Claims

1. A water treatment system, comprising:

at least one reverse osmosis cartridge;

at least one filtration cartridge;

at least one pump;

a manifold for recycling concentrate,

wherein said manifold for recycling concentrate comprises at least one valve assembly to regulate the amount of concentrate to be recycled; and

an enclosure.

2. The water treatment system of claim 1 wherein said water treatment system comprises at least two reverse osmosis cartridges.
3. The water treatment system of claim 1 wherein said at least two reverse osmosis cartridges are connected in parallel.
4. The water treatment system of claim 3 wherein said at least two reverse osmosis cartridges comprise a reverse osmosis cartridge assembly.
5. The water treatment system of claim 1 further comprising a post-permeate filter assembly.
6. The water treatment system of claim 1 wherein said post permeate filter assembly comprises at least two post-permeate filtration units.
7. The water treatment system of claim 1 wherein said water treatment system further comprises at least two filtration cartridges.

8. The water treatment system of claim 7 wherein each of said at least two filtration cartridges comprise at least two filtration units.
9. The water treatment system of claim 8 wherein said at least two filtration units comprise a filtration assembly.
10. The water treatment system of claim 1 wherein said at least one valve assembly comprises solenoid valves.
11. The water treatment system of claim 1 wherein said at least one valve assembly comprises step valves.
12. The water treatment system of claim 1 wherein said water treatment system further comprises a tank.
13. The water treatment system of claim 12 wherein said tank holds from about six gallons to about 24 gallons.
14. The water treatment system of claim 12 wherein said tank comprises fiber-reinforced plastic.
15. The water treatment system of claim 12 wherein said tank is bladderless.
16. The water treatment system of claim 1 wherein said water treatment system further comprises a permeate valve, wherein said permeate valve regulates the flow of permeate for flushing said water treatment system.
17. The water treatment system of claim 1 further comprising at least one pump assembly wherein said pump assembly comprises a mixing bowl.
18. The water treatment system of claim 17 wherein said at least pump assembly comprises at least one turbine.

19. The water treatment system of claim 17 wherein said pump assembly comprises at least three ports.
20. The water treatment system of claim 1, wherein the valve assembly regulates the amount of concentrate to be recycled based on one or a combination of factors including pressure of water flowing into the system, feed water quality, TDS value or output flow of water out of the system.