

3.7.

Mounting-Surface Dimensional Tolerance

3.7 Mounting-Surface Dimensional Tolerance

With the LM Guide, a slight dimensional error in the mounting surface can be absorbed by the natural self-adjusting capability of the product, thus ensuring smooth linear motion. In the table below, dimensional

tolerances for the mounting surface that would not adversely affect rolling resistance or service life in normal use are shown.

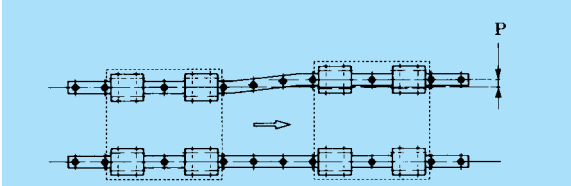


Fig. 28 Tolerance for Parallelism Between Two Axes (P)

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

JR	—
25	100
35	200
45	300
55	400

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

SR	Clearance C0	Clearance C1	Normal clearance
15	—	25	35
20	25	30	40
25	30	35	50
30	35	40	60
35	45	50	70
45	55	60	80
55	65	70	100
70	65	80	110
85	80	90	120
100	90	100	130
120	100	110	140
150	110	120	150

Note: This table applies to type SSR.

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

HSR	Clearance C0	Clearance C1	Normal clearance
8	—	10	13
10	—	12	16
12	—	15	20
15	—	18	25
20	18	20	25
25	20	22	30
30	27	30	40
35	30	35	50
45	35	40	60
55	45	50	70
65	55	60	80
85	70	75	90
100	85	90	100
120	100	110	120
150	115	130	140

Note: This table applies to types SHS, HSR-YR, and CSR.

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

NR	Clearance C0	Clearance C1	Normal clearance
25	14	15	21
30	19	21	28
35	21	25	35
45	25	28	42
55	32	35	49
65	39	42	56
75	44	47	60
85	49	53	63
100	60	63	70

Note: This table applies to type SNR.

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

NRS	Clearance C0	Clearance C1	Normal clearance
25	10	11	15
30	14	15	20
35	15	18	25
45	18	20	30
55	23	25	35
65	28	30	40
75	31	34	43
85	35	38	45
100	43	45	50

Note: This table applies to type SNS.

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

HRW	Clearance C0	Clearance C1	Normal clearance
12	—	10	13
14	—	12	16
17	—	15	20
21	—	18	25
27	—	20	25
35	20	22	30
50	27	30	40
60	30	35	50

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

GSR	—
15	30
20	40
25	50
30	60
35	70

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

NSR TBC	Clearance C1	Normal clearance
20	40	50
25	50	70
30	60	80
40	70	90
50	80	110
70	90	130

Tolerance for Parallelism Between Two Axes (P)
Unit: μm

RSR	Gothic-arch groove		Circular-arc groove
	Clearance C0	Normal clearance	Normal clearance
3	—	2	—
5	—	2	—
7	—	3	—
9	3	4	11
12	5	9	15
15	6	10	18
20	8	13	25

Note: This table applies to types RSR-W and RSH.

Mounting-Surface Flatness of Type RSR
Unit: μm

Model No.	Flatness
RSR 3	0.012/200
RSR 5	0.015/200
RSR 7	0.025/200
RSR 9	0.035/200
RSR 12	0.050/200
RSR 15	0.060/200
RSR 20	0.110/200
RSR 7A	0.100/200
RSR 9A	0.160/200
RSR12A	0.200/200
RSR15A	0.250/200
RSR20A	0.300/200

Notes

- Since some mounting surface tolerances are likely to be involved in one another, it is recommended to apply 70% or less of the values in the table.
- The values in this table apply to normal clearance. In a two-axis configuration with clearance C1, application of 50% or less of these values is recommended.
- This table applies to types RSR-W and RSH.

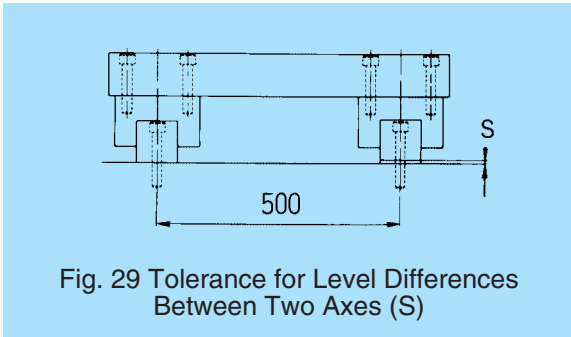


Fig. 29 Tolerance for Level Differences Between Two Axes (S)

Tolerance for Level Differences Between Two Axes

The following tables present the tolerances for level differences between two axes a distance of 500 mm from one another. The tolerances are proportional to the axis-to-axis distance (200 mm in the case of type RSR).

Level Difference Between Two axes (S) Unit: μm

SR	Clearance C0	Clearance C1	Normal clearance
15	—	100	180
20	80	100	180
25	100	120	200
30	120	150	240
35	170	210	300
45	200	240	360
55	250	300	420
70	300	350	480
85	350	420	540
100	400	480	600
120	450	540	720
150	500	600	780

Note: This table applies to type SSR.

Level Difference Between Two axes (S) Unit: μm

NR	Clearance C0	Clearance C1	Normal clearance
25	35	43	65
30	45	55	85
35	60	75	105
45	70	85	125
55	85	105	150
65	100	125	175
75	110	135	188
85	120	145	200
100	140	165	225

Note: This table applies to type SNR.

Level Difference Between Two axes (S) Unit: μm

JR	—
25	400
35	500
45	800
55	1000

Level Difference Between Two axes (S) Unit: μm

HSR	Clearance C0	Clearance C1	Normal clearance
8	—	11	40
10	—	16	50
12	—	20	65
15	—	85	130
20	50	85	130
25	70	85	130
30	90	110	170
35	120	150	210
45	140	170	250
55	170	210	300
65	200	250	350
85	240	290	400
100	280	330	450
120	320	370	500
150	360	410	550

Note: This table applies to types SHS, HSR-YR, and CSR.

Level Difference Between Two axes (S) Unit: μm

NRS	Clearance C0	Clearance C1	Normal clearance
25	49	60	91
30	63	77	119
35	84	105	147
45	98	119	175
55	119	147	210
65	140	175	245
75	154	189	263
85	168	203	280
100	196	231	315

Note: This table applies to type SNS.

Level Difference Between Two axes (S) Unit: μm

HRW	Clearance C0	Clearance C1	Normal clearance
12	—	11	40
14	—	16	50
17	—	20	65
21	—	85	130
27	—	85	130
35	70	85	130
50	90	110	170
60	120	150	210

Tolerance for Parallelism Between Two Axes (P) Unit: μm

NSR TBC	Clearance C0	Normal clearance
20	210	300
25	240	360
30	270	420
40	360	540
50	420	600
70	480	660

Level Difference Between Two axes (S) Unit: μm

GSR	—
15	240
20	300
25	360
30	420
35	480

Level Difference Between Two axes (S) Unit: μm

RSR	Gothic-arch groove		Circular-arc groove
	Clearance C0	Normal clearance	Normal clearance
3	—	15	—
5	—	20	—
7	—	25	—
9	6	35	160
12	12	50	200
15	30	60	250
20	60	110	350

Note: This table applies to types RSR-W and RSH.