TOWER-FLO®
A United Industries, Inc. Company

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 Three Phase 230V	Amp Draw Three Phase 460V	Area SqFt	Media Volume CuFt Sand	Media Volume CuFt Gravel	Media Volume CuFt Rock	Media Volume CuFt (Fill)	Operating Weight in Lbs
TFB-42	34" X 88"	3	192	40	8.3	4.2	9.62	18	3	5	3	6024
TFB-48	38" X 94"	5	250	40	13.7	6.8	12.57	23	4	12	5	8096
TFB-54	42" X 102"	5	318	40	13.7	6.8	15.90	29	4	14	7	9905
TFB-60	46" X 108"	7.5	393	40	20.3	10.1	19.63	35	5	17	10	11840
TFB-66	51" X 114"	7.5	475	40	20.3	10.1	23.76	42	6	22	14	14595
TFB-72	55" X 120"	10	565	40	26.4	13.2	28.27	52	8	24	19	17118
TFB-78	59" X 128"	10	664	40	26.4	13.2	33.18	59	9	30	23	19857
TFB-84	64" X 134"	15	770	40	38.0	18.9	38.48	68	10	34	28	22927
TFB-90	68" X 145"	15	884	40	38.0	18.9	44.18	80	12	40	33	28643
TFB-96	72" X 152"	15	1005	40	38.0	18.9	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:** Structural steel channel and plate, primed and coated.

PUMP ✔ **Standard:** Non self-priming; machined cast iron volute, bronze impeller, horizontal flooded suction, close coupled to an TEFC motor; and capable of _____ GPM at ____ feet TDH.
___ **Option:** Self-priming; 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:
____ 208V, ____230V, ____ 460V.
___ **Option:** ____ 575V.

STRAINER ✔ **Standard:** Cast iron body; stainless steel basket; cast iron cover with gasket, held in place with a yoke and bolt clamp.

FACEPIPING ✔ **Standard:** Class 1, 125 lb. cast iron; synthetic rubber gaskets; zinc plated nuts and bolts; backwash sight glass; 0-60 psi influent and effluent pressure gauges; adjustable valve linkage; pneumatic actuator (40 psi maximum air pressure) with solenoid, supplied by a 3/4 hp air compressor with 10 gallon reservoir requiring separate 120 VAC power supply;
___ **Option:** Flow control valve (one valve which controls both filter and backwash flow rate).
___ **Option:** Effluent flow meter, pitot tube style, for field installation on filtered water return piping (requires straight pipe run of 10" X pipe diameter).

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SPECIFICATION

VALVES

✔ **Standard:** Cast iron bodied, drilled lug style, butterfly valves, with 416 stainless steel stem, EPDM seat, nylon coated disc.

___ **Option:** Electric actuation.

CONTROLS

✔ **Standard, three phase, Automatic backwash operation:** UL® Listed control panel with: NEMA 3R enclosure; motor starter with thermal overload and short 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 (ΔP switch closure or manual initiation resets timer) for backup backwash initiation; ΔP 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:** Fresh water backwash from municipal water supply.

___ **Option:** Fresh water backwash from static water supply using pump to assist.

___ **Option:** Backwash lockout between/among ____ units; to prevent simultaneous backwash of multiple filter units; 0-15 minute adjustable lockout time delay relay.

___ **Option:** Contacts for connection to BMS, additional specifications required from owner (be specific) _____.

VESSEL

✔ **Standard:** Carbon steel; 15-18 mil epoxy coated interior; 14" X 18" access manway; 4" X 6" handhole; 50 psi working pressure; fitted with tank drain, influent and effluent pressure gauges, and an automatic air relief valve. Maximum flow rate _____ GPM at 20 GPM per square foot filter surface area.

___ **Option:** working pressures to 150 psi.

___ **Option:** Type 304 stainless steel

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.

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®.

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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