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**LINEAR  
GUIDEWAY**

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## Ball type linear guide

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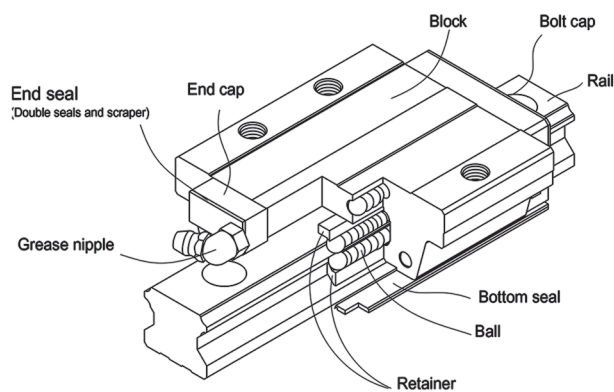
## Reference for Linear Guide Brands

| ROBO-TECH | HIWIN   | THK        | PMI        | TBI     | INA       |
|-----------|---------|------------|------------|---------|-----------|
| SGH15CA   | HGH15CA | HSR15R     | MSA15S     | TRH15VN | KUVE15BH  |
| SGH20CA   | HGH20CA | HSR20R     | MSA20S     | TRH20VN | KUVE20BH  |
| SGH25CA   | HGH25CA | HSR25R     | MSA25S     | TRH25VN | KUVE25BH  |
| SGH30CA   | HGH30CA | HSR30R     | MSA30S     | TRH30VN | KUVE30BH  |
| SGH35CA   | HGH35CA | HSR35R     | MSA35S     | TRH35VN | KUVE35BH  |
| SGH45CA   | HGH45CA | HSR45R     | MSA45S     | TRH45VN | KUVE45BH  |
| SGH55CA   | HGH55CA | HSR55R     | MSA55S     | TRH55VL | KUVE55BH  |
| SGH65CA   | HGH65CA | HSR65R     | MSA65S     | TRH65VL | KUVE65BH  |
|           |         |            |            |         |           |
| SGH20HA   | HGH20HA | HSR20LR    | MSA20LS    | TRH20VE | KUVE20BHL |
| SGH25HA   | HGH25HA | HSR25LR    | MSA25LS    | TRH25VE | KUVE25BHL |
| SGH30HA   | HGH30HA | HSR30LR    | MSA30LS    | TRH30VE | KUVE30BHL |
| SGH35HA   | HGH35HA | HSR35LR    | MSA35LS    | TRH35VE | KUVE35BHL |
| SGH45HA   | HGH45HA | HSR45LR    | MSA45LS    | TRH45VE | KUVE45BHL |
| SGH55HA   | HGH55HA | HSR55LR    | MSA55LS    | TRH55VE | KUVE55BHL |
| SGH65HA   | HGH65HA | HSR65LR    | MSA65LS    | TRH65VE | KUVE65BHL |
|           |         |            |            |         |           |
| SGW15CC   | HGW15CC | HSR15A/B   | MSA15E/A   | TRH15FN | KUVE15B   |
| SGW20CC   | HGW20CC | HSR20A/B   | MSA20E/A   | TRH20FN | KUVE20B   |
| SGW25CC   | HGW25CC | HSR25A/B   | MSA25E/A   | TRH25FN | KUVE25B   |
| SGW30CC   | HGW30CC | HSR30A/B   | MSA30E/A   | TRH30FN | KUVE30B   |
| SGW35CC   | HGW35CC | HSR35A/B   | MSA35E/A   | TRH35FN | KUVE35B   |
| SGW45CC   | HGW45CC | HSR45A/B   | MSA45E/A   | TRH45FN | KUVE45B   |
| SGW55CC   | HGW55CC | HSR55A/B   | MSA55E/A   | TRH55FN | KUVE55B   |
| SGW65CC   | HGW65CC | HSR65A/B   | MSA65E/A   | TRH65FN | KUVE65B   |
|           |         |            |            |         |           |
| SGW20HC   | HGW20HC | HSR20LA/LB | MSA20LE/LA | TRH20FE | KUVE20BL  |
| SGW25HC   | HGW25HC | HSR25LA/LB | MSA25LE/LA | TRH25FE | KUVE25BL  |
| SGW30HC   | HGW30HC | HSR30LA/LB | MSA30LE/LA | TRH30FE | KUVE30BL  |
| SGW35HC   | HGW35HC | HSR35LA/LB | MSA35LE/LA | TRH35FE | KUVE35BL  |
| SGW45HC   | HGW45HC | HSR45LA/LB | MSA45LE/LA | TRH45FE | KUVE45BL  |
| SGW55HC   | HGW55HC | HSR55LA/LB | MSA55LE/LA | TRH55FE | KUVE55BL  |
| SGW65HC   | HGW65HC | HSR65LA/LB | MSA65LE/LA | TRH65FE | KUVE65BL  |
|           |         |            |            |         |           |
| GGH25CA   | RGH25CA | SRG25R     | MSR25S     | R1821-2 | RUE25EH   |
| GGH30CA   | RGH30CA | SRG30R     | MSR30S     |         | RUE30EH   |
| GGH35CA   | RGH35CA | SRG35R     | MSR35S     | R1821-3 | RUE35EH   |
| GGH45CA   | RGH45CA | SRG45R     | MSR45S     | R1821-4 | RUE45EH   |
| GGH55CA   | RGH55CA | SRG55R     | MSR55S     | R1821-5 | RUE55EH   |
| GGH65CA   | RGH65CA | SRG65R     | MSR65S     | R1821-6 | RUE65EH   |
|           |         |            |            |         |           |
| GGH25HA   | RGH25HA | SRG25LR    | MSR25LS    | R1824-2 | RUE25EHL  |
| GGH30HA   | RGH30HA | SRG30LR    | MSR30LS    |         | RUE30EHL  |
| GGH35HA   | RGH35HA | SRG35LR    | MSR35LS    | R1824-3 | RUE35EHL  |
| GGH45HA   | RGH45HA | SRG45LR    | MSR45LS    | R1824-4 | RUE45EHL  |
| GGH55HA   | RGH55HA | SRG55LR    | MSR55LS    | R1824-5 | RUE55EHL  |
| GGH65HA   | RGH65HA | SRG65LR    | MSR65LS    |         | RUE65EHL  |
|           |         |            |            |         |           |
| GGW25CC   | RGW25CC | SRG25C     | MSR25E     | R1851-2 | RUE25E    |
| GGW30CC   | RGW30CC | SRG30C     | MSR30E     |         | RUE30E    |
| GGW35CC   | RGW35CC | SRG35C     | MSR35E     | R1851-3 | RUE35E    |
| GGW45CC   | RGW45CC | SRG45C     | MSR45E     | R1851-4 | RUE45E    |
| GGW55CC   | RGW55CC | SRG55C     | MSR55E     | R1851-5 | RUE55E    |
| GGW65CC   | RGW65CC | SRG65C     | MSR65E     | R1851-6 | RUE65E    |
|           |         |            |            |         |           |
| GGW25HC   | RGW25HC | SRG25LC    | MSR25LE    | R1853-2 | RUE25EL   |
| GGW30HC   | RGW30HC | SRG30LC    | MSR30LE    |         | RUE30EL   |
| GGW35HC   | RGW35HC | SRG35LC    | MSR35LE    | R1853-3 | RUE35EL   |
| GGW45HC   | RGW45HC | SRG45LC    | MSR45LE    | R1853-4 | RUE45EL   |
| GGW55HC   | RGW55HC | SRG55LC    | MSR55LE    | R1853-5 | RUE55EL   |
| GGW65HC   | RGW65HC | SRG65LC    | MSR65LE    | R1853-6 | RUE65EL   |

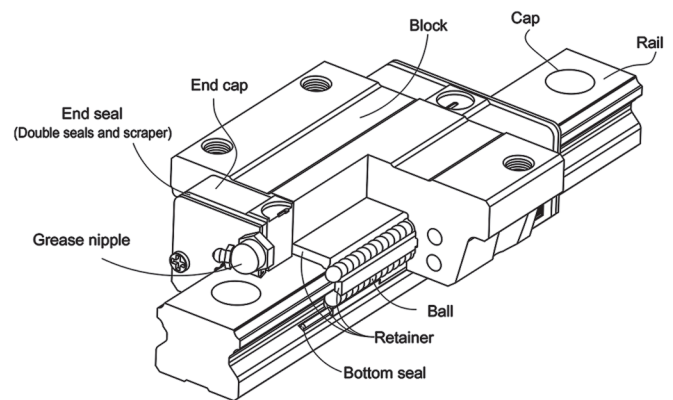
## Characteristics

SG and DG series linear guides use recirculating balls running in circular-arc raceways. Designed for heavy loads, high precision and high-speed linear motion, they provide resistance to torque and are suitable for automation equipment, machine tools, industrial robots and other applications.

### SG Series



### DG Series



## Features

High rigidity

High accuracy

High speed

Long lifetime

Easy lubrication

Easy installation

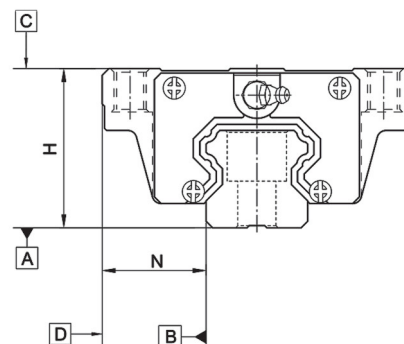
Self alignment capability

Interchangeability



## Accuracy classes

SG and DG series guideways are available in accuracy classes from Normal to Ultra Precision. Select the class according to the accuracy requirements of the application.



### (1) Accuracy of non-interchangeable guideways

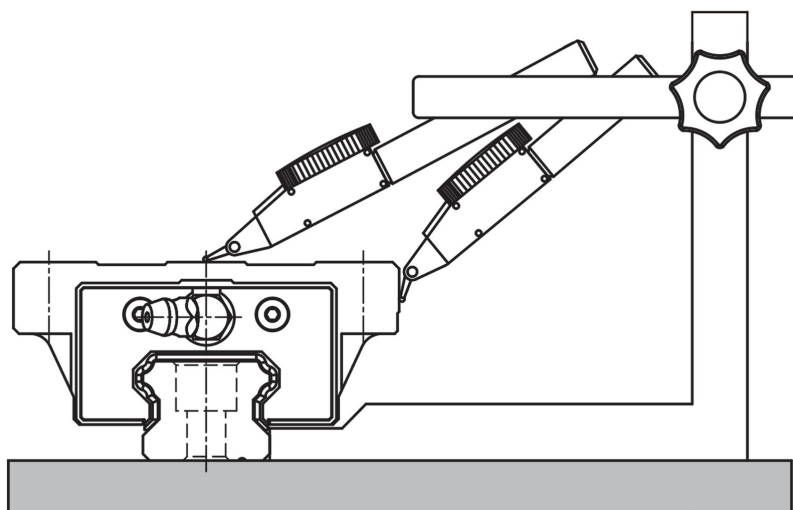
Unit:mm

| Model      | Item                              | Accuracy Classes |          |               |                      |                      |
|------------|-----------------------------------|------------------|----------|---------------|----------------------|----------------------|
|            |                                   | Normal (C)       | High (H) | Precision (P) | Super Precision (SP) | Ultra Precision (UP) |
| SG15/20    | Dimensional tolerance of height H | ±0.1             | ±0.03    | 0-0.03        | 0-0.015              | 0-0.008              |
|            | Dimensional tolerance of width N  | ±0.1             | ±0.03    | 0-0.03        | 0-0.015              | 0-0.008              |
| DG15/20    | Variation of height H             | 0.02             | 0.01     | 0.006         | 0.004                | 0.003                |
|            | Variation of width N              | 0.02             | 0.01     | 0.006         | 0.004                | 0.003                |
| SG25/30/35 | Dimensional tolerance of height H | ±0.1             | ±0.04    | 0-0.04        | 0-0.02               | 0-0.001              |
|            | Dimensional tolerance of width N  | ±0.1             | ±0.04    | 0-0.04        | 0-0.02               | 0-0.001              |
| DG25/30    | Variation of height H             | 0.02             | 0.015    | 0.007         | 0.005                | 0.003                |
|            | Variation of width N              | 0.03             | 0.015    | 0.007         | 0.005                | 0.003                |
| SG45/55    | Dimensional tolerance of height H | ±0.1             | ±0.05    | 0-0.05        | 0-0.03               | 0-0.02               |
|            | Dimensional tolerance of width N  | ±0.1             | ±0.05    | 0-0.05        | 0-0.03               | 0-0.02               |
|            | Variation of height H             | 0.03             | 0.015    | 0.007         | 0.005                | 0.003                |
|            | Variation of width N              | 0.03             | 0.02     | 0.01          | 0.007                | 0.005                |
| SG65       | Dimensional tolerance of height H | ±0.1             | ±0.07    | 0-0.07        | 0-0.05               | 0-0.03               |
|            | Dimensional tolerance of width N  | ±0.1             | ±0.07    | 0-0.07        | 0-0.05               | 0-0.03               |
|            | Variation of height H             | 0.03             | 0.02     | 0.01          | 0.007                | 0.005                |
|            | Variation of width N              | 0.03             | 0.025    | 0.015         | 0.01                 | 0.007                |

**(2)Accuracy of interchangeable guideways**

Unit:mm

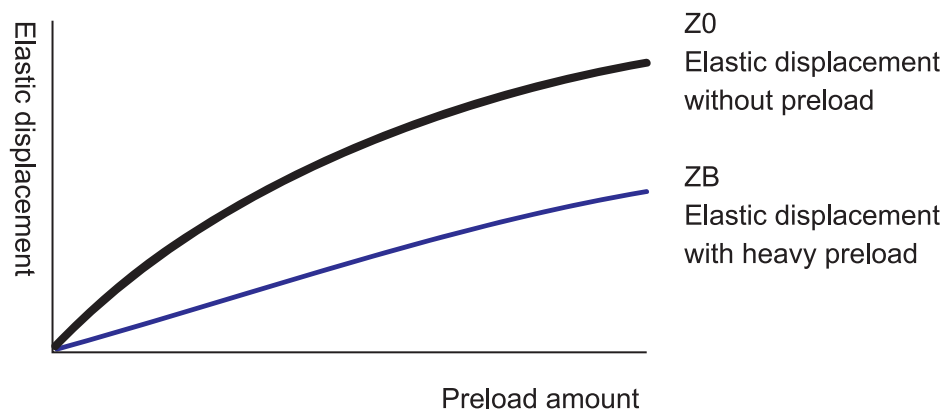
| Model                 | Item                              | Accuracy Classes |          |               |
|-----------------------|-----------------------------------|------------------|----------|---------------|
|                       |                                   | Normal (C)       | High (H) | Precision (P) |
| SG15/20<br>DG15/20    | Dimensional tolerance of height H | ±0.1             | ±0.03    | ±0.015        |
|                       | Dimensional tolerance of width N  | ±0.1             | ±0.03    | ±0.015        |
|                       | Variation of height H             | 0.02             | 0.01     | 0.006         |
|                       | Variation of width N              | 0.02             | 0.01     | 0.006         |
| SG25/30/35<br>DG25/30 | Dimensional tolerance of height H | ±0.1             | ±0.04    | ±0.02         |
|                       | Dimensional tolerance of width N  | ±0.1             | ±0.04    | ±0.02         |
|                       | Variation of height H             | 0.02             | 0.015    | 0.007         |
|                       | Variation of width N              | 0.03             | 0.015    | 0.007         |
| SG45/55               | Dimensional tolerance of height H | ±0.1             | ±0.05    | ±0.025        |
|                       | Dimensional tolerance of width N  | ±0.1             | ±0.05    | ±0.025        |
|                       | Variation of height H             | 0.03             | 0.015    | 0.007         |
|                       | Variation of width N              | 0.03             | 0.02     | 0.01          |
| SG65                  | Dimensional tolerance of height H | ±0.1             | ±0.07    | ±0.035        |
|                       | Dimensional tolerance of width N  | ±0.1             | ±0.07    | ±0.035        |
|                       | Variation of height H             | 0.03             | 0.02     | 0.01          |
|                       | Variation of width N              | 0.03             | 0.025    | 0.015         |

**(3)Accuracy of running parallelism**

| Rail Length (mm) | Accuracy (um) |    |    |    |    |
|------------------|---------------|----|----|----|----|
|                  | C             | H  | P  | SP | UP |
| 0 ~ 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 ~ 1,100      | 24            | 16 | 9  | 6  | 3  |
| 1,100 ~ 1,500    | 26            | 18 | 11 | 7  | 4  |
| 1,500 ~ 1,900    | 28            | 20 | 13 | 8  | 4  |
| 1,900 ~ 2,500    | 31            | 22 | 15 | 10 | 5  |
| 2,500 ~ 3,100    | 33            | 25 | 18 | 11 | 6  |
| 3,100 ~ 3,600    | 36            | 27 | 20 | 14 | 7  |
| 3,600 ~ 4,000    | 37            | 28 | 21 | 15 | 7  |

## Preload

Preload eliminates clearance between the rail and guide block, improving rigidity, motion accuracy and system stability. Select the appropriate preload for the guide size and operating conditions to avoid excessive friction and reduced service life.



## Preload classes

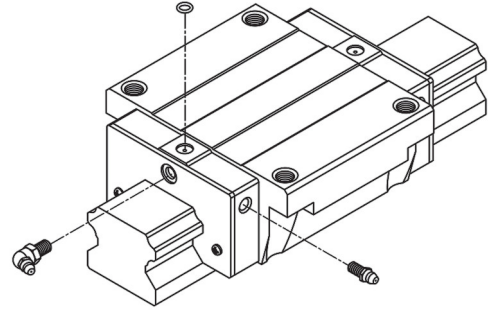
Robo-tech offers three classes of standard preload for various applications and conditions.

| Model     | Class              | Code | Preload     | Condition                                                  |
|-----------|--------------------|------|-------------|------------------------------------------------------------|
| SG Series | Light Preload      | Z0   | 0~0.02C     | Fixed load direction, low impact, low precision required   |
|           | Medium Preload     | ZA   | 0.05C-0.07C | High precision required                                    |
|           | Heavy Preload      | ZB   | 0.10C-0.12C | High rigidity required, with vibration and impact          |
| DG Series | Very Light Preload | Z0   | 0~0.02C     | Certain load direction, low impact, low precision required |
|           | Light Preload      | ZA   | 0.03C-0.05C | Low load and high precision required                       |
|           | Heavy Preload      | ZB   | 0.06C-0.08C | High rigidity required, with vibration and impact          |

Note: Interchangeable guideways: Z0, ZA. Non-interchangeable guideways: Z0, ZA, ZB.

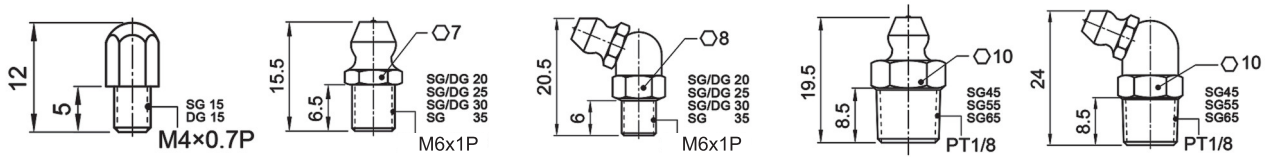
## Lubrication

Correct lubrication reduces wear between the rail and guide block and helps extend service life. Lubricating oil also helps dissipate heat and remove contaminants. Select a suitable lubricant and maintenance interval for the operating conditions.



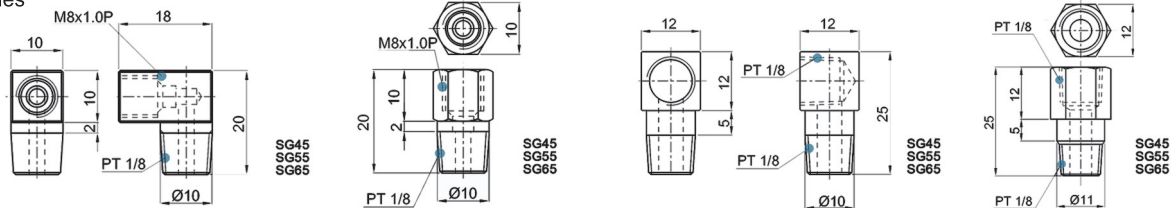
## Grease nipple and oil piping joint

### (1) Grease nipple

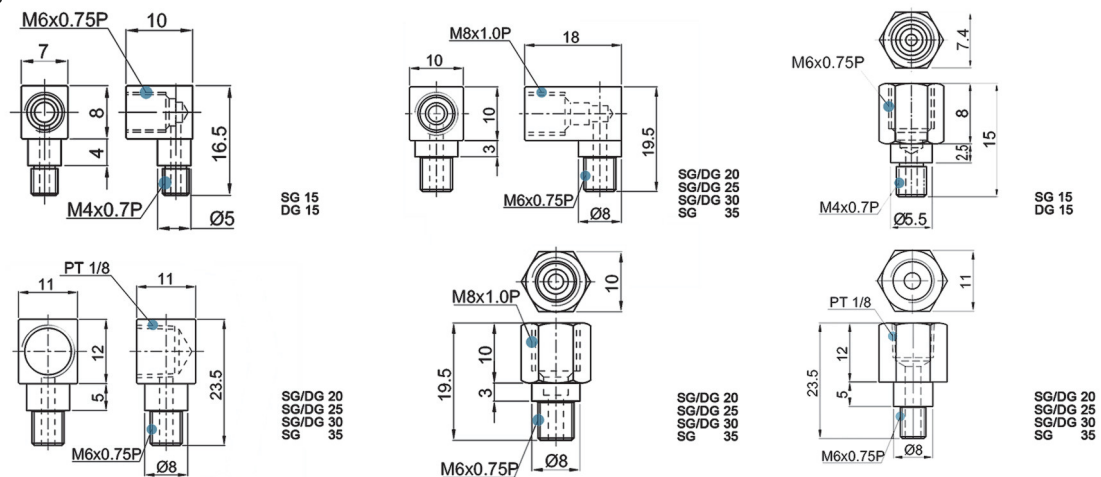


### (2) Piping joint

#### SG Series



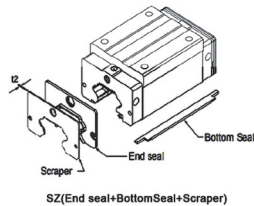
#### SG/DG Series



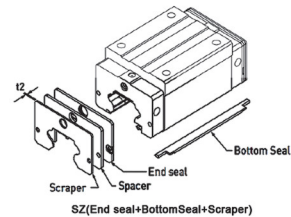
## Accessories

## SZ KIT

Size 15-45:End seal+Scraper



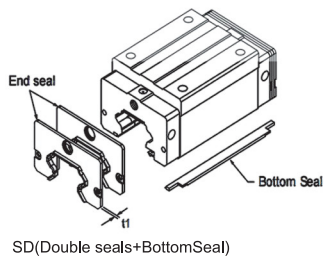
Size 55-65:End seal+Spacer+Scraper



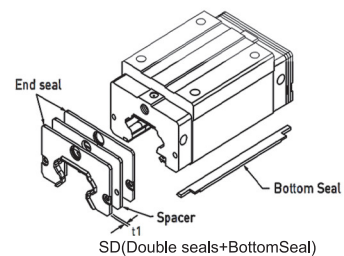
| Item | End seal thickness | Spacer thickness | Scraper thickness | Screw   | Nipple | Metal plug |
|------|--------------------|------------------|-------------------|---------|--------|------------|
| SG15 | 2.5                | /                | 1.5               | M2.5*16 | M4*8   | M4*6       |
| SG20 | 2.7                | /                | 1.5               | M2.5*16 | M6*8   | M6*8       |
| SG25 | 2.7                | /                | 1.5               | M2.5*16 | M6*8   | M6*8       |
| SG30 | 2.5                | /                | 1.5               | M3*16   | M6*8   | M6*8       |
| SG35 | 2.6                | /                | 1.5               | M3*18   | M6*8   | M6*8       |
| SG45 | 3                  | /                | 1.5               | M4*28   | M10*10 | M10*10     |
| SG55 | 4                  | 2.5              | 1.5               | M4*30   | M10*12 | M10*12     |
| SG65 | 5                  | 2                | 1.5               | M4*35   | M10*12 | M10*12     |

## SD KIT

Size 15-45:End seal+End seal



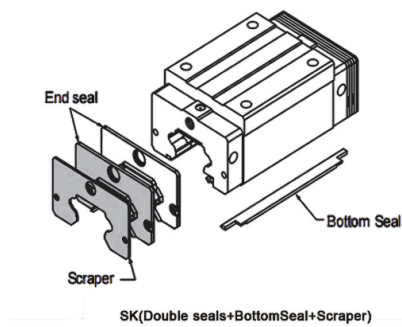
Size 55-65:End seal+Spacer+End seal



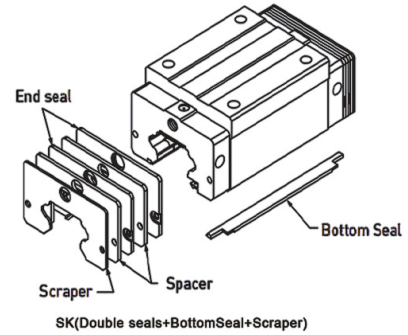
| Item | End seal thickness | Spacer thickness | Scraper thickness | Screw   | Nipple | Metal plug |
|------|--------------------|------------------|-------------------|---------|--------|------------|
| SG15 | 2.5                | /                | 1.5               | M2.5*16 | M4*8   | M4*6       |
| SG20 | 2.7                | /                | 1.5               | M2.5*16 | M6*8   | M6*8       |
| SG25 | 2.7                | /                | 1.5               | M2.5*16 | M6*8   | M6*8       |
| SG30 | 2.5                | /                | 1.5               | M3*16   | M6*8   | M6*8       |
| SG35 | 2.6                | /                | 1.5               | M3*18   | M6*8   | M6*8       |
| SG45 | 3                  | /                | 1.5               | M4*28   | M10*10 | M10*10     |
| SG55 | 4                  | 2.5              | 1.5               | M4*30   | M10*12 | M10*12     |
| SG65 | 5                  | 2                | 1.5               | M4*35   | M10*12 | M10*12     |

## SK KIT

Size 15-45:End seal+End seal+Scraper

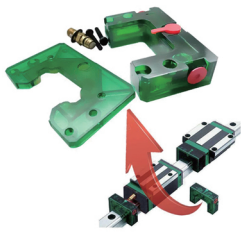


Size 55-65:End seal+spacer+End seal+spacer+Scraper



| Item | End seal thickness | Spacer thickness | Scraper thickness | Bolt    | Nipple | Metal plug |
|------|--------------------|------------------|-------------------|---------|--------|------------|
| SG15 | 2.5                | /                | 1.5               | M2.5*20 | M4*10  | M4*10      |
| SG20 | 2.7                | /                | 1.5               | M2.5*20 | M6*10  | M6*10      |
| SG25 | 2.7                | /                | 1.5               | M2.5*20 | M6*10  | M6*10      |
| SG30 | 2.5                | /                | 1.5               | M3*18   | M6*10  | M6*10      |
| SG35 | 2.6                | /                | 1.5               | M3*20   | M6*10  | M6*10      |
| SG45 | 3                  | /                | 1.5               | M4*30   | M10*14 | M10*14     |
| SG55 | 4                  | 2.5              | 1.5               | M4*35   | M10*16 | M10*16     |
| SG65 | 5                  | 2                | 1.5               | M4*40   | M10*16 | M10*16     |

## Oil tank



## Steel Strip Cover



## Black Chrome



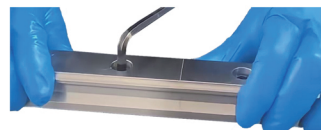
## Chrome Coating



## Nickel Coating



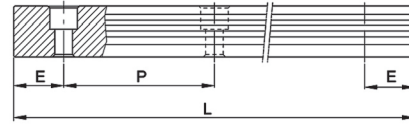
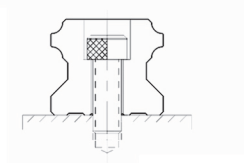
## Butt-joint





## Linear Rail Type

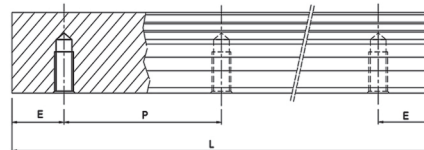
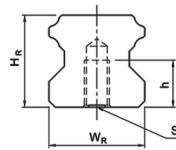
### Mounting From Top



Unit:mm

| Item           | Pitch | Standard Length | Max.Length   |
|----------------|-------|-----------------|--------------|
| SGR15<br>DGR15 | 60    | 4000            | 4000         |
| SGR20<br>DGR20 | 60    | 4000            | 6000<br>4000 |
| SGR25<br>DGR25 | 60    | 4000            | 6000<br>4000 |
| SGR30<br>DGR30 | 80    | 4000            | 6000<br>4000 |
| SGR35          | 80    | 4000            | 6000         |
| SGR45          | 105   | 4000            | 6000         |
| SGR55          | 120   | 4000            | 6000         |
| SGR65          | 150   | 4000            | 6000         |

### Mounting Tapped Hole



Unit:mm

| Item   | S         | h  | p   | Standard Length |
|--------|-----------|----|-----|-----------------|
| SGR15T | M5x0.8P   | 8  | 60  | 4000            |
| SGR20T | M6x1P     | 10 | 60  | 4000            |
| SGR25T | M6x1P     | 12 | 60  | 4000            |
| SGR30T | M8x1.25P  | 15 | 80  | 4000            |
| SGR35T | M8x1.25P  | 17 | 80  | 4000            |
| SGR45T | M12x1.75P | 24 | 105 | 4000            |
| SGR55T | M14x2P    | 24 | 120 | 4000            |
| SGR65T | M20x2.5P  | 30 | 150 | 4000            |

## Ordering Code

## (1) Non-interchangeable type

| SG                      | W          | 20   | C         | A                                                                | BC            | 2                     | R             | 1000                       | BC           | ZA                                                                              | P         | II                       | +           | SD/E2/RC |  |
|-------------------------|------------|------|-----------|------------------------------------------------------------------|---------------|-----------------------|---------------|----------------------------|--------------|---------------------------------------------------------------------------------|-----------|--------------------------|-------------|----------|--|
| Model                   | Block Type | Size | Load Type | Block Mounting                                                   | Block Coating | No.of Blocks per Rail | Rail Mounting | Rail Length(mm)            | Rail Coating | Preload                                                                         | Precision | No.of rails per axis set | Accessories |          |  |
| ①                       | ②          | ③    | ④         | ⑤                                                                | ⑥             | ⑦                     | ⑧             | ⑨                          | ⑩            | ⑪                                                                               | ⑫         | ⑬                        | ⑭           |          |  |
| ① Model                 |            |      |           | SG Series<br>DG Series                                           |               |                       |               | ⑧ Rail Mounting Type       |              | R:Mounting From Top<br>T:Mounting From Bottom                                   |           |                          |             |          |  |
| ② Block Type            |            |      |           | W: Flange Type<br>H: Square Type<br>L: Square Type (Low)         |               |                       |               | ⑨ Rail Length(mm)          |              |                                                                                 |           |                          |             |          |  |
| ③ Model Size            |            |      |           | SG15,20,25,30,35,45,55,65<br>DG15,20,25,30                       |               |                       |               | ⑩ Rail Treatment           |              | None:Standard Rail<br>BC:Black Chrome<br>CC:Chrome Coating                      |           |                          |             |          |  |
| ④ Load Type             |            |      |           | C:Heavy Load<br>H:Super Heavy Load<br>S:Medium Load              |               |                       |               | ⑪ Preload Code             |              | Z0,ZA,ZB                                                                        |           |                          |             |          |  |
| ⑤ Block Mounting        |            |      |           | A:Mounting From Top<br>B:Mounting From Bottom<br>C:Top or Bottom |               |                       |               | ⑫ Precision Code           |              | C,H,P,SP                                                                        |           |                          |             |          |  |
| ⑥ Block Coating         |            |      |           | None:Standard Block<br>BC:Black Chrome<br>CC:Chrome Coating      |               |                       |               | ⑬ No.of rails per axis set |              |                                                                                 |           |                          |             |          |  |
| ⑦ No.of Blocks per Rail |            |      |           |                                                                  |               |                       |               | ⑭ Accessories              |              | SD:SD,SZ,SK<br>E2:Self-Lubrication<br>SE:Metallic End Seal<br>RC:Reinforced Cap |           |                          |             |          |  |

## (2) Interchangeable type

## Block Code

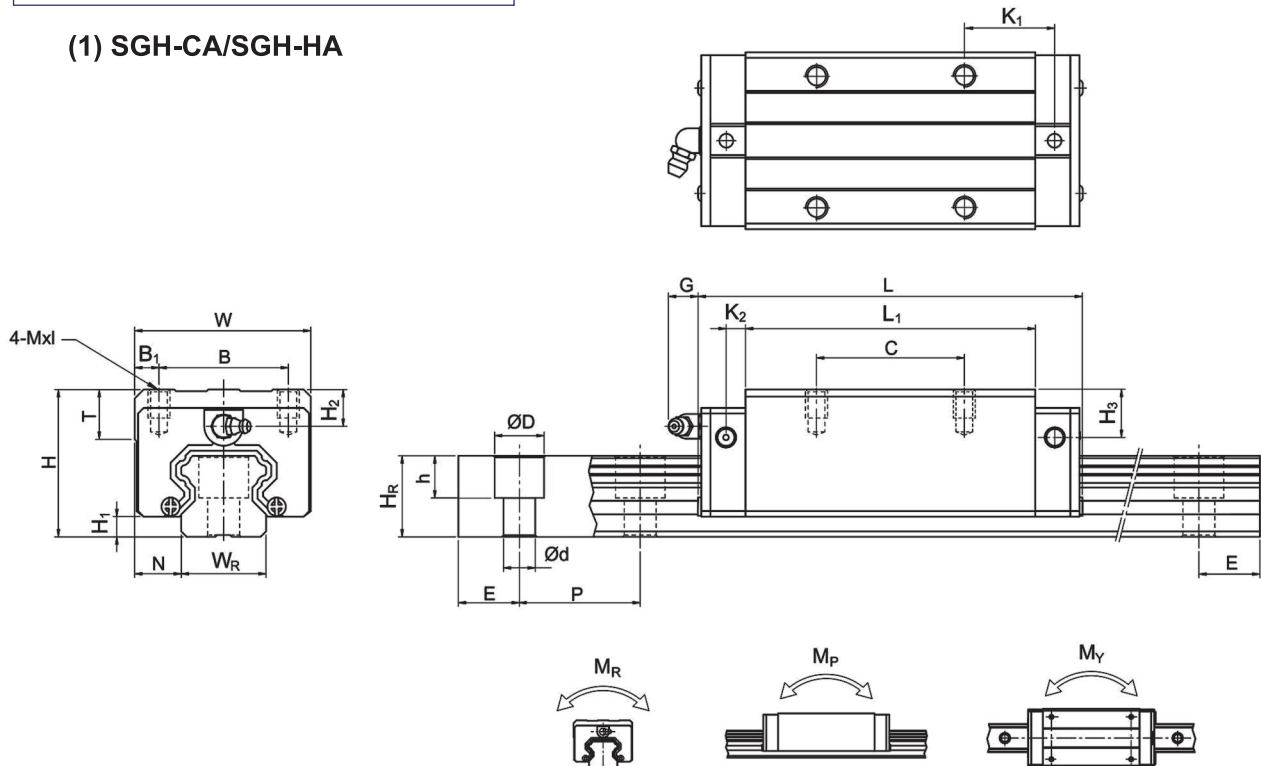
| SG                    | W          | 20   | C         | A                                                                | BC            | ZA      | P         | +           | SD/E2 |
|-----------------------|------------|------|-----------|------------------------------------------------------------------|---------------|---------|-----------|-------------|-------|
| Model                 | Block Type | Size | Load Type | Block Mounting                                                   | Block Coating | Preload | Precision | Accessories |       |
| ①                     | ②          | ③    | ④         | ⑤                                                                | ⑥             | ⑦       | ⑧         | ⑨           |       |
| ① Model               |            |      |           | SG Series<br>DG Series                                           |               |         |           |             |       |
| ② Block Type          |            |      |           | W: Flange Type<br>H: Square Type<br>L: Square Type (Low)         |               |         |           |             |       |
| ③ Model Size          |            |      |           | SG15,20,25,30,35,45,55,65<br>DG15,20,25,30                       |               |         |           |             |       |
| ④ Load Type           |            |      |           | C:Heavy Load<br>H:Super Heavy Load<br>S:Medium Load              |               |         |           |             |       |
| ⑤ Block Mounting Type |            |      |           | A:Mounting From Top<br>B:Mounting From Bottom<br>C:Top or Bottom |               |         |           |             |       |
| ⑥ Block Coating       |            |      |           | None:Standard Block<br>BC:Black Chrome<br>CC:Chrome Coating      |               |         |           |             |       |
| ⑦ Preload Code        |            |      |           | Z0,ZA,ZB                                                         |               |         |           |             |       |
| ⑧ Precision Code      |            |      |           | C,H,P                                                            |               |         |           |             |       |
| ⑨ Accessories         |            |      |           | SZ:SD,SZ,SK<br>E2:Self-Lubricant<br>SE:Metallic End Cap          |               |         |           |             |       |

## Linear Rail Code

| SG                     | R    | 20   | R             | 1000                                                       | BC             | P         | +           | RC |
|------------------------|------|------|---------------|------------------------------------------------------------|----------------|-----------|-------------|----|
| Model                  | Rail | Size | Mounting Type | Rail Length                                                | Rail Treatment | Precision | Accessories |    |
| ①                      | ②    | ③    | ④             | ⑤                                                          | ⑥              | ⑦         | ⑧           |    |
| ① Model                |      |      |               | SG Series<br>DG Series                                     |                |           |             |    |
| ② Interchangeable Rail |      |      |               |                                                            |                |           |             |    |
| ③ Model Size           |      |      |               | SG15,20,25,30,35,45,55,65<br>DG15,20,25,30                 |                |           |             |    |
| ④ Rail Mounting Type   |      |      |               | R:Mounting From Top<br>T:Mounting From Bottom              |                |           |             |    |
| ⑤ Rail Length(mm)      |      |      |               |                                                            |                |           |             |    |
| ⑥ Rail Treatment       |      |      |               | None:Standard Rail<br>BC:Black Chrome<br>CC:Chrome Coating |                |           |             |    |
| ⑦ Precision Code       |      |      |               | C,H,P                                                      |                |           |             |    |
| ⑧ Accessories          |      |      |               | RC:Reinforced Cap                                          |                |           |             |    |

## Dimensions for SG Series

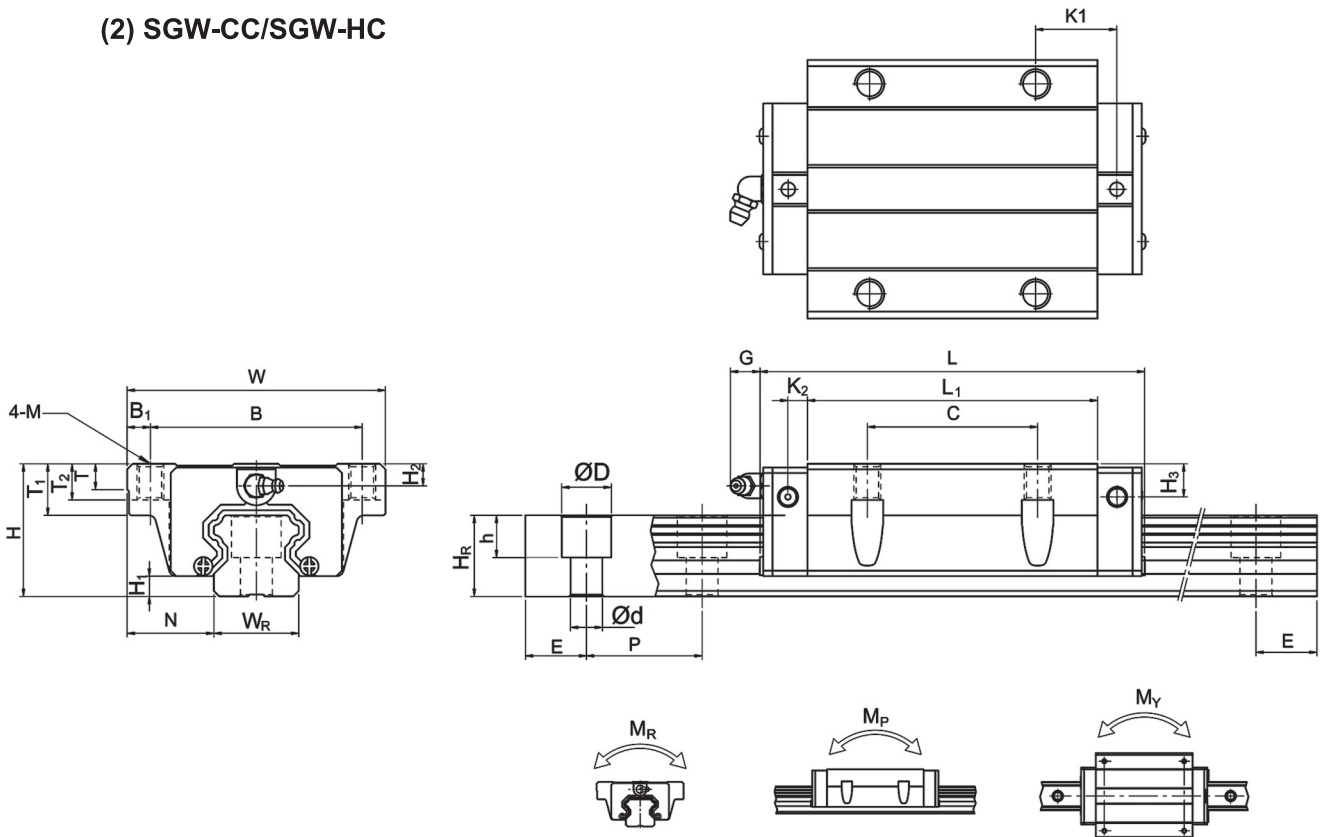
### (1) SGH-CA/SGH-HA



| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |    |                |     |                |       |                |                |      |        |      |                |                |                | Dimensions of Rail (mm) |     |     |     |     |      |        |       | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |                     |                     | Weight              |          |
|-----------|-----------------------------|----------------|------|--------------------------|----|----------------|-----|----------------|-------|----------------|----------------|------|--------|------|----------------|----------------|----------------|-------------------------|-----|-----|-----|-----|------|--------|-------|------------------------|---------------------------|--------------------------|---------------------|---------------------|---------------------|---------------------|----------|
|           | H                           | H <sub>1</sub> | N    | W                        | B  | B <sub>1</sub> | C   | L <sub>1</sub> | L     | K <sub>1</sub> | K <sub>2</sub> | G    | MxI    | T    | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub> | H <sub>R</sub>          | D   | h   | d   | P   | E    | (mm)   | C(kN) |                        |                           |                          | C <sub>0</sub> (kN) | M <sub>R</sub> kN-m | M <sub>P</sub> kN-m | M <sub>V</sub> kN-m | Block kg |
| SGH15CA   | 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                |                     |          |
| SGH20CA   | 30                          | 4.6            | 12   | 44                       | 32 | 6              | 36  | 50.5           | 77.5  | 2.25           | 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                |                     |          |
| SGH20HA   |                             |                |      |                          |    |                | 50  | 65.2           | 92.2  | 12.6           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 32.7  | 47.96                  | 0.35                      | 0.35                     | 0.35                | 0.39                |                     |                     |          |
| SGH25CA   | 40                          | 5.5            | 2.5  | 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                |                     |          |
| SGH25HA   |                             |                |      |                          |    |                | 50  | 78.6           | 104.6 | 18.5           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 42.2  | 69.07                  | 0.56                      | 0.57                     | 0.57                | 0.69                |                     |                     |          |
| SGH30CA   | 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                |                     |          |
| SGH30HA   |                             |                |      |                          |    |                | 60  | 93             | 120.4 | 21.75          |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 58.6  | 93.99                  | 0.88                      | 0.92                     | 0.92                | 1.16                |                     |                     |          |
| SGH35CA   | 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                |                     |          |
| SGH35HA   |                             |                |      |                          |    |                | 72  | 105.8          | 138.2 | 22.5           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 77.9  | 122.77                 | 1.54                      | 1.40                     | 1.40                | 1.92                |                     |                     |          |
| SGH45CA   | 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               |                     |          |
| SGH45HA   |                             |                |      |                          |    |                | 80  | 128.8          | 171.2 | 28.9           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 125.3 | 191.85                 | 2.63                      | 2.68                     | 2.68                | 3.61                |                     |                     |          |
| SGH55CA   | 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               |                     |          |
| SGH55HA   |                             |                |      |                          |    |                | 95  | 155.8          | 204.8 | 36.4           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 184.9 | 276.23                 | 4.88                      | 4.57                     | 4.57                | 5.49                |                     |                     |          |
| SGH65CA   | 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               |                     |          |
| SGH65HA   |                             |                |      |                          |    |                | 120 | 203.6          | 259.6 | 47.8           |                |      |        |      |                |                |                |                         |     |     |     |     |      |        | 277.8 | 420.17                 | 9.38                      | 7.38                     | 7.38                | 9.82                |                     |                     |          |

Note: 1 kgf = 9.8 N

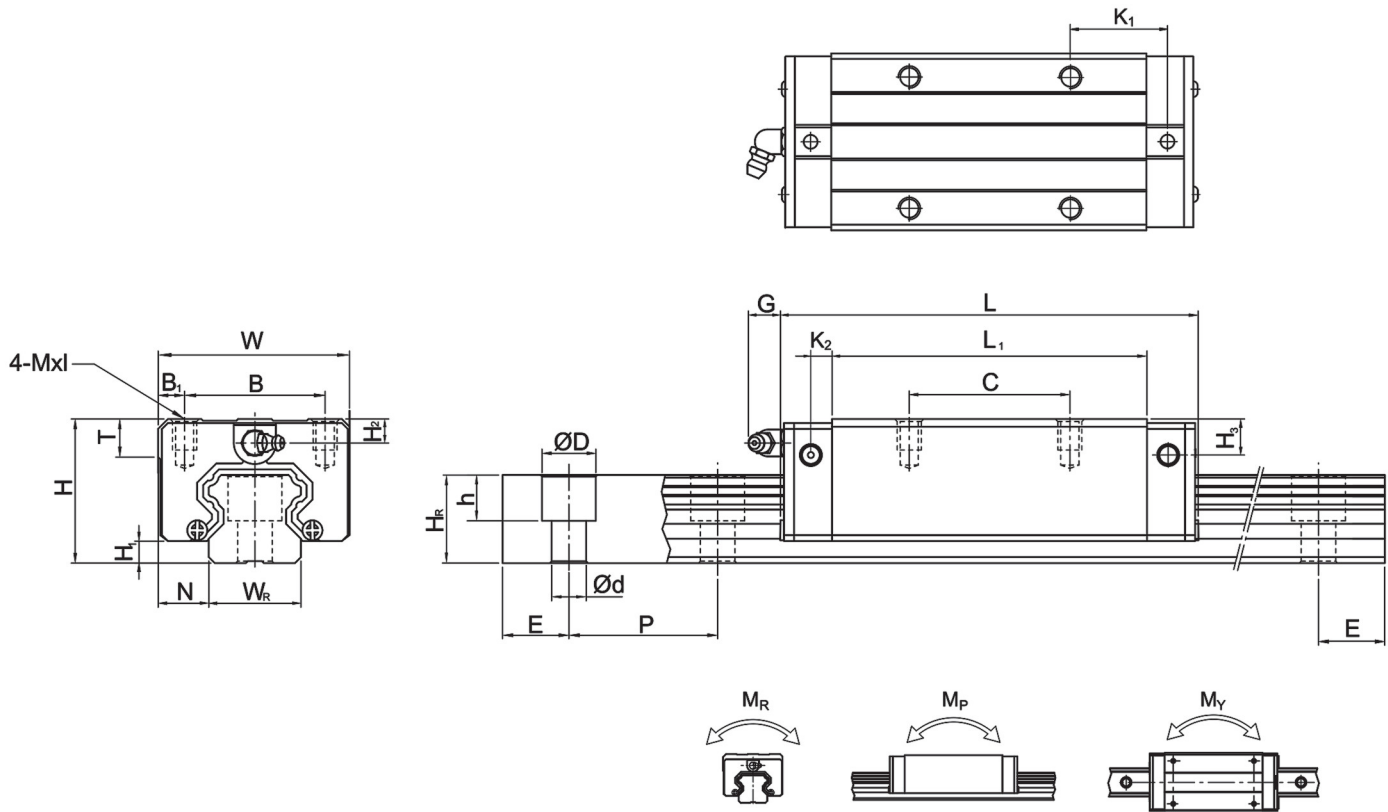
## (2) SGW-CC/SGW-HC



| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |     |                |     |                |       |                |                |      |     |      |                |                |                | Dimensions of Rail (mm) |                |                |     |     |     |     |      | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |       |                     | Weight              |                     |
|-----------|-----------------------------|----------------|------|--------------------------|-----|----------------|-----|----------------|-------|----------------|----------------|------|-----|------|----------------|----------------|----------------|-------------------------|----------------|----------------|-----|-----|-----|-----|------|------------------------|---------------------------|--------------------------|---------------------|-------|---------------------|---------------------|---------------------|
|           | H                           | H <sub>1</sub> | N    | W                        | B   | B <sub>1</sub> | C   | L <sub>1</sub> | L     | K <sub>1</sub> | K <sub>2</sub> | G    | M   | T    | T <sub>1</sub> | T <sub>2</sub> | H <sub>2</sub> | H <sub>3</sub>          | W <sub>R</sub> | H <sub>R</sub> | D   | h   | d   | P   | E    |                        |                           |                          | (mm)                | C(kN) | C <sub>0</sub> (kN) | M <sub>R</sub> kN-m | M <sub>P</sub> kN-m |
| SGW15CC   | 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                |
| SGW20CC   | 30                          | 4.6            | 21.5 | 63                       | 53  | 5              | 36  | 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                |
| SGW20HC   |                             |                |      |                          |     |                | 50  | 65.2           | 92.2  | 17.6           |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 32.7                      | 47.96                    | 0.35                | 0.35  | 0.35                | 0.52                |                     |
| SGW25CC   | 36                          | 5.5            | 23.5 | 70                       | 57  | 6.5            | 35  | 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                |
| SGW25HC   |                             |                |      |                          |     |                | 50  | 78.6           | 104.6 | 21             |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 42.2                      | 69.07                    | 0.56                | 0.57  | 0.57                | 0.80                |                     |
| SGW30CC   | 42                          | 6              | 31   | 90                       | 72  | 9              | 40  | 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                |
| SGW30HC   |                             |                |      |                          |     |                | 60  | 93             | 120.4 | 25.75          |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 58.6                      | 93.99                    | 0.88                | 0.92  | 0.92                | 1.44                |                     |
| SGW35CC   | 48                          | 7.5            | 33   | 100                      | 82  | 9              | 50  | 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                |
| SGW35HC   |                             |                |      |                          |     |                | 72  | 105.8          | 138.2 | 27.5           |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 77.9                      | 122.77                   | 1.54                | 1.40  | 1.40                | 2.06                |                     |
| SGW45CC   | 60                          | 9.5            | 37.5 | 120                      | 100 | 10             | 60  | 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               |
| SGW45HC   |                             |                |      |                          |     |                | 80  | 128.8          | 171.2 | 28.9           |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 125.3                     | 191.85                   | 2.63                | 2.68  | 2.68                | 3.69                |                     |
| SGW55CC   | 70                          | 13             | 43.5 | 140                      | 116 | 12             | 75  | 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               |
| SGW55HC   |                             |                |      |                          |     |                | 95  | 155.8          | 204.8 | 36.4           |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 184.9                     | 276.23                   | 4.88                | 4.57  | 4.57                | 5.96                |                     |
| SGW65CC   | 90                          | 15             | 53.5 | 170                      | 142 | 14             | 70  | 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               |
| SGW65HC   |                             |                |      |                          |     |                | 120 | 203.6          | 259.6 | 52.8           |                |      |     |      |                |                |                |                         |                |                |     |     |     |     |      |                        | 277.8                     | 420.17                   | 9.38                | 7.38  | 7.38                | 12.89               |                     |

Note: 1 kgf = 9.8 N

## (3) SGL-CA/SGL-HA

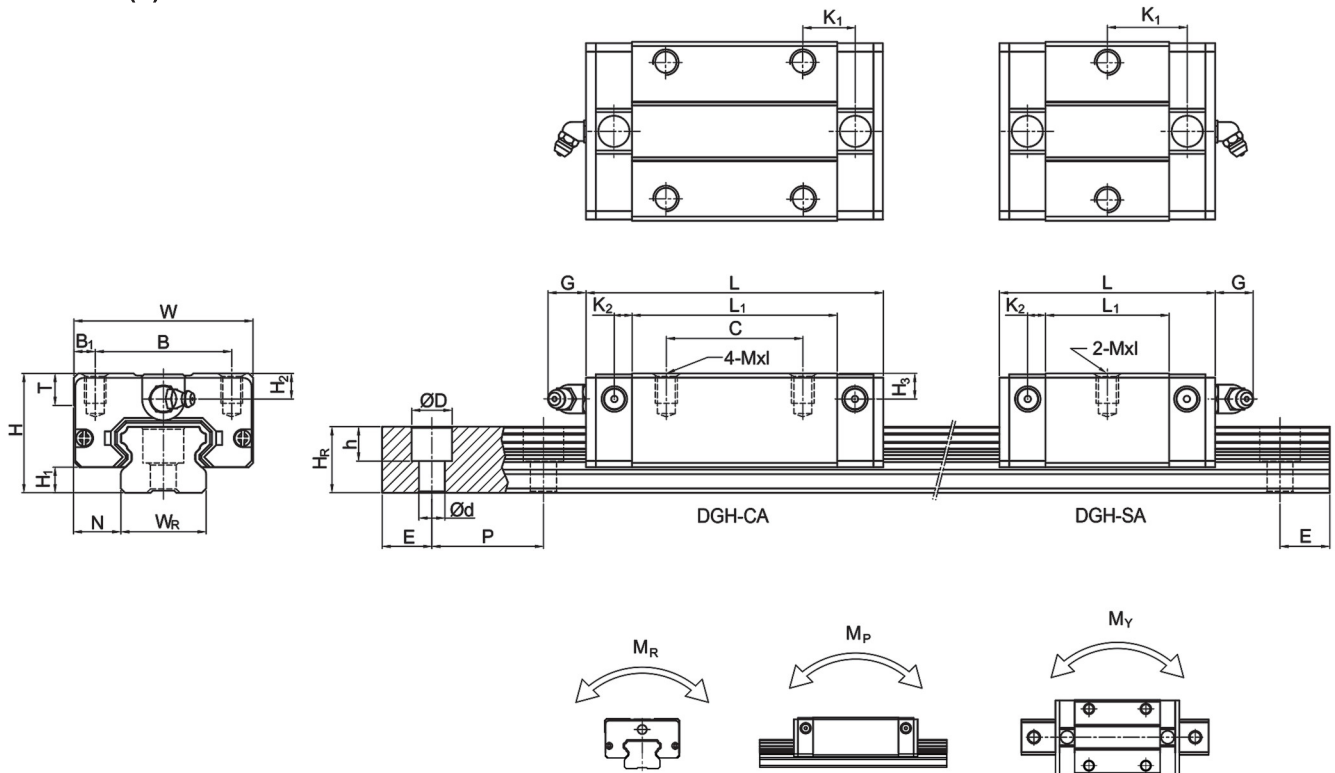


| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |    |                |    |                |       |                |                |      |        |      |                |                | Dimensions of Rail (mm) |                |     |     |     |     |      | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |       |                     | Weight              |                     |
|-----------|-----------------------------|----------------|------|--------------------------|----|----------------|----|----------------|-------|----------------|----------------|------|--------|------|----------------|----------------|-------------------------|----------------|-----|-----|-----|-----|------|------------------------|---------------------------|--------------------------|---------------------|-------|---------------------|---------------------|---------------------|
|           | H                           | H <sub>1</sub> | N    | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L     | K <sub>1</sub> | K <sub>2</sub> | G    | MxI    | T    | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub>          | H <sub>R</sub> | D   | h   | d   | P   | E    |                        |                           |                          | (mm)                | C(kN) | C <sub>0</sub> (kN) | M <sub>R</sub> kN-m | M <sub>P</sub> kN-m |
| SGL15CA   | 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                |
| SGL25CA   | 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                |
| SGL25HA   |                             |                |      |                          |    |                | 50 | 78.6           | 104.6 | 18.5           |                |      | M6x6   | 8    | 6              | 5              | 23                      | 22             | 11  | 9   | 7   | 60  | 20   |                        | 42.2                      | 69.07                    | 0.56                | 0.57  | 0.57                | 0.57                |                     |
| SGL30CA   | 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                |
| SGL30HA   |                             |                |      |                          |    |                | 60 | 93             | 120.4 | 21.75          |                |      | M8x10  | 8.5  | 6.5            | 10.8           | 28                      | 26             | 14  | 12  | 9   | 80  | 20   |                        | 58.6                      | 93.99                    | 0.88                | 0.92  | 0.92                | 1.03                |                     |
| SGL35CA   | 48                          | 7.5            | 18   | 70                       | 50 | 10             | 50 | 80             | 12.4  | 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                |
| SGL35HA   |                             |                |      |                          |    |                | 72 | 105.8          | 138.2 | 22.5           |                |      | M8x12  | 10.2 | 9              | 12.6           | 34                      | 29             | 14  | 12  | 9   | 80  | 20   |                        | 77.9                      | 122.77                   | 1.54                | 1.40  | 1.40                | 1.52                |                     |
| SGL45CA   | 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                | 10.4                |
| SGL45HA   |                             |                |      |                          |    |                | 80 | 128.8          | 171.2 | 28.9           |                |      | M10x17 | 16   | 8.5            | 20.5           | 45                      | 38             | 20  | 17  | 14  | 105 | 22.5 |                        | 125.3                     | 191.85                   | 2.63                | 2.68  | 2.68                | 2.75                |                     |
| SGL55CA   | 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               |
| SGL55HA   |                             |                |      |                          |    |                | 95 | 55.8           | 204.8 | 36.4           |                |      | M12x18 | 17.5 | 12             | 19             | 53                      | 44             | 23  | 20  | 16  | 120 | 30   |                        | 184.9                     | 276.23                   | 4.88                | 4.57  | 4.57                | 4.27                |                     |

Note: 1 kgf = 9.8 N

## Dimensions for DG Series

### (1) DGH-SA/DGH-CA



| Model No. | Dimensions of Assembly (mm) |                |     | Dimensions of Block (mm) |    |                |    |                |      |                |                |     |       |     |                |                | Dimensions of Rail (mm) |                |     |     |     |     |    |       | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |                     |                        | Weight                 |                        |
|-----------|-----------------------------|----------------|-----|--------------------------|----|----------------|----|----------------|------|----------------|----------------|-----|-------|-----|----------------|----------------|-------------------------|----------------|-----|-----|-----|-----|----|-------|------------------------|---------------------------|--------------------------|---------------------|---------------------|------------------------|------------------------|------------------------|
|           | H                           | H <sub>1</sub> | N   | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L    | K <sub>1</sub> | K <sub>2</sub> | G   | MxI   | T   | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub>          | H <sub>R</sub> | D   | h   | d   | P   | E  | (mm)  |                        |                           |                          | C(kN)               | C <sub>0</sub> (kN) | M <sub>R</sub><br>kN-m | M <sub>P</sub><br>kN-m | M <sub>Y</sub><br>kN-m |
| DGH15SA   | 24                          | 4.5            | 9.5 | 34                       | 26 | 4              | -  | 23.1           | 40.1 | 14.8           | 3.5            | 5.7 | M4x6  | 6   | 5.5            | 6              | 15                      | 12.5           | 6   | 4.5 | 3.5 | 60  | 20 | M3x16 | 5.35                   | 9.40                      | 0.08                     | 0.04                | 0.04                | 0.09                   | 1.25                   |                        |
| DGH15CA   |                             |                |     |                          |    |                | 26 | 39.8           | 56.8 | 10.15          |                |     |       |     |                |                |                         |                |     |     |     |     |    |       | 26                     | 39.8                      | 56.8                     | 10.15               | 26                  | 39.8                   |                        | 56.8                   |
| DGH20SA   | 28                          | 6              | 11  | 42                       | 32 | 5              | -  | 29             | 50   | 18.75          | 4.15           | 12  | M5x7  | 7.5 | 6              | 6              | 20                      | 15.5           | 9.5 | 8.5 | 6   | 60  | 20 | M5x16 | 7.23                   | 12.74                     | 0.13                     | 0.06                | 0.06                | 0.15                   | 2.08                   |                        |
| DGH20CA   |                             |                |     |                          |    |                | 32 | 48.1           | 69.1 | 12.3           |                |     |       |     |                |                |                         |                |     |     |     |     |    |       | 32                     | 48.1                      | 69.1                     | 12.3                | 32                  | 48.1                   |                        | 69.1                   |
| DGH25SA   | 33                          | 7              | 2.5 | 48                       | 35 | 6.5            | -  | 35.5           | 59.1 | 21.9           | 4.55           | 12  | M6x9  | 8   | 8              | 8              | 23                      | 18             | 1   | 9   | 7   | 602 | 20 | M6x20 | 11.40                  | 19.50                     | 0.23                     | 0.12                | 0.12                | 0.25                   | 2.67                   |                        |
| DGH25CA   |                             |                |     |                          |    |                | 35 | 59             | 82.6 | 16.15          |                |     |       |     |                |                |                         |                |     |     |     |     |    |       | 35                     | 59                        | 82.6                     | 16.15               | 35                  | 59                     |                        | 82.6                   |
| DGH30SA   | 42                          | 10             | 16  | 60                       | 40 | 10             | -  | 41.5           | 69.5 | 26.75          | 6              | 12  | M8x12 | 9   | 8              | 9              | 28                      | 23             | 11  | 9   | 7   | 80  | 20 | M6x25 | 16.42                  | 28.10                     | 0.40                     | 0.21                | 0.21                | 0.45                   | 4.35                   |                        |
| DGH30CA   |                             |                |     |                          |    |                | 40 | 70.1           | 98.1 | 21.05          |                |     |       |     |                |                |                         |                |     |     |     |     |    |       | 40                     | 70.1                      | 98.1                     | 21.05               | 40                  | 70.1                   |                        | 98.1                   |
| DGH35SA   | 48                          | 11             | 18  | 70                       | 50 | 10             | -  | 45             | 75   | 28.5           | 7              | 12  | M8x12 | 10  | 8.5            | 8.5            | 34                      | 27.5           | 14  | 12  | 9   | 80  | 20 | M8x25 | 22.66                  | 37.38                     | 0.56                     | 0.31                | 0.31                | 0.66                   | 6.14                   |                        |
| DGH35CA   |                             |                |     |                          |    |                | 50 | 78             | 108  | 20             |                |     |       |     |                |                |                         |                |     |     |     |     |    |       | 50                     | 78                        | 108                      | 20                  | 50                  | 78                     |                        | 108                    |

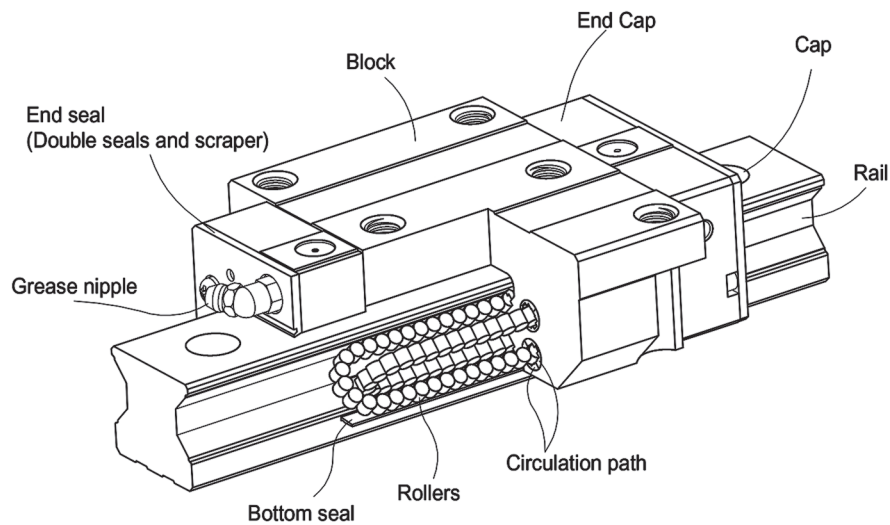
Note: 1 kgf = 9.8 N

| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |    |                |    |                |      |                |                |   |      |     |                |                |                | Dimensions of Rail (mm) |                |    |      |     |     |     |      | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |                     |                        | Weight                 |                        |             |
|-----------|-----------------------------|----------------|------|--------------------------|----|----------------|----|----------------|------|----------------|----------------|---|------|-----|----------------|----------------|----------------|-------------------------|----------------|----|------|-----|-----|-----|------|------------------------|---------------------------|--------------------------|---------------------|---------------------|------------------------|------------------------|------------------------|-------------|
|           | H                           | H <sub>1</sub> | N    | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L    | K <sub>1</sub> | K <sub>2</sub> | G | M    | T   | T <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub>          | H <sub>R</sub> | D  | h    | d   | P   | E   | (mm) |                        |                           |                          | C(kN)               | C <sub>0</sub> (kN) | M <sub>R</sub><br>kN-m | M <sub>P</sub><br>kN-m | M <sub>Y</sub><br>kN-m | Block<br>kg |
| DGW15SC   | 24                          | 4.5            | 18.5 | 52                       | 41 | 5.5            | -  | 23.1           | 40.1 | 14.8           |                |   |      |     |                |                |                |                         |                |    |      |     |     |     |      |                        | M3x16                     | 5.35                     | 9.40                | 0.08                | 0.04                   | 0.04                   | 0.12                   | 1.25        |
| DGW15CC   |                             |                |      |                          |    |                | 26 | 39.8           | 56.8 | 10.15          |                |   | 3.5  | 5.7 | M5             | 5              | 7              | 5.5                     | 6              | 15 | 12.5 | 6   | 4.5 | 3.5 | 60   | 20                     |                           |                          |                     |                     |                        | 7.83                   | 16.19                  |             |
| DGW20SC   | 28                          | 6              | 19.5 | 59                       | 49 | 5              | -  | 29             | 50   | 18.75          |                |   |      |     |                |                |                |                         |                |    |      |     |     |     |      |                        | M5x16                     | 7.23                     | 12.74               | 0.13                | 0.06                   | 0.06                   | 0.19                   | 2.08        |
| DGW20CC   |                             |                |      |                          |    |                | 32 | 48.1           | 69.1 | 12.3           |                |   | 4.15 | 12  | M6             | 7              | 9              | 6                       | 6              | 20 | 5.5  | 9.5 | 8.5 | 6   | 60   | 20                     |                           |                          |                     |                     |                        | 10.31                  | 21.13                  |             |
| DGW25SC   | 33                          | 7              | 25   | 73                       | 60 | 6.5            | -  | 35.5           | 59.1 | 21.9           |                |   |      |     |                |                |                |                         |                |    |      |     |     |     |      |                        | M6x20                     | 11.40                    | 119.50              | 0.23                | 0.12                   | 0.12                   | 0.35                   | 2.67        |
| DGW25CC   |                             |                |      |                          |    |                | 35 | 59             | 82.6 | 16.15          |                |   | 4.55 | 12  | M8             | 7.5            | 10             | 8                       | 8              | 23 | 18   | 11  | 9   | 7   | 60   | 20                     |                           |                          |                     |                     |                        | 16.27                  | 32.40                  |             |
| DGW30SC   | 42                          | 10             | 31   | 90                       | 72 | 9              |    | 41.5           | 69.5 | 26.75          |                |   |      |     |                |                |                |                         |                |    |      |     |     |     |      |                        | M6x25                     | 16.42                    | 28.10               | 0.40                | 0.21                   | 0.21                   | 0.62                   | 4.35        |
| DGW30CC   |                             |                |      |                          |    |                | 40 | 70.1           | 98.1 | 21.05          |                |   | 6    | 12  | M10            | 7              | 10             | 8                       | 9              | 28 | 23   | 11  | 9   | 7   | 80   | 20                     |                           |                          |                     |                     |                        | 23.70                  | 47.46                  |             |
| DGW35SC   | 48                          | 11             | 33   | 100                      | 82 | 9              | -  | 45             | 75   | 28.5           |                |   |      |     |                |                |                |                         |                |    |      |     |     |     |      |                        | M8x25                     | 22.66                    | 37.38               | 0.56                | 0.31                   | 0.31                   | 0.84                   | 6.14        |
| DGW35CC   |                             |                |      |                          |    |                | 50 | 78             | 108  | 20             |                |   | 7    | 12  | M10            | 10             | 13             | 8.5                     | 8.5            | 34 | 27.5 | 14  | 12  | 9   | 80   | 20                     |                           |                          |                     |                     |                        | 33.35                  | 64.84                  |             |

Note:  $1 \text{ kgf} = 9.8 \text{ N}$

## Characteristics

GG series linear guides use rollers with a 45-degree contact angle to support loads in four directions. Their roller contact and large contact area provide high rigidity and load capacity. The design also supports precise motion, straightforward installation and low mechanical energy consumption.



## Features

Low noise

Long lifetime

Optimal structure

Super high rigidity

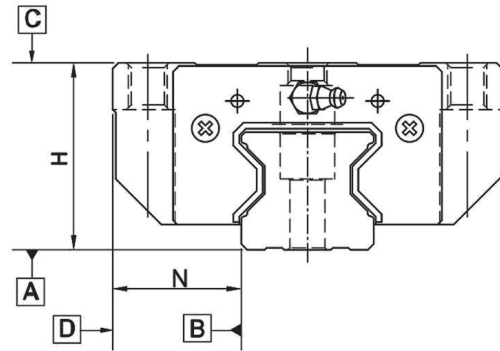
Super high precision

Super high load capacity



## Accuracy Classes

GG series guideways are available in accuracy classes from High to Ultra Precision. Select the class according to the accuracy requirements of the application.



### (1) Accuracy of non-interchangeable

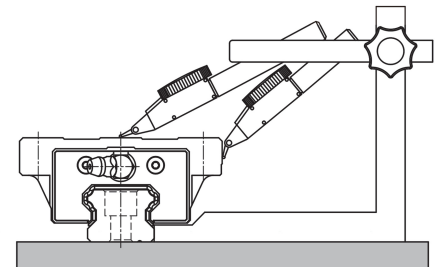
Unit:mm

| Model      | Item                              | Accuracy Classes |               |                      |                      |
|------------|-----------------------------------|------------------|---------------|----------------------|----------------------|
|            |                                   | High (H)         | Precision (P) | Super Precision (SP) | Ultra Precision (UP) |
| GG25/30/35 | Dimensional tolerance of height H | ±0.04            | 0-0.04        | 0-0.02               | 0-0.001              |
|            | Dimensional tolerance of width N  | ±0.04            | 0-0.04        | 0-0.02               | 0-0.001              |
|            | Variation of height H             | 0.015            | 0.007         | 0.005                | 0.003                |
|            | Variation of width N              | 0.015            | 0.007         | 0.005                | 0.003                |
| GG45/55    | Dimensional tolerance of height H | ±0.05            | 0-0.05        | 0-0.03               | 0-0.02               |
|            | Dimensional tolerance of width N  | ±0.05            | 0-0.05        | 0-0.03               | 0-0.02               |
|            | Variation of height H             | 0.015            | 0.007         | 0.005                | 0.003                |
|            | Variation of width N              | 0.02             | 0.01          | 0.007                | 0.005                |
| GG65       | Dimensional tolerance of height H | ±0.07            | 0-0.07        | 0-0.05               | 0-0.03               |
|            | Dimensional tolerance of width N  | ±0.07            | 0-0.07        | 0-0.05               | 0-0.03               |
|            | Variation of height H             | 0.02             | 0.01          | 0.007                | 0.005                |
|            | Variation of width N              | 0.025            | 0.015         | 0.01                 | 0.007                |

**(2)Accuracy of interchangeable**

Unit:mm

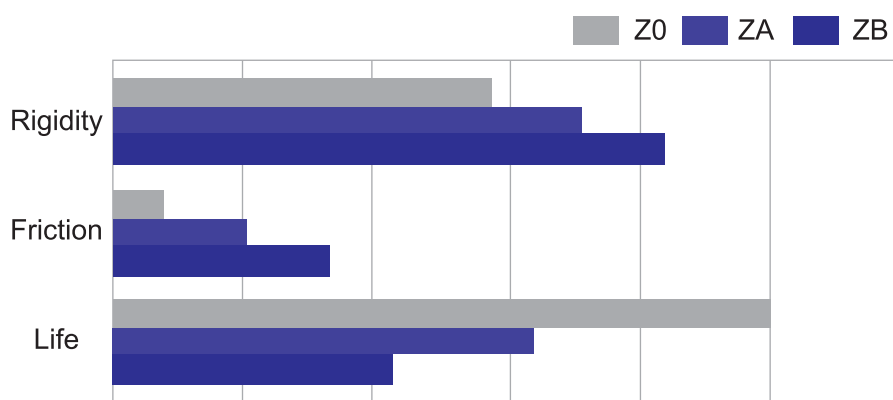
| Model      | Item                              | Accuracy Classes |              |
|------------|-----------------------------------|------------------|--------------|
|            |                                   | High(H)          | Precision(P) |
| GG25/30/35 | Dimensional tolerance of height H | ±0.04            | ±0.02        |
|            | Dimensional tolerance of width N  | ±0.04            | ±0.02        |
|            | Variation of height H             | 0.015            | 0.007        |
|            | Variation of width N              | 0.015            | 0.007        |
| GG45/55    | Dimensional tolerance of height H | ±0.05            | ±0.025       |
|            | Dimensional tolerance of width N  | ±0.05            | ±0.025       |
|            | Variation of height H             | 0.015            | 0.007        |
|            | Variation of width N              | 0.02             | 0.01         |
| GG65       | Dimensional tolerance of height H | ±0.07            | ±0.035       |
|            | Dimensional tolerance of width N  | ±0.07            | ±0.035       |
|            | Variation of height H             | 0.02             | 0.01         |
|            | Variation of width N              | 0.025            | 0.015        |

**(3)Accuracy of running parallelism**

| Rail Length(mm) | Accuracy(μm) |    |    |    |
|-----------------|--------------|----|----|----|
|                 | H            | P  | SP | UP |
| ~ 100           | 7            | 3  | 2  | 2  |
| 100 ~ 200       | 9            | 4  | 2  | 2  |
| 200 ~ 300       | 10           | 5  | 3  | 2  |
| 300 ~ 500       | 12           | 6  | 3  | 2  |
| 500 ~ 700       | 13           | 7  | 4  | 2  |
| 700 ~ 900       | 15           | 8  | 5  | 3  |
| 900 ~ 1,100     | 16           | 9  | 6  | 3  |
| 1,100 ~ 1,500   | 18           | 11 | 7  | 4  |
| 1,500 ~ 1,900   | 20           | 13 | 8  | 4  |
| 1,900 ~ 2,500   | 22           | 15 | 10 | 5  |
| 2,500 ~ 3,100   | 25           | 18 | 11 | 6  |
| 3,100 ~ 3,600   | 27           | 20 | 14 | 7  |
| 3,600 ~ 4,000   | 28           | 21 | 15 | 7  |

## Preload

Preload eliminates clearance between the rail and guide block, improving rigidity, motion accuracy and system stability. Select the appropriate preload for the guide size and operating conditions to avoid excessive friction and reduced service life.



## Preload classes

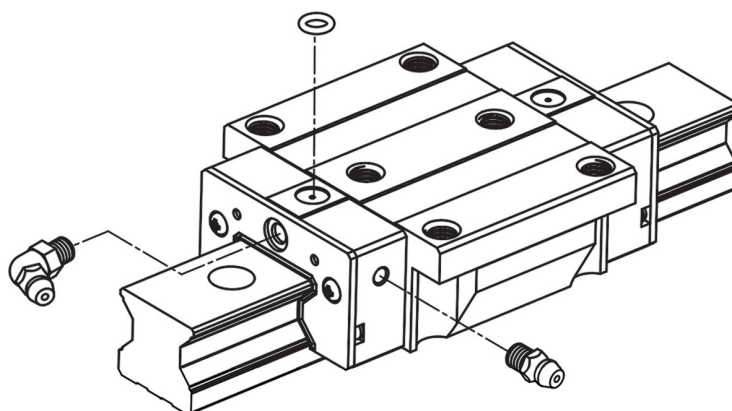
### GG Series Preload classes

Robo-tech offers three classes of standard preload for various applications and conditions.

| Model     | Class          | Code | Preload     | Condition                                                  |
|-----------|----------------|------|-------------|------------------------------------------------------------|
| GG Series | Light Preload  | Z0   | 0.02C~0.04C | Certain load direction, low impact, low precision required |
|           | Medium Preload | ZA   | 0.07C~0.09C | High rigidity required, high precision required            |
|           | Heavy Preload  | ZB   | 0.12C~0.14C | Super high rigidity required, with vibration and impact    |

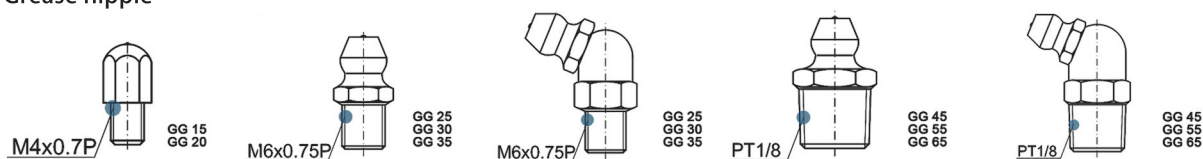
## Lubrication

Correct lubrication reduces wear between the rail and guide block and helps extend service life. Lubricating oil also helps dissipate heat and remove contaminants. Select a suitable lubricant and maintenance interval for the operating conditions.

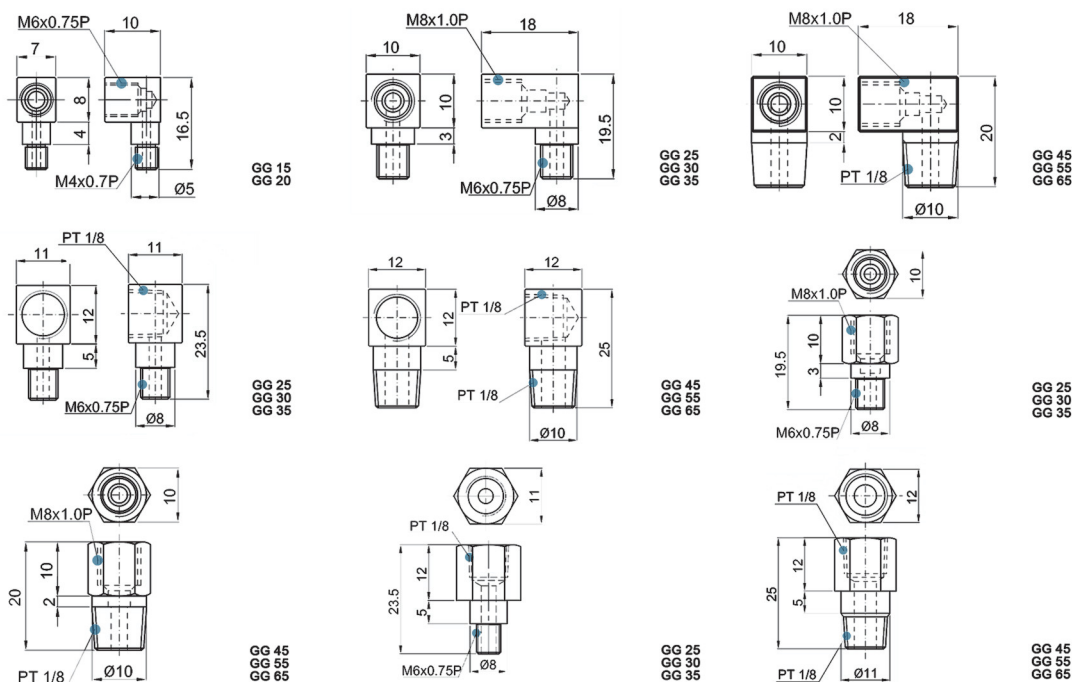


## Grease nipple and oil piping joint

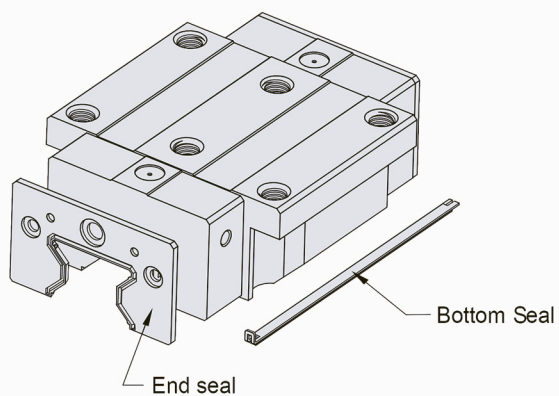
### (1) Grease nipple



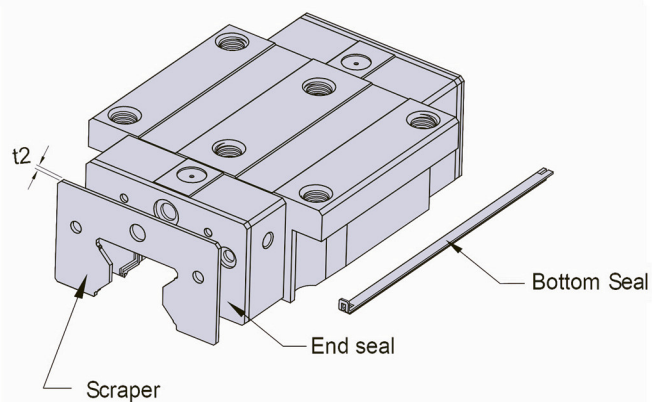
### (2) Piping joint



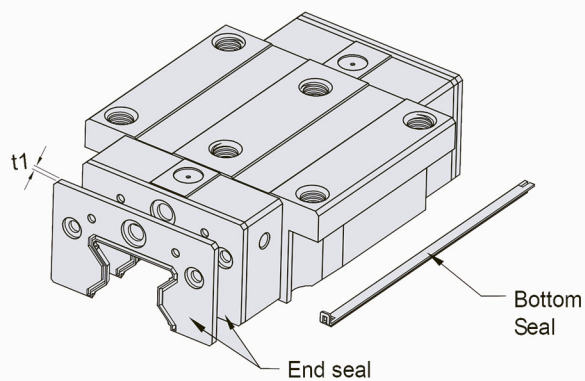
## Accessories



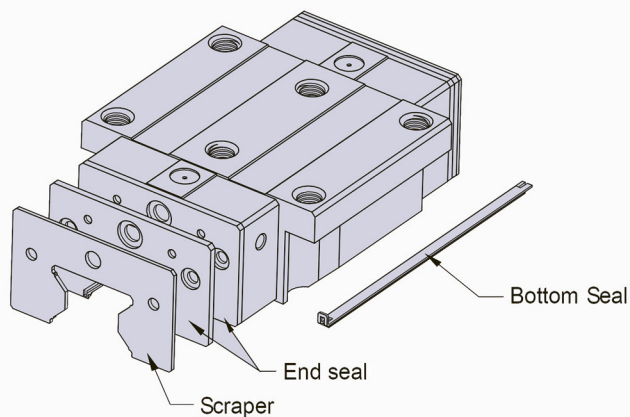
No symbol: Standard Protection (End seal + Bottom Seal)



SZ (End seal + Bottom Seal + Scraper)

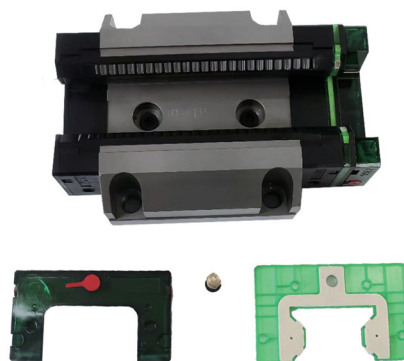
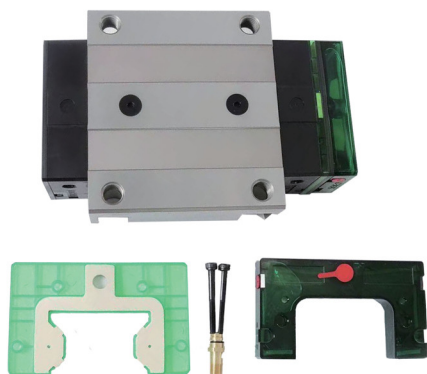


SD (Double seals + Bottom Seal)



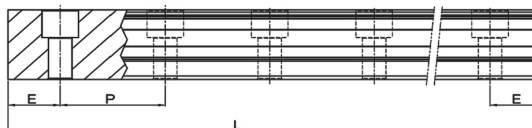
SK (Double seals + Bottom Seal + Scraper)

## Oil tank



## Linear Rail Type

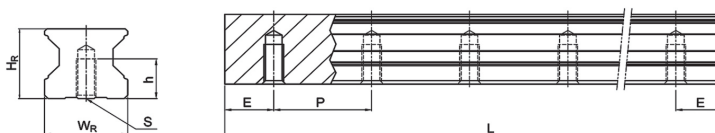
### Mounting From Top



Unit:mm

| Item  | Pitch | Standard Length | Max.Length |
|-------|-------|-----------------|------------|
| GGR25 | 30    | 4000            | 4000       |
| GGR30 | 40    | 4000            | 4000       |
| GGR35 | 40    | 4000            | 4000       |
| GGR45 | 52.5  | 4000            | 4000       |
| GGR55 | 60    | 4000            | 4000       |
| GGR65 | 75    | 4000            | 4000       |

### Mounting Tapped Hole



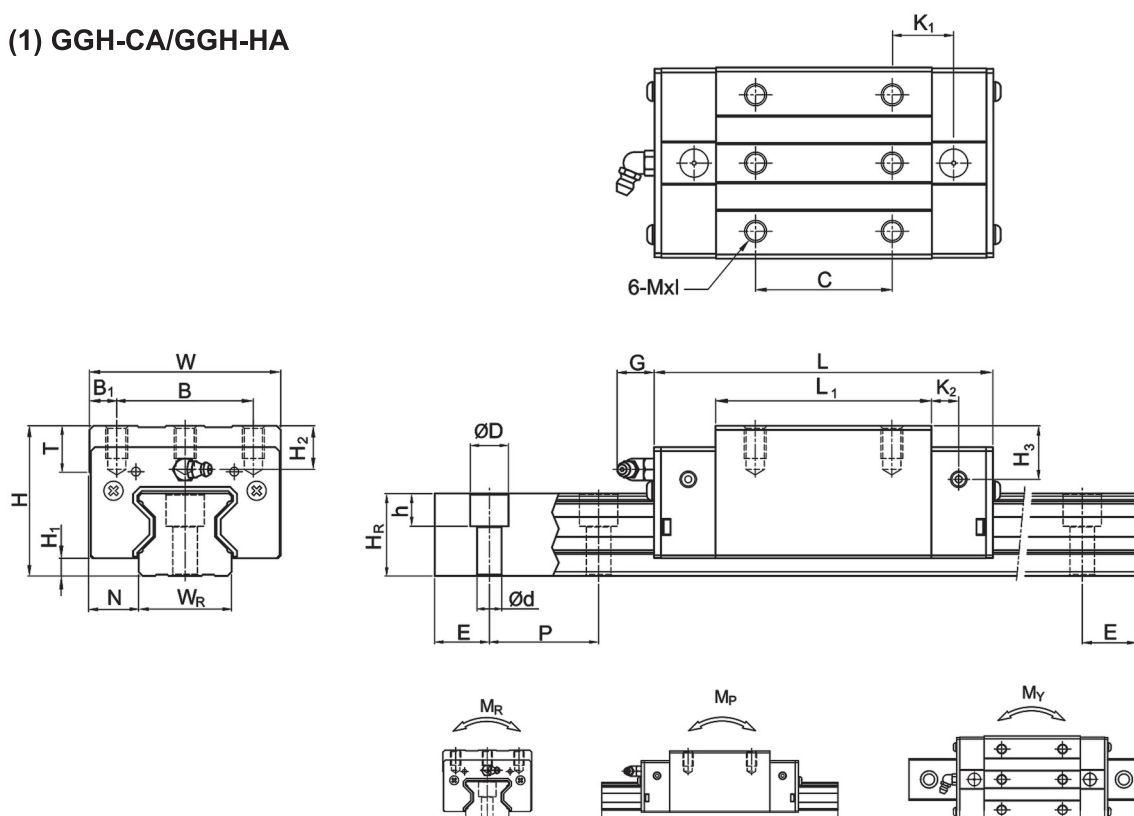
Unit:mm

| Item   | S         | h  | p    | Standard Length |
|--------|-----------|----|------|-----------------|
| GGR25T | M6×1P     | 12 | 30   | 4000            |
| GGR30T | M8×1.25P  | 15 | 40   | 4000            |
| GGR35T | M8×1.25P  | 17 | 40   | 4000            |
| GGR45T | M12×1.75P | 24 | 52.5 | 4000            |
| GGR55T | M14×2P    | 24 | 60   | 4000            |
| GGR65T | M20×2.5P  | 30 | 75   | 4000            |

## Linear Rail Code

## Dimensions for GG Series

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



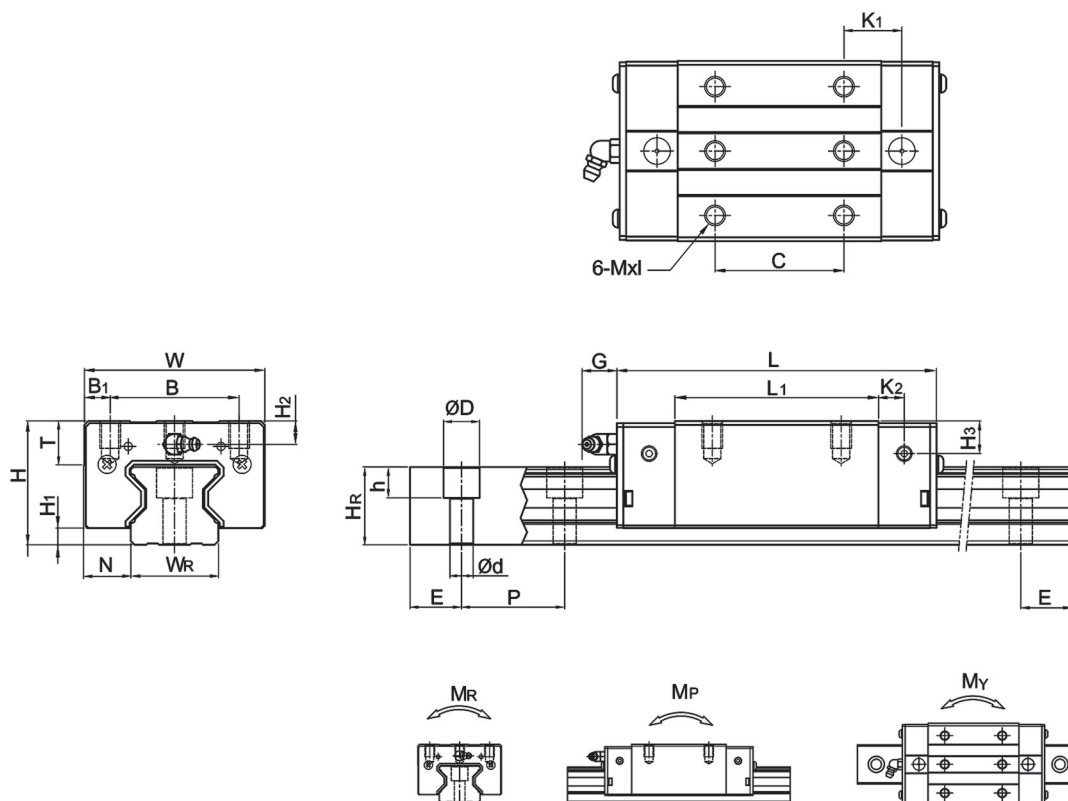
| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |    |                |     |                |       |                |                |      |        |      |                |                | Dimensions of Rail (mm) |                |    |    |     |     |      |        | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |                     |                        | Weight                 |                        |
|-----------|-----------------------------|----------------|------|--------------------------|----|----------------|-----|----------------|-------|----------------|----------------|------|--------|------|----------------|----------------|-------------------------|----------------|----|----|-----|-----|------|--------|------------------------|---------------------------|--------------------------|---------------------|---------------------|------------------------|------------------------|------------------------|
|           | H                           | H <sub>1</sub> | N    | W                        | B  | B <sub>1</sub> | C   | L <sub>1</sub> | L     | K <sub>1</sub> | K <sub>2</sub> | G    | MxI    | T    | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub>          | H <sub>R</sub> | D  | h  | d   | P   | E    | (mm)   |                        |                           |                          | C(kN)               | C <sub>0</sub> (kN) | M <sub>R</sub><br>kN-m | M <sub>P</sub><br>kN-m | M <sub>Y</sub><br>kN-m |
| GGH25CA   | 40                          | 5.5            | 12.5 | 148                      | 35 | 6.5            | 35  | 64.5           | 97.9  | 20.75          | 7.25           | 12   | M6x8   | 9.5  | 10.2           | 10             | 23                      | 23.6           | 11 | 9  | 7   | 30  | 20   | M6x20  | 27.7                   | 57.1                      | 0.758                    | 0.605               | 0.605               | 0.61                   | 3.08                   |                        |
| GGH25HA   |                             |                |      |                          |    |                | 50  | 81             | 114.4 | 21.5           |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 33.9                   | 73.4                      | 0.975                    | 0.991               | 0.991               | 0.75                   |                        |                        |
| GGH30CA   | 45                          | 6              | 16   | 60                       | 40 | 10             | 40  | 71             | 109.8 | 23.5           | 8              | 12   | M8x10  | 9.5  | 9.5            | 10.3           | 28                      | 28             | 14 | 12 | 9   | 4   | 20   | M8x25  | 39.1                   | 82.1                      | 1.445                    | 1.06                | 1.06                | 0.90                   | 4.41                   |                        |
| GGH30HA   |                             |                |      |                          |    |                | 60  | 93             | 131.8 | 24.5           |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 48.1                   | 105                       | 1.846                    | 1.712               | 1.712               | 1.16                   |                        |                        |
| GGH35CA   | 55                          | 6.5            | 18   | 70                       | 50 | 10             | 50  | 79             | 124   | 22.5           | 10             | 12   | M8x12  | 12   | 16             | 19.6           | 34                      | 30.2           | 14 | 12 | 9   | 40  | 20   | M8x25  | 57.9                   | 105.2                     | 2.17                     | 1.44                | 1.44                | 1.57                   | 6.06                   |                        |
| GGH35HA   |                             |                |      |                          |    |                | 72  | 106.5          | 151.5 | 25.25          |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 73.1                   | 142                       | 2.93                     | 2.6                 | 2.6                 | 2.06                   |                        |                        |
| GGH45CA   | 70                          | 8              | 20.5 | 86                       | 60 | 13             | 60  | 106            | 153.2 | 31             | 10             | 12.9 | M10x17 | 16   | 20             | 24             | 45                      | 38             | 20 | 7  | 145 | 2.5 | 22.5 | M12x35 | 92.6                   | 178.8                     | 4.52                     | 3.05                | 3.05                | 3.18                   | 9.97                   |                        |
| GGH45HA   |                             |                |      |                          |    |                | 80  | 139.8          | 187   | 37.9           |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 116                    | 230.9                     | 6.33                     | 5.47                | 5.47                | 4.13                   |                        |                        |
| GGH55CA   | 80                          | 10             | 23.5 | 100                      | 75 | 12.5           | 75  | 125.5          | 83.7  | 37.75          | 12.5           | 12.9 | M12x18 | 17.5 | 22             | 27.5           | 53                      | 44             | 23 | 20 | 16  | 60  | 30   | M14x45 | 130.5                  | 252                       | 8.01                     | 5.4                 | 5.4                 | 4.89                   | 3.98                   |                        |
| GGH55HA   |                             |                |      |                          |    |                | 95  | 173.8          | 232   | 51.9           |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 167.8                  | 348                       | 11.15                    | 10.25               | 10.25               | 6.68                   |                        |                        |
| GGH65CA   | 90                          | 12             | 31.5 | 126                      | 76 | 25             | 70  | 160            | 232   | 60.8           | 15.8           | 12.9 | M16x20 | 25   | 15             | 15             | 63                      | 53             | 26 | 22 | 18  | 75  | 35   | M16x50 | 213                    | 411.6                     | 16.20                    | 11.59               | 11.59               | 8.89                   | 20.22                  |                        |
| GGH65HA   |                             |                |      |                          |    |                | 120 | 223            | 295   | 67.3           |                |      |        |      |                |                |                         |                |    |    |     |     |      |        | 275.3                  | 572.7                     | 22.55                    | 22.17               | 22.17               | 12.13                  |                        |                        |

Note: 1 kgf = 9.8 N



Note:  $1 \text{ kgf} = 9.8 \text{ N}$

## (3) GGL-CA/GGL-HA

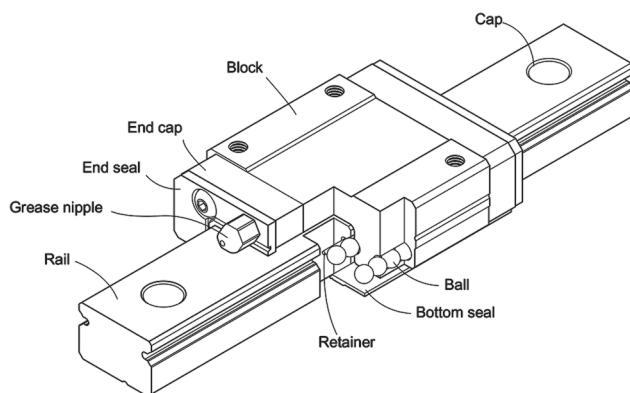


| Model No. | Dimensions of Assembly (mm) |                |      | Dimensions of Block (mm) |    |                |    |                |       |                |                |      |        |      |                |                | Dimensions of Rail (mm) |                |    |    |    |      |      |        | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |                     |                        | Weight                 |                        |
|-----------|-----------------------------|----------------|------|--------------------------|----|----------------|----|----------------|-------|----------------|----------------|------|--------|------|----------------|----------------|-------------------------|----------------|----|----|----|------|------|--------|------------------------|---------------------------|--------------------------|---------------------|---------------------|------------------------|------------------------|------------------------|
|           | H                           | H <sub>1</sub> | N    | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L     | K <sub>1</sub> | K <sub>2</sub> | G    | MxI    | T    | H <sub>2</sub> | H <sub>3</sub> | W <sub>R</sub>          | H <sub>R</sub> | D  | h  | d  | P    | E    | (mm)   |                        |                           |                          | C(kN)               | C <sub>0</sub> (kN) | M <sub>R</sub><br>kN-m | M <sub>P</sub><br>kN-m | M <sub>Y</sub><br>kN-m |
| GGL25CA   | 36                          | 5.5            | 12.5 | 48                       | 35 | 6.5            | 35 | 64.5           | 97.9  | 20.75          | 7.25           | 12   | M6x8   | 9.5  | 6.2            | 6              | 23                      | 23.6           | 11 | 9  | 7  | 30   | 20   | M6x20  | 27.7                   | 57.1                      | 0.758                    | 0.605               | 0.605               | 0.51                   | 3.08                   |                        |
| GGL25HA   |                             |                |      |                          |    |                | 50 | 811            | 14.4  | 21.5           |                |      |        |      |                |                |                         |                |    |    |    |      |      |        | 33.9                   | 73.4                      | 0.975                    | 0.991               | 0.99                | 0.63                   |                        |                        |
| GGL30CA   | 42                          | 6              | 16   | 60                       | 40 | 10             | 40 | 71             | 109.8 | 23.5           | 8              | 12   | M8x10  | 9.5  | 6.5            | 7.3            | 28                      | 28             | 14 | 12 | 9  | 40   | 20   | M8x25  | 39.1                   | 82.1                      | 1.445                    | 1.06                | 1.06                | 0.80                   | 4.41                   |                        |
| GGL30HA   |                             |                |      |                          |    |                | 60 | 93             | 131.8 | 24.5           |                |      |        |      |                |                |                         |                |    |    |    |      |      |        | 48.1                   | 105                       | 1.846                    | 1.712               | 1.712               | 1.03                   |                        |                        |
| GGL35CA   | 48                          | 6.5            | 18   | 70                       | 50 | 10             | 50 | 79             | 124   | 22.5           | 10             | 12   | M8x12  | 12   | 9              | 12.6           | 34                      | 30.2           | 14 | 12 | 9  | 40   | 20   | M8x25  | 57.9                   | 105.2                     | 2.17                     | 1.44                | 1.44                | 1.27                   | 6.06                   |                        |
| GGL35HA   |                             |                |      |                          |    |                | 72 | 106            | 153.2 | 31             |                |      |        |      |                |                |                         |                |    |    |    |      |      |        | 73.1                   | 142                       | 2.93                     | 2.6                 | 2.6                 | 1.65                   |                        |                        |
| GGL45CA   | 60                          | 8              | 20.5 | 86                       | 60 | 13             | 60 | 106            | 153.2 | 31             | 10             | 12.9 | M10x17 | 16   | 10             | 14             | 45                      | 38             | 20 | 17 | 14 | 52.5 | 22.5 | M12x35 | 92.6                   | 178.8                     | 4.52                     | 3.05                | 3.05                | 2.47                   | 9.97                   |                        |
| GGL45HA   |                             |                |      |                          |    |                | 80 | 139.8          | 187   | 37.9           |                |      |        |      |                |                |                         |                |    |    |    |      |      |        | 116                    | 230.9                     | 6.33                     | 5.47                | 5.47                | 3.20                   |                        |                        |
| GGL55CA   | 70                          | 10             | 23.5 | 100                      | 75 | 12.5           | 75 | 125.5          | 183.7 | 37.75          | 12.5           | 12.9 | M12x18 | 17.5 | 12             | 17.5           | 53                      | 44             | 23 | 20 | 16 | 60   | 30   | M14x45 | 130.5                  | 252                       | 8.01                     | 5.4                 | 5.4                 | 3.91                   | 3.98                   |                        |
| GGL55HA   |                             |                |      |                          |    |                | 95 | 173.8          | 232   | 51.9           |                |      |        |      |                |                |                         |                |    |    |    |      |      |        | 167.8                  | 348                       | 11.15                    | 10.25               | 10.25               | 5.32                   |                        |                        |

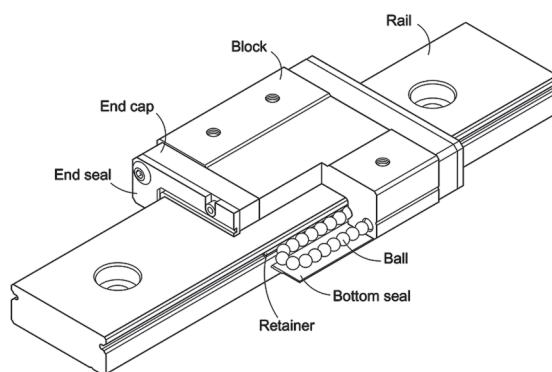
Note: 1 kgf = 9.8 N

## Characteristics

Miniature linear guides are designed for installations with limited space. They combine low weight, low friction and good rigidity. GCr15 bearing steel and stainless steel versions are available, together with high-temperature and enhanced dust-protection options.



WGN Type



WGW Type

## Features

Light weight

Low friction

Easy lubrication

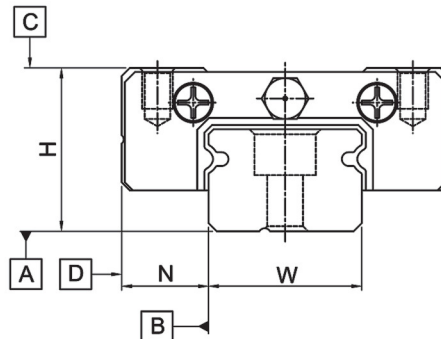
Good rigidity

Enhanced dust protection

High-temperature version

## Accuracy Classes

WGN and WGW series guideways are available in three accuracy classes: Normal (C), High (H) and Precision (P). Select the class according to the requirements of the application.



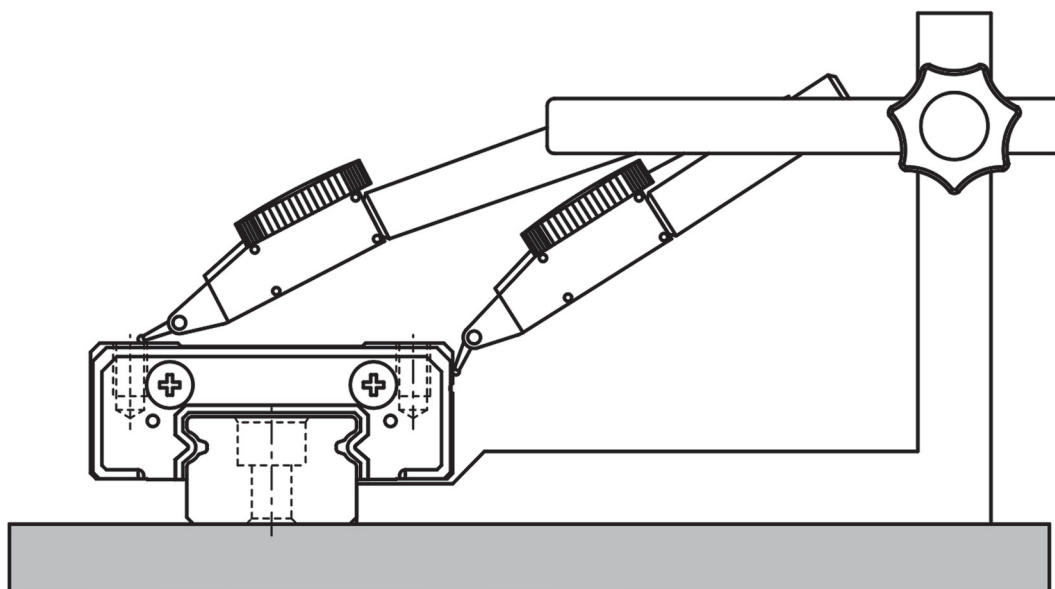
### (1) Accuracy of non-interchangeable guideways

Unit:mm

| Model                         | Item                                   | Accuracy Classes |          |               |
|-------------------------------|----------------------------------------|------------------|----------|---------------|
|                               |                                        | Normal (C)       | High (H) | Precision (P) |
| WGN Series<br>/<br>WGW Series | Dimensional tolerance of height H      | ±0.04            | ±0.02    | ±0.01         |
|                               | Dimensional tolerance of width N       | ±0.04            | ±0.025   | ±0.015        |
|                               | Pair Variation of height H             | 0.03             | 0.015    | 0.007         |
|                               | Pair Variation of width N(Master Rail) | 0.03             | 0.02     | 0.01          |

### (2) Accuracy of interchangeable guideways

|                               |                                        |       |        |        |
|-------------------------------|----------------------------------------|-------|--------|--------|
| WGN Series<br>/<br>WGW Series | Dimensional tolerance of height H      | ±0.04 | ±0.02  | ±0.01  |
|                               | Dimensional tolerance of width N       | ±0.04 | ±0.025 | ±0.015 |
|                               | Pair Variation of height H             | 0.03  | 0.015  | 0.007  |
|                               | Pair Variation of width N              | 0.03  | 0.02   | 0.01   |
|                               | Pair Variation of width N(Master Rail) | 0.07  | 0.04   | 0.02   |

**(3)Accuracy of running parallelism**

| Rail Length<br>(mm) | Accuracy( $\mu$ m) |     |     |
|---------------------|--------------------|-----|-----|
|                     | (C)                | (H) | (P) |
| ~50                 | 12                 | 6   | 2   |
| 50~80               | 13                 | 7   | 3   |
| 80~125              | 14                 | 8   | 3.5 |
| 125~200             | 15                 | 9   | 4   |
| 200~250             | 16                 | 10  | 5   |
| 250~315             | 17                 | 11  | 5   |
| 315~400             | 18                 | 11  | 6   |
| 400~500             | 19                 | 12  | 6   |
| 500~630             | 20                 | 13  | 7   |
| 630~800             | 22                 | 14  | 8   |
| 800~1,000           | 23                 | 16  | 9   |

| Rail Length<br>(mm) | Accuracy( $\mu$ m) |     |     |
|---------------------|--------------------|-----|-----|
|                     | (C)                | (H) | (P) |
| 1,000~1,200         | 25                 | 18  | 11  |
| 1,200~1,300         | 25                 | 18  | 11  |
| 1,300~1,400         | 26                 | 19  | 12  |
| 1,400~1,500         | 27                 | 19  | 12  |
| 1,500~1,600         | 28                 | 20  | 13  |
| 1,600~1,700         | 29                 | 20  | 14  |
| 1,700~1,800         | 30                 | 21  | 14  |
| 1,800~1,900         | 30                 | 21  | 15  |
| 1,900~2,000         | 31                 | 22  | 15  |
| 2,000~              | 31                 | 22  | 16  |

## Preload

WGN and WGW series guideways offer three standard preload classes.

| Model          | Class              | Code | Preload          | Accuracy |
|----------------|--------------------|------|------------------|----------|
| WGN/WGW Series | Light Clearance    | ZF   | Clearance 4~10µm | C        |
|                | Very Light Preload | Z0   | 0                | C~P      |
|                | Light Preload      | Z1   | 0.02C            | C~P      |

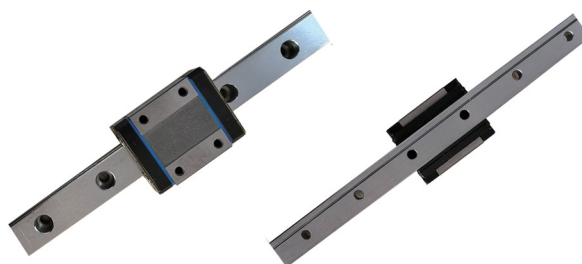
## Lubrication



## High-temperature version

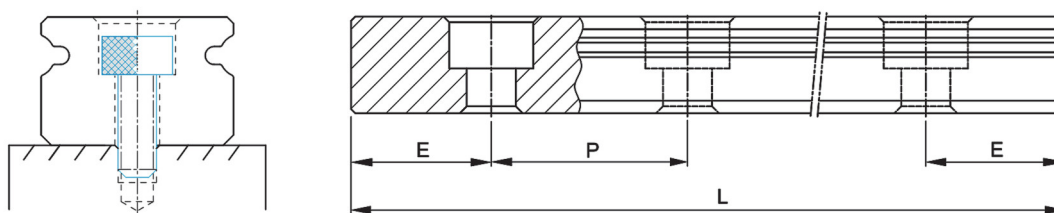


## Enhanced dust protection



## Linear Rail Type

### Mounting From Top



Unit:mm

| Item   | Pitch | Max.Length |
|--------|-------|------------|
| WGNR5  | 15    | 1000       |
| WGNR7  | 15    | 2000       |
| WGNR9  | 20    | 2000       |
| WGNR12 | 25    | 2000       |
| WGNR15 | 40    | 2000       |

Unit:mm

| Item   | Pitch | Max.Length |
|--------|-------|------------|
| WGWR5  | 20    | 1000       |
| WGWR7  | 30    | 2000       |
| WGWR9  | 30    | 2000       |
| WGWR12 | 40    | 2000       |
| WGWR15 | 40    | 2000       |

## Ordering Code

### (1) Non-interchangeable type

| WGN                     | 12   | C          | BC                                                          | 2                     | R1600                                                                      | BC               | Z1      | P                                    | SS       | II                   |
|-------------------------|------|------------|-------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------|------------------|---------|--------------------------------------|----------|----------------------|
| Model                   | Size | Block Type | Block Coating                                               | No.of Blocks per Rail | Rail Length (mm)                                                           | Rail Treatment   | Preload | Precision                            | Material | No.of Rails per Axis |
| ①                       | ②    | ③          | ④                                                           | ⑤                     | ⑥                                                                          | ⑦                | ⑧       | ⑨                                    | ⑩        | ⑪                    |
| ① ModelWGN/WGW Series   |      |            |                                                             |                       | ⑦ Rail TreatmentNone:Standard Rail<br>BC:Black Chrome<br>CC:Chrome Coating |                  |         |                                      |          |                      |
| ② Model Size            |      |            | WGN/WGW 5,7,9,12,15                                         |                       |                                                                            | ⑧ Preload Code   |         | ZF,Z0,Z1                             |          |                      |
| ③ Block Type            |      |            | C:Standard<br>H:Long                                        |                       |                                                                            | ⑨ Precision Code |         | C,H,P                                |          |                      |
| ④ Block Coating         |      |            | None:Standard Block<br>BC:Black Chrome<br>CC:Chrome Coating |                       |                                                                            | ⑩ Material       |         | None:Gcr15<br>SS:Stainless Steel 440 |          |                      |
| ⑤ No.of Blocks per Rail |      |            |                                                             |                       | ⑪ No.of Rails per Axis                                                     |                  |         |                                      |          |                      |
| ⑥ Rail Length (mm)      |      |            |                                                             |                       |                                                                            |                  |         |                                      |          |                      |

### (2) Interchangeable type

#### Miniature Block Code

| WGN              | 12                                                          | C          | BC            | Z1      | P         | SS       |
|------------------|-------------------------------------------------------------|------------|---------------|---------|-----------|----------|
| Model            | Size                                                        | Block Type | Block Coating | Preload | Precision | Material |
| ①                | ②                                                           | ③          | ④             | ⑤       | ⑥         | ⑦        |
| ① Model          | WGN/WGW Series                                              |            |               |         |           |          |
| ② Model Size     | WGN/WGW 5,7,9,12,15                                         |            |               |         |           |          |
| ③ Block Type     | C:Standard<br>H:Long                                        |            |               |         |           |          |
| ④ Block Coating  | None:Standard Block<br>BC:Black Chrome<br>CC:Chrome Coating |            |               |         |           |          |
| ⑤ Preload Code   | ZF,Z0,Z1                                                    |            |               |         |           |          |
| ⑥ Precision Code | C,H,P                                                       |            |               |         |           |          |
| ⑦ Material       | No Symbol:Gcr15<br>M:Stainless Steel 440                    |            |               |         |           |          |

#### Miniature Rail Code

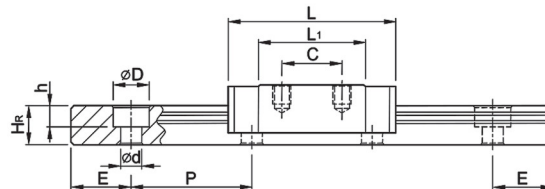
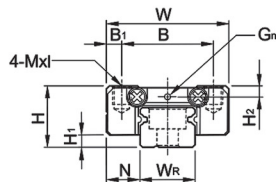
| WGN                    | R                                                           | 12   | R1000       | BC           | P         | SS       |
|------------------------|-------------------------------------------------------------|------|-------------|--------------|-----------|----------|
| Model                  | Rail                                                        | Size | Rail Length | Rail Coating | Precision | Material |
| ①                      | ②                                                           | ③    | ④           | ⑤            | ⑥         | ⑦        |
| ① Model                | WGN /WGW Series                                             |      |             |              |           |          |
| ② Interchangeable Rail |                                                             |      |             |              |           |          |
| ③ Model Size           | WGN/WGW 5,7,9,12,15                                         |      |             |              |           |          |
| ④ Rail Length          |                                                             |      |             |              |           |          |
| ⑤ Rail Coating         | None:Standard Block<br>BC:Black Chrome<br>CC:Chrome Coating |      |             |              |           |          |
| ⑥ Precision Code       | C,H,P                                                       |      |             |              |           |          |
| ⑦ Material             | No Symbol:Gcr15<br>SS:Stainless Steel 440                   |      |             |              |           |          |



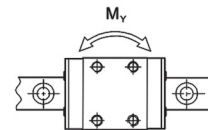
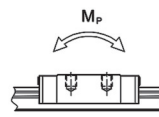
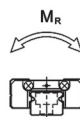
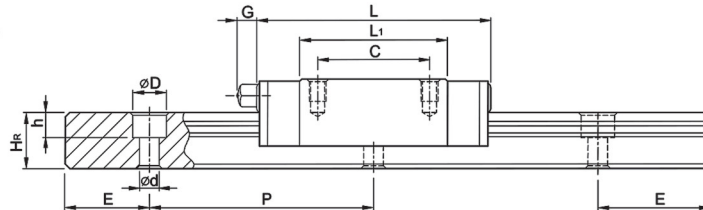
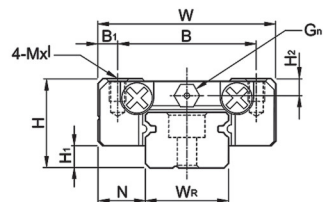
## Dimensions for WGN/WGW Series

### (1) WGN-C/WGN-H

WGN7, WGN9, WGN12



WGN15

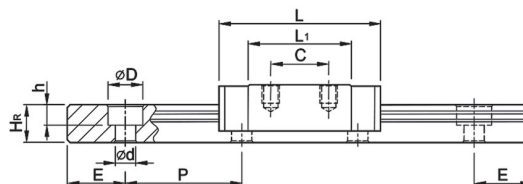
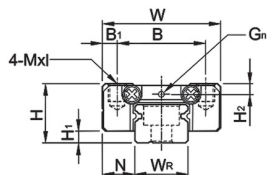


| Model No. | Dimensions of Assembly (mm) |                |     | Dimensions of Block (mm) |    |                |    |                |      |     |                |        |                | Dimensions of Rail (mm) |                |     |     |     |     |     |       |       |                     | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment   |                       |                       | Weight   |           |
|-----------|-----------------------------|----------------|-----|--------------------------|----|----------------|----|----------------|------|-----|----------------|--------|----------------|-------------------------|----------------|-----|-----|-----|-----|-----|-------|-------|---------------------|------------------------|---------------------------|--------------------------|-----------------------|-----------------------|-----------------------|----------|-----------|
|           | H                           | H <sub>1</sub> | N   | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L    | G   | G <sub>n</sub> | MxI    | H <sub>2</sub> | W <sub>R</sub>          | H <sub>R</sub> | D   | h   | d   | P   | E   | (mm)  | C(kN) | C <sub>0</sub> (kN) |                        |                           |                          | M <sub>R</sub><br>N-m | M <sub>P</sub><br>N-m | M <sub>Y</sub><br>N-m | Block kg | Rail kg/m |
| WGN7C     | 8                           | 1.5            | 5   | 17                       | 12 | 2.5            | 8  | 13.5           | 22.5 | -   | Ø1.2           | M2x2.5 | 1.5            | 7                       | 4.8            | 4.2 | 2.3 | 2.4 | 15  | 5   | M2x6  | 0.98  | 1.24                | 4.70                   | 2.84                      | 2.84                     | 0.010                 | 0.22                  |                       |          |           |
| WGN7H     |                             |                |     |                          |    |                | 13 | 21.8           | 30.8 |     |                |        |                |                         |                |     |     |     |     |     |       | 1.37  | 1.96                | 7.64                   | 4.80                      | 4.80                     | 0.015                 |                       |                       |          |           |
| WGN9C     | 10                          | 2              | 5.5 | 20                       | 15 | 2.5            | 10 | 18.9           | 28.9 | -   | Ø1.4           | M3x3   | 1.8            | 9                       | 6.5            | 6   | 3.5 | 3.5 | 20  | 7.5 | M3x8  | 1.86  | 2.55                | 11.76                  | 7.35                      | 7.35                     | 0.016                 | 0.38                  |                       |          |           |
| WGN9H     |                             |                |     |                          |    |                | 16 | 29.9           | 39.9 |     |                |        |                |                         |                |     |     |     |     |     |       | 2.55  | 4.02                | 19.60                  | 18.62                     | 18.62                    | 0.026                 |                       |                       |          |           |
| WGN12C    | 13                          | 3              | 7.5 | 27                       | 20 | 3.5            | 15 | 21.7           | 34.7 | -   | Ø2             | M3x    | 3.5            | 2.5                     | 12             | 8   | 6   | 4.5 | 3.5 | 251 | M3x8  | 2.84  | 3.92                | 25.48                  | 13.72                     | 13.72                    | 0.034                 | 0.65                  |                       |          |           |
| WGN12H    |                             |                |     |                          |    |                | 20 | 32.4           | 45.4 |     |                |        |                |                         |                |     |     |     |     |     |       | 3.72  | 5.88                | 38.22                  | 36.26                     | 36.26                    | 0.054                 |                       |                       |          |           |
| WGN15C    | 16                          | 4              | 8.5 | 32                       | 25 | 3.5            | 20 | 26.7           | 42.1 | 4.5 | M3             | M3x4   | 3              | 15                      | 10             | 6   | 4.5 | 3.5 | 40  | 15  | M3x10 | 4.61  | 5.59                | 45.08                  | 21.56                     | 21.56                    | 0.059                 | 1.06                  |                       |          |           |
| WGN15H    |                             |                |     |                          |    |                | 25 | 43.4           | 58.8 |     |                |        |                |                         |                |     |     |     |     |     |       | 6.37  | 9.11                | 73.50                  | 57.82                     | 57.82                    | 0.092                 |                       |                       |          |           |

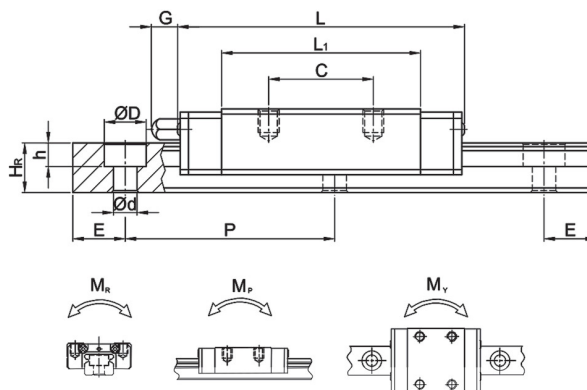
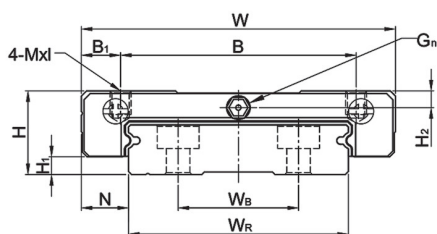
Note: 1 kgf = 9.8 N

## (2) WGW-C/WGW-H

WGW7,WGW9,WGW12



WGW15



| Model No. | Dimensions of Assembly (mm) |                |     | Dimensions of Block (mm) |    |                |    |                |      |     |                |        |                | Dimensions of Rail (mm) |                |                |   |     |     |    |    | Mounting Bolt for Rail | Basic Dynamic Load Rating | Basic Static Load Rating | Static Rated Moment |        |                     | Weight                |                       |
|-----------|-----------------------------|----------------|-----|--------------------------|----|----------------|----|----------------|------|-----|----------------|--------|----------------|-------------------------|----------------|----------------|---|-----|-----|----|----|------------------------|---------------------------|--------------------------|---------------------|--------|---------------------|-----------------------|-----------------------|
|           | H                           | H <sub>1</sub> | N   | W                        | B  | B <sub>1</sub> | C  | L <sub>1</sub> | L    | G   | G <sub>n</sub> | MxI    | H <sub>2</sub> | W <sub>R</sub>          | W <sub>B</sub> | H <sub>R</sub> | D | h   | d   | P  | E  |                        |                           |                          | (mm)                | C(kN)  | C <sub>0</sub> (kN) | M <sub>R</sub><br>N-m | M <sub>P</sub><br>N-m |
| WGW7C     | 9                           | 1.9            | 5.5 | 25                       | 19 | 3              | 10 | 21             | 312  | ·   | ø1.2           | M3x3   | 1.85           | 14                      | -              | 5.2            | 6 | 3.2 | 3.5 | 30 | 10 | M3x6                   | 1.37                      | 2.06                     | 15.70               | 7.14   | 7.14                | 0.020                 | 0.51                  |
| WGW7H     |                             |                |     |                          |    |                | 19 | 30.8           | 41   |     |                |        |                |                         |                |                |   |     |     |    |    |                        | 1.77                      | 3.14                     | 23.45               | 15.53  | 15.53               | 0.029                 |                       |
| WGW9C     | 12                          | 2.9            | 6   | 30                       | 21 | 4.5            | 12 | 27.5           | 39.3 | ·   | ø1.2           | M3x3   | 2.4            | 18                      | -              | 7              | 6 | 4.5 | 3.5 | 30 | 10 | M3x8                   | 2.75                      | 4.12                     | 40.12               | 18.96  | 18.96               | 0.040                 | 0.91                  |
| WGW9H     |                             |                |     |                          | 23 | 3.5            | 24 | 38.5           | 50.7 |     |                |        |                |                         |                |                |   |     |     |    |    |                        | 3.43                      | 5.89                     | 54.54               | 34.00  | 34.00               | 0.057                 |                       |
| WGW12C    | 14                          | 3.4            | 8   | 40                       | 28 | 6              | 15 | 31.3           | 46.1 | ·   | ø1.2           | M3x3.6 | 2.8            | 24                      | -              | 8.5            | 8 | 4.5 | 4.5 | 40 | 15 | M4x8                   | 3.92                      | 5.59                     | 70.34               | 27.80  | 27.80               | 0.071                 | 1.49                  |
| WGW12H    |                             |                |     |                          |    |                | 28 | 45.6           | 60.4 |     |                |        |                |                         |                |                |   |     |     |    |    |                        | 5.10                      | 8.24                     | 102.70              | 57.37  | 57.37               | 0.103                 |                       |
| WGW15C    | 16                          | 3.4            | 9   | 60                       | 45 | 7.5            | 20 | 38             | 54.8 | 5.2 | M3             | M4x4.2 | 3.2            | 42                      | 23             | 9.5            | 8 | 4.5 | 4.5 | 40 | 15 | M4x10                  | 6.77                      | 9.22                     | 199.34              | 56.66  | 56.66               | 0.143                 | 2.86                  |
| WGW15H    |                             |                |     |                          |    |                | 35 | 57             | 73.8 |     |                |        |                |                         |                |                |   |     |     |    |    |                        | 8.93                      | 13.38                    | 299.01              | 122.60 | 122.60              | 0.215                 |                       |

Note: 1 kgf = 9.8 N

# **ROBO-TECH.eu**

sales:

**+359 889 02 08 84**

**[sales@robo-tech.eu](mailto:sales@robo-tech.eu)**

support:

**+359 878 22 22 93**

**[support@robo-tech.eu](mailto:support@robo-tech.eu)**

website:

**[www.robo-tech.eu](http://www.robo-tech.eu)**

