Running parallelism

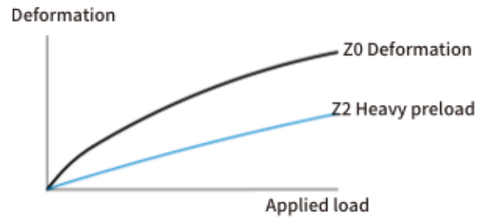
(3) Running parallelism

Length of rail	Accuracy grade (μm)				
(mm)	N	H	P	SP	UP
~100	12	7	3	2	2
100~200	14	9	4	2	2
200~300	15	10	5	3	2
300~500	17	12	6	3	2
500~700	20	13	7	4	2
700~900	22	15	8	5	3
900~1100	24	16	9	6	3
1100~1500	26	18	11	7	4
1500~1900	28	20	13	8	4
1900~2500	31	22	15	10	5
2500~3100	33	25	18	11	6
3100~3600	36	27	20	14	7
3600~4000	37	28	21	15	7

Preload

(1) Definition of preload

The preload is to pre-send the load force of the steel ball, that is, increase the diameter of the steel ball, and use the negative gap between the steel ball and the steel ball track to pre-press, which can improve the rigidity of the linear guide and eliminate the gap; The pressure increases the rigidity of the linear guide. However, the small size is recommended to use the preload under the light preload to avoid the excessive use of preload to reduce its service life.



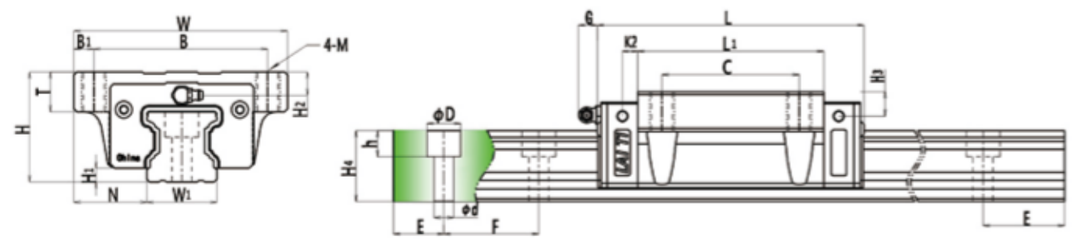
(2) Level of preload

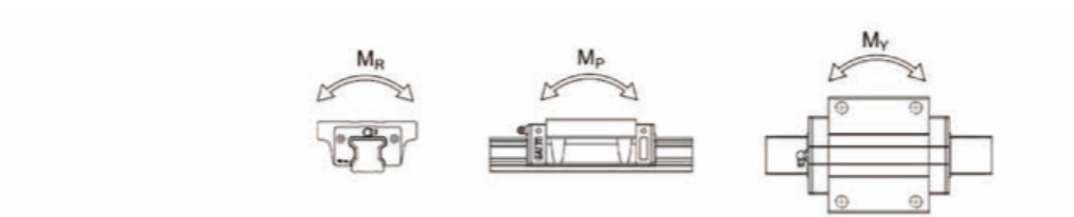
Level of preload	Mark	Preload	Conditions of Use	Application of Scope
No preload	Z0	0-0.02C	Fixed load direction with low impact and low precision	Transfer device, automatic packaging machine, automation industrial machinery, XY axis for general industrial machinery, welding machine, fuse machine, tool changer
Middle preload	Z1	0.05C-0.07C	Light load and high precision	General industrial machinery Z-axis, electric discharge machine, NC machine tool, precision XY platform, measuring device, machining center, vertical machining center, industrial robot, automatic coating machine, various high-speed material supply devices
Heavy preload	Z2	0.10C-0.12C	Requirements for rigidity, vibration and impact	Machining center, grinding machine, NC lathe, vertical or horizontal milling machine, machine tool Z axis, heavy cutting machine
Level	Interchangeable linear guide			Non-interchangeable track (assembly)
Level of preload	Z0,Z1			Z0,Z1，Z2

Note: preload C is dynamic load capacity

1-1-5 SG series linear guide dimension table

○ SGH-A/SGH-AL/SGS-A





Linear Guide parameter

Note：1kgf=9.81N

Model	Assembly dimension (mm)			Block dimension (mm)								Rail dimension (mm)							Basic dynamic load capacity	Basic static load capacity	Static permissible moment		
	H	H1	N	W	B	C	L1	L	MxL	H2	H3	W1	H4	D	h	d	F	E	Cdyn(kN)	C0(kN)	MR KN-m	MP KN-m	MY KN-m
SGH15A	24	3	16	47	38	30	39.2	58.2	M5	4	3.6	15	14.9	7.5	5.3	4.5	60	20	14.23	18.35	0.19	0.14	0.14
SGH20A	30	3.7	21.5	63	53	40	52.5	80	M6	5	5.8	20	20	9.5	8.5	6	60	20	23.96	30.87	0.37	0.28	0.28
SGH20AL							65.2	93											28.86	40.26	0.48	0.48	0.48
SGS20A	28	3.7	19.5	59	49	32	52.5	80	M6	4	3.8	20	20	9.5	8.5	6	60	20	23.96	30.87	0.37	0.28	0.28
SGH25A	36	4.5	23.5	70	57	45	61	85	M8	7.6	8	23	23	11	9	7	60	20	35.33	44.34	0.6	0.49	0.49
SGH25AL							80.3	104.7											42.58	57.86	0.74	0.73	0.73
SGS25A	33	4.5	25	73	60	35	61	85	M8	4.6	5	23	23	11	9	7	60	20	35.33	44.34	0.6	0.49	0.49
SGH30A	42	7	31	90	72	52	69	97	M10	6	7	28	28.4	14	12	9	80	20	46.25	55.91	0.95	0.7	0.7
SGH30AL							92.3	120.3											58.89	78.88	1.35	1.23	1.23
SGS30A	42	7	31	90	72	40	69	97	M10	6	7	28	28.4	14	12	9	80	20	46.25	55.91	0.95	0.7	0.7
SGH35A	48	7.6	33	100	82	62	79	109	M10	7.4	7.4	34	31.9	14	12	9	80	20	61.32	80.57	1.73	1.09	1.09
SGH35AL							105	135											78.16	113.64	2.46	2.02	2.02
SGS35A	48	7.6	33	100	82	50	79	109	M10	7.4	7.4	34	31.9	14	12	9	80	20	61.32	80.57	1.73	1.09	1.09
SGH45A	60	9.7	37.5	120	100	80	97.8	138	M12	8	8	45	39.85	20	17	14	105	22.5	98.43	112.66	3.56	2.35	2.35
SGH45AL							132.3	173											125.58	159.6	5.05	4.45	4.45