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JINAN MEIDE CASTING CO., LTD.

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Wet Barrel Fire Hydrant Installation Manual (SSZ2)

Product Review

The fire truck is connected to the outlet nozzle on the fire hydrant through the fire hose, and takes water from the municipal or outdoor fire water supply pipe network to put out the fire. It can also be connected to the fire hose or the water gun to put out the fire.

Wet fire hydrants are used in fire fighting. In the supply state, the pipeline is filled with pressurized water, and the fire can be extinguished quickly. Each water outlet has an independently controlled valve stem nut, which can be opened and closed according to needs. Use and install in an outdoor environment of 0° C-80° C.

Working Principle

Under ready condition, the valve disc and valve seat are sealed, and there is pressure inside the valve body.

In the working state, rotate the valve stem cap of the water outlet that needs to be used counterclockwise. The valve stem cap drives the valve stem to make a linear motion, and drives the valve disc to move backward. The valve seat of the fire hydrant and the valve disc are no longer in contact. Water spouts out.

Product Feature

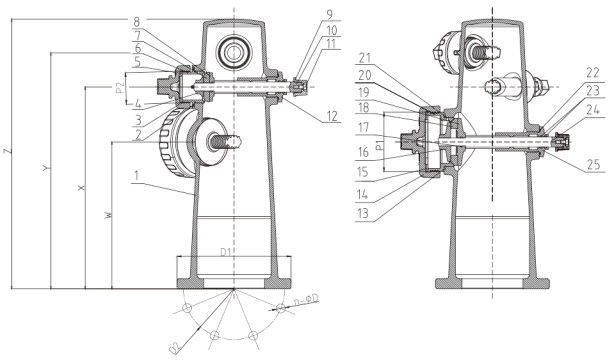
- Double O-ring design on the valve stem: improve the sealing performance of the valve stem; at the same time protect the operating parts from corrosion and from external dust intrusion.
- Key accessories such as nozzles and valve stems (SSZ2) are made of tin bronze, which has good rust and corrosion resistance.
- Reliable Tapered Seal: With self guiding positioning function, makes the seal solid and reliable.
- The detachable design of the nozzle: convenient and reliable for use, installation, and maintenance.
- The valve disc and bonnet are double sealed, preventing water leakage.

Specification & Standard

Design Standard		AWWA C503、UL 246、FM 1511
Connection Standard		ASME B16.42 Class 150
Coating Standard		AWWA C550
Nominal Pressure PN		300 Psi
Nominal Diameter DN		DN150
Test Pressure	Strength Test	600Psi
	Sealing Test	600Psi
Empty Operation Torque		≤ 27N.m
Closing/Opening Torque		≤ 270N.m
Head Loss		2 1/2" : ≤ 13.7KPa 4 1/2" : ≤ 34.5KPa
Pumper Connection Nozzle size		1-4-4NH 1-4.5-4NH 1-5-4NH
Hose Connection Nozzle Size		2-2.5-7.5NH
Applicable Medium Temperature		0°C -80°C
Applicable Medium		Water or medium with physical and chemical properties similar to water

Due to continuous optimization of performance, there may be differences between the real object and the photo, please refer to the actual object for details;

Structural Design and Dimensions



Product Structure

Dimensions

DN		Dimensions(mm)								
Inch	mm	D1	D2	n-ΦD	W	X	Y	Z	P1	P2
6"	DN150	280	241.3	8-Φ22	361	496	580	663	1-4-4NH 1-4.5-4NH 1-5-4NH	2-2.5-7.5NH

Additionally, P1 can provide 4 ", 5" threaded water outlets in accordance with BS 336

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Material Specifications

No.	Part	Standard Specification	Options
1	Main Body	ASTM A536 65-45-12	
2	O-Ring	NBR	EPDM
3	2.5" Nozzle Cap	ASTM A536 65-45-12	
4	2.5" Disc Gland	C83600	
5	2.5" Nozzle Gasket	EPDM	
6	2.5" Hose Outlet	C83600	
7	2.5" Rubber Disc	Q235+NBR	Q235+EPDM
8	2.5" Disc Bushing	C83600	
9	Stem Cap	ASTM A536 65-45-12	
10	2.5" Stem	C83600	AISI 304
11	Hexagon Socket Bolt	Carbon Steel Galvanized	AISI 304
12	Tailstock	C83600	
13	O-Ring	NBR	EPDM
14	4.5" Nozzle Cap	ASTM A536 65-45-12	
15	4.5" Nozzle Gasket	EPDM	
16	4.5" Disc Gland	C83600	
17	O-Ring	NBR	EPDM
18	4.5" Rubber Disc	Q235+NBR	Q235+EPDM
19	4.5" Disc Bushing	C83600	
20	4.5" Outlet	C83600	
21	Hexagon Socket Set Screws With Flat Point	Carbon Steel Galvanized	AISI 304
22	O-Ring	NBR	EPDM
23	O-Ring	NBR	EPDM
24	4.5" Stem	C83600	AISI 304
25	Tailstock	C83600	

Installation & Application

1. Preparation Before Installation

1.1 Before installation, please carefully check whether the product information is consistent with the working conditions. If there is any difference, please consult before using it; please specify it for special working conditions such as seawater and corrosive media, and customize according to working conditions.

1.2 Check if the opening and closing of the fire hydrant is working properly.

1.3 Keep all water outlets of the fire hydrant closed.

1.4 Flush the pipes before installation to ensure that the pipes are clean.

2. Installation Precautions

2.1 In order to facilitate fire trucks to take water directly from the fire hydrant, the distance between the fire hydrant and the roadside should not be greater than 2 m. The recommended distance between the fire hydrant center and the roadside line is 0.6 meters.

2.2 It is recommended to install an accessory gate valve between the fire hydrant and the main pipeline to facilitate the checking and maintenance of the fire hydrant without closing of the main pipeline.

2.3 When installing, the main nozzle should face the street.

2.4 This fire hydrant should be installed vertically.

3. Installation and Debugging

3.1 After the fire hydrants are installed, hydrostatic pressure test should be carried out.

3.2 When pressure test is completed successfully, the fire hydrants should be flushed and the drainage condition checked. Remove one of the nozzle caps and remove any dirt and deposits that may be generated when flushing. Check all nozzle fittings for leaks. Replace the hose connector to verify proper nozzle threading. Turn on and off fire hydrant and check if the opening and closing are working properly.

3.3 Facing the operating nut, turn the operating nut counterclockwise can open any outlet of the hydrant.

3.4 The torque for opening and closing fire hydrants should not exceed 27N, force should be applied uniformly.

Transportation & Storage

1. During transportation, take care to prevent violent vibration, throwing, collision, crushing, etc., and with proper protection from rain or chemical erosion.
2. Hydrants should be stored in a clean, dry, well-ventilated indoor places with non corrosive environment. The products should not be placed upside down.
3. The valve should not be dragged on the ground or move with the ground surface to avoid damage to the surface, metal plate and sealing surface.
4. The valve should be kept in a safe place and should be waterproof and dustproof.

Trouble Shooting

No.	Problem	Cause	Solution
1	Stem clamping	1、Lack of lubrication 2、Over force applied to stem and caused bending	1、Add lubricating oil 2、Replace the valve stem
2	Leakage of sealing surface	1、Sealing surface has contaminants attached 2、Sealing surface is damaged 3、Sealing surface is worn after long service	1、Remove dirt 2、Replace the valve seat 3、Replace the valve seat
3	Leakage at the joints of the cover, main body, and inlet flange	1、O-Ring aging 2、Loose bolts	1、Replace the O-Ring 2、Tighten the bolt

Maintenance

Inspect fire hydrants once a year in spring and autumn. Inspection method:

1. Use a special wrench to open and close the operation nuts of the fire hydrant, which should operate flexibly without jamming. Add lubricating oil If necessary.
2. Check if the coating surface is in good condition without peeling or rust. Repair the coating if necessary.
3. Close the fire hydrant, remove one nozzle cover, and check the drainage functioning.
4. Inspect the rubber gasket at the nozzle cover, O-ring, etc. for damage,aging, and replace if necessary.
5. Clear the debris around the fire hydrant at any time.
6. Make sure the auxiliary valve is open.
7. Maintenance records should be complete and effective.
8. The valves in use should be regularly maintained. Generally, valve flexibility operation, inspection, and drainage should be carried out at least once a month. Equipment with filtration function or used in environments containing debris should be maintained more frequently, and inspected and cleaned at least once a week to avoid affecting its function.
9. It is prohibited to strike, stand or support heavy objects on the valve in operation.
10. This type of fire hydrant cannot be used at freezing temperatures, and should not be used in areas with temperatures below 0℃.
11. Please strictly follow the instructions or consult in advance, otherwise our company will not bear any losses or responsibilities in case of any problems.

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