

# A-403 SUPER CENTURION® FIRE HYDRANT



Reliable Connections®

## 1. GENERAL CLASSIFICATION

- 1.1 Suitable for general waterworks service.
- 1.2 Dry barrel, post type with compression main valve closing with the inlet pressure.
- 1.3 Replaceable Stem Coupling and Traffic Flange at the ground line to prevent or minimize traffic damage.
- 1.4 UL 246 Listed, Complies with AWWA Standard C502 and certified to ANSI/NSF 61/372. (FM Approval pending).
- 1.5 Nozzle Section and Traffic Section less than 75 pounds each.

## 2. SELECTIVE SPECIFICATIONS (SELECTED BY THE CUSTOMER)

- 2.1 **Size of Hydrant** – 5-1/4" hydrant sized by seat ring internal diameters.
- 2.2 **Size and type of inlet connections:**
  - 2.2.1 **Mueller® AquaGrip® Connection** – Horizontal or vertical in relation to hydrant barrel – Stab compression connection with integral restraint. Furnished ready to install with all hardware and O-ring seal assembled. Use on Ductile Iron C900, PVC (DR14 & DR18), C909 PVC (DR25), DIPS PE (DR7 through DR17), IPS PVC (DR17 & DR21), IPS PE (DR7 through DR13) and IPS Steel. 6" size. (A-403 Only).
  - 2.2.2 **Flange** – Horizontal or vertical in relation to hydrant barrel – American Standard complying with ANSI/ASME B16.1 Class 125 and ISO PN10/16 (4" & 6").
  - 2.2.3 **Standardized Mechanical Joint** – Dimensions comply with ANSI/AWWA C111/A21.11. Furnished with integral anti-rotation pads on top two bolt holes (allowing use of standard T-head bolts) and with two strapping lugs. 4", 6" and 8" sizes.
  - 2.2.4 **D-150 Mechanical Joint** – With two specially designed gaskets to fit either of two diameters of Cast Iron or Ductile Iron pipe: duck-tipped rubber gasket for Class 150 pipe or plain rubber gasket for Class D pit cast pipe. 4" and 6" sizes.
  - 2.2.5 **Slip-On Joint\*** – Complete with Mueller Slip-On Gasket, complies with ANSI/AWWA C111/A21.11. Fits Ductile Iron pipe manufactured to ANSI/AWWA C151/A21.51; including the plain end of all makes of Cast Iron or Ductile Iron of the slip connection type. Also fits Classes 150 and 200 Ductile Iron O.D. PVC plastic pipe\*\* 6" size.
- 2.3 **Operating Nut and Nozzle Cap Nut** – shape and dimension according to customer selection.
- 2.4 **Opening direction** – Open left or right. Arrow on nozzle section indicates opening direction.
- 2.5 **Nozzle arrangement** – Furnished 3-way with 2 hose nozzles 180 degrees apart, 1 pumper in between, and all on the same horizontal plane.
  - 2.5.1 **Hose Nozzle threading** – Regularly furnished with 2-1/2" National Standard Hose Thread. Other 2-1/2" or 3" hose threads to customer specifications.
  - 2.5.2 **Pumper Nozzle threading** – Regularly furnished with 4-1/2" National Standard Pumper Hose Thread. Other 3-1/2", 4", 4-1/4", 4-1/2", and 5" pumper hose threads to customer specifications.

\* Design and dimensions of the joint are manufactured under license of U.S. Pipe and Foundry Company.

\*\* When using DI O.D. PVC pipe, the gaskets supplied by Mueller must be used with this hydrant connection

## 3. WORKING AND TEST PRESSURES

- 3.1 A-403HP Working Pressure is 350 psi. (A-403 Working Pressure is 250 psi.).
- 3.2 Mueller A-403 Series Hydrants are subjected to two hydrostatic tests per AWWA C502 Standard.
  - 3.2.1 A-403HP 700 psi (A-403 500 psi) Shell test (hydrant pressurized with main valve open).
  - 3.2.2 A-403HP 700 psi (A-403 500 psi) Seat test (shoe pressurized with main valve closed).

*During the above tests, no indication of leakage is permitted through castings, joints, main valve, or stem seals. Drain valve leakage cannot exceed five (5) fluid ounces per minute (ref. AWWA C502 Section 5.1.3).*

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## 4. DESIGN FEATURES

- 4.1 **Nozzle Section** – Dry top, factory lubricated. Oil level checked by removing the Oil Filler Plug on outside of Nozzle Section. Easy removal for repairs, weighs less than 75 lbs.
- 4.2 **Traffic Section** – Can be left in place during repair of hydrant internals.
- 4.3 **Nozzle Section Coupling** – Two-piece Coupling using only two bolts.
- 4.4 **Upper Operating System** – Bronze encased for O-ring seal surface contact.
- 4.5 **Nozzles** – Interchangeable, threaded in place and retained by stainless steel Nozzle Locks.
  - 4.5.1 **Integral Storz Nozzle** (A-403 model only).
- 4.6 **Nozzle Caps** – Attached to Nozzle Section with individual non-kinking Chains.
- 4.7 **Lower Barrel flange** – Concealed for improved appearance.
- 4.8 **Interchangeable design** – repair parts are interchangeable with Super Centurion hydrants.
- 4.9 **Traffic Flange** – Breaks cleanly upon impact, yet strong enough for normal handling, shipping, and use. Permits full 360 degree rotation of upper section to position nozzles in any desired direction. Extension sections can easily be added. Full size un-notched steel bolts used to retain traffic flange and connect the Traffic Section and Lower Barrel.
- 4.10 **Stem Coupling** – Stainless steel, connects the Upper and Lower Stems and is retained with stainless steel Clevis and Cotter Pins. When traffic damage occurs, the Coupling breaks cleanly, flush with the lower Stem. Lower Stem retains bottom Clevis and Cotter Pin with no loose parts to fall into hydrant barrel. Upper end of Lower Stem is located below Lower Barrel flange surface to prevent it from being held open by vehicle wheel after traffic damage.
- 4.11 **Lower Barrel** – Integrally cast Ductile Iron Lower Barrel and flanges for added strength (no threaded flanges).
- 4.12 **Shoe** – Has lugs for strapping anchors on Mechanical Joint, D-150 and Slip-On Joint ends. Bottom has a support pad and side opposite inlet has a backing support pad.
- 4.13 **Seat Ring** – Bronze Seat Ring threads into bronze Drain Ring; Drain Ring has two drain holes to provide an all bronze drain way.
- 4.14 **Double Drain Valves** (with replaceable thermoplastic Drain Valve Facings) – operate automatically to force flush the drain way each time the hydrant is opened or closed. No toggles, springs, or adjustable mechanisms are required and the Drain Valve Facings can be replaced when Seat Ring and Main Valve assembly is removed.
- 4.15 **Main Valve** – Molded rubber with encapsulated iron core, reversible, compression type, closes with inlet pressure and remains closed during above ground repairs or changes to upper section.
- 4.16 **Main Valve opening** – Stop in shoe design provide maximum valve opening for higher flow.
- 4.17 **Main Valve and Seat Ring** – Removable from above ground with seat removal wrench.
- 4.18 **Lower Stem end threads** – Covered with an epoxy coated iron Cap Nut and sealed with rubber Washer to protect from corrosion. The Cap Nut is retained with a stainless steel Lock Washer.
- 4.19 **Shoe and Upper Valve Plate design** – Permits maximum flow by minimizing friction loss.
- 4.20 **Shoe interior, Lower Valve Plate and Cap Nut** – Epoxy coated to resist corrosion.

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## 5. MATERIAL SPECIFICATIONS

- 5.1 **Nozzle Section, Nozzle Section Coupling, Traffic Section, Nozzle Caps, Lower Barrel, Traffic Flange, 4" & 6" Mechanical Joint & D-150 Mechanical Joint Shoes** – Ductile Iron, ASTM A-536.
  - 5.1.1 **Drain Ring Housing** – Cast Iron, ASTM A-126, Grade B or Ductile Iron, ASTM A-536.
  - 5.1.2 **Flanged, 8" Mechanical Joint and Slip-On Shoes** – Cast Iron, ASTM A-126, Grade B or Ductile Iron, ASTM A-536.
- 5.2 **Operating Nut, Hold Down Nut, Nozzles (including Storz), Upper Valve Plate, Seat Ring and Drain Ring** – Bronze, in compliance with AWWA Standard C502.
- 5.3 **Oil Filler Plug** – Brass, ASTM B-16.
- 5.4 **O-ring seals** – Buna N, ASTM D2000.
- 5.5 **Weather Seal** – EPDM, ASTM D2000.
- 5.6 **Anti-friction Washer** – Low coefficient polymer provides high resistance to dynamic and static wear.
- 5.7 **Bolts for Traffic Flange & Nozzle Section Coupling** – Steel, Electrogalvanized SAE J429 Grade 5.
- 5.8 **Bolts for Shoe** – Strain Hardened Stainless Steel, Type 316.
- 5.9 **Cap Chains** – Steel, Electrogalvanized.
- 5.10 **Upper and Lower Stems** – Steel, ASTM A-576.
- 5.11 **Stem Pin** – Stainless Steel, ASTM A-276 Type 302.
- 5.12 **Drain Valve Facing Screws** – Stainless Steel, ASTM A-276 Type 305.
- 5.13 **Nozzle Lock** – Stainless Steel, ASTM A-276 Type 410.
- 5.14 **O-rings for Nozzle and Traffic Section flanges** – Buna N, ASTM D2000.
- 5.15 **O-ring for Drain Ring Housing flange** – Buna N, ASTM D2000.
- 5.16 **Gaskets for Nozzle Caps** – Neoprene, ASTM D2000.
- 5.17 **Stem Coupling** – Stainless Steel, ASTM A-890.
- 5.18 **Stem Coupling Clevis Pins** – Stainless Steel, ASTM A-276 Type 305.
- 5.19 **Stem Coupling Cotter Pins** – Stainless Steel, ASTM A-276 Type 302.
- 5.20 **Drain Valve Facings** – Resilient precision molded thermoplastic with unique sealing characteristics.
- 5.21 **Reversible Main Valve** – Molded rubber (ASTM D2000) with encapsulated iron core.
- 5.22 **Lower Valve Plate** – Cast Iron, ASTM A-126 Class B or Ductile Iron, ASTM A-536 coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 5.23 **Lock Washer** – Stainless Steel, ASTM A-276 Type 302.
- 5.24 **Cap Nut** – Cast Iron ASTM A-126 Class B or Ductile Iron, ASTM A-536 coated with high performance 2-part epoxy NSF61 listed and AWWA C550 compliant.
- 5.25 **Cap Nut Seal** – Rubber, ASTM D2000.
- 5.26 **Shoe Coating** – Interior and exterior coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 5.27 **Paint** – Interior and exterior above and below ground line coated with high performance 2-part epoxy. Exterior above ground line – one coat UV resistant high gloss 2-part polyurethane enamel, color as specified by customer.



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