2. Granular Activated Carbon Filter

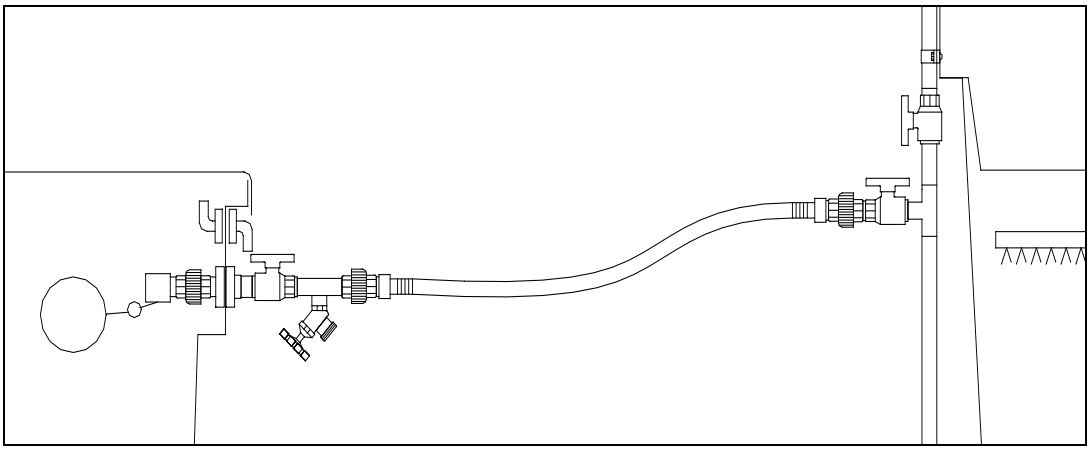
The Granular Activated Carbon (GA Carbon) filter is used for treatment of groundwater for removal of a variety of substances such as toxins, odour, colour, tastes, etc. The BioSand filter will remove the particulate matter. The GA Carbon water filter media is a consumable material and will require replacement when it stops working. Disinfection with Ultraviolet (UV) or chlorine is recommended after the GA Carbon water filter.

Important Notes:

- **All of the assembled components have been loosely fitted together. Use Teflon tape on all threaded connections and tighten. Do Not Over Tighten the PVC fittings. (They will crack if over-tightened)**
- **Refer to Figure 1 to find the locations for all system components.**
- **Heat the end of hose connections in hot water before installing. Use the gear clamps to fasten the hose to the barb fitting.**

Install Assembled Components

Step 1. Position the BioSand filter stand and GA Carbon water filter stand as shown in figure 1. Place the BioSand filter and GA Carbon water filter on the respective stands.
Step 2. Connect the BioSand filter and the GA Carbon water filter using the ¾" braided PVC hose and geared hose clamps.
Step 3. Flush the BioSand filter through the sampling valve at the GA Carbon water filter inlet.
Step 4. The GA Carbon water filter media is in a bag and only needs to be placed in the filter body. Remove the float valve in the GA Carbon unit and insert the GA Carbon media. Replace the float valve. Adjust the float valve as required during the start up. Flush the GA Carbon water filter with filtered water from the BioSand filter. Flush the GA Carbon water filter through the sampling valve at the filtered water storage tank inlet.
Step 5. Return to the manual and continue with the system installation.



BioSand Filter and GA Carbon Water Filter Coupler.

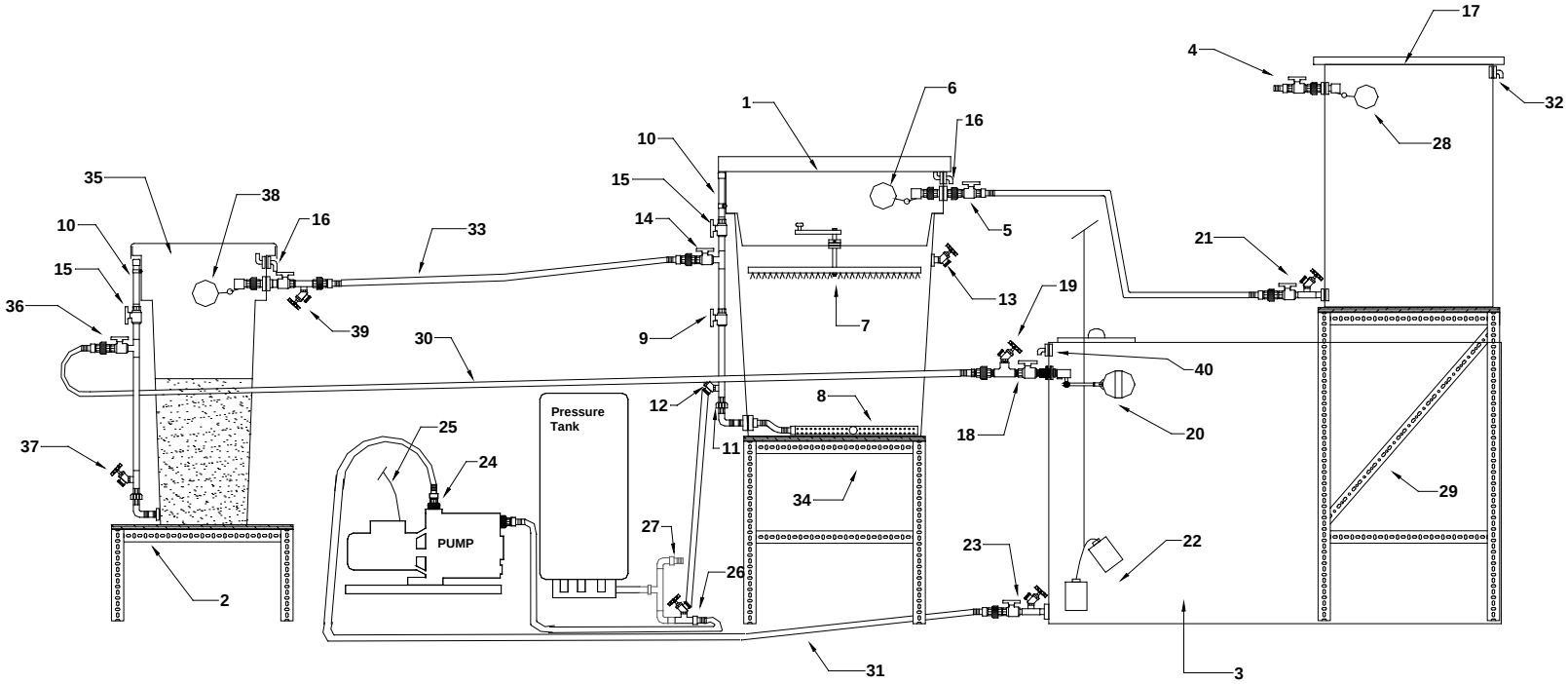


Figure 1 - Automated System Layout - BioSand Filter and GA Carbon Water Filter

1. BioSand Filter
2. Granular Activated Carbon (GAC) Stand
3. Storage Tank
4. Raw Water Inlet
5. Inlet Valve
6. Float Valve with Union Connection
7. Clean In Place (CIP) and Diffuser Basin
8. Underdrain
9. Flow Rate Control Valve
10. Filter Standpipe
11. Standpipe Union Connection
12. CIP / Reverse Flow Valve
13. Maintenance Drain Valve
14. Filter Outlet Valve
15. Anti-siphon Valve
16. Overflow
17. Head Tank
18. Storage Tank Inlet Valve with Union Connection
19. Sampling Valve
20. Storage Tank Float Valve
21. Head Tank Outlet
22. Low Level Float Switch (to the pump)
23. Storage Tank Outlet with Union Connection, Shutoff Valve and Drain Valve
24. Check Valve
25. Pump Electrical Outlet (to the low-level float switch)
26. Clean In Place (CIP) Reverse Flow (attached to standpipe lower valve)
27. To Distribution or Further Treatment (softener, Reverse Osmosis, UV)
28. Head Tank Inlet Float Valve
29. Head Tank Stand
30. ¾" Braided PVC Hose
31. 1" Braided PVC Hose
32. Head Tank Overflow
33. Filter to GAC Connection
34. Filter Stand
35. GAC Filter
36. GAC Outlet Valve
37. Drain Valve
38. GAC Inlet with Union Connection
39. GAC Inlet with Sample Valve
40. Storage Tank Overflow