

SUPER CENTURION® 250™ FIRE HYDRANT



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 a replaceable Traffic Flange at the ground line to prevent or minimize traffic damage.
- 1.4 Complies with AWWA Standard C502, are UL listed and FM approved.
- 1.5 Certified to ANSI/NSF 61/372.

2. SELECTIVE SPECIFICATIONS (SELECTED BY THE CUSTOMER)

- 2.1 **Size of Hydrant** -- 4-1/2" or 5-1/4" hydrants are 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.
 - 2.2.2 **Flange** -- Horizontal or vertical in relation to hydrant barrel -- American Standard complying to 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 all bolt holes (allowing use of standard tee-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 bonnet 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. Integral 4" or 5" Storz pumper connection available.

* 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 Working pressure is 250 psi.
- 3.2 Mueller Super Centurion 250 Hydrants are subjected to two hydrostatic tests per AWWA C502 Standard.
 - 3.2.1 500 PSI Shell test (hydrant pressurized with main valve open).
 - 3.2.2 500 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.

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4. DESIGN FEATURES

- 4.1 **Bonnet assembly** -- Dry top, factory lubricated. Oil level checked by removing the oil filler plug on outside of bonnet. Cannot be overfilled with oil.
- 4.2 **Upper operating system** -- Bronze encased for O-ring seal surface contact.
- 4.3 **Nozzles** -- Interchangeable, threaded in place and retained by stainless steel locks.
- 4.4 **Nozzle caps** -- Attached to upper barrel with individual non-kinking chains.
- 4.5 **Lower barrel flange** -- Concealed for improved appearance.
- 4.6 **Interchangeable design** -- permits the upper barrel assembly to be used with existing Mueller Improved or 107 Hydrants. (For 107 hydrant, use upper barrel assembly with stop-in-bonnet option.)
- 4.7 **Traffic flange** -- Breaks cleanly upon impact, yet strong enough for normal handling, shipping, and use. Permits full 360-degree rotation of upper barrel to position nozzles in any desired direction. Extension sections or upper barrel with different nozzle size or arrangement can easily be added. Full size un-notched steel bolts used to retain traffic flange and connect the upper and lower barrels.
- 4.8 **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.
- 4.9 **Lower barrel** -- Heavy wall sections where flange joins the barrel section for added strength.
- 4.10 **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.
- 4.11 **Seat ring** -- Bronze ring threads into bronze drain ring, which has two drain holes to provide an all bronze drain way.
- 4.12 **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.
- 4.13 **Main valve** -- Encapsulated molded rubber, reversible, compression type, closes with inlet pressure and remains closed during any above ground repairs or changes to upper barrel or bonnet assemblies.
- 4.14 **Main valve opening** -- Controlled by lug in bottom of shoe. Stop in bonnet also available.
- 4.15 **Main valve and seat ring** -- Removable from above ground with seat removal wrench.
- 4.16 **Lower stem end threads** -- Covered with an epoxy coated iron cap nut and sealed with rubber washer to protect them from corrosion. The cap nut is retained with a stainless-steel lock washer.
- 4.17 **Shoe and upper valve plate design** -- Permits maximum flow by minimizing friction loss.
- 4.18 **Shoe interior, lower valve plate and cap nut** -- Epoxy coated to resist corrosion.

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5. MATERIAL SPECIFICATIONS

- 5.1 **Bonnet, nozzle caps, barrels, traffic flange, drain ring housing, lower valve plate, cap nut and shoe** (Flanged, 8" Mechanical Joint and Slip-On) -- Cast Iron, ASTM A-126, Grade B.
 - 5.1.1 **AquaGrip® Shoe** -- Ductile Iron, ASTM A-536.
 - 5.1.2 **4" and 6" Mechanical Joint Shoe** -- Ductile Iron, ASTM A-536.
 - 5.1.3 **D-150 Mechanical Joint Shoe** -- Ductile Iron, ASTM A-536.
- 5.2 **Operating nut, hold down nut, nozzles, 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** -- Thermoplastic polymer with high resistance to dynamic and static wear.
- 5.7 **Bolts for bonnet, traffic flange, shoe and drain ring housing** -- Steel, ElectroGalvanized -- SAE J429 Grade 2.
- 5.8 **Cap chains** -- Steel, ElectroGalvanized.
- 5.9 **Upper and lower stems** -- Steel, ASTM A-576.
- 5.10 **Stem pin** -- Stainless Steel, ASTM A-276 300 Series.
- 5.11 **Drain valve facing screws** -- Stainless Steel, ASTM A-276 300 Series.
- 5.12 **Nozzle lock** -- Stainless Steel, ASTM A-276 Type 410.
- 5.13 **O-rings for bonnet and barrel flanges** -- Buna N, ASTM D2000.
- 5.14 **O-ring for drain ring housing flange** -- Buna N, ASTM D2000.
- 5.15 **Gaskets for nozzle caps** -- Neoprene, ASTM D2000.
- 5.16 **Stem coupling** -- Stainless Steel, ASTM A-890.
- 5.17 **Stem coupling clevis pins** -- Stainless Steel, ASTM A-276 300 Series.
- 5.18 **Stem coupling cotter pins** -- Stainless Steel, ASTM A-276 300 Series.
- 5.19 **Drain valve facings** -- Resilient precision molded thermoplastic with unique sealing characteristics.
- 5.20 **Reversible main valve** -- Encapsulated molded rubber, ASTM D2000.
- 5.21 **Lower valve plate** -- Cast Iron, ASTM A-126 Class B coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 5.22 **Lock washer** -- Stainless Steel, ASTM A-276 300 Series.
- 5.23 **Cap nut** -- Cast Iron ASTM A-126 Class B coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 5.24 **Cap nut seal** -- Rubber, ASTM D2000.
- 5.25 **Shoe coating** -- Interior and exterior coated with high performance 2-part epoxy. NSF61 listed and AWWA C550 compliant.
- 5.26 **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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