



AVANTech WTModules™ CAS-Series

Steel Tank Carbon Adsorption

The CAS-Series is designed to remove chlorine and reduce Total Organic Carbon (TOC). Standard 12x40 grade activated carbon media is manufactured by heating selected grades of coal that produces a honeycomb-like structure containing millions of tiny pores. Chlorine and its related elements are first adsorbed on the surface of the pores. The capacity of activated carbon for chlorine removal is immense while the ability to adsorb organic compound is more limited.

Vessels

CAS-Series vessels are constructed of high quality carbon steel with flanged and dished heads. The 24" and smaller vessels have two 6" handholes to permit loading of media and inspection of internals without disturbing main piping. The 30" and larger vessels have a bolt and yoke manway in the top head to permit loading of media and inspection of internals without disturbing main piping and a 3" diameter media removal pad flange in the lower side sheet. All CAS-Series vessels include structural legs.

Distribution

CAS-Series vessels have separate inlet and outlet distributors designed to evenly distribute all flows with a minimum pressure drop. CAS-Series distributors are constructed of Schedule 80 PVC and are shipped installed.

Media

The CAS-Series is provided with standard grade of 12x40 activated carbon. All filters have a 36" or 60" total bed depth when the height of the straight side of the tank is 60" or 96", respectively.

A bed of quartz protects the bottom distributor. The quartz media also provides for a means of collecting and distributing the water for service and backwash, respectively. High quality quartz is provided, containing low levels of extractable materials to prevent contamination of product water.

Lining

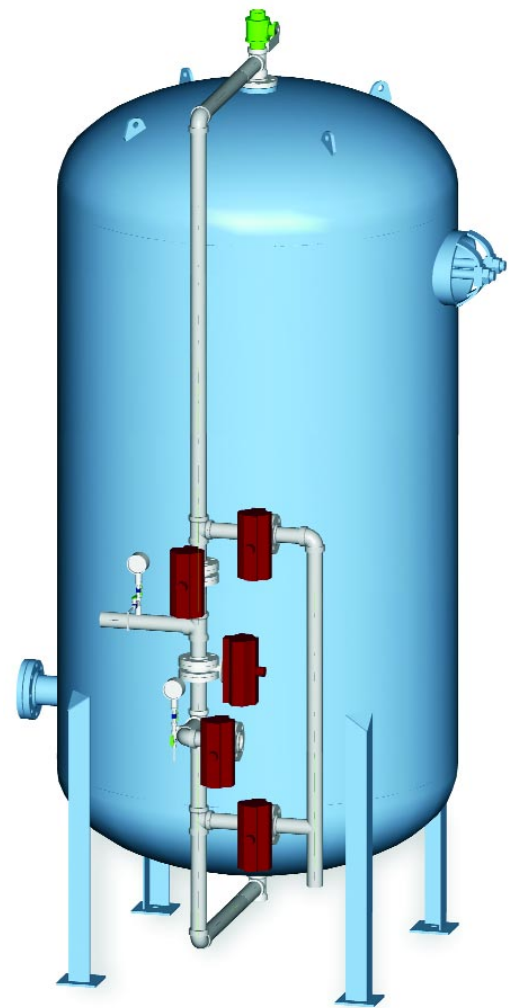
All vessels have Plasite linings.

Piping

Standard configuration piping is Schedule 80 PVC with socket welded fittings except where the attachment of threaded valves, rotometers and other devices is needed.

Valves

Diaphragm valves are provided for 2" piping and smaller; butterfly valves are provided for 3" piping and larger. Backwash and rinse outlet valves are equipped with travel stops to regulate flow rates during backwash and rinse cycles. An air pressure filter/regulator is provided. Clean air at a minimum pressure of 80 psig is required for valve actuation. All tubing is polypro.



Controls

A PLC controller will be provided, fully wired and programmed. All cleaning times have been programmed into the unit. All automatic valves are solenoid operated and include manual overrides.

Options

- ASME code tank
- Alternate tank lining
- Larger media connection
- Manway and davit
- 3" x 12" sight glass
- Structural steel skid
- 316SS piping and valves
- PPL piping and valves
- Interconnecting header
- Thermal relief valve
- D/P switch
- Flow indicator
- Media options
- Alternating service
- Alternate controllers
- Sanitation
- Media trap
- Backwash sight glass
- Finish paint
- Manual operation
- 316 stainless steel distribution
- Split manifold design

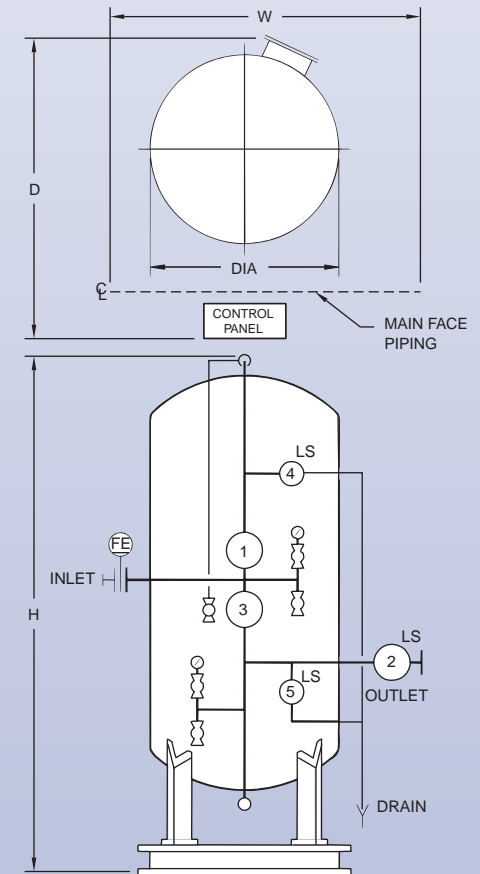
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WTModules™ are AVANTech's line of pre-engineered water treatment systems designed to provide excellent results at low cost in a variety of water treatment applications. With a long list of options, but without the need for custom engineering, WTModules™ is the cost effective solution for many process requirements.

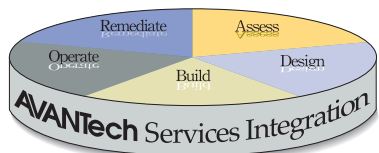
Model	Tank Size (in)	Design Flow (gpm)	Back Wash (gpm)	Media Volume (cf)	Pipe Size (in)	Overall Height H (in)	Width W (in)	Depth D (in)	Shipping Weight (lb)	Operating Weight (lb)
CAS-2060	20 x 60	20	25	7	1 1/2	97	26	36	1,200	1,500
CAS-2096	20 x 96	35	25	11	1 1/2	133	26	36	1,700	2,000
CAS-2460	24 x 60	30	38	9	2	98	30	40	1,625	3,050
CAS-2496	24 x 96	50	38	16	2	134	30	40	2,425	3,800
CAS-3060	30 x 60	50	60	14	2	100	36	45	2,150	3,100
CAS-3096	30 x 96	75	60	24	2	136	36	45	3,150	4,300
CAS-3660	36 x 60	70	84	21	3	102	42	51	3,200	4,600
CAS-3696	36 x 96	100	84	36	3	138	42	51	5,000	6,400
CAS-4260	42 x 60	100	115	28	3	104	48	57	4,300	6,000
CAS-4296	42 x 96	150	115	48	3	140	48	57	6,700	8,400
CAS-4860	48 x 60	125	150	37	3	106	54	69	5,600	7,900
CAS-4896	48 x 96	190	150	62	3	142	54	69	8,700	11,600
CAS-5460	54 x 60	160	190	47	4	107	60	75	7,200	10,200
CAS-5496	54 x 96	240	190	80	4	143	60	75	11,200	14,200
CAS-6060	60 x 60	200	240	58	4	109	66	81	8,700	12,500
CAS-6096	60 x 96	300	240	96	4	145	66	81	13,500	17,300
CAS-7260	72 x 60	280	340	84	4	112	84	93	12,500	17,800
CAS-7296	72 x 96	420	340	140	6	148	84	93	19,500	24,800
CAS-8460	84 x 60	385	460	114	6	126	96	114	16,200	23,800
CAS-8496	84 x 96	580	460	190	6	166	96	114	25,700	33,300
CAS-9660	96 x 60	500	600	149	6	132	108	120	20,900	30,500
CAS-9696	96 x 96	760	600	248	6	168	108	120	33,300	41,900
CAS-10860	108 x 60	640	760	188	6	135	120	135	29,500	41,400
CAS-10896	108 x 96	960	760	314	8	171	120	135	45,500	57,400
CAS-12060	120 x 60	800	950	232	8	142	132	150	35,500	50,500
CAS-12096	120 x 96	1,180	950	387	8	178	132	150	41,450	69,500
CAS-13260	132 x 60	950	1,150	281	8	160	144	160	42,200	60,500
CAS-13296	132 x 96	1,400	1,150	468	8	196	144	160	53,250	83,500
CAS-14460	144 x 60	1,200	1,360	336	8	171	156	170	50,500	71,600
CAS-14496	144 x 96	1,700	1,360	560	10	207	156	170	67,750	99,600

CAS-Series Carbon Adsorption Typical layout (shown with piping)



Typical valve sequence

Service	1 & 2
Backwash	3 & 4
Rinse	1 & 5



Design/Build/Operate AVANTech's approach to systems integration makes us uniquely qualified to provide turnkey service. Our broad range of services enables us to lend our expertise to an entire project—from planning through commissioning and beyond, including operational and remedial assistance needs. *Call us today for assistance with your project.*

