



*Simply Smarter.*



## System:3<sup>®</sup>

### D.E. Filter SD Series

#### ***Ultra Capacity Filtration***

The diatomaceous earth version of System:3<sup>®</sup> filtration is unsurpassed in innovative and functional design. Perfectly matched to Sta-Rite<sup>®</sup> pumps in performance and dependability, these “top-of-the-line” filters are truly redefining how pool and spa water is processed.

#### **Standard Features**

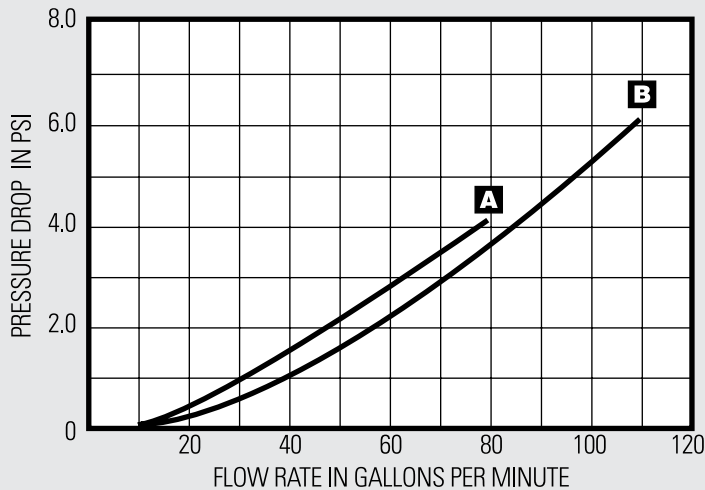
- D.E. is historically the media of choice for the designers of some of the largest and most beautiful pools in the world. The same sparkle those designers seek is now more practical than ever for all backyard pools.
- Consistently longer cycle times, as well as superior flow and backwash performance.
- Hydraulically balanced multiple grid design assures the most efficient use of filter area. Grid cloth is triple-seamed for long lasting performance.
- Posi-Loc™ tank closure system makes tank access safe and easy.
- Tank construction is of Dura-Glas™, the proven material of choice for all water and climatal extremes. Indoor or outdoor, cold or hot, no material in the industry has a longer track record of absolutely superior durability in pressure applications.

(Continued on inside)

# System:3

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## Performance Curves



For detailed efficiency curves for each model, please contact the factory.

### KEY

- A. S7D75
- B. S8D110



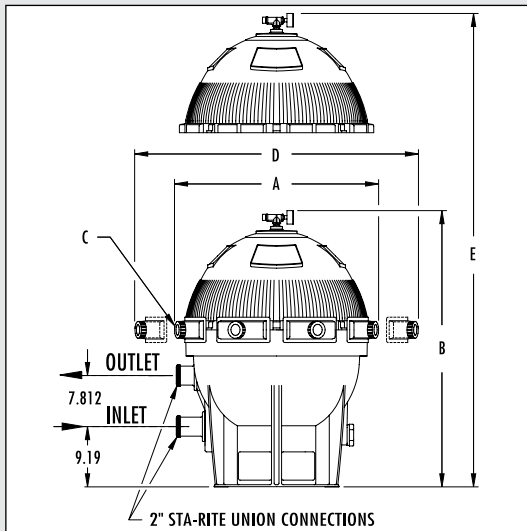
## Standard Features (continued)

- Sleek lines, low profile and black silhouette make the System:3 D.E. Filter SD Series a perfect fit in any poolscape.
- 2" full flow bulkhead fittings provide for union connection to your choice of slide or multiple position backwash valves.
- Top port allows for in-tank chemical treatment of media. Bushing and O-ring design helps prevent tank damage.
- Tank base is integrally molded and incorporates leveling pads for easy installation holes to facilitate all installations.
- Extra-large drains are positioned for easy side or bottom access.

## MATERIALS AND DESIGN

- **Tank**  
Glass reinforced thermoplastic Dura-Glas. Proprietary blend contains carbon black for maximum outdoor aging resistance.
- **Clamps**  
Plated and polished stainless steel. Designed with hand-secured knob and stud assemblies.
- **Piping Connections**  
Through-tank bulkhead fittings feature full 2" diameter clear flow. Hand secured against O-ring seals, the bulkhead fittings allow for union style connection to any of the Sta-Rite slide or multi-position valves.
- **Tank Base**  
Integrally molded with tank. Design incorporates leveling pads and mounting holes.
- **Air Bleed**  
Contains internal automatic air bleed, as well as top mounted air bleed at gauge port assembly.
- **Operating Limits**  
Designed for maximum continual working pressure of 50 psi. Water temperature maximum 104° F.

## System:3 D.E. Filter SD Series



### Outline Dimensions

Catalog Number	DIMENSION				
	A	B	C	D	E
S7D75	28.5	42	7	36	50
S8D110	32.5	42.25	8	40	50

A = width B = height C = number of clamps  
 D = area (width) needed to take off clamps  
 E = area (height) needed to remove top half of tank  
 All dimensions shown in inches.

## Ordering Information

Catalog Number	Filter Area (sq. ft.)	Optimal* Performance at this GPM	Flow Rated** at 1 - 2 GPM per sq. ft.	Turnover Rate (Gallons) (Flow Rate x 60 x Hours)			Tank Port Size	D.E.*** Required (lbs.)	Approx. Ship. Weight (lbs.)
				At 6 Hrs.	At 8 Hrs.	At 10 Hrs.			
S7D75	37	56	37 - 74	13 - 27,000	18 - 36,000	22 - 44,000	2"	3.7	112
S8D110	53	80	53 - 106	19 - 38,000	26 - 51,000	32 - 64,000	2"	5.3	136

\*Operating at this GPM will provide the longest filter cycles combined with the best and greatest dirt-loading capacity.

\*\*Based on NSF recommended flow rate range of 1 - 2 GPM per square foot.

\*\*\*Do not use more D.E. than shown here. Mixed results with D.E. alternatives.

**NOTE:** Operating Limits – maximum continual operating pressure of 50 psi pool/spa (bather) applications, maximum operating water temperature (internal filter) 104° F (40° C).

## Valve Ordering Information

Catalog Number	Description	Valve Port Size	Approx. Ship Weight (lbs.)
<b>MULTIPORT VALVES</b>			
18202-0150	ABS 6 Position Valve with Union Connections	1½"	5
18201-0200	ABS 6 Position Valve with Union Connections	2"	8
<b>SLIDE VALVES</b>			
263053	ABS Slide Valve with Union Connections	2"	5

## Accessory Ordering Information

Catalog Number	Description	Approx. Ship. Weight (lbs.)
25021-1021	DE Conversion Kit – S7D75	18
25021-1025	DE Conversion Kit – S8D110	20

# System:3<sup>®</sup>

## D.E. Filter SD Series



### ENGINEERING SPECIFICATIONS

#### Filter

- The System:3<sup>®</sup> filter(s) specified under this section shall be of the pressure D.E. type manufactured by Sta-Rite<sup>®</sup> Industries Inc.
- The filter shall consist of an injection-molded, glass-reinforced thermoplastic (Dura-Glas™) tank, 2" PVC union connections on inlet and outlet ports, a pressure gauge and an external air relief valve, all of which shall be mounted on a base that is integral to the lower half of the tank.
- The internal filtration system shall consist of vertical, flat, rigid grids covered by woven grid cloth to support the D.E. filter media pre-coat. By means of reversing the direction of water flow within the filter through appropriate valving, the filter grids shall be backwashed for cleaning of spent D.E. and preparation for a new D.E. precoat. There shall be an internal, continuous air relief tube connected to the outlet manifold of the grid assembly.
- The flow of influent, effluent and waste (or backwash) water shall be controlled through a Sta-Rite 2" multiport valve (ordered separately), which shall connect directly to the 2" union-type bulkhead fittings on the tank.
- The filter shall be tested and certified by a nationally recognized testing laboratory to conform to National Sanitation Foundation Standard 50.

#### Filter Area

- The filter shall have a total effective filtration area of \_\_\_\_\_ square feet.
- When operated at \_\_\_\_\_ gallons per minute (GPM) per square foot (Sq. Ft.) of filtering area, this filter will have a capacity of filtering \_\_\_\_\_ gallons in \_\_\_\_ hours and \_\_\_\_ minutes.

#### Filter Tank

- The tank shall be \_\_\_\_\_ inches in diameter, and shall be injection-molded, glass-reinforced thermoplastic (Dura-Glas) in an upper half and a lower half with integral base. The tank halves shall be sealed at the centerline by means of a peripheral sealing ring, and secured by means of multiple Posi-Lok™ clamp segments each having stainless steel T-bolts to engage the tank flange, and a threaded clamp knob that is captured in the clamp segment. The clamp segments, operating on the wedge principle, shall compress the tank sealing ring and retain the tank halves until all residual internal tank pressure is vented.
- The tank shall carry a 50 psi maximum pressure rating, and have a continuous maximum water temperature rating of 104° F.

- All piping shall be through the side of the lower half of the tank, to allow the top half to be removed for internal access without disassembly of the inlet and outlet piping. The tank shall have drain ports with nominal 2" threaded drain plugs for both side and bottom access.

#### Distribution System

- The piping connections shall be provided by means of 2" union-type bulk-head fittings which seal to the lower tank half ports with O-ring seals.
- The internal grid system shall consist of parallel flat grids covered by woven polypropylene which shall be triple sonic stitched onto the rectangular grid structure. The grids shall have metering slots to evenly distribute water flow across the top of each grid for uniform and complete backwashing of the grids. The individual grids shall be secured to a top manifold which connects to the outlet port of the filter tank by means of 2" PVC pipe, fittings and a union coupling which shall allow removal of the entire grid assembly for manual cleaning or servicing. There shall be a minimum of 1" spacing between grids for complete backwashing and minimizing of bridging of D.E. between grids.
- There shall be internal continuous air relief with a large capacity strainer screen at the top of the grid manifold for effective purging of accumulated air from within the tank during circulation system operation, and to assure complete submergence of the grids for maximum usage of the filter area.

#### Valves and Piping

(ordered separately)

- The System:3 D.E. filter shall be provided with all necessary face piping and/or valves having a diameter no less than the 2" inlet and outlet port bulkhead unions on the filter tank.
- The 2" valve shall be a two-position slide valve, Sta-Rite Model No. \_\_\_\_\_, or six-position dial valve, Sta-Rite Model No. \_\_\_\_\_.
- The filter unit as outlined herein shall be Sta-Rite Model No. \_\_\_\_\_.



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