

Manz BSF 60

Description and Specifications – August 2021



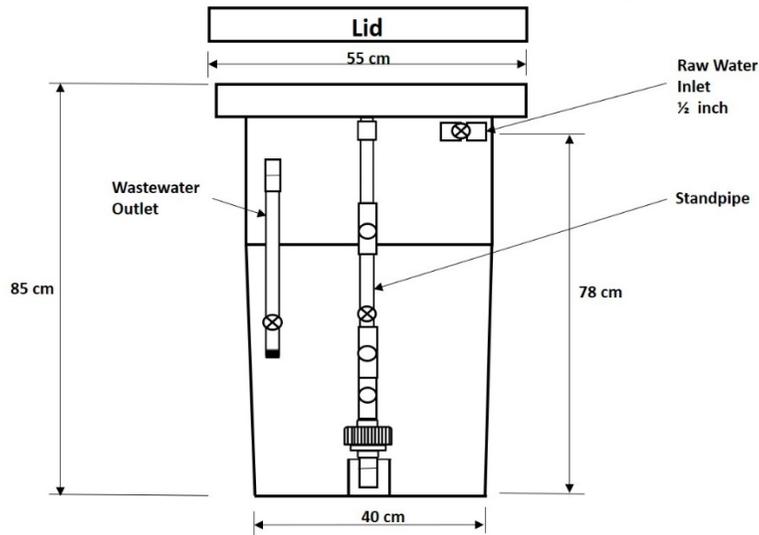
1. May be operated as a traditional slow sand filter or as a polishing sand filter. When operated as a slow sand filter water produced is free of all type of water borne parasites, such as Giardia and Cryptosporidium, and larger organisms such as Bilharzia and Guinea Worm and spores of infectious fungi. Most bacteria and viruses are also removed. Cholera is completely removed because it only survives in the gut of larger organisms that are easily removed. It is strongly recommended that filtered water be disinfected using chlorine or UV disinfection. The Manz BSF 60 will not remove most dissolved substances but does provide excellent pre-treatment for filters that do remove dissolved substances such as micro filters and reverse osmosis. The filter will remove oxidized iron (typical form) and dissolved arsenic with the iron (co-precipitation). The biosand filtration process has been proven to reduce concentration of organic pesticides.
2. Media bed design and media material supplied with filter meet AWWA recommended specifications for slow sand filtration.
3. Filter operation may be stopped and started as required without loss of performance when used as a slow sand filter or as a polishing sand filter.
4. Treatment rates may be adjusted as desired (1 L/min, 60 L/h equal to 400 L/h/m² or less when used as a slow sand filter and up to 3L/min, 180 L/h equal to 1,000 L/h/m² when used as a polishing sand filter).
5. Raw water supply flow rate as required by application at minimum pressure at filter inlet of 5 m head.
6. Flow into filter is controlled by external ball valve and internal mechanical float valve.

7. Flow into filter may be monitored using variable area flow meters (standard) or other flow rate monitoring instrumentation as required.
8. Operation (raw water inflow and filtered water outflow), backwash, wastewater evacuation may be manual or automatic. Manual operation is standard.
9. Filter is backwashable using filtered water (unchlorinated when used as a slow sand filter). Backwash flow rate of 0.636 L/s (10 US gal/min) is recommended though 0.318 L/s (5 US gal/min) may be satisfactory with a pressure head up to 6 m though the backwash water supply system at the filter wall. Volume per backwash is approximately 32 L. Frequency of backwash depends on suspended sediment load of water being treated. Wastewater is evacuated from filter by siphon action. Wastewater evacuation system also performs as emergency overflow during normal filter operation. Periodic mechanical agitation of the media surface coupled with manual removal of wastewater may be required if backwash is not providing adequate cleaning of media.
10. Filter-to-waste on filter outlet is provided to facilitate commissioning process, as per requirements of regulatory agency or client's specific needs.
11. Filters may be temporarily decommissioned and re-commissioned as required.
12. Tanks are constructed using food grade polyethylene. All other components are NSF 61 certified.
13. Filter media and underdrain media supplied with filter meet AWWA B-100 standards for slow sand filtration and are NSF 61 certified.
14. Filter media depth may vary from 15 cm to 80 cm as required. (Note that 35 cm depth of filter media meets the minimum requirements recommended by the AWWA for slow sand filters.
15. Maximum weight of media (35 cm of filter media and underdrain) and water in filter is approximately 250 kg.
16. Sampling port (also filter to waste outlet) is located on the filtered water outlet.
17. Filters are assembled by purchaser as per manuals provided at time of purchase.
18. Detailed manual for filter commissioning, operation and maintenance are provided with filter.

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Front View

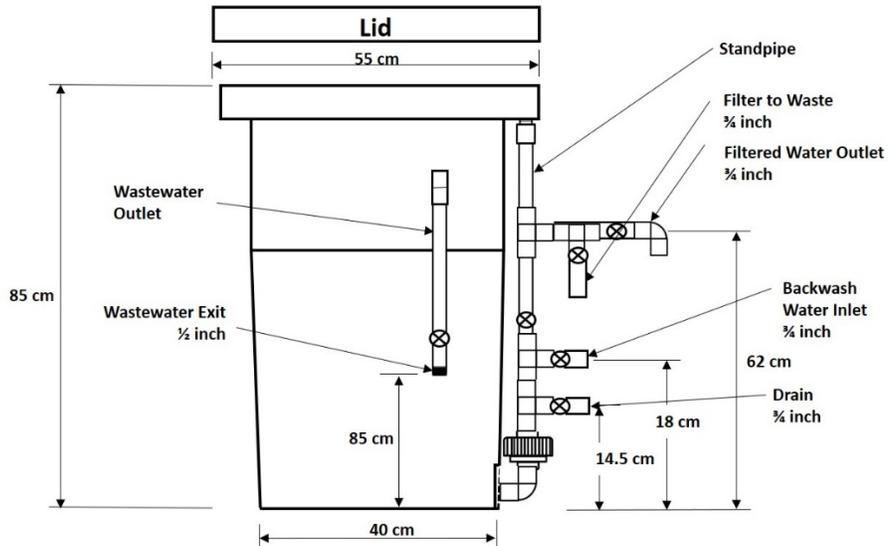
Total weight of filter c/w media and water (filled) is approximately 250 kg.



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Left Side View



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