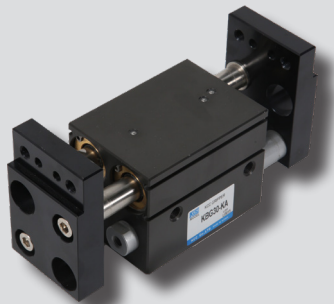


KBG series



KBG-30KA

Features

- Dual piston type with rack & pinion principle
- Increased efficiency design with piston at the bottom
- Sensor is applicable with embedded neodymium magnet on the piston
- Improved hardness and lubrication with no magnet on the guide rack
- With pin hole for body and jaw positioning

How to order

KBG - 20 K A - S80 + A93 2

① Series

| | |
|-----|---------------|
| KBG | Block gripper |
|-----|---------------|

② Bore size

| | | | |
|----|-----|----|-----|
| 12 | Ø12 | 30 | Ø30 |
| 16 | Ø16 | 40 | Ø40 |
| 20 | Ø20 | | |

③ Structure type

| | |
|---|---------------------------------------|
| K | New structure (KCC development model) |
| J | Old structure compatible products |

④ Jaw direction

| | |
|---|----------|
| A | Vertical |
| B | 90° |

※ For type B, the open and close of the air port are changed, and the size of the jaw is different due to the difference between the shaft distance, so the dimensions do not match with the B type of other companies.

⑤ Long stroke option

| | | | | | |
|---------------|--------|--------|--------|--------|------------|
| | KBG-12 | KBG-16 | KBG-20 | KBG-30 | KBG-40 |
| Nil(Standard) | (20) | (30) | (40) | (60) | (100) |
| S(Long) | 40 | 60 | 80 | 120 | developing |

※ The standard stroke can be omitted.

⑥ Auto switch

| Reed A/S | | Solid state A/S | | Notes |
|------------|-------------|-----------------|-----------|-------------|
| Order name | Model | Order name | Model | |
| A93(V) | D-A93(V)K | F-9□(V) | D-F9□(V)K | □ = N, P, B |
| A93N | D-A93KN | F-9□(V) | D-F9□(V)K | |
| A93(V)S | D-A93(V)K-S | F-9□(V) | D-F9□(V)K | |

※ Refer to Auto Switch Catalogue for more information.

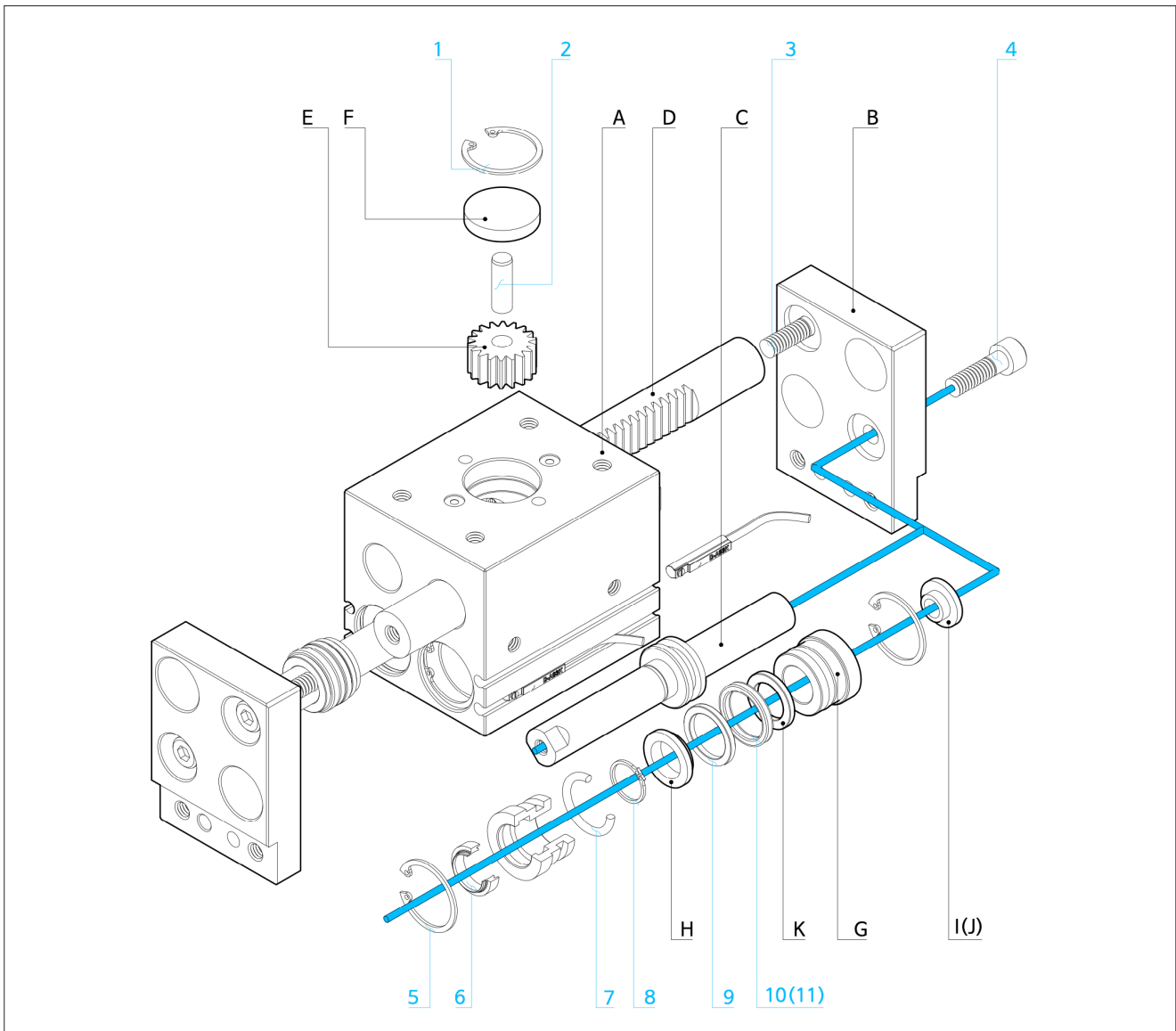
⑦ Quantity of sensor parts

| | |
|---|--------------------|
| # | Quantity of sensor |
|---|--------------------|

Specifications

| | KBG-12 | KBG-16 | KBG-20 | KBG-30 | KBG-40 |
|--------------------------------------|--|-----------------------------|-----------------------------|-----------------------------|-------------------------------|
| Fluid | Compressed air | | | | |
| Operating Pressure | 3~7kgf/cm ² (0.3~0.7MPa) | | | | |
| Ambient Temperature | 0~60℃ | | | | |
| Stroke(mm) | 2x10 | 2x15 | 2x20 | 2x30 | 2x50 |
| Port size | M5 | | | Rc(PT) 1/8 | |
| Air consumption(CC/Cycle) | 3 | 9 | 16.1 | 60.7 | 188.5 |
| Max. gripping point(mm) | 40 | 60 | 80 | 120 | 160 |
| Frequency(Cycle/min) | 60 | 50 | 50 | 40 | 30 |
| Repeat Accuracy(mm) | ±0.01 (After initial 100 operation) / ±0.2 (After 1 million operation) | | | | |
| Gripping force(N) ※ P = Mpa, L=mm | $\frac{124.0xP}{1+0.009xL}$ | $\frac{222.9xP}{1+0.008xL}$ | $\frac{299.9xP}{1+0.006xL}$ | $\frac{754.7xP}{1+0.004xL}$ | $\frac{1,460.4xP}{1+0.003xL}$ |
| Weight(kg) | 0.32 | 0.53 | 1.18 | 2.83 | 5.28 |

Structure



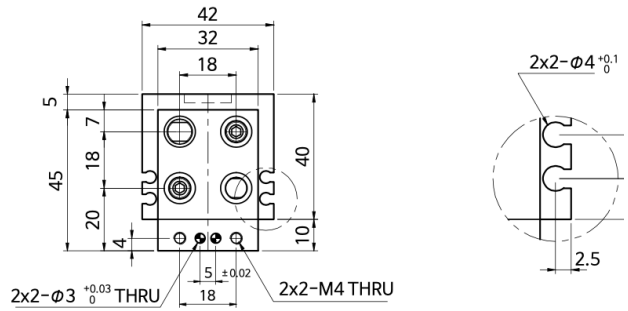
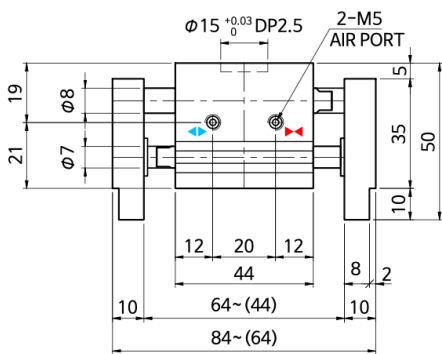
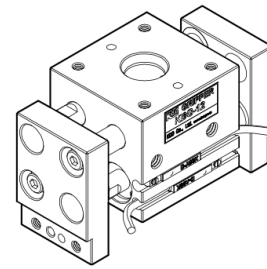
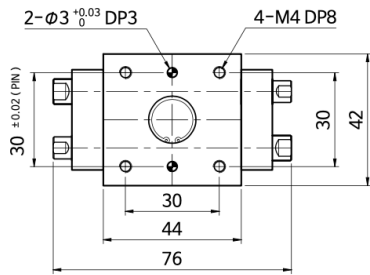
| No | Parts | Material | Remark |
|----|---------------|-----------------|-----------------------|
| A | Gripper Body | Aluminum alloy | Hard Anodizing |
| B | JAW | Aluminum alloy | Black Anodizing |
| C | Piston | Stainless steel | |
| D | Guide rack | Steel alloy | Hard chromium plating |
| E | Pinion | Steel alloy | Nitriding |
| F | Hinge cover | Stainless steel | |
| G | Rod cover | Copper alloy | |
| H | Magnet cover | Aluminum alloy | |
| I | Piston holder | Stainless steel | |
| J | Rack holder | Stainless steel | |
| K | Damper | Urethane rubber | |

| No | Parts | Remark |
|----|-------------------|-----------------|
| 1 | Snap ring | |
| 2 | Dowel pin | |
| 3 | Guide rack bolt | |
| 4 | Piston bolt | |
| 5 | Snap ring | |
| 6 | Rod packing | |
| 7 | O-ring(Rod cover) | |
| 8 | Snap ring | |
| 9 | Neodymium Magnet | |
| 10 | Piston packing | |
| 11 | Wear ring | Only KBG-30, 40 |

Dimensions-Standard

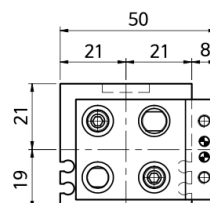
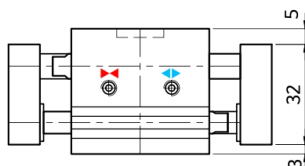
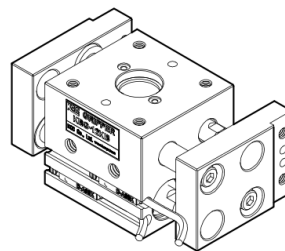
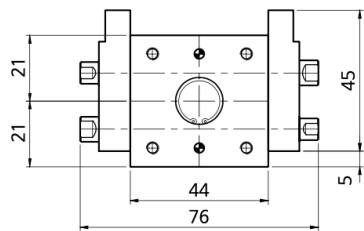
KBG-12KA

④



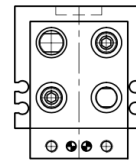
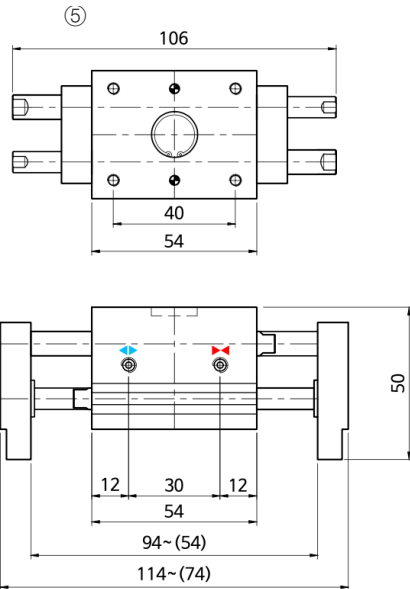
KBG-12KB

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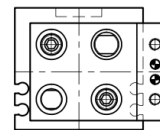
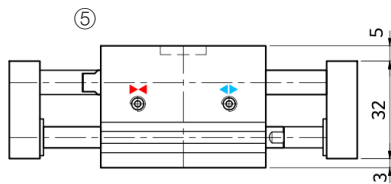


Dimensions-Option

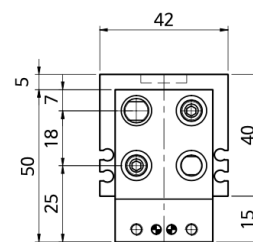
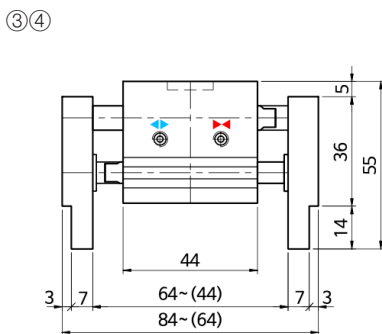
KBG-12KA-S40



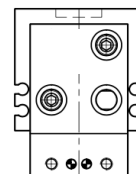
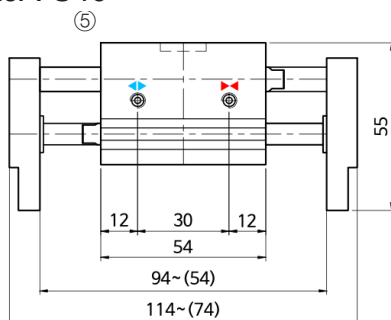
KBG-12KB-S40



KBG-12JA



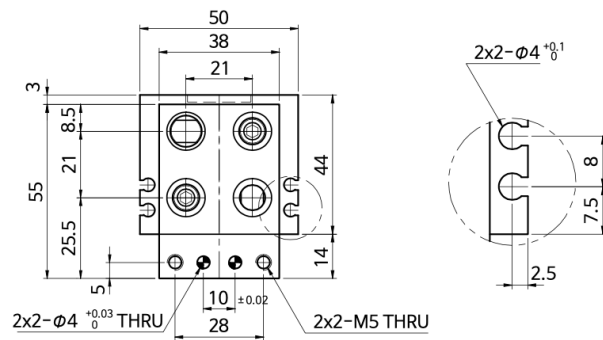
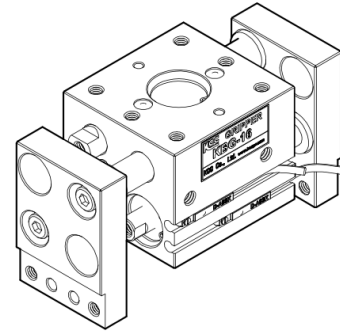
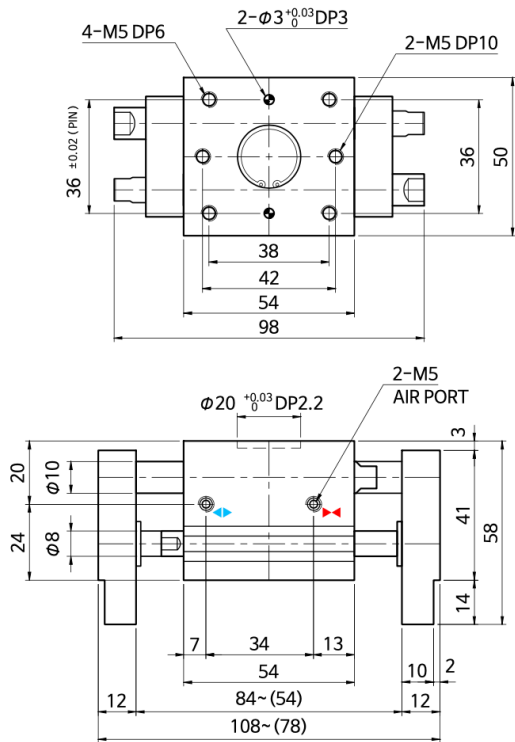
KBG-12JA-S40



Dimensions-Standard

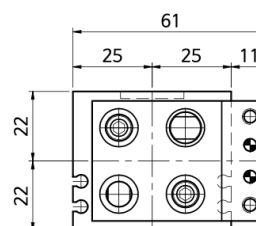
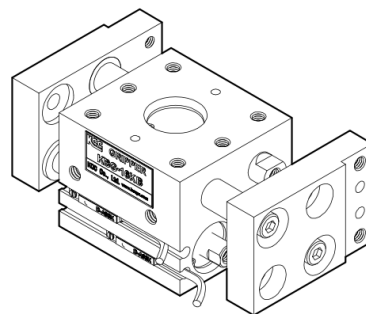
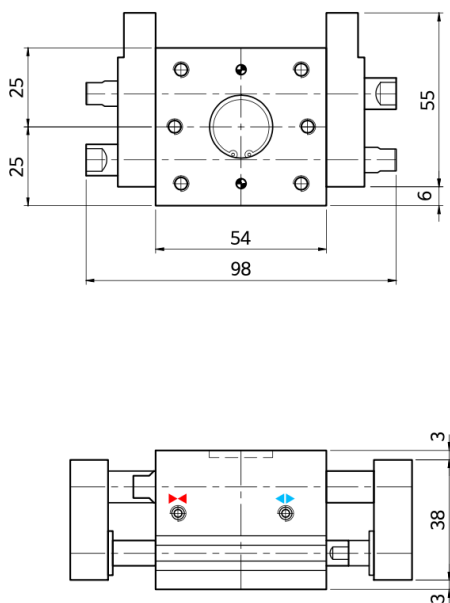
KBG-16KA

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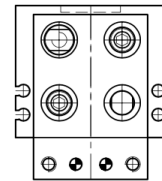
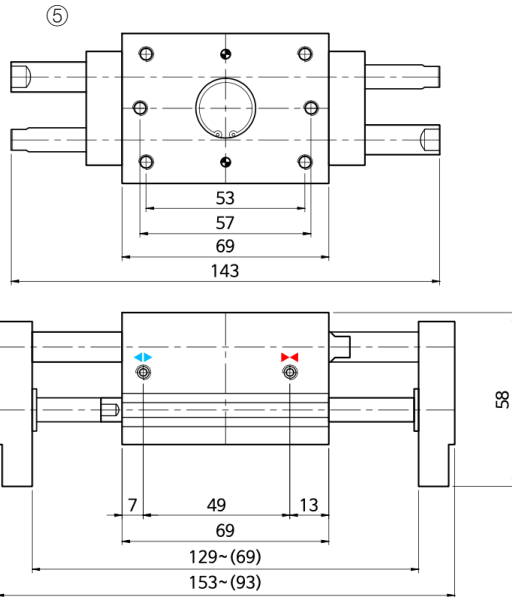
KBG-16KB

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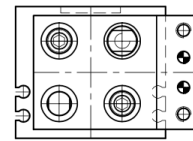
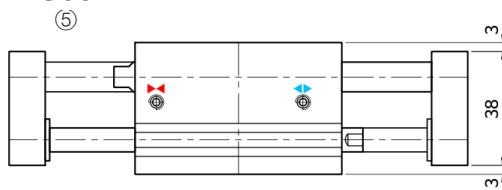


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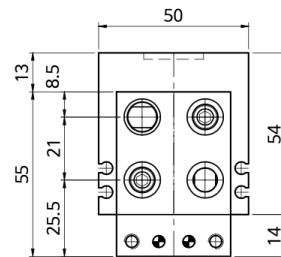
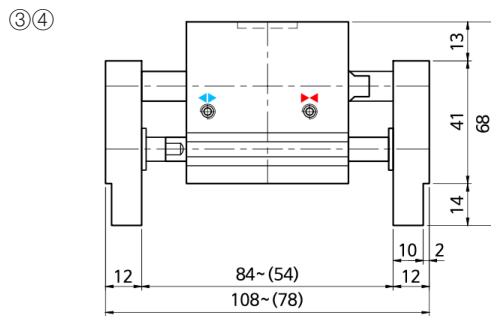
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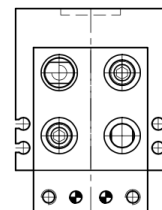
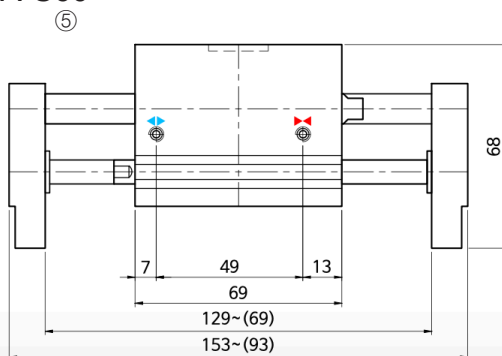
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KBG-16JA

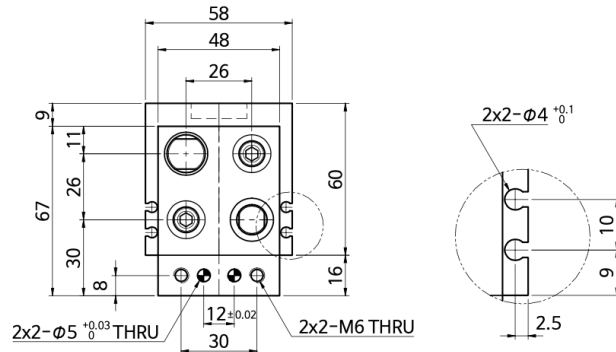
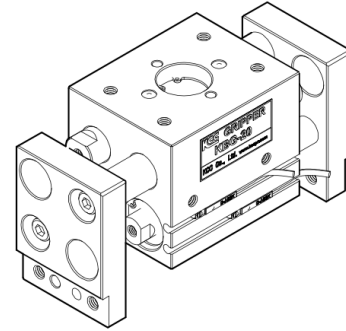
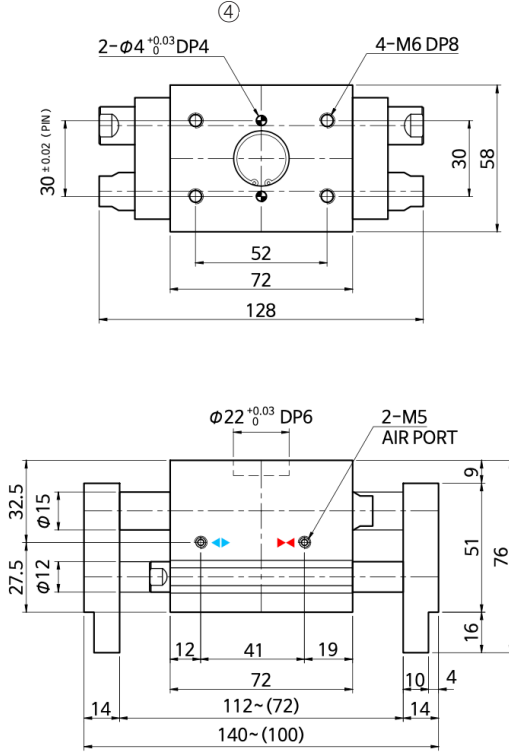


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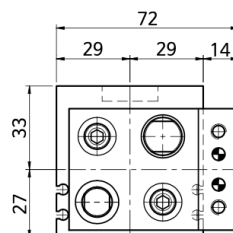
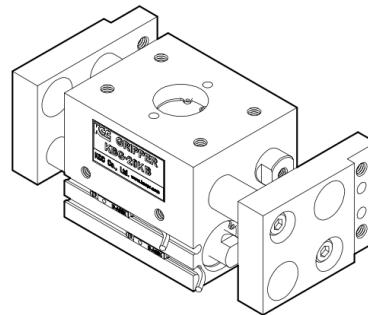
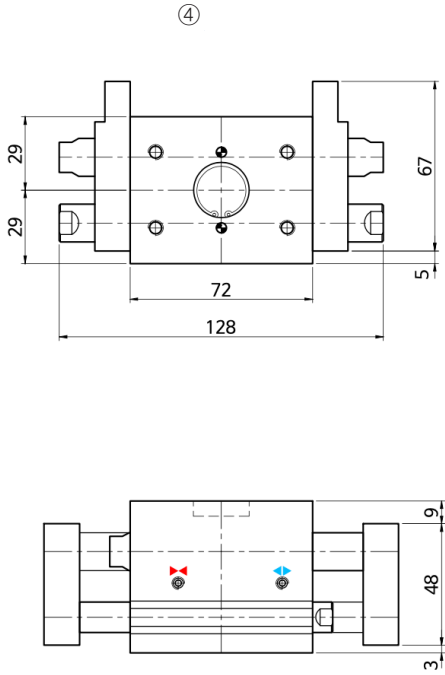


Dimensions-Standard

KBG-20KA

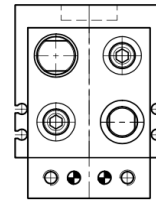
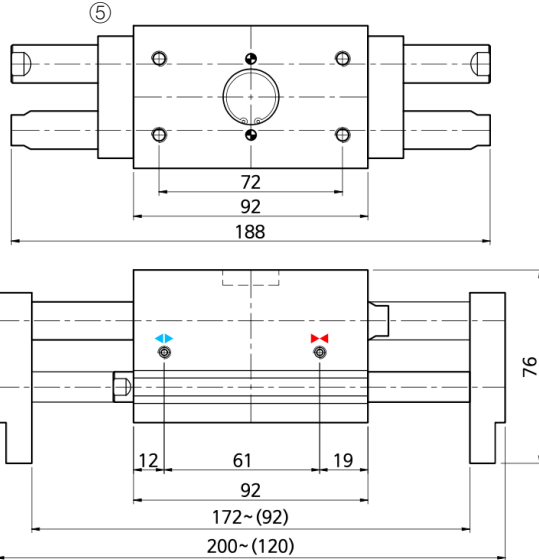


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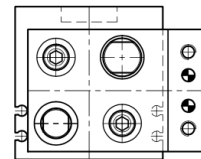
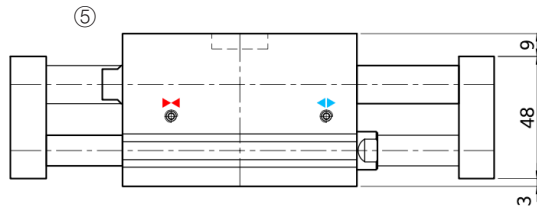


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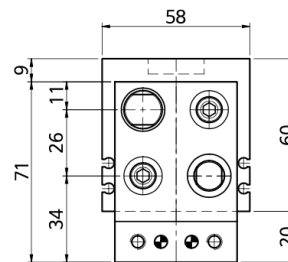
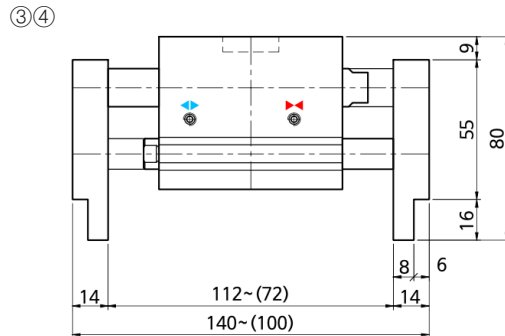
KBG-20KA-S80



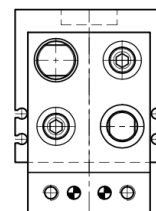
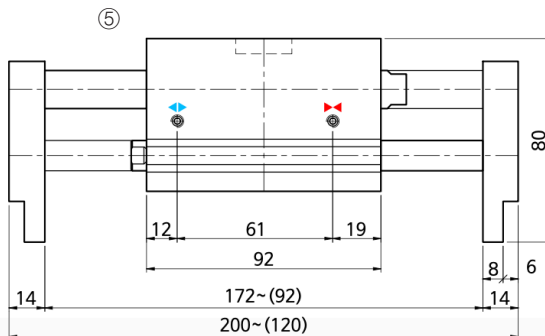
KBG-20KB-S80



KBG-20JA

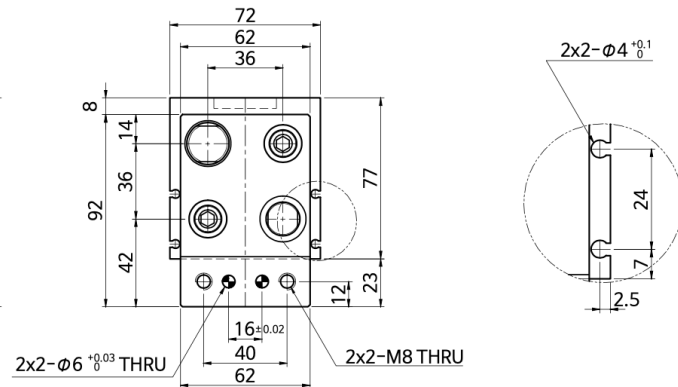
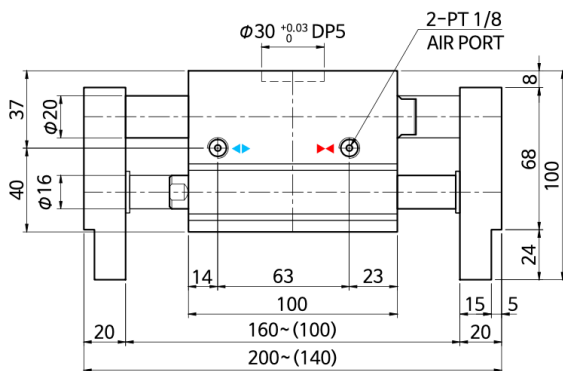
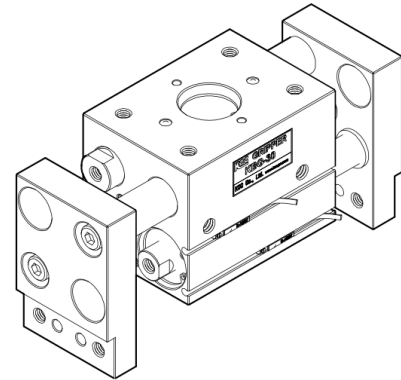
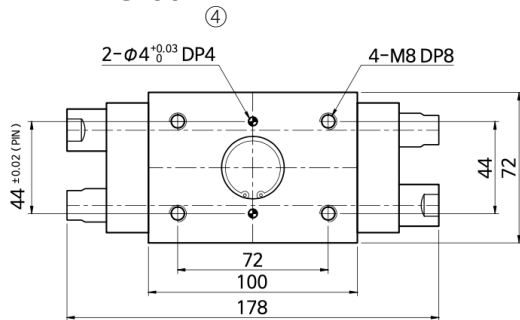


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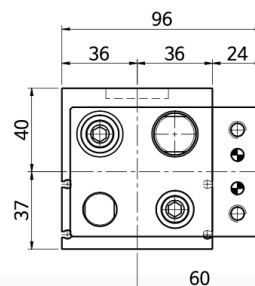
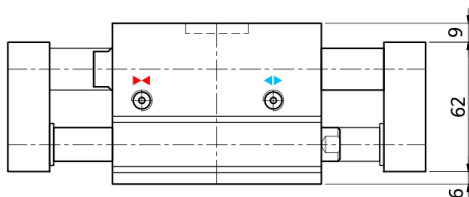
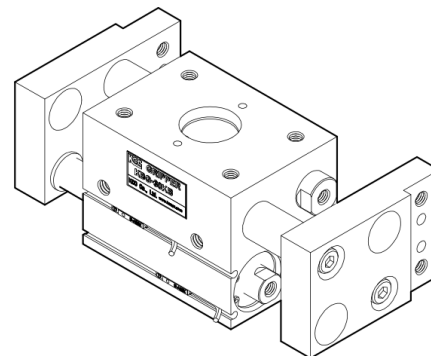
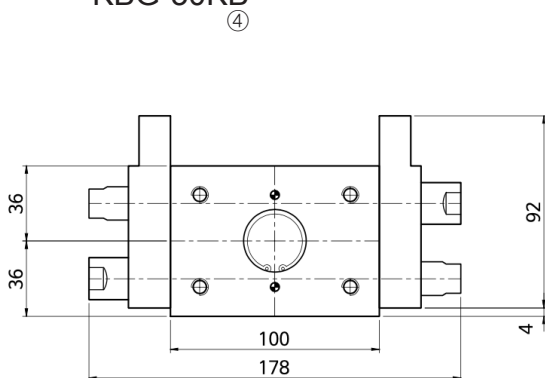


Dimensions-Standard

KBG-30KA

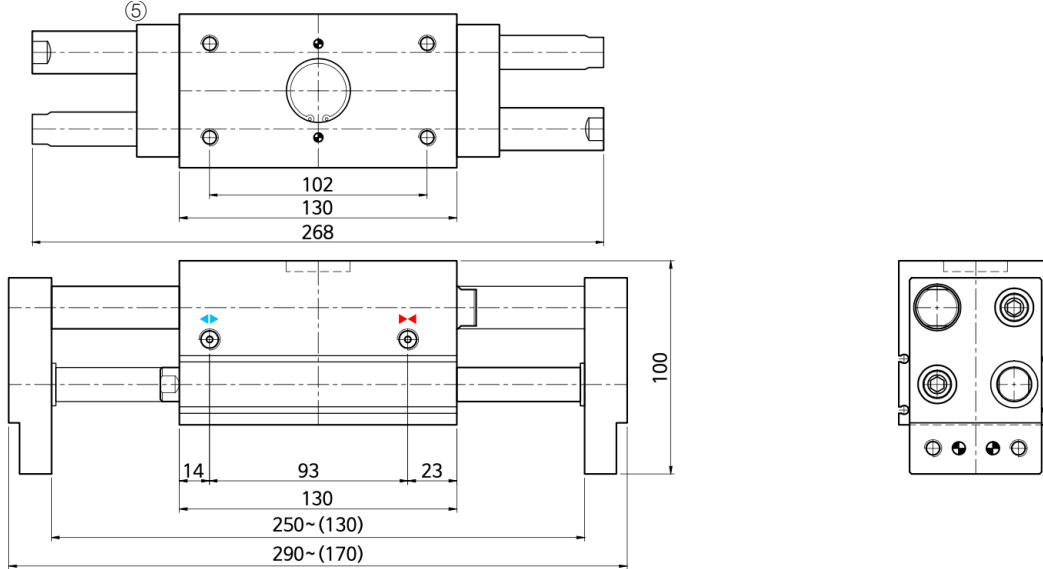


KBG-30KB

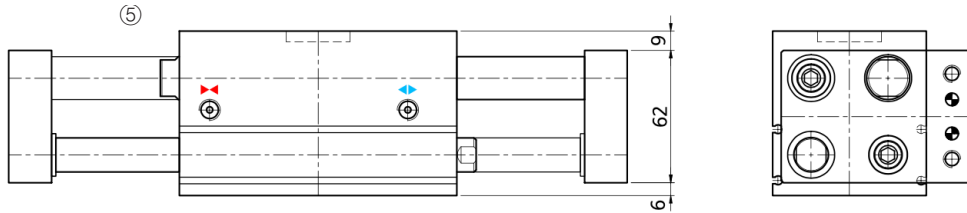


Dimensions-Option

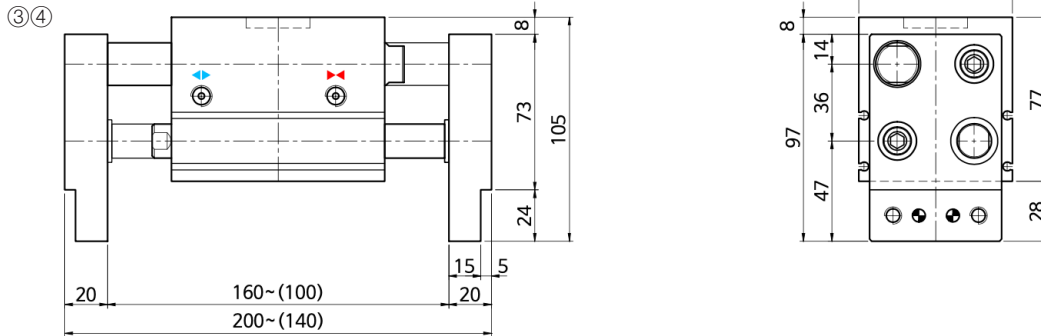
KBG-30KA-S120



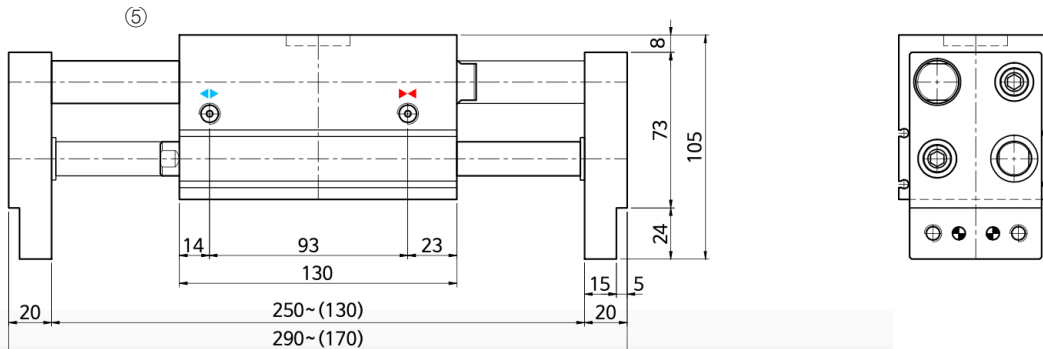
KBG-30KB-S120



KBG-30JA



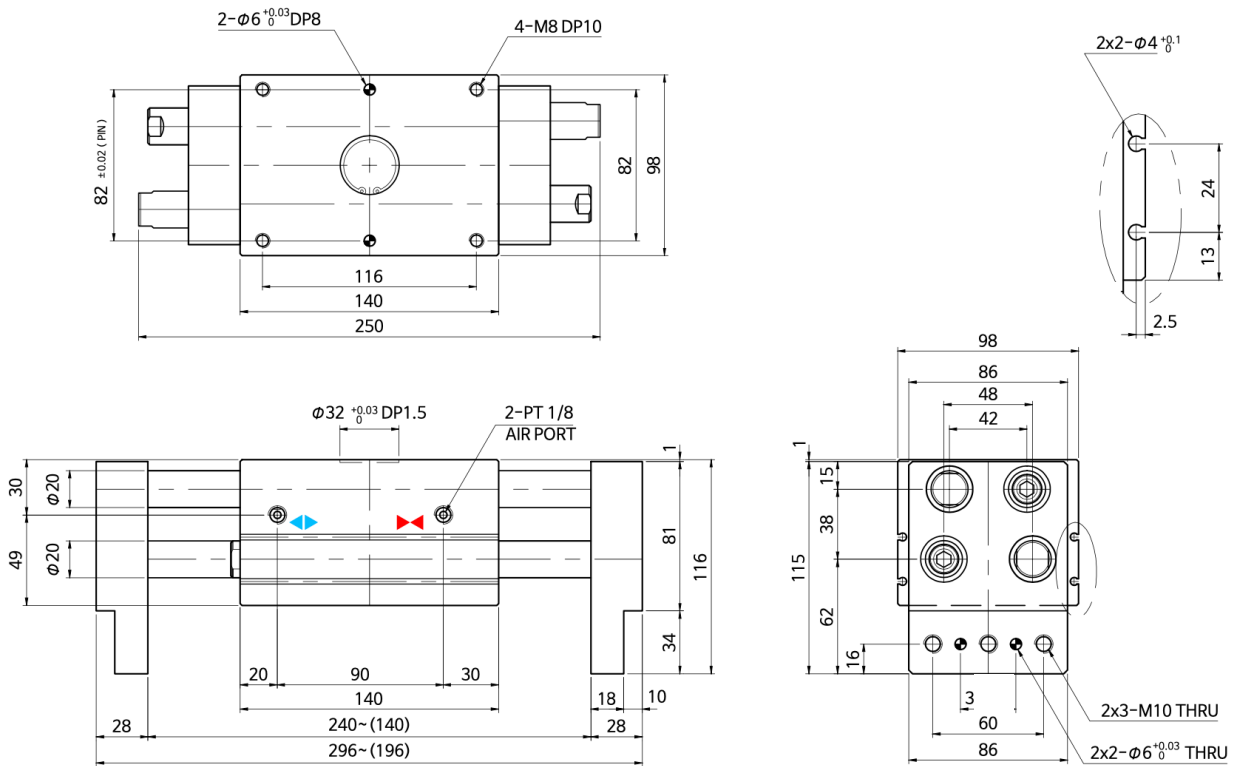
KBG-30JA-S120



Dimensions-Standard

KBG-40KA

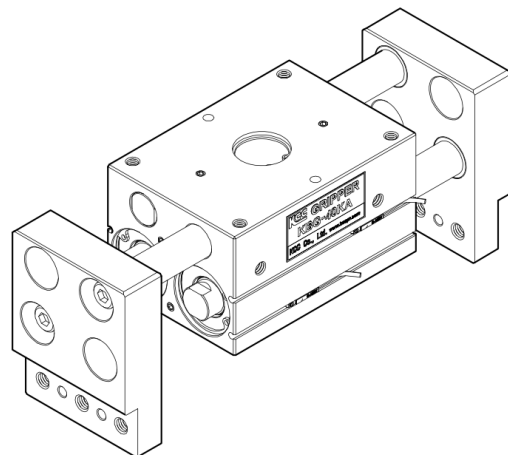
④



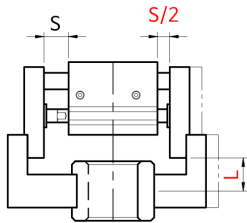
KBG-40KB

④

KBG-40KB Type can be manufactured after consultation as the dimensions are different for each company.



Effective gripping force



(This is a graph showing the standard type by dividing the maximum <L> value of the product by 5 when JAW is closed and open.

- ※ If you calculate the gripping force of the product X 1/5, 1/10, 1/20, you can calculate the work weight for each usage condition.
- ※ It is more stable if the <L> of the attachment is short, the coefficient of friction with the workpiece is large, and the weight is light.)

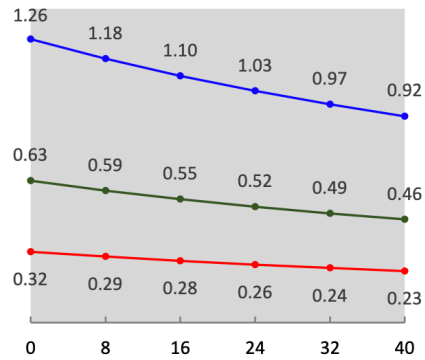
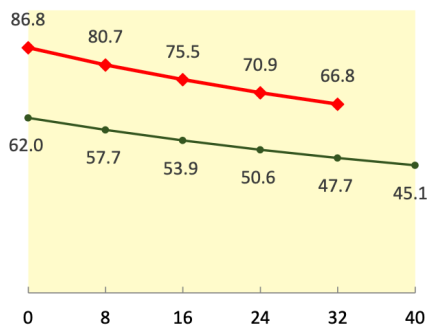
Gripping force [N] (Pressure = 0.5[MPa])

With a double rod type piston structure, the gripping force when close and open is the same.

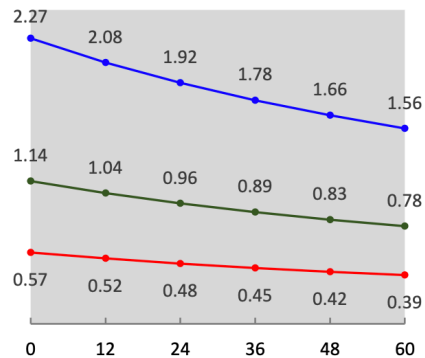
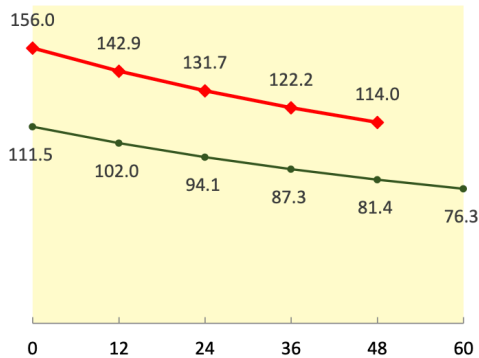
WORK weight by condition when closed [kg] (Pressure = 0.5[MPa])

- (Condition of use)
- (Fixed or slow moving)
 - (General deceleration and acceleration such as linear motion)
 - (Rapid deceleration and acceleration such as robot attachment or rotation)

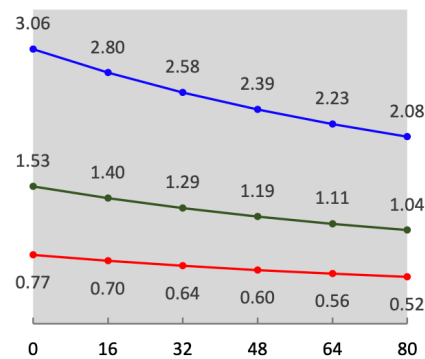
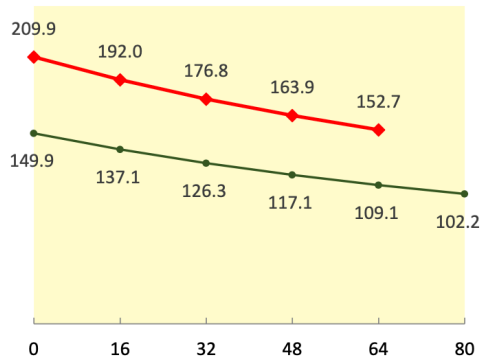
◆ KBG-12



◆ KBG-16



◆ KBG-20

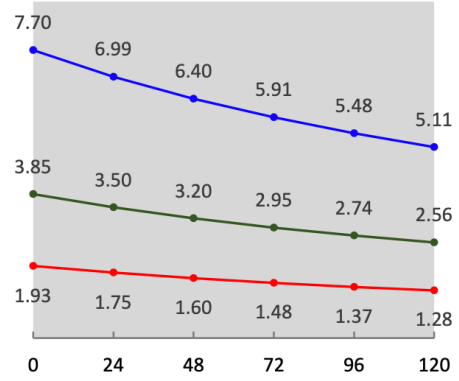
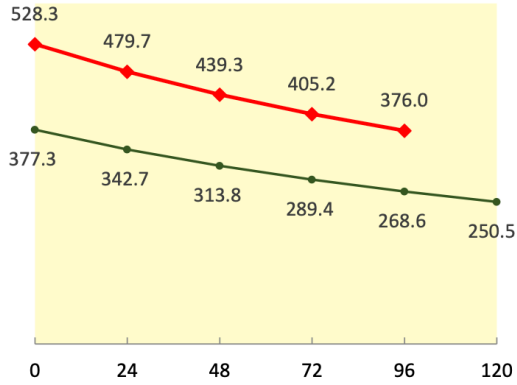


Effective gripping force

Gripping force [N] (Pressure = 0.5[MPa])

WORK weight by condition when closed [kg] (Pressure = 0.5[MPa])

◆ KBG-30



◆ KBG-40

