

1,005 GPM MAX FLOW RATE 50 PSI WORKING PRESSURE

Model Number	Base Dimensions	HP	Max GPM	TDH Ft.	Amp Draw		Area SqFt	Media				Operating Weight in Lbs
					Three Phase 230V	460V		Sand	Gravel	Rock	(Fill)	
TFB-36	34" X 84"	3	141	53	8.3	4.2	7.0	14	-	-	-	4300
TFB-42	36" X 88"	5	192	40	8.3	4.2	9.62	18	3	5	3	6024
TFB-48	40" X 94"	5	250	40	13.0	6.5	12.57	23	4	12	5	8096
TFB-54	46" X 102"	5	318	40	13.0	6.5	15.90	29	4	14	7	9905
TFB-60	50" X 108"	7.5	393	40	19.3	9.7	19.63	35	5	17	10	11840
TFB-66	54" X 114"	7.5	475	40	19.3	9.7	23.76	42	6	22	14	14595
TFB-72	58" X 120"	10	565	40	25.4	12.7	28.27	52	8	24	19	17118
TFB-78	62" X 128"	10	664	40	25.4	12.7	33.18	59	9	30	23	19857
TFB-84	66" X 136"	15	770	40	37.6	18.8	38.48	68	10	34	28	22927
TFB-90	68" X 145"	15	884	40	37.6	18.8	44.18	80	12	40	33	28643
TFB-96	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; premium efficient, 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.
- 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.
 - ___ **Option:** _____.

COMPONENT SPECIFICATION

FACEPIPING	<p><input type="checkbox"/> 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).</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> Option: Fresh water backwash from static water supply using pump to assist, includes addition of 3-way butterfly valve in front of pump suction.</p> <p><input type="checkbox"/> Option: Flow control valve (one valve which controls both filter and backwash flow rate); recommended on slipstream installations under pressure.</p> <p><input type="checkbox"/> Option: Provide a 3/4 HP air compressor with 3 gallon reservoir. Air compressor requires separate 120 VAC power supply and is <u>not suitable for outdoor installation</u>: <input type="checkbox"/> factory mounted on filter base, power by others; <input type="checkbox"/> factory mounted on filter base, power through filter control panel and as indicated under controls option; <input type="checkbox"/> boxed for field location and installation by others.</p>
VALVES	<p><input type="checkbox"/> Standard: ___", cast iron bodied, drilled lug style, butterfly valves, with 416 stainless steel stem, EPDM seat, nylon coated disc.</p> <p><input type="checkbox"/> Option: Electric actuation. (NOTE: Eliminates pneumatic actuation fail/safe feature and requires additional means, by others, of backwash syphon break in flooded suction installations.)</p>
CONTROLS	<p><input type="checkbox"/> Standard Three phase or single phase, Automatic backwash control panel, UL® and cUL® Labeled, in a NEMA 4X fiberglass enclosure including: 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 disconnect; programmable relay with program of operation, 7-year battery backup and external memory card backup; HOA switch for pump motor; differential pressure switch (external to the enclosure) for primary backwash initiation; manual backwash initiation pushbutton; backwash counter; and contacts for ΔP repeat closure shut-off and alarm, common alarm (motor trip indication), remote indication of backwash operation, remote backwash initiation, and conductivity interface. Program features 30-second time delay in ΔP switch circuit and 100 hour "re-setting" timer (ΔP switch closure or manual initiation resets timer) for backup backwash initiation.</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> Option: Contacts for connection to BMS, additional specifications required from owner. <input type="checkbox"/> local (lights) and remote (contacts) indication of filter or backwash operating mode. <input type="checkbox"/> other (be specific) _____.</p> <p><input type="checkbox"/> Option: Air compressor power supply included in filter control panel.</p> <p><input type="checkbox"/> Option: Manual backwash; ___ single-phase; ___ three-phase.</p>
VESSEL	<p><input type="checkbox"/> Standard: ___" diameter, carbon steel; interior tank coating of 15-18 mil two-part epoxy after near-white sandblast; exterior tank primer of two-part epoxy after sandblast 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.</p> <p><input type="checkbox"/> Option: working pressure to ___ psi.</p> <p><input type="checkbox"/> Option: Uniflex™ heat set PVC interior vessel lining, 60-90 mil finish thickness, 15 year limited vessel warranty.</p> <p><input type="checkbox"/> Option: _____.</p>

COMPONENT SPECIFICATION

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.

 ___ **Bulkhead fitting, additional**, for inlet from filter ___ 2", ___ 3", or ___ 4", for field installed by others;

 ___ **Manual ball valve**, 2", 2-way, ___ 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.

ISO VALVES ___ **Factory installed isolation valves** for pump and strainer service:

 ___", _____ with handle factory installed on pump pre-strainer inlet, and

 ___", _____ with handle factory installed on pump outlet.

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.