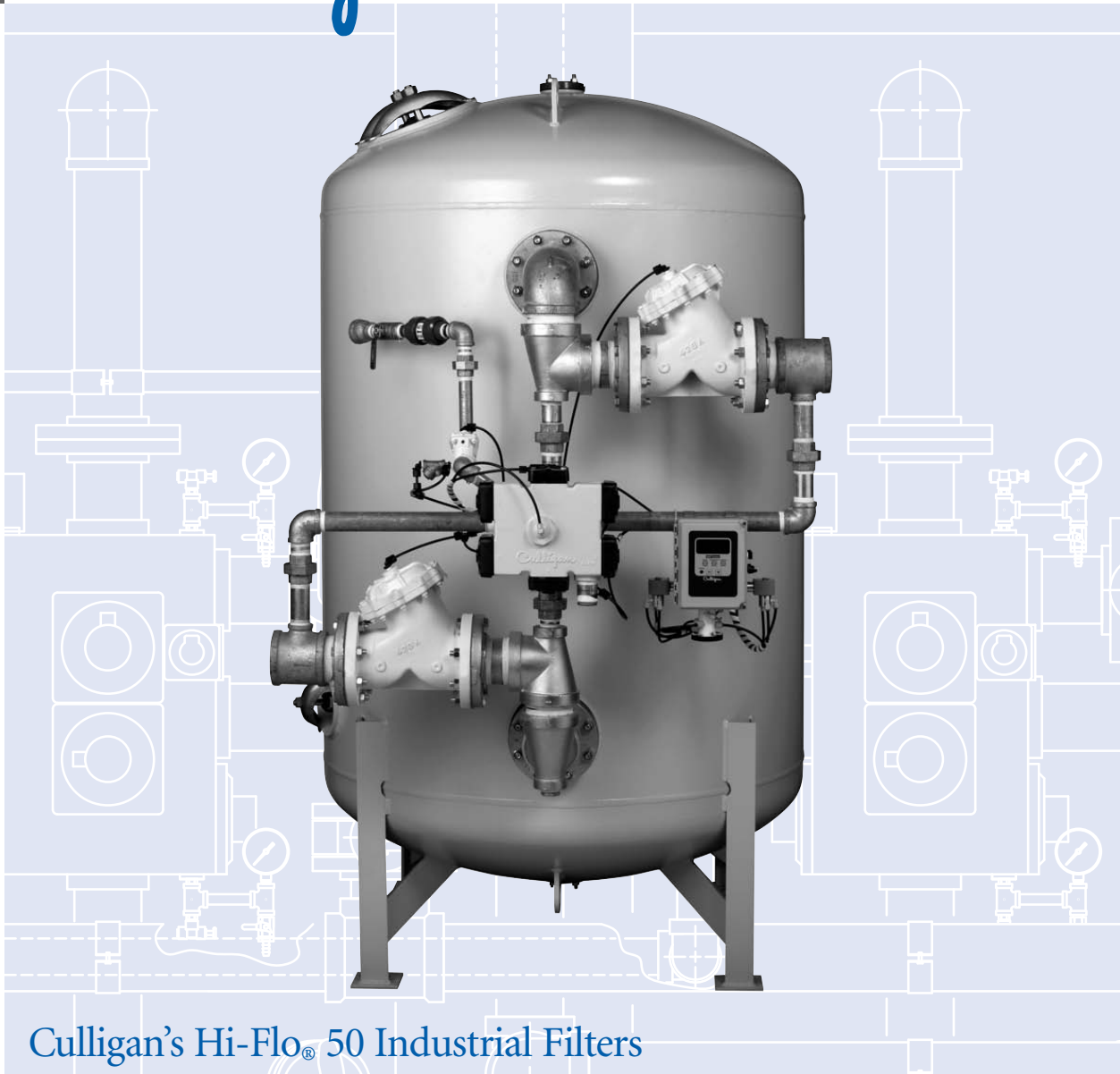




*Culligan®  
Heavy Duty  
Industrial  
Filters*

*apartments  
assisted living facilities  
cafeterias  
casinos  
corporate campuses  
educational facilities  
food service  
government  
grocery  
health clubs  
hotel/hospitality  
institutions  
laundry  
manufacturing facilities  
theme parks  
travel centers  
vehicle wash*



## Culligan's Hi-Flo® 50 Industrial Filters

### Standard Features

- Single, Duplex, Triplex, or Quad Configurations
- Regeneration initiation by choice of time clock, meter or differential pressure switch.
- Carbon Filters – For reduction of organics (flow rates up to 96gpm), or chlorine (flow rates up to 157gpm).
- Depth Filters – Flow rates up to 392gpm.
- Iron and Sulphur Removal – Flow rates up to 100gpm
- Side-Mounted Control 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.

*Trust The Water Experts®*



# Culligan's Hi-Flo<sup>®</sup> 50 Industrial Filters

## Applications and Benefits

- Pretreatment – For water softeners, reverse osmosis and deionization systems.
- Boilers – Turbidity reduction, minimize sludge blowdown.
- Drinking Water – Turbidity reduction, chlorine reduction, improves taste and clarity.
- Food And Beverage – Superior taste.
- Industrial Processes – reduces particulate matter.
- Vehicle Wash – Turbidity reduction.

## Options

- Skid Mounted—fully pre-piped and wired systems for single point field utility connection of inlet, outlet, drain and power supply.
- Patented Progressive Flow – Culligan's MVP™ Control can monitor flow demands bringing additional softening tanks on-line or offline as flows increase or decrease.
- ASME Code Tanks

- Flow Measuring Devices—are available for volume based regeneration initiation.
- Differential Pressure Switch
- Gauge Packages—pressure gauges provided for mounting at the inlet and outlet connection.

## Warranty

Culligan's *Hi-Flo* 50 water softeners are backed by a limited 1-year warranty against defects in material, workmanship and corrosion. In

addition, softener tanks are warranted for a period of 5 years.\*

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

## System Specifications

Pressure:	30–100 psig 210–690 kPa
Power:	120 Volts /60hz 220 Volts /50hz
Temperature:	40–120°F 4 - 49°C

Model		Water Quality						Backwash Flow Rate (GPM)	Valve Size (inches)
		Superior*		High**		Utility***			
		Flow Rate (GPM)	Pressure Loss (PSI)	Flow Rate (GPM)	Pressure Loss (PSI)	Flow Rate (GPM)	Pressure Loss (PSI)		
Depth Filters	HD-483	126	5	190	10	252	16	188	3
	HD-544	159	5	240	8	318	11	210	4
	HD-604	196	4	300	10	392	17	270	4
Carbon Filters	HR-4825	50 <sup>1</sup>	2 <sup>1</sup>	75	6	100 <sup>2</sup>	10 <sup>2</sup>	136	2 <sup>1</sup> / <sub>2</sub>
	HR-543	64 <sup>1</sup>	4 <sup>1</sup>	95	8	127 <sup>2</sup>	13 <sup>2</sup>	160	3
	HR-603	96 <sup>1</sup>	4 <sup>1</sup>	118	2	157 <sup>2</sup>	5 <sup>2</sup>	210	3
Iron Filters	HG-4825	65 <sup>3</sup>	4 <sup>3</sup>					160	2 <sup>1</sup> / <sub>2</sub>
	HG-5425	80 <sup>3</sup>	6 <sup>3</sup>					210	2 <sup>1</sup> / <sub>2</sub>
	HG-6025	100 <sup>3</sup>	4 <sup>3</sup>					240	2 <sup>1</sup> / <sub>2</sub>

\* Superior – Best quality water with lowest pressure loss. Recommended for influent suspended solid loads up to and greater than 300 ppm.

\*\* High – Very good quality water with increased pressure loss. Recommended for influent suspended solid loads less than 300 ppm.

\*\*\* Utility – Satisfactory quality water with greatest pressure loss. Shorter on line time between backwashing. Recommended for influent suspended solid loads less than 150 ppm.

<sup>1</sup> For Sediment and organic removal use the flow rates from the superior water quality column.

<sup>2</sup> For chlorine removal only, use the flow rates from the utility water quality column.

<sup>3</sup> Iron Filter Flow Rates and Pressure Loss are recommended maximums for proper system operation.

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.

## “Hey Culligan Man!”<sup>®</sup>

**Culligan**  
Trust the Water Experts<sup>®</sup>

[www.culligan.com](http://www.culligan.com)

1-800-CULLIGAN

©2006 Culligan International Co.

Printed in USA (2/06)

MooreWallace PART NO. 47600

Products manufactured and marketed by Culligan International Company (Culligan) and its affiliates are protected by patents issued or pending in the United States and other countries. Culligan reserves the right to change the specifications referred to in this literature at any time, without prior notice. *Culligan*, Brunematic, Hey Culligan Man, Culligan Man, Culligan Commercial @ Work, [www.culligan.com](http://www.culligan.com) and Culligan Service Network are trademarks of Culligan International Company or its affiliates.

# Hi-Flo® 50

## 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					
HD-483	126 @ 5	190 @ 10	252 @ 16	188	3	4280	48 x 60	7000
	28.6 @ 34.5	43.1 @ 68.9	57.2 @ 110	42.7	3	1941	1,219 x 1,524	3175
HD-544	159 @ 5	240 @ 8	318 @ 11	210	4	5500	54 x 60	8800
	36.1 @ 34.5	54.5 @ 55.2	72.2 @ 75.8	47.7	4	2495	1,372 x 1,524	3992
HD-604	196 @ 4	300 @ 10	392 @ 17	270	4	6930	60 x 60	10800
	44.5 @ 27.6	68.1 @ 68.9	89 @ 117	61.3	4	3143	1,524 x 1,524	4899

<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.



Commercial Systems  
©2004 Culligan 5/04  
1-800-Culligan  
www.culligan.com

# Hi-Flo® 50

## 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					
HR-4825	50 @ 2	100 @ 10	136	2.5	32	48 x 60	5200
	11.4 @ 13.8	22.7 @ 68.9	30.9	2.5	0.906	1,219 x 1,524	2359
HR-543	64 @ 4	127 @ 13	160	3	40	54 x 60	6500
	14.5 @ 27.6	28.8 @ 89.6	36.3	3	1.133	1,372 x 1,524	2948
HR-603	78 @ 4	157 @ 5	210	3	48	60 x 60	8000
	17.7 @ 27.6	35.6 @ 34.5	47.7	3	1.359	1,524 x 1,524	3629

<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.



Commercial Systems  
©2004 Culligan 5/04  
1-800-Culligan  
[www.culligan.com](http://www.culligan.com)



# 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

### *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.

“Hey Culligan Man!”

**Culligan**  
Trust The Water Experts.

[www.culligan.com](http://www.culligan.com)

1-800-CULLIGAN

©2006 Culligan International Company

Printed in USA (2/06)

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.

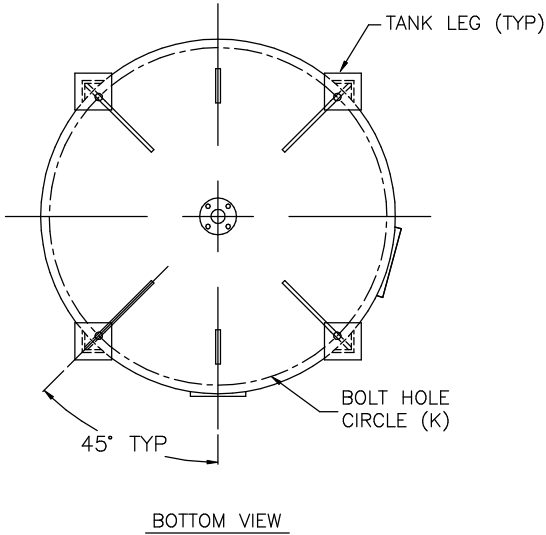
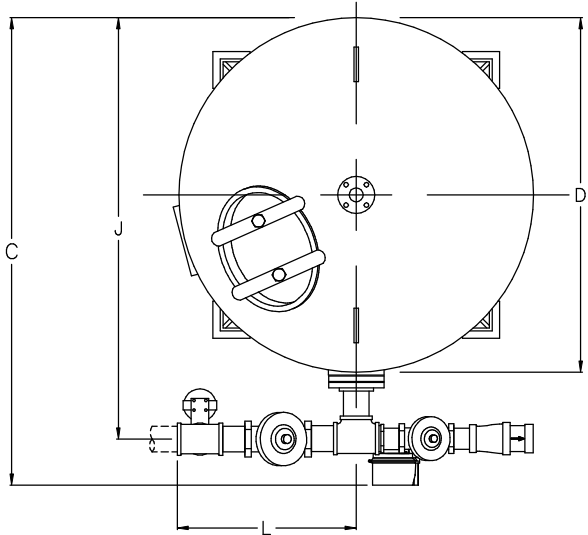
Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply 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

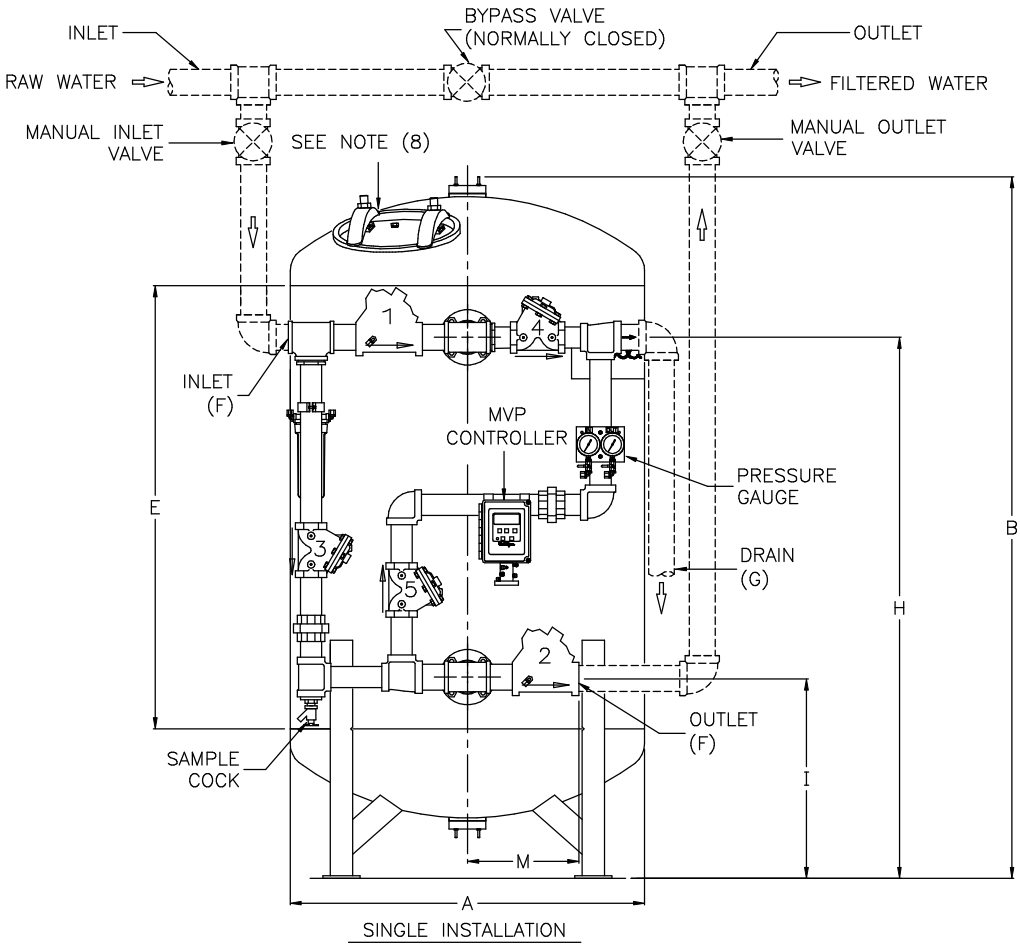
- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
  - (4) THE USE OF DISSIMILAR METALS IN A PIPING 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DIMENSIONS (INCHES)														SUPERIOR QUALITY FLOW	HIGH QUALITY FLOW	UTILITY QUALITY FLOW	DRAIN FLOW	MIN. DRAIN PIPE SIZE	SIMPLEX OPER. WT.	SIMPLEX SHIP. WT.
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	gpm @ DP	gpm @ DP	gpm @ DP	gpm	IN.	lbs.	lbs.
HD-483	49	93	65	48	60	3.0	3.0	73	27	57	45.7	24	15	126 @ 5	190 @ 10	252 @ 16	188	3.0	9500	7000

TOP VIEW



BOTTOM VIEW



DO NOT SCALE DRAWING TOLERANCES: ±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.

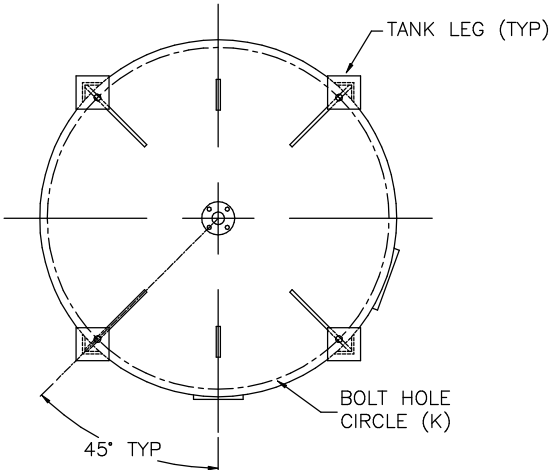
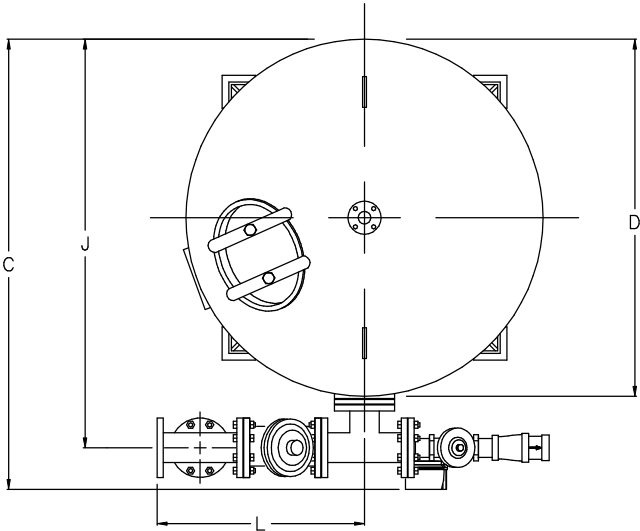
NAME HI-FLO® 50 FILTERS (DEPTH) MODELS HD-483 TECHNICAL DATA SHEET		
DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. F50_3_1_DEPTH	



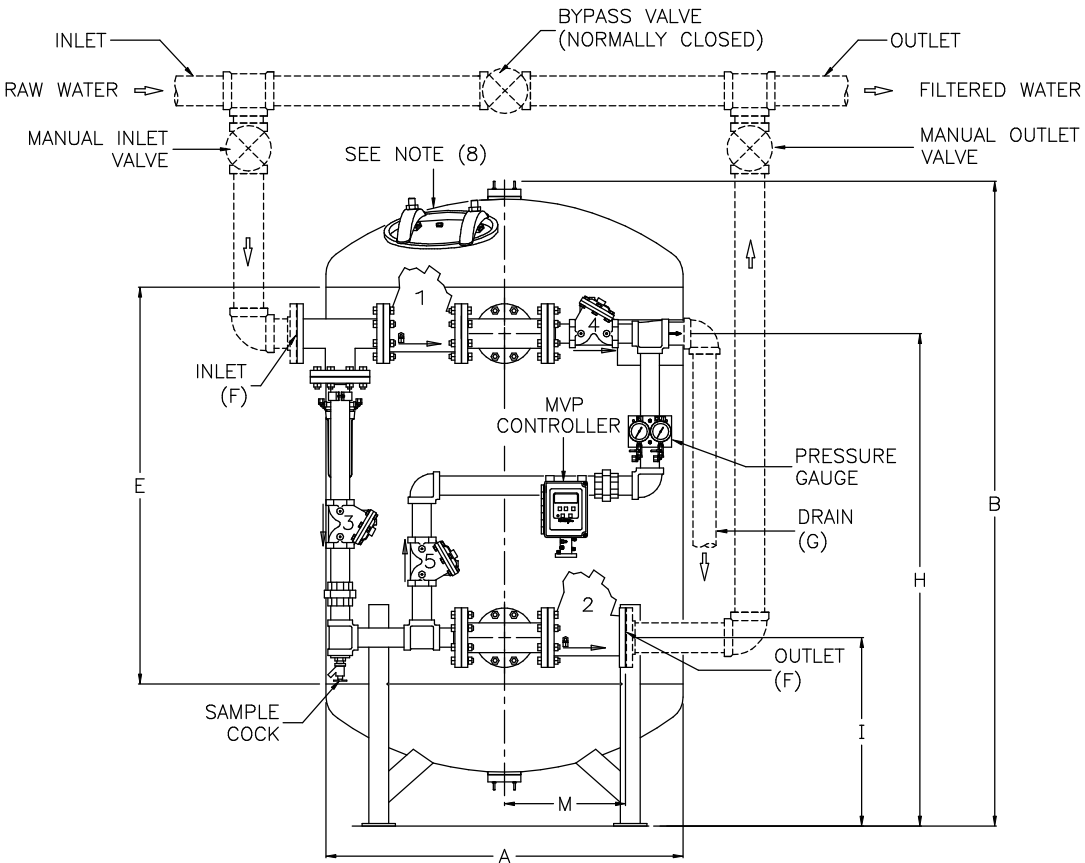
- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
  - (4) THE USE OF DISSIMILAR METALS IN A PIPING 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

	DIMENSIONS (INCHES)																			
	WIDTH	HEIGHT	DEPTH	TANK DIA.	SIDE-SHELL	INLET/OUTLET PIPE SIZES	DRAIN SIZE	FLOOR TO INLET	FLOOR TO OUTLET	BACK TO INLET/OUTLET	BOLT HOLE CIRCLE	INLET OFFSET	OUTLET OFFSET	SUPERIOR QUALITY FLOW	HIGH QUALITY FLOW	UTILITY QUALITY FLOW	DRAIN FLOW	MIN. DRAIN PIPE SIZE	SIMPLEX OPER. WT.	SIMPLEX SHIP. WT.
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	gpm @ DP	gpm @ DP	gpm @ DP	gpm	IN.	lbs.	lbs.
HD-544	55	96	72	54	60	4.0	3.0	75	29	62	51.7	32	18	159 @ 5	240 @ 8	318 @ 11	210	3.0	12000	8800
HD-604	61	98	78	60	60	4.0	3.0	76	30	68	57.63	32	18	196 @ 4	300 @ 10	392 @ 17	270	4.0	15000	10800

TOP VIEW



BOTTOM VIEW

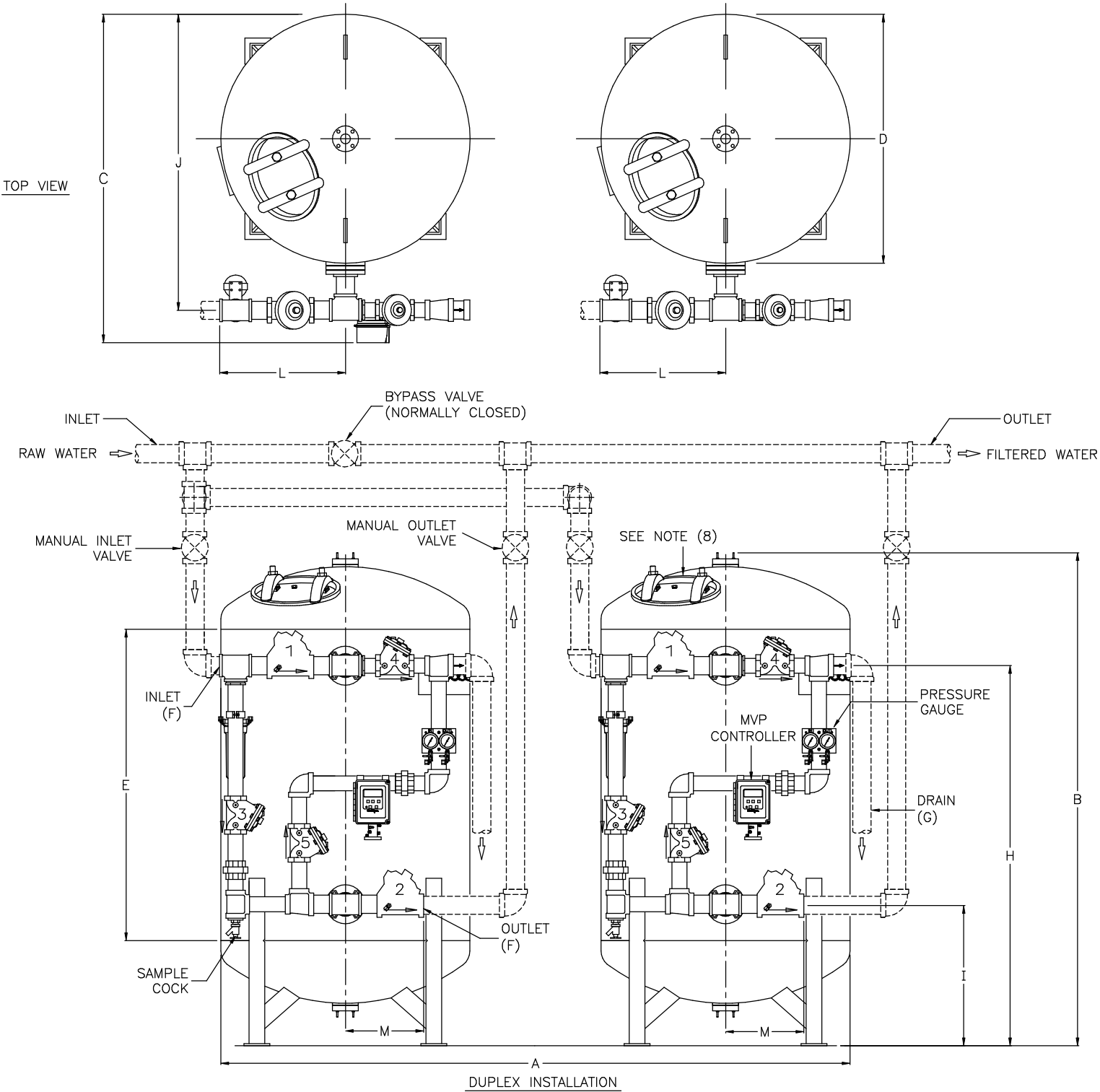
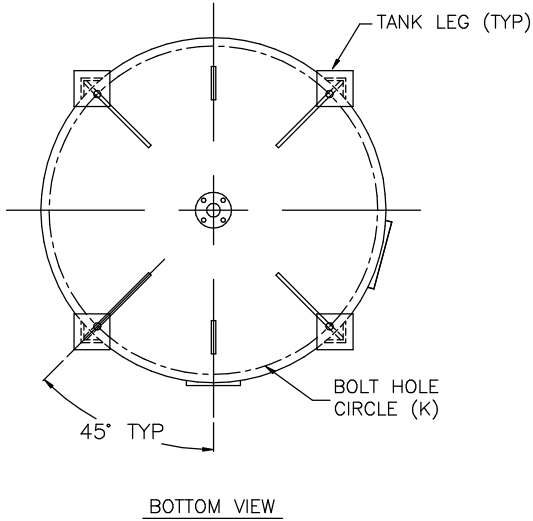


SINGLE INSTALLATION

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 HI-FLO® 50 FILTERS (DEPTH) MODELS HD-544, HD-604 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date				DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
								REF. NO.	PART NO.	
									F50_4_1_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

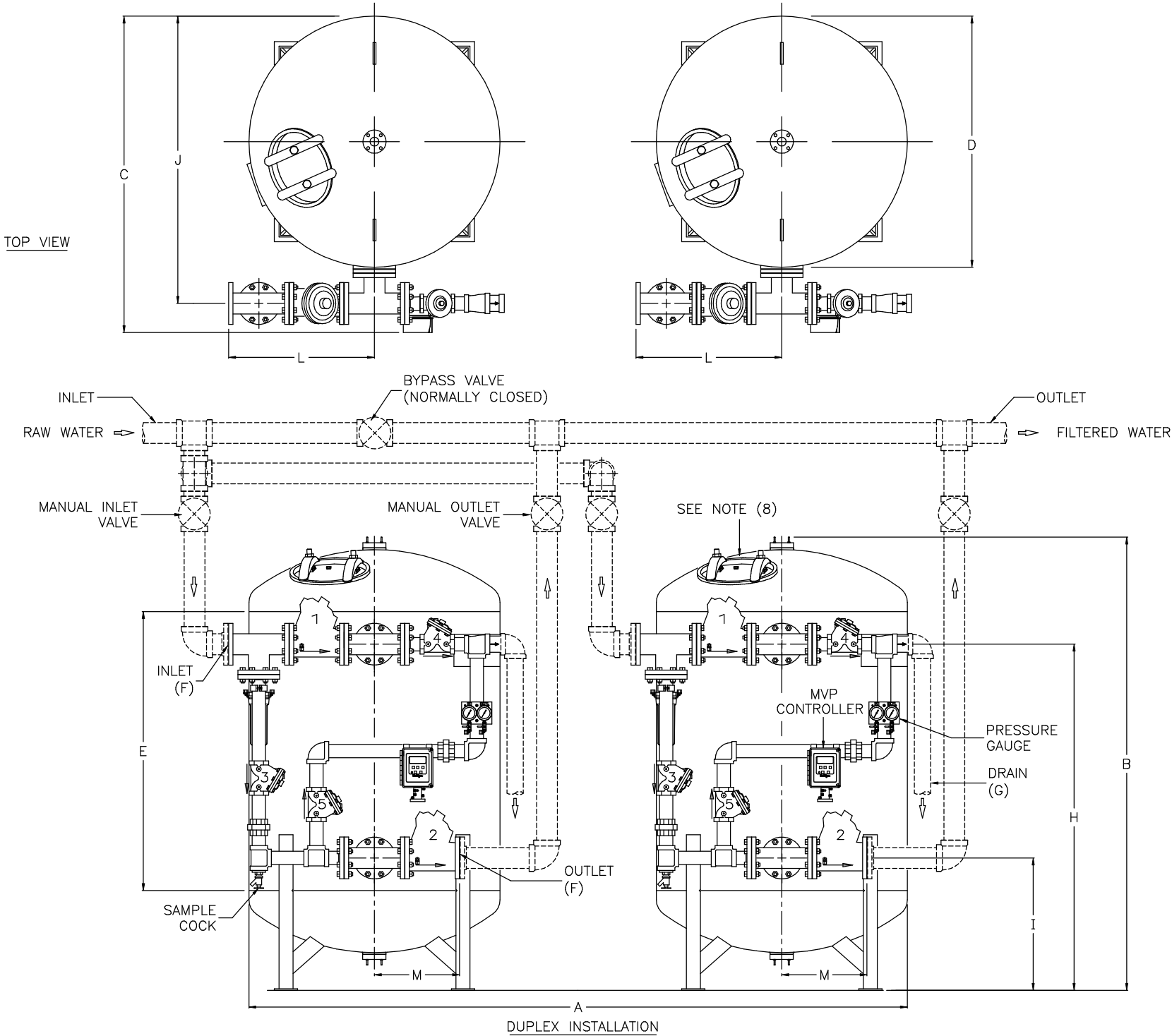
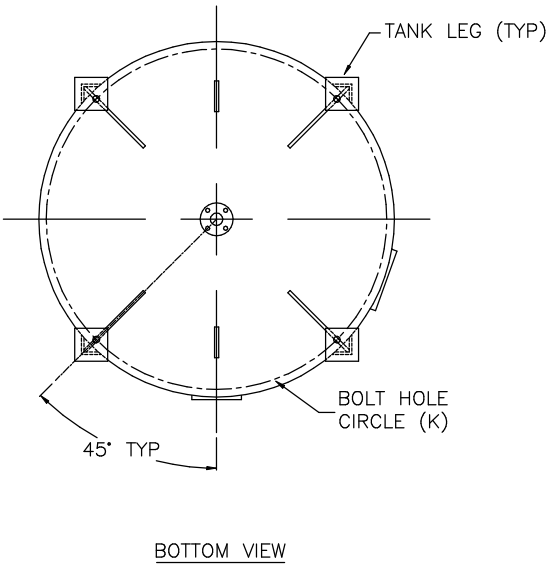
DIMENSIONS (INCHES)														UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
HD-483	110	93	65	48	60	3.0	3.0	73	27	57	45.7	24	15	126 @ 5	190 @ 10	252 @ 16	188	3.0	19000	14000



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 HI-FLO® 50 FILTERS (DEPTH) MODELS HD-483 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO.	
							F50_3_2_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DIMENSIONS (INCHES)														UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
HD-544	122	96	72	54	60	4.0	3.0	75	29	62	51.7	32	18	159 @ 5	240 @ 8	318 @ 11	210	3.0	24000	17600
HD-604	134	98	78	60	60	4.0	3.0	76	30	68	57.63	32	18	196 @ 4	300 @ 10	392 @ 17	270	4.0	30000	21600



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

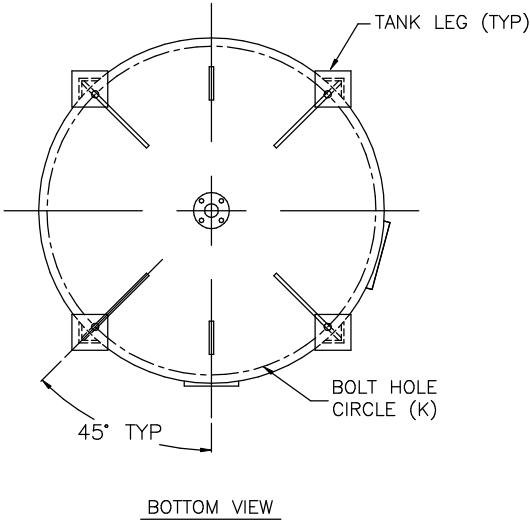
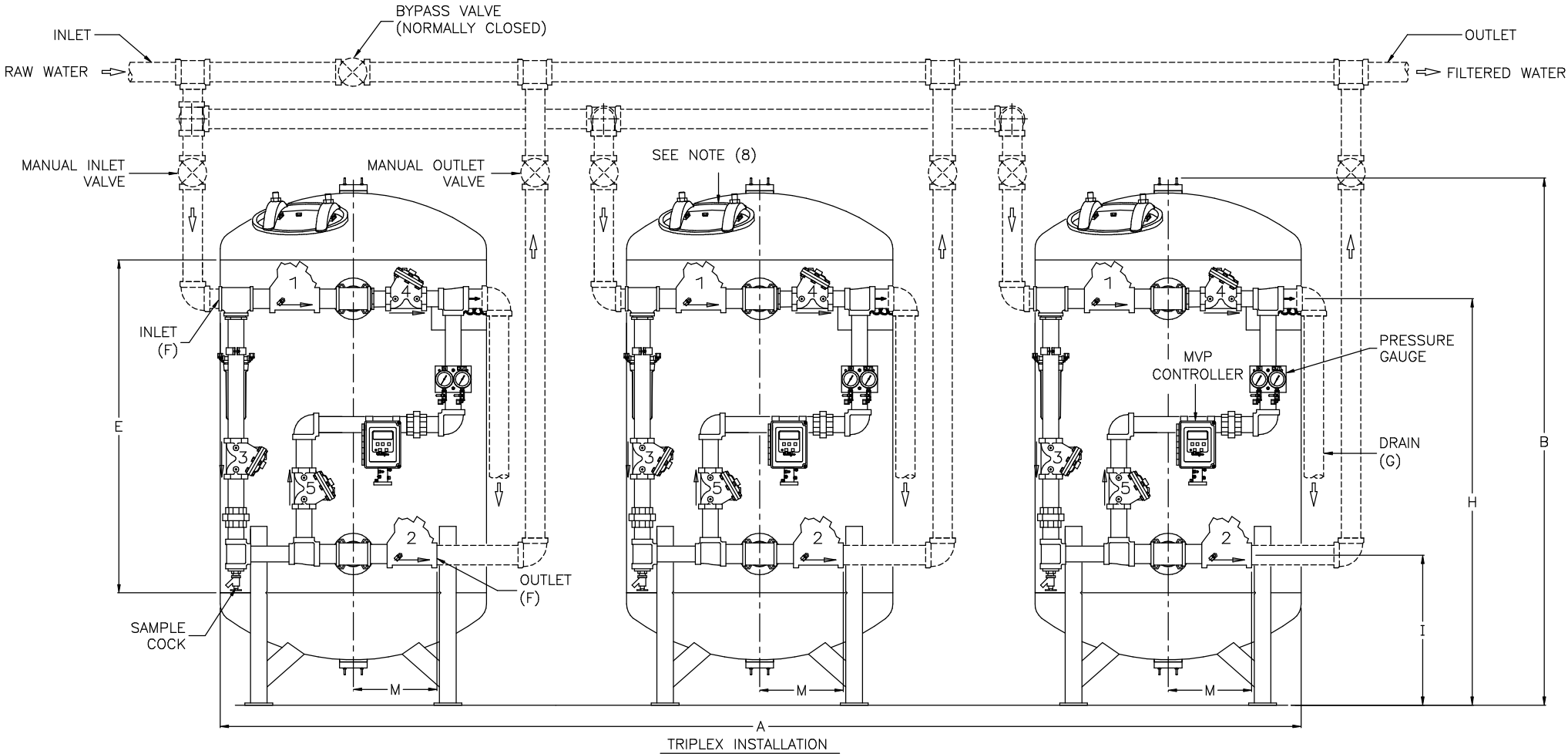
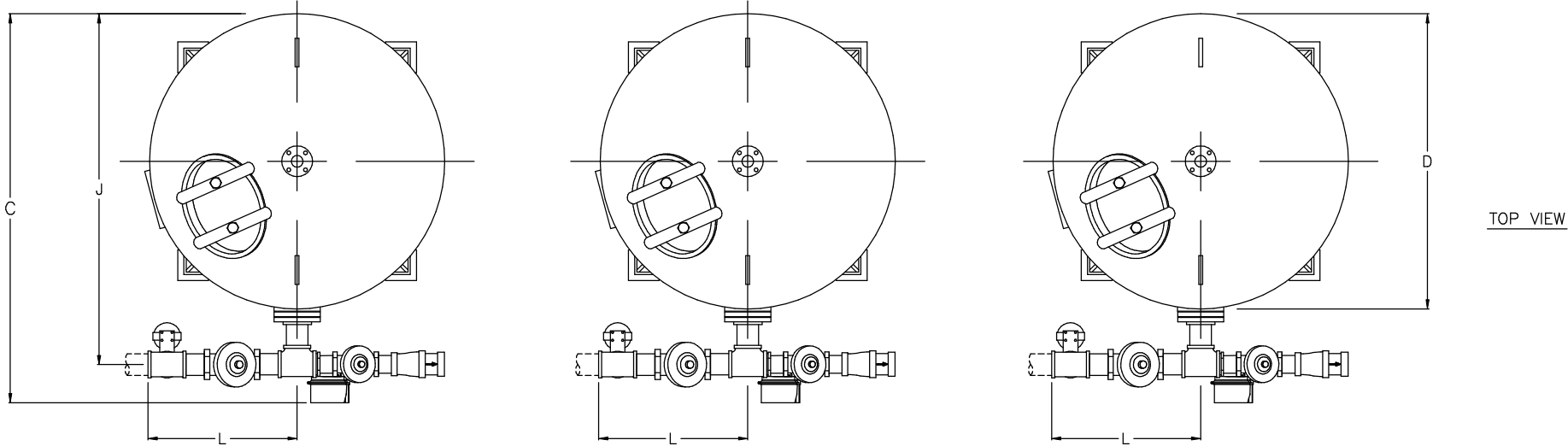
**Culligan®**  
**ENGINEERED SYSTEMS**  
**NORTHBROOK, ILLINOIS**

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

NAME HI-FLO® 50 FILTERS (DEPTH) MODELS HD-544, HD-604 TECHNICAL DATA SHEET		
DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. F50_4_2_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

MODEL	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
HD-483	171	93	65	48	60	3.0	3.0	73	27	57	45.7	24	15	126 @ 5	190 @ 10	252 @ 16	188	3.0	28500	21000



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

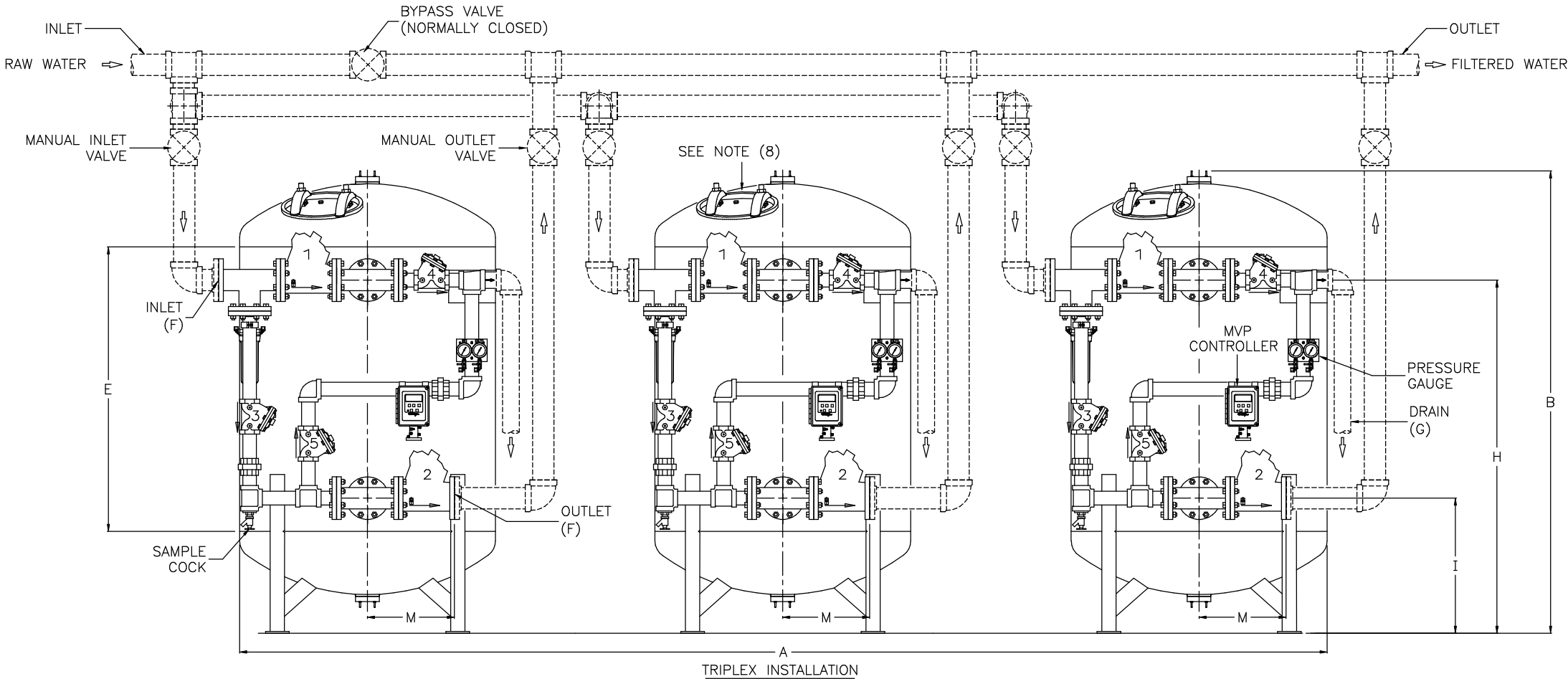
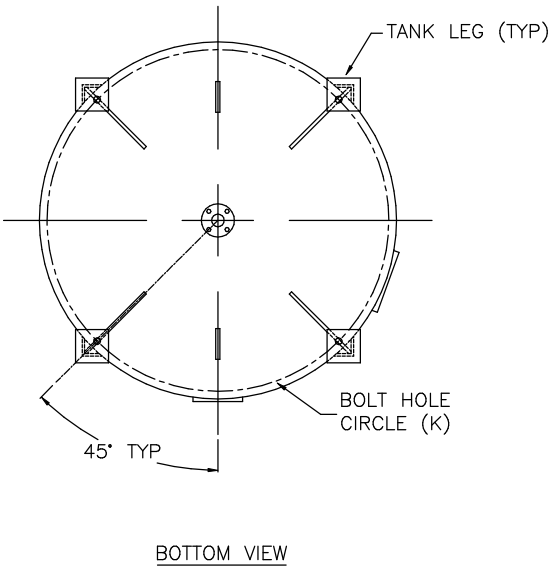
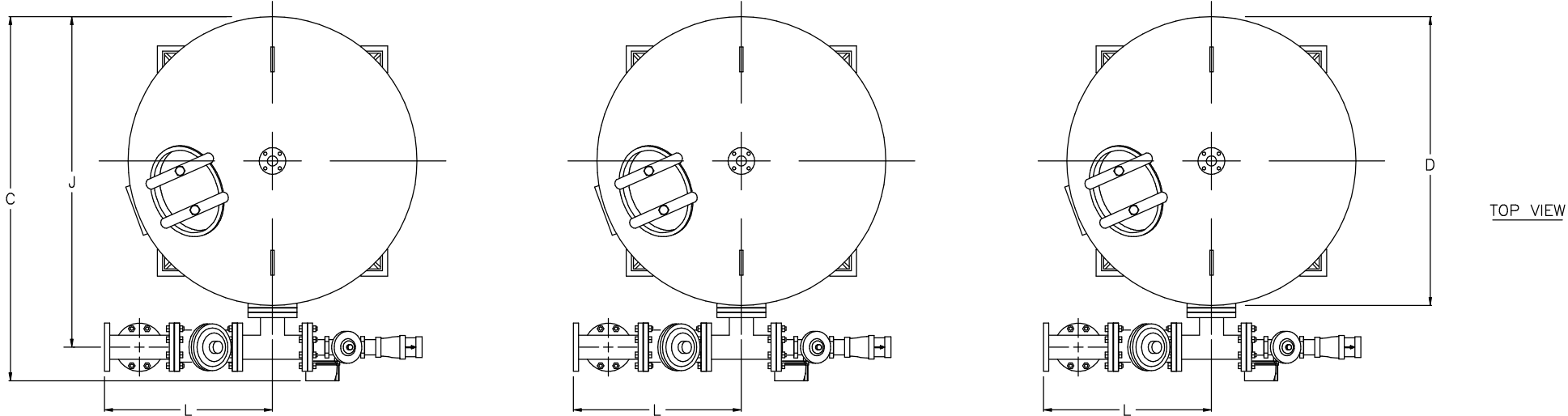
**Culligan®**  
**ENGINEERED SYSTEMS**  
**NORTHBROOK, ILLINOIS**

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

NAME HI-FLO® 50 FILTERS (DEPTH) MODELS HD-483 TECHNICAL DATA SHEET		
DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. F50_3_3_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE  $\pm 1$  INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

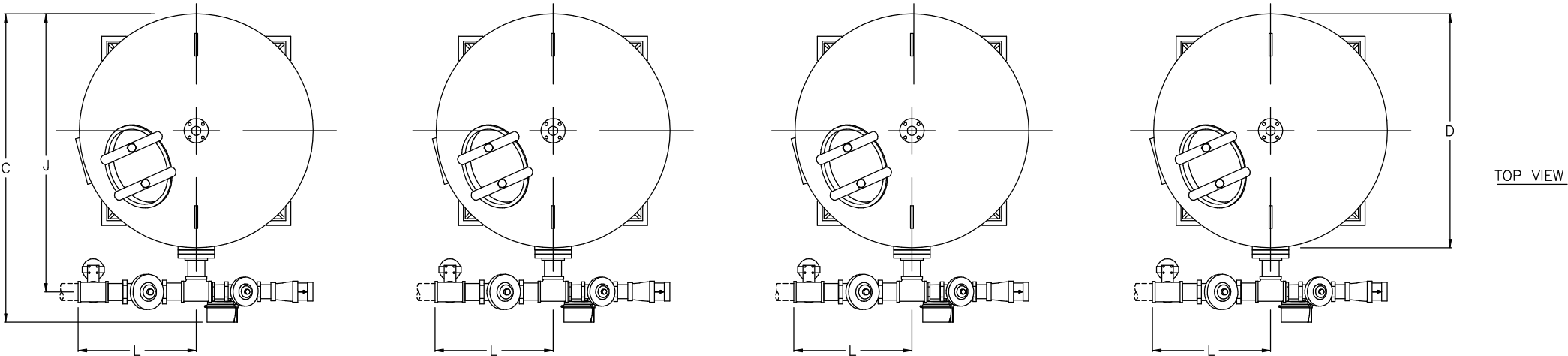
DIMENSIONS (INCHES)														UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
HD-544	189	96	72	54	60	4.0	3.0	75	29	62	51.7	32	18	159 @ 5	240 @ 8	318 @ 11	210	3.0	36000	26400
HD-604	207	98	78	60	60	4.0	3.0	76	30	68	57.63	32	18	196 @ 4	300 @ 10	392 @ 17	270	4.0	45000	32400



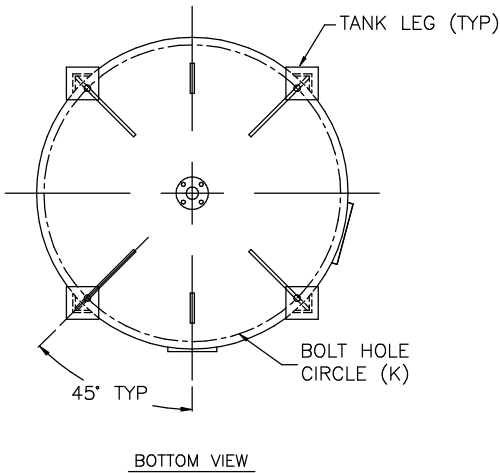
DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					<b>Culligan®</b> <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS  PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.		NAME HI-FLO® 50 FILTERS (DEPTH) MODELS HD-544, HD-604 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date			DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
							REF. NO.	PART NO.	
								F50_4_3_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

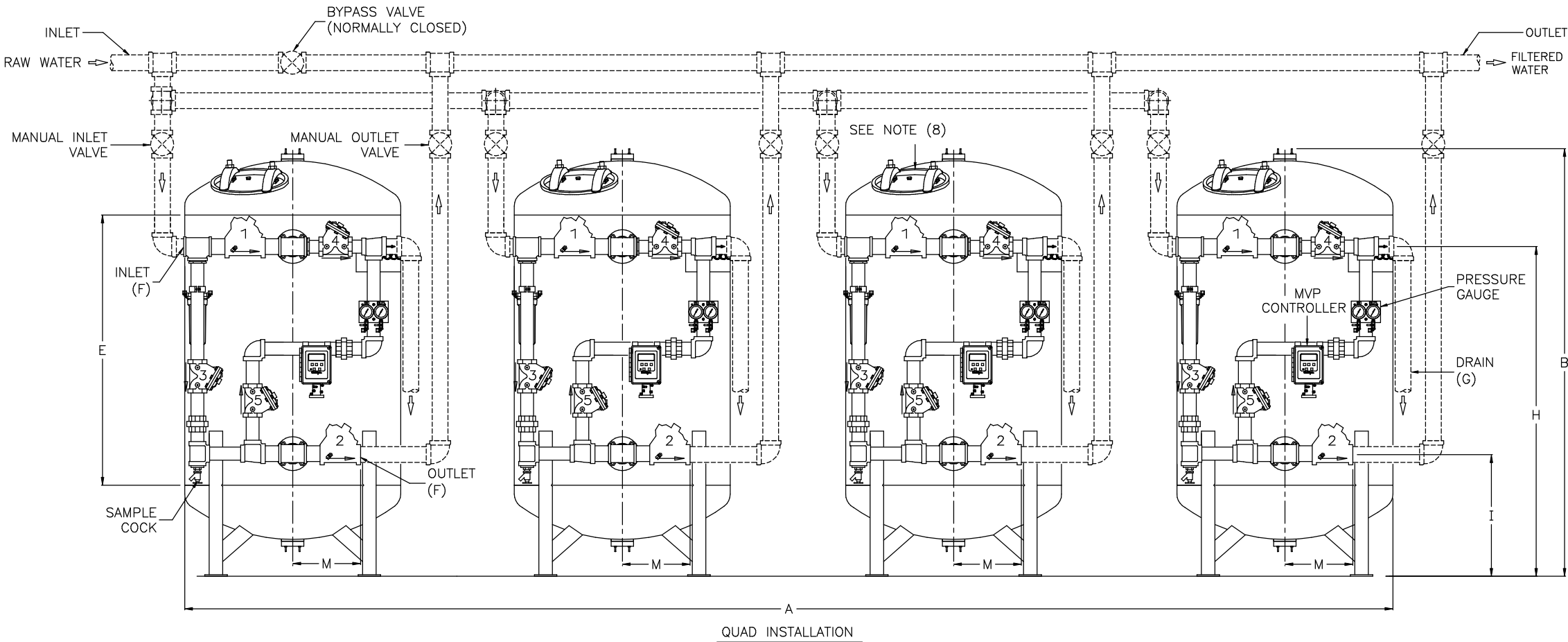
	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH	HEIGHT	DEPTH	TANK DIA.	SIDE-SHELL	INLET/OUTLET PIPE SIZES	DRAIN SIZE	FLOOR TO INLET	FLOOR TO OUTLET	BACK TO INLET/OUTLET	BOLT HOLE CIRCLE	INLET OFFSET	OUTLET OFFSET	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	QUAD OPER. WT. lbs.	QUAD SHIP. WT. lbs.
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	gpm @ DP	gpm @ DP	gpm @ DP	gpm			
HD-483	232	93	65	48	60	3.0	3.0	73	27	57	45.7	24	15	126 @ 5	190 @ 10	252 @ 16	188	3.0	38000	28000




TOP VIEW



BOTTOM VIEW

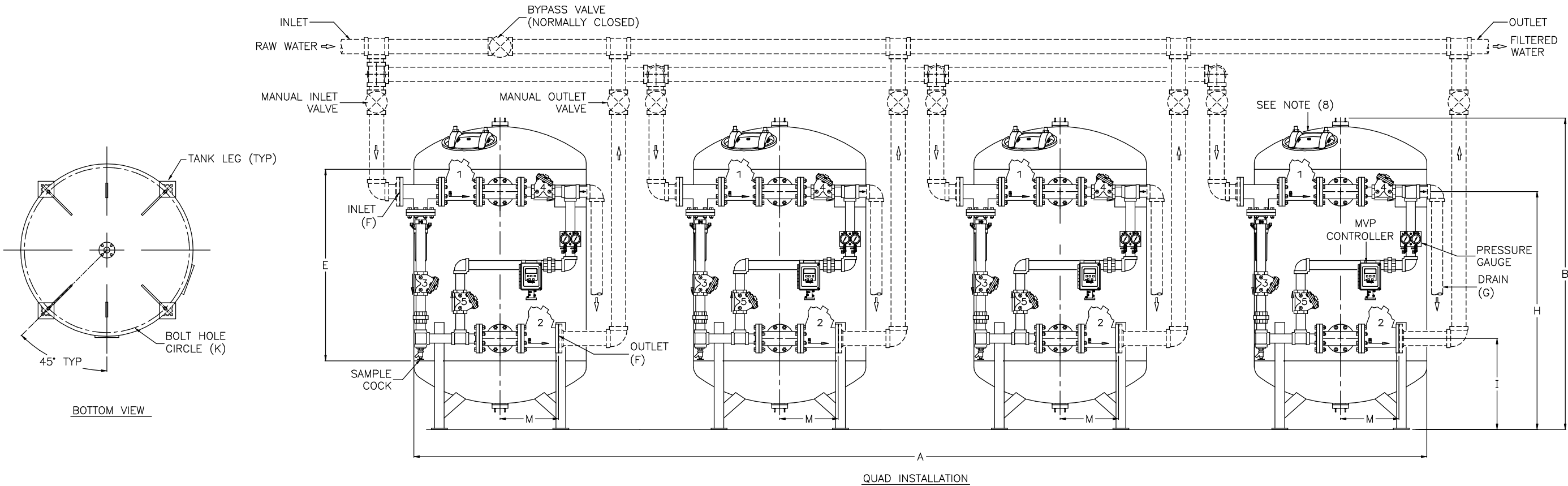
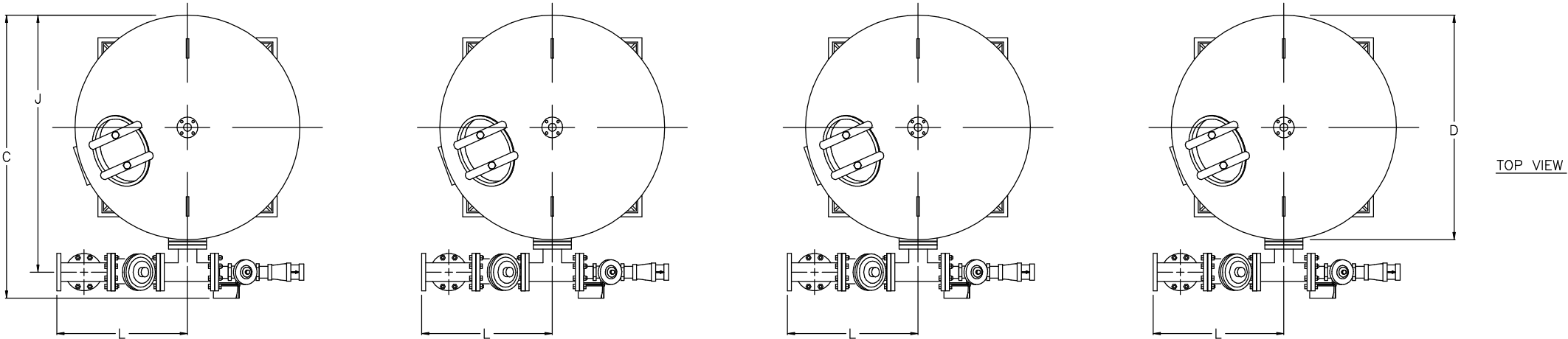


QUAD INSTALLATION

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 HI-FLO® 50 FILTERS (DEPTH) MODELS HD-483 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date			DETAILED BY: KMR 7/29/03	APP. BY:	SHEET 1 OF 1
							REF. NO.	PART NO. F50_3_4_DEPTH	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH	HEIGHT	DEPTH	TANK DIA.	SIDE-SHELL	INLET/OUTLET PIPE SIZES	DRAIN SIZE	FLOOR TO INLET	FLOOR TO OUTLET	BACK TO INLET/OUTLET	BOLT HOLE CIRCLE	INLET OFFSET	OUTLET OFFSET	SUPERIOR QUALITY FLOW	HIGH QUALITY FLOW	UTILITY QUALITY FLOW	DRAIN FLOW	MIN. DRAIN PIPE SIZE	QUAD OPER. WT.	QUAD SHIP. WT.
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	gpm @ DP	gpm @ DP	gpm @ DP	gpm	IN.	lbs.	lbs.
HD-544	256	96	72	54	60	4.0	3.0	75	29	62	51.7	32	18	159 @ 5	240 @ 8	318 @ 11	210	3.0	48000	35200
HD-604	280	98	78	60	60	4.0	3.0	76	30	68	57.63	32	18	196 @ 4	300 @ 10	392 @ 17	270	4.0	60000	43200



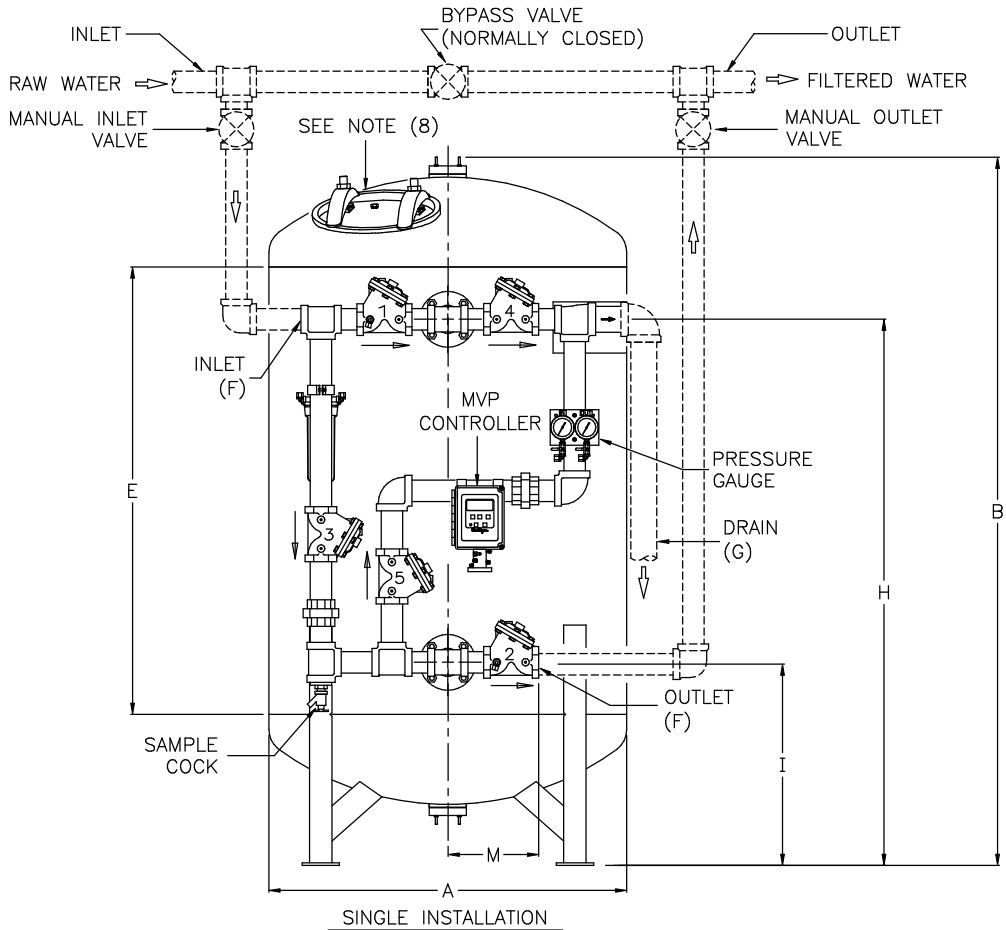
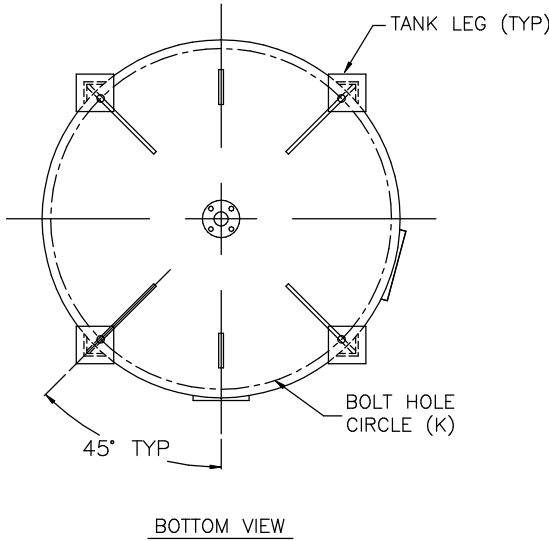
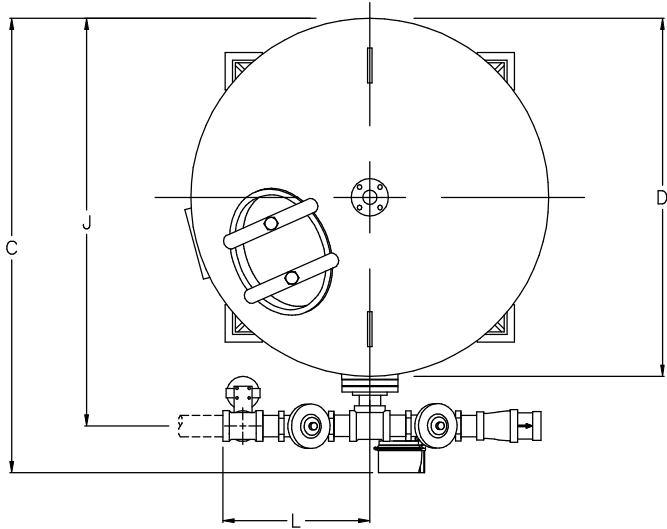
DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					<div>Culligan®</div> <div>ENGINEERED SYSTEMS</div> <div>NORTHBROOK, ILLINOIS</div> <div>PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.</div>	NAME HI-FLO® 50 FILTERS (DEPTH) MODELS HD-544, HD-604 TECHNICAL DATA SHEET			
Let.	Change	By	App	Date		DETAILED BY: KMR 7/29/03		APP. BY:	SHEET 1 OF 1
						REF. NO.		PART NO. F50_4_4_DEPTH	



- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DIMENSIONS (INCHES)														SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	SIMPLEX OPER. WT. lbs.	SIMPLEX SHIP. WT. lbs.
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M							
HR-4825	49	93	64	48	60	2.5	3.0	73	27	57	45.7	20	12	50 @ 2	75 @ 6	100 @ 10	136	3.0	7800	5200

TOP VIEW

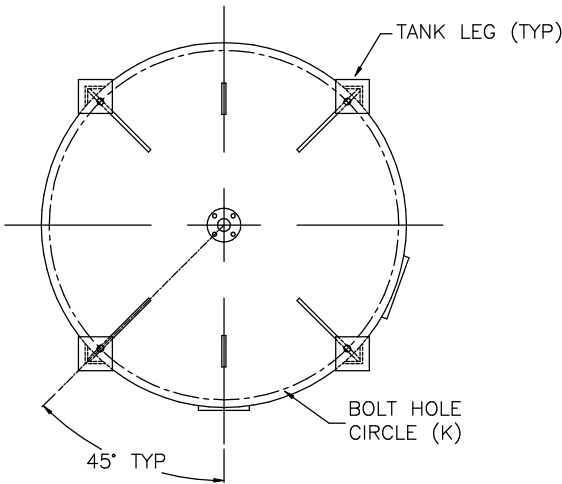


DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED						<b>Culligan®</b> <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS  PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.			NAME HI-FLO @50 FILTERS (CARBON) MODELS HR-4825 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date					DETAILED BY: KMR 7/15/03	APP. BY:	SHEET 1 OF 1
						REF. NO.			PART NO. F50_25_1_CARBON		

NOTES:

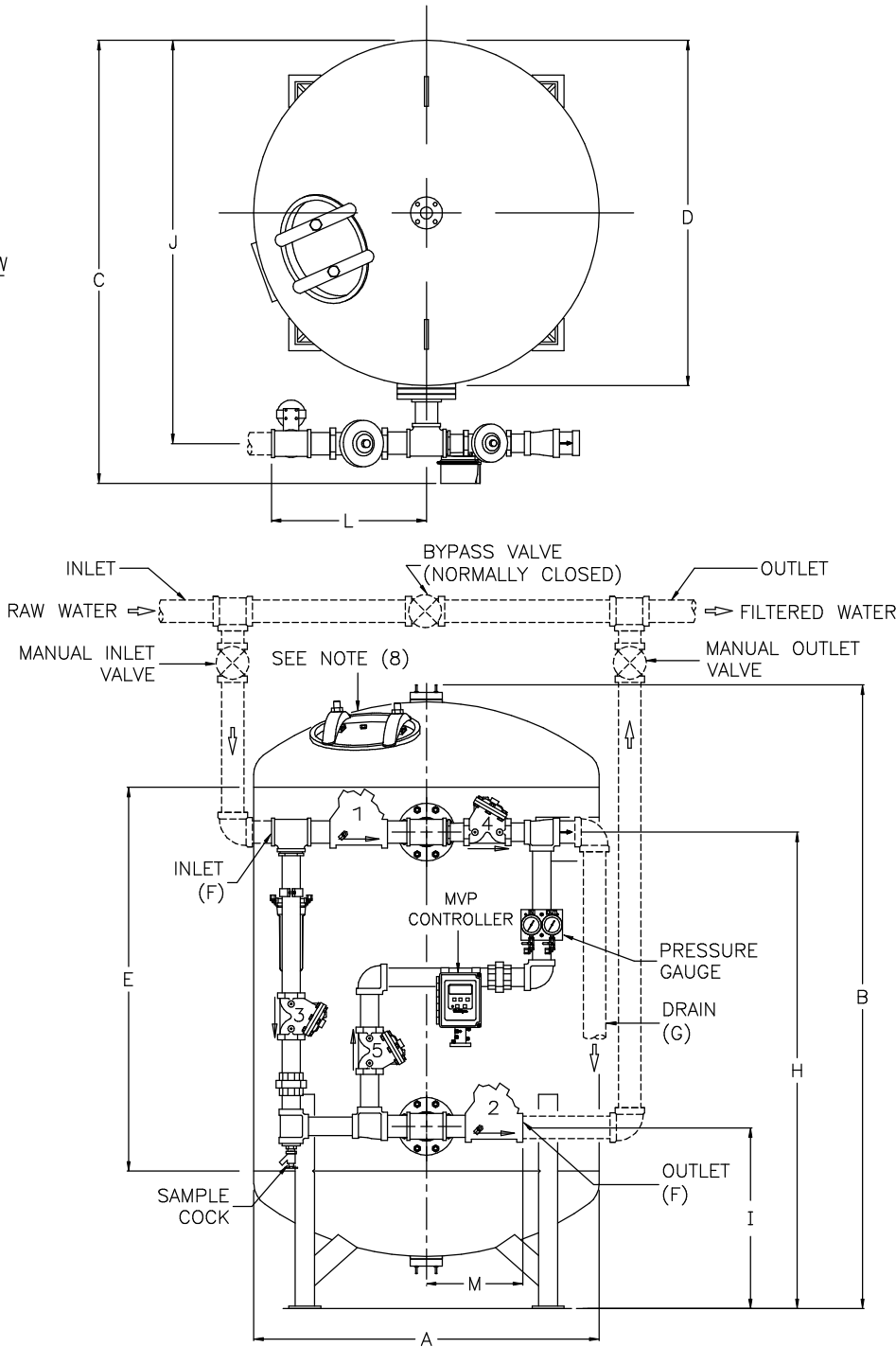
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
- (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM. THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
- (5) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

	DIMENSIONS (INCHES)																			
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	SIMPLEX OPER. WT. lbs.	SIMPLEX SHIP. WT. lbs.
HR-543	55	96	70	54	60	3.0	3.0	75	29	62	51.7	24	15	64 @ 4	95 @ 8	127 @ 13	160	3.0	9900	6500
HR-603	61	98	76	60	60	3.0	3.0	76	30	68	57.63	24	15	78 @ 4	118 @ 2	157 @ 5	210	3.0	12200	8000




BOTTOM VIEW

TOP VIEW



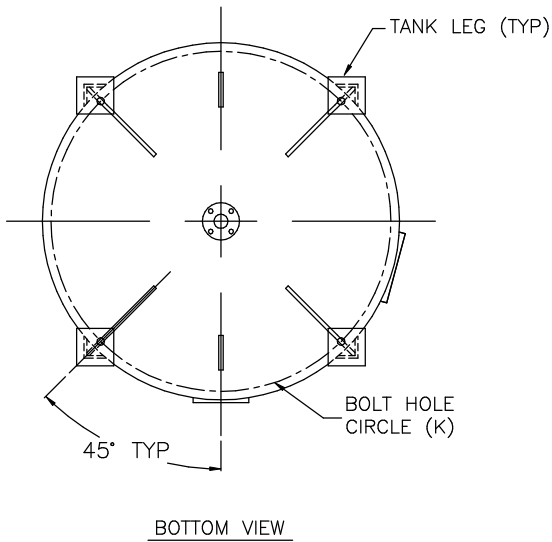
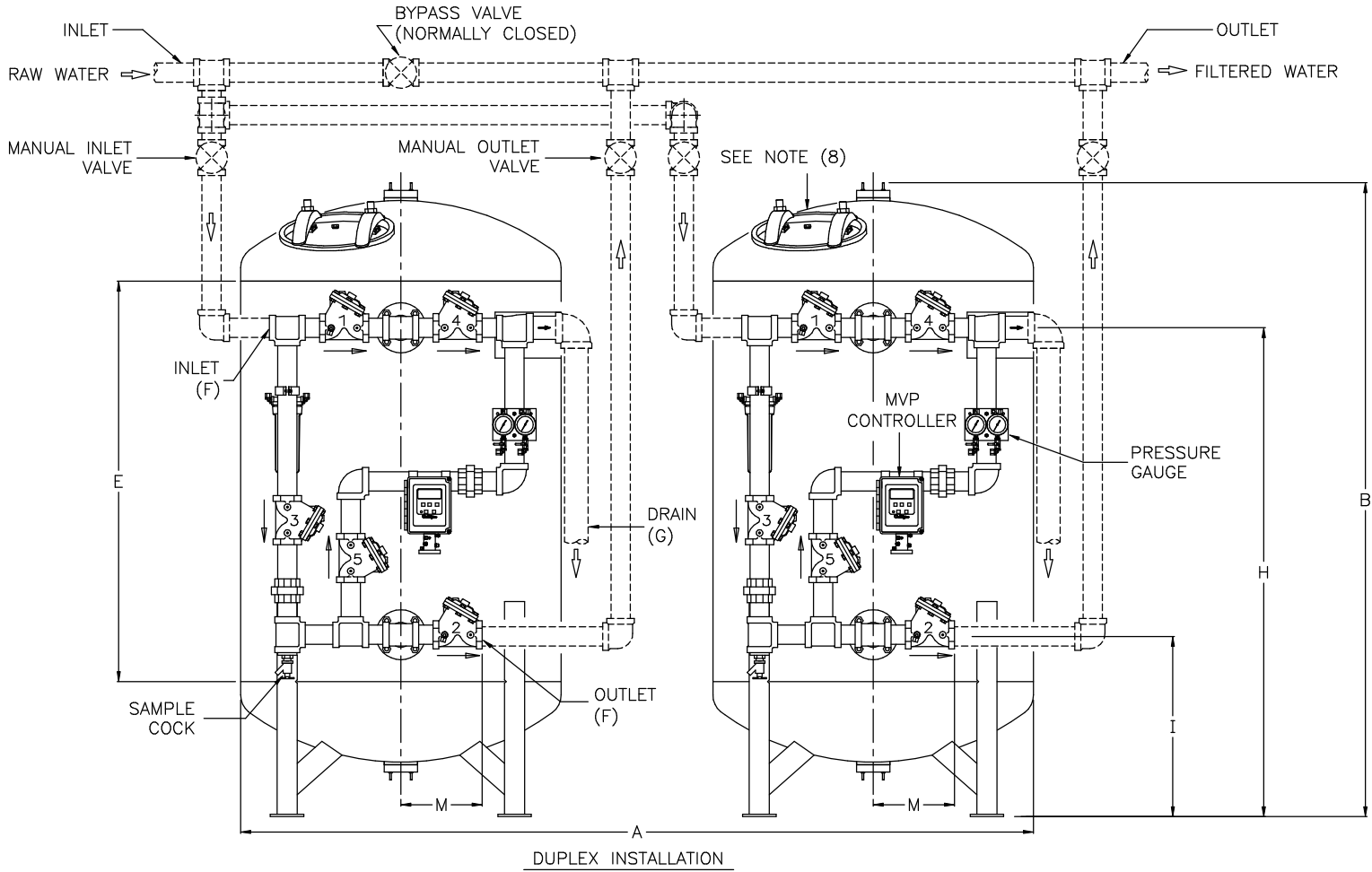
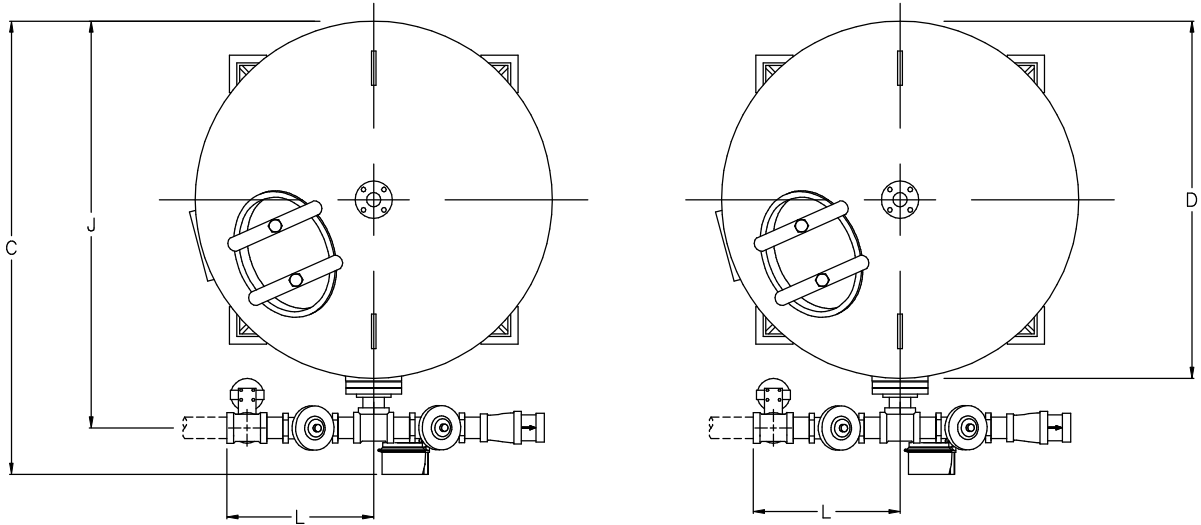
SINGLE INSTALLATION

DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					<div> <b>ENGINEERED SYSTEMS</b> NORTHBROOK, ILLINOIS</div> <div>PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.</div>	NAME HI-FLO @50 FILTERS (CARBON) MODELS HR-543, HR-603 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 12/03/03	APP. BY:	SHEET 1 OF 1
						REF. NO.		
						PART NO. F50_3_1_CARBON		

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DIMENSIONS (INCHES)														UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
HR-4825	110	93	64	48	60	2.5	3.0	73	27	57	45.7	20	12	50 @ 2	75 @ 6	100 @ 10	136	3.0	15600	10400

TOP VIEW



BOTTOM VIEW

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

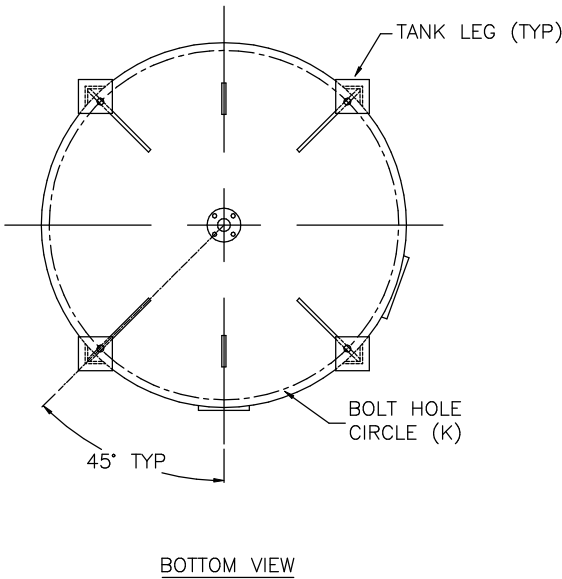
**Culligan®**  
**ENGINEERED SYSTEMS**  
NORTHBROOK, ILLINOIS

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

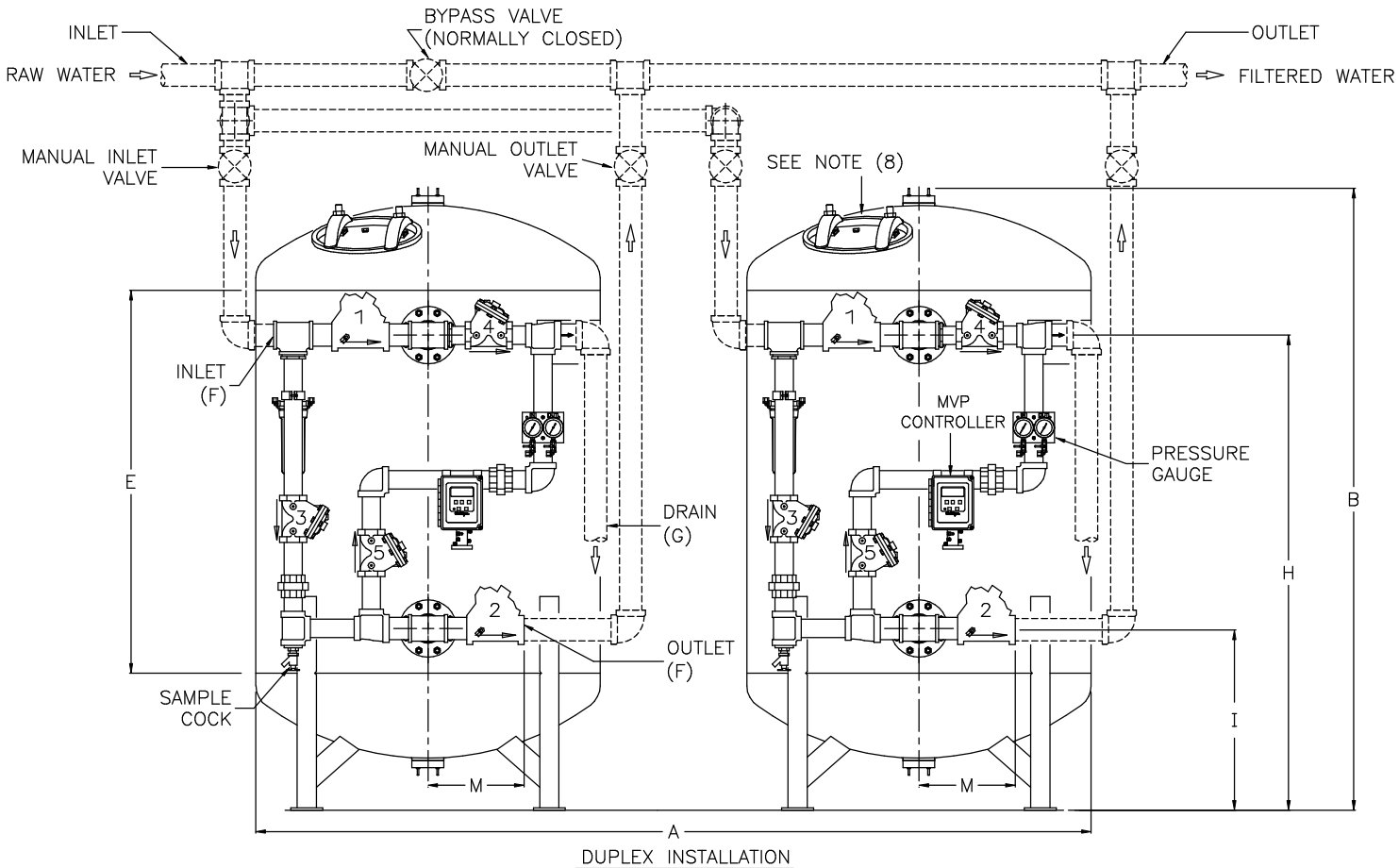
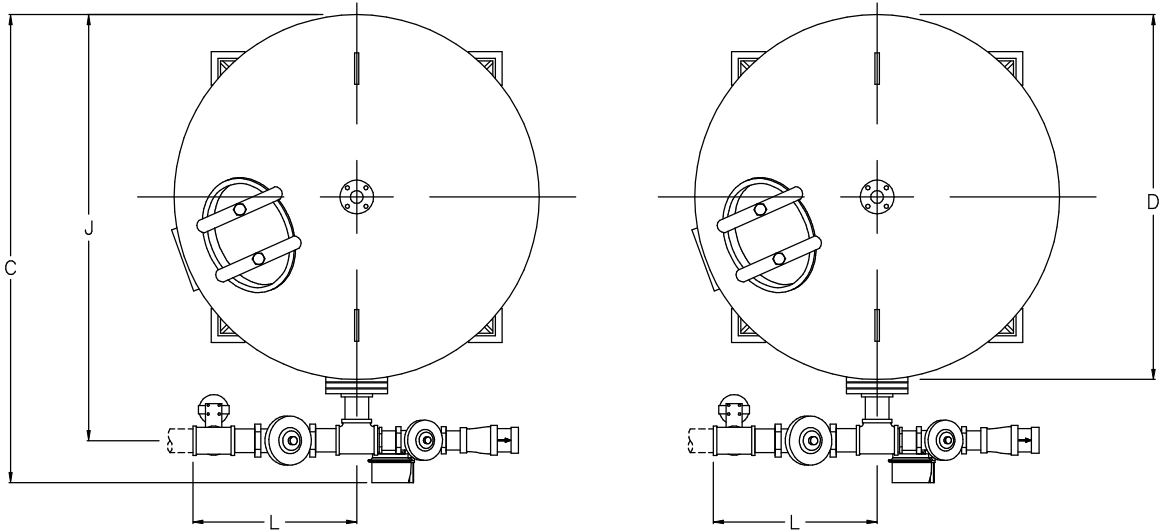
NAME HI-FLO @50 FILTERS (CARBON) MODELS HR-4825 TECHNICAL DATA SHEET		
DETAILED BY: KMR 7/16/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. F50_25_2_CARBON	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

MODEL	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
HR-543	122	96	70	54	60	3.0	3.0	75	29	62	51.7	24	15	64 @ 4	95 @ 8	127 @ 13	160	3.0	19800	13000
HR-603	134	98	76	60	60	3.0	3.0	76	30	68	57.63	24	15	78 @ 4	118 @ 2	157 @ 5	210	3.0	24400	16000



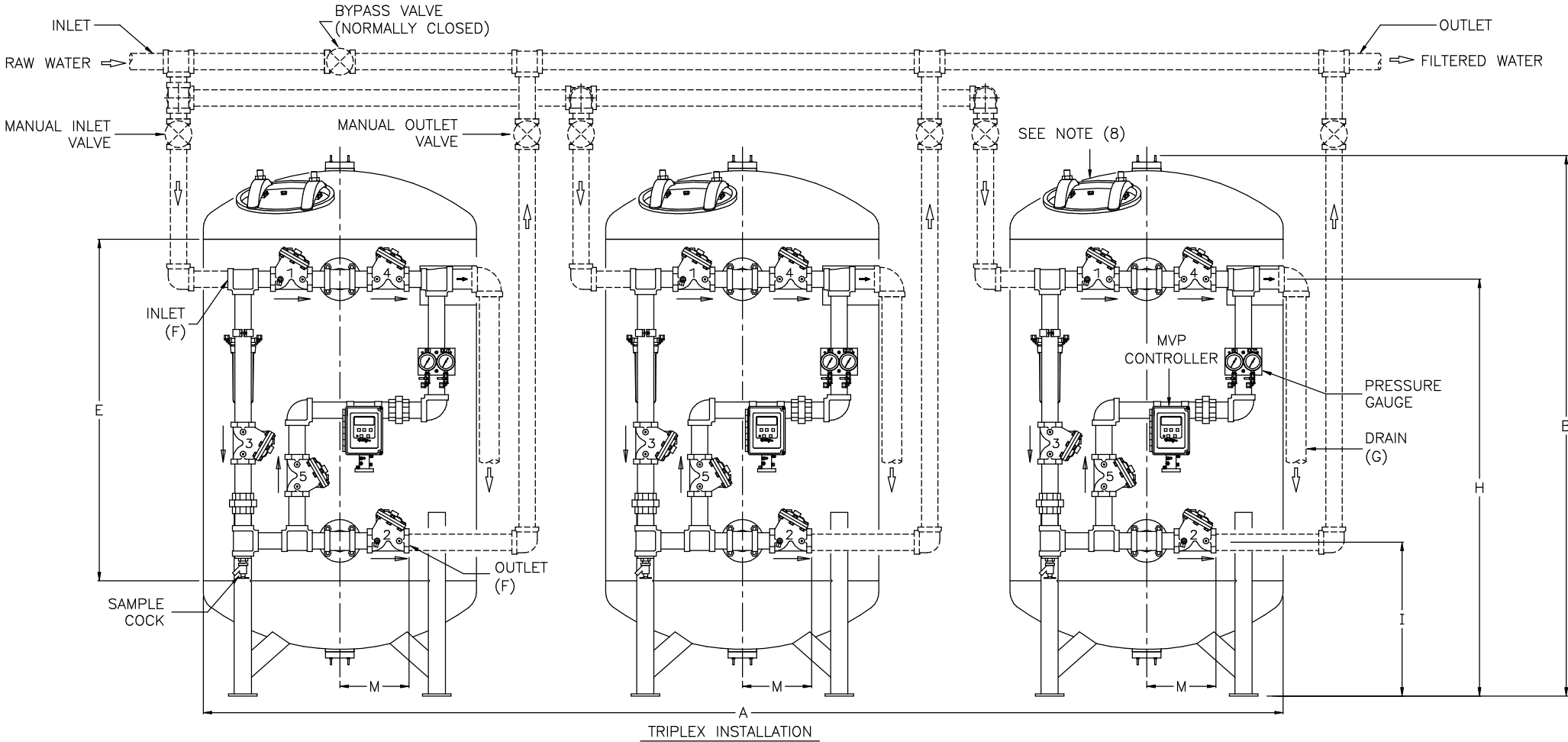
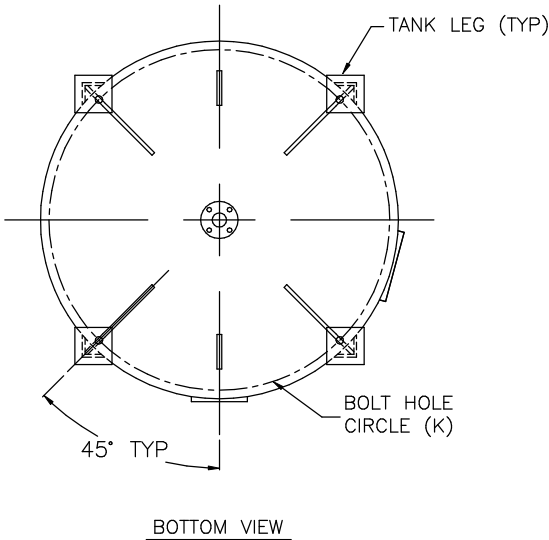
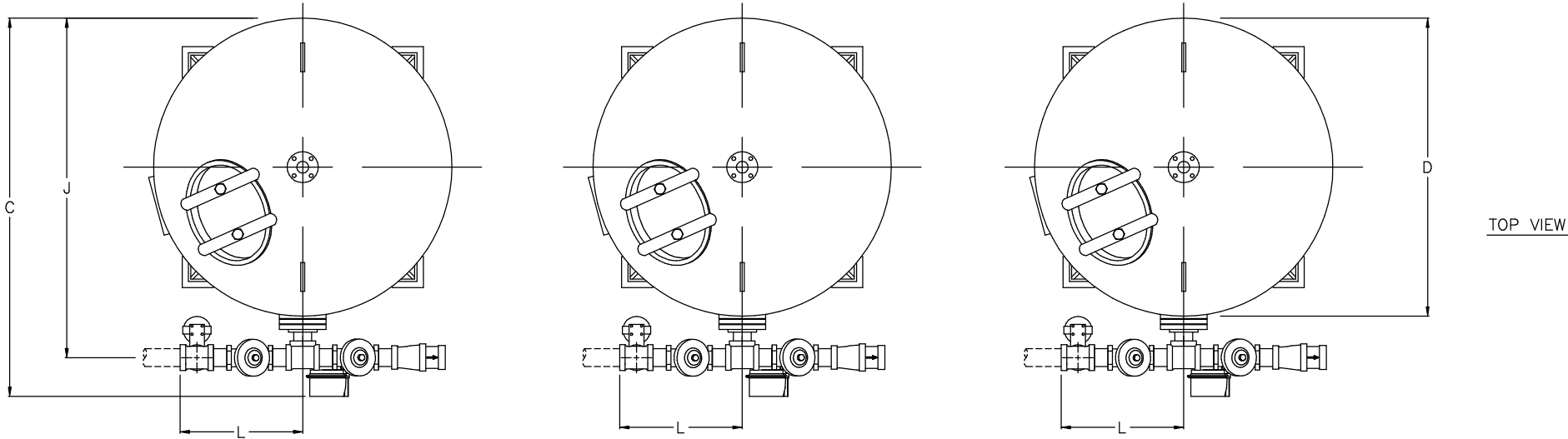
TOP VIEW




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 HI-FLO @50 FILTERS (CARBON) MODELS HR-543, HR-603 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 12/03/03	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO. F50_3_2_CARBON	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

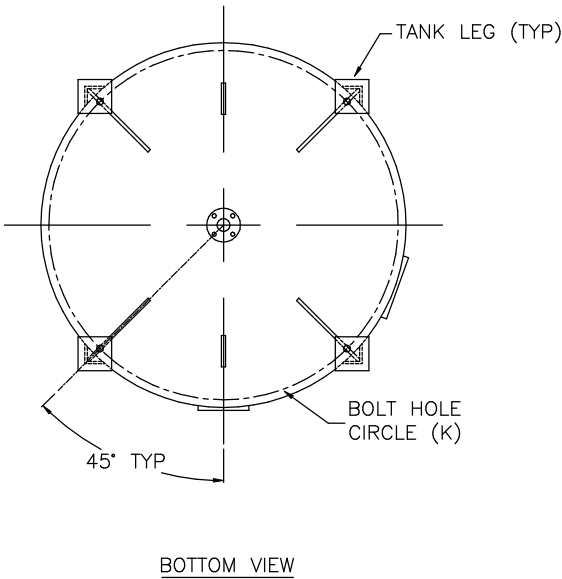
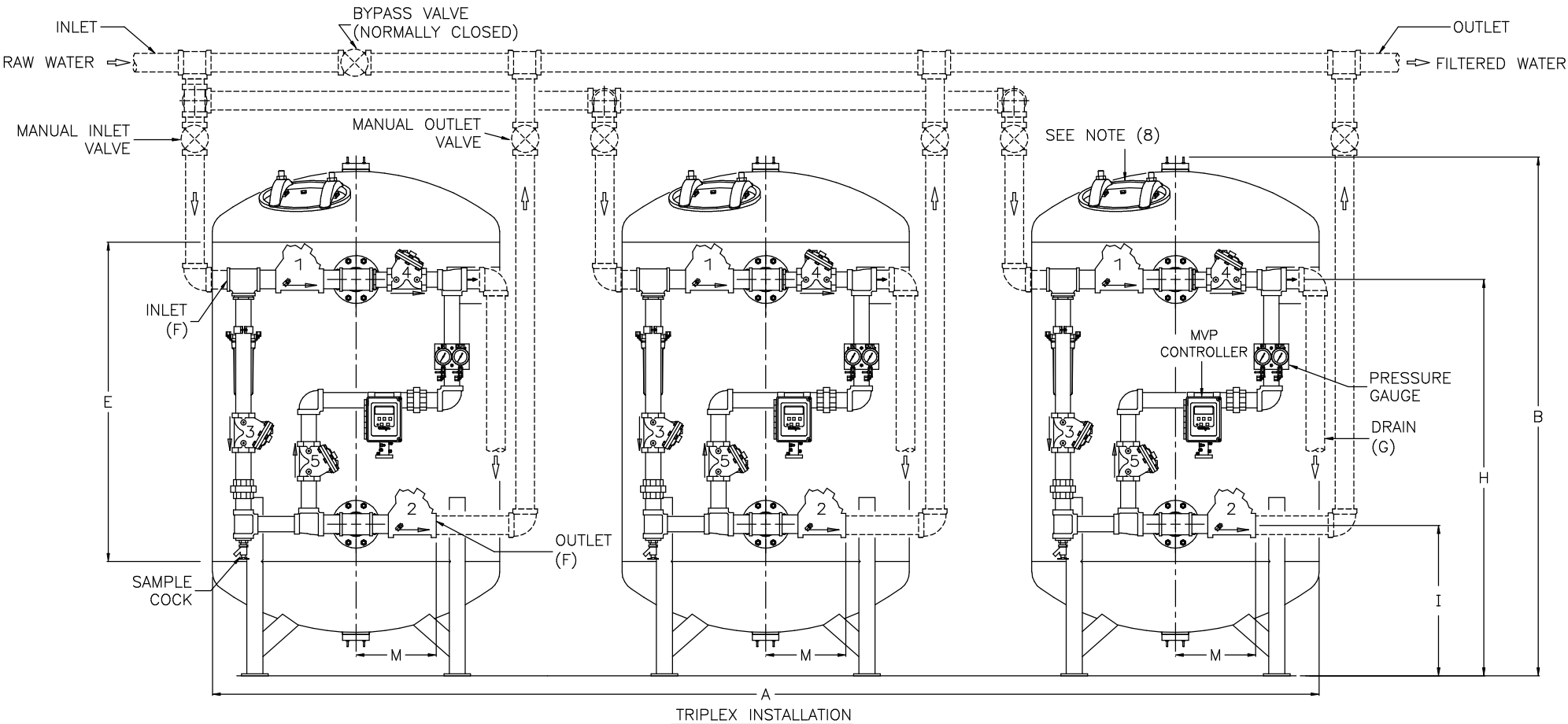
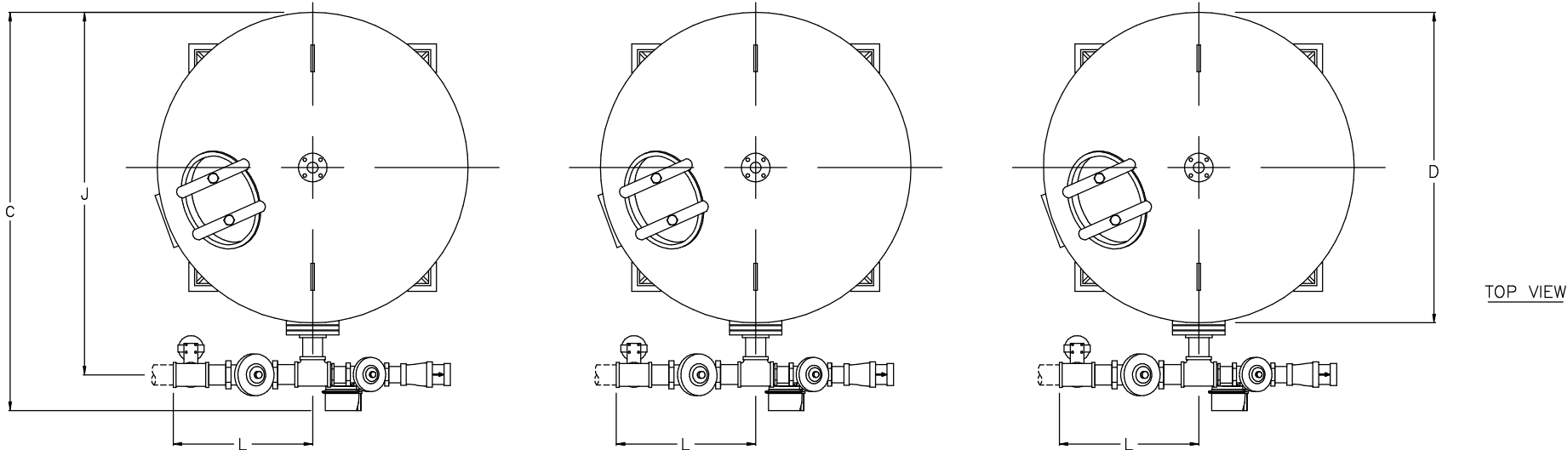
	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH	HEIGHT	DEPTH	TANK DIA.	SIDE-SHELL	INLET/OUTLET PIPE SIZES	DRAIN SIZE	FLOOR TO INLET	FLOOR TO OUTLET	BACK TO INLET/OUTLET	BOLT HOLE CIRCLE	INLET OFFSET	OUTLET OFFSET	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	gpm @ DP	gpm @ DP	gpm @ DP	gpm			
HR-4825	171	93	64	48	60	2.5	3.0	73	27	57	45.7	20	12	50 @ 2	75 @ 6	100 @ 10	136	3.0	23400	15600



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 HI-FLO @50 FILTERS (CARBON) MODELS HR-4825 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 7/16/03	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO.	
							F50_25_3_CARBON	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

DIMENSIONS (INCHES)														UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B	DEPTH C	TANK DIA. D	SIDE-SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	FLOOR TO OUTLET I	BACK TO INLET/OUTLET J	BOLT HOLE CIRCLE K	INLET OFFSET L	OUTLET OFFSET M	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	TRIPLEX OPER. WT. lbs.	TRIPLEX SHIP. WT. lbs.
HR-543	189	96	70	54	60	3.0	3.0	75	29	62	51.7	24	15	64 @ 4	95 @ 8	127 @ 13	160	3.0	29700	19500
HR-603	207	98	76	60	60	3.0	3.0	76	30	68	57.63	24	15	78 @ 4	118 @ 2	157 @ 5	210	3.0	36600	24000



DO NOT SCALE DRAWING TOLERANCES: ±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 HI-FLO 50 FILTERS (CARBON) MODELS HR-543, HR-603 TECHNICAL DATA SHEET		
DETAILED BY: KMR 12/03/03	APP. BY:	SHEET 1 OF 1
REF. NO.	PART NO. F50_3_3_CARBON	

- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.

(2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.

(3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.

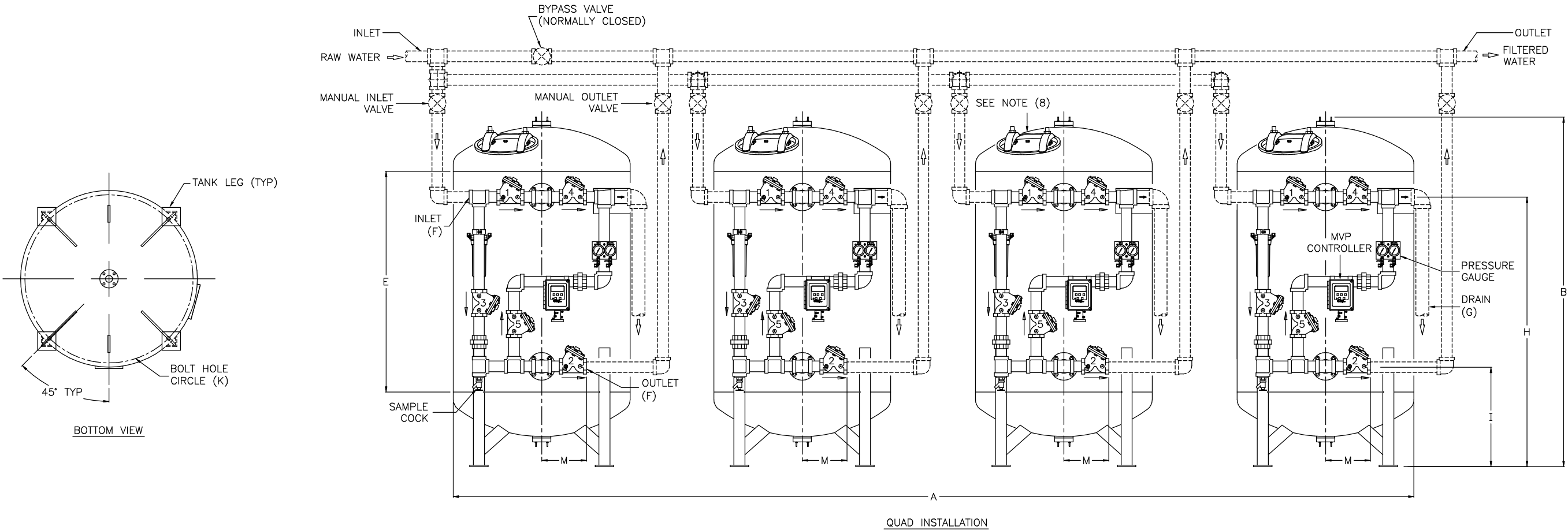
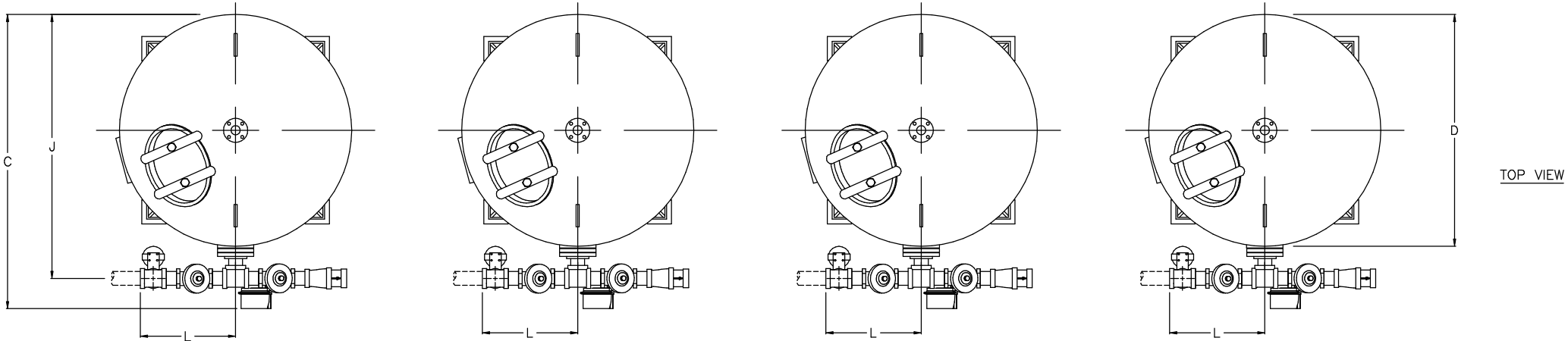
(4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM. THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.

(5) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.

(6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.
- | DIMENSIONS (INCHES) |         |          |         |             |              |                           |              |                  |                   |                        |                    |                |                 | UNIT DATA PER TANK             |                            |                               |                |                          |                     |                     |  |
|---------------------|---------|----------|---------|-------------|--------------|---------------------------|--------------|------------------|-------------------|------------------------|--------------------|----------------|-----------------|--------------------------------|----------------------------|-------------------------------|----------------|--------------------------|---------------------|---------------------|--|
| MODEL               | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE-SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | INLET OFFSET L | OUTLET OFFSET M | SUPERIOR QUALITY FLOW gpm @ DP | HIGH QUALITY FLOW gpm @ DP | UTILITY QUALITY FLOW gpm @ DP | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | QUAD OPER. WT. lbs. | QUAD SHIP. WT. lbs. |  |
| HR-4825             | 232     | 93       | 64      | 48          | 60           | 2.5                       | 3.0          | 73               | 27                | 57                     | 45.7               | 20             | 12              | 50 @ 2                         | 75 @ 6                     | 100 @ 10                      | 136            | 3.0                      | 31200               | 20800               |  |

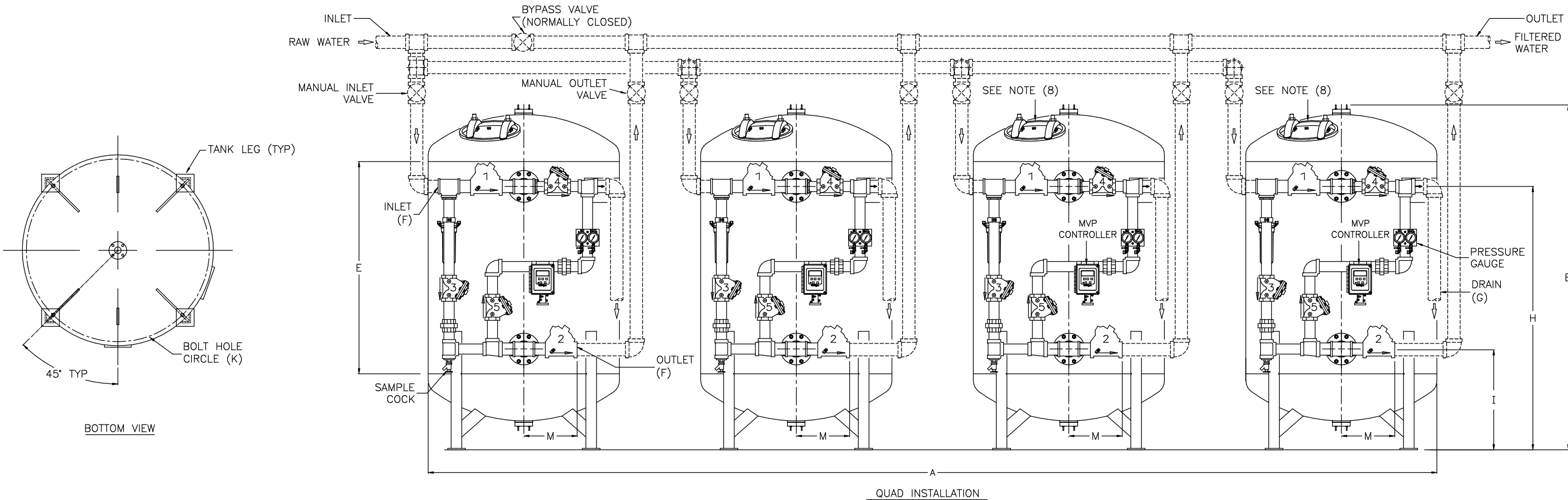
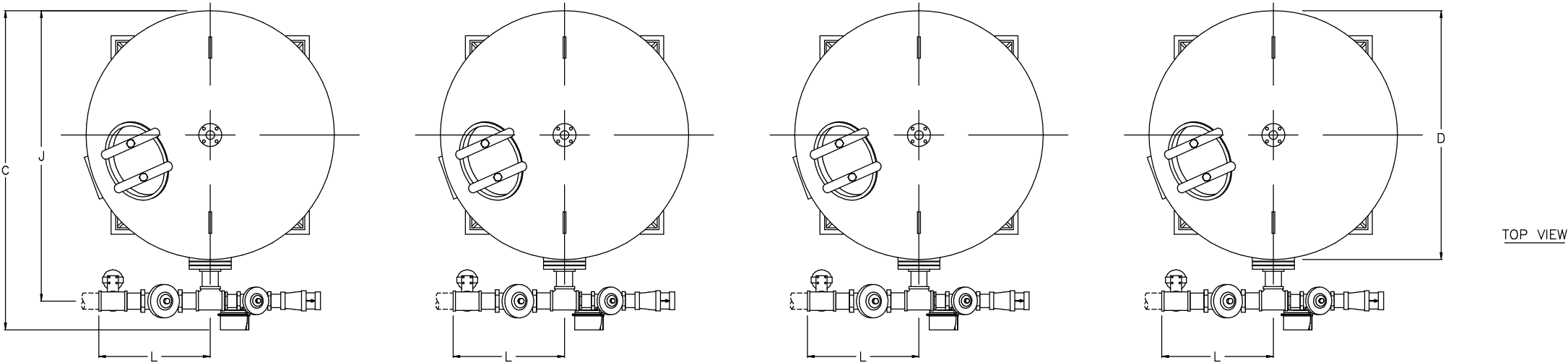



DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED					<div>Culligan®</div> <div>ENGINEERED SYSTEMS</div> <div>NORTHBROOK, ILLINOIS</div> <div>PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.</div>		NAME HI-FLO @50 FILTERS (CARBON) MODELS HR-4825 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date			DETAILED BY: KMR 7/16/03	APP. BY:	SHEET 1 OF 1
							REF. NO.	PART NO. F50_25_4_CARBON	



- NOTES:
- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
  - (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
  - (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET 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) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.
  - (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER 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) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

	DIMENSIONS (INCHES)													UNIT DATA PER TANK						
	WIDTH	HEIGHT	DEPTH	TANK DIA.	SIDE-SHELL	INLET/OUTLET PIPE SIZES	DRAIN SIZE	FLOOR TO INLET	FLOOR TO OUTLET	BACK TO INLET/OUTLET	BOLT HOLE CIRCLE	INLET OFFSET	OUTLET OFFSET	SUPERIOR QUALITY FLOW gpm @ DP	HIGH QUALITY FLOW gpm @ DP	UTILITY QUALITY FLOW gpm @ DP	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	QUAD OPER. WT. lbs.	QUAD SHIP. WT. lbs.
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	gpm @ DP	gpm @ DP	gpm @ DP	gpm			
HR-543	256	96	70	54	60	3.0	3.0	75	29	62	51.7	24	15	64 @ 4	95 @ 8	127 @ 13	160	3.0	39600	26000
HR-603	280	98	76	60	60	3.0	3.0	76	30	68	57.63	24	15	78 @ 4	118 @ 2	157 @ 5	210	3.0	48800	32000



DO NOT SCALE DRAWING TOLERANCES: ±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 HI-FLO @50 FILTERS (CARBON) MODELS HR-543, HR-603 TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 12/03/03	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO. F50_3_4_CARBON	