



Series  
**TFB**

# Project Specifications

**1,005 GPM MAX FLOW RATE    50 PSI WORKING PRESSURE**

Model Number	Base Dimensions	HP	Max GPM	TDH Ft.	Amp Draw		Area SqFt	Media Volume CuFt			Operating Weight in Lbs	
					230V	460V		Sand	Gravel	Rock (Fill)		
<b>TFB-36</b>	34" X 84"	3	141	53	8.3	4.2	7.0	14	-	-	-	4300
<b>TFB-42</b>	34" X 88"	3	192	40	8.3	4.2	9.62	18	3	5	3	6024
<b>TFB-48</b>	38" X 94"	5	250	40	13.0	6.5	12.57	23	4	12	5	8096
<b>TFB-54</b>	42" X 102"	5	318	40	13.0	6.5	15.90	29	4	14	7	9905
<b>TFB-60</b>	46" X 108"	7.5	393	40	19.3	9.7	19.63	35	5	17	10	11840
<b>TFB-66</b>	54" X 114"	7.5	475	40	19.3	9.7	23.76	42	6	22	14	14595
<b>TFB-72</b>	55" X 120"	10	565	40	25.4	12.7	28.27	52	8	24	19	17118
<b>TFB-78</b>	59" X 128"	10	664	40	25.4	12.7	33.18	59	9	30	23	19857
<b>TFB-84</b>	64" X 134"	15	770	40	37.6	18.8	38.48	68	10	34	28	22927
<b>TFB-90</b>	68" X 145"	15	884	40	37.6	18.8	44.18	80	12	40	33	28643
<b>TFB-96</b>	72" X 152"	15	1005	40	37.6	18.8	50.26	96	14	44	39	32305

TOWER-FLO® Series TFB self-contained filter plants shall consist of the following major components: base, pump, motor, strainer, facepiping, valves, controls, and filter vessel. The system shall be shipped as a complete factory assembled and tested unit. Filter media shall be shipped with the unit for field installation.

Project: \_\_\_\_\_ Date: \_\_\_\_\_

The TOWER-FLO® Series TFB Model being specified for this project is a TFB-\_\_\_\_\_ with a maximum filter rate of \_\_\_\_\_ GPM. \_\_\_\_\_ unit(s) is(are) specified and each unit shall be equipped with the following components:

**COMPONENT    SPECIFICATION**

**BASE**    \_\_\_\_\_ **Standard 36-78:**    Structural steel channel, primed and coated (same as vessel coatings).  
 \_\_\_\_\_ **Standard 84-96:**    Structural steel I-beam, primed and coated (same as vessel coatings).  
 \_\_\_\_\_ **Option 36-78:**    Structural steel I-beam, primed and coated (same as vessel coatings).

**PUMP**    \_\_\_\_\_ **Standard:**    Non self-priming; machined cast iron volute, bronze impeller, horizontal flooded suction, close coupled to a TEFC motor; and capable of \_\_\_\_\_ GPM at \_\_\_\_\_ feet TDH.  
 \_\_\_\_\_ **Option 36-72:**    Self-priming; close-coupled to motor; specified as follows: \_\_\_\_\_ and capable of \_\_\_\_\_ GPM at \_\_\_\_\_ feet TDH.  
 \_\_\_\_\_ **Option 78-96:**    Self-priming; long-coupled to motor requiring field alignment by others; specified as follows: \_\_\_\_\_ and capable of \_\_\_\_\_ GPM at \_\_\_\_\_ feet TDH.

**MOTOR**    \_\_\_\_\_ **Standard:**    Three phase; 60 Hz; TEFC; class 30 cast iron case; NEMA jm frame; rated at a service factor of 1.15 at 40°C over ambient; \_\_\_\_\_ HP; UL and CSA listed; at the following VAC, phase and Hz: \_\_\_\_\_.  
 \_\_\_\_\_ **Option:**    575V.  
 \_\_\_\_\_ **Option:**    Premium Efficiency motor, \_\_\_\_\_%

**STRAINER**    \_\_\_\_\_ **Standard:**    \_\_\_\_\_", cast iron body; stainless steel basket; cast iron cover with gasket, held in place with a yoke and bolt clamp; with necessary eccentric and concentric reducers for pump connections and gaskets, bolts and nuts necessary for complete factory assembly.



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**FACEPIPING** \_\_\_ **Standard:** Class 1, 150 lb. ductile iron flanged fittings; synthetic rubber gaskets; zinc plated nuts and bolts; backwash sight glass; 0-60 psi influent and effluent pressure gauges in common panel; adjustable mechanical valve linkage; dual-acting pneumatic cylinder (80 psi air pressure) with 4-way air solenoid valve, and an air filter/regulator to receive compressed air from an outside source (air demand is less than 1.0 SCFM per actuation at 80 PSI).

\_\_\_ **Option:** Fresh water backwash from municipal water supply; includes addition of: 3-way butterfly valve with pneumatic actuator after pump discharge; controls modified to stop pump during backwash; flow control valve for field installation; end-user responsible for the addition of pressure regulator (maximum 30 psi) and/or backflow preventer, if required.

\_\_\_ **Option:** Fresh water backwash from static water supply using pump to assist, includes addition of 3-way butterfly valve in front of pump suction.

\_\_\_ **Option:** Flow control valve (one valve which controls both filter and backwash flow rate); recommended on slipstream installations under pressure.

\_\_\_ **Option:** Provide a 3/4 HP air compressor with 3 gallon reservoir. Air compressor requires separate 120 VAC power supply and is not suitable for outdoor installation: \_\_\_ factory mounted on filter base, power by others; \_\_\_ factory mounted on filter base, power through filter control panel and as indicated under controls option; \_\_\_ boxed for field location and installation by others.

**VALVES** \_\_\_ **Standard:** \_\_\_", cast iron bodied, drilled lug style, butterfly valves, with 416 stainless steel stem, EPDM seat, nylon coated disc.

\_\_\_ **Option:** Electric actuation. (NOTE: Eliminates pneumatic actuation fail/safe feature and requires additional means, by others, of backwash syphon break in flooded suction installations.)

**CONTROLS** \_\_\_ **Standard, three phase or single phase, Automatic backwash operation:** UL® and cUL® Labeled control panel with: NEMA 4X corrosion resistant fiberglass enclosure; motor starter with thermal overload and short circuit protection; fuseless branch and control circuit protection; transformer to convert primary supply to 24 and 120 VAC control power; through-the-door power disconnect; programmable relay with adjustable timing controls for backwash steps; program protected internally against power failure; 30-second time delay in delta P switch circuit; 1-100 hour "re-setting" timer ( $\Delta P$  switch closure or manual initiation resets timer) for backup backwash initiation;  $\Delta P$  repeat closure shut-off and alarm; manual ON/OFF switch; manual backwash initiation switch; backwash counter; and differential pressure switch (external to the controls enclosure) for primary backwash initiation.

\_\_\_ **Option:** Backwash lockout between/among \_\_\_ units; to prevent simultaneous backwash of multiple filter units; 0-60 minute adjustable lockout time delay program; field connection between/among control panels by others.

\_\_\_ **Option:** Contacts for connection to BMS, additional specifications required from owner.  
 \_\_\_ remote indication of common alarm.  
 \_\_\_ remote indication of backwash in operation.  
 \_\_\_ remote control of pump on/off with HOA switch.  
 \_\_\_ other (be specific) \_\_\_\_\_.

\_\_\_ **Option:** Air compressor power supply included in filter control panel.

\_\_\_ **Option:** Manual backwash; \_\_\_ single-phase; \_\_\_ three-phase.

**VESSEL** \_\_\_ **Standard:** \_\_\_" diameter, carbon steel; interior tank coating of 15-18 mil two-part epoxy; exterior tank primer of two-part epoxy after wire brush cleaning; exterior finish coating of two-part industrial and marine grade polyurethane; Schedule 80 PVC and polypropylene internals; 14" X 18" access manway; 4" X 6" handhole; 50 psi working pressure; fitted with tank drain, influent and effluent pressure taps, automatic and manual air relief valves. Maximum flow rate \_\_\_\_\_ GPM at 20 GPM per square foot filter surface area.

\_\_\_ **Option:** Type 304 stainless steel

\_\_\_ **Option:** working pressure to \_\_\_ psi.

\_\_\_ **Option:** Uniflex™ heat set PVC interior vessel lining, 60-90 mil finish thickness, 15 year limited vessel warranty.



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**INTERNALS** \_\_\_ **Standard:** Sch. 80 PVC pipe. Influent terminates into a perforated distribution header. Effluent header fitted with 1-1/2" Sch. 80 PVC laterals, machine slotted both sides with .016" slots at 10 slots to the inch, maximum lateral spacing of 3-3/4" O.C., fabricated for minimum **field installation**. Total open area of laterals no less than 6 times the open area of the effluent header and water velocity through the laterals less than 1 foot per second. Influent and effluent header supported internally and secured with stainless steel bands.  
\_\_\_ **Option:** Type 304 stainless steel header & lateral; lateral spacing and open area design varies from above standard specifications.

**MEDIA** \_\_\_ **Standard:** Quartzite or silica in nature, hard, not smooth, uniformity coefficient of 1.7, with effective sizes as follows: Sand .45 - .55 mm; Gravel 1/8" - 1/4"; and Rock 1/4" - 1/2". Sand shall contain no more than 5% flat particles, or more than 1% clay, loam dust, or other foreign material. Gravel and Rock shall contain no more than 2% flat particles. At the discretion of the owner or installer, the bottom of the vessel below the collection laterals shall be filled with either rock or concrete (Fill). Concrete will increase vessel stability, however, concrete is not supplied by Tower-Flo®.

## COMMON ADDITIONAL EQUIPMENT:

**NOZZLES** \_\_\_ **Sweeper-Eductor Nozzle**, 1/4" MPT, ABS plastic, quantity of \_\_\_.

**HOLDERS** \_\_\_ **Clip-On Nozzle Holder**, quantity of \_\_\_; for \_\_\_ 1-1/4"; \_\_\_ 1-1/2"; or \_\_\_ 2" PVC pipe.

**SURGE TANK** \_\_\_ **Polyethylene tank** for backwash surge capture and gravity release to closest drain: \_\_\_ gallon capacity, \_\_\_" diameter x \_\_\_" high, with a \_\_\_" diameter lid in top head and a 2" FPT drain bulkhead fitting.  
\_\_\_ Additional \_\_\_" bulkhead fitting for inlet from filter (2", 3", or 4"), field installed by others; \_\_\_ 2", 2-way, manual ball valve, \_\_\_ Sch 40 PVC, \_\_\_ Sch 80 PVC, \_\_\_ brass, for field installation by others on drain piping from tank for isolation and/or throttling.

**LIQUID LEVEL** \_\_\_ **Liquid level control assembly** for backwash surge tank to interrupt filter pump if/when surge tank nears capacity. Includes: ITT McDonnell-Miller 750B liquid level controller mounted in separate NEMA 3R enclosure requiring separate 120 V power supply factory mounted on filter's control panel bracket (unless otherwise specified); sensor; 3 trimmable probes (L, H, and Ground); field wiring from sensor to LLC enclosure by others. Also includes additional contacts for remote pump on/off in filter control panel.  
\_\_\_ **Option:** Liquid level control column assembly; 2" Sch 80 piping assembly mounted on side of poly tank to isolate liquid level probes from turbulence in poly tank.

**NOTE:** Backwash flow rate, irrespective of water source, must be no less than 75% and no greater than 100% of the vessel's designed maximum gpm. Backwash duration is factory preset at 3 minutes and is field adjustable.



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Form TFB-PSPEC:2/10-P3

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