Precision Lead Screws

Customized products MG series

KSS manufactures not only Ball Screws but also Precision Lead Screws.
It can be used as fine Pitch which Ball Screws do not have, and it can be achievable when less precise products are needed.

●Features

Possible to select fine Pitch
It is possible to select fine Pitch which Ball Screws do not have.

Wide variety of size
Metric Fine Thread and Metric Coarse Thread based on JIS(Japanese Industrial Standard) are standardized but we also manufacture Trapezoidal Thread, Unified Screw Thread, ACME Screw Thread, special Pitch, and multiple start Thread.

Low torque
With knowhow of screw gauge, we make use of grinding technique, and lapping technique, so fine surface roughness and low wobble become reality, which lead low torque and less wear.

Flexibility of Nut configuration
Nut configuration is not restricted and it is possible to manufacture in accordance with customer's design.

●Model number notation

MG ① 6 ② P=0.5 ③ (2N) ④ — 120 ⑤ R ⑥ 150 ⑦

①Lead Screws series No.
MG：Precision Lead Screws
M：General Lead Screws
**Sign differs other than M-thread Screw.
②Screw Shaft outside diameter(mm)
③Pitch(mm)
④Number of Thread
2N=double-start thread、No identified for single-start thread
⑤Screw thread length(mm)
⑥Thread direction R=Right-hand, L=Left-hand
⑦Screw Shaft total length(mm)

Note 1)Model number is mentioned in specification document that we hand in.
Note 2)Accuracy, Axial play are not mentioned in Model number notation.

●Material & Surface hardness

Components	Material	Surface hardness
Shaft	SKS3、SCM415、SUS440C	HRC50 or more
	SUS303	N/A
Nut	BC6、C5191B	N/A

Note1)Leadless Copper alloy(AQ30) which conforms to RoHS regulation is available.

●Combination of Shaft dia. & Pitch

Unit:mm

Shaft dia. \ Pitch	0.25	0.35	0.4	0.45	0.5	0.7	0.75	0.8	1.0	1.25	1.5	2.0
2	◎		○									
2.5		◎		○								
3		◎			○							
4					◎	○						
5					◎			○				
6					◎		◎		○			
7					◎		◎		○			
8					◎		◎		◎	○	□	
9					◎		◎		◎		○	□
10					◎		◎		◎		○	□

◎ Recommended model including Metric Fine Pitch Thread.
○ Metric Coarse Pitch Thread.
□ Metric Trapezoidal Thread.
***Blank：Can be manufactured, but please inquire KSS.

●Ultra Fine Pitch (0.1mm) Lead Screws

0.1mm Pitch is not shown on the table above, but with our machining technique, we have experiences to manufacture 0.1mm Ultra Fine Pitch Lead Screws. If 0.1mm pitch is needed, please inquire KSS.

●Recommended Axial play

Unit : mm

Axial play	max. 0.005	0.005~0.010	0.010~0.020	0.015~0.030	0.020~0.050

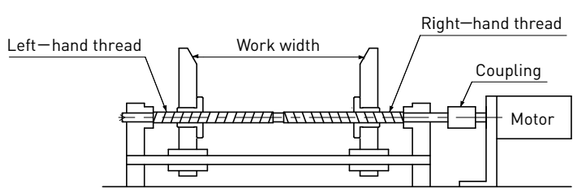
●Maximum Length

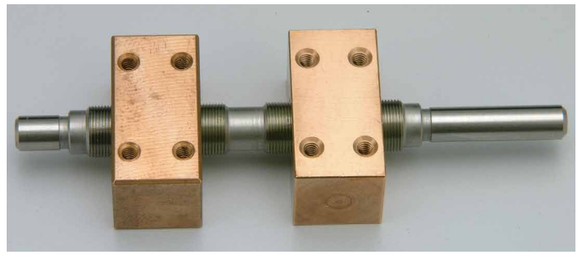
Unit : mm

Shaft dia. / Grade	2	2.5	3	4	5	6	7	8	9	10
Precision type	25	30	80	120	160	200	250	300	350	400
Normal type	25	40	90	140	180	250	300	350	400	450

●Bi-directional Lead Screws

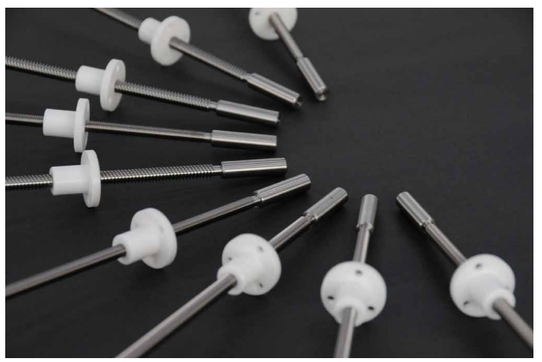
Bi-directional Lead Screws which are machined Left handed and Right handed thread on a Shaft, and Nuts are mounted on each thread. Both Right and Left Nuts move symmetrically, precise positioning, and width adjustment by single motor.
Nut configuration is designed freely to suit customer's requirements





●Special Lead Screws

KSS Lead Screws are defined as precision Lead Screws due to making use of grinding technique. According to customer's request, we manufacture Lead Screws which are done only machining process as a low price version. Moreover, when mass-production, it is possible to manufacture Screw Shaft by Rolling process.
The Lead Screws which have plastic Nuts are also available as special Lead Screws. In mass-production case, plastic Nuts are produced by injection mold.



●Precaution for design and use of Lead Screws

1) We recommend Shaft and Nut are made from different materials.
2) Make sure not to raise surface pressure and relative velocity on thread surface.
3) Lubricating is highly important for Lead Screws due to sliding contact by Flank surface.
   Make sure not to be lack of lubricant.