWH**



MJS--RD** **MJS-**-ERD**

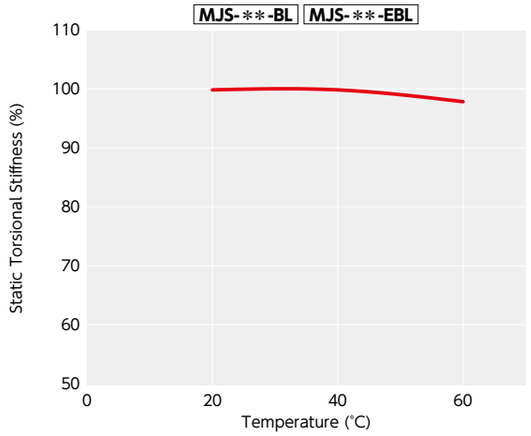


MJS--GR** **MJS-**-EGR**

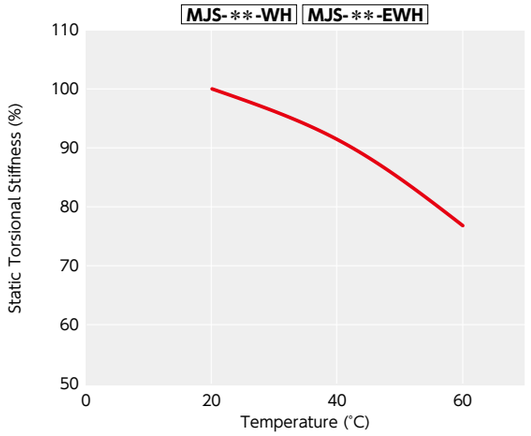


● Change in static torsional stiffness due to temperature

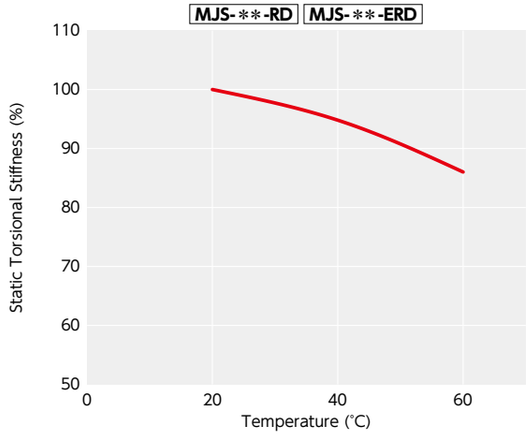
MJS--BL** **MJS-**-EBL**



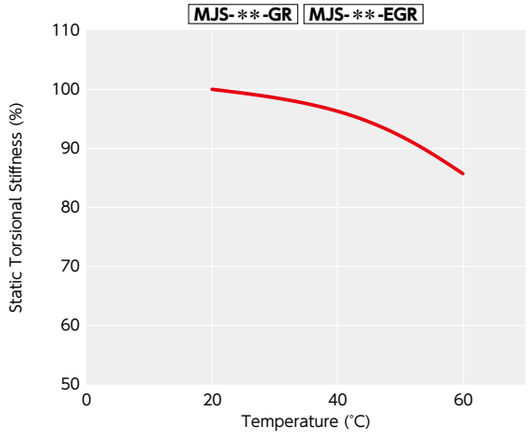
MJS--WH** **MJS-**-EWH**



MJS--RD** **MJS-**-ERD**



MJS--GR** **MJS-**-EGR**



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.
Before using the unit, be aware of the deterioration of responsiveness.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the max. torque of **MJS-CS**.

Unit : N・m

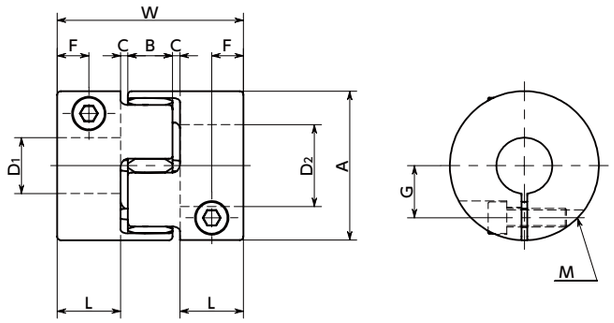
Part Number	Bore Diameter (mm)																		
	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38
MJS-40CS	28.9	35.6	37.7																
MJS-55CS			40.2	46.7	53.2	66.1	72.6	79	92	98.4	104	117	130	137		145			
MJS-65CS						113	123	134	155	165	176	197	218	228	260	281	302	300	300

● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MJS-CS** dimensional table.

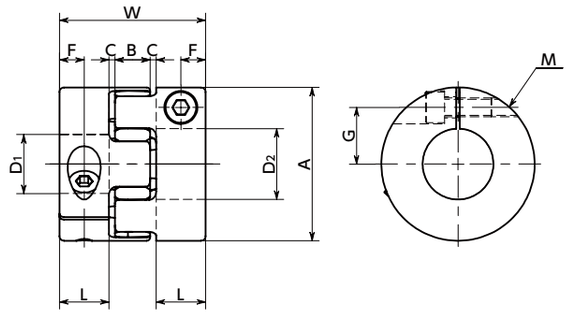
Couplicon®

MJS-CS Flexible Coupling - Jaw - type (Short) - Clamping Type

WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation



Outside Diameter: ϕ40



Outside Diameter: ϕ55 / ϕ65

Dimensions

Unit : mm

Part Number 1	Bore Diameter	A	L	W	B	C*1	Sleeve E	F	G	M	Screw Tightening Torque (N・m)
MJS-40CS	8 - 20	40	17	50	12	2	18	8.5	14	M5	8
	22 - 25								15.75	M4	3.5
MJS-55CS	10 - 28	55	18	54	14	2	27.5	9	20	M6	13
	30 - 32								21	M5	8
MJS-65CS	14 - 32	65	21	62	15	2.5	31	10.5	24	M8	28
	35 - 38								25	M6	13

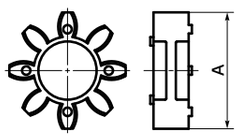
*1 : Use with C Dimension

Part Number	Standard Bore Diameter D1・D2 3																		
	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38
MJS-40CS	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
MJS-55CS			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
MJS-65CS						●	●	●	●	●	●	●	●	●	●	●	●	●	●

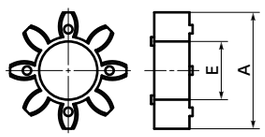
- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and clamping + key type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

- Sleeve Details

Tight Fit



Easy Fit



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

Performance

Part Number	Sleeve 2		Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
	Tight Fit	Easy Fit												
MJS-40CS	BL	EBL	25	4.9	9.8	1.2	15000	2.7×10^{-5}	380	0.15	1	$^{+1.2}_{0}$	100	
MJS-55CS	BL	EBL	32	17	34		11000	1.1×10^{-4}	1400	0.2	1	$^{+1.4}_{0}$	210	A80
MJS-65CS	BL	EBL	38	46	92		9000	2.4×10^{-4}	2800	0.2	1	$^{+1.5}_{0}$	340	
MJS-40CS	WH	EWH	25	10	20	1.2	15000	2.7×10^{-5}	570	0.1	1	$^{+1.2}_{0}$	100	
MJS-55CS	WH	EWH	32	35	70		11000	1.1×10^{-4}	1600	0.15	1	$^{+1.4}_{0}$	210	A92
MJS-65CS	WH	EWH	38	95	190		9000	2.4×10^{-4}	3000	0.15	1	$^{+1.5}_{0}$	340	
MJS-40CS	RD	ERD	25	17	34	1.2	15000	2.7×10^{-5}	1200	0.1	1	$^{+1.2}_{0}$	100	
MJS-55CS	RD	ERD	32	60	120		11000	1.1×10^{-4}	2600	0.1	1	$^{+1.4}_{0}$	210	A98
MJS-65CS	RD	ERD	38	160	320		9000	2.4×10^{-4}	4900	0.1	1	$^{+1.5}_{0}$	340	
MJS-40CS	GR	EGR	25	21	42	1.2	15000	2.7×10^{-5}	3000	0.08	1	$^{+1.2}_{0}$	100	
MJS-55CS	GR	EGR	32	75	150		11000	1.1×10^{-4}	9000	0.08	1	$^{+1.4}_{0}$	210	D64
MJS-65CS	GR	EGR	38	200	400		9000	2.4×10^{-4}	13000	0.08	1	$^{+1.5}_{0}$	340	

*1 : Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJS-CS's allowable operating temperature is −20℃ to 60℃.
*2 : These are values with max. bore diameter.
*3 : For transmission with Zero Backlash, please use a tight fit sleeve.

- Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

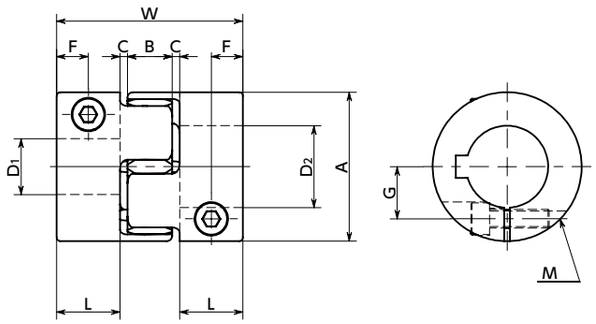
- Part number specification

MJS-55CS - EGR - 14-16
1　2　3

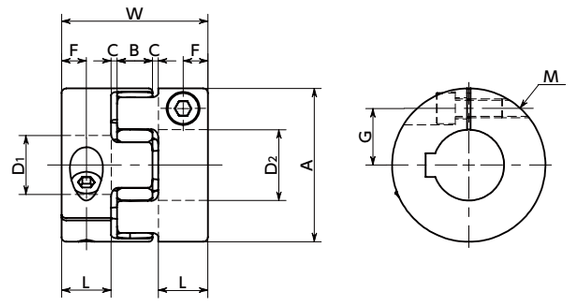
Couplicon®

MJS-CSK Flexible Coupling - Jaw-type (Short) - Clamping + Key Type

WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation



Outside Diameter: ϕ40



Outside Diameter: ϕ55 / ϕ65

Dimensions

Unit : mm

Part Number 1	Bore Diameter	A	L	W	B	C*1	Sleeve E	F	G	M	Screw Tightening Torque (N・m)
MJS-40CSK	10 - 20	40	17	50	12	2	18	8.5	14	M5	8
	22 - 25								15.75	M4	3.5
MJS-55CSK	10 - 28	55	18	54	14	2	27.5	9	20	M6	13
	30 - 32								21	M5	8
MJS-65CSK	14 - 32	65	21	62	15	2.5	31	10.5	24	M8	28
	35 - 38								25	M6	13

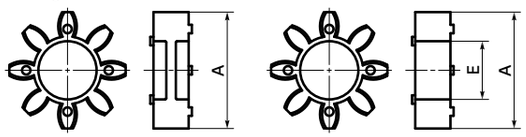
*1 : Use with C Dimension

Part Number	Standard Bore Diameter D1・D2 3																
	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38
MJS-40CSK	●	●	●	●	●	●	●	●	●	●	●	●					
MJS-55CSK	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
MJS-65CSK				●	●	●	●	●	●	●	●	●	●	●	●	●	●

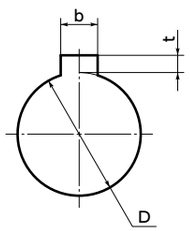
- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping + key type for one side and clamping type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

● Sleeve Details

Tight Fit　Easy Fit



● Details of Shaft Hole



Unit : mm

Standard Bore Diameter D	Keyway b Standard Dimension	Keyway b Allowance (JS9)	Keyway t Standard Dimension	Keyway t Allowance	Key Nominal Dimension b x h
10・11・12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・15・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・19・20・22	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
24・25・28・30	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7
32・35・38	10	±0.0180	3.3	$^{+0.2}_{0}$	10×8

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	Sleeve 2 Tight Fit	Sleeve 2 Easy Fit	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Zero Backlash*3 Allowable Transmission Torque (N・m)	Max. Rotational Frequency (min-1)	Moment*2 of Inertia (kg・m2)	Static Torsional Stiffness (N・m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
MJS-40CSK	BL	EBL	25	4.9	9.8	1.2	15000	2.7 x 10-5	380	0.15	1	$^{+1.2}_{0}$	96	
MJS-55CSK	BL	EBL	32	17	34		11000	1.0 x 10-4	1400	0.2	1	$^{+1.4}_{0}$	210	A80
MJS-65CSK	BL	EBL	38	46	92		9000	2.3 x 10-4	2800	0.2	1	$^{+1.5}_{0}$	330	
MJS-40CSK	WH	EWH	25	10	20	1.2	15000	2.7 x 10-5	570	0.1	1	$^{+1.2}_{0}$	96	
MJS-55CSK	WH	EWH	32	35	70		11000	1.0 x 10-4	1600	0.15	1	$^{+1.4}_{0}$	210	A92
MJS-65CSK	WH	EWH	38	95	190		9000	2.3 x 10-4	3000	0.15	1	$^{+1.5}_{0}$	330	
MJS-40CSK	RD	ERD	25	17	34	1.2	15000	2.7 x 10-5	1200	0.1	1	$^{+1.2}_{0}$	96	
MJS-55CSK	RD	ERD	32	60	120		11000	1.0 x 10-4	2600	0.1	1	$^{+1.4}_{0}$	210	A98
MJS-65CSK	RD	ERD	38	160	320		9000	2.3 x 10-4	4900	0.1	1	$^{+1.5}_{0}$	330	
MJS-40CSK	GR	EGR	25	21	42	1.2	15000	2.7 x 10-5	3000	0.08	1	$^{+1.2}_{0}$	96	
MJS-55CSK	GR	EGR	32	75	150		11000	1.0 x 10-4	9000	0.08	1	$^{+1.4}_{0}$	210	D64
MJS-65CSK	GR	EGR	38	200	400		9000	2.3 x 10-4	13000	0.08	1	$^{+1.5}_{0}$	330	

*1 : Correction of rated torque and max. torque due to load fluctuation is not required. However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the table. MJS-CSK 's allowable operating temperature is −20℃ to 60℃.
*2 : These are values with max. bore diameter.
*3 : For transmission with Zero Backlash, please use a tight fit sleeve.

● Ambient Temperature / Temperature Correction Factor

Ambient Temperature	Temperature Correction Factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

● Part number specification

MJS-40CSK - EBL - 14-16
1　2　3

Couplicon®

MJB Flexible Coupling - Jaw - type (Bushing)

Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

Structure

● Bushing type

MJB ➡ P.153

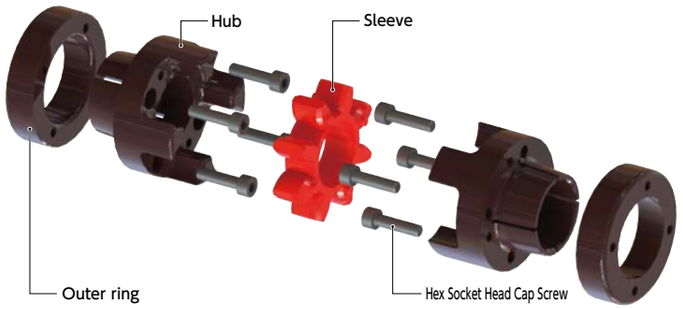
● Sleeve

Outside diameter ϕ40

Tight Fit Easy Fit

Outside diameter ϕ55 -ϕ95

Tight Fit Easy Fit



● Material/Finish

RoHS2 Compliant

	MJB
Hub	S45C Ferrosoferric Oxide Film (Black)
Outer ring	S45C Ferrosoferric Oxide Film (Black)
Sleeve	Polyurethane
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Part number specification

MJB - 55 - RD - 10-10

Product Code | Size | Sleeve Type | 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	Not Available	Not Available

● Applicable motors

	Tight fit	Easy Fit
Servomotor	◎	○
Stepping Motor	◎	◎
General-purpose motor	◎	◎

◎: Excellent ○: Very good

● Property

	Tight fit	Easy Fit
High torque	◎	◎
Allowable Misalignment	○	○
Vibration absorption	◎	◎
Electrical insulation	◎	◎
Assembling	○	◎
Allowable operating temperature	−20℃ to 60℃	−20℃ to 60℃

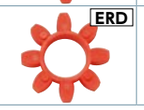
◎: Excellent ○: Very good

- This is a jaw type flexible coupling.
- This superior high torque transmission is the most appropriate for the spindle of a machine tool.
- Excellent flexibility allows eccentricity, and angular misalignment and vibration to be accepted.
- It has electrical insulation. Resistance value: not less than 2 MΩ.
- There are four types of sleeve hardness. Please select desirable units according to usage conditions including torque and misalignment.
- Since the sleeve's vibration absorption can raise the gain of a servomotor, tight fit can achieve high responsive operation exceeding the Disk coupling.
- Easy fit allows you to assemble and partition the hub and sleeve smoothly. This allows you to reduce the time of assembling the unit and maintenance.

● Application

Machine tool / Spindle

● Sleeve type

Sleeve Type	Sleeve Hardness (JIS)			
	A80	A92	A98	D64
Tight Fit	 BL	 WH	 RD	 GR
Easy Fit	 EBL	 EWH	 ERD	 EGR

Small ← Rated torque and max. torque → Large

Large ← Allowable Misalignment → Small

MJB Flexible Coupling - Jaw - type (Bushing)

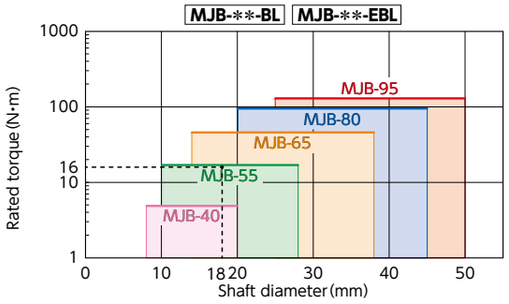
Selection Tool | CAD Download | High torque | Vibration absorption | Electrical Insulation

Selection

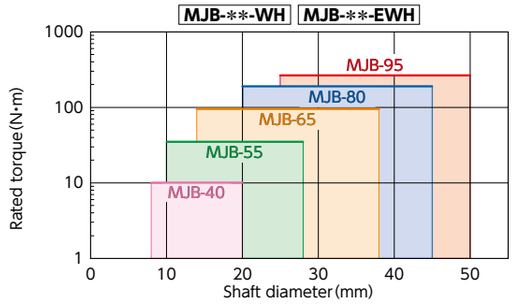
● Selection based on shaft diameter and rated torque

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

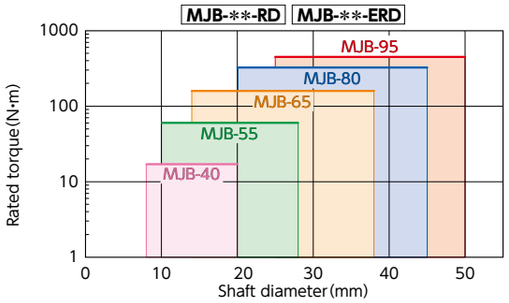
MJB--BL** **MJB-**-EBL**



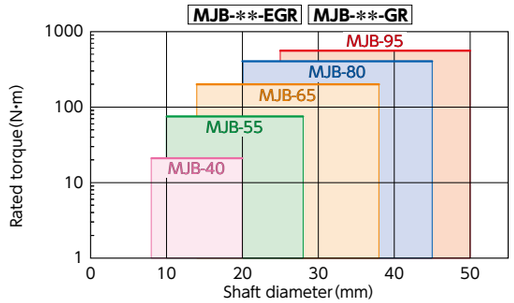
MJB--WH** **MJB-**-EWH**



MJB--RD** **MJB-**-ERD**



MJB--EGR** **MJB-**-GR**



● Selection example

In case of selected parameters of shaft diameter of ϕ 18 and load torque of 16 N•m, the selected size for **MJB-**-BL** **MJB-**-EBL** is **MJB-55-BL** **MJB-55-EBL**

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	Not Available	Not Available

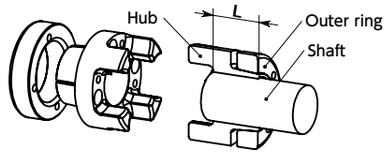
● Mounting / Removing

● Mounting

①Clean up the fitting surfaces of hub, outer ring and shaft.

②Apply light oil thinly on the surfaces. Avoid molybdenum base oil as it reduces the fastening power seriously.

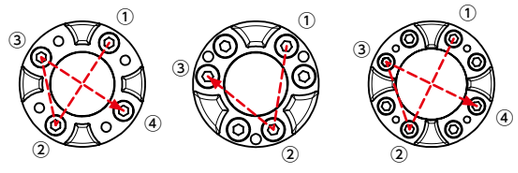
③Insert the shaft to the dimension L. ➡ **Table 1**



④Tighten the hexagon socket head bolts with 50% of the tightening torque in **Table 1**, each for once, following the sequence in **Fig.1**

⑤In the same sequence as in④, tighten the hexagon socket head bolts with 100% of the tightening torque in **Table 1**, each for once.

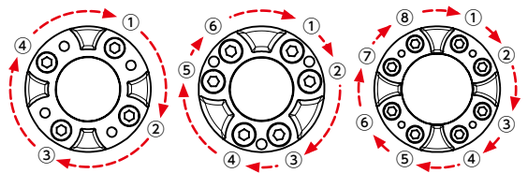
Diagram 1 Tighten in diagonal sequence



Number of bolts=4 Number of bolts=6 Number of bolts=8

⑥Tighten all hexagon socket head bolts with the tightening torque in **Table 1**, following the sequence in **Fig.2**

Diagram 2 Tighten all bolts



Number of bolts=4 Number of bolts=6 Number of bolts=8

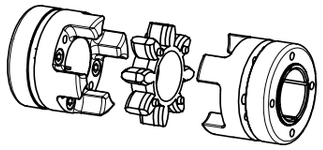
⑦Repeat ⑥ until all hex socket head cap screws securely fixed.

As a guide, the rotation of a hex socket head screw, when tightened, should be less than 20 degrees.

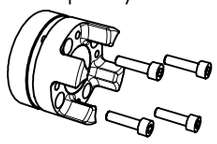
⚠ Use a torque wrench to tighten bolts.

● Removal

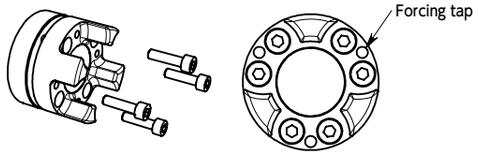
①Disassemble the hub and the sleeve.



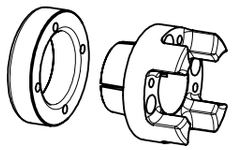
②Confirm that there is no torque or thrust load, then loosen all hexagon socket head bolts completely and remove them.



③Insert one of the removed bolts in ②to a forcing tap, and tighten little by little, avoiding uneven clamping.



④ Repeating ③ will lead to sharply reduced tightening torque. Remove the coupling from the shaft, as the fastening force from the tapered surface is reduced.



● **Table 1**

Part Number	L	Hex Socket Head Cap Screw		Screw Tightening Torque (N・m)
		Diameter of Thread	Number of bolts	
MJB-40	25	M4	6	4
MJB-55	30	M5	4	8.5
MJB-65	35	M5	8	8.5
MJB-80	45	M6	8	14
MJB-95	50	M8	8	35

Couplicon®

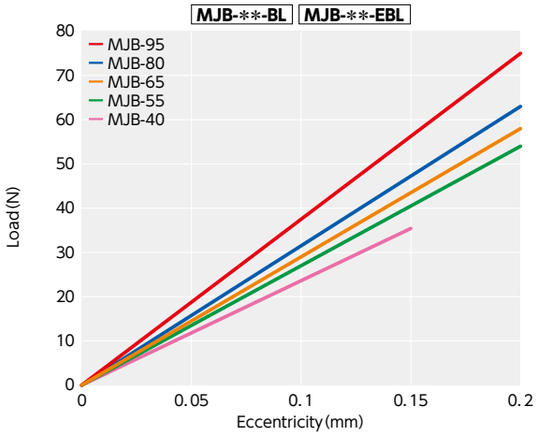
MJB Flexible Coupling - Jaw - type (Bushing)

WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation

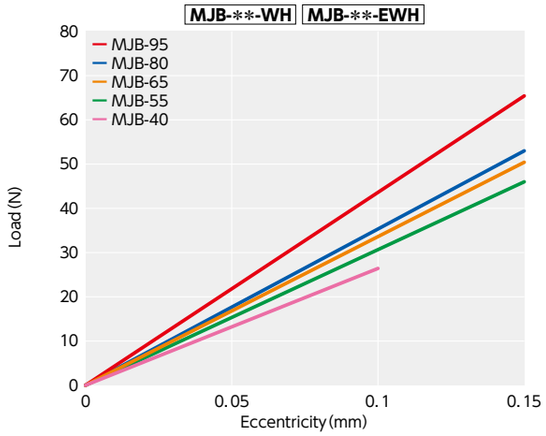
Technical Information

● Eccentric Reaction Force

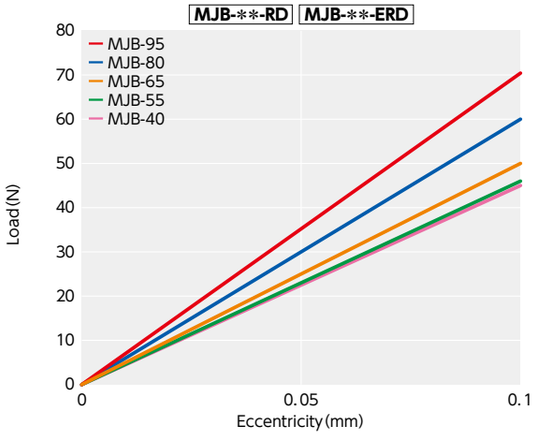
MJB--BL** **MJB-**-EBL**



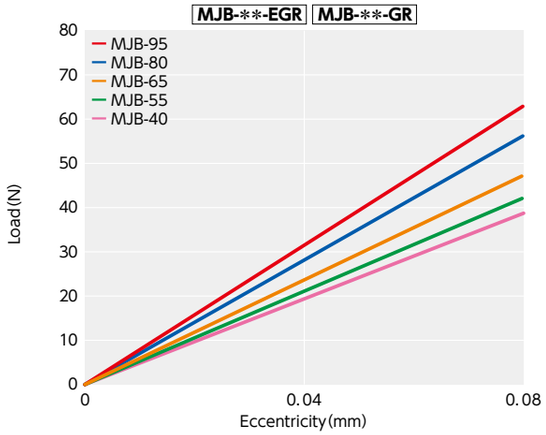
MJB--WH** **MJB-**-EWH**



MJB--RD** **MJB-**-ERD**

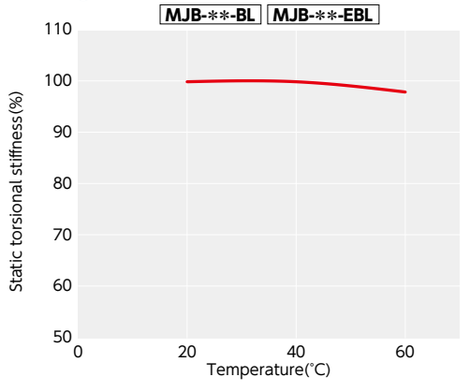


MJB--EGR** **MJB-**-GR**

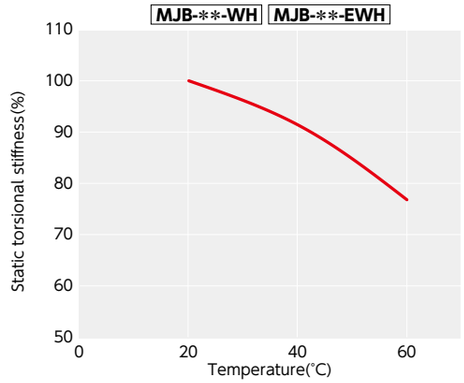


● Change in static torsional stiffness due to temperature

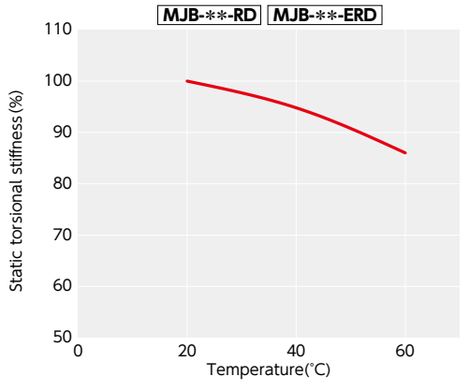
MJB--BL** **MJB-**-EBL**



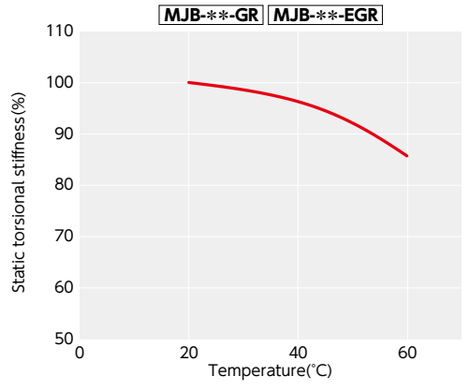
MJB--WH** **MJB-**-EWH**



MJB--RD** **MJB-**-ERD**



MJB--GR** **MJB-**-EGR**



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.
Before using the unit, be aware of the deterioration of responsiveness.

● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the max. torque of **MJB** .

Unit : N・m

Part Number	Bore (mm)																					
	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50
MJB-55	32.8	54	75.2	117	138																	
MJB-65				161	171	181	202	212	222	243	264	274	305	325	346	377						
MJB-80									285	335	385	411	486	500	500	500	500	500	500	500		
MJB-95												500	500	500	500	500	500	500	500	500	500	500

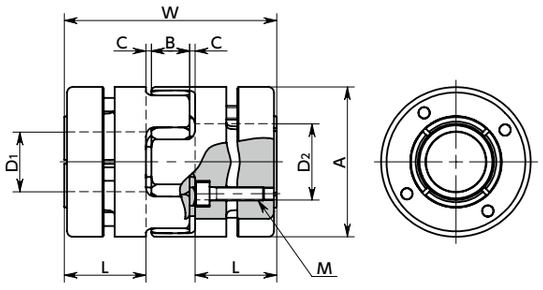
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MJB** Dimension table.

Couplicon®

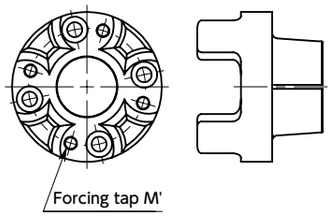
MJB Flexible Coupling - Jaw - type (Bushing)

WEB Selection Tool　WEB CAD Download　High torque　Vibration absorption　Electrical Insulation

MJB



● Details of hub



Dimensions

Unit : mm

Part Number 1	A	L	W	B	C*1	Sleeve E	M	Number of bolts	Forcing tap M'	Screw Tightening Torque (N·m)
MJB-40	40	25	66	12	2	17	M4	6	M4	4
MJB-55	55	30	78	14	2	26	M5	4	M5	8.5
MJB-65	65	35	90	15	2.5	29.5	M5	8	M5	8.5
MJB-80	80	45	114	18	3	35.5	M6	8	M6	14
MJB-95	95	50	126	20	3	44	M8	8	M8	35

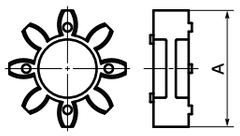
*1 : Use with C Dimension

Part Number	Standard Bore Diameter D1・D2 3																							
	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50
MJB-40	●	●	●	●	●	●	●	●	●	●	●													
MJB-55			●	●	●	●	●	●	●	●	●	●	●	●	●									
MJB-65						●	●	●	●	●	●	●	●	●	●	●	●	●	●					
MJB-80											●	●	●	●	●	●	●	●	●	●	●	●	●	
MJB-95														●	●	●	●	●	●	●	●	●	●	●

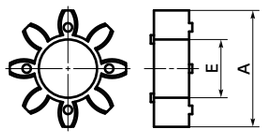
- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

● Sleeve Details

Tight Fit



Easy Fit



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	Not Available	Not Available

Performance

Part Number	Sleeve 2 Tight Fit	Sleeve 2 Easy Fit	Max. Bore Diameter (mm)	Rated*1 Torque (N·m)	Max.*1 Torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg·m^2$)	Static Torsional Stiffness (N·m / rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)	Sleeve Hardness (JIS)
MJB-40	BL	EBL	20	4.9	9.8	23000	3.9×10^{-5}	380	0.15	1	$^{+1.2}_{0}$	400	
MJB-55	BL	EBL	28	17	34	17000	1.6×10^{-4}	1400	0.2	1	$^{+1.4}_{0}$	800	
MJB-65	BL	EBL	38	46	92	14000	3.8×10^{-4}	2800	0.2	1	$^{+1.5}_{0}$	1100	A80
MJB-80	BL	EBL	45	95	190	11000	1.0×10^{-3}	3200	0.2	1	$^{+1.8}_{0}$	2300	
MJB-95	BL	EBL	50	130	260	10000	2.3×10^{-3}	3600	0.2	1	$^{+2.0}_{0}$	4000	
MJB-40	WH	EWH	20	10	20	23000	3.9×10^{-5}	570	0.1	1	$^{+1.2}_{0}$	400	
MJB-55	WH	EWH	28	35	70	17000	1.6×10^{-4}	1600	0.15	1	$^{+1.4}_{0}$	800	
MJB-65	WH	EWH	38	95	190	14000	3.8×10^{-4}	3000	0.15	1	$^{+1.5}_{0}$	1100	A92
MJB-80	WH	EWH	45	190	380	11000	1.0×10^{-3}	5300	0.15	1	$^{+1.8}_{0}$	2300	
MJB-95	WH	EWH	50	265	530	10000	2.3×10^{-3}	6200	0.15	1	$^{+2.0}_{0}$	4000	
MJB-40	RD	ERD	20	17	34	23000	3.9×10^{-5}	1200	0.1	1	$^{+1.2}_{0}$	400	
MJB-55	RD	ERD	28	60	120	17000	1.6×10^{-4}	2600	0.1	1	$^{+1.4}_{0}$	800	
MJB-65	RD	ERD	38	160	320	14000	3.8×10^{-4}	4900	0.1	1	$^{+1.5}_{0}$	1100	A98
MJB-80	RD	ERD	45	325	650	11000	1.0×10^{-3}	6500	0.1	1	$^{+1.8}_{0}$	2300	
MJB-95	RD	ERD	50	450	900	10000	2.3×10^{-3}	8900	0.1	1	$^{+2.0}_{0}$	4000	
MJB-40	GR	EGR	20	21	42	23000	3.9×10^{-5}	3000	0.08	1	$^{+1.2}_{0}$	400	
MJB-55	GR	EGR	28	75	150	17000	1.6×10^{-4}	9000	0.08	1	$^{+1.4}_{0}$	800	
MJB-65	GR	EGR	38	200	400	14000	3.8×10^{-4}	13000	0.08	1	$^{+1.5}_{0}$	1100	D64
MJB-80	GR	EGR	45	405	810	11000	1.0×10^{-3}	14000	0.08	1	$^{+1.8}_{0}$	2300	
MJB-95	GR	EGR	50	560	1120	10000	2.3×10^{-3}	15000	0.08	1	$^{+2.0}_{0}$	4000	

*1 : Correction of rated torque and max. torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MJB is −20℃ to 60℃.

*2 : These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

● Part number specification

MJB-65 - EWH - 16-20 (1 set)
1　2　3

MJ - 40 - RD - SLV (Single Sleeve)
Sleeve Symbol　Outside Diameter (A Dimension)　2　Sleeve Symbol

Couplicon®

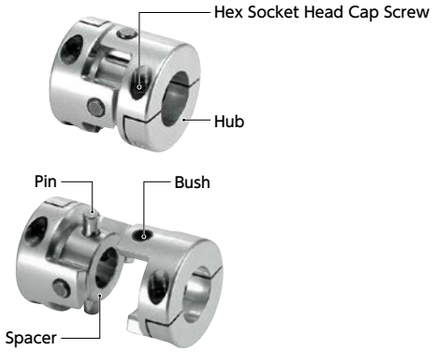
XUT Flexible Coupling - Cross joint - type

WEB Selection Tool　WEB CAD Download　High Rigidity　Vibration absorption

Structure

● Clamping type

XUT-C ➡ P.159



The high accuracy fitting of pin and bush allows the extremely small backlash.
For the bush of XUT the polyimide resin with excellent abrasion-resistance is adopted.
The backlash at the initial stage is maintained for a long period.

● Recommended applicable motor

	XUT
Servomotor	◎
Stepping Motor	◎
General-purpose motor	△

◎: Excellent　○: Very good　△: Available

● Property

	XUT
Zero Backlash	○
High torque	○
High Torsional Stiffness	◎
Allowable Misalignment	○
Vibration absorption	◎

◎: Excellent　○: Very good

- This is a Cross joint-type flexible coupling.
- Slippage of the bush built in the hubs and the pins of the spacer allows eccentricity and angular misalignment to be accepted.
- The high accuracy fitting of pin and bush allows the extremely small backlash.
- The load on the shaft generated by misalignment is small and the burden on the shaft is reduced.

● Application

Actuator/XY stage/Index table

● Material/Finish　RoHS2 Compliant

	XUT-C
Hub	A2017*1
Spacer	SUS304
Pin	SUJ2
Bush	Polyimide
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

*1: Manufacturing alumite treatment products is also possible. Please feel free to contact our customer service.

● Part number specification

XUT - 25C - 6-8

Product Code　Size　Bore Diameter

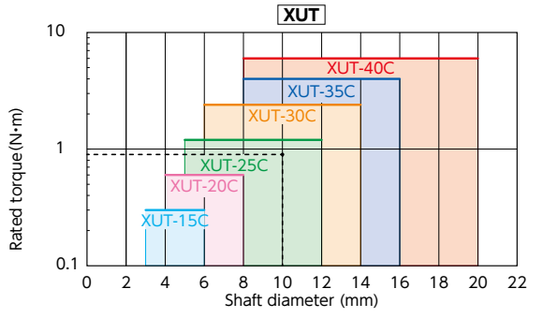
Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Please feel free to contact us	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 10 and load torque of 0.9 N•m, the selected size is XUT-25C

● Selection based on the rated output of the servomotor

Rated output (W)	Servomotor Specifications*1			Selection size
	Diameter of motor shaft (mm)	Rated torque (N・m)	Instantaneous maximum torque (N・m)	XUT-C
10	5 - 6	0.032	0.096	XUT-15C
20	5 - 6	0.064	0.19	XUT-15C
30	5 - 7	0.096	0.29	XUT-20C
50	6 - 8	0.16	0.48	XUT-20C
100	8	0.32	0.95	XUT-25C
200	9 - 14	0.64	1.9	XUT-30C
400	14	1.3	3.8	XUT-35C
750	16 - 19	2.4	7.2	–

*1: Motor specifications are based on general values. For details, see the motor manufacturer's catalogs.This is the size for cases where devices such as reduction gears are not used.

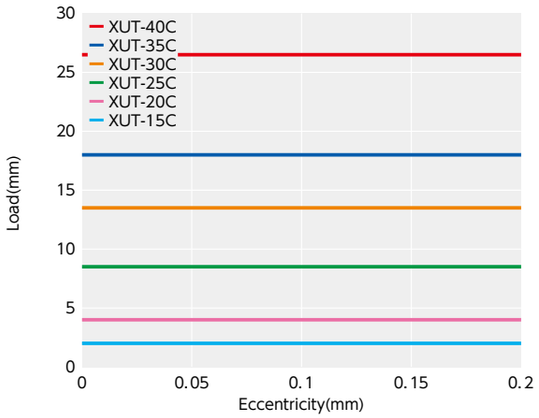
Couplicon®

XUT Flexible Coupling - Cross joint - type

Selection Tool | CAD Download | High Rigidity | Vibration absorption

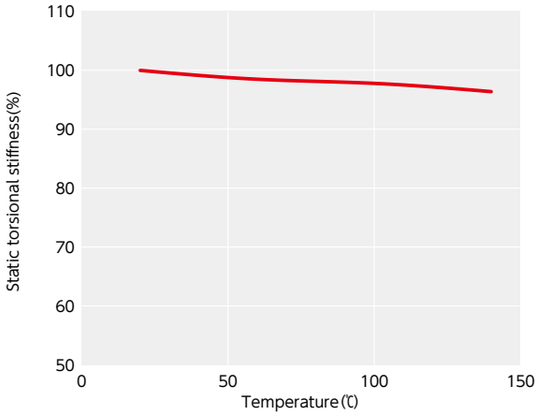
Technical Information

● Eccentric Reaction Force



XUT has small eccentric reaction force and an extremely small shaft load generated by misalignment. This reduces the load to such components as shaft bearings.

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
XUT 's change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

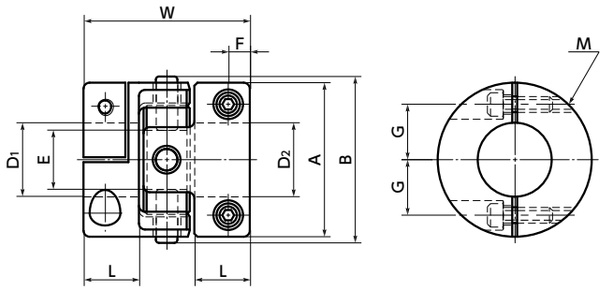
158

Couplicon®

XUT-C Flexible coupling - Cross joint - type - Clamping type

WEB Selection Tool　WEB CAD Download　High Rigidity　Vibration absorption

XUT-C



Dimensions

Unit : mm

Part Number 1	A	B	L	W	E	F	G	M	Screw Tightening Torque (N・m)
XUT-15C	15	16	6	18	4	2.5	5.2	M2	0.5
XUT-20C	20	22	7	20	7	2.7	6.5	M2	0.5
XUT-25C	25	27	9	27	10	3.5	9	M2.5	1
XUT-30C	30	32	9.5	30	10	4	10.5	M3	1.5
XUT-35C	35	37	11.5	35	13	5	12.5	M4	2.5
XUT-40C	40	42	12.5	40	15	5.5	15	M4	2.5

Part Number	Standard Bore Diameter D1・D2 2													
	3	4	5	6	8	10	11	12	14	15	16	18	19	20
XUT-15C	●	●	●	●										
XUT-20C		●	●	●	●									
XUT-25C			●	●	●	●	●	●						
XUT-30C				●	●	●	●	●	●					
XUT-35C					●	●	●	●	●	●	●			
XUT-40C					●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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

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

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
XUT-15C	6	0.3	42000	2.3×10^{-7}	200	0.2	1	8
XUT-20C	8	0.6	31000	8.1×10^{-7}	400	0.2	1	16
XUT-25C	12	1.2	25000	2.7×10^{-6}	900	0.2	1	33
XUT-30C	14	2.4	21000	6.2×10^{-6}	1300	0.2	1	53
XUT-35C	16	4	18000	1.3×10^{-5}	2200	0.2	1	81
XUT-40C	20	6	15000	2.6×10^{-5}	2300	0.2	1	120

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

- Part number specification

XUT-30C - 10-12
1　2

Couplicon®

MOR Flexible coupling - Oldham - type

Selection Tool | CAD Download | High torque | Electrical Insulation | High Allowable Misalignment | Small Eccentric Reaction Force

Structure

● Set Screw type
MOR ➡ P.165

● Clamping type
MOR-C ➡ P.167

● Set Screw + Key type
MOR-K ➡ P.169

● Clamping + Key type
MOR-CK ➡ P.171

● Applicable motors

	MOR
Servomotor	–
Stepping Motor	○
General-purpose motor	◎

◎: Excellent ○: Very good

● Property

	MOR
High torque	◎
Allowable Misalignment	◎
Small eccentric reaction force	◎
Electrical insulation	◎
Allowable operating temperature	−20℃ to 80℃

◎: Excellent ○: Very good

- This is an oldham-type flexible coupling.
- Slippage of hubs and a spacer allows large eccentricity and angular misalignment to be accepted.
- The eccentric reaction force generated by misalignment is small and the burden on the shaft is reduced.
- The simple structure allows the unit to be easily assembled.

● Application

Sputtering device / Parts feeder / Industrial sewing machine / Amusement device

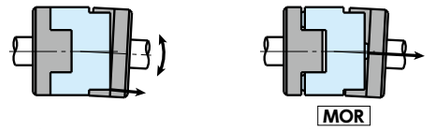
● Material/Finish

RoHS2 Compliant

	MOR / MOR-C / MOR-K / MOR-CK
Hub	A2017 Alumite Treatment
Spacer	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Spacer's projection structure

Spacer's projection structure allows large angular to be effortlessly accepted. It reduces burden on the shaft.



(Without projection) (With projection)

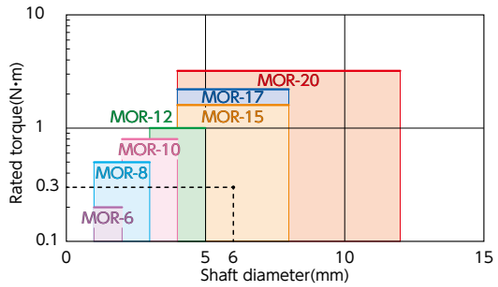
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.
NBK's oldham type coupling allows the angular misalignment to be easily accepted since the projection serves as support. Bending moment does not arise. Therefore, the max. angular misalignment is large (3°) and the burden on the shaft is reduced.

Selection

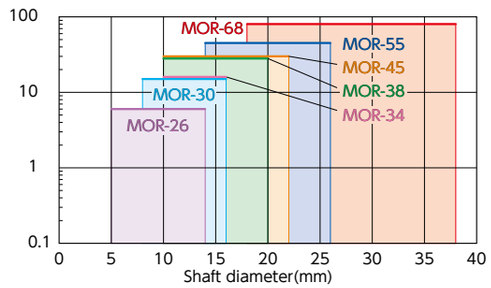
● Selection based on shaft diameter and rated torque

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

MOR Outside diameter ϕ 20 or less



MOR Outside diameter ϕ 26 or more



● Selection example

In case of selected parameters of shaft diameter of ϕ 6 and load torque of 0.3 N•m, the selected size is **MOR-15**.

● Related Products

Oldham-type couplings **MOM** with metal spacers are available.
➡ P.173

● Part number specification

MOR - 20CK - 6-10

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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

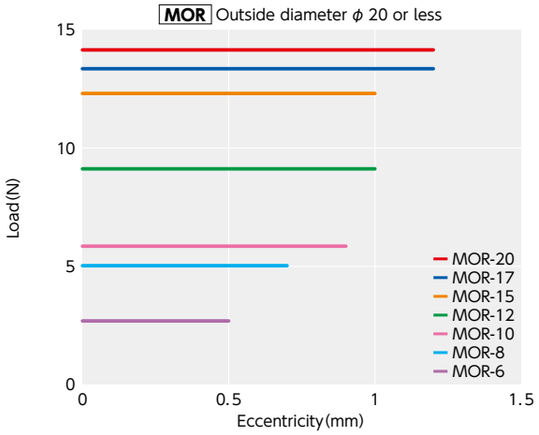
Couplicon®

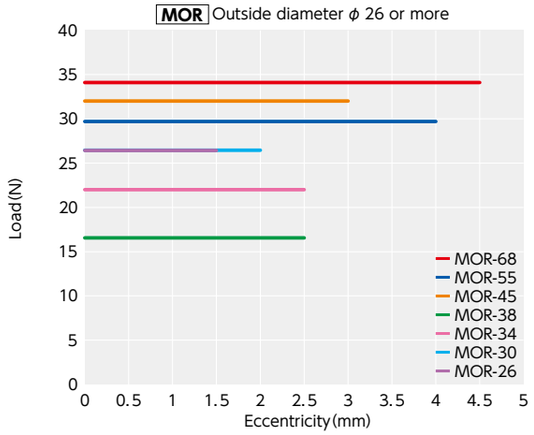
MOR Flexible coupling - Oldham - type

Selection Tool | CAD Download | High torque | Electrical Insulation | High Allowable Misalignment | Small Eccentric Reaction Force

Technical Information

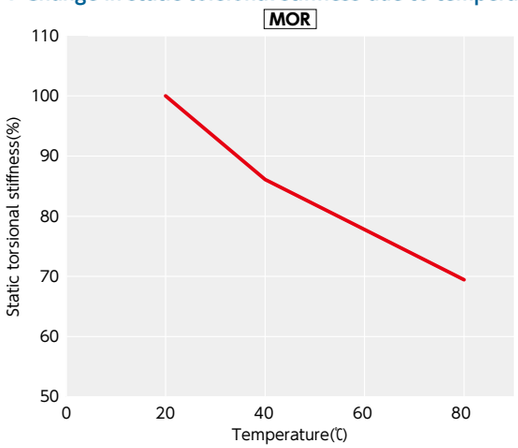
● Eccentric reaction force





These are initial slippage load values of hubs and a spacer.
After running-in operation, the slippage load becomes small, the load on the shaft due to misalignment becomes lowered, and the burden on the shaft bearing is reduced.

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of torsional stiffness within the range of allowable operating temperature is as shown in the graph.
Before using the unit, be aware of the deterioration of responsiveness.

● Spacer's physical property (Polyacetal)

	Test method	unit	Polyacetal
Density	ISO 1183	g/cm³	1.36
Water Absorption (23℃, dipped for 24 hr)	ISO 62	%	0.7
Tensile strength	ISO 527 - 1、2	N/mm²	52
Bending Strength	ISO 178	N/mm²	72
Charpy impact strength (with notch)	ISO 179/1eA	kJ/m²	5.9
Deflection temperature under load(1.8 MPa)	ISO 75 - 1、2	℃	85
Insulation breakdown strength (3 mmt)	IEC 60243 - 1	kV/mm	20
Volume Resistivity	IEC 60093	Ω・cm	1×10^{14}
Combustibility	UL94	–	HB

● Spacer's chemical resistance (Polyacetal)

	Effect
Weather Resistance	Slight change in color
Weak Acid Resistance	Minor effect
Strong Acid Resistance	Effect
Weak Alkali Resistance	Minor effect
Strong Alkali Resistance	Minor effect
Organic Solvent Resistance	Includes resistance

● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the max. torque of **MOR-C**.

Unit : N・m

Part Number	Bore diameter																		
	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28	30	35
MOR-12C	0.8	1.9	2.4																
MOR-15C		2.3	3.5	4.8															
MOR-17C			2.7	3.6	4														
MOR-20C			3.7	4.2	4.3	5.7	6.1												
MOR-26C				4	6.4	9.3	11.8												
MOR-30C						7.5	13.6	13.9	17.2	20.4									
MOR-34C								16.5	18.6	23.3	30.9								
MOR-38C								19.4	20.2	24	30	34.1	37.8	38.8					
MOR-45C									34.5	41.8	42.6	44.5	48.4						
MOR-55C												73.2	75.9	88.1					
MOR-68C														101.5	104.3	104.9	105.4	110.5	115.4

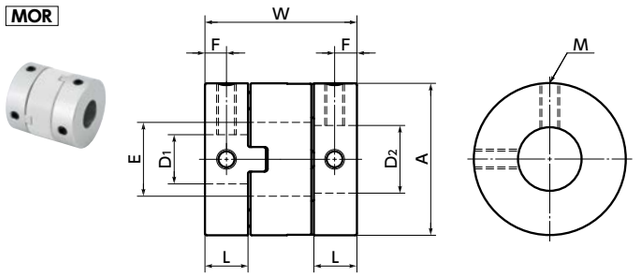
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MOR-C** Dimension table.

Couplicon®

MOR Flexible coupling - Oldham - type - Set screw type

WEB Selection Tool | WEB CAD Download | High torque | Electrical Insulation | High Allowable Misalignment | Small Eccentric Reaction Force

MOR



Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	M	Screw Tightening Torque (N・m)
MOR-6	6	2.5	8.4	2.1	1.3	M2	0.3
MOR-8	8	2.5	9.6	3.1	1.3	M2	0.3
MOR-10	10	2.9	10.2	4.1	1.4	M2	0.3
MOR-12	12	3.9	14.2	5.2	2	M3	0.7
MOR-15	15	4.4	16	8.2	2.2	M3	0.7
MOR-17	17	4.9	19.8	8.2	2.5	M3	0.7
MOR-20	20	5.8	21.4	12.2	2.9	M4	1.7
MOR-26	26	7.3	25.6	14.2	3.7	M4	1.7
MOR-30	30	10	32.5	16.2	5	M4	1.7
MOR-34	34	11.1	34	16.2	5.6	M5	4
MOR-38	38	12.1	40	20.3	6.1	M5	4
MOR-45	45	13.8	46	22.3	6.9	M6	7
MOR-55	55	18.7	57	26.5	9.4	M8	15
MOR-68	68	24	77	38.5	12	M10	30

Part Number	Standard Bore Diameter D1・D2 (dimensional allowance H8) 2																					
	1	1.5	2	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28	30	35	38
MOR-6	●	●	●																				
MOR-8	●		●	●																			
MOR-10			●	●	●																		
MOR-12				●	●	●																	
MOR-15					●	●	●	●	●														
MOR-17					●	●	●	●	●														
MOR-20					●	●	●	●	●	●	●	●											
MOR-26						●	●	●	●	●	●	●	●										
MOR-30									●	●	●	●	●	●	●								
MOR-34											●	●	●	●	●								
MOR-38											●	●	●	●	●	●	●						
MOR-45											●	●	●	●	●	●	●	●					
MOR-55													●	●	●	●	●	●	●				
MOR-68																●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- 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.
- A set of hubs with set screw type for one side and clamping type or other type for the other side is available upon request.

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

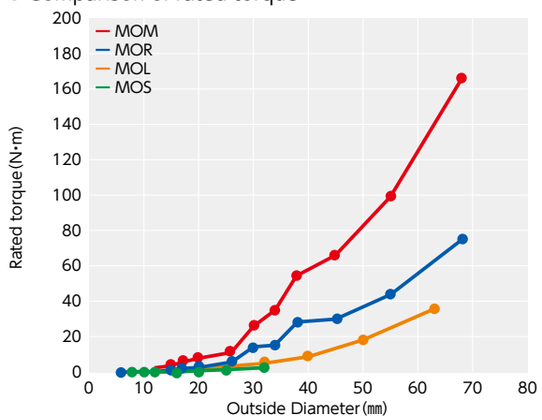
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOR-6	2	0.2	0.4	100000	2.2×10^{-9}	5	0.5	3	0.4
MOR-8	3	0.5	1	78000	7.4×10^{-9}	12	0.7	3	0.8
MOR-10	4	0.8	1.6	63000	1.9×10^{-8}	23	0.9	3	1
MOR-12	5	1	2	52000	5.3×10^{-8}	60	1	3	3
MOR-15	8	1.6	3.2	42000	1.4×10^{-7}	80	1	3	4
MOR-17	8	2.2	4.4	37000	2.8×10^{-7}	120	1.2	3	7
MOR-20	12	3.2	6.4	31000	5.7×10^{-7}	120	1.2	3	9
MOR-26	14	6	12	24000	2.1×10^{-6}	300	1.5	3	20
MOR-30	16	15	30	21000	5.4×10^{-6}	530	2	3	38
MOR-34	16	16	32	18000	9.1×10^{-6}	1000	2.5	3	52
MOR-38	20	28	56	16000	1.6×10^{-5}	1500	2.5	3	69
MOR-45	22	30	60	14000	3.3×10^{-5}	2400	3	3	110
MOR-55	26	45	90	11000	1.0×10^{-4}	4100	4	3	230
MOR-68	38	80	160	9000	3.7×10^{-4}	6400	4.5	3	430

*1 : Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MOR is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOR-20 - 6-12 1 set
(1) (2)

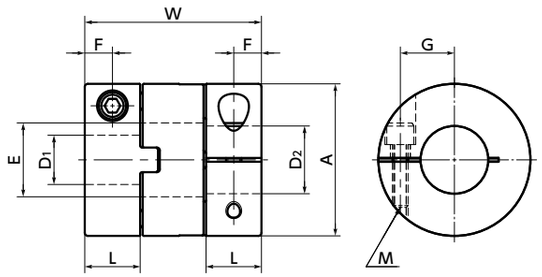
MOR - 20 - SPCR Single Spacer
Product Code | Outside Diameter (A Dimension) | Single Spacer

Couplicon®

MOR-C Flexible coupling - Oldham - type - Clamping type

Selection Tool | CAD Download | High torque | Electrical Insulation | High Allowable Misalignment | Small Eccentric Reaction Force

MOR-C



Dimensions

Unit : mm

Part Number ❶	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOR-12C	12	5	16.5	5.2	2.5	4	M2	0.5
MOR-15C	15	5.8	18.8	8.2	2.9	5	M2.5	1
MOR-17C	17	7.3	24.5	8.2	3.7	6	M2.5	1
MOR-20C	20	8.8	27.4	12.2	4.4	7.5	M3	1.5
MOR-26C	26	9.7	30.4	14.2	4.9	9.5	M3	1.5
MOR-30C	30	10	32.5	16.2	5	11.1	M4	2.5
MOR-34C	34	11.1	34	16.2	5.6	12.6	M4	2.5
MOR-38C	38	12.1	40	20.3	6	14.2	M5	4
MOR-45C	45	13.8	46	22.3	6.9	16	M5	4
MOR-55C	55	18.7	57	26.5	9.4	20	M6	8
MOR-68C	68	24	77	38.5	12	26	M8	16

Part Number	Standard Bore Diameter D1・D2 ❷																		
	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	25	28	30	35
MOR-12C	●	●	●																
MOR-15C		●	●	●															
MOR-17C			●	●	●														
MOR-20C			●	●	●	●	●	●											
MOR-26C				●	●	●	●	●	●	●									
MOR-30C						●	●	●	●	●									
MOR-34C								●	●	●	●	●							
MOR-38C								●	●	●	●	●	●	●					
MOR-45C									●	●	●	●	●	●					
MOR-55C												●	●	●	●	●			
MOR-68C														●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and set screw type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

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

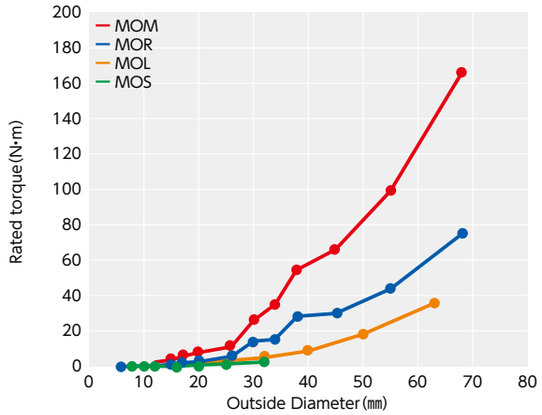
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOR-12C	5	1	2	52000	6.6×10^{-8}	60	1	3	3
MOR-15C	6	1.6	3.2	42000	1.7×10^{-7}	80	1	3	5
MOR-17C	6.35	2.2	4.4	37000	3.8×10^{-7}	120	1.2	3	9
MOR-20C	10	3.2	6.4	31000	8.0×10^{-7}	120	1.2	3	13
MOR-26C	14	6	12	24000	2.5×10^{-6}	300	1.5	3	24
MOR-30C	14	15	30	21000	5.3×10^{-6}	530	2	3	39
MOR-34C	16	16	32	18000	8.6×10^{-6}	1000	2.5	3	50
MOR-38C	20	28	56	16000	1.5×10^{-5}	1500	2.5	3	67
MOR-45C	20	30	60	14000	3.2×10^{-5}	2400	3	3	110
MOR-55C	25	45	90	11000	1.0×10^{-4}	4100	4	3	230
MOR-68C	35	80	160	9000	3.3×10^{-4}	6400	4.5	3	440

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30°C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MOR-C is −20°C to 80°C.

*2: These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOR-55C - 18-20 (1 set)
❶ ❷

MOR - 20 - SPCR (Single Spacer)

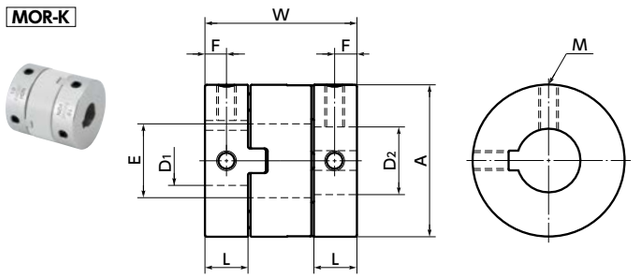
Product Code	Outside Diameter (A Dimension)	Single Spacer
MOR	20	SPCR

Couplicon®

MOR-K Flexible coupling - Oldham - type - Set screw + Key type

WEB Selection Tool　WEB CAD Download　High torque　Electrical Insulation　High Allowable Misalignment　Small Eccentric Reaction Force

MOR-K



Dimensions

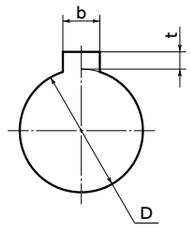
Unit : mm

Part Number 1	A	L	W	E	F	M	Screw Tightening Torque (N・m)
MOR-15K	15	4.4	16	8.2	2.2	M3	0.7
MOR-17K	17	4.9	19.8	8.2	2.5	M3	0.7
MOR-20K	20	5.8	21.4	12.2	2.9	M4	1.7
MOR-26K	26	7.3	25.6	14.2	3.7	M4	1.7
MOR-30K	30	10	32.5	16.2	5	M4	1.7
MOR-34K	34	11.1	34	16.2	5.6	M5	4
MOR-38K	38	12.1	40	20.3	6.1	M5	4
MOR-45K	45	13.8	46	22.3	6.9	M6	7
MOR-55K	55	18.7	57	26.5	9.4	M8	15
MOR-68K	68	24	77	38.5	12	M10	30

Part Number	Standard Bore Diameter (dimensional allowance H8) D1・D2 2														
	6	8	10	12	14	15	16	18	20	22	25	28	30	35	38
MOR-15K	●	●													
MOR-17K	●	●													
MOR-20K	●	●	●	●											
MOR-26K	●	●	●	●	●										
MOR-30K		●	●	●	●	●	●								
MOR-34K			●	●	●	●	●								
MOR-38K			●	●	●	●	●	●	●						
MOR-45K			●	●	●	●	●	●	●	●					
MOR-55K					●	●	●	●	●	●	●				
MOR-68K								●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with key type for one side and clamping type or other type for the other side is available upon request.

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway				Key
	b		t		Nominal dimension b×h
	Standard Dimension	Allowance (JS9)	Standard Dimension	Allowance	
6	2	±0.0125	1.0	$^{+0.1}_{0}$	2×2
8	3	±0.0125	1.4	$^{+0.1}_{0}$	3×3
10・12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・15・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・20・22	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
25・28	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7
30・35・38	10	±0.0180	3.3	$^{+0.2}_{0}$	10×8

- Excerpt from JIS B 1301

Additional Keyway at Shaft Hole ➡ P.803
Please feel free to contact us

Cleanroom Wash & Packaging ➡ P.807
Available / Add'l charge

Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge

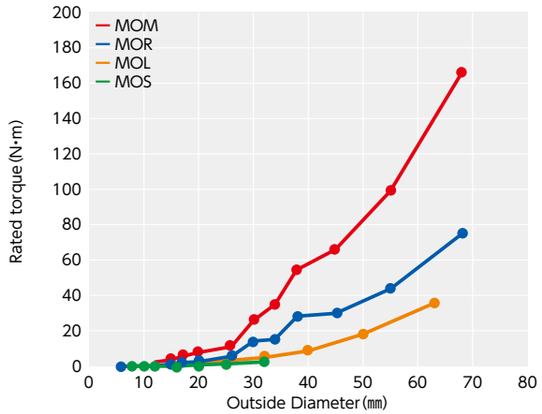
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOR-15K	8	1.6	3.2	42000	1.4×10^{-7}	80	1	3	4
MOR-17K	8	2.2	4.4	37000	2.8×10^{-7}	120	1.2	3	7
MOR-20K	12	3.2	6.4	31000	5.6×10^{-7}	120	1.2	3	8
MOR-26K	14	6	12	24000	2.0×10^{-6}	300	1.5	3	19
MOR-30K	16	15	30	21000	5.4×10^{-6}	530	2	3	37
MOR-34K	16	16	32	18000	9.0×10^{-6}	1000	2.5	3	51
MOR-38K	20	28	56	16000	1.5×10^{-5}	1500	2.5	3	68
MOR-45K	22	30	60	14000	3.2×10^{-5}	2400	3	3	110
MOR-55K	26	45	90	11000	1.0×10^{-4}	4100	4	3	230
MOR-68K	38	80	160	9000	3.3×10^{-4}	6400	4.5	3	430

*1 : Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30°C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MOR-K is −20°C to 80°C.

*2 : These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOR-26K - 8-10 1 set
(1) (2)

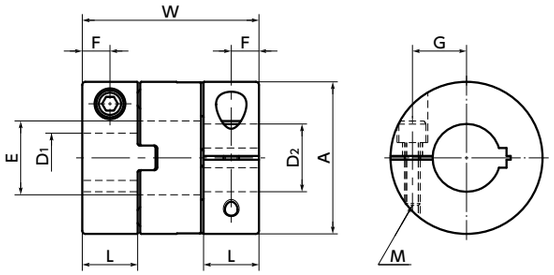
MOR - 20 - SPCR Single Spacer
Product Code / Outside Diameter (A Dimension) / Single Spacer

Couplicon®

MOR-CK Flexible coupling - Oldham - type - Clamping + Key type

WEB Selection Tool　WEB CAD Download　High torque　Electrical Insulation　High Allowable Misalignment　Small Eccentric Reaction Force

MOR-CK



Dimensions

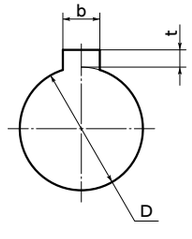
Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOR-15CK	15	5.8	18.8	8.2	2.9	5	M2.5	1
MOR-17CK	17	7.3	24.5	8.2	3.7	6	M2.5	1
MOR-20CK	20	8.8	27.4	12.2	4.4	7.5	M3	1.5
MOR-26CK	26	9.7	30.4	14.2	4.9	9.5	M3	1.5
MOR-30CK	30	10	32.5	16.2	5	11.1	M4	2.5
MOR-34CK	34	11.1	34	16.2	5.6	12.6	M4	2.5
MOR-38CK	38	12.1	40	20.3	6	14.2	M5	4
MOR-45CK	45	13.8	46	22.3	6.9	16	M5	4
MOR-55CK	55	18.7	57	26.5	9.4	20	M6	8
MOR-68CK	68	24	77	38.5	12	26	M8	16

Part Number	Standard Bore Diameter D1・D2 2													
	6	8	10	12	14	15	16	18	20	22	25	28	30	35
MOR-15CK	●													
MOR-17CK	●													
MOR-20CK	●	●	●											
MOR-26CK	●	●	●	●	●									
MOR-30CK		●	●	●	●									
MOR-34CK			●	●	●	●	●							
MOR-38CK			●	●	●	●	●	●	●					
MOR-45CK				●	●	●	●	●	●					
MOR-55CK							●	●	●	●	●			
MOR-68CK									●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping + key type for one side and clamping type or other types for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway				Key
	b		t		Nominal dimension b×h
	Standard Dimension	Allowance (JS9)	Standard Dimension	Allowance	
6	2	±0.0125	1.0	$^{+0.1}_{0}$	2×2
8	3	±0.0125	1.4	$^{+0.1}_{0}$	3×3
10・12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・15・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・20・22	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
25・28	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7
30・35	10	±0.0180	3.3	$^{+0.2}_{0}$	10×8

- Excerpt from JIS B 1301

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

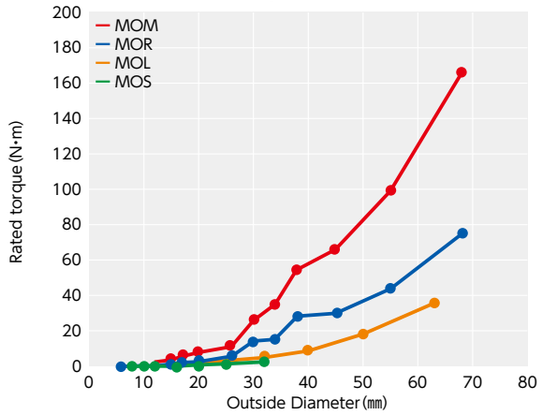
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOR-15CK	6	1.6	3.2	42000	1.8×10^{-7}	80	1	3	5
MOR-17CK	6.35	2.2	4.4	37000	3.8×10^{-7}	120	1.2	3	9
MOR-20CK	10	3.2	6.4	31000	8.0×10^{-7}	120	1.2	3	13
MOR-26CK	14	6	12	24000	2.5×10^{-6}	300	1.5	3	23
MOR-30CK	14	15	30	21000	5.2×10^{-6}	530	2	3	38
MOR-34CK	16	16	32	18000	8.6×10^{-6}	1000	2.5	3	49
MOR-38CK	20	28	56	16000	1.5×10^{-5}	1500	2.5	3	64
MOR-45CK	20	30	60	14000	3.2×10^{-5}	2400	3	3	110
MOR-55CK	25	45	90	11000	1.0×10^{-4}	4100	4	3	230
MOR-68CK	35	80	160	9000	3.3×10^{-4}	6400	4.5	3	440

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30°C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of **MOR** is −20°C to 80°C.

*2: These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOR-38CK - 14-15 1 set
1　2

MOR - 20 - SPCR Single Spacer
Product Code　Outside Diameter (A Dimension)　Single Spacer

Couplicon®

MOM Flexible coupling - Oldham - type

WEB Selection Tool　WEB CAD Download　High torque　High Rigidity

Structure

● Set Screw type
MOM ➡ P.179

● Clamping type
MOM-C ➡ P.181

● Set Screw + Key type
MOM-K ➡ P.183

● Clamping + Key type
MOM-CK ➡ P.185

● Material/Finish

RoHS2 Compliant

	MOM / MOM-C / MOM-K / MOM-CK
Hub	S45C Ferrosoferric Oxide Film (Black)
Spacer	FCD400 Ferrosoferric oxide film
Pin	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

● Applicable motors

	MOM
Servomotor	–
Stepping Motor	–
General-purpose motor	◎

◎: Excellent ○: Very good

● Property

	MOM
High torque	◎
High Torsional Stiffness	◎
Allowable Misalignment	○

◎: Excellent ○: Very good

- This is an oldham-type flexible coupling.
- FCD400 is adopted in the spacer. Suitable for low-speed and high-torque specification.
- High performance grease is applied in the gap between hubs and the spacer in order to prevent sticking.
- Slippage of hubs and a spacer allows large eccentricity and angular misalignment to be accepted.
- A projection placed in the spacer (resin pin) allows angular misalignment to be effortlessly accepted.
- Long-term maintenance free. The grease accumulated in a grease hole will gradually seep out during operation, thereby maintaining the lubrication property over a long period.

● Application

Mixer / Pump / Small power press / Grinder

⚠ Precautions for Use
Please apply grease periodically in order to prevent sticking of hubs and a spacer.

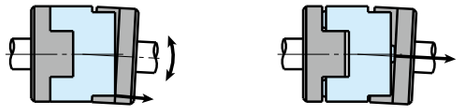
● Part number specification

MOM - 30K - 12-14
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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

● Spacer's projection structure
Spacer's projection structure allows large angular to be effortlessly accepted. It reduces burden on the shaft.



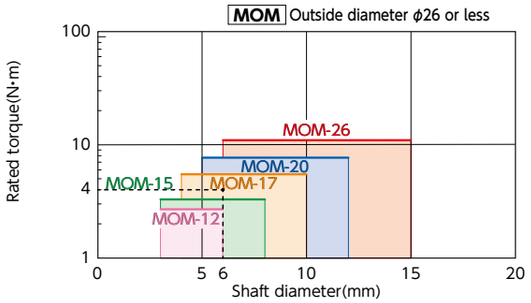
(Without projection)　MOM (With projection)

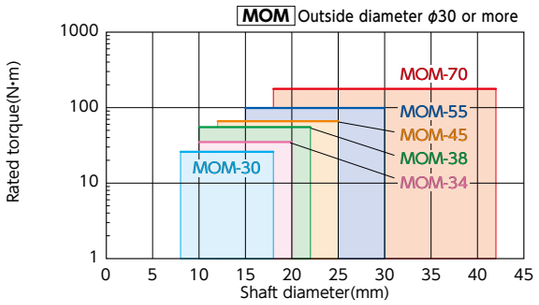
In the oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.
NBK's oldham type coupling allows the angular misalignment to be easily accepted since the projection serves as support. Bending moment does not arise. Therefore, the max. angular misalignment is large (2°) and the burden on the shaft is reduced. MOM is provided with a projection by inserting a resin pin into the spacer.

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 6 and load torque of 4N•m, the selected size is MOM-17.

MOM Flexible coupling - Oldham - type

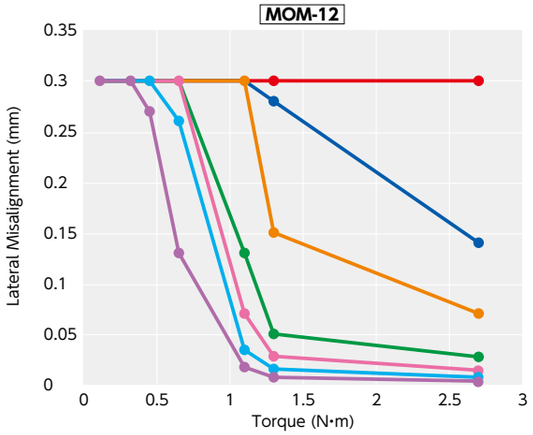
Selection Tool | CAD Download | High torque | High Rigidity

Technical Information

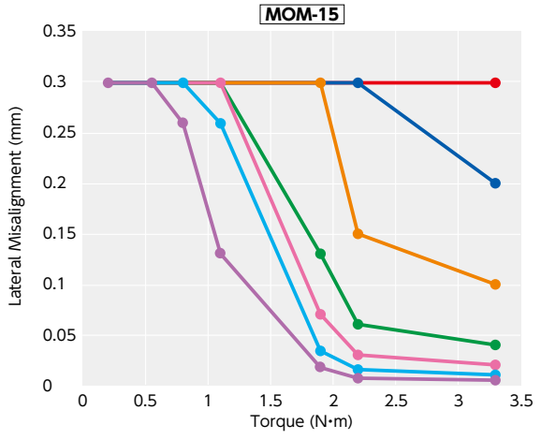
● Max. Lateral Misalignment

MOM's max. lateral misalignment varies depending on the load torque and revolution.

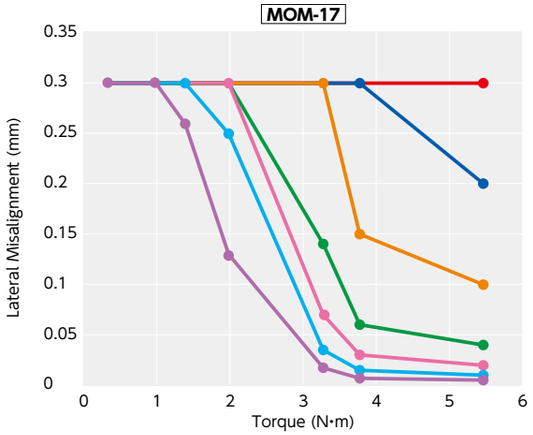
MOM-12



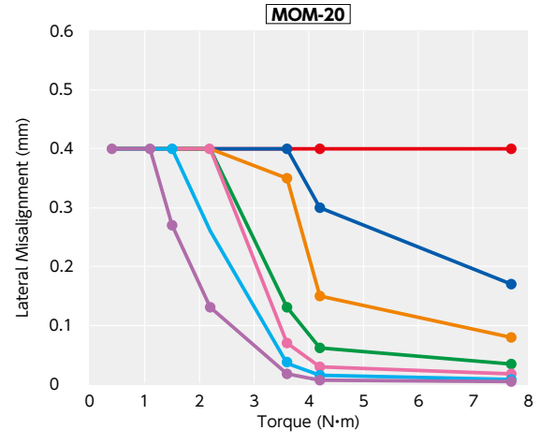
MOM-15



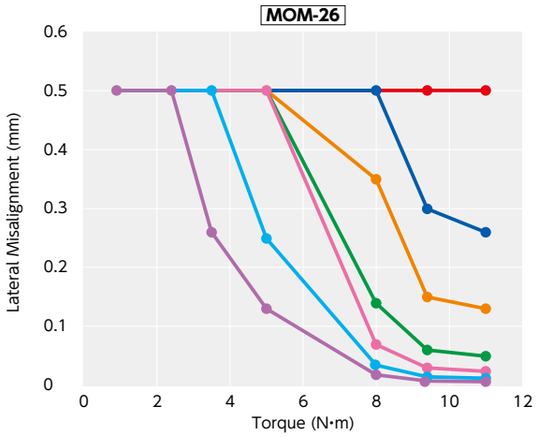
MOM-17



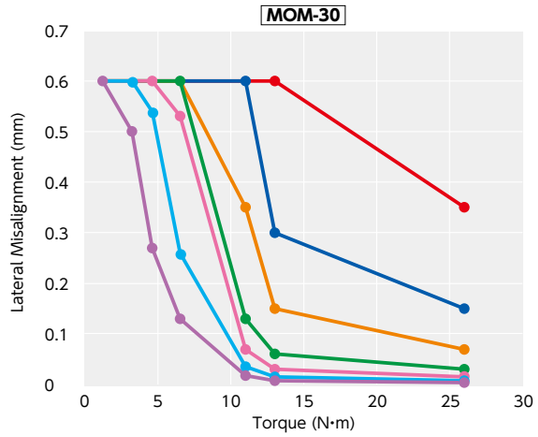
MOM-20



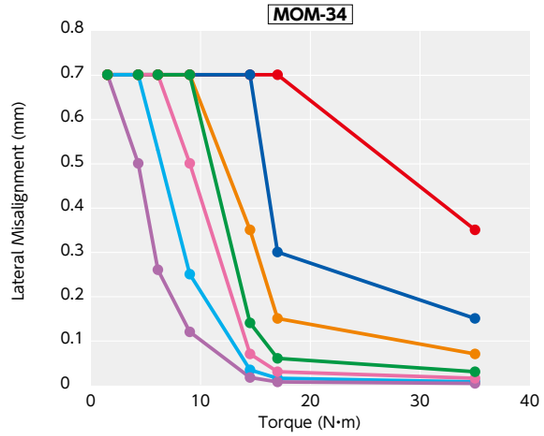
MOM-26



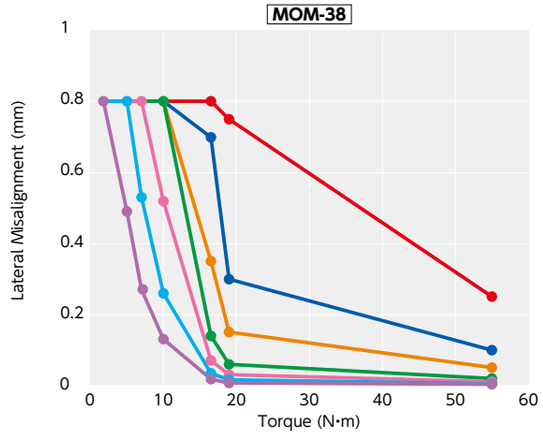
MOM-30



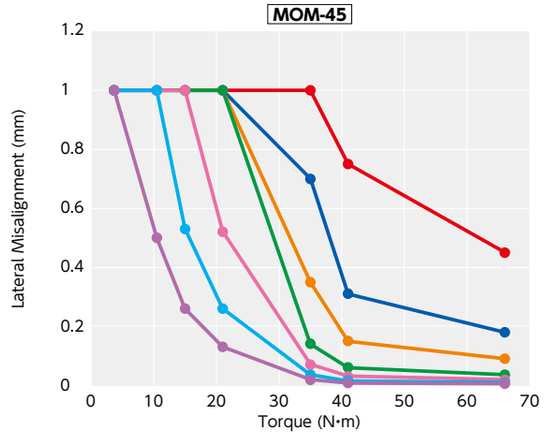
MOM-34



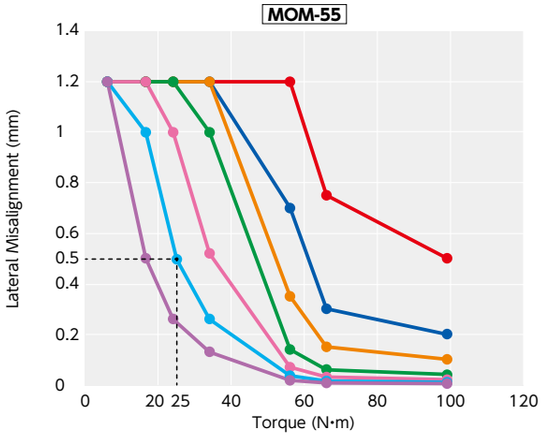
MOM-38



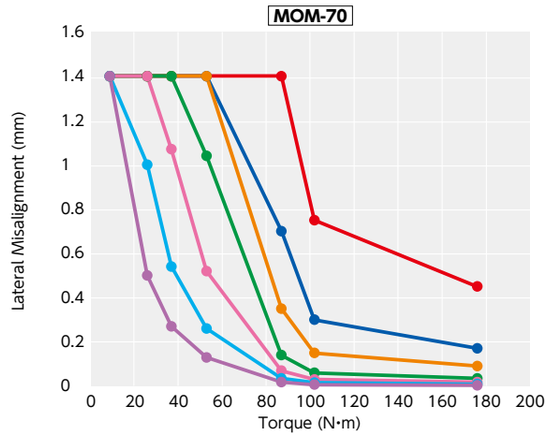
MOM-45



MOM-55



MOM-70



● Example
When load torque is 25 N•m and revolution is 1000 min−1, the max. lateral misalignment of **MOM-55** is 0.5 mm.

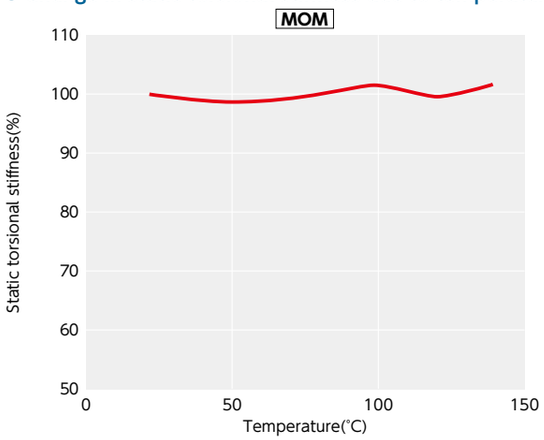
20min⁻¹
50min⁻¹
100min⁻¹
250min⁻¹
500min⁻¹
1000min⁻¹
2000min⁻¹

Couplicon®

MOM Flexible coupling - Oldham - type

Selection Tool | CAD Download | High torque | High Rigidity

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
MOM's change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small.
However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the max. torque of **MOM-C**.

Unit : N・m

Part Number	Bore Diameter																			
	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15C	0.3	0.5	0.8	1															
MOM-17C		2.1	3.5	3.7															
MOM-20C			3.8	6	6	6.8	7.5												
MOM-26C				5.4	5.4	5.8	6.6	8.7											
MOM-30C						7.4	12.6	14.4	15.1										
MOM-34C							13	13.2	15.8	16.1	16.8								
MOM-38C							16.4	18.4	20.9	23.1	25.1	28.3	31.6						
MOM-45C								47.9	48.9	56.1	56.8	57.5	62.8						
MOM-55C										42.9	54.1	55.3	56.2	89.3	93.4	97.5			
MOM-70C												62.6	92.9	95.5	97.6	103.9	119	122.1	130

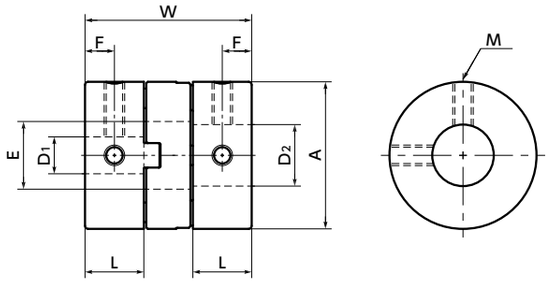
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MOM-C** Dimension table.

Couplicon®

MOM Flexible coupling - Oldham - type - Set screw type

WEB Selection Tool　WEB CAD Download　High torque　High Rigidity

MOM



Dimensions

Unit : mm

Part Number ◀1	A	L	W	E	F	M	Screw Tightening Torque (N・m)
MOM-12	12	5.2	15	5.9	2.6	M2.5	0.5
MOM-15	15	5.4	16.6	6.9	2.7	M3	0.7
MOM-17	17	6.7	20.4	7.3	3.35	M3	0.7
MOM-20	20	7	22	11.1	3.5	M3	0.7
MOM-26	26	9	26.6	13.3	4.5	M4	1.7
MOM-30	30	12	34	15.5	6	M4	1.7
MOM-34	34	13	35	17.5	6.5	M5	4
MOM-38	38	15	40.5	21.5	7.5	M5	4
MOM-45	45	15	45.2	24.3	7.5	M5	4
MOM-55	55	17	51	27.7	8.5	M6	7
MOM-70	70	20	58.6	38.5	10	M8	15

Part Number	D1・D2 ◀2 Standard Bore Diameter (dimensional allowance H8)																					
	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35	38	40	42
MOM-12	●	●	●	●																		
MOM-15	●	●	●	●		●																
MOM-17		●	●	●		●	●															
MOM-20			●	●	●	●	●	●														
MOM-26				●	●	●	●	●	●	●												
MOM-30						●	●	●	●	●	●	●										
MOM-34							●	●	●	●	●	●	●									
MOM-38							●	●	●	●	●	●	●	●								
MOM-45								●	●	●	●	●	●	●	●	●						
MOM-55										●	●	●	●	●	●	●	●	●				
MOM-70												●	●	●	●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- 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.
- A set of hubs with set screw type for one side and clamping type for the other side is available upon request.

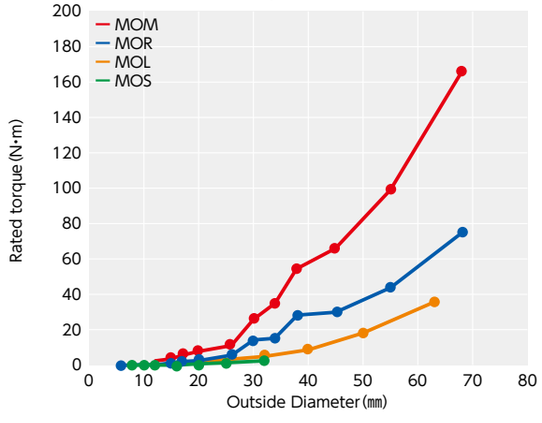
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

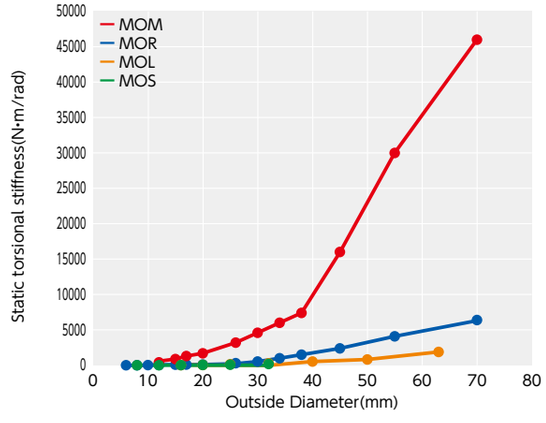
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. lateral*3 misalignment (mm) ➡ P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-12	6	2.7	5.4	2000	2.0×10^{-7}	420	0.3	2	9
MOM-15	8	3.3	6.6	2000	5.5×10^{-7}	870	0.3	2	15
MOM-17	10	5.5	11	2000	1.1×10^{-6}	1300	0.3	2	24
MOM-20	12	7.7	15.4	2000	2.3×10^{-6}	1700	0.4	2	34
MOM-26	15	11	22	2000	8.1×10^{-6}	3200	0.5	2	72
MOM-30	18	26	52	2000	1.8×10^{-5}	4600	0.6	2	119
MOM-34	20	35	70	2000	3.1×10^{-5}	6000	0.7	2	159
MOM-38	22	55	110	2000	5.5×10^{-5}	7400	0.8	2	230
MOM-45	25	66	132	2000	1.2×10^{-4}	16000	1	2	364
MOM-55	30	99	198	2000	3.0×10^{-4}	30000	1.2	2	636
MOM-70	42	176	352	2000	8.9×10^{-4}	46000	1.4	2	1090

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin.
*2: These are values with max. bore diameter.
*3: The max. lateral misalignment varies depending on the load torque and revolution. ➡ P.175

● Comparison of rated torque





● Part number specification

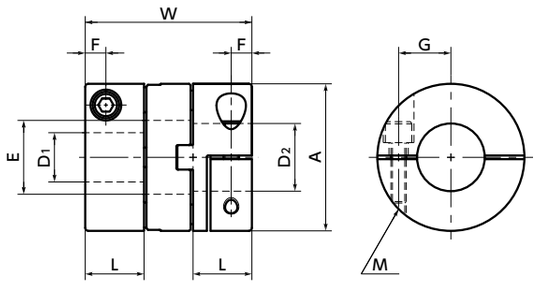
MOM-26-6.35-10
◀1 ◀2

Couplicon®

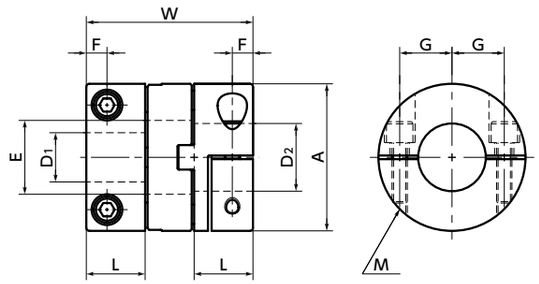
MOM-C Flexible coupling - Oldham - type - Clamping type

WEB Selection Tool　WEB CAD Download　High torque　High Rigidity

MOM-C



Outside Diameter: ϕ15 - ϕ38



Outside Diameter: ϕ45 - ϕ70

Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOM-15C	15	6.6	19	6.9	2.15	5.2	M1.6	0.25
MOM-17C	17	9	25	7.3	2.65	5.5	M2	0.5
MOM-20C	20	10	28	11.1	3.25	7.25	M2.5	1
MOM-26C	26	11.5	31.6	13.3	4	9	M3	1.5
MOM-30C	30	12	34	15.5	4	11	M3	1.5
MOM-34C	34	13	35	17.5	4.5	12	M4	3.5
MOM-38C	38	15	40.5	21.5	4.75	14	M4	3.5
MOM-45C	45	16.2	47.6	24.3	6.2	16	M5	8
MOM-55C	55	20.8	58.6	27.7	7.9	20	M6	13
MOM-70C	70	25	68.6	38.5	8.9	26	M6	13

Part Number	Standard Bore Diameter D1・D2 2																		
	3	4	5	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15C	●	●	●	●															
MOM-17C		●	●	●															
MOM-20C			●	●	●	●	●												
MOM-26C				●	●	●	●	●											
MOM-30C						●	●	●	●										
MOM-34C							●	●	●	●	●								
MOM-38C							●	●	●	●	●	●	●						
MOM-45C								●	●	●	●	●	●	●					
MOM-55C										●	●	●	●	●	●	●			
MOM-70C												●	●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping type for one side and set screw type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

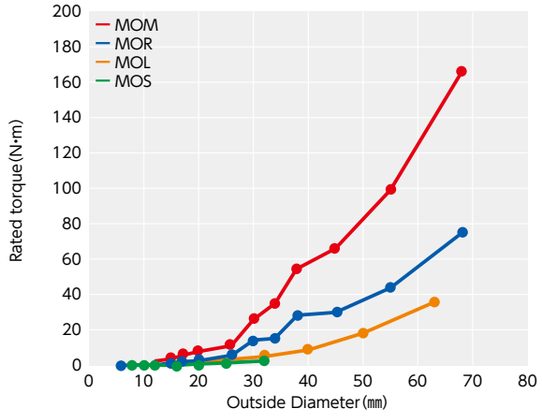
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

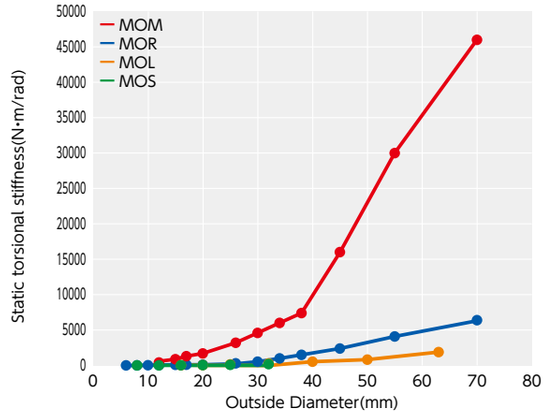
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral*3 Misalignment (mm) ➡ P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15C	6	3.3	6.6	2000	6.2×10^{-7}	870	0.3	2	19
MOM-17C	6.35	5.5	11	2000	1.4×10^{-6}	1300	0.3	2	34
MOM-20C	10	7.7	15.4	2000	3.0×10^{-6}	1700	0.4	2	47
MOM-26C	12	11	22	2000	9.6×10^{-6}	3200	0.5	2	92
MOM-30C	14	26	52	2000	1.8×10^{-5}	4600	0.6	2	131
MOM-34C	16	35	70	2000	3.1×10^{-5}	6000	0.7	2	173
MOM-38C	20	55	110	2000	5.5×10^{-5}	7400	0.8	2	235
MOM-45C	22	66	132	2000	1.2×10^{-4}	16000	1	2	387
MOM-55C	25	99	198	2000	3.4×10^{-4}	30000	1.2	2	752
MOM-70C	35	176	352	2000	1.0×10^{-3}	46000	1.4	2	1370

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin.
*2: These are values with max. bore diameter.
*3: The max. lateral misalignment varies depending on the load torque and revolution. ➡ P.175

- Comparison of rated torque





- Part number specification

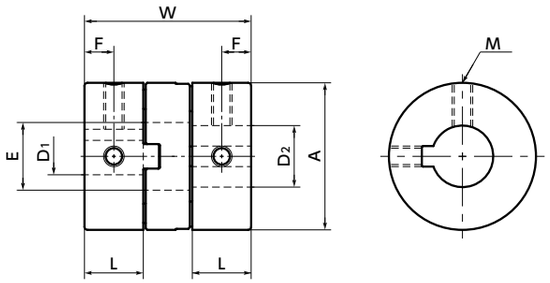
MOM-55C - 15-16
1　2

Couplicon®

MOM-K Flexible coupling - Oldham - type - Set screw + Key type

WEB Selection Tool　WEB CAD Download　High torque　High Rigidity

MOM-K



Dimensions

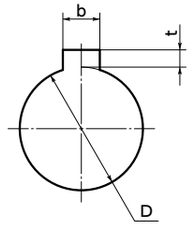
Unit : mm

Part Number 1	A	L	W	E	F	M	Screw Tightening Torque (N・m)
MOM-15K	15	5.4	16.6	6.9	2.7	M3	0.7
MOM-17K	17	6.7	20.4	7.3	3.35	M3	0.7
MOM-20K	20	7	22	11.1	3.5	M3	0.7
MOM-26K	26	9	26.6	13.3	4.5	M4	1.7
MOM-30K	30	12	34	15.5	6	M4	1.7
MOM-34K	34	13	35	17.5	6.5	M5	4
MOM-38K	38	15	40.5	21.5	7.5	M5	4
MOM-45K	45	15	45.2	24.3	7.5	M5	4
MOM-55K	55	17	51	27.7	8.5	M6	7
MOM-70K	70	20	58.6	38.5	10	M8	15

Part Number	Standard Bore Diameter (dimensional allowance H8) D1・D2 2															
	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15K	●															
MOM-17K	●		●													
MOM-20K	●	●	●	●												
MOM-26K	●	●	●	●	●											
MOM-30K			●	●	●	●	●									
MOM-34K				●	●	●	●	●								
MOM-38K				●	●	●	●	●	●	●						
MOM-45K					●	●	●	●	●	●	●					
MOM-55K							●	●	●	●	●	●	●	●		
MOM-70K									●	●	●	●	●	●	●	●

- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with key type for one side and clamping type or other type for the other side is available upon request.

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway b		Keyway t		Key Nominal dimension b×h
	Standard Dimension	Allowance (JS9)	Standard Dimension	Allowance	
6・6.35	2	±0.0125	1.0	$^{+0.1}_{0}$	2×2
8	3	±0.0125	1.4	$^{+0.1}_{0}$	3×3
10・12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・15・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・20・22	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
24・25・28・30	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7
35	10	±0.0180	3.3	$^{+0.2}_{0}$	10×8

- Excerpt from JIS B 1301

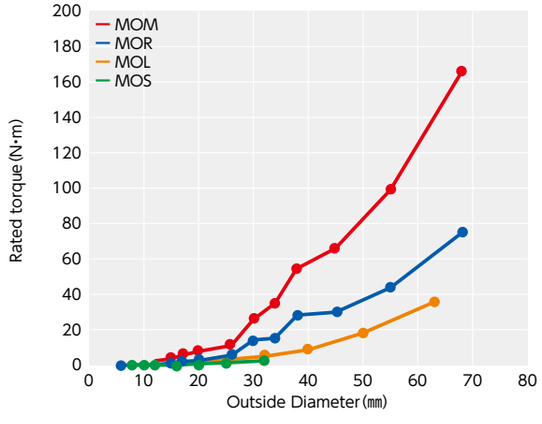
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

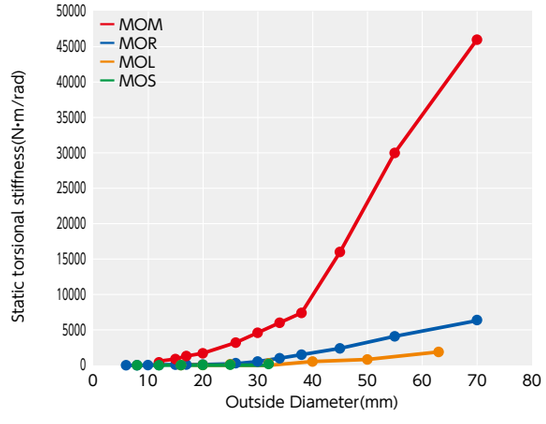
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. lateral*3 misalignment (mm) ➡ P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15K	7	3.3	6.6	2000	5.7×10^{-7}	870	0.3	2	17
MOM-17K	8	5.5	11	2000	1.1×10^{-6}	1300	0.3	2	26
MOM-20K	10	7.7	15.4	2000	2.4×10^{-6}	1700	0.4	2	37
MOM-26K	12	11	22	2000	8.4×10^{-6}	3200	0.5	2	78
MOM-30K	15	26	52	2000	1.8×10^{-5}	4600	0.6	2	130
MOM-34K	16	35	70	2000	3.2×10^{-5}	6000	0.7	2	178
MOM-38K	20	55	110	2000	5.7×10^{-5}	7400	0.8	2	241
MOM-45K	22	66	132	2000	1.2×10^{-4}	16000	1	2	384
MOM-55K	28	99	198	2000	3.1×10^{-4}	30000	1.2	2	650
MOM-70K	35	176	352	2000	9.3×10^{-4}	46000	1.4	2	1200

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin.
*2: These are values with max. bore diameter.
*3: The max. lateral misalignment varies depending on the load torque and revolution. ➡ P.175

● Comparison of rated torque





● Part number specification

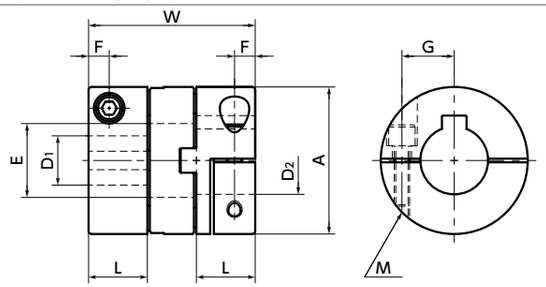
MOM-15K - 6-6
1　2

Couplicon®

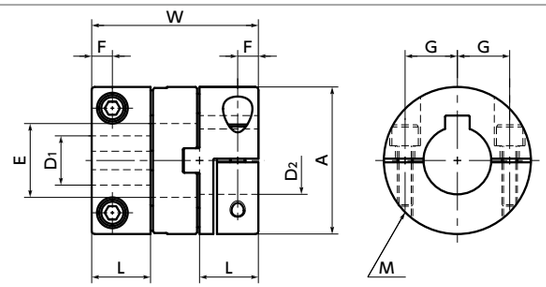
MOM-CK Flexible coupling - Oldham - type - Clamping + Key type

WEB Selection Tool　WEB CAD Download　High torque　High Rigidity

MOM-CK



Outside Diameter: ϕ15 - ϕ38



Outside Diameter: ϕ45 - ϕ70

Dimensions

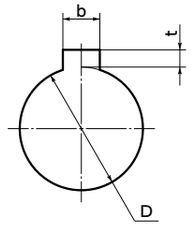
Unit : mm

Part Number [1]	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOM-15CK	15	6.6	19	6.9	2.15	5.2	M1.6	0.25
MOM-17CK	17	9	25	7.3	2.65	5.5	M2	0.5
MOM-20CK	20	10	28	11.1	3.25	7.25	M2.5	1
MOM-26CK	26	11.5	31.6	13.3	4	9	M3	1.5
MOM-30CK	30	12	34	15.5	4	11	M3	1.5
MOM-34CK	34	13	35	17.5	4.5	12	M4	3.5
MOM-38CK	38	15	40.5	21.5	4.75	14	M4	3.5
MOM-45CK	45	16.2	47.6	24.3	6.2	16	M5	8
MOM-55CK	55	20.8	58.6	27.7	7.9	20	M6	13
MOM-70CK	70	25	68.6	38.5	8.9	26	M6	13

Part Number	Standard Bore Diameter D1・D2 [2]															
	6	6.35	8	10	12	14	15	16	18	20	22	24	25	28	30	35
MOM-15CK	●															
MOM-17CK	●															
MOM-20CK	●	●	●	●												
MOM-26CK	●	●	●	●	●											
MOM-30CK			●	●	●	●										
MOM-34CK				●	●	●	●	●								
MOM-38CK				●	●	●	●	●	●	●						
MOM-45CK					●	●	●	●	●	●	●					
MOM-55CK							●	●	●	●	●	●	●			
MOM-70CK										●	●	●	●	●	●	●

- All products are provided with hex socket head cap screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with clamping + key type for one side and clamping type or other type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

● Details of Shaft Hole



Unit : mm

Standard bore diameter D	Keyway				Key
	b		t		Nominal dimension b×h
	Standard Dimension	Allowance (JS9)	Standard Dimension	Allowance	
6・6.35	2	±0.0125	1.0	$^{+0.1}_{0}$	2×2
8	3	±0.0125	1.4	$^{+0.1}_{0}$	3×3
10・12	4	±0.0150	1.8	$^{+0.1}_{0}$	4×4
14・15・16	5	±0.0150	2.3	$^{+0.1}_{0}$	5×5
18・20・22	6	±0.0150	2.8	$^{+0.1}_{0}$	6×6
24・25・28・30	8	±0.0180	3.3	$^{+0.2}_{0}$	8×7
35	10	±0.0180	3.3	$^{+0.2}_{0}$	10×8

- Excerpt from JIS B 1301

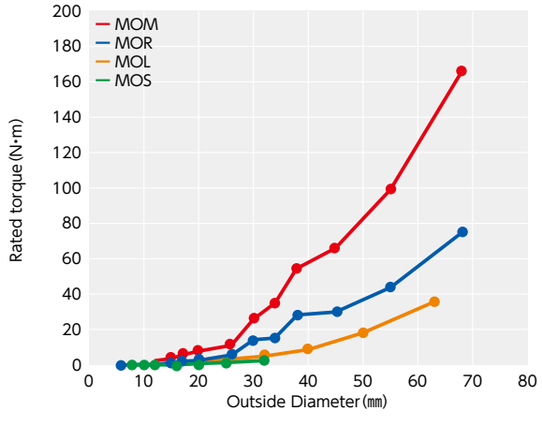
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

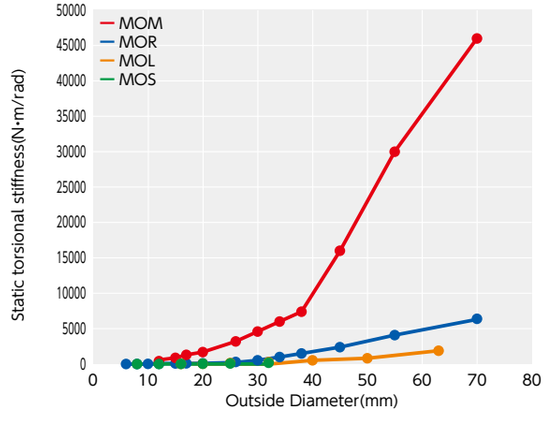
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. lateral*3 misalignment (mm) ➡ P.175	Max. Angular Misalignment (°)	Mass*2 (g)
MOM-15CK	6	3.3	6.6	2000	6.1×10^{-7}	870	0.3	2	18
MOM-17CK	6.35	5.5	11	2000	1.4×10^{-6}	1300	0.3	2	33
MOM-20CK	10	7.7	15.4	2000	2.9×10^{-6}	1700	0.4	2	45
MOM-26CK	12	11	22	2000	9.5×10^{-6}	3200	0.5	2	90
MOM-30CK	14	26	52	2000	1.8×10^{-5}	4600	0.6	2	128
MOM-34CK	16	35	70	2000	3.0×10^{-5}	6000	0.7	2	170
MOM-38CK	20	55	110	2000	5.4×10^{-5}	7400	0.8	2	231
MOM-45CK	22	66	132	2000	1.2×10^{-4}	16000	1	2	383
MOM-55CK	25	99	198	2000	3.4×10^{-4}	30000	1.2	2	743
MOM-70CK	35	176	352	2000	1.0×10^{-3}	46000	1.4	2	1350

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin.
*2: These are values with max. bore diameter.
*3: The max. lateral misalignment varies depending on the load torque and revolution. ➡ P.175

● Comparison of rated torque





● Part number specification

MOM-38CK - 16-18
[1] [2]

Couplicon®

MOL/MOS Flexible coupling - Oldham - type

WEB Selection Tool WEB CAD Download High Allowable Misalignment Small Eccentric Reaction Force

Structure

● Set Screw type

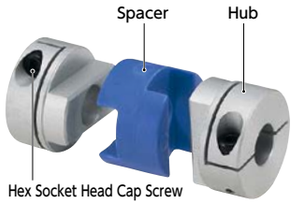
MOL Outside diameter ϕ16 - ϕ32 ➡ P.189

MOL Outside diameter ϕ40 - ϕ63

MOS ➡ P.191

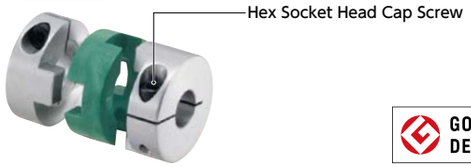
● Clamping type

MOL-C Outside diameter ϕ16 - ϕ32 ➡ P.189



MOL-C Outside diameter ϕ40 - ϕ63

MOS-C ➡ P.191



GOOD DESIGN

● Applicable motors

	MOL	MOS
Servomotor	–	–
Stepping Motor	○	○
General-purpose motor	◎	◎

◎: Excellent ○: Very good

● Property

	MOL	MOS
Allowable Misalignment	◎	◎
Electrical insulation	◎	◎
Allowable operating temperature	−20℃ to 80℃	−20℃ to 80℃

◎: Excellent ○: Very good

- This is an oldham-type flexible coupling.
- Slippage of hubs and a spacer allows large eccentricity and angular misalignment to be accepted.
- The load on the shaft generated by misalignment is small and the burden on the shaft is reduced.
- It has electrical insulation.
- Standard type **MOL** and short type **MOS** are available.

● Application

Parts feeder/Transport device

● Material/Finish

RoHS2 Compliant

	MOL / MOL-C / MOS / MOS-C
Hub	A2017 Alumite Treatment
Spacer	Polyacetal
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film
Hex Socket Head Cap Screw	SCM435 Ferrosoferric oxide film

Related Products

Oldham-type coupling with high torque specification **MOR** is available.
➡ P.161

Oldham-type couplings **MOM** with metal spacers are available.
➡ P.173

● Part number specification

MOL - 20C - 6-8

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
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

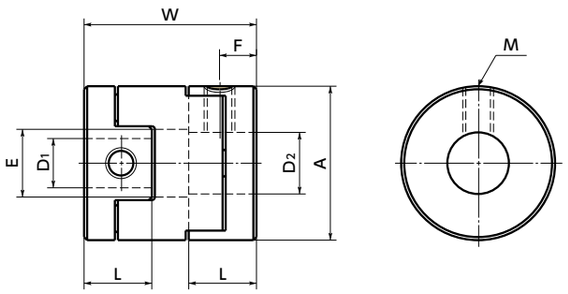
Couplicon®

MOL/MOL-C Flexible coupling - Oldham - type - Set screw type/Clamping type

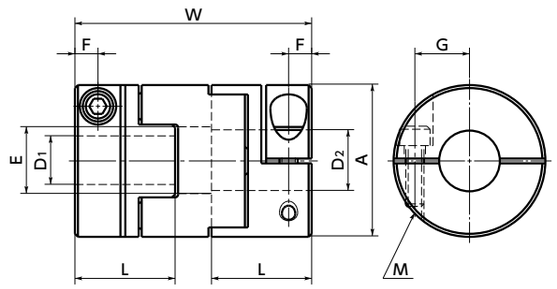
WEB Selection Tool　WEB CAD Download　High Allowable Misalignment　Small Eccentric Reaction Force

MOL

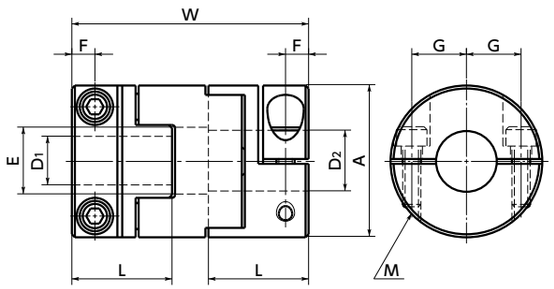
MOL-C



MOL



MOL-C Outside diameter ϕ 16 - ϕ 32



MOL-C Outside diameter ϕ 40 - ϕ 63

Dimensions

Unit : mm

Part Number ◀1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOL-16	16	7	18	7	3.5		M3	0.7
MOL-20	20	9	23	9	4.5		M4	1.7
MOL-25	25	11	28.2	11	5.5		M5	4
MOL-32	32	12.7	32.7	14.5	6.5		M6	7
MOL-40	40	14	32	17	7		M6	7
MOL-50	50	17	38.2	23	8.5		M8	15
MOL-63	63	21	46.6	28	10.5		M10	30
MOL-16C	16	12.5	29	7	3	5	M2.5	1
MOL-20C	20	14.4	33.8	9	3	6.5	M2.5	1
MOL-25C	25	16.5	39.2	11	3.8	9	M3	1.5
MOL-32C	32	18.7	44.7	14.5	4.5	11	M4	2.5
MOL-40C	40	23	50	17	7	13	M5	4
MOL-50C	50	27	58.2	23	8	16	M6	8
MOL-63C	63	33	70.6	28	10	21	M8	16

Part Number	Standard Bore Diameter D1・D2 ◀2															
	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	18	20	25
MOL-16	●	●	●	●	●											
MOL-20		●	●	●	●	●										
MOL-25			●	●	●	●	●	●								
MOL-32						●		●		●	●					
MOL-40								●		●	●	●	●			
MOL-50											●	●	●	●	●	
MOL-63													●	●	●	●
MOL-16C			●	●												
MOL-20C				●	●	●										
MOL-25C					●	●		●								
MOL-32C						●		●	●	●	●					
MOL-40C										●	●	●	●			
MOL-50C													●	●	●	
MOL-63C														●	●	●

- All products are provided with hex socket set screw MOL or hex socket head cap screw MOL-C
- The dimensional allowance for bore diameter of a set screw type MOL is H8.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- A set of hubs with set screw type for one side and clamping type for the other side is available upon request.
- In case of mounting on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

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

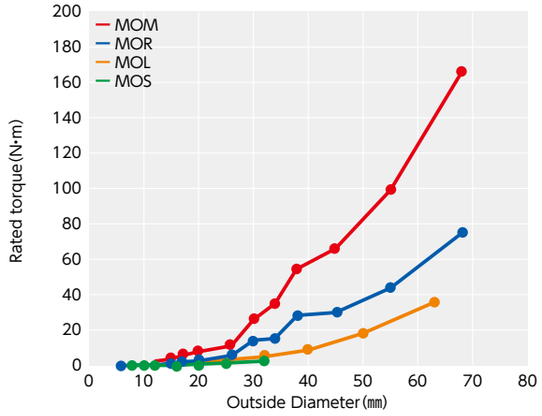
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOL-16	6.35	0.7	1.4	39000	3.2×10^{-7}	31	1	3	7
MOL-20	8	1.2	2.4	31000	1.0×10^{-6}	60	1.5	3	14
MOL-25	10	2	4	25000	3.0×10^{-6}	140	2	3	27
MOL-32	14	4.5	9	19000	9.5×10^{-6}	280	2.5	3	50
MOL-40	16	9	18	15000	2.3×10^{-5}	540	3	3	80
MOL-50	20	18	36	12000	6.7×10^{-5}	820	3.5	3	150
MOL-63	25	36	72	10000	2.2×10^{-4}	1900	4	3	300
MOL-16C	6	0.7	1.4	39000	5.8×10^{-7}	31	1	3	12
MOL-20C	8	1.2	2.4	31000	1.5×10^{-6}	60	1.5	3	19
MOL-25C	10	2	4	25000	4.4×10^{-6}	140	2	3	36
MOL-32C	14	4.5	9	19000	1.4×10^{-5}	280	2.5	3	69
MOL-40C	16	9	18	15000	4.1×10^{-5}	540	3	3	130
MOL-50C	20	18	36	12000	1.2×10^{-4}	820	3.5	3	230
MOL-63C	25	36	72	10000	3.7×10^{-4}	1900	4	3	450

*1: Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30°C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MOL MOL-C is −20°C to 80°C.

*2: These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOL-40C - 14-15 1 set

◀1　◀2

MOL - 40 - SPCR Single Spacer

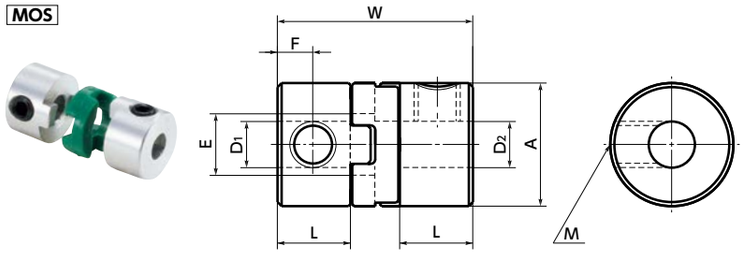
Product Code　Outside Diameter (A Dimension)　Single Spacer

Couplicon®

MOS/MOS-C Flexible coupling - Oldham - type - Set screw type/Clamping type

WEB Selection Tool　WEB CAD Download　High Allowable Misalignment　Small Eccentric Reaction Force

MOS



Outside diameterϕ8

Dimensions

Unit : mm

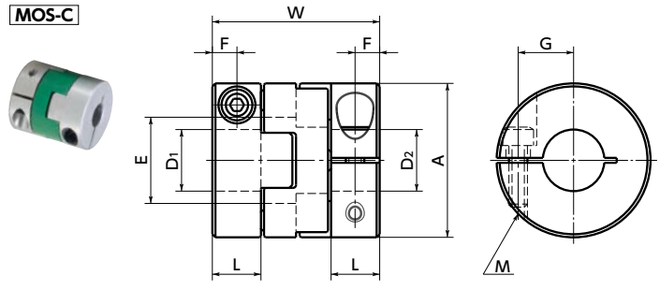
Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOS-8	8	4.8	12.7	4	2.3		M3	0.7
MOS-12C	12	5	14.9	6	2.5	4	M2	0.5
MOS-16C	16	7	21	8	3.5	5	M2.5	1
MOS-20C	20	7	22.1	10	3.5	6.5	M2.5	1
MOS-25C	25	8	27.2	14	4	9	M3	1.5
MOS-32C	32	10	33.3	18	5	11	M4	2.5

Part Number	Standard Bore Diameter D1・D2 2													
	1	2	2.5	3	4	5	6	6.35	7	8	10	11	12	14
MOS-8	●	●	●	●										
MOS-12C				●	●	●								
MOS-16C				●	●	●	●							
MOS-20C						●	●	●	●	●				
MOS-25C								●	●	●	●			
MOS-32C								●		●	●	●	●	●

- All products are provided with hex socket set screw (MOS-8) or hex socket head cap screw (MOS-C)
- The dimensional allowance for bore diameter of MOS-8 is H8.
- 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

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

MOS-C



Outside diameterϕ12 - ϕ32

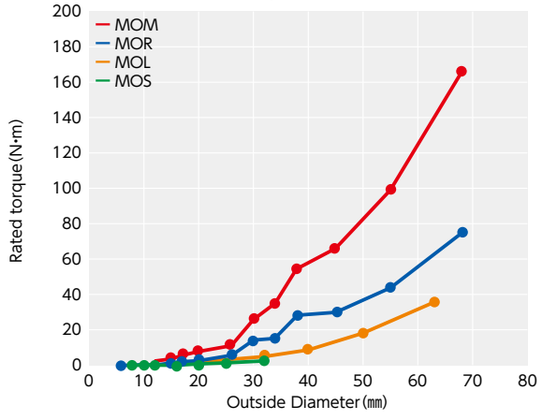
Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOS-8	3	0.08	0.16	78000	1.2×10^{-8}	2	0.5	2	2
MOS-12C	5	0.2	0.4	52000	7.1×10^{-8}	9	0.6	2	3
MOS-16C	6	0.4	0.8	39000	3.0×10^{-7}	30	1	2	8
MOS-20C	8	0.7	1.4	31000	7.4×10^{-7}	47	1.3	2	13
MOS-25C	10	1.2	2.4	25000	2.2×10^{-6}	85	1.5	2	24
MOS-32C	14	2.8	5.6	19000	7.3×10^{-6}	190	2	2	48

*1 : Values with no load fluctuation and rotation in a single direction. If there is large load fluctuation, or both normal and reverse rotation, select a size with some margin. If ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of MOS MOS-C is −20℃ to 80℃.

*2 : These are values with max. bore diameter.

● Comparison of rated torque



● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
−20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70
60℃ to 80℃	0.55

● Part number specification

MOS-20C - 6.35-8 1 set
1　2

MOS - 40 - SPCR Single Spacer
Product Code　Outside Diameter (A Dimension)　Single Spacer

MBB Flexible Couplings - Bellows Type

WEB Selection Tool | WEB CAD Download | Zero Backlash | High torque | High Rigidity

Structure

● Clamping Type

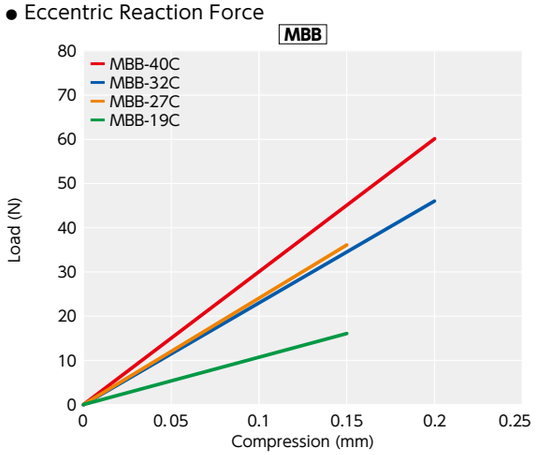
MBB-C Aluminum alloy hub

● Material/Finish

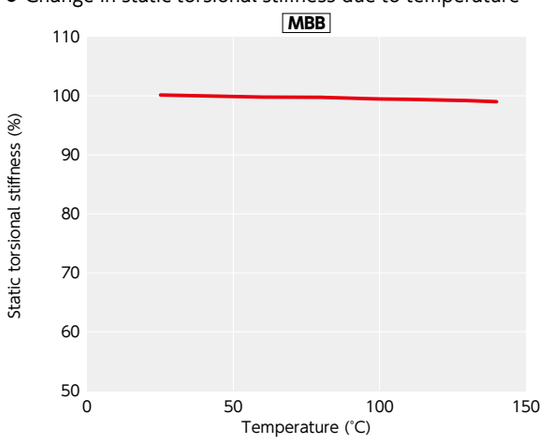
RoHS2 Compliant

	MBB
Hub	A2017 Alumite Treatment
Bellows	SUS304
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Eccentric Reaction Force



● Change in static torsional stiffness due to temperature



● Applicable motors

	MBB
Servomotor	◎
Stepping Motor	◎
General-purpose Motor	–

◎: Excellent ○: Very good

● Property

	MBB
Zero Backlash	◎
Allowable Misalignment	○

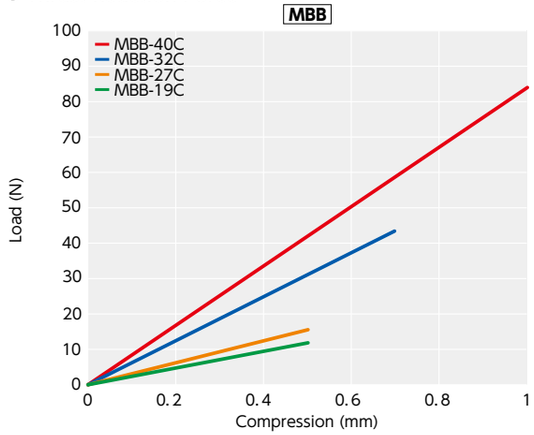
◎: Excellent ○: Very good

- This is a bellows type flexible coupling.
- The bellows allows eccentricity, angular misalignment, and end-play.
- The bellows is stainless steel.

● Application

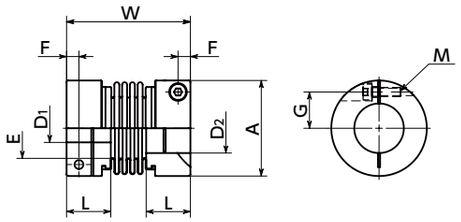
Actuator / High precision XY stage / Semiconductor devices / Encoder

● Thrust Reaction Force



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **MBB** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

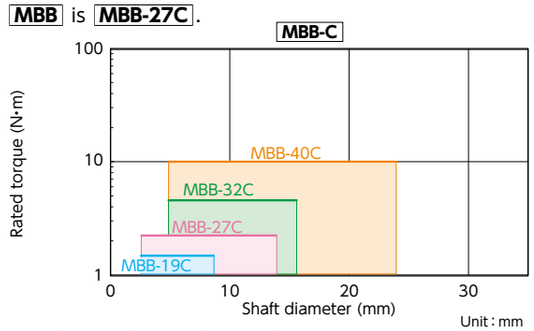
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Not Available	Please feel free to contact us



Selection

● Selection Example

In case of selected parameters of shaft diameter of ϕ 10 and load torque of 2 N・m, the selected size for **MBB** is **MBB-27C**.



Unit : mm

Dimensions

Part Number [1]	Bore Diameter	A	L	W	E	F	G	M	WrenchTorque(N・m)
MBB-19C	3 - 8	19	10.5	30	12	3	6.75	M2	0.5
MBB-27C	3 - 14	27	12.5	35	17	3.5	10.25	M2.5	0.9
MBB-32C	5 - 16	32	15.5	46	22	4.25	12	M3	1.5
MBB-40C	5 - 20	40	16	51	28	5	15	M4	3.5
	22 - 24							M3	1.5

Part Number	Standard Bore Diameter D1・D2 [2]														
	3	4	5	6	8	10	12	14	15	16	17	19	20	22	24
MBB-19C	●	●	●	●	●										
MBB-27C	●	●	●	●	●	●	●	●							
MBB-32C			●	●	●	●	●	●	●	●					
MBB-40C			●	●	●	●	●	●	●	●	●	●	●	●	●

Part Number	Standard Bore Diameter D1・D2 [2]							
	1 / 8	3 / 16	1 / 4	3 / 8	1 / 2	5 / 8	3 / 4	7 / 8
MBB-19C	●	●	●					
MBB-27C	●	●	●	●	●			
MBB-32C			●	●	●	●		
MBB-40C			●	●	●	●	●	●

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 Torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MBB-19C	8	1.5	33000	8.6×10^{-7}	170	0.15	1.5	±0.5	16
MBB-27C	14	2.3	23000	3.6×10^{-6}	800	0.15	1.5	±0.5	32
MBB-32C	16	4.5	19000	1.1×10^{-5}	1600	0.2	1.5	±0.7	68
MBB-40C	24	10	15000	2.8×10^{-5}	2700	0.2	1.5	±1	110

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

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **MBB-C**.

Unit : N・m

Part Number	Bore Diameter (mm)		
	3	5	6
MBB-19C	0.8		
MBB-32C		2	4.2
MBB-40C		9.8	

- These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MBB-C** dimensional table.

● Part number specification

MBB-19C-6-1/4
[1] [2]

Couplicon®

MFB Flexible Coupling - Bellows - type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

Structure

● Set Screw type

MFB Aluminum alloy hub ➡ P.199

MFBS Made of all stainless steel ➡ P.199

● Clamping type

MFB-C Aluminum alloy hub ➡ P.199

MFBS-C Made of all stainless steel ➡ P.199

● Recommended applicable motor

	MFB	MFBS
Servomotor	–	–
Stepping motor	○	○
General-purpose motor	–	–

◎: Excellent ○: Very good △: Available

● Property

	MFB	MFBS
Zero Backlash	◎	◎
Allowable Misalignment	○	○
Corrosion Resistance (All S.S.)	–	◎

◎: Excellent ○: Very good

- This is a bellows type flexible coupling.
- The bellows allow the eccentricity, and angular misalignment, and end-play.
- Even if there is misalignment, the constant revolution is performed.
- There are two types of bellows: phosphor bronze type and stainless steel type.

● Application

Encoder

● Material/Finish

RoHS2 Compliant

	MFB / MFB-C	MFBS / MFBS-C
Hub	A2017 Alumite Treatment	SUS303
Bellows	C5191	SUS316L
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film	SUSXM7

● Part number specification

MFB - 20C - 6-8

Product Code　Size　Bore Diameter

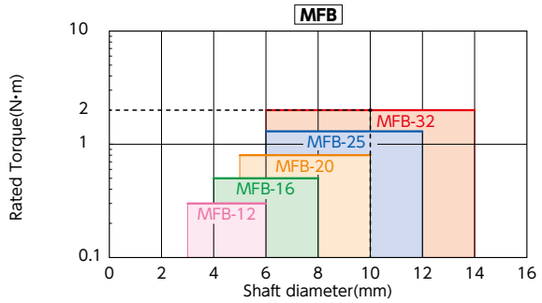
Please refer to dimensional table for part number specification.

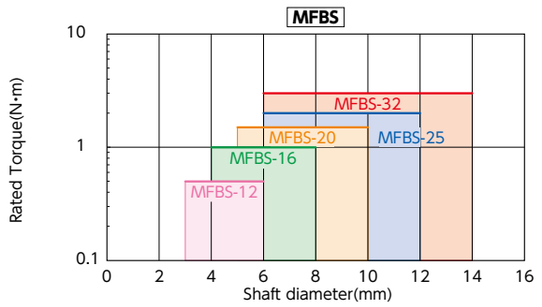
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Available / Add'l charge	Available / Add'l charge

Selection

● **Selection based on shaft diameter and rated torque**

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



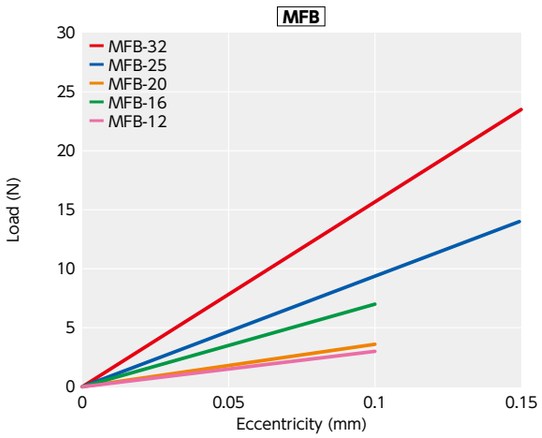


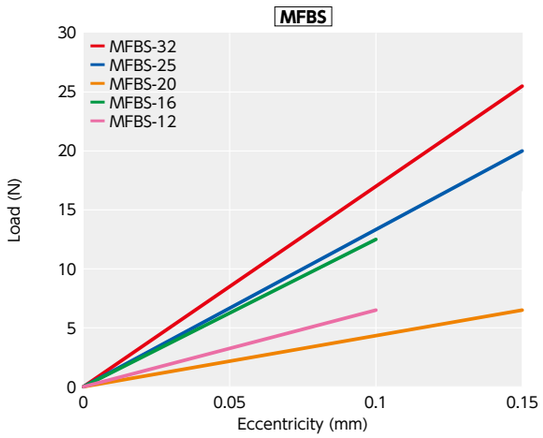
● Selection example

In case of selected parameters of shaft diameter of ϕ 10 and load torque of 2 N・m, the selected size for **MFB** **MFB-32**.

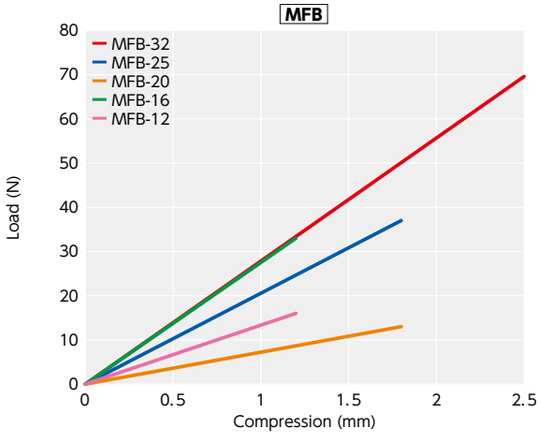
Technical Information

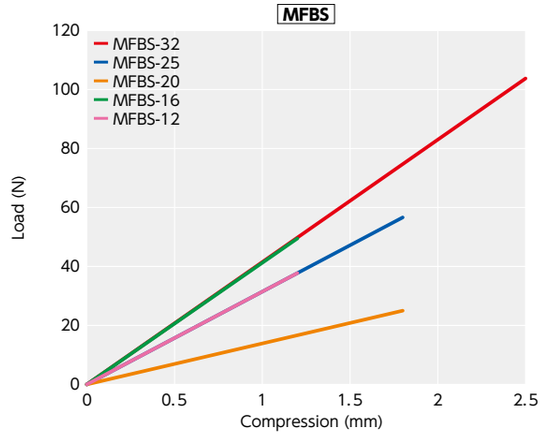
● Eccentric reaction force





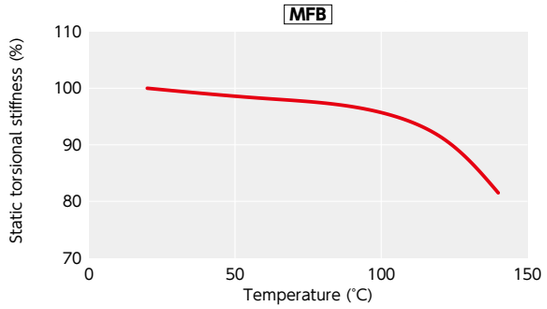
● Thrust Reaction Force (N)

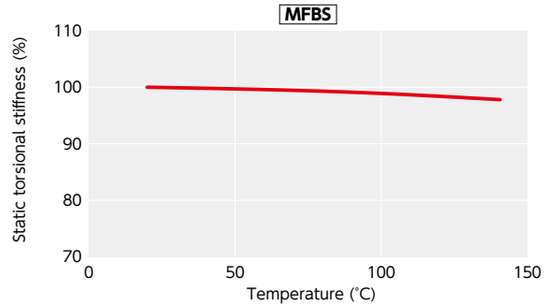




● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **MFB** **MFBS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be cautious about misalignment due to elongation or deflection of the shaft associated with thermal expansion.





● Slip Torque

Concerning the sizes shown in the following table, please note that the shaft's slip torque is smaller than the rated torque of **MFBS-C**.

Unit : N・m

Part Number	Bore Diameter (mm)	
	4	5
MFBS-12C	0.4	
MFBS-16C		0.9

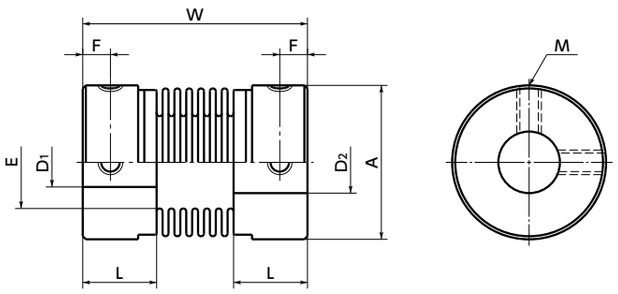
- These are test values based on the condition of shaft's dimensional allowance: h7, hardness: 34 - 40 HRC, and screw tightening torque of the values described in **MFBS-C** Dimension table.

Couplicon®

MFB/MFBS/MFB-C/MFBS-C Flexible Coupling - Bellows - type

WEB Selection Tool　WEB CAD Download　Zero Backlash　SUS Stainless steel

MFB Aluminum alloy hub
MFBS Made of all stainless steel



Dimensions

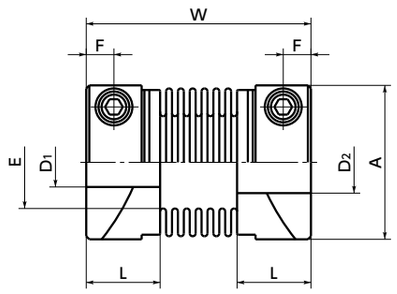
Unit : mm

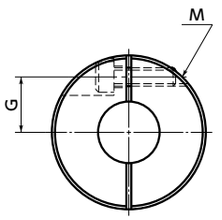
Part Number ◀1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)	Standard Bore Diameter D1・D2 ◀2							
									3	4	5	6	8	10	12	14
MFB-12	12	7.5	23.5	7	2.5		M2.5	0.5	●	●	●	●				
MFB-16	16	9	26.5	9.5	3		M3	0.7		●	●	●	●			
MFB-20	20	10	33	12.5	3.5		M3	0.7			●	●	●	●		
MFB-25	25	12	36.5	15	4.5		M4	1.7				●	●	●	●	
MFB-32	32	13.5	42	21	5.5		M4	1.7				●	●	●	●	●
MFBS-12	12	7.5	23.5	7	2.5		M2.5	0.5	●	●	●	●				
MFBS-16	16	9	26.5	9.5	3		M3	0.7		●	●	●	●			
MFBS-20	20	10	32	12.5	3.5		M3	0.7			●	●	●	●		
MFBS-25	25	12	36.5	15	4.5		M4	1.7				●	●	●	●	
MFBS-32	32	13.5	42	21	5.5		M4	1.7				●	●	●	●	●
MFB-12C	12	7.5	23.5	7	2.25	4	M2	0.5		●	●					
MFB-16C	16	9	26.5	9.5	3	5	M2.5	1			●	●				
MFB-20C	20	10	33	12.5	3.5	6.5	M2.5	1				●	●			
MFB-25C	25	12	36.5	15	4.5	9	M3	1.5					●	●		
MFB-32C	32	13.5	42	21	5	11	M4	2.5					●	●	●	●
MFBS-12C	12	7.5	23.5	7	2.25	4	M2	0.5		●	●					
MFBS-16C	16	9	26.5	9.5	3	5	M2.5	1			●	●				
MFBS-20C	20	10	32	12.5	3.5	6.5	M2.5	1				●	●			
MFBS-25C	25	12	36.5	15	4.5	9	M3	1.5					●	●		
MFBS-32C	32	13.5	42	21	5	11	M4	2.5					●	●	●	●

- All products are provided with hex socket set screws (**MFB**, **MFBS**) and hex socket head cap screws (**MFB-C**, **MFBS-C**).
- In a case where the bore diameter is ϕ 4 or less, the set screw is used in only one place.
- The dimensional allowance for bore diameter of a set screw type is H8.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.
- In case of mounting a clamping type **MFB-C** **MFBS-C** on D-cut shaft, be careful about the position of the D-cut surface of the shaft. ➡ P.258

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

MFB-C Aluminum alloy hub
MFBS-C Made of all stainless steel





Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MFB-12	6.35	0.3	52000	9.0×10^{-8}	82	0.1	1.5	$^{+0.4}_{-1.2}$	4.1
MFB-16	8	0.5	39000	3.5×10^{-7}	110	0.1	1.5	$^{+0.4}_{-1.2}$	9
MFB-20	10	0.8	31000	9.9×10^{-7}	180	0.15	2	$^{+0.6}_{-1.8}$	16
MFB-25	12	1.3	25000	3.1×10^{-6}	240	0.15	2	$^{+0.6}_{-1.8}$	32
MFB-32	16	2	19000	9.2×10^{-6}	330	0.2	2	$^{+0.8}_{-2.5}$	57
MFBS-12	6.35	0.5	52000	2.1×10^{-7}	100	0.1	1.5	$^{+0.4}_{-1.2}$	9.1
MFBS-16	8	1	39000	8.0×10^{-7}	150	0.1	1.5	$^{+0.4}_{-1.2}$	20
MFBS-20	10	1.5	31000	2.3×10^{-6}	220	0.15	2	$^{+0.6}_{-1.8}$	37
MFBS-25	12	2	25000	7.0×10^{-6}	330	0.15	2	$^{+0.6}_{-1.8}$	73
MFBS-32	16	3	19000	2.1×10^{-5}	490	0.2	2	$^{+0.8}_{-2.5}$	130
MFB-12C	5	0.3	52000	9.7×10^{-8}	82	0.1	1.5	$^{+0.4}_{-1.2}$	3.8
MFB-16C	6.35	0.5	39000	3.7×10^{-7}	110	0.1	1.5	$^{+0.4}_{-1.2}$	9.8
MFB-20C	8	0.8	31000	1.0×10^{-6}	180	0.15	2	$^{+0.6}_{-1.8}$	16
MFB-25C	10	1.3	25000	3.1×10^{-6}	240	0.15	2	$^{+0.6}_{-1.8}$	32
MFB-32C	14	2	19000	9.6×10^{-6}	330	0.2	2	$^{+0.8}_{-2.5}$	58
MFBS-12C	5	0.5	52000	2.1×10^{-7}	100	0.1	1.5	$^{+0.4}_{-1.2}$	9.2
MFBS-16C	6.35	1	39000	8.1×10^{-7}	150	0.1	1.5	$^{+0.4}_{-1.2}$	22
MFBS-20C	8	1.5	31000	2.3×10^{-6}	220	0.15	2	$^{+0.6}_{-1.8}$	38
MFBS-25C	10	2	25000	6.9×10^{-6}	330	0.15	2	$^{+0.6}_{-1.8}$	74
MFBS-32C	14	3	19000	2.1×10^{-5}	490	0.2	2	$^{+0.8}_{-2.5}$	130

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

- Part number specification

MFB-12C - 4-5
◀1 ◀2

Couplicon®

MWBS Flexible coupling - Bellows - type (high precision welding)

WEB Selection Tool | WEB CAD Download | Zero Backlash | High Allowable Misalignment | SUS Stainless steel

Structure

● Set Screw type

MWBS ➡ P.203

● Property

	MWBS
Zero Backlash	◎
Allowable Misalignment	◎
Corrosion Resistance (All S.S.)	◎

◎: Excellent ○: Very good

- This is a bellows type flexible coupling.
- The crest and root of the bellows are bonded by special high precision welding.
- Thin metal plate molded with high precision allows higher misalignment to be accepted.
- Even if there is misalignment, the constant revolution is performed.

● Application

Measurement equipment/Control device/Encoder

● Material/Finish

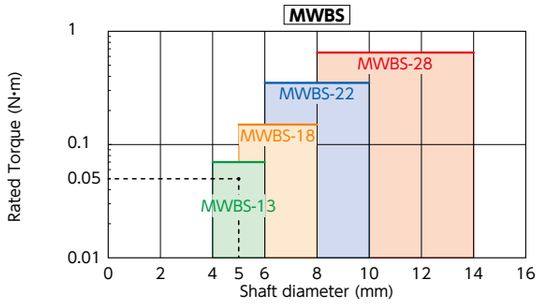
RoHS2 Compliant

	MWBS
Hub	SUS304
Bellows	SUS316L
Hex Socket Set Screw	SUSXM7

Selection

● Selection based on shaft diameter and rated torque

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

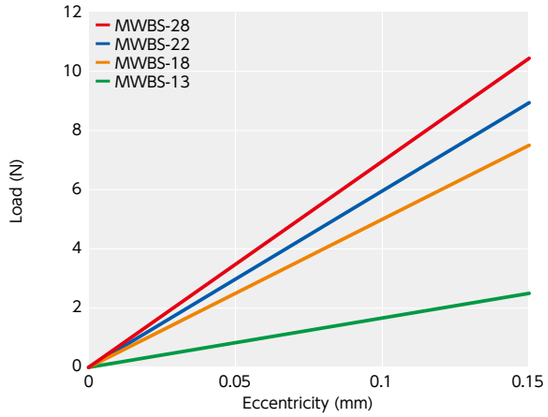


● Selection example

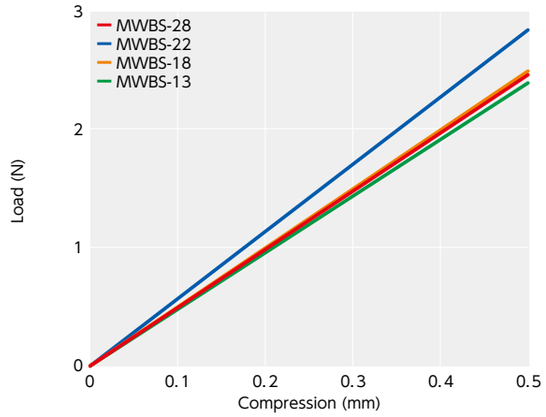
In case of selected parameters of shaft diameter of ϕ 5 and load torque of 0.05 N·m, the selected size for MWBS is MWBS-13.

● Technical Information

● Eccentric reaction force



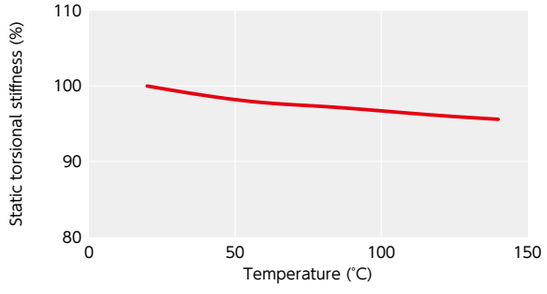
● Thrust Reaction Force



● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.

MWBS 's change in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



● Related Products

Completely custom-made super bellows coupling with high precision welded bellows can be manufactured.
➡ P.204

● Part number specification

MWBS - 22 - 6-8

Product Code	Size	Bore Diameter

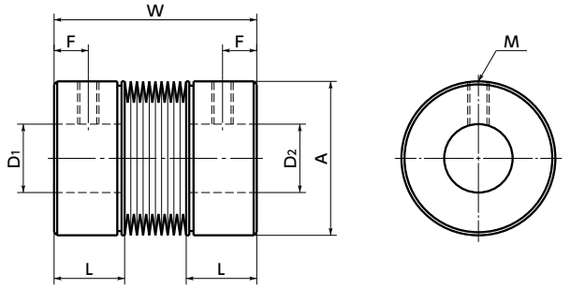
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Changed to the S.S. screw

Couplicon®

MWBS Flexible coupling - Bellows - type (high precision welding)

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Allowable Misalignment　SUS Stainless steel

MWBS Made of all stainless steel



Dimensions

Unit : mm

Part Number	A 1	L	W	F	M	Screw Tightening Torque (N・m)	Standard Bore Diameter (dimensional allowance H8) D1・D2 2							
							4	5	6	8	10	11	12	14
MWBS-13	13	6	16.5	3	M2	0.5	●	●	●					
MWBS-18	18	8	22	4	M2.5	1		●	●	●				
MWBS-22	22	10	27	5	M3	1.5			●	●	●			
MWBS-28	28	14	37	7	M4	2.5				●	●	●	●	●

- All products are provided with hex socket set screw.
- Recommended dimensional allowances of applicable shaft diameter are h6 and h7.

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MWBS-13	6	0.07	10000	2.5×10^{-7}	30	0.15	3.5	0.5	9.8
MWBS-18	8	0.15	10000	1.2×10^{-6}	40	0.15	5	0.5	25
MWBS-22	10	0.35	10000	3.4×10^{-6}	200	0.15	4	0.5	48
MWBS-28	14	0.65	10000	1.4×10^{-5}	900	0.15	4.5	0.5	110

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

- Part number specification

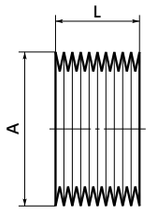
MWBS - 22 - 6-8

Product Code　1　2

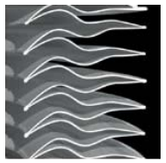
Additional Keyway at Shaft Hole ➡ P.803 — Please feel free to contact us
Cleanroom Wash & Packaging ➡ P.807 — Available / Add'l charge
Change to Stainless Steel Screw ➡ P.805 — Changed to the S.S. screw

Couplicon®

Super bellows Custom - made coupling



Single bellows



Double bellows

- Completely Custom-made super bellows coupling with high precision welded bellows can be designed and manufactured.
- The following table shows part of the performance that the super bellows coupling achieves. The performance depends on the type, outside diameter, threads per inch, and plate thickness of the bellows to use.

Dimensions・Performance

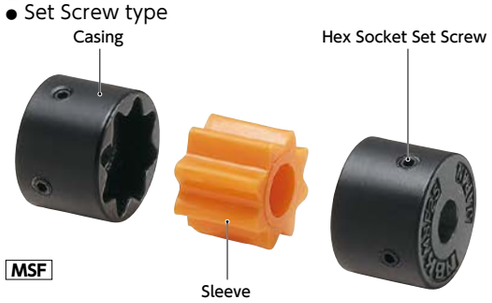
Type	A (mm)	Threads per inch	L (mm)	Plate thickness (mm)	Rated torque (N・m)	Max. torque (N・m)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)
Single bellows	13	10	4.5	0.05 - 0.1	0.07	0.15	0.15	3.5	±0.5
		20	9				0.3	6.5	±1
		30	13.5				0.45	10	±1.5
	18	10	6	0.05 - 0.1	0.15	0.3	0.15	5	±0.5
		20	12				0.3	9.5	±1
		30	18				0.45	14.5	±1.5
	22	10	7	0.06 - 0.1	0.35	0.7	0.2	4	±0.5
		20	14				0.4	8	±1
		30	21				0.6	12	±1.5
	28	10	9	0.1 - 0.15	0.65	1.3	0.25	6.5	±0.5
		20	18				0.5	9	±1
		30	27				0.75	14	±1.5
Double bellows	13	10	6	0.05 - 0.1	0.15	0.3	0.15	3.6	±0.5
		20	12				0.3	7.2	±1
		30	18				0.45	10	±1.5
	18	10	8	0.05 - 0.1	0.7	1.4	0.15	5.7	±0.5
		20	16				0.3	11.5	±1
		30	24				0.45	17.2	±1.5
	22	10	8	0.06 - 0.1	1.25	2.5	0.2	4.7	±0.5
		20	16				0.4	9.4	±1
		30	24				0.6	14	±1.5
	28	10	11	0.1 - 0.15	1.3	2.6	0.25	3.7	±0.5
		20	22				0.5	7.4	±1
		30	33				0.75	11	±1.5

MSF Flexible coupling - Serration - type

Selection Tool | CAD Download | Electrical Insulation | SUS Stainless steel

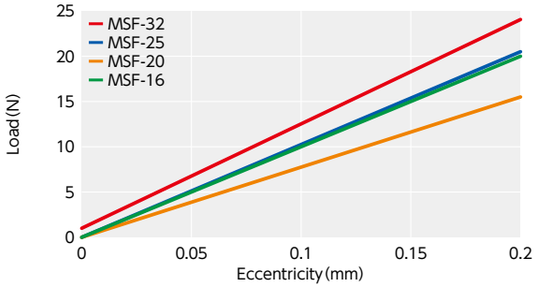
Structure

● Set Screw type



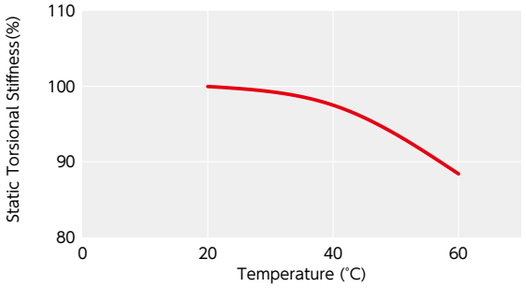
● Technical Information

● Eccentric reaction force



● Change in static torsional stiffness due to temperature

This is a value under the condition where the static torsional stiffness at 20℃ is 100%. If the unit is used under higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.



● Applicable motors

	MSF
Servomotor	–
Stepping Motor	–
General-purpose motor	◎

◎: Excellent ○: Very good

● Property

	MSF
Allowable Misalignment	○
Vibration absorption	○
Electrical insulation	◎
Allowable operating temperature	–20℃ to 60℃

◎: Excellent ○: Very good

- The engagement of serration transmits torque. This is a simple structure flexible coupling.
- It has excellent flexibility. Its max. lateral misalignment and max. angular misalignment are large, absorbing torsional vibration.

● Application

Mixer/Gaming device

● Material/Finish

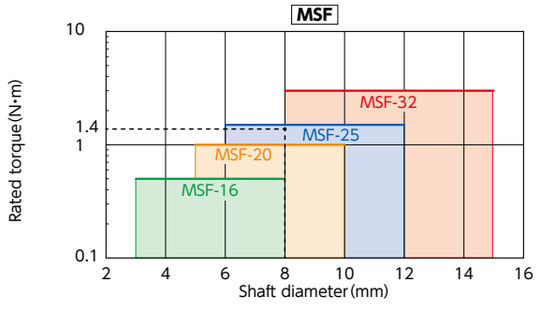
RoHS2 Compliant

	MSF-16-MSF-25	MSF-32
Casing	ZDC2 Cathodic electrodeposition coating	SMF4040 Steam treatment
Sleeve	Polyurethane	Polyurethane
Hex Socket Set Screw	SCM435 Ferrosoferric oxide film	SCM435 Ferrosoferric oxide film

Selection

● Selection based on shaft diameter and rated torque

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

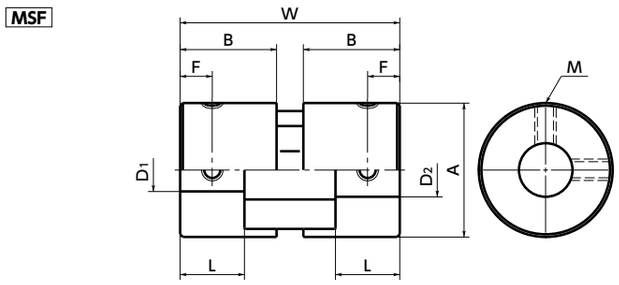


● Selection example

In case of selected parameters of shaft diameter of ϕ 8 and load torque of 1.4 N•m, the selected size is **MSF-25**.

Additional Keyway at Shaft Hole ➡ P.803 | Cleanroom Wash & Packaging ➡ P.807 | Change to Stainless Steel Screw ➡ P.805

Available / Add'l charge	Please feel free to contact us	Available / Add'l charge



Dimensions

Unit : mm

Part Number ◀1	A	B	L	W	F	M	Screw Tightening Torque (N·m)	Sleeve T	Sleeve C	Sleeve E	Standard Bore Diameter (dimensional allowance H8) D1・D2 ◀2 3	4	5	6	6.35	8	10	12	14
MSF-16	16	12	8	27	4	M3	0.7	11	14	6 / 6	●	●	●	●	●	●			
MSF-20	20	15	10	34	5	M3	0.7	14	18	8 / 8			●	●	●	●	●		
MSF-25	25	18	12	41	6	M4	1.7	17	22	10 / 10				●	●	●	●	●	
MSF-32	32	21	14	48	7	M4	1.7	20	29	12 / 14						●	●	●	●

- All products are provided with hex socket set screw.
- 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*1 torque (N·m)	Max.*1 torque (N·m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg \cdot m^2$)	Static Torsional Stiffness (N·m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MSF-16	8	0.5	1	39000	9.0×10^{-7}	4.4	0.20	2	22
MSF-20	10	1	2	31000	2.7×10^{-6}	9.5	0.20	2	42
MSF-25	12	1.5	3	25000	8.1×10^{-6}	20	0.20	2	81
MSF-32	15	3	6	19000	2.5×10^{-5}	52	0.20	2	150

*1: Correction of rated torque and max. torque due to load fluctuation is not required.However, if ambient temperature exceeds 30℃, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table. The allowable operating temperature of **MSF** is –20℃ to 60℃.

*2: These are values with max. bore diameter.

● Ambient Temperature / Temperature Correction Factor

Ambient temperature	Temperature correction factor
–20℃ to 30℃	1.00
30℃ to 40℃	0.80
40℃ to 60℃	0.70

● Part number specification

MSF-16-6-6.35 1 set
◀1 ◀2

MSF-16-SLV Single Sleeve
◀1
Single Sleeve

XRP Rigid Coupling

Selection Tool | CAD Download | Zero Backlash | High Rigidity

Structure

● Clamping type

XRP-C ➡ P.209

● Material/Finish

RoHS2 Compliant

	XRP-C
Main Body	A7075
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film

● Recommended applicable motor

	XRP-C
Servomotor	◎
Stepping motor	◎
General-purpose motor	–

◎: Excellent ○: Very good △: Available

● Property

	XRP-C
Zero Backlash	◎
High Torque	○
High Torsional Stiffness	◎

◎: Excellent ○: Very good

- This is a high precision rigid coupling.
- Coaxiality, bore diameter, and run out have been pursued to the ultimate level.
- An inspection report is attached to all products before shipment.
- Light weight and ultra small moment of inertia. High response.
- This is a shaft fastening structure with consideration of rotational balance and unbalance is ultra small.
- Extra super duralumin (A7075) featuring the highest strength among aluminum alloy is adopted.

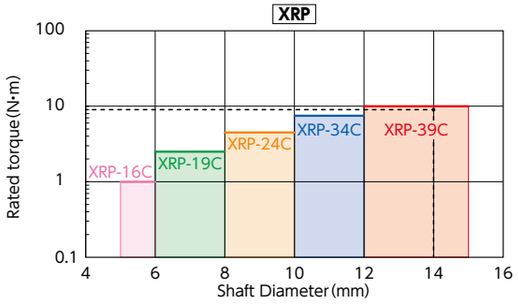
● Application

High precision measurement device/High precision XY stage/Encoder

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 14 and load torque of 9 N・m, the selected size is **XRP-39C**.

● Part number specification

XRP-19C-6-8

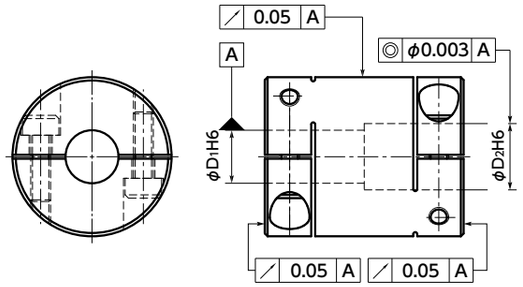
Product Code | size | Bore Diameter

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

● Commitment to high precision

- The coaxiality of both bores is not more than 3 μm.
- Bore diameter tolerance is H6.
- Radial run out and run out of end face against bore are not more than 50μm.

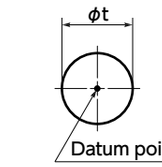
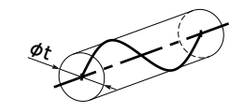
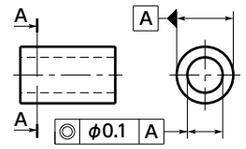
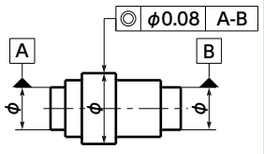


● Precision assurance by total inspection

- The inspection is conducted in an environment of constant temperature and humidity.
- Inspection item:
  Bore diameters D1 and D2
  Coaxiality of bores D1 and D2
  Radial run out and run out of end face against bore
- 3D measurement device:
  UPMC850CARAT SuperAcc made by Carl Zeiss
  Measurement precision Max. allowable instruction error 0.7+L/600μm
  Max. allowable probing error 0.6μm
  Measurement environment Temperature 20±1℃
  Humidity 50±10%

ZEISS ACCRETECH

● Concentricity tolerance and coaxiality tolerance

Property symbol	Definition of tolerance zone	
◎		If the symbol ϕ is attached to the tolerance value, the tolerance zone is regulated by a circle of diameter t. The center of circular tolerance zone coincides with datum A.
		If the symbol ϕ is attached to the tolerance value, the tolerance zone is regulated by a cylinder of diameter t. The axis line of cylindrical tolerance zone coincides with datum A.
	Example and explanation of instruction method	
◎		The actual (reproduced) center of the outside circle must be within the circle concentric with datum circle A and of 0.1 in diameter.
		The actual (reproduced) shaft line of inside cylinder must be within a cylindrical tolerance area coaxial with common datum axis line A-B and of 0.08 in diameter.

● Excerpt from JIS B 0021

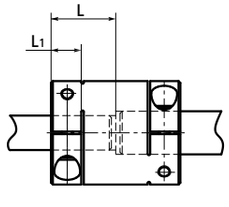
● Shaft insertion length

The shaft insertion length should be not less than L_1 (clamp portion) and not more than L.

The insertion length of a shaft to maintain the high precision should be L dimension if possible.

However, be careful so that both shaft ends do not interfere with each other.

If the shaft insertion length is less than L_1, it may derange the coaxiality or generate vibration when fastening the shaft.

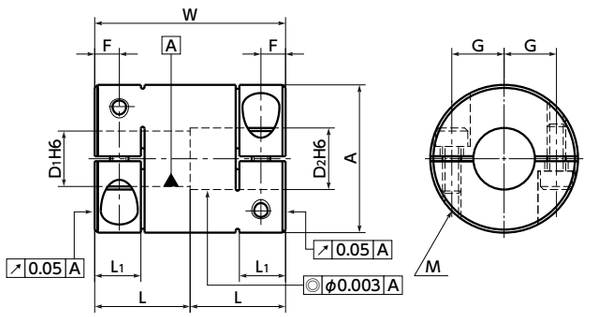


Couplicon®

XRP Rigid Coupling - Clamping Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　High Rigidity

XRP-C



Dimensions

Unit : mm

Part Number 1	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 2		
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.258

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 ($kg・m^2$)	Mass*2 (g)
XRP-16C	6	1	39000	3.1×10^{-7}	9
XRP-19C	8	2.5	33000	8.0×10^{-7}	15
XRP-24C	10	4.5	26000	2.7×10^{-6}	32
XRP-34C	15	7.5	18000	1.4×10^{-5}	87
XRP-39C	18	10	16000	3.9×10^{-5}	140

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

- Part number specification

XRP-24C - 8-10
1　2

Couplicon®

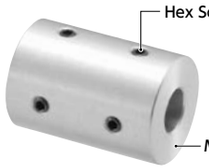
MRG / MRGS Rigid Coupling

WEB Selection Tool　WEB 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

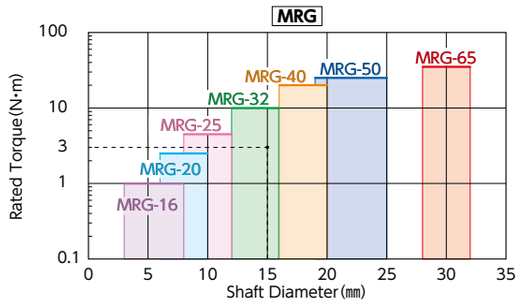
● Material/Finish　RoHS2 Compliant

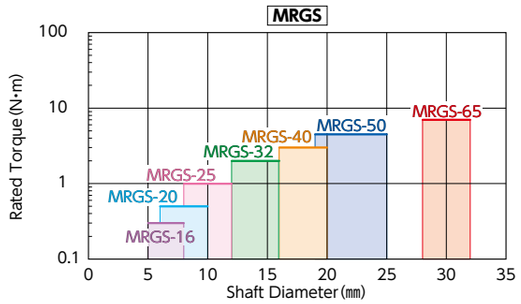
	MRG / MRG-C / MRG-W	MRGS / MRGS-C / MRGS-W
Main Body	A2017 Alumite Treatment	SUS303
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film	SUSXM7
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film	SUSXM7

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**.

● **Related Products**

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

● Part number specification

MRG - 16W - 5-6

Product Code　size　Bore Diameter

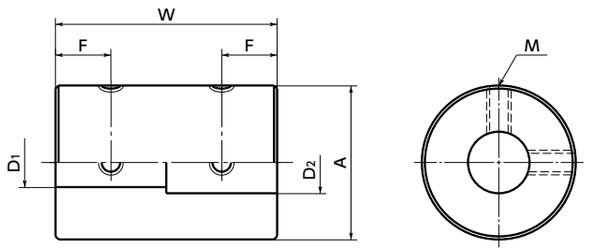
Please refer to dimensional table for part number specification.

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

MRG / MRGS Rigid coupling - Set screw type

WEB Selection Tool　WEB 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

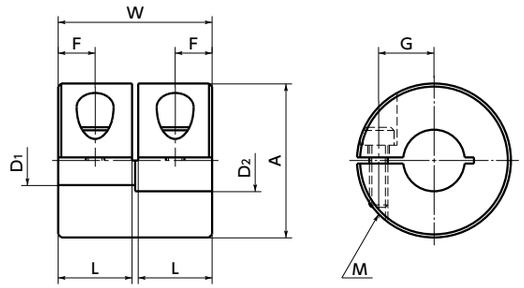
MRGS-40 - 18-20
1　2

Couplicon®

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

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 ($kg・m^2$)	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.

- Part number specification

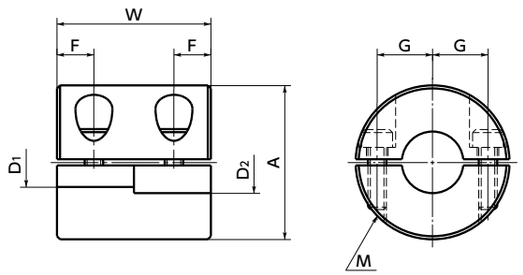
MRG-32C - 12-14
1　2

Couplicon®

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.

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.

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-25W - 8-8
1　2

Couplicon®

MLR / MLRS Rigid Coupling

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

Structure

● Clamping type

MLR-C Made of aluminum alloy ➡ P.221

MLRS-C Made of all stainless steel ➡ P.221

● Semi-split type

MLR-V Made of aluminum alloy ➡ P.223

MLRS-V Made of all stainless steel ➡ P.223

● Recommended applicable motor

	MLR	MLRS
Servomotor	◎	◎
Stepping motor	◎	◎
General-purpose motor	–	–

◎: Excellent　○: Very good　△: Available

● Property

	MLR	MLRS
Zero Backlash	◎	◎
High Torque	○	○
High Torsional Stiffness	◎	◎
Corrosion Resistance (All S.S.)	–	◎

◎: Excellent　○: Very good

- This is a long type rigid coupling.
- This can also be used as a joint for extending a shaft.
- There are two types of units made of aluminum alloy or stainless steel.
- There are clamping type and semi-split type.

● Application

Cleaning equipment/Transport device

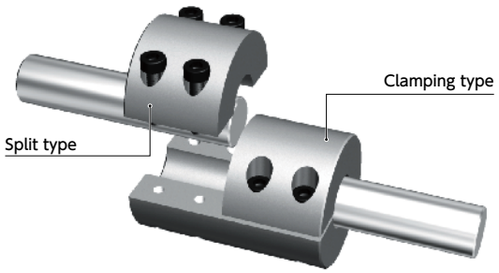
● Material/Finish

RoHS2 Compliant

	MLR-C / MLR-V	MLRS-C / MLRS-V
Main Body	A2017 Alumite Treatment	SUS303
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film	SUSXM7

● Semi-split type

Semi-split type is an attachment method in which one side of the hubs is clamping type and the other side is split type. While keeping one shaft attached on clamping side, the other shaft can be mounted or removed on split side, thus easier assembling set up.



● Part number specification

MLR - 16V - 6-6

Product Code　size　Bore Diameter

Please refer to dimensional table for part number specification.

● Related Products

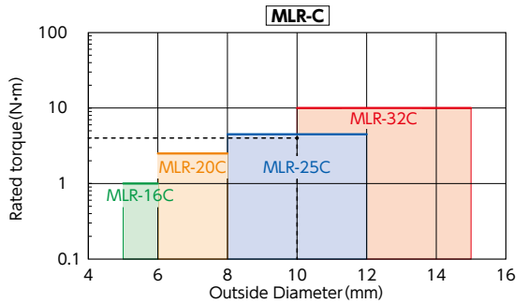
Rigid coupling with high precision **XRP** is available.
➡ P.207

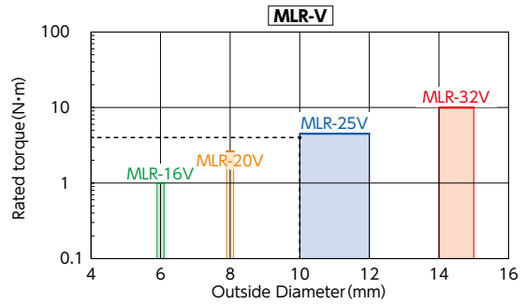
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Available / Add'l charge	Available / Add'l charge

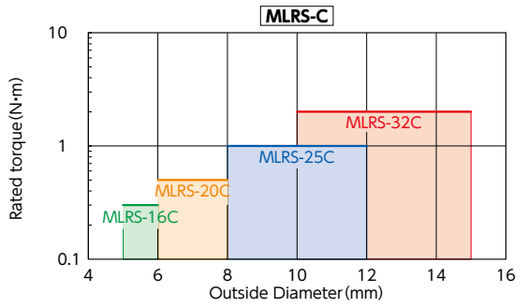
Selection

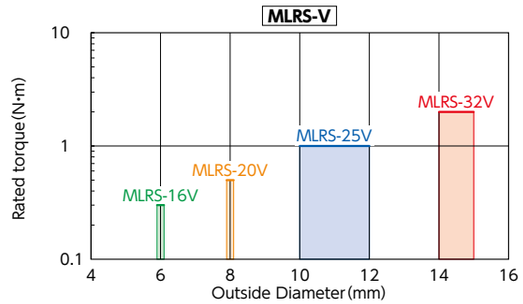
● Selection based on shaft diameter and rated torque

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









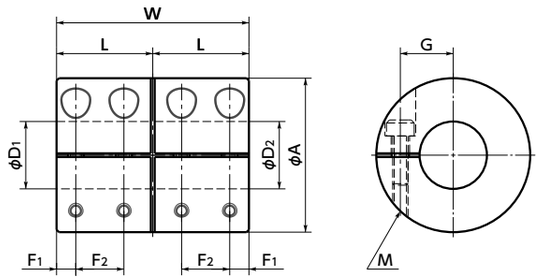
● Selection example

In case of selected parameters of shaft diameter of ϕ10 and load torque of 4 N·m, the selected size is **MLR-25C** or **MLR-25V**.

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

Selection Tool | 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 1	A	L	W	F1	F2	G	M	Screw Tightening Torque (N・m)	Standard Bore Diameter D1-D2 2						
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.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)
MLR-16C	6	1	39000	3.4×10^{-7}	10
MLR-20C	8	2.5	31000	9.2×10^{-7}	18
MLR-25C	12	4.5	25000	3.4×10^{-6}	38
MLR-32C	15	10	19000	1.0×10^{-5}	70
MLRS-16C	6	0.3	39000	8.9×10^{-7}	25
MLRS-20C	8	0.5	31000	2.5×10^{-6}	45
MLRS-25C	12	1	25000	9.2×10^{-6}	100
MLRS-32C	15	2	19000	2.7×10^{-5}	180

*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

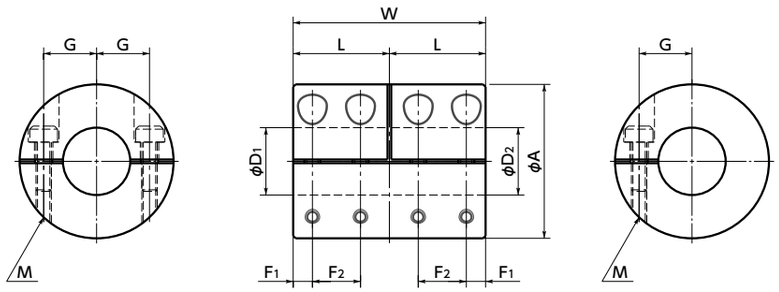
- Part number specification

MLR-16C - 5-5
1 2

MLR-V / MLRS-V Rigid coupling - Semi - split type

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

MLR-V Made of aluminum alloy
MLRS-V Made of all stainless steel



Dimensions

Unit : mm

Part Number 1	A	L	W	F1	F2	G	M	Screw Tightening Torque (N・m)	Standard Bore Diameter D1-D2 2	
MLR-16V	16	11	22	2.5	5.5	5	M2	0.5	6 - 6	
MLR-20V	20	12	24	2.5	6	7	M2	0.5	8 - 8	
MLR-25V	25	18	36	4.5	9	9	M2.5	1	10 - 10	12 - 12
MLR-32V	32	20	40	4	10	11	M3	1.5	14 - 14	15 - 15
MLRS-16V	16	11	22	2.5	5.5	5	M2	0.5	6 - 6	
MLRS-20V	20	12	24	2.5	6	7	M2	0.5	8 - 8	
MLRS-25V	25	18	36	4.5	9	9	M2.5	1	10 - 10	12 - 12
MLRS-32V	32	20	40	4	10	11	M3	1.5	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.258

Performance

Part Number	Max. Bore Diameter (mm)	Rated torque*1 (N・m)	Max. Rotational Frequency (min^{-1})	Moment of Inertia*2 ($kg・m^2$)	Mass*2 (g)
MLR-16V	6	1	39000	3.5×10^{-7}	10
MLR-20V	8	2.5	31000	9.5×10^{-7}	18
MLR-25V	12	4.5	25000	3.4×10^{-6}	38
MLR-32V	15	10	19000	1.0×10^{-5}	70
MLRS-16V	6	0.3	39000	9.1×10^{-7}	25
MLRS-20V	8	0.5	31000	2.6×10^{-6}	45
MLRS-25V	12	1	25000	9.3×10^{-6}	100
MLRS-32V	15	2	19000	2.8×10^{-5}	180

*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

MLRS-20V - 8-8
1　2

Cleanroom, Vacuum, Heat resistant Coupling For Specific Environments

Type	Slit Coupling			Oldham Coupling		Disk Coupling	
Part Number	**XSTS**	**XWSS**	**MSXP**	**MOHS**	**MOP**	**XBWS**	**XBSS**
Page	**P.227**	**P.227**	**P.231**	**P.237**	**P.243**	**P.77**	**P.83**
Shape							
Material	SUS316L	SUS316L	PEEK	SUS303 Vespel®*2 SUSXM7	A2017 PEEK SUSXM7	SUS303 SUSXM7	SUS303 SUSXM7
Cleaning method	Ultrasonic cleaning	Ultrasonic cleaning	Ultrasonic cleaning	Ultrasonic cleaning	Ultrasonic cleaning	Ultrasonic cleaning*1	Ultrasonic cleaning*1
Low particle	◎	◎	◎	△	△	○	○
Vacuum-supported	○	○	○	◎	◎	○	○
Less outgas	○	○	○	○	○	○	○
Heat resistant	○	○	○	◎	◎	○	○
Chemical resistant	◎	◎	◎	○	○	○	○
Zero Backlash	◎	◎	◎			◎	◎
High torque	○	○				○	○
High torsional rigidity						◎	◎
Allowable Misalignment	○		○	◎	◎	○	○

◎: Excellent ○: Very good △: Abrasion powder may be produced

*1 **XBWS** **XBSS** are uncleaned products. Clean washing and clean packaging are available upon request. For details, please refer to the Service page. ➡ P.807

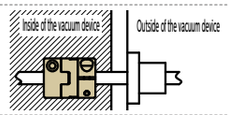
*2 VESPEL is a registered trademark of U.S. company DuPont.

Low particle

The amount of attached particle is ultra low.
This is directly available in a cleanroom. This does not bring contaminated matters into a cleanroom.

Vacuum-supported

A material with which outgas production in a vacuum environment is small is used.
If misalignment becomes larger due to vacuum pressure difference, **MOHS** **MOP**, for which larger misalignment is permitted, are recommended.



Less outgas

Materials with which production of outgas that causes chemical contamination under atmospheric environment is small are used.

Heat resistant

This is available even in an environment of high temperature (80℃ or higher)
Elongation or deflection of a shaft associated with thermal expansion may increase misalignment. If misalignment becomes larger, **MOHS** **MOP**, for which larger misalignment is permitted, is recommended.

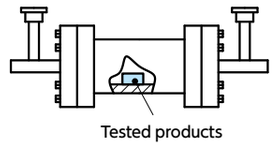
Chemical resistant

Materials superior in chemical resistance are used.

● Analysis of outgas Vacuum-supported Less outgas

Target product: **MOHS** **MOP** **MSXP**

Measurement method:Inorganic gas — Gas chromatography (TCD)
Organic gas — Gas chromatography (FID)
Measurement condition: Heating temperature — 100℃

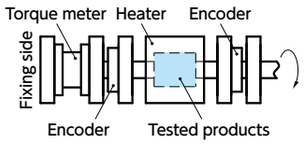


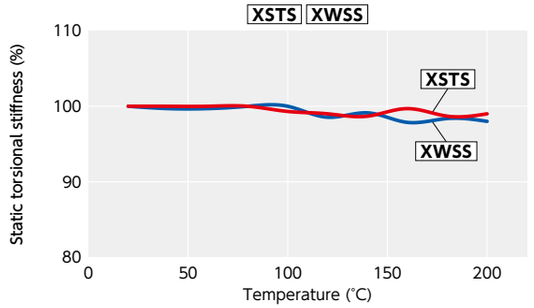
Unit : (v/v ppm)

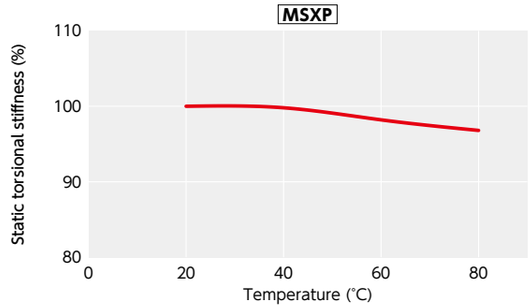
Component		Content
Inorganic gas	Hydrogen	500 or less
	Carbon monoxide	500 or less
	Carbon dioxide	500 or less
Organic gas	Methane	5 or less
	Ethane	5 or less
	Ethylene	5 or less
	Propane	5 or less
	Acetylene	5 or less
	i-butane	5 or less
	n-butane	5 or less
	Propylene	5 or less

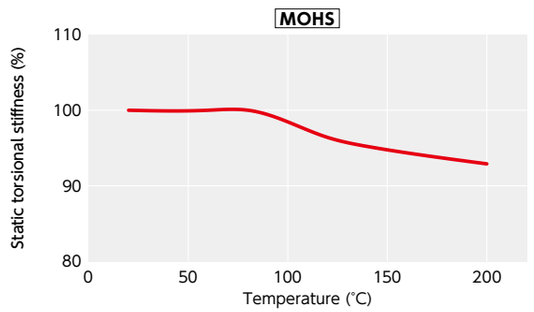
*Both inorganic gas and organic gas are not more than the lower limit of determined amount and are not detected.

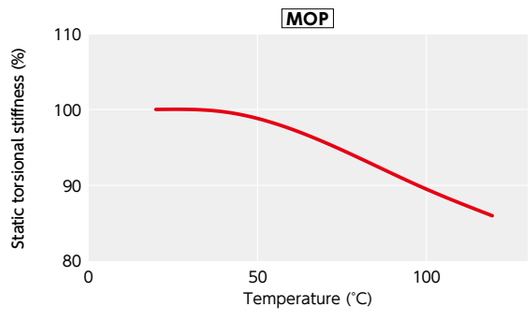
● Change in static torsional stiffness due to temperature Heat resistant











This is a value for each product under the condition where the static torsional stiffness at 20°C is 100%.

• The data described in this catalog are just for your reference and are not guaranteed values.

XSTS/XWSS Cleanroom / Vacuum / Heat Resistant Coupling - Slit-type (SUS316L)

Selection Tool | CAD Download | Zero Backlash | Cleanroom | Chemical-proof | SUS Stainless steel

Couplicon®

Structure

● Clamping type

XSTS-C ➡ P.229

Outside Diameter ϕ25/ϕ32

XSTS-C

Outside Diameter ϕ40 - ϕ63

XWSS-C ➡ P.229

● Property

	XSTS	XWSS
Low Particle	◎	◎
Vacuum-supported	○	○
Low Outgas	○	○
Heat-resistance	○	○
Chemical Resistance	◎	◎
Zero Backlash	◎	◎
High Torque	○	○
Allowable Misalignment	○	–
Corrosion resistance (all stainless steel)	◎	◎

◎: Excellent ○: Very good

- This is an all stainless steel spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- Clean washing and clean packaging are completed. It can be used in an environment where chemical resistance is required, such as FPD manufacturing device and semiconductor manufacturing device.
- High flexibility type **XSTS** and short type **XWSS** are standardized.
- In **XSTS**, a plate spring formed by a slit allows eccentricity, angular misalignment, and end-play to be accepted.

● Application

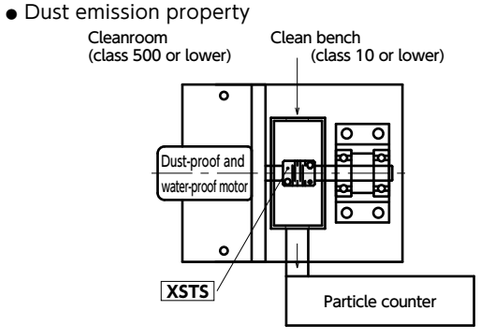
FPD manufacturing device/Semiconductor manufacturing device/ Offshore instrument

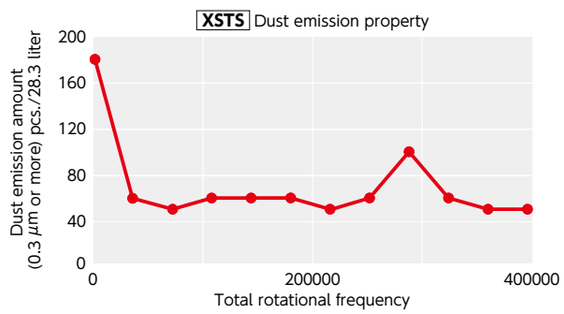
● Material/Finish

RoHS2 Compliant

	XSTS-C / XWSS-C
Main body	SUS316L Shot Blast
Hex Socket Head Cap Screw	SUS316L HiMo

● Dust emission property





● Related Products

There is a slit-type flexible coupling **MSX** made of extra super duralumin (A7075).
➡ P.97

● Part number specification

XSTS-32C-12-12

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	Cleanroom washed and packed	Changed to the S.S. screw

● Technical Information

● **Made of SUS316L superior in corrosion resistance**

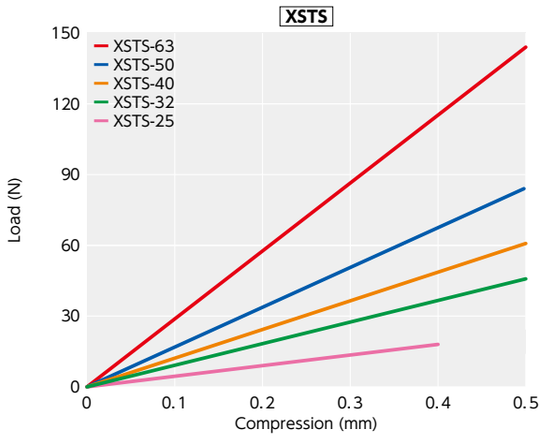
● Characteristics

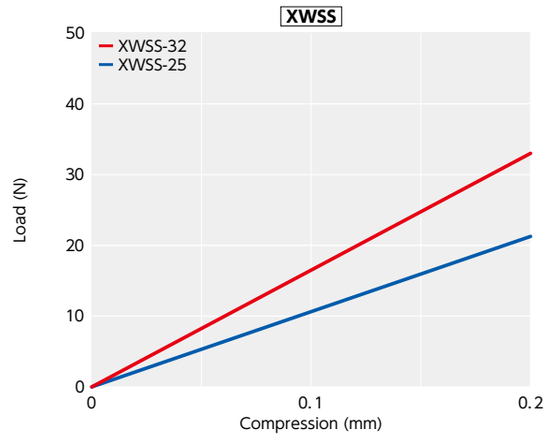
Material code	Characteristics
SUS304	This features smaller amount of carbon and is superior in corrosion resistance and weldability. This is the most standard product among austenitic stainless steel.
SUS316	This has good corrosion resistance and acid resistance as well as high-temperature strength due to addition of Mo and is used as heat resistant steel.
SUS316L	Carbon content is lower than that of SUS316 and the grain boundary corrosivity and weldability are improved.

● Chemical component

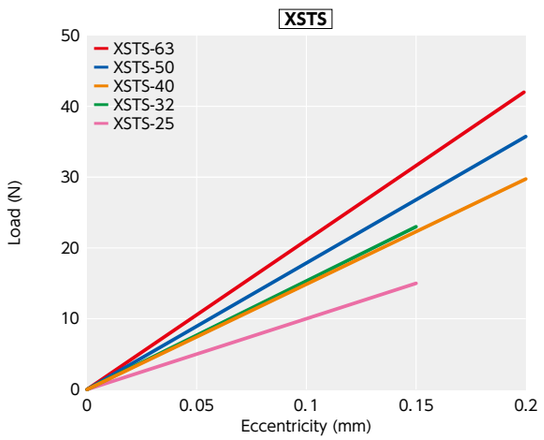
Material code	Chemical components (%)				
	C	Si / Mn / P / S	Ni	Cr	Mo
SUS304	0.08 or less	Equivalent	8.00-10.50	18.00-20.00	–
SUS316	0.08 or less		10.00-14.00	16.00-18.00	2.00-3.00
SUS316L	0.03 or less		12.00-15.00	16.00-18.00	2.00-3.00

● **Thrust Reaction Force**





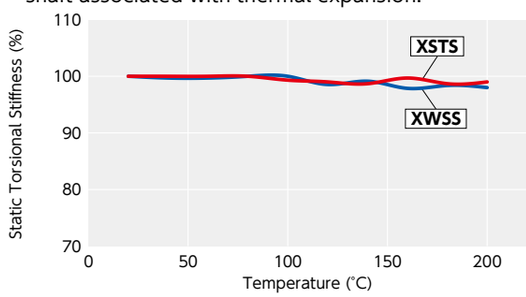
● **Eccentric Reaction Force**



● **Change in static torsional stiffness due to temperature**

This is a value under the condition where the static torsional stiffness at 20℃ is 100%.

The change of **XSTS** **XWSS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

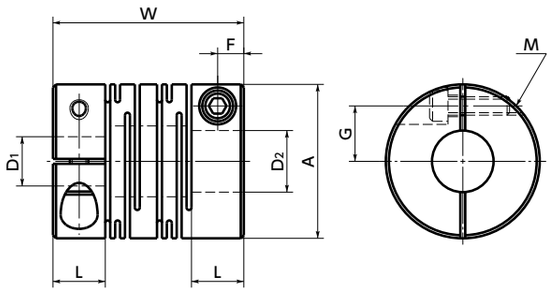


Couplicon®

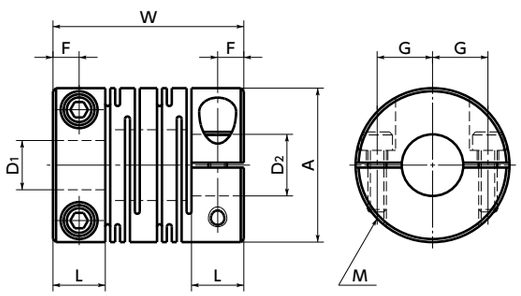
XSTS-C / XWSS-C Cleanroom / Vacuum / Heat Resistant Coupling - Slit-type (SUS316L) - Clamping Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　Cleanroom　Chemical-proof　SUS Stainless steel

XSTS-C

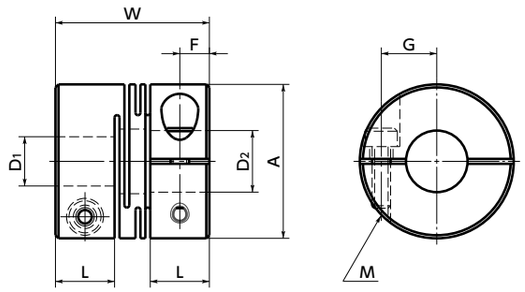


Outside diameter ϕ25, ϕ32



Outside diameter ϕ40 - ϕ63

XWSS-C



Dimensions

Unit : mm

Part Number	A	L	W	F	G	M	Screw Tightening Torque*1 (N・m)
XSTS-25C	25	8.5	31	4.25	9	M3	1.5
XSTS-32C	32	12	41	6	11	M4	2.5
XSTS-40C	40	17	56	8.5	14	M5	4
XSTS-50C	50	21	71	10.5	18	M6	8
XSTS-63C	63	26	90	13	24	M8	16
XWSS-25C	25	9.6	25	4.8	9	M3	1.5
XWSS-32C	32	12.6	32	6.3	11	M4	2.5

Part Number	Standard Bore Diameter D1・D2																
	5	6	8	10	11	12	14	15	16	18	19	20	22	24	25	28	30
XSTS-25C	●	●	●	●													
XSTS-32C			●	●	●	●	●										
XSTS-40C			●	●	●	●	●	●	●	●							
XSTS-50C						●	●	●	●	●	●	●	●				
XSTS-63C							●	●	●	●	●	●	●	●	●	●	●
XWSS-25C	●	●	●	●													
XWSS-32C			●	●	●	●	●										

- All products are provided with hex socket head cap screw.
- 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

*1 : This is a screw tightening torque when inserting a degreased shaft.

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	Cleanroom washed and packed	Changed to the S.S. screw

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
XSTS-25C	10	2	25000	7.1×10^{-6}	330	0.15	2	±0.4	78
XSTS-32C	14	3.5	19000	2.7×10^{-5}	850	0.15	2	±0.5	170
XSTS-40C	18	8	15000	9.0×10^{-5}	1000	0.2	2	±0.5	370
XSTS-50C	22	15	12000	2.8×10^{-4}	1400	0.2	2	±0.5	750
XSTS-63C	30	35	10000	8.8×10^{-4}	1800	0.2	2	±0.5	1400
XWSS-25C	10	2	25000	6.3×10^{-6}	720		1	±0.2	69
XWSS-32C	14	3.5	19000	2.2×10^{-5}	1300		1	±0.2	150

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

*2 : These are values with max. bore diameter.

- Part number specification

XWSS-25C - 8-10
1　2

Couplicon®

MSXP Cleanroom / Vacuum / Heat Resistant Coupling - Slit - type (PEEK)

WEB Selection Tool | WEB CAD Download | Zero Backlash | Cleanroom | Electrical Insulation | Chemical-proof | SUS Stainless steel

Structure

● Clamping type

MSXP-C ➡ P.235

● Property

	MSXP
Low Particle	◎
Vacuum-supported	○
Low Outgas	○
Heat-resistance	○
Chemical Resistance	◎
Zero Backlash	◎
Allowable Misalignment	○
Electrical Insulation	◎
Cleanroom Specification	◎
Allowable Operating Temperature	−20℃ to 80℃

◎: Excellent ○: Very good

- This is a resin spring coupling with single-piece construction. A slit is inserted into a cylindrical material.
- It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing device.
- PEEK superior in physical and chemical properties is adopted. The amount of outgas is ultralow.
- A plate spring formed by a slit allows eccentricity, angular misalignment, and end-play to be accepted.

● Application

FPD manufacturing device/Semiconductor manufacturing device

● Material/Finish

RoHS2 Compliant

	MSXP-C
Main body	PEEK (Polyether ether ketone)
Hex Socket Head Cap Screw	PEEK (Polyether ether ketone)

● PEEK's color may vary depending on the lot or other matters.

● **Related Products**

There is a slit-type flexible coupling **MSX** made of extra super duralumin (A7075).
➡ P.97

● Part number specification

MSXP - 25C - 6-8

Product Code | Size | bore diameter

Please refer to dimensional table for part number specification.

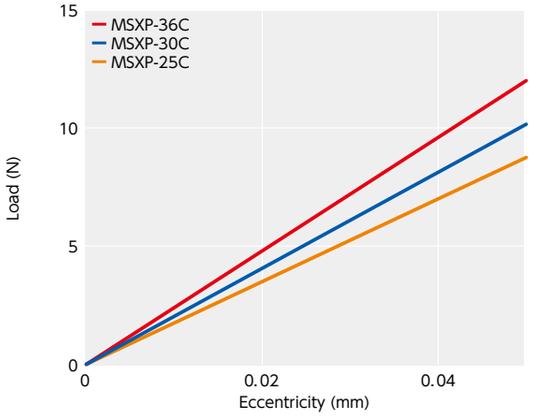
Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Please feel free to contact us	Cleanroom washed and packed	Not Available

MSXP Cleanroom / Vacuum / Heat Resistant Coupling - Slit - type (PEEK)

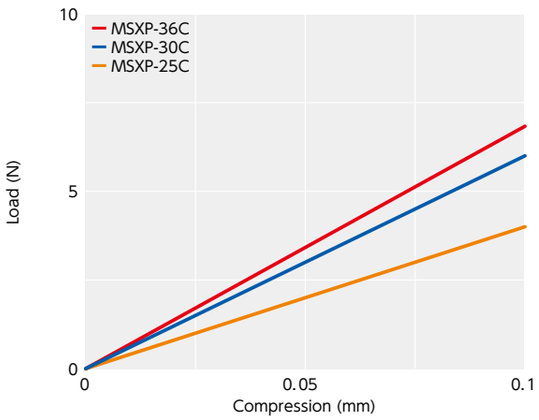
Selection Tool | CAD Download | Zero Backlash | Cleanroom | Electrical Insulation | Chemical-proof

Technical Information

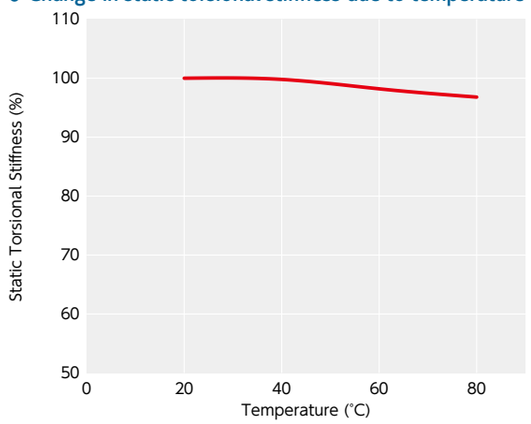
● Eccentric Reaction Force



● Thrust Reaction Force



● Change in static torsional stiffness due to temperature



● Analysis of outgas

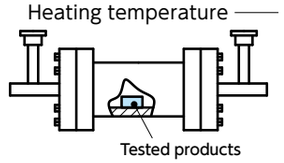
Unit : (v/v ppm)

Component		Content
Inorganic gas	Hydrogen	500 or less
	Carbon monoxide	500 or less
	Carbon dioxide	500 or less
Organic gas	Methane	5 or less
	Ethane	5 or less
	Ethylene	5 or less
	Propane	5 or less
	Acetylene	5 or less
	i-butane	5 or less
	n-butane	5 or less
	Propylene	5 or less

● Both inorganic gas and organic gas are not more than the lower limit of determined amount and are not detected.

● Measurement Methods
Inorganic gas ——— Gas chromatography (TCD)
Organic gas ——— Gas chromatography (FID)

● Measurement Conditions
Heating temperature —— 100℃



Technical Information

● PEEK's physical property

Property	Test Method	unit	PEEK
Tensile Strength	D638	N/mm²	97
Tensile elongation	D638	%	65
Bending Strength	D790	N/mm²	156
Bending elastic modulus	D790	GPa	4.1
Izod impact value (with notch)	D256	J/m	94
Rockwell hardness	D785	R / M Scale	M99
Deflection Temperature Under Load (1.82MPa)	D648	℃	152
Combustibility	UL94	–	V-0
Dielectric Constant (10^6 Hz)	D150	–	3.3
Dielectric loss tangent (10^6 Hz)	D150	–	0.003
Volume resistivity ($x10^{14}$)	D257	Ω・m	4.9
Insulation Breakdown Strength	D149	MV/m	17
Arc resistance	D495	sec	23
Specific gravity	D792	–	1.30
Water absorption (in 23℃ water x 24 h)	D570	%	0.500
Content by percentage of glass fiber	–	%	0

● PEEK's chemical resistance

Chemical name	PEEK
10% hydrochloric acid	○
10% sulfuric acid	○
50% sulfuric acid	×
10% nitric acid	○
50% nitric acid	×
50% hydrofluoric acid	×
10% phosphoric acid	○
Formic acid	△
10% acetic acid	○
Citric acid	○
Chromic acid	○
Boric acid	○
Methyl alcohol	○
Glycol	○
Ammonia	○
10% sodium hydroxide	○
10% potassium hydroxide	○
Calcium hydroxide	○
Hydrogen sulfide (gas)	○
Sulfur dioxide	○
Ammonium nitrate	○
Sodium nitrate	○
Calcium carbonate	○
Calcium chloride	○
Magnesium chloride	○
Magnesium sulfate	○
Zinc sulfate	○
Hydrogen peroxide	○

○: Available △: Fair pending on condition
×: Not available
● This is test data with a specimen used at room temperature (23℃). The chemical resistance varies depending on the usage conditions. Be sure to perform a test under the same usage conditions as in actual usage in advance.

● Slip Torque

Concerning the sizes shown in the table, please note that the shaft's slip torque is smaller than the rated torque of **MSXP-C**.

Unit : N・m

Part Number	Bore Diameter (mm)			
	6	8	10	12
MSXP-25C	0.5	0.6		
MSXP-30C		0.8		
MSXP-36C			0.7	1.2

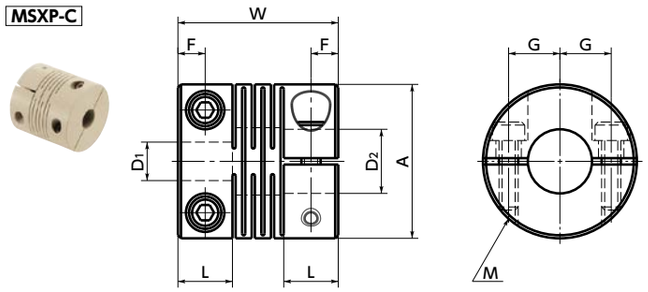
● These are test values based on the condition of shaft's dimensional allowance: h7, hardness: from 34 - 40 HRC, and screw tightening torque of the values described in **MSXP-C** dimensional table.

Couplicon®

MSXP-C Cleanroom / Vacuum / Heat Resistant Coupling - Slit-type (PEEK) - Clamping Type

WEB Selection Tool　WEB CAD Download　Zero Backlash　Cleanroom　Electrical Insulation　Chemical-proof

MSXP-C



Dimensions

Unit : mm

Part Number ①1	A	L	W	F	G	M	Screw Tightening Torque (N・m)
MSXP-25C	25	8.5	25	4.25	8	M3	0.15
MSXP-30C	30	10.2	30	5.1	9	M3	0.15
MSXP-36C	36	12	35	6	11	M3	0.15

Part Number	Standard Bore Diameter D1-D2 ②2				
MSXP-25C	6 - 8	6 - 10	8 - 8	8 - 10	10 - 10
MSXP-30C	8 - 8	8 - 10	10 - 12	12 - 12	
MSXP-36C	10 - 14	12 - 14	14 - 15	15 - 15	

- All products are provided with hex socket head cap screw.
- 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*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Max. Axial Misalignment (mm)	Mass*2 (g)
MSXP-25C	10	0.7	25000	3.0×10^{-7}	110	0.05	0.5	±0.1	3.8
MSXP-30C	12	1	21000	7.8×10^{-7}	180	0.05	0.5	±0.1	6.8
MSXP-36C	16	1.5	17000	1.8×10^{-6}	280	0.05	0.5	±0.1	10

*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	Cleanroom washed and packed	Not Available

- Part number specification

MSXP-36C - 14-15
①1　②2

Couplicon®

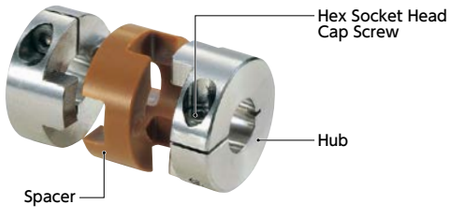
MOHS Cleanroom / Vacuum / Heat Resistant Coupling - Oldham - Type (VESPEL)

WEB Selection Tool　WEB CAD Download　Cleanroom　Electrical Insulation　Heat-resistance　Chemical-proof　High Allowable Misalignment

Structure

● clamping type

MOHS-C ➡ P.241



● Application

FPD manufacturing device/Semiconductor manufacturing device

● Material/Finish　RoHS2 Compliant

	MOHS-C
Hub	SUS303
Spacer	VESPEL*1
Hex Socket Head Cap Screw	SUSXM7 Molybdenum Disulfide Coating

*1： VESPEL is a registered trademark of U.S. company DuPont.

● The color may vary depending on the lot or other matters.

● Spacer's projection structure

Spacer's projection structure allows large angular to be effortlessly accepted. It reduces burden on the shaft.

(Without projection)

MOHS (With projection)

In the Oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.

NBK's oldham type coupling allows the angular misalignment to be easily accepted since the projection serves as support. Bending moment does not arise. Therefore, the max. angular misalignment is large (2°) and the burden on the shaft is reduced.

● Property

	MOHS
Low Particle	△
Vacuum-supported	◎
Low Outgas	○
Heat-resistance	◎
Chemical Resistance	○
Allowable Misalignment	◎
Electrical Insulation	◎
Cleanroom Specification	◎
Allowable Operating Temperature	−20℃ to 200℃

◎: Excellent ○: Very good
△: Abrasion powder may be produced

- This is an oldham-type flexible coupling.
- Clean washing and clean packaging are completed. It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing device.
- VESPEL SPC5000 is adopted in the spacer. This is superior in heat resistance and chemical resistance, and the amount of outgas at high temperature is ultralow.
- Slippage of hubs and a spacer allows eccentricity and angular misalignment to be accepted.
- The load on the shaft generated by misalignment is small and the burden on the shaft is reduced.

● Part number specification

MOHS - 19C - 6-6

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
Available / Add'l charge	Cleanroom washed and packed	Changed to the S.S. screw

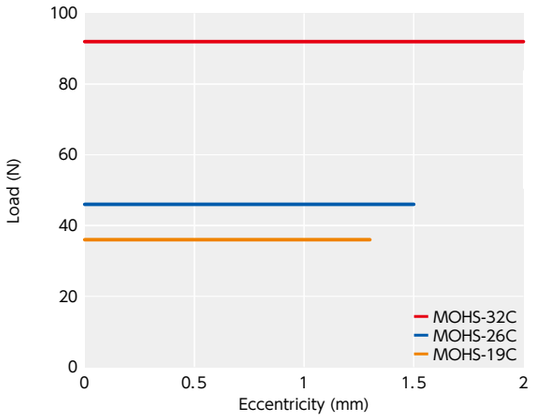
Couplicon®

MOHS Cleanroom / Vacuum / Heat Resistant Coupling - Oldham - Type (VESPEL)

WEB Selection Tool　WEB CAD Download　Cleanroom　Electrical Insulation　Heat-resistance　Chemical-proof　High Allowable Misalignment

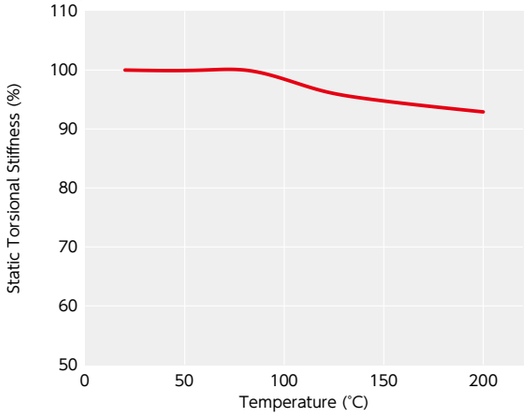
Technical Information

● Eccentric Reaction Force



These are initial slippage load values of hubs and a spacer.
After running-in operation, the slippage load becomes small, the load on the shaft due to misalignment becomes lowered, and the burden on the shaft bearing is reduced.

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **MOHS** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

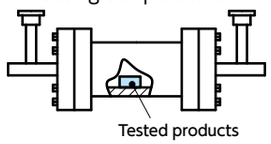
● Analysis of outgas

Unit : (v/v ppm)

Component		Content
Inorganic gas	Hydrogen	500 or less
	Carbon monoxide	500 or less
	Carbon dioxide	500 or less
Organic gas	Methane	5 or less
	Ethane	5 or less
	Ethylene	5 or less
	Propane	5 or less
	Acetylene	5 or less
	i-butane	5 or less
	n-butane	5 or less
	Propylene	5 or less

● Both inorganic gas and organic gas are not more than the lower limit of determined amount and are not detected.

● Measurement Methods
Inorganic gas ——— Gas chromatography (TCD)
Organic gas ——— Gas chromatography (FID)
● Measurement Conditions
Heating temperature —— 100℃



Technical Information

● VESPEL's physical property

Property	Test Method	Unit	VESPEL
Tensile Strength	D1708	N/mm²	160
Tensile elongation	D1708	%	7
Bending Strength	D790	N/mm²	247
Bending elastic modulus	D790	GPa	5.7
Izod impact value (with notch)	D256	J/m	–
Rockwell hardness	D785	R / M Scale	M100
Deflection Temperature Under Load (1.82MPa)	D648	℃	350
Combustibility	UL94	–	V-0
Dielectric Constant (10^6 Hz)	D150	–	3.3
Dielectric loss tangent (10^6 Hz)	D150	–	0.001
Volume resistivity ($x10^{14}$)	D257	Ω・m	1
Insulation Breakdown Strength	D149	MV/m	–
Specific gravity	D792	–	1.43
Water absorption (in 23℃ water x 24 h)	D570	%	0.08
Content by percentage of glass fiber	–	%	–

● VESPEL's chemical resistance

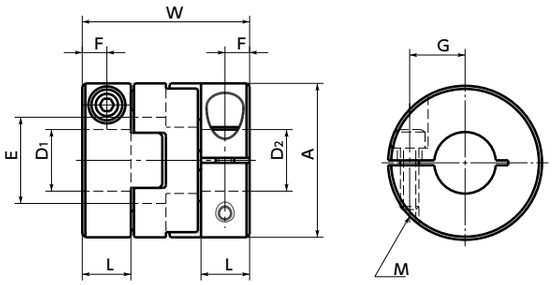
Property	VESPEL
10% hydrochloric acid	○
10% sulfuric acid	○
50% sulfuric acid	△
10% nitric acid	△
50% nitric acid	×
10% hydrofluoric acid	△
50% hydrofluoric acid	×
Formic acid	△
10% acetic acid	○
Citric acid	○
Boric acid	○
Methyl alcohol	△
Glycol	○
Ammonia	△

○: Available　△: Fair pending on condition
×: Not available
● This is test data with a specimen used at room temperature (23℃). The chemical resistance varies depending on the usage conditions. Be sure to perform a test under the same usage conditions as in actual usage in advance.

MOHS-C Cleanroom / Vacuum / Heat Resistant Coupling - Oldham Type (VESPEL) - Clamping Type

WEB Selection Tool　WEB CAD Download　Cleanroom　Electrical Insulation　Heat-resistance　Chemical-proof　High Allowable Misalignment

MOHS-C



Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOHS-19C	19	7	22.1	10	3.5	6.5	M2.5	0.5
MOHS-26C	25.4	8	27.2	14	4	9	M3	0.7
MOHS-32C	31.7	10	33.3	18	5	11	M4	1.2

Part Number	Standard Bore Diameter D1・D2 2						
	5	6	8	10	11	12	14
MOHS-19C	●	●	●				
MOHS-26C			●	●			
MOHS-32C			●	●	●	●	●

- All products are provided with hex socket head cap screw.
- 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*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOHS-19C	8	0.4	0.8	900	1.4×10^{-6}	160	1.3	2	28
MOHS-26C	10	1.2	2.4	900	5.5×10^{-6}	220	1.5	2	61
MOHS-32C	14	2.2	4.4	900	1.6×10^{-5}	600	2	2	110

*1 : Correction of rated torque and max. 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
Available / Add'l charge	Cleanroom washed and packed	Changed to the S.S. screw

- Part number specification

MOHS-32C - 10-12 (1 set)
1 2

MOHS - SPCR (Single Spacer)
1 Single Spacer

Couplicon®

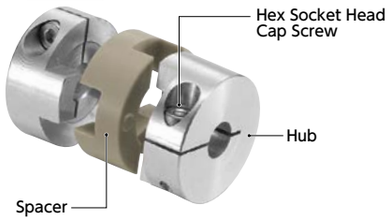
MOP Cleanroom / Vacuum / Heat Resistant Coupling - Oldham - Type (PEEK)

WEB Selection Tool | WEB CAD Download | Cleanroom | Electrical Insulation | Heat-resistance | Chemical-proof | High Allowable Misalignment

Structure

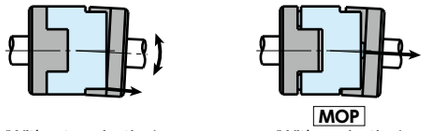
● clamping type

MOP-C ➡ P.247



● Spacer's projection structure

Spacer's projection structure allows large angular to be effortlessly accepted. It reduces burden on the shaft.



(Without projection)

MOP

(With projection)

In the Oldham-type coupling whose spacer has no projection, the spacer and hubs interfere with each other near outside diameter, so that the max. angular misalignment is small (1° - 1.5°) and that the bending moment arises on the shaft.
NBK's oldham type coupling allows the angular misalignment to be easily accepted since the projection serves as support. Bending moment does not arise. Therefore, the max. angular misalignment is large (2°) and the burden on the shaft is reduced.

● Property

	MOP
Low Particle	△
Vacuum-supported	◎
Low Outgas	○
Heat-resistance	◎
Chemical Resistance	○
Allowable Misalignment	◎
Electrical Insulation	◎
Cleanroom Specification	◎
Allowable Operating Temperature	−20℃ to 120℃

◎: Excellent ○: Very good
△: Abrasion powder may be produced

- This is an oldham-type flexible coupling.
- Clean washing and clean packaging are completed. It can be used in an environment or cleanroom where heat resistance and chemical resistance are required, such as FPD manufacturing device and semiconductor manufacturing device.
- PEEK is adopted in the spacer. This is superior in heat resistance and chemical resistance, and the amount of outgas is ultralow.
- Slippage of hubs and a spacer allows eccentricity and angular misalignment to be accepted.
- The load on the shaft generated by misalignment is small and the burden on the shaft is reduced.

● Application

FPD manufacturing device/Semiconductor manufacturing device

● Material/Finish

RoHS2 Compliant

	MOP-C
Hub	A2017
Spacer	PEEK (Polyether ether ketone)
Hex Socket Head Cap Screw	SUSXM7

● PEEK's color may vary depending on the lot or other matters.

● Part number specification

MOP - 25C - 8-8

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
Available / Add'l charge	Cleanroom washed and packed	Changed to the S.S. screw

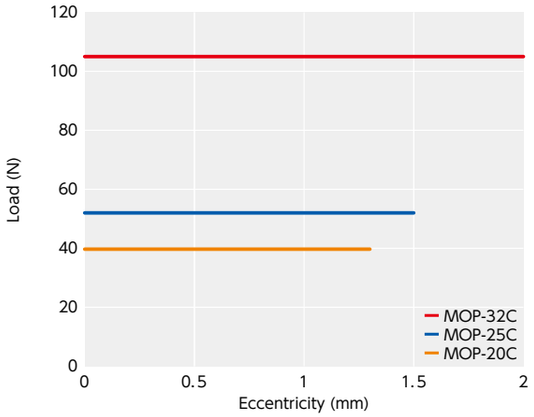
Couplicon®

MOP Cleanroom / Vacuum / Heat Resistant Coupling - Oldham - Type (PEEK)

WEB Selection Tool WEB CAD Download Cleanroom Electrical Insulation Heat-resistance Chemical-proof High Allowable Misalignment

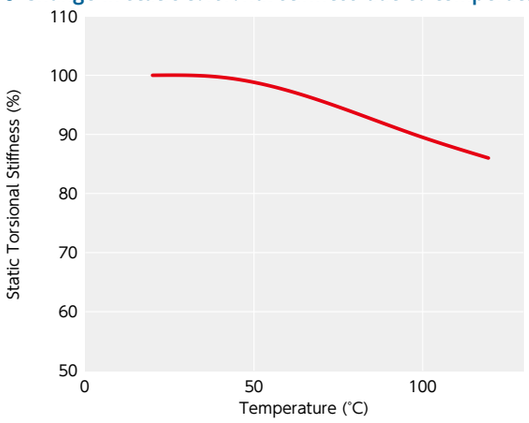
Technical Information

● Eccentric Reaction Force



These are initial slippage load values of hubs and a spacer.
After running-in operation, the slippage load becomes small, the load on the shaft due to misalignment becomes lowered, and the burden on the shaft bearing is reduced.

● Change in static torsional stiffness due to temperature



This is a value under the condition where the static torsional stiffness at 20℃ is 100%.
The change of **MOP** in torsional stiffness due to temperature is small and the change in responsiveness is extremely small. However, if the unit is used at higher temperature, be careful about misalignment due to elongation or deflection of the shaft associated with thermal expansion.

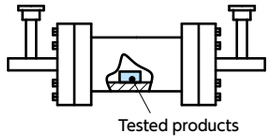
● Analysis of outgas

Unit : (v/v ppm)

Component		Content
Inorganic gas	Hydrogen	500 or less
	Carbon monoxide	500 or less
	Carbon dioxide	500 or less
Organic gas	Methane	5 or less
	Ethane	5 or less
	Ethylene	5 or less
	Propane	5 or less
	Acetylene	5 or less
	i-butane	5 or less
	n-butane	5 or less
	Propylene	5 or less

● Both inorganic gas and organic gas are not more than the lower limit of determined amount and are not detected.

● Measurement Methods
Inorganic gas —— Gas chromatography (TCD)
Organic gas —— Gas chromatography (FID)
● Measurement Conditions
Heating temperature —— 100℃



Technical Information

● PEEK's physical property

Property	Test Method	unit	PEEK
Tensile Strength	D638	N/mm²	97
Tensile elongation	D638	%	65
Bending Strength	D790	N/mm²	156
Bending elastic modulus	D790	GPa	4.1
Izod impact value (with notch)	D256	J/m	94
Rockwell hardness	D785	R / M Scale	M99
Deflection Temperature Under Load (1.82MPa)	D648	℃	152
Combustibility	UL94	–	V-0
Dielectric Constant (10^6 Hz)	D150	–	3.3
Dielectric loss tangent (10^6 Hz)	D150	–	0.003
Volume resistivity ($x10^{14}$)	D257	Ω・m	4.9
Insulation Breakdown Strength	D149	MV/m	17
Arc resistance	D495	sec	23
Specific gravity	D792	–	1.30
Water absorption (in 23℃ water x 24 h)	D570	%	0.500
Content by percentage of glass fiber	–	%	0

● PEEK's chemical resistance

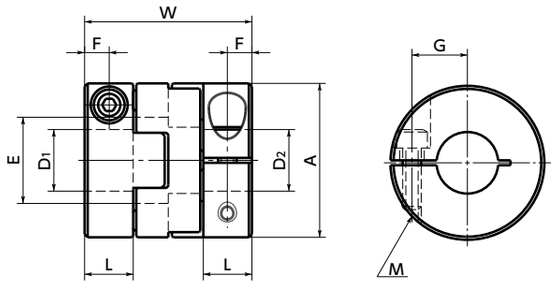
Chemical name	PEEK
10% hydrochloric acid	○
10% sulfuric acid	○
50% sulfuric acid	×
10% nitric acid	○
50% nitric acid	×
50% hydrofluoric acid	×
10% phosphoric acid	○
Formic acid	△
10% acetic acid	○
Citric acid	○
Chromic acid	○
Boric acid	○
Methyl alcohol	○
Glycol	○
Ammonia	○
10% sodium hydroxide	○
10% potassium hydroxide	○
Calcium hydroxide	○
Hydrogen sulfide (gas)	○
Sulfur dioxide	○
Ammonium nitrate	○
Sodium nitrate	○
Calcium carbonate	○
Calcium chloride	○
Magnesium chloride	○
Magnesium sulfate	○
Zinc sulfate	○
Hydrogen peroxide	○

○: Available △: Fair pending on condition
×: Not available
● This is test data with a specimen used at room temperature (23℃). The chemical resistance varies depending on the usage conditions. Be sure to perform a test under the same usage conditions as in actual usage in advance.

MOP-C Cleanroom / Vacuum / Heat Resistant Coupling - Oldham - Type (PEEK) - Clamping Type

WEB Selection Tool　WEB CAD Download　Cleanroom　Electrical Insulation　Heat-resistance　Chemical-proof　High Allowable Misalignment

MOP-C



Dimensions

Unit : mm

Part Number 1	A	L	W	E	F	G	M	Screw Tightening Torque (N・m)
MOP-20C	20	7	22.1	10	3.5	6.5	M2.5	1
MOP-25C	25	8	27.2	14	4	9	M3	1.5
MOP-32C	32	10	33.3	18	5	11	M4	2.5

Part Number	Standard Bore Diameter D1・D2 2						
	5	6	8	10	11	12	14
MOP-20C	●	●	●				
MOP-25C			●	●			
MOP-32C				●	●	●	●

- All products are provided with hex socket head cap screw.
- 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

Additional Keyway at Shaft Hole ➡ P.803	Cleanroom Wash & Packaging ➡ P.807	Change to Stainless Steel Screw ➡ P.805
Available / Add'l charge	Cleanroom washed and packed	Changed to the S.S. screw

Performance

Part Number	Max. Bore Diameter (mm)	Rated*1 torque (N・m)	Max.*1 torque (N・m)	Max. Rotational Frequency (min^{-1})	Moment*2 of Inertia ($kg・m^2$)	Static Torsional Stiffness (N・m/rad)	Max. Lateral Misalignment (mm)	Max. Angular Misalignment (°)	Mass*2 (g)
MOP-20C	8	0.7	1.4	31000	7.4×10^{-7}	93	1.3	2	13
MOP-25C	10	1.2	2.4	25000	2.2×10^{-6}	140	1.5	2	24
MOP-32C	14	2.8	5.6	19000	7.3×10^{-6}	350	2	2	48

*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

MOP-25C - 8-8 (1 set)
1 2

MOP - 25 - SPCR (Single Spacer)
Product Code / Outside Diameter (A Dimension) / Single Spacer

Flexus® Custom - made parts

Couplicon®

Technical Information

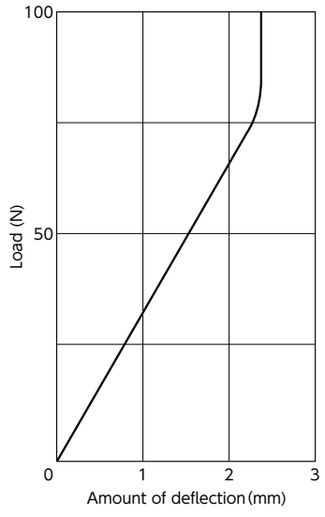
● Characteristics

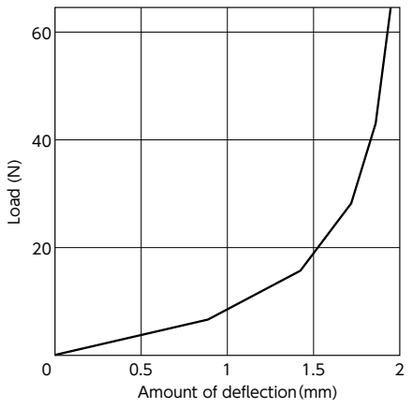
- This is a multi-functional part made of various materials with slits and the portion between the slits works as a spring.
- Simple structure made of various materials with slits. Its excellent functionality is demonstrated in a flexible coupling(**MST** and **MSX**).
- This enables arbitrary spring properties against compression, tension, shearing, and bending.
- It has extremely high rigidity against torsion.
- Due to cutting process, exact spring constant can be obtained for use in instruments where precision and reliability are required.
- This enables you to get a spring property extremely close to the linearity.
- Its heat radiation effect allows thermal expansion and shrink.
- The shape and dimensions are flexible. Polygonal shape as well as cylinder can be manufactured.
- The shape of hub (end portion for mounting) can also be manufactured according to individual needs.
- Materials such as beryllium copper, spring steel, and engineering plastic in addition to aluminum alloy and stainless steel are freely selectable.

・Parts for instrumentation of linear properties

Free state　　Compressed state

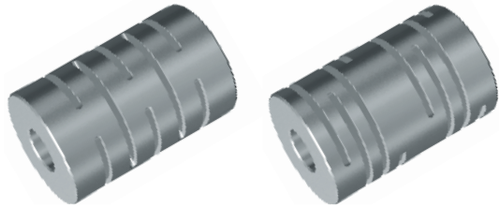
・Flexus with a spring property made to approximate quadratic curve by inserting irregular pitch slits.





● Slit Pattern

- Changing the slit (number, pitch, width, depth, etc.) enables you to obtain arbitrary spring property.



● Usage Example

- Functions other than spring such as screw, washer, and pin can be added and integrated into one unit to reduce the part cost and the number of manhours for assembling. For example, end portions for holding or fixing can be integrated into screw or flange form.

Flexus with a female screw integrated.

Flexus with a male screw integrated.

Flexus with a flange integrated.

Flexus is a completely custom-made multi-functional part.
When considering, please specify the following condition.

- Material and surface treatment
- Spring properties: Spring constant (N/mm), amount of deflection (mm)
- Application
- Outline

- A heat radiating effect can be created by increasing the surface area and minimize shrinkage and expansion due to heat. Heat insulating products can also be made based on selected materials.

Flexus with a surface area expanded by processing into thin shape. Thermal expansion-permitted machine tool retaining parts.

Flexus integrated into the spindle of a machine tool for absorbing the machining error caused by thermal expansion.

Couplicon®

MPF Photo Sensor Flange

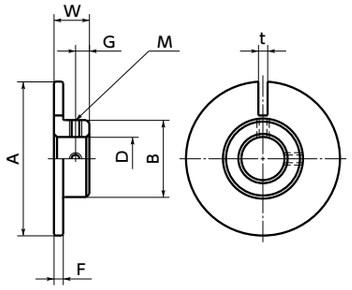
WEB Selection Tool WEB CAD Download

Structure

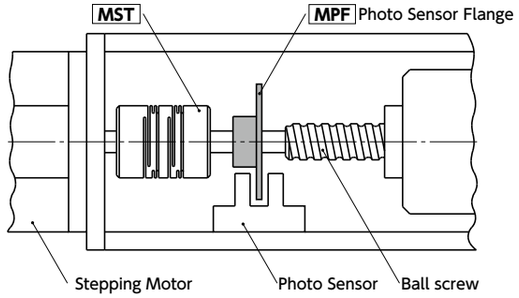
- Material/Finish

RoHS2 Compliant

	MPF
Main Body	A2017 Alumite Treatment
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film



- Photo sensor flange for origin detection.
- Light weight and ultra small moment of inertia.
- Bore-completed products. Bore diameter of ϕ4 to ϕ15.



- Products of special specifications including outside diameter of flange, slit width, bore diameter, material, and surface treatment can also be manufactured. Please contact our customer service.

Dimensions

Unit : mm

Part Number ①	A	B	W	F	t	G	M	Moment*1 of Inertia (kg・m²)	Mass*1 (g)	Standard Bore Diameter (dimensional allowance H8) D ②									
										4	5	6	6.35	8	9.525	10	12	14	15
MPF-32	32	14	8	1.5	1.5	3.5	M3	5.1×10^{-7}	5.2	●	●	●	●	●					
MPF-40	40	20	10	1.5	2	4.5	M3	1.4×10^{-6}	9.8	●	●	●	●	●	●	●	●		
MPF-50	50	25	10	1.5	2.5	4.5	M4	3.5×10^{-6}	15			●	●	●	●	●	●	●	●

*1： These are values with max. bore diameter.

- The standard bore diameter (dimensional tolerance is H8) 9.525 of MPF-40 MPF-50 is order-made. For delivery period, please contact our customer service.
- All products are provided with hex socket set screw.
- 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.

- Part number specification

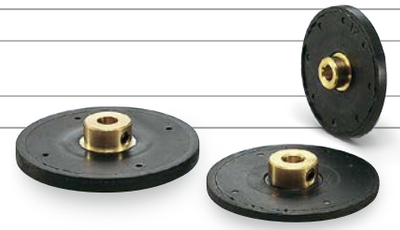
MPF-32 - 8
① ②

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	Please feel free to contact us	Available / Add'l charge

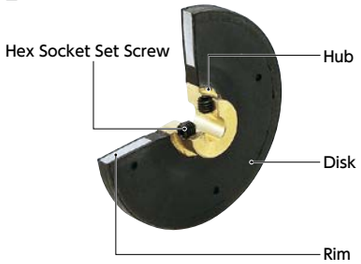
Couplicon®

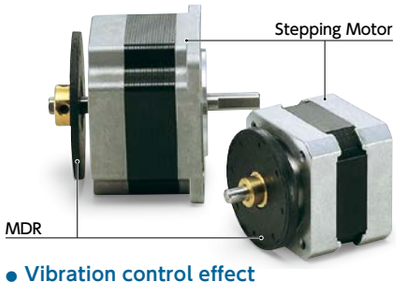
MDR Damper Roll

WEB Selection Tool WEB CAD Download



Structure





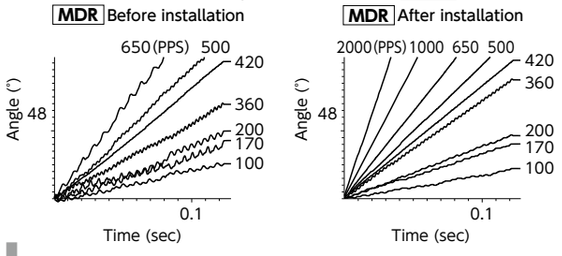
- This reduces the vibration in the resonance area of a stepping motor.
- This supports the follow-up to pulse speed of a stepping motor in high speed zone to improve the max. rotational frequency.
- Allowable operating temperature: –10℃ to 40℃
- Bore-completed products. Special processing is not required.
- MDR of special specifications according to the operating environment and device conditions can be manufactured. Also, a coupling with a vibration-proof function using MDR can be manufactured. Please contact our customer service.

- Material/Finish

	MDR
Hub	C3604
Disk	NBR
Rim	SPCC
Hex Socket Set Screw	SCM435 Ferrosoferric Oxide Film

- **Vibration control effect**

Below is a figure that shows the measurement of vibration control effect of MDR by stepping motor speed (pulse).
Vibration is reduced by attachment of MDR.



Selection

From the moment of inertia of the rotor of the stepping motor to use, select the applicable part number of MDR according to the following table.

Part Number	Moment of inertia of the stepping motor's rotor
MDR-41	Not more than 50 g・cm²
MDR-52	Not more than 150 g・cm²
MDR-57	Not more than 250 g・cm²

- Part number specification

MDR-41 - 5
① ②

Dimensions

Unit : mm

Part Number ①	A	L	B	M	G	Moment*1 of Inertia (g・cm²)	Mass*1 (g)	Standard Bore Diameter (dimensional allowance H8) D ②			
								5	6	6.35	8
MDR-41	41	8	10	1 - M3	3	48	23	●			
MDR-52	52	9.5	15	2 - M4	3.5	139	46	●	●	●	
MDR-57	57	12	15	2 - M4	3.5	270	70		●	●	●

*1： These are values with max. bore diameter.

- All products are provided with hex socket set screw.
- 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	Please feel free to contact us	Available / Add'l charge

Explanation of Terminology

Rated torque

This is a torque value that can be continuously transmitted by Coupling.
This is a value with load variation during operation considered and does not require correction of the rated torque at the time of selection(Except for Oldham Couplings).
Select the Coupling so that the load torque generated by continuous operation may not be more than the rated torque.

Max. torque

This is a torque value that can be instantaneously transmitted by Coupling.

Misalignment

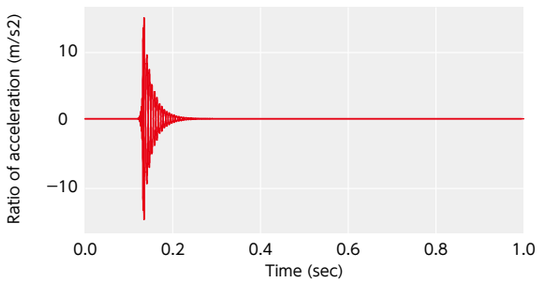
This is a shaft center error.
There are three types of misalignment: eccentricity, argument, and end-play.
For details, please refer to Mounting and Maintenance. ➡ P.257

Max. rotational frequency

This is a maximum rotational frequency available for Coupling.
A value calculated based on peripheral speed 33 m/s is described and we have confirmed that this frequency does not damage the unit by a test. (Except for MOM MOHS MWBS)

Damping ratio

This is a parameter that represents the damping property of vibration amplitude.
XGT2 XGL2 XGS2 have a large damping ratio, thus enabling the servomotor gain to be raised. ➡ P.33

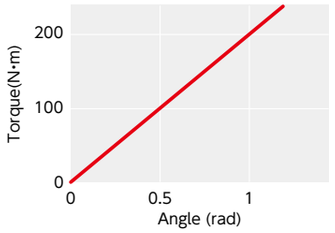


Moment of Inertia

This is a value that indicates the rotational difficulty of Coupling.
Smaller moment of inertia reduces the load torque at the time of start and stop.

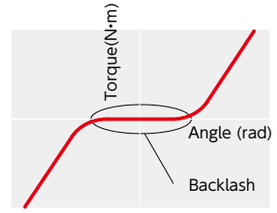
Static Torsional Stiffness

This is rigidity against torsion of Coupling and the inclination shown in the graph indicates the static torsional stiffness.
Static torsional stiffness for the entire Coupling including not only deflection part but also hub is described here.



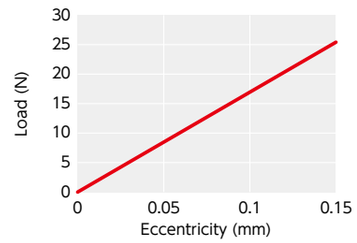
Backlash

This is a backlash against the rotational direction of Coupling.
When high precision positioning is required, select a Coupling with zero backlash.



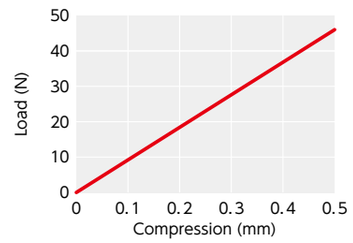
Eccentric reaction force

This is a force generated when making Coupling in eccentric condition.
As the eccentric reaction force becomes smaller, the force acting on the shaft bearing also becomes smaller.



Thrust Reaction Force

This is a force generated when compressing Coupling in the shaft direction.
As the thrust reaction force becomes smaller, the force acting on the motor also becomes smaller.



Electrical insulation

This is insulation against electricity between both hubs of Coupling.
The electrical insulation value of Coupling with rubber/resin used between both hubs is as shown in the following table.

Product Code	Electric resistance value
XGT2 / XGL2 / XGS2	Not less than 2 MΩ
XGT / XGL / XGS	Not less than 100 kΩ and not more than 1 MΩ
MJC / MJS / MJB	Not less than 2 MΩ
MOR / MOL / MOS	Not less than 2 MΩ
MOHS	Not less than 2 MΩ
MOP	Not less than 2 MΩ
MSXP	Not less than 2 MΩ
MSF	Not less than 2 MΩ

Constant velocity

This is speed unevenness for one rotation of Coupling.
In general, the higher the misalignment is, the lower the constant velocity becomes.
MFB **MWBS** are superior in constant velocity even when misalignment exists and is appropriate for detection devices such as encoder.

Allowable operating temperature

This is a temperature available for Coupling.
The allowable operating temperature for rubber/resin-used Coupling is as shown in the following table.

Product Code	Allowable operating temperature
XGT2 / XGL2 / XGS2	−10℃ - 120℃
XGT / XGL / XGS	−20℃ - 80℃
MJC / MJS / MJB	−20℃ - 60℃
MOR / MOL / MOS	−20℃ - 80℃
MOHS	−20℃ - 200℃
MOP	−20℃ - 120℃
MSXP	−20℃ - 80℃
MSF	−20℃ - 60℃

Temperature correction factor

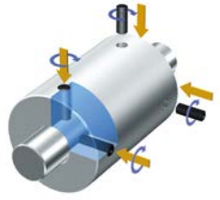
This is a factor multiplied to the rated torque and max. torque depending on the operating temperature of Coupling.
In **XGT2** **XGL2** **XGS2** **XGT** **XGL** **XGS** **MJC** **MJS** **MJB** **MOR** **MOL** **MOS** **MSF**, the rated torque and max. torque vary. If ambient temperature exceeds 30 °C, be sure to correct the rated torque and max. torque with correction factor shown in the following table.
MOHS **MOP** **MSXP** are superior in heat resistance and the rated torque and max. torque do not vary depending on the operating temperature. Correction by temperature correction factor is not required.

Ambient temperature	Temperature correction factor
−20 - 30℃	1.00
30 - 40℃	0.80
40 - 60℃	0.70
60 - 120℃	0.55

Attachment

There are seven types of shaft attachment methods as follows. Select a method according to your needs.

❶ Set screw type
This is low cost and most common attachment method. However, since the screw point directly contacts the shaft, note that it may damage the shaft or make it difficult to remove the unit.



❷ Clamping type
The bore is contracted by tightening force of the screw to clamp the shaft. Mounting and removal can be easily conducted, which does not damage the shaft.

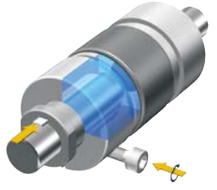
❸ Split type
The bore portion can be completely divided. Therefore, it can be easily mounted or removed without moving the device. In addition, the shaft is not damaged.

❹ Semi-split type
This is an attachment method in which one side of the hubs is clamping type and the other side is split type. The device can be connected only on the split type side while keeping the clamping type side attached on the shaft.

❺ Key type
As with set screw type, this is a general attachment method and can be applied to the transmission of relatively high torque. To prevent the movement in the shaft direction, this is used together with set screw type and clamping type.

❻ Bushing type
Attachment method using taper wedge effect enables secure and stable attachment. This is suitable to high torque transmission and is the most appropriate for the spindle of a machine tool.

❼ Adapter + Clamping type
This is a type made by inserting an adapter into the clamping type so as to be applied to 1/10 taper shaft of the servomotor.



Alignment adjustment

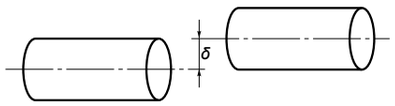
❶ Although flexible coupling permits misalignment and transmits rotation angle and torque, if the misalignment exceeds the allowable value, vibration may occur or the life may be rapidly shortened. Be sure to perform alignment adjustment.

❷ Shaft center misalignment includes eccentricity (parallel error of both shaft centers), argument (angle error of both shaft centers), and end-play (shaft direction movement of the shaft). Adjust the shaft alignment so that it is not more than an allowable value described in the Dimension/Performance table in this catalog.

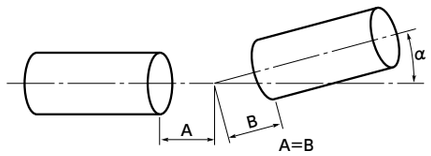
❸ The allowable values of misalignment described in the Dimension/Performance table are for the case where any one of eccentricity, argument, and end-play occurs independently. Mixing of two or more misalignment causes each of the allowable values to be reduced to half.

❹ Misalignment may occur not only in mounting into the device but also due to vibration, thermal expansion, and shaft bearing abrasion during operation. Therefore, misalignment is recommended to be not more than one third of the allowable value.

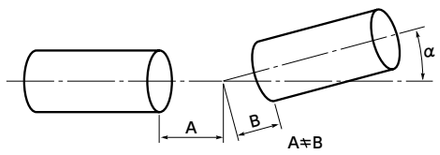
● Eccentricity



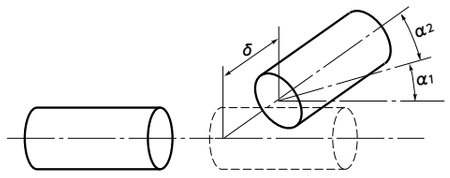
● Angular alignment (center matched)



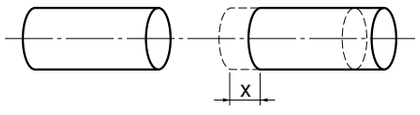
● Angular alignment (center unmatched)



● Mixture of eccentricity and angular alignment



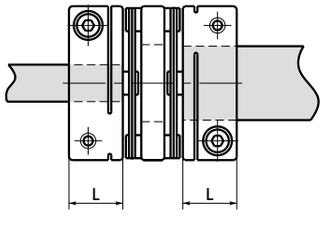
● End-play



● Run out

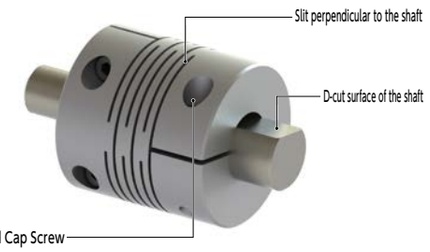
Shaft insertion length

The shaft insertion length into Coupling should be the length of hub (L dimension) described in the catalog. Shorter insertion length may cause slippage of the shaft or damage of the clamp portion.
Longer insertion length may cause damage due to the shaft interference in Coupling.



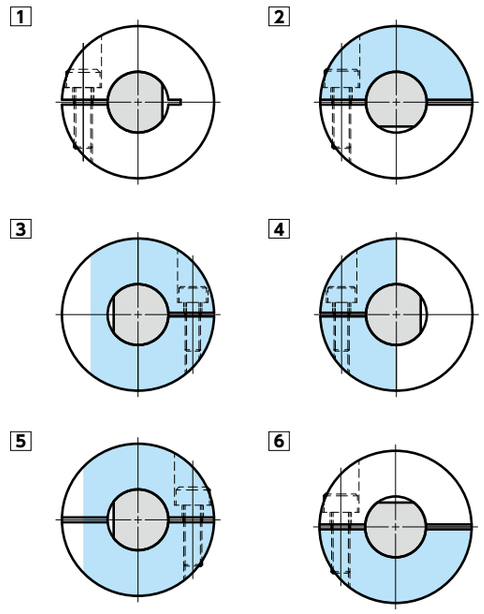
Mounting on D-cut shaft

When using a Coupling of clamping type, use a round-shaped shaft in principle.
If D-cut shaft is used, an excessive load due to tightening by the hex socket head cap screw may damage the Coupling depending on the mounting position of D-cut surface of the shaft.
When using a D-cut shaft, please perform mounting so that the D-cut surface of the shaft does not contact to a slit perpendicular to the shaft as much as possible. (Refer to mounting example)



Product Code	Mounting example
MJC (Outside diameter ϕ30 or less) / MJS / MOR / MOS / MKM / MOHS / MOP	1
MHW / MHS / MOL (Outside diameter ϕ32 or less) MFB / MFBS / MRG	2
MLR / MLRS	3
XHW / XHS	4
MSTS (Outside diameter ϕ32 or less) / MWSS XSTS / XWSS	5
MOM (Outside diameter ϕ38 or less) / XGT2 XGL2 / XGS2	6
MST (Outside diameter ϕ32 or less) / MWS	7
MJC (Outside diameter ϕ40 or more) / MOM (Outside diameter ϕ45 or more)	8
MST (Outside diameter ϕ40 or more) / MSTS (Outside diameter ϕ40 or more) MOL (Outside diameter ϕ40 or more) / XSTS (Outside diameter ϕ40 or more)	9
XGT / XGL / XGS / XUT	10
MSX / MSXP	11
XBW / XBWS / XBS / XBSS / MDW MDS / XRP	12

● Mounting example



For better drive

Selection

Select an appropriate Couplicon according to the following procedures.

Selection procedures

1. Type selection
2. Size selection
3. Torque correction by operating temperature
4. Checking of max. bore diameter and max. rotational frequency
5. Summary

1.Type selection

By referring to Couplicon selected from the table, Couplicon selected based on motor, and Couplicon selected based on application , select the most appropriate Couplicon type.

2.Size selection

Be sure to select a size with performance of rated torque higher than the load torque of the system.
The rated torque is a value with load variation during operation considered and dose not require correction at the time of selection.
Select the size so that the load torque generated by continuous operation may not be more than the rated torque.

3.Torque correction by operating temperature

For rubber/resin-material Couplicon, the rated torque and max. torque vary depending on the operating temperature. ➡ P.255
If ambient temperature exceeds 30˚C, be sure to correct the rated torque and max. torque with temperature correction factor shown in the following table.

Ambient temperature	Temperature correction factor
−20℃ - 30℃	1.00
30℃ - 40℃	0.80
40℃ - 60℃	0.70
60℃ - 120℃	0.55

In other Couplicons, the rated torque and max. torque do not vary depending on the operating temperature. Correction by temperature correction factor is not required.

4.Checking of max. bore diameter and max. rotational frequency

Ensure that both of the max. bore diameter and max. rotational frequency exceed the bore diameter and rotational frequency specified in the design conditions. If either or both of the max. bore diameter and max. rotational frequency are not satisfied, change the size.

5.Summary

Finally, ensure that other items also satisfy the design condition by referring to the Dimention/Performance table.

Safety Precautions

Couplicon®

In order to safely use our products, please carefully read "Precautions for safety" described here and "Precautions for use" and "Handling method" described on respective product pages before using products. After reading them, be sure to keep this catalog so as to read it again as required.

⚠ Warning

In the case it is thought that improper handling may cause a person to die or be heavily injured.

- The devices must be covered with our product protection covers. Otherwise your hands or fingers may contact the device in operation and get injured. However, do not fully cover the device but ventilate the surrounding air.
- A safety mechanism must beinstalled on the equipment for hazard prevention.
- When mounting or removing a product, never turn on the device. Otherwise your hands or fingers may contact the device suddenly driven and get injured.
- The screw (hex socket set screw or hex socket head cap screw) must be properly tightened using a torque driver or torque wrench.
- Do not use this unit with rotational frequency exceeding the max. rotational frequency.
- Never disassemble or modify the products.

⚠ Precautions

In the case it is thought that improper handling may cause a person to be injured or physical damage to occur.

- Do not store or use the products in an environment that may affect them.
- Be careful about handling the products. Dropping a product may damage them. Also, be careful not to damage your waist or drop a product and damage your feet when transporting products.
- Coupling should be used with misalignment of not more than the allowable value. Use of the unit exceeding the allowable value may damage the product or affect peripheral devices.
- The load torque generated by continuous operation must be not more than a rated torque of the coupling.
  Use of the unit exceeding the allowable value may damage the product or affect peripheral devices.
- In case of a device with large load fluctuation, please apply adhesive agent or upgrade the part number of a coupling to use by one level to prevent screw loosening.
- If any abnormal sound or vibration occurs during operation, immediately stop the operation and check the alignment, interference with peripheral devices, and loosening of screws.
- Screws other than our specified ones (hex socket set screw or hex socket head cap screw) should not be used.
- When discarding the used products, please ask a special dealer to discard them so as to prevent bad influence on environment.
- Never touch the product immediately after stopping the operation. Heat transmission from peripheral devices may cause the product to be highly heated, which may cause the worker to be burned.