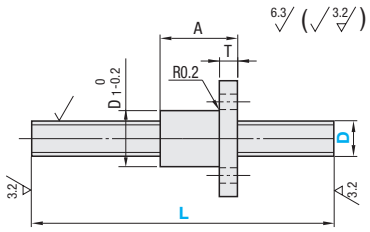
# Miniature Slide Screws / Nuts
## Straight

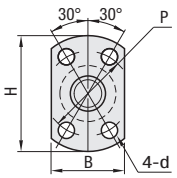
■ Miniature Slide Screws / Nuts

RoHS 10

| Type | | Material | |
|---|---|---|---|
| | | Shaft | Nut |
| MSSR | Right-Hand Thread | SUS304 | Special Resin |
| MSSRN | Nut only | - | |

MSSR includes a shaft and a nut; MSSRN includes a nut only.




| Part Number Type | D | Lead | L 1mm Increment | Number of Starts | Plastic Nut Dimension D1 | H | A | T | B | P | d | Allowable Axial Load N (Reference) | Allowable Rotational Speed rpm (Reference) | Tightening Torque N・mm | Mass (Reference) g/100mm | Unit Price MSSR Min.L~100 | L101~200 | L201~300 | L301~400 | L401~550 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSSR MSSRN (Nut) | 4 | 01 | 30~150 | 1 | 10 | 23 | 11.5 | 3.5 | 15 | 15 | 2.9 | 50 | 2500 | 180 | 11(3) | | | - | - | - |
| | | 02 | | 2 | | | | | | | | 60 | | | 11(3) | | | - | - | - |
| | 6 | 01 | 30~250 | 1 | 12 | 26 | 14.5 | 3.5 | 17 | 18 | 3.4 | 120 | 2000 | 400 | 23(3) | | | | - | - |
| | | 02 | | | | | | | | | | 60 | | | 25(3) | | | | - | - |
| | | 09 | | 4 | | | | | | | | 90 | | | 25(3) | | | | - | - |
| | | 18 | | | | | | | | | | 110 | | | 25(3) | | | | - | - |
| | 8 | 01 | 40~250 | 1 | 14 | 29 | 18 | 4 | 18 | 21 | 3.4 | 200 | 2000 | 400 | 42(5) | | | | - | - |
| | | 02 | | | | | | | | | | 290 | | | 38(5) | | | | - | - |
| | | 12 | 40~350 | 4 | | | | | | | | 210 | | | 40(5) | | | | | - |
| | | 24 | | 6 | | | | | | | | 210 | | | 41(4) | | | | | - |
| | 10 | 02 | 50~250 | 1 | 16 | 33 | 22 | 5 | 21 | 24 | 4.5 | 460 | 1500 | 500 | 59(6) | | | | - | - |
| | | 15 | 50~500 | 4 | | | | | | | | 410 | | | 58(6) | | | | | |
| | | 30 | | 6 | | | | | | | | 440 | | | 56(6) | | | | | |
| | 12 | 02 | 50~250 | 1 | 18 | 35 | 25 | 5 | 22 | 26 | 4.5 | 660 | 1000 | 500 | 86(8) | | | | - | - |
| | | 18 | 50~550 | 6 | | | | | | | | 750 | | | 86(8) | | | | | |
| | | 36 | | | | | | | | | | 540 | | | 87(7) | | | | | |

The tightening toque applies to the screw for mounting the plastic nut. Note that positioning repeatability changes when nut is exchanged for maintenance. The dimension in ( ) of mass table is nut mass.

Ordering Example

| Part Number | - | L |
|---|---|---|
| MSSR812 | - | 300 |
| MSSRN1002 (Nut) | | |

### ■Features

Slide screw's nut is made of special resin composed of PPS as base material and solid lubricant (fluorine, for example) filled to increase sliding properties.
The material is superior to polypropylene, nylon, and polyacetal in tribological properties, heat resistance and moisture absorbing characteristics. Quieter in comparison to ball screws, and lighter in motion with lower torque compared to lead screws.

### ■Material Properties of Nuts

| Item | Testing Method | Unit | Value |
|---|---|---|---|
| Base Material | - | - | PPS |
| Specific Gravity | ASTM D792 | - | 1.53 |
| Tensile Strength | ASTM D638 | MPa | 51 |
| Hardness | - | Rockwell R | 110 |
| Elongation | ASTM D638 | % | 3 |
| Water Absorption Ratio | ASTM D570 | % | 0.05 |
| Critical Temperature | - | ℃ | 140 |

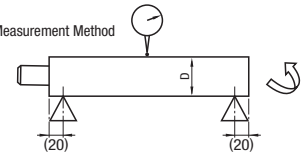
### ■Caution

①Positioning repeatability is changed by wear due to usage and exchange of parts during maintenance.
②Do not use molybdenum and silicone based greases due to its negative impact to the nuts.
Do not use it due to its negative impact to the nuts.
③Sliding properties are based on 25°C. It may vary depending on temperature.
④The nuts are made of PPS base material; they may be "cracked" or "deformed" due to shocks or excessive tightening.

### ■Screw Accuracy

- Initial Accumulative Lead Error ±0.21/300mm (Reference Temperature 25°C)
- Bending Accuracy: 0.16 or less

Bend Measurement Method



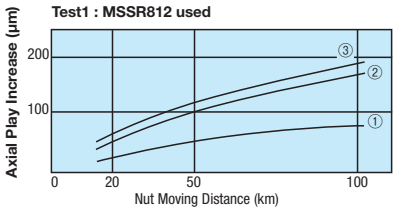

The screw shaft is supported on both ends with V-blocks and the measurements are taken with a dial indicator at arbitrary points while the shaft is rotated.

### ■Leads

Lead is the travel distance of one revolution.
Lead 01···Travel Distance/Rev. : 1mm
Lead 24···Travel Distance/Rev. : 24mm

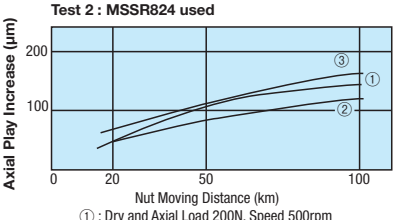
### ■Wear Data (Reference Values)

**Test1 : MSSR812 used**




①: Dry and Axial Load 50N, Speed 500rpm
②: Dry and Axial Load 100N, Speed 500rpm
③: Dry and Axial Load 200N, Speed 500rpm

**Test 2 : MSSR824 used**




① : Dry and Axial Load 200N, Speed 500rpm
② : Dry and Axial Load 200N, Speed 1000rpm
③ : Dry and Axial Load 200N, Speed 2000rpm