

HYDRANTS TECHNICAL DATA



QUARTERHORSE 1/4 TURN NON-FREEZE WALL HYDRANTS

Box-type 1/4 turn non-freeze wall hydrants are recommended for all finished exterior walls. Smith regularly furnishes this type wall hydrant with a stainless steel box. Figures 5560QT Series has a bronze box with a high polished chrome plated face. Stainless Steel and chrome plate finish will not "oxide stain" finished exterior walls. All Smith boxes are face-of-wall design. The box flange covers the rough opening and fits flush against exterior wall surface. The hinged locking cover conceals the hose nozzle and all operating parts. Advantages of flush recessed box type non-freeze hydrants are:

- No protruding hose connection, operating mechanism or key.
- Cannot be used by unauthorized persons.
- Protected against vandalism and tampering.
- Flush design offers the ultimate in appearance in any finished exterior wall.

Projecting hose connection type 1/4 turn non-freeze hydrants (5600 Series) are recommended in finished exterior walls where protruding parts will not present a problem and where vandalism or tampering protection is not a necessity. This type is recommended with a nickel plated face to prevent staining of finished walls. Usually, the exposed type hydrant is installed where shrubs or other plantings conceal the hydrant and where property is protected by fencing or other security measures.

HOSE CONNECTIONS Smith 1/4 Turn Non-Freeze Wall Hydrants are regularly furnished with a 3/4" - 11 1/2 NH garden hose connection. This connection is regularly furnished for both 3/4" and 1" inlet sizes. A 1" 11 1/2 NPSH water hose connection can be furnished (-HC1) when specified.

1/4 TURN NON-FREEZE SERIES With exception of short as possible (-SAP) types, series 5500 and 5600 should always be used where outside temperatures drop below freezing. In mild climates or at indoor locations where freezing temperatures are not encountered, the 5509QT-SAP type mild climate box hydrants are recommended. These series are regularly furnished with a stainless steel box to protect the finished wall from staining.

The 5509QT and 5609QT series non-freeze wall hydrants are regularly furnished with an integral atmospheric vacuum breaker. The 5560QT and 5561QT series are regularly furnished without a vacuum breaker. These are available with an add-on type vacuum breaker as variation (-H) when specified.

Back siphonage is prevented when a negative pressure or vacuum occurs in the hydrant by automatically closing the vacuum breaker and opening air ports, thus breaking the vacuum within the hydrant.

REPLACEMENT PARTS LIST

The following diagrams and replacement parts list can be used in figure numbers below. All Smith hydrant submittal drawings show a complete parts list on reverse side of drawing.

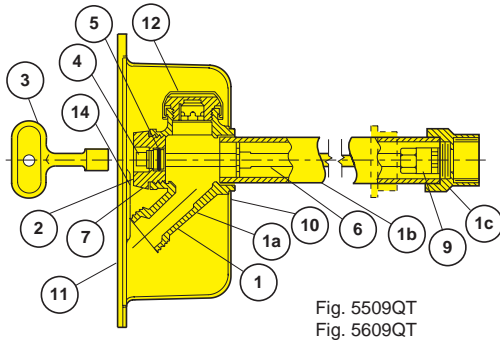


Fig. 5509QT
Fig. 5609QT

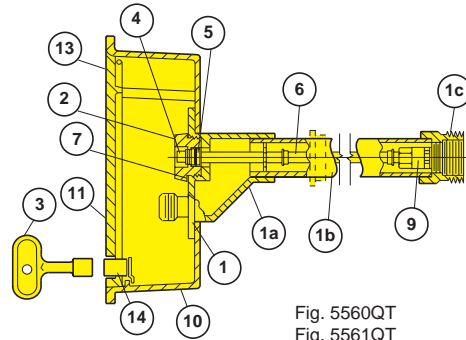


Fig. 5560QT
Fig. 5561QT

REPLACEMENT PARTS LIST WITH USE BY FIGURE NUMBER									
SPECIFY FIGURE NUMBER WHEN ORDERING									
PART NO.	DESCRIPTION	FIGURE NUMBER							
		5509QT	-SAP	5560QT	-SAP	5561QT	-SAP	5609QT	-SAP
1	HEAD/CASING ASSY.								
1a	HEAD								
1b	CASING								
1c	VALVE HOUSING								
2	FACE NUT								
3	KEY								
4	ACTUATOR SHAFT								
5	ACTUATOR "O" RING								
6	OPERATING ROD								
7	FACE NUT WASHER								
8	BACKER PLATE								
10	BOX								
11	COVER								
12	VACUUM BREAKER ASSY.								
13	HINGE PINS (2)								
14	LOCKING DEVICE								



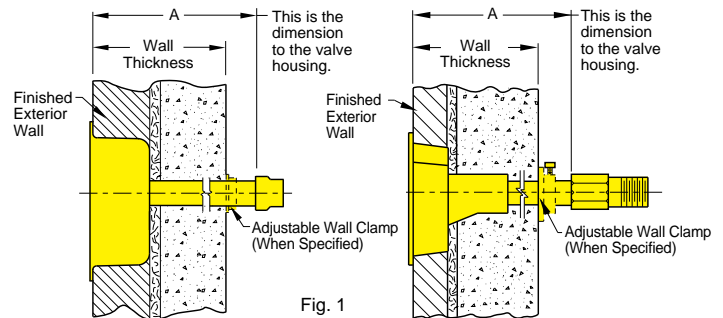
HYDRANTS TECHNICAL DATA AND OPTIONAL INLET CONNECTIONS

NON-FREEZE GROUND AND POST HYDRANTS are supplied with a special valve housing which prevents freezing of hydrant during non-use periods. The valve housing must be installed below the frost line (minimum depth of bury) which prevails for the area of installation. The valve housing has a drain hole which drains the casing of hydrant when hydrant is shut off. In effect, there is no water in the casing during non-use periods. Normally, water from the drain hole is allowed to drain into the ground. The valve housing should be set in a bed of gravel so that water drained from casing can leach into ground.

Some locations which require Non-Freeze Ground Hydrants cannot tolerate water draining from the drain hole. Examples are parking garages, plazas, and roof decks used for recreational purposes. Often in this type of application the valve housing will protrude into a finished area which is not subject to freezing temperatures. To eliminate the problem of water drainage in this type of installation, Smith can supply a tapped drain hole in the hydrant box and a tapped drain hole in the valve housing. By using the tapped drain hole, water accumulation in the box, and the normal drain down water from the valve housing drain hole can be piped to a suitable drain.

SPECIFYING WALL SIZE Primary function of both 5500 and 5600 Series 1/4 Turn Non-Freeze Wall Hydrants is to supply water to the building exterior without danger of freezing, regardless of how low the outside temperature falls. For this reason, the hydrant must be specified with a casing long enough to locate the valve seat inside the heated building. (Fig. 1) shows how to determine proper size required.

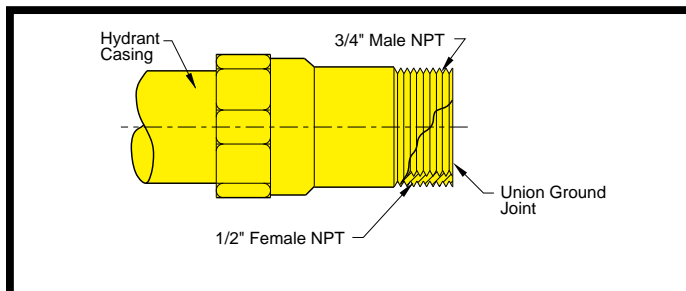
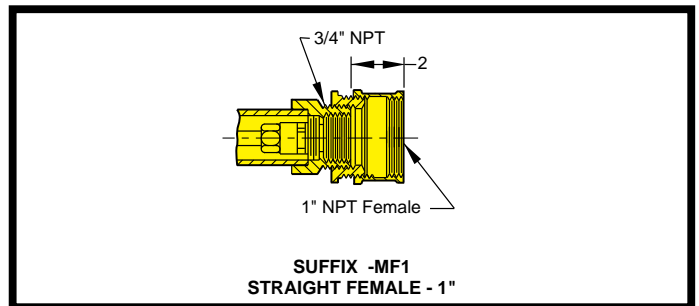
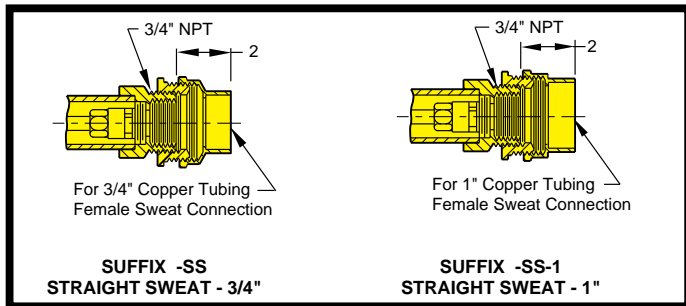
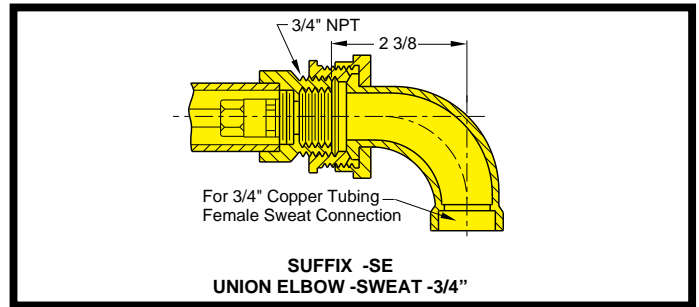
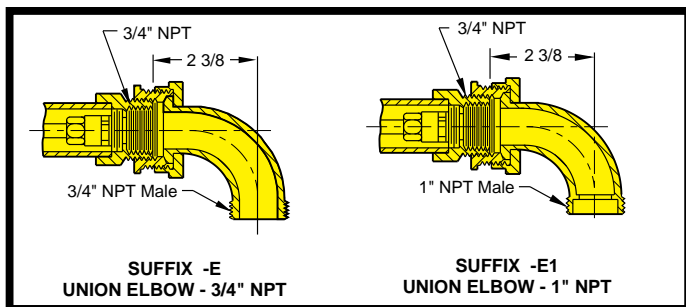
NOTE: All wall hydrant series are available in short as possible types for mild climate installation. Specify series number -SAP.



NOTE: When ordering, specify Figure Number and "A" dimension. "A" should always be greater than wall thickness for non-freeze installations. When a wall clamp is specified, add 1/4" to the wall thickness to arrive at a minimum required "A." The "A" specified should be the next larger, even number; such as 6", 8", 10", etc. Wall hydrants are furnished in lengths of 2" increments.

Often, non-freeze wall hydrants must be concealed entirely within the wall. When so required, an overall dimension can be specified. This dimension is measured from face of hydrant box to extreme end of inlet connection. When the valve seat must be concealed within the wall, extra precautions must be taken to properly insulate the valve seat housing to protect against freezing.

OPTIONAL INLET CONNECTIONS



UNIVERSAL INLET CONNECTION

Hydrants are regularly furnished with a unique inlet connection, 3/4" NPT Male thread, 1/2" NPT Female thread, and union ground joint carefully engineered to accommodate inlet connections shown above.

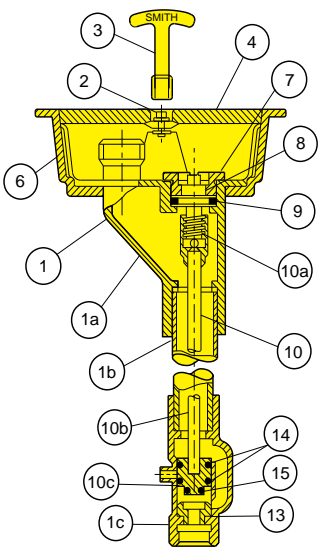


Fig. 5810

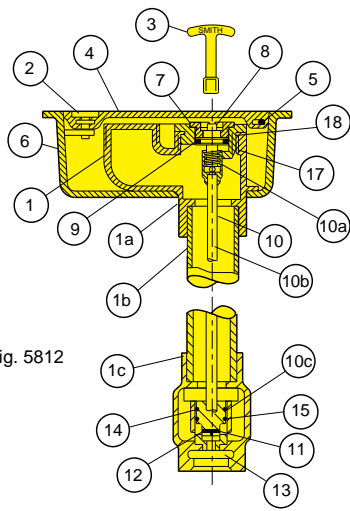


Fig. 5812

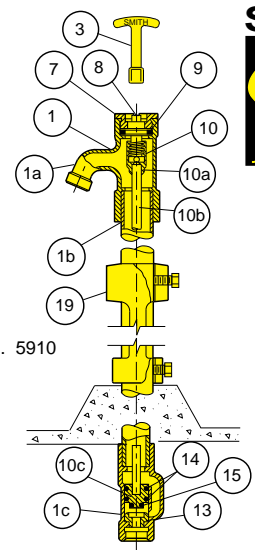


Fig. 5910

**REPLACEMENT PARTS LIST WITH USE BY FIGURE NUMBER
 SPECIFY FIGURE NUMBER WHEN ORDERING**

PART NO.	DESCRIPTION	FIGURE NUMBER													
		5810	-F	5811	-F	5812	5813	5814	5910	5911	5912	5913	5914	5950	5951
1	HEAD/CASING ASSY.														
1a	HEAD														
1b	CASING														
1c	VALVE HOUSING														
2	LOCKING DEVICE														
3	KEY														
4	COVER														
5	HINGE PINS (2)														
6	BOX														
7	FACE NUT														
8	OPERATING SCREW														
9	OPERA. SCR. "O" RING														
10	OPERA. ROD ASSY.														
10a	COUPLING														
10b	ROD														
10c	PLUNGER														
11	WASHER SCREW														
12	WASHER NEOPRENE														
13	REMOVABLE SEAT														
14	PLUNGER "O" RING														
15	PLUNGER "O" RING														
16	LIFTING DEVICE														
17	FACE NUT SEAT														
18	FACE NUT SEAT GASKET														
19	CASING GUARD														

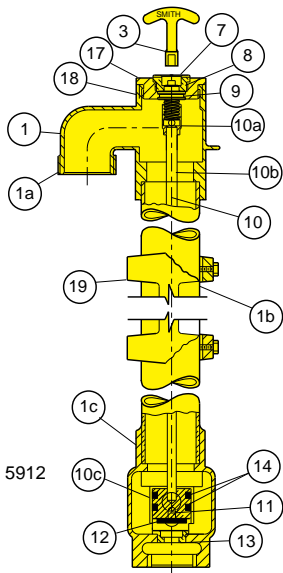


Fig. 5912

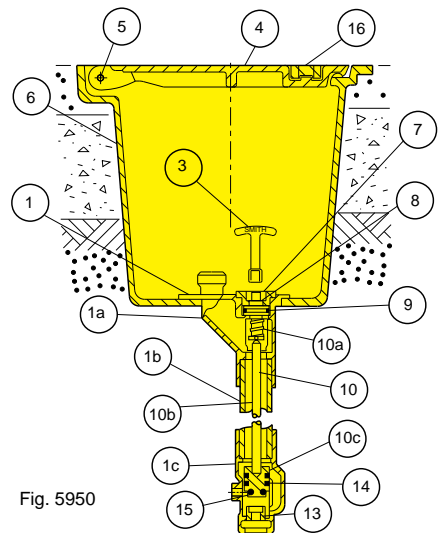


Fig. 5950