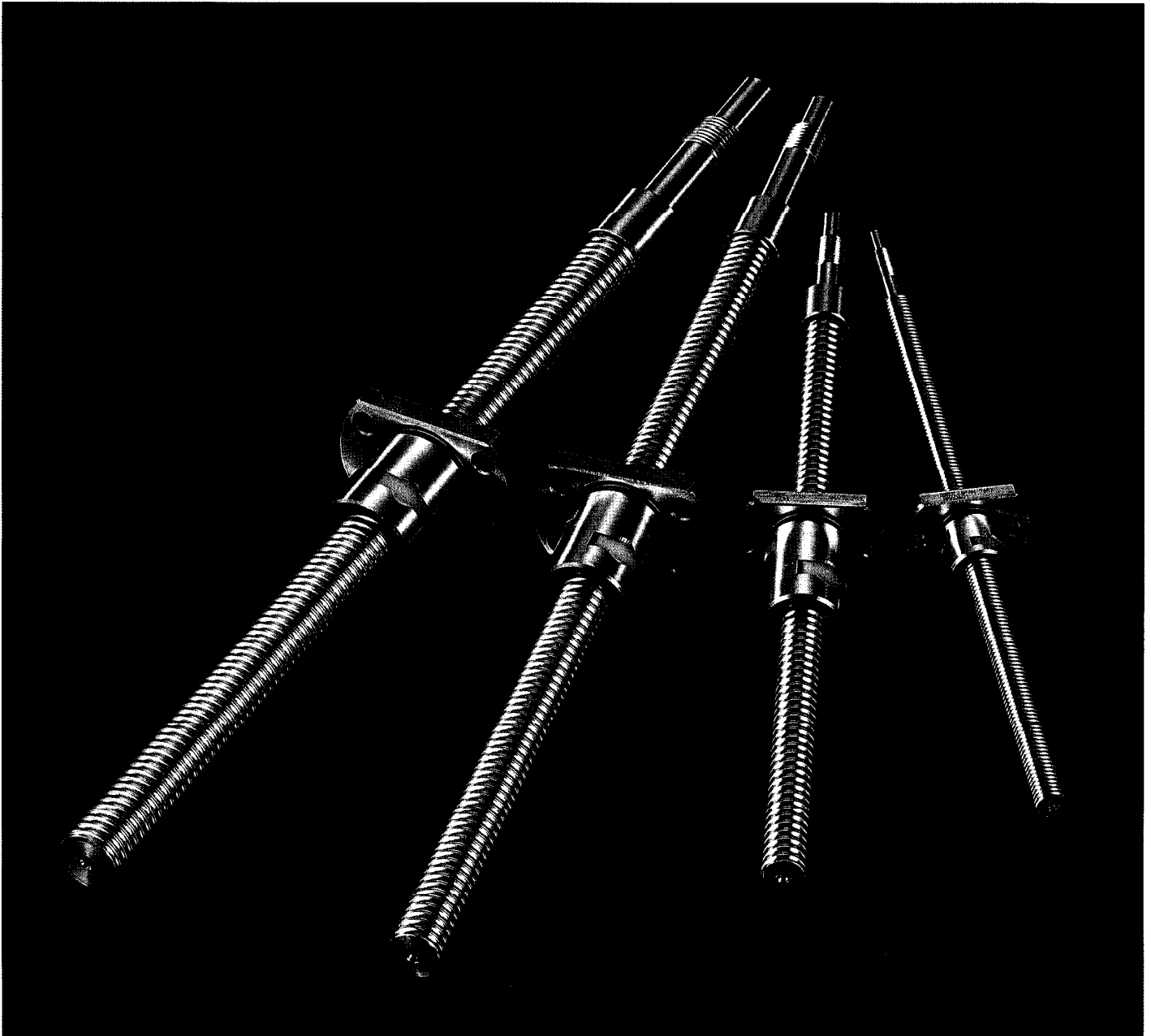


# Miniature Precision Rolling Ball Screw

RMA, RMS Series

Low priced C7 class precision ball screws  
Processed shaft ends and support kits are maintained  
as standard inventory



# Miniature Precision Rolling Ball Screw (RMA, RMS Series)

## 1. Features

### 1. Low price

The C7 class miniature ball screw is low-priced and has a shaft with a precision rolling finish.

### 2. Standard inventory

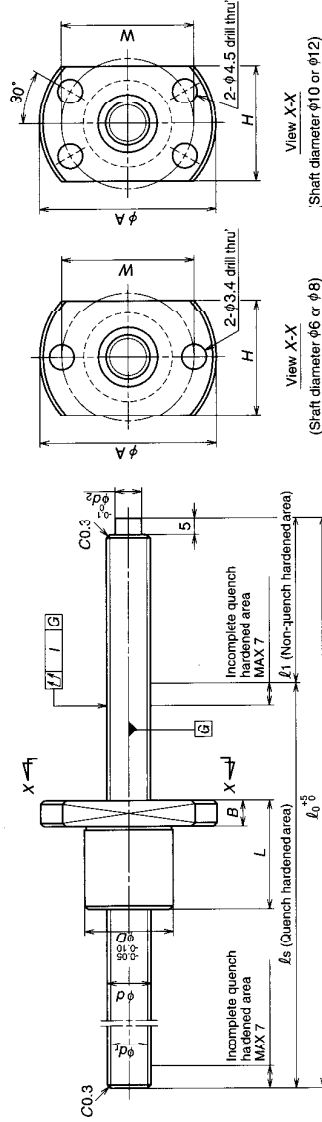
Both the RMA and RMS series are maintained in well-stocked inventories, enabling prompt delivery.

### 3. Compactness

The compact nut is achieved by an internal circulation.

### 4. Processed and unprocessed shaft ends

We are currently preparing the RMA series with a processed shaft end, and the RMS series with an unprocessed shaft end. The RMA series can be used easily with the special support kit and support unit (conventional product).



RMS series

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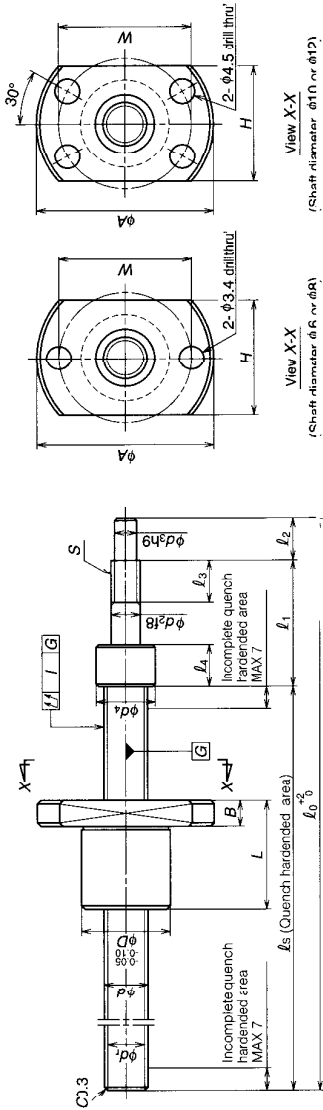
Unit: mm

Reference number	Ball screw specification				Load rating				Nut dimension				Shaft dimension				
	Shaft diameter d	Lead l	Root diameter dr	Effective turns Turns x Circut	Dynamic rating Ca	Load rating (kgf)	Static rating C0a	L	A	B	H	W	Total shaft length L0	Quench hardened length Ls	Non-quench hardened length L1	Shaft runout I	d2
RMS0601C7S-300	6	1	5.3	1 X 3	520	(55)	925	(95)	15	24	3.5	18	300	250	50	0.09	4
RMS0601C7S-300			7.3	1 X 3	600	(60)	1290	(130)	16	27	4	18	21				
RMS0601.5C7S-300	8	1.5	7.2	1 X 3	810	(85)	1590	(160)	22	28	4	19	300	250	50	0.09	6
RMS0602C7S-300		2	7.0	1 X 3	990	(100)	1770	(180)	26	29	4	20	350	290	60	0.10	8
RMS1002C7S-350	10	2	9.0	1 X 3	1210	(125)	2510	(255)	28	35	5	22	350	290	60	0.10	10
RMS1202C7S-350	12	2	11.0	1 X 3	1350	(135)	3190	(325)	28	37	5	24	350	290	60	0.10	10

Axial play is less than 0.020 mm.

RMA series

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Reference number	Ball screw specification			Load rating (kgf)		Nut dimension			Shaft dimension			Collar size	Shaft runout	Matching support unit											
	Shaft diameter	Lead	Root diameter	Dynamic rating	Static rating	Turns x Circuit	Effective Turns	Turns x Circuit	Dynamic rating	Static rating	Effective Turns				Turns x Circuit	Effective Turns	Turns x Circuit								
	$d$	$l$	$d_r$	$C_c$	$C_{0a}$	$T$	$E$	$D$	$L$	$A$	$B$	$H$	$N$	$L_0$	$L_s$	$d_2$	$d_1$	$d_3$	$d_4$	$S$	$k_3$	$k_4$	$I$		
RMA0601C7S-60	6	1	5.3	520	925	1 X 3	1 X 3	12	15	24	3.5	16	18	160	139	4	15	3	6	M4 X 0.5	7.5	---	---	0.06	
RMA0601C7S-260				(55)	(95)									260	239									0.09	WBK04R-11
RMA0801C7S-80	8	1	7.3	600	1290	1 X 3	1 X 3	14	16	27	4	18	21	180	146									0.06	
RMA0801C7S-280				(60)	(130)									280	246									0.09	
RMA0801.5C7S-180	8	1.5	7.2	810	1590	1 X 3	1 X 3	15	22	28	4	19	22	180	146	6	26	4.5	8	M6 X 0.75	7.5	10	9	0.06	
RMA0801.5C7S-280				(85)	(160)									280	246									0.09	WBK06R-11
RMA0802C7S-80	8	2	7.0	990	1770	1 X 3	1 X 3	16	26	29	4	20	23	180	146									0.06	
RMA1002C7S-250				(100)	(180)									280	246									0.09	
RMA1002C7S-350	10	2	9.0	1210	2510	1 X 3	1 X 3	18	28	35	5	22	27	250	201	8	39	6	10	M8 X 1.0	9	11.5	12	0.07	WBK08-01
RMA1202C7S-250				(125)	(255)									350	301									0.10	WBK08-11
RMA1202C7S-350	12	2	11.0	1350	3190	1 X 3	1 X 3	20	28	37	5	24	29	250	190	10	45	8	15	M10 X .0	10	14	15	0.07	WBK10-01
				(135)	(325)									350	290									0.10	WBK10-11

Unit: mm

## 2. Accuracy and axial play

Accuracy is JIS C7 class (JIS B 1191). And a typical cumulative lead error (E) is obtained as follows:

Typical cumulative lead error E (mm)

$$E = 2 \times \ell_s / 300 \times 0.05 \quad \ell_s > 150$$

$$E = 0.05 \quad \ell_s < 150$$

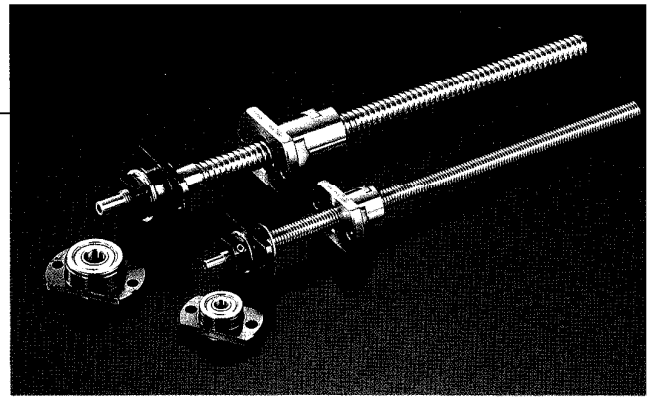
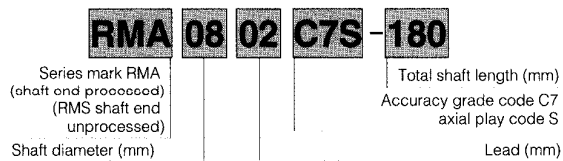
Axial play: 0.020 mm or less (code S)

## 3. Additional processing of the shaft

One end of the shaft of the RMS series is not quench hardened to facilitate after-processing. (50 mm for RMS06 and 08, 60 mm for RMS10, 12)

In case of processing the shaft end, please create the center-hole using the outside diameter of the shaft. The nut should be fixed to the shaft and covered during processing to prevent water or chips entering during cutting work. (Please do not remove the nut from the shaft. If the nut is removed by accident, please contact NSK.)

## 4. Reference number



## 5. Lubrication

Rust-preventive oil is applied to the RMA and RMS series at the time of shipment. Please apply lubricant (eg. NSK grease No.2) after washing.

## 6. Usage requirements

For the RMA and RMS series, special attention should be paid to the compressed load (buckling load) and critical speed, because the total screw length is long relative to the shaft diameter. For other usage requirements and details, please refer to Precision Machine Components/NSK Linear Guides and Ball Screws (CAT. No. 3151).

## 7. Support kit

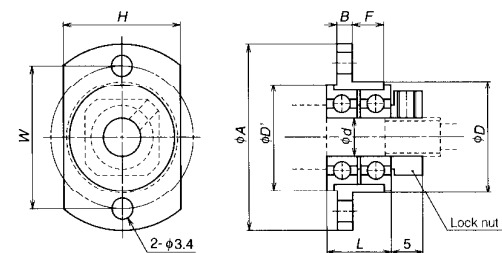
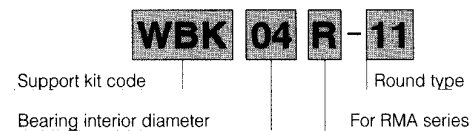
WBK04R-11 (for RMA06 series)

WBK06R-11 (for RMA08 series)

We are preparing a support kit with 4 mm and 6 mm bearing interior diameters. With this support kit, you can design a compact device in combination with the RMA series (RMA06 and RMA08 series).

## Special support kit (standard inventory)

Support kit number



Support kit number	φd	φD	φD'	L	F	A	B	H	W	Thrust load limit (kgf)	Lock nut tightening torque (kgf)	Series for application
WBK04R-11	4	13	12.5	9	4	25	2.5	14	19	50 kgf	10 kgf	RMA06
WBK06R-11	6	18	17	11	5.1	30	3	19	24	95 kgf	12 kgf	RMA08

Note:

- After fitting the support kit to the shaft end of the ball screw, you are required to adjust the flange deviation. When the deviation is large, please adjust the phase of the bearing and lock nut to obtain minimal deviation.
- Please apply the conventional support unit to RMA10, RMA12 series.



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**For more details, please contact any of the following NSK offices**

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