IHARA SCIENCE

SINGLE ACTION PISTON VALVE ADAPTED FOR HEMING SEALER

WEARLESS VALVE

FOR EFFICIENCY PROMOTION/COST REDUCTION/LONGER LIFE
IN THE ADHESION PROCESS IN THE AUTOMOBILE PRODUCTION LINE

IHARA SCIENCE CORPORATION

ALWAYS PRODUCES AN OPTIMUM FLOW

With the adoption of WEARLESS VALVE, a single action piston valve adaptable to heming sealer, production efficiency and drastic reduction in maintenance cost can be realized by the positive flow control of fluid in such application as high viscous adhesive containing glass beads.

Main features

Single action (Products of other makers' are double action)

With the spring return design being 'AIR Less Close' complete closure of fluid at pressure of 20MPa can be achieved, and operation air for piston upper part is not required-therefore no water puddle. Air piping required for double action is not required.

Features of the stem seal

With the adoption of the 'special steel scrapper' , adhesive material seeping into the gland part can be prevented and wear due to sliding of glass beads have been overcome by the combination in the design of the 'gland packing adaptable for high viscous fluid' based on track records in seals and with the super polished stem. Drastic shot endurance has been realized.

Special characteristics of the valve seat

With the use of the highest quality 'special alloy' material for the valve and valve seat as well as by utilizing the unique production know-how such as the remarkable precision in the improved machining process, superior closing performance is being exhibited. Wear resistance and longer life incomparable with other valves have been achieved.

Impact reduction mechanism

In order to enhance durability of the valve seat, impact reduction mechanism has been adopted for protection against impact encountered by the valve seat at spring return. By providing a needle valve mechanism for control of the operation air pressure exhaust velocity at valve closing, limited adjustability has been provided to the speed control mechanism.

Weight reduction and non-corrosiveness

In addition to the compact design with the adoption of the high resistance special plate spring and high viscosity duralumin body, the material adopted for the vessel is non-corrosive light weight aluminum alloy. This light and high performance piston valve employs stainless steel and special high grade material for vital parts.

Field of application

System related to conveying adhesive

Control valves for lines conveying high viscous adhesive material containing glass beads for heming sealer and masstic sealer in automobile assembly plants.

System related to conveying liquid containing high viscous liquid solids

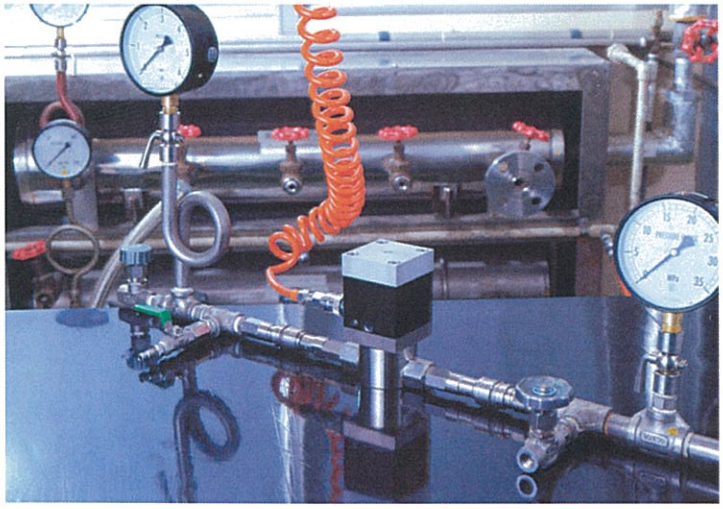
Fluid control valve for 'liquid containing solids' such as various high viscous liquid (such as silicon, calking material, printing ink) and various slurry, sludge, fibrous material, powder, etc.

Specifications

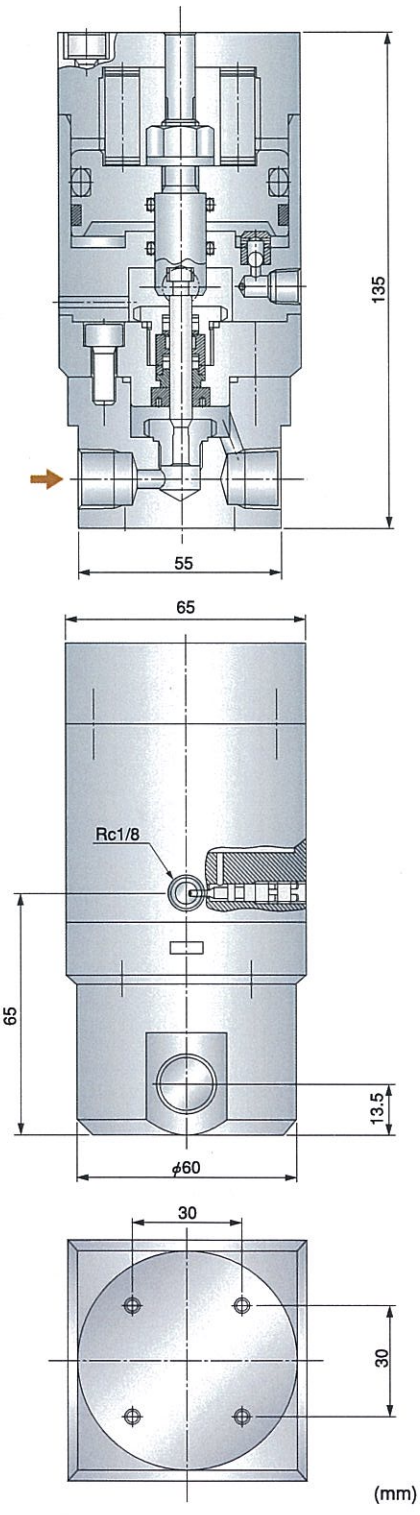
Fluid	High viscous adhesive, adhesive containing glass beads, High viscous liquid, liquid and fluid containing solids in slurry form.
Design pressure	Input : 20 MPa, Output: 5 MPa
Design temperature	Ambient temperature
Design	Spring return type pneumatic operated ON-OFF globe valve
Operation air pressure	0.39 MPa
Operation mode	AIR Less Close
Orifice	Dia. 4
Connection	Rc3/8
Valve closing time	Recommend setting - more than 0.3 sec.
Pressure inspection	Pressure test: 25 MPa; valve seat leak test: 20 MPa; Leak to outside test: 5 MPa
Endurance test	More than 100,000 shots
Main material	Body : Aluminum alloy (super duralumin JIS A7075) Bonnet, cylinder, etc. : Aluminum alloy (A6063, A5056) Essential parts : SUS304, SK, special alloy, special resin
Product weight	1.6 kg

Endurance test

Actual liquid adhesive material containing glass beads was introduced into the valve, and valve opening and closing by the piston driven by pneumatic pressure was performed to test for leakage from valve seat and gland.



Dimensions



(mm)

イハラサイエンス株式会社
IHARA SCIENCE CORPORATION

ISO9001、ISO14001 Certified place of Business

Headquarters/13-17 Oi 4-Chome, Shinagawa-ku Tokyo 140-0014 JAPAN TEL:(81)35742-2221 FAX :(81)35742-2231

■URL:http://www.ihara-sc.co.jp
■This Specification is Subject to Change Without Notice.

2006.12.30.AUEW