



Culligan®

better water. pure and simple.™

*Culligan
Hi-Flo® 22
Automatic
Water Softener
and Filter*

New and Improved Commercial Softener and Filter



Expandable - Additional tanks can be easily added. As many as 6 controls may be linked together allowing for simple, future expansion.

Progressive Flow - Culligan's patented feature permits smaller systems to provide greater flow rates and treatment capacities by taking tanks on-line or off-line based on system flow rate.

Brine Reclaim - Optional feature allows system to recycle a portion of regeneration water. The system not only conserves water, but also makes your water softener more environmentally friendly.

Electronics - State-of-the-art 24 VAC solid state electronics allow the controller to be used as a simple timer or a more complex system integrator. Can be regenerated based on time or volume. Configuration settings are accessed from a user-friendly programmable interface.

Diagnostics - The controller provides sophisticated diagnostics which allows for easy system analysis.

Wide Range of Capacities and Flow Rates - Softeners available with capacities ranging from 60,000 grains to 210,000 grains per tank. Peak flow rates from 37 gpm to 45 gpm per tank.

- ✓ Local Water Expertise
- ✓ Trusted Leader for Over 70 Years
- ✓ Certified Sales, Installation and Service Professionals
- ✓ 100% Satisfaction Guarantee
- ✓ Full Service (salt delivery, filter changes and more)
- ✓ Affordable Water Solutions for Home and Business



The Best Choice Is Culligan®!

*Discover all the
benefits ...*

assisted living facilities

cafeterias

casinos

corporate campuses

educational facilities

food service

grocery

hotel/hospitality

institutions

laundry

theme parks

vehicle wash

Culligan has been a premier provider of quality water treatment products and services for over 70 years. When it comes to providing commercial and industrial water treatment solutions no one is better positioned than Culligan to deliver results with your needs in mind.

Culligan's Hi-Flo® 22 Automatic Water Softener and Filter

Standard Features

- **24 Volt MVP™ Controller** — Field programmable with a back-lit LCD display and UL listed 120v/24v transformer.
- **Single, Duplex, Triplex, or Quad Softener Configurations** — Hardness removal capacities up to 210,000 grains per tank, and continuous flow rates up to 33 gpm per tank.
- **Regeneration Cycle** — Standard flow meter starts cycle after preset volume of water has been softened. Flow meter is accurate down to 0.5 gpm.
- **Corrosion Resistant Tanks** — Made from fiberglass reinforced polyester. Additional reinforcement from continuous fiberglass overwrap. Underdrain design maximizes softener's capacity, reduces pressure loss.
- **Corrosion Resistant Positive Motor-Driven Regeneration Valve** — Motor driven piston is reliable under severe water conditions, resists dirt, iron, turbidity.
- **Choice of Granular Activated Carbon** or mixed media depth filters.
- **NSF 61 Rating**

Applications and Benefits

- **RO/DI Pretreatment**
- **Apartment buildings, assisted living facilities and hotels** — Quality water for laundry, dishwashers, boilers.
- **Office buildings** — For heating plant pretreatment, tenant convenience, general housekeeping.
- **Restaurants** — For dishwashing, cleaning material savings, scale reduction, superior taste and increased cost savings.
- **Car washes** — Quality results, detergent and water heating savings, scale reduction, turbidity reduction.
- **Light industry** — For process and make-up water, boiler and cooling system pretreatment, general housekeeping.
- **Drinking Water** — Reduces turbidity and chlorine; improves taste and clarity.





Culligan's MVP™ Designed With The Ease of 24-volt Operation.

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 regenerating simultaneously.

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 1/2AAA-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.
- **Progressive Flow Trip Point** - Use of this patented feature allows multiple tank systems operating with water meters to be brought online or offline as facility flow demands increase or decrease.
- **Flow Meter/Sensor Input** - Built-in flow sensor can be used to measure the amount of treated water provided and initiate a 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.
- **Auxiliary 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.
- **Auxiliary Outputs** - Two auxiliary outputs can be programmed to be active or inactive at any point of the regeneration process.



Quality products
and services you
can count on.



Culligan's Hi-Flo® 22 Automatic Water Softener and Filter

Options

- **Dubl-Safe™** Brine System for softeners—Positive overflow protection. Automatic refill control is backed up by shutoff float valve to minimize chance of overflow.
- **Patented Progressive Flow** – Culligan's MVP™ Control can monitor flow demands bringing additional softening tanks on-line or offline as flows increase or decrease.
- **Patented Aqua-Sensor®** Control – Initiates regeneration only when needed based upon water hardness. Automatically adjusts to changes in raw water hardness and water consumption - softener only.
- **Pressure Differential Switch** for filters.
- **Bypass valve.**

Warranty

Culligan's Hi-Flo® 22 water softeners and filters are backed by a limited 1-year warranty against defects in materials, workmanship, and corrosion. The plastic conditioner tank has a 5-year warranty. See printed warranty for details.*

Some localities have corrosive water. A softener cannot correct this condition, so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures, or water-using equipment. If you suspect corrosion, your independently operated Culligan® dealer has equipment to control the problem.

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

Softener Specifications

| | |
|-----------------------|--------------------------------|
| Pipe Size, All Units: | 1.5" |
| Pressure: | 20 – 125 psig 135 – 860 kPa |
| Power: | 24 Volts 50/60hz ¹ |
| Power Consumption: | 3/100 Watts Min/Max |
| Vacuum: | None ² |
| Temperature: | 33–120°F 0 – 48°C |
| Turbidity: | 5 NTU, max. ³ |
| Chlorine: | 1 mg/L, max. ³ |
| Iron: | 5 mg/L |

¹120 Volt/24 Volt CUL/UL listed Transformer Included.

²Tank warranty is void if subject to vacuum

³See media specification for details

| Model | Resin Qty. (Ft ³) | Flow Rates (gpm) | | Tank Size ⁴ | |
|--------|----------------------------------|-------------------------|-------------------|------------------------|--------------------|
| | | Continuous ¹ | Peak ² | Softener | Brine ⁵ |
| WS-060 | 2 | 29 | 37 | 14 x 47 | 18 x 38 |
| WS-090 | 3 | 29.5 | 38 | 16 x 53 | 24 x 40 |
| WS-120 | 4 | 27 | 35 | 16 x 65 | 24 x 40 |
| WS-150 | 5 | 33.5 | 45 | 21 x 54 | 24 x 48 |
| WS-210 | 7 | 33 | 42 | 21 x 69 | 24 x 48 |

¹ Flow rate at a 15 psi pressure loss.

² Flow rate at a 25 psi pressure loss.

⁴ Dimensions are diameter by tank height.

⁵ Brine systems are optional. Size shown is size most commonly selected.

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.

Valve only flow rate is 42 gpm @ 15 psi and 53 gpm @ 25 psi.

Filter Specifications

| | |
|-----------------------|--------------------------------|
| Pipe Size, All Units: | 1.5" |
| Pressure: | 20 – 125 psig 135 – 860 kPa |
| Power: | 24 Volts 50/60hz ¹ |
| Power Consumption: | 3/100 Watts Min/Max |
| Vacuum: | None ² |
| Temperature: | 33 – 120°F 0 - 48°C |

¹120 Volt/24 Volt CUL/UL listed Transformer Included.

²Tank warranty is void if subject to vacuum

| | Model | Organics Removal | | Dechlorination | | Backwash Flow Rate (GPM) |
|----------------|-------|--------------------|------------------------|--------------------|------------------------|--------------------------------|
| | | Flow Rate (GPM) | Pressure Loss (PSI) | Flow Rate (GPM) | Pressure Loss (PSI) | |
| Carbon Filters | CF-12 | 4 | 0.5 | 8 | 1 | 8 |
| | CF-14 | 5 | 1 | 11 | 2 | 10 |
| | CF-16 | 7 | 1 | 14 | 2 | 15 |
| | CF-21 | 11 | 2 | 22 | 6 | 25 |
| Depth Filters | | Normal | | Peak | | |
| | DF-12 | 8 | 2 | 12 | 4 | 10 |
| | DF-14 | 11 | 3 | 16 | 5 | 15 |
| | DF-16 | 14 | 3 | 21 | 6 | 20 |
| | DF-21 | 22 | 6 | 33 | 11 | 30 |

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.



better water. pure and simple.™

www.culligan.com
www.culligancommercial.com
1-800-CULLIGAN

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Revised 03/07
Moore Wallace Part No. 46928

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.

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, Hi-Flo, Dubl-Safe, and better water. pure and simple. are trademarks of Culligan International Company or its affiliates.

Hi-Flo® 22

Automatic Water Softeners

Specifications and Operating Data

| Single Tank Models | Exchange Capacity ¹ @ Salt Dosage | | | Service Flow Rates ^{2, 4} | | Pipe Size | Resin Qty | Softener Tank Size | Brine Tank Size ³ | Approx. Ship. Weight |
|--------------------|--|-------------|-------------|------------------------------------|--------------------|-----------|-----------|--------------------|------------------------------|----------------------|
| | Minimum | Standard | Maximum | Peak Flow | Cont. Flow | | | | | |
| | gr @ lb | gr @ lb | gr @ lb | gpm | gpm | | | | | |
| | g @ kg | g @ kg | g @ kg | m ³ /hr | m ³ /hr | | | | | |
| WS-060 | 40,000/12 | 50,000/20 | 60,000/30 | 37 | 29 | 1.5 | 2 | 14 x 47 | 18 x 38 | 225 |
| | 2,592/5.4 | 3,240/9.1 | 3,888/13.6 | 8.4 | 6.6 | 1.5 | 57 | 356 x 1,194 | 457 x 965 | 102 |
| WS-090 | 60,000/18 | 75,000/30 | 90,000/45 | 38 | 29.5 | 1.5 | 3 | 16 x 53 | 24 x 42 | 310 |
| | 3,888/8.2 | 4,860/13.6 | 5,832/20.4 | 8.6 | 6.7 | 1.5 | 85 | 406 x 1,346 | 610 x 1,067 | 141 |
| WS-120 | 80,000/24 | 100,000/40 | 120,000/60 | 35 | 27 | 1.5 | 4 | 16 x 65 | 24 x 42 | 380 |
| | 5,184/10.9 | 6,480/18.1 | 7,776/27.2 | 7.9 | 6.1 | 1.5 | 113 | 406 x 1,651 | 610 x 1,067 | 172 |
| WS-150 | 100,000/30 | 125,000/50 | 150,000/75 | 45 | 33.5 | 1.5 | 5 | 21 x 54 | 24 x 48 | 490 |
| | 6,480/13.6 | 8,100/22.7 | 9,720/34 | 10.2 | 7.6 | 1.5 | 142 | 533 x 1,372 | 610 x 1,219 | 222 |
| WS-210 | 140,000/42 | 175,000/70 | 210,000/105 | 42 | 33 | 1.5 | 7 | 21 x 69 | 24 x 48 | 620 |
| | 9,072/19.1 | 11,340/31.8 | 13,608/47.6 | 9.5 | 7.5 | 1.5 | 198 | 533 x 1,753 | 610 x 1,219 | 281 |

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. Peak flow shown is at a 25 psi (172 kPa) pressure loss. Continuous flow shown is at a 15 psi (103 kPa) pressure loss.

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

⁴ **Flow rates for the valve alone are as follows: 42 gpm @ 15 psi and 53 gpm @ 25 psi.**

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
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 1-800-Culligan
www.culligancommercial.com



Limited WARRANTY

Culligan® Hi-Flo® 22 Series, Hi-Flo® 42 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. 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. |

* 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.

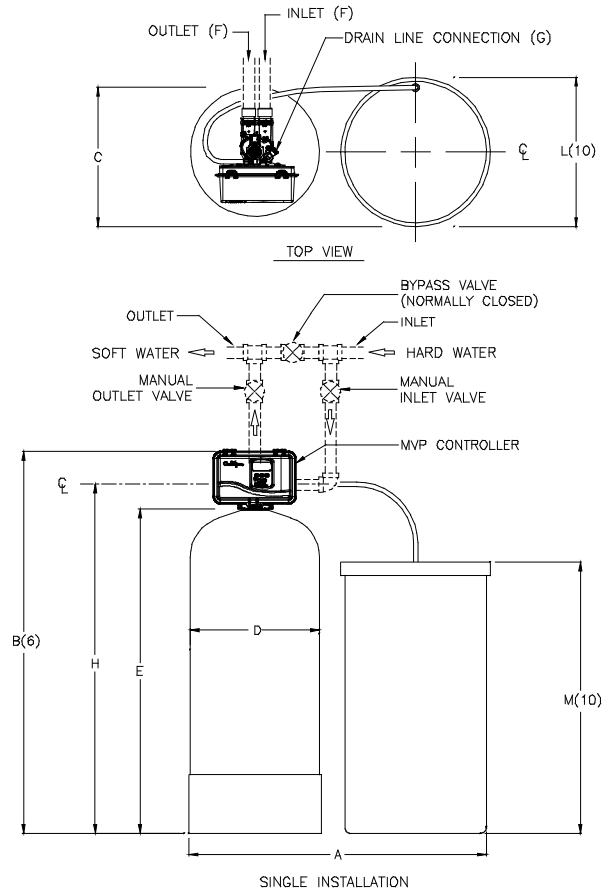
Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply 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) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET PIPING IF THE SERVICE LINE IS SUBJECT TO A VACCUUM.
- (9) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
- (10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM.
- (11) OPTIONAL BYPASS VALVE IS AVAILABLE AND CAN BE USED IN PLACE OF THE THREE VALVE BYPASS SHOWN
- (12) SHIPPING AND OPERATING WEIGHTS SHOWN ON THIS DRAWING INCLUDE THE BRINE SYSTEM.

| | DIMENSIONS (INCHES) | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|--------|---------------------|----------------|------------|-------------------|---------------------|---------------------------------|--------------------|------------------------|--------------------------------|----------------------------------|--|------------------------------------|--|--------------------------------------|----------------------|--------------------------------|------------------------------|------------------------------|
| MODEL | WIDTH A | HEIGHT B(6) | DEPTH C | TANK DIA. D | TANK HEIGHT E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME ft ³ | CONTINUOUS FLOW gpm @ 15 psi drop | PEAK FLOW gpm @ 25 psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | SIMPLEX OPER. WT. lbs. | SIMPLEX SHIP. WT. lbs. |
| WS-060 | 39 | 57 | 19 | 14 | 47 | 1.5 | 1.0 | 52 | 18 | 38 | 60 @ 30 | 2 | 29 | 37 | 5 | 0.75 | 842 | 245 |
| WS-090 | 47 | 63 | 24 | 16 | 53 | 1.5 | 1.0 | 57 | 24 | 40 | 90 @ 45 | 3 | 29.5 | 38 | 6 | 0.75 | 1235 | 341 |
| WS-120 | 47 | 75 | 24 | 16 | 65 | 1.5 | 1.0 | 69 | 24 | 40 | 120 @ 60 | 4 | 27 | 35 | 7 | 1.0 | 1379 | 412 |
| WS-150 | 50 | 65 | 24 | 21 | 55 | 1.5 | 1.0 | 59 | 24 | 40 | 150 @ 75 | 5 | 33.5 | 45 | 12 | 1.0 | 1578 | 524 |
| WS-210 | 50 | 79 | 24 | 21 | 69 | 1.5 | 1.0 | 73 | 24 | 50 | 210 @ 105 | 7 | 33 | 42 | 12 | 1.0 | 1950 | 665 |



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

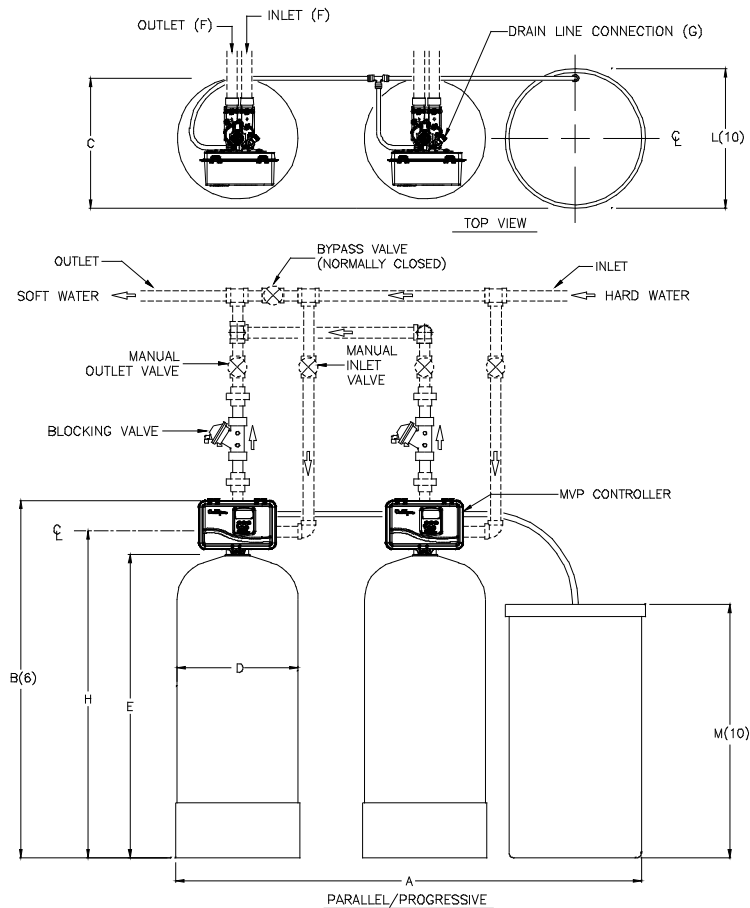
PRINT AND BILL OF MATERIAL ARE NOT
TO BE USED WITHOUT THE WRITTEN
CONSENT OF CULLIGAN INTERNATIONAL CO.

| | | |
|---|-----------------------|-----------------|
| NAME HI-FLO 22, 1-1/2" AUTOMATIC SOFTENER SINGLE TECHNICAL DATA SHEET | | |
| DETAILED BY: KMR 2/08/07 | APP. BY: | SHEET 1 OF 1 |
| REF. NO. | PART NO. HF-22_S-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 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) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET PIPING IF THE SERVICE LINE IS SUBJECT TO A VACUUM.
- (9) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
- (10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM.
- (11) OPTIONAL BYPASS VALVE IS AVAILABLE AND CAN BE USED IN PLACE OF THE THREE VALVE BYPASS SHOWN
- (12) SHIPPING AND OPERATING WEIGHTS SHOWN ON THIS DRAWING INCLUDE THE BRINE SYSTEM.

| | DIMENSIONS (INCHES) | | | | | | | | | | UNIT DATA PER TANK | | | | | | | | |
|--------|---------------------|----------------|------------|-------------------|---------------------|---------------------------------|--------------------|------------------------|--------------------------------|----------------------------------|--|------------------------------------|--|--------------------------------------|----------------------|--------------------------------|-----------------------------|-----------------------------|--|
| MODEL | WIDTH A | HEIGHT B(6) | DEPTH C | TANK DIA. D | TANK HEIGHT E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME ft ³ | CONTINUOUS FLOW gpm @ 15 psi drop | PEAK FLOW gpm @ 25 psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | DUPLEX OPER. WT. lbs. | DUPLEX SHIP. WT. lbs. | |
| WS-060 | 62 | 57 | 19 | 14 | 47 | 1.5 | 1.0 | 52 | 18 | 38 | 60 @ 30 | 2 | 29 | 37 | 5 | 0.75 | 1187 | 468 | |
| WS-090 | 72 | 63 | 24 | 16 | 53 | 1.5 | 1.0 | 57 | 24 | 40 | 90 @ 45 | 3 | 29.5 | 38 | 6 | 0.75 | 1685 | 647 | |
| WS-120 | 72 | 75 | 24 | 16 | 65 | 1.5 | 1.0 | 69 | 24 | 40 | 120 @ 60 | 4 | 27 | 35 | 7 | 1.0 | 1923 | 789 | |
| WS-150 | 85 | 65 | 24 | 21 | 55 | 1.5 | 1.0 | 59 | 24 | 40 | 150 @ 75 | 5 | 33.5 | 45 | 12 | 1.0 | 2354 | 1013 | |
| WS-210 | 85 | 79 | 24 | 21 | 69 | 1.5 | 1.0 | 73 | 24 | 50 | 210 @ 105 | 7 | 33 | 42 | 12 | 1.0 | 2910 | 1280 | |



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

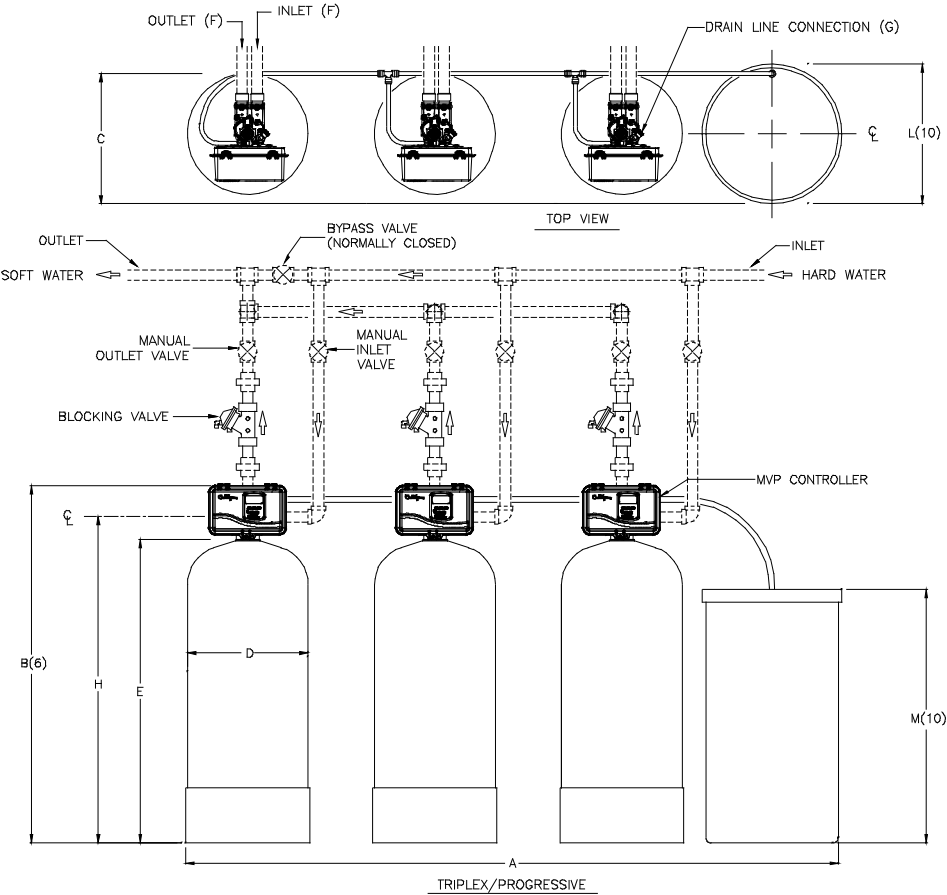
PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.

| | | |
|---|--------------------|--------------|
| NAME HI-FLO 22, 1-1/2" AUTOMATIC SOFTENER DUPLEX TECHNICAL DATA SHEET | | |
| DETAILED BY: KMR | APP. BY: 2/08/07 | SHEET 1 OF 1 |
| REF. NO. | PART NO. HF-22_S-2 | |

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) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET PIPING IF THE SERVICE LINE IS SUBJECT TO A VACUUM.
- (9) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
- (10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM.
- (11) OPTIONAL BYPASS VALVE IS AVAILABLE AND CAN BE USED IN PLACE OF THE THREE VALVE BYPASS SHOWN
- (12) SHIPPING AND OPERATING WEIGHTS SHOWN ON THIS DRAWING INCLUDE THE BRINE SYSTEM.

| MODEL | DIMENSIONS (INCHES) | | | | | | | | | | UNIT DATA PER TANK | | | | | | | |
|--------|---------------------|----------------|------------|-------------------|---------------------|---------------------------------|--------------------|------------------------|--------------------------------|----------------------------------|--|------------------------------------|--|--------------------------------------|----------------------|--------------------------------|------------------------------|------------------------------|
| | WIDTH A | HEIGHT B(6) | DEPTH C | TANK DIA. D | TANK HEIGHT E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME ft ³ | CONTINUOUS FLOW gpm @ 15 psi drop | PEAK FLOW gpm @ 25 psi drop | DRAIN FLOW gpm | MIN. DRAIN PIPE SIZE IN. | TRIPLEX OPER. WT. lbs. | TRIPLEX SHIP. WT. lbs. |
| WS-060 | 96 | 57 | 19 | 14 | 47 | 1.5 | 1.0 | 52 | 18 | 38 | 60 @ 30 | 2 | 29 | 37 | 5 | 0.75 | 1532 | 691 |
| WS-090 | 100 | 63 | 24 | 16 | 53 | 1.5 | 1.0 | 57 | 24 | 40 | 90 @ 45 | 3 | 29.5 | 38 | 6 | 0.75 | 2135 | 953 |
| WS-120 | 100 | 75 | 24 | 16 | 65 | 1.5 | 1.0 | 69 | 24 | 40 | 120 @ 60 | 4 | 27 | 35 | 7 | 1.0 | 2467 | 1166 |
| WS-150 | 118 | 65 | 24 | 21 | 55 | 1.5 | 1.0 | 59 | 24 | 40 | 150 @ 75 | 5 | 33.5 | 45 | 12 | 1.0 | 3130 | 1502 |
| WS-210 | 118 | 79 | 24 | 21 | 69 | 1.5 | 1.0 | 73 | 24 | 50 | 210 @ 105 | 7 | 33 | 42 | 12 | 1.0 | 3870 | 1895 |



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

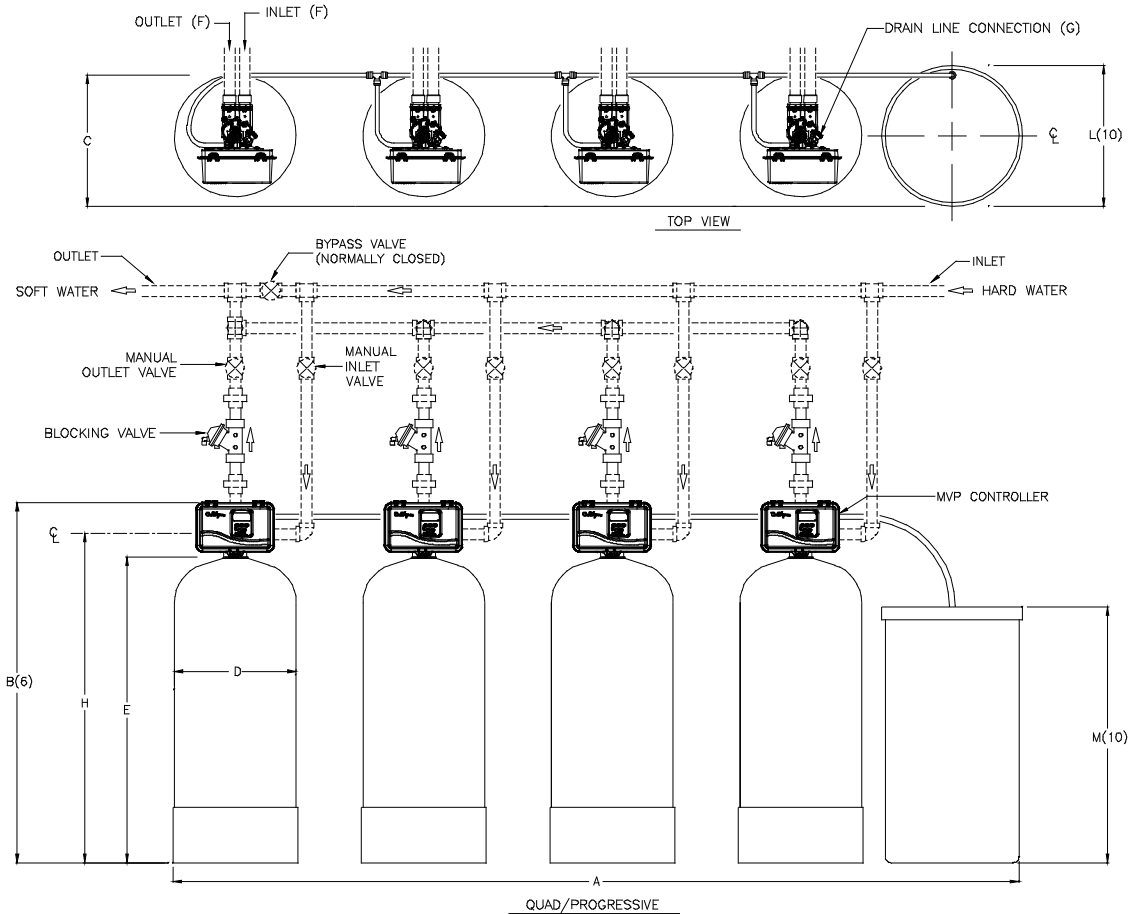
PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.

| | | |
|---|-----------------------|-----------------|
| NAME HI-FLO 22, 1-1/2" AUTOMATIC SOFTENER TRIPLEX TECHNICAL DATA SHEET | | |
| DETAILED BY: KMR 2/08/07 | APP. BY: | SHEET 1 OF 1 |
| REF. NO. | PART NO. HF-22_S-3 | |

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) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET PIPING IF THE SERVICE LINE IS SUBJECT TO A VACUUM.
- (9) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.
- (10) BRINE TANK DIMENSIONS SHOWN ARE FOR THE BRINE TANK MOST COMMONLY SELECTED FOR USE WITH THIS SIZE SYSTEM.
- (11) OPTIONAL BYPASS VALVE IS AVAILABLE AND CAN BE USED IN PLACE OF THE THREE VALVE BYPASS SHOWN
- (12) SHIPPING AND OPERATING WEIGHTS SHOWN ON THIS DRAWING INCLUDE THE BRINE SYSTEM.

| MODEL | DIMENSIONS (INCHES) | | | | | | | | | | UNIT DATA PER TANK | | | | | MIN. DRAIN PIPE SIZE IN. | QUAD OPER. WT. lbs. | QUAD SHIP. WT. lbs. |
|--------|---------------------|-------------|---------|-------------|---------------|---------------------------|--------------|------------------|-----------------------|-------------------------|---------------------------------|------------------------------|-----------------------------------|-----------------------------|----------------|--------------------------|---------------------|---------------------|
| | WIDTH A | HEIGHT B(6) | DEPTH C | TANK DIA. D | TANK HEIGHT E | INLET/OUTLET PIPE SIZES F | DRAIN SIZE G | FLOOR TO INLET H | BRINE TANK DIA. L(10) | BRINE TANK HEIGHT M(10) | MAX. CAPACITY KGR @ SALT DOSAGE | RESIN VOLUME ft ³ | CONTINUOUS FLOW gpm @ 15 psi drop | PEAK FLOW gpm @ 25 psi drop | DRAIN FLOW gpm | | | |
| WS-060 | 120 | 57 | 19 | 14 | 47 | 1.5 | 1.0 | 52 | 18 | 38 | 60 @ 30 | 2 | 29 | 37 | 5 | 0.75 | 1877 | 914 |
| WS-090 | 128 | 63 | 24 | 16 | 53 | 1.5 | 1.0 | 57 | 24 | 40 | 90 @ 45 | 3 | 29.5 | 38 | 6 | 0.75 | 2585 | 1259 |
| WS-120 | 128 | 75 | 24 | 16 | 65 | 1.5 | 1.0 | 69 | 24 | 40 | 120 @ 60 | 4 | 27 | 35 | 7 | 1.0 | 3011 | 1543 |
| WS-150 | 152 | 65 | 24 | 21 | 55 | 1.5 | 1.0 | 59 | 24 | 40 | 150 @ 75 | 5 | 33.5 | 45 | 12 | 1.0 | 3906 | 1991 |
| WS-210 | 152 | 79 | 24 | 21 | 69 | 1.5 | 1.0 | 73 | 24 | 50 | 210 @ 105 | 7 | 33 | 42 | 12 | 1.0 | 4830 | 2510 |



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|---|------------------|--------------|
| NAME HI-FLO 22, 1-1/2" AUTOMATIC SOFTENER QUAD TECHNICAL DATA SHEET | | |
| DETAILED BY: KMR | APP. BY: 2/08/07 | SHEET 1 OF 1 |
| REF. NO. | PART NO. | HF-22_S-4 |