



BRADLEY HALO EMERGENCY PLUMBING FIXTURES, Pedestal-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 wall-mounted, pedestal-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 multiple programs providing HS&W Learning Units.

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SECTION 22 45 00.01 – EMERGENCY PLUMBING FIXTURES, PEDESTAL-MOUNTED

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Pedestal-mounted [eyewash] [eye/face wash] equipment.
2. Pedestal-mounted combination shower and [eyewash] [eye/face wash] equipment.
3. Water-tempering equipment.
4. 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: Classified by UL to comply with ANSI Z358.1.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. EN Standard: Comply with EN 15154-2.
- E. 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.

- F. 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 1-1/4-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 1-1/4-inch NPT with stay-open ball valve.
 2. Drain piping 1-1/4-inch NPT.

2.3 PEDESTAL-MOUNTED EMERGENCY PLUMBING FIXTURES

BRADLEY PEDESTAL-MOUNTED EMERGENCY EYEWASH AND EYE/FACEWASH FIXTURES

<u>Model</u>	<u>Description</u>
Halo S19214BSS	Eye/Facewash with polished 304 stainless steel sprayhead with flip-open dust covers; 304 stainless steel bowl; 304 stainless steel piping; 316 stainless steel ball valve; push paddle activated
Halo S19214B	Eyewash with ABS plastic sprayhead with flip-open dust covers; 304 stainless steel bowl; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214PDC	Eyewash with ABS plastic sprayhead; ABS plastic bowl and hinged dust cover; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214DC	Eyewash with ABS plastic sprayhead; 304 stainless steel bowl and hinged dust cover; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214EW	Eyewash with ABS plastic sprayhead with flip-open dust covers; ABS plastic bowl; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated

Halo S19214FW	Eye/Facewash with ABS plastic sprayhead with flip-open dust covers; ABS plastic bowl; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214PDCFW	Eye/Facewash with ABS plastic sprayheads; ABS plastic bowl and hinged dust covers; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214DCFW	Eye/Facewash with ABS plastic sprayheads; 304 stainless steel bowl and hinged dust cover; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214P	Eye/Facewash with ABS plastic sprayheads with flip-open dust covers; 304 stainless steel bowl; drench hose; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated
Halo S19214SC	Eye/Facewash with polished 304 stainless steel sprayhead; 304 stainless steel bowl and hinged dust cover; 304 stainless steel piping; 316 stainless steel ball valve; push paddle activated
Halo S19214SS	Eye/Facewash with polished 304 stainless steel sprayhead with flip-open dust covers; 304 stainless steel bowl; 304 stainless steel piping; 316 stainless steel ball valve; push paddle and foot pedal activated
Halo S19214YF	Eye/Facewash with ABS plastic sprayheads with flip-open dust covers; stainless steel bowl hand; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle and foot pedal activated
Halo S19214Y	Eye/Facewash with ABS plastic sprayheads with flip-open dust covers; stainless steel bowl hand; safety yellow coated galvanized piping; chrome-plated brass ball valve; push paddle activated

- A. Pedestal-Mounted, Emergency Eyewash Stations: With separate supply and waste piping. 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 COMBINATION DRENCH SHOWER / EYEWASH STATIONS

BRADLEY COMBINATION DRENCH SHOWER / EYE AND EYE/FACE WASH STATIONS

<u>Model</u>	<u>Description</u>
Halo S19-304D2	Eye/Face wash with ABS plastic sprayheads, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl and dust cover; ABS

	plastic SpinTec® showerhead with chrome-plated brass ball valve, pull rod operated; galvanized steel pipe, with freeze protection valve, insulated, with electric heat trace cable, and with ABS plastic protective shell; NFPA Class 1 Division 2 classified; [bottom supply] [top supply] [with indicator lights]
Halo S19-304GA	Eye/Face wash with ABS plastic sprayheads, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl and dust cover; ABS plastic SpinTec showerhead with chrome-plated brass ball valve, pull rod operated; galvanized steel pipe, with freeze protection valve, insulated, with electric heat trace cable, and with ABS plastic protective shell; NFPA General Area classified; [bottom supply] [top supply] [with indicator lights]
Halo S19-304	NFPA [General area] [Class I, Div 2, Groups B, C & D] [Class I, Div 1, Groups C & D] [Class II, Div 1 and 2, Groups E, F & G] classified; [120V] [240V], [top supply] [bottom supply]; [Eyewash] [Eye/Face wash] with [ABS plastic] [304SS] [316SS] sprayheads; [galvanized pipe with chrome-plated brass ball valve] [304SS pipe with 316SS ball valve] [316SS pipe with 316SS ball valve]; [300 series push handle][316SS push handle][300 series push handle and foot pedal][316SS push handle and foot pedal] activated; [Plastic bowl] [304SS bowl] [316SS bowl] with [plastic cover] [304SS cover] [316SS cover]; [ABS plastic showerhead] with [plastic shroud] [SS shroud] [304SS showerhead] [316SS showerhead] with SpinTech technology, pull rod activated; [drench hose;], [scald protection valve], insulated, with electric heat trace cable, and with ABS plastic protective shell; [with indicator lights]

Halo S19314AC	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers and chrome-plated brass ball valve, push paddle and foot pedal activated; 304 stainless steel bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314SPR	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle and foot pedal activated; 304 stainless steel bowl; 304 stainless steel showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe

Halo S19314FW	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314BFPB	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free model

Halo S19314FSS	Eye/Face wash with polished 304 stainless steel sprayhead with flip-open dust covers, 316 stainless steel ball valve, push paddle activated; 304 stainless steel bowl; 304 stainless steel showerhead with SpinTec technology, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping
Halo S19314BFSS	Eye/Face wash with polished 304 stainless steel sprayheads with flip-open dust covers, 316 stainless steel ball valve, push paddle activated; 304 stainless steel bowl; 304 stainless steel showerhead with SpinTec technology, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping; barrier free model

Halo S19314BF	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle activated; stainless steel bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free model
Halo S19314TT	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle activated; stainless steel bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; stainless steel showerhead shroud; safety yellow coated galvanized steel pipe
Halo S19314SBFW	Eye/Face wash with ABS plastic sprayheads with flip-open dust covers, chrome-plated brass ball valve, push paddle activated; stainless steel bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe

Halo S19314DCBF	Eye/Face wash with ABS plastic sprayheads, chrome-plated brass ball valve, push paddle activated; stainless steel bowl and hinged bowl dust cover; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe; barrier free model
Halo S19314DCFW	Eye/Face wash with ABS plastic sprayheads; stainless steel bowl and hinged bowl dust cover; chrome-plated brass ball valve, push paddle activated; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314PDCFW	Eye/Face wash with ABS plastic sprayheads, bowl, and bowl dust cover; chrome-plated brass ball valve, push paddle activated; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe

Halo S19314DC	Eyewash with ABS plastic sprayheads, chrome-plated brass ball valve, push paddle activated; stainless steel bowl and hinged bowl dust cover; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314PDC	Eyewash with ABS plastic sprayhead, bowl and hinged bowl dust cover, chrome-plated brass ball valve, push paddle activated; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe

Halo S19314EW	Eyewash with ABS plastic sprayheads and flip-open dust covers, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl; ABS plastic showerhead with SpinTec technology, chrome plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314F	Eyewash with ABS plastic sprayhead and flip-open dust covers, chrome-plated brass ball valve, push paddle activated; stainless steel bowl; ABS plastic showerhead with SpinTech technology and stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314GG	Eye/Face wash with ABS plastic sprayhead and flip-open dust covers, chrome-plated brass ball valve, push paddle activated; no bowl; ABS

Halo S19314P	plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe Eyewash with ABS plastic sprayhead and flip-open dust covers, chrome-plated brass ball valve, push paddle activated; ABS plastic bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; drench hose; safety yellow coated galvanized steel pipe
Halo S19314SB	Eyewash with ABS plastic sprayhead and flip-open dust covers, chrome-plated brass ball valve, push paddle activated; stainless steel bowl; ABS plastic showerhead with SpinTec technology, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe

Halo S19314SC	Eye/Face wash with polished 304 stainless steel sprayheads, 316 stainless steel ball valve, push paddle activated; 304 stainless steel bowl with hinged bowl dust cover; 304 stainless steel showerhead with SpinTec technology, 316 stainless steel ball valve, pull rod activated; 304 stainless steel piping
Halo S19314SS	Eye/Face wash with polished 304 stainless steel sprayheads with flip-open dust covers, push paddle and foot pedal activated; 304 stainless steel bowl; 304 stainless steel ball valve; 304 stainless steel showerhead with SpinTec technology, 304 stainless steel ball valve, pull rod activated; 304 stainless steel piping
Halo S19314SS16	Eye/Face wash with polished 316 stainless steel sprayheads with flip-open dust covers, push paddle and foot pedal activated; 316 stainless steel bowl; 316 stainless steel ball valve; 316 stainless steel showerhead with SpinTec technology, 316 stainless steel ball valve, pull rod activated; 316 stainless steel piping

Halo S19314UU	Eyewash with ABS plastic sprayhead and flip-open dust covers with stainless steel bowl; chrome-plated brass ball valve, push paddle and foot pedal activated; ABS plastic showerhead with SpinTec technology and stainless steel shroud, chrome-plated brass ball valve, pull rod activated; safety yellow coated galvanized steel pipe
Halo S19314LL	Eyewash with ABS plastic sprayhead and flip-open dust covers with stainless steel bowl; chrome-plated brass ball valve, push paddle and foot pedal activated; ABS plastic showerhead with SpinTec technology,

chrome-plated brass ball valve, pull rod activated; safety yellow coated
galvanized steel pipe

- A. Plumbed Emergency Shower with Eyewash Combination Units: ANSI Z358.1, self-draining, with separate supply and waste piping. 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>.**

2.5 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. See Part 2 Article WATER TEMPERING EQUIPMENT.

BRADLEY NAVIGATOR THERMOSTATIC MIXING VALVES

<u>Model</u>	<u>Description</u>
Navigator S19-2000 (EFX8)	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.

2.6 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 [; configured for heat trace units]
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
S19-324DG	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, 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
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- 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.

2.7 EMERGENCY FIXTURE ACCESSORIES

Retain one or more of the below accessory descriptions and edit to suit Project; verify accessories are available with selected fixture model.

- A. Drench Hose: 8-foot (2438 mm) yellow reinforced thermoplastic hose. Operating range 30-90 psi and flow rate of 2.4-2.8 gpm. 3/8-inch NPT male thread, with chrome-plated brass stay-open valve, [with vacuum breaker] [with backflow preventer], attachment supply, fittings, and hangar, equipped with ABS plastic spray head and cover.
- B. Extreme Condition Protection: [Freeze Protection Valve] [Scald Protection Valve].

2.8 MATERIALS

- A. Stainless Steel: ASTM A 666 Type 304.
- B. Stainless Steel: ASTM A 666 Type 316.
- C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS, manufacturer's standard thickness.
- D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating, manufacturer's standard thickness.
- E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- F. Fasteners:
1. Exposed: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant.
 2. Concealed: Galvanized steel.
- G. Chrome Plating: ASTM B 456, Service Condition Number SC 2, moderate service.
- H. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation, impact resistant.

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