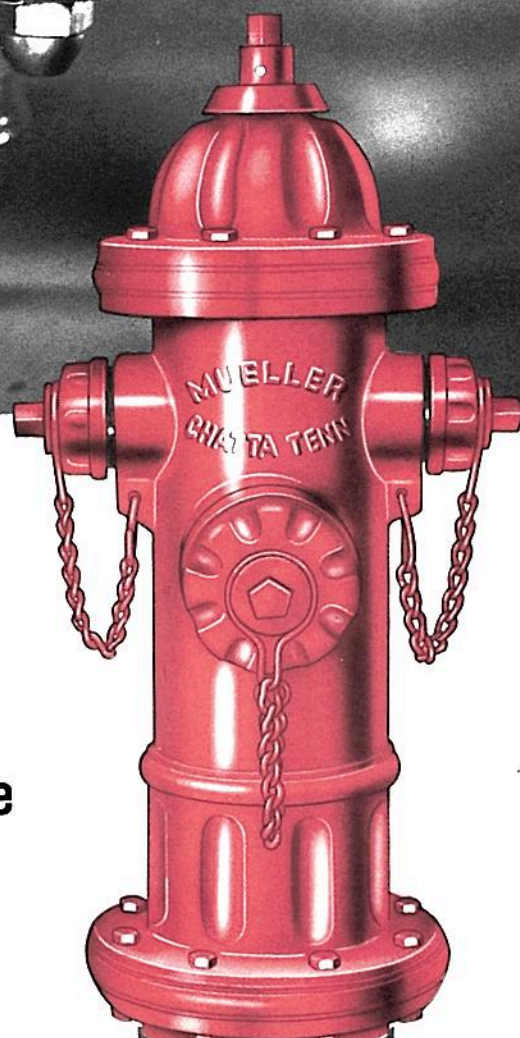


the **MUELLER** / **107**[®]
fire hydrant

FULLY COMPLIES WITH AWWA SPECIFICATIONS C-502-54

totally new from bonnet to shoe

MUELLER CO.
DECATUR, ILL.



for 107 years . . .

Mueller Co. has led the water industry in the development of new products and new installation methods for water distribution systems. During this time hundreds of new products have been introduced and countless product improvements added to the broad Mueller line. Each of these innovations was designed to improve operating dependability, reduce cost of operation and simplify maintenance of vital water distribution systems.

The new Mueller/107 Fire Hydrant reflects this broad water industry experience—in design, manufacture and service concept—to meet the rapidly growing community responsibility for fire protection.

During Mueller's 107 years of service, the need for fire protection has multiplied, and the mechanical requirements of fire hydrants, for **dependable, instant operation and large volumes of water**, have become even more important.

When fire strikes, the hydrant must operate quickly and easily, delivering full pressure and full flow regardless of weather conditions, inadequate maintenance or long periods of inactivity.

With heavy traffic conditions exposing hydrants to possible vehicle damage, the hydrant must be designed so that damage is minimized. Repairs must be quickly and easily made to place the hydrant back in service in minimum time.

Recognizing the importance of the fire hydrant, Mueller Co. has conducted a continuing and extensive program of fire hydrant research, engineering, testing and development.

The result: The Mueller/107 Fire Hydrant—a modern hydrant that meets tomorrow's needs as well as today's.

The new Mueller/107 delivers full pressure and full flow whenever needed, regardless of freezing rain, or sub-zero temperatures.

The Mueller/107 operates instantly, even after extended periods of inactivity or inadequate maintenance.

Traffic damage can be repaired in minutes with just two inexpensive parts. Periodic maintenance is eliminated by a sealed, unitized bonnet, factory-filled with the proper amount and type of lubricant.

With its many proven features, the Mueller/107 Fire Hydrant insures dependability with minimum long-term operating costs.

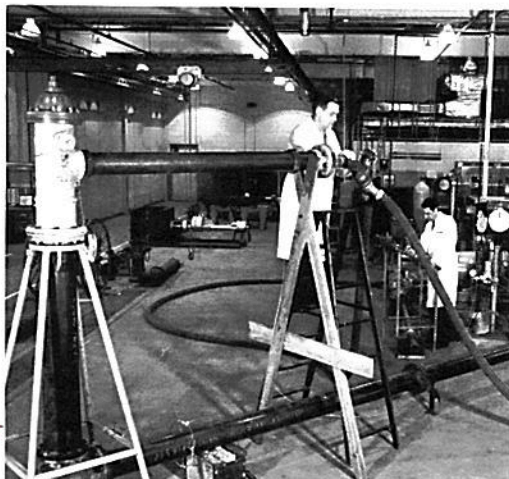
The Mueller/107—product of 107 years of experience—is your best investment in community protection.

proving out the **MUELLER / 107**



Continuing operating tests, from "full open" to "full closed" exceeded 12,000 cycles—more than two cycles per week for 100 years! Performance and long-lasting dependability of the operating mechanism, main valve and drain valves have been proven far beyond normal requirements.

Carefully metered flow tests were conducted to prove out the maximum flow capability and full flow performance of the shoe, main valve, barrel, and hose and pumper nozzles.



The superior performance characteristics of the Mueller safety flange and new safety stem coupling design were proven through actual traffic damage tests.

the

MUELLER / 107

fire hydrant . . .



DRY TOP BONNET — SEALED UNIT DESIGN

EASY TURNING

All operating threads are continuously lubricated.

"Teflon"-coated anti-friction washer provides extremely fast and easy opening.

COMPLETELY SEALED LUBRICANT SYSTEM

The lubricant reservoir is factory-filled with the proper type and proper amount of lubricant. There is no loss of the lubricant during shipping, storage, installation or use.

The sealed reservoir assures proper lubrication of the operating mechanism and ease of operation at all times.

COMPLETELY SEALED, DRY TOP UNIT

Operating threads and bearing surfaces are sealed away from the water pressure during operation by a Quad-ring seal and wiper ring. Rain, snow, dirt and other foreign matter are also sealed away from the operating mechanism by O-ring seals in the bonnet.

SEALED UNIT — NO FIELD MAINTENANCE

The unitized bonnet assembly permits fast, easy removal and replacement as a unit. The entire bonnet can be removed without disassembly or loss of lubricant. There is no need to check or add oil in the field.

SAFETY FLANGE AND SAFETY STEM COUPLING DESIGN

ELIMINATES HYDRANT DAMAGE

If hit by a car or truck, damage is confined to two inexpensive, easily-replaced parts — the safety flange and stem coupling.

There is no damage to the barrel sections, no stem bending, or no damage to the main valve. There is no loss of lubricant from the bonnet.

NO FLOODING

The compression-type main valve closes with the pressure and stays closed.

There is **no** flooding or loss of water pressure.

PERMITS CHANGES WITHOUT DIGGING

The upper barrel can be rotated so nozzles can be faced in any direction.

Upper barrels can be changed for different hose and pumper nozzle arrangements.

Extensions can be added to raise the hydrant to meet changes in grade line.

These changes and repairs can be completed from above-ground without digging or water shut-off.

COMPRESSION-TYPE MAIN VALVE CLOSURES WITH THE PRESSURE

NO MECHANICAL FORCE REQUIRED TO HOLD VALVE CLOSED

In case of traffic damage to the fire hydrant, the water pressure keeps the main valve closed, preventing flooding.

The compression-type main valve design permits all changes and repairs to be completed from above ground and all (except for main valve removal) without water shut-off.

EASILY-REMOVED MAIN VALVE AND SEAT RING

The entire main valve, drain valve and seat ring assembly is easily removed as a unit by one man using a compact and lightweight seat removal wrench.

LARGE FLOW PASSAGE

The main valve and seat ring design provides a large valve opening and streamlined waterway, assuring maximum flow and pressure.

POSITIVE, AUTOMATIC BARREL DRAINAGE

Large double drain valves are an integral part of the main valve assembly and operate automatically, assuring positive drainage, preventing the barrel from freezing.

The entire drain valve waterway and drain openings are bronze to resist corrosion.

Each time the hydrant is operated, the double drain valves and drain valve waterway are force-flushed, assuring positive drainage.

The main valve, shoe, barrels and nozzles have been designed and sized to provide maximum flow and maximum pressure at the nozzle.

Complies with The American Water Works Association Specifications C-502-54

150 psi working pressure 300 psi test pressure

*DuPont Company registered trademark.

DRY TOP BONNET . . . SEALED UNIT DESIGN

- *permanently lubricated for easy operation . . .*
- *unitized assembly for easy removal . . .*

One-Piece Operating Nut and Weathercap

The one-piece operating nut and weathercap is made of ductile iron to provide added strength against any wear or damage caused by traffic damage to the hydrant.

A corrosion-resistant stainless steel screw pin secures the combined cap and nut to the operating screw, eliminating vandalism yet providing for removal and change, if required.

The operating nut is clearly marked to show the direction of opening. The circular design of the cap assures easy operation even under extreme icing conditions.

Positive Stem Nut Pressure Seal

A Quad-ring seal on the operating stem nut positively seals the water pressure away from the operating mechanism and seals in the lubricant.

The lower wiper ring protects the Quad-ring pressure seal.

Completely Sealed Lubricant Reservoir

The operating threads are continuously lubricated by the sealed lubricant reservoir for long-lived performance and easy turning.

The unitized bonnet assembly of the Mueller/107 Fire Hydrant is filled with the proper amount and proper type of lubricant at the factory during assembly. The permanently-sealed unit eliminates any lubricant loss during shipment, storage, installation, use or when removing the bonnet for repairing traffic damage.

O-ring seals, on the operating screw and operating screw bearing, seal in the lubricant at the top of the bonnet and keep moisture and dirt out, away from the threads and bearing surfaces.

The Quad-ring effectively seals in the lubricant at the lower end of the bonnet.

Easy Turning

An exclusive "Teflon"-coated anti-friction washer assures easy operation. This special washer provides a permanently-lubricated surface between the operating screw and operating screw bearing.

This design provides extremely fast and easy opening, even after long periods of inactivity.

Main Valve Travel Automatically Controlled — Over-Compression Eliminated

The operating stem nut and bonnet design controls travel in the opening direction.

Lugs on the stem nut move in vertical slots in the bonnet. The main valve is fully opened when the lugs contact the bottom of the slot. Travel is automatically stopped.

This design positively eliminates damage to the main valve or stem since these parts are not subjected to over-compression in the fully-open position.

Turning torque is not transmitted to the stem or stem coupling; therefore, damage to these parts caused by excessive torque is prevented.

The automatic travel control in the bonnet eliminates the need for a stop in the shoe, providing a streamlined flow passage, improved performance.

The stem nut design also eliminates the need for any field travel adjustment, simplifying installation and repair.

Securely Locked Hold-Down Nut

The hold-down nut can't back out during hydrant operation.

Special lugs on each side of the operating screw bearing engage the vertical slots in the bonnet preventing any rotation of the operating screw bearing. Since the operating stem bearing can't rotate, the hold-down nut cannot back out when the hydrant is opened or closed.

No Field Maintenance Required

The unitized and permanently sealed bonnet design eliminates the need for any field maintenance. The unitized bonnet assembly makes it possible to perform all bonnet maintenance (seldom, if ever required) in the maintenance shop.

The entire bonnet can easily be removed as a unit and replaced with a new bonnet assembly. The old bonnet can then be repaired and relubricated in the convenience of the maintenance shop.



Easy Bonnet Removal and Replacement

Remove bonnet bolts and nuts. Rotate the operating nut to fully open position to raise bonnet off upper barrel.

Rotating the bonnet counter-clockwise detaches it from the upper stem threads.

The upper stem O-ring seal protects the threaded connection from water and corrosion and makes it easy to detach the bonnet assembly from the stem.

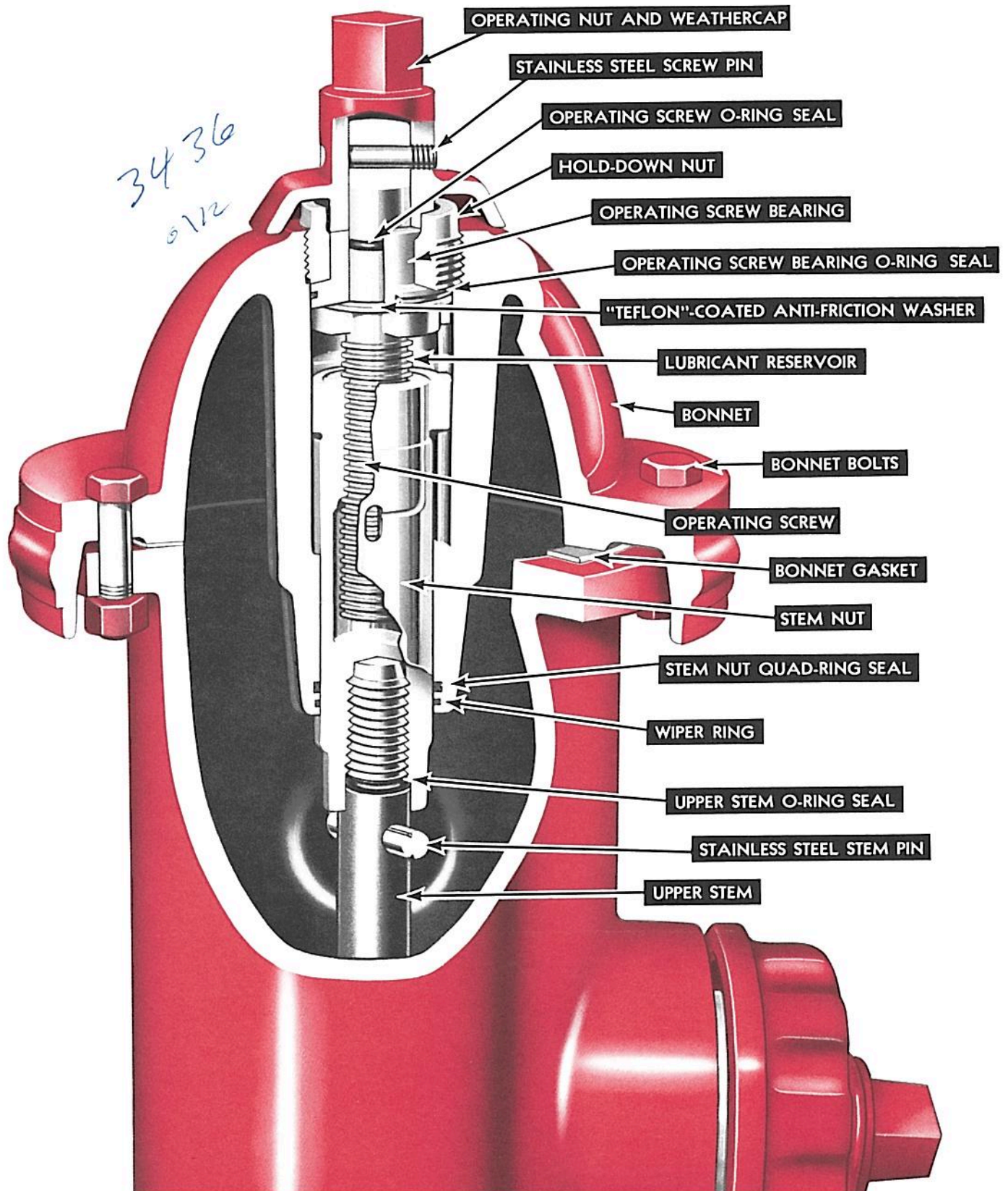
Easily Repaired in the Shop

If required, the bonnet assembly can easily be relubricated, and worn parts replaced, conveniently in the shop.

Remove the stainless steel screw pin; lift off the combined operating nut and weathercap; remove the hold-down nut and lift out the other parts as a unit.

All parts can be inspected, worn parts replaced and the assembly relubricated — all in the convenience of the shop! No disassembly in the field is required!





SAFETY FLANGE AND SAFETY STEM COUPLING DESIGN

if hit by a car or truck only the safety mechanism breaks . . .

1. Upper barrel assembly falls to ground — unharmed
2. No damage to either barrel section
3. There is no stem bending
4. There is no loss of water
5. The main valve is not damaged, remains closed
6. The operating thread mechanism is not damaged
7. There is no loss of lubricant
8. Repairs are easily made without shutting-off water
9. Only two inexpensive parts need replacement
10. Hydrant can be repaired and back in service in minutes
11. Design reduces vehicle damage and helps to prevent injuries to occupants of vehicle

PROVEN DESIGN PREVENTS DAMAGE

Safety Flange

Upon impact from any direction, the notched safety flanges fracture and the pieces fall to the ground, not down into the hydrant barrel.

The safety flange is specifically designed to withstand normal operating pressures and the stresses of shipping, han-

dling, installation and use, yet, will break on impact to prevent costly damage to the hydrant.

This special safety flange design insures more accurate control of impact stresses and eliminates the uncertainties of frangible bolt designs such as corrosion and varying bolt strength.

Safety Stem Coupling

The safety stem coupling, made of steel, is strong enough to withstand normal use, yet will fracture on impact to prevent any stem bending or valve damage.

The steel coupling, with stainless steel pins, connects the two steel stem sections. Galvanic corrosion due to dissimilar metals is eliminated.

Precision-machined notches in the coupling assures fracture of the coupling, eliminating any stem bending or damage to the main valve.

Stem Coupling Breaks Below the Flange

The breaking point of the safety stem coupling has been positioned **below** the flange.

An auto or truck cannot depress the stem and open the main valve, **even if a wheel passes directly over the hydrant lower barrel.**

ALL REPAIRS EASILY MADE FROM ABOVE-GROUND

#3502 0/12

#3497 03/12



Traffic-Damaged Hydrant Easily and Quickly Repaired — If a hydrant is damaged, all you need is a repair kit and wrench to make the repairs. One man can do the job in minutes.



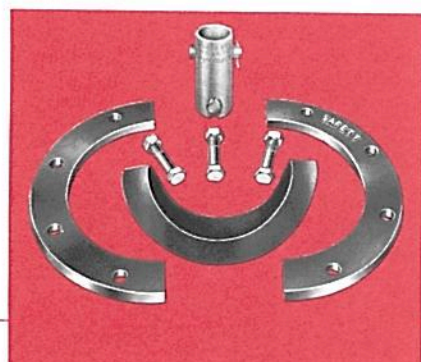
Replace the safety stem coupling and steel pins.



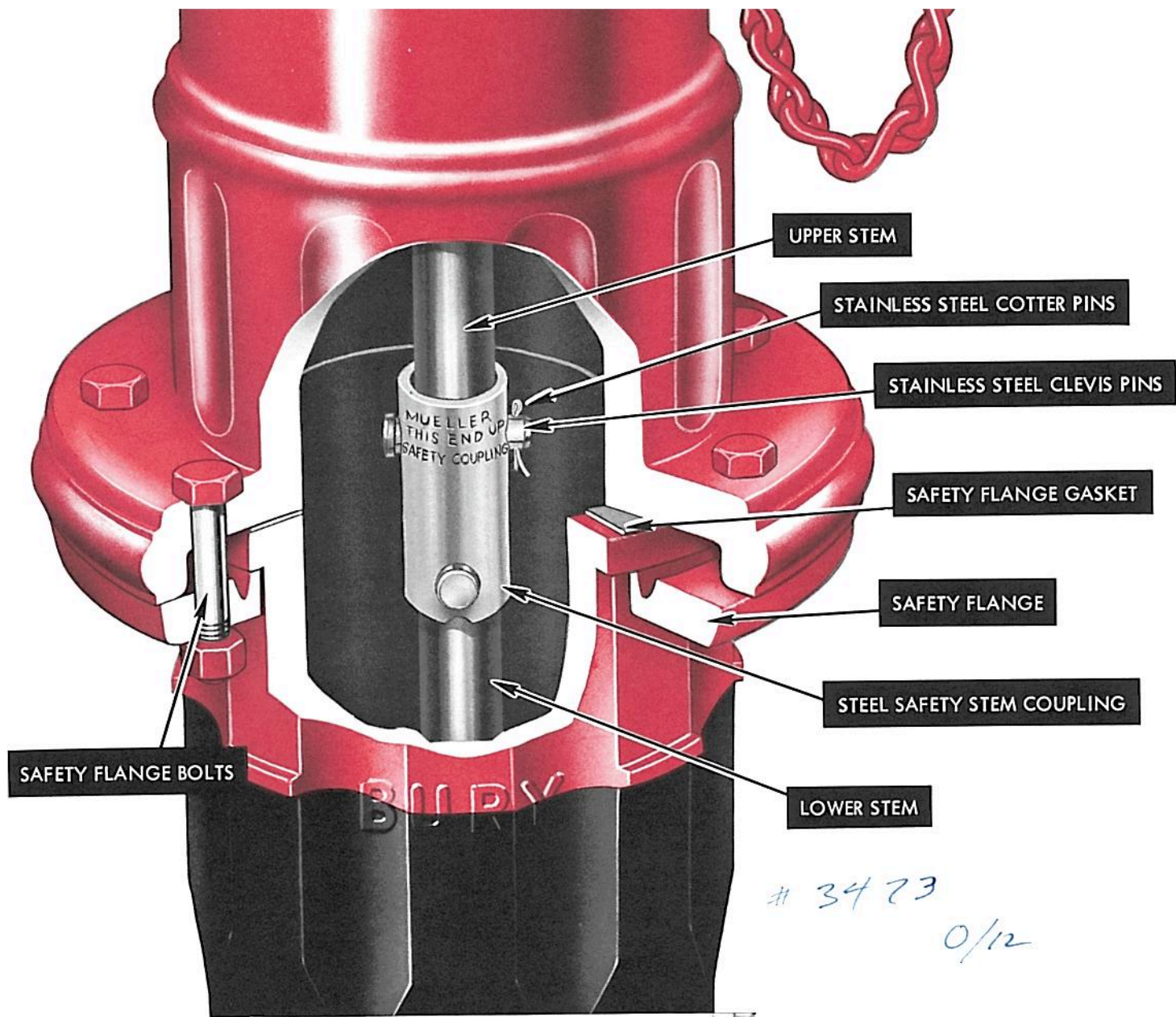
Replace the safety flange and upper barrel assembly.



Attach the bonnet assembly to complete repairs.



Safety Flange Repair Kit — Contains all parts needed.



The upper barrel can be rotated to permit nozzles to be faced in any desired direction. (Not in a specific number of positions such as 4, 6, or 8).



The upper barrel can be easily changed to add a pumper nozzle.



Barrel and stem extensions can be added to raise the hydrant to meet changes in the grade line.

COMPRESSION-TYPE MAIN VALVE DESIGN

● *closes with the pressure*

Main Valve Closes with the Pressure

The main valve of the Mueller/107 Fire Hydrant closes with the water pressure. The pressure holds the valve closed. No mechanical force or special linkage is required to hold the main valve in the closed position.

This basic design feature prevents any flooding if the hydrant is accidentally hit by a car or truck. It also permits repair of traffic damage, addition of barrel and stem extensions to meet changes in grade line, rotation of the upper barrel for proper nozzle facing, and changes of upper barrels for different hose and pumper nozzle arrangements . . . all without digging or water shut-off.

Main Valve Assures Dependable Performance

The streamlined main valve design assures maximum flow and maximum pressure for fire fighting.

The long-lived synthetic rubber ring-type main valve is resilient to resist abrasion and damage from rocks or other foreign matter. The main valve is also hard enough to withstand the pressure. The special valve material holds its shape in use, eliminating valve chatter during operation, improving performance.

Heavy Construction Provides Long-Life

The upper and lower valve plates have heavy sections for added strength, full support of the main valve and long-term resistance to corrosion.

The upper valve plate is secured to the stem by a stainless steel stem pin. An O-ring seal provides a positive pressure seal between the upper valve plate and stem.

The upper valve plate guides are heavy beam sections to eliminate distortion or bending during seat ring removal or installation. The guides are precision-machined and slide in vertical grooves cut in the seat ring, supporting the main valve in the open position and providing an all-bronze drain valve sealing surface.

Special lugs on the upper end of the valve guides prevent the main valve assembly from dropping out of the seat ring into the shoe during removal of the main valve and seat ring assembly.

A bronze cap nut protects the bottom end of the stem and stem threads against corrosion. The stainless steel lock washer prevents the cap nut from unscrewing.

Provides Full Net Valve Opening

All Mueller/107 Fire Hydrants provide a full, net valve opening area for each nominal size hydrant assuring maximum water flow for fire fighting.

For example, when in the open position, a 5" hydrant provides a valve opening net flow area equal to the area of a 5" diameter circle.

The large, streamlined flow passage has been carefully engineered to assure maximum possible flow with minimum pressure loss.

Bronze Shoe Bushing

A bronze bushing, permanently threaded into the shoe and pressure sealed with an O-ring, provides a corrosion-resistant threaded connection for the bronze seat ring.

The bronze shoe bushing is securely locked in position by the lower barrel, preventing any rotation or backing out during seat ring removal, and is sealed at the top by the shoe flange gasket.

Bronze Seat Ring — Easy to Remove, Easy to Re-Install

The bronze seat ring provides a precision-machined long-lived seating surface for the main valve.

Two O-ring seals provide a positive pressure seal between the seat ring and shoe bushing. One is located above the annular drain valve waterway and one is below the waterway.

Large bronze-to-bronze V-threads make it easy to remove from above the ground.

A long guide on the lower end of the seat ring assures accurate alignment and positive engagement of the large V-threads, eliminating any cross-threading damage, making it easy to re-install.

Automatic Double Drain Valves . . . Assure Positive Operation — a Dry Barrel

The double drain valves are an integral part of the main valve assembly. Each time the hydrant is operated, the valves provide positive, automatic operation without any toggles, springs or synchronized mechanisms.

When the hydrant is closed, drain valves are open

Water in the barrel passes through the openings below the upper valve plate guides, through the drain valves, into the annular waterway and out the four large drain openings. The barrel is positively drained preventing any freezing or damage.

When the hydrant is open, drain valves are closed

The face of the valve guides and the Quad-ring drain valve seals positively shut-off the drain valves.

Exclusive Quad-Ring Drain Valve Seals

Positive drain valve sealing is assured by long-lived Quad-rings which seal against the face of the corrosion-resistant bronze upper valve plate guides. The seals are not affected by air or water, assuring superior life and performance.

Corrosion-Resistant All-Bronze Drain Valve Waterway

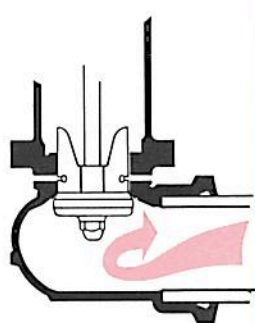
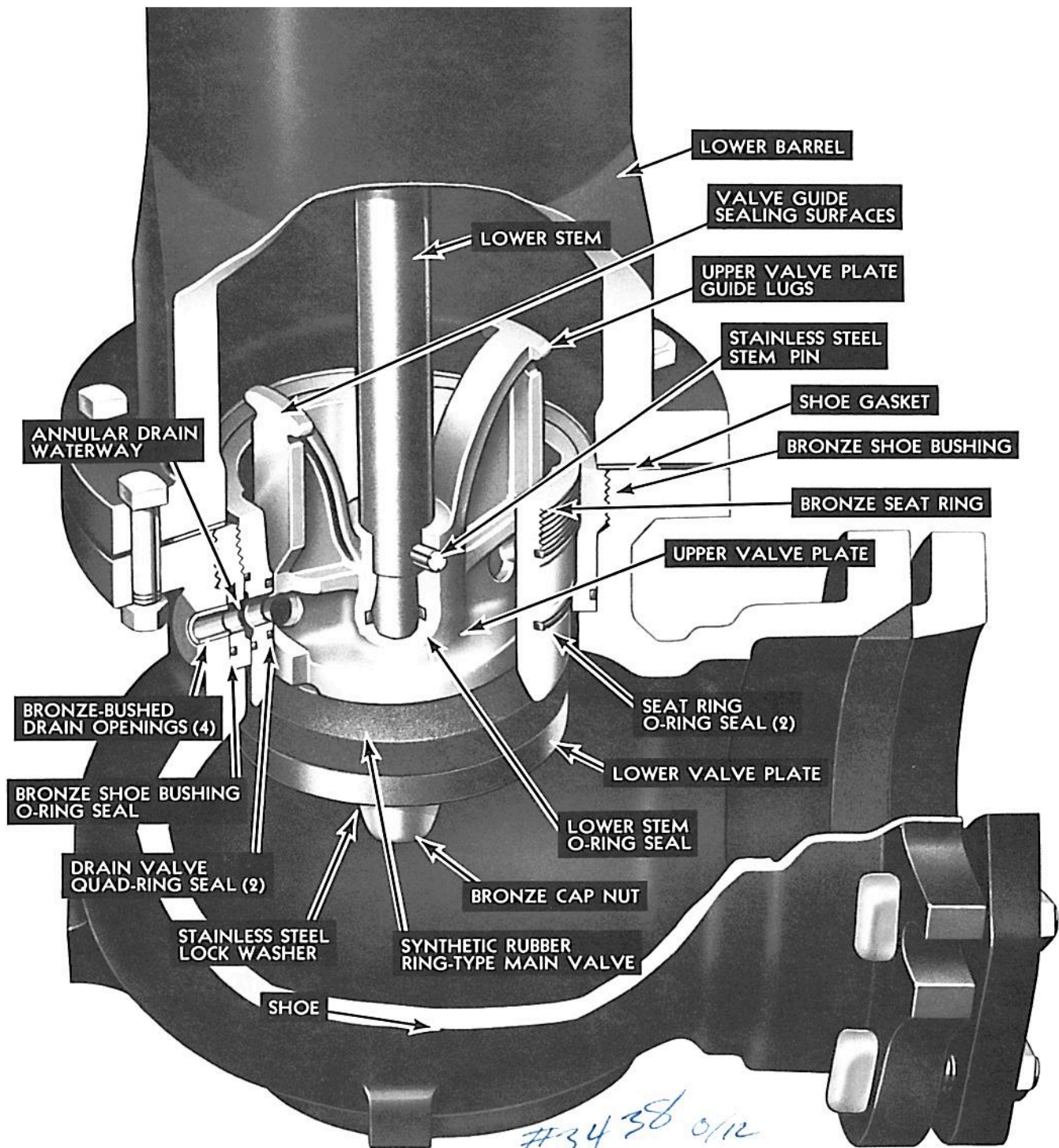
The entire double drain valve and drain valve waterway system is of corrosion-resistant bronze. Four large drain openings in the cast iron shoe are bronze bushed.

Large Drain Opening Bosses on Shoe

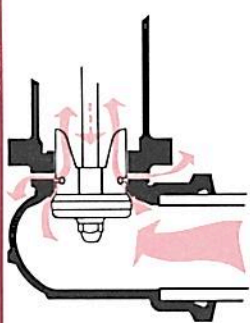
Extra large bosses on the shoe permit tapping the four drain openings when required.

Double Drain Valves — Automatically Force-Flushed

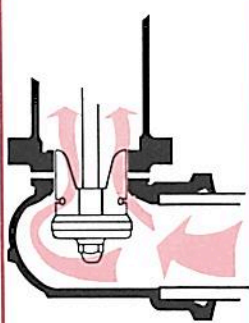
The double drain valve openings are placed in a vertical position to prevent clogging by scale or dirt collecting in the openings. The entire drain valve and drain valve waterway system is completely flushed under full line pressure each time the hydrant is operated.



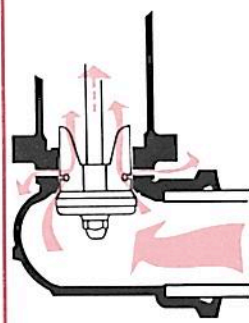
Main Valve Closed. Held closed by water pressure. Barrel is dry. Drain valves are open.



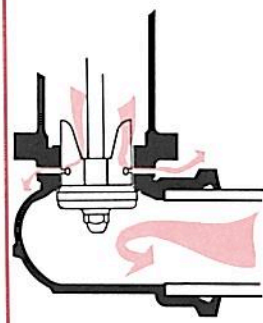
Main Valve Opening. Full water pressure force flushes double drain valves, waterway and four openings during first few turns of operating nut.



Main Valve Open. Double drain valves are now closed by the bronze sealing surfaces on main valve guides.

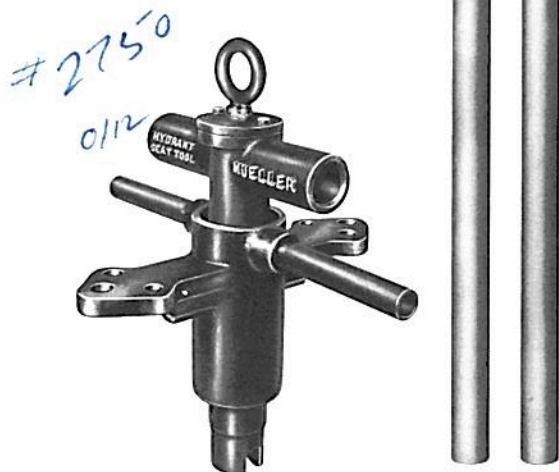


Main Valve Closing. Full water pressure force flushes double drain valves, waterway and four openings during last few turns of operating nut.



Main Valve Closed. Drain valves are open. Water drains from barrel through open ports, assuring dry barrel when hydrant is not in use.

MAIN VALVE AND SEAT REMOVAL



MUELLER/107 SEAT REMOVAL WRENCH

One compact, lightweight seal removal wrench fits all three sizes (4", 5", 6") of Mueller/107 Fire Hydrants and all depths of bury.

One man, with the new compact Mueller/107 Seat Removal Wrench, can easily remove the entire main valve and seat ring assembly from above ground.

No disassembly of the bonnet is required — seals, lubricant and operating mechanism are not disturbed, simplifying repairs. The entire unitized bonnet is easily removed from the upper barrel flange and disconnected from the stem. Disassembly of the safety flange or removal of the upper barrel is not required.



1
First
Isolate
the hydrant

Close the gate valve ahead of the hydrant to shut off line pressure. Open the hydrant to the "full open" position, relieving the pressure.



2
Remove
the bonnet

Remove the bonnet bolts and rotate the bonnet counter-clockwise, unscrewing it from the valve operating stem.

Lift off the Mueller/107 bonnet as a unit. There is no loss of oil, damage to O-rings, removal of any seals or operating mechanism parts that require relubrication, adjustment or re-assembly. The sealed operating mechanism and lubricant reservoir are not disturbed.

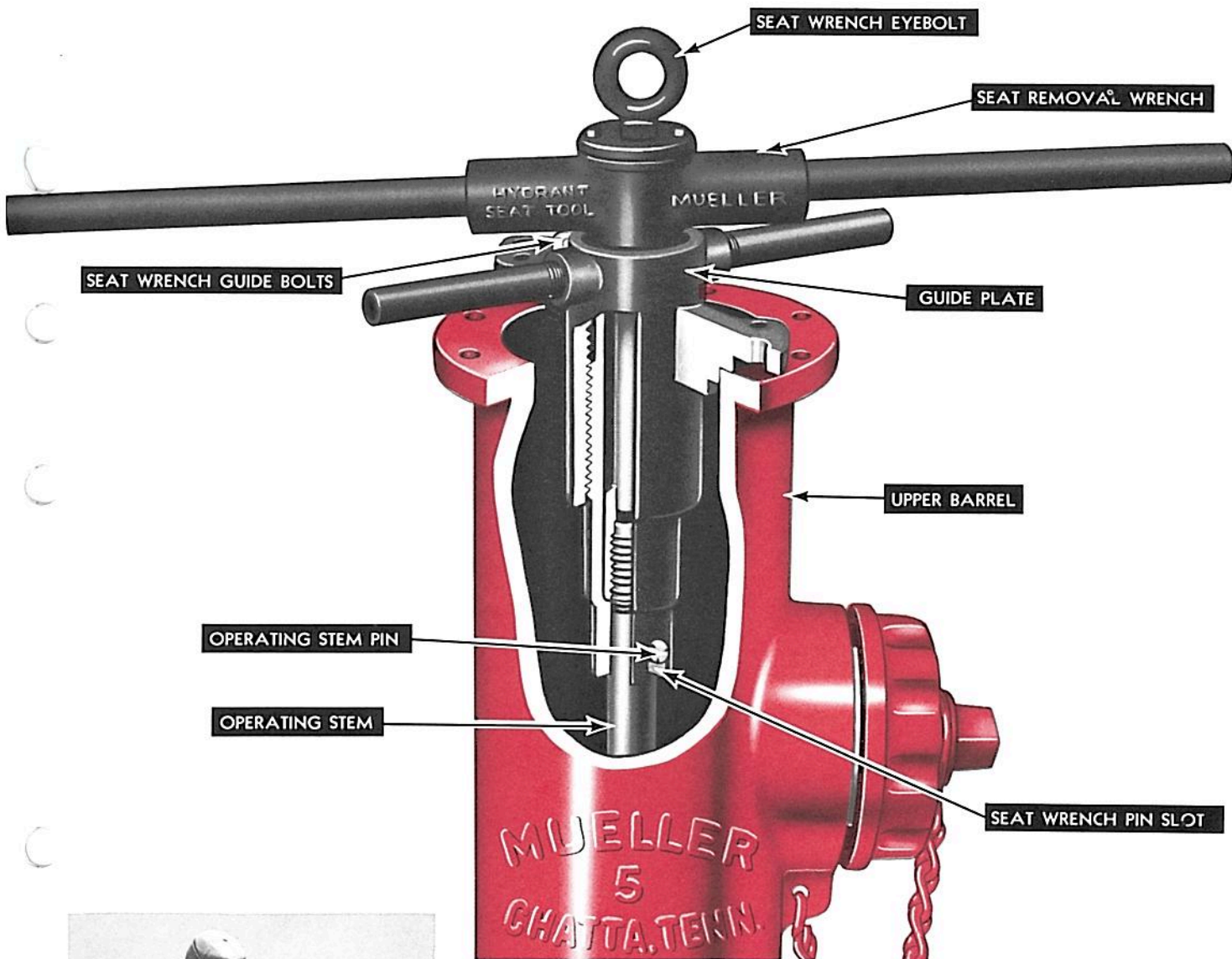


3
Next,
attach the
Seat Removal
Wrench

Lower the Seat Removal Wrench over the operating stem into the upper barrel. The special notches on the lower end of the wrench engage the stainless steel pin on the upper stem to transmit the turning torque.

Self-centering guides on the Seat Wrench center the wrench on the upper barrel flange. Each guide point corresponds to each size of hydrant.

Secure the eyebolt to the upper stem thread by rotating it clockwise to hold the entire valve stem, main valve and seat ring assembly.



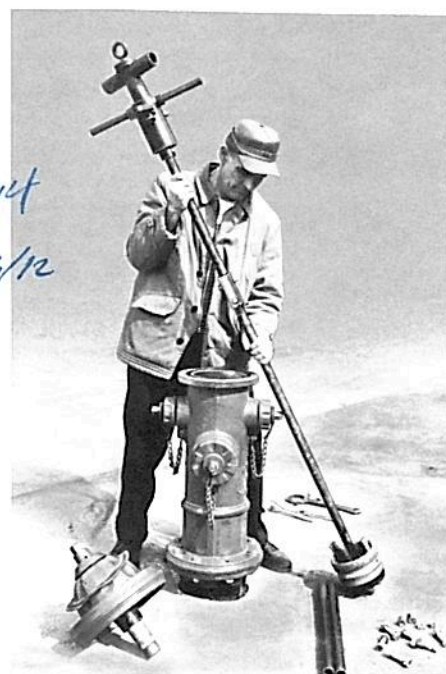
4
Remove
main valve
and seat ring

Rotate the Guide Plate to close the main valve.

Then attach handles to the Seat Wrench and rotate the wrench counter-clockwise about five revolutions to disengage the seat ring threads.

The entire assembly can then be lifted out for inspection or repair.

The corrosion-resistant, bronze seat ring to bronze shoe bushing threads assure easy removal.



5
Easy
to re-install

The long guide on the lower end of the seat ring makes it easy to re-install the seat ring and main valve assembly.

The guide assures accurate engagement of the seat ring and shoe bushing threads, prevents cross-threading and thread damage.

MUELLER / 107

fire hydrant features

- ... ASSURE LONG-TERM PERFORMANCE
- ... TOTAL DEPENDABILITY AND ECONOMY

Ductile Iron Operating Nut and Weathercap

— prevents moisture from entering bonnet section. Circular design of the cap assures easy operation even under extreme icing conditions, discourages unauthorized tampering or removal of the operating nut or hold-down nut. Cap is marked to show direction of rotation.

Non-Kinking Chains —

extra-long heavy chain with special links eliminates kinking. A special chain loop at the cap permits free turning of the cap. The nozzle caps, when removed, hang directly under each nozzle.

Concealed Flanges —

improve hydrant appearance.

Brilliant Enamel Finish —

aids recognition and resists weather and corrosion.

Plated Bolts and Nuts —

give greater resistance to corrosion.

Safety Flange — breaks cleanly on impact from any angle to prevent barrel damage when struck by a vehicle.

Flange is strong enough to withstand normal shipping, handling and use. Permits easy, economical repair, adding of extension sections, rotation of upper barrel sections changing upper barrels for different nozzle arrangements — all without digging or water shut-off.

Fluted Design — ribs add strength at flanged joints and add to hydrant appearance.

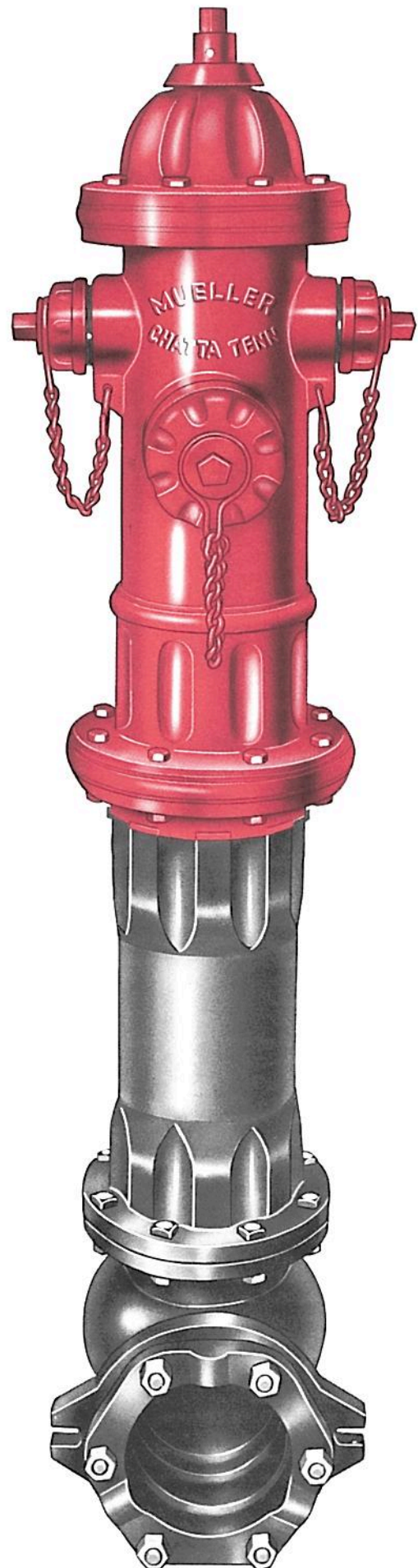
Pitch Tar Varnish Finish —

resists corrosion below ground for long life.

Tapered Lower Barrel

— prevents frost heave.

Heavy Shoe — designed for full flow and easy installation. Large round base pad eases setting. The back of the pad is flush with the flange for easy blocking. Strapping lugs are available on all non-rigid inlet connections. Extra-large bosses on the drain openings permit tapping when needed.



interior features

Dry Top Design — operating stem threads and all bearing surfaces are sealed away from the water in the barrel.

Sealed Oil Reservoir — factory-filled with the proper type and amount of lubricant. Requires no field maintenance. Provides positive, continuous lubrication.

Unitized Bonnet Assembly — design permits easy removal of the entire bonnet assembly without disturbing seals or lubricant. No field adjustment or assembly needed.

O-Ring Bonnet Seals — give permanent, water-tight seal. O-rings, on operating screw bearing and operating screw, seal out moisture and prevent any lubricant leakage during shipment, storage, installation or use.

Quad-Ring Stem Pressure Seal — provides positive pressure seal, sealing lubricant in and water pressure away from operating mechanism. Wiper ring protects the Quad-ring.

Upper Stem O-Ring Seal — protects the threaded connection from water and corrosion. Makes it easy to detach the bonnet assembly from the stem.

Compression-Type Main Valve — closes with the pressure. Permits bonnet removal, barrel changes for different nozzle arrangements, rotating barrels for proper nozzle facing, addition of barrel and stem extensions to meet grade line changes, and repairs of traffic damage with all work done from above ground, without digging or water shut-off, except for main valve removal.

Automatic Double Drain Valves — an integral part of the main valve assembly, provide automatic operation each time hydrant is operated. No toggles, springs, linkages, or synchronized mechanisms of any kind. The vertical position of the drain valves prevents clogging. Drain valves and drain valve waterway are force-flushed each time hydrant is opened and closed.

All-Bronze Waterway — entire drain valve and drain valve waterway is corrosion-resistant bronze.

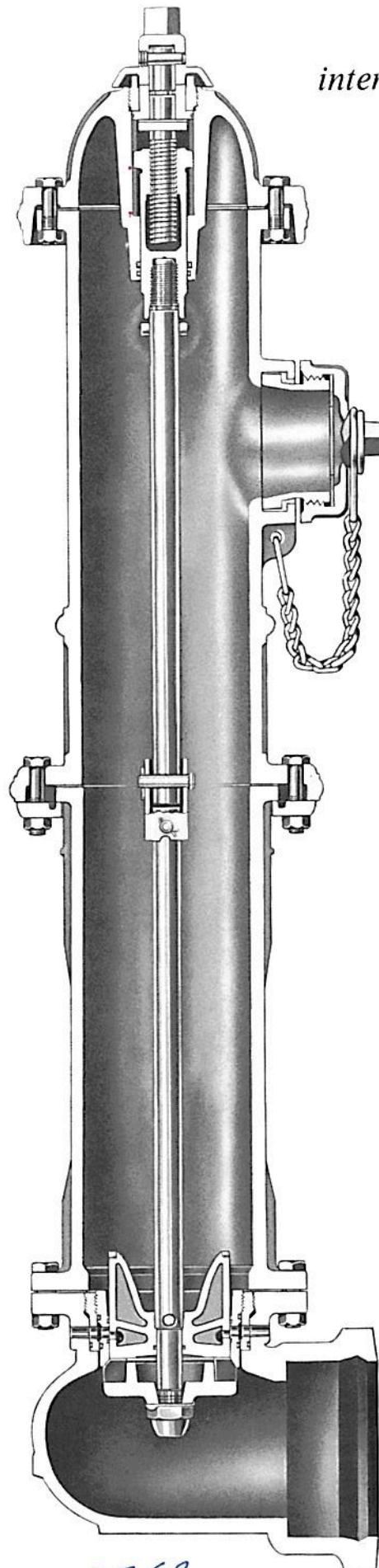
Four Large Drain Openings — in shoe, connected to annular waterway, are bronze-bushed to resist corrosion, provide positive drainage. Extra large bosses on shoe permit tapping drain openings when required.

Long-Lived Main Valve — the special ring-type main valve of synthetic rubber eliminates valve chatter, assures long life and resistance to damage by rocks or other foreign matter.

Upper Valve Plate Guide Lugs — cast on the upper end of the guides, prevent the valve assembly from dropping out of the seat ring during seat ring and main valve removal.

Stainless Steel Stem Pin — securely locks upper valve plate assembly to stem.

Long Heavy Guides — on upper valve plate fully support the main valve when the valve is in the open position. Also provide an all-bronze drain valve sealing surface.



Lifetime Anti-Friction Washer — of "Teflon" - coated steel reduces turning effort to a minimum for fast easy opening. Requires no lubrication or maintenance.

Operating Screw Bearing Lugs — prevent operating screw bearing from rotating during operation. Prevents hold-down nut from backing out.

Main Valve Travel Automatically Controlled — requires no field adjustment. Valve travel is controlled by lugs on the stem nut that move in vertical slots in the bonnet. This eliminates damage to the stem or main valve since these parts are not subjected to over-compression or excessive torque.

Breech-Locked Nozzles — prevent nozzle blow-out. Four interlocking lugs on nozzle are given a fractional turn from the slots in the barrel and are then securely calked in place.

Full Flow Openings — large radius hose and pumper nozzle openings reduce frictional loss to a minimum.

Safety Stem Coupling — breaks on impact to prevent damage to stem and main valve when hydrant is struck by a vehicle.

Easily replaced without water shut-off.

Stainless Steel Coupling Pins — securely connect safety stem coupling to upper and lower stem. Coupling and pin design eliminates galvanic corrosion, caused by dissimilar metals.

Bronze Shoe Bushing — threaded into the shoe, sealed with an O-ring and securely locked in position by the lower barrel, assures easy removal of the seat ring.

Bronze Seat Ring — has large V-threads that assure easy removal or installation. Two O-rings seal the pressure between seat ring and shoe bushing.

Seat Ring Guide — on lower end of seat ring — provides easy, positive thread alignment with large V-threads on shoe bushing for easy installation. Prevents cross-threading and thread damage.

Bronze Cap Nut — seals and protects the bottom end of stem and stem threads from water to prevent corrosion. Nut is locked in place with a stainless steel lockwasher.

O-Ring Seal — provides a positive pressure seal between the main valve assembly and lower stem.

Full-Flow Shoe — provides maximum flow and minimum pressure loss. There are no pads or obstructions in the waterway.

Full-Net Valve Opening — each nominal size of hydrant provides a full net valve opening area equal to the area of a circle of the nominal hydrant diameter.

For example, a 5" hydrant provides a full flow opening equal to the area of a 5" diameter circle.

MUELLER / 107

fire hydrant

Mueller/107 Fire Hydrants meet or exceed the specifications of the American Water Works Association.

Specifications:

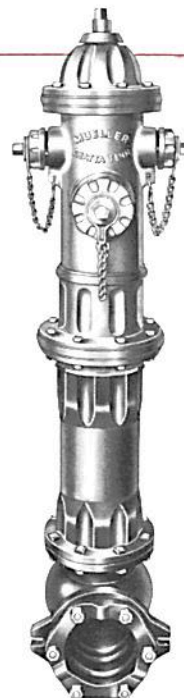
150 psi Working Pressure
300 psi Test Pressure
Dry Top Design

SIZES AND TYPES OF INLET CONNECTIONS



Size of Hydrant	Hub	Flanged	Mech. Joint
4"	6"	6"	6"
5"	6"	6"	6"
6"	6"	6"	6"

(Auxiliary gate valves with flanged outlet end and a choice of inlet ends can be furnished and attached to flanged inlet hydrants. Strapping lugs on all non-rigid inlet connections.)



THREE-WAY HYDRANTS

Two 2½" Hose Nozzles,
One Pumper Nozzle

Size of Valve Opening	Catalog Number
4"	A-24113
5"	A-24123
6"	A-24133

(Other combinations of outlets can be furnished)

TWO-WAY HYDRANTS

Two 2½" Hose Nozzles

Size of Valve Opening	Catalog Number
4"	A-24112
5"	A-24122
6"	A-24132

(Other combinations of outlets can be furnished)



MUELLER / 107 FIRE HYDRANT ACCESSORIES

SEAT WRENCH

One man, with one wrench, can remove the main valve and seat ring. Compact, lightweight seat removal wrench fits all sizes of hydrants, depths of bury. Wrench self-centers on upper barrel flange.

Catalog Number A-24140



OPERATING WRENCH

One wrench operates hose nozzle cap, pin-type and lug-type hose coupling, hydrant operating nut and hold-down nut.

Order by quantity, Catalog Number and size and shape of operating nut.

Catalog Number A-24142



BARREL EXTENSION SECTIONS

Barrel extension sections, in 6" increments from 6" through 4'-0", are available. Each is furnished with stem extension, steel coupling, solid flanges, gasket and bolts.

Order by hydrant size, Catalog Number and length desired.

Hydrant Size	Catalog Number
4"	A-24155
5"	A-24156
6"	A-24157

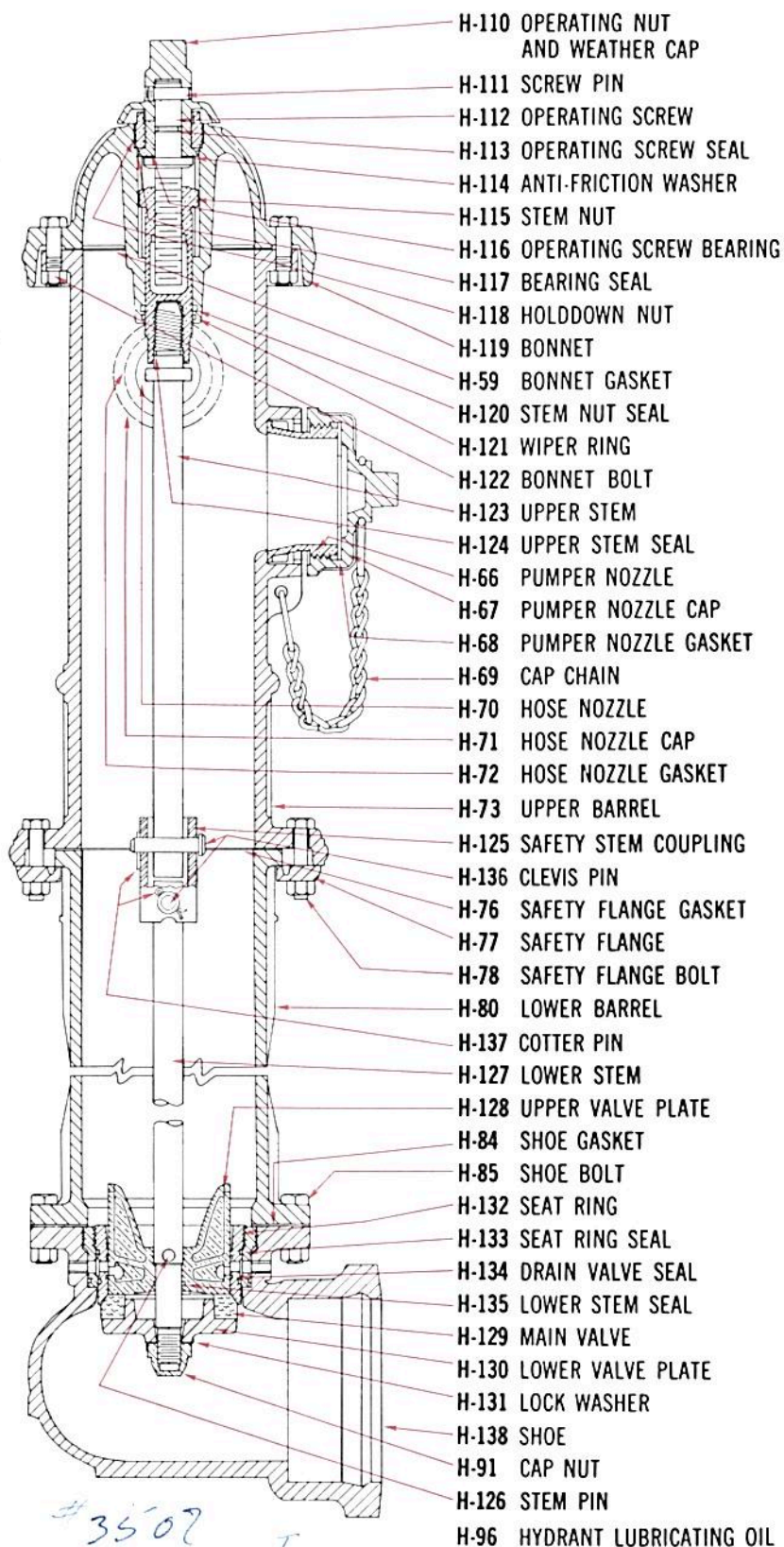
SAFETY FLANGE REPAIR KIT

Consists of notched steel safety stem coupling, proven two-piece safety flange, gasket and bolts.

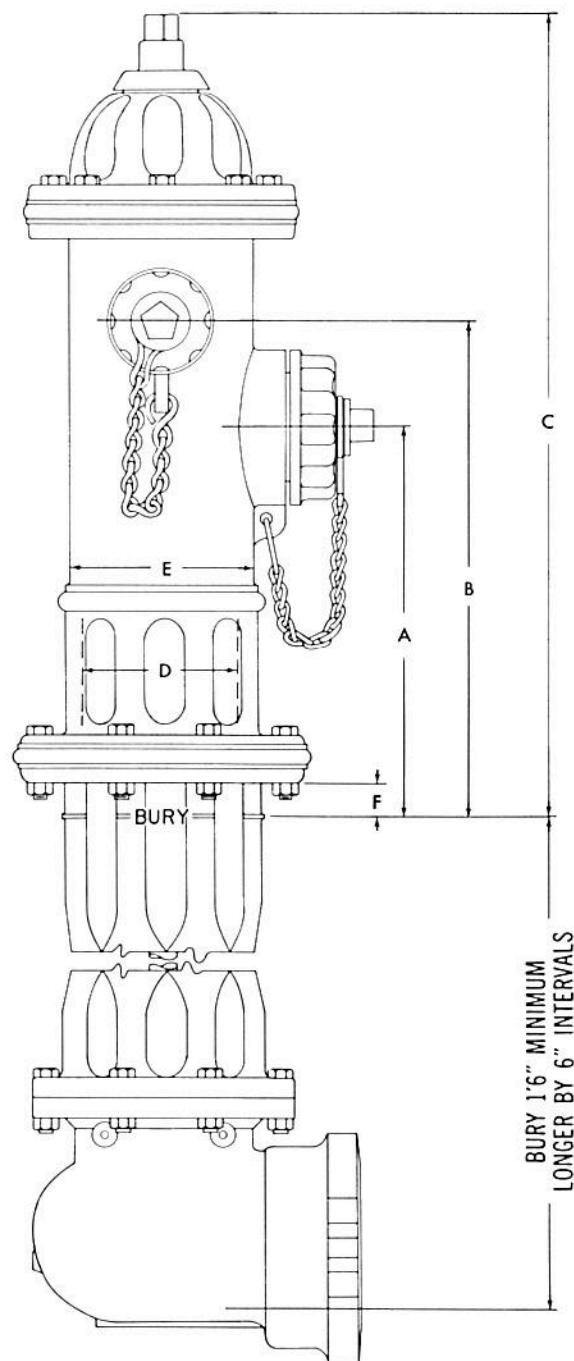


Hydrant Size	Kit Catalog Number
4"	A-24150
5"	A-24151
6"	A-24152

PARTS AND DIMENSIONS



HYDRANT WITH STEEL SAFETY STEM COUPLING



DIMENSIONAL DIAGRAM

Size	A	B	C	D	E	F
4"	18	21¼	35	6½	7⅞	1⅞
5"	18	23	37¼	7¼	8⅞	1⅞
6"	18¾	23¾	37¼	8½	9¾	2⅞

DIRECTIONS FOR ORDERING

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.
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.
6. **TYPE OF INLET CONNECTION**
See types of inlets listed for each hydrant.
7. **SIZE AND SHAPE OF OPERATING NUT**
National Standard is $1\frac{1}{2}$ " 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 $\frac{1}{16}$ " 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.

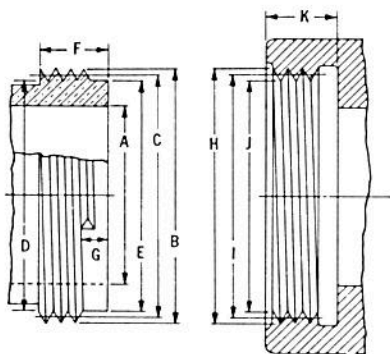
WHEN ORDERING PARTS SPECIFY:

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				
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	⅝"	⅝"	1"	1⅝"	1⅝"	1¼"	1¼"
G. Face to start of second turn	⅝"	⅝"	¼"	⅝"	⅝"	⅞"	⅞"
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	1⅝"	1⅝"	1⅝"	1⅝"	1⅝"	1⅝"	1⅝"

*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.

MUELLER CO.



DECATUR, ILL.

Factories at: Decatur, Chattanooga, Brea (Los Angeles)
In Canada: Mueller, Limited, Sarnia, Ontario