



# Hand Dryer

## Operating Instructions and Parts Manual Surface-mounted High-Speed hand dryer

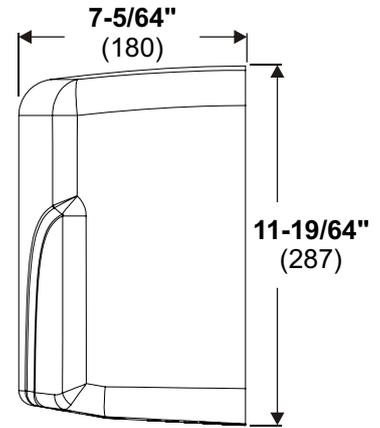
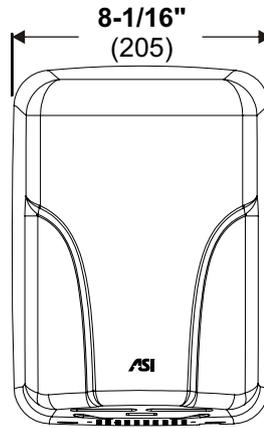
**PLEASE CAREFULLY READ THROUGH THIS MANUAL BEFORE USING THE PRODUCT. OBSERVING ALL SAFETY INFORMATION, WARNINGS AND CAUTIONS WILL PROTECT YOURSELF AND OTHERS. PLEASE KEEP INSTRUCTIONS FOR FUTURE REFERENCE.**



**MODEL # 0197-1**

**MODEL # 0197-2**

**Patent Pending**



Note:  
All Dim's  
inch[mm]

### TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage, 0197-1	120VAC, 50/60Hz, 1.4kW
Operating Voltage, 0197-2	240VAC, 50/60Hz, 1.4kW
Output Warm Air Volume	63.6CFM {108 m <sup>3</sup> /h}, Adjustable by Owner
Output Warm Air Temp	140°F {60°C} at ambient T = 77°F {25°C}, MAX, Adjustable by Owner
Output Air Speed	145.4mph (213ft/s) [65m/s {234km/h}] - 213mph (312ft/s) [95m/s {342km/h}], Adjustable by Owner
Sound Pressure	MIN 61.2 dB-A to 65.2 dB-A MAX @ 2m
Motor Type	1HP, 7 - 18k rpm, Adjustable, Brush Type, Dual Ball Bearings
Motor Thermal Protection	Auto resetting thermostat turns unit off at 275°F {135°C}
Heater Element	350 - 700W, Adjustable by Owner
Heater Thermal Protection	Auto Resetting Thermostat turns unit off at 185°F {85°C}, Resets at 167°F {75°C}
Drying Time	Less than 15 seconds
Circuit Operation	Infrared Automatic, self adjusting
Sensor Range 0197-1	5-1/8" to 13-25/32" {130 to 350}, Adjustable; Std 7" ± 25/32" {178 ± 20}
Sensor Range 0197-2	4" to 9" {100 to 230}, Adjustable; Std 7" ± 25/32" {178 ± 20}
Timing Protection	60 seconds auto shut off
Timing Duration	2 seconds delayed turn off after last sensor read
Cover Type	16 gauge {.063", [1.6]} thick drawn steel or 304 series stainless steel
Cover Finish	Porcelain Enamel on steel or Bright or Satin on stainless steel
Net Weight	12.8lbs {5.8kg}
Shipping Weight	13.7lbs {6.2kg}
Unit Size	8-1/16" W x 11-19/64 " H x 7-5/64" D {205 x 287 x 180}

Input	Model	Motor			Heater		Total	
		Vac	Inrush A(W)	Operating A(W)	Vac	Inrush / Operating A(W)	Inrush A(W)	Operating A(W)
115	0197-1	115	8.46 (972)	5.64 (648)	115	5.64 (648)	14.10 (1620)	11.28 (1296)
120	0197-1	120	8.75 (1050)	5.83 (700)	120	5.83 (700)	14.58 (1750)	11.66 (1400)
208	0197-2	208	3.83 (798)	2.55 (532)	208	2.55 (532)	6.38 (1330)	5.10 (1064)
230	0197-2	230	4.23 (972)	2.82 (648)	230	2.82 (648)	7.05 (1620)	5.64 (1296)
240	0197-2	240	4.38 (1050)	2.92 (700)	240	2.92 (700)	7.30 (1750)	5.84 (1400)

## General safety information

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

**⚠ WARNING** Disconnect power at the service breaker before installing or servicing.

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

**⚠ 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

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" (610) on center.
3. Remove and retain 2 cover screws and cover.
4. a. **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).  
b. **For Surface Mounted Conduit (exposed) power supply -**  
Provide appropriate conduit to entry location according to local code and attach securely to chassis with correct strain relief connector (not supplied).
5. Drill four (4) holes at locations A, B, C and D of 5/16" Diameter (Ø8) x 1-3/8" (35) deep if using wall anchors supplied with unit. Install supplied anchors flush with wall face, or install other fastening system suitable for wall conditions (not supplied). Attach dryer to wall. For wood wall/studs use 1/4" dia. (M6) screws at length that will ensure 1" (25) min. stud penetration. For masonry walls use expansion bolts or anchors for 1/4" dia. (M6) screws to ensure penetration 1/4" (6) 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, Red or Black) to the terminal block marked "L".
  - B. Connect the neutral wire (colored Black, Blue, White or Grey) or connect the second live wire (colored Red or Orange) to the terminal block marked "N".
  - C. Connect the ground wire to the terminal block marked "⊕" or to the green screw marked "⊕".  
Bare grounding (earth) wires should be sleeved with green and yellow or green tubing.  
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.

## Installation Kit Included (find in carton)

1. Self-Threading screws 1/4" x 1-1/2" [M6 x 38] x 4 pcs
2. Metal Washer 3/8" I.D. x 7/8" O.D. x 1/16" thick [Ø10 x Ø22 x 1.6] x 4 pcs
3. Plastic expansion anchor 5/16" dia. x 1-3/8" (Ø8 x 35) x 4 pcs
4. Nylon bushing x 4 pcs

### Service Tool Included (with installation kit)

Security hex driver 4 mm x 1 pc (5/32" pin-hex will work if tool is lost)

➤ 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)

SEE TEMPLATE 1807060919

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

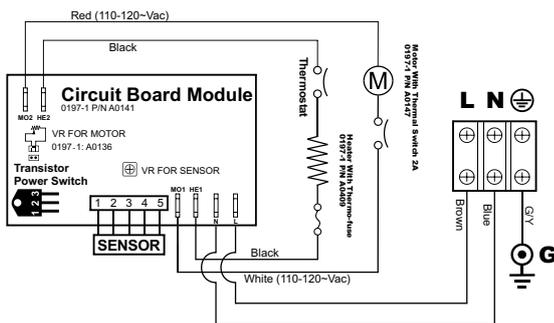
Reference 2010 ADA Accessibility Standards  
AFF (maximum)

Reach LIMIT (unrestricted)

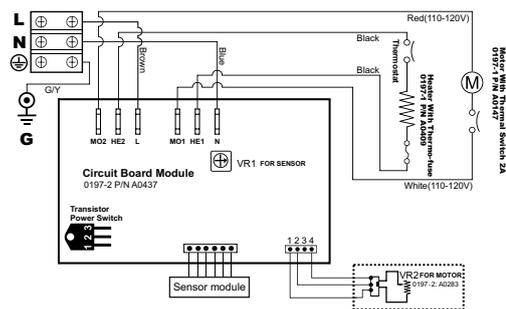
All Approaches 48" (1219)

### Circuit Diagram

110-120~Vac



208-240~Vac



### Operation

- Shake excess water from hands.
- Place hands under the nozzle and dryer automatically starts operation.
- Rub hands lightly and rapidly under the nozzle.
- Dryer stops when hands are removed from sensor zone or if maximum time is reached.

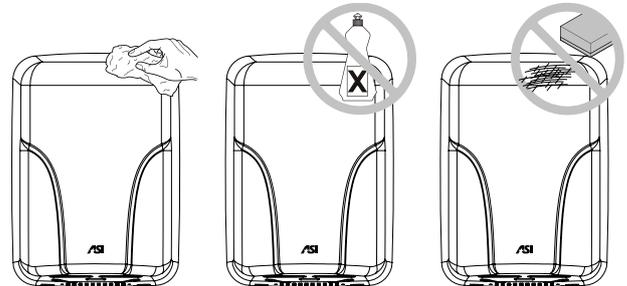
### Warranty

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 **Five** 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.

**Cleaning and Maintenance**

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

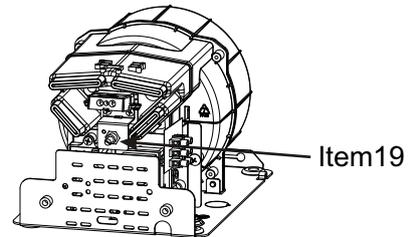
- Disconnect the electrical supply.
- Remove the two cover-mounting screws.
- Remove the cover.
- Clean all dust lint from the interior of the dryer.
- Wipe the cover with a damp cloth and mild cleaning solution. Do not Soak. Never use abrasives to clean the cover.
- Replace the cover. Do not over tighten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



Patent Pending

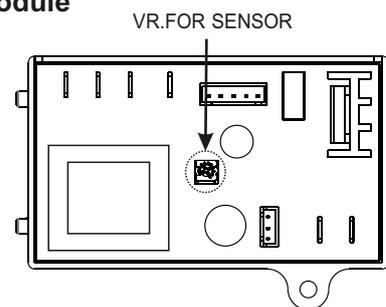
**Speed Adjustment Procedure**

1. Switch off the power, loosen the cover screws and remove the cover. The adjustment potentiometer shaft (Item 19) can be seen.
2. Use small Philips head screwdriver or plastic flat blade probe to gently turn VR shaft. Turn clock-wise [CW] to increase power to maximum (+) ↻, turn counterclockwise [CCW] to reduce power as required (-) ↻.
3. **DO NOT OVERTURN!** Note that at minimum power the unit may not start if low line voltage condition exists.



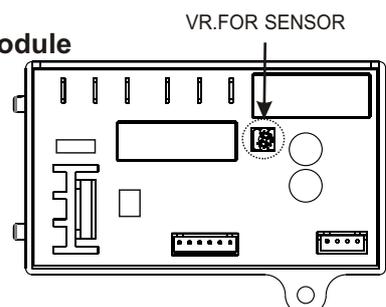
**Sensor range adjustment** For 110~120V Circuit Board Module

1. The range is 5-1/8" to 13-25/32" [130 to 350], standard setting is 7" [178 ± 20].
2. Turn CW: Increases the sensing range (+) ↻.
3. Turn CCW: 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!**



**Sensor range adjustment** For 208~240V Circuit Board Module

1. The range is 4" to 9" [100 to 230], standard setting is 6-11/16" [170 ± 20].
2. Turn CW: Increases the sensing range (+) ↻.
3. Turn CCW: 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!**



**Diagnostics and Remedies**

Symptom	Corrective Actions for Initial Installation Failures
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. Verify that connections are made correctly. Adjust the VR to make sure it is not set too low.
The dryer cycles by itself or runs constantly	Ensure that there is no obstruction on or in front of the IR sensor. Clean any dirt or debris off the sensor lens. If problem persists, replace sensor.
The dryer makes a loud noise and does not run for a complete cycle	Ensure that the supply Voltage is correct. Dryer will make a loud humming noise if the input Voltage is too high. Verify Voltage requirement on unit rating label and correct supply as required. If CBM has been damaged, replace CBM, IR sensor module and VR component and cable.
The dryer runs but air stream is low pressure and/or low velocity	Ensure that the supply Voltage is correct. Dryer will run weakly if the input Voltage is too low. Verify Voltage requirement on unit rating label and correct supply as required.

Symptom	Corrective Actions for In-Service Failures
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. Replace the CBM and IR sensor module. Test the VR for open circuit (see Technical Specifications for value). Replace VR if $\Omega = \infty$ . Taking suitable precautions to avoid shock hazard, reconnect the power and check for Voltage at the terminal block.
The IR sensor only "sees" close range objects	For 208~240 V: Disconnect power from unit; disconnect heater element from circuit; check resistance ( $\Omega$ ) of element with multimeter. If $\Omega$ is off-scale infinitely large then replace element. If $\Omega$ is between 18 and 23 then check motor brushes for wear and replace them if remaining graphite is $\leq 25/64"$ [10]. If after reassembly and testing there is still no motor function then replace motor.
The heater gets hot but no air stream is produced	Ensure that there is no obstruction on or in front of the IR sensor. Clean any dirt or debris off the sensor lens. If problem persists, disconnect the power and remove the dryer cover. Taking suitable precautions to avoid shock hazard, reconnect the power and try carefully adjusting the sensitivity control (yellow shaft in blue box on CBM) to increase the sensing range. If problem persists, replace sensor.
The dryer only blows cold air during a full cycle	Disconnect the power. Remove the dryer cover and disassemble the blower-motor/fan housing. Replace the fan motor.
The air stream is low pressure and velocity	Disconnect the power. Remove the dryer cover and disassemble the blower-motor/fan housing. Test the thermostat for open circuit. Check the heater element for signs of burning or breakage. Damaged element must be replaced.
	Check the output nozzle for obstructions. If none are present, disconnect the power. Remove the dryer cover. Remove any dust/lint buildup from intake vent slots. Disassemble the blower-motor/fan housing. Check the motor brushes for worn condition ( $\leq 25/64"$ [10] graphite remains) and replace them, if necessary.

### Repair parts list

Key	Part #	Description	Qty	Key	Part #	Description	Qty
1		Cover	1	26	A0133	Mylar shield with <b>LNG</b> marked	1
	A0404	Steel - Porcelain Enamel		27	A0010	Terminal block	1
	A0405	Stainless Steel - Bright		28	A0414	Base plate	1
	A0406	Stainless Steel - Satin		29		Caution Branch Circuit label	1
2		Rating Label	1		A0131	12A - 110-120Vac	
	A0151	0197-1			A0132	8A - 208-240Vac	
	A0152	0197-2		30	A0011	Grounding screw with cup	1
3	A0123	Security hex screw	2	31	A0001	Rubber grommet -Base	4
4	A0124	Security hex screw wrench	1	32	A0028	Metal washer	4
5		Label, Circuit Diagram	1	33	A0029	Nylon bushing	4
	A0415	110-120Vac		34	-	Self threading screw 1/4"x1-1/2", 4 philips pan head	
	A0501	280-240Vac		35	-	Self threading screw M4x12, philips pan head	4
6	A0068	CAUTION label	1	36	-	Self threading screw M4x10, philips pan head	5
7	A0176	Cable protector	1	37	-	Screw M3x8, philips pan head	2
8	A0407	Blower housing - Upper	1	38	-	Screw M5x10, philips pan head	3
9	A0029	Motor rubber - Large	1	39	-	Screw M4x10, philips pan head with external tooth lock washer	1
10	A0147	Motor - 1HP@120Vac	1	40	-	Screw M3x16, philips pan head	2
11	A0202	Motor rubber - Small	1	41	-	Screw M4x12, philips pan head	2
12	A0408	Blower housing - Below	1	42	-	Screw M4x8, philips pan head	2
13		Heater assembly		43	A0279	Motor brushes	2
	A0409	700W@120Vac, 20.6Ω	1				
14	A0411	Air Outlet	1				
15	A0170	Sensor bracket	1				
16		Sensor module	1				
	A0129	110-120Vac					
	A0259	208-240Vac					
17	A0130	Sensor protector	1				
18	A0063	Sensor rubber seal	1				
19		Variable resistance (VR)	1				
	A0136	110-120Vac					
	A0283	280-240Vac					
20	A0412	VR bracket	1				
21	A0149	VR mounting nut	1				
22		Circuit Board Module (CBM)	1				
	A0141	110-120Vac					
	A0437	208-240Vac					
23		CBM terminal legend label	1				
	A0143	110-120Vac					
	A0276	208-240Vac					
24	A0413	Air outlet bracket	1				
25	A0012	Nylon cable clamp	1				

**Assembly Diagram**

**0197**

