

## TEE STRAINERS FABRICATED 304 AND 324 SERIES

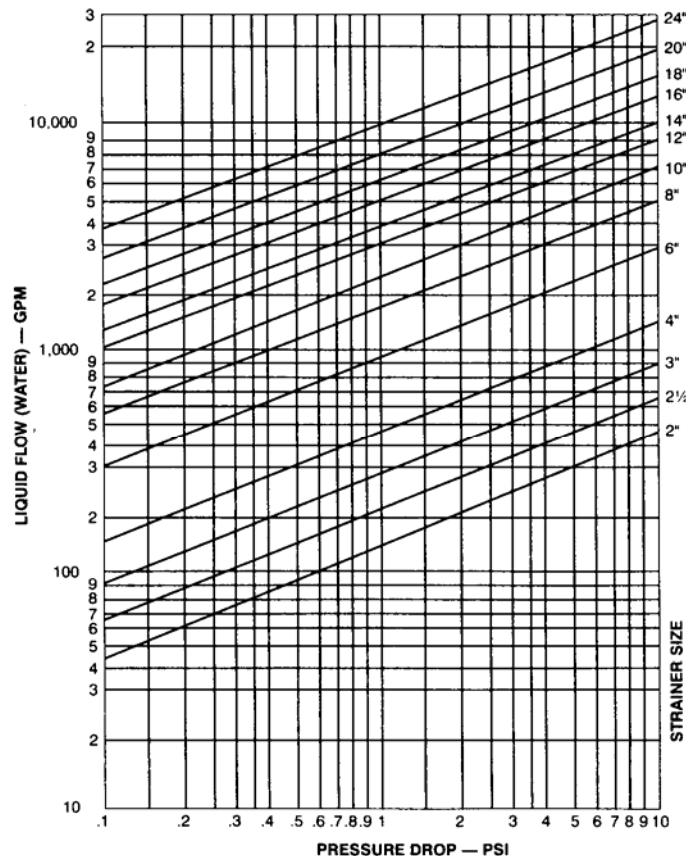
The Tee Strainer is fabricated with the customer's requirements in mind. The standard line, style 304 and 324, ranges from 2" through 24" pipe sizes in carbon steel with a 5/32" perforated element.

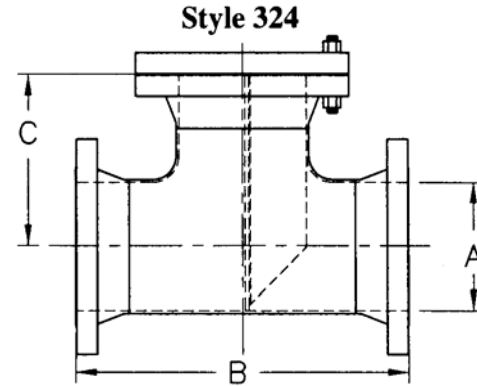
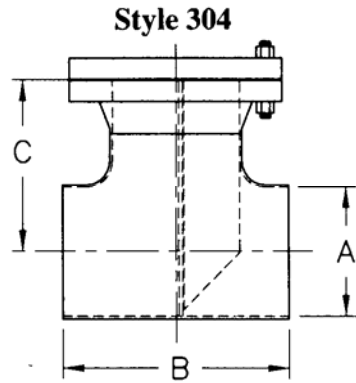
### STANDARD DESIGN FEATURES

- In line connections
- Compact, light weight fabricated vessels
- Wedge basket design with a low pressure drop
- Heavy duty wedge basket design for a long life
- Butt weld or flange connections
- Bolted flange closure
- 304 stainless steel wedge basket

### OPTIONAL FEATURES

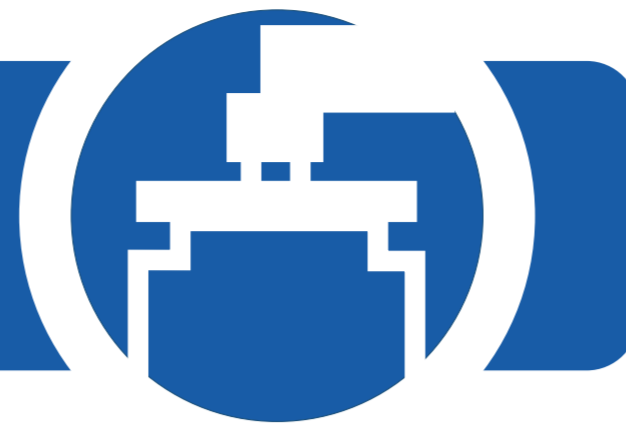
- Other materials of construction are available
- Large sizes have high pressure ratings
- Quick opening closures
- Closure davit lifts
- Mounting legs for large tees
- ASME code stamp
- Pressure differential gauge taps





NOMINAL PIPE SIZE	PIPE SCH	304 TEE STRAINER BUTT-WELD ENDS				324 TEE STRAINER FLANGED ENDS			
		150#		300#		150#		300#	
A		B	C	B	C	B	C	B	C
2"	40	5.0"	5.0"	5.0"	5.3"	10.0"	5.0"	10.5"	5.3"
50 mm		127.0 mm	127.0 mm	127.0 mm	134.6 mm	254.0 mm	127.0 mm	266.7 mm	134.6 mm
2-1/2"	40	6.0"	5.8"	6.0"	6.0"	11.5"	5.8"	12.0"	6.0"
65 mm		152.4 mm	147.3 mm	152.4 mm	152.4 mm	292.1 mm	147.3 mm	304.8 mm	152.4 mm
3"	40	6.8"	6.1"	6.8"	6.5"	12.3"	6.1"	13.0"	6.5"
80 mm		172.7 mm	155.6 mm	172.7 mm	165.1 mm	312.4 mm	155.6 mm	330.2 mm	165.1 mm
4"	40	8.3"	7.1"	8.3"	7.5"	14.3"	7.1"	15.0"	7.5"
100 mm		210.8 mm	180.3 mm	210.8 mm	190.5 mm	363.2 mm	180.3 mm	381.0 mm	190.5 mm
6"	40	11.3"	9.1"	11.3"	9.5"	18.3"	9.1"	19.0"	9.5"
150 mm		287.0 mm	231.1 mm	287.0 mm	241.3 mm	464.8 mm	231.1 mm	482.6 mm	241.3 mm
8"	40	14.0"	11.0"	14.0"	11.4"	22.0"	11"	22.8"	11.4"
200 mm		355.6 mm	279.4 mm	355.6 mm	289.6 mm	558.8 mm	279.4 mm	579.1 mm	289.6 mm
10"	40	17.0"	12.5"	17.0"	13.1"	25.0"	12.5"	26.3"	13.1"
250 mm		431.8 mm	317.5 mm	431.8 mm	332.7 mm	635.0 mm	317.5 mm	668.0 mm	332.7 mm
12"	STD	20.0"	14.5"	20.0"	15.1"	29.0"	14.5"	30.3"	15.1"
300 mm		508.0 mm	368.3 mm	508.0 mm	383.5 mm	736.6 mm	368.3 mm	769.6 mm	383.5 mm
14"	30	22.0"	16.0"	22.0"	16.6"	32.0"	16.0"	33.3"	16.6"
350 mm		558.8 mm	406.4 mm	588.8 mm	421.6 mm	812.8 mm	406.4 mm	845.8 mm	421.6 mm
16"	30	24.0"	17.0"	24.0"	17.8"	34.0"	17.0"	35.5"	17.8"
400 mm		609.6 mm	431.8 mm	609.6 mm	452.1 mm	863.6 mm	431.8 mm	901.7 mm	452.1 mm
18"	STD	27.0"	19.0"	27.0"	19.8"	38.0"	19.0"	39.5"	19.8"
450 mm		685.8 mm	482.6 mm	685.8 mm	502.9 mm	965.2 mm	482.6 mm	1003.3 mm	502.9 mm
20"	20	30.0"	20.7"	30.0"	21.4"	41.4"	20.7"	42.8"	21.4"
500 mm		762.0 mm	525.8 mm	762.0 mm	543.6 mm	1051.6 mm	525.8 mm	1087.1 mm	543.6 mm
24"	20	34.0"	23.0"	34.0"	23.6"	46.0"	23.0"	47.3"	23.6"
600 mm		863.6 mm	584.2 mm	863.6 mm	599.4 mm	1168.4 mm	584.2 mm	1201.4 mm	599.4 mm

Dimensions subject to change without notice, apply for certified drawings.  
Other sizes are available, please consult the factory or your local sales representative.



## Self-Cleaning Sand Filter Models 691 and 692

The Self-Cleaning Sand Filters offer continuous cleaning due to a granular filter media design. The media is continually being cleaned with treated water by recycling it through a fluidized bed sand washer. This filtration process reduces or eliminates the amount of additional up-stream flocculation and settling stages.

These filtration systems have been designed to handle high solid loading capacity. A key design element of the Self-Cleaning Sand Filters is that it allows the entire bed depth to be utilized in containing entrapped solids. The reprocessed filter media acts as the final clean-up area. This system offers a liquid-solids separation at flow rates of 5 to 26 gpm/ft<sup>2</sup> and a suspended solid capacity of 6 to 10 lbs/ft<sup>3</sup> (96 to 160 kg/m<sup>3</sup>). Whereas conventional downflow sand filters are effective for liquid-solids separation at flow rates of 5 to 7 gallons/min/ft<sup>2</sup> of filter area.

### FEATURES:

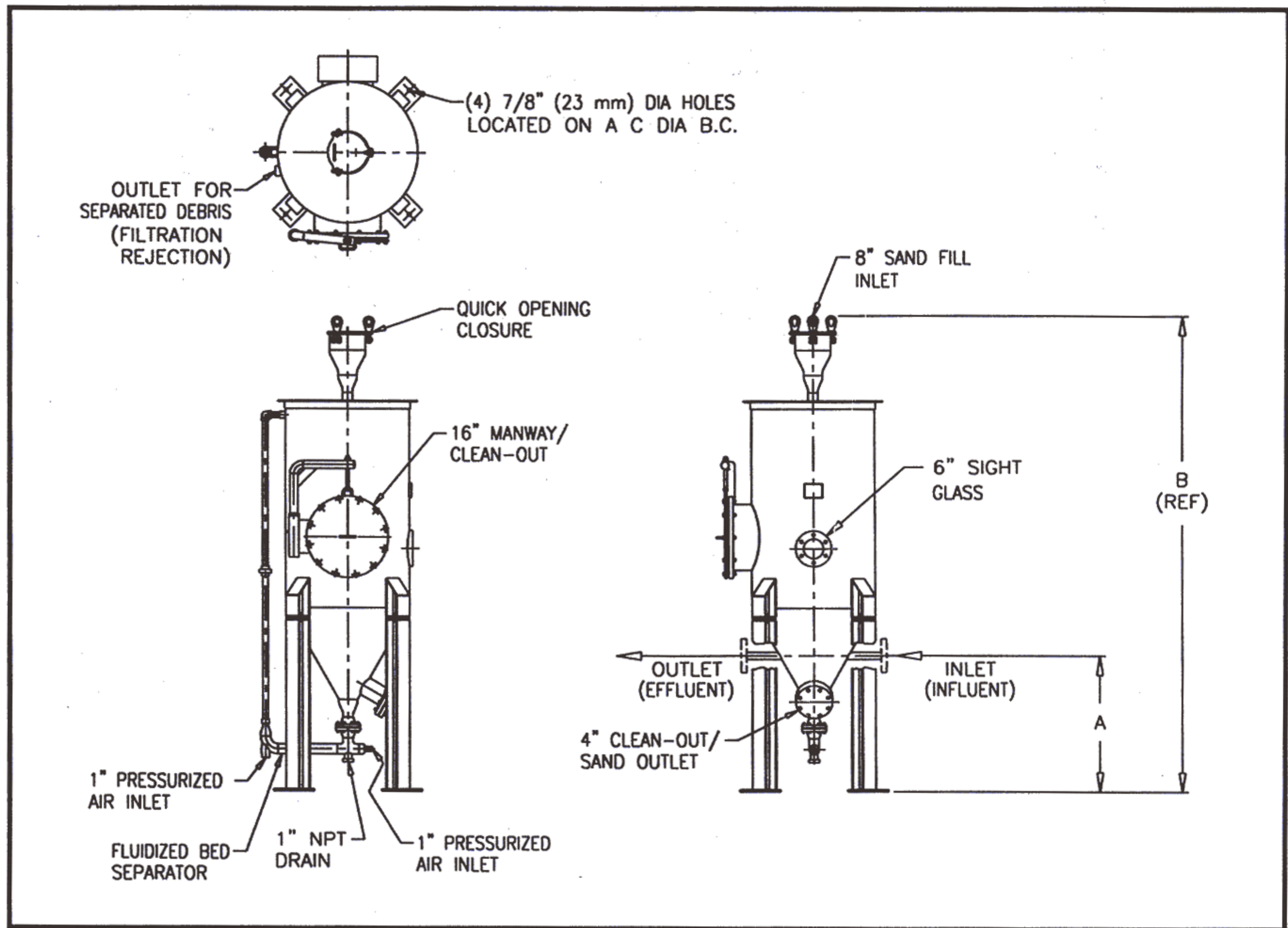
- Uninterrupted Operation
- Continuous Cleaning
- No Moving Parts
- Upflow - Deep Bed Filtration
- Self-Cleaning of Filter Media

### OPTIONS:

- 304 or 316 Stainless Steel Construction
- Platform and Ladder
- Transfer Pumps
- Air Compressor Package
- Ozone Injector
- Ozone System
- Epoxy Paint System
- Cascading Strainer (Model 290)

### APPLICATIONS

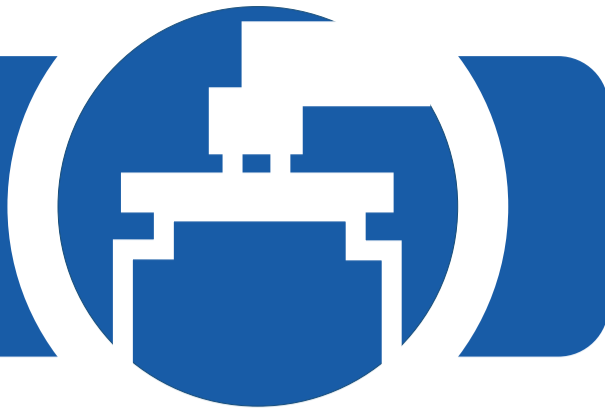
- Biofiltration
- Algae Removal
- Water Reclamation
- Groundwater Remediation
- Chemical Processing
- Cooling Tower
- Membrane Filter Pretreatment
- Potable Water Filtration
- Metal Finishing
- Mill Scale Removal



Model Number	Inlet/Outlet	A	B	C	Debris Outlet	Area of Sand Bed	Effluent (Flow Rate)
691-01230-0102	1¼" NPT 32 mm	32½" 825 mm	114" 2895 mm	42¼" 1075 mm	1" NPT 25 mm	5 Ft <sup>2</sup> .46 Meter <sup>2</sup>	10 - 45 GPM 37.8 - 170 LPM
691-01536-0102	1½" NPT 40 mm	32½" 825 mm	124" 3150 mm	48¼" 1225 mm	1" NPT 25 mm	7 Ft <sup>2</sup> .65 Meter <sup>2</sup>	25 - 75 GPM 95 - 284 LPM
691-02048-0102	2" NPT 50 mm	32½" 825 mm	131" 3330 mm	60¼" 1530 mm	1" NPT 25 mm	13 Ft <sup>2</sup> 1.2 Meter <sup>2</sup>	40 - 100 GPM 151 - 379 LPM
692-03060-0102	3"-150# RF 80 mm	50" 1270 mm	155" 3940 mm	72¼" 1835 mm	1¼" NPT 32 mm	19 Ft <sup>2</sup> 1.8 Meter <sup>2</sup>	75 - 200 GPM 284 - 757 LPM
692-04066-0102	4"-150# RF 100 mm	50" 1270 mm	160" 4065 mm	78¼" 1990 mm	1¼" NPT 32 mm	24 Ft <sup>2</sup> 2.2 Meter <sup>2</sup>	125 - 300 GPM 473 - 1136 LPM
692-06072-0102	6"-150# RF 150 mm	56" 1425 mm	169" 4295 mm	84¼" 2140 mm	1½" NPT 38 mm	28 Ft <sup>2</sup> 2.6 Meter <sup>2</sup>	225 - 600 GPM 852 - 2271 LPM
692-08084-0102	8"-150# RF 200 mm	56" 1425 mm	172" 4370 mm	96¼" 2445 mm	1½" NPT 38 mm	38 Ft <sup>2</sup> 3.5 Meter <sup>2</sup>	400 - 800 GPM 1514 - 3028 LPM

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## Zero Liquid Discharge Package with Ozone (Model 475)

The Model 475 consists of the Hyperzone™ Sand Filtration System (Model 481/482), which includes an ozone disinfection package, and a Cascading Strainer (Model 290).

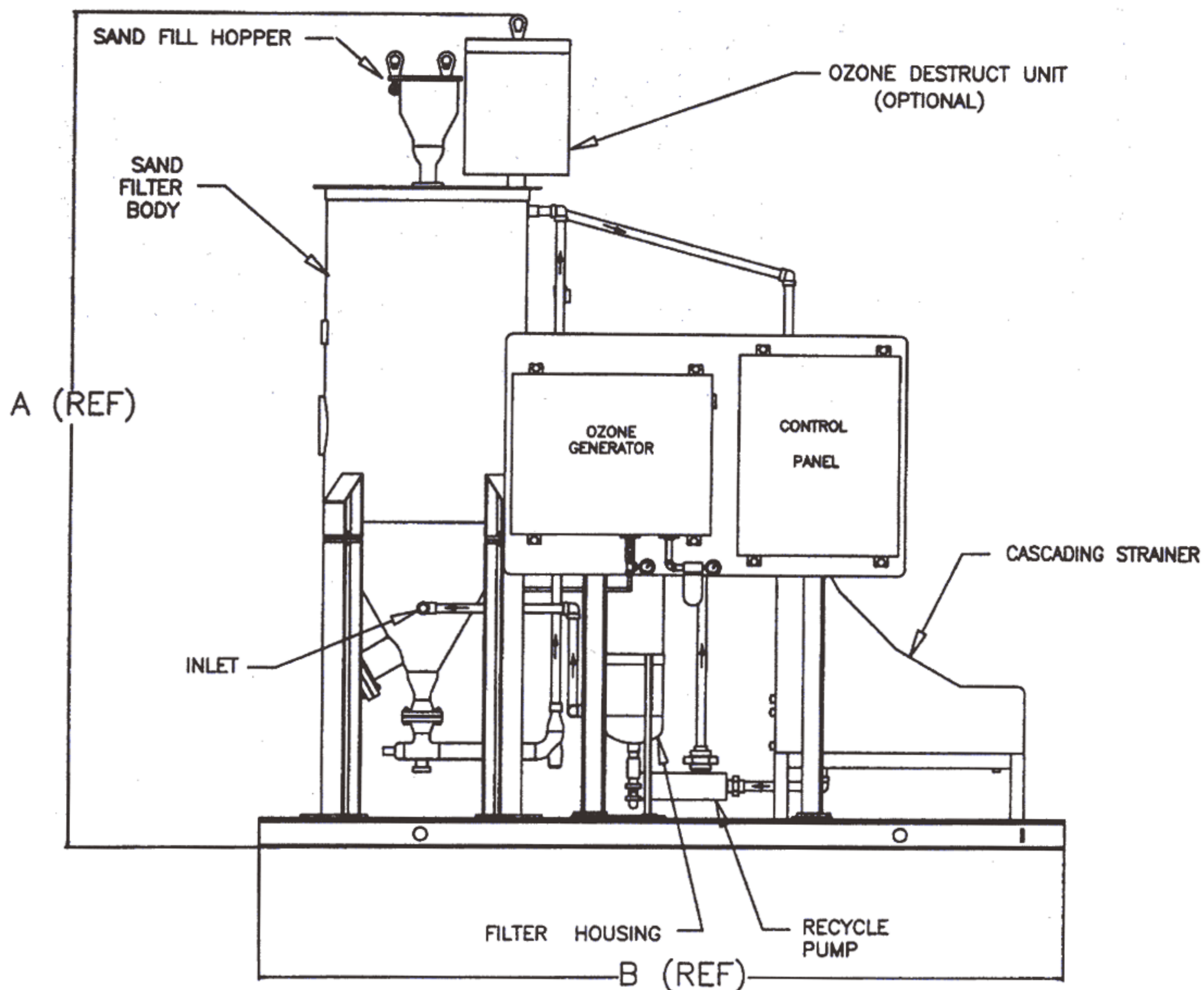
As contaminated liquid enters the sand filter, the debris is separated from the liquid. This is accomplished by the debris becoming entrapped within the downward-flowing sand media. The cleaned liquid travels up through the sand bed. As the cleaned liquid travels upward, ozone gas (O<sub>3</sub>) is injected to disinfect both the liquid and sand media. Due to the dynamics of this product design, there is no channeling of sand from the upflow of the ozone gas. The clean, disinfected liquid flows into the outlet piping and continues down the process piping line.

The downward flow of the sand moves the entrapped debris to a fluidized bed at the bottom of the sand bed. Pressurized air lifts and separates the debris from the liquid and sand. The debris, liquid, and sand moves through the transfer section and into a fluidized two-stage separator. One hundred percent of the debris laden wash reject liquid flows out of the sand filter to the Cascading Strainer (Model 290) for further filtration, while the clean sand is introduced back into the sand filter to use for further filtration.

The Model 290 separates the debris from the liquid at a predetermined micron level. The liquid is contained in the sump of the strainer and pumped to a bag filter. The debris flows down the wedge-wire screen to a debris catcher where the debris can be removed for disposal.

The liquid being pumped from the sump will be transferred to a bag filter that houses the MagnaFilt Bag that will remove all ferrous materials and other contaminants to the predetermined micron level. The liquid is then directed back to the sand filter for re-processing and the cycle is completed with no discharge of liquid.

PATENT PENDING



Model Number	A	B	Width	Inlet/Outlet	Model 481/482	Model 290	Flows
475-01230	152" 3860.8 mm	134" 3403.6 mm	66" 1676.4 mm	1 1/4" NPT 32 mm	481-01230	290-010025	10 - 45 GPM 38 - 170 LPM
475-01536	156" 3962.4 mm	142" 3606.8 mm	66" 1676.4 mm	1 1/2" NPT 40 mm	481-01536	290-020100	25 - 75 GPM 95 - 284 LPM
475-02048	160" 4064.0 mm	166" 4216.4 mm	66" 1676.4 mm	2" NPT 50 mm	481-02048	290-020100	40 - 100 GPM 151 - 379 LPM
475-03060	164" 4165.6 mm	172" 4368.8 mm	84" 2133.6 mm	3" - 150# RF 75 mm	482-04060	290-030250	75 - 200 GPM 284 - 757 LPM
475-04066	168" 4267.2 mm	180" 4572.0 mm	84" 2133.6 mm	4" - 150# RF 100 mm	482-06066	290-030250	125 - 300 GPM 473 - 1136 LPM
475-06072	172" 4368.8 mm	240" 6096.0 mm	84" 2133.6 mm	6" - 150# RF 150 mm	482-06072	290-040400	225 - 600 GPM 852 - 2271 LPM
475-08084	180" 4572.0 mm	240" 6096.0 mm	84" 2133.6 mm	8" - 150# RF 200 mm	482-08084	290-040400	400 - 800 GPM 1514 - 3028 LPM

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 Custom engineered models are available for higher flows.