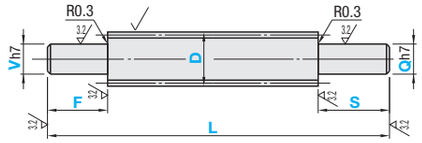
Lead Screw
Both Ends Stepped

Generally used product type.

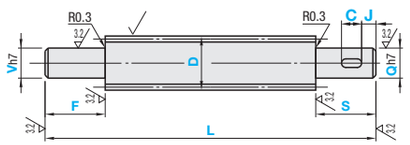
Type						Material	Surface Treatment
Right-Hand Thread	Right-Hand Thread with Keyway	Fine Pitch Right-Hand Thread	Left-Hand Thread	Right and Left-Hand Thread	Precision Right and Left-Hand Thread		
MTSRW	MTSRV	MTXRW	MTSLW	MTSWW	MTSYW	S45C	-
MTSBRW	MTSBRV	MTXBRW	MTSBLW	MTSBWW	MTSBYW		Black Oxide
RMTSRW	RMTSRV	-	RMTSLW	RMTSWW	-		Low Temperature Black Chrome Plating
MTSTRW	-	-	MTSTLW	-	-	SUS303	-

・Single Pitch Error ··· ±0.02mm ・Accumulated Pitch Error ··· ±0.15/300mm

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

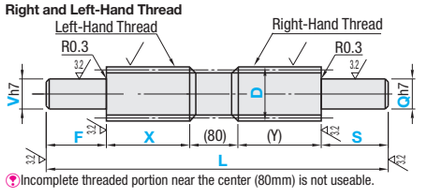


Right-Hand Thread with Keyway



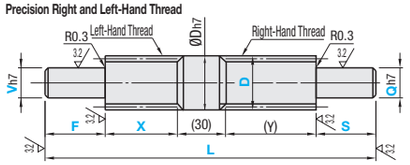
Keyway machining details conform to Shaft Keyway Dimensions shown on the right-hand page.

Right and Left-Hand Thread



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

Precision Right and Left-Hand Thread



ØDh7-30mm part includes incomplete thread portion by about 1.5 pitches at both ends (in total about 3 pitches).

Incomplete Threaded Portion of Right and Left-Hand Thread Type

The Center between the right-hand thread and the left-hand thread is an incomplete thread portion (approx. 80mm) resulting from rolling machining. This portion, including the shaft part enclosed with ◯, 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.

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

Part Number Type	D	1mm Increment L	F, S	V / Q Selection	Right and Left-Hand Thread / Precision Right and Left-Hand Thread X 1mm Increment	D	Pitch P
(Right-Hand Thread) MTSRW MTSBRW RMTSRW D≤32,L≤1000 MTSTRW (Stainless Steel)	*8	50~500	2≤F≤Vx7 2≤S≤Qx7 When V and Q are 6 ~ 9, 2≤F≤Vx5 2≤S≤Qx5	6	When D=10 ~ 14 50≤X≤460<485>-F (Y)=L-80<30>-F-S-X (Y)≤500-S-40<15> When D=16 ~ 50 50≤X≤560<585>-F (Y)=L-80<30>-F-S-X (Y)≤600-S-40<15> Dimensions in < > are for Precision Right and Left-Hand Thread.	8	1.5
	10	80~1000		6 7		10	2
	12			6 7 8 9		12	
(Left-Hand Thread) MTSLW MTSBLW RMTSLW D≤32,L≤1000 MTSTLW (Stainless Steel)	14			8 9 10		14	3
	16	100~1200		9 10 12		16	
(Right and Left-Hand Thread) MTSWW MTSBWW RMTSWW D≤32,L≤1000	18	150~1200		9 10 12		18	4
	20			10 12 14 15		20	
	22			10 12 14 15		22	5
	25			12 14 15 16 17		25	
	28			14 15 16 17 20		28	
(Precision Right and Left-Hand Thread) MTSYW MTSBYW	32	200~1200		14 15 16 17 20 25		32	6
	36			17 20 25		36	
	40			20 25 30		40	
(D8 is applicable to MTSRW, MTSBRW and RMTSRW only)	50			25 30 35 40		50	8

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 Type	D	1mm Increment L	F, S	V / Q Selection	1mm Increment C	1mm Increment J	D	Pitch P
MTSRV MTSBRV RMTSRV D≤32,L≤1000	12	80~1000	2≤F≤Vx72≤S≤Qx7 When Q, V≤9, F, S are 5x or less of Q, V.	7 8 9	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	2
	14			8 9 10			14	3
	16	100~1200		9 10 12			16	
	18	150~1200		9 10 12			18	4
	20			10 12 14 15			20	
	22			10 12 14 15			22	5
	25			12 14 15 16 17			25	
	28			14 15 16 17 20			28	
	32	200~1200		14 15 16 17 20 25			32	6
	36			17 20 25			36	
	40			20 25 30			40	
	50			25 30 35 40			50	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 Type	D	1mm Increment L	F, S	V / Q Selection	D	Pitch P
MTXRW	16	100~1000	2≤F≤Vx7 2≤S≤Qx7 When Q, V≤9, F,S are 5x or less of Q, V.	9 10 12	16	2
MTXBRW	20	150~1000		10 12 14 15	20	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 Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000	L1001~1200
MTSRW Price in the Table	8				-	-	-
	10						-
	12						-
	14						-
MTSBRW Price in the Table x1.1	16						
	18						
	20						
MTSLW Price in the Table x1.02	22						
	25						
	28						
MTSBLW Price in the Table x1.12	32						
	36						
	40						
	50						

■Right and Left-Hand Thread

Part Number Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000	L1001~1200
MTSWW Price in the Table MTSBWW Price in the Table x1.12	10						-
	12						-
	14						-
	16						
	18						
	20						
	22						
	25						
	28						
	32						
	36						
	40						
	50						

■Precision Right and Left-Hand Thread

Part Number Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000	L1001~1200
MTSYW Price in the Table MTSBYW Price in the Table x1.1	14						-
	16						
	20						
	25						
	28						
	32						

■Fine Pitch Right-Hand Thread

Part Number Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000
MTXRW	16					
	20					
MTXBRW	16					
	20					

■Right-Hand Thread with Keyway

Part Number Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000	L1001~1200
MTSRV Price in the Table MTSBRV Price in the Table x1.1	12						-
	14						-
	16						
	18						
	20						
	22						
	25						
	28						
	32						
	36						
	40						
	50						

■Right-Hand Thread / Left-Hand Thread, Stainless Steel

Part Number Type	D	Unit Price Min. L ~ 200	L200~400	L401~600	L601~800	L801~1000	L1001~1200
MTSTRW MTSTLW	10						-
	12						-
	14						-
	16						
	18						
	20						
MTSTRW	25						
	28						
	32						

■Low Temperature Black Chrome Plated Products

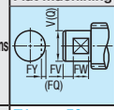
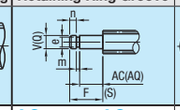
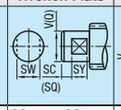
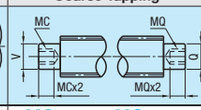
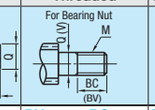
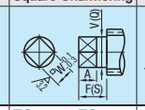
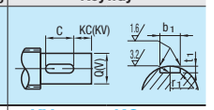
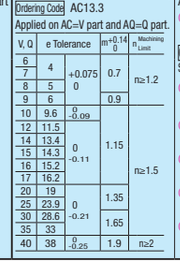
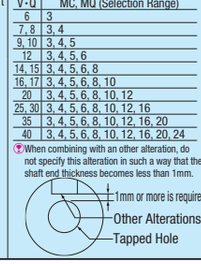
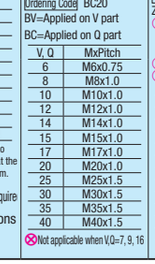
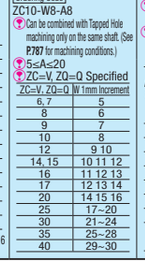
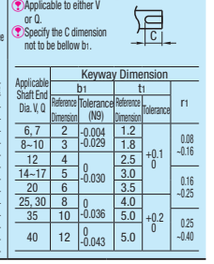
Part Number Type	D	Unit Price Min. L ~ 200	L201~400	L401~600	L601~800	L801~1000
RMTSRW (Price of MTSRW + Price in the Table)	8				-	-
	10					
	12					
RMTSRV (Price of MTSRV + Price in the Table)	14					
	16					
	18					
RMTSLW (Price of MTSLW + Price in the Table)	20					
	22					
RMTSWW (Price of MTSWW + Price in the Table)	25					
	28					
	32					

For low temperature black chrome plated products, add the price of low temperature black chrome plating shown above to the non-plated product prices.

Alterations

Part Number	L	F	V	S	Q	(AC, SC, MC··· etc)
MTSRW16	282	F16	V10	S14	Q10	AC13.3

Only AC, SC, MC, MQ and ZC are applicable to Right-Hand Thread with Keyway.

Alterations	Flat Machining	Retaining Ring Groove	Wrench Flats	Coarse Tapping	Threaded	Square Chamfering	Keyway
							
Code	FV (V part) FQ (Q part)	AC (V part) AQ (Q part)	SC (V part) SQ (Q part)	MC (V part) MQ (Q part)	BV (V part) BC (Q part)	ZC (V part) ZQ (Q part)	KV (V part) KC (Q part)
Spec.	FV,FQ,FW,FY= 0.5mm Increment FV=Applied on V part FQ=Applied on Q part Applicable to either V or Q. Ordering Code FV5-FW10-FY1 FV(FQ)=0, or FV(FQ)≥2 When V (Q)≤25, FY≤1.0 When V (Q)≥26, FY≤2.0 3≤FW≤20	AC, AQ=0.1mm Increment AC,AQ≤F(S)-**m-n** For the m,n value, see the table bellow. (For the m value, consider the tolerance.) Ordering Code AC13.3 Applied on AC=V part and AQ=Q part. 	SC,SQ,SW,SY= 1mm Increment Applied on SC=V part Applied on SQ=Q part Applicable to either V or Q. Ordering Code SC5-SW10-SY8 SC(SQ)=0, or SC(SQ)≥2 When Q(V)<15, then SW≥Q(V)-2 When 15≤Q(V)≤25, SW≥Q(V)-3 When 30≤Q(V), SW≥Q(V)-5 3≤SY≤20	MC=Applied on V part MQ=Applied on Q part Ordering Code MC24  When combining with an other alteration, do not specify this alteration in such a way that the shaft end thickness becomes less than 1mm.	BV,BC≤Mx3 BV,BC≥Pitchx3 BV,BC≤F,S-Pitchx3 Ordering Code BC20 BV=Applied on V part BC=Applied on Q part  Not applicable when V,Q=7, 9, 16	W,A=1mm Increment ZC=Applied on V part ZQ=Applied on Q part Applicable to either V or Q. Ordering Code ZC10-W8-A8 Can be combined with Tapped Hole machining only on the same shaft. (See P.787 for machining conditions.) 5≤A≤20 ZC=V, ZQ=Q Specified 	KC,KV,C=1mm Increment Ordering Code KC8-C10 KV=Applied on V part KC=Applied on Q part Applicable to either V or Q. Specify the C dimension not to be bellow b1. C≤60 S(F)-C-KC(KV)≥2 KC(KV)≥2 When KC,KV=0 

Applicable Shaft End Dia. V, Q	Keyway Dimension b1 Reference Dimension	b1 Tolerance (N9)	t1 Reference Dimension	t1 Tolerance	r1
6, 7	2	-0.004 -0.029	1.2	+0.1 0	0.08 ~0.16
8~10	3		1.8		
12	4	0 -0.030	2.5		0.16 ~0.25
14~17	5		3.0		
20	6		3.5		
25, 30	8	0 -0.036	4.0	+0.2 0	0.25 ~0.40
35	10		5.0		
40	12	0 -0.043	5.0		

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)