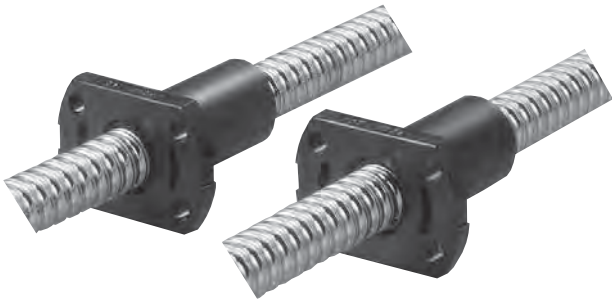


# Slide screws with resin nuts

Shaft diameter  $\phi 10, \phi 12$  Accuracy grade, C7, C10



Low price and compact design compared to ball screws

## Accuracy

(Unit: mm)

Model No.	Mean travel deviation	Shaft center runout	Initial axial play
PY1004GP(SP)*-0400A	C10 $\pm 0.21/300$	0.15	0.1 or less
PY1004GP(SP)*-0600A		0.25	
PY1010GP(SP)*-0400A		0.15	
PY1010GP(SP)*-0600A		0.25	
PY1204GP(SP)*-0400A		0.15	
PY1204GP(SP)*-0800A		0.32	
PY1210GP(SP)*-0400A		0.15	
PY1210GP(SP)*-0800A		0.32	
PW1004GP(SP)*-0400A	C7 $\pm 0.05/300$	0.10	0.05 or less
PW1004GP(SP)*-0600A		0.15	
PW1010GP(SP)*-0400A		0.10	
PW1010GP(SP)*-0600A		0.15	
PW1204GP(SP)*-0400A		0.10	
PW1204GP(SP)*-0800A		0.20	
PW1210GP(SP)*-0400A		0.10	
PW1210GP(SP)*-0800A		0.20	

## Ordering Instruction

• Standard product (without screw shaft machining)

PY 10 04 SPR - 0600A  
 (1) (2) (3) (4) (5) (6) (7)

• (With t screw shaft machining)

PY 10 04 SPR - 0600X0546 - CA Y  
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) Series: PY (C10) or PW (C7)

(2) Shaft diameter (mm): 10 or 12

(3) Lead (mm): 04 or 10

(4) Shaft material: G (S45C) or S (SUS304)

(5) Nut material: P (PPS)

(6) Torsion direction: R (right) or L (left) (R or L indicated at the mark \* in the left table.)

(7) Overall shaft length (mm)

(8) Thread length (mm)

(9) Accuracy grade: CA (PY) or C7 (PW)

## Shaft (Rolled)

- Two materials can be selected by material.  
 GP: S45C (No quench hardening)  
 SP: SUS304 (No quench hardening)
- Surface roughness in the sliding direction of thread groove: Ra0.05 $\mu$ m

## Nut (Injection mold)

- Stable dimension  
 High rigidity engineering plastic (PPS) for sliding is used.

## Major physical properties of nut material PPS

Item	Unit	PPS	PET GF 30 %	Aluminum die casting	Test method
Specific gravity	-	2.55	1.60	2.70	ASTM-D792
Tensile strength	MPa	165	118	343	ASTM-D638
Bending strength	MPa	225	181	-	ASTM-D790
Coefficient of linear expansion	X 10 <sup>-5</sup> /K	1.7~1.8	2.5	2.1	ASTM-D696

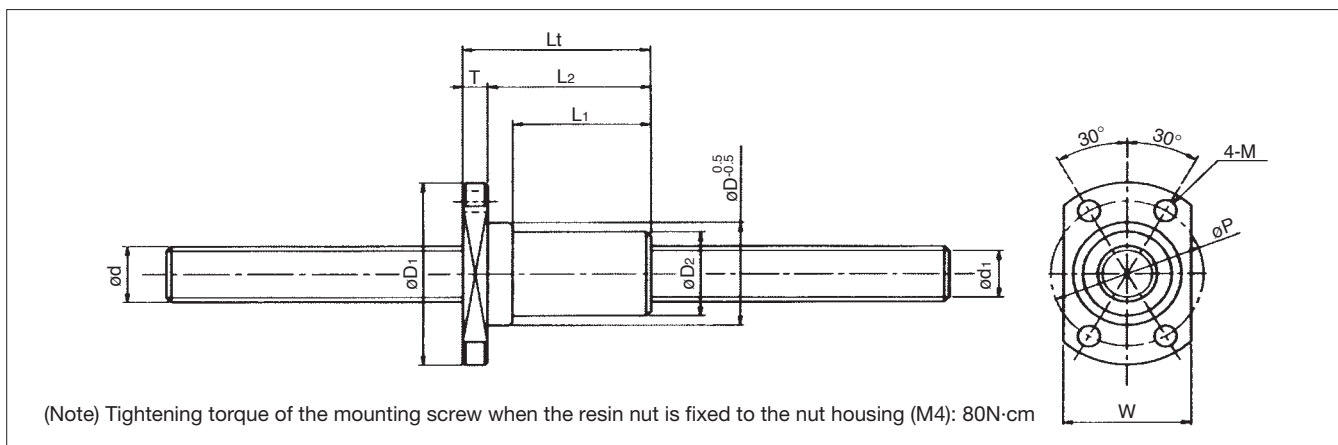
## Lubrication

- Recommended grease:  
 “Alvania Grease S2” by Showa Shell Sekiyu
- Anti-rust oil applied to the shaft and the resin nut has a lubricating property and it can be also used as lubricant.
- The initial inspection shall be conducted in 2 to 3 months after operation start.  
 If grease is very dirty, remove the old grease and apply new grease.
- After the initial inspection, re-grease once a year.

## Permissible axial load and revolution speed

Shaft diameter (mm)	Lead (mm)	Permissible axial load (practical index) (N)	Permissible revolution speed (min <sup>-1</sup> )
$\phi 10$	4	70	3000
	10		
$\phi 12$	4	100	3000
	10		

## ■ Shape and dimension



(Unit: mm)

Model No.	Nominal			Screw shaft		Nut							Accuracy grade	Axial clearance																	
	Shaft diameter $d$	Lead $L$	Torsion	Overall length	Root diameter $d_1$	Nut barrel			Flange																						
						Outside diameter $D$	$D_2$	Overall length $L_t$	Nut barrel length $L_2$	$L_1$	Diameter $D_1$	Thickness $T$			Mounting hole		Width $W$														
PY1004GP(SP)R-0400A	10	4	Right	400	(7.8)	19	16	32	27	22	36	5	28	4.5 drilled	22	C10	0.10 or less														
PY1004GP(SP)R-0600A			600																												
PY1004GP(SP)L-0400A			Left	400																											
PY1004GP(SP)L-0600A			600																												
PY1010GP(SP)R-0400A		10	Right	400																											
PY1010GP(SP)R-0600A				600																											
PY1204GP(SP)R-0400A		12	4	Right														400	(10.0)	22	18	38	33	28	39	5	31	4.5 drilled	26	C10	0.10 or less
PY1204GP(SP)R-0800A				800																											
PY1210GP(SP)R-0400A	10		Right	400	(9.6)																										
PY1210GP(SP)R-0800A				800																											
PW1004GP(SP)R-0400A	10	4	Right	400	(7.8)	19	16	32	27	22	36	5	28	4.5 drilled	22	C7	0.05 or less														
PW1004GP(SP)R-0600A			600																												
PW1004GP(SP)L-0400A			Left	400																											
PW1004GP(SP)L-0600A			600																												
PW1010GP(SP)R-0400A		10	Right	400																											
PW1010GP(SP)R-0600A				600																											
PW1204GP(SP)R-0400A		12	4	Right														400	(10.0)	22	18	38	33	28	39	5	31	4.5 drilled	26	C7	0.05 or less
PW1204GP(SP)R-0800A				800																											
PW1210GP(SP)R-0400A	10		Right	400	(9.6)																										
PW1210GP(SP)R-0800A				800																											

## ■ Axial load and drive torque

Index of torque required for motor

