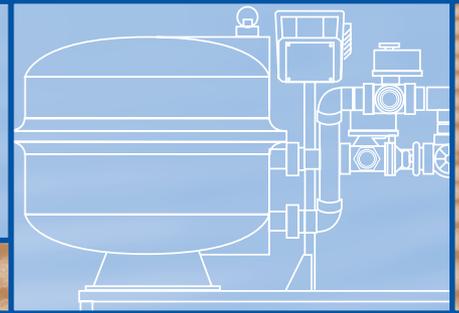




FOR SIDE-STREAM COOLING TOWER APPLICATIONS



The TowerGuard side-stream sand filter series represents Miller-Leaman's newest generation of self-cleaning cooling tower water filtration products.

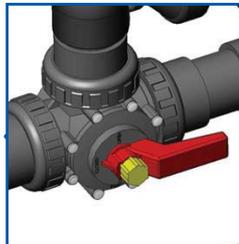
The skid mounted TowerGuard filter system automatically removes particles introduced to your system from the air scrubbing action of the cooling tower as well as particles present in the cooling tower make up water. Keeping your system free of these particles will reduce maintenance costs by keeping your cooling tower basin, heat exchanger tubes, and system piping clean. In addition, you will see an improvement in heat exchange efficiency resulting in lower energy costs. The TowerGuard utilizes a specialized granular filter media, providing particle removal approaching at the 10-micron level.

Available in a 44 GPM, 62 GPM, and 98 GPM model size, the TowerGuard filters come complete with a robust 2-piece fiberglass reinforced vessel rated at 50 PSI, a close coupled Type 316 stainless steel centrifugal pump with a TEFC motor, all mounted on a heavy-duty Type 304 stainless steel skid.

Miller-Leaman's compact, yet powerful Maxim backwash controller provides for complete control of the filter system, enabling the backwash cycle to be triggered manually, on differential pressure, or elapsed time.



All TowerGuard systems offer the versatility of backwashing with tower/source water or city/external water. This is accomplished by a turn of the backwash selector valve and a simple menu change in the Maxim controller.



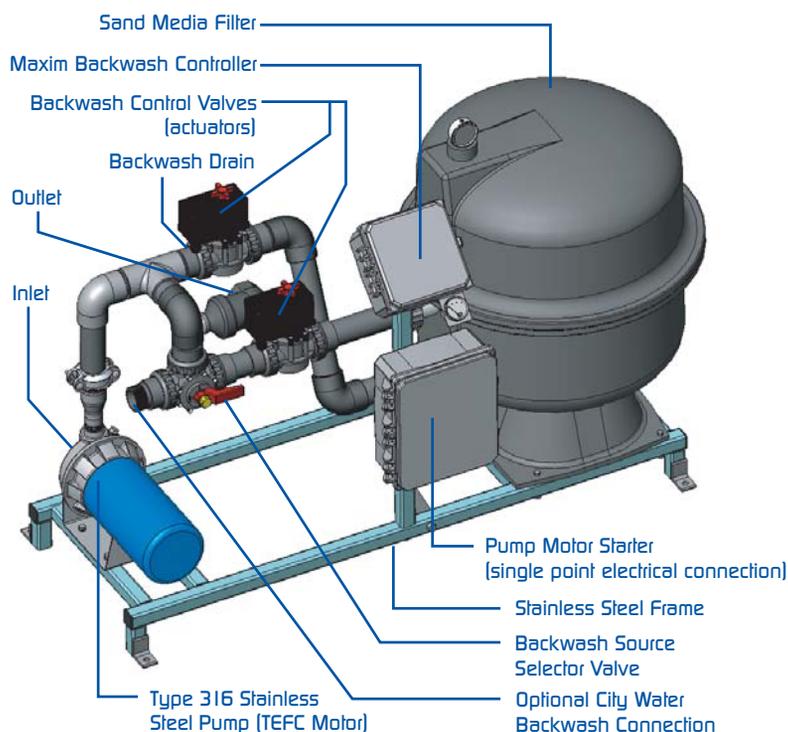
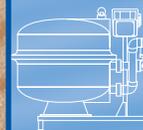
The skid mounted system arrives completely assembled, pre-wired with a single-point electrical connection, and loaded with sand. Our innovative TowerGuard systems are value engineered to deliver superior performance and long-term reliability.

SYSTEM FEATURES:

- Particle removal down to 10-micron
- Robust fiberglass reinforced polyester vessel
- Corrosion resistant, electrically-actuated PVC 3-way valves
- Type 316 stainless steel pump with a TEFC motor, available in Single-phase and Three-phase
- Single-point electrical connection
- State-of-the-art user-adjustable Maxim backwash controller
- Optional backwashing with source water or city water
- System arrives completely assembled, loaded with sand, and factory tested

TYPICAL APPLICATIONS:

- Schools/Universities
- Hospitals
- Office Buildings
- Hotels
- Government Buildings
- Industrial Facilities



FILTER OPERATION MODES

Filtration:

Influent contaminated water flows through the pump and enters the filter. Water is distributed evenly over the sand media bed. As it flows down through the sand media, suspended particles are captured. Filtered effluent water exits into the system outlet. As particles are captured, a “caking effect” is achieved throughout the sand bed which results in finer particle removal.

Backwash:

Once the Maxim controller initiates a backwash, the flow path is reversed through the filter by two 3-way valves. During backwash, the water is reversed through the media bed. The reverse flow of water causes the media bed to lift, allowing the captured particles to release and wash out the backwash drain pipe. Backwashing can be done with source water or city water.

FILTER COMPONENTS

- Vessel: Fiberglass Reinforced Polyester (FRP)
- Internal Distribution Piping: PVC
- Face Piping: Schedule 80 PVC
- Filter Media: Unigran-85 (10 micron)
- Pump: Close Coupled TEFC Motor, System Matched Type 316 Stainless Steel Centrifugal Pump
- Control Valves: PVC 3-Way Valves, Electrically Actuated
- Skid: 1.5" Type 304 Stainless Steel, Welded
- Controller: Maxim Backwash Controller with User-Adjustable Backwash Frequency and Duration in a NEMA-4X Enclosure. (Additional input/output capabilities are optional.)
- Electric: Single Point Electrical Connection Common VAC, complete with Motor Starter with Overload Protection and Reset Button

Model #	Flow Rate (GPM)*	Filtration Area (Sq. Ft.)	Max Pressure (PSI)	Inlet / Outlet Size and Type	Backwash Line Size and Type	Optional City Water Line Size and Type	Pump HP	System Voltage / Amps**
1 phase power systems / single line feed								
TG-20	44 GPM	2.2 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	1 HP	115 VAC (15 amps) 230 VAC (8 amps)
TG-24	62 GPM	3.1 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	1.5 HP	115 VAC (20 amps) 230 VAC (11 amps)
TG-30	98 GPM	4.9 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	2 HP	115 VAC (22 amps) 230 VAC (12 amps)
3 phase power systems / single line feed								
TG-20-3P	44 GPM	2.2 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	1 HP	208-230 VAC (5 amps) 460 VAC (3 amps)
TG-24-3P	62 GPM	3.1 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	1.5 HP	208-230 VAC (7 amps) 460 VAC (4 amps)
TG-30-3P	98 GPM	4.9 sq. ft.	50 PSI	Inlet: 1.5" NPT (f), Outlet: 2" NPT (f)	2" NPT (m)	2" NPT (m)	2 HP	208-230 VAC (8 amps) 460 VAC (5 amps)

*Higher flow rate models available; contact factory for additional information.

**All systems come standard with single point electrical feed; electrical connection is at motor starter.

