

Bradley Aerix® Warm Air Dryers

Bradley Aerix Warm Air Hand Dryers are designed to meet a range of installation requirements from light commercial to heavy industrial installations. Dryers are manufactured to meet both U.S., Canadian, and European Union (EU) electrical standards. Bradley Aerix warm air hand dryers provide a hygienic, economical solution to problems of vandalism, litter, and barrier-free accessibility. They are available in sensor- and push-button-operated units, with a variety of cover materials. Units meeting ADA/ABA projecting object limitations are available.

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 GREENGUARDSM Environmental Institute, and GREENGUARD Children and Schools program. Bradley Aerix Warm Air Hand Dryers are GreenSpec[®] listed.

Bradley is a trusted leader in the commercial washroom equipment market. We offer high quality accessories at a competitive price, fast delivery, and excellent customer service. Bradley offers a full line of washroom accessories for every application. From high-end office buildings to high-security prisons, Bradley has a product to meet any washroom accessory need. Custom products are another of our specialties, from unusual configurations of grab bars, to modified sizes, Bradley will work with you to provide the products necessary to complete your project. 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.

Bradley is the industry leader in the manufacture of premium quality commercial plumbing fixtures, valves, TMVs and washroom accessories that appear in the following CSI MasterFormat 2004TM Sections:

Section 10 21 13 – Toilet Compartments (Mills Metal, Plastic-laminate, Phenolic, and Plastic units)
Section 10 28 13.13 – Commercial Toilet Accessories
Section 10 28 13.15 – Warm Air Dryers
Section 10 28 13.63 – Detention Toilet Accessories
Section 10 51 26.00 – Plastic Lockers (Lenox Plastic Lockers)
Section 22 11 19 – Domestic Water Piping Specialties (Thermostatic mixing valves)
Section 22 42 16.01 – Commercial Lavatories and Faucets (Single and multi-station lavatory systems)
Section 22 42 16.02 – Commercial Lavatories and Faucets (Bradley Advocate Lavatory System)
Section 22 42 16.03 – Commercial Lavatories and Faucets (Bradley Verge Lavatory System)
Section 22 42 16.04 – Commercial Lavatory Decks and Faucets (Single and multi-station lavatory decks)
Section 22 42 16.11 – Commercial Sinks and Faucets
Section 22 42 23 – Commercial Showers and Shower Valves
Section 22 42 33 – Wash Fountains
Section 22 43 00 – Healthcare Plumbing Fixtures (Patient care lavatory units)
Section 22 45 00 – Emergency Plumbing Fixtures (Emergency Eyewash Fixtures and Drench Showers)
Section 22 46 00 – Security Plumbing Fixtures

Contact Bradley Corporation, Menomonee Falls, WI 53051; Phone: 800-BRADLEY ((800)272-3539) Fax: (262)251-5817, or visit the Bradley web site www.bradleycorp.com. Bradley Corporation is an AIA/CES registered provider currently offering six programs earning one (1) HS&W Learning Unit each; several qualify for sustainable design (SD) credit.

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SECTION 10 28 13.15
WARM AIR HAND DRYERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Warm-air hand dryers.

Specifier: If retaining Related Sections Article, edit to correspond to Project requirements.

1.2 RELATED SECTIONS

- A. Division 06 – Section "Rough Carpentry" for anchoring warm air dryers.
- B. Division 09 – Section "Non-Structural Metal Framing" for anchoring warm air dryers.
- C. Division 26 Sections "Grounding and Bonding Requirements for Electrical Systems".

Specifier: If retaining References Article, retain references remaining in edited section and delete others.

1.3 REFERENCES

- A. Canadian Standards Association, CSA International (CSA):
 - 1. CSA C22.2 No. 24 – Temperature-Indicating and -Regulating Equipment.
- B. German Equipment and Product Safety Act (GPSG):
 - 1. GS Safety Tested Mark.
- C. European Compliance Services (CE):
 - 1. 'New Approach' Product Safety Directives.
- D. International Electrotechnical Commission (IEC):
 - 1. IEC 73/23/CEE – Low Voltage Directive.
 - 2. IEC 89/336/CEE – Electromagnetic Compatibility (EMC).
 - 3. IEC 93/68/CEE – CE Marking Directive.
- E. National Fire Protection Association (NFPA):
 - 1. NFPA 70 – National Electrical Code.
- F. Underwriters Laboratories (UL):
 - 1. UL 94 - Standard Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.

2. UL 499: Electrical Heating Appliances.

G. US Federal Government:

1. U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.4 ACTION SUBMITTALS

A. Product Data: For each type of warm air dryer indicated include the following:

1. Anchoring and mounting requirements.
2. Material and finish descriptions.
3. Electrical requirements.
4. Common characteristics.
5. Product Test Reports: When requested by Architect provide documentation indicating compliance of products with requirements, from a qualified independent testing agency.

B. Location Schedule: Indicating model number and installation locations by room number for each warm air dryer required.

1.5 INFORMATIONAL SUBMITTALS

A. Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data.

1.7 QUALITY ASSURANCE

A. Source Limitations: Obtain warm air dryers from a single source from single manufacturer.

B. Electrical Components: Listed and labeled per NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

C. Quality Standards: Provide warm air dryers complying with the following:

1. UL 499.
2. CSA C22.2 No. 24.

Specifier: Retain and edit applicable standards below for Projects based upon European Union (EU) standards.

3. GS marked.
4. CE marked.
5. IEC 73/23/CEE.
6. IEC 89/336/CEE.

Specifier: Bradley offers several warm air dryers meeting projecting object requirements of ADAAG and ICC A117.1.

- D. Accessibility Requirements: Comply with requirements of ADA/ABA and with requirements of authorities having jurisdiction.

1.8 DELIVERY, STORAGE, AND HANDLING

- 1. Deliver warm air dryers in manufacturer's original packaging marked for location of installation.

1.9 WARRANTY

- A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship within the following periods following the date of Substantial Completion:
 - 1. Sensors: 1 year.
 - 2. Motor Brushes: 3 years.
 - 3. All Other Components: 10 years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide Warm Air Dryer products of **Bradley Corporation, Menomonee Falls, WI 53051**, (800)272-3539, fax (262)251-5817; Email info@BradleyCorp.com; Website www.bradleycorp.com.

Specifier: Retain one of two 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.]
 - b. Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.
- 2. Provide specified product; Owner will not consider substitution requests.

B. MATERIALS

- 1. Aluminum Sheet: ASTM B 209.
- 2. Stainless Steel Sheet: ASTM A 666, Type 304.
- 3. Cast Iron: ASTM A 48/A 48M.
- 4. Steel Sheet: ASTM A 1008, Designation CS.
- 5. Galvanized Steel Sheet: ASTM A 653, with G60 hot-dip zinc coating.
- 6. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.
- 7. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- 8. ABS Plastic: Acrylonitrile-butadiene-styrene resin.
- 9. Exposed Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-resistant.
- 10. Concealed Fasteners: Screws, bolts, and other devices compatible with adjacent materials, and of corrosion-resistant material.

2.2 WARM AIR HAND DRYERS

Specifier: **Bradley Aerix 2902-Series Sensor-Operated Adjustable Speed Hand Dryers** are recommended for very high use facilities and for locations where units may be placed in an accessible path. They are available in 3 models with varying finishes. Cast iron covers are recommended for installations requiring high durability and vandal-resistance. Units are factory-wired with universal voltage for a wide range of installations, and can be placed in any location without creating a protruding object in accessible paths. Adjustable fan speed allows units to be used in sound-sensitive areas.

If needed, retain and edit drawing designations in following paragraphs.

- A. Surface-Mounted, sensor-operated, ADA/ABA-mounting-depth compliant, adjustable speed, universal voltage warm air hand dryer [WAD# ____].
1. Basis-of-Design Product: **Bradley, Aerix Adjustable Speed Warm Air Hand Dryer** Model No. [2902-2800] [2902-2873] [2902-2874].

Specifier: Retain one of three material/finish subparagraphs below. Bradley Aerix Model 2902-2800 is cast iron; Model 2902-2873 is steel, and Model 2902-2874 is stainless steel.

2. Cover: Fixed to base plate with two tamper-resistant lock screws, of the following material:
 - a. **Cast iron**, 3/16 inch (4.5 mm) thick, with white porcelain enamel finish.
 - b. **Steel**, 1/16 inch (1.5 mm) thick, with white epoxy finish.
 - c. **Stainless steel**, 1/16 inch (1.5 mm) thick, with satin finish.
3. Discharge Outlet: Bottom outlet, fixed.
4. Base: 1/8 inch (3 mm) aluminum base with mechanical noise dampening blocks.
5. Unit Dimensions: 10-1/2 inches high by 11-1/2 inches wide by 4 inches deep (267 mm high by 292 mm wide by 102 mm deep).
6. Operation: Infrared electronic-sensor activated, with automatic power cut-off switch, adjustable for detection between 2 and 8 inches (51 and 203 mm).
 - a. Operation Time: Up to 60 seconds.
7. Safety Features:
 - a. Automatic cutoff after 60 seconds.
 - b. Self-resetting thermal cut-off.
 - c. Protection Level against Water Splashes: IEC IP23.
8. Operational Characteristics:
 - a. Discharge Temperature: Adjustable from 106 to 111 deg F (41 to 44 deg C) at 4 inches (102 mm) distance and ambient temperature of 70 deg F. (21 deg C).
 - b. Air Speed: Adjustable from 4920 to 9840 fpm (25 to 50 m/s).
 - c. Effective Airflow: Adjustable from 36 to 58 cfm (16.9 to 27 L/s).
 - d. Average Drying Time Range: 10 to 15 seconds.
 - e. Noise Level: 64–70 dB delivering 43–70 CFM (16.9 to 27 L/s) of air at 106 to 111 deg F (41 to 44 deg C) and velocity of 4,920 to 9,840 fpm (25 to 50 m/s).

9. Electrical Power Characteristics:
 - a. Heating Element: 900 W (1.20 hp).

Specifier: Select voltage required; coordinate with electrical drawings.

- b. Motor: Adjustable speed, 1/3 hp/250 W 50/60 Hz, [100 - 120 V] [208 V] [220-240 V].

Specifier: **Bradley Aerix 2903-Series Sensor-Operated Warm Air Hand Dryers** are recommended for very high traffic areas. They are available in US and European market models (CE). Cast iron covers provide very high durability and vandal-resistance.

- B. Surface-Mounted, sensor-operated, fixed outlet, warm air hand dryer [WAD# ____].
 1. Basis-of-Design Product: **Bradley, Aerix Sensor-Operated Warm Air Hand Dryer** Model No. [2903-28] [2903-28CE].
 2. Cover: Fixed to base plate with two tamper-resistant lock screws.
 - a. Material: Cast iron, 1/4 inch (6 mm) thick, with white porcelain enamel finish.
 3. Discharge Nozzle: Fixed position, chrome-plated Zamak.
 4. Base: 1/8 inch (3 mm) aluminum base with mechanical noise dampening blocks.
 5. Unit Dimensions: 10 inches high by 11-1/8 inches wide by 8-1/2 inches deep (254 mm high by 282 mm wide by 215 mm deep).
 6. Operation: Infrared electronic-sensor activated, with automatic power cut-off switch, adjustable for detection between 6 and 10 inch (152 and 254 mm).
 7. Safety Features:
 - a. Automatic cutoff after 60 seconds.
 - b. Self-resetting thermal cut-off.
 8. Operational Characteristics
 - a. Discharge Temperature: 128 deg F (53 deg C) at 4 inches (102 mm) distance and 70 deg F. (21 deg C.) ambient temperature.
 - b. Air Speed: 5,512 fpm (28 m/s).
 - c. Effective Airflow: 203 cfm (96 L/s).
 - d. Average Drying Time: 29 seconds.
 - e. Noise Level: 70 dB at 79 inches (2007 mm).
 9. Electrical Characteristics
 - a. Heating Element: 1600 W (2.15 hp).

Specifier: Select motor optional subparagraph below. First subparagraph is for Model 2903-28 (US). Second subparagraph is for Model 2903-28CE (European).

- b. **Motor:** Single Speed, 1/3 hp/250W 50/60 Hz 110 - 120V.
 - c. **Motor:** Single Speed, 1/3 hp/250W 50/60 Hz 220 - 240V.

Specifier: **Bradley Aerix 2904-Series Push Button-Operated Warm Air Hand Dryers** are recommended for high traffic areas. They are available in US and European market models (CE). Cast iron covers provide very high durability and vandal-resistance.

- C. Surface-Mounted, Push-Button Operated, Fixed Outlet, adjustable speed, hands free, universal voltage warm air hand dryer [WAD# ____].
1. Basis-of-Design Product: **Bradley, Aerix Push Button-Operated Warm Air Hand Dryer** Model No. [2904-28] [2904-28CE].
 2. Cover: Fixed to base plate with two tamper resistant lock screws.
 - a. Material: Cast iron, 1/4 inch (6 mm) thick, with white porcelain enameled coating.
 3. Discharge Nozzle: Fixed position, chrome plated Zamak.
 4. Base: 1/8 inch (3 mm) aluminum base with mechanical noise dampening blocks.
 5. Unit Dimensions: 10 inches high by 11-1/8 inches wide by 8-1/2 inches deep (254 mm high by 282 mm wide by 215 mm deep).
 6. Safety Features:
 - a. Self-resetting thermal cut-off.
 7. Operational Characteristics:
 - a. Discharge Temperature: 128 deg F (53 deg C) at 4 inch (102 mm) distance and 70 deg F. (21 deg C.) ambient temperature.
 - b. Air Speed: 5,512 fpm (28 m/s).
 - c. Effective Airflow: 203 cfm (96 L/s).
 - d. Average Drying Time: 29 seconds.
 - e. Noise Level: 70 dB at 79 inches (2007 mm).
 8. Electrical Characteristics:
 - a. Heating Element: 1600 W (2.15 hp).

Specifier: Select motor optional subparagraph below. First subparagraph is for Model 2904-28 (US). Second subparagraph is for Model 2904-28CE (European).

- b. **Motor:** Single Speed, 1/3 hp/250W 50/60 Hz 110 - 120V.
- c. **Motor:** Single Speed, 1/3 hp/250W 50/60 Hz 220 - 240V.

Specifier: **Bradley 2905-Series Sensor-Operated Warm Air Hand Dryers** are recommended as an economical solution for mid to high traffic areas where vandalism is not a design concern. They are available in US and European market models (CE).

- D. Surface-Mounted, sensor-operated warm air hand dryer [WAD# ____].
1. Basis-of-Design Product: **Bradley, Aerix Sensor-Operated Warm Air Hand Dryer** Model No. [2905-2873] [2905-2873CE].
 2. Cover: Fixed to base plate with four allen head screws.
 - a. Material and Finish: Steel, 5/64 inch (1.9 mm) thick, with white epoxy coating.

3. Discharge Outlet: Bottom outlet, Zamak chrome grille.
4. Base: Fire-resistant ABS plastic, UL listed 94-V0.
5. Unit Dimensions: 11-7/8 inches high by 10-1/16 inches wide by 5-1/2 inches deep (301 mm high by 256 mm wide by 140 mm deep).
6. Operation: Infrared electronic-sensor activated, with automatic power cut-off switch, adjustable for detection between 6 and 10 inch (152 and 254 mm).
 - a. Operation Time: Up to 60 seconds.
7. Safety Features: Self-resetting thermal cut-off.
8. Operational Characteristics:
 - a. Discharge Temperature: 12.6 deg F (52 deg C) at 4 inches (102 mm) distance and 70 deg F (21 deg C.) ambient temperature.
 - b. Effective Airflow: 166 cfm (78 L/s).
 - c. Average drying Time: 38 seconds.
 - d. Noise Level: 60 dB at 79 inches (2007 mm).
9. Electrical Characteristics:
 - a. Heating Element: 1,500 W (2 HP).

Specifier: Select motor optional subparagraph below. First subparagraph is for Model 2905-28. Second subparagraph is for Model 2905-28CE (European).

- b. **Motor:** Single Speed, 1/5 hp/140W 50/60 Hz 110 - 120V.
- c. **Motor:** Single Speed, 1/5 hp/140W 50/60 Hz 220 - 240V.

- E. Special Tools: Provide special tool for removing warm air dryers for internal access for servicing and adjusting.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install warm air dryers in locations indicated, in accordance with manufacturer's written instructions, using recommended fasteners. Install units level, plumb, and firmly anchored in locations and at heights indicated.

3.2 ADJUSTMENT

- A. Adjust variable speed dryers as directed. Instruct Owner's personnel in operations to adjust variable speed dryers.

3.3 FINAL CLEANING

- A. Clean warm air dryer surfaces of handprints and finger marks.

END OF SECTION