

## SUPER CENTURION FIRE HYDRANT

### Product Specifications

#### 1. GENERAL CLASSIFICATION

- 1.1 MUELLER SUPER CENTURION Hydrants are suitable for general waterworks service.
- 1.2 MUELLER SUPER CENTURION Hydrants are dry barrel, post type with compression main valve closing with the inlet pressure.
- 1.3 MUELLER MODERN CENTURION Hydrants have a replaceable Stem Coupling and Traffic Flange at the ground line.
- 1.4 MUELLER SUPER CENTURION Hydrants are UL 246 Listed, FM 1510 Approved, comply with AWWA Standard C502 and UL Water Quality certified to ANSI/NSF 61/372.

#### 2. SELECTIVE SPECIFICATIONS (TO BE SELECTED BY CUSTOMER)

- 2.1 **Size of Hydrant** – 4½” or 5¼” (hydrants are sized by seat ring internal diameter).
- 2.2 **Size and type of inlet connections:**
  - 2.2.1 **Standard Mechanical Joint** – Dimensions comply with ANSI/AWWA C111/A21.11. Furnished with integral anti-rotational pads on all bolt holes (allowing use of standard tee-head bolts), and with two strapping lugs. 6 & 8” size (4” available on AWWA hydrants).
  - 2.2.2 **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. 6” sizes (4” available on AWWA hydrants).
  - 2.2.3 **Hymax Grip® Restraint** – Certified to ANSI/NSF 61 & 372. Meets or exceeds all applicable requirements of ANSI/AWWA C502 Standard to the working pressure of 250 PSIG and requirements of ANSI/AWWA C550 Standard. Use on Cast Iron, C151 Ductile Iron, C909 PVC DIPS (DR14 & DR18), D2241 PVC IPS (SDR17 & SDR21), C906 HDPE IPS & DIPS (SDR9, SDR11, SDR13.5, & SDR17). 6” size
  - 2.2.4 **Flange** – Horizontal or vertical in relation to hydrant barrel - American Standard complying to ANSI B16.1 Class 125 (ISO PN10/PN16 drilling optional). 6” size (4” available on AWWA hydrants).

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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 (4" available on AWWA hydrants).

2.3 **Operating nut and nozzle cap nut** – Shape and dimension according to customer selection.

2.2 **Opening direction** – Open left (counterclockwise) or right (clockwise). Arrow on weather cap indicates opening direction.

2.4 **Nozzle arrangement** – Furnished 3-way with 2 hose nozzles 180 degrees apart, 1 pumper in between and on the same horizontal plane.

2.5.1 **Hose nozzle threading** – Regularly furnished with 2½" National Standard Hose Thread. Other 2½" or 3" hose threads to customer specifications.

2.5.2 **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. 6" sizes (4" available on AWWA hydrants).

\* 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 MUELLER SUPER CENTURION standard working pressure is 350 psi (model number ends in HP). Hydrants with AquaGrip Shoes or Storz Nozzles are rated for 250 psi.

3.2 MUELLER SUPER CENTURION Hydrants are subjected to two hydrostatic tests per AWWA C502 Standard.

3.3.1 **Seat Test** – shoe pressurized with main valve closed.

3.2.1.1 350 psi rated hydrants are tested at 700 psi

3.2.1.2 250 psi rated hydrants are tested at 500 psi

3.3.2 **Shell Test** – entire hydrant pressurized main valve open

3.2.2.1 350 psi rated hydrants are tested at 700 psi

3.2.2.2 250 psi rated hydrants are tested at 500 psi

During the above tests, no indication of leakage is permitted through castings, joints, main valve, or stem packing. Drain valve leakage cannot exceed five fluid ounces per minute.

### 4. DESIGN FEATURES

4.1 **Bonnet assembly** – Dry top, factory lubricated. Oil Level checked by removing the oil filter plug on outside of bonnet. Cannot be overfilled with oil.

4.2 **Upper operating system** – Bronze encased for O-ring stem 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 hydrants, 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 pins and removable clips. When traffic damage occurs, the coupling breaks cleanly, flush with the lower stem. Lower stem retains bottom clevis and clip 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 a bronze drain ring, which has two drain holes to provide an all bronze drain way.
- 4.12 **Double drain valves (with replaceable polymer 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 Coating to resist corrosion.

## 5. MATERIAL SPECIFICATIONS

- 5.1 **Bonnet, nozzle caps, barrels, traffic flange, drain ring housing, lower valve plate, & cap nut** – Cast Iron, ASTM A-126, Grade B
  - 5.1.1 **4 & 6” Mechanical Joint, 4 & 6” D-150, 6” Flanged & AquaGrip® Shoe** – Ductile Iron, ASTM A-536.
  - 5.1.2 **4” Flanged, 8” Mechanical Joint and Slip-On Shoes** – Gray Iron, ASTM A-126, Grade B
- 5.2 **Operating nut, hold down nut, nozzles, upper valve plate, seat ring and drain ring** – Bronze. Complies with AWWA Standard C502.
- 5.3 **Oil filler plug** – Brass, ASTM B-16, half hard.
- 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 High Strength.
- 5.8 **Cap chains** – Steel, Electrogalvanized.
- 5.9 **Upper and lower stems** – Steel, ASTM A-576, e-coated or FBE coated.
- 5.10 **Stem pin** – Stainless Steel, ASTM A-276, Type 302.
- 5.11 **Drain valve facing screws** – Stainless Steel, ASTM A-276, Type 305.
- 5.12 **Nozzle locks** – 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 Type 305.
- 5.18 **Stem coupling clips** – Stainless Steel, ASTM A-276 Type 302.
- 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 **Drain Ring Housing** – Cast Iron ASTM A-126, Class B and e-coated.
- 5.22 **Lower valve plate** – Cast Iron ASTM A-126, Class B and coated with high performance 2-part epoxy, NSF61 listed and AWWA C550 complaint.

- 5.23 **Lock washer** – Stainless Steel, ASTM A-276 Type 304.
- 5.24 **Cap nut** – Cast Iron ASTM A-126 Class B 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.

## SUPER CENTURION FIRE HYDRANTS

	PRESSURE RATING		MAIN VALVE		NOZZLES		LISTINGS	
	250 PSI	350 PSI	4½"	5¼"	Pumper	Hose	UL	FM
MODEL	A421	A421HP	•		1	2	•	•
	A421/HS		•		1	2		•
	A423	A423HP		•	1	2	•	•
	A423/HS			•	1	2		•
	A424	A424HP	•		1	0		•
	A425 *	A425HP *		•	2	0	•	
	A433	A433HP	•		0	2	•	•
	A435	A435HP		•	0	2	•	•
	A454 *	A454HP *		•	0	3	•	•
	A455 *	A455HP *		•	0	4	•	•
	A458 *	A458HP *		•	1	3	•	•
	A459 *	A459HP *		•	2	2	•	
	A461	A461HP	•		1	2	•	•
	A473	A473HP		•	1	2	•	•
	A477			•	1	0		
A479	A479HP		•	1	2	•	•	