



LICHFIELD
FIRE & SAFETY
EQUIPMENT
CO. LTD.

WET BARREL HYDRANT

LF-WBHM-115 / LF-WBHX-115

LF-WBHM-100 / LF-WBHX-100

Installation, Operation
and Maintenance Manual

Version: 1

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INSPECTION BEFORE DELIVERY

1. The fire hydrants have been pressure tested before leaving the factory to ensure no leakage.
2. Check whether the fire hydrant is damaged during shipment before installation. Rotate the operating nut to fully open and close the fire hydrant to ensure that components are intact.
3. Pressure and leak tests should be performed on the hydrant before installation to ensure that the nozzles and threaded fasteners are not loose during shipping time.
4. After the inspection and testing are completed, close every valve of the hydrant.

INSTALLATION

1. The fire hydrant must be installed if conditions are permitted. The installation location must comply with local regulations or municipal design standards.
2. Install the fire hydrant with the water supply line for the fire protection system.
3. Unless specified by the locality, it is recommended that the distance from the edge of the road to the fire hydrant should be at least 2 feet.
4. Place the fire engine nozzle face to the street to be quickly connected to the fire pump.
5. The hose nozzle must be installed at least 18 inches [46 cm] above the ground so that the hydrant wrench can be properly operated to remove the nozzle cover or use the fire hydrant.
6. A gate valve (auxiliary valve) must be installed on the pipeline to isolate the fire hydrant and the main channel for maintenance or emergency shutdown. An end cap or other support shall be provided at the piping system's junction to remove the hydrant without closing the main water pipe.
7. The gate valve should be installed as close as possible to the main pipeline.
8. Install hydrants using solid feet (such as slate or concrete bases) to prevent settlement and deformation of the hydrant lines and risers. Joint end caps or other supports should be provided.
9. When closing the hydrant valve, please pay attention to whether there are debris or residuals, make sure all the covers are tight enough to prevent manual removal, and the auxiliary valve is in the fully open position.

TEST

Pressure test under main pipeline pressure:

The following steps are used to apply pressure tests on fire hydrants under main pipeline pressure after maintenance, repair, or installation.

1. Before testing, ensure that each valve is closed.
2. When the auxiliary valve is closed, remove the uppermost nozzle cover and open the uppermost valve slightly.

3. Open the auxiliary valve slowly to allow air in the system to escape from the opened nozzle valve. Warning: air in the system may be compressed, so please be careful during the operation.
4. When there is water flowing out of the nozzle outlet, the air is emptied. Close the valve and fully open the auxiliary valve.
5. Remove all nozzle covers and pressurize the fire hydrant to the pipeline pressure. Visually check whether the fire hydrant is leaking.
6. If any leakage is found, repair or replaces the defective parts and re-test.

Pressure test under higher main pipeline pressure:

The following steps are used to apply a pressure test on fire hydrants under pressure higher than the main pipeline pressure to verify whether the hydrant is leaking at the nominal pressure (250PSI).

1. Before testing, ensure that each valve is closed.
2. Remove all nozzle covers and connect the hydraulic test pump with the lowest hydrant's lowest outlet nozzle.
3. Open the uppermost valve slowly. Close it when the water flows out from the nozzle outlet, which means the air has been emptied.
4. Close the auxiliary valve of the system and open the test pump. Warning: air in the system may be compressed. Please be careful during the operation.
5. Pressurize the fire hydrant to the nominal pressure according to the test pump's operating procedures and visually check whether the fire hydrant is leaking.
6. If any leakage is found, repair or replaces the defective parts and re-test.
7. After the test is completed, close the outlet valve connected with the test pump, open the auxiliary valve, and put the fire hydrant into use.

MAINTENANCE AND REPAIR

Inspection and maintenance procedures should be conducted regularly. Use it at least once a year for inspections or exercises. And should be performed by authorized and trained staff.

1. Check if the chain and nozzle cover is bundled and if the nozzle cover can rotate freely.
2. Remove the nozzle cover and visually inspect the hydrant inlet flange joint, outlet nozzle, valve seat, and valve shaft inlet for leaks. If leaking, try to tighten the components. If leakage cannot be resolved, mark it for subsequent repair.
3. Check whether there is any damage or foreign matter accumulation in the nozzle outlet thread. If the thread needs to be cleaned, ensure unimpeded screwing.
4. Check whether the fire hydrant has bare metal. If so, repair the paint in time.
5. Close the auxiliary valve, isolate the fire hydrant from pipeline pressure, open and close each valve twice, and the valve shaft shall rotate freely without obstruction.

6. Visually check the disc sealing ring from the nozzle outlet. Compression should not exceed 3mm. If damaged, mark it for subsequent repair.
7. Close all valves and slightly open the uppermost valve to empty air from the system.
8. Slowly open the auxiliary valve in the system and close it when water flows out of the opened valve.
9. Repeat operation steps above for each valve and dispose of discharged water properly.
10. Close each valve and tighten each nozzle cover not to be easily removed by hand.
11. Ensure the auxiliary valve is fully open.
12. Record inspection and necessary follow-up maintenance (if required).
13. Put the fire hydrant back into use.