

IMPROVED AWWA TYPE FIRE HYDRANTS

SECTION

16



INDEX • fire hydrants—improved AWWA type

SECTION

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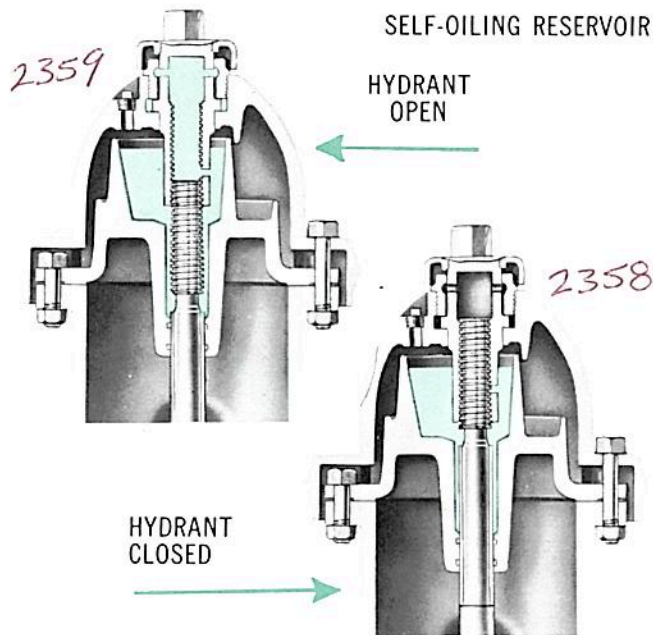
See Section 17 for Standard AWWA Type Fire Hydrants

See Section 19 for Underwriter Fire Hydrants

In this section is shown a line of MUELLER Improved Fire Hydrants for municipal fire protection systems. These fire hydrants comply with the American Water Works Association Specifications C-502-54.

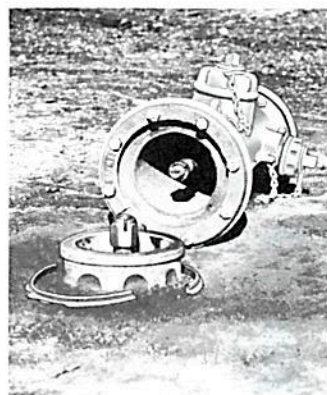
SELF-OILING, DRY TOP BONNET

The two illustrations (top right) show the automatic self-oiling system. The upper end of the stem and the stem threads are submerged in oil. The stem threads, all bearing surfaces, and the "O" Rings are automatically lubricated each time the hydrant is operated. When open the oil runs inside the operating nut above the top of the stem. In closing, the stem traps this oil within the operating nut and forces it upward and out the lateral ports at the top. The oil then flows downward, lubricates the thrust collar, and then flows back into the oil reservoir. This design assures friction-free operation and a positive seal against water ever reaching the operating mechanism.



SAFETY FLANGE PROTECTION

When a MUELLER Improved Hydrant is broken off as shown in photo at right, the damage is confined to three inexpensive parts: the safety flange, safety stem coupling, and safety sleeve. The barrel is not damaged and the stem is not bent. There is no flooding of streets or sudden drop in the water pressure. The damage can be quickly repaired with a Safety Flange Repair Kit.



MUELLER Improved Hydrant with upper barrel knocked over by truck. Note broken pieces of Safety Flange lying on ground.

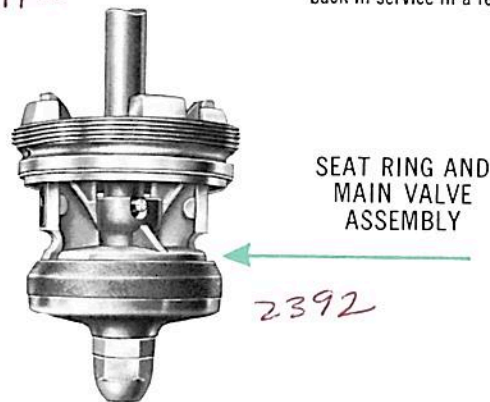


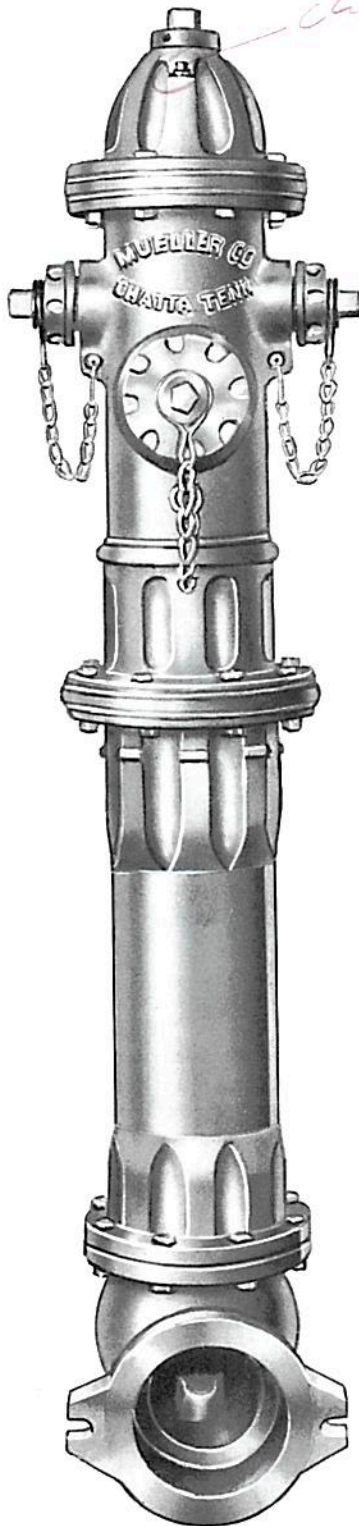
One man can put the hydrant back in service in a few minutes.

COMPRESSION TYPE MAIN VALVE

The big, rugged main valve closes with the water pressure. The valve will stay tightly closed even if the hydrant is accidentally broken or the bonnet is removed for periodic inspection. All maintenance and repair can be done from above ground without any digging. There is no need for water shut-off except those few times that the main valve or seat ring is removed for inspection or repair.

Two automatic drain valves positively drain the hydrant after each use. The barrel cannot freeze. The drain valves are positive in operation, and they are force flushed each time the hydrant is operated. There are no complicated springs, toggle joints, or synchronized mechanisms.





BRONZE WEATHER CAP — prevents water from entering bonnet section. Prevents ice from freezing the operating nut. Discourages unauthorized removal of the operating nut or hold-down nut.

OIL FILLER PLUG — permits instant check of oil level with dipstick. Oil may be added without removing bonnet.

NON-KINKING CHAINS — nozzle cap, when removed, hangs directly under each nozzle. No interference with other caps. Extra long, heavy, special link chains will not kink. The special chain loop at the cap end permits free turning of the caps.

BRILLIANT ENAMEL FINISH — aids recognition and resists weather.

CONCEALED FLANGES — keep out dirt and improve appearance.

PLATED BOLTS AND NUTS — give greater resistance to corrosion.

SAFETY FLANGE — breaks cleanly to prevent barrel breakage when struck by a vehicle, yet is strong enough to withstand normal handling, shipping, and use. Permits economical repair, adding of extension sections, rotation of upper barrel section, changing of upper barrel section for different nozzle arrangements — all without digging or water shut-off.

FLUTED DESIGN — ribs add strength at flanged joints.

PITCH TAR VARNISH FINISH — resists corrosion below ground.

TAPERED LOWER BARREL — prevents frost heave.

HEAVY SHOE — designed for full flow with pedestal base and backing pad for ease in setting and blocking to prevent blow-off. Has two lugs for strapping.



FEATURES

IMPROVED AWWA TYPE FIRE HYDRANTS

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DRY TOP DESIGN — threads and all bearing surfaces are sealed away from the water in the barrel.

OIL RESERVOIR — provides positive lubrication of all stem threads and bearing surfaces each time the hydrant is operated.

"O" RING SEALS — give permanent, water-tight seal by bearing against a bronze sleeve attached to the top of the stem. Packing adjustments, binding of stem, stuffing box bolts and glands are completely eliminated.

BREECH-LOCKED NOZZLES — the bronze nozzle cannot be blown out. Four interlocking lugs on nozzle are given a fractional turn from the slots in the barrel and are then calked in place.

FULL FLOW OPENING — large radius hose and pumper openings reduce frictional loss to a minimum.

SAFETY STEM COUPLING — opens up to prevent damage to stem when hydrant is hit by a vehicle. Can be replaced in minutes without water shut-off.

PIN AND GUIDES — prevent stem from rotating during operation of hydrant and eliminate tendency of stem to unscrew from main valve.

DOUBLE DRAIN VALVES — integral part of main valve assembly to give positive, automatic operation without springs, toggle joints or synchronized mechanisms.

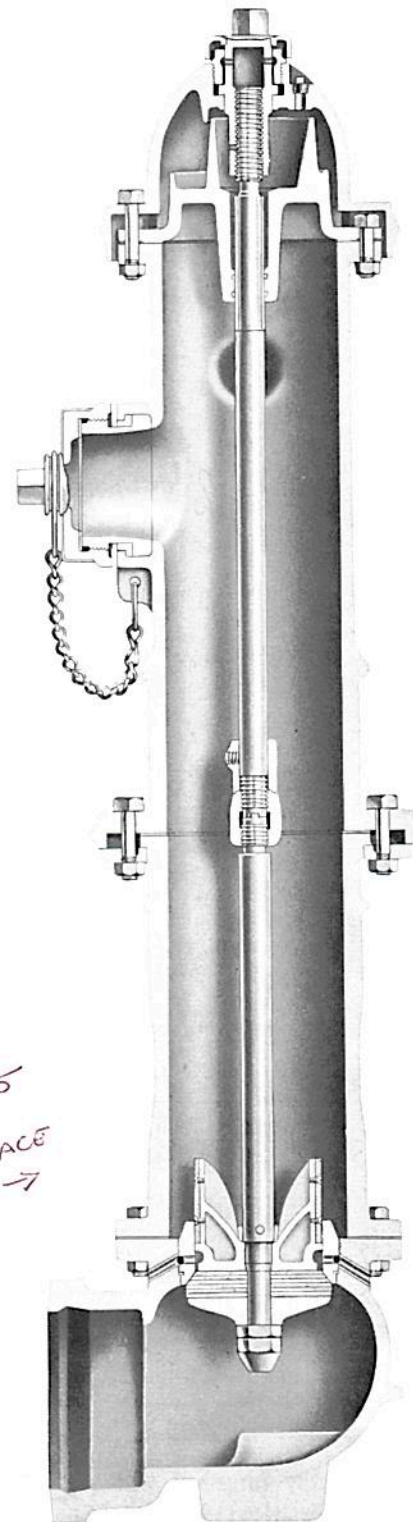
DOUBLE DRAIN OPENINGS — fully bronze mounted. Annular drain groove in seat ring connects drain openings in ring and shoe. Openings are momentarily force-flushed each time hydrant is operated.

BRONZE SEAT RING — fine threads and copper-asbestos gasket prevent leakage around seat ring in both open and closed position. Straight threads permit easy removal from above-ground. Gasket comes out with seat ring.

COMPRESSION TYPE MAIN VALVE — closes with the pressure and stays closed. Permits bonnet removal, barrel changes, and all repairs with work done from above ground without digging or water shut-off except when main valve or seat ring must be removed. Valve made of special material selected for its long wear and resistance to damage by rocks or other foreign matter.

BRONZE CAP NUT — seals bottom of stem and stem threads from water to reduce corrosion.

POSITIVE STOP — integrally cast into shoe permits full opening without over-travel of stem.



**MUELLER CO.
DECATUR, ILL.**

150 p.s.i. Working Pressure — 300 p.s.i. Test Pressure

Compression type valve closes with the pressure. Complies with American Water Works Association Specifications.

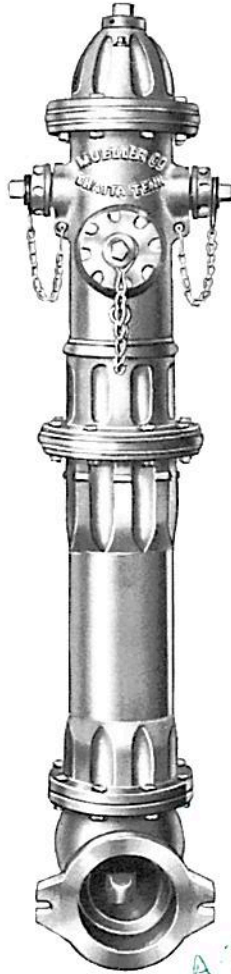


2 WAY

Size of Valve Opening	Catalog Number
	Two 2½" Hose Nozzles
4¼"	A-24010
4½"	A-24013
5¼"	A-24016
6¼"	A-24019

Hydrants are illustrated with hub inlets. See page 16-5 for sizes and types of inlets that are available.

Hydrants are normally furnished with nozzles setting as illustrated. They can be furnished on order in other combina-

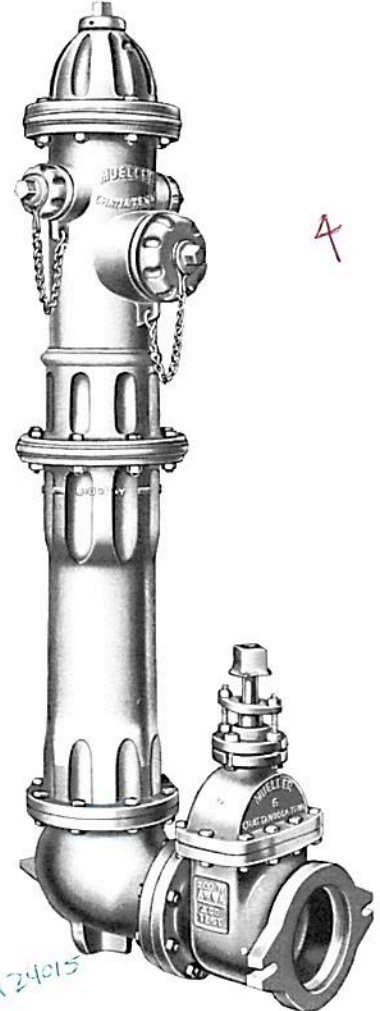


3 WAY

Size of Valve Opening	Catalog Number
	Two 2½" Hose Nozzles and One Pumper Nozzle
4¼"	A-24009
4½"	A-24012
5¼"	A-24015
6¼"	A-24018

tions or pumper nozzle set on same plane with two 2½" hose nozzles.

Hydrants are regularly furnished with two-piece Brass Safety Stem Coupling. A one-piece Cast Iron Safety Stem Coupling is available as an alternate when specified.



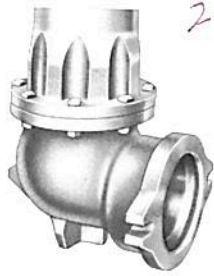
WITH AUXILIARY GATE VALVE

Hydrant has Flanged inlet to permit bolting on an auxiliary gate valve. Several types of valves are available — all with a Flanged outlet and a choice of the following inlet ends: Hub, Universal, Ring-Tite, Fluid-Tite, Mechanical Joint, and MUELLER D-150 Mechanical Joint. Either conventional packing or "O" Ring stem seal design may be had on any of these valves. Flange bolts and gasket are included. Specify size and catalog numbers of hydrant and valve required. (See Section 18 for valves.) Shipped as two separate items.



INLET CONNECTIONS FOR VARIOUS TYPES OF PIPE

IMPROVED AWWA TYPE FIRE HYDRANTS



2263

HUB OR BELL INLET

For a calked joint. Suitable for use on Classes C and D or Class 150 Cast Iron Spigot end pipe or other pipe with same O. D. Furnished with two strapping lugs.



FLANGED INLET

For Flanged end pipe or when used with an auxiliary gate valve. The Flange is faced and drilled to the 125 lb. American standard.

36



37

UNIVERSAL INLET

For use with Universal Cast Iron Pipe only.



2257

MECHANICAL JOINT INLET

For use on Standardized Mechanical Joint pipe or other pipe having the same O. D. Furnished with the connecting Gland, Plain Rubber Gasket, and Cast Iron Bolts and Nuts, unless otherwise specified. Inlet has two strapping lugs. Can also be furnished on order with Set Screws in the Gland for bonding, or with Lead Tipped Gasket.

RING-TITE OR FLUID-TITE INLET

Use with Johns-Manville Class 150 Ring-Tite asbestos-cement pipe or Keasbey and Mattison Fluid-Tite asbestos-cement pipe. Furnished with two strapping lugs.



2264

FLANGED TEE INLET

Permits the hydrant to be installed directly over and become an integral part of a continuous piping system.



2017

MUELLER D-150 MECHANICAL JOINT INLET

This is an enlarged connection suitable for use with Class 150 Cast Iron pipe or Class D Pit Cast pipe by using one of two type gaskets available. For Class 150 Cast Iron pipe use Duck Tipped Gasket. For Class D Pit Cast pipe use Plain Rubber Gasket. Complete with the Gland, Cast Iron Bolts and Nuts, and either Plain Rubber or Duck Tipped Gasket as specified. These gaskets and glands will not interchange with those on the Standardized Mechanical Joint. Can be furnished with Set Screws in the Gland for bonding upon order. Inlet has two strapping lugs.



2257

#35



1659

MECHANICAL JOINT INLET (see above)

Same as inlet shown at left except without gland, gasket, bolts and nuts. Inlet has two strapping lugs.

Size of Hydrant	Sizes and Types of Inlet Connections						
	Hub	Flanged	Universal	Ring-Tite Fluid-Tite	Mechanical Joint	D-150 Mechanical Joint	Tee Base
4¼"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	
4½"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	
5¼"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4", 6" & 8"	4", 6" & 8"	6"
6¼"	6" & 8"	6" & 8"	6" & 8"	6"	6" & 8"	6"	



SAFETY FLANGE REPAIR KIT



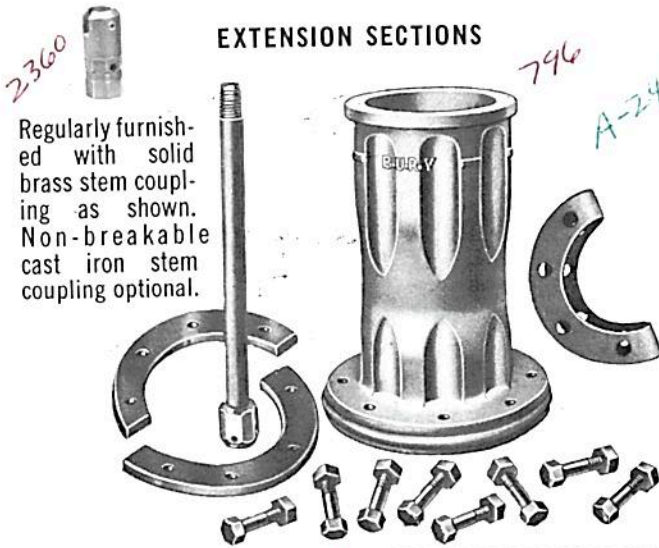
Consists of safety flange, brass safety stem coupling, brass safety sleeve, 3 safety flange bolts, safety flange gasket and can of MUELLER hydrant lubricating oil.

Breakable cast iron safety stem coupling optional instead of brass couplings shown.

Size of Hydrant	Catalog Number
4¼" and 4½"	A-24095
5¼"	A-24096
6¼"	A-24097

ORDER BY QUANTITY, CATALOG NUMBER AND SPECIFY BRASS OR IRON COUPLING

EXTENSION SECTIONS



Regularly furnished with solid brass stem coupling as shown. Non-breakable cast iron stem coupling optional.

Size of Hydrant	Catalog Number
4¼" and 4½"	A-24074
5¼"	A-24075
6¼"	A-24076

Lengths: 6", 1', 1'6", 2', 2'6", 3', 3'6" and 4'

ORDER BY QUANTITY, LENGTH, CATALOG NUMBER AND SPECIFY BRASS OR IRON COUPLING

A-24099 BRASS SLEEVE

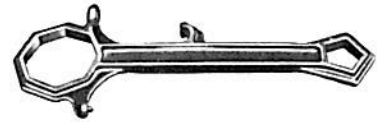


Protects "O" Rings from damage by stem threads when removing or replacing stuffing box.

ORDER BY QUANTITY AND CATALOG NUMBER

A-24091:

OPERATING WRENCH



This one wrench fits the following:

- Hydrant operating nut
- Hose nozzle caps
- Pin type hose coupling
- Lug type hose coupling
- Hydrant weather cap
- Hydrant hold down nut

ORDER BY QUANTITY, CATALOG NUMBER AND SIZE AND SHAPE OF OPERATING NUT

SEAT WRENCHES



Size of Hydrant	Catalog Number Adjustable Type	Catalog Number Non-Adjustable Type
4¼" and 4½"	A-24053	A-24036
5¼"	A-24054	A-24037
6¼"	A-24055	A-24038

The adjustable wrench covers five successive buries. Example: 2'6", 3', 3'6", 4' and 4'6". Always specify the shortest and longest bury for which wrench may be required. A non-adjustable seat wrench is for one length of hydrant.

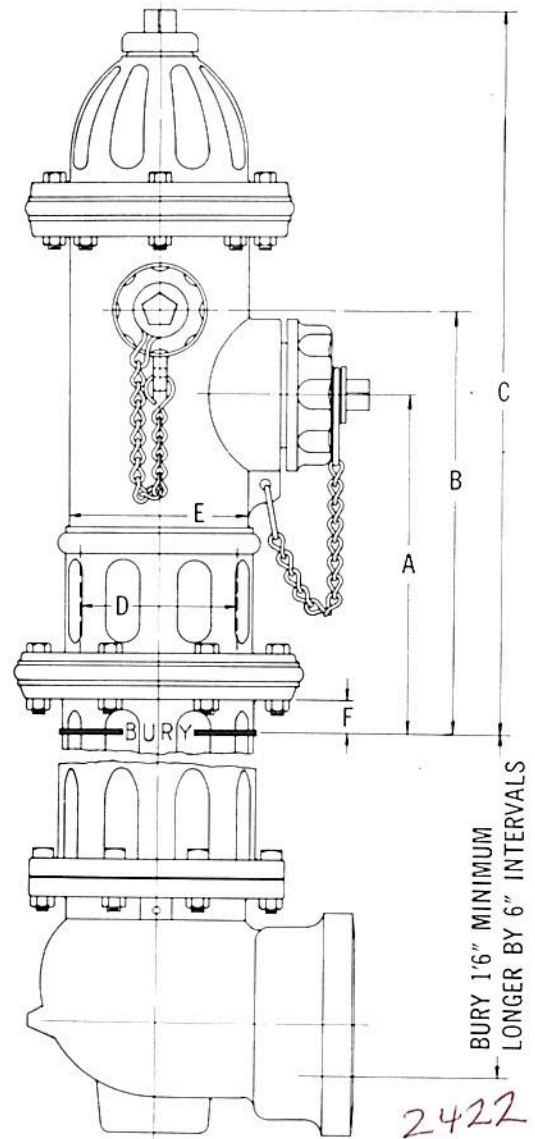
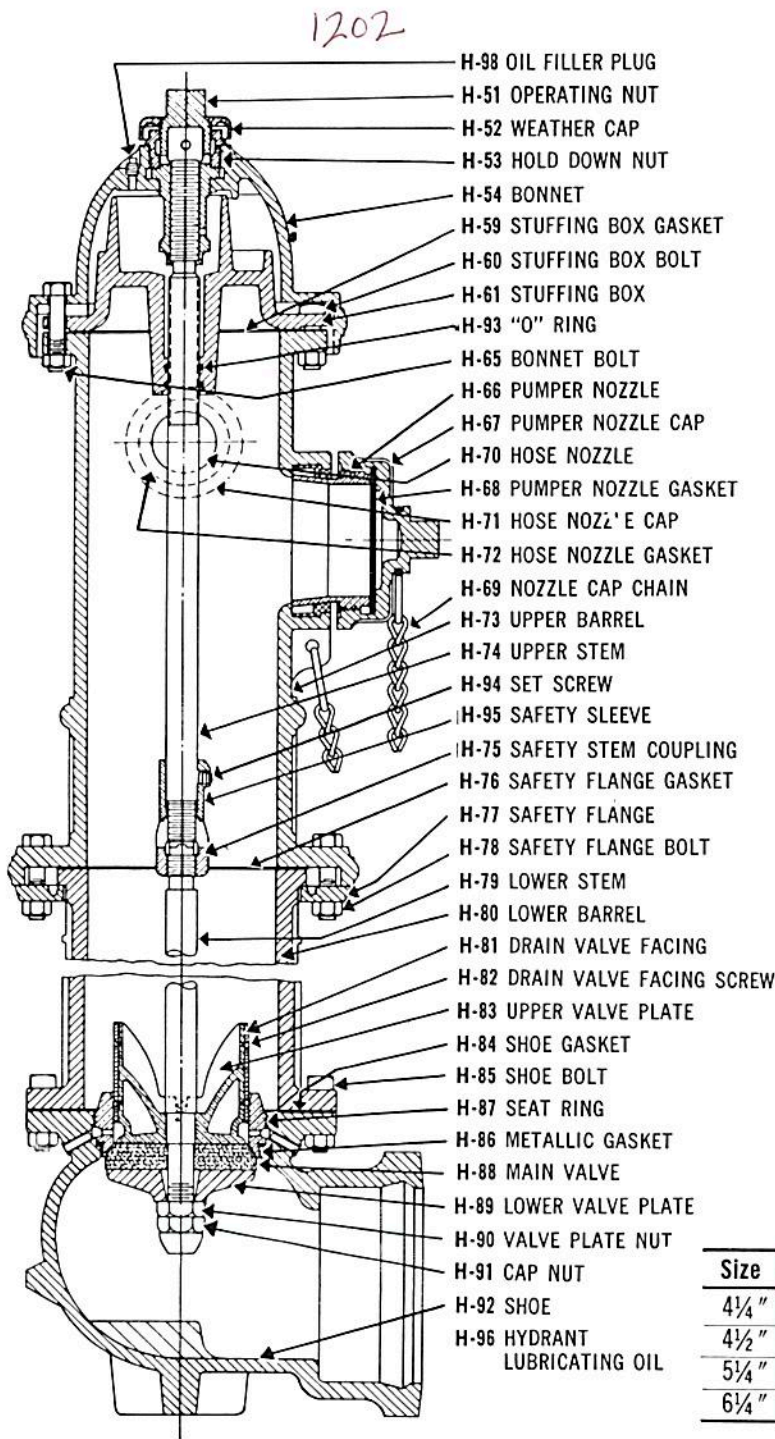
ORDER BY QUANTITY, CATALOG NUMBER AND DEPTH OF BURY



PARTS AND DIMENSIONS

IMPROVED AWWA TYPE FIRE HYDRANTS

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DIMENSIONAL DIAGRAM

Size	A	B	C	D	E	F
4 1/4"	16 3/4	21 1/4	35 5/8	6 1/2	7 5/8	1 5/8
4 1/2"	16 3/4	21 1/4	35 5/8	6 1/2	7 5/8	1 5/8
5 1/4"	18	23	38 5/8	7 1/4	8 3/8	1 5/8
6 1/4"	18 3/4	23 3/4	40 1/4	8 1/2	9 3/4	2 1/8



2208

H-97 Cast Iron Breakable Safety Stem Coupling optional for H-95 Brass Safety Sleeve and H-75 Brass Safety Stem Coupling shown above.

1730



H-96 HYDRANT LUBRICATING OIL

This special all-weather oil flows freely through a temperature range of minus 60 to plus 150 degrees. Can contains 8 oz. of oil — exactly enough to fill oil reservoir to correct level.



WHEN ORDERING FIRE HYDRANTS SPECIFY THE FOLLOWING:

1. QUANTITY REQUIRED
If more than one size, quantity of each.
2. SIZE OF VALVE OPENING AND CATALOG NUMBER
This determines the size of the hydrant. (Page 16-4)
3. NOZZLE ARRANGEMENT
The Catalog Number indicates the usual arrangements of hose and pumper nozzles. If a different arrangement is desired, specify the number of hose nozzles and the number of pumper nozzles.
4. DEPTH OF TRENCH OR BURY
Distance from ground line to bottom of connecting pipe. "Trench" and "Ditch" are the same as "Bury". "Cover" is the distance from the ground line to the top of the connecting pipe.
5. SIZE OF INLET CONNECTION
See sizes listed for each hydrant. (Page 16-5)
6. TYPE OF INLET CONNECTION
See types of inlets listed for each hydrant. (Page 16-5)
7. SIZE AND SHAPE OF OPERATING NUT
National Standard is 1½" pentagon, measured from point to opposite flat. Square and Hexagon or other sizes pentagon can also be furnished, size being determined by measuring from flat to flat on square and hexagon, and from point to opposite flat on pentagon. Measurements to be taken at base of nut. Measurement at top of nut is 1/16" less unless otherwise specified.

8. DIRECTION OF OPENING
Usually left (counter-clockwise). If previous hydrants open right, new hydrants should open right.
9. HOSE NOZZLE THREADING
Send male coupling on hydrant nozzle to show threads desired, EXCEPT in the following cases: (a) if using National Standard, specify accordingly on order. (b) if we have previously furnished hydrants at the same location and there is no change. (Complete records are kept on file in our Engineering Department for reference.)
10. PUMPER NOZZLE THREADING
Same instructions as number 9.
11. COLOR
Unless otherwise specified, the hydrant will be enameled above the ground line with fire hydrant red. When so ordered, we will enamel any color (or colors) specified to match existing standards in your city.

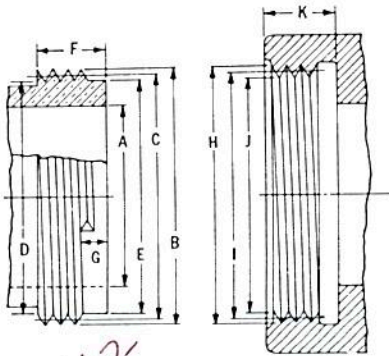
WHEN ORDERING PARTS SPECIFY:

1. Quantity
2. Part number and name
3. Size and catalog number of fire hydrant.
4. Direction of opening
5. Depth of bury
6. Year date shown on hydrant

NATIONAL STANDARD HOSE COUPLING THREAD SPECIFICATIONS

	Water Hose	1½" Fire Protection Hose	Fire Hose				
			2½"	3"	3½"	4"	4½"
A. Nominal inside diameter	1½"	1½"	2½"	3"	3½"	4"	4½"
Number of threads per inch	11½	9	7½	6	6	4	4
B. Major diameter nozzle thread							
Max.	1.8788	1.9900	3.0686	3.6239	4.2439	5.0109	5.7609
Min.	1.8618	1.9678	3.0366	3.5879	4.2079	4.9609	5.7109
C. Pitch diameter nozzle thread							
Max.	1.8223	1.9178	2.9820	3.5156	4.1356	4.8485	5.5985
Min.	1.8138	1.9067	2.9660	3.4976	4.1176	4.8235	5.5735
D. Minor diameter nozzle thread							
Max.	1.7658	1.8457	2.8954	3.4073	4.0273	4.6861	5.4361
E. Diameter pilot nozzle	1.718	1.797	2.850	3.354	3.973	4.610	5.357
*F. Length of thread — nozzle	5/8"	5/8"	1"	1 1/8"	1 1/8"	1 1/4"	1 1/4"
G. Face to start of second turn	5/32"	5/32"	1/4"	5/16"	5/16"	7/16"	7/16"
H. Major diameter coupling thread							
Min.	1.8888	2.0020	3.0836	3.6389	4.2639	5.0359	5.7859
I. Pitch diameter coupling thread							
Max.	1.8408	1.9409	3.0130	3.5486	4.1736	4.8985	5.6485
Min.	1.8323	1.9298	2.9970	3.5306	4.1556	4.8735	5.6235
J. Minor diameter coupling thread							
Max.	1.7928	1.8799	2.9424	3.4583	4.0833	4.7611	5.5111
Min.	1.7758	1.8577	2.9104	3.4223	4.0473	4.7111	5.4611
K. Depth of coupling	1 9/32"	1 9/32"	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"

*Manufacturer's Standard



All dimensional data and tolerances are in accord with the U. S. Dept. of Commerce, National Bureau of Standards, Handbook H28 1957 Part II.



Catalog Page No.

Form 9102

- 16-1 The Main Valve on all Fire Hydrants has been changed from a Balata to a Rubber Compound.

Balata Valves will be furnished upon application only.

May 11, 1962

- 16-4 The Improved Hydrant's Lower Barrel is manufactured in two sections when the depth of bury is unusually deep. The chart below shows the length of the lower barrel section and the length of barrel extension section or sections.

IMPROVED HYDRANTS

Depth of Bury	4 1/4" Improved Hydrant		5 1/4" Improved Hydrant	
	Lower Barrel	Lower Extension	Lower Barrel	Lower Extension
→ 8'6"	5'6"	3'0"	5'6"	3'0"
9'0"	6'0"	3'0"	6'0"	3'0"
9'6"	5'6"	2 ea.-2'0"	4'6"	5'0"
10'0"	6'0"	2 ea.-2'0"	5'0"	5'0"

The lower barrel extension sections are installed between the lower barrel section and the hydrant shoe. Buries not shown have not been furnished.

May 11, 1962 - Revised 5-12-62, Revised 12-20-71

- 16-6 The barrel extension section and flange for the improved hydrant have been redesigned.

The skirt was removed from the barrel extension flange and the solid flange was of thicker construction. They are now being changed back to the design shown in the W-103 Catalog which has the skirt on the bottom of the extension and a thinner solid flange.

May 11, 1962, Revised 5-12-62, 4-20-64.

- 16-7 Dimension "A" for 4 1/4" and 4 1/2" Improved Fire Hydrants in the chart on page 16-7 should be changed from 16 3/4" to 18".

March 11, 1970

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

- 16-5 Our 4-1/4" Improved Fire Hydrant can be furnished with a special inlet adapter permitting the hydrant to be installed directly to existing shoe of an old R. D. Wood Mathews Hydrant. This construction provides the opportunity of replacing an old R.D. Wood Mathews Hydrant with a new 4-1/4" Mueller Improved Fire Hydrant without removing the old R.D. Wood Mathews Shoe from the Pipe.

The R. D. Wood Mathews Hydrant has a threaded connection between the bottom of the barrel and the top of the Mathews Shoe. Therefore, this new adapter likewise has a threaded connection between the lower end of the adapter and the top of the existing Mathews Shoe.

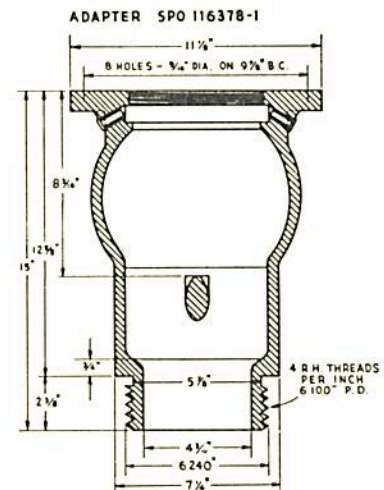
When so furnished, our hydrant with the adapter replaces the shoe normally furnished with our hydrant. The valve mechanism screws into the top of the adapter instead of into the top of the shoe.

This adapter is approximately 12" long and therefore, it reduces the bury of a hydrant so furnished by one foot. As an example: If a five foot hydrant would normally be furnished, then a four foot hydrant with adapter would provide the same bury setting.

IMPORTANT - Compare the dimensions of the adapter with the dimensions of the R. D. Wood Mathews shoe to be certain that the adapter will fit the shoe. R. D. Wood Mathews hydrants have been furnished with several sizes of shoes, however, we only have the one adapter as shown in the drawing.

4-1/4" Improved Fire Hydrant
with SPO 116378-1 Adapter

SPO 116378-1 Adapter only
furnished as a separate part.



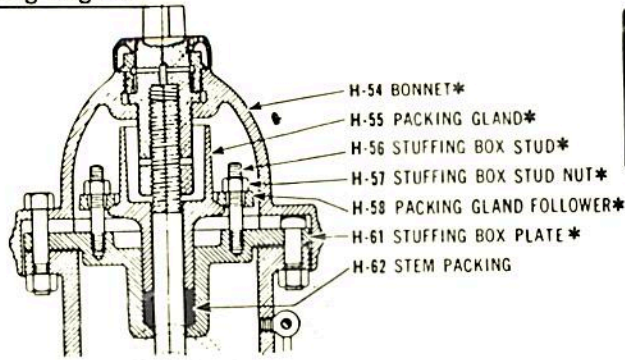
- 16-10 Fire Hydrants that are longer than 10 feet will require special pricing, these prices will be available upon application.

May 1, 1970

NOTE: ARROW INDICATES ADDED INFORMATION

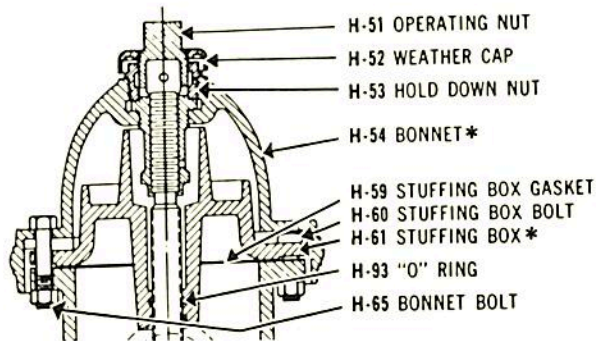
Catalog Page No.

Form 9102



1934 THROUGH 1947

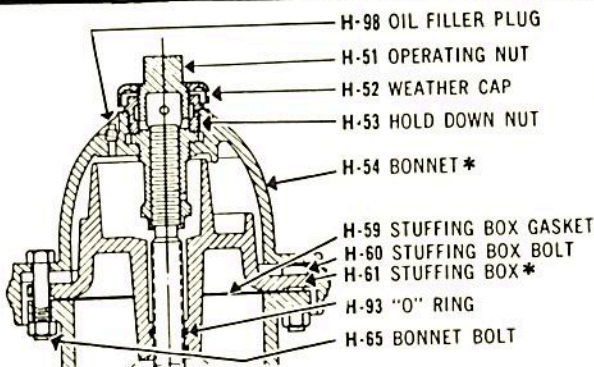
Above: Bonnet section of hydrant with conventional packing and without filler plug in bonnet. All other parts same as on drawing at right. Appearance same as 1948 through 1953. No oil plug. If nozzle chains are attached to eye bolt, bonnet is this style unless already changed. Packing is "conventional".



1948 THROUGH 1953

Above: Bonnet Section with "O" ring seals and without filler plug in bonnet. All other parts same as on drawing at right. No oil plug. Nozzle chains are attached below each nozzle. "O" rings now used in place of "conventional" packing. Year date is marked on side of barrel.

SPECIAL NOTE: Whenever it is necessary to replace the **HOLD DOWN NUT** on a hydrant of earlier manufacture which does not have the **H-102 Shake Proof Lock Washer** (see parts diagram at right) it will also be necessary to replace the **WEATHER CAP** with the latest model and add a **LOCK WASHER**.

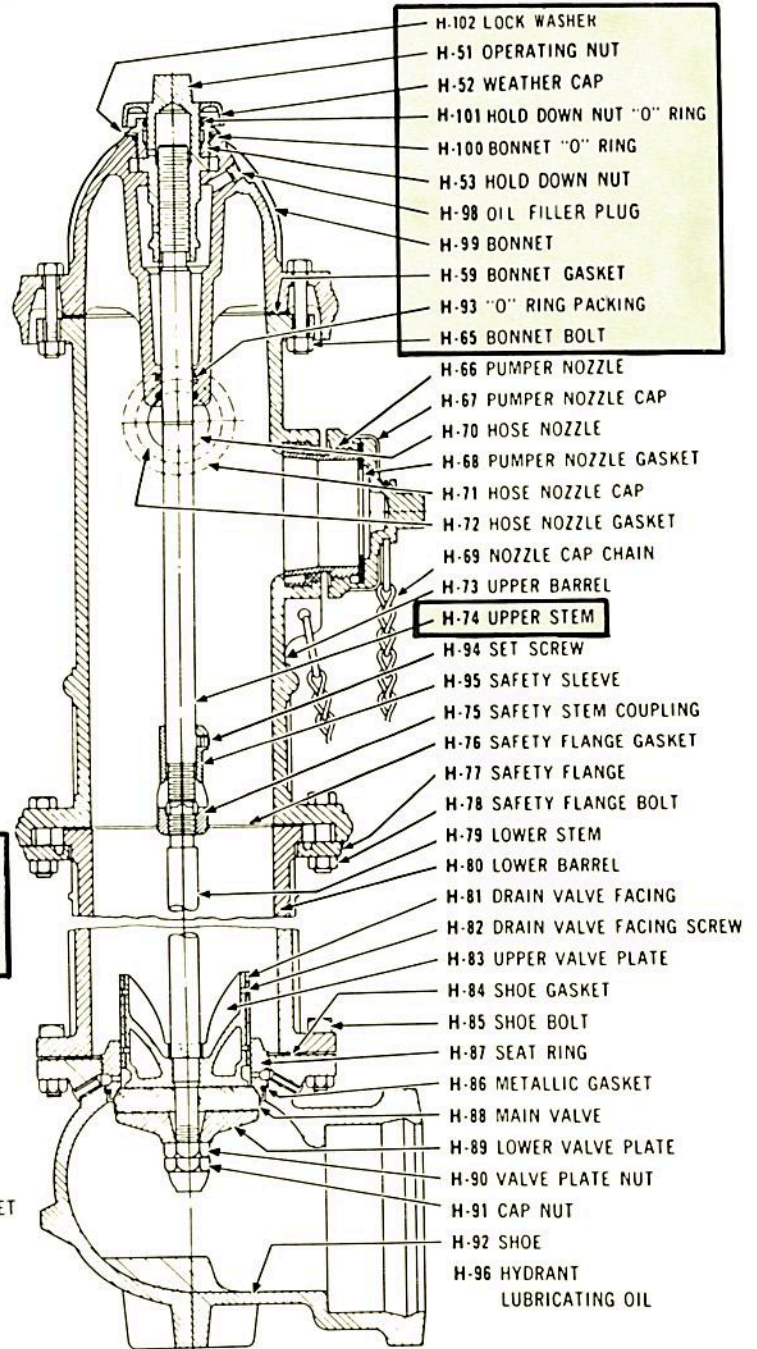


1954 THROUGH 1961

Above: Bonnet section with "O" ring seals and with filler plug in bonnet. All other parts same as on drawing at right. Oil reservoir changed in shape to allow addition of oil plug without disturbing bonnet. Oil plug is in vertical position. Year date is marked on side of barrel.

* NOTE: CANCELLED - NOT AVAILABLE

An Improved Fire Hydrant with any bonnet style shown at left can be converted to have 1962 style bonnet (sealed oil reservoir) by ordering parts in boxed area at upper right.
NOTE: New H-74 upper stem is also required to convert Hydrant with 1934 through 1947 style bonnet to 1962 style.



- H-102 LOCK WASHER
- H-51 OPERATING NUT
- H-52 WEATHER CAP
- H-101 HOLD DOWN NUT "O" RING
- H-100 BONNET "O" RING
- H-53 HOLD DOWN NUT
- H-98 OIL FILLER PLUG
- H-99 BONNET
- H-59 BONNET GASKET
- H-93 "O" RING PACKING
- H-65 BONNET BOLT
- H-66 PUMPER NOZZLE
- H-67 PUMPER NOZZLE CAP
- H-70 HOSE NOZZLE
- H-68 PUMPER NOZZLE GASKET
- H-71 HOSE NOZZLE CAP
- H-72 HOSE NOZZLE GASKET
- H-69 NOZZLE CAP CHAIN
- H-73 UPPER BARREL
- H-74 UPPER STEM**
- H-94 SET SCREW
- H-95 SAFETY SLEEVE
- H-75 SAFETY STEM COUPLING
- H-76 SAFETY FLANGE GASKET
- H-77 SAFETY FLANGE
- H-78 SAFETY FLANGE BOLT
- H-79 LOWER STEM
- H-80 LOWER BARREL
- H-81 DRAIN VALVE FACING
- H-82 DRAIN VALVE FACING SCREW
- H-83 UPPER VALVE PLATE
- H-84 SHOE GASKET
- H-85 SHOE BOLT
- H-87 SEAT RING
- H-86 METALLIC GASKET
- H-88 MAIN VALVE
- H-89 LOWER VALVE PLATE
- H-90 VALVE PLATE NUT
- H-91 CAP NUT
- H-92 SHOE
- H-96 HYDRANT LUBRICATING OIL

Above: Hydrant with sealed oil reservoir. Hydrant bonnet is marked SR on top of flange. Oil filler plug is set at an angle. Year date is marked on side of barrel. Lock washer under hold down nut added in 1965.

NOTE: To add Lock Washer to 1962 style bonnet manufactured without lock washer, it is necessary to replace Hold Down Nut and Weather Cap.

Catalog Page No.

Form 910.2

16-6 The can of Hydrant Lubricant has been changed to an 8 ounce can without
16-7 the long filling spout.

June 18, 1962

16-2 The oil filler plug on the Improved Type Fire Hydrants has been changed
from a square to a hex socket plug.

November 30, 1962

16-4 → Fire Hydrant lower barrel sections in lengths of 6' - 6' thru 8' will be
furnished as two pieces for Mueller®/107®, Mueller Improved, and Mueller
Modern Improved Fire Hydrants.

A 3' extension section will be used with existing lengths of lower barrel
to make up the 6' thru 8' buries for Standard and Underwriter Fire Hydrants.

The combination of barrel extension and lower barrel will be used on the
following fire hydrants:

MUELLER/107 FIRE HYDRANT

4"	5"
A-24112	A-24122
A-24113	A-24123

IMPROVED FIRE HYDRANT

4 1/4"	4 1/2"	5 1/4"
A-24009	A-24012	A-24015
A-24010	A-24013	A-24016

STANDARD FIRE HYDRANT

4 1/4"	5 1/4"
A-24005	A-24007
A-24006	A-24008

UNDERWRITER FIRE HYDRANT

5 1/4"
A-20030
A-20035

MUELLER MODERN IMPROVED
FIRE HYDRANT

4 1/2"	5 1/4"
A-419	A-419

February 16, 1965, Revised 11-18-66, Revised 12-20-71

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

16-1 Fire hydrants, gate valves and tapping valves having mechanical joint end connections will fit the following classes of pipe within the specifications listed below.

SIZE OF VALVE	3"	4"	6"	8"	10"	12"
VALVE BODY I.D. Min.	4.04"	4.88"	6.98"	9.13"	11.18"	13.28"
PIPE O.D. Nominal	3.96"	4.80"	6.90"	9.05"	11.10"	13.20"
PIPE O.D. Maximum	4.02"	4.86"	6.96"	9.11"	11.16"	13.26"
APPLICABLE SPECIFICATIONS	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES
ASA 21.2 - 1953*	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50-100-150-200	50-100-150-200
ASA 21.3 - 1953*		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150
→ ANSI 21.6 - 1970	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ ANSI 21.7 - 1970		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-150-200
→ ANSI 21.8 - 1970	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ ANSI 21.9 - 1970		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150
→ AWWA C 102 - 53*	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50-100-150-200	50-100-150-200
→ AWWA C 106 - 70	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ AWWA C 108 - 70	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
AWWA 1908 STANDARD	A-B-C-D	A	A	A-B	A-B	A-B
FED. SPEC. WW-P-421*		150-250	150-250	150-250	150-250	150-250
AGA OLD STANDARD	All Classes	All Classes	All Classes	All Classes	All Classes	All Classes

SIZE OF VALVE	14"	16"	18"	20"	24"
VALVE BODY I.D. Min	15.37"	17.47"	19.58"	21.68"	25.88"
PIPE O.D. Nominal	15.30"	17.40"	19.50"	21.60"	25.80"
PIPE O.D. Maximum	15.36"	17.46"	19.58"	21.68"	25.88"
APPLICABLE SPECIFICATIONS	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES
ASA 21.2 - 1953*	50-100	50-100	50-100	50-100	50-100
ASA 21.3 - 1953*		10-50-100		10-50-100	10-50-100
→ ANSI 21.6 - 1970	50-100	50-100	50-100	50-100	50-100
→ ANSI 21.7 - 1970		10-50-100		10-50-100	10-50-100
→ ANSI 21.8 - 1970	50-100	50-100	50-100	50-100	50-100
→ ANSI 21.9 - 1970		10-50-100		10-50-100	10-50-100
→ AWWA C 102 - 53*	50-100	50-100	50-100	50-100	50-100
→ AWWA C 106 - 70	50-100	50-100	50-100	50-100	50-100
→ AWWA C 108 - 70	50-100	50-100	50-100	50-100	50-100
→ AWWA 1908 STANDARD	A-B	A-B	A-B	A-B	A-B
FED. SPEC. WW-P-421*					
AGA OLD STANDARD		All Classes		All Classes	All Classes

*Discontinued

NOTE: This information does not apply to the special Mueller D-150 Mechanical Joint.

March 22, 1966 - Rev 10-21-66 - Revised 4-3-72

NOTE: ARROW INDICATES NEW INFORMATION

Replaces page 16-13 dated October 21, 1966
Date April 3, 1972

MUELLER CO.
DECATUR, ILL.

Page 16-13

Catalog Page No.

Form 9102

16-6 An 8 oz. can of hydrant lubricant will now be furnished with each A-24074, A-24075 and A-24076 Extension Section.

No change in price.

April 29, 1963

16-5 Improved and Mueller[®]/107[®] Fire Hydrants are now available with three variations of Slip-On Joint Inlet End Connections. They are as follows:

Mueller Slip-On Joint with Mueller Slip-On Gasket

Mueller Slip-On Joint with Lok-Tyton[®] Gasket

Mueller Slip-On Joint without Gasket

The following inlet sizes are available.

<u>Improved Fire Hydrant</u>		<u>Mueller/107 Fire Hydrant</u>	
<u>Size of Hydrant</u>	<u>Size of Inlet</u>	<u>Size of Hydrant</u>	<u>Size of Inlet</u>
4 1/4"	4", 6"	4"	4", 6"
4 1/2"	4", 6"	5"	4", 6"
5 1/4"	4", 6"	6"	6"
6 1/4"	6"		

→ Mueller Slip-On Joint inlet end connections with Mueller Slip-On Gasket will fit the plain end of all cast iron pipe, Classes 150, 200, and 250 manufactured to specifications ANSI A21.6 and ANSI A21.8 including the plain end of all makes of cast iron pipe of the slip connection type.

Mueller Slip-On Joint inlet end connections with Lok-Tyton Gasket will fit Lok-Tyton pipe only.

When using hydrants with Mueller Slip-On Joint inlet and Mueller Slip-On Gasket, we recommend the use of tie rods or concrete blocking.

The design and dimensions of the joint are manufactured under license of U.S. Pipe Foundry Co.

Lok-Tyton is a registered trade mark of U.S. Pipe & Foundry Co.

February 1, 1966 - Rev. 3-22-66, - Rev. 10-21-66, Rev April 3, 1972

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

- 16-4 Shakeproof lock washers are now being furnished on all improved hydrants. This washer is installed between the bonnet and the hold down nut.

The incorporation of this washer necessitates slight changes in the hold down nut and weather cap. Old style parts are unavailable, and in filling repair parts orders, only new style parts will be furnished. The new weather cap will fit both old and new style hydrants. However, when furnishing hold down nuts, it is necessary to also furnish the new weather cap as the old cap will not fit the new hold down nut. The lock washer will also be required.

A slight change was also made at the same time in the bonnet "O" ring groove. This however, does not affect bonnet interchangeability.

2 lock washers will be furnished - one for hydrants that open left and one for hydrants that open right.

January 18, 1966 - Rev. 2-15-66

-
- 16-5 Improved Fire Hydrant shoes, previously furnished and marked FT, are all cancelled and discontinued.

Improved Fire Hydrant shoes previously furnished for use with RT pipe and marked RT will be suitable for use with all domestic AC pipe. The marking RT will be removed and marking AC applied.

June 23, 1967

-
- The stem coupling furnished with MUELLER/107[®] Fire Hydrant Barrel Extension Sections has been changed from cast iron to steel.

→ The pins furnished to connect the stem coupling have also been changed - from threaded pins to stainless steel clevis pins. Two stainless steel cotter pins are used to retain the clevis pins.

No change in price of /107 Fire Hydrant Barrel Extension Sections.

April 19, 1968

— A newly designed safety stem coupling made of steel is now being furnished with 107 Fire Hydrants and Safety Flange Repair Kits.

Instead of threaded pins, two stainless steel clevis pins are used to connect the new steel coupling to the upper and lower operating stems. The clevis pins are retained by stainless steel cotter pins.

Unlike the old style cast iron coupling, the steel coupling does not break in two pieces upon impact. Instead, the metal web between the lower pin hole and the bottom of the coupling is torn out and the entire coupling is pulled free of the lower stem.

To insure proper function of the coupling, it is marked with the correct position of assembly. Correct assembly is also insured by a rollpin within the coupling which acts as a stop and will not permit alignment of all pin holes if the coupling is assembled up-side down.

The new steel safety stem coupling is completely interchangeable with cast iron couplings.

No change in price of hydrants or safety flange repair kits.



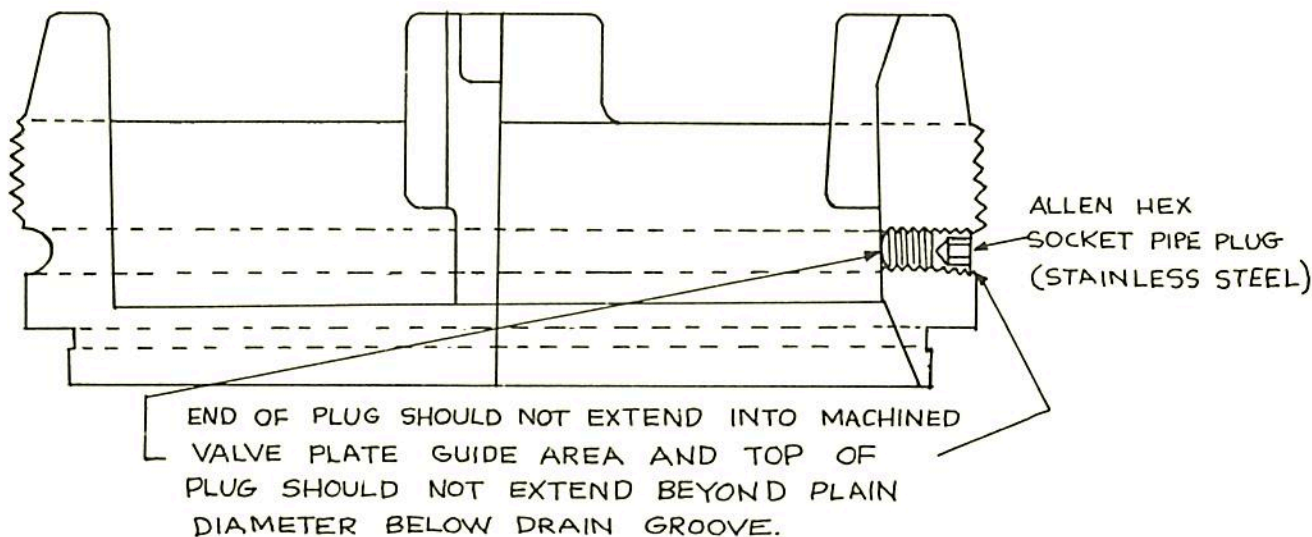
December 1, 1967

Catalog Page No.

Form 9102

— In some areas it may be advisable to plug fire hydrant drains to prevent ground water from entering the drain openings and accumulating in the hydrant barrel. The drains can be plugged on an installed MUELLER® Hydrant without excavating by tapping and plugging the seat ring drain openings as follows:

1. Remove seat ring from hydrant.
2. Clamp seat ring in vise-type fixture.
3. For all fire hydrants except MUELLER/107®, drill existing seat ring drain holes with 11/32" diameter drill or No. "R" Tap Drill Size. (Drain holes in MUELLER/107 seat ring do not require drilling.)
4. Tap drain holes. Use 1/8" - 27 NPT tap for all except MUELLER/107 Fire Hydrant. For MUELLER/107, use 1/4" - 18 NPT Tap. Depth of tap should be carefully controlled so that plug will not extend into machined valve plate guide area and so that top of plug will not extend beyond plain diameter below drain groove.
5. Inspect and remove sharp edges or burrs from machined valve plate guide groove, resulting from drilling operation.
6. Insert stainless steel Allen Hex-Socket Pipe Plug and tighten with Allen Key. Use 1/8" plug for all except MUELLER/107 and tighten with 3/16" Allen Key. For MUELLER/107 use 1/4" plug and tighten with 1/4" Allen Key.
7. Replace seat ring to upper valve plate and re-assemble to hydrant.



September 13, 1968

Date

September 13, 1968

MUELLER CO.

Page 16-17

Catalog Page No.

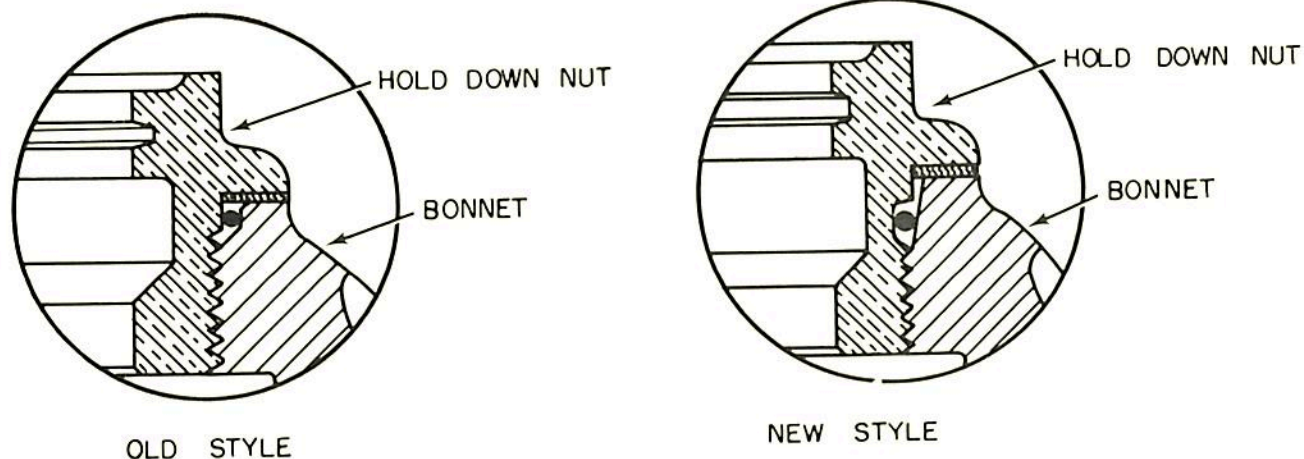
Form 9102

To prevent possible oil leakage in the Improved Fire Hydrant, while being stored or transported in the horizontal position, the Bonnet and Hold Down Nut have been re-designed.

The re-design consisted of changing from an "O" Ring recess in the Bonnet to an "O" Ring groove in the Hold Down Nut and changing the machining on the inside of the Bonnet top from a counterbore with a small chamfer to a tapered counterbore (see drawings below).

The above changes prevent Oil Reservoir leaks in the horizontal position, once the Hydrant is installed in the vertical position, the "O" Ring acts as a seal to prevent water from entering the Bonnet from under the Hold Down Nut.

The new Hold Down Nut will fit an old style Bonnet; conversely, an old style Hold Down Nut will fit a new style Bonnet.



February 16, 1973

- In an effort to discourage theft of Improved Fire Hydrant Weather Caps, the material has been changed from Bronze to Ductile Iron. Ductile Iron has the strength, impact and fatigue resistance of steel while offering the corrosion resistance of Cast Iron. The Ductile Iron Weather Caps are interchangeable with the Bronze Weather Caps. The Ductile Iron Weather Caps will be painted the same color as the Bonnet. No change in price.

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

-- Announcing the new Modern Improved Fire Hydrant

MODERN IMPROVED FIRE HYDRANT WITH 4" OR 6" HUB INLETS
THREE-WAY - A-419 Hydrants

VALVE OPENING	BURY					
4 1/2"	1-1/2'	2'	2-1/2'	3'	3-1/2'	4'
5 1/4"	1-1/2'	2'	2-1/2'	3'	3-1/2'	4'

VALVE OPENING	BURY					
4 1/2"	4-1/2'	5'	5-1/2'	6'	6-1/2'	7'
5 1/4"	4-1/2'	5'	5-1/2'	6'	6-1/2'	7'

MODERN IMPROVED FIRE HYDRANT WITH 4" OR 6" HUB INLETS
TWO-WAY - A-419 Hydrants

VALVE OPENING	BURY					
4 1/2"	1-1/2'	2'	2 1/2'	3'	3-1/2'	4'

VALVE OPENING	BURY					
4 1/2"	4-1/2'	5'	5-1/2'	6'	6-1/2'	7'

NOTE: FOR BURYS OVER 7' - PRICES ON APPLICATION

5 1/4" TWO-WAY - A-419 Hydrants - NOT AVAILABLE AT PRESENT TIME

OPTIONAL EQUIPMENT FOR FIRE HYDRANTS

4" Auxiliary Valve, Flanged to Hub Ends (Includes extra charges for flanged hydrant connection and bolts, nuts & gasket)

6" Ditto

4" Auxiliary Valve, Flanged to A-C Pipe Connection (includes extra charges for flanged hydrant connection and bolts, nuts, and gasket)

6" Ditto

4" Auxiliary Valve Flanged to Mechanical Joint (includes extra charges for hydrant connection and bolts, nuts and gaskets)

6" Ditto

4" Auxiliary Valve, Flanged to D-150 Mechanical Joint (includes extra charges for hydrant connection and bolts, nuts & gasket)

6" Ditto

Outside Hose Nozzle Valves

CONTINUED ON NEXT PAGE

Catalog Page No.

Form 9102

-- OPTIONAL EQUIPMENT FOR FIRE HYDRANTS - CONT'D

4" Flanged Pipe Connection
6" Ditto

4" Standardized Mechanical Joint Pipe Connection Only
6" Ditto

4" Standardized Mechanical Joint Pipe Connection With Gland, Gasket,
and Bolts
6" Ditto

4" D-150 Mechanical Joint Pipe Connection with glands, rubber gaskets
and bolts
6" Ditto

4" A-C Pipe Connection for 5 1/4" Hydrant
6" Ditto

4" Slip-On Joint Inlet - with Slip-On Gasket
6" Ditto

4" Slip-On Joint Inlet - With Lok-Tyton® Gasket
6" Ditto

4" Slip-On Joint Inlet - Without Gasket
6" Ditto

ACCESSORIES - REPAIR KIT, EXTENSION SECTIONS, WRENCHES, ETC.

A-307 - Safety Flange Repair Kit

A-358 - Seat Wrench

A-24091 - Operating Wrench

A-367 - Brass Sleeve

H-96 - Hydrant Lubricating Oil (8 Oz.)
Ditto - Per Gallon

A-333 Extension - note when ordering extensions list valve size and extension
length

VALVE SIZE	EXTENSION LENGTH										
4 1/2	6"	1'	1-1/2'	2'	2-1/2'	3'	3-1/2'	4'	4' - 6"	5'	
5 1/4	6"	1'	1-1/2'	2'	2-1/2'	3'	3-1/2'	4'	4' - 6"	5'	

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

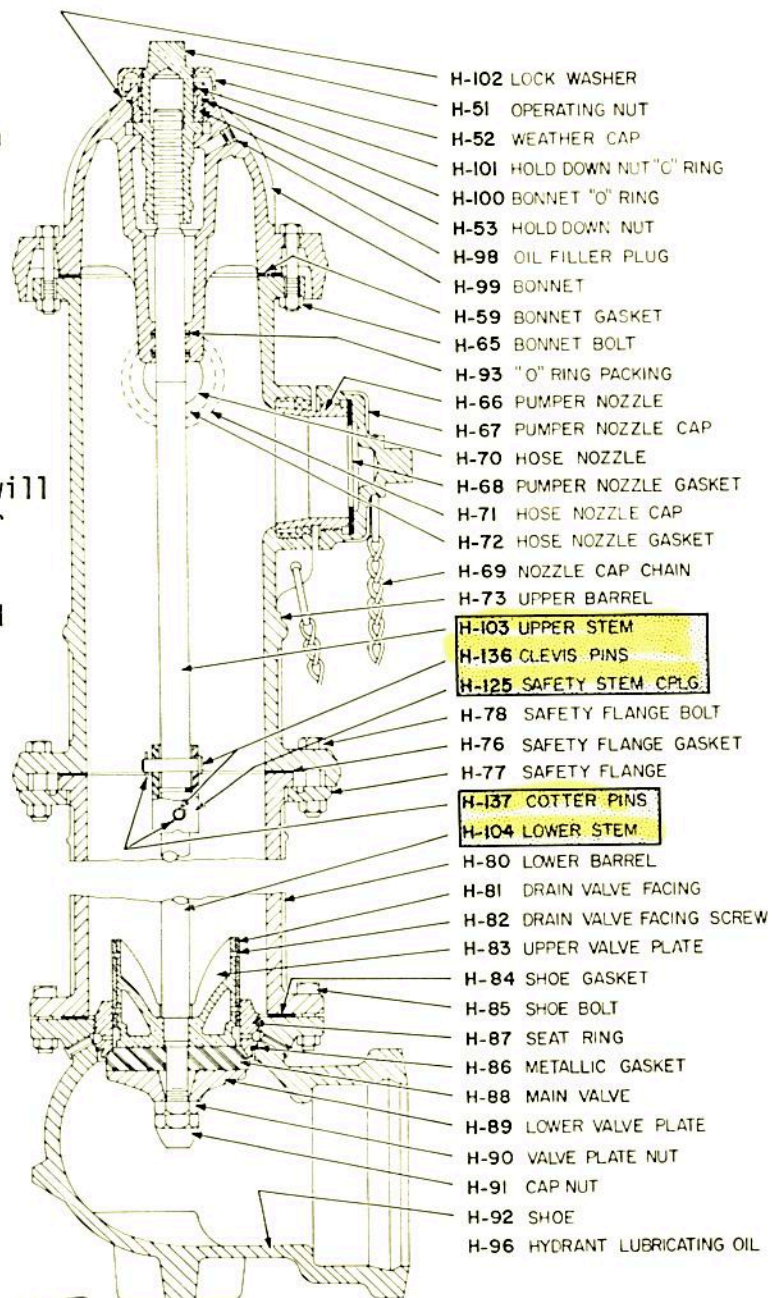
→ We do not recommend the use of Mechanical Joint to IPS PVC Pipe Transition Gaskets with MUELLER® Improved, MUELLER/107® or MUELLER Modern Improved Fire Hydrants. We do recommend use of the New MUELLER Transition Gland (A-399). See Page 18-26a for additional information.

February 10, 1972

→16-4
16-6

The MUELLER Improved Fire Hydrant is now being produced with the steel safety stem coupling used with the MUELLER/107® and Modern Improved Fire Hydrants. This replaces the brass thimble and sleeve coupling previously used. Below is a parts drawing of the Mueller Improved Hydrant with the new stem coupling. The parts in the shaded boxes are parts which differ from parts used with the old brass thimble and sleeve type coupling. No change in price.

There is no way to outwardly distinguish between an Improved hydrant with the brass thimble and sleeve coupling and one with the new steel stem coupling. For this reason, safety flange repair kits A-24095, A-24096 and A-24097 will contain both the brass thimble and sleeve stem coupling and the new steel stem coupling at no increase in price. The extension kits A-24074, A-24075 and A-24076 in addition to containing both style extension stem couplings will also contain extension stems for both style couplings at no increase in price. The necessity of both style stem couplings and extension stems is due to the fact that they are not interchangeable.



August 4, 1972

NOTE: ARROW INDICATES
NEW INFORMATION

April 1973

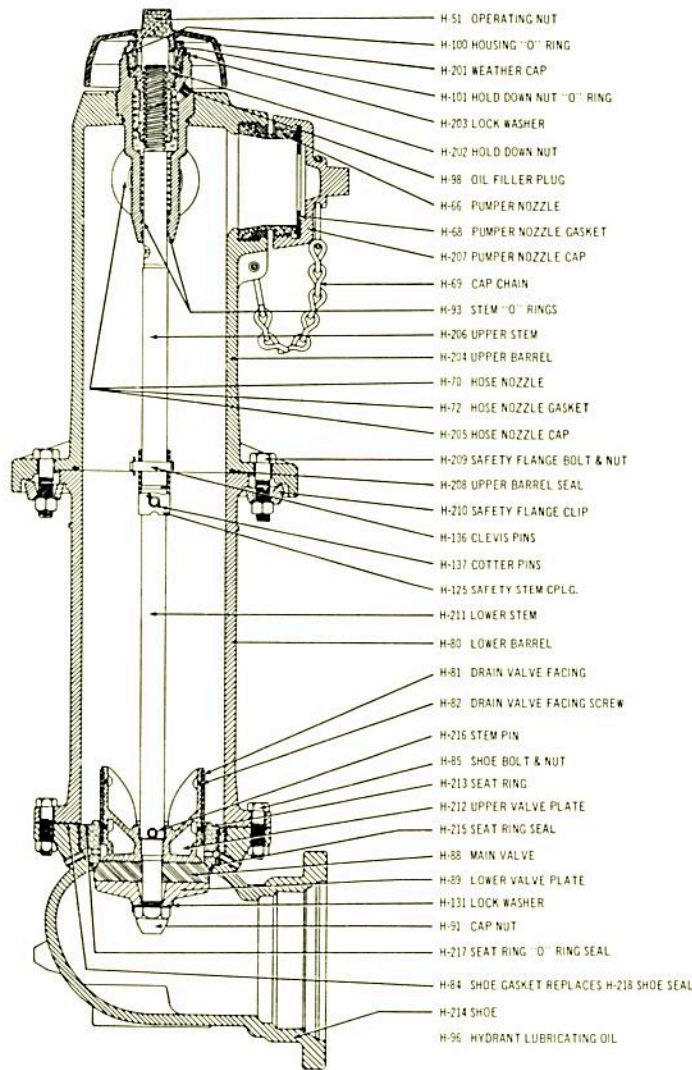
Catalog Page No.

Form 9102

To aid in field identification, the Upper Valve Plate, Lower Valve Plate, Seat Ring and Main Valve of the 4-1/4" and 4-1/2" Improved Hydrant will be cast with the basic Valve size.

February 16, 1973

Below is a repair parts callout for the Modern Improved Fire Hydrant (A-419). To order repair parts, specify: Quantity, Part Number, Part Name and Hydrant Model and Size. Ex: 4 - H-210 Safety Flange Clips, Modern Improved Fire Hydrant, 5-1/4



16-5 The Universal Type Shoe, as shown on Page 16-5, has been cancelled and will no longer be available due to the obsolescence of Universal Type Pipe.

Catalog Page No.

SALESMEN ONLY 16-1

16-1 The following is the Chattanooga Policy on shipping Fire Hydrant Seat Wrenches with initial orders.

On initial orders of Improved, MUELLER® Modern Improved, and 107® Fire Hydrants for municipal water systems, we furnish one Seat Wrench, one Safety Flange Repair Kit, and one Operating Wrench at no charge. Any additional Seat Wrenches or Safety Flange Repair Kits are charged to the customer. Additional Operating Wrenches are supplied at no charge with every six Hydrants ordered. Over and above this, they are charged to the customer.

→ On Standard Hydrants, all extra equipment is charged to the customer, unless six or more Hydrants are furnished and then one Operating Wrench is furnished at no charge with each six Hydrants ordered.

On initial orders of Flush Type Hydrants, we furnish no Wrenches. All Seat and Operating Wrenches requested are charged to the customer.

On initial orders of Underwriter Hydrants, we furnish an Operating Wrench at no charge with each Hydrant ordered. However, all Seat Wrenches are charged to the customer.

October 22, 1971, Revised April 19, 1973

NOTE: ARROW INDICATES REVISED INFORMATION

Catalog Page No.

SALESMEN ONLY 16-2

- 16-1 A machined groove has been added to the Safety Stem Coupling
- 16-3 on the Improved Fire Hydrants. This permits an improved
- 16-7 function of the Stem Coupling allowing it to open up more consistently than in the past.

May 4, 1962

- 16-1 A change has been made in the Seat Ring and Main Valve Assembly on the Improved and Standard Hydrant.

The hardness of the Main Valve Rubber has been increased and the angle of the Seat Ring has been slightly changed. This is to eliminate the possibility of chatter due to flow when starting to open or close the Hydrant.

December 3, 1963

It is now possible to convert an existing Improved Hydrant to a Modern Improved Hydrant. The conversion includes all items from the Lower Barrel Flange up and with either brass (old style) or steel (new style) Safety Coupling.

Prices are as follows:

4-1/2" Two Way	\$115.05
4-1/2" Three Way (with 4" or 4-1/2" Pumper Nozzle)	\$142.19
5-1/4" Three Way (with 4" or 4-1/2" Pumper Nozzle)	\$164.03

These are Trade prices subject to 10% distributor discount.

Orders for conversion units will be handled on SP0 basis.

Seat Wrenches must also be handled on SP0 basis. The A-24053 or A-24054 at the regular price is appropriate for pricing purposes.

October 13, 1972

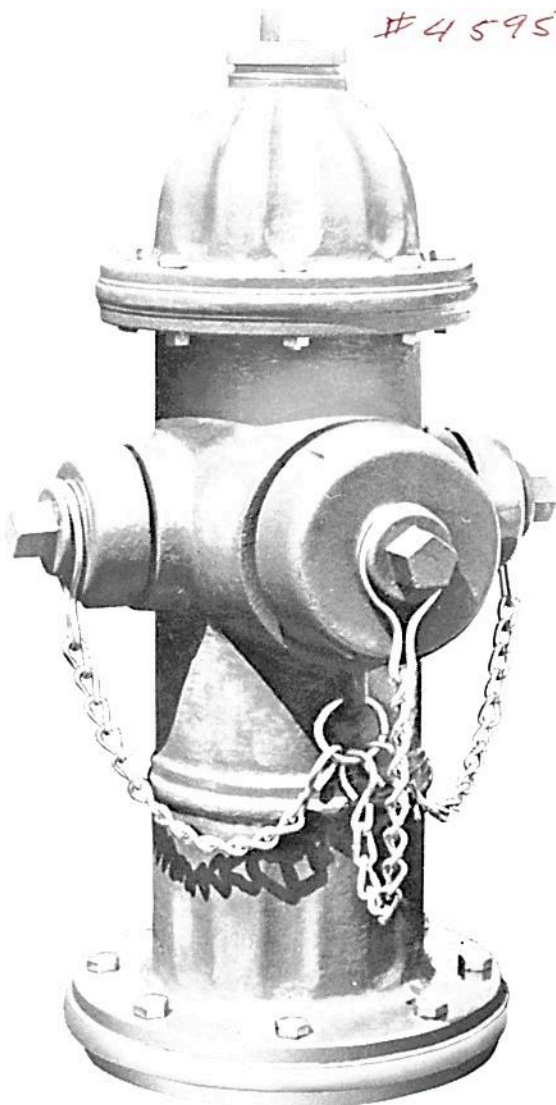
→ In an attempt to discontinue the 4-1/4" Improved Fire Hydrant, all mention of this Hydrant will be deleted from advertising literature, catalog pages and supplements as they are reprinted.

NOTE: ARROW INDICATES NEW INFORMATION

CENTURION[®] FIRE HYDRANT

SECTION

16A



INDEX - CENTURION® FIRE HYDRANTS

SECTION

16A

	Page
DESIGN	16A-1
FEATURES	16A-2, 16A-3
HYDRANTS AND END CONNECTIONS AVAILABLE	16A-4
PARTS AND DIMENSIONS	16A-5
ORDERING INSTRUCTIONS	16A-7

This section illustrates and describes the MUELLER CENTURION Fire Hydrant which is used in municipal fire protection systems. The MUELLER CENTURION Fire Hydrant fully complies with the American Water Works Association Standard C-502.

The CENTURION Fire Hydrant combines traditional appearance with the most efficient and effective operational features available. The improvements most requested during the past several years, have been incorporated into the CENTURION Fire Hydrant to provide a high degree of flexibility. Nozzles can be replaced quickly and easily, various types of shoes can be stocked and installed on the hydrant to meet user requirements and the main valve can be removed from either the bonnet flange or ground line flange.

The CENTURION Fire Hydrant has an extremely low pressure drop to assure maximum flow.

Dry Top Design with Sealed Oil Reservoir

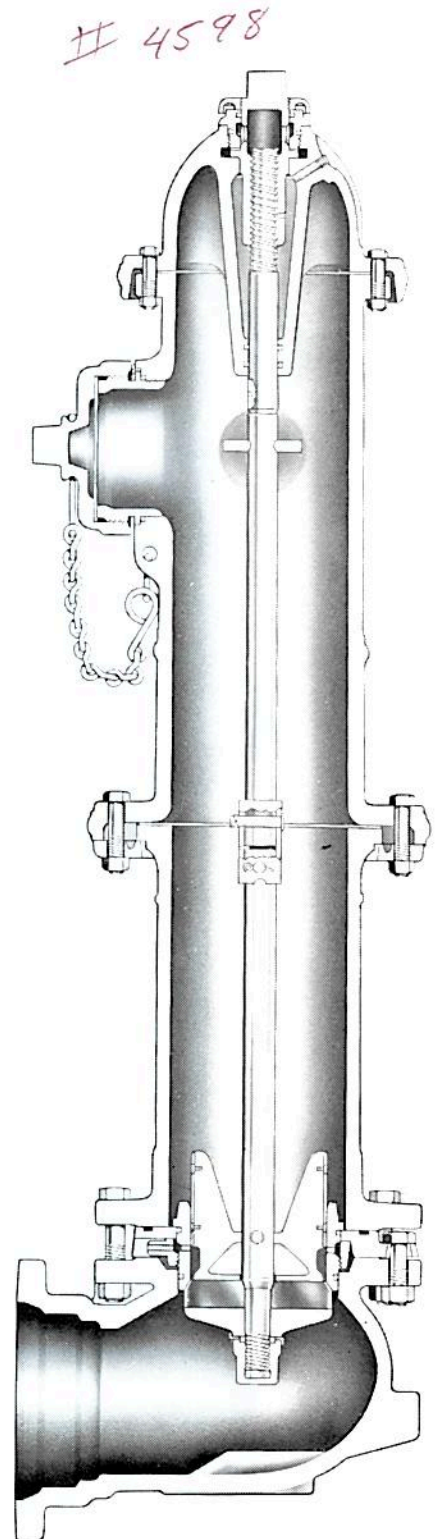
An "O" Ring sealed oil reservoir provides continual lubrication to the operating mechanism to assure ease of operation at all times. Dual "O" Ring stem seals prevent loss of lubricant during shipping storage and installation and also seals water away from the stem threads and bearing surfaces when the hydrant is operated. The bonnet "O" Ring and hold-down nut "O" Ring seal out all moisture and foreign matter.

Safety Stem Coupling and Safety Flange Design

The CENTURION Fire Hydrant Traffic feature is designed to minimize traffic damage to the hydrant. The safety mechanisms on the barrel and stem break or pull apart to prevent or reduce damage to the upper barrel, lower barrel and stem. The main valve remains closed and service is easily restored, in minutes, by simply replacing the low cost broken parts.

Compression Type Main Valve

Water pressure holds the main valve closed, permitting quick and easy maintenance or repair of the entire barrel assembly from above ground without need for shut-off. Two automatic drain valves positively drain the hydrant after each use to prevent freezing of water in the barrel. Three positions of the main valve serve to operate the drain valves: 1) main valve closed, the hydrant is drained; 2) during opening and closing of main valve the drains are flushed; 3) main valve open, drains are sealed. The CENTURION Fire Hydrant assures simple positive sealing and has no complicated springs, toggle joints, or synchronized mechanisms to foul or jam.



MUELLER® CENTURION® FIRE HYDRANT

FEATURES



WEATHER CAP — prevents water from entering the bonnet section, prevents ice from freezing operating nut and discourages unauthorized removal of the operating nut or hold-down nut.

OIL FILLER PLUG — permits instant check of oil level. Oil can be added without removing the bonnet.

HOLD-DOWN NUT — “O” Ring sealed. Concealed to prevent unauthorized removal of bronze operating nut.

ANTI-FRICTION WASHER — reduces friction and maintains operating torque values at a constant level to assure easier operation for the life of the hydrant.

SEALED OIL RESERVOIR — “O” Ring seals in bonnet and hold-down nut retain lubricant — prevent leakage and assure positive lubrication of all stem threads and bearing surfaces each time the hydrant is operated. Factory prefilled with correct amount and proper type of lubricant.

“O” RING SEALS — provide positive water and lubricant sealing by bearing against the bronze sleeve at top of the stem. Packing adjustments, stem binding and stuffing box bolts are eliminated.

STRONG CAST IRON BODY — has traditional appearance and low profile with pumper nozzle and hose nozzles on the same plane.

NON-KINKING CHAINS — special, long, heavy, non-kinking chains are attached to the hydrant with an “S” hook. Special nozzle cap chain loop permits free cap turning.

CONCEALED FLANGES — keep out dirt and improve the appearance.

BRILLIANT ENAMEL FINISH — aids in recognition and aids in corrosion protection.

SAFETY FLANGE — breaks cleanly to prevent or minimize the possibility of barrel damage, yet is strong enough to withstand normal handling. Permits economical repair, adding of extension sections, rotation of upper barrel section, changing upper barrel section — all without excavation or water shut-off.

ELECTRO-GALVANIZED BOLTS AND NUTS — provide excellent corrosion resistance.

PITCH TAR VARNISH FINISH — resists corrosion below ground.

CONTOURED SHOE — the contoured shoe is designed for maximum full flow and has large blocking pads for ease in setting and two lugs for strapping. The shoe is easily interchanged with any other CENTURION Fire Hydrant shoe of the same nominal size without disturbing the seat ring.



FEATURES

MUELLER® CENTURION® FIRE HYDRANT

SECTION

16A

FULL FLOW OPENING — large radius hose and pumper openings reduce friction loss to a minimum.

INTERCHANGEABLE INLINE PUMPER AND HOSE NOZZLES — "O" Ring sealed, threaded in place and retained by stainless steel screws. Easily replaced.

SAFETY STEM COUPLING — pulls free to prevent damage to stem and main valve when hydrant is hit by a vehicle. Top of lower stem is below the top of the lower barrel flange to prevent a vehicle tire from depressing the lower stem and opening the main valve. Designed to prevent or reduce stem and barrel damage and afford easy, economical repair.

UPPER VALVE PLATE — the bronze conical upper valve plate permits maximum flow because of its streamlined design.

DRAIN VALVE FACINGS — long life specially designed facings provide positive sealing of drain valves.

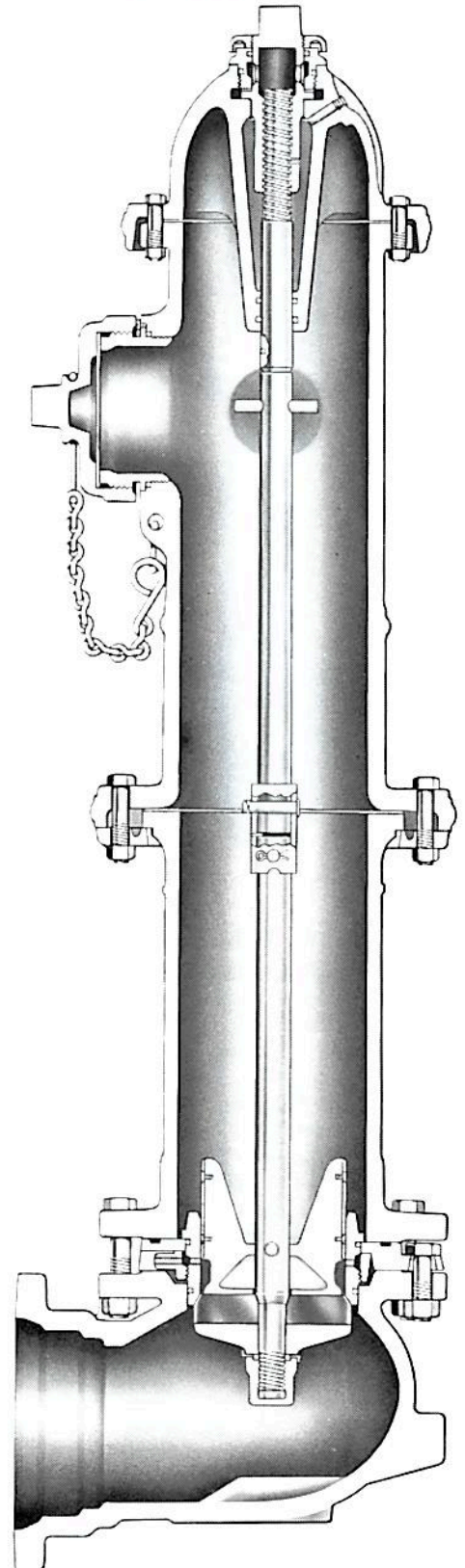
BRONZE SEAT RING — threads into bronze drain ring — top and lower seat ring "O" Rings prevent leakage. Double drain valves assure positive force flushing through two drain valve openings in the drain ring each time the hydrant is opened and closed to provide positive barrel drainage. Bronze drain valves are an integral part of the main valve assembly. The seat ring can be easily removed or installed from above ground.

BRONZE DRAIN RING — retains seat ring, has two drain holes to provide an all bronze waterway, and is held in place by drain ring housing.

DRAIN RING HOUSING — bolts securely to shoe to retain drain ring, seat ring and main valve assembly.

COMPRESSION TYPE MAIN VALVE — closes with the water pressure and remains closed under pressure. Allows easy maintenance or repair of entire barrel from above ground without water shut-off. The fact that the main valve closes with the water pressure plus the safety flange design and the drain ring housing bolts holding the main valve in place in the shoe, combine to permit easy addition of extension sections, rotating of upper barrel section and changing of upper barrel section for different nozzle arrangements. The main valve assembly, drain ring and drain ring housing are connected to the shoe by drain ring housing bolts (only one bolt is shown in illustration). This permits the shoe bolts and lower barrel to be removed (if damaged) with the shoe under pressure.

DUCTILE IRON CAP NUT — retains main valve and seats against cap nut gasket to prevent corrosion of stem threads. Locked in place by a stainless steel lock washer.



MUELLER® CENTURION® FIRE HYDRANT

HYDRANTS AND END CONNECTIONS AVAILABLE

150 p.s.i. Working Pressure — 300 p.s.i. Test Pressure Compression type main valve closes with the pressure. Fully complies with American Water Works Association Standard C-502.



TWO WAY

Nominal Size of Main Valve Opening	Catalog Number
	Two 2½" Hose Nozzles
4½"	A-420
5¼"	A-422

THREE WAY

Nominal Size of Main Valve Opening	Catalog Number
	Two 2½" Hose Nozzles and One Pumper Nozzle
4½"	A-421
5¼"	A-423

Hydrant bury lengths are as follows:

1'6", 2'0", 2'6", 3'0", 3'6", 4'0", 4'6", 5'0", 5'6", 6'0", 6'6", 7'0", 7'6", 8'0", 8'6", 9'0", 9'6", 10'0".

NOTE: The above buries are all one piece. Longer buries are available.

INLET CONNECTIONS

HUB OR BELL INLET

For a calked joint. Suitable for use on classes C and D or class 150 Cast Iron Spigot end pipe or other pipe with same O.D. Furnished with two strapping lugs.

FLANGED INLET

For Flanged end pipe or when used with an auxiliary gate valve. The flange is faced and drilled to the 125 lb. American Standard.

ASBESTOS-CEMENT (A-C) INLET

For use with Class 150 Asbestos-Cement pipe. Furnished with two strapping lugs.

MECHANICAL JOINT INLET

For use on Standardized Mechanical Joint pipe or other pipe having the same O.D. Furnished with the connecting gland, plain rubber gasket, and cast iron bolts and nuts, unless otherwise specified. Inlet has two strapping lugs. Can also be furnished on order with set screws in the gland for bonding, or with lead tipped gasket.

MUELLER® D-150 MECHANICAL JOINT INLET

This is an enlarged connection suitable for use with Class 150 Cast Iron Pipe or Class D Pit Cast pipe by using one of two type gaskets available. For Class 150 Cast Iron pipe use Duck Tipped Gasket. For Class D Pit Cast Pipe use Plain Rubber Gasket. Complete with gland, cast iron bolts and nuts, and either plain rubber or duck tipped gasket as specified. These gaskets and glands will not interchange with those on the Standardized Mechanical Joint. Can be furnished with set screws in the gland for bonding upon order. Inlet has two strapping lugs.

SLIP-ON* JOINT INLET

The Slip-On inlet connection will fit the plain end of all cast iron pipe, Classes 150, 200 and 250 manufactured to ANSI A21-6 and ANSI A21.8 including the plain end of all makes of cast iron pipe of the slip connection type. Inlet has two strapping lugs. Two gaskets are available. The regular Slip-On gasket or LOK-TYTON® gasket may be ordered. The LOK-TYTON gasket fits LOK-TYTON pipe and provides a positive lock against joint separation without the use of thrust block or tie rods.

*The design and dimensions of this joint are manufactured under license of U.S. Pipe and Foundry Company.

LOK-TYTON is a registered trademark of the U.S. Pipe and Foundry Company.

Size of Hydrant	SIZES AND TYPES OF INLET CONNECTIONS					
	Hub or Bell	Flanged	Asbestos-Cement	Mechanical Joint	D-150 Mechanical Joint	Slip-On
4½"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"
5¼"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"	4" & 6"

See Page 16A-7 for Parts Ordering Instructions.

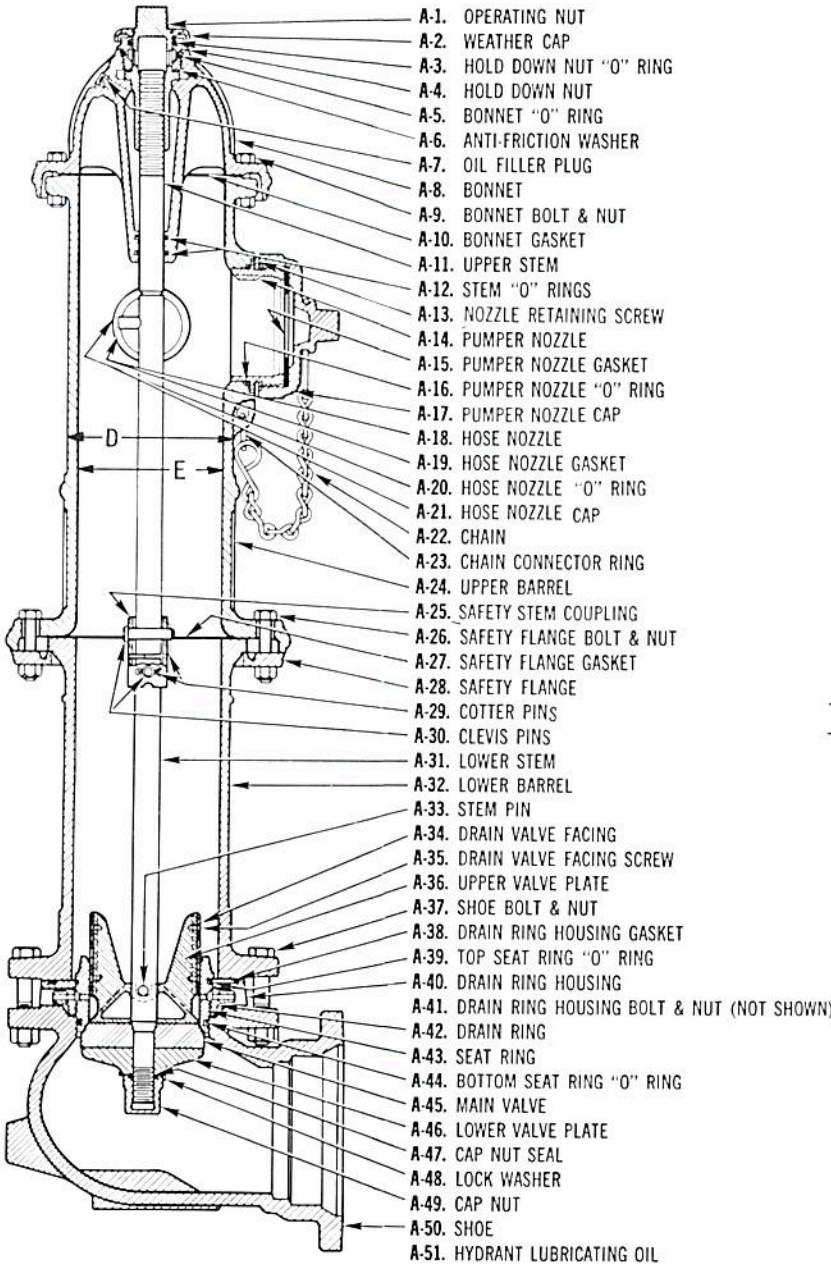


PARTS AND DIMENSIONS

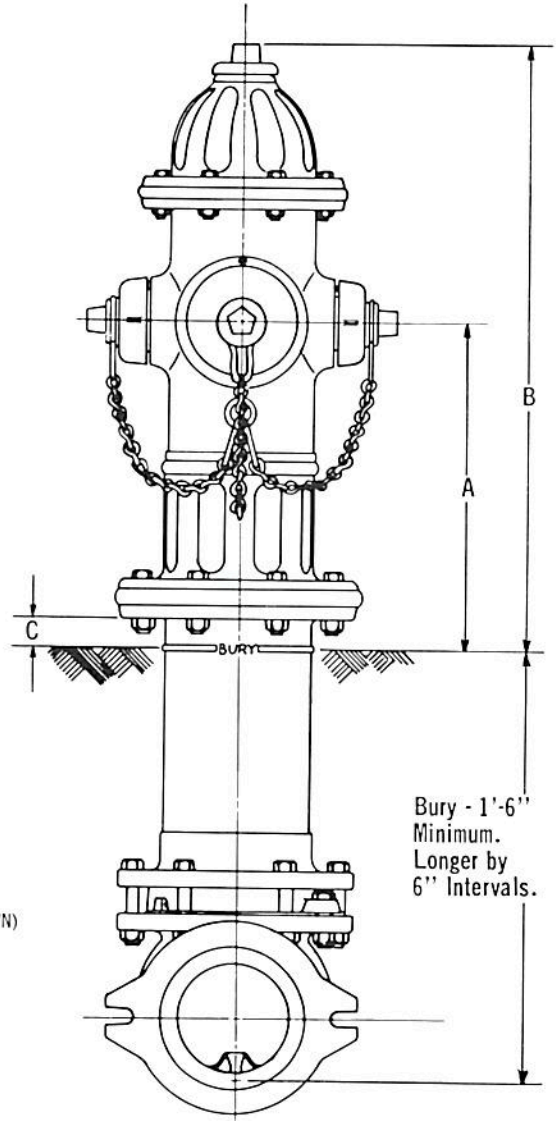
MUELLER® CENTURION® FIRE HYDRANT

SECTION
16A

#4597



#4596



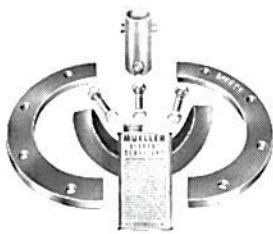
Hydrant Size	DIMENSIONS				
	A	B	C	D	E
4 1/2"	18"	32"	1 5/8"	6 3/4"	6"
5 1/4"	18"	33 1/4"	1 5/8"	7 7/8"	7"

See Page 16A-7 for Parts Ordering Instructions.



MUELLER® CENTURION® FIRE HYDRANT

ACCESSORIES

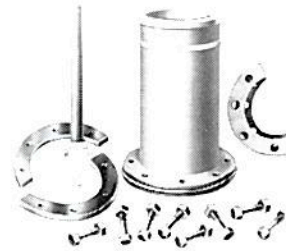


SAFETY FLANGE REPAIR KIT — Consists of notched steel safety stem coupling, stainless steel clevis pins and cotter pins, safety flange, gasket, three bolts and nuts and a can of MUELLER Hydrant lubricating oil.

A-300 for 4½" Hydrants

A-301 for 5¼" Hydrants

To order specify - Quantity and Catalog Number



BARREL EXTENSION SECTIONS — Barrel extension sections in 6" increments from 6" through 4'0". Consists of barrel extension, steel stem coupling, stainless steel clevis pins and cotter pins, solid flange, gasket, bolts, and a can of MUELLER Hydrant lubricating oil. These barrel extensions are used between the upper and lower barrels.

A-319 for 4½" Hydrants

A-320 for 5¼" Hydrants

To order specify — Quantity, Length and Catalog Number

#1582

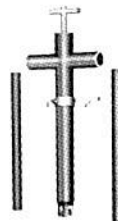


BRASS SLEEVE — Protects "O" Rings from being damaged by stem threads when removing the bonnet from the upper stem for any reason.

A-367 Brass Sleeve

To order specify — Quantity and Catalog Number

#4341



SEAT WRENCH — Used to remove main valve and seat ring from bonnet level or ground line. Fits all sizes of hydrants and depths of bury. Wrench self centers on barrel flanges.

A-359 Seat Wrench

To order specify — Quantity and Catalog Number

#768



OPERATING WRENCH — Used to operate nozzle caps, pin type and lug type hose couplings, hydrant operating nut and hold-down nut.

A-311 Operating Wrench

To order specify — Quantity, Catalog Number, Size and Shape of Operating Nut

#4338



HYDRANT LUBRICATING OIL — This special all weather oil flows freely through a temperature range of -60° F to +150° F. The can contains 8 oz. of oil — exactly enough to fill the oil reservoir to the correct level.

A-51 Lubricating Oil

To order specify — Quantity and Catalog Number



NOZZLES WRENCH — Used to remove and install hose and pumper nozzles. One end is used on 4" or 4½" pumper nozzles and 2½" hose nozzles. The other end is used on 3" pumper nozzles.

A-316 Nozzle Wrench

To order specify — Quantity and Catalog Number



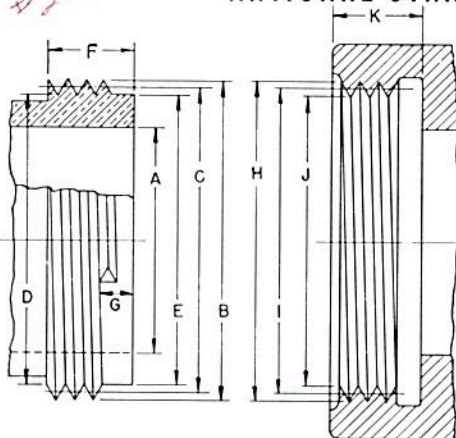
WHEN ORDERING FIRE HYDRANTS SPECIFY THE FOLLOWING:

1. **QUANTITY REQUIRED**
If more than one size, quantity of each.
2. **SIZE OF VALVE OPENING AND CATALOG NUMBER**
This determines the size of the hydrant. (16A-4)
3. **NOZZLE ARRANGEMENT**
The Catalog Number indicates the usual arrangements of hose and pumper nozzles. If a different arrangement is desired, specify the number of hose nozzles and the number of pumper nozzles.
4. **DEPTH OF TRENCH OR BURY**
Distance from ground line to bottom of connecting pipe. "Trench" and "Ditch" are the same as "Bury." "Cover" is the distance from the ground line to the top of the connecting pipe.
5. **SIZE OF INLET CONNECTION**
See sizes listed for each hydrant. (16A-4)
6. **TYPE OF INLET CONNECTION**
See types of inlets listed for each hydrant. (16A-4)
7. **SIZE AND SHAPE OF OPERATING NUT**
National Standard is 1½" pentagon, measured from point to opposite flat. Square and Hexagon or other sizes pentagon can also be furnished, size being determined by measuring from flat to flat on square and hexagon, and from point to opposite flat on pentagon. Measurements to be taken at base of nut. Measurement at top of nut is 1/16" less unless otherwise specified.
8. **DIRECTION OF OPENING**
Usually left (counter-clockwise). If previous hydrants open right, new hydrants should open right.
9. **HOSE NOZZLE THREADING**
Send male coupling on hydrant nozzle to show threads desired, EXCEPT in the following cases: (a) if using National Standard, specify accordingly on order. (b) if we have previously furnished hydrants at the same location and there is no change. (Complete records are kept on file in our Engineering Department for reference.)
10. **PUMPER NOZZLE THREADING**
Same instructions as number 9.
11. **COLOR**
Unless otherwise specified, the hydrant will be enameled above the ground line with fire hydrant red. When so ordered, we will enamel any color (or colors) specified to match existing standards in your city.

WHEN ORDERING PARTS SPECIFY:

1. Quantity
2. Part number and name
3. Size and catalog number of fire hydrant
4. Direction of opening
5. Depth of bury
6. Year date shown on hydrant

NATIONAL STANDARD HOSE COUPLING THREAD SPECIFICATIONS



All dimensional data and tolerances are in accord with ANSI B26.

		2½"	3"	3½"	4"	4½"
A. Nominal inside diameter		2½"	3"	3½"	4"	4½"
Number of threads per inch		7½	6	6	4	4
B. Major diameter nozzle thread	Max.	3.0686	3.6239	4.2439	5.0109	5.7609
	Min.	3.0366	3.5879	4.2079	4.9609	5.7109
C. Pitch diameter nozzle thread	Max.	2.9820	3.5156	4.1356	4.8485	5.5985
	Min.	2.9660	3.4976	4.1176	4.8235	5.5735
D. Minor diameter nozzle thread	Max.	2.8954	3.4073	4.0273	4.6861	5.4361
E. Diameter pilot nozzle		2.850	3.354	3.973	4.610	5.357
F. Length of thread—nozzle		1"	1⅛"	1⅛"	1¼"	1¼"
G. Face to start of second turn		¼"	⅝"	⅝"	⅞"	⅞"
H. Major diameter coupling thread	Min.	3.0836	3.6389	4.2639	5.0359	5.7859
I. Pitch diameter coupling thread	Max.	3.0130	3.5486	4.1736	4.8985	5.6485
	Min.	2.9970	3.5306	4.1556	4.8735	5.6235
J. Minor diameter coupling thread	Max.	2.9424	3.4583	4.0833	4.7611	5.5111
	Min.	2.9104	3.4223	4.0473	4.7111	5.4611
K. Depth of coupling		⅝"	1⅛"	1⅛"	1⅞"	1⅞"

*Manufacturer's Standard

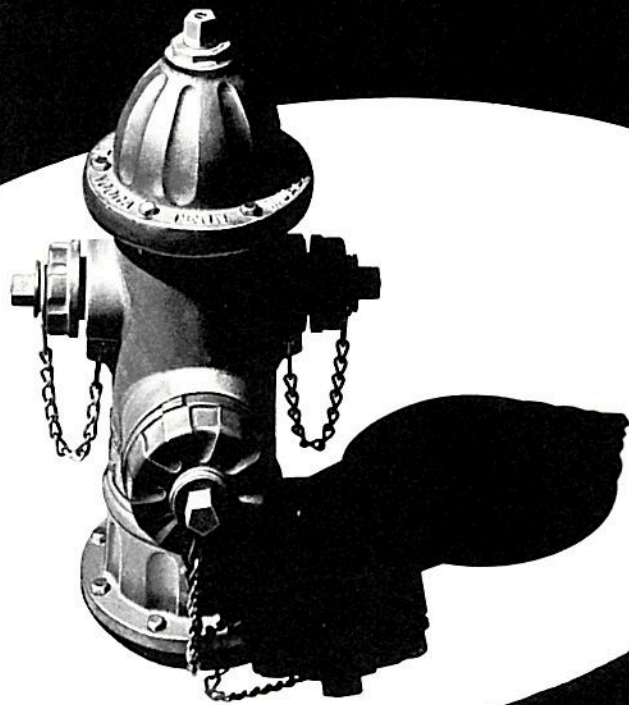


MUELLER CO.
DECATUR, ILL.

STANDARD FIRE HYDRANTS

SECTION

17



INDEX • standard fire hydrants

SECTION

17

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See Section 16 for Improved AWWA Type Fire Hydrants

See Section 19 for Underwriter Fire Hydrants

In this section is shown a line of MUELLER Standard AWWA Fire Hydrants for municipal, industrial, and private fire protection and water supply systems. Both post type and flush type in the regular and 2 1/8" valve sizes are shown. All hydrants in this section except the 2 1/8" size valve opening comply with the American Water Works Association Specifications C-502-54.

BONNET SECTION

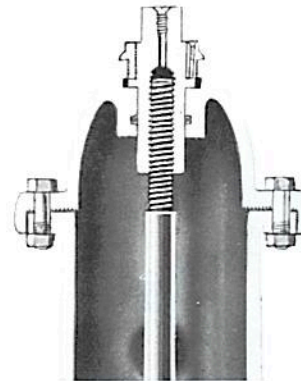
The Standard Fire Hydrant has a convenient means for lubricating stem threads, "O" Ring, and bearing surfaces in the bonnet. The oil holes permit quick lubrication of vital bearing points. The oil screws seal the oil holes. The "O" Ring assures pressure tight seal around the operating nut. These features eliminate the usual problems of dry packing, binding of stem, and packing adjustments.

RUGGED EXTERIOR

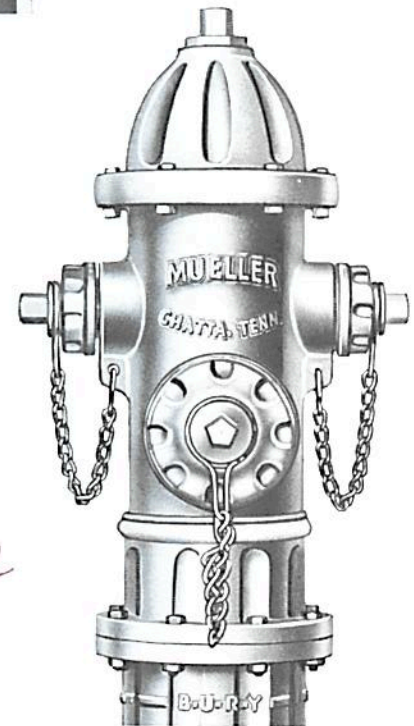
The fluted design of the bonnet, barrel, and nozzle caps gives this hydrant an attractive appearance and added strength. This added strength is particularly beneficial at the ground line where traffic damage occurs. The concealed type bonnet flange adds to the sturdy appearance.

COMPRESSION TYPE MAIN VALVE

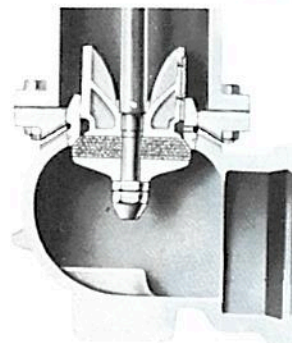
The big, rugged main valve closes with the water pressure. If the hydrant is accidentally broken or if the hydrant bonnet is removed for periodic inspection, the valve will stay tightly closed. All maintenance and repair can be done from above ground without any digging. There is no need for water shut-off except those few times that the main valve or seat ring is removed for inspection or repair. The automatic drain valve keeps the hydrant dry when not in use. It is positive in operation, the entire drain system is force flushed each time the hydrant is opened, and it requires no care. The barrel cannot freeze. There are no complicated springs, toggle joints, or synchronized mechanisms.



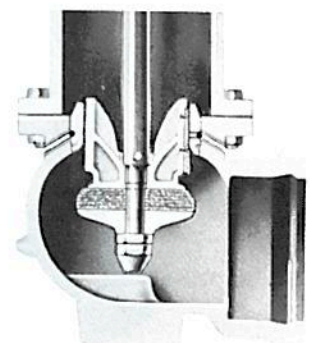
BONNET SECTION



12

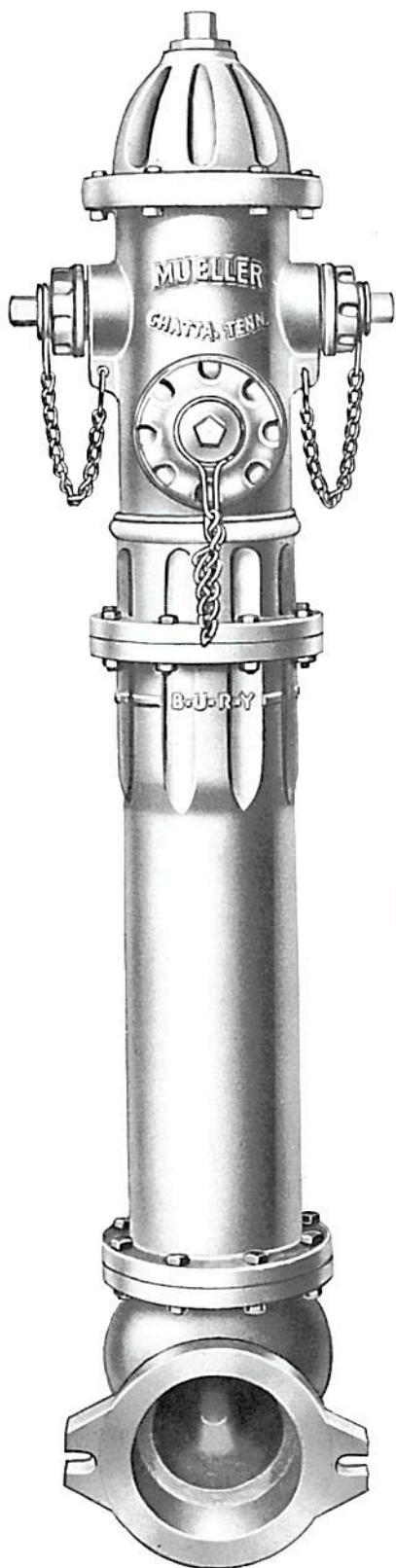


MAIN VALVE CLOSED
DRAIN VALVE OPEN



MAIN VALVE OPEN
DRAIN VALVE CLOSED





12

PLATED BOLTS AND NUTS

Give greater resistance to corrosion.

CONCEALED BONNET FLANGE

Keeps out dirt and improves appearance.

BRILLIANT ENAMEL FINISH

Aids recognition and resists weather.

NON-KINKING CHAINS

Nozzle cap, when removed, hangs directly under each nozzle. No interference with other caps. Extra long, heavy, special link chains will not kink. The special chain loop at the cap end permits free turning of the caps.

GROUND LINE FLANGE

Extra heavy for safety factor against impact. Permits adding of extension sections, replacing of upper barrel section, changing of upper barrel section for different nozzle arrangements — all without digging or water shut-off. The nozzles can be faced in eight directions simply by rotating the upper barrel.

FLUTED DESIGN

Ribs add strength at the ground line flange.

TAPERED BARREL

Lower barrel section tapers with a larger diameter at bottom. Prevents frost heave.

PITCH TAR VARNISH FINISH

Resists corrosion below ground.

HEAVY SHOE

Designed for full flow with pedestal base and backing pad for ease in setting and blocking to prevent blow-off. Has two lugs for strapping except on flanged and universal inlets.



LUBRICATION

Stem threads and operating nut collar are positively lubricated through oil holes in the operating nut and hold down nut. The oil screws for these openings make a pressure-tight seal against leakage.

"O" RING SEAL

Gives permanent water-tight seal between the operating nut and the bonnet. Packing adjustments, binding of the stem, stuffing box, bolts, and glands are completely eliminated.

BREECH-LOCKED NOZZLES

The bronze nozzle cannot be blown out. Four interlocking lugs on nozzle are given a fractional turn from the slots in the barrel and are then calked in place.

FULL FLOW OPENING

Large radius hose and pumper openings reduce frictional loss to a minimum. Unrestricted, tapered openings of the nozzles and the large diameter barrel assure maximum flow.

COMPRESSION TYPE MAIN VALVE

Closes with the pressure and stays closed. Permits bonnet removal, barrel changes, and all repairs with work done from above ground without digging or water shut-off except when main valve or seat ring must be removed.

DRAIN VALVE

Integral part of main valve assembly to give positive, automatic drainage operation without springs, toggle joints or other synchronized mechanisms.

PIN AND GUIDES

Prevent stem from rotating during operation of hydrant and eliminate tendency of stem to unscrew from main valve.

BRONZE SEAT RING

Fine threads and copper-asbestos gasket prevent leakage around seat ring in both open and closed position. Straight threads permit easy removal from above-ground. Gasket comes out with seat ring.

POSITIVE DRAIN ACTION

Fully bronze mounted. Annular drain groove in seat ring connects drain openings in ring and shoe. Openings are momentarily force-flushed each time hydrant is operated.

RESILIENT MAIN VALVE

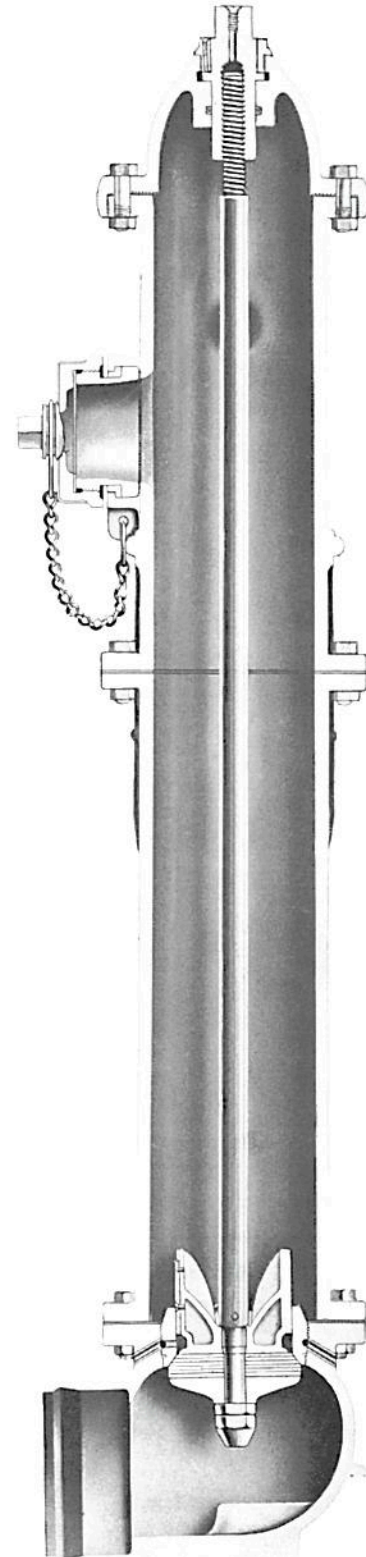
Specially selected material for long wear and resistance to damage by rocks or other foreign matter.

BRONZE VALVE PLATE NUTS

Bottom threads are protected against corrosion and damage by two bronze nuts.

POSITIVE STOP

Integrally cast into shoe permits full opening without over-travel of stem.



33

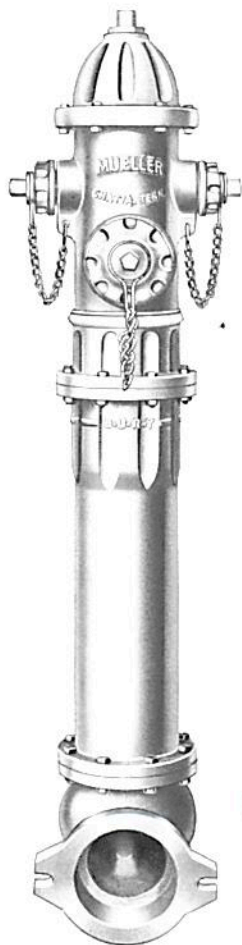


150 p.s.i. Working Pressure — 300 p.s.i. Test Pressure

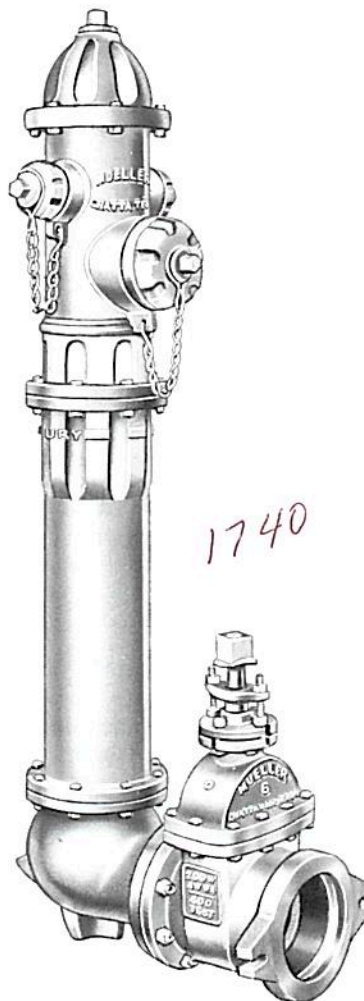
Compression type valve closes with the pressure. Complies with American Water Works Association specifications.



1741



12



1740

2 WAY

Size of Valve Opening	Two 2½" Hose Nozzles
4¼"	A-24006
5¼"	A-24008

Hydrants are illustrated with hub inlets. See page 17-5 for sizes and types of inlets that are available.

Hydrants are normally furnished with nozzles arranged as illustrated. They can

3 WAY

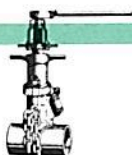
Size of Valve Opening	Two 2½" Hose Nozzles and One Pumper Nozzle
4¼"	A-24005
5¼"	A-24007

be furnished on order in other combinations or with pumper nozzle set on same plane with two 2½" hose nozzles.

For repair parts see page 17-9.

WITH AUXILIARY GATE VALVE

Hydrant has Flanged inlet to permit bolting on an auxiliary gate valve. Several types of valves are available — all with a Flanged outlet and a choice of the following inlet ends: Hub, Universal, Ring-Tite, Fluid-Tite, Mechanical Joint, and MUELLER D-150 Mechanical Joint. Either conventional packing or "O" Ring stem seal design may be had on any of these valves. Flange bolts and gasket are included. Specify size and catalog numbers of hydrant and valve required. (See Section 18 for valves.) Shipped as two separate items.



INLET CONNECTIONS FOR VARIOUS TYPES OF PIPE

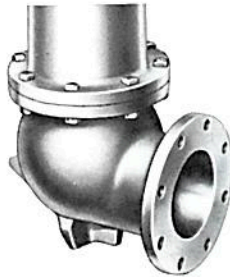
STANDARD FIRE HYDRANTS



HUB OR BELL INLET

For a calked joint. Suitable for use on Classes C and D or Class 150 Cast Iron Spigot end pipe or other pipe with same O.D. Furnished with two strapping lugs.

20



FLANGED INLET

For flanged end pipe or when used with an auxiliary gate valve. The flange is faced and drilled to the 125 lb. American Standard.

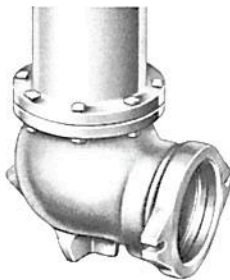
18



UNIVERSAL INLET

For use with Universal Cast Iron Pipe only.

19



RING-TITE OR FLUID-TITE INLET

Use with Johns-Manville Class 150 Ring-Tite asbestos-cement or Keasbey and Mattison Fluid-Tite asbestos-cement pipe. Furnished with two strapping lugs.

1734

MECHANICAL JOINT INLET

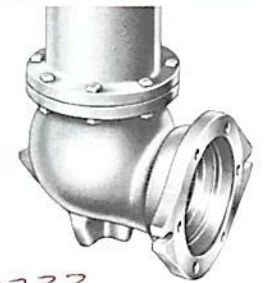
For use on Standardized Mechanical Joint pipe or other pipe having same O.D. Unless otherwise specified, furnished with the connecting gland, plain rubber gasket, and cast iron bolts and nuts. Inlet has two strapping lugs. Can also be furnished on order with set screws in the gland for bonding or with lead tipped gasket.



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MECHANICAL JOINT INLET

Same as inlet shown above except without gland, gasket, bolts and nuts. Furnished with two strapping lugs.



1733

MUELLER D-150 MECHANICAL JOINT INLET

This is an enlarged connection suitable for use with Class 150 Cast Iron pipe or Class D Pit Cast pipe by using one of two type gaskets available. For Class 150 Cast Iron pipe use Rubber Duck Tipped gasket. For Class D Pit Cast pipe use plain Rubber gasket. Always furnished complete with the gland, cast iron bolts and nuts, two strapping lugs, and either plain Rubber or Duck Tipped gasket as specified. These gaskets and glands will not interchange with those on the standardized Mechanical Joint. Can be furnished with set screws in the gland for bonding upon order.

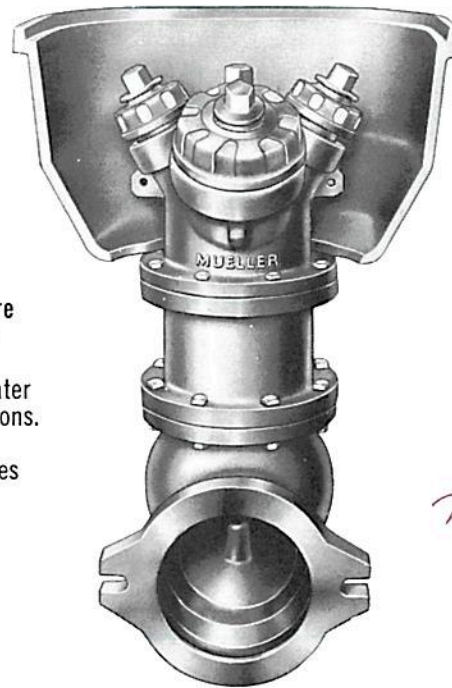
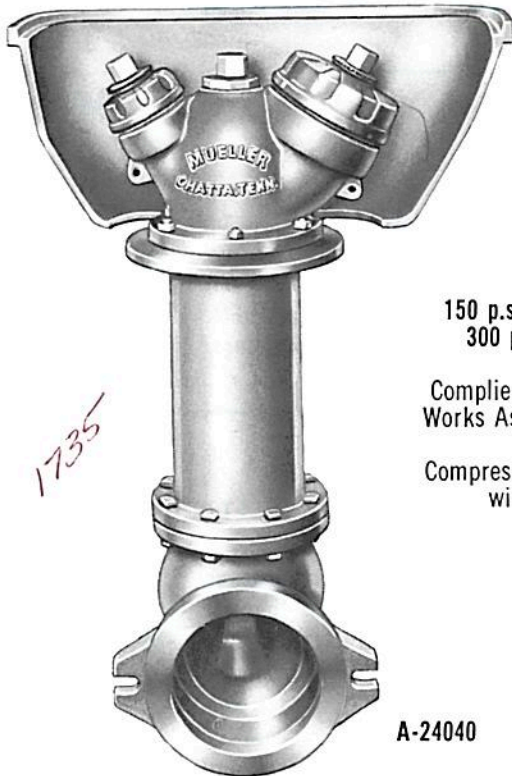


31

Sizes and Types of Inlet Connections

Size of Hydrant	Sizes and Types of Inlet Connections					
	Hub	Flanged	Universal	Ring-Tite Fluid-Tite	Mechanical Joint	D-150 Mechanical Joint
4 1/4"	4"-6"	4"-6"	4"-6"	4"-6"	4"-6"	4"-6"
5 1/4"	4"-6"	4"-6"	4"-6"	4"-6"	4"-6"-8"	4"-6"





150 p.s.i. Working Pressure
300 p.s.i. Test Pressure

Complies with American Water Works Association specifications.

Compression type valve closes with the pressure.

A-24040

A-24042

Sizes	Catalog No.	Description
4¼"	A-24040	With one 2½" hose nozzle and one pumper nozzle
4¼"	A-24041	With two 2½" hose nozzles

Sizes	Catalog No.	Description
5¼"	A-24042	With two 2½" hose nozzles and one pumper nozzle.

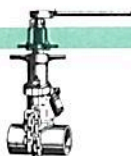
Hydrant is installed flush with the ground. Ideal for heavily traveled areas and for locations where above-ground fire hydrants detract from the surroundings. They also provide unobstructed above-ground clearance in extremely restricted locations such as airports, narrow streets, or sidewalks.

Operating nut and hose nozzles are located in cast iron box below ground level. Cover has recessed lift handle for

Hydrants are illustrated with hub inlets. Other type inlets can be furnished upon order. See Page 17-5.

easy removal. Box is not rigidly attached to hydrant barrel. Surface loads are not transmitted to the hydrant barrel or the piping. This construction minimizes hydrant damage from settlement or frost heave. The valve and operating mechanism is the same as the Standard post-type hydrant (page 17-4). Use seat ring type extension shown on page 17-8.

Repair Parts for these hydrants on Page 17-9. Cap chains furnished upon order.



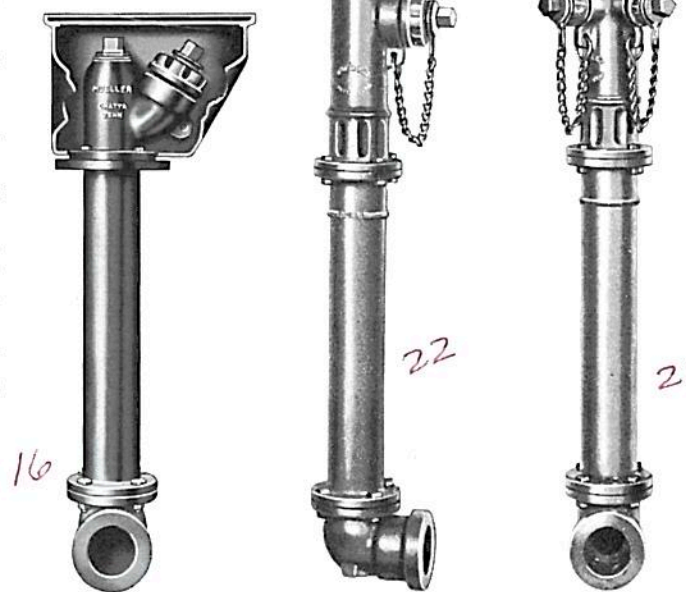
2 1/8" VALVE FLUSH and POST TYPE

STANDARD FIRE HYDRANTS

150 p.s.i. Working Pressure — 300 p.s.i. Test Pressure

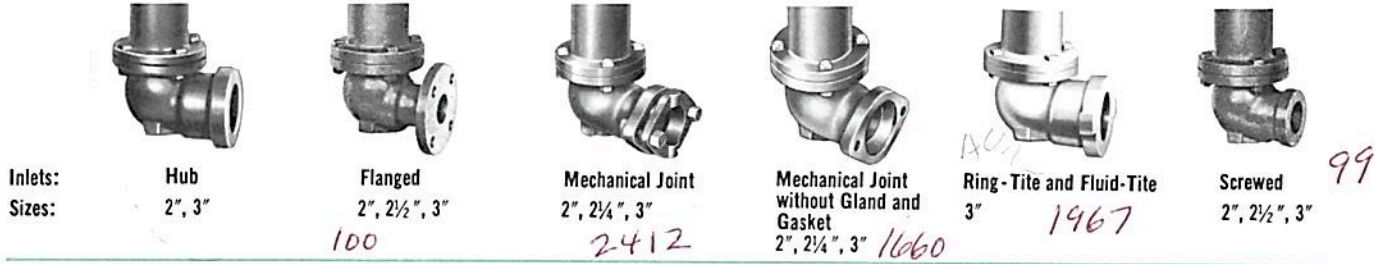
Fire protection for private estates, clubs and airports; water supply for contractors and sprinkling equipment; and flushing of dead ends are a few of the uses for the 2 1/8" hydrant. The design of these hydrants, either post or flush type, is exactly the same as the Standard Type Fire Hydrant—the only difference is in size.

Size	Catalog No.	Description
2 1/8"	A-24058	Post type — with one 2 1/2" (or smaller) hose nozzle
2 1/8"	A-24059	Post type—with two 1 1/2" (or larger) hose nozzles—(Two 2 1/2" nozzles not recommended.)
2 1/8"	A-24039	Flush type—with one 2 1/2" (or smaller) hose nozzle. Cap chain furnished on order.



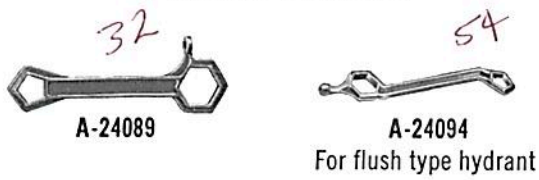
A-24039 A-24058 A-24059

INLET CONNECTIONS For 2 1/8" Hydrants



Inlets: Hub Flanged Mechanical Joint Mechanical Joint without Gland and Gasket Ring-Tite and Fluid-Tite Screwed
 Sizes: 2", 3" 2", 2 1/2", 3" 2", 2 1/4", 3" 2", 2 1/4", 3" 3" 2", 2 1/2", 3"

OPERATING WRENCHES

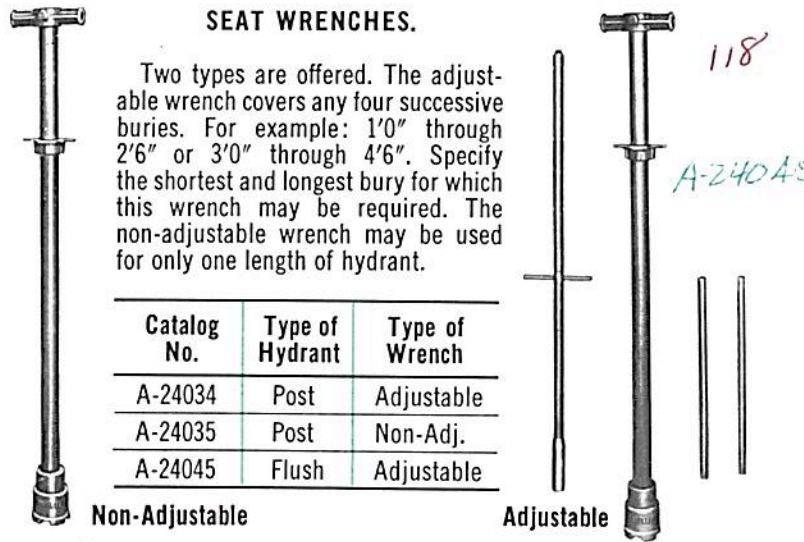


Heavy duty operating wrenches fit the hydrant operating nut, hold down nut, hose nozzle caps and lug type hose coupling.

Type of Hydrant	Catalog No.
Post	A-24089
Flush	A-24094

SEAT WRENCHES.

Two types are offered. The adjustable wrench covers any four successive buries. For example: 1'0" through 2'6" or 3'0" through 4'6". Specify the shortest and longest bury for which this wrench may be required. The non-adjustable wrench may be used for only one length of hydrant.



Catalog No.	Type of Hydrant	Type of Wrench
A-24034	Post	Adjustable
A-24035	Post	Non-Adj.
A-24045	Flush	Adjustable

Non-Adjustable

Adjustable

For ordering hydrants see page 17-10

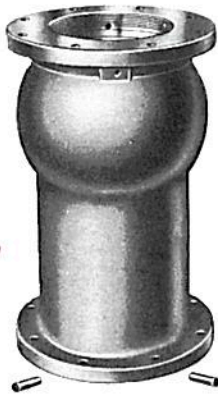
Order operating wrenches by quantity, catalog number, and by size and shape of operating nut.

Order seat wrenches by quantity, catalog number, and length of bury.



HYDRANT EXTENSIONS

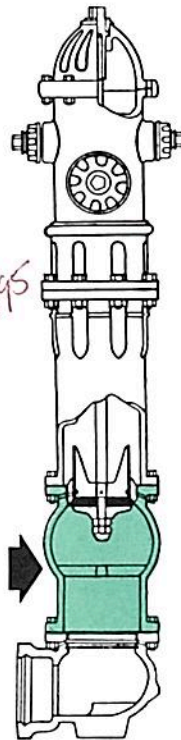
Seat Ring Type



Inserted between the shoe flange and lower barrel — requires digging and water shut-off. Complete valve assembly is removed from shoe and plugs are driven into lower shoe drains. Valve assembly is reinstalled in barrel extension. The same stem is used without an extension. Complete with 2 drain hole plugs, 2 gaskets, and 2 sets of bolts and nuts.

Catalog No.	Size of Hydrant
A-24065	4 1/4"
A-24066	5 1/4"

Lengths — 1'0" and longer by 6" intervals up to 6'0".



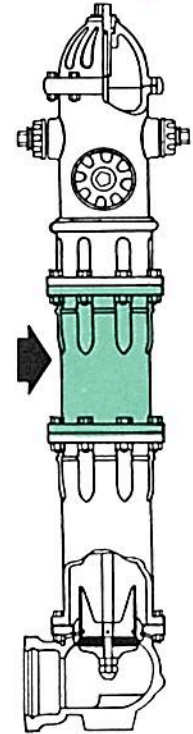
Barrel Type



Barrel type extension permits the extension of hydrant without digging or water shut-off. Installed at ground line between the flanges of upper and lower barrels. Complete extension barrel, extension stem, stem pin, 2 gaskets and 2 sets of bolts and nuts.

Catalog No.	Size of Hydrant
A-24062	4 1/4"
A-24063	5 1/4"

Lengths — 1'0" and longer by 6" intervals up to 6'0". For Post Type Hydrant Only.



ORDER BY QUANTITY AND CATALOG NUMBER

SEAT WRENCHES

Two types are offered. The adjustable wrench (at right) covers any five successive buries. For example: 1'0", 1'6", 2'0", 2'6", 3'0", or 3'0" through 5'0". Specify the shortest and longest bury for which this wrench may be required. The non-adjustable wrench (at left) may be used for only one length of hydrant. The non-adjustable wrench is not made for the Flush Type fire hydrant. Each wrench has two handles.



Catalog Number	Size of Hydrant	Type of Hydrant	Type of Wrench
A-24047	4 1/4"	Standard	Non-Adjust.
A-24048	4 1/4"	Standard	Adjustable
A-24050	5 1/4"	Standard	Adjustable
A-20059	5 1/4"	Standard	Non-Adjust.
A-24046	4 1/4"	Flush Type	Adjustable
A-24044	5 1/4"	Flush Type	Adjustable

OPERATING WRENCHES

For Standard Hydrant



A-24091

Heavy duty operating wrench fits the hydrant operating nut, hold down nut, hose nozzle caps, pin type hose coupling, and lug type hose coupling.

For Flush Type Hydrant



A-24093

Heavy duty operating wrench fits the hydrant operating nut, hold down nut, hose nozzle caps, and lug type hose coupling.

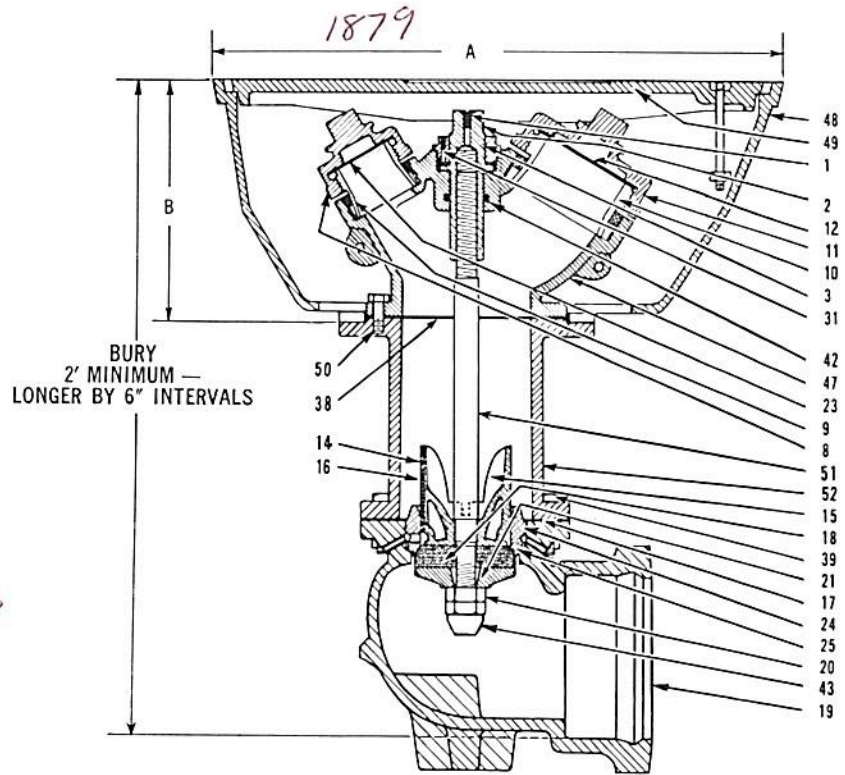
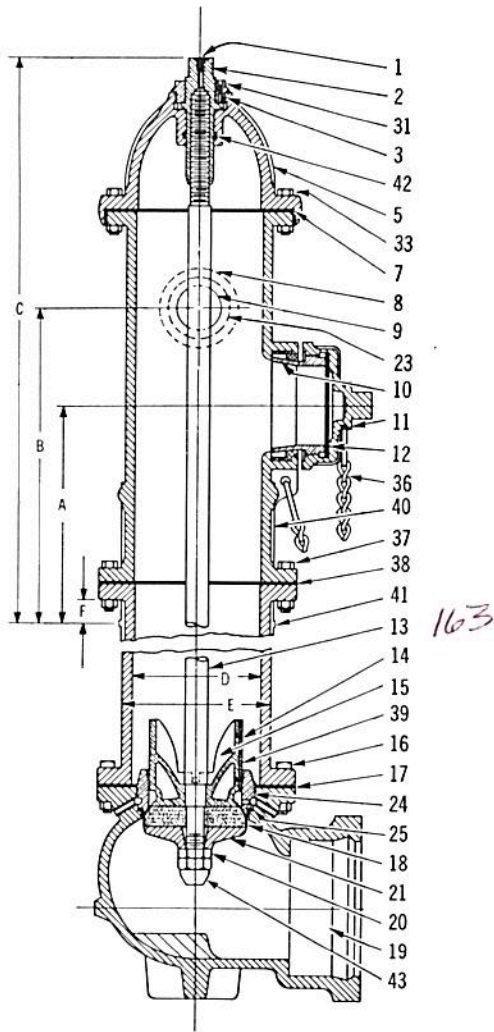
ORDER BY QUANTITY, CATALOG NUMBER, AND SIZE AND SHAPE OF OPERATING NUT

ORDER SEAT WRENCHES BY QUANTITY, CATALOG NUMBER AND DEPTH OF BURY



PARTS & DIMENSIONS STANDARD & FLUSH TYPE

STANDARD FIRE HYDRANTS



Bury 1'6" minimum — longer by 6" intervals.

Size	A	B	C	D	E	F
2 1/8"	—	14 1/2"	23 3/4"	3 1/4"	—	2 5/8"
4 1/4"	12 1/4"	17 3/4"	30 3/4"	6"	7"	1 3/8"
5 1/4"	12 1/4"	17 3/4"	31 3/4"	7"	8 1/8"	1 3/8"

PARTS FOR STANDARD HYDRANT

- | | | |
|--------------------------------|-----------------------------|----------------------------|
| 1 OIL SCREW FOR OPERATING NUT | 10 PUMPER NOZZLE | 14 DRAIN VALVE SCREW |
| 2 OPERATING NUT | 11 PUMPER NOZZLE CAP | 15 UPPER VALVE PLATE |
| 31 OIL SCREW FOR HOLD DOWN NUT | 12 PUMPER NOZZLE GASKET | 39 SHOE BOLT & NUT |
| 3 HOLD DOWN NUT | 36 NOZZLE CAP CHAIN | 16 DRAIN VALVE FACING |
| 42 "O" RING | 40 UPPER BARREL | 17 SHOE GASKET |
| 5 BONNET | 37 BARREL FLANGE BOLT & NUT | 24 SEAT RING |
| 33 BONNET BOLT & NUT | 38 GASKET FOR BARREL FLANGE | 25 METALLIC GASKET |
| 7 BONNET GASKET | 41 LOWER BARREL | 18 MAIN VALVE |
| 8 HOSE NOZZLE CAP | 13 STEM | 21 LOWER VALVE PLATE |
| 9 HOSE NOZZLE | | 20 VALVE PLATE NUT |
| 23 HOSE NOZZLE GASKET | | 19 SHOE |
| | | 43 CAP NUT FOR 5 1/4" ONLY |

PARTS FOR FLUSH TYPE HYDRANT

- | | |
|--------------------------------|-----------------------------|
| 48 FLUSH BOX | 8 HOSE NOZZLE CAP |
| 49 COVER | 50 CAP SCREW |
| 1 OIL SCREW FOR OPERATING NUT | 38 GASKET FOR BARREL FLANGE |
| 2 OPERATING NUT | 14 DRAIN VALVE SCREW |
| 12 PUMPER NOZZLE GASKET | 16 DRAIN VALVE FACING |
| 11 PUMPER NOZZLE CAP | 51 STEM |
| 10 PUMPER NOZZLE | 52 LOWER BARREL |
| 3 HOLD DOWN NUT | 15 UPPER VALVE PLATE |
| 31 OIL SCREW FOR HOLD DOWN NUT | 18 MAIN VALVE |
| 42 "O" RING | 39 SHOE BOLT & NUT |
| 47 TOP SECTION | 21 LOWER VALVE PLATE |
| 23 HOSE NOZZLE GASKET | 17 SHOE GASKET |
| 9 HOSE NOZZLE | 24 SEAT RING |
| | 25 METALLIC GASKET |
| | 20 VALVE PLATE NUT |
| | 19 SHOE |
| | 43 CAP NUT FOR 5 1/4" ONLY |



WHEN ORDERING FIRE HYDRANTS SPECIFY THE FOLLOWING:

1. **QUANTITY REQUIRED**
If more than one size, quantity of each.
2. **SIZE OF VALVE OPENING AND CATALOG NUMBER**
This determines the size of the hydrant. (Pages 17-4, 17-6, 17-7)
3. **NOZZLE ARRANGEMENT**
The Catalog Number indicates the usual arrangements of hose and pumper nozzles. If a different arrangement is desired, specify the number of hose nozzles and the number of pumper nozzles.
4. **DEPTH OF TRENCH OR BURY**
Distance from ground line to bottom of connecting pipe. "Trench" and "Ditch" are the same as "Bury". "Cover" is the distance from the ground line to the top of the connecting pipe.
5. **SIZE OF INLET CONNECTION**
See sizes listed for each hydrant. (Pages 17-5, 17-7)
6. **TYPE OF INLET CONNECTION**
See types of inlets listed for each hydrant. (Pages 17-5, 17-7)
7. **SIZE AND SHAPE OF OPERATING NUT**
National Standard is 1½" pentagon, measured from point to opposite flat. Square and Hexagon or other sizes pentagon can also be furnished, size being determined by measuring from flat to flat on square and hexagon, and from point to

- opposite flat on pentagon. Measurements to be taken at base of nut. Measurement at top of nut is 1/16" less unless otherwise specified.
8. **DIRECTION OF OPENING**
Usually left (counter-clockwise). If previous hydrants open right, new hydrants should open right.
 9. **HOSE NOZZLE THREADING**
Send male coupling on hydrant nozzle to show threads desired, EXCEPT in the following cases: (a) if using National Standard, specify accordingly on order. (b) if we have previously furnished hydrants at the same location and there is no change. (Complete records are kept on file in our Engineering Department for reference.)
 10. **PUMPER NOZZLE THREADING**
Same instructions as number 9.
 11. **COLOR**
Unless otherwise specified, the hydrant will be enameled above the ground line with fire hydrant red. When so ordered, we will enamel any color (or colors) specified to match existing standards in your city.

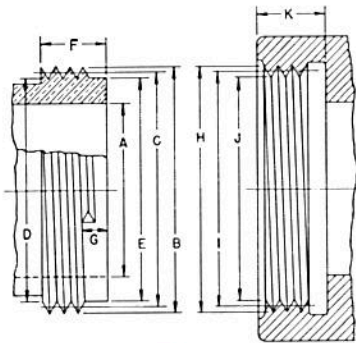
WHEN ORDERING PARTS SPECIFY:

1. Quantity
2. Part number and name
3. Size and catalog number of fire hydrant.
4. Direction of opening
5. Depth of bury
6. Year date shown on hydrant

NATIONAL STANDARD HOSE COUPLING THREAD SPECIFICATIONS

	Water Hose	1½" Fire Protection Hose	Fire Hose				
			2½"	3"	3½"	4"	4½"
A. Nominal inside diameter	1½"	1½"	2½"	3"	3½"	4"	4½"
Number of threads per inch	11½	9	7½	6	6	4	4
B. Major diameter nozzle thread							
Max.	1.8788	1.9900	3.0686	3.6239	4.2439	5.0109	5.7609
Min.	1.8618	1.9678	3.0366	3.5879	4.2079	4.9609	5.7109
C. Pitch diameter nozzle thread							
Max.	1.8223	1.9178	2.9820	3.5156	4.1356	4.8485	5.5985
Min.	1.8138	1.9067	2.9660	3.4976	4.1176	4.8235	5.5735
D. Minor diameter nozzle thread							
Max.	1.7658	1.8457	2.8954	3.4073	4.0273	4.6861	5.4361
E. Diameter pilot nozzle	1.718	1.797	2.850	3.354	3.973	4.610	5.357
*F. Length of thread — nozzle	5/8"	5/8"	1"	1 1/8"	1 1/8"	1 1/4"	1 1/4"
G. Face to start of second turn	5/32"	5/32"	1/4"	5/16"	5/16"	7/16"	7/16"
H. Major diameter coupling thread							
Min.	1.8888	2.0020	3.0836	3.6389	4.2639	5.0359	5.7859
I. Pitch diameter coupling thread							
Max.	1.8408	1.9409	3.0130	3.5486	4.1736	4.8985	5.6485
Min.	1.8323	1.9298	2.9970	3.5306	4.1556	4.8735	5.6235
J. Minor diameter coupling thread							
Max.	1.7928	1.8799	2.9424	3.4583	4.0833	4.7611	5.5111
Min.	1.7758	1.8577	2.9104	3.4223	4.0473	4.7111	5.4611
K. Depth of coupling	1 9/32"	1 5/32"	1 1/16"	1 1/16"	1 1/16"	1 1/16"	1 1/16"

*Manufacturer's Standard



*2362
TRACING
CLOTH*

All dimensional data and tolerances are in accord with the U. S. Dept. of Commerce, National Bureau of Standards, Handbook H28 1957 Part II.



Catalog Page No.

Form 9102

- 17-4 Standard, Flush Type, and 2 1/8" Post Type Hydrant's Lower Barrel is
- 17-6 manufactured in two sections when the depth of bury is unusually deep.
- 17-7 The chart below shows the length of the Lower Barrel Section and the length of Barrel Extension Section or Sections.

STANDARD HYDRANTS

Depth of Bury	5 1/4" Standard Hydrant	
	Lower Barrel	Lower Extension
8'6"	5'6"	3'0"
9'0"	3'0"	2 ea- 3'0"
9'6"	3'6"	2 ea- 3'0"
10'0"	4'0"	2 ea- 3'0"

FLUSH TYPE HYDRANTS

Depth of Bury	2 1/8" Flush Type Hydrant		4 1/4" Flush Type Hydrant		5 1/4" Flush Type Hydrant	
	Lower Barrel	Lower Extension	Lower Barrel	Lower Extension	Lower Barrel	Lower Extension
5'6"	5'0"	6"	5'6"	Not Required Through 8'	5'6"	Not Required Through 7'0"
6'0"	5'0"	1'0"	6'0"		6'0"	
6'6"	5'0"	1'6"	6'6"		6'6"	
7'0"	5'0"	2'0"	7'0"		7'0"	7'0"
7'6"	5'0"	2'6"	7'6"		4'6"	3'0"
8'0"	5'0"	3'0"	8'0"		5'0"	3'0"
8'6"	5'0"	3'6"	5'6"	3'0"	5'6"	3'0"
9'0"	5'0"	4'0"	5'0"	4'0"	6'0"	3'0"
9'6"	NO	NO	5'6"	4'0"	6'6"	3'0"

2 1/8" POST TYPE HYDRANTS

Depth of Bury	2 1/8" Post Type Hydrant	
	Lower Barrel	Lower Extension
4'6"	4'0"	0'6"
5'0"	4'0"	1'0"
5'6"	4'0"	1'6"
6'0"	4'0"	2'0"
6'6"	4'0"	2'6"
7'0"	4'0"	3'0"
7'6"	4'0"	3'6"
8'0"	4'0"	4'0"

The lower barrel extension sections are installed between the lower barrel section and the hydrant shoe. Buries not shown have not been furnished.

NOTE: ARROW INDICATES NEW ADDED INFORMATION.

17-1 Fire hydrants, gate valves and tapping valves having mechanical joint end connections will fit the following classes of pipe within the specification listed below.

SIZE OF VALVE	3"	4"	6"	8"	10"	12"
VALVE BODY I.D. Min.	4.04"	4.88"	6.98"	9.13"	11.18"	13.28"
PIPE O.D. Nominal	3.96"	4.80"	6.90"	9.05"	11.10"	13.20"
PIPE O.D. Maximum	4.02"	4.86"	6.96"	9.11"	11.16"	13.26"
APPLICABLE SPECIFICATIONS	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES
ASA 21.2 - 1953*	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50-100-150-200	50-100-150-200
ASA 21.3 - 1953*		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150
→ ANSI 21.6 - 1970	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ ANSI 21.7 - 1970		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-150-200
→ ANSI 21.8 - 1970	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ ANSI 21.9 - 1970		10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150	10-50-100-150
→ AWWA C 102 - 53*	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50-100-150-200	50-100-150-200
→ AWWA C 106 - 70	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
→ AWWA C 108 - 70	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250	50 THRU 250
AWWA 1908 STANDARD	A-B-C-D	A	A	A-B	A-B	A-B
FED. SPEC. WW-P-421*		150-250	150-250	150-250	150-250	150-250
AGA OLD STANDARD	All Classes	All Classes	All Classes	All Classes	All Classes	All Classes
SIZE OF VALVE	14"	16"	18"	20"	24"	
VALVE BODY I.D. Min	15.37"	17.47"	19.58"	21.68"	25.88"	
PIPE O.D. Nominal	15.30"	17.40"	19.50"	21.60"	25.80"	
PIPE O.D. Maximum	15.36"	17.46"	19.58"	21.68"	25.88"	
APPLICABLE SPECIFICATIONS	CLASSES	CLASSES	CLASSES	CLASSES	CLASSES	
ASA 21.2 - 1953*	50-100	50-100	50-100	50-100	50-100	
ASA 21.3 - 1953*		10-50-100		10-50-100	10-50-100	
→ ANSI 21.6 - 1970	50-100	50-100	50-100	50-100	50-100	
→ ANSI 21.7 - 1970		10-50-100		10-50-100	10-50-100	
→ ANSI 21.8 - 1970	50-100	50-100	50-100	50-100	50-100	
→ ANSI 21.9 - 1970		10-50-100		10-50-100	10-50-100	
→ AWWA C 102 - 53*	50-100	50-100	50-100	50-100	50-100	
→ AWWA C 106 - 70	50-100	50-100	50-100	50-100	50-100	
→ AWWA C 108 - 70	50-100	50-100	50-100	50-100	50-100	
→ AWWA 1908 STANDARD	A-B	A-B	A-B	A-B	A-B	
FED. SPEC. WW-P-421*						
AGA OLD STANDARD		All Classes		All Classes	All Classes	

*Discontinued

NOTE: This information does not apply to the special Mueller D-150 Mechanical Joint.

November 30, 1962 - Revised April 3, 1972

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

Fire Hydrant lower barrel sections in lengths of 6' - 6" thru 8' will be furnished as two pieces. This applies only to the Mueller®/107®, Improved, and Mueller Modern Improved Fire Hydrant.

A 3' extension section will be used with existing lengths of lower barrel to make up the 6' thru 8' buries for the Standard and Underwriter Fire Hydrants.

The combination of barrel extension and lower barrel will be used on the following fire hydrants.

<u>MUELLER/107 FIRE HYDRANT</u>		<u>IMPROVED FIRE HYDRANT</u>			<u>MUELLER MODERN IMPROVED FIRE HYDRANTS</u>	
4"	5"	4 1/4"	4 1/2"	5 1/4"	4 1/2"	5 1/4"
A-24112	A-24122	A-24009	A-24012	A-24015	A-419	A-419
A-24113	A-24133	A-24010	A-24013	A-24016		

<u>STANDARD FIRE HYDRANT</u>				<u>UNDERWRITER FIRE HYDRANT</u>	
4 1/4"	4 1/2"	5 1/4"		5 1/4"	
A-24005	A-24025	A-24027	A-24007	A-20030	
A-24006	A-24026	A-24028	A-24008	A-20035	

February 16, 1965 - Revised 12-20-71

17-5 Standard Fire Hydrants are now available with three variations of Slip-On Joint inlet end connections. They are as follows:

- Mueller Slip-On Joint with Mueller Slip-On Gasket
- Mueller Slip-On Joint with Lok-Tyton® Gasket
- Mueller Slip-On Joint without Gasket

The following inlet sizes are available.

Standard Fire Hydrant

<u>Size of Hydrant</u>	<u>Size of Inlet</u>
4 1/4"	4", 6"
5 1/4"	4", 6"

Mueller Slip-On Joint inlet end connections with Mueller Slip-On Gasket will fit the plain end of all cast iron pipe Classes 150, 200, and 250 manufactured to standards ANSI A21.6 and ANSI A21.8 including the plain end of all makes of cast iron pipe of the slip connection type.

Mueller Slip-On Joint inlet end connections with Lok-Tyton Gasket will fit Lok-Tyton pipe only.

When using hydrants with Mueller Slip-On Joint inlet and Mueller Slip-On gasket, we recommend the use of tie rods or concrete blocking.

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

Form 9102

The design and dimensions of the joint are manufactured under license of U.S. Pipe and Foundry Co.

Refer to Form 9382 Rev. for prices.

Lok-Tyton is a registered trade mark of U.S. Pipe & Foundry Co.

February 1, 1966 - Rev. 3-22-66, 10-21-66

The following is available upon order:

MUELLER ANGLE FIRE VALVE
300 psi Working Pressure
600 psi Test Pressure

A-20022 ANGLE FIRE VALVE
Inlet: Inside I.P. Thread
Outlet: National Standard Hose Coupling Thread with
pin type spanner outlet cap with chain
Size: 4" x 2-1/2"*

A-20023 ANGLE FIRE VALVE
Inlet: Inside I.P. Thread
Outlet: National Standard Hose Coupling Thread with
plastic outlet cap less chain.
Size: 4" x 2-1/2"*

For more information, refer to Form 9701.

*First size is the size of the inlet connection. Second size is the size of the outlet hose connection.

April 24, 1967, Revised - 8-25-67, Revised - 3-11-70

17-5 Standard Fire Hydrant shoes previously furnished and marked FT are all cancelled and discontinued.

Standard Fire Hydrant shoes previously furnished for RT pipe and marked RT will now be suitable for use with all domestic AC pipe. The marking RT will be removed and marking AC applied.

June 23, 1967

NOTE: Arrow indicates revised information.

Catalog Page No.

Form 9102

To all Standard Fire Hydrants sizes 4-1/4" and 5-1/4", we have added an "O" Ring type seal to bore of Hold Down Nut. The principal purpose of this is to prevent rain water from getting down between Hold Down Nut and Operating Nut. Therefore, this will change the design of the Hold Down Nut. The new Hold Down Nut will be interchangeable with Hold Down Nuts on Standard Hydrants manufactured prior to this change. The "O" Ring is a stock item, Part Number 195271.

May 1, 1970

We do not recommend the use of Mechanical Joint to IPS PVC Pipe Transition Gaskets with MUELLER® Standard Fire Hydrants. We do recommend use of the New MUELLER Transition Gland (A-399). See Page 18-26a for additional information.

February 10, 1972; September 28, 1973

The A-24005 (3 way) Standard Fire Hydrant is now being produced with the Pumper and Hose Nozzles on the same plane. The centerline of the Pumper and Hose Nozzles is 18" above the ground line.

No change in price.

April 19, 1973

To aid in field identification, the Upper Valve Plate, Lower Valve Plate, Seal Ring and Main Valve of the 4-1/4" and 4-1/2" Standard Hydrant will be cast with the basic Valve size.

February 16, 1973

17-5 The Universal Type Shoe, as shown on Page 17-5, has been cancelled and will no longer be available due to the obsolescence of Universal Type Pipe.
June 29, 1973

→ 17-8 Due to low demand, the A-24065 and A-24066 Seat Ring Extensions will now be available on a special order basis only.

NOTE: ARROW INDICATES NEW INFORMATION

Catalog Page No.

SALESMEN ONLY 17-1

17-1 A change has been made in the seat ring and main valve assembly on the Improved and Standard Hydrant.

The hardness of the main valve rubber has been increased and the angle of the seat ring has been slightly changed. This is to eliminate the possibility of chatter due to flow when starting to open or close the hydrant.

December 3, 1963

17-2 As a result of a manufacture procedure, a groove, normally used for drain valve leather will be added to the guide wing on the upper valve plate of the standard hydrant. No drain valve leather will be installed in the groove as this change serves no function for the upper valve plate.

July 1, 1964

SECTION

SUPPLEMENT

File in **CATALOG W-103**

After the last page in this Section

Catalog Page No.

Page

**MUELLER CO.
DECATUR, ILL.**

Date

Form 9102