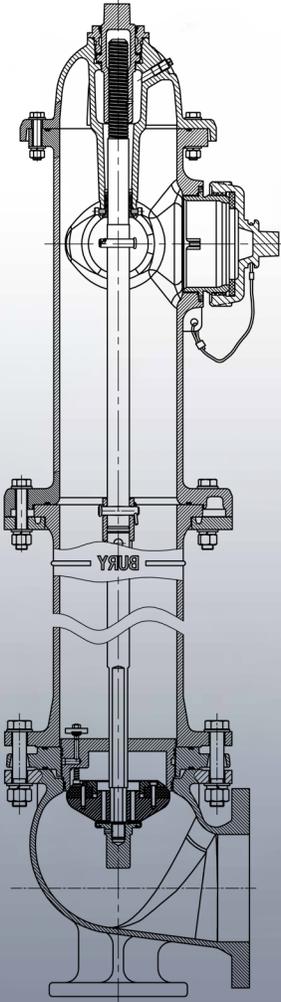
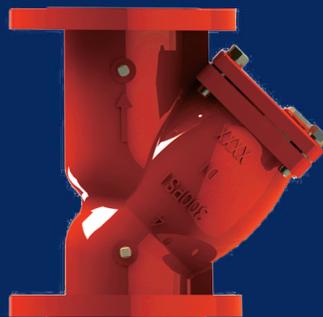


Century



Model F600
Dry Barrel Fire Hydrant
Installation and Maintenance Manual



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Operation and installation manual for the Century Dry Barrel Fire Hydrant Model F600

This document is an inspection, installation, and maintenance manual for the Century Dry Barrel Fire Hydrant Model F600. It details the Hydrant components, their specifications, and proper installation procedures to ensure longevity and functionality. The manual also provides step-by-step instructions for inspection, operation, adjustment and routine maintenance.

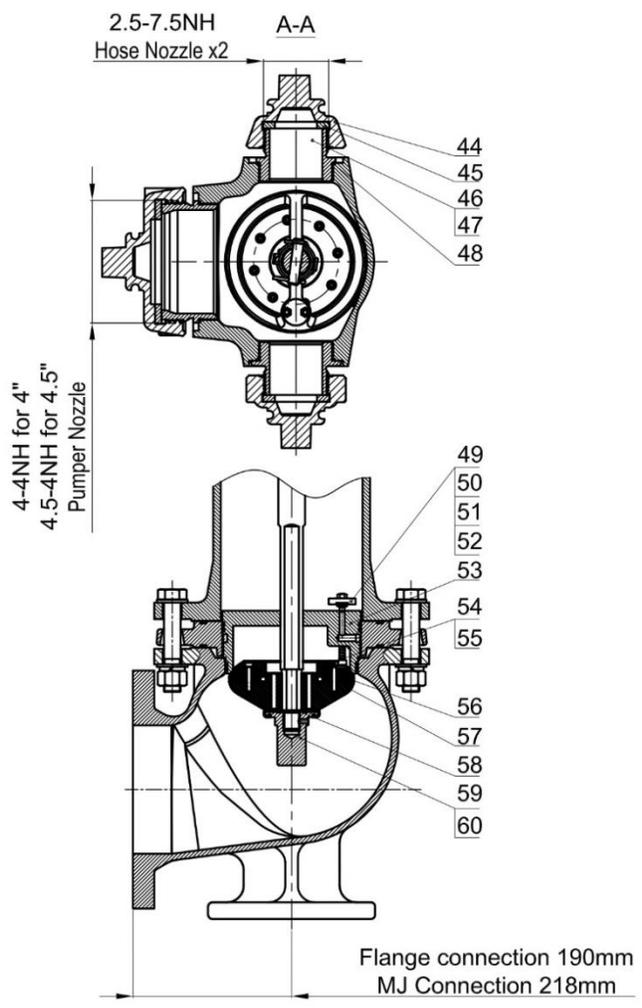
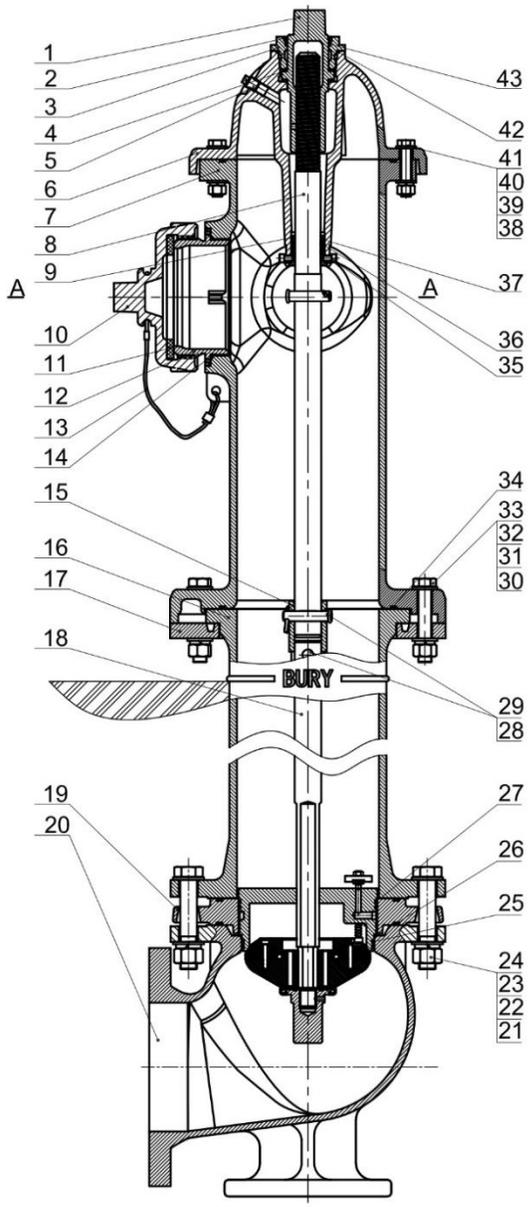
Emphasis is placed on safety precautions during all procedures; this will ensure reliable operation and longevity of the equipment.

Components:

The Century Dry Barrel Fire Hydrant Model F600 is made of various parts.

Item	Name
1	Operating Nut
2	Dust Ring
3	Lock Nut
4	Antifriction Pad
5	Plug
6	Cover
7	Top Body
8	Top Shaft
9	Gland
10	Hose Nozzle Cap
11	Hose Nozzle Gasket
12	Hose Nozzle
13	Chain
14	O-Ring
15	Coupling
16	Down Body
17	Safety Flange
18	Down Shaft
19	Drainage Ring Cover
20	Elbow Body
21	Hexagon Bolt
22	Plain Washer
23	Lock Washer
24	Hexagon Nut
25	O-Ring
26	Drain Valve Cover Seal
27	O-Ring
28	Pin Shaft
29	Pin
30	Hexagon Bolt

Item	Name
31	Plain Washer
32	Lock Washer
33	Hexagon Nut
34	Upper Plug Body Seal
35	Hexagon Socket Head Cap Screws
36	O-Ring
37	O-Ring
38	Hexagon Bolt
39	Plain Washer
40	Lock Washer
41	Hexagon Nut
42	O-Ring
43	O-Ring
44	Hose Nozzle Cap
45	Hose Nozzle Gasket
46	Hose Nozzle
47	Hexagon Socket Set Screws
48	O-Ring
49	Drain Valve Cover
50	Spring
51	Hexagon Socket Head Cap Screws
52	Hex Nuts
53	Seat Ring
54	Tablet
55	Hexagon Socket Head Cap Screws
56	Disc Seal
57	Disc Seal
58	O-Ring
59	Nut Press Ring
60	Hexagon Socket Set Screws



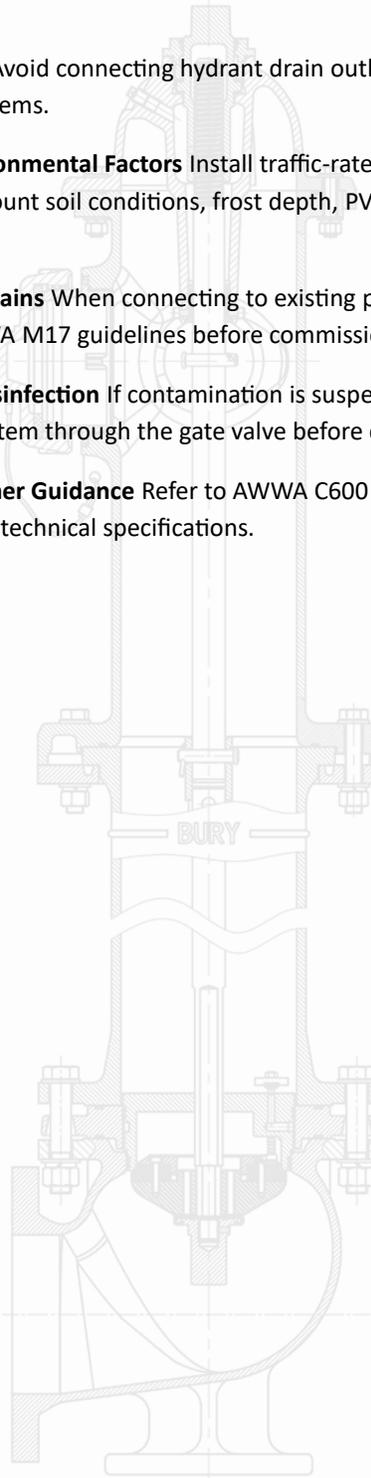
PRE-INSTALLATION INSPECTION

1. **Storage Positioning** If immediate installation is not possible, store the hydrant with the inlet facing downward. Inspect once again before use to confirm that no conditions have changed.
2. **Shipping Damage Check** Inspect the hydrant for signs of damage sustained during transit. Operate the Operating Nut (Item 1) fully in both directions to verify smooth movement and internal integrity.
3. **Threaded Connections and Nozzles** Check that all nozzles and their Hose Nozzle Caps (Hose Nozzle Cap Item 10 and 44), threaded joints, and external fittings are secure and have not loosened during transportation.
4. **Hydrant Closure** After completing inspection and functional checks, confirm that the main valve (Disc Item 57 and Disc Seal Item 56) is closed to prevent unintended flow when connected to the system.

INSTALLATION GUIDELINES

1. **Coordination with Water Mains** Ensure that the Century F600 hydrant installation is coordinated with the existing water mains to meet required fire flow capacities. Comply with local fire codes, municipal design standards, or relevant authority requirements.
2. **Upright Installation** Position the Century F600 fire hydrant as vertically as possible, considering site conditions. Ensure the hydrant remains plumb to allow for proper operation and maintenance.
3. **Setback Distance** Unless otherwise directed by local regulations, place the hydrant at least 2 feet (approximately 60 cm) back from the edge of the curb or roadway to ensure accessibility and protection.
4. **Nozzle Orientation** Align the pumper nozzle (4-4NH for 4" or 4.5-4NH for 4.5") to face the street to allow firefighters to connect to the hydrant quickly during emergencies.
5. **Nozzle Height and Clearance** Install all outlet nozzles, especially the hose connections (2.5-7.5NH Hose Nozzles), at a minimum of 18 inches (46 cm) above finished grade. Keep the area around the nozzles clear of obstructions to ensure wrench access and cap removal.
6. **Auxiliary Valve (Gate Valve) Installation** Install a 6" gate valve on the hydrant lead, as close to the main as practical, to allow for isolation during maintenance or emergencies. Provide appropriate thrust restraint (such as joint restraints or thrust blocks) to secure the connection without requiring shutdown of the main line.
7. **Clean Piping Before Installation** Clear any debris or foreign material from the hydrant connection pipe before installing the Century F600 hydrant and its valve to prevent contamination and ensure proper function.
8. **Secure Foundation** Mount the hydrant on a solid base, such as concrete or stone, to avoid settling strain on the riser, or damage to the lead pipe. Use thrust restraint systems to prevent movement under pressure.

9. **Drain Hole Protection** When placing concrete or other supports, do not obstruct the hydrant's drain holes. Keep them clear for proper drainage.
10. **Drainage Considerations** In locations with high water tables, plug the drain outlets to prevent groundwater from entering. Fully drain or pump the hydrant dry and mark it clearly to avoid freezing damage.
11. **Drain Outlet Restrictions** Avoid connecting hydrant drain outlets to storm drains, sanitary sewers, or any domestic water systems.
12. **Traffic Hydrants and Environmental Factors** Install traffic-rated hydrants per AWWA Manual M17 guidelines, taking into account soil conditions, frost depth, PVC piping, drainage capacity, and potential traffic loads.
13. **Disinfection for Existing Mains** When connecting to existing pipelines, disinfect the Century F600 hydrant according to AWWA M17 guidelines before commissioning.
14. **Debris Removal Before Disinfection** If contamination is suspected, disassemble the hydrant (valve and seat) and flush the system through the gate valve before disinfecting.
15. **Pressure Testing and Further Guidance** Refer to AWWA C600 and AWWA M17 for pressure testing procedures and additional technical specifications.



DISASSEMBLY AND INSPECTION

Note: Use calibrated torque tools to prevent over-tightening.

1. **Shut Off Water Supply** Close the Century F600 Fire Hydrant gate valve to stop the water flow from the main pipe into the hydrant.
2. **Relieve Internal Pressure** To safely relieve any residual pressure, remove one of the Hose Nozzle Caps (Item 10 or 44). Turn the Operating Nut (Item 1) counterclockwise three full turns. After the water has stopped draining, fully close the hydrant by turning the Operating Nut (Item 1) clockwise until it gently stops.

Caution: Ensure all internal pressure is relieved before disassembly to avoid injury.

3. **Apply Lubricant** Remove the top external Plug (Item 5) and apply manufacturer-recommended lubricant into the exposed cavity. This lubricates the Top Shaft (Item 8) and protects the O-rings inside the Cover (Item 6) from thread damage during removal.
4. **Remove Top Components** Loosen and remove the Lock Nut (Item 3) and the Operating Nut (Item 1). Keep the Antifriction Pad (Item 4) for reassembly.
5. **Protect O-Ring During Cover Removal** Insert the protective sleeve (accessory) with its chamfered end into the Top Shaft (Item 8) threads. This will prevent damage to the O-Ring during Cover (Item 6) removal.
6. **Cover Removal** Unbolt and gently lift off the Cover (Item 6). Carefully remove the cover O-Ring from the Top Body (Item 7).
7. **Seat Wrench Setup** Remove the protective sleeve. Place the seat wrench bracket (accessory) over the valve stem. Insert the T-handle seat wrench (accessory) through the bracket until it engages the retaining pin in the rod. Tighten the bracket screw and rotate the wrench counterclockwise approximately seven full turns to disengage the internal rod assembly.



8. **Extract Internal Components** Remove the seat wrench and bracket, then lift out the rod assembly. Disassemble and inspect parts such as the main valve, Tablet (Item 54), Seat Ring (Item 53), and seals. Replace any components that are worn or damaged.
9. **Drain Valve and O-Ring Check** Inspect the Drain Valve Cover (Item 49) facings and all O-Rings for wear, cracking, or deformation. Replace as necessary before reassembly. Use spare O-Rings, as they may be easily damaged during disassembly.

REASSEMBLY

1. **Reinstall Internal Valve Components** Reassemble the valve components in reverse order of disassembly. Tighten the Tablet (Item 54) nut to the specified torque (approximately 100 ft-lb). Bend the Lock Washer (Item 32) to secure the nut.
2. **Insert Rod Assembly** Lower the rod assembly back into the hydrant body carefully to avoid damaging the O-Rings. Use the seat wrench and bracket to torque the assembly into place (approximately 375 ft-lb).
3. **Reinstall Cover and Seals** Install a new or inspected O-Ring into the flange groove. Reattach the Cover (Item 6) and bolts loosely at first, then tighten once everything is correctly aligned.
4. **Reinstall Top Components** Remove the protective sleeve. Reinstall the Operating Nut (Item 1) and Antifriction Pad (Item 4). Inspect the O-Ring of the Lock Nut (Item 3); replace if necessary. Secure the Lock Nut (Item 3) and fully tighten all cover bolts.

NOZZLE REPLACEMENT

1. **Remove Existing Nozzle** Unscrew the Hose Nozzle Cap (Item 10 or 44). Use the nozzle lock key and a hammer to remove the lock keys. Fit the nozzle wrench onto the nozzle with correct alignment.
2. **Loosen Nozzle** Slide a sturdy extension (e.g., 3-ft. steel pipe) over the wrench handle for leverage. Loosen the nozzle by turning clockwise.

Note: reverse threads.

3. **Install New Nozzle** Thread the new Hose Nozzle (Item 12 or 46) and Hose Nozzle Gasket (Item 11 or 45) into place counterclockwise. Hold the nozzle in alignment using the wrench and cap and tighten to approximately 600 ft-lb. Remove the wrench and cap.
4. **Lock Key Installation** Reinsert the lock keys between the nozzle lugs and the hydrant body using the key tool and hammer. Ensure proper seating and alignment. Perform a standard leak test to ensure proper sealing.

By following these maintenance steps, your hydrant will remain in proper working condition and ready to provide service when needed most.

Please contact us at sales@centuryvalves.com for all your hydrant needs.