Hydro-Guard Flushing & Monitoring Systems

Hydro-Guard automatic flushing and monitoring systems are used by utilities throughout North America to maintain water quality throughout their distribution systems. These systems can be programmed to flush on a scheduled sequence and to monitor a variety of water quality conditions, including chlorine residuals, temperature, pH, flow, turbidity, and pressure.

In areas within the distribution system where it is difficult to maintain an acceptable level of disinfectant residual, or where taste, color or odor issues are leading to customer complaints, Mueller Co. provides automated flushing and water quality sampling solutions. The Hydro-Guard system can be programmed to flush a line and monitor water quality conditions in distribution piping. When conditions warrant, the device automatically initiates flushing and helps a utility to comply with USEPA Safe Drinking Water Standards. This system conserves water, reduces chlorine consumption, and improves customer satisfaction, while requiring minimal supervision by utility personnel.

- By maintaining water quality with a higher degree of consistency, Hydro-Guard helps utilities reduce complaints, improve compliance and lower operating costs.

Since pressure management in pipe networks is fundamental to providing safe drinking water, Mueller Co. provides a user-friendly and cost-effective technology to continuously monitor pressure in potable water distribution systems. The pressure monitoring system, typically installed in DMAs or pressure zones; on PRVs; system interconnnects; and water storage tanks, reports at user-defined intervals via cellular service. Data is logged; made available for periodic upload; and stored for up to two years on a secure web server. When a pressure spike occurs, utility personnel can be notified within minutes by email and text messaging. This technology is currently available in North America only.

- By monitoring pressure, infrastructure failures can be avoided, non-revenue water can be reduced, energy costs can be reduced and public safety is improved.
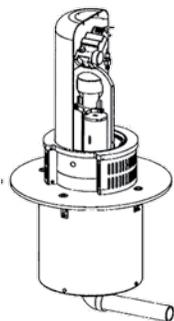

HG-6 Portable Flushing System

HG-3 Permanent Flushing System

Remote Pressure Monitoring System

Part Numbering Example

Item Description:

Hydro-Guard® HG-1 utilizes a 12" air gap to prevent backflow. According to the associated part number, this device is to have 2" piping and valve; be constructed of Schedule 80 PVC; have an 18" bury depth; and be housed in a low-profile, above grade, light green enclosure.

HG1AIN2PVC018LPLG						
HG1	**A**	**IN**	**2**	**PVC**	**018**	**LPLG**
HG-1 Atmosheric Discharge	Air Gap Backflow	Built-in (NODE) Programmer	2" Inlet Valve	PVC Pipe Material	18" Bury Depth	Low Profile, Light Green

Components in contact with potable water will also comply with latest requirements of the Federal Safe Drinking Water Act.

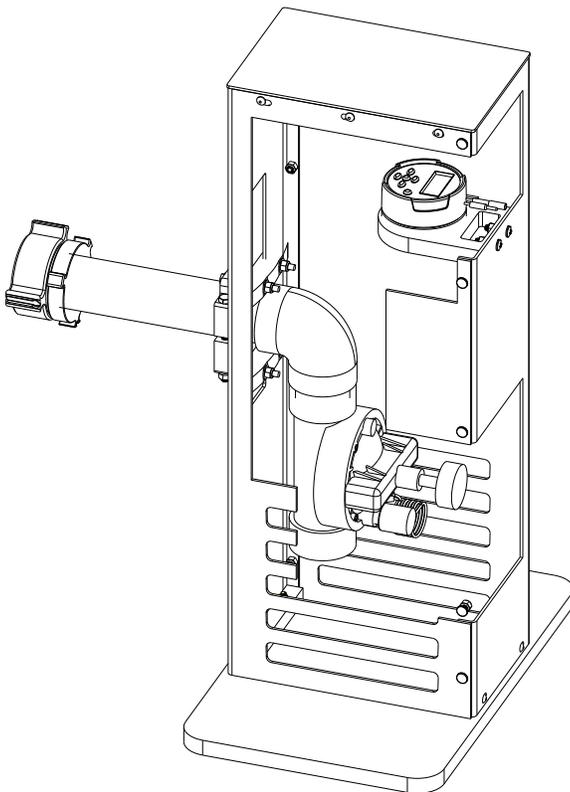## Hydro-Guard Temporary (Portable) Flushing Systems

The Hydro-Guard Portable Automatic Flushing System takes automatic and programmable flushing capabilities anywhere in the water distribution system where a fire hydrant is available. The HG-6 is portable and adjustable. Its lightweight design gives it portability. The device's integrated height adjustment allows it to match up to most hydrant heights on any brand of hydrant. And its flushing capabilities are identical to that offered by semi-permanent / permanent Hydro-Guard products.
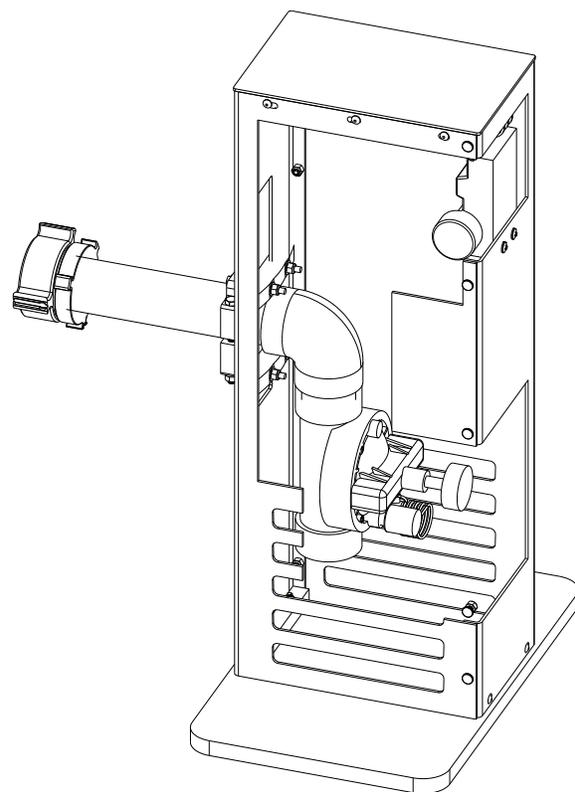
Standard Features:

☐ HG-6 with Built-in (NODE) programming: multi-event integrated programmer (powered by one 9-volt Alkaline battery with the option to add a second battery for longer battery life)

☐ HG-6 with Removable (T-2/TBOS-II handheld) programming: programming managed by removable multi-event - handheld programmer purchased separately, but usable on multiple Hydro-Guard units - (powered by 9-volt Lithium battery)

☐ 20psi to 150psi recommended operating pressure*

☐ Easy access to mounted programmer (or port for handheld)

☐ Adjustable mounting connection to accommodate varied hydrant heights with swivel adapter

☐ Durable, powder-coated heavy-gauge stainless steel construction**

☐ Self-supporting, free-standing design (device does not hang on hydrant

☐ 2" glass reinforced adjustable Nylon control valve

☐ Sampling Valve (operational with unit on or off)

☐ Splash plate for erosion control - reduces potential for ground erosion from under hydrant

☐ 2.5 inch NTP hydrant swivel adapter

☐ 8-tablet dechlorination dispenser

☐ Security Kit (1 set included with purchase)

☐ Air Gap to prevent backflow of water into water main

☐ Certified to NSF/ANSI 372

* Where line pressure exceeds 110psi use of a PRV is recommended
** Paint is optional
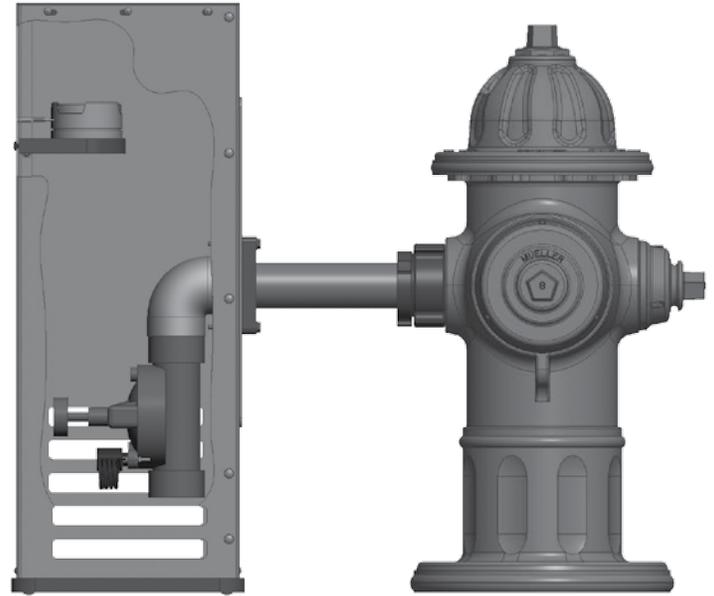

HG-6 with Built-in (NODE) Programmer

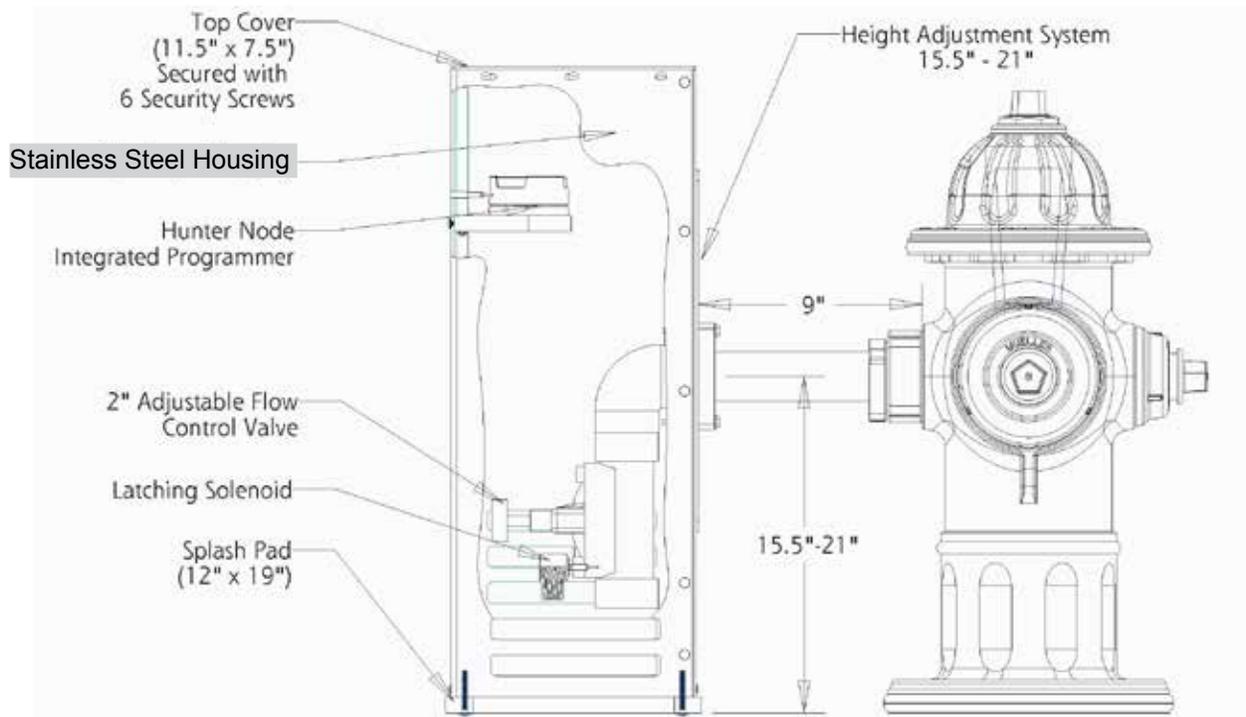HG-6 with Removable (Handheld required) Programmer

Ordering Guide

To order a Hydro-Guard automatic flushing and monitoring system, simply choose the desired options from the chart below and contact your Mueller Sales Representative for pricing. ■ indicates option is included with the unit.

Hydro-Guard (Hydrant Mount)	■	HG6 = Hydrant Mount / Discharges to Ground
Backflow Prevention	■	A = Air Gap
Programming	☐	IN = Built-In (NODE)
	☐	RM = Removavle (T-2) 5
	☐	SM = SMART Controller Upgrade 6
Valve/Inlet Size	■	2 = 2" Valve & Piping
Pipe Material	☐	BRN = No Lead Brass Piping (includes Dechlor and Sampling)
	☐	PVC = Brass Connection with Schedule 80 PVC Piping 4; Dechlor and Sampling are not included
Bury Depth	■	000 = None / Hydrant Mount
Enclosure Type	☐	LPUN = Unpainted 4
	☐	LPRR = Red
	☐	LPYY = Yellow

HG-6 Flushing System

Top Cover (11.5" x 7.5") Secured with 6 Security Screws
Height Adjustment System 15.5" - 21"
Stainless Steel Housing
Hunter Node Integrated Programmer
2" Adjustable Flow Control Valve
Latching Solenoid
Splash Pad (12" x 19")
9"
15.5"-21"

4 - Unpainted enclosures are only available with Hydrant Flushing models that are equipped with Schedule 80 PVC piping and do not require dechlorination system.
5 - Where an "RM" code is indicated for controller type a handheld controller will be required. The handheld controller (PN: 545687) is sold separately. One handheld controller can be used to manage programming on an unlimited number of "RM" equipped flushing systems.
6 - Where an "SM" code is indicated for controller type a SMART Multi-Parameter Monitoring and Flushing Controller will be utilized. As of this date, the SMART Multi-Parameter Controller will monitor for up to three water quality parameters (analyzers sold separately) including chlorine, temperature, pH, pressure and turbidity.

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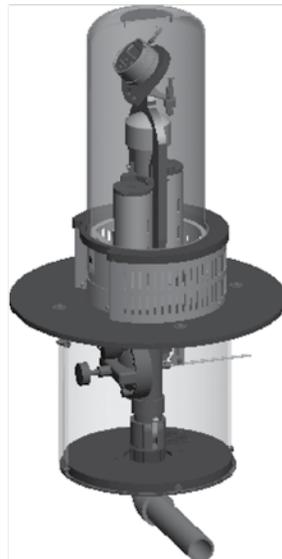## Hydro-Guard Permanent Flushing Systems

Hydro-Guard Permanent Flushing Systems provide a fully automated solution for flushing water distribution lines. The units can be designed to operate reliably in warm and cold climates. Designed for use with a built-in (NODE) multi-event programmer, Hydro-Guard systems are programmed to flush a water line multiple times per day, seven days a week, with flush durations ranging from one minute to six hours per program. Water can be discharged atmospherically onto the system's splash plate or direct into a sewer system.

Standard Features:

☐ Programming managed by a multi-event battery powered handheld programmer (9-volt Alkaline battery)

☐ Battery and programming interface accessible from top of unit (9-volt Lithium)

☐ 20psi to 150psi recommended operating pressure (valve rated to 200psi) (for pressures in excess of 110psi the use of a PRV is recommended).

☐ Free standing design

☐ Lockable, polyethylene housing provides durability, UV and impact resistance

☐ Cold climate units feature a patented freeze protection system features a self-draining dual check valve

☐ The HG-1 & HG-3 feature an energy dissipating stainless steel shield and integral heavy-duty UV protected splash plate (est. 135 gpm).

☐ OEM-installed Dechlorination System (8-tablet capacity)

☐ OEM-installed Sampling System (allows sample collection with unit on or off)

☐ Security Kit (1 set included with purchase)

☐ HG-3 & HG-4 Cold climate units feature a patented Cam-Lock™ Release System

☐ HG-8 Cold climate & HG-8 Warm climate devices are below grade designs with only a lid at grade
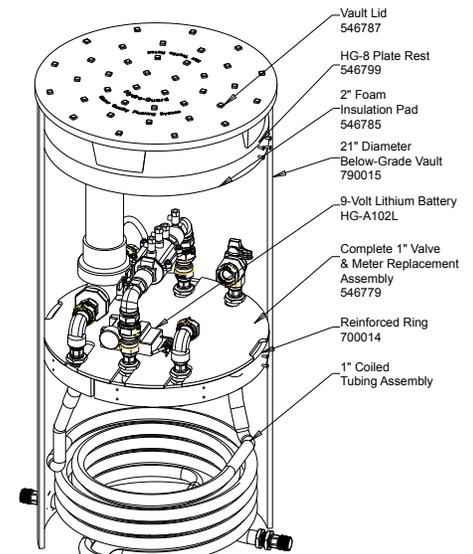
☐ Certified to NSF/ANSI 372

HG-8 Warm Climate

HG-1

HG-3

HG-8 Cold Climate

Vault Lid
546787

HG-8 Plate Rest
546799

2" Foam
Insulation Pad
546785

21" Diameter
Below-Grade Vault
790015

9-Volt Lithium Battery
HG-A102L

Complete 1" Valve
& Meter Replacement
Assembly
546779

Reinforced Ring
700014

1" Coiled
Tubing Assembly

Ordering Instructions

To order a Hydro-Guard automatic flushing and monitoring system, simply choose the desired options from the chart below and contact your Mueller Sales Representative for pricing. ■ indicates option is included with the unit.

WARM CLIMATES		
Hydro-Guard WARM Climate (without freeze protection)		
Discharge	☐	**HG1 =** On the Ground [8]
	☐	**HG2 =** Direct Discharge
	☐	**HG8 =** Direct Discharge - Flushing System Below Grade; Direct Flush to Storm Sewer, Pond or Swale [7]
Backflow Prevention	☐	**A =** Air Gap
	☐	**D =** Double Check [1]
	☐	**R =** RPZ [1]
Programming	☐	**IN =** Built-In (NODE)
	☐	**RM =** Removable (T-2) [5]
	☐	**SM =** SMART Controller Upgrade [6]
Inlet Size	☐	**2 =** 2"
Pipe Material	☐	**PVC =** Schedule 80 PVC
	☐	**BRN =** No Lead Brass
Bury Depth	☐	**000 =** None
	☐	**018 =** 18" (HG-1 & HG-2 only)
	☐	**036 =** 36" (HG-8 WC only)
	☐	**042 =** 42" (HG-8 WC only)
Enclosure Type	☐	**LPLG =** Low Profile, Green
	☐	**HPLG =** High Profile, Green
	☐	**HPTN =** High Profile, Tan
	☐	**UNGD =** (only available for HG-8)

COLD CLIMATES		
Hydro-Guard COLD Climate (with freeze protection)		
Discharge	☐	**HG3 =** Flush onto Ground [7]
	☐	**HG4 =** Direct Flush to Storm Sewer, Pond or Swale [7]
	☐	**HG8 =** Flushing System Below Grade; Direct Flush to Storm Sewer, Pond or Swale [7]
Backflow Prevention	☐	**A =** Air Gap
	☐	**D =** Double Check [1]
Programming	☐	**IN =** Built-In (NODE)
	☐	**RM =** Removable (T-2) [5]
	☐	**SM =** SMART Controller Upgrade [6]
Inlet Size	☐	**1 =** 1" (only available for HG-8)
	☐	**2 =** 2"
Pipe Material	☐	**PVC =** Schedule 80 PVC
	☐	**BRN =** No Lead Brass
Bury Depth	☐	**018 =** 18"
	☐	**036 =** 36"
	☐	**048 =** 48"
	☐	**060 =** 60"
	☐	**084 =** 84"
	☐	**108 =** 108"
Enclosure Type	☐	**LPLG =** Low Profile, Green
	☐	**UNGD =** None [2, 3]

Optional Equipment		
545687	☐	TBOS II handheld
-TCV	☐	Option TCV freeze protection [8]

HSZ0060010/HG-A134	☐	HG-5 Hydrant Defender with HG-6 lock (red)
HSZ0060014/HG-A134	☐	HG-5 Hydrant Defender with HG-6 lock (yellow)

1 - Double Check or RPZ backflow prevention is only offered on devices with an 18" bury depth and low profile enclosure, with the exception of any device that is constructed using a Below Grade enclosure (I.E. HG-8 Warm Climate)

2 - HG-8 cold climate is only available with 1" poly-coil tubing and brass fittings

3 - Minimum bury depth for HG-8 cold climate flushing system with no above-grade enclosure is estimated to be 48"

5 - Where an "RM" code is indicated for controller type a handheld controller will be required. The handheld controller (PN: 545687) is sold separately. One handheld controller can be used to manage programming on an unlimited number of "RM" equipped flushing systems.

6 - Where an "SM" code is indicated for controller type a SMART Multi-Parameter Monitoring and Flushing Controller will be utilized. The SMART Multi-Parameter Controller will monitor for up to five water quality parameters (analyzers sold separately) including chlorine, temperature, pH, pressure and turbidity

7 - For cold climates the Low Pressure Relief Valve / Double Check freeze protection system is utilized to prevent freeze damage. When the flushing system ceases to flush the water in the service lines of the device are drained of water to reduce the possibility of freeze damage.

8 - TVC freeze protection is only available on the HG-11Basic/S [HG1A--2---000LPLG] and HG-2 style devices.
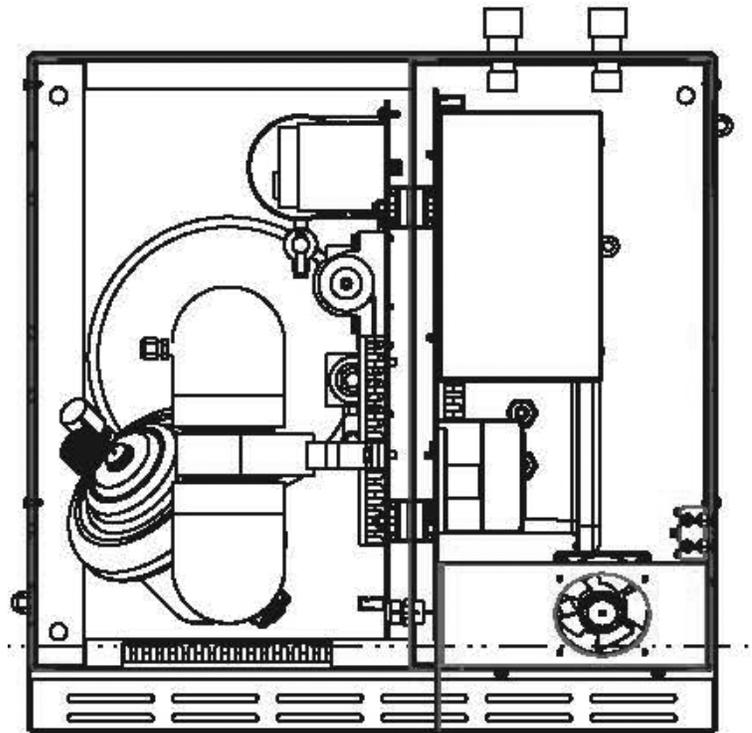
Rev. 12-16 Shaded area indicates changes

Hydro-Guard S.M.A.R.T. Flush Management Options

The Hydro-Guard S.M.A.R.T. Flushing System is the ultimate automated flush management system. S.M.A.R.T. enabled flushing can be set to occur either by scheduled flush times or in response to real-time analysis of local water quality. What's more it allows two-way communication and remote flush and water quality management via either a secure web portal or a secure interface with end-user's existing SCADA via MODBUS TCP protocol.

By way of this two-way communication, the utility can receive near-time updates from each Hydro-Guard Unit in the distribution system equipped with the S.M.A.R.T. controller. It can be integrated with a residual analyzer and a variety of other water quality management devices. This integration will allow the Hydro-Guard S.M.A.R.T. Flushing System to flush only when the disinfectant residual drops below the parameters established by the end-user, as opposed to flushing on a set time based schedule. S.M.A.R.T. technology takes water conservation and cost management to a whole new level of potential savings.

Standard Features:

- ☐ Hydro-Guard S.M.A.R.T. Controller
- ☐ Hydro-Guard S.M.A.R.T. Management RTU with Ethernet
- ☐ Premium grade analyzers and sensors
- ☐ Web-based two way management software
- ☐ MODBUS TCP for SCADA integration
- ☐ Monitor multiple water quality parameters (chlorine, temperature, pH, turbidity, etc.)

- ☐ System management assisted by remote telemetry
- ☐ Premium grade protective enclosure with optional tamper notification
- ☐ Weather-proof protective enclosure
- ☐ Hydro-Guard Flushing System (model to be determined through client/Hydro-Guard consultation)

S.M.A.R.T. Flushing System

HYDRO-GUARD® S.M.A.R.T. FLUSH
ORDERING INSTRUCTIONS

Mueller Co.
Reliable Connections*

16.7

Shaded area indicates change Rev. 5-17

Ordering Instructions

To order a Hydro-Guard automatic flushing and monitoring system, simply choose the desired options from the chart below and contact your Mueller Sales Representative for pricing. ■ indicates option is included with the unit.

STEP 1 - SELECT MODEL

Selection	Code	Special Instructions	Select One
S.M.A.R.T. Controller	SM [6]	-	■

STEP 2 - SELECT CHLORINE ANALYZER

Selection	Code	Special Instructions	Select One
Total Chlorine/ Mueller Specified	TC	-	☐
Free Chlorine/ Mueller Specified	FC	-	☐

STEP 3 - SELECT RADIO COMMUNICATION OPTION

Selection	Code	Special Instructions	Select One
Cellular Radio (GSM)	G	-	☐
Cellular Radio (CDMA)	A	-	☐
Ethernet Radio	ET	-	☐
Bluetooth Radio	BT	Can be added to other Radio options	☐
Wireless LAN Wifi	WF	-	☐
2.4 gHz / End User Spec	24	-	☐

STEP 4 - SELECT ANTENNA OPTION

Selection	Code	Special Instructions	Select One
Low Profile	L	-	☐
Boom Antenna (Responsibility of End User)	U	-	☐
No Antenna Required	N	-	☐

STEP 5 - SELECT BACKFLOW OPTION

Selection	Code	Special Instructions	Select One
Air Gap	AG	-	☐
Double Check Valve [1]	DC	-	☐
Reduced Pressure Zone (RPZ) [1]	RZ	-	☐

STEP 5 - SELECT ENCLOSURE / HOUSING

Selection	Code	Special Instructions	Select One
Ground Mount 33" Height	G3	-	☐
Ground Mount 60" Height	G6	-	☐

STEP 6 - SELECT POWER SOURCE

Selection	Code	Special Instructions	Select One
120 - Volt AC	AC	-	■

STEP 7 - SELECT FREEZE PROTECTION

Selection	Code	Special Instructions	Select One
Heater	FH	-	☐
Heater + Heat Tape	FT	-	☐
No Heater Required	NF	-	☐

STEP 8 - SELECT SYSTEM SECURITY

Selection	Code	Special Instructions	Select One
Tamper Switch	T	-	☐
Flow Detection Sensor	F	-	☐
Manual On/Off Switch	M	-	☐
No Security Option Required	N	-	☐

STEP 9 - SELECT WATER QUALITY MONITORING SENSORS

Selection	Code	Special Instructions	Select One
Chlorine Analyzer	CL	-	■
pH Sensor	PH	-	☐
Turbidity Sensor	TU	-	☐
Control Valve with PRV	PV		
Flow Meter / Control Valve Combo**	FM	-	☐
Temperature Sensor	TP	Reports: GPM/ Total	☐
TOC Sensor	TC	-	☐
Pressure	PS	-	☐

STEP 10 - SELECT HYDRO-GUARD FLUSHING DEVICE (REQUIRED)

HG-6 S.M.A.R.T.	HG6B	B = Brass	☐ Brass
HG-7 All-in-One Enclosure	HG7A	B = Brass, P = PVC	☐ Brass ☐ SCH80 PVC
HG-7 All-in-One Enclosure	HG7D	B = Brass, P = PVC	☐ Brass ☐ SCH80 PVC

1 - Double Check or RPZ backflow prevention is only offered on devices with an 18" bury depth and low profile enclosure, with the exception of any device that is constructed using a Below Grade enclosure.

6 - Where an "SM" code is indicated for controller type a SMART Multi-Parameter Monitoring and Flushing Controller will be utilized. The SMART Multi-Parameter Controller will monitor for up to five water quality parameters (analyzers sold separately) including chlorine, temperature, pH, pressure and turbidity.

16.8

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HYDRO-GUARD®
SAMPLING STATIONS

Rev. 4-17 Shaded area indicates changes

Hydro-Guard Sampling Stations

The Hydro-Guard Blow-Off Sampling Station (B.O.S.S.) provides a reliable and user-friendly method for taking water quality samples from a utility's own water distribution line. Using a permanent, dedicated sampling point allows utility personnel to access sample locations at their convenience—no appointment necessary. Hydro-Guard Sampling Stations are for use in warm or cold climates, with a variety of freeze protection options available for the protection of these devices in even the coldest of climates.

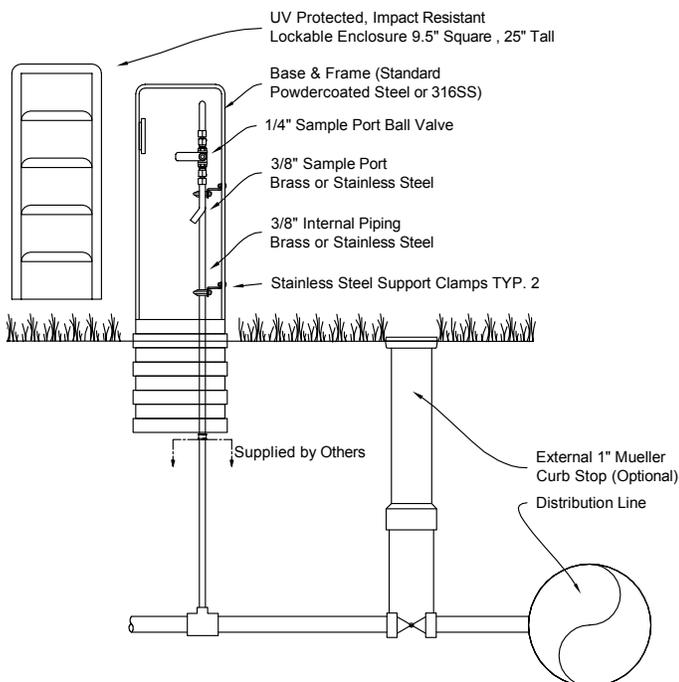## Above Grade Solutions

Standard Features:

- Bury depths of 12" to 72"
- No lead brass or stainless steel piping components
- Free standing, self-supporting needs no additional pad or post
- Self-locking enclosure
- HDPE or Powder-coated aluminum, lockable support frame with powder-coating for corrosion resistance

Optional Features:

- Mechanical thermal control valve freeze protection
- Internal curb stop and drain freeze protection
- Internal curb stop with VAC line freeze protection

**B.O.S.S. BSS-02
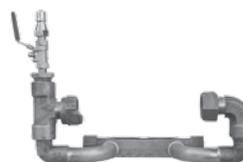Sample Station with TCV
style freeze protection**

Below Grade Solutions

Standard Features:

- Incorporated into Mueller Relocator with horizontal inlet and outlet
- M.I.P. meter thread used to retrofit dual check with sampling into existing meter set
- Available for use with 5/8"; 5/8" x ¾"; ¾"; and 1" meter setters
- Sampling wand (sold separately)
- Easy access
- No above grade housing to maintain
- Sanitary cap included for protection of sample quick connect at meter setter
- No lead brass or stainless steel quick connect valve for sure-fit connection of sample wand and sample point
- No valve to open at meter setter connection
- Wand constructed of 3/8" stainless steel tubing with a ball valve

**Sampling Wand: 547800
(for use with all
samplers & relocators)**

UV Protected, Impact Resistant Lockable Enclosure 9.5" Square , 25" Tall

Base & Frame (Standard Powdercoated Steel or 316SS)

1/4" Sample Port Ball Valve

3/8" Sample Port Brass or Stainless Steel

3/8" Internal Piping Brass or Stainless Steel

Stainless Steel Support Clamps TYP. 2

Supplied by Others

External 1" Mueller Curb Stop (Optional)

Distribution Line

BSS05-CHA-00-SP Cold Climate Sample Station Installation

**5/8" x 3/4" Relocator:
203H1445 ----02N
(for use with 5/8"x3/4" SEAERS)**

Ordering Instructions

To order a Hydro-Guard automatic flushing and monitoring system, simply choose the desired options from the chart below and contact your Mueller Sales Representative for pricing. ■ indicates option is included with the unit.

Above Ground Sample Stations

STEP 1 - SELECT MODEL		
Type	Code	Select One
Blow-Off Sampling Station	BSS	■

STEP 2 - SELECT BLOW OFF SIZE		
No Blow Off Valve Included (DIV or CHA)	05	☐
1" Blow Off Valve Included (DIV or CHA)	01	☐
2" Blow Off Valve Included (CHA)	02	☐
NOTE: 1" Station CHA Enclosure Option		

STEP 3 - SELECT BURY DEPTH		
12" (standard)	12	■
36"	36	☐
54"	54	☐
60"	60	☐
72"	72	☐

STEP 4 - ENCLOSURE & COLOR		
CHA Enclosures for 1" Models		
Blue	CHABL	☐
Light Green	CHALG	☐
Dark Green	CHADG	☐
CHA Enclosures for 2" Models		
Blue	CHABL	☐
Light Green	CHALG	☐
Dark Green	CHADG	☐
MUE Heavy Gauge Aluminum Powder Coated Enclosures		
Dark Green 1"	MUDG1	☐
Water Blue 1"	MUWB1	☐
Brown 1"	MUBR1	☐
Purple 1"	MURP1	☐
Dark Green 2"	MUDG2	☐
Water Blue 2"	MUWB2	☐
Brown 2"	MUBR2	☐
Purple 2"	MUPR2	☐
Custom Sizes	Call	☐

STEP 5 - SELECT FREEZE PROTECTION		
Type	Code	Select One
No Freeze Protection	000	■
Vacuum Port for Manual Vacuum *	VAC	☐
Thermal Control Valve - Auto Discharge of Water	TCV	☐
Curb Stop that can be shut off after use	CSR	☐
Curb Stop that drains after shut off	CSD	☐
Vacuum Port for Manual Vacuum with Curb Stop	VCS	☐

STEP 5 - SELECT INTERNAL COMPONENTS		
No Lead Brass Component Construction	NL	■
Stainless Steel Interior Component Construction 12"	SS	☐
Stainless Steel Interior Component Construction 36"	SS	☐
Stainless Steel Interior Component Construction 54"	SS	☐
Stainless Steel Interior Component Construction 60"	SS	☐
Stainless Steel Interior Component Construction 72"	SS	☐

STEP 6 - SELECT ENCLOSURE SUPPORT FRAME		
Standard Powder-Coated Steel	00	☐
316 Stainless Steel **	16	☐

Below Ground Sample Stations		
Code	Size	Select One
203H1445----02N	5/8"x3/4"	☐
-	5/8"	☐
-	3/4"	☐
-	1"	☐
547800	Universal sampling wand	☐

OPTIONS		
Item	Used On	Code
TD Key	All DIV	HG-A2006
Hex/Shoulder Bolt Key	All CHA	HG-A2023
Curb Stop Key	CSR, CSD, VCS	HG-20087
ID Tag ***	Any Model	HG-20033
Vacuum Pump	VAC & VCS	HG-A107
2" MPT x 2.5" NST	2" BSS	HG-29011
Cyber Lock Key	All CHA	HG-A2008

Notes:
* Vacuum without Curb Stop only available on 12" models
** 316 Stainless Steel frame for SGE070739CHA16 or SGE101042CHA16 Enclosures
*** 3 lines and 25 characters per line
All Safety Guard BOSS products can be custom built to meet the utilities specifications.

Rev. 10-16 Shaded area indicates changes

Hydro-Guard® Monitoring System

Hydro-Guard Remote Pressure Monitoring System is engineered to be deployed anywhere in a distribution system that has cell phone service. It can be installed by way of a saddle or direct tap into the distribution main or at the meter vault. The system includes a Lithium battery and 1-year of cellualr service with a renewable annual contract.

Standard Features:

☐ Monitors pressure from a single installation point

☐ Flexible installation - Can be installed anywhere in the distribution system

☐ Data transmitted via celluar service - No need to deploy personnel to read devices

☐ Standard Mode: Readings taken every 15 seconds, logged and made available for periodic uploads

☐ Transient Mode: When scheduled, device will monitor up to 256 readings per second.

☐ Information stored on secure, cloud-based servers - No software to purchase

☐ GIS map interface via any web browser - User-friendly and intuitive

Roadway or Sidewalk Installation

Meter Vault Installation

Ordering Guide

Below is a simplified ordering guide to help select the options available. Please contact your Mueller sales representative for additional details and assistance.

STEP 1 - SELECT MODEL			
Selection	**Code**	**Other**	**Select One**
Pressure Monitoring System for installation in Vault or on Tank	IWT1		☐
Pressure Monitoring Sytem for Installation in Roadway	IWT2		☐
STEP 2 - SELECT TYPE of CELLULAR SERVICE			
GSM (AT&T)	G	-	☐
CDMA (Verizon)	C	-	☐
STEP 3 - SELECT CORPORATIONSTOP			
IWT1 - No Corp. Included	NC	None	■
IWT2 - Mueller 300 Ball Corp Included	45	3/4"	☐
STEP 4 - SELECT SERVICE SADDLE			
IWT1 - No Saddle Included	NOSADDLE	None	■

BR2B (3/4" cc)	BR2B0474	4.74 - 5.32	-	☐
	BR2B0684	6.84 - 7.45	-	☐
	BR2B0899	8.99 - 9.67	-	☐
For use on Ductile / Cast Iron	BR2B1104	11.04 - 12.12	-	☐
	BR2B1314	13.14 - 14.58	-	☐
	BR2B1522	15.22 - 16.88	-	☐
	BR2B1732	17.32 - 19.19	-	☐
BR2S (3/4" cc)	BR2S0474	4.74 - 5.32	-	☐
	BR2S0684	6.84 - 7.45	-	☐
	BR2S0899	8.99 - 9.67	-	☐
For use on A-C, Cast Iron, & Ductile	BR2S1104	11.04 - 12.12	-	☐
	BR2S1314	13.14 - 14.58	-	☐
	BR2S1522	15.22 - 16.88	-	☐
	BR2S1732	17.32 - 19.19	-	☐
BR2W (3/4" cc)	BR2W1800	18.00 - 19.50	-	☐
For use on A-C, Cast Iron, & Ductile	BR2W2000	20.00 - 24.60	-	☐
	BR2W2400	24.00 - 25.00	-	☐

STEP 5 - SELECT COMPOSITE VALVE BOX with 12" Cast Iron Upper Section			
IWT1 - No Valve Box Included	NOV	-	■
IWT2 - Mueller Valve Box 3'	03C	3-foot	☐
IWT2 - Mueller Valve Box 5'	05C	5-foot	☐
IWT2 - Mueller Valve Box 7'	07C	7-foot	☐
IWT2 - Mueller Valve Box 9'	09C	9-foot	☐
STEP 6 - SELECT SECURITY OPTION			
Locking Lid	LR	Locking Nut	☐
OPTIONAL PARTS			
Cast Iron Valve Box	AJBV-4C	Roadway Install	☐

Enclosures

Enclosures are ideal for protecting valuable utility assets from the environment or vandalism.

Mueller offers a wide range of sizes, materials and options to meet a utility's need to cover a sample station, air release valve, or any other water or wastewater asset.

Standard Features:

☐ Plastic enclosures are UV and impact resistant polyethylene

☐ Metal enclosures are high-strength Aluminum, painted with Mueller® hydrant-quality finishes

☐ Powder-coated steel enclosures offer easy access to equipment and are available in a wide range of color options

☐ Below grade base for stability

☐ Most options offer 360° accessibility

☐ Corrosion resistant

☐ 1-year limited warranty

SGE080833DIV

SGE140024CHA
(not available in CA, AZ, NV, OR, & WA)

SGE142435CHA00

ENCLOSURES
ORDERING INSTRUCTIONS

Mueller Co.
Reliable Connections

16.13

Shaded area indicates change Rev. 10-16

Ordering Instructions

To order an Enclosure, simply choose the desired options from the chart below and contact your Mueller Sales Representative for pricing. ■ indicates option is included with the unit.

STEP 1 - SELECT MODEL		
Type	**Code**	**Select One**
Enclosure	SGE	■
STEP 2 - SELECT ENCLOSURE STYLE		
Part Number		**Select One**
ROUND		
SGE180034CHA[1]		☐
SGE140024CHA[1]		☐
SQUARE		
CHA / Standard		
SGE070739CHASP		☐
SGE101042CHASP		☐
SGE121247CHASP		☐
CHA / 316 Stainless Steel		
SGE070739CHA16		☐
SGE101042CHA16		☐
SGE121247CHA16		☐
DIV		
SGE080833DIV		☐
SGE101029DIV		☐
SGE121229DIV		☐
MUE / Heavy Gauge Aluminum (Powder Coated)		
MUE080833PS		☐
MUE101033PS		☐
Custom Sized		☐
RECTANGLE		
CHA		
SGE142435CHA00	Standard Form	☐
SGE142435CHA16	316 Stainless Steel	☐
DIV		
SGE163125DIVWO	Without Insulation	☐
SGE1633125DIVWI	With Insulation	☐
SGE203426DIVWO	Without Insulation	☐
SGE203426DIVWI	With Insulation	☐
ROCK		
545781	For HG-2 / HG-4 **	☐
545782	For HG-5 **	☐

STEP 3 - SELECT COLOR		
Color	**Code**	**Select One**
DIV & CHA		
Blue	BL	☐
Light Green	LG	☐
Dark Green	DG	☐
CHA ONLY		
Sand Stone	SS	☐
Granite	GR	☐
Purple	PR	☐
Tan	TN	☐
MUE ONLY		
Dark Green	DG	☐
Water Blue	BL	☐
Brown	BR	☐
Purple	PR	☐
White	WH	☐
Black	BK	☐

OPTIONS		
Item	**Code**	**Select One**
TD Key (All DIV)	HG-A2006	☐
Hex & Shoulder Bolt Lock Key Combo (All CHA except 14x24x35)	HG-A2023	☐
P Key (CHA 14x24x35)	HG-15113	☐
Curb Stop Key	HG-20087	☐
ID Tag * (Any Model)	HG-20033	☐
Vacuum Pump	HG-A107	☐

1 - Not available in CA, AZ, NV, OR, & WA)

Part Numbering Example

CHA Style Enclosures																
Shape	Width	Depth	Height	Part Number												
Square	07"	07"	39"	S	G	E	0	7	0	7	3	9	C	H	A	
	10"	10"	42"	S	G	E	1	0	1	0	4	2	C	H	A	
	12"	12"	47"	S	G	E	1	2	1	2	4	7	C	H	A	
Rectangle	14"	24"	35"	S	G	E	1	4	2	4	3	5	C	H	A	

BL = Blue   **LG** = Light Green   **DG** = Dark Green

SS = Sand Sone*   **GR** = Granite   **PR** = Purple

* Multi-colored faux stone appearance

| HG-A103/A104 | Hunter NODE with Bermad Solenoid | HG-2 | HG-123100 | HG-A134 | Handheld PN: 545687 |

Optional Equipment

Type	Code
Handheld Programmer for T2 Programmer Interface	545687
Security Kit (includes screw driver) for HG-1/HG-3 design (prior to 11/2015)	HG-A103104
PSV - Portable Sample Valve (HG-1/HG-2/HG-5)	HG-S116
Hydrant Wrench (HG-6)	HG-A133
Locking Device (HG-6)	HG-A134
Sample Port Upgrade for former HG-3	HG-S135
Securing Screw Driver for former HG-1 & HG-3 (prior to 11/2015)	HG-A103
Security Wrench	HG-A104
Portable Sample Valve	HG-S116
Portable Sample Valve - Stainless	HG-S116B
Winterizing Vacuum Pump for VAC Sample Stations	HG-A107
Latching Solenoid for T2 Equipped Devices - 17" (HG1B/S, HG2, HG5)	HG-S255B
Latching Solenoid for T2 Equipped Devices - 33" (HG6BA)	HG-S256B
Latching Solenoid for T2 Equipped Devices - 50" (HG-1)	HG-S257B
Replacement TBOS T-2 Controller Interface	545686
HG-3 Ground Plate Sup-Assembly (prior to 11/2015)	HG-S119
Low Pressure Relief Valve	HG-S120
HG-3 Diffuser Sub-Assembly (prior to 11/2015)	HG-S121
HG-3 Riser Sub-Assembly (prior to 11/2015)	HG-S122
HG-3/4 Bottom Plate Sub-Assembly	HG-S123
HG-1 Riser Assembly (since 11/2015)	546703
HG-1 Above Grade Housing (since 11/2015)	546284
HG-1/HG-3 Decholorination Assembly (since 11/2015)	546519
Male Quick Connection	HG-123104
Male Quick Connection Cap	HG-123105
Femal Camlock - 2"	HG-13101
HG-1 NODE Bracket (since 11/2015)	546708
HG-1/HG-3 Housing Diffusion Top (since 11/2015)	546514
HG-1/HG-3 Housing Diffusion Screen (since 11/2015)	546515
Hydrant Defender with HG-6 lock (red)	HSZ0060010/HG-A134
Hydrant Defender with HG-6 lock (yellow)	HSZ0060014/HG-A134

Replacement Parts and Kits

Type	Code
EPDM (HIT Valve) Diaphragm	HG-16035
HG-1 Control Valve Sub-Assembly (prior to 11/2015)	HG-S101
Banjo Connection Replacement Gasket	HG-V102
HG-1/HG-3 Ground Plate Gasket (prior to 11/2015)	HG-01144
HG-1/HG-3 Cap O-Ring Replacement (prior to 11/2015)	HG-0119
HIT Valve with Flow Control	HG-123100
HIT Valve without Flow Control	HG-123100B
HG-1/HG-3 Cap Security Screws (prior to 11/2015)	HG-13159
HG-6 Cover Security Screws	HG01126
HG-3/HG-4 Low Pressure Relief Valve	HG-S120
Banjo Connection Female Sub-Assembly	HG-S125
2" HIT Valve Top Sub-Assembly	HG-16037
HG-1 Retrofit Kit for Conversion to RB TBOS T2	HG1-T2
HG-2 Retrofit Kit for Conversion to RB TBOS T2	HG2-T2
HG-3 Retrofit Kit for Conversion to RB TBOS T2	HG3-T2
HG-4 Retrofit Kit for Conversion to RB TBOS T2	HG4-T2
HG-5 Retrofit Kit for Conversion to RB TBOS T2	HG5-T2
HG-6 Retrofit Kit for Conversion to RB TBOS T2	HG6-T2
HG-1 Basic/S 1" Retrofit Kit for Conversion RB TBOS T2	HG1BS1-T2
HG-1 Basic/S 2" Retrofit Kit for Conversion RB TBOS T2	HG1BS2-T2
HG-1 Basic Retrofit Kit for Conversion RB TBOS T2	HG1BA-T2
Retrofit Kit for HG-1	HG1-NODE
Retrofit Kit for HG-2	HG2-NODE
Retrofit Kit for HG-6	HG6-NODE
Retrofit Kit for HG-1-Basic/A	HG1BS-NODE
NODE Controller Sub-Assembly	HG-5292
Freeze Protection Adaptpr	HG-FP108
Hydrant Swivel Adaptor	HG-16018
Hex Lock Replacement Kit	HG-A2009
Thermal Control Valve Replacement	HG-FP100
Thermal Control Valve Complete Assembly Replacement Kit	546846KIT
Replacement TBOS T2 Adaptor & O-Ring (prior to 11/2015)	546110