A155S, A156S

Pressure restricting valve with automatic ball drip

Instruction
047U59078 09/2021

A155S

A156S

LISTED 12HO

How to use the valves

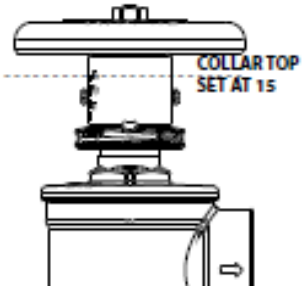
The valves combine shut-off and pressure reducing features and are intended for use in high rise buildings to reduce the water pressure in standpipe system to a pressure at the hose nozzle.
These Pressure Restricting Valves reduce the downstream water pressure only under flowing (residual) condition.
The reduced outlet pressure is calibrated by the manufacturer and is set by the user in order to adjust the height of the collar according to these installation instructions.
These valves are provided with automatic ball drip which allows to drain out of the body the residual water, caused by small seat leakage, avoiding filling in the attached fire hose.

Determining the proper outlet pressure

- The 1-1/2" valves should not be set to provide less than the minimum pressure required by NFPA14 "Standard for the Installation of Standpipe and Hose Systems" Edition 2010, while flowing 100 GPM.
  This standard requires that Standpipe systems shall be hydraulically designed to provide water flow rate at a minimum residual pressure of 65 PSI at the outlet at the hydraulically most remote 1-1/2" hose station.
  These valves are designed for upstream pressure up to 300 PSI, but when the outlet pressure does not correspond to NFPA 14 requirements, the use must be authorized by local Fire Department.
  There will be a pressure drop due to friction between the outlet of the valve and the nozzle.
  The amount of this pressure loss should be calculated by qualified personnel, to assure that the nozzle receives water pressure sufficient to its design needs.
  The outlet pressures indicated in the curves are at the outlet of the valve.
- To determine the pressures at the hose nozzle, the hydraulic calculation information provided in NFPA Fire Protection Handbook should be fallowed.
- The valves are designed and Listed to reduce inlet pressures under flowing conditions.
  Authorities having jurisdiction should be consulted to confirm that the outlet pressures and flow rates are acceptable.

Installation and Setting

- Pipe unions or rubber gasket fittings are to be installed immediately upstream and downstream of the valve to permit easy replacement.
- Connect the valve to the piping.
- Select setting number from graph or through calculation by using the Cv factors of the valve.
- Close valve hand-tight.
- Loose set screws in collar.
- Rotate indicator-cap until top collar reaches selected setting number.
- Tighten set screws in collar. At this point the valve is set and ready to works.
- To override pressure restriction, pull spring clip out of the assembly position.



GIACOMINI
WATER E-MOTION

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Inspection, Testing and Maintenance

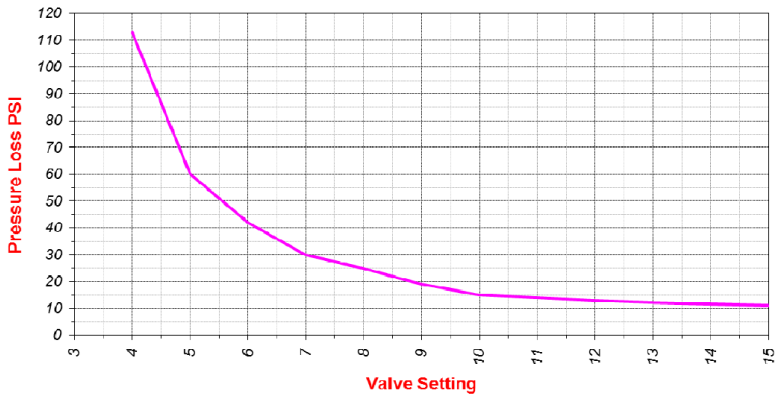
Periodical maintenance and testing should be in accordance with Standard NFPA 25.

- These valves are to be set to provide the required outlet pressures and flows, and tested after installation in accordance with NFPA14.
- In the event the valve leaks, the test valve should be opened again to flush the valve.
- The valves should be inspected for damage or corrosion minimum annually.
- After its installation it is recommended to cap the valve to avoid introduction of debris or powders that can reduce the operating capacity.
- The valves are not designed to accept internal replacement parts.
- The system should be drained every two to three years and all valves opened fully and lubricant applied to the valve stem. The valve seat should be inspected for debris.
- The correct lubrication of the valve stem reduces abundantly the required operating torque.
- The valve should be operated by hands, never using a torque bar or other device to exert pressure. Excess torque may damage the seat and or stem, disc, and other working parts.
- If the valve fails to perform as intended, the valve should be replaced.

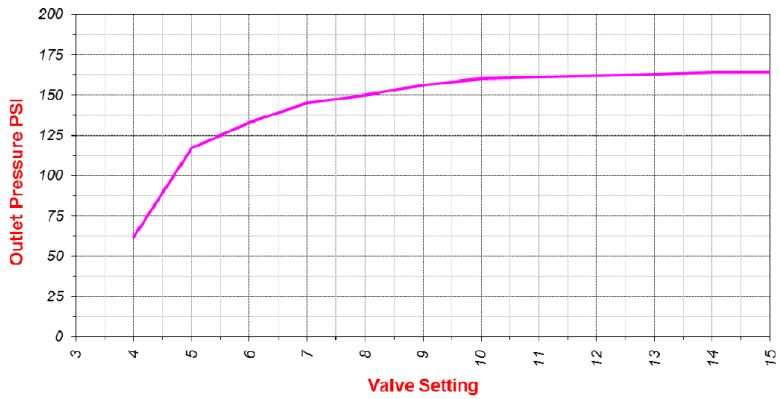
Technical features

- Model A155S, Angle Pressure Restricting Valve size 1-1/2" Female NPT x Female NPT.
- Max. rated pressure in compliance with NFPA 14 2010 Edition, and in accordance with the cUL and ULC Listing: 175 PSI (1206 kPa).
- Maximum upstream pressure 300 PSI (2070 kPa).
- Nominal Rated capacity up to 100 GPM (378 litre/minute).
- These valves are intended for use in Class II in compliance with NFPA 14 2010 Edition.
- The automatic ball drip discharge with downstream pressure approximately below 30 PSI. During use at pressure above 30 PSI the drain function is prevented.
- Cv factors of the valve available upon request to Giacomini's Laboratory.

Pressure Loss while flowing 100 GPM



Outlet Pressure while flowing 100 GPM with Inlet Pressure 175PSI



NOTE. The graphs are issued according to the results of test performed at UL's Laboratory on 5 July 2012

WARNING.

- These valves are Pressure Restricting Valve, designed to reduce the downstream water pressure only in flowing conditions and not in static conditions.
- When the upstream pressure is over the requirements of NFPA 14 2010 Edition, the downstream residual pressure at flow required could exceed the value of 100 PSI.
- With open valve, in static conditions, the downstream pressure corresponds to the upstream pressure.
- The use of the valve with residual upstream pressure above 175 PSI is not in compliance with NFPA 14, and not in compliance with the Approval Bodies prescriptions.
- The graphs refer only to the indicated conditions of flow and pressure, as tested by UL Approval body during the certification process. Should the local codes or the designing Engineer require graphs for different conditions, please contact the factory for alternate graphs to suit field conditions.
- The set positions of the valves have approximate value. The correct set position must be verified on the installation by checking the downstream pressure under flow during the hydraulic test.

Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

Package Disposal. Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

Additional information. For more information, go to giacomini.com or contact our technical assistance service. This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

Product Disposal. Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

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