



# Hand Dryer Operating Instructions and Parts Manual

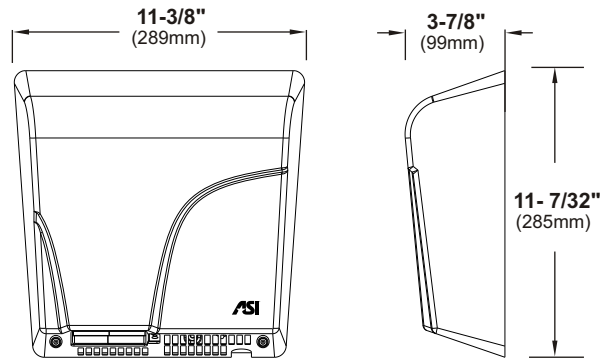
Surface-mounted ADA-compliant hand dryer



PLEASE CAREFULLY READ THROUGH THIS MANUAL BEFORE USING THE PRODUCT. OBSERVING ALL SAFETY INFORMATION, WARNINGS AND CAUTIONS WILL PROTECT YOURSELF AND OTHERS. PLEASE KEEP INSTRUCTIONS FOR FUTURE REFERENCE.

**MODEL # 0165**

Patented No. D 542,976 S



## TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage	100-240VAC, 50/60Hz, 1.8kW
Warm Air Volume Output	180CFM {306m <sup>3</sup> /h}
Warm Air Temp Output	140°F {60°C} at ambient T = 77°F {25°C}
Motor Type	1/4HP, 7.5k rpm, Brush Type, Dual Ball Bearings
Motor Thermal Protection	Auto Resetting Thermostat turns unit off at 221°F, {105°C}
Heater Element	1620W @ 120VAC, Nichrome 8.9 Ω
Heater Thermal Protection	Auto Resetting Thermostat turns unit off at 149°F, { 65°C}, Resets at 122°F {50°C}
Drying Time	Less than 28 seconds
Circuit Operation	Infrared Automatic, self adjusting
Sensor Range	2" to 13" [51mm to 330mm], adjustable; standard 7" [18cm ± 2cm]
Timing Protection	1 minutes auto shut off
Timing Duration	2 second delayed turn off after last sensor read
Sound Level	66dB-A @ 2m
Cover Type	Die Cast aluminum, 7/64"(.109", 2.6mm) thick
Cover Finish	Epoxy Enamel Paint
Net Weight	10lbs [4.54kg]
Shipping Weight	10.5lbs [4.76kg]
Unit Size	11-3/8" W x 11-7/32" H x 3-7/8" D [289mm x 285mm x 99mm]
ADAAG Compliance	Less Than 4" [102mm] Projection

Input (Vac)	Motor			Heater		Total	
	Vac	Inrush A(W)	Operating A (W)	Vac	Inrush / Operating A(W)	Inrush A(W)	Operating A(W)
115	115	2.16 (248)	1.44 (165)	115	13.0 (1488)	15.2 (1736)	14.4 (1653)
120	120	2.25 (270)	1.5 (180)	120	13.5 (1620)	15.8 (1890)	15.0 (1800)
208	104	1.95 (203)	1.3 (135)	104	11.7 (1217)	13.7 (1420)	13.0 (1352)
220	110	2.07 (227)	1.38 (151)	110	12.4 (1361)	14.5 (1588)	13.8 (1512)
230	115	2.16 (248)	1.44 (165)	115	13.0 (1488)	15.2 (1730)	14.4 (1653)
240	120	2.25 (270)	1.5 (180)	120	13.5 (1620)	15.8 (1890)	15.0 (1800)

## General safety information

**⚠ WARNING** *This product is intended for installation by a qualified service person. Use AWG NO. 12 solid conductor for wiring.*

**⚠ DANGER** *Failure to properly ground unit could result in severe electrical shock and/or death.*

**⚠ WARNING** *Disconnect power at the service breaker before installing or servicing. NOT FOR HOUSEHOLD USE - MAY CAUSE BURNS. " IMPROPRE A L'USAGE DOMESTIQUE - PUEUT OCCASIONNER."*

**⚠ WARNING** *All units must be supplied with a 3-wire service. The ground wire must be connected to the dryer's backplate.*

-- **NOTE:** Do not install dryer over washbasin --

## Installation - IMPORTANT - READ COMPLETELY BEFORE STARTING INSTALLATION PROCEDURE

1. Make sure power supply breaker is switched off. Installation must be carried out in accordance with the current edition of the local wiring regulations code having jurisdiction. Installation should be performed only by a qualified electrician.
2. Place template against wall at desired height (see mounting height recommendations) and mark locations of 4 mounting holes and wire service entry at knockout (KO) location.  
**Note:** For two or more dryers, dryers should be no closer than 24 inches (610 mm) on center.
3. Remove and retain 2 cover screws and cover.
4. **For in-wall (concealed) power supply** - Provide supply wire to KO location according to local code and attach securely to chassis at KO with appropriate strain relief connector (not supplied).
5. Attach dryer to wall. For wood wall/studs use 1/4" dia. (Ø6 mm) screws at length that will ensure 1" (25 mm) min. stud penetration. For masonry walls use expansion bolts or anchors for 1/4" dia. (Ø6 mm) screws to ensure penetration 1/4" (6 mm) deeper than anchor. Shim if necessary to ensure base plate is flat against wall.
6. Connect supply and ground wires to terminal block where indicated or connect supply wires to terminal block where indicated and connect ground wire to base plate with ground screw (Connections: A. Connect the live wire (colored Brown or Black) to the terminal block marked "L1". B. Connect the neutral wire (colored White or Grey) or connect the second live wire (colored Red or Orange) to the terminal block marked "N/L2". C. Connect the ground wire (colored green or green and yellow or bare conductor) to the terminal block marked "⊕" or to the green screw marked "⊕"). Colors of live and neutral wires depend on voltage of supply service and requirements of Building and Electrical Code having jurisdiction.
7. Replace cover. Do not over-tighten screws.
8. Switch on circuit breaker and test unit operation.
9. Complete and mail registration reply postcard.

## Installation Kit Included (find in carton)

1. Self-Threading screws (1/4" x 1-1/2") x 4 pcs
2. Metal Washer (3/8" x 7/8"x 1/16") x 4 pcs
3. Nylon bushing x 4 pcs
4. Security hex wrench (5/32") x 1 pc

### Service Tool Included (with installation kit)

Security hex driver (5/32") x 1 pc

➤ Please unpack the unit and check the quantity of the above tool and kit.

### Recommended mounting heights - from bottom edge of dryer above finished floor (AFF)

Men	50"	(1270 mm)
Women	47"	(1194 mm)
Children 4-7 years	35"	(889 mm)
Children 8-10 years	39"	(991 mm)
Children 11-13 years	43"	(1092 mm)
Children 14-16 years	47"	(1194 mm)
Handicaped	40"	(1016 mm)

Reference ADAAG Reach LIMIT (unrestricted)	AFF (maximum)
All Approaches	48" (1219 mm)

### Operation

- No-touch operation.
- Shake excess water from hands.
- Place hands under the outlet to start operation.
- Rub hands lightly and rapidly.
- Stops automatically after hands are removed.

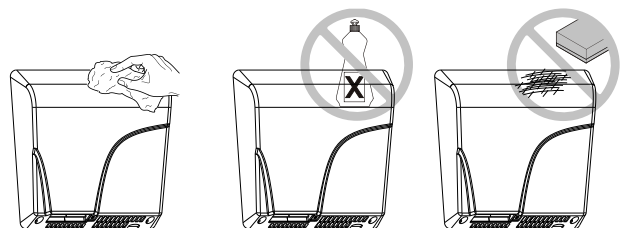
### Cleaning and Maintenance

Periodic cleaning of the unit is recommended to ensure optimum performance.

- Disconnect the electrical supply.
- Remove the two cover-mounting screws.
- Remove the cover.
- Clean all dust lint from the interior of the dryer.
- Wipe the cover with a damp cloth and mild cleaning solution. Do not Soak. Never use abrasives to clean the cover.
- Replace the cover. Do not over tighten the screws.

### Sensor range adjustment

1. The range is 2" to 13" [51 mm to 330 mm], standard setting is 7" [18 cm ± 2 cm]
2. Clockwise: Increases the sensing range(+) ↻
3. Counterclockwise: Decreases the sensing range(-) ↻
4. Use small Phillips head screwdriver or plastic flat blade probe to turn VR shaft on Circuit Board Module (CBM). **DO NOT OVERTURN!**



### Warranty

All of our dryers are designed and manufactured to provide years of dependable performance. Component parts are guaranteed to be free of defects in material and workmanship for a period of **Ten** years. This guarantee will be honored provided that the dryer is installed and maintained in accordance with the instructions. Parts damaged during the Installation are the purchaser's responsibility. **ASI's** warranty covers defects exclusively, and only liability for the replacement of defective parts will be accepted. This warranty does not cover wear and tear, or misuse and abuse. Transportation, freight costs and labor are also excluded. Defective parts must be returned prepaid, accompanied by the unit serial number, to the point of purchase. This warranty is granted solely to the original purchaser of the unit and is subject to registration.

## Diagnostics and Remedies

Symptom	Corrective Action
If the dryer will not run	First ensure that the breaker supplying the dryer is operational. If it is, disconnect the power and remove the dryer cover. Taking suitable precautions to avoid shock hazard, reconnect the power and check for voltage at the terminal block. If there is power and the dryer will not run, replace the circuit board module (CBM) and/or the sensor module and/or the power transistor (part of the wire harness, item 19/21).
If the dryer cycles by itself, runs all the time, or is not sensitive enough	Ensure that there is no obstruction on or in front of the infra-red sensor. Clean any dirt off the sensor lens. Try adjusting the sensitivity potentiometer on CBM (blue knob). If the problem persists, replace the CBM and/or the sensor module.
If the element gets hot but the fan motor does not turn	Disconnect the power. Remove the dryer cover and check for obstructions in the fan housing. Damaged fans must be replaced. If there are no obstructions, replace the motor.
If the unit runs but makes a buzz noise	Disconnect the power. Remove the dryer cover and check the fan for rubbing on the housing as it rotates. Replace fan if the condition exists.
If the fan motor runs but the element does not get hot (Dryer blows cold air)	Disconnect the power and remove the dryer cover. Check for loose or damaged wires. Remove the blower housing. Check the element for signs of burning or breakage. Damaged element must be replaced. If the element does not appear damaged, disconnect it at the CBM and check element wire continuity (see tech spec). An open circuit indicates damage to the element wire and to the integral temperature limit control (TLC). Separate the TLC and test for open circuit. If this is the case, replace the element and/or the thermostat.
If the motor makes ticking/winding noise when it runs	Disconnect the power. Remove the dryer cover and check the brushes for worn condition (less than 25/64" [10mm] graphite remains) and replace them, if necessary. Purchase rebuild kit to perform repair.

## Repair parts list

Key	Part #	Description	Key	Part #	Description
1	A0021	Cover	25	A0029	Nylon bushing (4 reqd.)
2	A0012	Cable clamp	26	A0034	Access hole plug
3	A0004	Motor	27	A0035	Rating label
4	A0005	Rubber grommet -Motor (4 reqd.)	28	A0030	Circuit diagram label (not shown)
5	A0006	Motor bracket	29	-	Screw (3 reqd. Ø4x8mm), philips pan head
6	A0007	Nylon washer -Motor (4 reqd.)	30	-	Screw (4 reqd. 1/4" dia. x1-1/2"), philips pan head
7	A0009	Circuit Board Module (CBM)	31	-	Screw (4 reqd. Ø5x10mm), philips pan head
8	A0022	Barrier plate	32	-	Screw (6 reqd. Ø4x10mm), philips pan head
9	A0036	Sensor Module, 7" cable	33	-	Screw (2 reqd. Ø3x6mm), philips pan head
10	A0023	Security hex screw with lock washer (2 reqd.)	34	-	Screw (4 reqd. Ø5x12mm), philips pan head
11	A0011	Grounding screw with cup washer	35	-	Screw (4 reqd. Ø4x6mm), philips pan head
12	A0010	Terminal block	36	-	Screw (1 reqd. Ø4x6mm), headless set (with 2mm hex key)
13	A0024	Base plate	37	-	Screw (2 reqd. Ø3x16mm), philips pan head
14	A0014	Blower housing - LH	38	-	Screw (1 reqd. Ø4x10mm), philips pan head with external tooth lock washer
15	A0013	Thermostat (TLC)	39	-	Mylar shield with <b>L1,N/L2,G</b> marked
16	A0015	Blower wheel	40	-	Wire nuts (2 reqd.) not shown
17	A0037	Heater assembly	41	-	Cable ties (2 reqd.) not shown
18	A0017	Blower housing - RH			
19	A0024	Power Transistor (part of item 21)			
20	A0018	Security hex wrench			
21	A0025	Wire harness (not shown)			
22	A0026	Motor brush (2 reqd.)			
23	A0001	Rubber grommet - Base (4 reqd.)			
24	A0028	Metal washer (4 reqd.)			

**Diagram** Patented No. D 542,976 S

