

HG系列—重负荷型滚珠直线导轨

HG 系列直线导轨，为四列式单圆弧牙型接触直线导轨，同时整合最佳化结构设计的超重负荷精密直线导轨，相较于其他之直线导轨提升了负荷与刚性能力；具备四方向等负载特色、及自动调心的功能，可吸收安装面的装配误差，得到高精度的诉求。高速度、高负荷、高刚性与高精度化概念已成为未来全世界工业产品发展的趋势，HXHV四列式超重负荷直线导轨，即为基于此理念开发的产品。

HG Series - Heavy Load Ball Type Linear Guideway

HG series linear guideways are designed with load capacity and rigidity higher than other similar products with circular-arc groove and structure optimization. It features equal load ratings in the radial, reverse radial and lateral directions, and self-aligning to absorb installation-error. Thus, HXHV HG series linear guideways can achieve a long life with high speed, high accuracy and smooth linear motion.

• HG系列直线导轨特点

(1)自动调心能力

来自圆弧沟槽的DF(45°-45°)组合，在安装的时候，借由钢珠的弹性变形及接触点的转移，即使安装面多少有些偏差，也能被线轨滑块内部吸收，产生自动调心能力的效果而得到高精度稳定的平滑运动。

(1)具有互换性

由于对生产制造精度严格管控，直线导轨尺寸能维持在一定的水准内，且滑块有保持器的设计以防止钢珠脱落，因此部份系列精度具可互换性，客户可依需要订购导轨或滑块，亦可分开储存导轨及滑块，以减少储存空间。

(1)所有方向皆具有高刚性

运用四列式圆弧沟槽，配合四列钢珠等45度的接触角度，让钢珠达到理想的两点接触构造，能承受来自上下和左右方向的负荷；在必要时更可施加预压以提高刚性。

• Features of HG Series

(1) Self-aligning capability

By design, the circular-arc groove has contact points at 45 degrees. HG series can absorb most installation errors due to surface irregularities and provide smooth linear motion through the elastic deformation of rolling elements and the shift of contact points. self-aligning capability, high accuracy and smooth operation can be obtained with an easy installation.

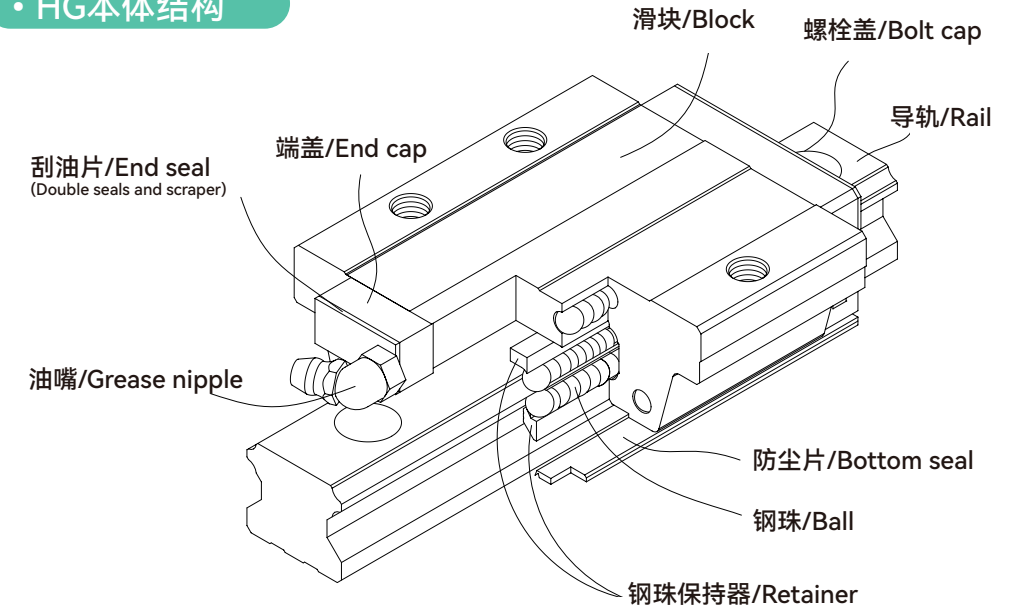
(2) Interchangeability

Because of precision dimensional control, the dimensional tolerance of HG series can be kept in a reasonable range, which means that any blocks and any rails in a specific series can be used together while maintaining dimensional tolerance. And a retainer is added to prevent the balls from falling out when the blocks are removed from the rail.

(3) High rigidity in all four directions

Because of the four-row design, the HG series linear guideway has equal load ratings in the radial, reverse radial and lateral directions. furthermore, the circular-arc groove provides a wide-contact width between the balls and the groove raceway allowing large permissible loads and high rigidity.

• HG本体结构



- 滚动循环系统：滑块、导轨、端盖、钢珠、钢珠保持器
- 润滑系统：油嘴、油管接头
- 防尘系统：刮油片、地面尘封防尘片，导轨螺栓盖，金属刮板

- Rolling circulation system: Block, Rail, End Cap and Retainer
- Lubrication system: Grease Nipple and piping Joint
- Dust protection system: End seal, Bottom seal, Bolt Cap, Double seals and scraper

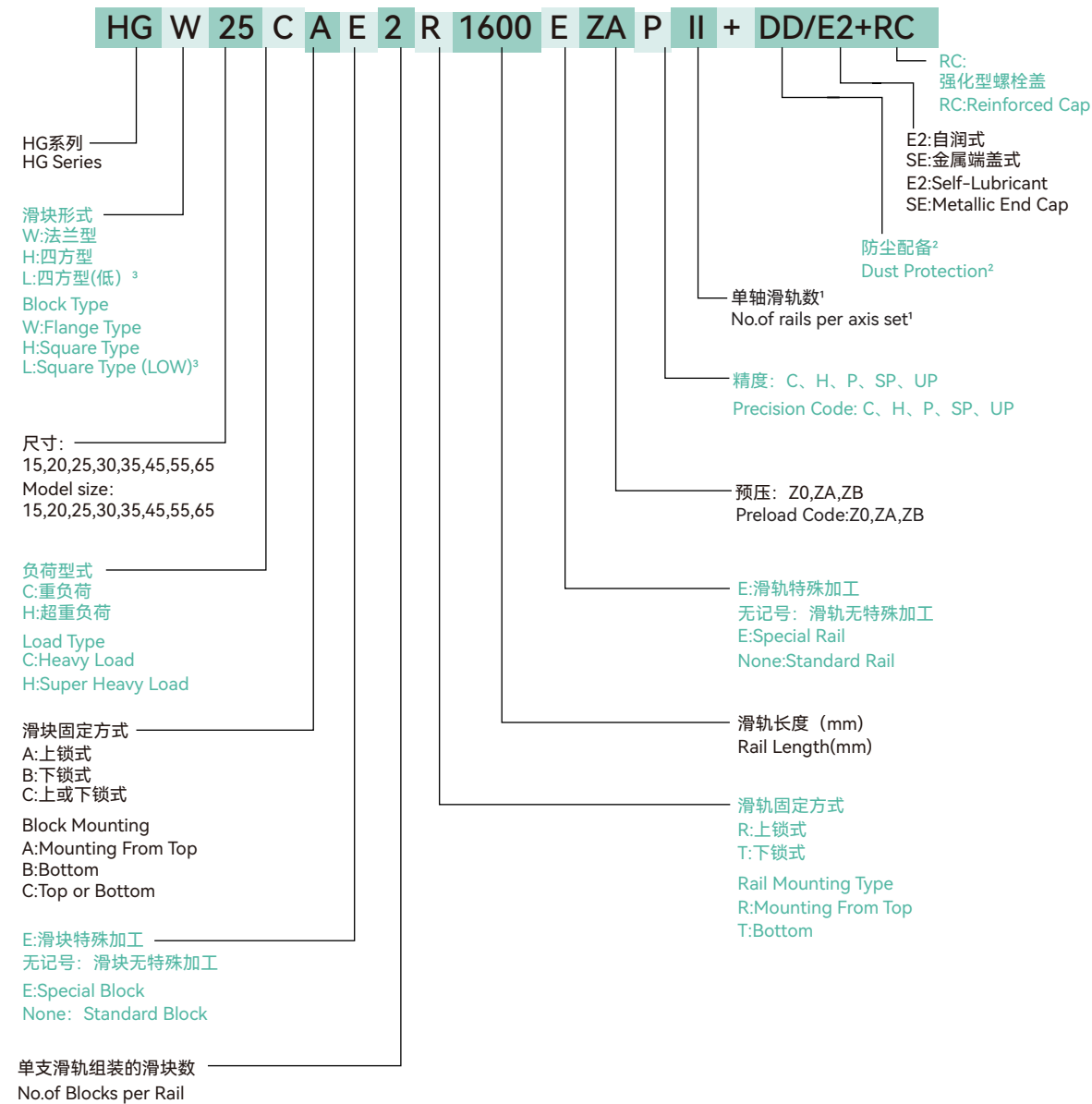
产品规格说明

HG系列分为非互换性及互换性型两种直线导轨，两者规格尺寸相同，主要差异点在于互换性型之滑块、导轨可单出互换使用，较便利，但其组合精度无法达到非互换性型的超高精度，不过由于HXHV在制造上有良好的尺寸控制及严格的品质要求，互换性型的组合精度目前已达到一定的水准，对不需配对安装直线导轨的客户而言，是一项很好的选择。直线导轨的产品规格型号主要标明直线导轨尺寸、型式、精度等级、预压等规格要求，方便订货时双方对产品的确认。

Model Number of HG Series

HG series guideways can be classified into non-interchangeable and interchangeable types. The sizes are identical. The only difference between the two types is that the interchangeable type of blocks and rails can be freely exchanged, and their accuracy can reach up to p class. The model number of HG series contains the size, type, accuracy class, preload class, etc..

(1)非互换性直线导轨产品型号 Non-interchangeable type

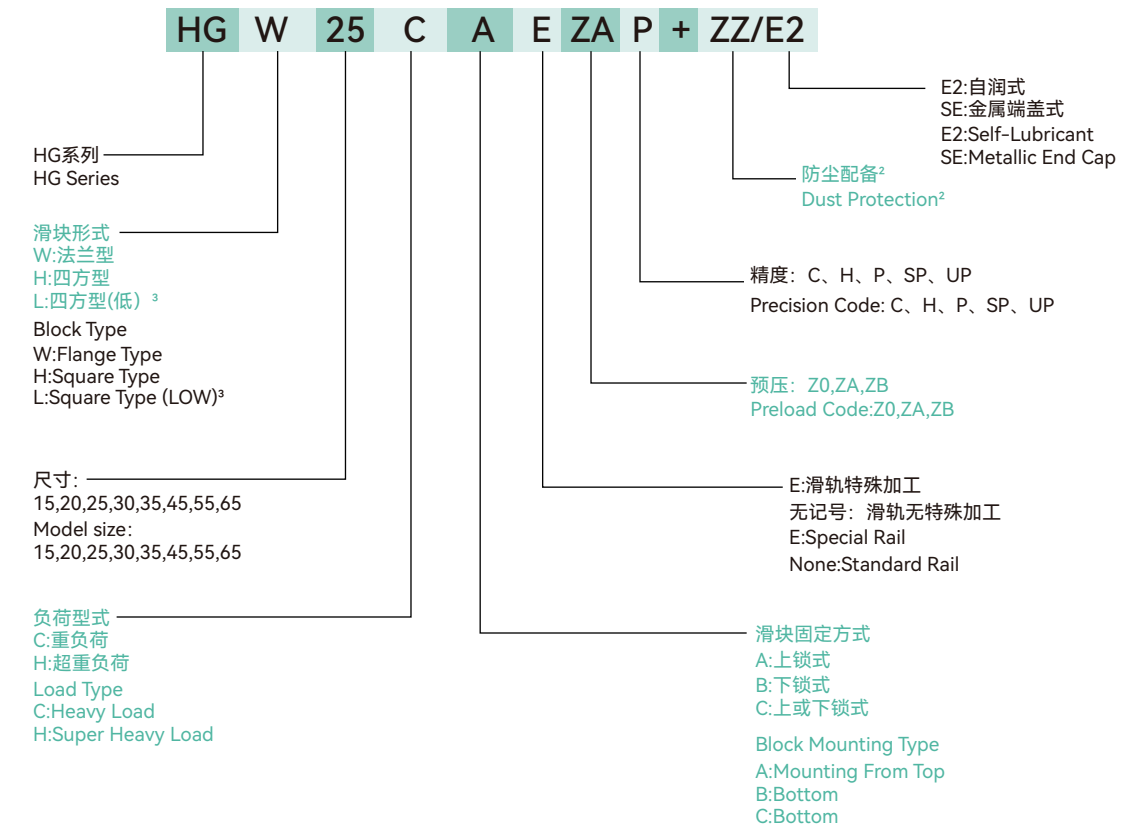


註: 1. 单轴轨道数若只使用一支导轨则不写, 两只标记为II, 三支标记为III, 以此类推。
2. 防尘配备中无记号为防尘标准配备刮油片加防尘片。
ZZ为刮油片加防尘片加金属刮板。
KK为双刮油片加防尘片加金属刮板。
DD为双刮油片加防尘片。
3. 滑块型式L为方形H的低组装式滑块, 其组合高度与同尺寸的法兰型一致。

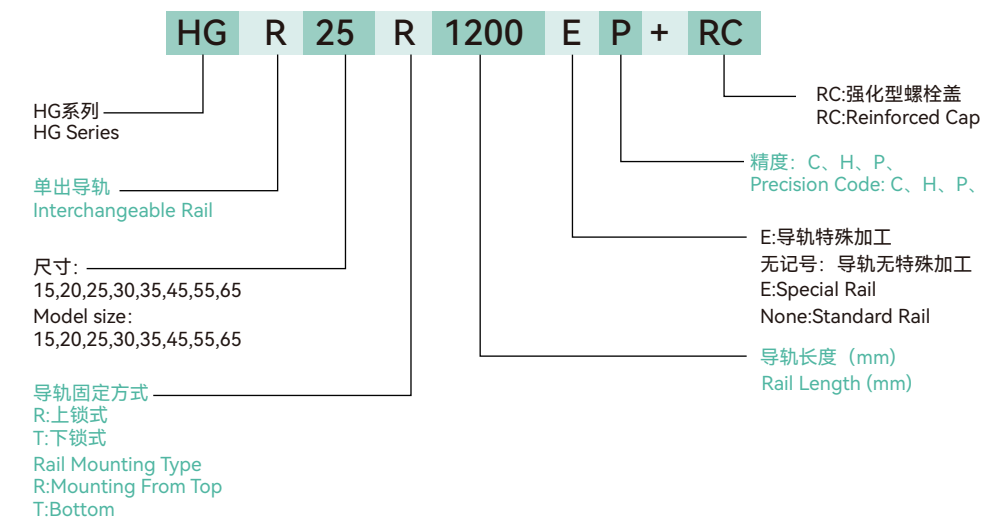
Note: 1. The roman numerals express a matched set of rails.
2. No symbol indicates standard protection (end seal and bottom seal).
ZZ: End seal, bottom seal and scraper
KK: Double seals, bottom seal and scraper.
DD: Double seals and bottom seal
3. Block type HGL is the low profile design of HGH (square type), the assembled height is same as HGW (flange type) in same size.

(2)互换性直线导轨产品型号 Interchangeable type

● 互换型滑块产品型号 Model Number of HG Block



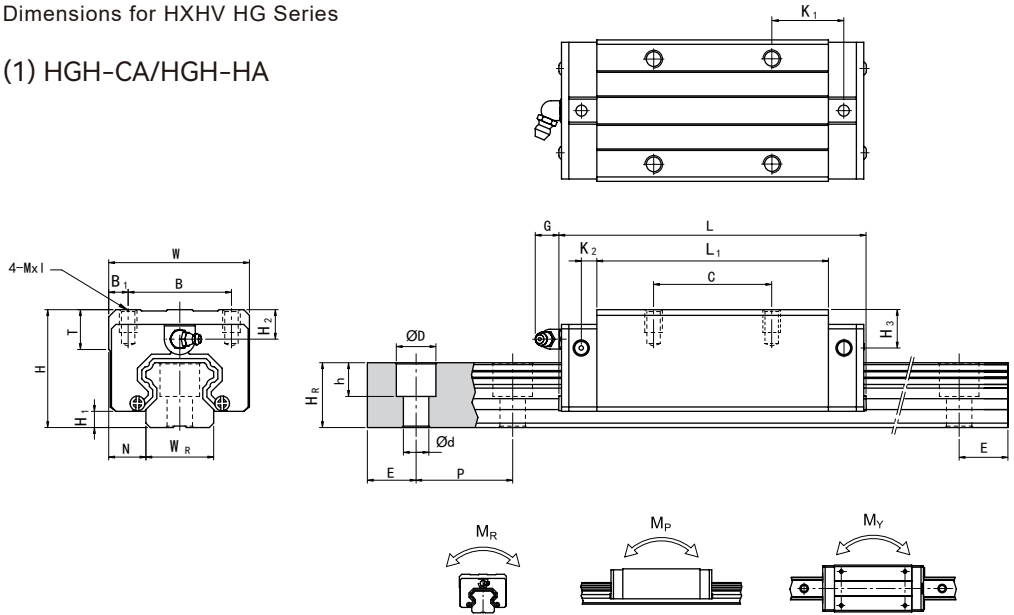
● 互换型导轨产品型号 Model Number of HG Rail



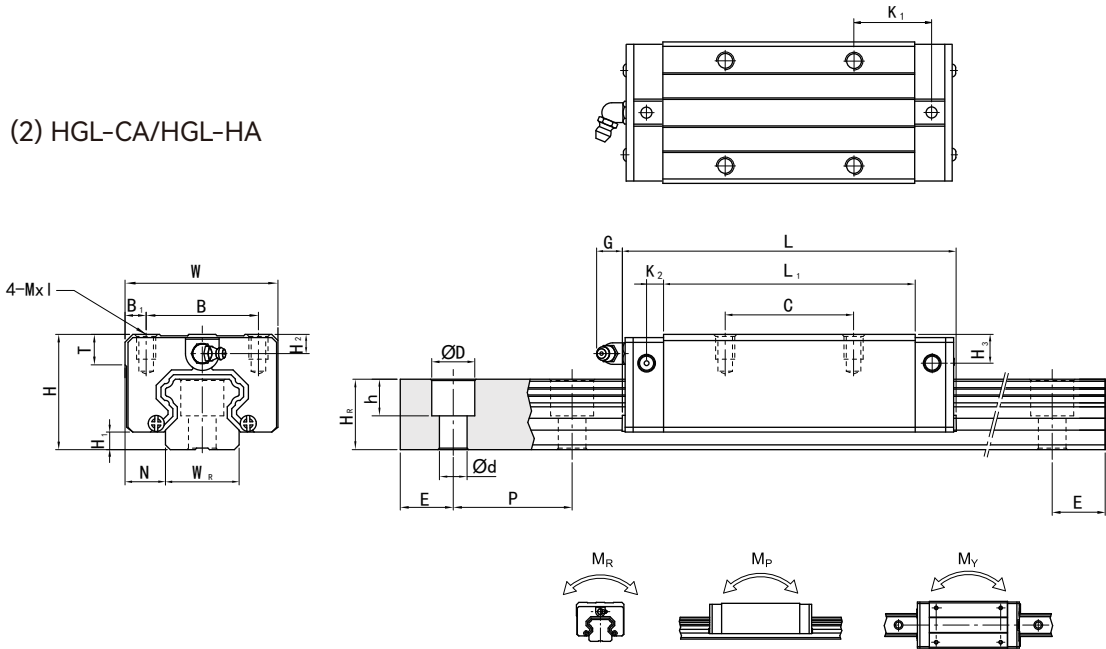
HG系列重负荷型滚珠直线导轨
 HG Series Heavy Load Ball Type

HG系列直线导轨尺寸表
 Dimensions for HXHV HG Series

(1) HGH-CA/HGH-HA



(2) HGL-CA/HGL-HA



型号 Model No.	组件尺寸 Dimensions of Assembly (mm)				滑块尺寸 Dimensions of Block (mm)														导轨尺寸 Dimensions of Rail (mm)										导轨的固定螺栓尺寸 Mounting Bolt for Rail	基本额定负荷 Basic Dynamic Load Rating	基本静额定负荷 Basic Static Load Rating	容许静力矩			重量 Weight	
																																Static Rated Moment				
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	MXI	T	H ₂	H ₃	W _R	H _R	D	h	d	P	E	(mm)	C(kN)	C ₁ (kN)	M _R	M _p	M _v	滑块 Block Kg	导轨 Rail Kg/m					
HGH 15CA	28	4.3	9.5	34	26	4	26	39.4	61.4	10	4.85	5.3	M4x5	6	7.95	7.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.7	23.47	0.12	0.10	0.10	0.18	1.45					
HGH 20CA	30	4.6	12	44	32	6	36	50.5	77.5	12.25	6	12	M5x6	8	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	27.1	36.68	0.27	0.20	0.20	0.30	2.21					
HGH 20HA							50	65.2	92.2	12.6															32.7	47.96	0.35	0.35	0.35	0.39						
HGH 25CA	40	5.5	12.5	48	35	6.5	35	58	84	15.7	6	12	M6x8	8	10	9	23	22	11	9	7	60	20	M6x20	34.9	52.82	0.42	0.33	0.33	0.51	3.21					
HGH 25HA							50	78.6	104.6	18.5															42.2	69.07	0.56	0.57	0.57	0.69						
HGH 30CA	45	6	16	60	40	10	40	70	97.4	20.25	6	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	48.5	71.87	0.66	0.53	0.53	0.88	4.47					
HGH 30HA							60	93	120.4	21.75															58.6	93.99	0.88	0.92	0.92	1.16						
HGH 35CA	55	7.5	18	70	50	10	50	80	112.4	20.6	7	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	64.6	93.88	1.16	0.81	0.81	1.45	6.30					
HGH 35HA							72	105.8	138.2	22.5															77.9	122.77	1.54	1.40	1.40	1.92						
HGH 45CA	70	9.5	20.5	86	60	13	60	97	139.4	23	10	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	103.8	146.71	1.98	1.55	1.55	2.73	10.41					
HGH 45HA							80	128.8	171.2	28.9															125.3	191.85	2.63	2.68	2.68	3.61						
HGH 55CA	80	13	23.5	100	75	12.5	75	117.7	166.7	27.35	11	12.9	M12x18	17.5	22	29	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.17	15.08					
HGH 55HA							95	155.8	204.8	36.4															184.9	276.23	4.88	4.57	4.57	5.49						
HGH 65CA	90	15	31.5	126	76	25	70	144.2	200.2	43.1	14	12.9	M16x20	25	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	7.00	21.18					
HGH 65HA							120	203.6	259.6	47.8															277.8	420.17	9.38	7.38	7.38	9.82						

注:1kgf=9.81N Note:1kgf=9.81N

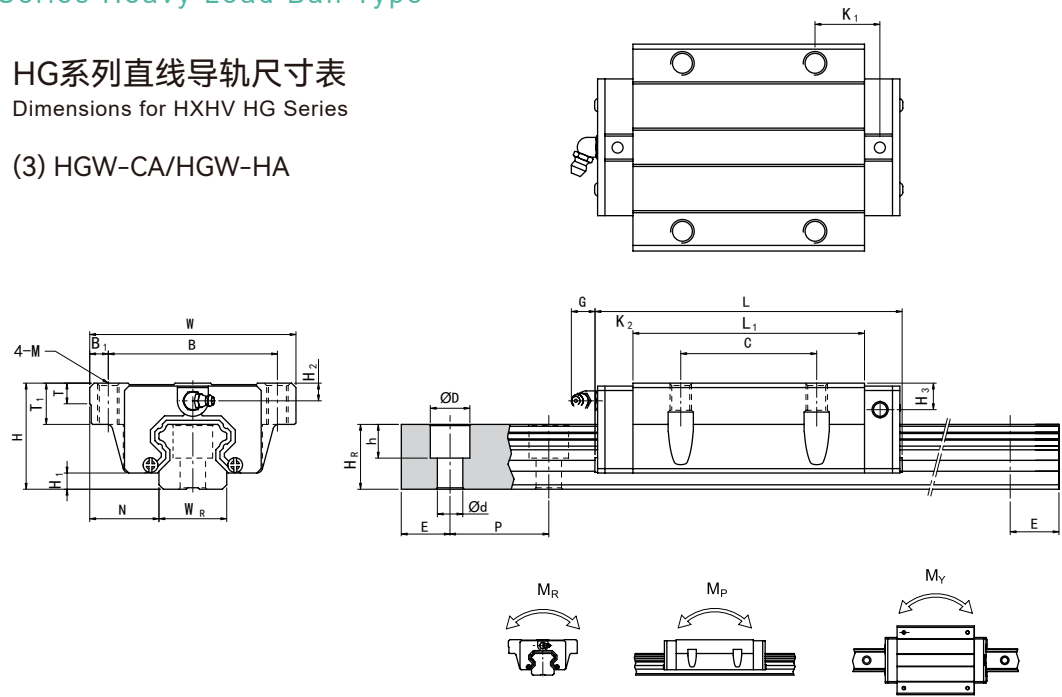
型号 Model No.	组件尺寸 Dimensions of Assembly (mm)			滑块尺寸 Dimensions of Block (mm)																导轨尺寸 Dimensions of Rail (mm)										导轨的 固定螺栓尺寸 Mounting Bolt for Rail	基本 动额定负荷 Basic Dynamic Load Rating	基本 静额定负荷 Basic Static Load Rating	容许静力矩 Static Rated Moment			重量 Weight	
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	MXI	T	H ₂	H ₃	W _R	H _R	D	h	d	P	E	(mm)	C(kN)	C ₀ (kN)	kN·m	kN·m	kN·m				滑块 Block Kg	导轨 Rail Kg/m			
HGL 15CA	24	4.3	9.5	34	26	4	26	39.4	61.4	10	4.85	5.3	M4x4	6	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.7	23.47	0.12	0.10	0.10	0.14	1.45						
HGL 25CA	36	5.5	12.5	48	35	6.5	35	58	84	15.7	6	12	M6x6	8	6	5	23	22	11	9	7	60	20	M6x20	34.9	52.82	0.42	0.33	0.33	0.42	3.21						
HGL 25HA							50	78.6	104.6	18.5															42.2	69.07	0.56	0.57	0.57	0.57							
HGL 30CA	42	6	16	60	40	10	40	70	97.4	20.25	6	12	M8x10	8.5	6.5	10.8	28	26	14	12	9	80	20	M8x25	48.5	71.87	0.66	0.53	0.53	0.78	4.47						
HGL 30HA							60	93	120.4	21.75															58.6	93.99	0.88	0.92	0.92	1.03							
HGL 35CA	48	7.5	18	70	50	10	50	80	112.4	20.6	7	12	M8x12	10.2	9	12.6	34	29	14	12	9	80	20	M8x25	64.6	93.88	1.16	0.81	0.81	1.14	6.30						
HGL 35HA							72	105.8	138.2	22.5															77.9	122.77	1.54	1.40	1.40	1.52							
HGL 45CA	60	9.5	20.5	86	60	13	60	97	139.4	23	10	12.9	M10x17	16	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	103.8	146.71	1.98	1.55	1.55	2.08	10.41						
HGL 45HA							80	128.8	171.2	28.9															125.3	191.85	2.63	2.68	2.68	2.75							
HGL 55CA	70	13	23.5	100	75	12.5	75	117.7	166.7	27.35	11	12.9	M12x18	17.5	12	19	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	3.25	15.08						
HGL 55HA							95	155.8	204.8	36.4															184.9	276.23	4.88	4.57	4.57	4.27							

注:1kgf=9.81N Note:1kgf=9.81N

HG系列重负荷型滚珠直线导轨
HG Series Heavy Load Ball Type

HG系列直线导轨尺寸表
Dimensions for HXHV HG Series

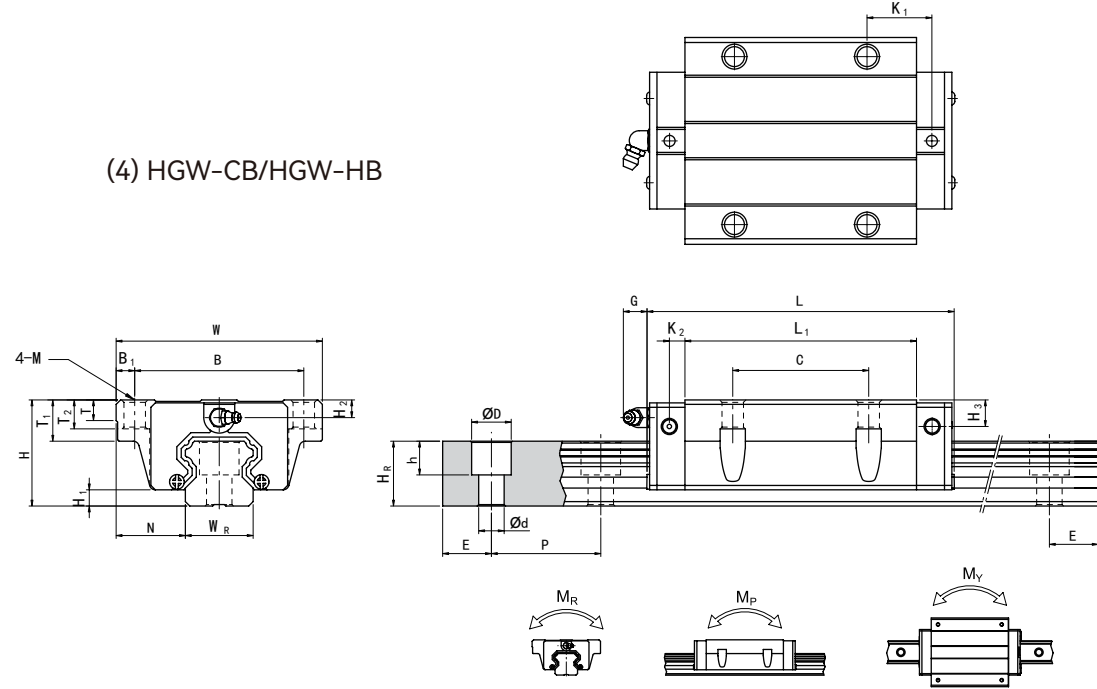
(3) HGW-CA/HGW-HA



型号 Model No.	组件尺寸 Dimensions of Assembly (mm)			滑块尺寸 Dimensions of Block (mm)														导轨尺寸 Dimensions of Rail (mm)							导轨的 固定螺栓尺寸 Mounting Bolt for Rail	基本 动额定负荷 Basic Dynamic Load Rating	基本 静额定负荷 Basic Static Load Rating	容许静力矩 Static Rated Moment			重量 Weight	
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	M	T	T ₁	H ₂	H ₃	W _R	H _R	D	h	d	P	E	(mm)	C(kN)	C ₁ (kN)	kN-m	kN-m	kN-m	滑块 Block Kg	导轨 Rail Kg/m
HGW 15CA	24	4.3	16	47	38	4.5	30	39.4	61.4	8	4.85	5.3	M5	6	8.9	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.7	23.47	0.12	0.10	0.10	0.17	1.45
HGW 20CA	30	4.6	21.5	63	53	5	40	50.5	77.5	10.25	6	12	M6	8	10	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	27.1	36.68	0.27	0.20	0.20	0.40	2.21
HGW 20HA								65.2	92.2	17.6																65.2	92.2	17.6	47.96	0.35	0.35	
HGW 25CA	36	5.5	23.5	70	57	6.5	45	58	84	10.7	6	12	M8	8	14	6	5	23	22	11	9	7	60	20	M6x20	34.9	52.82	0.42	0.33	0.33	0.59	3.21
HGW 25HA								78.6	104.6	21																42.2	69.07	0.56	0.57	0.57	0.80	
HGW 30CA	42	6	31	90	72	9	52	70	97.4	14.25	6	12	M10	8.5	16	6.5	10.8	28	26	14	12	9	80	20	M8x25	48.5	71.87	0.66	0.53	0.53	1.09	4.47
HGW 30HA								93	120.4	25.75																58.6	93.99	0.88	0.92	0.92	1.44	
HGW 35CA	48	7.5	33	100	82	9	62	80	112.4	14.6	7	12	M10	10.1	18	9	12.6	34	29	14	12	9	80	20	M8x25	64.6	93.88	1.16	0.81	0.81	1.56	6.30
HGW 35HA								105.8	138.2	27.5																77.9	122.77	1.54	1.40	1.40	2.06	
HGW 45CA	60	9.5	37.5	120	100	10	80	97	139.4	13	10	12.9	M12	15.1	22	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	103.8	146.71	1.98	1.55	1.55	2.79	10.41
HGW 45HA								128.8	171.2	28.9																125.3	191.85	2.63	2.68	2.68	3.69	
HGW 55CA	70	13	43.5	140	116	12	95	117.7	166.7	17.35	11	12.9	M14	17.5	26.5	12	19	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.52	15.08
HGW 55HA								155.8	204.8	36.4																184.9	276.23	4.88	4.57	4.57	5.96	
HGW 65CA	90	15	53.5	170	142	14	110	144.2	200.2	23.1	14	12.9	M16	25	37.5	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	9.17	21.18
HGW 65HA								203.6	259.6	52.8																277.8	420.17	9.38	7.38	7.38	12.89	

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(4) HGW-CB/HGW-HB



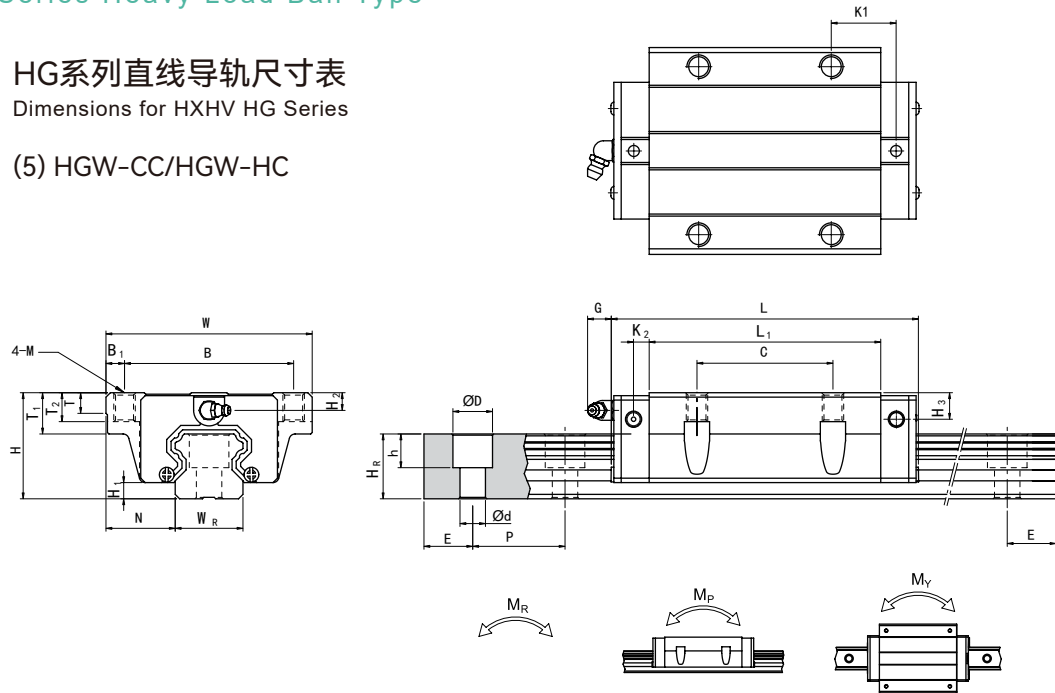
型号 Model No.	组件尺寸 Dimensions of Assembly (mm)			滑块尺寸 Dimensions of Block (mm)													导轨尺寸 Dimensions of Rail (mm)						导轨的 固定螺栓尺寸 Mounting Bolt for Rail	基本 动额定负荷 Basic Dynamic Load Rating	基本 静额定负荷 Basic Static Load Rating	容许静力矩 Static Rated Moment			重量 Weight				
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	M	T	T ₁	T ₂	H ₂	H ₃	W _R	H _R	D	h	d	P	E	(mm)	C(kN)	C ₀ (kN)	M _R	M _p	M _y	滑块 Block Kg	导轨 Rail Kg/m
HGW 15CB	24	4.3	16	47	38	4.5	30	39.4	61.4	8	4.85	5.3	Ø4.5	6	8.9	6.95	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.7	23.47	0.12	0.10	0.10	0.17	1.45
HGW 20CB	30	4.6	21.5	63	53	5	40	50.5	77.5	10.25	6	12	Ø6	8	10	9.5	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	27.1	36.68	0.27	0.20	0.20	0.40	2.21
HGW 20HB								65.2	92.2	17.6																M5x16	32.7	47.96	0.35	0.35	0.35	0.52	
HGW 25CB	36	5.5	23.5	70	57	6.5	45	58	84	10.7	6	12	Ø7	8	14	10	6	5	23	22	11	9	7	60	20	M6x20	34.9	52.82	0.42	0.33	0.33	0.59	3.21
HGW 25HB								78.6	104.6	21																M6x20	42.2	69.07	0.56	0.57	0.57	0.80	
HGW 30CB	42	6	31	90	72	9	52	70	97.4	14.25	6	12	Ø9	8.5	16	10	6.5	10.8	28	26	14	12	9	80	20	M8x25	48.5	71.87	0.66	0.53	0.53	1.09	4.47
HGW 30HB								93	120.4	25.75																M8x25	58.6	93.99	0.88	0.92	0.92	1.44	
HGW 35CB	48	7.5	33	100	82	9	62	80	112.4	14.6	7	12	Ø9	10.1	18	13	9	12.6	34	29	14	12	9	80	20	M8x25	64.6	93.88	1.16	0.81	0.81	1.56	6.30
HGW 35HB								105.8	138.2	27.5																M8x25	77.9	122.77	1.54	1.40	1.40	2.06	
HGW 45CB	60	9.5	37.5	120	100	10	80	97	139.4	13	10	12.9	Ø11	15.1	22	15	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	103.8	146.71	1.98	1.55	1.55	2.79	10.41
HGW 45HB								128.8	171.2	28.9																M12x35	125.3	191.85	2.63	2.68	2.68	3.69	
HGW 55CB	70	13	43.5	140	116	12	95	117.7	166.7	17.35	11	12.9	Ø14	17.5	26.5	17	12	19	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.52	15.08
HGW 55HB								155.8	204.8	36.4																M14x45	184.9	276.23	4.88	4.57	4.57	5.96	
HGW 65CB	90	15	53.5	170	142	14	110	144.2	200.2	23.1	14	12.9	Ø16	25	37.5	23	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	9.17	21.18
HGW 65HB								203.6	259.6	52.8																M16x50	277.8	420.17	9.38	7.38	7.38	12.89	

注:1kgf=9.81N Note:1kgf=9.81N

HG系列重负荷型滚珠直线导轨
HG Series Heavy Load Ball Type

HG系列直线导轨尺寸表
Dimensions for HXHV HG Series

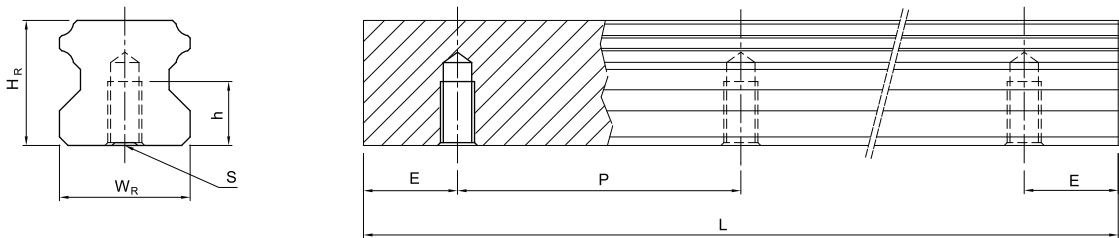
(5) HGW-CC/HGW-HC



型号 Model No.	组件尺寸 Dimensions of Assembly (mm)			滑块尺寸 Dimensions of Block (mm)														导轨尺寸 Dimensions of Rail (mm)										导轨的 固定螺栓尺寸 Mounting Bolt for Rail	基本 动额定负荷 Basic Dynamic Load Rating	基本 静额定负荷 Basic Static Load Rating	容许静力矩 Static Rated Moment			重量 Weight		
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	M	T	T ₁	T ₂	H ₂	H ₃	W _R	H _R	D	h	d	P	E	(mm)	C(kN)				C ₀ (kN)	kN-m	kN-m	kN-m	滑块 Block	导轨 Rail
HGW 15CC	24	4.3	16	47	38	4.5	30	39.4	61.4	8	4.85	5.3	M5	6	8.9	6.95	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.7	23.47	0.12	0.10	0.10	0.17	1.45			
HGW 20CC	30	4.6	21.5	63	53	5	40	50.5	77.5	10.25	6	12	M6	8	10	9.5	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	27.1	36.68	0.27	0.20	0.20	0.40	2.21			
HGW 20HC								65.2	92.2	17.6																										
HGW 25CC	36	5.5	23.5	70	57	6.5	45	58	84	10.7	6	12	M8	8	14	10	6	5	23	22	11	9	7	60	20	M6x20	34.9	52.82	0.42	0.33	0.33	0.59	3.21			
HGW 25HC								78.6	104.6	21																										
HGW 30CC	42	6	31	90	72	9	52	70	97.4	14.25	6	12	M10	8.5	16	10	6.5	10.8	28	26	14	12	9	80	20	M8x25	48.5	71.87	0.66	0.53	0.53	1.09	4.47			
HGW 30HC								93	120.4	25.75																										
HGW 35CC	48	7.5	33	100	82	9	62	80	112.4	14.6	7	12	M10	10.1	18	13	9	12.6	34	29	14	12	9	80	20	M8x25	64.6	93.88	1.16	0.81	0.81	1.56	6.30			
HGW 35HC								105.8	138.2	27.5																										
HGW 45CC	60	9.5	37.5	120	100	10	80	97	139.4	13	10	12.9	M12	15.1	22	15	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	103.8	146.71	1.98	1.55	1.55	2.79	10.41			
HGW 45HC								128.8	171.2	28.9																										
HGW 55CC	70	13	43.5	140	116	12	95	117.7	166.7	17.35	11	12.9	M14	17.5	26.5	17	12	19	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.52	15.08			
HGW 55HC								155.8	204.8	36.4																										
HGW 65CC	90	15	53.5	170	142	14	110	144.2	200.2	23.1	14	12.9	M16	25	37.5	23	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	9.17	21.18			
HGW 65HC								203.6	259.6	52.8																										

注:1kgf=9.81N Note:1kgf=9.81N

(6) HGR-T 下锁式导轨尺寸表
(6) Dimesions for HGR-T (Rail Mounting from Bottom)



型号 Model No.	导轨尺寸 Dimensions of Rail (mm)						重量 Weight
	W _R	H _R	S	h	p	E	
HGR15T	15	15	M5 x 0.8P	8	60	20	1.48
HGR20T	20	17.5	M6 x 1P	10	60	20	2.29
HGR25T	23	22	M6 x 1P	12	60	20	3.35
HGR30T	28	26	M8 x 1.25P	15	80	20	4.67
HGR35T	34	29	M8x1.25P	17	80	20	6.51
HGR45T	45	38	M12 x 1.75P	24	105	222.5	10.87
HGR55T	53	44	M14 x 2P	24	120	230	15.67
HGR65T	63	53	M20 x 2.5P	30	150	235	21.73

注:1kgf=9.81N Note:1kgf=9.81N