

# Floating alignment pad

# GFM-A

Swinging which handles sag.

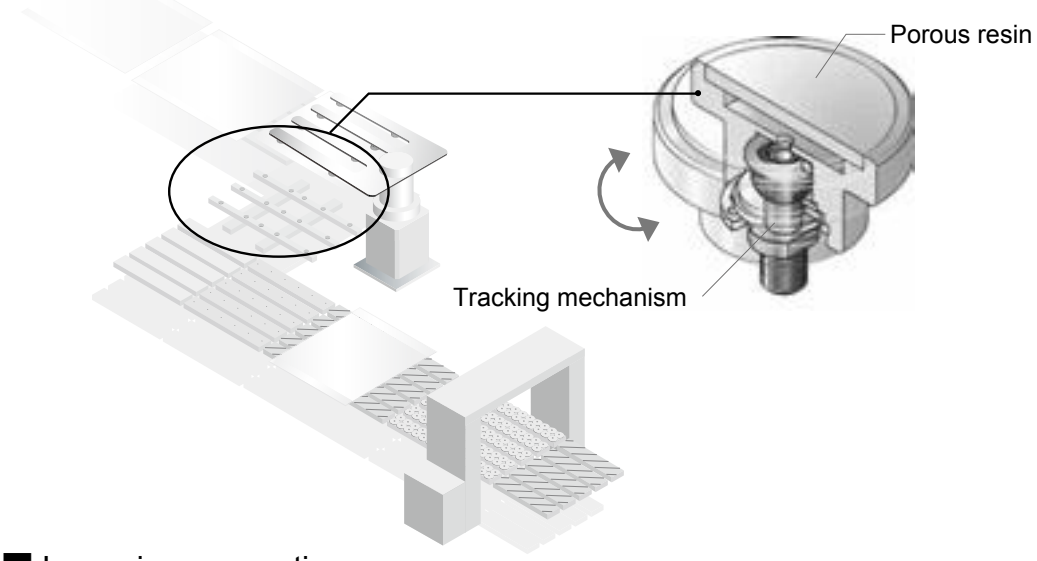
- Estimated float: 10 μm or more
- Main applications: Alignment

RoHS CAD



## By adopting a new porous resin material and unique tracking mechanism, an alignment that supports sag is made possible.

### ■ Adopts CKD's unique "porous resin and tracking mechanism" (patented).




### ■ Less air consumption

By adopting a porous material, air consumption rate is reduced by half *.

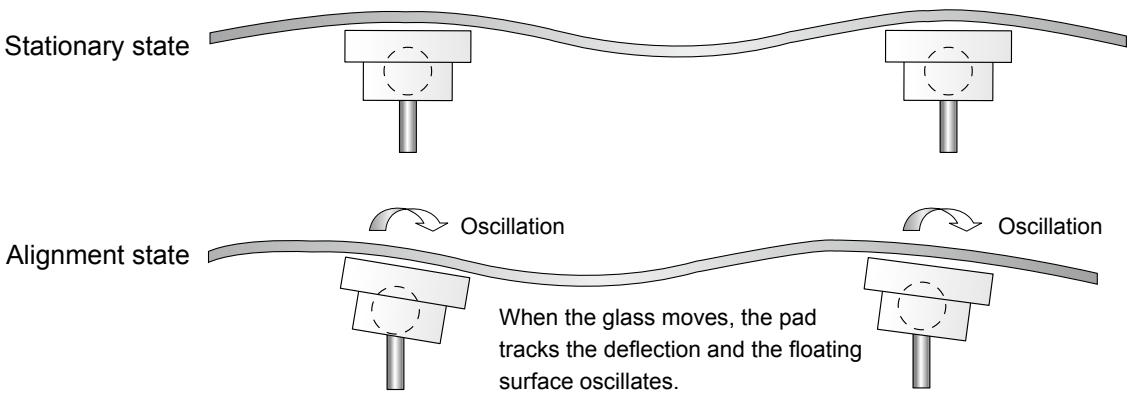
* according to our test for GFM-A

### ■ Antistatic

By using the antistatic porous resin, the suppression of static electricity is enabled.

### ■ Supports sag freely

By tracing the sag of large glass substrates, etc., contactless floating can be achieved. (image diagram)



## Specifications

| Item | | GFM-A |
|---|---|---|
| Working fluid | | Compressed clean air [class 1.1.1 to 1.6.2] |
| Working pressure kPa | When floating | 80 (≈12 psi, 0.8 bar) to 200 (≈29 psi, 2 bar) |
| | At suction | -90 (≈-13 psi, -0.9 bar) to -60 (≈-8.8 psi, -0.6 bar) |
| Operating ambient temperature °C | | 5 (41°F) to 40 (104°F) |
| Storage ambient temperature °C | | -10 (14°F) to 60 (140°F) (no freezing) |
| Mounting orientation | | Limited to the state when the porous surface is facing up |
| Applied load *1 N | | 1 to 5 |
| Air consump *1 ℓ/min | | 10 or less |
| Suction holding force N | | 5 or less (perpendicular to the direction of suction surface) |
| Port size | | M5 |
| Weight g | | Approx. 15 |

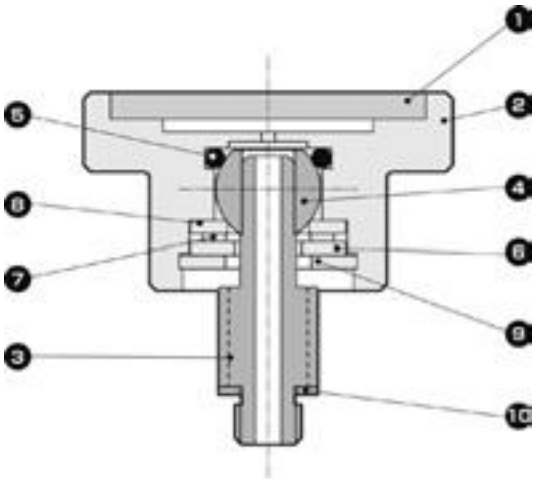
*1: This is the value when the supply air pressure is 100 kPa.

## How to order

GFM - A

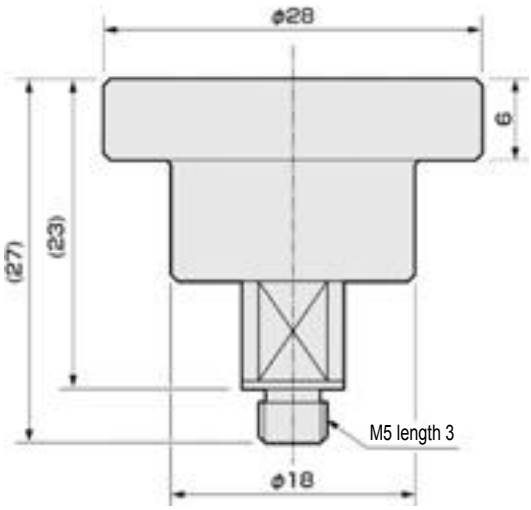
Model No.

## Internal structure and parts list



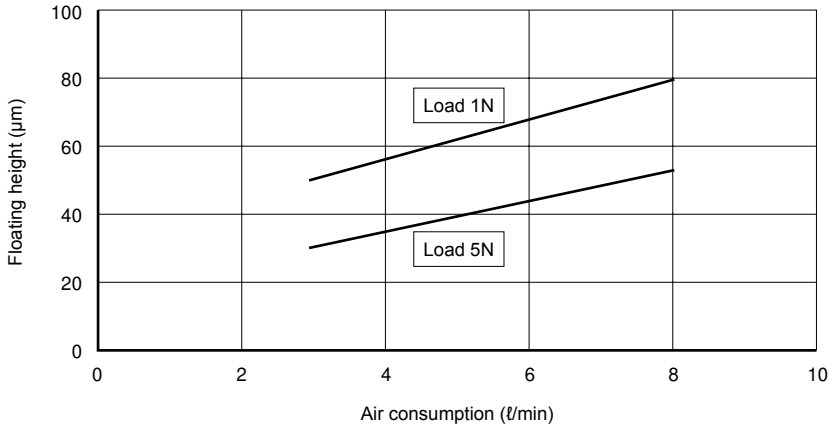

| No. | Part name | Material | Remarks |
|---|---|---|---|
| 1 | Porous material | Polyphenylene sulfide | Containing carbon fiber |
| 2 | Body | Polyphenylene sulfide | Containing carbon fiber |
| 3 | Shaft | Stainless steel | |
| 4 | Steel ball | Stainless steel | |
| 5 | O-ring | Nitrile rubber | |
| 6 | Metal washer | Stainless steel | |
| 7 | Wave washer | Stainless steel | |
| 8 | Metal washer | Steel | Electroless nickel plating |
| 9 | C type snap ring for hole | Stainless steel | |
| 10 | Gasket | Nitrile rubber/steel | |

## Dimensions CAD

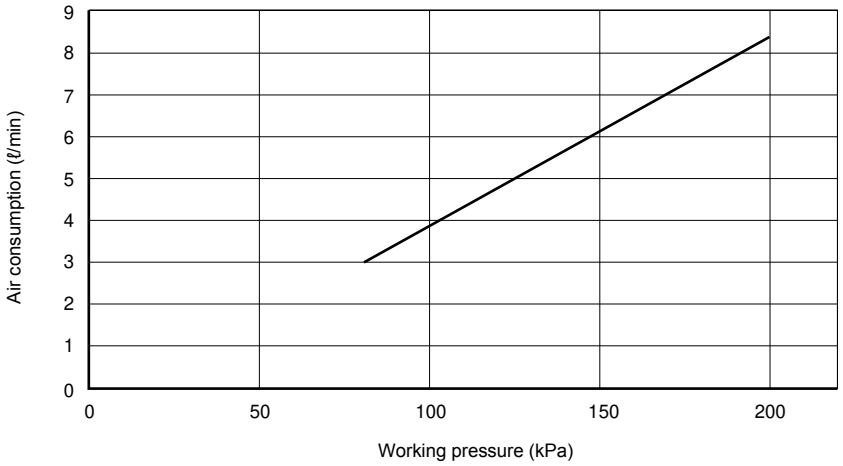


## 1 Floating height (reference data)

Air consumption - floating height




Working pressure - air consumption

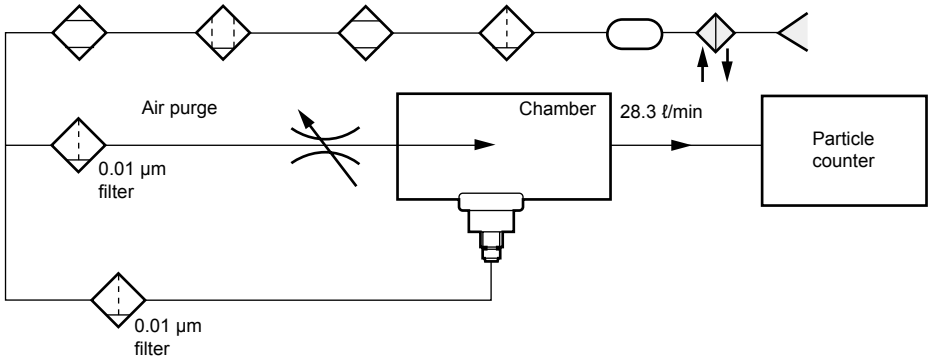


## 2 Dust generation rate (reference data)

[Measuring method]

(1) Set a test sample in the chamber.
(2) Supply air.
(3) Measure the number of particles when air flows continuously.

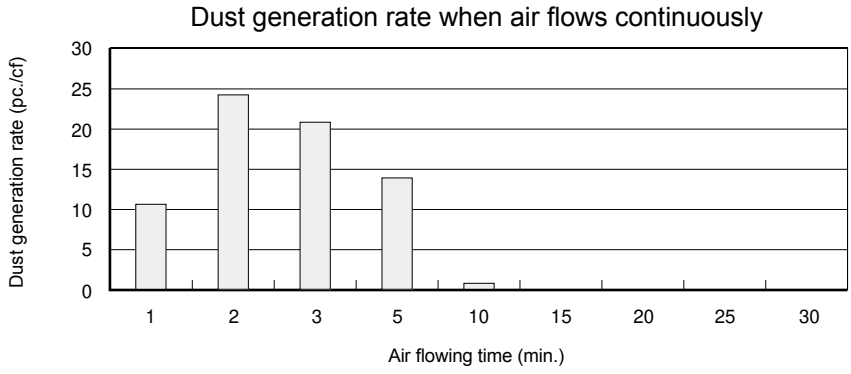
[Test circuit]




[Measuring instrument]

| | |
|---|---|
| Particle counter | : Laser dust monitor |
| Min. measurable particle diameter | : 0.1 µm |
| Intake | : 28.3 ℓ/min |

[Results]



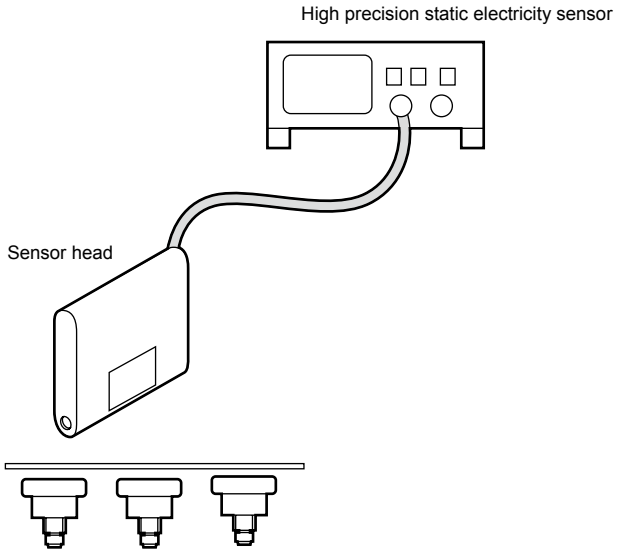

Note: The dust generation rate includes particles with diameter of 0.5 µm or more.

## 3 Static electricity change (reference data)

[Measuring method]

(1) Mount the sensor head at the center of the glass.
(2) Measure the indicated static electricity (voltage) when air is supplied.

[Test circuit]




[Measuring instrument]

Static electricity measurement: High-precision static electricity measuring device (contactless)

[Results]

