

# AMMONIA

## VALVES FOR AMMONIA SERVICE "M" SERIES

### General

Habonim's Ammonia Service ball valves are ideally suited to provide optimal protection and functionality for use in severe Ammonia Service applications. All valves designated for Ammonia Service are expertly prepared and cleaned to standards required for the safe operation of Ammonia Service equipment and product purity.

### Ammonia

At atmospheric conditions, Ammonia is a colorless gas lighter than air with a pungent, suffocating odor. It is a highly caustic irritant that is both toxic and flammable. Ammonia is soluble in water to provide an alkaline solution.

### Ammonia Uses

Manufactured by synthesis from nitrogen and hydrogen, Ammonia has myriad uses in the production of fertilizers, plastics, explosives, pharmaceuticals, in metal treating operations, as a refrigerant, cleaning agent, defoliator and more.

### Valve Component Materials

Due to the extreme noxious nature of ammonia, it is crucial that all valve components are constructed from the proper materials. Carbon Steel is suitable for Anhydrous Ammonia applications, however if moisture is present, Stainless Steel should be used.

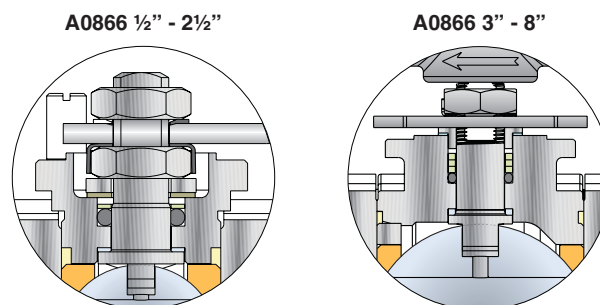
### Ammonia Hazards

Never permit oil, grease or other combustible substances to come in contact with Ammonia Service valves or components. Ammonia combined with these substances can result in explosions.

### Design

Habonim Ammonia Service valves are available with screwed, socket weld, butt-weld, ANSI Class 150 and ANSI Class 300, DIN PN16 and DIN PN40 flanged ends. Flanged valves range from 1/2" to 8", and three piece valves from 1/4" to 6". Body materials include 316 stainless steel and carbon steel. Standard ball and stem material is 316 stainless steel.

TFM, NRG PTFE or glass filled PTFE seat and seal materials are used for Anhydrous Ammonia applications, and stem seals also include EPDM o-ring. (Suffix - A0866)



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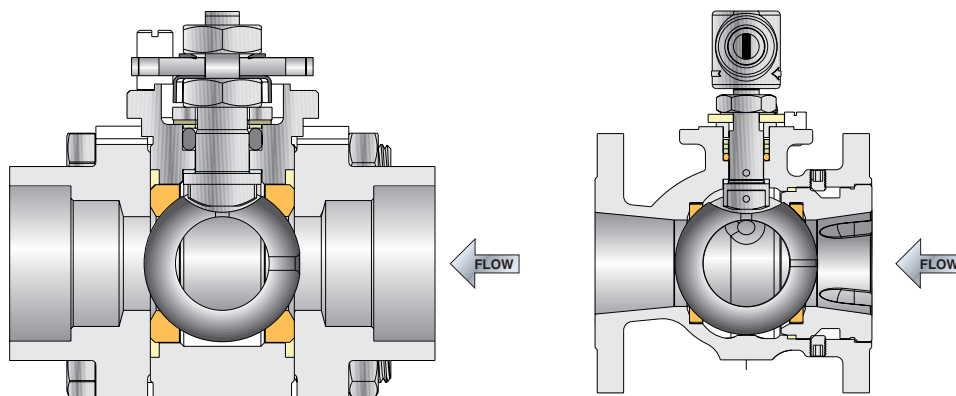
Valves designed for Ammonia in a liquid state come equipped with an upstream pressure relief hole in the ball. (Suffix - A0866-P250) The hole is drilled to accommodate the rapid expansion of liquid when Ammonia gases off. This occurs when the valve is closed and ambient temperature warms the valve cavity.

Valves designed for Ammonia in the gaseous state do not require an upstream pressure relief hole.

Order code example:

10 47P-6666TT/NPT-A0866-P250 for liquid Ammonia.

10 47P-6666TT/NPT-A0866 for gaseous Ammonia.



Valve shown in closed position

## Preparation

All valve components used for Ammonia Service, in gaseous or liquid state, are de-burred to a high standard and specifically cleaned to remove any traces of oil, grease or hydrocarbon materials prior to assembly. Ammonia Service Valve assembly is carried out in a high quality 'clean room' by technicians using lint free gloves, to assure no ingress of grease or dust. Only lubricants compatible with Ammonia are used. Valve seat and external leakage pressure tests are conducted in a 'clean room' environment, using pure Nitrogen. Only special 'clean tools' are used in the valve assembly.

## Packing

After successful testing, valves are once again restored to the "open" position. Each valve is packed with a 'Silica-gel pack'. The valve is clearly labeled 'Prepared for Ammonia Service', and sealed in a polyethylene bag.

## Accessories

Locking devices are available, including the unique design for "Locked in Last Position" (LLP). Valves with a stem extension are provided for insulated pipelines. Valves can be used with the Habonim Compact II Actuator for automation and remote control.

In accordance with our policy to strive for continuous improvement of the product, we reserve the right to alter the dimensions, technical data and information included in this catalogue when required.

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