



SECTION 10 28 13
ELECTRIC HAND DRYERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. High Efficiency Heated Air Electric Hand Dryer
- B. High Efficiency Non-Heated Electric Air Hand Dryer
- C. High Efficiency Surface Mounted ADA Compliant Electric Hand Dryer
- D. Conventional Push Button Electric Hand or Hair Dryer
- E. Conventional Automatic Electric Hand Dryer
- F. Conventional Lexan Push Button or Automatic Electric Hand Dryer

1.2 RELATED SECTIONS

- A. Section 061000 - Rough Carpentry: Blocking in stud partitions for mounting hand dryers.
- B. Section 260519 - Low Voltage electrical Power Conductors and Cables: Electrical supply, conduit, wiring, boxes, and wiring devices for hand dryers.

1.3 REFERENCES

- A. ICC/ANSI A117.1 - American National Standard for Accessible and Useable Buildings and Facilities; 2017.
- B. UL, LLC / UL Environment - Product Category Rules (PCR) for Hand Dryers, 2016.

1.4 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Operating instructions and performance.
 - 3. Storage and handling requirements and recommendations.

4. Electrical wiring diagrams
5. Installation methods.
- C. Shop Drawings showing dimensions, method of attachment, and required supports.
- D. LEED Submittals: Provide documentation of how the requirements of LEED v4.0 Credits will be met:
 1. Product Data: For products contributing to increased energy performance, provide manufacturer documentation of use and non-use energy consumption.
 2. Product Data: For products having recycled content, provide manufacturer documentation including percentage(s) by weight of postconsumer and preconsumer recycled content.
 3. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
- E. LEED Submittals: Provide Product Data for Credit IEQ 4.1, LEED-NC, LEED-CI, and LEED-CS; coordinate with requirements for air dryers.
 1. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
 2. Environmental Product Declaration: Building Product Disclosure and Optimization - Environmental Product Declarations. Confirm with manufacturer that EPDs are available for each product.
 - a. Environmental Product Declaration: For each product.
 3. Sourcing of Raw Materials: Building Project Disclosure and Optimization - Sourcing of Raw Materials, Option 1 - Raw Material Source and Extraction Reporting. Confirm with manufacturer that corporate sustainability reports are available, have been prepared within the last year or are applicable to the year of production, and are by an organization approved by the USGBC.
 - a. Sourcing of Raw Materials: Corporate sustainability report for each manufacturer.
- F. Warranty for review by Architect.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing electric hand dryers with 10 years minimum experience.
- B. Source Limitations: Obtain all electric hand dryers from a single source and from single manufacturer.
- C. Equipment certified by Underwriters Laboratory, Inc., with UL and ULC labels.
- D. Comply with ICC/ANSI A117.1.

1.6 WARRANTY

- A. Provide manufacturer's standard limited warranty for period specified.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Excel Dryer Inc., which is located at: 357 Chestnut St. P. O. Box 365; East Longmeadow, MA 01028. ASD. Tel: 413-525-4531; Fax: 413-525-2853; Email: sales@exceldryer.com; Web: www.exceldryer.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PERFORMANCE

- A. UL Product Category Rule (PCR) Testing:
 - 1. XLERATOR Hand Dryer
 - a. Dry Time: Not greater than eight seconds.
 - b. Energy per Use: Not greater than 3.7 W-h (13.32 J).
 - 2. XLERATOReco Hand Dryer
 - a. Dry Time: Not greater than 10 seconds
 - b. Energy Per Use: Not greater than 1.7 Wh (6.12 J)
 - 3. ThinAir Hand Dryer
 - a. Dry Time: Not greater than 14 seconds
 - b. Energy Per Use: Not greater than 3.7 Wh (13.32 J)
- B. Electrical Components: Listed and labeled per NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
- C. Certification: Products certified by Underwriters Laboratory, Inc., with UL and ULC labels.
- D. Accessibility Requirements: Comply with requirements of ADA/ABA and accessibility requirements of authorities having jurisdiction.
 - 1. Comply with ICC/ANSI A117.1.

2.3 ELECTRIC HAND DRYERS

- A. High Efficiency Heated Air Hand Dryer: XLERATOR; Hand Dryer; EPD Certified, Rapid-drying, energy efficient, rapid drying, automatic sensor, adjustable speed and sound control, adjustable heat control, electric hand dryer; surface mounted or semi-recessed; entire dryer internally grounded. Made in the USA Certified. Warranty 5 year limited.

1. Model XL-BW:
 - a. Cover: Bulk Molding Composite (BMC).
 - b. Finish: White color.
2. Model XL-W:
 - a. Cover: Zinc die cast.
 - b. Finish: White painted.
3. Model XL-GR:
 - a. Cover: Zinc die cast.
 - b. Finish: Textured graphite painted.
4. Model XL-C:
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
5. Model XL-SB:
 - a. Cover: Stainless steel.
 - b. Finish: Brushed Number 4 finish.
6. Model XL-SI:
 - a. Cover: Zinc die cast.
 - b. Cover: Custom special image.
7. Model XL-SB-SI:
 - a. Cover: Stainless Steel
 - b. Cover: Custom special image
8. Model XL-SP:
 - a. Cover: Zinc die cast.
 - b. Finish: Custom special color painted.
9. Options:
 - a. HEPA Filtration System: Filters 99.97 percent of bacteria at 0.3 microns from the air stream.
 - b. Noise Reduction Nozzle: Reduces air deflection noise level by 9 db and increases the dry time by 2-3 seconds.
10. Mounting:
 - a. Surface Mounted.
 - b. Recessed: ADA compliant recess kit is fabricated of 22 GA 18-8 type 304 stainless steel with #4 satin finish with 16 GA 18-8 type 304 stainless steel dryer mounting plate. All welded construction. 16-3/8 inches (416 mm) wide by 26 inches (660 mm) high by 3-3/8 inches (86 mm) deep.
11. Controls: Automatic, activated by infrared optical sensor located next to the air outlet. Dryer will operate as long as hands are under the air outlet and has a 35-second lockout feature if hands are not removed. Control includes adjustable sound and speed control mechanism, adjustable heat control with High, Medium, Low and Off settings and a filter sensor which is activated should the filter become clogged. Sensor equipped with externally visible Red LED light that flashes error codes to assist in troubleshooting. Control

assembly sealed for protection against moisture, lint, dust and vandalism.

12. Air Intake: Inlet openings on bottom of cover.
13. Air Outlet: Delivers focused air stream of 19,000 LFM at nozzle and 16,000 LFM at average hand position of 4 inches (102 mm) below air outlet.
14. Pre Filter: Extends the lifespan and improves reliability. Reduces lint, dust and other airborne debris from entering the internal motor chamber. Filter sensor is activated if filter becomes clogged.
15. Nominal Size: 11-3/4 inches (298 mm) wide by 12-11/16 inches (322 mm) high by 6-11/16 inches (170 mm) deep.
16. Weight:
 - a. 17 pounds (7.7 kg) die cast cover.
 - b. 16 pounds (7.2 kg) stainless cover.
 - c. 15 pounds (6.8 kg) bulk molding composite cover.
17. Power Source:
 - a. 110 - 120 Volts, 11.3 - 12.2 Amps, 50/60 Hz, 1240 - 1450 Watts.
 - b. 208 - 277 Volts, 5.6 - 6.2 Amps, 50/60 Hz, 1160 - 1490 Watts.
 - c. 230 Volts, 6.1 Amps, 50 Hz, 1410 Watts
18. Combination Motor and Blower: Series commutated, through-flow discharge, vacuum type; 5/8 HP, 20,000 RPM. Airflow rate: 19,000 linear feet per minute (97 meters per second) at air outlet, 16,000 linear feet per minute (81 meters per second) at average hand position of 4 inches (102 mm) below air outlet.
19. Heater: Nichrome wire element, mounted inside blower housing to be vandal resistant. Heater Safeguard: Automatic resetting thermostat to open when airflow is restricted and close when airflow is resumed.
20. Air Temperature: 135 degrees F (55 degrees C) measured at average hand position of 4 inches (102 mm) below air outlet. Air Heater Output: 970 watts.
21. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
22. Mount at the following heights above floor surface:
 - a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.
23. Optional Accessories:

- a. Anti-Microbial Wall Guards: Plastic Microban Anti-microbial Wall Guards 31-3/4 inches (806 mm) by 15-3/4 inches (400 mm) by 1/16 inch (1.5 mm) deep with 1/2 inch (13 mm) radius corners with double sided construction grade 3M adhesive tape on the mounting side.
 - 1) White plastic.
 - 2) Black plastic.
 - b. Brushed Stainless Steel Wall Guards.
 - c. XChanger Combo Kit: Recessed Model #'s 40575 (Includes #40502 & 40550) & 40576 (Includes # 40502 & 40551) retrofit kit is fabricated of 18 GA 18-8 type 304 stainless steel with #4 satin finish. All welded construction. 17-1/4 inches (416 mm) high by 56 inches (660 mm) wide by 1 inch (25 mm) deep.
- B. High Efficiency Non-Heated Air Hand Dryer: XLERATOReco; Hand Dryer; EPD Certified, Rapid-drying, energy-efficient electric hand dryer with adjustable automatic sensor, adjustable speed, sound controls; surface mounted or semi-recessed; entire dryer internally grounded. Made in the USA Certified. Tested to UL Environment Global Hand Dryer Product Category Rules (PCR) Guidelines.
- 1. Model XL-BW-ECO:
 - a. Cover: Bulk Molding Composite (BMC).
 - b. Finish: White color.
 - 2. Model XL-W-ECO:
 - a. Cover: Zinc die cast.
 - b. Finish: White painted.
 - 3. Model XL-GR-ECO:
 - a. Cover: Zinc die cast.
 - b. Finish: Textured graphite painted.
 - 4. Model XL-C-ECO:
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - 5. Model XL-SB-ECO:
 - a. Cover: Stainless steel.
 - b. Finish: Brushed Number 4 finish.
 - 6. Model XL-SI-ECO:
 - a. Cover: Zinc die cast.
 - b. Cover: Custom special image.
 - 7. Model XL-SP-ECO:
 - a. Cover: Zinc die cast.
 - b. Finish: Custom special color painted.
 - 8. Options:
 - a. HEPA Filtration System: Filters 99.97 percent of bacteria at 0.3 microns from the air stream.

- b. Noise Reduction Nozzle: Reduces air deflection noise level by 9 dB and increases the dry time by 2-3 seconds.
- 9. Mounting:
 - a. Surface Mounted.
 - b. Recessed: ADA compliant recess kit Model # 40502 is fabricated of 22 GA 18-8 type 304 stainless steel with #4 satin finish with 16 GA 18-8 type 304 stainless steel dryer mounting plate. All welded construction. 16-3/8 inches (416 mm) wide by 26 inches (660 mm) high by 3-3/8 inches (86 mm) deep.
- 10. Controls: Automatic, activated by infrared optical sensor located next to the air outlet. Dryer operates as long as hands are under the air outlet and has a 35-second lockout feature if hands are not removed. Control includes adjustable sound and speed control mechanism, and a filter sensor which is activated should the filter become clogged. Sensor equipped with externally visible Red LED light that flashes error codes to assist in troubleshooting. Control assembly sealed for protection against moisture, lint, dust and vandalism.
- 11. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
- 12. Air Intake: Inlet openings on bottom of cover.
- 13. Air Outlet: Provides air velocity of 19,000 LFM at the air outlet and 16,000 LFM at the hands, 4 inches (102 mm) below air outlet.
- 14. Nominal Size: 11-3/4 inches (298 mm) wide by 12-11/16 inches (322 mm) high by 6-11/16 inches (170 mm) deep.
- 15. Weight:
 - a. 17 pounds (7.7 kg) die cast cover.
 - b. 16 pounds (7.2 kg) stainless cover.
 - c. 15 pounds (6.8 kg) bulk molding composite.
- 16. Power Source:
 - a. 110 - 120 Volts, 4.3 - 4.5 Amps, 50/60 Hz, 460 - 530 Watts.
 - b. 208 - 277 Volts, 2.0 - 2.2 Amps, 50/60 Hz, 425 - 500 Watts.
 - c. 230 Volts, 2.2 Amps, 50 Hz, 500 Watts.
- 17. Combination Motor and Blower: Series commutated, through-flow discharge, vacuum type; 5/8 HP, 20,000 RPM. Airflow rate: 19,000 linear feet per minute (97 meters per second) at air outlet, 16,000 linear feet per minute (81 meters per second) at average hand position of 4 inches (102 mm) below air outlet. Includes a washable metal mesh filter for more reliable performance.
- 18. Air Temperature: Ambient room temperature.
- 19. All metal parts coated according to Underwriters Laboratories, Inc. requirements.

20. Mount at the following heights above floor surface:
 - a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.
 21. Optional Accessories:
 - a. Anti-Microbial Wall Guards: Plastic Microban Anti-microbial Wall Guards 31-3/4 inches (806 mm) by 15-3/4 inches (400 mm) by 1/16 inch (1.5 mm) deep with 1/2 inch (13 mm) radius corners with double sided construction grade 3M adhesive tape on the mounting side.
 - 1) White plastic. (2 per set)
 - 2) Black plastic. (2 per set)
 - b. Brushed Stainless Steel Wall Guards. (2 per set)
 - c. XChanger Combo Kit: Recessed Model #'s 40575 (Includes #40502 & 40550) & 40576 (Includes # 40502 & 40551) retrofit kit is fabricated of 18 GA 18-8 type 304 stainless steel with #4 satin finish. All welded construction. 17-1/4 inches (416 mm) high by 56 inches (660 mm) wide by 1 inch (25 mm) deep.
- C. High Efficiency Surface Mounted ADA Compliant Hand Dryer: ThinAir; high speed, energy efficient, rapid drying, automatic sensor, surface mounted, ADA Compliant, adjustable speed and sound control, adjustable heat control, electric hand dryer; entire dryer internally grounded. Made in the USA Certified. Warranty 5 year limited.
1. Model TA-ABS:
 - a. Cover: ABS – White polymer with SanaFor antimicrobial additive.
 - b. Finish: White color.
 2. Model TA-SB:
 - a. Cover: Stainless steel.
 - b. Finish: Brushed Number 4 finish.
 3. Mounting: Surface Mounted (ADA Complaint).
 4. Controls: Automatic, activated by infrared optical sensor located next to the air outlet. Dryer will operate as long as hands are under the air outlet and has a 35-second lockout feature if hands are not removed. Control includes adjustable sound and speed control mechanism, adjustable heat control with High, Medium, Low and Off settings. Sensor equipped with externally visible Red LED light that flashes error codes to assist in troubleshooting. Control assembly sealed for protection against moisture, lint, dust and vandalism.

5. Air Intake: Inlet openings on bottom of cover.
 6. Air Outlet: Air baffle; designed to keep foreign objects out of dryer.
 7. Nominal Size: 8-29/32 inches (226 mm) wide by 13-11/16 inches (348 mm) high by 4 inches (102 mm) deep.
 8. Weight:
 - a. 8 pounds (3.6 kg) ABS cover.
 - b. 10 pounds (4.5 kg) Stainless Steel cover.
 9. Power Source:
 - a. 110 - 120 Volts, 7 - 7.7 Amps, 50/60 Hz, 770 - 915 Watts.
 - b. 208 - 277 Volts, 3.6 - 4.0 Amps, 50/60 Hz, 735 - 950 Watts.
 - c. 230 Volts, 3.9 Amps, 50 Hz, 890 Watts.
 10. Motor: Thermally protected, series commutated, through-flow discharge vacuum motor/blower (1/2 hp / high-30,000 rpm, low-20,000 rpm) which provides air velocity of up to 16,000 LFM (linear feet per minute) at the air outlet and 7,000 LFM at the hands (4 inches [102 mm] below the air outlet).
 11. Heater: Nichrome wire element, mounted inside blower housing to be vandal resistant. Heater Safeguard: Automatic resetting thermostat to open when airflow is restricted and close when airflow is resumed.
 - a. Air Temperature: 141 degrees F (61 degrees C).
 12. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
 13. Mount at the following heights above floor surface:
 - a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.
 14. Optional Accessories:
 - a. Anti-Microbial Wall Guards: Plastic Microban Anti-microbial Wall Guards 31-3/4 inches (806 mm) by 15-3/4 inches (400 mm) by 1/16 inch (1.5 mm) deep with 1/2 inch (13 mm) radius corners with double sided construction grade 3M adhesive tape on the mounting side.
 - 1) White plastic. (2 per set)
 - 2) Black plastic. (2 per set)
 - 3) Brushed stainless steel. (2 per set)
- D. Conventional Push Button Hand or Hair Dryer: Heated, air electric hand dryer; push-button; Hands On Series; entire dryer internally grounded. Made in the USA Certified. Warranty 10 year unlimited.

1. Model 76-W: Hand Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Time Cycle: 30 Seconds.
 - d. Mounting: Surface Mounted.
2. Model 76-C: Hand Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Time Cycle: 30 Seconds.
 - d. Mounting: Surface Mounted.
3. Model H76-W: Hair Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Time Cycle: 3 Minutes.
 - d. Mounting: Surface Mounted.
4. Model H76-C: Hair Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Time Cycle: 3 Minutes.
 - d. Mounting: Surface Mounted.
5. Model R76-W: Hand Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Time Cycle: 30 Seconds.
 - d. Mounting: Semi-Recessed.
6. Model R76-C: Hand Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Time Cycle: 30 Seconds.
 - d. Mounting: Semi-Recessed.
7. Model RH76-W: Hair Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Time Cycle: 3 Minutes.
 - d. Mounting: Semi-Recessed.
8. Model RH76-C: Hair Dryer
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Time Cycle: 3 Minutes.
 - d. Mounting: Semi-Recessed.
9. Electronic Controls, Hand Dryers: Push button; electronic timer with adjustable time cycle; set to 30 seconds.
10. Electronic Controls, Hair Dryers: Push button; electronic timer with adjustable time cycle; set to 3 minutes.
11. Nozzle: Fixed chrome plated nozzle.

12. Nozzle: 360 degree revolving, chrome plated nozzle.
13. Push Button: Die-cast, chrome plated, zinc alloy push button.
14. Air Intake: Perforated metal screen fixed to cover; designed to keep foreign objects out of dryer.
15. Mounting: Surface, mounted on cast zinc alloy wall plate, with four 5/16 inch (8 mm) diameter holes for surface mounting to wall and three 7/8 inch (22 mm) diameter holes for electrical wiring; bottom hole suitable for surface conduit.
 - a. Nominal Size: 10-3/4 inches (273 mm) wide by 8 inches (203 mm) high by 10-1/8 inches (257 mm) deep including nozzle.
 - b. Weight: 18 pounds (8.1 kg).
16. Mounting: Semi-recessed, mounted on cast zinc alloy plate in wall box with concealed mounting bolts; two 7/8 inch (22 mm) diameter holes for electrical wiring.
 - a. Nominal Size: 12-1/2 inches (318 mm) wide by 9-3/4 inches (248 mm) high by 7-1/8 inches (181 mm) deep including nozzle.
 - b. Weight: 20 pounds (9.0 kg).
17. Power Source:
 - a. 110-120 Volts, 15 Amps, 60 Hz., 1650-1800 Watts
 - b. 110-120 Volts, 20 Amps, 60 Hz., 2200-2400 Watts
 - c. 208-230 Volts, 10 Amps, 60 Hz., 2080-2300 Watts
 - d. 277 Volts, 8 Amps, 60 Hz., 2216 Watts
 - e. 220 Volts, 10 Amps, 50 Hz., 2200 Watts
 - f. 240 Volts, 10 Amps, 50 Hz., 2400 Watts
18. Motor:
 - a. 60 Hz, capacitor-initiated; brushless, for longer life and quiet operation; 1/10 HP, 3,450 RPM; self-lubricating bearings; self-resetting thermal protection.
 - b. 50 Hz, universal brush, 1/10 HP, 4200 RPM; sealed ball bearings; insulated by resilient mounting and thermally protected.
19. Blower Fan: Single inlet centrifugal, 150 cubic feet per minute (0.071 cubic meters per second); mounted on motor shaft; insulated with resilient rubber mounting to obtain maximum sound and vibration dampening.
20. Heater: Nichrome wire element, side mounted on blower housing to be vandal proof.
 - a. Safeguard: Automatic resetting thermostat to open when airflow is restricted and close when airflow is resumed.
 - b. Air Temperature: 145 degrees F (63 degrees C).
21. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
22. Mount at the following heights above floor surface:

- a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.
23. Mount hair dryers at the following heights above floor surface:
- a. Men's Showers: 64 inches (1626 mm).
 - b. Women's Showers: 58 inches (1473 mm).
 - c. Teenagers' Showers: 56 inches (1422 mm).
 - d. Young Children's Showers: 43 inches (1092 mm).
 - e. Showers for Persons with Physical Disabilities: 45 inches (1143 mm).
- E. Conventional Automatic Hand Dryer: Heated air, electric hand dryer; automatic sensor; Hands Off Series; entire dryer internally grounded. Made in the USA Certified. Warranty 10 year limited.
1. Model HO-IW:
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Mounting: Surface.
 2. Model HO-IC:
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Mounting: Surface.
 3. Model R76-IW:
 - a. Cover: Zinc die cast.
 - b. Finish: White color.
 - c. Mounting: Semi-Recessed.
 4. Model R76-IC:
 - a. Cover: Zinc die cast.
 - b. Finish: Chrome plated.
 - c. Mounting: Semi-Recessed.
 5. Electronic Controls: Activated by infrared optical sensor. Operates while hands are moving under blower. Shut-off in 90 seconds if hands not removed.
 6. Nozzle: Fixed
 7. Air Intake: Inlet openings on bottom of cover.
 8. Mounting: Surface, mounted on cast zinc alloy wall plate, with four 5/16 inch (8 mm) diameter holes for surface mounting to wall and three 7/8 inch (22 mm) diameter holes for electrical wiring; bottom hole suitable for surface conduit.
 - a. Nominal Size: 10-3/4 inches (273 mm) wide by 8 inches (203 mm) high by 10-1/8 inches (257 mm) deep including nozzle.

- b. Weight: 18 pounds (8.1 kg).
- 9. Mounting: Semi-recessed, mounted on cast zinc alloy plate in wall box with concealed mounting bolts; two 7/8 inch (22 mm) diameter holes for electrical wiring.
 - a. Nominal Size: 12-1/2 inches (318 mm) wide by 9-3/4 inches (248 mm) high by 7-1/8 inches (181 mm) deep including nozzle.
 - b. Weight: 20 pounds (9.0 kg).
- 10. Power Source:
 - a. 110-120 Volts, 15 Amps, 60 Hz., 1650-1800 Watts
 - b. 110-120 Volts, 20 Amps, 60 Hz., 2200-2400 Watts
 - c. 208-230 Volts, 10 Amps, 60 Hz., 2080-2300 Watts
 - d. 277 Volts, 8 Amps, 60 Hz., 2216 Watts
 - e. 220 Volts, 10 Amps, 50 Hz., 2200 Watts
 - f. 240 Volts, 10 Amps, 50 Hz., 2400 Watts
- 11. Motor:
 - a. 60 Hz, capacitor-initiated; brushless, for longer life and quiet operation; 1/10 HP, 3,450 RPM; self-lubricating bearings; self-resetting thermal switch.
 - b. 50 Hz, universal brush, 1/10 HP, 4,200 RPM; sealed ball bearings; insulated by resilient mounting and thermally protected.
- 12. Blower Fan: Single inlet centrifugal, 180 cubic feet per minute; mounted on motor shaft; insulated with resilient rubber mounting to obtain maximum sound and vibration dampening.
- 13. Heater: Nichrome wire element, side mounted on blower housing to be vandal proof.
 - a. Safeguard: Automatic resetting thermostat to open when airflow is restricted and close when airflow is resumed.
 - b. Air Temperature: 145 degrees F (63 degrees C).
- 14. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
- 15. Mount at the following heights above floor surface:
 - a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.
- F. Conventional, Push Button or Automatic Lexan Hand Dryer: heated air, electric hand dryer; Lexan series; surface mounted; lightweight; entire dryer internally grounded. Made in the USA Certified. Warranty 5 year limited.
 - 1. Model HO-BL:

- a. Cover: Molded Lexan.
 - b. Finish: White color.
 - c. Time Cycle: 30 Seconds.
 - d. Mounting: Surface.
2. Model HO-IL:
 - a. Cover: Molded Lexan.
 - b. Finish: White color.
 - c. Time Cycle: Automatic.
 - d. Mounting: Surface.
 3. Controls:
 - a. Push button, chrome-plated, on cover; sealed electronic timer with adjustable cycle, set for 30 seconds.
 - b. Automatic; activated by infrared optical sensor. Operates while hands are moving under blower. Shut-off in 90 seconds if hands not removed.
 4. Wall Plate: Cast zinc alloy plate, with four 5/16 inch (8 mm) diameter holes for surface mounting to wall and three 7/8 inch (22 mm) diameter holes for electrical wiring; bottom hole suitable for surface conduit.
 5. Air Intake: Inlet openings on bottom of cover.
 6. Air Outlet: Chrome-plated, die-cast zinc grating; fixed to blower housing; designed to keep foreign objects out of dryer.
 7. Nominal Size: 12 inches (305 mm) wide by 9-3/4 inches (248 mm) high by 8 inches (203 mm) deep. Weight: 13 pounds (5.9 kg).
 8. Power Source:
 - a. 110-120 Volts, 15 Amps, 60 Hz., 1650 – 1800 Watts
 - b. 110-120 Volts, 20 Amps, 60 Hz., 2200 – 2400 Watts
 - c. 208-230 Volts, 10 Amps, 60 Hz., 2080-2300 Watts
 - d. 277 Volts, 8 Amps, 60 Hz., 2216 Watts
 - e. 220 Volts, 10 Amps, 50 Hz., 2200 Watts
 - f. 240 Volts, 10 Amps, 50 Hz., 2400 Watts
 9. Motor:
 - a. 60 Hz, capacitor-initiated; brushless, for longer life and quiet operation; 1/10 HP, 3,450 RPM; self-lubricating bearings; self-resetting thermal switch.
 - b. 50 Hz, universal brush, 1/10 HP, 4,200 RPM; sealed ball bearings; insulated by resilient mounting and thermally protected.
 10. Blower Fan: Single inlet centrifugal, 180 cubic feet per minute; mounted on motor shaft; insulated with resilient rubber mounting to obtain maximum sound and vibration dampening.
 11. Heater: Nichrome wire element, side mounted on blower housing to be vandal proof.
 - a. Safeguard: Automatic resetting thermostat to open when airflow is restricted and close when airflow is resumed.

- b. Air Temperature: 130 degrees F (55 degrees C).
- 12. All metal parts coated according to Underwriters Laboratories, Inc. requirements.
- 13. Mount at the following heights above floor surface:
 - a. Men's Toilets: 45 inches (1143 mm).
 - b. Women's Toilets: 43 inches (1092 mm).
 - c. Teenagers' Toilets: 41 inches (1041 mm).
 - d. Young Children's Toilets: 35 inches (889 mm).
 - e. Toilets for Persons with Physical Disabilities: 37 inches (940 mm).
 - f. Mount dryers at heights indicated on Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Coordinate requirements for blocking to ensure adequate means for support and installation of hand dryers.
- D. Coordinate requirements for power supply, conduit, disconnect switches and wiring.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install dryers at specified heights.
- C. Install dryers securely to supporting substrate so that fixtures are level and aligned with each other. Use type and length of fastener as recommended by manufacturer for type of substrate.

3.4 PROTECTION

- A. Inspect installation to verify secure and proper mounting. Test each dryer to verify operation, control functions, and performance. Correct deficiencies.

- B. Protect installed dryers until completion of project.
- C. Replace damaged products before Substantial Completion.

END OF SECTION