



BRADLEY HALO™ EMERGENCY PLUMBING FIXTURES, Showers 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 wall-mounted, pedestal-mounted, combination eyewash/face wash/shower, drenching shower, and cabinet-mounted 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 multiple programs providing HS&W Learning Units.

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SECTION 22 45 00.04 – EMERGENCY PLUMBING FIXTURES, SHOWERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Drenching-type emergency showers.
2. Water-tempering equipment.
3. Signaling Equipment.

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 DRENCHING SHOWER EMERGENCY PLUMBING FIXTURES

<u>Model</u>	<u>Description</u>
S19-120	Drench shower with horizontal supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-120A	Drench shower with horizontal supply, ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-120SS	Drench shower with horizontal supply, 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping
S19-120T	Drench shower with horizontal supply, ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, pull rod activated; chrome plated pipe and fittings
S19-120BF	Drench shower with horizontal supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free
S19-120ABF	Drench shower with horizontal supply, ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free
S19-120SSBF	Drench shower with horizontal supply, 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping; barrier free
S19-120FM	Drench shower flush mounted with horizontal supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-120FMBF	Drench shower flush mounted with horizontal supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free
S19-120G	Drench shower with horizontal supply, configured for over-the-door installations, with ABS plastic showerhead, chrome-plated brass ball valve, cord activated; safety yellow coated galvanized steel pipe
S19-120P	Drench shower flush mounted with horizontal supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated, with 8 foot hand-held hose sprayhead; safety yellow coated galvanized steel pipe

S19-125SBF	Drench shower recessed mounted with horizontal supply, ABS plastic extended showerhead, chrome-plated brass ball valve, surface mounted handle activated; brass and copper pipe and fittings; stainless steel cabinet and cover plate; barrier free
S19-125SFMBF	Drench shower recessed mounted with horizontal supply, ABS plastic flush mounted showerhead, chrome-plated brass ball valve, surface mounted handle activated; brass and copper pipe and fittings; stainless steel cabinet and cover plate; barrier free
S19-125BF	Drench shower recessed mounted with horizontal supply, ABS plastic extended showerhead, chrome-plated brass ball valve, recessed handle activated; brass and copper pipe and fittings; stainless steel cabinet; barrier free
S19-125FMBF	Drench shower recessed mounted with horizontal supply, ABS plastic flush mounted showerhead, chrome-plated brass ball valve, recessed handle activated; brass and copper pipe and fittings; stainless steel cabinet; barrier free
S19-130BF	Drench shower with vertical supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free
S19-130ABF	Drench shower with vertical supply, ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free
S19-130SSBF	Drench shower with vertical supply, 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping; barrier free
S19-130	Drench shower with vertical supply, ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-130A	Drench shower with vertical supply, ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-130SS	Drench shower with vertical supply, 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping
S19-130F	Drench shower with vertical supply, configured for over-the-door installations, with ABS plastic showerhead, chrome-plated brass ball valve, cord activated; safety yellow coated galvanized steel pipe
S19-110BF	Drench shower, freestanding, with ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free

S19-110BFSS	Drench shower, freestanding, with 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping; barrier free
S19-110	Drench shower, freestanding, with ABS plastic showerhead, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
S19-110SS	Drench shower, freestanding, with 304 stainless steel showerhead, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping
S19-120HFP	Drench shower, frost proof wall mounted with horizontal supply for [0 to 8 inch wall] [8 to 12 inch wall] [12 to 18 inch wall]; ABS plastic showerhead, chrome-plated brass ball valve, push flag handle activated; safety yellow coated galvanized steel pipe
S19-125BF	Drench shower, recess mounted, with extended ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, recessed handle activated; brass and copper pipe and fittings; barrier free model
S19-125FMBF	Drench shower, recess mounted, with flush mounted ABS plastic showerhead, chrome-plated brass ball valve, recessed handle activated; brass and copper pipe and fittings; barrier free model
S19-125SBF	Drench shower, recess mounted, with extended ABS plastic showerhead with stainless steel shroud, chrome-plated brass ball valve, surface mounted handle activated; brass and copper pipe and fittings; barrier free model
S19-125FMBF	Drench shower, recess mounted, with flush mounted ABS plastic showerhead, chrome-plated brass ball valve, surface mounted handle activated; brass and copper pipe and fittings; barrier free model

- A. Drenching Shower: ANSI Z358.1. 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>.

2.3 WATER TEMPERING EQUIPMENT

- A. Thermostatic Mixing Valve for Eyewash, Eye/Face Wash, and Drench 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 5 deg F (3 deg C) for required 15-minute test period, and in case of unit failure to continue cold-water flow, with associated corrosion-resistant housing and fittings.

1. Basis of Design Manufacturer/Model: **Bradley, Navigator S19-2100 (EFX25)**.
2. Model Description: Emergency fixture thermostatic mixing valve for shower and eyewash/shower combination units: 26 gpm at 30 psi.
3. Supply Connections: Hot and cold water.
4. Finish: [Rough bronze] [Chrome-plated bronze].
5. Cabinet: [Surface mounted stainless steel] [Recessed stainless steel] [Surface mounted white enamel] [Recessed white enamel] [Plexiglass window in door], with cylinder door lock.

2.4 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
S19-323D	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
S19-324D1D	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

S19-324DG	<p>cable; remote building management system compatible; NEMA 4X indoor and outdoor gasketed waterproof enclosure for electrical components</p> <p>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]</p>
S19-324	<p>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</p>
S19-324D	<p>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</p>

- A. Automatic Audible and Visual Alarm System: Alarm 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