

A-5-2.1 PU Series (Miniature type)

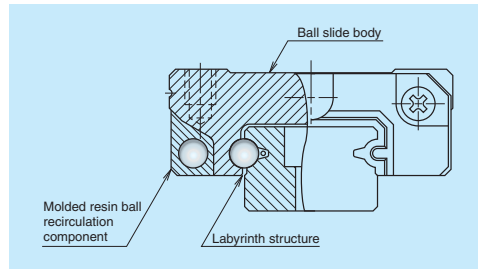
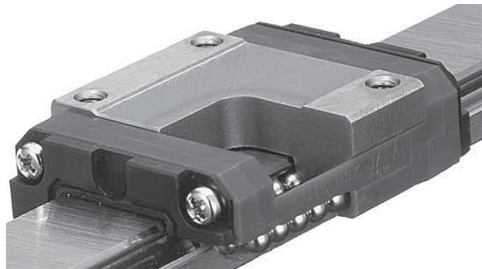


Fig. 1

1. Features

(1) Motion performance

Newly designed recirculation component facilitates smooth circulation of steel balls.

(2) Lightweight

The ball slide is fabricated to be approximately 20% lighter than LU Series by the application of resin to a part of its body.

(3) Reduced noise intensity

Resin components applied in ball circulating circuits reduce collision noise between steel balls and the inner wall of circulating circuits.

(4) Low dust generation

The structure is designed to prevent dust generation.

(5) Excellent dust-proofing

It is designed to minimize the clearance between the side of rails and the inner walls of the slide, and prevent foreign matters from entering the ball slide.

(6) High corrosion resistance

High corrosion-resistant martensite stainless steel is incorporated as a standard feature to provides excellent corrosion resistance.

(7) Easy to handle

Safety design includes a retainer that prevents steel balls from dropping out of the ball slide even when the slide is removed from the rail.

(8) Long-term maintenance-free

Superb features of NSK K1 Lubrication unit realize a long-term, maintenance-free operation.

(9) Fast delivery

Lineup of random-matching rails and ball slides facilitates fast delivery. (PU09 to PU15)

2. Ball slide shape

Ball slide Model	Shape/installation method	Type (Upper row, Rating: Lower row, Ball slide length)	
		Standard type	High-load type
AR TR AL UR BL BR		Standard TR, AR, AL	Long UR, BL, BR

3. Accuracy and preload

(1) Running parallelism of ball slide

Table 1

Unit: μm

Rail length (mm)	Preloaded assembly type (not random matching)				Random-matching type
	Super precision P4	High precision P5	Precision grade P6	Normal grade PN	Normal grade PC
over 50	2	2	4.5	6	6
50 – 80	2	3	5	6	6
80 – 125	2	3.5	5.5	6.5	6.5
125 – 200	2	4	6	7	7
200 – 250	2.5	5	7	8	8
250 – 315	2.5	5	8	9	9
315 – 400	3	6	9	11	11
400 – 500	3	6	10	12	12
500 – 630	3.5	7	12	14	14
630 – 800	4.5	8	14	16	16
800 – 1 000	5	9	16	18	18
1 000 – 1 250	6	10	17	20	20

(2) Accuracy standard

The preloaded assembly has four accuracy grades; Super precision P4, High precision P5, Precision grade P6, and normal grade PN, while the random-matching type has Normal grade PC only.

Table 2 shows the accuracy standard for the preloaded assembly type while **Table 3** shows the accuracy standard for the random-matching types.

• **Tolerance of preloaded assembly**

Characteristics	Accuracy grade	Super precision P4	High precision P5	Precision grade P6	Normal grade PN
Mounting height H Variation of H (All ball slides on a set of rails)		± 10 5	± 15 7	± 20 15	± 40 25
Mounting width W_2 or W_3 Variation of W_2 or W_3 (All ball slides on reference rail)		± 15 7	± 20 10	± 30 20	± 50 30
Running parallelism of surface C to surface A Running parallelism of surface D to surface B		Shown in Table 1 and Fig. 2			

• **Tolerance of random-matching type: Normal grade PC**

Characteristics	Model No.	PU09, 12 and 15
Mounting height H		± 20
Variation of mounting height H		15 ^① 30 ^②
Mounting width W_2 or W_3		± 20
Variation of mounting width W_2 or W_3		20
Running parallelism of surface C to surface A Running parallelism of surface D to surface B		Shown in Table 1 and Fig. 2

Notes: ① Variation on the same rail ② Variation on multiple rails

(3) Assembled accuracy

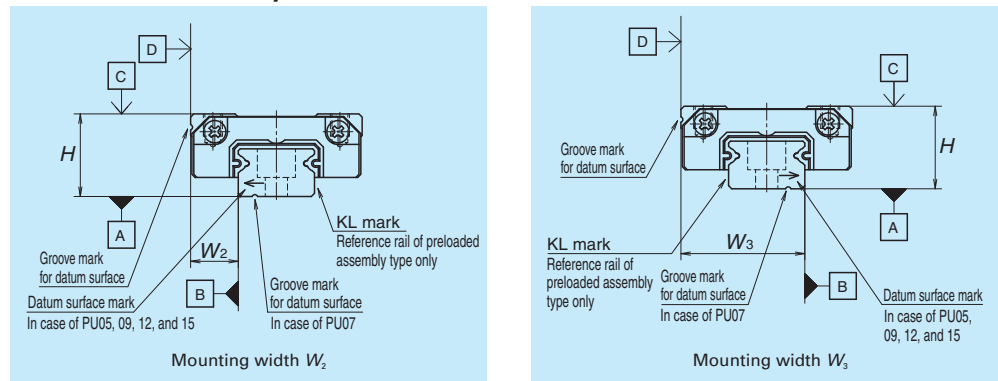


Fig. 2

Note: Please refer to page A67 for marks on the datum surfaces.

(4) Preload and rigidity

We offer three levels of preload: Slight preload Z1 and Fine clearance Z0 for preloaded assembly type, along with Fine clearance ZT for random-matching type. Values for preload and rigidity of the preloaded assembly type are shown in **Table 4**. Rigidities are for the median of the preload range.

• **Preload and rigidity of preloaded assembly**

Model No.	Preload (N)	Rigidity (N/ μm)	
	Slight preload (Z1)	Slight preload (Z1)	
Standard type	PU05TR	0 – 3	17
	PU07AR	0 – 8	22
	PU09TR	0 – 10	30
	PU12TR	0 – 17	33
High-load type	PU15AL	0 – 33	45
	PU09UR	0 – 14	46
	PU12UR	0 – 25	52
PU15BL	0 – 51	75	

Note: Clearance of Fine clearance Z0 is 0 to 3 μm . Therefore, preload is zero.

• **Clearance of random-matching type**

Model No.	Fine clearance ZT	
Standard type	PU09TR	3 or less
	PU12TR	
	PU15AL	
High-load type	PU09UR	5 or less
	PU12UR	
	PU15BL	

4. Maximum rail length

Table 6 shows the limitations of rail length (maximum length). However, the limitations vary by accuracy grade.

Series	Material	Size				
		05	07	09	12	15
PU	Stainless steel	210	375	600	800	1 000

Note: Rails can be butted if user requirement exceeds the rail length shown in the table. Please consult NSK.

5. Installation

(1) Permissible values of mounting error

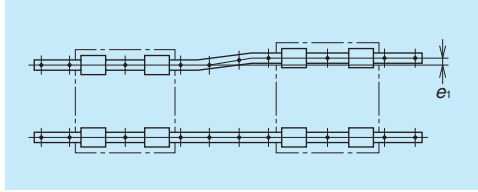


Fig. 3

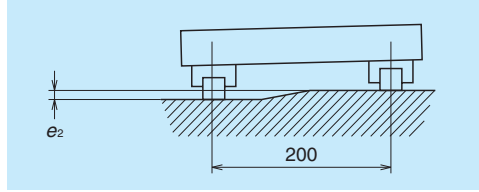


Fig. 4

Table 7

Unit: μm

Value	Preload	Model No.				
		PU05	PU07	PU09	PU12	PU15
Permissible values of parallelism in two rails e_1	Z0, ZT	10	12	15	20	25
	Z1	7	10	13	15	21
Permissible values of parallelism (height) in two rails e_2	Z0, ZT	150 $\mu\text{m}/200\text{ mm}$				
	Z1	90 $\mu\text{m}/200\text{ mm}$				

(2) Shoulder height of the mounting surface and corner radius r

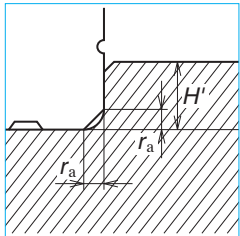


Fig. 5 Shoulder for the rail datum surface

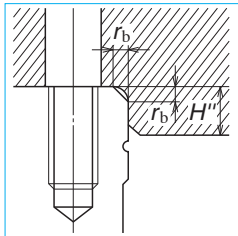


Fig. 6 Shoulder for the ball slide datum surface

Table 8

Unit: mm

Model No.	Corner radius (maximum)		Shoulder height	
	r_a	r_b	H'	H''^*
PU05	0.2	0.2	0.7	2.3
PU07	0.2	0.3	1.2	2.5
PU09	0.3	0.3	1.9	2.6
PU12	0.3	0.3	2.5	3.4
PU15	0.3	0.5	3.5	4.4

*) H'' is the minimum recommended value based on the dimension T in dimension table.

6. Lubrication accessory

Model of PU15 can select drive-in type grease fitting as an option.

For the models of PU05 to PU12, apply grease directly to the ball grooves of rail using a point nozzle.



Drive-in type

7. Dust-proof components

(1) Standard specification

An end seal provided to both ends of a ball slide as a standard feature.

Seal friction per standard ball slide is shown in Table 9.

Table 9 Seal friction per ball slide (maximum value)

Unit: N

Series	Size	05	07	09	12	15
PU		0.3	0.3	0.5	0.5	0.5

(2) NSK K1™ lubrication unit

Table 10 shows the dimension of linear guides equipped with the NSK K1 lubrication unit.

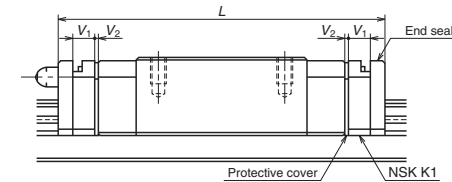


Table 10

Unit: mm

Model No.	Ball slide length	Ball slide model	Standard ball slide length	Ball slide length equipped with two NSK K1 L	Thickness of NSK K1, V_1	Thickness of protective cover, V_2
PU05	Standard	TR	19.4	24.4	2	0.5
PU07	Standard	AR	23.4	29.4	2.5	0.5
PU09	Standard	TR	30	36.4	2.7	0.5
	Long	UR	41	47.4		
PU12	Standard	TR	35	42	3	0.5
	Long	UR	48.7	55.7		
PU15	Standard	AL	43	51.2	3.5	0.6
	Long	BL	61	69.2		

Note: Ball slide length equipped with NSK K1 =

$$(\text{Standard ball slide length}) + (\text{Thickness of NSK K1, } V_1 \times \text{Number of NSK K1}) + (\text{Thickness of the protective cover } V_2 \times 2)$$

PU Series

8. Reference number

Reference numbers shall be set to individual NSK linear guide when its specifications are finalized, and it is indicated on its specification drawing. Please specify the reference number, except design serial number, to identify the product when ordering, requiring estimates, or inquiring about specifications from NSK.

(1) Reference number for preloaded assembly

PU 15 0470 AL K 2 - P5 1**

Series name	Preload code (See page A254.)
Size	0: Z0, 1: Z1
Rail length (mm)	Accuracy code (See Table 12.)
Ball slide shape code (See page A252.)	Design serial number
Material/surface treatment code (See Table 11.) K: Stainless steel	Added to the reference number. Number of ball slides per rail

(2) Reference number for random-matching type

PAU 15 ALS -K

Random-matching ball slide series code PAU: PU Series random-matching ball slide	Option code -K: Equipped with NSK K1
Size	Material code S: Stainless steel
Ball slide shape code (See page A252.)	

Rail P1U15 0470 RKN - PC T**

Random-matching rail series code P1U: PU Series random-matching rail	Preload code (See page A254.) T: Fine clearance
Size	Accuracy code: PC PC: Normal grade is only available.
Rail length (mm)	Design serial number
Rail shape code S: PU09, 12. R: PU15	Added to the reference number. *Butting rail specification N: Non-butting. L: Butting specification
Material/surface treatment code (See Table 11.)	

*Please consult with NSK for butting rail specification.

The reference number coding for the assembly of random-matching type is the same as that of preloaded assembly. However, only preload code of "fine clearance T" is available (refer to page A254).

Table 11 Material/surface treatment code

Code	Description
K	Stainless steel
H	Stainless steel with surface treatment
Z	Other, special

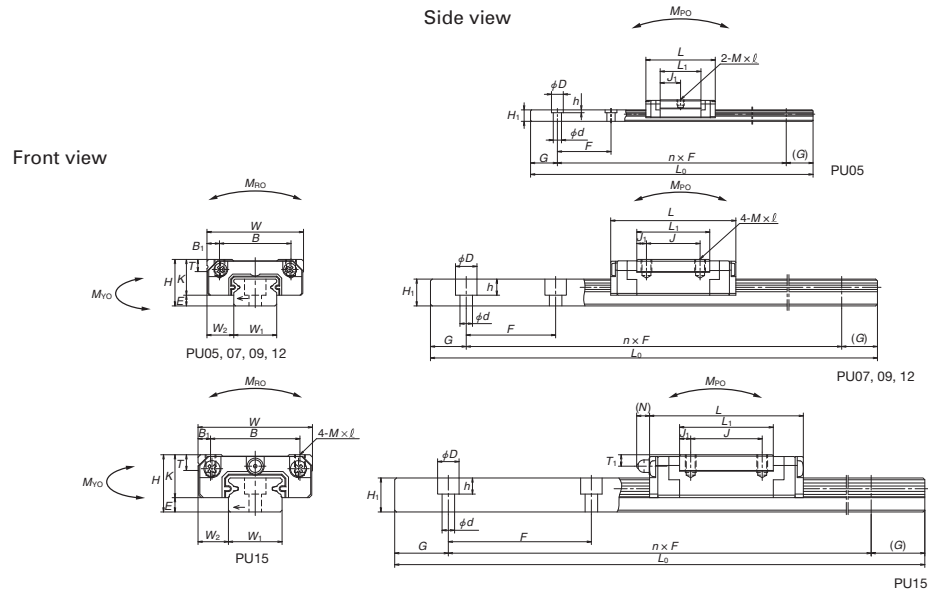
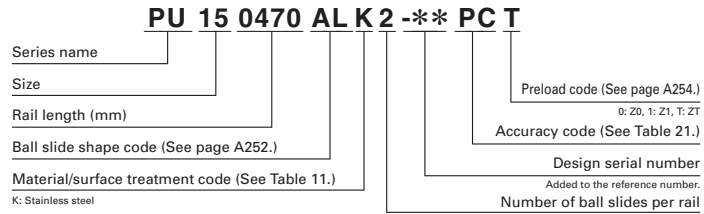
Table 12 Accuracy code

Accuracy	Standard (Without NSK K1)	With NSK K1	With NSK K1 for food and medical equipment
Super precision grade	P4	K4	F4
High precision grade	P5	K5	F5
Precision grade	P6	K6	F6
Normal grade	PN	KN	FN
Normal grade (random-matching type)	PC	KC	FC

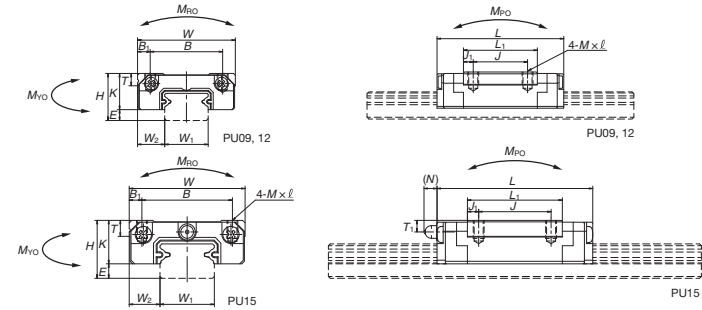
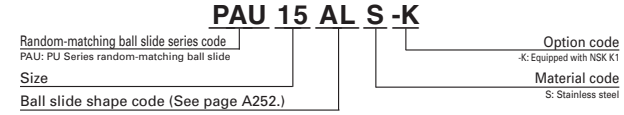
Note: Refer to pages A38 and A61 for the NSK K1 lubrication unit.

9. Dimensions

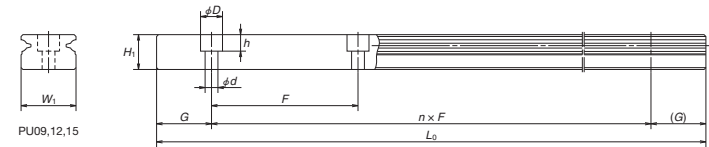
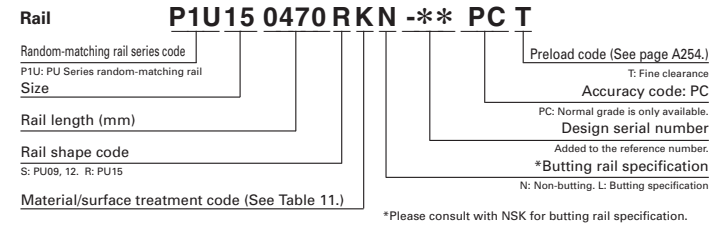
PU-TR, AR, AL (Standard type / Standard)
 PU-UR, BL (High-load type / Long)



Reference number for ball slide of random-matching type



Reference number for rail of random-matching type



Unit: mm

Model No.	Assembly				Ball slide											
	Height	E	W ₂	W	Length	Mounting hole							Oil hole			
						B	J	M×Pitch×ℓ	B ₁	L ₁	J ₁	K	T	Hole size	T ₁	N
PU05TR	6	1	3.5	12	19.4	8	—	M2×0.4×1.5	2	11.4	5.7	5	2.3	φ 0.9	1.5	—
PU07AR	8	1.5	5	17	23.4	12	8	M2×0.4×2.4	2.5	13.3	2.65	6.5	2.45	φ 1.5	1.8	—
PU09TR	10	2.2	5.5	20	30	15	10	M3×0.5×3	2.5	19.6	4.8	7.8	2.6	—	—	—
PU09UR					41		16			30.6	7.3					
PU12TR	13	3	7.5	27	35	20	15	M3×0.5×3.5	3.5	20.4	2.7	10	3.4	—	—	—
PU12UR					48.7		20			34.1	7.05					
PU15AL	16	4	8.5	32	43	25	20	M3×0.5×5	3.5	26.2	3.1	12	4.4	φ 3	3.2	(3.6)
PU15BL					61		25			44.2	9.6					

Notes: 1) The ball slide of PU05TR has only two mounting tap holes in the center.

Rail							Basic load rating						Weight	
Width	Height	Pitch	Mounting bolt hole	G	Maximum length	Dynamic	Static	Static moment (N·m)				Ball slide	Rail	
								C	C ₀	M _{Bo}	M _{Vo}			(g)
W ₁	H ₁	F	d×D×h	(Reference)	L _{0max}	(N)	(N)	One slide	Two slides	One slide	Two slides			
5	3.2	15	2.3×3.3×0.8	5	210	520	775	2.06	1.28	9.90	1.28	9.90	4	11
7	4.7	15	2.4×4.2×2.3	5	375	1 090	1 370	5.20	2.70	21.8	2.70	21.8	8	23
9	5.5	20	3.5×6×4.5	7.5	600	1 490	2 150	9.90	6.10	41.0	6.10	41.0	16	35
						2 100	3 500	16.2	15.6	88.0	15.6	88.0	25	25
12	7.5	25	3.5×6×4.5	10	800	2 830	3 500	21.1	11.4	73.5	11.4	73.5	32	65
						4 000	5 700	34.5	28.3	174	28.3	174	53	53
15	9.5	40	3.5×6×4.5	15	1 000	5 550	6 600	49.5	25.6	190	25.6	190	59	105
						8 100	11 300	84.5	69.5	435	69.5	435	100	100

- Basic dynamic load rating is a load that allows for a 50-km rating fatigue life and is a vertical and constant load on the ball slide mounting surface. To convert C to C₁₀₀ for a 100-km rating fatigue life, divide C by 1.26.
- To fix rail of PU05TR, use M2 x 0.4 cross-recessed pan head machine screw for precision instrument. (JCS 10-70 No. 0 pan head machine screw No.1.) (JCS: Japanese Camera Industrial Standard.)

A-5-2.3 PE Series (Miniature wide type)

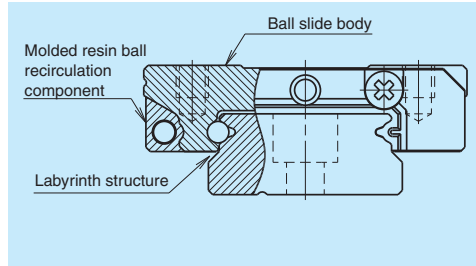


Fig. 1

1. Features

(1) Ideal for use of single rail

The PE Series linear guides are miniature and wide rail type. Thanks to the wide rail, load carrying capacity is high against moment load from rolling direction.

(2) Motion performance

Newly designed recirculation component facilitates smooth circulation of steel balls.

(3) Lightweight

The ball slide is fabricated to be approximately 20% lighter than that of the LE Series by the application of resin to a part of its body.

(4) Reduced noise intensity

Resin components applied in ball circulating circuits reduce collision noise between steel balls and the inner wall of circulating circuits.

(5) Low dust generation

The structure is designed to prevent dust generation.

(6) Excellent dust-proofing

It is designed to minimize the clearance between the side of rails and the inner walls of the slide, and prevent foreign matters from entering the ball slide.

(7) High corrosion resistance

High corrosion-resistant martensite stainless steel incorporated as a standard feature provides excellent resistance to corrosion.

(8) Easy to handle

Safety design includes a retainer that prevents steel balls from dropping out of the ball slide even when the slide is removed from the rail.

(9) Long-term maintenance-free

Equipped with NSK K1 Lubrication Unit realizes long-term, maintenance-free use.

(10) Fast delivery

Lineup of random-matching rails and ball slides in the series supports random matching and facilitates fast delivery. (PE09 to PE15)

2. Ball slide shape

Ball slide Model	Shape/installation method	Type (Upper row, Rating: Lower row, Ball slide length)	
		Standard type	High-load type
AR, TR UR, BR		AR, TR	UR, BR

3. Accuracy and preload

(1) Running parallelism of ball slide

Table 1

Unit: μm

Rail length (mm)	Preloaded assembly type (not random matching)				Random-matching type
	Super precision P4	High precision P5	Precision grade P6	Normal grade PN	Normal grade PC
over or less					
- 50	2	2	4.5	6	6
50 - 80	2	3	5	6	6
80 - 125	2	3.5	5.5	6.5	6.5
125 - 200	2	4	6	7	7
200 - 250	2.5	5	7	8	8
250 - 315	2.5	5	8	9	9
315 - 400	3	6	9	11	11
400 - 500	3	6	10	12	12
500 - 630	3.5	7	12	14	14
630 - 800	4.5	8	14	16	16
800 - 1 000	5	9	16	18	18
1 000 - 1 250	6	10	17	20	20

(2) Accuracy standard

The preloaded assembly type has four accuracy grades; Super precision P4, High precision P5, Precision P6, and Normal PN grades, while the random-matching type has Normal grade PC only.

Table 2 shows the accuracy standard for the preloaded assembly type while **Table 3** shows the accuracy standard for the random-matching types.

• **Tolerance of preloaded assembly**

Characteristics	Accuracy grade	Super precision P4	High precision P5	Precision grade P6	Normal grade PN
Mounting height H Variation of H (All ball slides on a set of rails)		± 10 5	± 15 7	± 20 15	± 40 25
Mounting width W_2 or W_3 Variation of W_2 or W_3 (All ball slides on reference rail)		± 15 7	± 20 10	± 30 20	± 50 30
Running parallelism of surface C to surface A Running parallelism of surface D to surface B		Shown in Table 1 and Fig. 2			

• **Tolerance of random-matching type: Normal grade PC**

Characteristics	Model No.	PE09, 12 and 15
Mounting height H		± 20
Variation of mounting height H		15 ^① 30 ^②
Mounting width W_2 or W_3		± 20
Variation of mounting width W_2 or W_3		20
Running parallelism of surface C to surface A Running parallelism of surface D to surface B		Shown in Table 1 and Fig. 2

Note: ① Variation on the same rail ② Variation on multiple rails

(3) Assembled accuracy

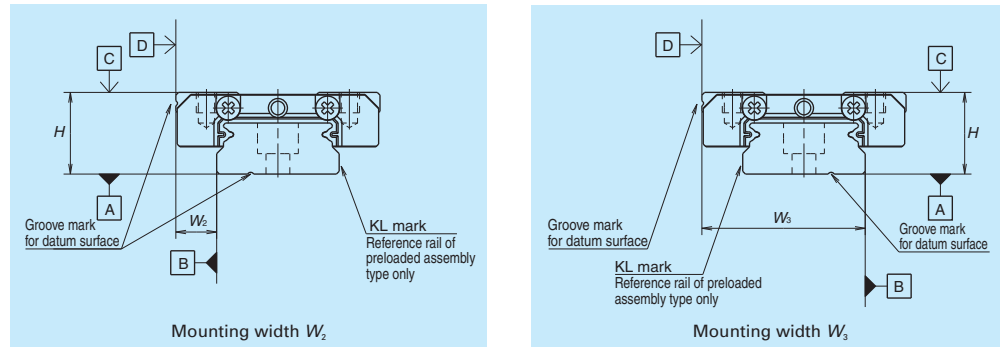


Fig. 2

(4) Preload and rigidity

We offer three levels of preload: Slight preload Z1 and Fine clearance Z0, along with random-matching type of Fine clearance ZT. Values for preload and rigidity of the preloaded assembly types are shown in **Table 4**. Rigidities are for the median of the preload range.

• **Preload and rigidity of preloaded assembly**

Model No.	Preload (N)	Rigidity (N/ μm)
	Slight preload (Z1)	Slight preload (Z1)
Standard type	PE05AR	0 – 28 / 45
	PE07TR	0 – 29 / 46
	PE09TR	0 – 37 / 61
	PE12AR	0 – 40 / 63
High-load type	PE15AR	0 – 49 / 66
	PE09UR	0 – 54 / 86
	PE12BR	0 – 59 / 97
PE15BR	0 – 75 / 114	

Note: Clearance of Fine clearance Z0 is 0 to 3 μm . Therefore, preload is zero.

• **Clearance of random-matching type**

Model No.	Fine clearance ZT	
Standard type	PE09TR	3 or less
	PE12AR	
	PE15AR	
High-load type	PE09UR	5 or less
	PE12BR	
	PE15BR	

4. Maximum rail length

Table 6 shows the limitations of rail length.

However, the limitations vary by accuracy grades.

Series	Material	Size				
		05	07	09	12	15
PE	Stainless steel	150	600	800	1 000	1 200

Note: Rails can be butted if user requirement exceeds the rail length shown in the table. Please consult NSK.

5. Installation

(1) Permissible values of mounting error

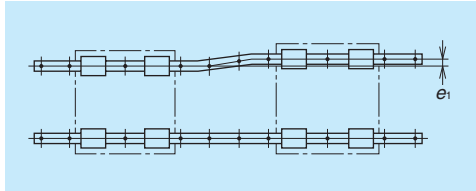


Fig. 3

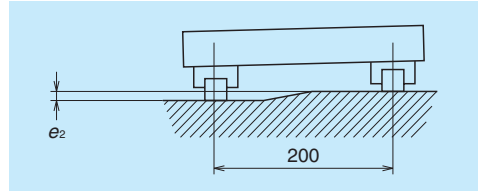


Fig. 4

Table 7

Unit: μm

Value	Preload	Model No.				
		PE05	PE07	PE09	PE12	PE15
Permissible values of parallelism in two rails e_1	Z0, ZT	10	12	15	18	22
	Z1	5	7	10	13	17
Permissible values of parallelism (height) in two rails e_2	Z0, ZT	50 $\mu\text{m}/200\text{ mm}$				
	Z1	35 $\mu\text{m}/200\text{ mm}$				

(2) Shoulder height of the mounting surface and corner radius r

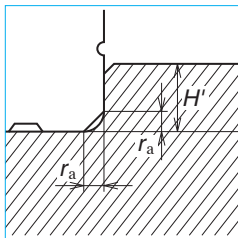


Fig. 5 Shoulder for the rail datum surface

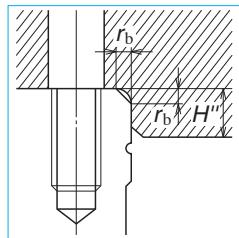


Fig. 6 Shoulder for the ball slide datum surface

Table 8

Unit: mm

Model No.	Corner radius (maximum)		Shoulder height	
	r_a	r_b	H'	H''^*
PE05	0.2	0.2	1.1	2.5
PE07	0.2	0.3	1.7	3
PE09	0.3	0.3	3.5	2.8
PE12	0.3	0.3	3.5	3.2
PE15	0.3	0.5	3.5	4.1

*) H'' is the minimum recommended value based on the dimension T in dimension table.

6. Lubrication accessory

Model of PE15 can select drive-in type grease fitting as an option.

For the model of PE05 to PE12, apply grease directly to the ball grooves of rail using a point nozzle.



Drive-in type

7. Dust-proof components

(1) Standard specification

End seal: Provided to both ends of the ball slide as a standard feature.

Seal friction per standard ball slide is shown in Table 9.

Table 9 Seal friction per ball slide (maximum value)

Unit: N

Series	Size	05	07	09	12	15
PE		0.4	0.4	0.8	1	1.2

(2) NSK K1™ lubrication unit

Table 10 shows the dimension of linear guides equipped with the NSK K1 lubrication unit.

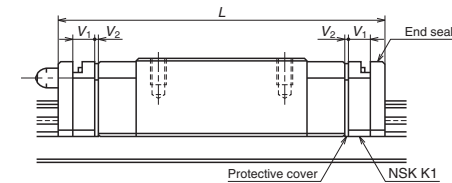


Table 10

Unit: mm

Model No.	Ball slide length	Ball slide model	Standard ball slide length	Ball slide length equipped with two NSK K1 L	Thickness of NSK K1, V_1	Thickness of protective cover, V_2
PE05	Standard	AR	24.1	28.9	2	0.4
PE07	Standard	TR	31.1	37.1	2.5	0.5
PE09	Standard	TR	39.8	46.8	3	0.5
	Long	UR	51.2	58.2		
PE12	Standard	AR	45	53	3.5	0.5
	Long	BR	60	68		
PE15	Standard	AR	56.6	66.2	4	0.8
	Long	BR	76	85.6		

Note: Ball slide length equipped with NSK K1 =

(Standard ball slide length) + (Thickness of NSK K1, V_1 × Number of NSK K1) +

(Thickness of the protective cover V_2 × 2)

8. Reference number

Reference numbers shall be set to individual NSK linear guide when its specifications are finalized, and it is indicated on its specification drawing.

Please specify the reference number, except design serial number, to identify the product when ordering, requiring estimates, or inquiring about specifications from NSK.

(1) Reference number for preloaded assembly

PE 15 0470 ARK 2 - P5 1**

Series name	Preload code (See page A276.)
Size	0: Z0, 1: Z1
Rail length (mm)	Accuracy code (See Table 12.)
Ball slide shape code (See page A274.)	Design serial number
Material/surface treatment code (See Table 11.) K: Stainless steel	Added to the reference number. Number of ball slides per rail

(2) Reference number for random-matching type

PAE 15 ARS -K

Random-matching ball slide series code PAE: PE Series random-matching ball slide	Option code -K: Equipped with NSK K1
Size	Material code S: Stainless steel
Ball slide shape code (See page A274.)	

P1E 15 0470 RKN - PC T**

Random-matching rail series code P1E: PE Series random-matching rail	Preload code (See page A276.) T: Fine clearance
Size	Accuracy code: PC PC: Normal grade is only available.
Rail length (mm)	Design serial number
Rail shape code R: PE09, 12. P: PE15	Added to the reference number. *Butting rail specification N: Non-butting. L: Butting specification
Material/surface treatment code (See Table 11.)	

*Please consult with NSK for butting rail specification.

Reference number coding for the assembly of random-matching type is the same as that of the preloaded assembly. However, only preload code of "Fine clearance T" is available (refer to page A276).

Table 11 Material/surface treatment code

Code	Description
K	Stainless steel
H	Stainless steel with surface treatment
Z	Other, special

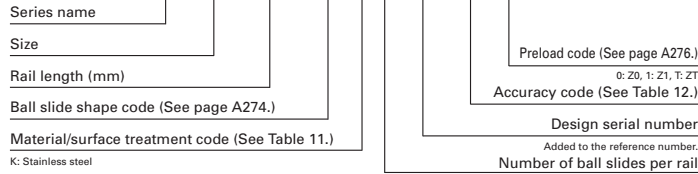
Table 12 Accuracy code

Accuracy	Standard (Without NSK K1)	With NSK K1	With NSK K1 for food and medical equipment
Super precision grade	P4	K4	F4
High precision grade	P5	K5	F5
Precision grade	P6	K6	F6
Normal grade	PN	KN	FN
Normal grade (random-matching type)	PC	KC	FC

Note: Refer to pages A38 and A61 for NSK K1 lubrication unit.

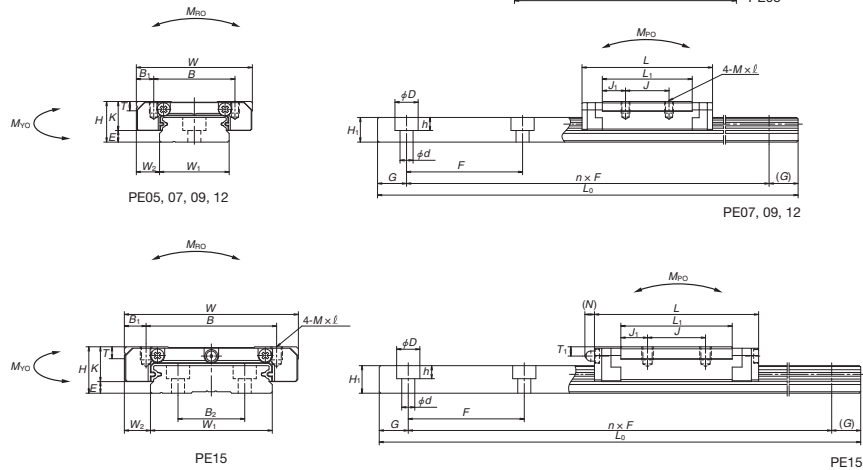
9. Dimensions
PE-AR, TR (Standard type / Standard)
PE-UR, BR (High-load type / Long)

PE 15 0470 AR K 2 - PC T**



Front view

Side view

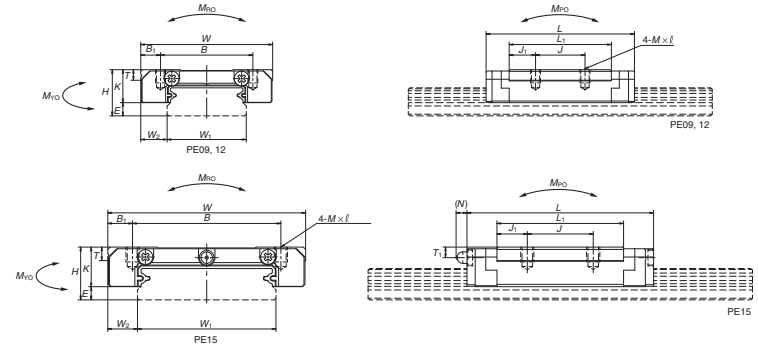
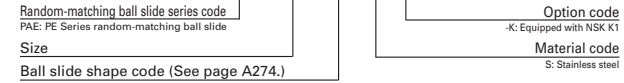


Model No.	Assembly			Ball slide												
	Height	Width	Length	Mounting hole									Oil hole			
				H	E	W ₂	W	L	B	J	M×Pitch×l	B ₁	L ₁	J ₁	K	T
PE05AR	6.5	1.4	3.5	17	24.1	13	—	M2.5×0.45×1.5	2	16.4	8.2	5.1	2.5	φ 0.9	1.3	—
PE07TR	9	2	5.5	25	31.1	19	10	M3×0.5×2.8	3	20.8	5.4	7	3	φ 1.9	1.9	—
PE09TR	12	4	6	30	39.8	21	12	M3×0.5×3	4.5	26.6	7.3	8	2.8	φ 2	2.3	—
PE09UR	12	4	6	30	51.2	23	24	M3×0.5×3	3.5	38	7	8	2.8	φ 2	2.3	—
PE12AR	14	4	8	40	45	28	15	M3×0.5×4	6	31	8	10	3.2	φ 2.5	2.7	—
PE12BR	14	4	8	40	60	28	28	M3×0.5×4	6	46	9	10	3.2	φ 2.5	2.7	—
PE15AR	16	4	9	60	56.6	45	20	M4×0.7×4.5	7.5	38.4	9.2	12	4.1	φ 3	3.2	(3.3)
PE15BR	16	4	9	60	76	45	35	M4×0.7×4.5	7.5	57.8	11.4	12	4.1	φ 3	3.2	(3.3)

Notes: 1) Ball slide of PE05AR has only two mounting tap holes in the center.

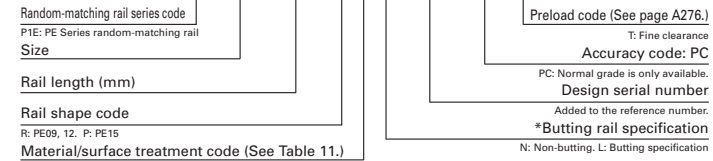
Reference number for ball slide of random-matching type

PAE 15 AR S -K

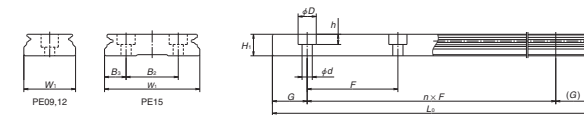


Reference number for rail of random-matching type

P1E15 0470 RKN - PC T**



*Please consult with NSK for butting rail specification.



Rail							Basic load rating							Weight	
Width	Height	Pitch	Mounting bolt hole	G	Maximum length	L _{0max}	Dynamic C (N)	Static C ₀ (N)	Static moment (N·m)				Ball slide (g)	Rail (g/100 mm)	
									M _{Ro}	M _{Fo}		M _{Vo}			
W ₁	H ₁	B ₂	F	d×D×h	(Reference)			One slide		Two slides	One slide	Two slides			
10	4	—	20	3×5×1.6	7.5	150	690	1 160	6.00	2.75	17.5	2.75	17.5	7	34
14	5.2	—	30	3.5×6×3.2	10	600	1 580	2 350	16.7	7.20	46.0	7.20	46.0	19	55
18	7.5	—	30	3.5×6×4.5	10	800	3 000	4 500	36.5	17.3	113	17.3	113	35	95
24	8.5	—	40	4.5×8×4.5	15	1 000	4 000	6 700	54.5	37.5	210	37.5	210	50	140
42	9.5	23	40	4.5×8×4.5	15	1 200	7 600	10 400	106	63.5	345	63.5	345	98	275
							10 300	16 000	320	135	740	135	740	211	

- Basic dynamic load rating is a load that allows for a 50-km rating fatigue life and is a vertical and constant load on the ball slide mounting surface.
To convert C to C₁₀₀ for a 100-km rating fatigue life, divide C by 1.26.
- To fix rail of PE05AR, use M2.5 × 0.45 cross-recessed pan head machine screw for precision instrument.
(JICIS 10-70 No. 0 pan head machine screw No.3.)
(JICIS: Japanese Camera Industrial Standard.)