



*Culligan®  
Heavy Duty  
Commercial  
Filter*

*assisted living facilities*

*cafeterias*

*casinos*

*corporate campuses*

*educational facilities*

*food service*

*grocery*

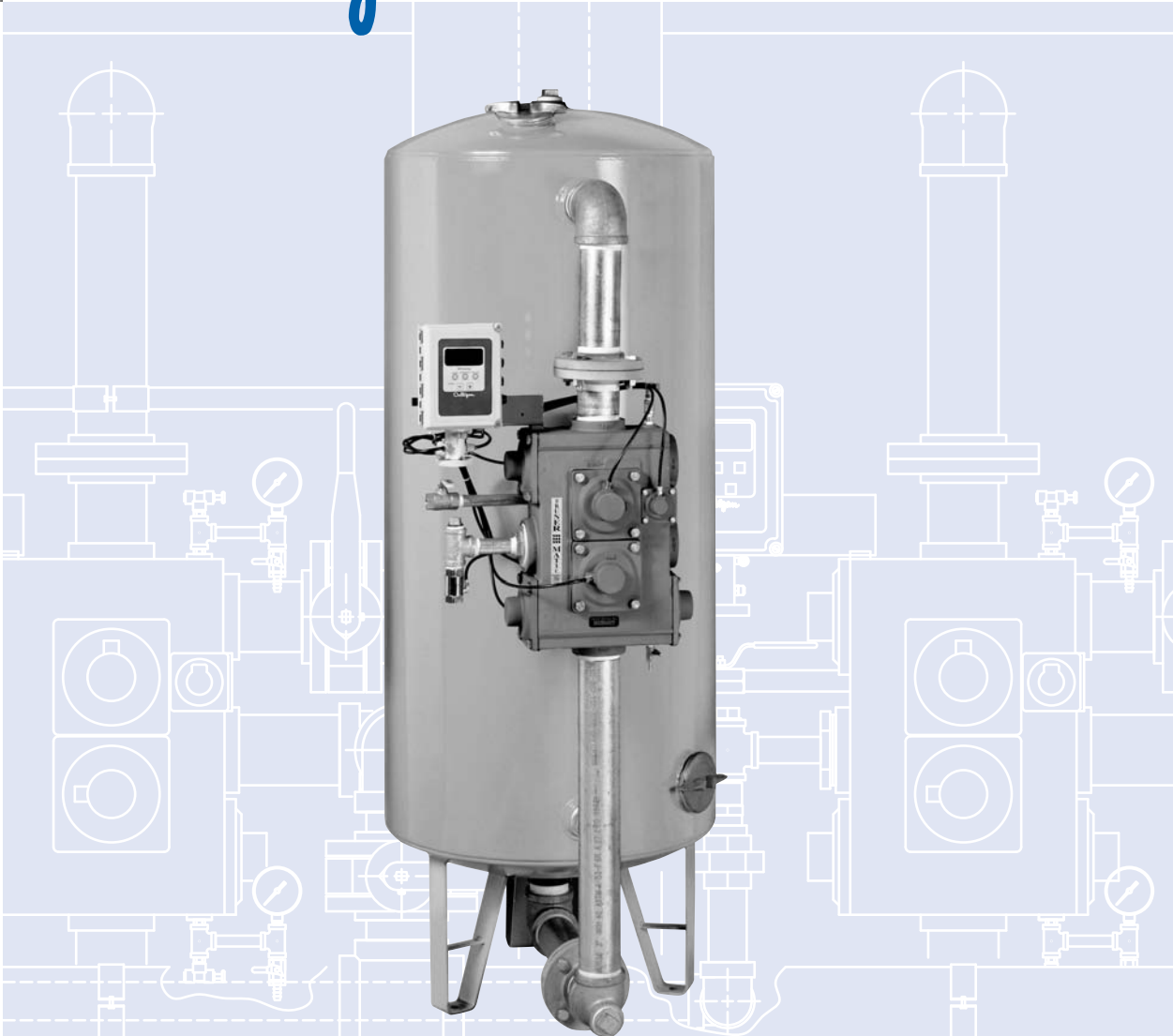
*hotel/hospitality*

*institutions*

*laundry*

*theme parks*

*vehicle wash*



## Culligan Side Mount (CSM™) Heavy Duty Commercial Filter

### Standard Features

- Side mount valve means easy access for convenient service.
- 24 Volt Culligan's MVP™ Controller – Field programmable with a back-lit LCD display and UL listed 120v/24v transformer.
- Single or Multiple Tank Configurations – Flow rates up to 77 gpm(carbon) and 193 gpm(depth).
- Regeneration initiation by choice or combination of time clock, flow meter or differential pressure switch.
- Carbon and Depth Filters
- Culligan's Brunermatic® Valve – Guided perimeter designed diaphragm valves are smooth operating and free of water hammer. All valve parts are easily accessible in the multiport design for ease of service.
- Corrosion resistant tanks – Made of low carbon steel with epoxy interior lining and finish coat painted exterior.



# Culligan's CSM™ Commercial Filter

## Applications and Benefits

- Food and Beverage—Superior taste and increased cost savings.
- Drinking Water—Reduces turbidity and chlorine; improves taste and clarity.
- Boilers—Turbidity reduction, minimize sludge blowdown.
- Light Industry Processes—Reduces particulate matter.
- Pretreatment—For softeners, RO's and DI systems.
- Vehicle Wash—Turbidity reduction.

## Options

- Patented Progressive Flow—Culligan's MVP controller can monitor flow demands, bringing additional tanks on-line or off-line as flows increase or decrease.
- Differential Pressure Switch
- A.S.M.E. Code Tanks
- Sample cocks and pressure gauges

- Separate source regeneration kits
- Skid mounting
- Flow meter

## Warranty

Culligan's CSM water filters are backed by a limited 1-year warranty against defects in material, workmanship and corrosion. In addition, tanks carry a limited 5-year warranty.\*

## System Specifications

Pressure:	30–100 psig 207–690 kPa
Power:	120 VAC/24 VAC 50/60 Hz
Temperature:	40–120°F 4–49°C

## Specifications Table

Model		Water Quality						Backwash Flow Rate (GPM)	Valve Size (inches)
		Superior <sup>1</sup>		High <sup>2</sup>		Utility <sup>3</sup>			
		Flow Rate (GPM)	Pressure Loss (PSI)	Flow Rate (GPM)	Pressure Loss (PSI)	Flow Rate (GPM)	Pressure Loss (PSI)		
Carbon Filters	CSM-201R	9	1	14	2	18	3	20	1.25
	CSM-242R	13	2	19	3	26	5	30	2
	CSM-302R	20	3	30	4	40	6	45	2
	CSM-362R	29	2	42	4	57	7	70	2
	CSM-422R	39	3	58	6	77	9	95	2
Depth Filters	CSM-201D	22	6	33	12	44	19	30	1.25
	CSM-202D	22	3	33	5	44	8	30	2
	CSM-242D	32	4	48	8	63	13	45	2
	CSM-302D	50	6	74	13	99	20	70	2
	CSM-362D	71	9	107	17	142	27	105	2
	CSM-422D	97	11	145	22	193	33	150	2
	CSM-423D	97	6	145	11	193	16	150	3

<sup>1</sup>Superior—Best quality water with lowest pressure loss. Recommended for influent suspended solid loads up to and greater than 300 ppm.

<sup>2</sup>High—Very good quality water with increased pressure loss. Recommended for influent suspended solid loads less than 300 ppm.

<sup>3</sup>Utility—Satisfactory quality water with greatest pressure loss. Shorter on line time between backwashing. Recommended for influent suspended solid loads less than 150 ppm.

All pressure drop figures are based on new filter media and a water temperature of 60°F.

Depth filters are capable of 10 micron effluent water quality, whereas all other filter types are capable of 40 micron effluent water quality.

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International Company

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MooreWallace PART NO. 46957

CSM product formerly sold under the Bruner label and/or CF20 Plus model designation.

The contaminants or other substances removed or reduced by this water treatment device are not necessarily in your water.

\* See printed warranty for details. Culligan will provide a copy of the warranty upon request.

MVP Controller



The product is covered by the following patents:

Controller Board Assembly: US 5351199, 5751598;  
Canada 2090757; DE 6920444.0; KR 215487;  
JP 3226284

Filter: US 5073255, 5273070, 6457698, 4534867; Israel  
095754

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## Automatic Depth Filters For Sediment Reduction

### Specifications and Operating Data

Single Tank  Models	Service Flow Rates <sup>1</sup>			Back- wash Flow <sup>2</sup>	Pipe Size	Media Qty	Filter Tank Size	Approx. Ship. Weight
	Superior Quality	High Quality	Utility Quality					
	gpm @ psi drop	gpm @ psi drop	gpm @ psi drop					
	m <sup>3</sup> /hr @ kPa drop	m <sup>3</sup> /hr @ kPa drop	m <sup>3</sup> /hr @ kPa drop					
CSM-202D	22 @ 3	33 @ 5	44 @ 8	30	2	571	20 x 54	1096
	5 @ 20.7	7.5 @ 34.5	10 @ 55.2	6.8	2	259	508 x 1,372	497
CSM-242D	32 @ 4	48 @ 8	63 @ 13	45	2	830	24 x 54	1658
	7.3 @ 27.6	10.9 @ 55.2	14.3 @ 89.6	10.2	2	376	610 x 1,372	752
CSM-302D	50 @ 6	74 @ 13	99 @ 20	75	2	1244	30 x 60	2414
	11.4 @ 41.4	16.8 @ 89.6	22.5 @ 138	17	2	564	762 x 1,524	1095
CSM-362D	71 @ 9	107 @ 17	142 @ 27	105	2	1765	36 x 60	4030
	16.1 @ 62	24.3 @ 117	32.2 @ 186	23.8	2	801	914 x 1,524	1828
CSM-422D	97 @ 11	145 @ 22	193 @ 33	150	2	2488	42 x 60	5008
	22 @ 75.8	32.9 @ 152	43.8 @ 228	34.1	2	1129	1,067 x 1,524	2272
CSM-423D	97 @ 6	145 @ 11	193 @ 16	150	3	2488	42 x 60	5008
	22 @ 41.4	32.9 @ 75.8	43.8 @ 110	34.1	3	1129	1,067 x 1,524	2272

<sup>1</sup> Service flow rates are based on:

Superior (10 gpm/ft<sup>2</sup> - 24 m<sup>3</sup>/hr/m<sup>2</sup>) - Best quality effluent at specified flow. Lowest pressure loss. Recommended for suspended solids loads up to and greater than 300 ppm.

High (15 gpm/ft<sup>2</sup> - 37 m<sup>3</sup>/hr/m<sup>2</sup>) - Very good quality effluent at specified flow. Increased pressure loss. Recommended for suspended solids loads < 300 ppm.

Utility (20 gpm/ft<sup>2</sup> - 49 m<sup>3</sup>/hr/m<sup>2</sup>) - Satisfactory quality effluent at specified flow. Greatest pressure loss. Recommended for suspended solids loads of < 150 ppm.

<sup>2</sup> Backwash flow rates are based on 12-14 gpm/ft<sup>2</sup> (29-34 m<sup>3</sup>/hr/m<sup>2</sup>) using 50° F (10° C) water. A different backwash rate may be required depending upon water temperature.

NOTE: Operational, maintenance and replacement requirements are essential for this product to perform as advertised. Specifications shown are for single models. Also available in multiple tank configurations.



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## Automatic Cullar® Filters For Dechlorination and Organic Adsorption

### Specifications and Operating Data

Single Tank  Models	Service Flow Rates		Back-wash Flow <sup>3</sup>	Pipe Size	Media Qty	Filter Tank Size	Approx. Ship. Weight
	Taste, Odor & Organic Removal <sup>1</sup>	Dechlorination <sup>2</sup>					
	gpm @ psi drop	gpm @ psi drop					
	m <sup>3</sup> /hr @ kPa drop	m <sup>3</sup> /hr @ kPa drop					
CSM-201R	9 @ 1	18 @ 3	20	1-1/4	6	20 x 54	690
	2 @ 6.9	4.1 @ 20.7	4.5	1-1/4	0.17	508 x 1,372	313
CSM-242R	13 @ 2	26 @ 5	30	2	8	24 x 54	1048
	3 @ 13.8	5.9 @ 34.5	6.8	2	0.227	610 x 1,372	475
CSM-302R	20 @ 3	40 @ 6	45	2	12	30 x 60	1500
	4.5 @ 20.7	9.1 @ 41.4	10.2	2	0.34	762 x 1,524	680
CSM-362R	29 @ 2	57 @ 7	70	2	18	36 x 60	2760
	6.6 @ 13.8	12.9 @ 48.3	15.9	2	0.51	914 x 1,524	1252
CSM-422R	39 @ 3	77 @ 9	95	2	24	42 x 60	3180
	8.9 @ 20.7	17.5 @ 62	21.6	2	0.68	1,067 x 1,524	1442

<sup>1</sup> Service flow rates for taste, odor & organic removal are based on 5 gpm/ft<sup>2</sup> (12 m<sup>3</sup>/hr/m<sup>2</sup>).

<sup>2</sup> Service flow rates for dechlorination are based on 10 gpm/ft<sup>2</sup> (24 m<sup>3</sup>/hr/m<sup>2</sup>).

<sup>3</sup> Backwash flow rates are based on 10 gpm/ft<sup>2</sup> (24 m<sup>3</sup>/hr/m<sup>2</sup>) using 50° F (10° C) water. A different backwash rate may be required depending upon water temperature or the type of carbon used.

NOTE: Operational, maintenance and replacement requirements are essential for this product to perform as advertised. Specifications shown are for single models. Also available in multiple tank configurations.



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# Culligan®

## *Softeners*

- Hi-Flo® 2E
- CSM
- Hi-Flo® 55E
- Hi-Flo® 50

## *Filters*

- Hi-Flo® 2E
- Hi-Flo® 42
- CSM
- Hi-Flo® 55E
- Hi-Flo® 50

## Introducing the Culligan® MVP Electronic Controller

# MVP

### *Multifunctional*

- Sequences the regeneration process of water softeners or filtration systems
- Time, Volume, Aqua-Sensor®\* or external device
- Can be used as a simple timer or more complex system integrator

### *Versatile*

- Patented Progressive Flow\*\* feature permits smaller systems to provide greater flow rates and treatment capacities
- Will adapt to many types of water softeners, filters or dealkalizers
- As many as 6 controls may be linked together, allowing for simple, future expansion
- Operates on 24 VAC

### *Programmable*

- Time based regeneration schedule can be interval of days or hours or specific day of week
- Programmable trip point allows multiple units to be brought online or offline as flow demand increases or decreases
- Two auxilliary outputs and one input can be programmed to be active or inactive at any point of the regeneration process.



## Culligan® MVP Designed With The Ease of 24-volt Operation.

corporate campuses  
educational facilities  
food service  
grocery  
hotel/hospitality  
laundry  
vehicle wash

### **Time of Day**

Displays time in 12 hour (AM/PM) or 24 hour formats.

### **EEPROM**

Saves programmed and statistical functions.

### **One-Touch Program Update**

Update multiple controls through the touch of a button on the primary control.

### **Lock/Unlock**

Allows the control to be easily locked out from inadvertent program changes or abuse.

### **Screen Blanking**

Allows the screen to go blank once programming is complete (After 5 minutes of no keypad activity).

### **Power Source**

Electrical power required for the control is 24-volt 50/60 Hz AC current. A plug-in transformer (120v/24v) is provided.

### **Program Beeper**

Emits an audible beep when key pads are depressed to help identify valid (short beep) or invalid (3 short beeps) key pad touches. Can be enabled or disabled as desired.

### **Multi-Unit Communication Input/Output (RS485)**

The communication input/output feature routinely recognizes when another controller within a multiple controller system is in a regeneration sequence, prohibiting the chance of multiple units

## Additional MVP Features

- **Battery Backup** - The optional battery backup will maintain the time of day for a minimum of 4 weeks using a 3.6V 1/2AA-lithium type battery as supplied by Culligan.
- **Regeneration Start Delay** - A user determined number of hours (up to 9) can be input for the purpose of increasing time between multiple regeneration initiations.
- **Auxillary Input** - capable of accepting a remote signal from a dry contact device such as an operator push-button for the purpose of initiating the regeneration sequence.
- **Segmented Brine Draw/Rinse Cycle - Brine Reclaim Capability** - allows the user to configure the system for brine reclaim with a minimum of additional valves and/or other types of hardware.

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MooreWallace PART NO. 46968



\* Aqua-Sensor: Patent # US 5,699,272

\*\* Progressive Flow: Patent # US 5,060,167 , # US 5,351,199

Check for compliance with state and local laws and regulations. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

Culligan, Aqua-Sensor, [www.culligan.com](http://www.culligan.com) and Hey Culligan Man are trademarks of Culligan International Company.





# Limited WARRANTY

Culligan® Hi-Flo® 2 and 2e Series, Hi-Flo® 52 series, Hi-Flo® 42 Series, Hi-Flo® 55e Series,  
CSM Series and Hi-Flo® 50 Series

You have just purchased one of the finest water conditioners made. As an expression of our confidence in Culligan International Company products, this product is warranted to the original end-user, when installed in accordance with Culligan specifications, against defects in material and workmanship from the date of original installation, as follows:

<b>For a period of ONE YEAR</b>	<b>The entire conditioner.</b>
<b>For a period of TWO YEARS</b>	<b>The control valve internal parts. The brine valve and its component parts. The salt storage container internal components.</b>
<b>For a period of FIVE YEARS</b>	<b>The control valve body, excluding internal parts. The fiberglass wound container(s), if so equipped*. The salt storage container(s), if so equipped. The epoxy-lined steel conditioner tank(s), if so equipped.</b>
<b>For a period of TWELVE YEARS</b>	<b>The conditioner tank, if it contains a plastic liner.</b>

\* The tank must be protected by a vacuum breaker device as described in the unit's operating manual. Damage to the tank caused by vacuum is not covered by this warranty. The unit must be used in operating conditions that conform to Culligan's recommended design guidelines. This warranty will not apply if the unit has been modified, repaired or altered by someone not authorized by Culligan.

If a part described above is found defective within the specified period, you should notify your independently operated Culligan dealer and arrange a time during normal business hours for the dealer to inspect the water conditioner on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

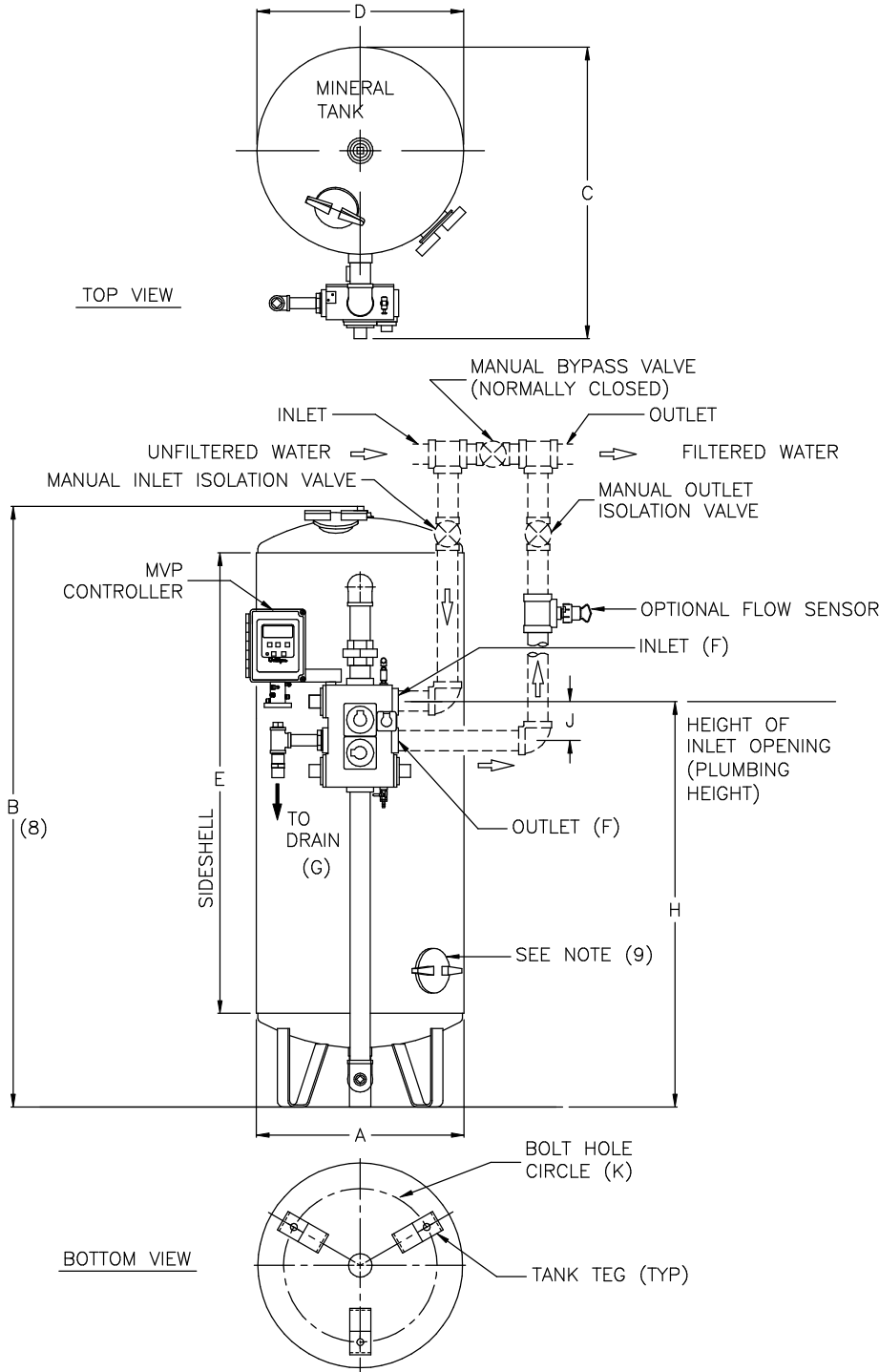
We are not responsible for damage caused by accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, oxidizing agents (such as chlorine, ozone, chloramines and other related components), alteration, installation or operation contrary to our printed instructions, or by the use of accessories or components which do not meet Culligan specifications, is not covered by this warranty. Refer to the specifications section in the Installation and Operating manual for application parameters.

Our product performance specifications are furnished with each water conditioning unit. TO THE EXTENT PERMITTED BY LAW, CULLIGAN DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; TO THE EXTENT REQUIRED BY LAW, ANY SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE-YEAR PERIOD SPECIFIED ABOVE FOR THE ENTIRE CONDITIONER. As a manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing this product. The quality of water supplies may vary seasonally or over a period of time, and your water usage rate may vary as well. Water characteristics can also differ considerably if this product is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product with a nonpotable water source or a water source which does not meet the conditions for use described in the installation and operation manual(s) that accompany the equipment. OUR OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE WATER CONDITIONER, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES.

Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Consult your telephone directory for your local independently operated Culligan dealer, or write Culligan International Company for warranty and service information.

CULLIGAN INTERNATIONAL COMPANY  
One Culligan Parkway  
Northbrook, Illinois 60062

MODEL	DIMENSIONS (INCHES)																	
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	SIMPLEX OPER. WT. lbs.	SIMPLEX SHIP. WT. lbs.
CSM-201D	21	73	29	20	54	1.25	1.0	46.25	3.25	14"	22 @ 6	33 @ 12	44 @ 19	30	1.25	3	1365	1046
CSM-202D	21	73	29	20	54	2.0	1.0	47.62	4.62	14"	22 @ 3	33 @ 5	44 @ 8	30	1.25	3	1415	1096
CSM-242D	25	74	33	24	54	2.0	2.5	47.62	4.62	18"	32 @ 4	48 @ 8	63 @ 13	46	1.5	4	2215	1658
CSM-302D	31	85	40	30	60	2.0	3.0	47.62	4.62	24"	50 @ 6	74 @ 13	99 @ 20	76	2	4.25	3560	2414
CSM-362D	37	88	46	36	60	2.0	3.0	47.62	4.62	30"	71 @ 9	107 @ 17	142 @ 27	105	2	7	5600	4030
CSM-422D	43	90	53	42	60	2.0	4.0	47.62	4.62	36"	97 @ 11	145 @ 22	193 @ 33	150	2.5	3	6470	5008
CSM-423D	43	90	54	42	60	3.0	4.0	49.62	6.62	36"	97 @ 6	145 @ 11	193 @ 16	150	2.5	3	6520	5058

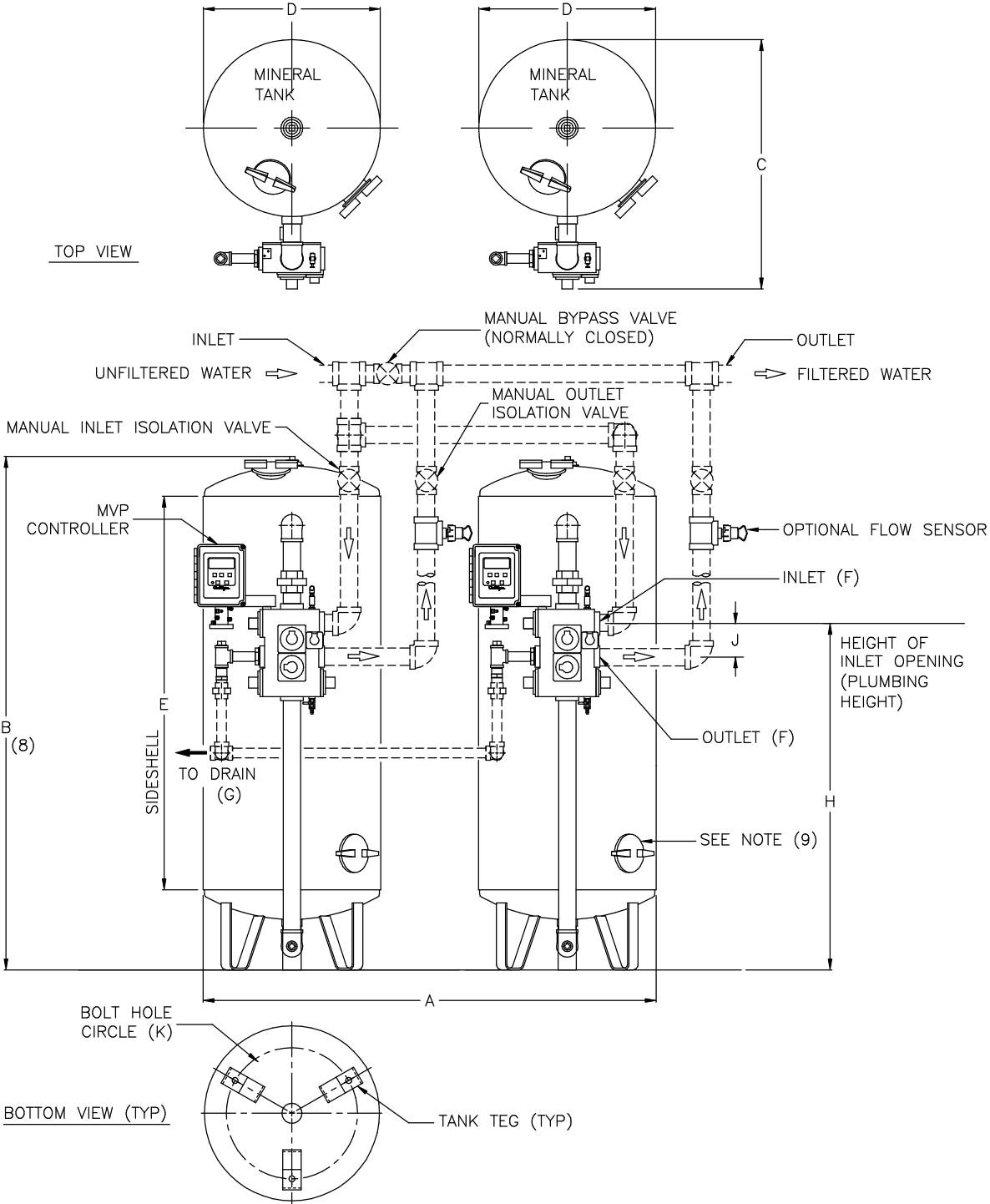


- NOTES:
- (1) PIPING AND FITTINGS SHOWN DASHED TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE IN INCHES ( $\pm 1$  INCH) AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET, OUTLET, AND DRAIN CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
  - (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM, THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
  - (5) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE FILTER FOR FILLING.
  - (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
  - (8) OVERALL TANK HEIGHT IS BASED ON STANDARD NON-CODE TANK CONSTRUCTION. SEE ASME TANK HEIGHT ADDER FOR ASME TANKS.
  - (9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					 <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS <small>PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.</small>	NAME CSM SIMPLEX DEPTH FILTER TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
						REF. NO.		
						PART NO. CSM_SIMP_DEPTH		



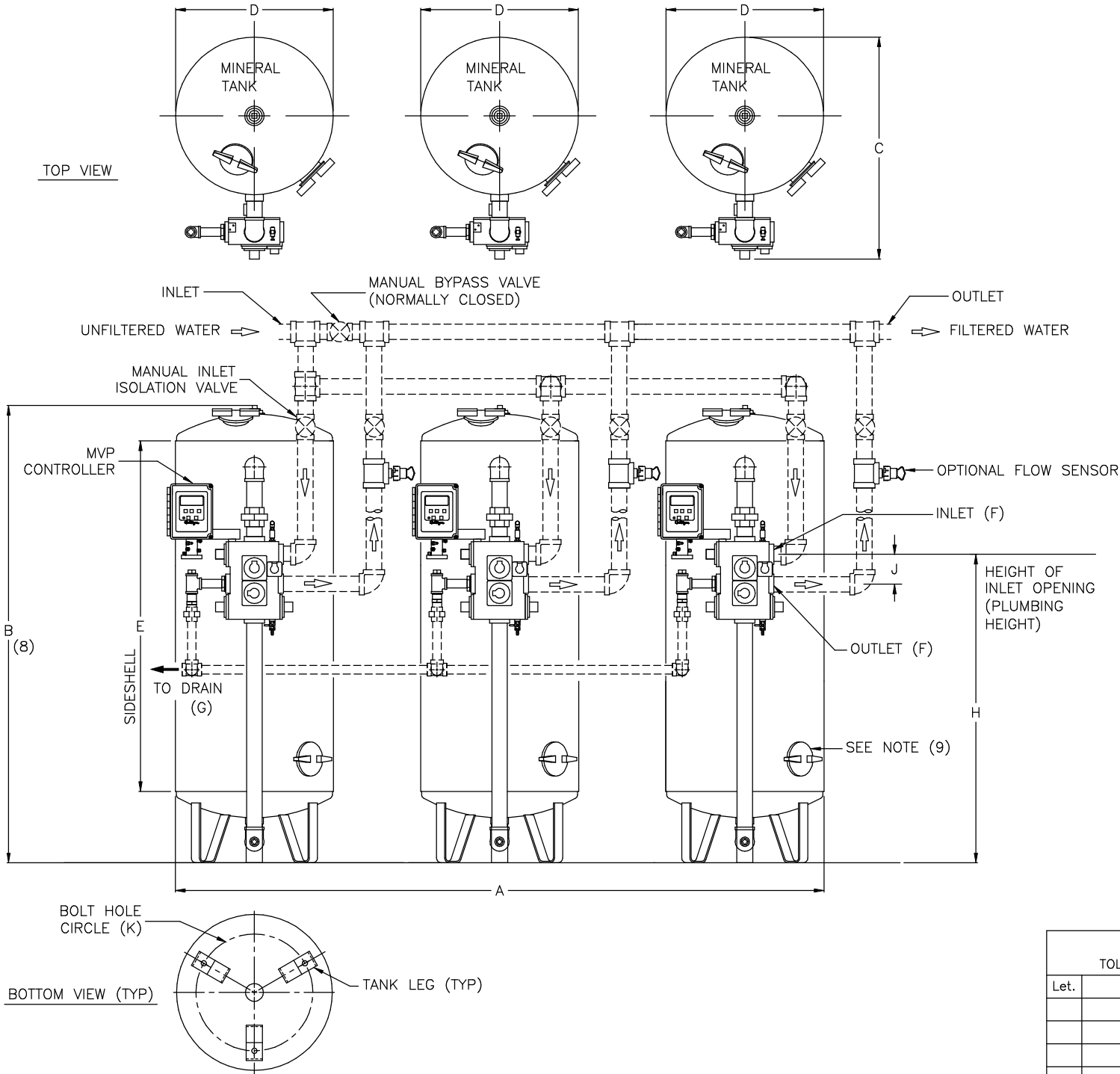
MODEL	DIMENSIONS (INCHES)										UNIT DATA PER TANK							
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
CSM-201D	54	73	29	20	54	1.25	1.0	46.25	3.25	14"	22 @ 6	33 @ 12	44 @ 19	30	1.25	3	2730	2092
CSM-202D	54	73	29	20	54	2.0	1.0	47.62	4.62	14"	22 @ 3	33 @ 5	44 @ 8	30	1.25	3	2830	2192
CSM-242D	62	74	33	24	54	2.0	2.5	47.62	4.62	18"	32 @ 4	48 @ 8	63 @ 13	46	1.5	4	4430	3316
CSM-302D	74	85	40	30	60	2.0	3.0	47.62	4.62	24"	50 @ 6	74 @ 13	99 @ 20	76	2	4.25	7120	4828
CSM-362D	86	88	46	36	60	2.0	3.0	47.62	4.62	30"	71 @ 9	107 @ 17	142 @ 27	105	2	7	11200	8060
CSM-422D	98	90	53	42	60	2.0	4.0	47.62	4.62	36"	97 @ 11	145 @ 22	193 @ 33	150	2.5	3	12940	10016
CSM-423D	98	90	54	42	60	3.0	4.0	49.62	6.62	36"	97 @ 6	145 @ 11	193 @ 16	150	2.5	3	13040	10116



- NOTES:
- (1) PIPING AND FITTINGS SHOWN DASHED TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE IN INCHES (±1 INCH) AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET, OUTLET, AND DRAIN CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
  - (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM, THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
  - (5) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE FILTER FOR FILLING.
  - (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
  - (8) OVERALL TANK HEIGHT IS BASED ON STANDARD NON-CODE TANK CONSTRUCTION. SEE ASME TANK HEIGHT ADDER FOR ASME TANKS.
  - (9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					 <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS  PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.	NAME CSM DUPLEX DEPTH FILTER TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
						REF. NO.		
						PART NO. CSM_DUP_DEPTH		

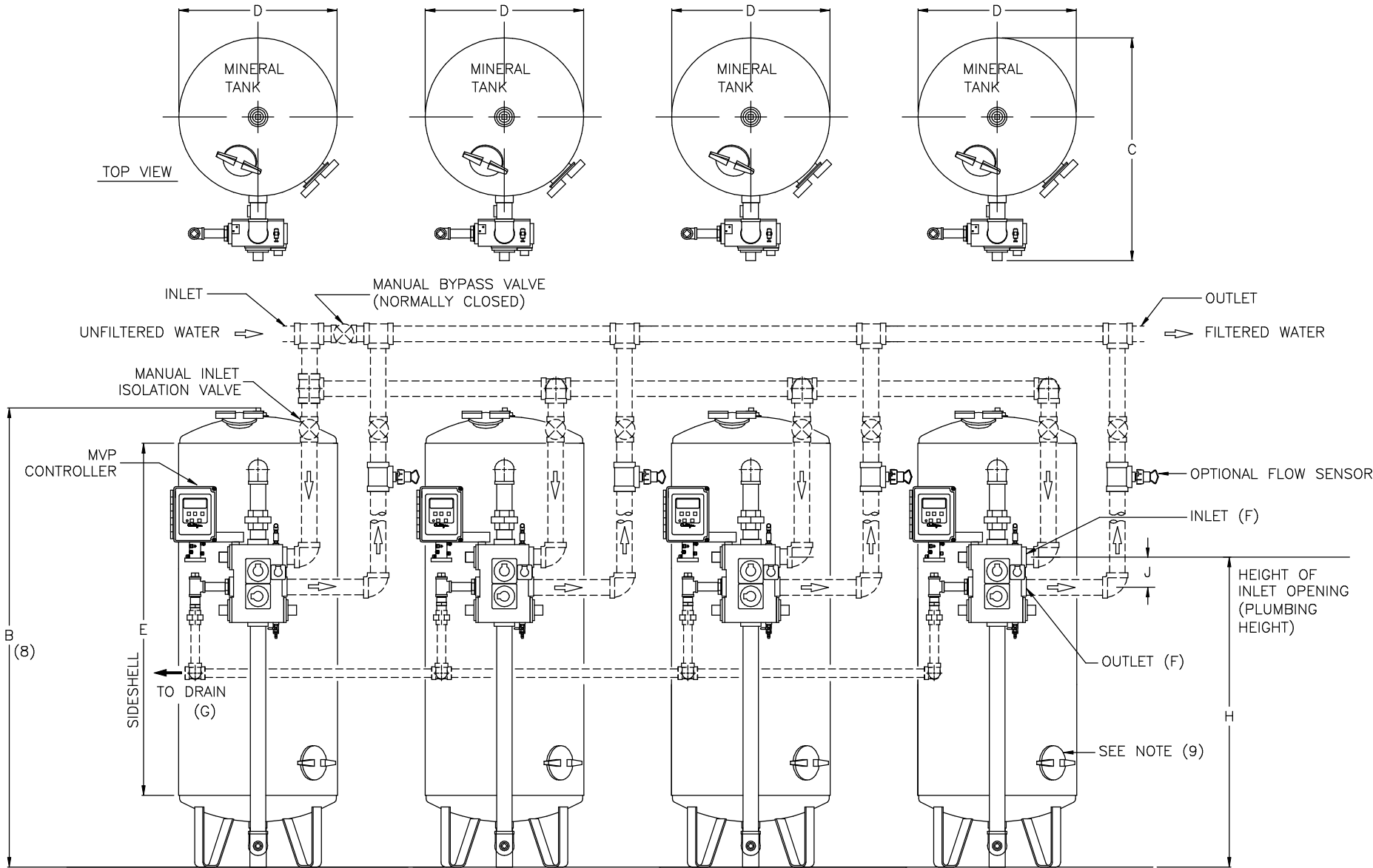
MODEL	DIMENSIONS (INCHES)										UNIT DATA PER TANK							
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
CSM-201D	87	73	29	20	54	1.25	1.0	46.25	3.25	14"	22 @ 6	33 @ 12	44 @ 19	30	1.25	3	4095	3138
CSM-202D	87	73	29	20	54	2.0	1.0	47.62	4.62	14"	22 @ 3	33 @ 5	44 @ 8	30	1.25	3	4245	3288
CSM-242D	99	74	33	24	54	2.0	2.5	47.62	4.62	18"	32 @ 4	48 @ 8	63 @ 13	46	1.5	4	6645	4974
CSM-302D	117	85	40	30	60	2.0	3.0	47.62	4.62	24"	50 @ 6	74 @ 13	99 @ 20	76	2	4.25	10680	7242
CSM-362D	135	88	46	36	60	2.0	3.0	47.62	4.62	30"	71 @ 9	107 @ 17	142 @ 27	105	2	7	16800	12090
CSM-422D	153	90	53	42	60	2.0	4.0	47.62	4.62	36"	97 @ 11	145 @ 22	193 @ 33	150	2.5	3	19410	15024
CSM-423D	153	90	54	42	60	3.0	4.0	49.62	6.62	36"	97 @ 6	145 @ 11	193 @ 16	150	2.5	3	19560	15174



- NOTES:
- (1) PIPING AND FITTINGS SHOWN DASHED TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE IN INCHES (±1 INCH) AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET, OUTLET, AND DRAIN CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
  - (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM, THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
  - (5) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE FILTER FOR FILLING.
  - (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
  - (8) OVERALL TANK HEIGHT IS BASED ON STANDARD NON-CODE TANK CONSTRUCTION. SEE ASME TANK HEIGHT ADDER FOR ASME TANKS.
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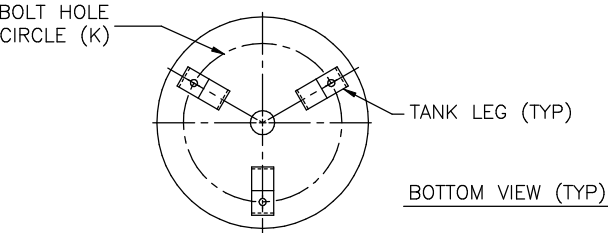
DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					<div>Culligan® ENGINEERED SYSTEMS NORTHBROOK, ILLINOIS</div> <div>PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.</div>	NAME CSM TRIPLEX DEPTH FILTER TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO. CSM_TRI_DEPTH	


MODEL	DIMENSIONS (INCHES)										UNIT DATA PER TANK							
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	QUAD OPER. WT. lbs.	QUAD SHIP. WT. lbs.
CSM-201D	120	73	29	20	54	1.25	1.0	46.25	3.25	14"	22 @ 6	33 @ 12	44 @ 19	30	1.25	3	5460	4184
CSM-202D	120	73	29	20	54	2.0	1.0	47.62	4.62	14"	22 @ 3	33 @ 5	44 @ 8	30	1.25	3	5660	4384
CSM-242D	136	74	33	24	54	2.0	2.5	47.62	4.62	18"	32 @ 4	48 @ 8	63 @ 13	46	1.5	4	8860	6632
CSM-302D	160	85	40	30	60	2.0	3.0	47.62	4.62	24"	50 @ 6	74 @ 13	99 @ 20	76	2	4.25	14240	9656
CSM-362D	184	88	46	36	60	2.0	3.0	47.62	4.62	30"	71 @ 9	107 @ 17	142 @ 27	105	2	7	22400	16120
CSM-422D	208	90	53	42	60	2.0	4.0	47.62	4.62	36"	97 @ 11	145 @ 22	193 @ 33	150	2.5	3	25880	20032
CSM-423D	208	90	54	42	60	3.0	4.0	49.62	6.62	36"	97 @ 6	145 @ 11	193 @ 16	150	2.5	3	26080	20232



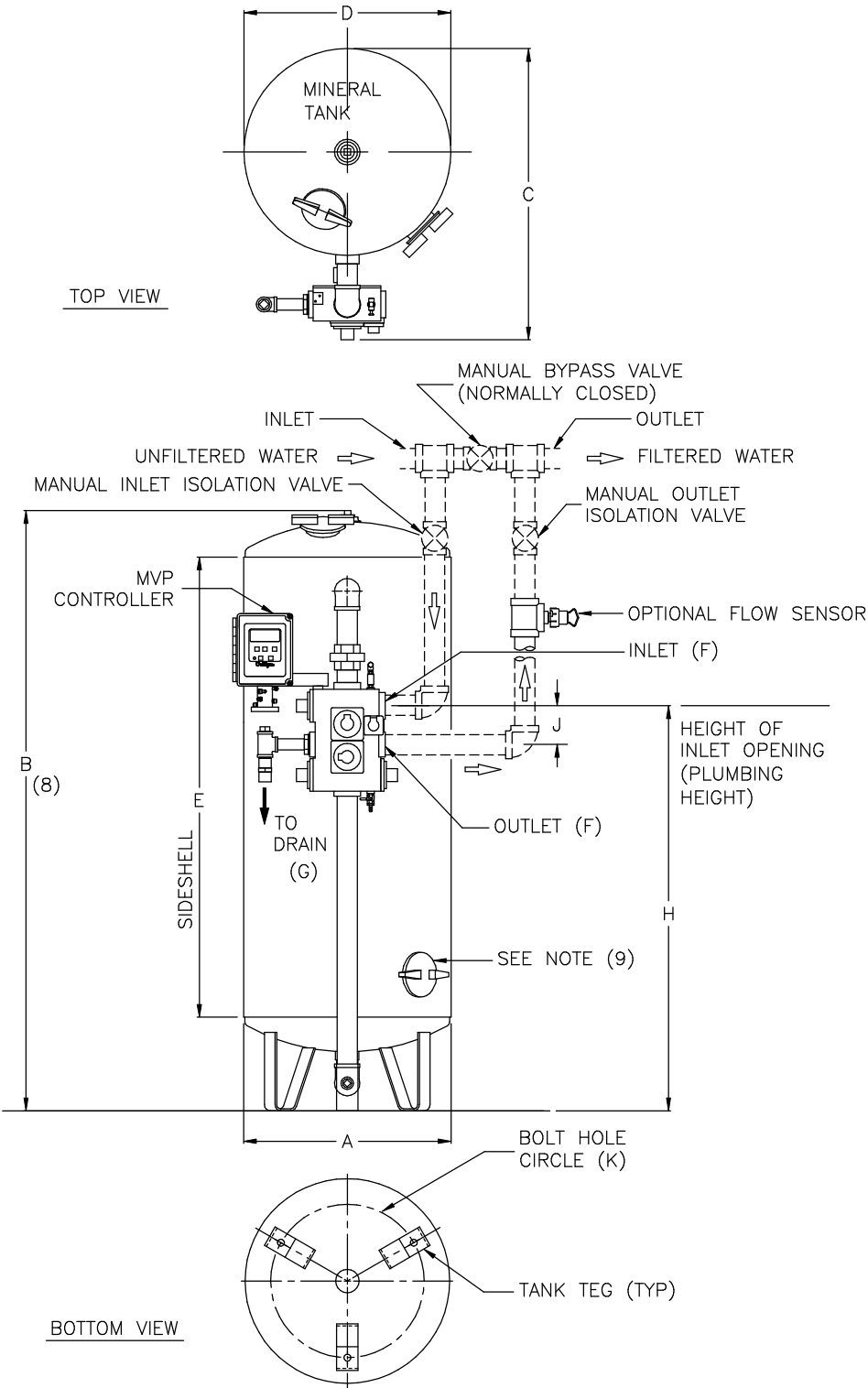
NOTES:

- (1) PIPING AND FITTINGS SHOWN DASHED TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE IN INCHES ( $\pm 1$  INCH) AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.
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- (5) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE FILTER FOR FILLING.
- (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
- (8) OVERALL TANK HEIGHT IS BASED ON STANDARD NON-CODE TANK CONSTRUCTION. SEE ASME TANK HEIGHT ADDER FOR ASME TANKS.
- (9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.



DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					 <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS	NAME CSM QUAD DEPTH FILTER TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
					PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.	REF. NO.		
						PART NO. CSM_QUAD_DEPTH		

DIMENSIONS (INCHES)																		
MODEL	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	SIMPLEX OPER. WT. lbs.	SIMPLEX SHIP. WT. lbs.
CSM-201R	21	73	29	20	54	1.25	1.0	46.25	3.25	14"	9 @ 1	14 @ 2	18 @ 3	20	1.25	3	960	690
CSM-242R	25	74	33	24	54	2.0	1.0	47.62	4.62	18"	13 @ 2	19 @ 3	26 @ 5	30	1.25	4	1465	1048
CSM-302R	31	85	40	30	60	2.0	2.5	47.62	4.62	24"	20 @ 3	30 @ 4	40 @ 6	46	1.25	4.25	2320	1500
CSM-362R	37	88	46	36	60	2.0	3.0	47.62	4.62	30"	29 @ 2	42 @ 4	57 @ 7	69	2	7	3745	2760
CSM-422R	43	90	53	42	60	2.0	3.0	47.62	4.62	36"	39 @ 3	58 @ 6	77 @ 9	95	2	3	4775	3180



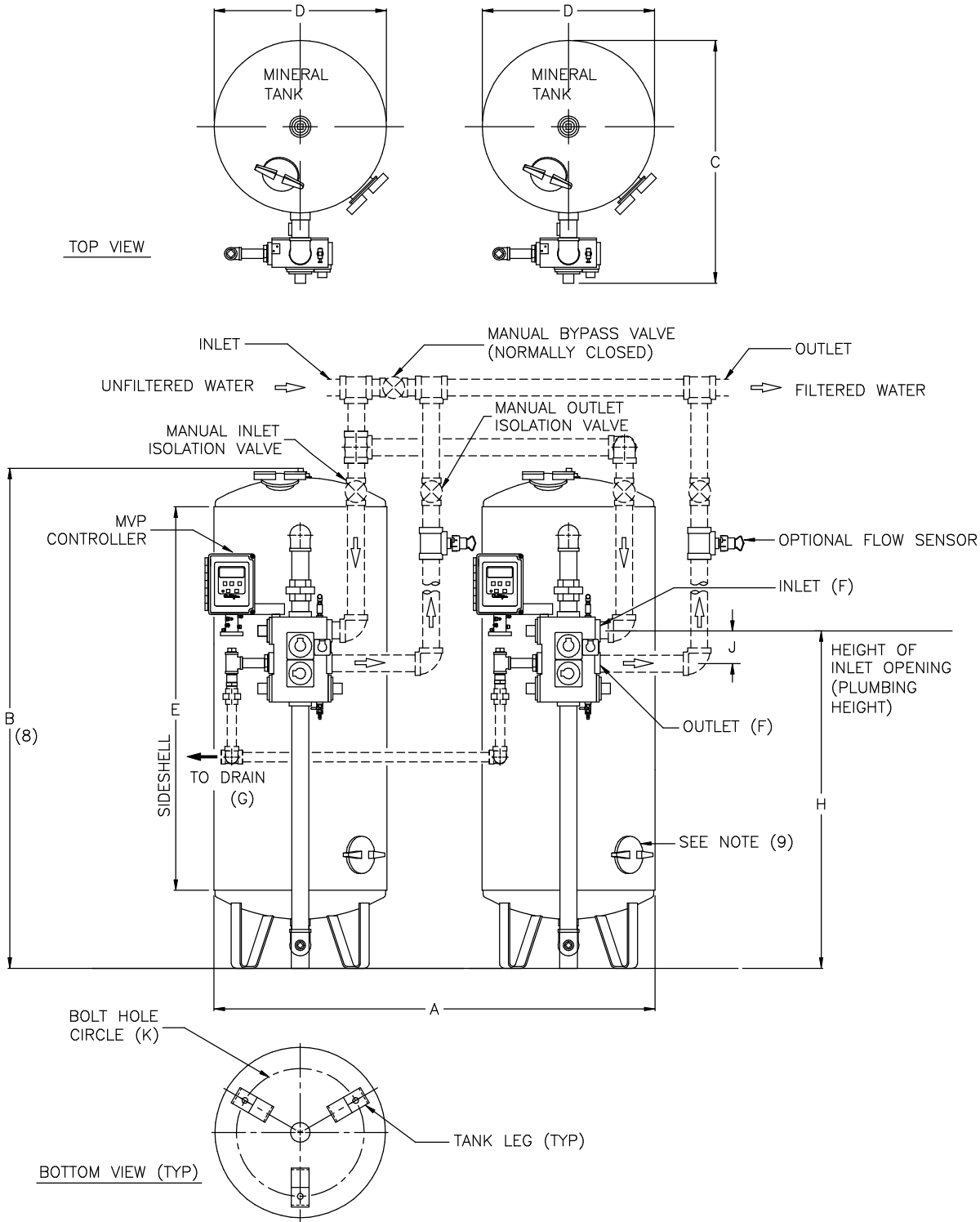
- NOTES:
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DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					NAME CSM SIMPLEX CARBON FILTER TECHNICAL DATA SHEET	
Let.	Change	By	App	Date		
					DETAILED BY: KMR 7/1/03	APP. BY:
					REF. NO.	PART NO. CSM_SIMP_CARBON
						SHEET 1 OF 1

**Culligan®**  
**ENGINEERED SYSTEMS**  
NORTHBROOK, ILLINOIS

PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.

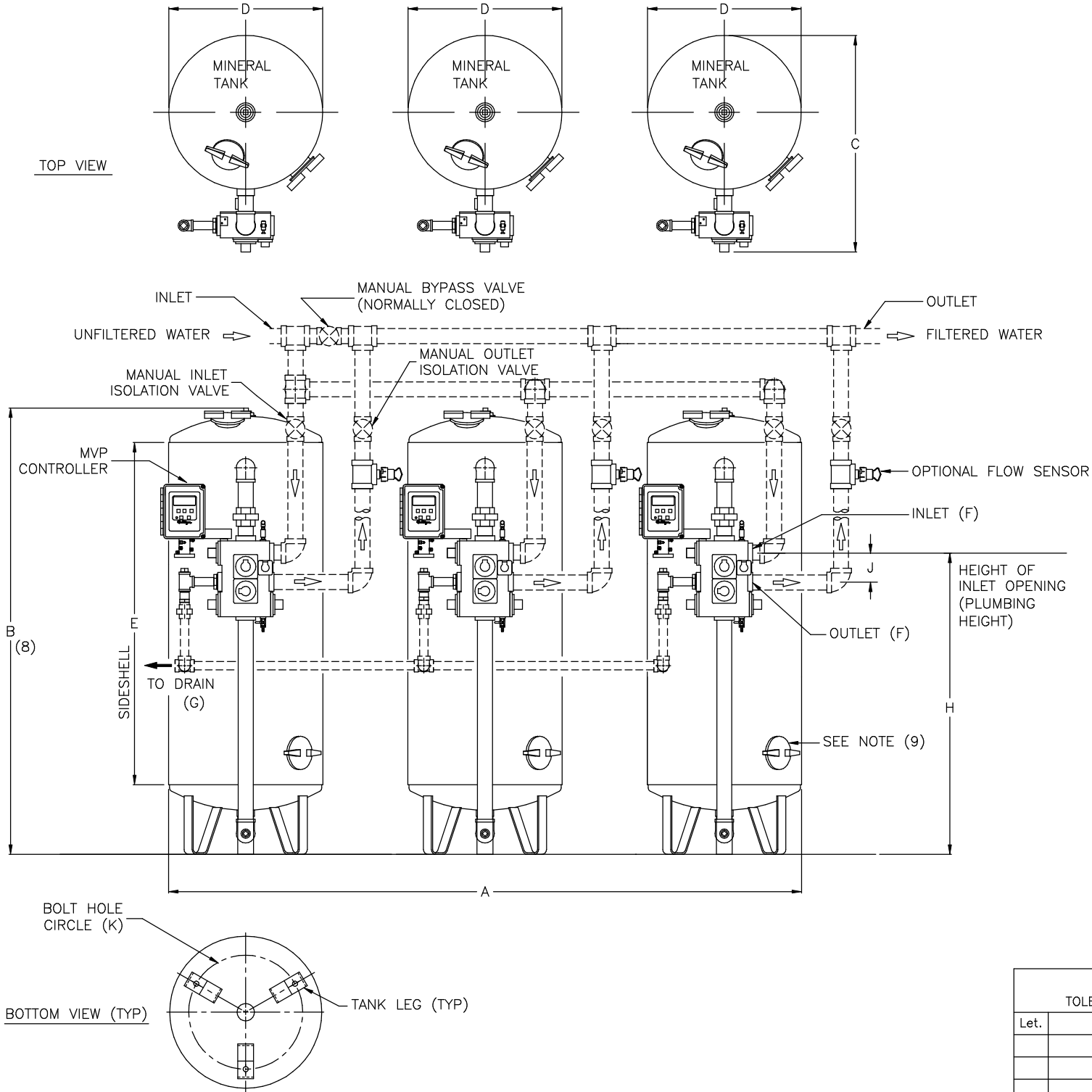
MODEL	DIMENSIONS (INCHES)										UNIT DATA PER TANK			DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP					
CSM-201R	54	73	29	20	54	1.25	1.0	46.25	3.25	14"	9 @ 1	14 @ 2	18 @ 3	20	1.25	3	1920	1380
CSM-242R	62	74	33	24	54	2.0	1.0	47.62	4.62	18"	13 @ 2	19 @ 3	26 @ 5	30	1.25	4	2930	2096
CSM-302R	74	85	40	30	60	2.0	2.5	47.62	4.62	24"	20 @ 3	30 @ 4	40 @ 6	46	1.25	4.25	4540	3000
CSM-362R	86	88	46	36	60	2.0	3.0	47.62	4.62	30"	29 @ 2	42 @ 4	57 @ 7	69	2	7	7490	5520
CSM-422R	98	90	53	42	60	2.0	3.0	47.62	4.62	36"	39 @ 3	58 @ 6	77 @ 9	95	2	3	9550	6360



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Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
						REF. NO.		
						PART NO. CSM_DUP_CARBON		

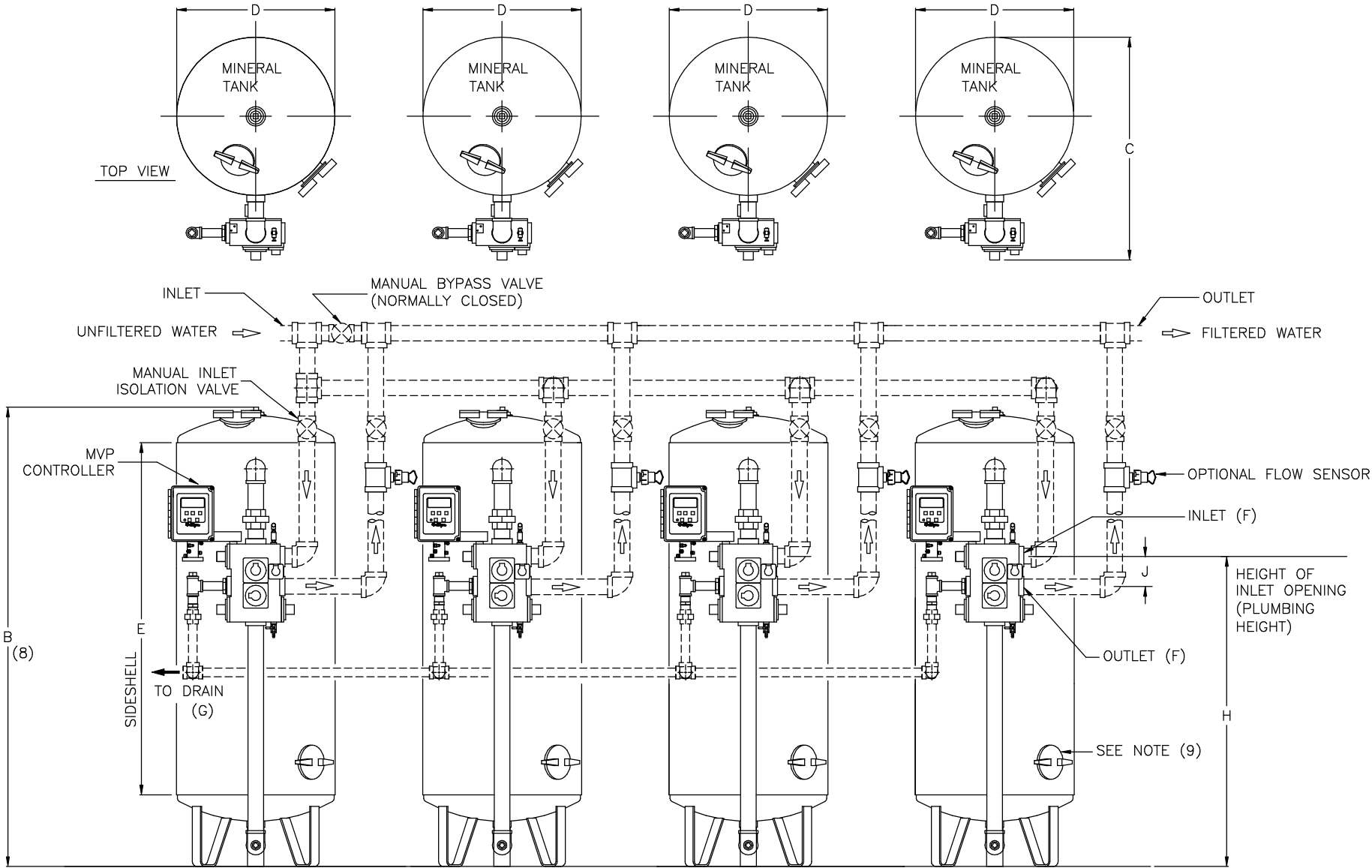
DIMENSIONS (INCHES)											UNIT DATA PER TANK							
MODEL	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
CSM-201R	87	73	29	20	54	1.25	1.0	46.25	3.25	14"	9 @ 1	14 @ 2	18 @ 3	20	1.25	3	2880	2070
CSM-242R	99	74	33	24	54	2.0	1.0	47.62	4.62	18"	13 @ 2	19 @ 3	26 @ 5	30	1.25	4	4395	3144
CSM-302R	117	85	40	30	60	2.0	2.5	47.62	4.62	24"	20 @ 3	30 @ 4	40 @ 6	46	1.25	4.25	6960	4500
CSM-362R	135	88	46	36	60	2.0	3.0	47.62	4.62	30"	29 @ 2	42 @ 4	57 @ 7	69	2	7	11235	8280
CSM-422R	153	90	53	42	60	2.0	3.0	47.62	4.62	36"	39 @ 3	58 @ 6	77 @ 9	95	2	3	14325	9540



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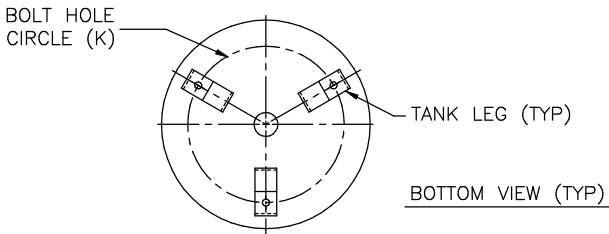
DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					 <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS  PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.	NAME CSM TRIPLEX CARBON FILTER TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
						REF. NO.		
						PART NO. CSM_TRI_CARBON		

MODEL	DIMENSIONS (INCHES)										UNIT DATA PER TANK			DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	ASME TANK HEIGHT ADDER (8) IN.	QUAD OPER. WT. lbs.	QUAD SHIP. WT. lbs.
	WIDTH A	HEIGHT B(8)	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	INLET TO OUTLET J	BOLT HOLE CIRCLE DIA. K	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP					
CSM-201R	120	73	29	20	54	1.25	1.0	46.25	3.25	14"	9 @ 1	14 @ 2	18 @ 3	20	1.25	3	3840	2760
CSM-242R	136	74	33	24	54	2.0	1.0	47.62	4.62	18"	13 @ 2	19 @ 3	26 @ 5	30	1.25	4	5860	4192
CSM-302R	160	85	40	30	60	2.0	2.5	47.62	4.62	24"	20 @ 3	30 @ 4	40 @ 6	46	1.25	4.25	9280	6000
CSM-362R	184	88	46	36	60	2.0	3.0	47.62	4.62	30"	29 @ 2	42 @ 4	57 @ 7	69	2	7	14980	11040
CSM-422R	208	90	53	42	60	2.0	3.0	47.62	4.62	36"	39 @ 3	58 @ 6	77 @ 9	95	2	3	19100	12720



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DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED				
Let.	Change	By	App	Date

**Culligan®**  
**ENGINEERED SYSTEMS**  
NORTHBROOK, ILLINOIS

PRINT AND BILL OF MATERIAL ARE NOT  
TO BE USED WITHOUT THE WRITTEN  
CONSENT OF CULLIGAN INTERNATIONAL CO.

NAME CSM QUAD CARBON FILTER TECHNICAL DATA SHEET		
DETAILED BY: KMR 7/1/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. CSM_QUAD_CARBON	