TOWER-FLO® Series TFH

Project Specifications

141 GPM MAX FLOW RATE 100 PSI WORKING PRESSURE

Model Number	Base Dimensions	HP	Max GPM	TDH Ft.	Full Load Amp Draw								Media		Operating Weight in Lbs
					Single Phase				Three Phase				Area SqFt	Vol CuFt*	
					S.F.	115V	208V	230V	S.F.	208V	230V	460V			
TFH-18	16.75" x 38"	1	35	65	1.15	12.0	6.6	6.0	1.15	3.2	3.6	1.8	1.8	4.0	
TFH-24	22" X 46"	1.5	65	50	1.0	17.0	8.8	8.5	1.15	4.4	4.2	2.1	3.14	7.0	2488
TFH-30	26" X 52"	3	100	45	1.0	-	14.0	14.2	1.15	8.1	8.0	4.0	5.0	9.0	2957
TFH-36	30" X 58"	3	141	45	1.15	-	-	-	1.15	9.1	8.3	4.1	7.0	14.0	3910

*1 Cubic foot of media = 100 lbs.

TOWER-FLO® Series TFH self-contained filter plants shall consist of the following major components: base, pump, motor, strainer, facepiping, valve, 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 TFH Model being specified for this project is a TFH-____ 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: TFH-18, -24, -30:** Self-priming, close grain cast and machined brass volute, impeller, and pump-to-motor coupling; close coupled to the motor; and capable of ____ GPM at ____ feet TDH.

___ **Standard: TFH-36:** Flooded suction, machined cast iron volute, bronze fitted, close coupled to the motor and capable of ____ GPM at ____ feet TDH.

___ **Option: TFH-36:** Self-priming pump, machined cast iron volute, bronze fitted, close coupled to the motor and capable of ____ GPM at ____ feet TDH.

MOTOR

✔ **Standard: TFH-18, -24, -30:** TEFC, heavy gauge rolled steel case, NEMA 56C frame, Class F insulation, double shielded prelubricated ball bearings; UL® and CSA® listed; ____ HP; and at the following VAC, phase and Hz: _____.

___ **Standard: TFH-36:** TEFC, heavy gauge rolled steel case, NEMA 145JM frame, Class F insulation, double shielded prelubricated ball bearings; UL® and CSA® listed; ____ HP; and at the following VAC, phase and Hz: _____.

___ **Option:** 575V.

STRAINER

✔ **Standard: TFH-18, -24, -30:** Basket type, brass body, ABS basket, brass cover with o-ring, held in place by two brass lockhandles.

___ **Option: TFH-18, -24, -30:** Delete strainer on installations where inlet pressure exceeds 30PSI.

___ **Standard: TFH-36:** Cast iron body; stainless steel basket; cast iron cover with gasket, held in place with a yoke and bolt clamp (60 PSI @ 150˚ F).

FACEPIPING

✔ **Standard:** Steel; backwash sight glass; influent / effluent pressure gauges, 0-160 psi, liquid-filled

___ **Option:** Type 304 Stainless Steel (with brass or stainless steel valves).

___ **Option:** Fresh water backwash from municipal water supply; includes facepiping modifications, 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.

VALVES

✔ **Standard:** Brass, 3-way ball valves, with electric actuation.

___ **Option:** Stainless steel (with steel or stainless steel facepiping).

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COMPONENT	SPECIFICATION	
CONTROLS	✔ **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.
	___ **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. ___ local (lights) and remote (contacts) indication of filter or backwash operating mode. ___ other (be specific) _____.
	___ **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 molded cycolac internals; **TFH-18** has removable top head for internal access with gasketed flange rings, bolts and nuts; **TFH-24, -30, -36** have 14" X 18" access manway; 4" X 6" handhole; 100 psi working pressure; fitted with tank drain, influent and effluent pressure gauges, automatic air relief valve. Maximum flow rate _____ GPM at 20 GPM per square foot filter surface area.
	___ **Option:**	Type 304 stainless steel
	___ **Option:**	working pressures to 150 psi.
	___ **Option:**	Uniflex™ heat set PVC interior vessel lining, 60-90 mil finish thickness, 15 year limited vessel warranty.
MEDIA	✔ **Standard:**	Quartzite or silica in nature, hard, not smooth, uniformity coefficient of 1.7, relative size of .45 to .55 mm, containing no more than 5% flat particles or more than 1% clay, loam dust, or other foreign material. Media weighs 100 lbs per cubic foot.

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 specificed); 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.
___ **Liquid level control column assembly**; 2" Sch 80 piping assembly mounted on side of poly tank to isolate liquid level probes from turbulance in poly tank.

SOLENOID VALVE ___ **Solenoid valve**, for backwash siphon break, _____", bronze, with 24 VAC solenoid.

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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