

Guidelines for Accuracy Grades by Machine Type

Table14 shows guidelines for selecting an accuracy grade of the LM Guide according to the machine type.

Table14 Guideline for Accuracy Grades by Machine Type

Type of machine		Accuracy grades						
		Ct7	Ct5	Normal	H	P	SP	UP
Machine tool	Machining center					●	●	
	Lathe					●	●	
	Milling machine					●	●	
	Boring machine					●	●	
	Jig borer						●	●
	Grinding machine						●	●
	Electric discharge machine					●	●	●
	Punching press				●	●		
	Laser beam machine				●	●	●	
	Woodworking machine	●	●	●	●	●		
	NC drilling machine				●	●		
	Tapping center				●	●		
	Palette changer			●				
	ATC	●	●	●				
	Wire cutting machine					●	●	
Dressing machine						●	●	
Industrial robot	Cartesian coordinate			●	●	●		
	Cylindrical coordinate			●	●			
Semiconductor manufacturing equipment	Wire bonding machine					●	●	
	Prober						●	●
	Electronic component inserter				●	●		
	Printed circuit board drilling machine				●	●	●	
Other equipment	Injection molding machine			●	●			
	3D measuring instrument						●	●
	Office equipment	●	●	●	●			
	Conveyance system	●	●	●	●			
	XY table				●	●	●	
	Coating machine	●	●	●	●			
	Welding machine	●	●	●	●			
	Medical equipment			●	●			
	Digitizer				●		●	
	Inspection equipment					●	●	●

Ct7 : Grade Ct7
 Ct5 : Grade Ct5
 Normal : Normal grade
 H : High accuracy grade

P : Precision grade
 SP : Super precision grade
 UP : Ultra precision grade

Accuracy Standard for Each Model

- Accuracies of models SHS, SSR, SVR/SVS, SHW, HSR, SR, NR/NRS, HRW, NSR-TBC, HSR-M1, HSR-M1VV, SR-M1, HSR-M2, SRG and SRN are categorized into Ct7 grade (Ct7), Ct5 grade (Ct5), Normal grade (no symbol), High accuracy grade (H), Precision grade (P), Super precision grade (SP) and Ultra precision grade (UP) by model numbers, as indicated in Table16 on **A1-77**.

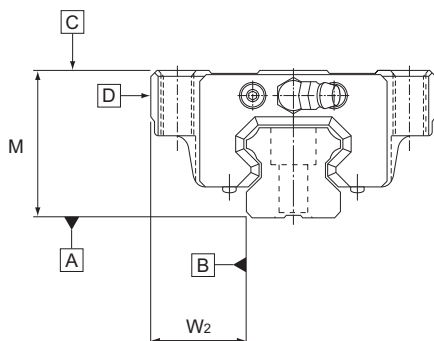


Fig.13

Table15 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values						
Above	Or less	Grade Ct7	Grade Ct5	Normal grade	High-accuracy grade	Precision grade	Super precision grade	Ultra precision grade
—	50	6	6	5	3	2	1.5	1
50	80	6	6	5	3	2	1.5	1
80	125	6	6	5	3	2	1.5	1
125	200	7	6	5	3.5	2	1.5	1
200	250	9.5	6.5	6	4	2.5	1.5	1
250	315	11	7.5	7	4.5	3	1.5	1
315	400	13	8.5	8	5	3.5	2	1.5
400	500	16	11	9	6	4.5	2.5	1.5
500	630	18	13	11	7	5	3	2
630	800	20	15	12	8.5	6	3.5	2
800	1000	23	16	13	9	6.5	4	2.5
1000	1250	26	18	15	11	7.5	4.5	3
1250	1600	28	20	16	12	8	5	4
1600	2000	31	23	18	13	8.5	5.5	4.5
2000	2500	34	25	20	14	9.5	6	5
2500	3090	36	27	21	16	11	6.5	5.5

Note) Ct7 and Ct5 class are only applicable for model HSR.

Point of Selection

Determining the Accuracy

Table16 Accuracy Standards for Models SHS, SSR, SVR/SVS, SHW, HSR, SR, NR/NRS, HRW, NSR-TBC, HSR-M1, HSR-M1VV, SR-M1, HSR-M2, SRG, and SRN.

Unit: mm

Model No.	Accuracy standards	Grade Ct7	Grade Ct5	Normal grade	High-accuracy grade	Precision grade	Super precision grade	Ultra precision grade	
		Item	Ct7	Ct5	No Symbol	H	P	SP	UP
8 10 12 14	Dimensional tolerance in height M	—	—	±0.07	±0.03	±0.015	±0.007	—	
	Difference in height M	—	—	0.015	0.007	0.005	0.003	—	
	Dimensional tolerance in width W ₂	—	—	±0.04	±0.02	±0.01	±0.007	—	
	Difference in width W ₂	—	—	0.02	0.01	0.006	0.004	—	
	Running parallelism of surface C against surface A	ΔC (as shown in Table15 A1-76)							
	Running parallelism of surface D against surface B	ΔD (as shown in Table15 A1-76)							
15 17 20 21	Dimensional tolerance in height M	±0.12	±0.12	±0.07	±0.03	0 -0.03	0 -0.015	0 -0.008	
	Difference in height M	0.025	0.025	0.02	0.01	0.006	0.004	0.003	
	Dimensional tolerance in width W ₂	±0.12	±0.12	±0.06	±0.03	0 -0.02	0 -0.015	0 -0.008	
	Difference in width W ₂	0.025	0.025	0.02	0.01	0.006	0.004	0.003	
	Running parallelism of surface C against surface A	ΔC (as shown in Table15 A1-76)							
	Running parallelism of surface D against surface B	ΔD (as shown in Table15 A1-76)							
25 27 30 35	Dimensional tolerance in height M	±0.12	±0.12	±0.08	±0.04	0 -0.04	0 -0.02	0 -0.01	
	Difference in height M	0.025	0.025	0.02	0.015	0.007	0.005	0.003	
	Dimensional tolerance in width W ₂	±0.12	±0.12	±0.07	±0.03	0 -0.03	0 -0.015	0 -0.01	
	Difference in width W ₂	0.035	0.035	0.025	0.015	0.007	0.005	0.003	
	Running parallelism of surface C against surface A	ΔC (as shown in Table15 A1-76)							
	Running parallelism of surface D against surface B	ΔD (as shown in Table15 A1-76)							
40 45 50 55 60	Dimensional tolerance in height M	—	—	±0.08	±0.04	0 -0.05	0 -0.03	0 -0.015	
	Difference in height M	—	—	0.025	0.015	0.007	0.005	0.003	
	Dimensional tolerance in width W ₂	—	—	±0.07	±0.04	0 -0.04	0 -0.025	0 -0.015	
	Difference in width W ₂	—	—	0.03	0.015	0.007	0.005	0.003	
	Running parallelism of surface C against surface A	ΔC (as shown in Table15 A1-76)							
	Running parallelism of surface D against surface B	ΔD (as shown in Table15 A1-76)							
65 70 75 85 100 120 150	Dimensional tolerance in height M	—	—	±0.08	±0.04	0 -0.05	0 -0.04	0 -0.03	
	Difference in height M	—	—	0.03	0.02	0.01	0.007	0.005	
	Dimensional tolerance in width W ₂	—	—	±0.08	±0.04	0 -0.05	0 -0.04	0 -0.03	
	Difference in width W ₂	—	—	0.03	0.02	0.01	0.007	0.005	
	Running parallelism of surface C against surface A	ΔC (as shown in Table15 A1-76)							
	Running parallelism of surface D against surface B	ΔD (as shown in Table15 A1-76)							

Note) XFor models SRG and SRN, only precision or higher grades apply. (Ct7 grade, Ct5 grade, normal grade and high accuracy grade are not available.)

Note) Ct7 and Ct5 class are only applicable for model HSR.

Note) The difference between Ct7 grade and Ct5 grade pairs with a height M and a width W₂ is the value for one shaft.

- Accuracies of model HMG are defined by model number as indicated in Table17.

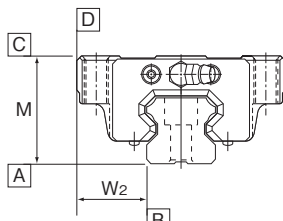


Fig.14

Table17 Model HMG Accuracy Standard

Unit: mm

Model No.	Accuracy Standards Item	Normal grade No symbol
15	Dimensional tolerance in height M	± 0.1
	Difference in height M	0.02
	Dimensional tolerance in width W_2	± 0.1
	Difference in width W_2	0.02
	Running parallelism of surface C against surface A	ΔC (as shown in Table18)
	Running parallelism of surface D against surface B	ΔD (as shown in Table18)
25 35	Dimensional tolerance in height M	± 0.1
	Difference in height M	0.02
	Dimensional tolerance in width W_2	± 0.1
	Difference in width W_2	0.03
	Running parallelism of surface C against surface A	ΔC (as shown in Table18)
	Running parallelism of surface D against surface B	ΔD (as shown in Table18)
45 65	Dimensional tolerance in height M	± 0.1
	Difference in height M	0.03
	Dimensional tolerance in width W_2	± 0.1
	Difference in width W_2	0.03
	Running parallelism of surface C against surface A	ΔC (as shown in Table18)
	Running parallelism of surface D against surface B	ΔD (as shown in Table18)

Table18 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values
Above	Or less	Normal grade
—	125	30
125	200	37
200	250	40
250	315	44
315	400	49
400	500	53
500	630	58
630	800	64
800	1000	70
1000	1250	77
1250	1600	84
1600	2000	92

- Accuracies of model HCR are categorized into normal and high accuracy grades by model number as indicated in Table19.

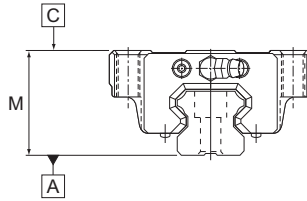


Fig.15

Table19 Accuracy Standard for Model HCR

Unit: mm

Model No.	Accuracy standards	Normal grade	High-accuracy grade
	Item	No Symbol	H
12	Dimensional tolerance in height M	± 0.2	± 0.2
15	Difference in height M	0.05	0.03
25	Running parallelism of surface C against surface A	ΔC (as shown in Table20)	
35			
45	Dimensional tolerance in height M	± 0.2	± 0.2
65	Difference in height M	0.06	0.04
	Running parallelism of surface C against surface A	ΔC (as shown in Table20)	

Table20 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values	
Above	Or less	Normal grade	High-accuracy grade
—	125	30	15
125	200	37	18
200	250	40	20
250	315	44	22
315	400	49	24
400	500	53	26
500	630	58	29
630	800	64	32
800	1000	70	35
1000	1250	77	38
1250	1600	84	42
1600	2000	92	46

- Accuracies of model JR are defined by model number as indicated in Table21.

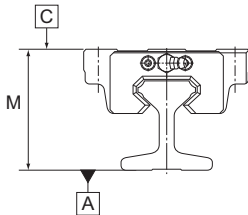


Fig.16

Table21 Accuracy Standard for Model JR

Unit: mm

Model No.	Accuracy standards	Normal grade
	Item	No Symbol
25	Difference in height M	0.05
35	Running parallelism of surface C against surface A	ΔC (as shown in Table22)
45	Difference in height M	0.06
55	Running parallelism of surface C against surface A	ΔC (as shown in Table22)

Table22 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values
Above	Or less	Normal grade
—	50	5
50	80	5
80	125	5
125	200	6
200	250	8
250	315	9
315	400	11
400	500	13
500	630	15
630	800	17
800	1000	19
1000	1250	21
1250	1600	23
1600	2000	26
2000	2500	28
2500	3150	30
3150	4000	33

- Accuracies of models SCR and CSR are categorized into precision, super precision and ultra precision grades by model number as indicated in Table23.

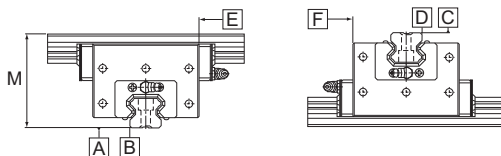


Fig.17

Table23 Accuracy Standard for Models SCR and CSR

Unit: mm

Model No.	Accuracy standards	Precision grade	Super precision grade	Ultra precision grade
		P	SP	UP
15 20	Difference in height M	0.01	0.007	0.005
	Perpendicularity of surface D against surface B	0.005	0.004	0.003
	Running parallelism of surface E against surface B	ΔC (as shown in Table24)		
	Running parallelism of surface F against surface D	ΔD (as shown in Table24)		
25	Difference in height M	0.01	0.007	0.005
	Perpendicularity of surface D against surface B	0.008	0.006	0.004
	Running parallelism of surface E against surface B	ΔC (as shown in Table24)		
	Running parallelism of surface F against surface D	ΔD (as shown in Table24)		
30 35	Difference in height M	0.01	0.007	0.005
	Perpendicularity of surface D against surface B	0.01	0.007	0.005
	Running parallelism of surface E against surface B	ΔC (as shown in Table24)		
	Running parallelism of surface F against surface D	ΔD (as shown in Table24)		
45	Difference in height M	0.012	0.008	0.006
	Perpendicularity of surface D against surface B	0.012	0.008	0.006
	Running parallelism of surface E against surface B	ΔC (as shown in Table24)		
	Running parallelism of surface F against surface D	ΔD (as shown in Table24)		
65	Difference in height M	0.018	0.012	0.009
	Perpendicularity of surface D against surface B	0.018	0.012	0.009
	Running parallelism of surface E against surface B	ΔC (as shown in Table24)		
	Running parallelism of surface F against surface D	ΔD (as shown in Table24)		

Table24 LM Rail Length and Running Parallelism

by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values		
Above	Or less	Precision grade	Super precision grade	Ultra precision grade
—	50	2	1.5	1
50	80	2	1.5	1
80	125	2	1.5	1
125	200	2	1.5	1
200	250	2.5	1.5	1
250	315	3	1.5	1
315	400	3.5	2	1.5
400	500	4.5	2.5	1.5
500	630	5	3	2
630	800	6	3.5	2
800	1000	6.5	4	2.5
1000	1250	7.5	4.5	3
1250	1600	8	5	4
1600	2000	8.5	5.5	4.5
2000	2500	9.5	6	5
2500	3090	11	6.5	5.5

Point of Selection

Determining the Accuracy

- Accuracies of model HR are categorized into normal, high accuracy, precision, super precision and ultra precision grades as indicated in Table25.

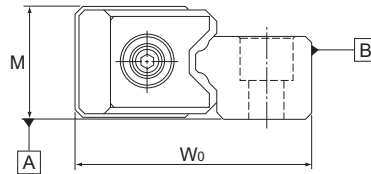


Fig.18

Table25 Accuracy Standard for Model HR

Unit: mm

Accuracy standards	Normal grade	High-accuracy grade	Precision grade	Super precision grade	Ultra precision grade
Item	No Symbol	H	P	SP	UP
Dimensional tolerance in height M	±0.1	±0.05	±0.025	±0.015	±0.01
Difference in height M ^{Note 1)}	0.03	0.02	0.01	0.005	0.003
Dimensional tolerance for total width W ₀	±0.1		±0.05		
Difference in total width W ₀ ^{Note 2)}	0.03	0.015	0.01	0.005	0.003
Parallelism of the raceway against surfaces A and B	ΔC (as shown in Table26)				

Note1) Difference in height M applies to a set of LM Guides used on the same plane.

Note2) Difference in total width W₀ applies to LM blocks used in combination on one LM rail.

Note3) Dimensional tolerance and difference in total width W₀ for precision and higher grades apply only to the master-rail side among a set of LM Guides. The master rail is imprinted with "KB" following a serial number.

Table26 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values				
Above	Or less	Normal grade	High-accuracy grade	Precision grade	Super precision grade	Ultra precision grade
—	50	5	3	2	1.5	1
50	80	5	3	2	1.5	1
80	125	5	3	2	1.5	1
125	200	5	3.5	2	1.5	1
200	250	6	4	2.5	1.5	1
250	315	7	4.5	3	1.5	1
315	400	8	5	3.5	2	1.5
400	500	9	6	4.5	2.5	1.5
500	630	11	7	5	3	2
630	800	12	8.5	6	3.5	2
800	1000	13	9	6.5	4	2.5
1000	1250	15	11	7.5	4.5	3
1250	1600	16	12	8	5	4
1600	2000	18	13	8.5	5.5	4.5
2000	2500	20	14	9.5	6	5
2500	3000	21	16	11	6.5	5.5

- Accuracies of model GSR are categorized into normal, high accuracy and precision grades by model number as indicated in Table27.

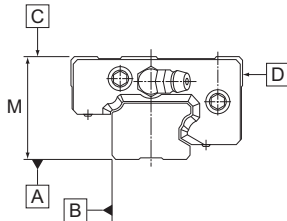


Fig.19

Table27 Accuracy Standard for Model GSR

Unit: mm

Model No.	Accuracy standards	Normal grade	High-accuracy grade	Precision grade
	Item	No Symbol	H	P
15 20	Dimensional tolerance in height M	±0.02		
	Running parallelism of surface C against surface A	ΔC (as shown in Table28)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table28)		
25 30 35	Dimensional tolerance in height M	±0.03		
	Running parallelism of surface C against surface A	ΔC (as shown in Table28)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table28)		

Table28 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values		
Above	Or less	Normal grade	High-accuracy grade	Precision grade
—	50	5	3	2
50	80	5	3	2
80	125	5	3	2
125	200	5	3.5	2
200	250	6	4	2.5
250	315	7	4.5	3
315	400	8	5	3.5
400	500	9	6	4.5
500	630	11	7	5
630	800	12	8.5	6
800	1000	13	9	6.5
1000	1250	15	11	7.5
1250	1600	16	12	8
1600	2000	18	13	8.5
2000	2500	20	14	9.5
2500	3000	21	16	11

- Accuracies of model GSR-R are categorized into normal and high accuracy grades by model number as indicated in Table29.

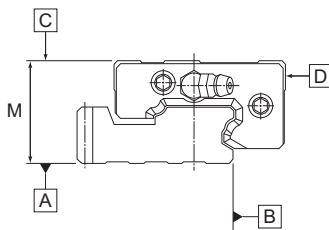


Fig.20

Table29 Accuracy Standard for GSR-R

Unit: mm

Model No.	Accuracy standards	Normal grade	High-accuracy grade
	Item	No Symbol	H
25 30 35	Dimensional tolerance in height M	±0.03	
	Running parallelism of surface C against surface A	ΔC (as shown in Table30)	
	Running parallelism of surface D against surface B	ΔD (as shown in Table30)	

Table30 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values	
Above	Or less	Normal grade	High-accuracy grade
—	50	5	3
50	80	5	3
80	125	5	3
125	200	5	3.5
200	250	6	4
250	315	7	4.5
315	400	8	5
400	500	9	6
500	630	11	7
630	800	12	8.5
800	1000	13	9
1000	1250	15	11
1250	1600	16	12
1600	2000	18	13

Point of Selection

Determining the Accuracy

- Accuracies of models SRS, RSR, RSR-M1, RSR-W, RSR-Z and RSR-WZ are categorized into normal, high accuracy and precision grades by model number as indicated in Table31.

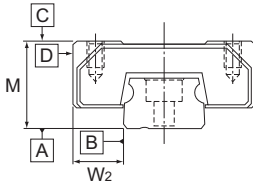


Fig.21

Table31 Accuracy Standards for Models SRS, RSR, RSR-M1, RSR-W, RSR-Z and RSR-WZ

Unit: mm

Model No.	Accuracy standards	Normal grade	High-accuracy grade	Precision grade
	Item	No Symbol	H	P
3 5	Dimensional tolerance in height M	±0.03	—	±0.015
	Difference in height M	0.015	—	0.005
	Dimensional tolerance in width W ₂	±0.03	—	±0.015
	Difference in width W ₂	0.015	—	0.005
	Running parallelism of surface C against surface A	ΔC (as shown in Table32)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table32)		
7 9 12 14 15 20 25	Dimensional tolerance in height M	±0.04	±0.02	±0.01
	Difference in height M	0.03	0.015	0.007
	Dimensional tolerance in width W ₂	±0.04	±0.025	±0.015
	Difference in width W ₂	0.03	0.02	0.01
	Running parallelism of surface C against surface A	ΔC (as shown in Table33)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table33)		

Table32 LM Rail Length and Running Parallelism for Models SRS5, RSR3 and RSR5 by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values	
Above	Or less	Normal grade	Precision grade
—	25	2.5	1.5
25	50	3.5	2
50	100	5.5	3
100	150	7	4
150	200	8.4	5

Table33 LM Rail Length and Running Parallelism for Models RSR7 to 25 and RSR7 to 25 by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values		
Above	Or less	Normal grade	High-accuracy grade	Precision grade
—	40	8	4	1
40	70	10	4	1
70	100	11	4	2
100	130	12	5	2
130	160	13	6	2
160	190	14	7	2
190	220	15	7	3
220	250	16	8	3
250	280	17	8	3
280	310	17	9	3
310	340	18	9	3
340	370	18	10	3
370	400	19	10	3
400	430	20	11	4
430	460	20	12	4
460	490	21	12	4
490	520	21	12	4
520	550	22	12	4
550	580	22	13	4
580	610	22	13	4
610	640	22	13	4
640	670	23	13	4
670	700	23	13	5
700	730	23	14	5
730	760	23	14	5
760	790	23	14	5
790	820	23	14	5
820	850	24	14	5
850	880	24	15	5
880	910	24	15	5
910	940	24	15	5
940	970	24	15	5
970	1000	25	16	5
1000	1030	25	16	5
1030	1060	25	16	6
1060	1090	25	16	6
1090	1120	25	16	6
1120	1150	25	16	6
1150	1180	26	17	6
1180	1210	26	17	6
1210	1240	26	17	6
1240	1270	26	17	6
1270	1300	26	17	6
1300	1330	26	17	6
1330	1360	27	18	6
1360	1390	27	18	6
1390	1420	27	18	6
1420	1450	27	18	7
1450	1480	27	18	7
1480	1510	27	18	7
1510	1540	28	19	7
1540	1570	28	19	7
1570	1800	28	19	7

- Accuracies of model MX are categorized into normal and precision grades by model number as indicated in Table34.

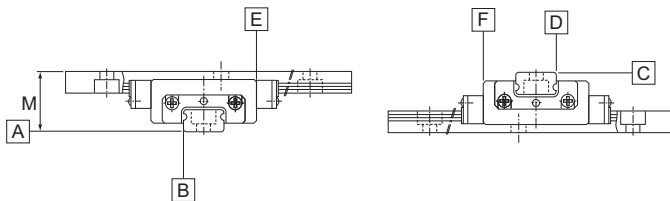


Fig.22

Table34 Accuracy Standard for Model MX

Unit: mm

Model No.	Accuracy standards	Normal grade	Precision grade
	Item	No Symbol	P
5	Difference in height M	0.015	0.005
	Perpendicularity of surface D against surface B	0.003	0.002
	Running parallelism of surface E against surface B	ΔC (as shown in Table35)	
	Running parallelism of surface F against surface D	ΔD (as shown in Table35)	
7	Difference in height M	0.03	0.007
	Perpendicularity of surface D against surface B	0.01	0.005
	Running parallelism of surface E against surface B	ΔC (as shown in Table36)	
	Running parallelism of surface F against surface D	ΔD (as shown in Table36)	

Table36 LM Rail Length and Running Parallelism for Model MX7 by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values	
Above	Or less	Normal grade	Precision grade
—	40	8	1
40	70	10	1
70	100	11	2
100	130	12	2
130	160	13	2
160	190	14	2
190	220	15	3
220	250	16	3
250	280	17	3
280	310	17	3
310	340	18	3
340	370	18	3
370	400	19	3

Table35 LM Rail Length and Running Parallelism for Model MX5 by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values	
Above	Or less	Normal grade	Precision grade
—	25	2.5	1.5
25	50	3.5	2
50	100	5.5	3
100	150	7	4
150	200	8.4	5

- Accuracies of model SRW are categorized into precision, super precision and ultra precision grades by model number as indicated in Table37.

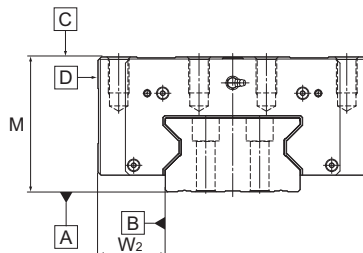


Fig.23

Table37 Accuracy Standard for Model SRW

Unit: mm

Model No.	Accuracy standards	Precision grade	Super precision grade	Ultra precision grade
		P	SP	UP
70 85	Dimensional tolerance in height M	0 -0.05	0 -0.03	0 -0.015
	Difference in height M	0.007	0.005	0.003
	Dimensional tolerance in width W_2	0 -0.04	0 -0.025	0 -0.015
	Difference in width W_2	0.007	0.005	0.003
	Running parallelism of surface C against surface A	ΔC (as shown in Table38)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table38)		
100	Dimensional tolerance in height M	0 -0.05	0 -0.04	0 -0.03
	Difference in height M	0.01	0.007	0.005
	Dimensional tolerance in width W_2	0 -0.05	0 -0.04	0 -0.03
	Difference in width W_2	0.01	0.007	0.005
	Running parallelism of surface C against surface A	ΔC (as shown in Table38)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table38)		
130 150	Dimensional tolerance in height M	0 -0.05	0 -0.04	0 -0.03
	Difference in height M	0.01	0.007	0.005
	Dimensional tolerance in width W_2	0 -0.05	0 -0.04	0 -0.03
	Difference in width W_2	0.01	0.007	0.005
	Running parallelism of surface C against surface A	ΔC (as shown in Table38)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table38)		

Table38 LM Rail Length and Running Parallelism by Accuracy Standard

Unit: μm

LM rail length (mm)		Running Parallelism Values		
Above	Or less	Precision grade	Super precision grade	Ultra precision grade
—	50	2	1.5	1
50	80	2	1.5	1
80	125	2	1.5	1
125	200	2	1.5	1
200	250	2.5	1.5	1
250	315	3	1.5	1
315	400	3.5	2	1.5
400	500	4.5	2.5	1.5
500	630	5	3	2
630	800	6	3.5	2
800	1000	6.5	4	2.5
1000	1250	7.5	4.5	3
1250	1600	8	5	4
1600	2000	8.5	5.5	4.5
2000	2500	9.5	6	5
2500	3090	11	6.5	5.5

- Accuracies of model EPF are categorized into normal, high accuracy and precision grades by model number as indicated in Table39.

Table39 Accuracy Standard for Model EPF

Unit: mm

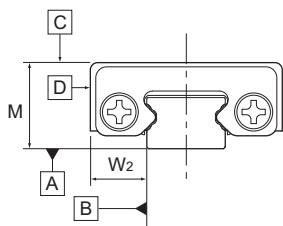


Fig.24

Model No.	Accuracy Standards	Normal grade	High-accuracy grade	Precision grade
		No Symbol	H	P
7M 9M 12M 15M	Dimensional tolerance in height M	±0.04	±0.02	±0.01
	Difference in height M	0.03	0.015	0.007
	Dimensional tolerance in width W_2	±0.04	±0.025	±0.015
	Running parallelism of surface C against surface A ^(Nom)	0.008	0.004	0.001
	Running parallelism of surface D against surface B ^(Nom)	0.008	0.004	0.001

(Note) If the stroke is more than 40 mm, contact THK.

- Accuracies of model SR-MS are categorized into precision, super precision and ultra precision grades by model number as indicated in Table40.

Table41 LM Rail Length and Running Parallelism by Accuracy Standard

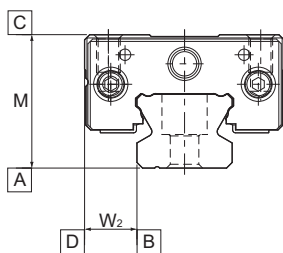
Unit: μm 

Fig.25

Table40 Accuracy Standard for Model SR-MS

Unit: mm

Model No.	Accuracy Standards	Precision grade	Super precision grade	Ultra precision grade
	Item	P	SP	UP
15 20	Dimensional tolerance in height M	0 -0.03	0 -0.015	0 -0.008
	Difference in Height M	0.006	0.004	0.003
	Dimensional tolerance in width W_2	0 -0.02	0 -0.015	0 -0.008
	Difference in Width W_2	0.006	0.004	0.003
	Running parallelism of surface C against surface A	ΔC (as shown in Table41)		
	Running parallelism of surface D against surface B	ΔD (as shown in Table41)		

LM rail length (mm)		Running Parallelism Values		
Above	Or less	Precision grade	Super precision grade	Ultra precision grade
		P	SP	UP
—	50	2	1.5	1
50	80	2	1.5	1
80	125	2	1.5	1
125	200	2	1.5	1
200	250	2.5	1.5	1
250	315	3	1.5	1
315	400	3.5	2	1.5