For Ensuring Safety

To Use This Product Safely

Be sure to read this before use.
For general pneumatic components precautions, Intro P. 15 for details.

Individual Precautions: Float Star GFM Series

Design / Selection

1. Common

Warning

■During transport/storage, keep the environment temperature within the range of the storage ambient temperature (-10°C to 60°C).
Transport/storage outside this range will cause product damage, abnormalities, or degradation of performance/durability. For optimal use of the product, transport/storage near 25°C is best.

■Always use within the product specifications.
Use outside the specification range can cause damage to the porous material or deterioration of the porous surface; do not use.

■Avoid using outdoors in areas with high levels of dust or direct sunlight.
Do not use in locations with corrosive or flammable gases. Also, never allow them to be inhaled.

■This product is used for compressed air. Do not use other fluids.

■Never modify or additionally machine this product. Processing distortion, etc., may lead to accuracy or strength degradation.

■The floating workpiece can be moved with minimal force.
To prevent injury to personnel and damage to workpieces/equipment/devices due to workpiece movement or overrun, appropriately incorporate workpiece support/holding/fixing and stoppers, etc.

■Consider the possibility that the pressure may be decreased by the electrical power failure or breakdown of the power source.
If insufficient floating could cause injury to personnel or damage to workpieces/equipment/devices, incorporate safety devices for that purpose. If insufficient suction force could cause injury to personnel or damage to workpieces/equipment/devices, incorporate safety devices for that purpose.

■Consider the behavior at emergency stop.
If safety devices activate during emergency stop or system abnormality, causing the power source, machinery, etc., to stop, design so as not to cause injury to personnel or damage to workpieces/equipment/devices.

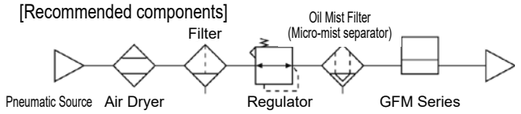
■Consider the behavior when restarting after emergency or abnormal stops.
Design so that restarting does not cause injury to personnel or damage to workpieces/equipment/devices.

■Perform piping with a sufficient effective cross-sectional area.
Piping design commensurate with air consumption is necessary. Ensure the effective area of tubes, fittings, valves, etc., is sufficiently large to minimize pressure drop. Insufficient floating or suction force can lead to injury to personnel and damage to workpieces/equipment/devices.

■Do not use spiral piping.
Avoid spiral piping on both the supply and vacuum sides; perform piping using the shortest possible straight distance to minimize pressure drop. Insufficient floating or suction force can lead to injury to personnel and damage to workpieces/equipment/devices.

Caution

■Use dry, clean compressed air [Class 1.1.1 to 1.6.2] (20,000 pcs./m^3 or less of solid particles 0.1 to 0.5 µm, pressure dew point +10°C or less, oil concentration 0.1mg/m^3 or less).
(Class is based on compressed air quality classes according to ISO-8573-1: 2010.)
[It is recommended to use the CKD Super dryer SD Series or CKD inline filter FCS.]
[Recommended components]



■When using this product in a cold climate, take the necessary measures to prevent freezing.
Foreign matter or oil in compressed air can clog the porous material, causing failure/malfunction.

■When there is a heat source in the surroundings, insulate the product.
Radiant heat may cause the product temperature to rise above the operating ambient temperature; shield with a cover, etc.

■Avoid using this product where vibration and impact are present.
Causes failure/malfunction.

■Wiping the floating surface of the product with cloth/paper, touching with a hand or contacting with glass will cause black adhesion(color transfer). This phenomenon means that applying physical load/stress to the porous material causes the porous surface layer to peel or be abraded, leading to particle generation; please be careful. (Excluding GFM-T)

2. SwiveL-type GFM-A

Warning

■Take care when swiveling operation is performed with a pad fixed with thread.
Rotation may cause screw loosening, risking trouble.

■When performing suction transport, consider the acceleration, impact and wind pressure.
There is a risk of the suctioned object detaching during movement.

Caution

■For the normal oscillating operation, set the applied load to 1 to 5 N.
Setting the quantity and installation layout is important. If the load capacity is 1 N or less, air may blow out from the body side or bottom surface. If 5 N or more, the copying mechanism may not function.

3. Rail-type GFM-R□/ Precision Type GFM-P

Caution

■Separately prepare brackets for piping connection that meet the mounting dimensions of your equipment.
Separate bracket kits are available. Please consult us.

■Because the threaded part of the mounting section of this product penetrates the air path, air leakage may occur from the threaded part.
[GFM-R Series Only]
This can be prevented by using screw gaskets.

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Equipment Product Site (https: //www.ckd.co.jp/kiki/en/) → 'model No.' → Instruction Manual