

# Linear Guideways

## IG Type

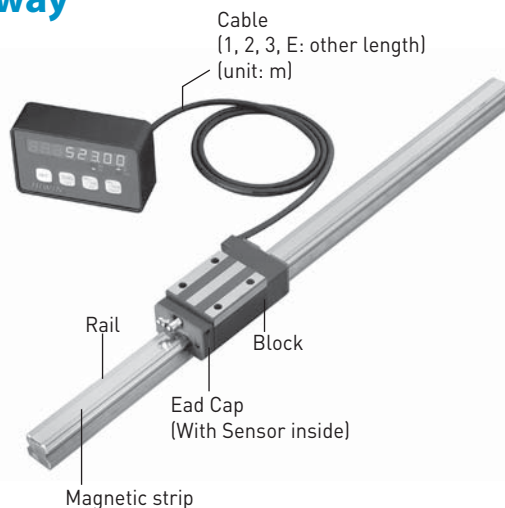
### 2-6 IG Series - Intelligent Linear Guideway

#### (1) Construction of IG series

IG is a Linear Guideway assembly integrated with a position measurement magnetic encoder.

#### (2) HIWIN IG Features

1. The additional components are completely internal, thus saving installation space.
2. Maintains high rigidity as well as high accuracy.
3. Both sensor and magnetic strip are protected from externally harmful contaminants such as dust, iron chips, etc.
4. Non-contact measuring sensor can achieve longer life.
5. Can measure distances up to 30 m.
6. Can withstand humid, and high-temperature environments in oily, dusty, and high vibration applications.
7. High resolution
8. Easy to install



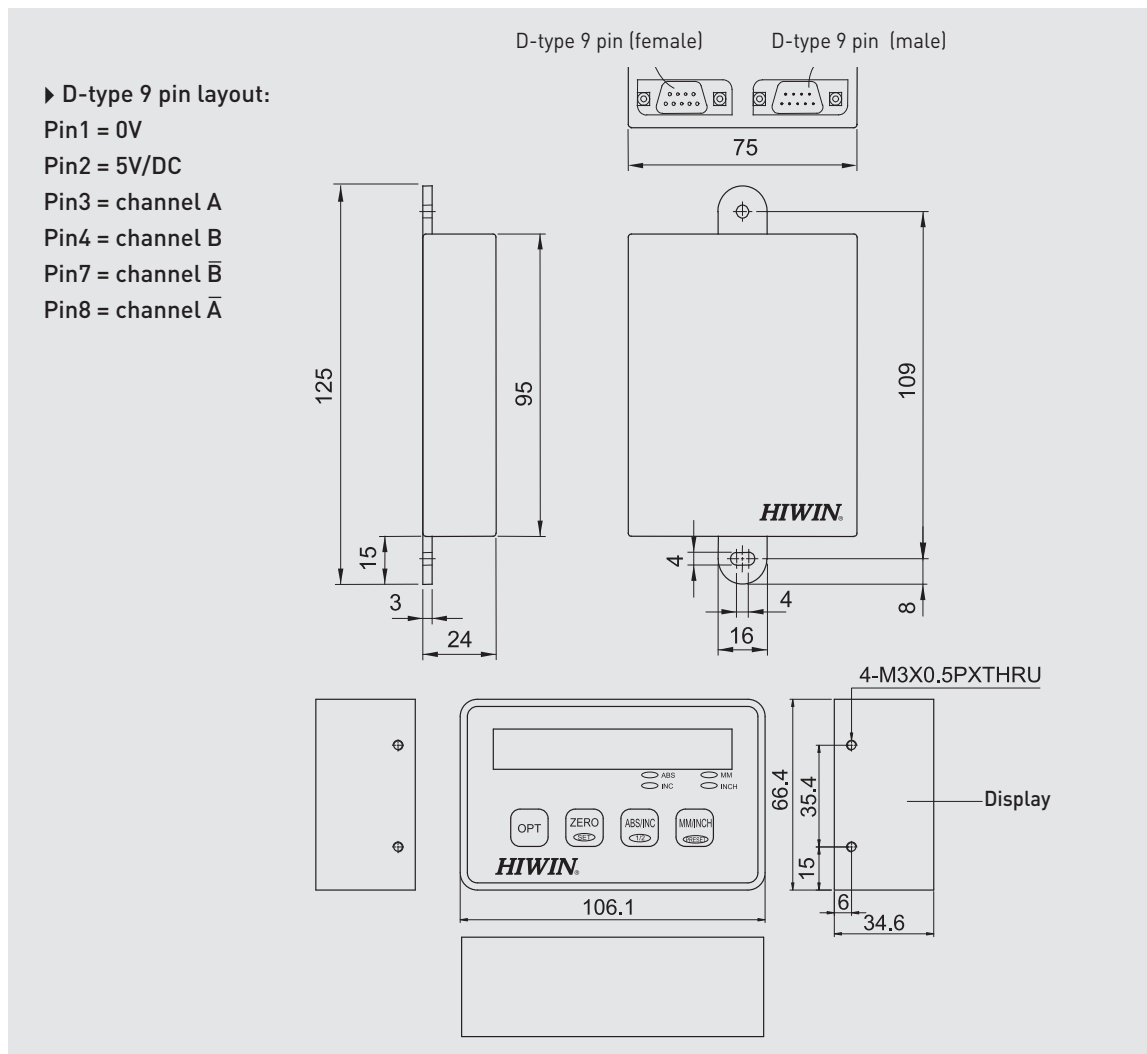
#### 2-6-1 Model Number of IG series

<b>IGH</b>	<b>W</b>	<b>25</b>	<b>C</b>	<b>A</b>	<b>E</b>	<b>1/2</b>	<b>T</b>	<b>1600</b>	<b>E</b>	<b>ZA</b>	<b>P</b>	<b>I/II/E2</b>	<b>+KK</b>	<b>+03</b>	<b>+□□</b>
Intelligent Guideway Series : IGH	Block Type : W : Flange Type H : Square Type	Model Size : 20, 25, 30, 35, 45, 55	Load Type : S : Medium Load C : Heavy Load H : Super Heavy Load	Block Mounting Type : A : From Top B : From Bottom C : Top or Bottom	E : Special Block None : Standard Block	No. of Blocks per Axis	Rail Mounting Type : R : From Top T : From Bottom	Rail Length (mm)	E : Special Rail None : Standard Rail	Preload Code : Z0, ZA, ZB	Precision Code : C, H, P	No. of Rails with Magnetic Strip	No. of Rails per Axis	E2 : Self Lubricant Block Blank: Standard Block	Dustproof : DD, ZZ, KK
															<b>D P = Display (Option)</b> <b>1 2 = Signal Translator</b>  Output Signal Type: 1:5V input, TTL output 2:24V input, O.C. output  Resolution: 1=5μm 2=10μm  Cable Length : 01=1m; 02=2m 03=3m; 10=10m

## 2-6-2 Technical Data of IG series

Table 2.68

Item	Specifications	
	Display	Signal Translator
Measuring length	Max. 10M (option: Max. 30M)	Max. 10M (option: Max. 30M)
Resolution (μm)	5	5/10
Accuracy (μm)	± (80+15×L) , L: Scale length unit(m)	± (80+15×L) , L: Scale length unit(m)
Repeatability (μm)	±10 μ / m	±10 μ / m
Max. velocity (m/sec)	3 (Acc. 2G)	1.2 (Acc. 1G)
Output pulse signals	-	A, B phase differential , O.C
Max. output frequency (KHZ)	-	64/ 32 (at resolution: 5/10μm)
Power input	DC5V ±5% / 1A	DC5V ±5% / 1A
Operating temperature(°C)	0 ~ 50	0 ~ 50
Storage temperature(°C)	-5 ~ 70	-5 ~ 70
IP Class	Scale / Sensor: IP66, Display : IP43	Scale / Sensor: IP66, Display : IP43



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### 2-6-3 Accuracy Classes

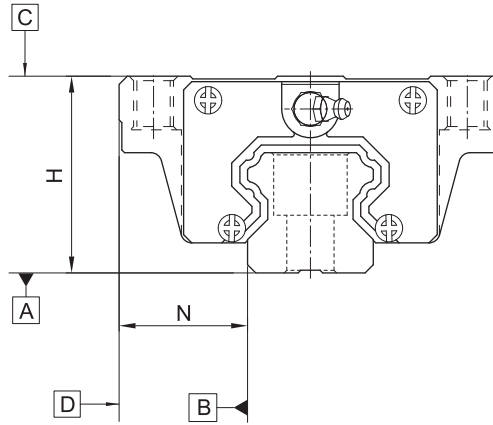
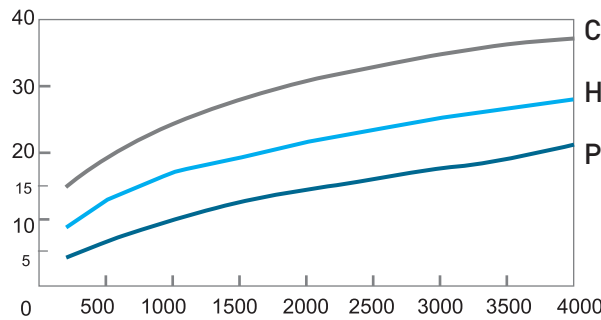


Table 2.69 For example: IGH 25, 30, 35

Unit: mm

Accuracy Classes	Normal (C)	High (H)	Precision (P)
Dimensional tolerance of height H	± 0.1	± 0.04	0 -0.04
Dimensional tolerance of width N	± 0.1	± 0.04	0 -0.04
Pair Variation of height H	0.02	0.015	0.007
Pair Variation of width N (Master Rail)	0.03	0.015	0.007
Running parallelism of block surface C to surface A	See chart below		
Running parallelism of block surface D to surface B	See chart below		

#### Running parallelism of the guideway



### 2-6-4 Preload

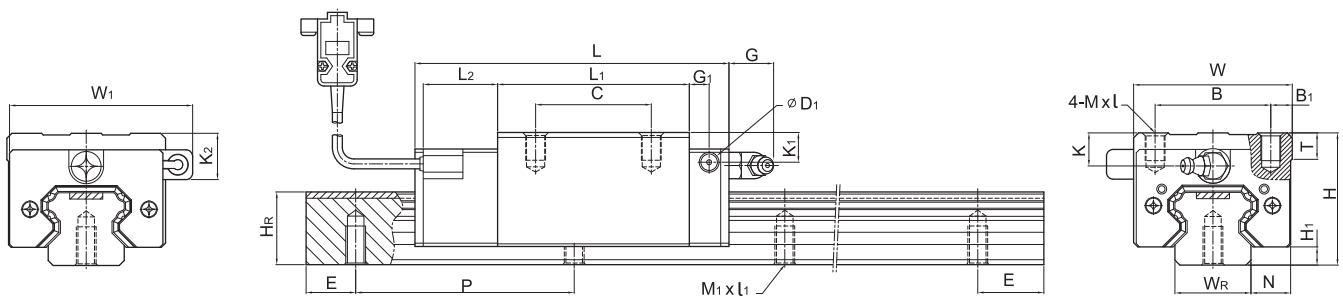
Table 2.70 IGH-series

Class	Code	Preload
Light Preload	Z0	0~0.02C
Medium Preload	ZA	0.05C~0.07C
Heavy Preload	ZB	0.10C~0.12C

Note: "C" in column preload means basic dynamic load rating.

## 2-6-5 Dimensions for IG Series

### (1) IGHH-CA/IGHH-HA



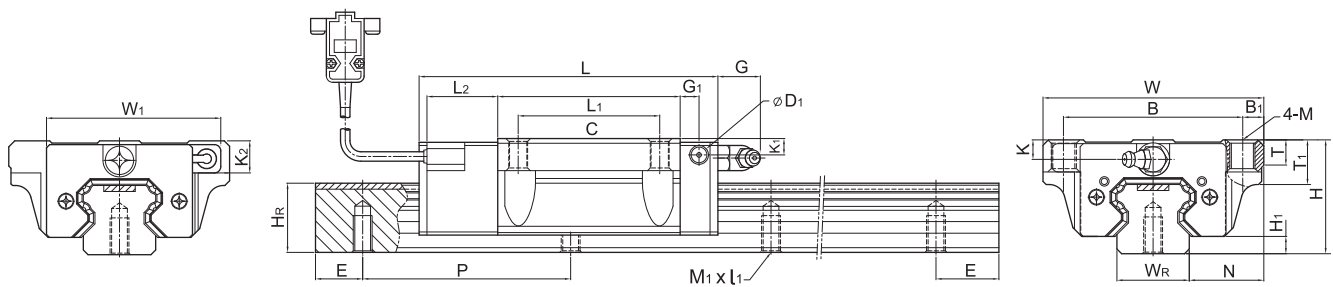
Model No.	Dimensions of Assembly (mm)				Dimensions of Block (mm)														Dimensions of Rail (mm)					Basic Dynamic Load Rating	Basic Static Load Rating	Weight			
	H	H <sub>1</sub>	N	W	W <sub>1</sub>	B	B <sub>1</sub>	C	L	L <sub>1</sub>	L <sub>2</sub>	G	G <sub>1</sub>	D <sub>1</sub>	K	K <sub>1</sub>	K <sub>2</sub>	MxL	T	W <sub>R</sub>	H <sub>R</sub>	M <sub>1</sub> xL <sub>1</sub>	P			E	C (kN)	C <sub>0</sub> (kN)	Block
	kg	kg/m																											
IGHH20CA	30	4.6	12	44	52	32	6	36	90.5	50.5	25	12	6	5	6	7	11	M5x6	8	20	17.5	17.5	M6x10	60	20	17.75	37.84	0.38	2.21
IGHH20HA	50	105	65.2	21.18	48.84	0.39																							
IGHH25CA	40	5.5	12.5	48	55.4	35	6.5	35	95	58	22.5	12	6	5	10	13	18	M6x8	8	23	22	M6x12	60	20	26.48	56.19	0.51	3.21	
IGHH25HA								50	116	78.6																	32.75		76.00
IGHH30CA	45	6	16	60	67	40	10	40	110	70	23	12	6	5	9.5	13.8	19	M8x10	8.5	28	26	M8x15	80	20	38.74	83.06	0.88	4.47	
IGHH30HA								60	133	93																	47.27		110.13
IGHH35CA	55	7.5	18	70	77	50	10	50	123	80	23.4	12	7	5	16	19.6	23.5	M8x12	10.2	34	29	M8x17	80	20	49.52	102.87	1.45	6.30	
IGHH35HA								72	149	106																	60.21		136.31
IGHH45CA	70	9.5	20.5	86	91	60	13	60	148	97	26	12.9	10	8.5	18.5	30.5	30.5	M10x17	16	45	38	M12x24	105	22.5	77.57	155.93	2.73	10.41	
IGHH45HA								80	180	129																	94.54		207.12
IGHH55CA	80	13	23.5	100	106	75	12.5	75	173	118	26	12.9	11	8.5	22	29	28.5	M12x18	17.5	53	44	M14x25	120	30	114.44	227.81	4.17	15.08	
IGHH55HA								95	198	143																	139.35		301.26

Note : 1 kgf = 9.81 N

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### (2) IGHW-CA / IGHW-HA



Model No.	Dimensions of Assembly (mm)									Dimensions of Block (mm)											Dimensions of Rail (mm)					Basic Dynamic Load Rating	Basic Static Load Rating	Weight		
	H	H <sub>1</sub>	N	W	W <sub>1</sub>	B	B <sub>1</sub>	C	L	L <sub>1</sub>	L <sub>2</sub>	G	G <sub>1</sub>	D <sub>1</sub>	M	K	K <sub>1</sub>	K <sub>2</sub>	T	T <sub>1</sub>	W <sub>R</sub>	H <sub>R</sub>	M <sub>1</sub> x <sub>l<sub>1</sub></sub>	P	E			C (kN)	C <sub>0</sub> (kN)	Block
	kg	kg/m																												
IGHW20CA	30	4.6	21.5	63	52	53	5	40	90.5	50.5																	17.75	37.84	0.40	2.21
IGHW20HA									105	65.2	25	12	6	5	M6	6	7	11	8	10	20	17.5	M6x10	60	20	21.18	48.84	0.52		
IGHW25CA	36	5.5	23.5	70	55.4	57	6.5	45	95	58																26.48	56.19	0.59	3.21	
IGHW25HA									116	78.6	22.5	12	6	5	M8	6	9	14	8	14	23	22	M6x12	60	20	32.75	76.00	0.80		
IGHW30CA	42	6	31	90	67	72	9	52	110	70																38.74	83.06	1.09	4.47	
IGHW30HA									133	93	23	12	6	5	M10	6.5	10.8	16	8.5	16	28	26	M8x15	80	20	47.27	110.13	1.44		
IGHW35CA	48	7.5	33	100	77	82	9	62	123	80																49.52	102.87	1.56	6.30	
IGHW35HA									149	106	23.4	12	7	5	M10	9	12.6	16.5	10.1	18	34	29	M8x17	80	20	60.21	136.31	2.06		
IGHW45CA	60	9.5	37.5	120	91	100	10	80	148	97																77.57	155.93	2.79	10.41	
IGHW45HA									180	129	26	12.9	10	8.5	M12	8.5	20	20	15.1	22	45	38	M12x24	105	22.5	94.54	207.12	3.69		
IGHW55CA	70	13	43.5	140	106	116	12	95	173	118																114.44	227.81	4.52	15.08	
IGHW55HA									198	143	26	12.9	11	8.5	M14	12	19	18.5	17.5	26.5	53	44	M14x25	120	30	139.35	301.26	5.96		

Note : 1 kgf = 9.81 N