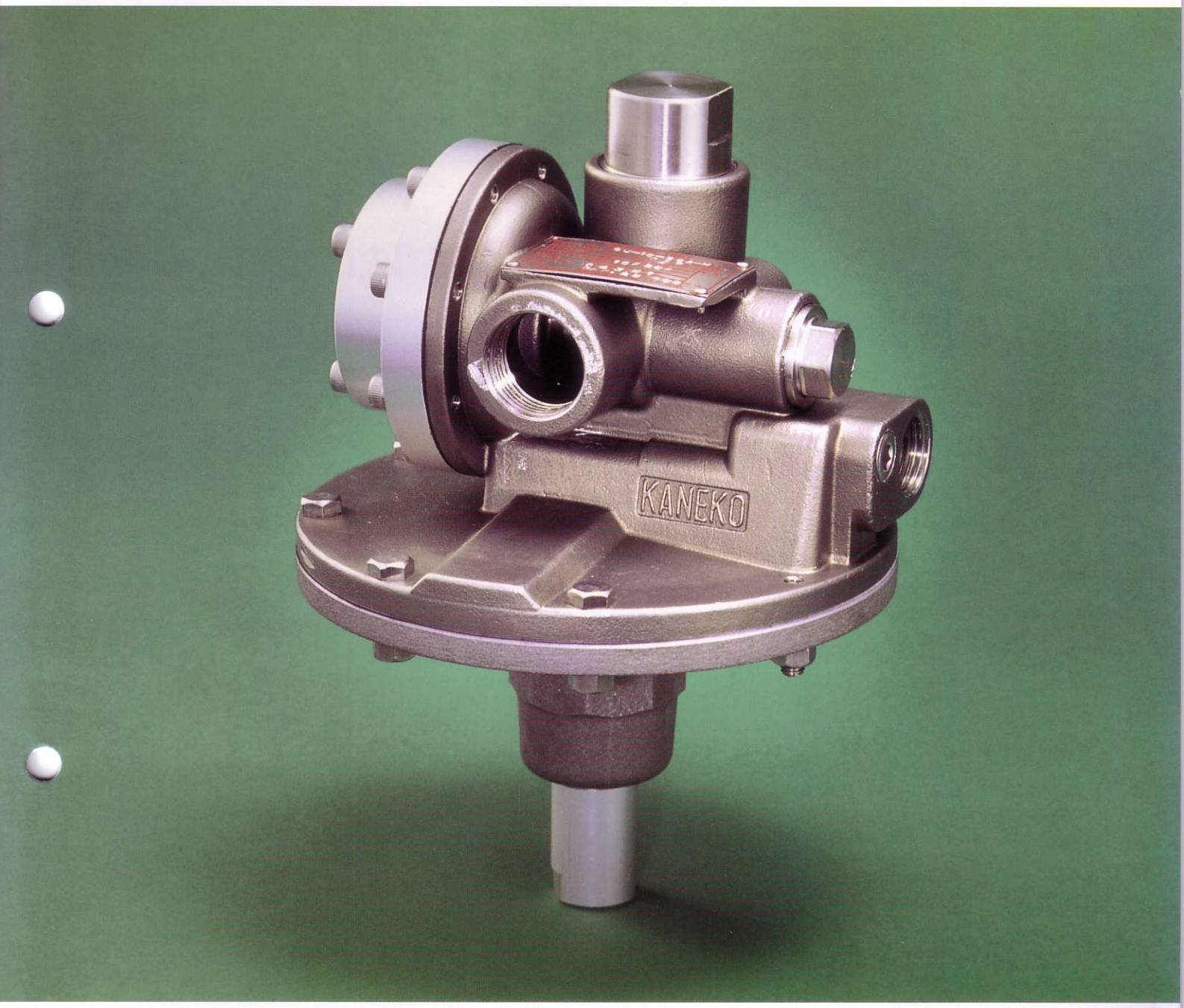
CATALOG No.01-223

GAS SEAL UNIT

GU-10 / GU-25



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Purpose of Use

1 Dust prevention
The gas seal unit is intended to prevent the entrance of dust in the air into storage tanks such as those for pure water incompatible therewith.

2 Protection of contents from change in quality or deterioration
The gas seal unit is intended to isolate the contents from active gas in storage tanks for foodstuffs, medicines, petroleum products, etc., which change in quality or deteriorate by contact with air or the like.

3 Safety
The gas seal unit is intended to prevent storage tanks for inflammable contents from explosion or fire by virtue of inert gas sealed therein.

When storing liquids and powders such as pure water and ultra-pure water indispensable for semiconductor and pharmaceutical production, chemical products, medicines, petroleum products, foodstuffs(corns, wine, sake, juice), etc., an inert gas(usually nitrogen gas) is sealed in the storage tank to prevent them from deteriorating by contact with air.
Inflammable gases stored in tanks may often have the upper gas phase in an explosive state. To prevent this, an inert gas sealing method is used to expel oxygen from the gas phase.

Features

1 Very low pressure
The minimum pressure is 0.1kPa. for size 3/8(GU-10 series) and 0.05kPa.for size 25(GU-25 series).

2 High sensitivity
High responsiveness and highly that air cannot enter.

3 No delay
Gas feed rate is so high that air cannot enter.

4 Low installation cost
No excess piping is needed because of unitized construction.

Usually nitrogen gas is used as seal gas. Being expensive, this gas is required not to flow out wastefully. If the response of the gas seal unit to pressure change is late, the pressure in the storage tank becomes lower than the atmospheric pressure, for example, at the time of drawing out the contents, resulting in air being suched in through other suction devices and hence in the very effect of gas sealing being marred.
The present gas seal unit is excellent in responsiveness and stable in pressure setting, so the above-mentioned problems can easily be solved.

Standard Specifications GU-10-□□□

1 Nominal pipe Size
Primary: Rc 3/8
Secondary: Rc 3/4 ┐
Control pipe: Rc 1/2 ┘ Tank side

2 Primary pressure : 0.1-0.7 MPa
- Normal control is not effected when the primary pressure becomes less than 0.1MPa during operation (while fluid is flowing).

3 Set pressure : 0.1-3kPa.
- The set pressure changes with changes in primary pressure.
- The main valve is pilot-operated. In a full-sealed tank, therefore, its inner pressure stabilizes at a level about 0.05 to 0.1kPa higher than the set pressure.

4 Flow rate (see Table1)
- As for the gas flow rate dependent on liquid drawout and temperature change, calculate it according to the "Method of calculating the rate of gas flow to the tank" described in Kaneko's Catalog for Breather Valve and Flame Arrester.
- It is dangerous to feed gas at a rate exceeding the capacity of the exhaust ventilator installed to the storage tank. It is therefore necessary to control the flow rate within the limits not exceeding the above capacity.[Necessary flow rate] ≦ [Flow characteristic of gas seal unit] < [Controlled flow rate]

5 Material
Body material: SCS13(304S.S.)
For other materials, refer to Table4.

Table 1