Manifolds for drip irrigation connections to city water (with ¾'' outlets)

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Useful plumbing terms

FPT = female pipe thread (a threaded socket with inside threads); pipe threads are tapered.

MPT = male pipe thread (threaded pipe or fitting with outside threads

MHT = male hose thread ¾-inch or 5/8-inch garden hose threads

FHT = female hose thread ¾-inch or 5/8-inch garden hose threads

SCH 40 PVC = This is the white plastic (Schedule 40 PVC) pipe sold in hardware and home stores; it can be easily glued together with PVC glue.

Slip = A smooth-walled PVC pipe fitting which is usually glued into another smooth-walled fitting (slip fit)

"T" or "tee" = a T-shaped pipe fitting with 3 threaded or slip-fit sockets

Elbow or "ell" = 90- or 45-degree pipe fittings with 2 threaded or slip-fit sockets

Nipple = a short length of pipe threaded at both ends

Coupler = a short pipe fitting with two sockets for joining two lengths of pipe (threaded or slip)

Union = a pipe fitting used to make an easily detachable pipe connection

Manifold for connecting ¾” water line to 1.5” layflat for drip irrigation (Figure 1)

Parts list and cost (does not include injector or filter)

1. ¾’’ MPT to ¾’’ FHT = $4.19
2. ¾” FPT brass check valve (Swing type) = $6.40
3. ¾”x ¾” x 3”-long MPT to MPT pipe nipple =$1.87
4. 1.5” male slip to ¾” FPT coupler SCH 40 PVC = $1.67
5. 1.5” FPT to 1.5” female slip SCH 40 PVC = $1.32
6. 1.5” MPT Pressure reducer (15 PSI Max) = $28.50
7. 1.5” FPT Elbow SCH 40 PVC = $2.97
8. 1.5” MPT to 1.5 Barb” (This part is what connects to the layflat. Put two hose clamps on the layflat, slide the layflat over the barb end and tighten the clamps) = $0.83

Not pictured:

Hose clamps = $8.91/10 count

1.5’’ Layflat = $91/300 ft

8 mil drip tape = $145/7,500 ft

Connectors (these join individual drip lines, or drip tape, to layflat) = $1.50 each

Figure 1. Manifold for connecting ¾'' water line to 1.5'' layflat for drip irrigation

Manifold for injecting fertilizer into a ¾" water line (Figure 2)*

Parts list and cost

1. ¾" FHT to ¾" MPT = $4.19

2. ¾" MHT to ¾" MPT (this part connects to the end of a hose that connects to a faucet where the water would be coming from) = $4.19

3. ¾" "T" FPT SCH 40 PVC = $2.26

4. 2 pieces of ¾"x ¾" x 3"-long MPT to MPT nipple = $1.87 x 2 = $3.74

5. ¾" ball valve (threaded) = $2.60

6. 1.5" male slip to ¾" FPT coupler SCH 40 PVC = $1.67

7. 1.5" MPT to 1.5" female slip SCH 40 PVC = $1.32

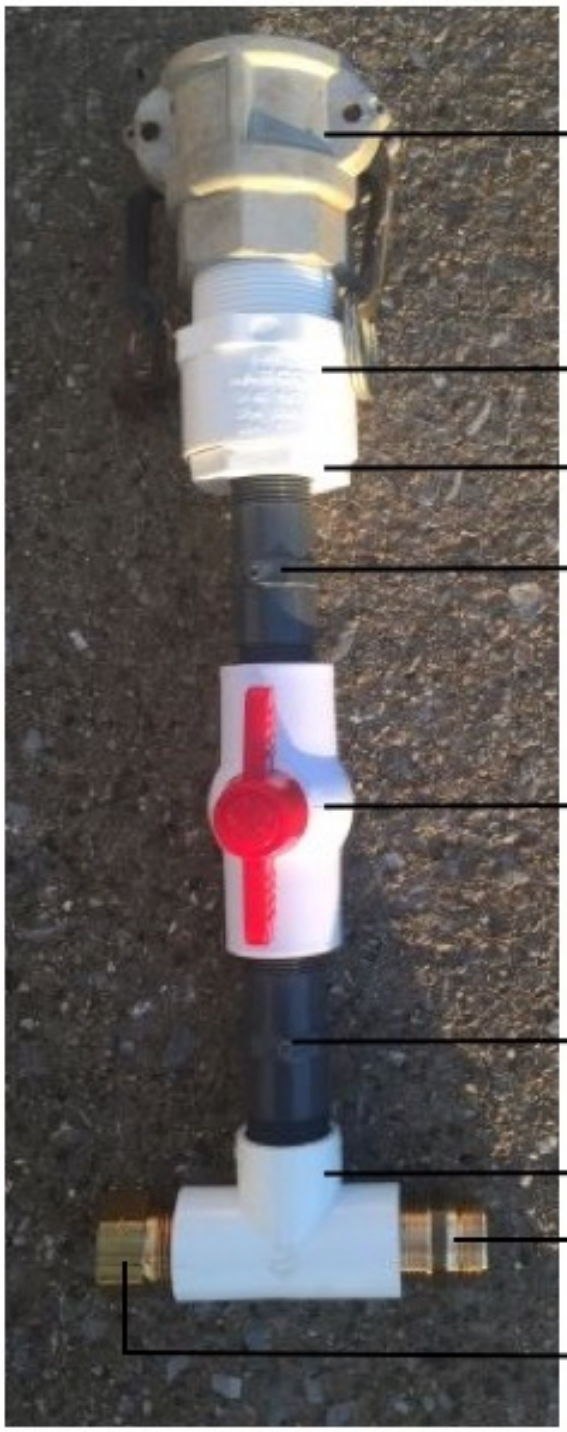
8. 1.5" female quick connect to 1.5" FPT (this part is for connecting to an injector for fertigation as seen in Figure 3. The injector will need to have the male quick connect.) = $7.70 for aluminum ($8.80 for poly)

Not pictured:

Flexible male to female ¾'' garden hose = $8.38

*IMPORTANT: A LEGAL BACKFLOW PREVENTER MUST BE INSTALLED ELSEWHERE IN THE SYSTEM IF USING CITY WATER.

Figure 2. Manifold for injecting fertilizer into a ¾ '' water line (assumes legal backflow preventer elsewhere in the line)



8.) 1.5" Female Quick Connect to 1.5'' FPT to injector tank

7.) 1.5" MPT to 1.5'' Female Slip SCH 40 PVC

6.) 1.5" Male Slip to ¾'' FPT SCH 40 PVC

4.) ¾"x ¾"x 3" MPT to MPT pipe nipple

5.) ¾" Ball valve (threaded) SCH 40 PVC

4.) ¾"x ¾" x 3" MPT to MPT pipe nipple

3.) ¾" "T" (threaded) FPT SCH 40 PVC

2.) ¾" MHT to ¾" MPT hose connection

1.) ¾" FHT to ¾" MPT

Figure 3. Tank for injecting fertilizer into ¾'' water line