



Sand Media
Filtration

For the Most
Challenging
Dirty Water
Conditions
in Irrigation



Irrigation Systems

Yardney Media Filters

Time.
Quality.
Experience.
Knowledge.

Yardney pioneered the use of sand media filtration in 1965 and through advancing technology, continues to provide high performance and long-term value in the field. Yardney Sand Media filters are manufactured in the USA to the most exacting standards.



Manway weld tabs are standard on all media tanks and screen filter housings.

Applications

- Removal of algae, slime or other organic contaminant as well as sand, rock, grit and other inorganic contaminants
- Protects drip and micro-irrigation systems from plugging with fine filtration removal down to 200 mesh or 75 microns

Advantages

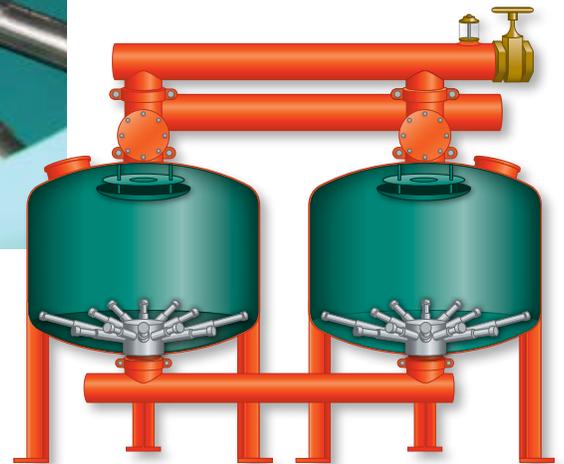
- ASME code shaped head construction for durability and safety
- Standard products material thickness:
 - Carbon steel: 3/16"
 - Stainless steel: 10 gauge
- Standard operating pressure of 80 psi (high pressure systems available)
- Backwash automatically or manually initiated
- Easy-entry lid closure with weld tabs for operator safety
- Exterior of tank on carbon steel product is powder coated with UV stabilized polyester powder coat for longer product life and greater protection from the environment
- Optional stainless steel 304 or 316
- Removable stainless steel wedgewire underdrain
 - Ensures structural integrity in the harshest conditions
 - Hydraulically balanced to increase effectiveness of backwash while reducing flush frequency and waste of water
 - High strength stainless steel wedgewire will withstand a collapse pressure in excess of 600 psi
- Drain Ports:
 - 14", 18", 24" and 30" tanks: 3" drain port
 - 36" and 48" tanks: 6" drain port to allow access to the stainless steel underdrain and less time for draining of media
- Made in USA

Features



Optional removable underdrain

High strength stainless steel wedgewire underdrain has a collapse resistance in excess of 600 psi insuring structural integrity in the harshest conditions. Removable underdrain system feature saves both labor and time during media changes.



Automatic and Manual Valves



Our patented cast-iron backwash valve has the lowest pressure drop in the industry and is designed to be 100% field serviceable with basic hand tools. Valves feature non-corrosive stainless steel shafts, brass bushing, durable molded polyurethane seals, fusion epoxy lining, and a grease fitting for valve shaft lubrication.

Inlet and Outlet Endcap Couplings



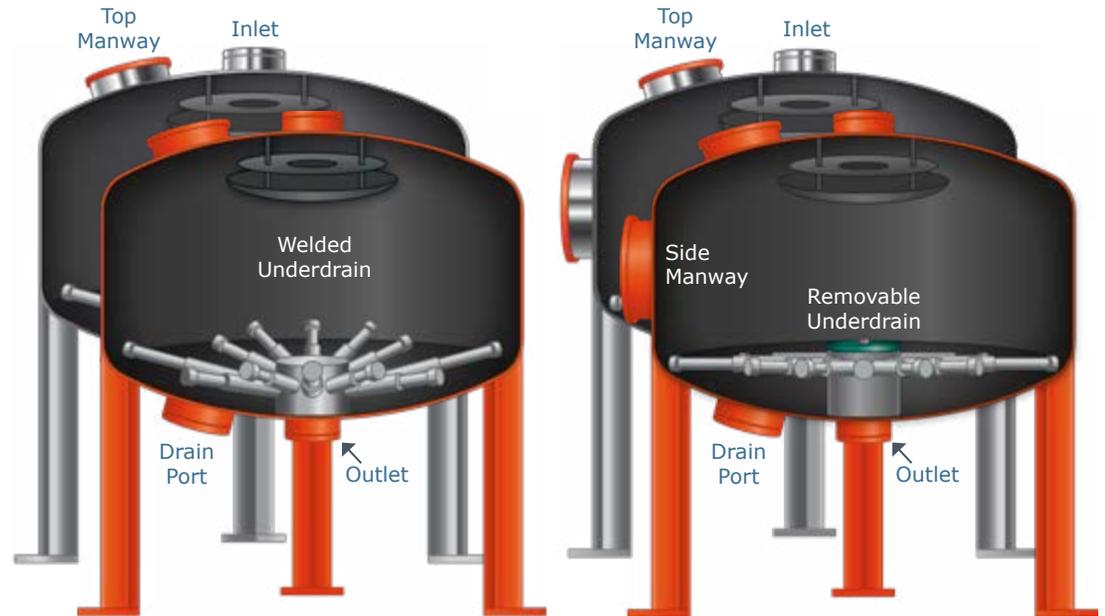
Weld couplings accompanied with a galvanized plug are standard on the endcaps of inlet and outlet manifolds.

Deflector



The inlet and two-stage deflector plate reduce the velocity of water entering the tank and create a more uniform distribution across the filtration media bed.

Tank Options



Available Options:

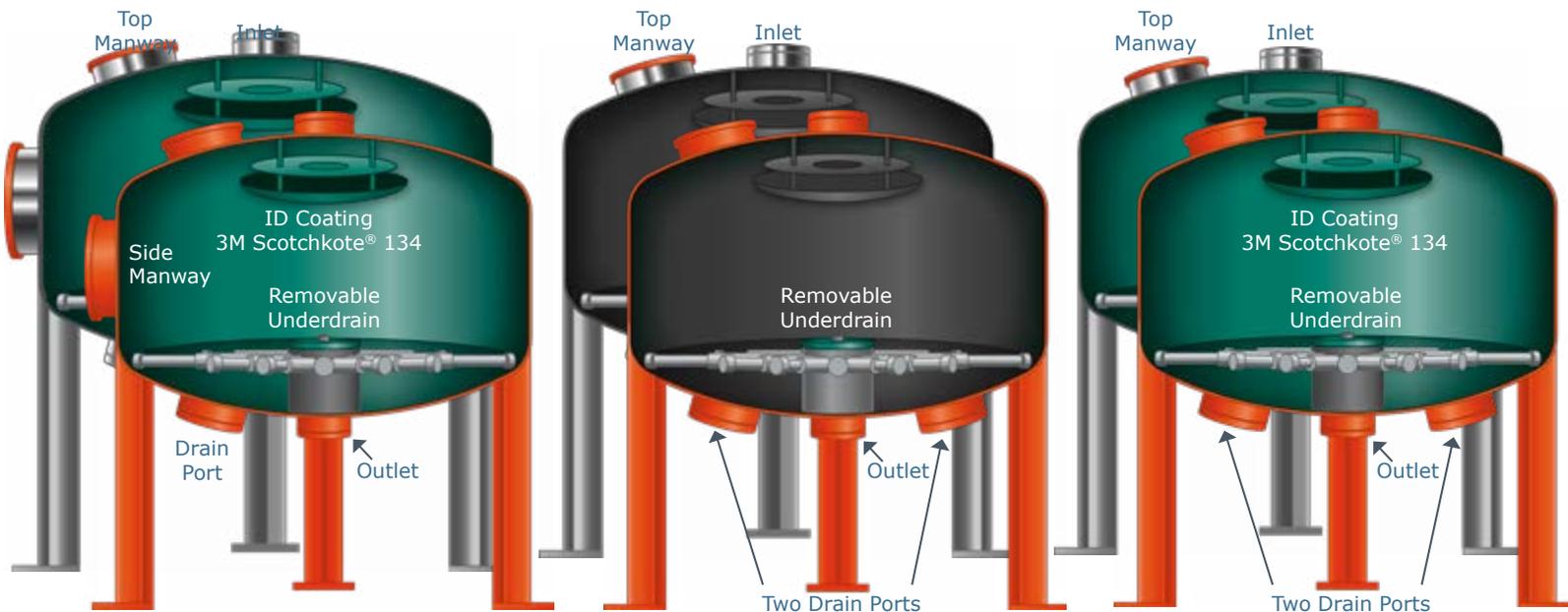
- Stainless steel 304 or 316
- Optional cross flow (CF) underdrain (excluding SM200)
- Optional sand-only cross flow (SOCF) underdrain (excluding SM200)

SM200

- Available in:
Carbon steel: 14", 18", 24", 30", 36", 48"
Stainless steel: 18", 24", 30", 36", 48"
- One 3" drain port on 14", 18", 24" and 30" tanks
- One 6" drain port on 36" and 48" tanks
- Welded stainless steel wedgewire underdrain
- Top manway cover:
Carbon steel:
3": 14", 18" tanks
6": 24", 30" tanks
8": 36" tanks
10": 48" tanks
Stainless steel:
3": 18" tanks
6": 24" tanks
8": 30", 36", 48" tanks
- Exterior UV stabilized powder coat on carbon steel tanks and all manway lids

SM300

- Available in:
Carbon steel: 14", 18", 24", 30", 36", 48"
Stainless steel: 18", 24", 30", 36", 48"
- One 6" drain port
- Threaded removable stainless steel wedgewire underdrain with Schedule 80 PVC hub
- Top manway cover:
Carbon steel: 10"
Stainless steel: 8"
- 11 x 14" elliptical side manway
- Exterior UV stabilized powder coat on carbon steel tanks and all manway lids



SM350

- Available in:
Carbon steel: 14", 18", 24", 30", 36", 48"
Stainless steel: 18", 24", 30", 36", 48"
- One 6" drain port
- Threaded removable stainless steel wedgewire underdrain with Schedule 80 PVC hub
- Top manway cover:
Carbon steel: 10"
Stainless steel: 8"
- 11 x 14" elliptical side manway
- Exterior UV stabilized powder coat on carbon steel tanks and all manway lids
- 3M Scotchkote® 134 on interior surfaces of tank

SM400

- Available in:
Carbon steel: 48"
Stainless steel: 48"
- Two 6" drain ports
- Threaded removable stainless steel wedgewire underdrain with Schedule 80 PVC hub
- Top manway cover:
Carbon steel: 10"
Stainless steel: 10"
- Exterior UV stabilized powder coat on carbon steel tanks and all manway lids

SM450

- Available in:
Carbon steel: 48"
Stainless steel: 48"
- Two 6" drain ports
- Threaded removable stainless steel wedgewire underdrain with Schedule 80 PVC hub
- Top manway cover:
Carbon steel: 10"
Stainless steel: 10"
- Exterior UV stabilized powder coat on carbon steel tanks and all manway lids
- 3M Scotchkote® 134 on interior surfaces of tank

Operation



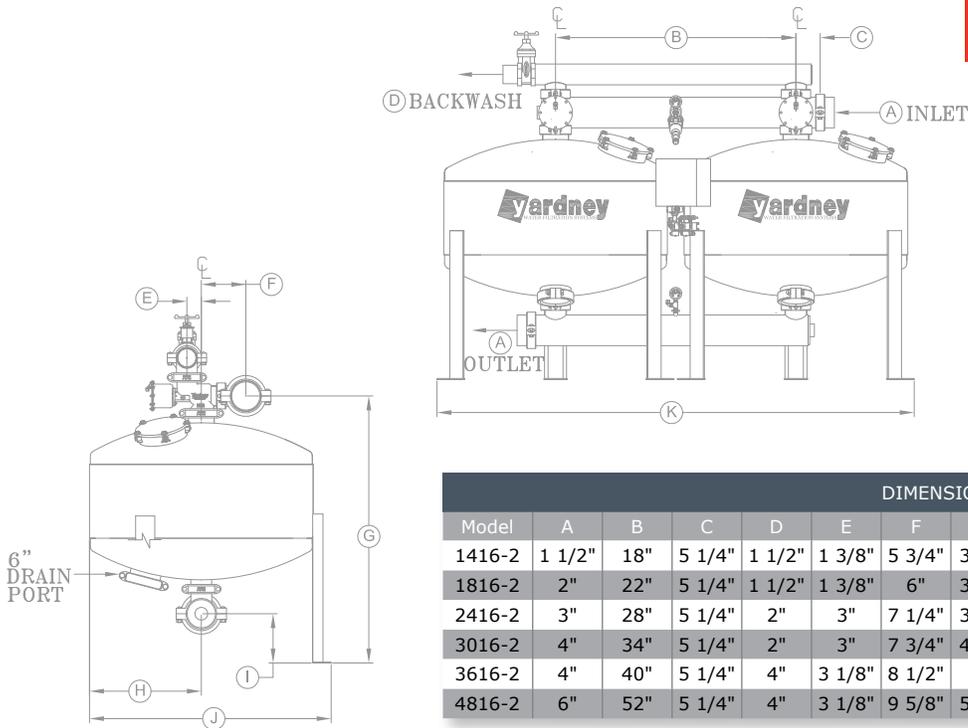
Filtration Process

- The contaminated water enters the system through the inlet manifold, transitioning to the Yardney 3-way valve and into the top inlet of each tank
- The Yardney two-stage deflector creates a uniform distribution for laminar flow across the media bed while avoiding channeling of the media bed
- Particulate is trapped and retained within the media bed resulting in clean process water flowing out through the stainless steel wedgewire underdrain, to the outlet of each filter tank and to the outlet manifold for end use

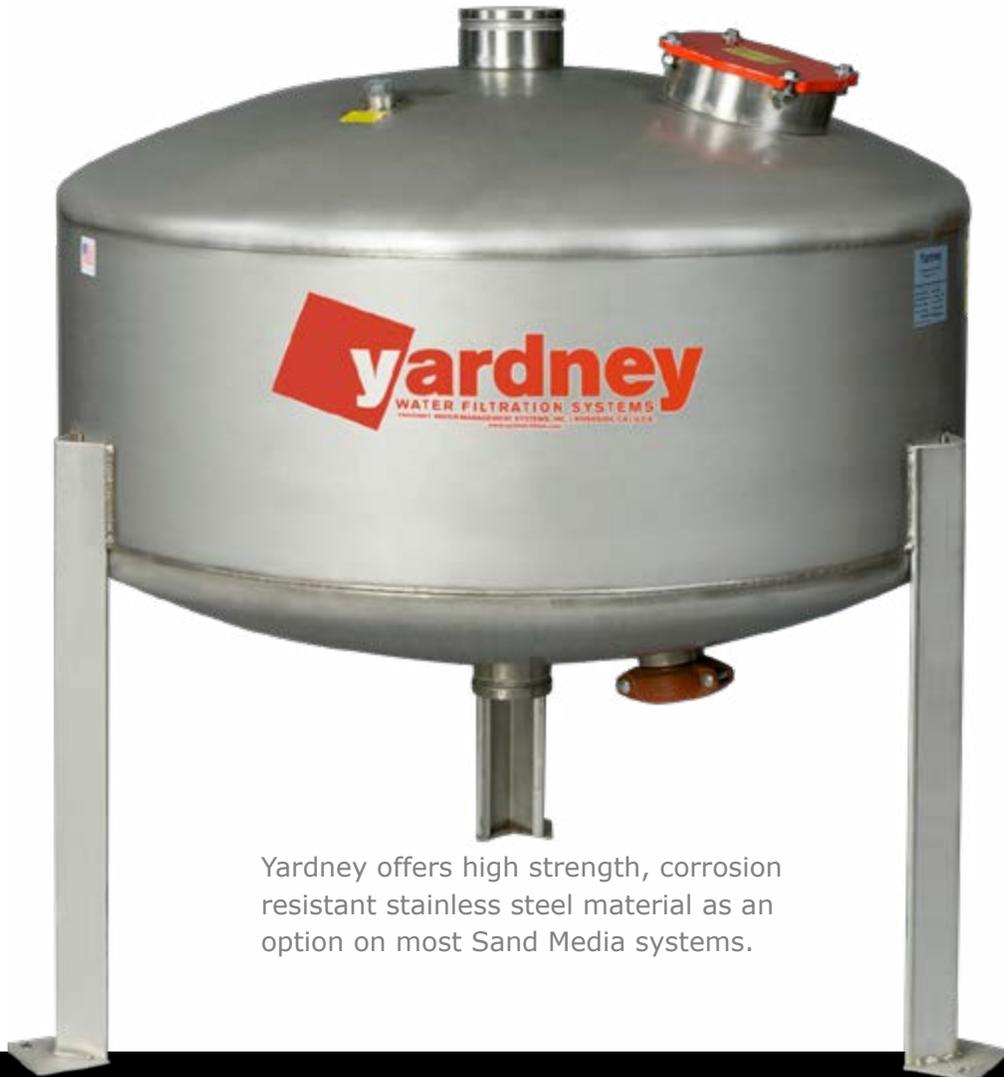
Backwash Process

- Backwash sequence is initiated by either manual or automatic operation via the Yardney controller
- Water or air pressure opens the Yardney 3-way valve causing the reverse flow of a portion of filtered water up through the stainless steel underdrain to hydraulically and uniformly lift the media bed
- The use of a hydraulically balanced underdrain in conjunction with a gravel pack creates a proper and uniform lift of the media bed while avoiding a turbulent backwash
- Entrapped particulates are released during the backwash event, exhausted up through the backwash manifold and routed to a convenient location
- Each vessel is backwashed one at a time while continuing to process water for use until the entire system is clean
- Once completed with the backwash, filtration continues until the next backwash event is called for

Dimensions



DIMENSIONS											
Model	A	B	C	D	E	F	G	H	I	J	K
1416-2	1 1/2"	18"	5 1/4"	1 1/2"	1 3/8"	5 3/4"	35 1/4"	7 3/16"	5"	16 9/16"	36"
1816-2	2"	22"	5 1/4"	1 1/2"	1 3/8"	6"	36 7/8"	9"	4 13/16"	20 3/16"	43 3/16"
2416-2	3"	28"	5 1/4"	2"	3"	7 1/4"	39 7/8"	12 3/16"	4 1/4"	26 9/16"	54 11/16"
3016-2	4"	34"	5 1/4"	2"	3"	7 3/4"	43 7/8"	15 3/16"	6"	32 9/16"	66"
3616-2	4"	40"	5 1/4"	4"	3 1/8"	8 1/2"	48"	18 3/16"	8"	40 1/4"	80 9/16"
4816-2	6"	52"	5 1/4"	4"	3 1/8"	9 5/8"	57 3/4"	24 3/16"	10 11/16"	52 1/4"	103"



Yardney offers high strength, corrosion resistant stainless steel material as an option on most Sand Media systems.

Specifications

SPECIFICATIONS | SAND MEDIA FILTERS

Model	Number of Tanks	Standard Flow Ranges				Filtration Surface Area (total sq ft)	Backwash Flow Rate (per tank)		Media Requirements (cubic feet)		Maximum Pressure Carbon Steel	Maximum Pressure Stainless Steel	Inlet/Outlet Pipe Size	Backwash Line Pipe Size
		Minimum Flow		Maximum Flow			gpm	m ³ /hr	Gravel 1/2-3/4"	Media				
		gpm	m ³ /hr	gpm	m ³ /hr									
1416-2	2	36	8	53	12	2.1	16	4	1	2	150 psi	100 psi	1 1/2"	1 1/2"
1816-2	2	60	14	88	20	3.5	27	6	2	3	150 psi	100 psi	2"	1 1/2"
1816-3	3	90	20	133	30	5.3	27	6	3	5	150 psi	100 psi	3"	1 1/2"
2416-2	2	107	24	158	36	6.3	47	11	3	7	150 psi	100 psi	3"	2"
2416-3	3	160	36	235	53	9.4	47	11	5	11	150 psi	100 psi	3"	2"
3016-2	2	167	38	245	56	9.8	74	17	5	10	125 psi	100 psi	4"	2"
3616-2	2	240	55	353	80	14.1	106	24	8	14	105 psi	80 psi	4"	4"
3016-3	3	250	57	368	84	14.7	74	17	8	15	125 psi	100 psi	4"	2"
3616-3	3	360	82	530	120	21.2	106	24	12	21	105 psi	80 psi	6"	4"
4816-2	2	425	97	625	142	25.0	188	43	14	26	80 psi	80 psi	6"	4"
4816-3	3	638	145	938	213	37.5	188	43	21	39	80 psi	80 psi	6"	4"
4816-4	4	850	193	1250	284	50.0	188	43	28	52	80 psi	80 psi	8"	4"
4816-5	5	1063	242	1563	355	62.5	188	43	35	65	80 psi	80 psi	10"	4"
4816-6	6	1275	290	1875	426	75.0	188	43	42	78	80 psi	80 psi	10"	4"
4816-7	7	1488	338	2188	497	87.5	188	43	49	91	80 psi	80 psi	10"	4"
4816-8	8	1700	386	2500	568	100.0	188	43	56	104	80 psi	80 psi	10"	4"

Other models and sizes are available.

Ordering code part number breakdown:

PRODUCT	Model Number	Number of Tanks	CS: Carbon SS: Stainless	A: Automatic SA: Semi-Automatic	CF: Crossflow or S: Standard underdrain	Standard pressure rating 80 psi or high pressure options 100 125 150*	IE: Inline/End feed IC: Inline/Center feed EU: End feed "U" pattern EB: End feed Block pattern CH: Center Feed "H" pattern
EXAMPLE: SM-400	- 4816	- 4	- CS	- A	- CF	- 80	- EU
SM-400-4816-4-CS-A-CF-80* - EU							*For pressure ratings above 150 PSI, please consult a Yardney representative.



Made in USA

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