



BRADLEY HALO™ EMERGENCY PLUMBING FIXTURES, Cabinet-Mounted Guide Specification

Bradley Halo Emergency Plumbing Fixtures are a new generation in safety equipment, featuring separate supply and waste piping to eye/face wash, ergonomic hand activation paddle easy to reach from any direction, and instant water flow on opening the new translucent dust cover. Halo eye/face wash units provide full face water distribution profile recognized as the best design in the industry. Integral strainers, and Bradley's unique patented self-draining design all reduce the potential for bacteria growth, providing safer, more effective fixtures.

Halo units are available in cabinet mounted, combination eyewash/face wash/shower, drenching, and laboratory units.

Bradley Corporation, the industry's leading manufacturer of premium quality commercial lavatories and lavatory faucets, wash stations, toilet accessories, TMVs, and emergency plumbing fixtures, serves a diverse customer base ranging from local business facilities to international corporations like Wal-Mart, General Motors, U.S. Postal Service, W.W. Grainger, AMC Theaters Corporation.

Architects, engineers, and specifiers look to Bradley Corporation for innovation in design and leadership in the development of environmentally conscious products. Bradley Corporation, a member of the U.S. Green Building Council, the Wisconsin Green Building Alliance, has several products earning certification by Greenguard Environmental Institute, and Greenguard Children and Schools program.

Bradley eases the specifying process with a seasoned customer service staff and a range of helpful information tools on an advanced website. For example, easy-to-use sizing software, available on Bradley's website, allows engineers to quickly determine the correct size Thermostatic Mixing Valves.

Contact Bradley Corporation, Menomonee Falls, WI 53051; Phone: 800-BRADLEY ((800)272-3539) or visit the Bradley web site www.bradleycorp.com. Bradley Corporation is an AIA/CES registered provider currently offering five programs providing one HS&W Learning Unit each.

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SECTION 22 45 00.03 – EMERGENCY PLUMBING FIXTURES, CABINET MOUNTED

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Cabinet-mounted emergency shower and eye/face wash units.
2. Water-tempering equipment.
3. Emergency signaling systems.

1.2 RELATED SECTIONS

- A. Division 22 Section "Domestic Water Piping" for [hot and cold] [tempered] water piping.
- B. Division 22 Section "Sanitary Waste Piping Specialties" for floor drains.
- C. Division 26 sections for electrical power and control wiring.

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 1. ANSI Z 358.1 – American National Standard for Emergency Eyewash and Shower Equipment.
- B. US Federal Government:
 1. Public Law 90-480 – The Architectural Barriers Act of 1968, as amended.
 2. Public Law 101-336 – The Americans with Disabilities Act of 1990, as amended.

1.4 ACTION SUBMITTALS

- A. Product Data: For each product:
 1. Manufacturer's data sheets indicating operating characteristics, materials and finishes.
 2. Include details of electrical and mechanical operating parts.
 3. Provide mounting requirements and rough-in dimensions.
 4. Mark each sheet with product drawing designation.
- B. Shop Drawings: Submit power, signal, and control wiring diagrams.

1.5 INFORMATION SUBMITTALS

Specifier: Retain paragraphs below when Project requirements include compliance with Federal Buy American provisions. Bradley manufactures enclosed emergency showers in both the US and Canada.

- A. Buy American Act Certification: Submit documentation certifying that products comply with provisions of the Buy American Act 41 U.S.C 10a – 10d.
- B. Manufacturer's Certificates: Submit certificates documenting factory testing of specified units.
- C. Field quality-control test reports.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.7 MAINTENANCE SUBMITTALS

- A. Furnish indicated spare parts that are packaged with identifying labels listing associated products.

1.8 QUALITY ASSURANCE

- A. Source Limitations: Obtain emergency plumbing fixtures through a single source from a single manufacturer.

Specifier: To meet the ANSI Z358.1 the water supply to the equipment must be tempered water. See Part 2 Article WATER TEMPERING EQUIPMENT

- B. ANSI Standard: Comply with ANSI Z358.1.
- C. NSF Standard: Comply with NSF 61 for fixture components in contact with potable water.

Specifier: All fixtures listed below have accessibility options available from Bradley Corp.

- D. Accessibility Requirements: Comply with ICC/ANSI A117.1; [Public Law 90-480 and Public Law 101-336] and requirements of authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide emergency plumbing fixtures manufactured by **Bradley Corporation**, Menomonee Falls, WI 53051, (800)272-3539; Email info@BradleyCorp.com; Website www.bradleycorp.com.

Specifier: Retain one of three paragraphs below based upon Project requirements.

1. Submit comparable products of one of the following for approval by Architect:
 - a. [Specifier: Insert name of manufacturer of comparable product.]
2. Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.
3. Provide specified product; Owner will not consider substitution requests.

Specifier: Retain the required articles from the remainder of PART 2, then select and paste Model # and Description into the specification text at the appropriate insert points.

2.2 EMERGENCY PLUMBING FIXTURES, GENERAL

- A. Eyewash and Eye/Facewash Units: Integral flow control at 5.1 gpm (19.1L/m) with steady water flow under varying water supply conditions from 30 to 90 psi; self-draining bowl with integral strainer; ergonomic stainless steel paddle operated unless otherwise indicated.
1. Supply piping 1/2-inch NPT with stay-open ball valve.
 2. Drain piping 1-1/4-inch NPT.

Retain one of two "Showerhead" Paragraphs below when selecting emergency shower model below. Verify pipe sizing from selected model data sheet.

- B. Showerhead: 22 gpm (1.38 L/s) flow rate, 3.1-inch (78.1 mm) diameter ABS plastic.
1. Supply piping 1-inch NPT with stay-open ball valve.
 2. Drain piping 1-1/4-inch NPT.
- C. Showerhead: 22 gpm (1.38 L/s) flow rate, 2-inch (51 mm) diameter stainless steel.
1. Supply piping 1-inch NPT with stay-open ball valve.
 2. Drain piping 1-1/4-inch NPT.

2.3 CABINET MOUNTED EMERGENCY FIXTURES

<u>Model</u>	<u>Description</u>
Halo S19284HB	Eyewash with ABS plastic sprayhead and flip-open dust covers; in wall recessed stainless steel cabinet, pull down activated ceramic valve; copper piping and brass and chrome fittings; barrier free
Halo S19284JB	Eye/face wash with ABS plastic sprayhead and flip-open dust covers; in wall recessed stainless steel cabinet, pull down activated ceramic valve; copper piping and brass and chrome fittings; barrier free
Halo S19284H	Eyewash with ABS plastic sprayhead and flip-open dust covers; in wall recessed stainless steel cabinet, pull down activated ceramic valve; copper piping and brass and chrome fittings
Halo S19284J	Eye/face wash with ABS plastic sprayhead and flip-open dust covers; in wall recessed stainless steel cabinet, pull down activated ceramic valve; copper piping and brass and chrome fittings
Halo S19294HB	Eyewash with ABS plastic sprayhead; concealed in wall recessed stainless steel cabinet with pull-down door, pull down activated ceramic valve; copper piping and brass and chrome fittings; barrier free

Halo S19294HBT	Eyewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull-down door, pull down activated ceramic valve; copper piping and brass and chrome fittings, p-trap; barrier free
Halo S19294JB	Eye/facewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull-down door, pull down activated ceramic valve; copper piping and brass and chrome fittings, P-trap; barrier free
Halo S19294JBT	Eye/facewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull-down door, pull down activated ceramic valve; copper piping and brass and chrome fittings; barrier free
Halo S19345HXB	Eyewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull down activated ceramic valve; ABS plastic drench shower with extended showerhead and stainless steel shroud, chrome-plated brass ball valve, swing down pull handle activated; copper piping and brass and chrome fittings, tailpiece; barrier free
Halo S19345HFB	Eyewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull down activated ceramic valve; ABS plastic drench shower with flush-mounted showerhead, chrome-plated brass ball valve, swing down pull handle activated; copper piping and brass and chrome fittings, tailpiece; barrier free
Halo S19345HXB	Eyewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull down activated ceramic valve; ABS plastic drench shower with extended showerhead, chrome-plated brass ball valve, swing down pull handle activated; copper piping and brass and chrome fittings, p-trap; barrier free
Halo S19345HFBT	Eyewash with ABS plastic sprayheads; concealed in wall recessed stainless steel cabinet with pull down activated ceramic valve; ABS plastic drench shower with flush-mounted showerhead, chrome-plated brass ball valve, swing down pull handle activated; copper piping and brass and chrome fittings, p-trap; barrier free

- A. Cabinet-Mounted Recessed Eye and Eye/Face Wash Fixture: ANSI Z358.1 space-saving safety fixture with 20-degree swing down activation, installed in stainless-steel flush wall mounted cabinet with stop valve, tail piece, and fittings concealed behind a locked, hinged door. Provide factory-assembled and tested units with standard-compliant identification sign and inspection tag.

1. Basis of Design Manufacturer/Model: **Bradley**, <Insert model number from above>.
2. Model Description: <Insert corresponding model description from above>.

2.4 WATER TEMPERING EQUIPMENT

Specifier: Thermostatic mixing valve assembly is recommended by Bradley as best way to satisfy ANSI Z358.1 requirement for providing tepid water delivery to emergency plumbing fixtures. To meet the ANSI Z358.1 the water supply to the equipment must be tempered water.

BRADLEY NAVIGATOR THERMOSTATIC MIXING VALVES

<u>Model</u>	<u>Description</u>
Navigator S19-2000 (EFX-8)	Emergency fixture thermostatic mixing valve for eyewash and eye/facewash units: 7 gpm at 30 psi
Navigator S19-2100 (EFX25)	Emergency fixture thermostatic mixing valve for shower and eyewash/shower combination units: 26 gpm at 30 psi

- A. Thermostatic Mixing Valve for Eyewash, Eye/Face Wash, and Drench Shower Fixture Units: ANSI Z358.1 compliant single valve design with liquid-filled unit-mounted dial thermometer, providing 85 deg F (29 deg C) tepid, potable water, maintaining temperature at plus or minus 3 deg F for required 15-minute test period, and with automatic shutoff in case of unit failure to continue cold-water flow, with associated corrosion-resistant housing and fittings.

1. Basis of Design Manufacturer/Model: **Bradley**, <Insert model number from above>.
2. Model Description: <Insert model description from above>.
3. Supply Connections: Hot and cold water.
4. Finish: [Rough bronze] [Chrome-plated bronze].

Specifier: Retain and edit "Cabinet" Subparagraph below if cabinet enclosure for TMV is required for Project.

5. Cabinet:
 - a. Mounting: [Surface mounted] [Recessed] [Bracket only; no cabinet].
 - b. Material and Finish: [Steel, white enamel painted] [Satin finish stainless steel] [, with plexiglass window in door].
 - c. Door: Cylinder door lock.

2.5 EMERGENCY FIXTURE SIGNALING SYSTEMS

BRADLEY EMERGENCY FIXTURE SIGNALING SYSTEMS

<u>Model</u>	<u>Description</u>
S19-322D	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 85dB horn, green/amber LED beacon, and double pole, double throw flow switch 1-1/4 inch NPT, 24VDC; remote building management system compatible; recessed NEMA 1 General Purpose interior use enclosure for electrical components

S19-322E	Solid state signaling system for eyewash or eye/facewash emergency fixtures; 85dB horn, green/amber LED beacon, and double pole, double throw brass flow switch 1/2 inch NPT, 24VDC; remote building management system compatible; recessed NEMA 1 General Purpose interior use enclosure for electrical components
S19-323D	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber LED beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 3R indoor and outdoor gasketed waterproof enclosure for electrical components
S19-323E	Solid state signaling system for eyewash or eye/facewash emergency fixtures; 108dB horn, amber LED beacon, and brass double pole, double throw flow switch 1/2 inch NPT, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 3R indoor and outdoor gasketed waterproof enclosure for electrical components
S19-324D1D	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber LED beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X Class I, Division 1, Groups C & D explosion proof indoor and outdoor gasketed waterproof enclosure for electrical components
S19-324D2D	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber LED beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X Class I, Division 2, Groups B, C, & D explosion proof indoor and outdoor gasketed waterproof enclosure for electrical components [; configured for heat trace units]
S19-324DG	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber halogen beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components

S19-324DGW	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber halogen beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components, with halogen area light in corrosion resistant NEMA 4X enclosure
S19-324	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn with multiple tone options, [amber halogen flashing beacon in corrosion resistant NEMA 4X enclosure] [halogen area light in corrosion resistant NEMA 4X enclosure], and brass double pole, double throw flow switch 1-1/4 inch NPT, auto-reset silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components
S19-324D	Solid state signaling system for drench shower or combination shower/eyewash emergency fixtures; 108dB horn, amber halogen beacon, and brass double pole, double throw flow switch 1-1/4 inch NPT, auto-reset silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components
S19324EG	Solid state signaling system for eyewash emergency fixtures; 108dB horn with multiple tone options, amber halogen flashing beacon in corrosion resistant NEMA 4X enclosure, and brass double pole, double throw flow switch 1/2 inch NPT, panel mounted auto-reset silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components
S19324EGW	Solid state signaling system for eyewash emergency fixtures; 108dB horn with multiple tone options, amber halogen flashing beacon in corrosion resistant NEMA 4X enclosure halogen and area light in corrosion resistant NEMA 4X enclosure, and brass double pole, double throw flow switch 1/2 inch NPT, panel mounted auto-reset silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components

S19324E

Solid state signaling system for eyewash emergency fixtures; 108dB horn with multiple tone options, amber halogen flashing beacon in corrosion resistant NEMA 4X enclosure, and brass double pole, double throw flow switch 1/2 inch NPT, panel mounted auto-reset silence switch, 24VDC, with 6 foot power cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components

- A. Automatic Audible and Visual Signaling System: Signaling system intended to alert others that the emergency fixture has been activated with flow switch.
 - 1. Basis of Design Manufacturer/Model: Bradley, <Insert model number from above>.
 - 2. Model Description: <Insert model description from above>.
 - 3. Electrical: 90-260 VAC, 15W.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Assemble fixtures and associated fittings and trim in accordance with manufacturer's instructions.
- B. Install fixture supports attached to building structure for fixtures requiring supports.
- C. Install fixtures onto waste-fitting seals or flanges and attach to supports or building structure.
- D. Install fixtures level, plumb, and firmly in place in accordance with manufacturer's rough-in drawings.
- E. Install water supply piping to each fixture requiring water supply connection. Provide stop on each supply in readily-serviced location. Fasten supply piping to supports or substrate.
- F. Install trap and waste piping to each fixture requiring sanitary system connection.
- G. Install escutcheons at exposed piping penetrations in finished locations and within cabinets.
- H. Seal joints between fixtures and walls, floors, and countertops with mildew-resistant silicone sealant.

3.2 CLEANING AND PROTECTION

- A. Repair or replace defective work, including damaged fixtures and components.
- B. Clean unit surfaces, test fixtures, and leave in ready-to-use condition.
- C. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.
- D. Protect units with water-resistant temporary covering. Do not allow temporary use of plumbing fixtures unless approved in writing by Architect. Remove protection at Substantial Completion and dispose.

3.3 TESTING AND ADJUSTING

- A. Set field-adjustable temperature set points of temperature-actuated water mixing valves. Adjust set point within allowable temperature range.
- B. Test and adjust installation.
- C. Remove and replace malfunctioning thermostatic mixing valves and retest.

END OF SECTION