More

Culligan®

*Culligan® Heavy Duty Industrial Softener*

*apartments*

*assisted living facilities*

*cafeterias*

*casinos*

*corporate campuses*

*educational facilities*

*food service*

*government*

*grocery*

*health clubs*

*hotel/hospitality*

*institutions*

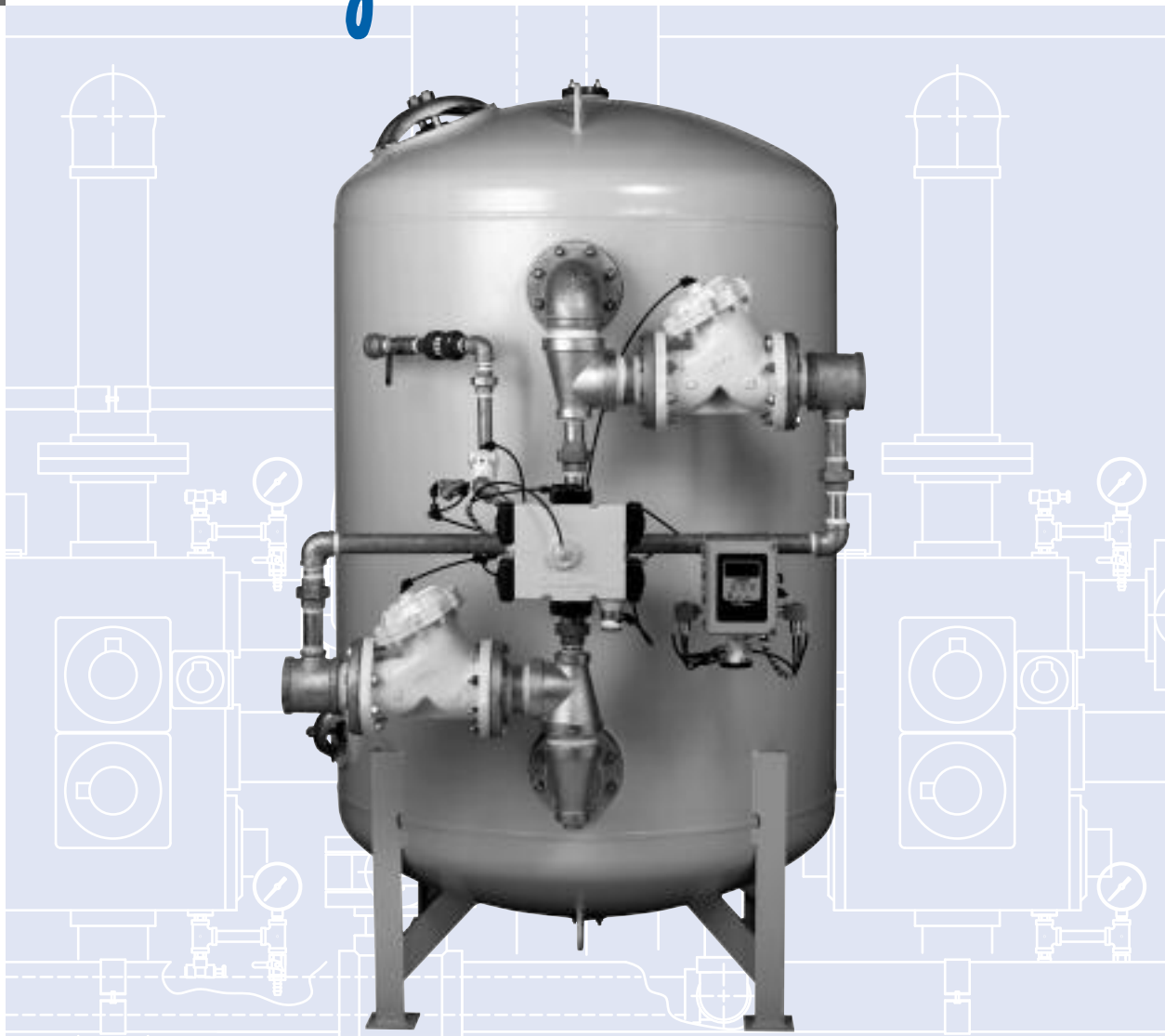
*laundry*

*manufacturing facilities*

*theme parks*

*travel centers*

*vehicle wash*



## Culligan's Hi-Flo® 50 Industrial Water Softener

### Standard Features

- 24 Volt Culligan's MVP™ Controller – Field programmable with a back-lit LCD display and UL listed 120v/24v transformer.
- Single, Duplex, Triplex, or Quad Configurations – Hardness removal capacities up to 2,000,000 grains per tank. Continuous flow rates up to 240 gpm per tank.
- Regeneration initiation by choice of time clock, meter or Aqua-Sensor® inputs.
- 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® 50 Industrial Water Softener

## Applications and Benefits

- Educational Facilities—Boiler and cooling tower make-up water for scale reduction and improved energy costs.
- Restaurants—For dishwashing, cleaning material savings, scale reduction.
- RO/DI Pretreatment
- Car washes—Quality results, detergent and water heating savings, scale reduction.
- Apartment buildings, assisted living facilities and hotels—Quality water for laundry, dishwashers, boilers.
- Industry—For process and make-up water, boiler and cooling system pretreatment, general housekeeping.
- Office buildings—For heating plant pretreatment, tenant convenience, general housekeeping.

## Options

Culligan's Brine System

- Corrosion resistant construction for long life.
- Adjustable salt dosage.

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

Culligan® Salt Saving System – reduces operating costs by recycling a portion of the regeneration water.

Patented Aqua-Sensor® Control – initiates regeneration only when needed based upon water hardness. Automatically adjusts to changes in raw water hardness and water consumption.

Flow Measuring Devices – are available for volume based regeneration initiation.

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<br>210–690 kPa |
| Power: | 120 Volts /60hz<br>220 Volts /50hz |
| Temperature: | 40–120°F<br>4 - 49°C |
| Turbidity: | 5 NTU, max.[2] |
| Chlorine: | 1 mg/L, max.[2] |
| Iron: | 5 mg/L, max. |

[1]120 Volt/24 Volt CUL/UL listed Transformer Included.

[2]See media specification for details.

| Model | Resin Qty. ($Ft^3$) | Pipe Size | Flow Rate**** Gallons Per Minute | | Tank Size*** | |
|---|---|---|---|---|---|---|
| | | | Continuous* | Peak** | Softener | Brine |
| HS-1203 | 40 | 3" | 138 | 230 | 48" x 60" | 48" x 60" |
| HS-1503 | 50 | 3" | 160 | 230 | 54" x 60" | 48" x 60" |
| HS-1504 | 50 | 4" | 208 | 320 | 54" x 60" | 48" x 60" |
| HS-2004 | 67 | 4" | 240 | 363 | 60" x 60" | 60" x 60" |

*Flow rate at a 15 psi pressure loss.
**Flow rate at a 15 psi pressure loss.
***Dimensions are diameter by tank height.
****Per Softener Tank

Flow rates shown are per tank.
Low flow channeling (flow rates less than 0.5 gallons per minute per cubic foot of resin) may cause hardness leakage into effluent.

Aqua-Sensor Patent # US 5,699,272
Progressive Flow Patent # US 5,060,167
US 5,351,199

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

"Hey Culligan Man!"®

Culligan
Trust the Water Experts®

**www.culligan.com**™

1-800-CULLIGAN


Printed in USA (2/06)
MooreWallace PART NO. 34743

More

Culligan®

# Introducing the Culligan® MVP Electronic Controller

## 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*

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 deactive at any point of the regeneration process.

*Trust The Water Experts®*

# 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!®"

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Printed in USA (2/06)
MooreWallace PART NO. 46968

CE
MVP Controller

* *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.

# Hi-Flo® 50

## Automatic Water Softeners

### Specifications and Operating Data

| Single Tank Models | Exchange Capacity[1] @ Salt Dosage | | | Service Flow Rates[2] | | Pipe Size | Resin Qty | Softener Tank Size | Brine Tank Size[3] | Approx. Ship. Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | Minimum | Standard | Maximum | Peak Flow @ ΔP | Cont. Flow @ ΔP | | | | | |
| | gr @ lb | gr @ lb | gr @ lb | gpm | gpm | in. | ft³ | in | in | lb |
| | g @ kg | g @ kg | g @ kg | m³/hr | m³/hr | in. | L | mm | mm | kg |
| **HS-1203** | 800,000/240 | 1,000,000/400 | 1,200,000/600 | 230 @ 15 | 150 @ 8 | 3 | 40 | 48 x 60 | 48 x 60 | 5800 |
| | 51,840/109 | 64,800/181 | 77,760/272 | 52.2 @ 103.4 | 34.1 @ 55.2 | 3 | 1133 | 1,219 x 1,524 | 1,219 x 1,524 | 2631 |
| **HS-1503** | 1,000,000/300 | 1,250,000/500 | 1,500,000/750 | 230 @ 14 | 160 @ 7 | 3 | 50 | 54 x 60 | 48 x 60 | 7400 |
| | 64,800/136 | 81,000/227 | 97,200/340 | 52.2 @ 96.5 | 36.3 @ 48.3 | 3 | 1416 | 1,372 x 1,524 | 1,219 x 1,524 | 3357 |
| **HS-1504** | 1,000,000/300 | 1,250,000/500 | 1,500,000/750 | 320 @ 15 | 190 @ 6 | 4 | 50 | 54 x 60 | 48 x 60 | 7800 |
| | 64,800/136 | 81,000/227 | 97,200/340 | 72.6 @ 103.4 | 43.1 @ 41.4 | 4 | 1416 | 1,372 x 1,524 | 1,219 x 1,524 | 3538 |
| **HS-2004** | 1,340,000/402 | 1,675,000/670 | 2,000,000/1005 | 400 @ 18 | 240 @ 7 | 4 | 67 | 60 x 60 | 60 x 60 | 9600 |
| | 86,832/182 | 108,540/304 | 129,600/456 | 90.8 @ 124.1 | 54.5 @ 48.3 | 4 | 1897 | 1,524 x 1,524 | 1,524 x 1,524 | 4355 |

[1] Exchange capacities based on treating water containing 10 grains per gallon (171 mg/l) of hardness (expressed as calcium carbonate), free of color, oil, turbidity and at a service flow rate of approximately 50 percent of the peak flow rate. These are nominal capacities and will vary with influent water characteristics, water temperature and other factors.

[2] Operation of a softener at peak flow rate for extended periods of time may result in a slight reduction of softening capacity. This is due to premature hardness breakthrough. Flows shown are gpm @ psi loss (m³/hr @ kPa).

[3] Brine system shown is optional. Multiple sizes are available. Size shown is size most often selected for the system.

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.

Culligan

Commercial Systems



1-800-Culligan

www.culligan.com

# 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:

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

* 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

PN 01016557

Printed in U.S.A.

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 HARNESS 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.

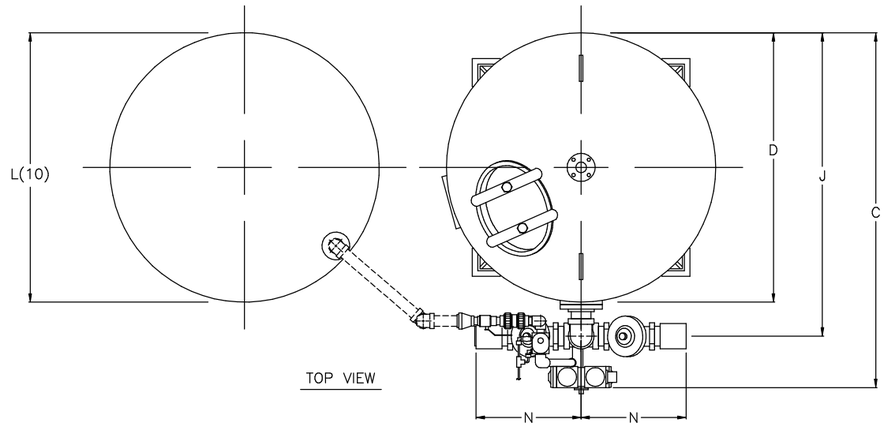
(7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.

(8) WHEN USING A WATER METER, THERE MUST BE A MINIMUM AMOUNT OF STRAIGHT PIPE BEFORE AND AFTER THE SENSOR. REFER TO THE INSTALLATION INSTRUCTIONS FOR DETAILS.

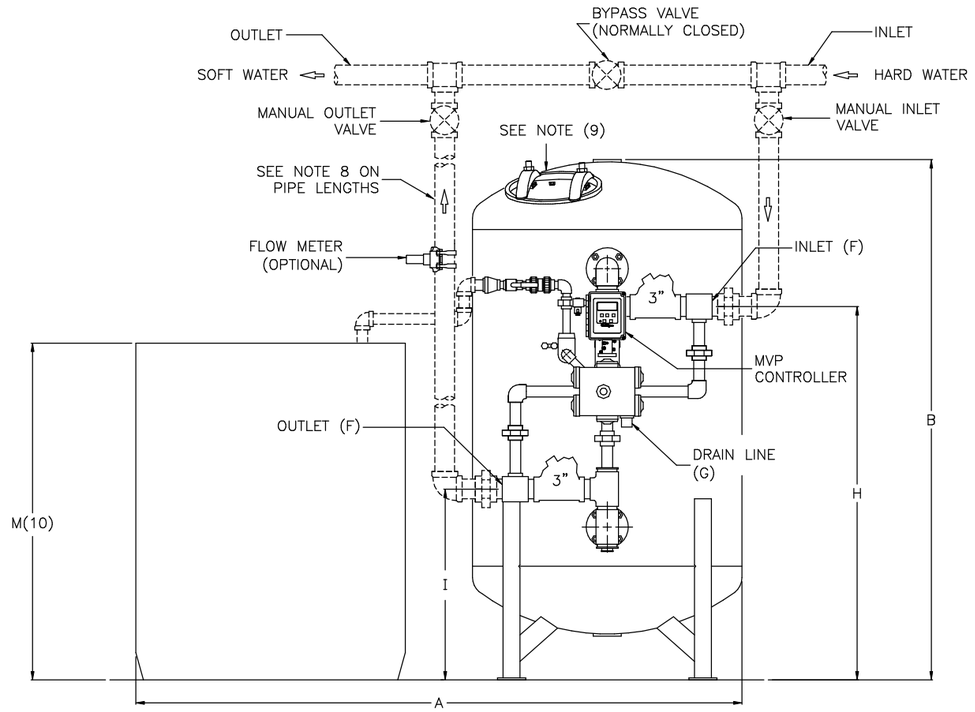
(9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

(10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM

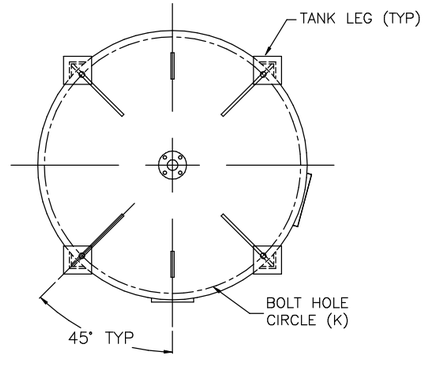
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | SIMPLEX OPER. WT. lbs. | SIMPLEX SHIP. WT. lbs. |
| HS–1203 | 108 | 93 | 65 | 48 | 60 | 3.0 | 1.5 | 67.0 | 34.0 | 54.0 | 45.7 | 48 | 60 | 19 | 1200 @ 600 | 40 | 150 @ 8 | 230 @ 15 | 60 | 2.0 | 12800 | 5800 |
| HS–1503 | 114 | 96 | 71 | 54 | 60 | 3.0 | 1.5 | 68.0 | 35.0 | 60.0 | 51.7 | 48 | 60 | 19 | 1500 @ 750 | 50 | 160 @ 7 | 230 @ 14 | 70 | 2.0 | 15400 | 7400 |




TOP VIEW




SINGLE INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 3"

CAD File: Hi-Flo 50 Softener Single 3in.dwg

| DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED | | | | |
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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1203–1503 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/12/03 | | 1 OF 1 |

| REF. NO. | PART NO. |
|---|---|
| | S50_3_1 |

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 HARNESS 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) WHEN USING A WATER METER, THERE MUST BE A MINIMUM AMOUNT OF STRAIGHT PIPE BEFORE AND AFTER THE SENSOR. REFER TO THE INSTALLATION INSTRUCTIONS FOR DETAILS.

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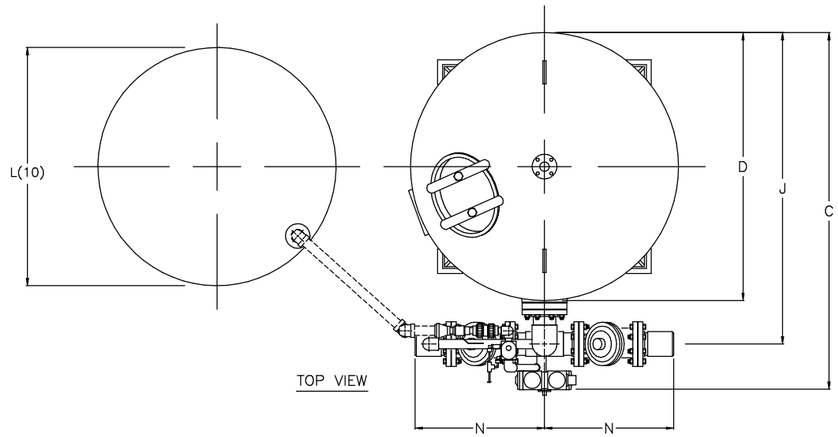
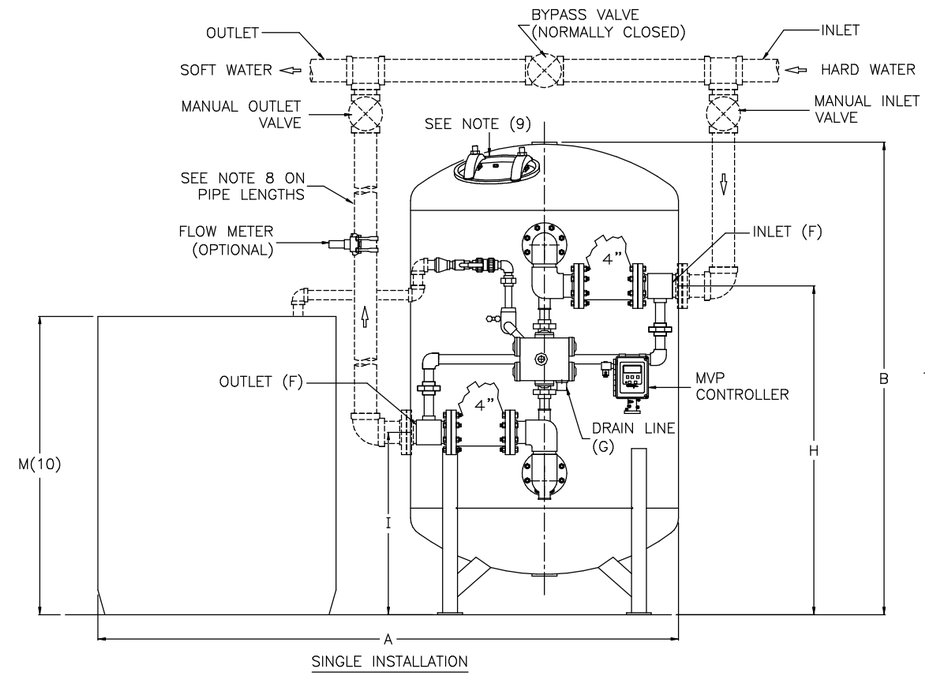
(10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM

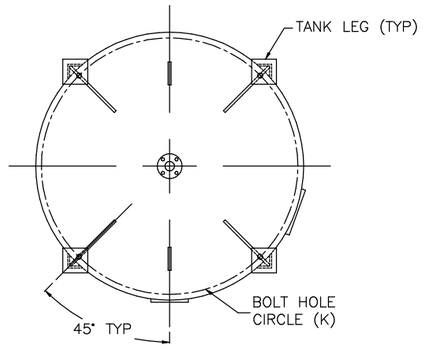
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | SIMPLEX OPER. WT. lbs. | SIMPLEX SHIP. WT. lbs. |
| HS–1504 | 114 | 96 | 73 | 54 | 60 | 4.0 | 1.5 | 66.0 | 37.0 | 62.0 | 51.7 | 48 | 60 | 26 | 1500 @ 750 | 50 | 190 @ 6 | 320 @ 15 | 70 | 2.0 | 15800 | 7800 |
| HS–2004 | 132 | 98 | 78 | 60 | 60 | 4.0 | 1.5 | 67.0 | 38.0 | 67.0 | 57.63 | 60 | 60 | 26 | 2000 @ 1005 | 67 | 240 @ 7 | 400 @ 18 | 90 | 2.0 | 20900 | 9600 |




TOP VIEW




SINGLE INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 4"

CAD File: Hi-Flo 50 Softener Single 4in.dwg

| DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED | | | | |
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| Let. | Change | By | App | Date |
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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME
HI–FLO® 50 SOFTENERS
MODELS 1504–2004
TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/28/03 | | 1 OF 1 |
| REF. NO. | | PART NO. S50_4_1 |

NOTES:

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

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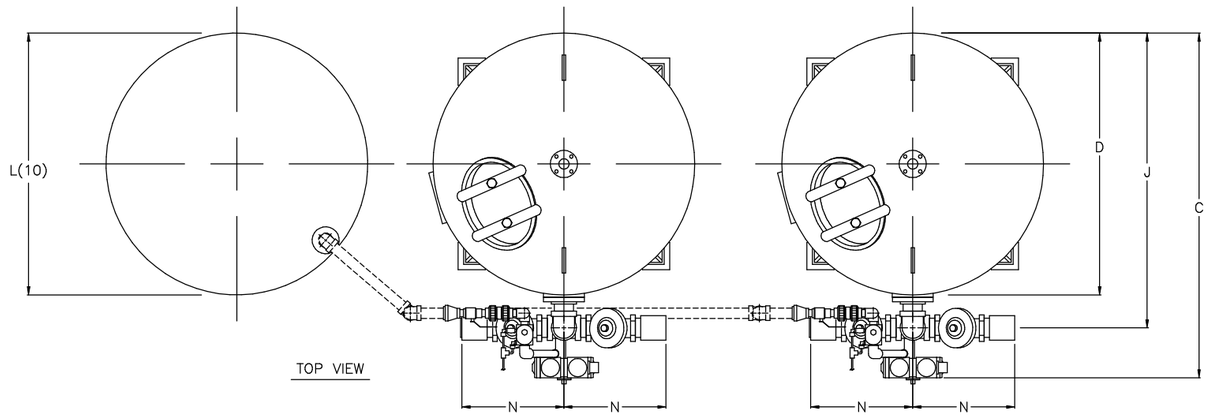
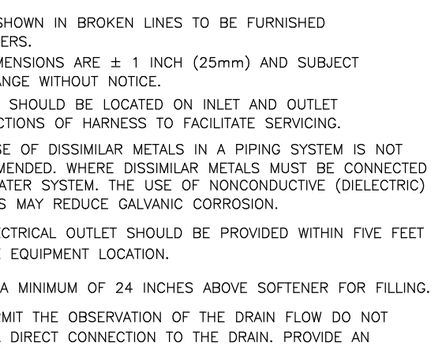
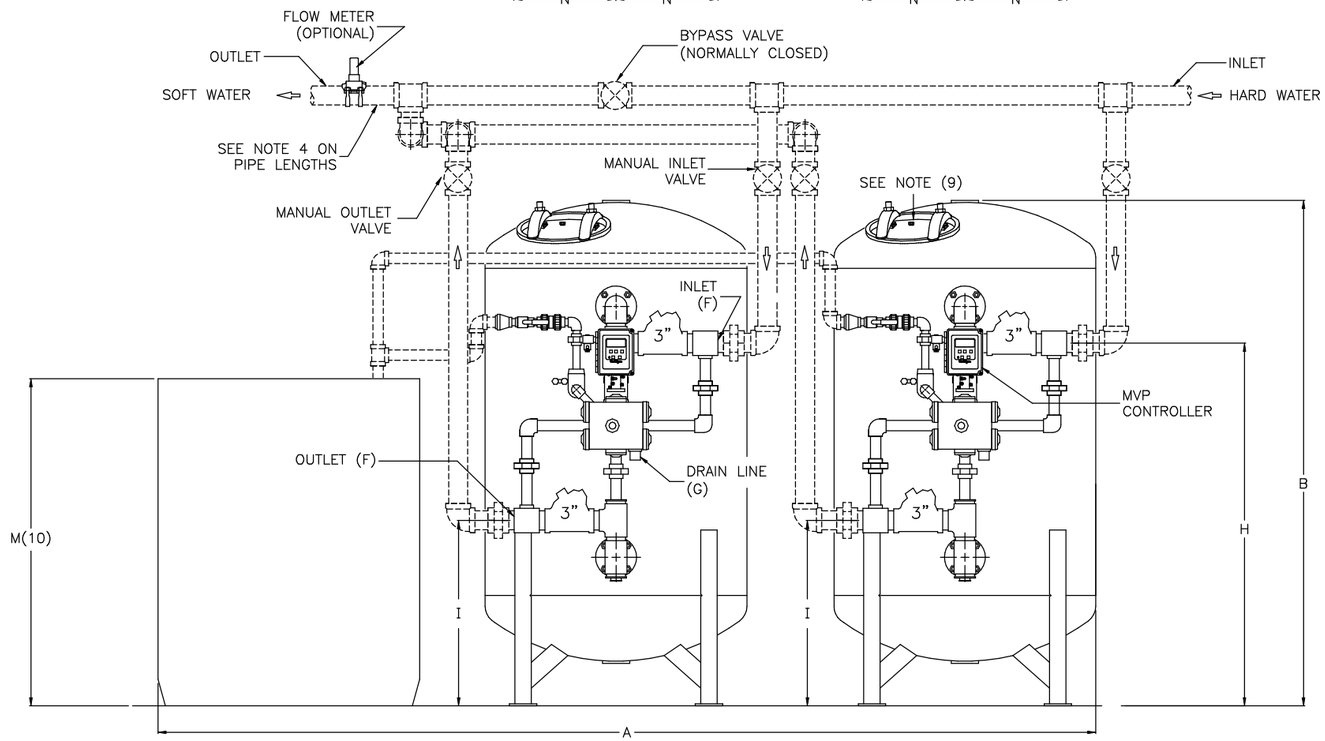
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | DUPLEX OPER. WT. lbs. | DUPLEX SHIP. WT. lbs. |
| HS–1203 | 168 | 93 | 65 | 48 | 60 | 3.0 | 1.5 | 67.0 | 34.0 | 54.0 | 45.7 | 48 | 60 | 19 | 1200 @ 600 | 40 | 150 @ 8 | 230 @ 15 | 60 | 2.0 | 23200 | 11400 |
| HS–1503 | 180 | 96 | 71 | 54 | 60 | 3.0 | 1.5 | 68.0 | 35.0 | 60.0 | 51.7 | 48 | 60 | 19 | 1500 @ 750 | 50 | 160 @ 7 | 230 @ 14 | 70 | 2.0 | 28400 | 14600 |




TOP VIEW




BOTTOM VIEW




ALTERNATING DUPLEX INSTALLATION

# Hi-Flo 50 - 3"

CAD File: Hi-Flo 50 Softener DA 3in.dwg

DO NOT SCALE DRAWING
TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED

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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1203–1503 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/12/03 | | 1 OF 1 |

REF. NO.

PART NO. S50_3_2A

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 HARNESS 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.

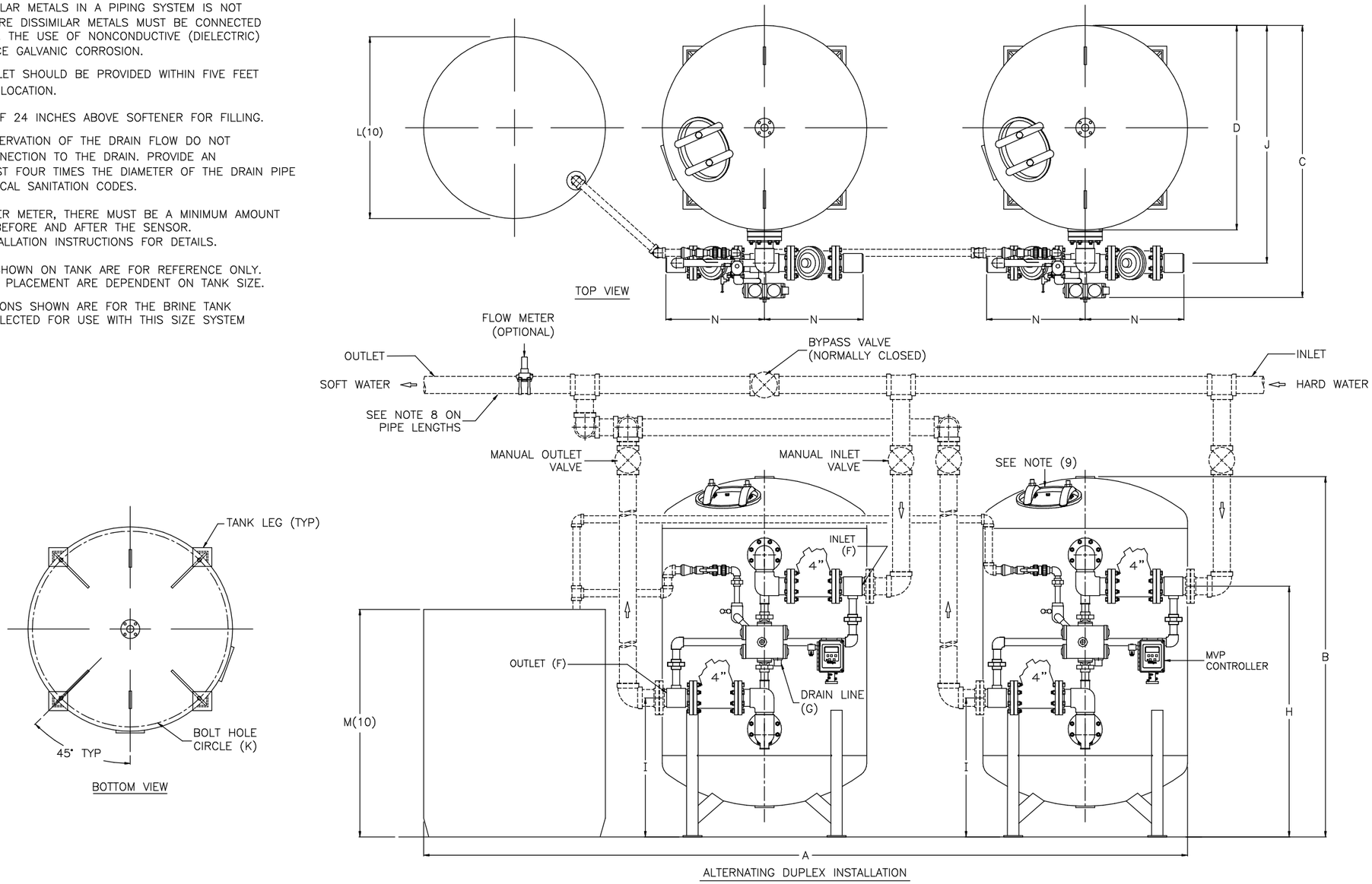
(7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.

(8) WHEN USING A WATER METER, THERE MUST BE A MINIMUM AMOUNT OF STRAIGHT PIPE BEFORE AND AFTER THE SENSOR. REFER TO THE INSTALLATION INSTRUCTIONS FOR DETAILS.

(9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

(10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM

| | 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 | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME ft³ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | DUPLEX OPER. WT. lbs. | DUPLEX SHIP. WT. lbs. |
| HS-1504 | 180 | 96 | 73 | 54 | 60 | 4.0 | 1.5 | 66.0 | 37.0 | 62.0 | 51.7 | 48 | 60 | 26 | 1500 @ 750 | 50 | 190 @ 6 | 320 @ 15 | 70 | 2.0 | 29500 | 15400 |
| HS-2004 | 204 | 98 | 78 | 60 | 60 | 4.0 | 1.5 | 67.0 | 38.0 | 67.0 | 57.63 | 60 | 60 | 26 | 2000 @ 1005 | 67 | 240 @ 7 | 400 @ 18 | 90 | 2.0 | 37800 | 18900 |




# Hi-Flo 50 - 4"

CAD File: Hi-Flo 50 Softener DA 4in.dwg

DO NOT SCALE DRAWING
TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED

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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME
HI-FLO® 50 SOFTENERS
MODELS 1504-2004
TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/28/03 | | 1 OF 1 |
| REF. NO. | PART NO. S50_4_2A | |

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.

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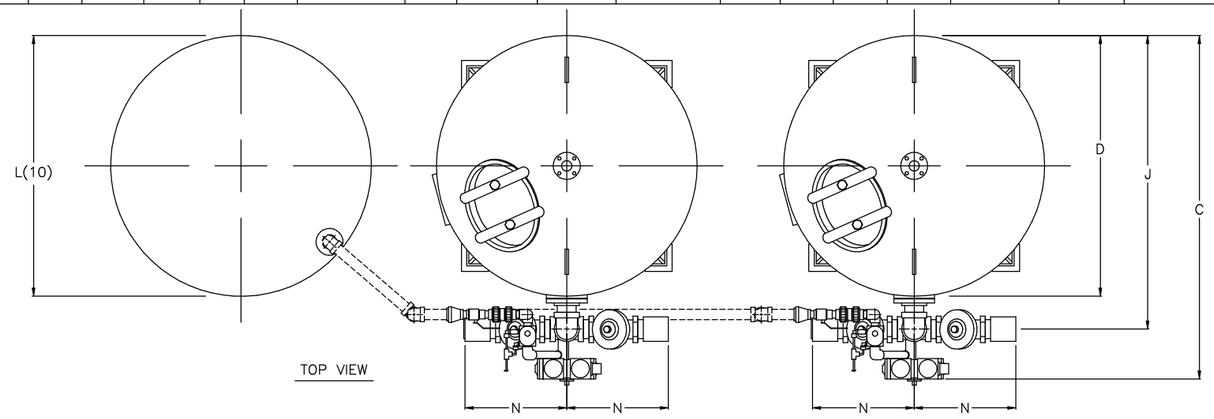
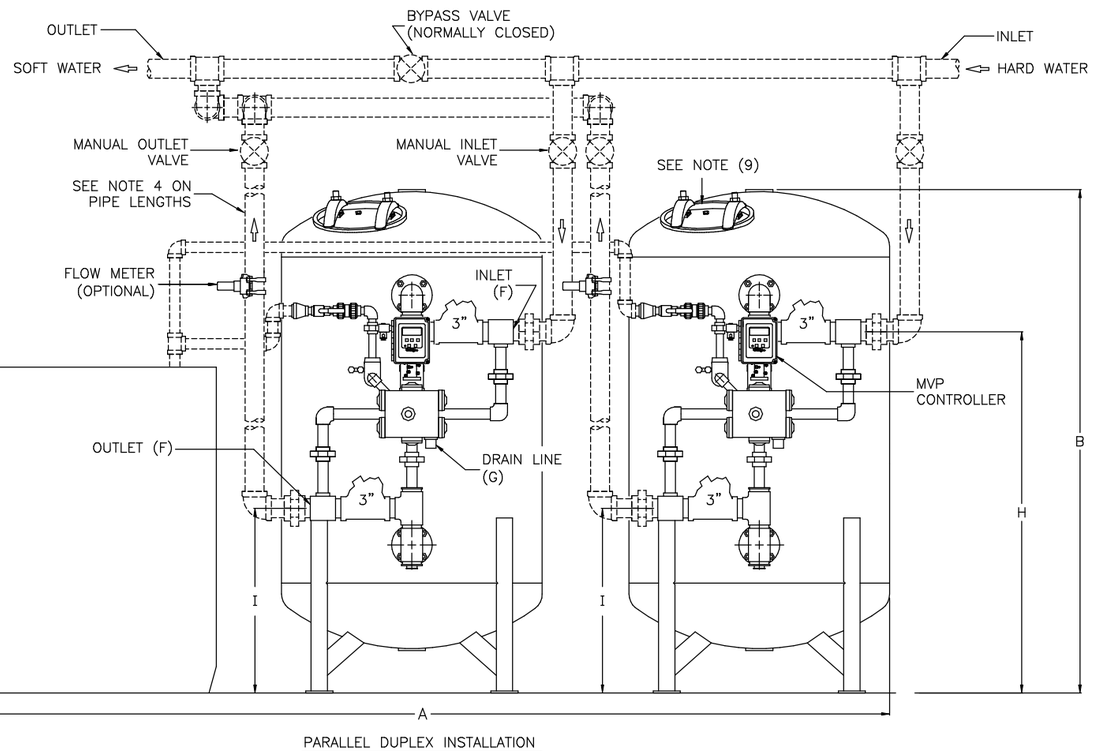
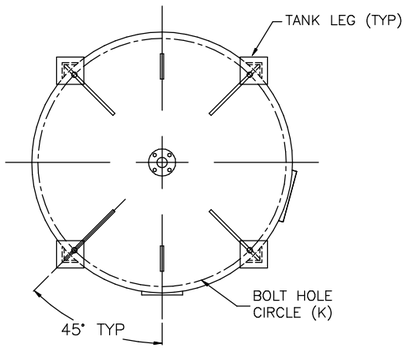
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | DUPLEX OPER. WT. lbs. | DUPLEX SHIP. WT. lbs. |
| HS–1203 | 168 | 93 | 65 | 48 | 60 | 3.0 | 1.5 | 67.0 | 34.0 | 54.0 | 45.7 | 48 | 60 | 19 | 1200 @ 600 | 40 | 150 @ 8 | 230 @ 15 | 60 | 2.0 | 23200 | 11400 |
| HS–1503 | 180 | 96 | 71 | 54 | 60 | 3.0 | 1.5 | 68.0 | 35.0 | 60.0 | 51.7 | 48 | 60 | 19 | 1500 @ 750 | 50 | 160 @ 7 | 230 @ 14 | 70 | 2.0 | 28400 | 14600 |




TOP VIEW




PARALLEL DUPLEX INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 3"

CAD File: Hi-Flo 50 Softener DP 3in.dwg

DO NOT SCALE DRAWING
TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED

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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1203–1503 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/12/03 | | 1 OF 1 |

REF. NO.

PART NO. S50_3_2P

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 HARNESS 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.

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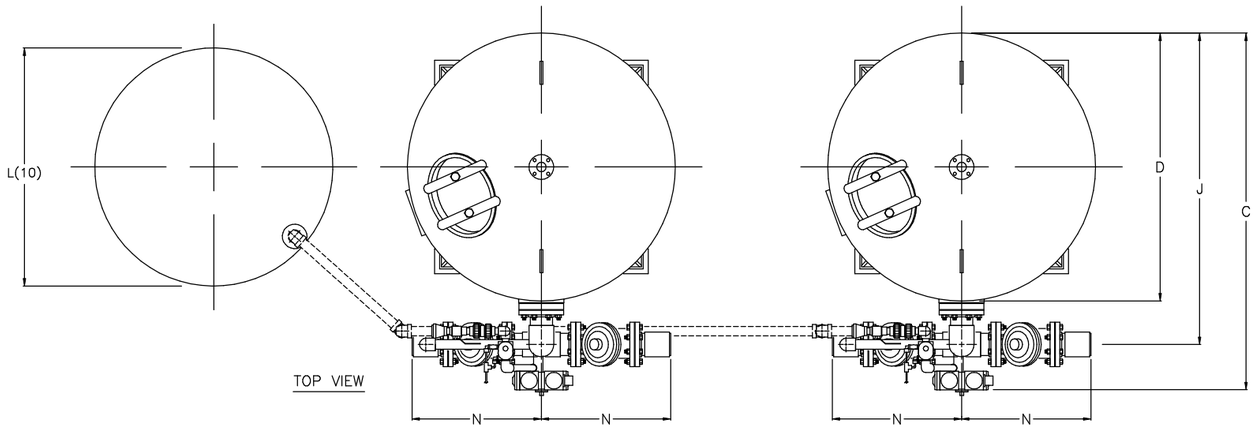
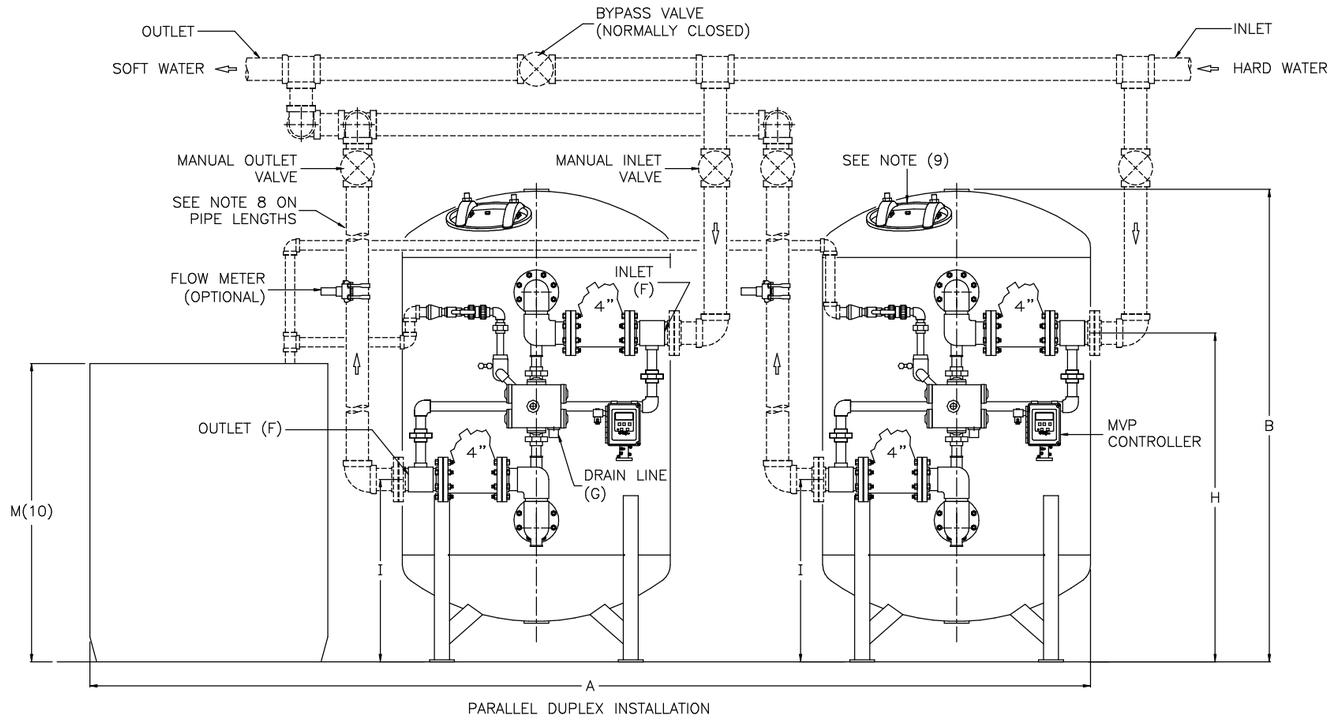
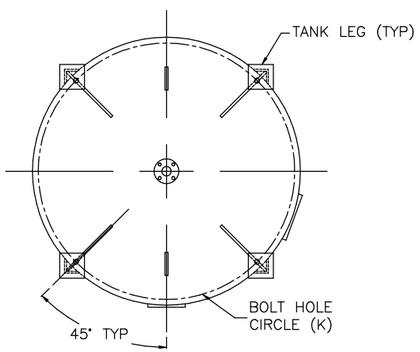
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | DUPLEX OPER. WT. lbs. | DUPLEX SHIP. WT. lbs. |
| HS–1504 | 180 | 96 | 73 | 54 | 60 | 4.0 | 1.5 | 66.0 | 37.0 | 62.0 | 51.7 | 48 | 60 | 26 | 1500 @ 750 | 50 | 190 @ 6 | 320 @ 15 | 70 | 2.0 | 29500 | 15400 |
| HS–2004 | 204 | 98 | 78 | 60 | 60 | 4.0 | 1.5 | 67.0 | 38.0 | 67.0 | 57.63 | 60 | 60 | 26 | 2000 @ 1005 | 67 | 240 @ 7 | 400 @ 18 | 90 | 2.0 | 37800 | 18900 |




PARALLEL DUPLEX INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 4"

CAD File: Hi-Flo 50 Softener DP 4in.dwg

DO NOT SCALE DRAWING
TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED

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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME
HI–FLO® 50 SOFTENERS
MODELS 1504–2004
TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/28/03 | | 1 OF 1 |
| REF. NO. | PART NO. | |
| | S50_4_2P | |

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 HARNESS 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.

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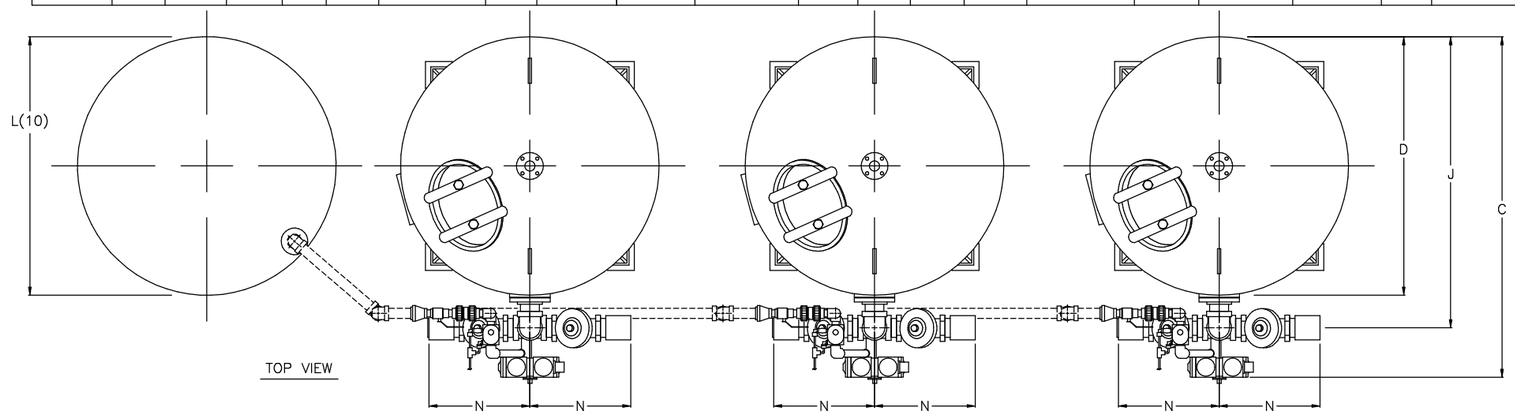
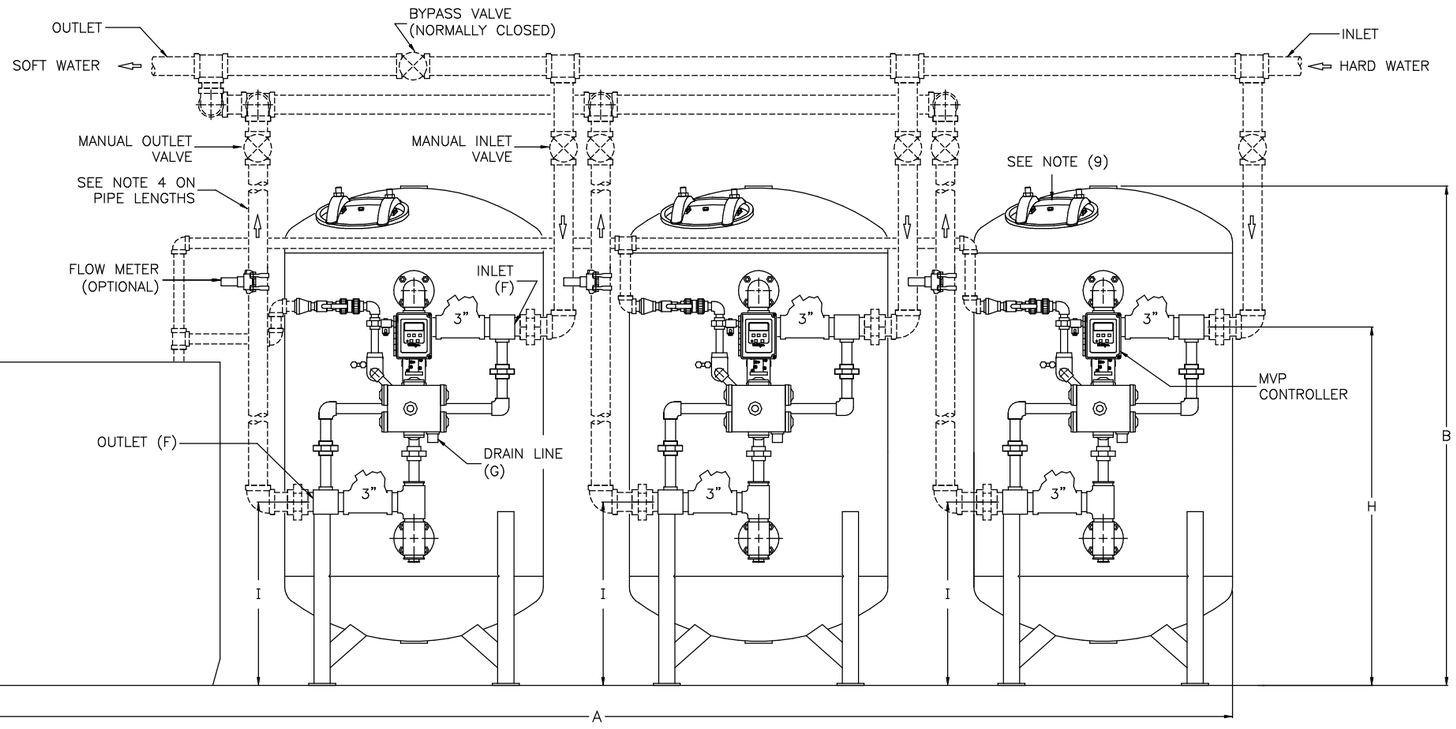
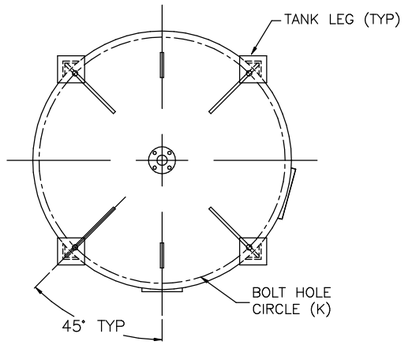
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | TRIPLEX OPER. WT. lbs. | TRIPLEX SHIP. WT. lbs. |
| HS–1203 | 228 | 93 | 65 | 48 | 60 | 3.0 | 1.5 | 67.0 | 34.0 | 54.0 | 45.7 | 48 | 60 | 19 | 1200 @ 600 | 40 | 150 @ 8 | 230 @ 15 | 60 | 2.0 | 33600 | 17000 |
| HS–1503 | 246 | 96 | 71 | 54 | 60 | 3.0 | 1.5 | 68.0 | 35.0 | 60.0 | 51.7 | 48 | 60 | 19 | 1500 @ 750 | 50 | 160 @ 7 | 230 @ 14 | 70 | 2.0 | 41400 | 21800 |




TOP VIEW




TRIPLEX INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 3"

CAD File: Hi-Flo 50 Softener Triplex 3in.dwg

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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1203–1503 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
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| KMR 8/12/03 | | 1 OF 1 |

| REF. NO. | PART NO. |
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| | S50_3_3 |

NOTES:

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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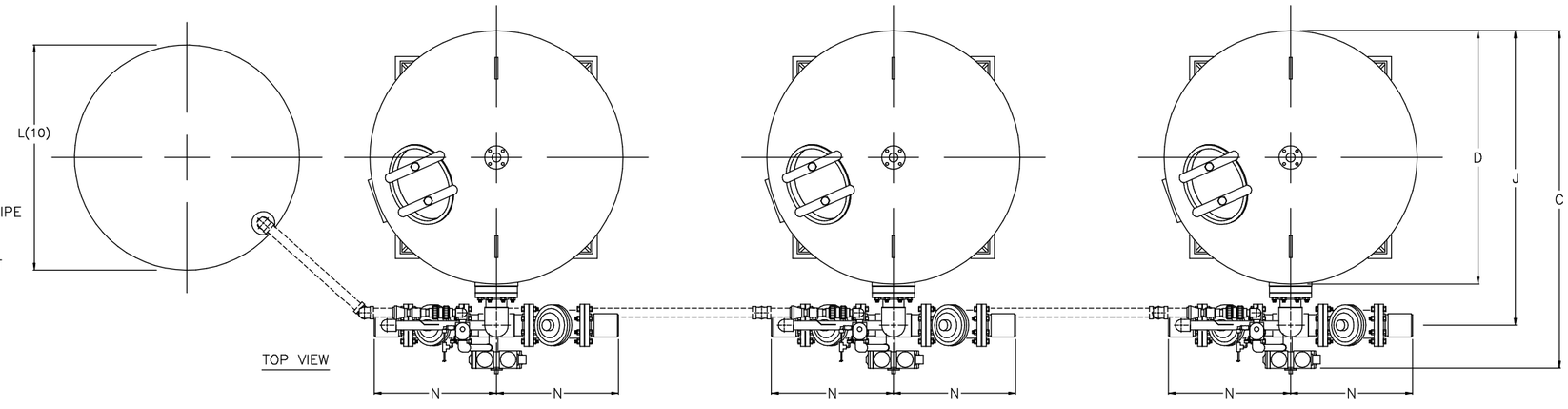
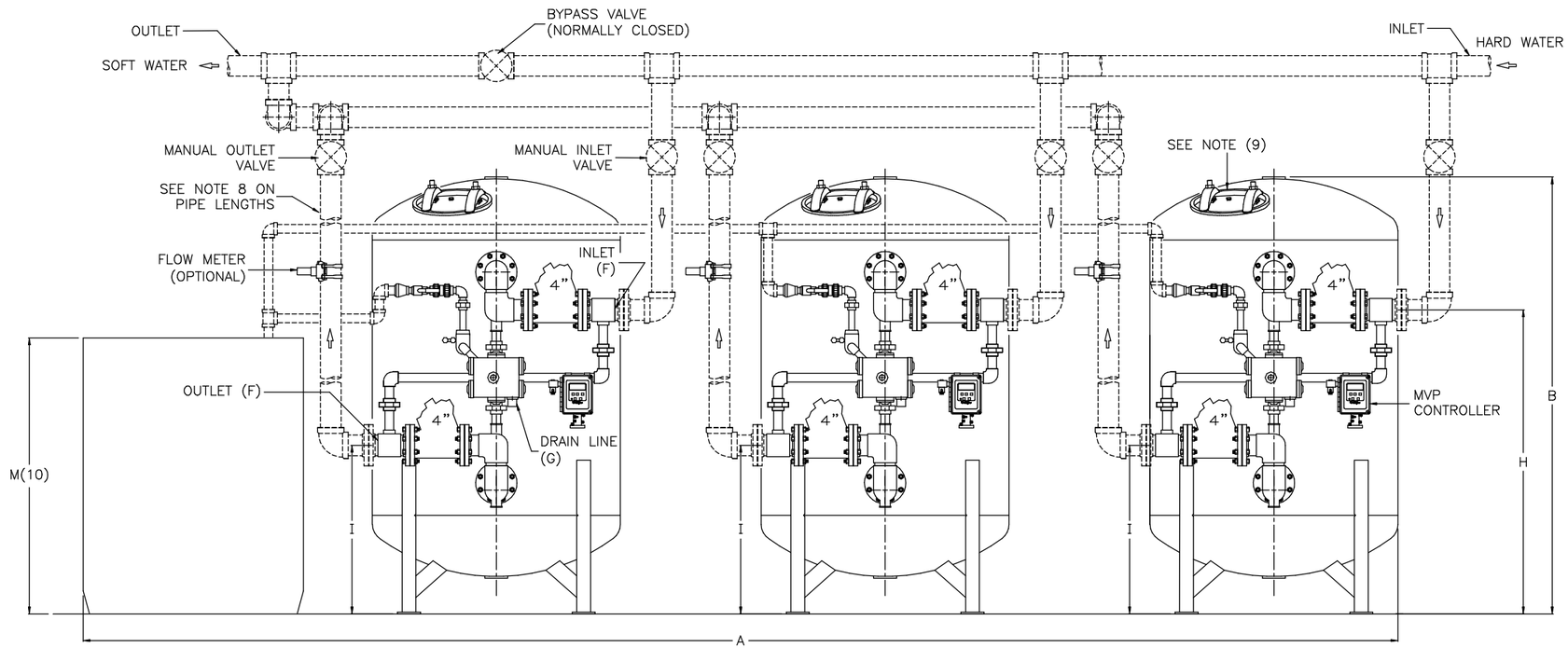
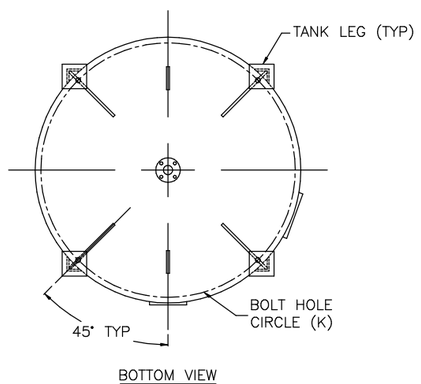
| HS–1504 | 246 | 96 | 73 | 54 | 60 | 4.0 | 1.5 | 66.0 | 37.0 | 62.0 | 51.7 | 48 | 60 | 26 | 1500 @ 750 | 50 | 190 @ 6 | 320 @ 15 | 70 | 2.0 | 43200 | 23000 |
| HS–2004 | 276 | 98 | 78 | 60 | 60 | 4.0 | 1.5 | 67.0 | 38.0 | 67.0 | 57.63 | 60 | 60 | 26 | 2000 @ 1005 | 67 | 240 @ 7 | 400 @ 18 | 90 | 2.0 | 54700 | 28200 |




TRIPLEX INSTALLATION




BOTTOM VIEW

# Hi-Flo 50 - 4"

CAD File: Hi-Flo 50 Softener Triplex 4in.dwg

| DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED | | | | |
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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1504–2004 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
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| KMR 8/28/03 | | 1 OF 1 |

REF. NO.

PART NO. S50_4_3

NOTES:

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(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.

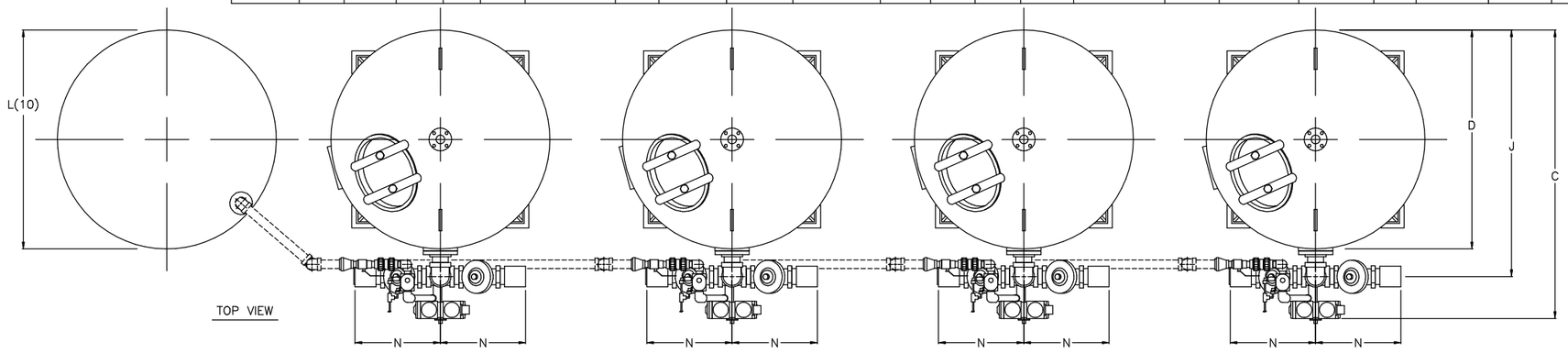
(7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.

(8) WHEN USING A WATER METER, THERE MUST BE A MINIMUM AMOUNT OF STRAIGHT PIPE BEFORE AND AFTER THE SENSOR. REFER TO THE INSTALLATION INSTRUCTIONS FOR DETAILS.

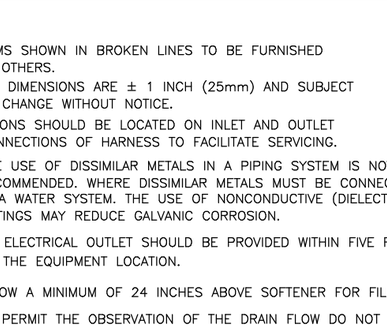
(9) ACCESS OPENINGS SHOWN ON TANK ARE FOR REFERENCE ONLY. QUANTITY, TYPE AND PLACEMENT ARE DEPENDENT ON TANK SIZE.

(10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM.

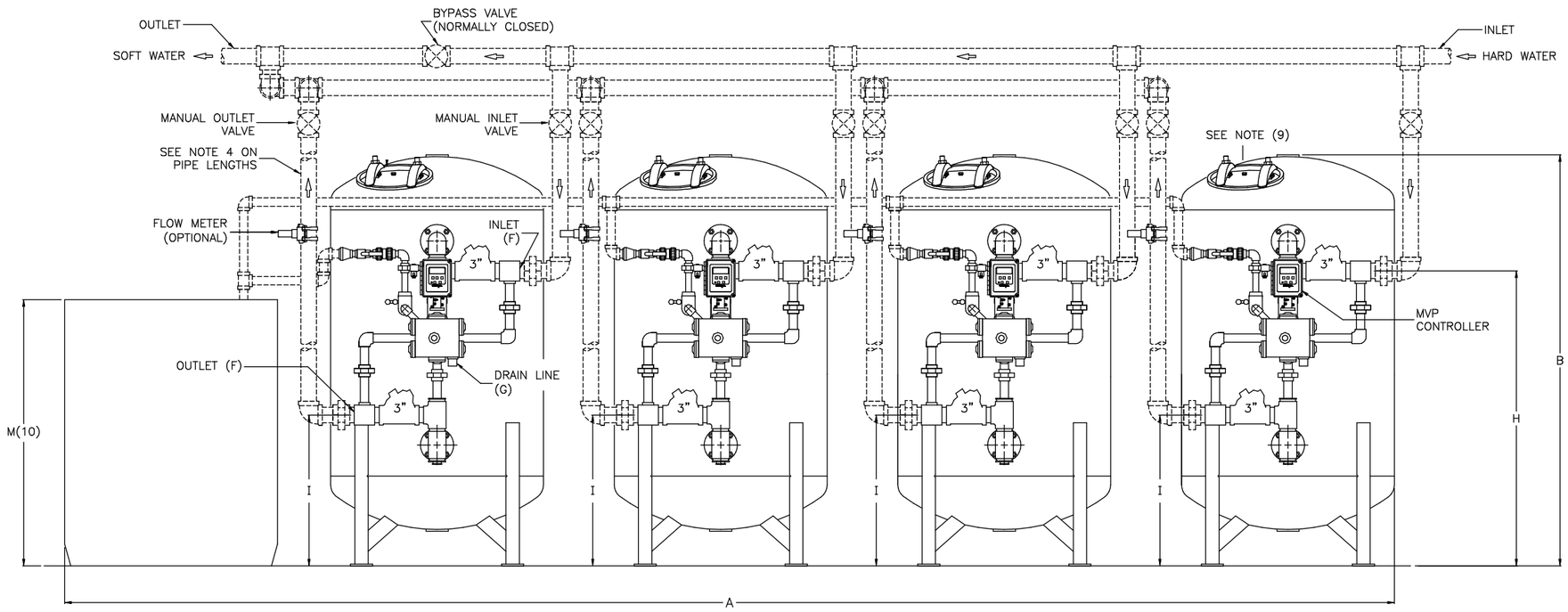
| | DIMENSIONS (INCHES) | | | | | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE–SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | QUAD OPER. WT. lbs. | QUAD SHIP. WT. lbs. |
| HS–1203 | 288 | 93 | 65 | 48 | 60 | 3.0 | 1.5 | 67.0 | 34.0 | 54.0 | 45.7 | 48 | 60 | 19 | 1200 @ 600 | 40 | 150 @ 8 | 230 @ 15 | 60 | 2.0 | 44000 | 23200 |
| HS–1503 | 312 | 96 | 71 | 54 | 60 | 3.0 | 1.5 | 68.0 | 35.0 | 60.0 | 51.7 | 48 | 60 | 19 | 1500 @ 750 | 50 | 160 @ 7 | 230 @ 14 | 70 | 2.0 | 54400 | 29600 |




TOP VIEW




BOTTOM VIEW




QUAD INSTALLATION

# Hi-Flo 50 - 3"

CAD File: Hi-Flo 50 Softener Quad 3in.dwg

| DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED | | | | |
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| Let. | Change | By | App | Date |
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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI–FLO® 50 SOFTENERS MODELS 1203–1503 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/12/03 | | 1 OF 1 |
| REF. NO. | PART NO. S50_3_4 | |

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 HARNESS 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.

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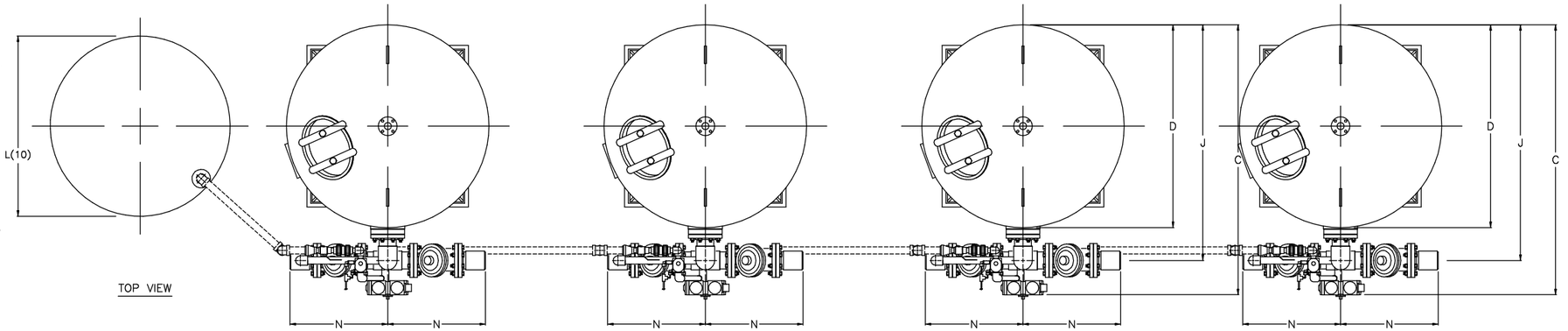
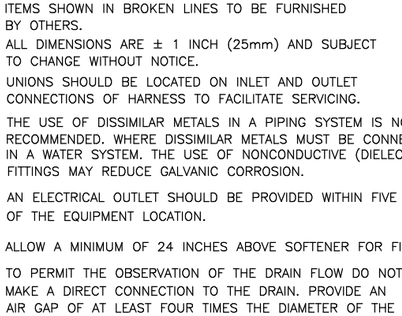
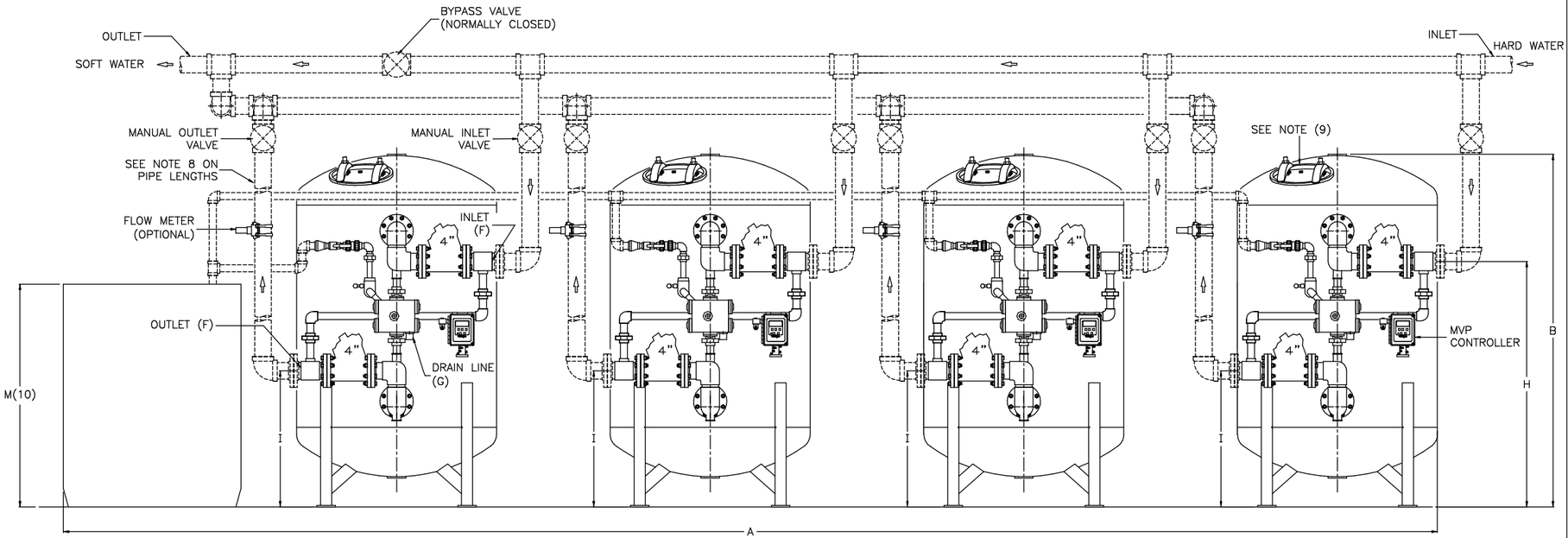
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | WIDTH A | HEIGHT B | DEPTH C | TANK DIA. D | SIDE-SHELL E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | FLOOR TO OUTLET I | BACK TO INLET/OUTLET J | BOLT HOLE CIRCLE K | BRINE TANK DIA. L(10( | BRINE TANK HEIGHT M(10) | INLET/ OUTLET OFFSET N | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME $ft^3$ | CONTINUOUS FLOW gpm @ psi drop | PEAK FLOW gpm @ psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | QUAD OPER. WT. lbs. | QUAD SHIP. WT. lbs. |
| HS-1504 | 312 | 96 | 73 | 54 | 60 | 4.0 | 1.5 | 66.0 | 37.0 | 62.0 | 51.7 | 48 | 60 | 26 | 1500 @ 750 | 50 | 190 @ 6 | 320 @ 15 | 70 | 2.0 | 56900 | 31200 |
| HS-2004 | 348 | 98 | 78 | 60 | 60 | 4.0 | 1.5 | 67.0 | 38.0 | 67.0 | 57.63 | 60 | 60 | 26 | 2000 @ 1005 | 67 | 240 @ 7 | 400 @ 18 | 90 | 2.0 | 71600 | 38400 |




TOP VIEW




BOTTOM VIEW




QUAD INSTALLATION

# Hi-Flo 50 - 4"

CAD File: Hi-Flo 50 Softener Quad 4in.dwg

DO NOT SCALE DRAWING
TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED

| Let. | Change | By | App | Date |
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Culligan® ENGINEERED SYSTEMS
NORTHBROOK, ILLINOIS



NAME: HI-FLO® 50 SOFTENERS MODELS 1504-2004 TECHNICAL DATA SHEET

| DETAILED BY: | APP. BY: | SHEET |
|---|---|---|
| KMR 8/28/03 | | 1 OF 1 |

| REF. NO. | PART NO. |
|---|---|
| | S50_4_4 |