

# Lead Screw

## Both Ends Stepped

Generally used product type.

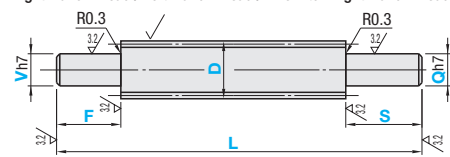


Type						Material	Surface Treatment
Right-Hand Thread	Right-Hand Thread with Keyway	Fine Pitch Right-Hand Thread	Left-Hand Thread	Right and Left-Hand Thread	Precision Right and Left-Hand Thread		
MTSRW	MTSRV	MTXRW	MTSLW	MTSWW	MTSYW	EN 1.1191 Equiv.	Black Oxide LTBC Plating
MTSBRW	MTSBRV	MTXBRW	MTSBLW	MTSBWW	MTSBYW		
RMTSRW	RMTSRV	RMTXBRW	RMTSLW	RMTSBBW	RMTSBBYW		
MTSTRW	-	-	MTSTLW	-	-	EN 1.4305 Equiv.	-

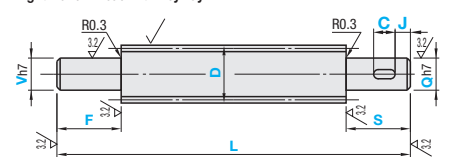
Single Pitch Error  $\pm 0.02\text{mm}$  Accumulated Pitch Error  $\pm 0.15/300\text{mm}$

$$6.3 / (\sqrt{3.2})$$

Right-Hand Thread / Left-Hand Thread / Fine Pitch Right-Hand Thread

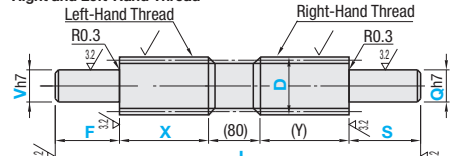


Right-Hand Thread with Keyway

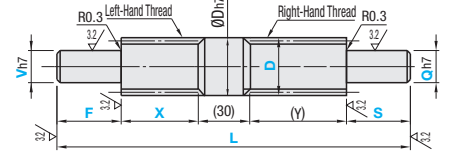


Keyway machining details conform to Shaft Keyway Dimensions shown on the right-hand page.

Right and Left-Hand Thread



Precision Right and Left-Hand Thread



Incomplete Threaded Portion of Right and Left-Hand Thread Type  
Left-Hand Thread Incomplete Threaded Portion (80mm) Right-Hand Thread  
The Center between the right-hand thread and the left-hand thread is an incomplete threading portion (approx. 80mm) resulting from rolling machining. This portion, including the shaft part enclosed with  $\phi$ , is not useable.  
When being required to use the center between the right-hand thread and the left-hand thread as the shaft, select the Precision Right and Left-Hand Thread type.

Incomplete threaded portion near the center (80mm) is not useable.

$\phi D_{h7-30\text{mm}}$  part includes incomplete thread portion by about 1.5 pitches at both ends (in total about 3 pitches).

### Right-Hand Thread / Left-Hand Thread / Right and Left-Hand Thread / Precision Right and Left-Hand Thread

Part Number	D	1mm Increment		V / Q Selection	Right and Left-Hand Thread / Precision Right and Left-Hand Thread		D	Pitch P
		Type	L		F, S	X 1mm Increment		
(Right-Hand Thread) MTSRW MTSBRW RMTSRW MTSTRW	8 10 12 14	50-500		6 6 7 6 7 8 9 8 9 10			8 10 12 14	1.5 2 3
(Left-Hand Thread) MTSLW MTSBLW RMTSLW	16 18 20	100-1200		9 10 12 9 10 12 10 12 14 15			16 18 20	3 4
(Right and Left-Hand Thread) MTSWW MTSBBW RMTSBBW	22 25 28	150-1200	When V and Q are 6-9, $2sF=Vx5$ $2sS=Qx5$	10 12 14 15 12 14 15 16 17 14 15 16 17 20			22 25 28	4 5
(Precision Right and Left-Hand Thread) MTSYW MTSBBYW	32 36 40 50	200-1200		14 15 16 17 20 25 14 15 16 17 20 25 25 30 35 40			32 36 40 50	6 8

$\phi D_8$  is applicable to MTSRW, MTSBRW and RMTSRW only.

For Precision Right and Left-Hand Thread, D dimension 14, 16, 20, 25, 28 and 32 are available. When combined with position indicators, the standard Q diameters are 8 ~ 20. P.811, 812  
D dimension 22, 36, 40 and 50 are not applicable to Stainless Steel. D dimension 25, 28 and 32 are applicable to Right-Hand Thread only.

### Right-Hand Thread with Keyway

Part Number	D	1mm Increment		V / Q Selection	1mm Increment		D	Pitch P
		Type	L		F, S	C		
MTSRV MTSBRV RMTSRV	12 14 16 18 20 22 25 28 32 36 40 50	80-1000 100-1200 150-1200 200-1200	$2sF=Vx7$ $2sS=Qx7$	7 8 9 8 9 10 9 10 12 9 10 12 10 12 14 15 10 12 14 15 12 14 15 16 17 14 15 16 17 20 17 20 25 20 25 30 25 30 35 40	C=60 S-C-J=2	J=2 or J=0 When J=0, keyway R will be eliminated on the shaft end side.	12 14 16 18 20 22 25 28 32 36 40 50	2 3 4 5 6 8

When combined with position indicators, the standard Q diameters are 8 ~ 20. P.811, 812

### Fine Pitch Right-Hand Thread

Fine Pitch Right-Hand Thread has a smaller pitch than the conventional standard products.

Part Number	D	1mm Increment		V / Q Selection	D	Pitch P
		Type	L			
MTXRW MTXBRW	16 20	100-1000 150-1000	$2sF=Vx7$ $2sS=Qx7$	9 10 12 10 12 14 15	16 20	2 2

Nuts for Fine Pitch Right-Hand Thread P.796

Ordering Example

Part Number	L	F	V	S	Q	C	J
MTSRW16	282	F16	V10	S14	Q10		
MTSRV16	282	F16	V10	S14	Q10	C10	J2
Part Number	L	F	V	S	Q	X	
MTSWW20	583	F20	V15	S30	Q15	X100	

Unit price for the product is price in the table multiplied by price multiplier.  
Price in the table x Price Multiplier = Unit Price

### Right-Hand Thread / Left-Hand Thread

Part Number	D	Unit Price					
		Min. L - 200	L201-400	L401-600	L601-800	L801-1000	L1001-1200
MTSRW	8 10 12 14 16 18 20 22 25 28 32 36 40 50						

### Right and Left-Hand Thread

Part Number	D	Unit Price					
		Min. L - 200	L201-400	L401-600	L601-800	L801-1000	L1001-1200
MTSWW	10 12 14 16 18 20 22 25 28 32 36 40 50						

### Precision Right and Left-Hand Thread

Part Number	D	Unit Price					
		Min. L - 200	L201-400	L401-600	L601-800	L801-1000	L1001-1200
MTSYW	14 16 20 22 25 28 32						

### Fine Pitch Right-Hand Thread

Part Number	D	Unit Price			
		Min. L - 200	L201-400	L401-600	L801-1000
MTXRW	16 20				
MTXBRW	16 20				

Alterations Part Number L F V S Q C J (AC, SC, MC, MQ, etc) Only AC, SC, MC, MQ and ZC are applicable to Right-Hand Thread with Keyway.  
MTSRW16 - 282 - F16 - V10 - S14 - Q10 - AC13.3

Alterations	Code	Spec.	Flat Machining	Retaining Ring Groove	Wrench Flats	Coarse Tapping	Threaded	Square Chamfering	Keyway

Specify an alteration position to be 2mm or more away from the stepped part. (For details, see P.787)  
Do not specify multiple alterations in such a way that they overlap with each other in the rotating direction on the same shaft. (For details, see P.787)  
When flat machining, wrench flats, square chamfering and keyway alterations are combined with each other, their orientations will be random. (For details, see P.787.)  
When adding multiple alterations, there must be 2mm or more clearance between each feature. (For details, see P.787)