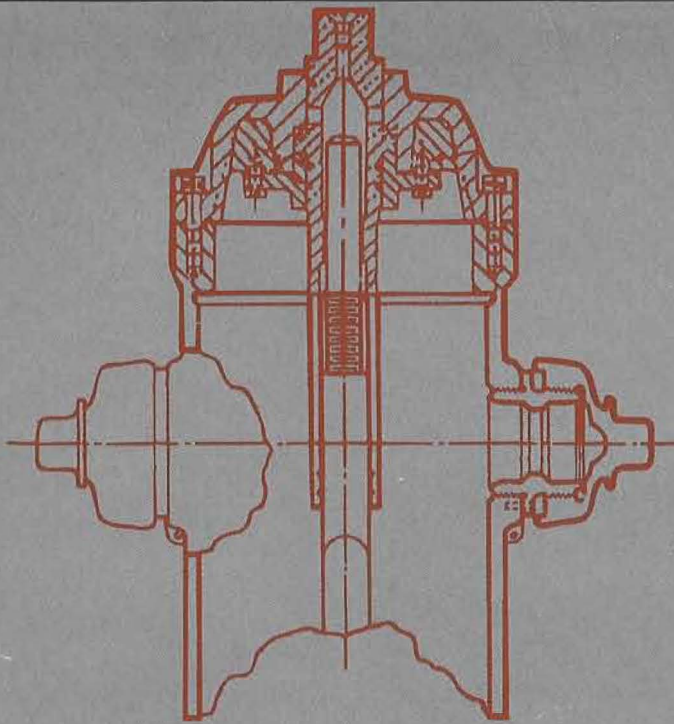




FIRE HYDRANTS



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CLOW CANADA

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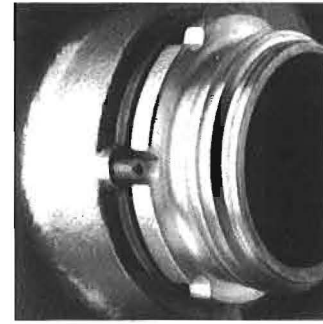
BRIGADIER

SERIES M



Lower valve assembly

Clow Canada is committed to the manufacture and delivery of superior products, supported by superior services. Strict quality control measures govern every step of the manufacturing process, to ensure precision and consistency. We provide the knowledge, the technology and the products to serve industry's changing needs, efficiently and effectively. For more information about our products or services, please contact the Clow Canada sales office nearest you.

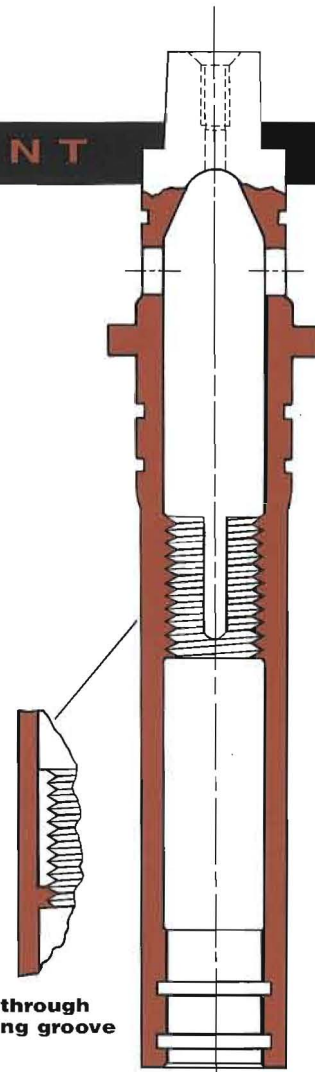


External allen screw locks nozzle into place

BRIGADIER FIRE HYDRANT

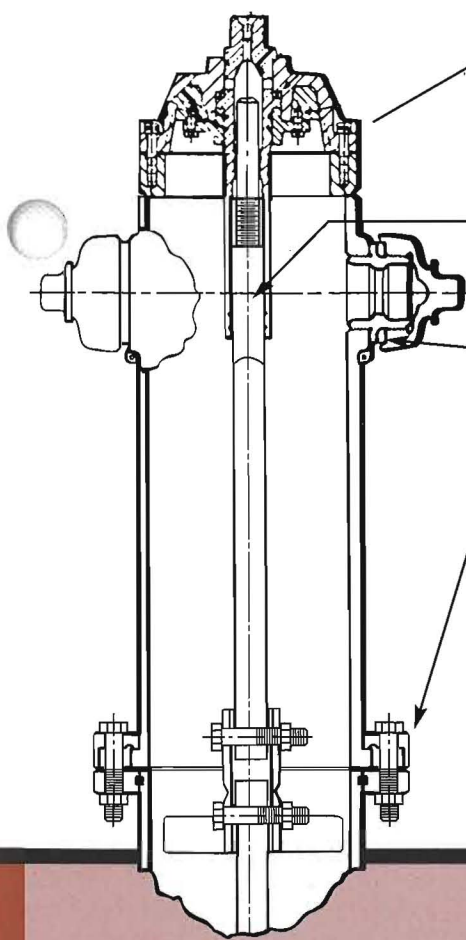
Clow Canada's Brigadier SERIES M incorporates several new design features and improved components for increased performance in firefighting, along with greater durability, economy and convenience. These hydrants are manufactured in Canada to the highest standards of quality — every unit is thoroughly tested before leaving the Clow factory. Lubrication is assured through the Brigadier's unique Hydra-lube™ mechanism. The Brigadier can be rotated to any position — during or after installation — without disturbing the working mechanism. The rugged Brigadier SERIES M stands up easily to traffic damage. It is designed for easy upkeep, repair and replacement of parts; its internal assembly can be removed and replaced in 20 minutes, without excavation. Alternative design options and accessories serve a wide range of municipal and industrial needs. The Brigadier's advantages include:

- **efficient compression-type hydrant**
- **factory-lubricated operating mechanism effectively O-ring sealed for long and efficient operation**
- **very low opening and closing torques**
- **automatic drainage**
- **positive sealing with O-rings at operating nut, operating housing, seat, bronze casing and seat**
- **durable and positive seating**
- **easy multiple positioning**
- **safety stem coupling and four safety segments**
- **internal parts easily removed — bury easily increased**
- **threaded hose and pumper nozzles — simple replacement if needed**
- **complete interchangeability with previous M-67 and M-59-M model hydrants**
- **conforms to AWWA specifications**



Section through lubricating groove

Hydra-lube™ operating nut

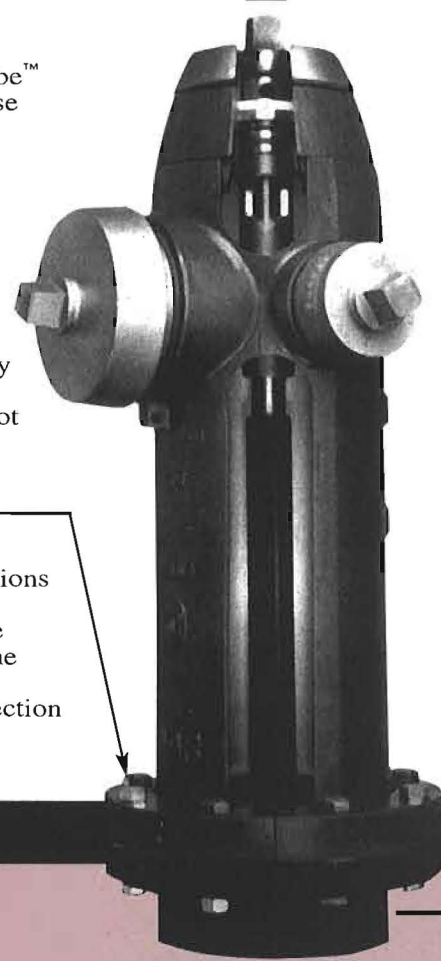


Hydra-lube™
The Brigadier's innovative Hydra-lube™ system incorporates an internal grease channel for self-lubrication during operation.

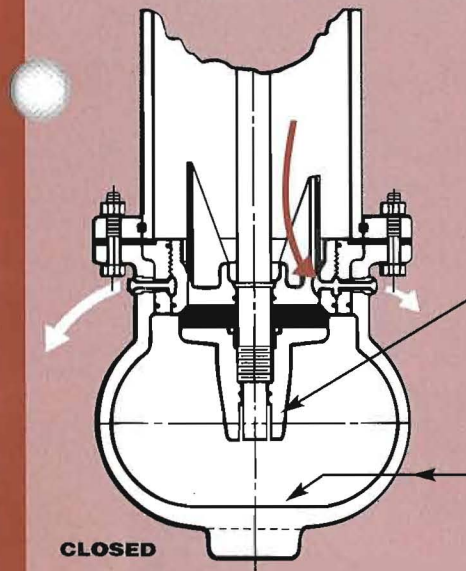
Stainless steel rod
Stainless steel upper stem provides corrosion-free seating for O-rings.

Nozzles
An external allen screw mechanically locks nozzles into place; this offers greater assurance that nozzles will not turn or back out.

Safety flanges
The safety flange consists of four identical segments grooved on the underside. The strength of these sections is less than the strength of the intermediate section flange; if severe impact occurs, breakage will be at the safety segment. The hydrant body, working mechanism, intermediate section and connecting flange remain undamaged.



Ground line

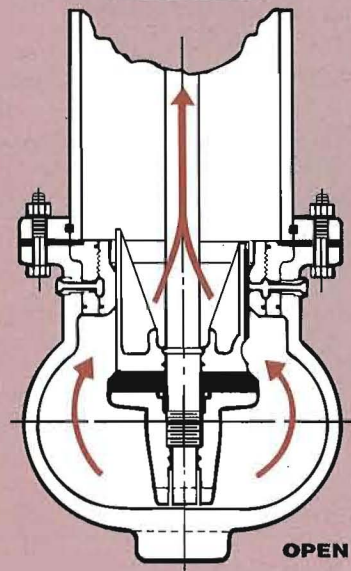


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Automatic drain
To prevent corrosion and freeze-up, the hydrant body is automatically drained quickly through the drip valve after each use.

Lower valve assembly
The lower valve plate assembly is extended to fully encapsulate the lower rod threads. This allows for increased corrosion resistance and ease of disassembly.

Epoxy coating
A durable epoxy coating on the interior and exterior of the elbow guards against corrosion.



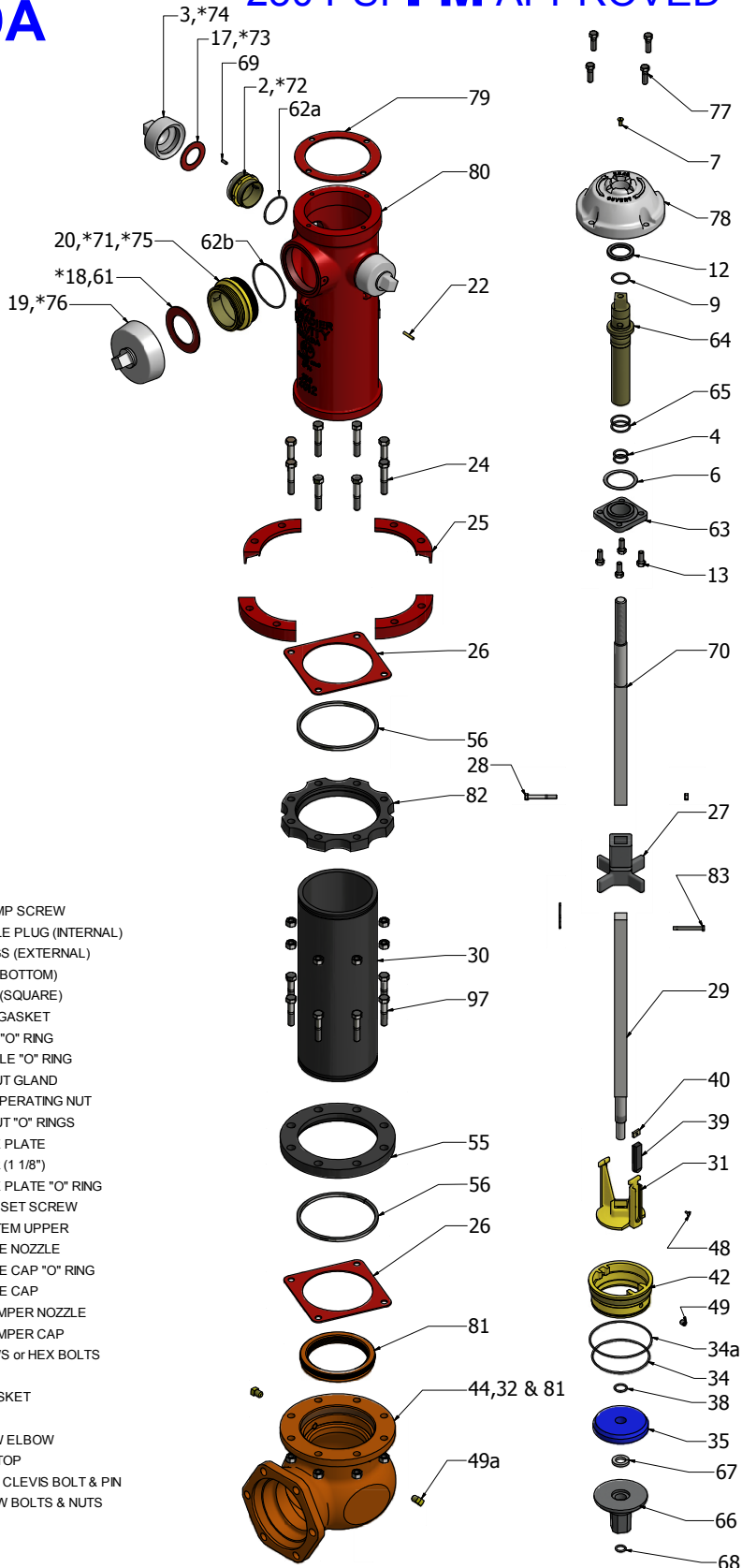
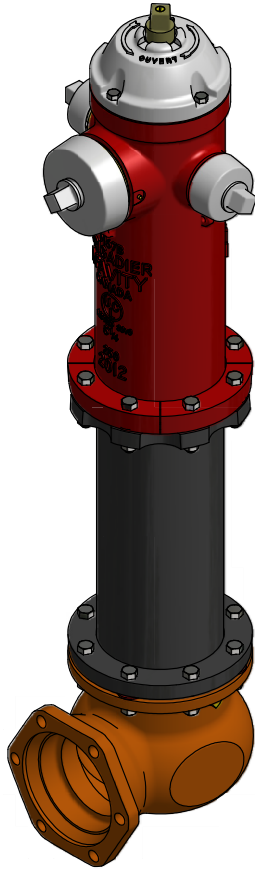
OPEN

 Listed by Underwriters' Laboratories of Canada.



Factory Mutual Approved

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DESCRIPTION

- 2 HOSE NOZZLE
- 3 HOSE NOZZLE CAP
- 4 HOUSING STEM "O" RINGS
- 6 HOUSING JOINT GASKET
- 7 OIL HOLE SCREW
- 9 OPERATING NUT "O" RING
- 12 OPERATING NUT BEARING
- 13 HEX BOLT (1/2" x 1 1/4")
- 17 HOSE CAP GASKET
- *18 STORZ 100 PUMPER CAP "O" RING
- 19 PUMPER NOZZLE CAP
- 20 PUMPER NOZZLE
- 22 PUMPER NOZZLE PIN
- 24 INTERSECTION BOLTS & NUTS
- 25 SAFETY FLANGE (4 SEGMENTS)
- 26 INTERSECTION GASKET
- 27 SAFETY COUPLING
- 28 SAFETY COUPLING BOLT & NUT
- 29 OPERATING STEM LOWER
- 30 INTERMEDIATE SECTION
- 31 DRIP VALVE
- 32 DRAIN HOLE LINING C/W ELBOW
- 34 SEAT "O" RING BOTTOM
- 34a SEAT "O" RING TOP
- 35 MAIN VALVE DISC
- 38 MAIN VALVE "O" RING
- 39 DRIP VALVE FACING
- 40 HOLDING CLAMP
- 42 MAIN VALVE SEAT
- 44 ELBOW (STATE INLET REQUIRED)

DESCRIPTION

- 48 HOLDING CLAMP SCREW
- 49 1/4" DRAIN HOLE PLUG (INTERNAL)
- 49a 3/8" PIPE PLUGS (EXTERNAL)
- 55 PIPE FLANGE (BOTTOM)
- 56 RETAINING RING (SQUARE)
- 61 PUMPER CAP GASKET
- 62a HOSE NOZZLE "O" RING
- 62b PUMPER NOZZLE "O" RING
- 63 OPERATING NUT GLAND
- 64 HYDRALUBE OPERATING NUT
- 65 OPERATING NUT "O" RINGS
- 66 LOWER VALVE PLATE
- 67 LOCKWASHER (1 1/8")
- 68 LOWER VALVE PLATE "O" RING
- 69 HOSE NOZZLE SET SCREW
- 70 OPERATING STEM UPPER
- *72 STORZ 65 HOSE NOZZLE
- *73 STORZ 65 HOSE CAP "O" RING
- *74 STORZ 65 HOSE CAP
- *75 STORZ 100 PUMPER NOZZLE
- *76 STORZ 100 PUMPER CAP
- 77 ALLEN SCREWS or HEX BOLTS
- 78 BODY CAP
- 79 BODY CAP GASKET
- 80 BODY
- 81 SEAT RING C/W ELBOW
- 82 PIPE FLANGE TOP
- 83 SAFETY CPLG. CLEVIS BOLT & PIN
- 97 PIPE TO ELBOW BOLTS & NUTS

*OPTIONAL PARTS



CLOW CANADA - M-67 / M93 BRIGADIER FIRE HYDRANT SPECIFICATION

TESTING AND DESIGN SPECIFICATIONS (PER AWWA C502)

1. Hydrant shall be manufactured in accordance with AWWA C502 latest revision
2. Hydrant shall be designed for 250 *PSI* working pressure and tested to 500 *PSI* hydrostatic pressure.
3. Hydrant shall be rated for 250 *PSI*. **FM** working pressure and 200 *PSI*. **ULC** working pressure.
4. Hydrant shall be a compression type, dry barrel design with centre operating stem construction.
5. The O-ring seating surface on the upper stem shall be constructed of stainless steel.
6. Epoxy coating to be applied to interior and exterior of hydrant shoe for corrosion protection.
7. Hydrant shall be manufactured with operating nut and integral thrust collar made of bronze. Delrin washer bearing shall be located above thrust collar for ease of hydrant operation.
8. Hydrant shall have a lower valve assembly that fully encapsulates the lower operating rod threads. This allows for increased corrosion resistance and ease of disassembly.
9. Intermediate section shall be ductile iron. (AWWA C110 – 08)

STANDARD HYDRANT FEATURES

1. Body style: Round
2. Hydrant shall have an internally lubricated bronze operating nut with O-ring seals. Operating nut shall be of the Hydra-lube™ design to ensure self lubrication during operation.
3. Hydrant hose nozzles shall be mechanically locked into place by an external allen screw, and have O-ring seals.
4. Hydrant Lower rod shall be 1-1/4" in sq.
5. Hydrant shall have a main valve opening of 5-1/4".
6. Hydrant shall be a traffic model, complete with safety flanges and stem coupling. Upper body can be rotated 360 degrees to adjust pumper direction.
7. Hydrant shall be manufactured with a lower valve plate that bottoms out in the shoe for maximum opening.
8. Hydrant shall be backed by manufacturer's 12 year limited warranty
9. Hydrant shall be the Clow Canada Brigadier as manufactured by Clow Canada.

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OPTIONAL HYDRANT FEATURES

1. a) 2 hose one pumper upper body or b) 2 hose upper body
2. AVAILABLE INLETS:
 - 150mm (6") Mechanical Joint (ANSI A-21.11)
 - 150mm (6") Online chamber flanged (ANSI B16.1 Class 125)
 - 200mm (8") Mechanical Joint (ANSI A-21.11)
 - 200mm (8") Online chamber flanged (ANSI B16.1 Class 125)
 - 150mm (6") flanged (ANSI B16.1 Class 125)
 - 150mm (6") flanged (ANSI B16.1 Class 250)
 - 150mm (6") Tyton (AWWA C110)

3. All standard inlets available in CAST IRON ASTM A126 Class B
Or Ductile Iron ASTM A536 (65-45-12)
4. Hydra-lube operating nut – see standard shapes on submittal drawing
5. Two 65mm (2.5") hose nozzles - threads on nozzle ends to suit national, provincial or municipal standard or STORZ quick connect
6. One 113mm (4.5") pumper nozzle - threads on nozzle ends to suit national, provincial or municipal standard
7. 100mm (4") or 125mm (5") STORZ quick connect pumper nozzle
8. Nozzle caps to suit – see standard shapes on submittal drawing
9. Two external .375" NPT plugs in inlet @ 180 degrees / one internal .25" NPT plug

10. Hose & pumper nozzle cap chains
11. Hydrants painted to suit national, provincial or municipal standard.

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SPECIAL HYDRANTS

MONITOR HYDRANT

The Brigadier is available with monitor flange for use in industrial fire protection in pulp and paper mills, lumber yards or storage areas for inflammable materials. The hydrant's 3" (76mm) flanged outlet is faced and drilled to ANSI 125, suitable for connecting a long radius flanged elbow and standpipe for mounting a monitor nozzle. With the exception of the monitor elbow this hydrant uses ALL CURRENT STANDARD PARTS. It can also be supplied with:

- The online chamber for mounting directly to the water main.
- An inline chamber for DEEP D.O.B. HYDRANTS 14' +
- A class 250 ductile iron flanged inlet for high pressure applications

IN-LINE CHAMBER (DEEP D.O.B. HYDRANTS 14' +) Clow Canada recommends all hydrants over 14' Bury be supplied with an in line chamber (around the 12' mark) to make the hydrant more accessible & safe for maintenance. With depths of bury in the north regularly in the 15 – 20' + range, hydrant maintenance becomes unsafe or impossible without the assistance of heavy equipment. The inline chamber corrects this issue by moving the main valve components up to the usual bury depth and is available for all McAvity hydrants.

FLANGED ELBOWS – M67B BRIGADIER / M93B BRIGADIER are available with **ASTM A536** ductile iron flanged elbows in class 125 and 250 for higher pressure applications.

ON-LINE HYDRANT

In many northern communities & on industrial sites hydrants must be attached directly to the water main by way of a tee. Clow supplies the M67B BRIGADIER / M93B BRIGADIER with either a 6" or 8" ANSI B16.1 flanged vertical chamber to facilitate this. With the exception of the online chamber this hydrant uses ALL CURRENT STANDARD PARTS. It can also be supplied with an inline chamber for DEEP D.O.B. HYDRANTS 14' +

HERITAGE STYLE HYDRANT – has a nostalgic McAvity shape but uses all current standard parts from 1995 to present. Octagonal body & bonnet, hose & pumper caps are the only difference between this & the standard round body M67B hydrant.

This hydrant shares a common shape with the older McAvity M59 & M59M models but can be easily identified by the 4 ground line flange segments (#25).

HYDRANT INSULATING KIT

When hydrants are buried in the frost line, a thermal break must be installed below the frost line, at the hydrant inlet. The flange isolation kit stops thermal conductivity through the hydrant into the piping system. This option is available on all hydrants.

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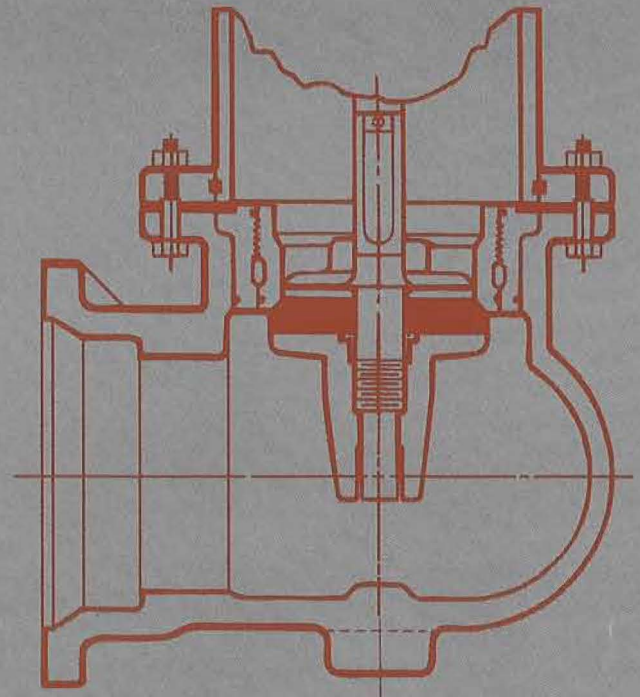
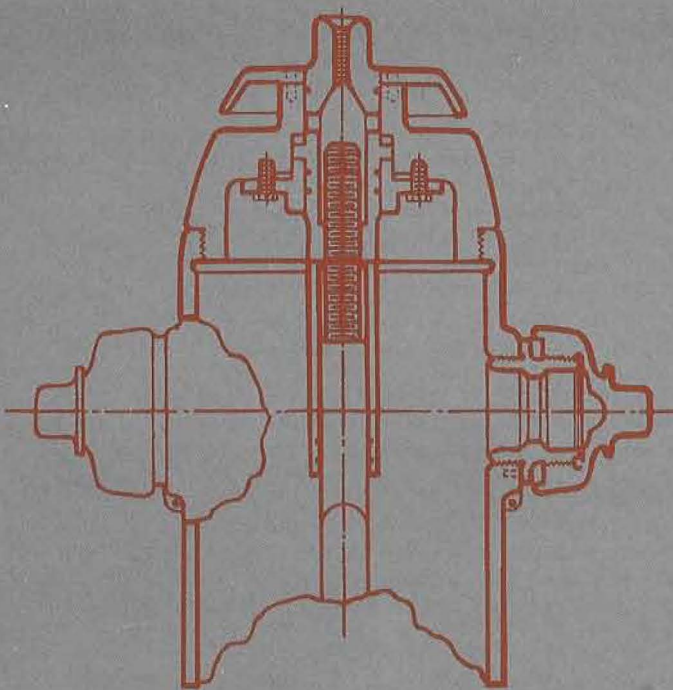
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