Hand Dryer

Operating Instructions and Parts Manual

Surface-mounted ADA-compliant hand dryer

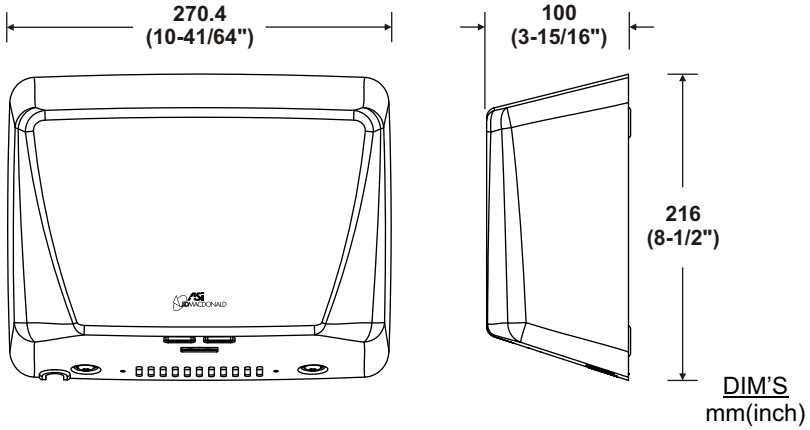
PLEASE CAREFULLY READ THROUGH THIS MANUAL BEFORE USING THE PRODUCT. OBSERVING ALL SAFETY INFORMATION, WARNINGS AND CAUTIONS WILL PROTECT YOURSELF AND OTHERS. PLEASE KEEP INSTRUCTIONS FOR FUTURE REFERENCE.

MODEL # 10-0199-2-00

MODEL # 10-0199-2-93

MODEL # 10-0199-2-41

Patented



TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage, 10-0199-2	220-240VAC, 50/60Hz, 4.2A, 1.0KW
Output Warm Air Volume	71-105m³/h [42-62CFM], adjustable by owner
Output Warm Air Temp	55°C when ambient Temp = 25°C. MAX adjustable by owner
Output Air Speed	124mph (182ft/s) [55.4m/s {199km/h}] - 184mph (270ft/s) [82.2m/s {296km/h}], adjustable by owner
Motor Type	500W, 22000-29000rpm, adjustable, brush type, dual ball bearings
Motor Thermal Protection	Auto resetting thermostat turns unit off at 95°C
Heater Element	Range adjustable by owner, 275-500 W
Heater Thermal Protection	Auto resetting thermostat turns heater element off at 85°C, resets at 75°C, thermal cut-off at 142°C
Drying Time	Less than 15 seconds
Standby Power	Less than 0.5W
Circuit Operation	Infrared automatic, self adjusting
Sensor Range	100mm to 230mm adjustable; standard 170mm ± 20mm
Timing Protection	60 seconds auto shut off
Timing Duration	1 second delayed turn off after last sensor read
Sound Level	MIN 60.5dB-A to 67.2dB-A MAX @ 2m, adjustable by owner
Drip Proof	IP24
Cover Type	18gauge [.047", 1.2mm] thick drawn steel or 304 series stainless steel
Cover Finish	Powder coating white or matte black on steel or satin on stainless steel
Net Weight	3.8kg
Shipping Weight	4.2kg
Unit Size	270.4mm W x 216mm H x 100mm D [10-41/64" x 8-1/2" x 3-15/16"]

Input	Model	Motor			Heater		Total	
VAC	№	Vac	Inrush A(W)	Operating A(W)	Vac	Operating A(W)	Inrush A(W)	Operating A(W)
220	10-0199-2	220	2.86 (630)	1.91 (420)	220	1.91 (420)	4.77 (1050)	3.82 (840)
230	10-0199-2	230	2.99 (689)	2.00 (459)	230	2.00 (459)	4.99 (1148)	3.99 (918)
240	10-0199-2	240	3.13 (750)	2.08 (500)	240	2.08 (500)	5.21 (1250)	4.17 (1000)

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. NOT FOR HOUSEHOLD USE - MAY CASE BURNS.**

⚠ 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 - 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. a. **For in-wall (concealed) power supply - (See MT & IG 1207101509)**
   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 Ø5/16" (Ø8) Diameter x 1-3/8" (35mm) 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 Ø1/4 inch (M6) screws at length that will ensure 1 inch (25 mm) min. stud penetration. For masonry walls use expansion bolts or anchors for Ø1/4 inch (M6) screws to ensure penetration 1/4 inch (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, 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" x 7/8"x 1/16" (Ø10 x Ø22 x 1.6 thk) x 4 pcs
3. Nylon bushing x 4 pcs

Service Tool Included (with installation kit)

Security hex wrench 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 Mounting Template & Installation Guide (MT & IG)
1207101509 (Supplied with unit)

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

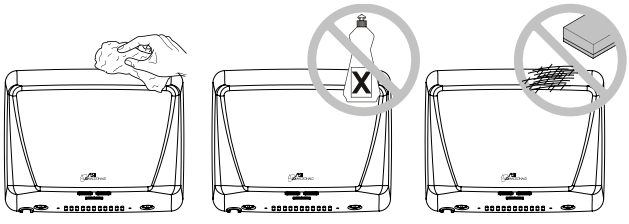
Operation

- **S**hake excess water from hands.
- **P**lace hands under the nozzle and dryer automatically starts operation. LED in sensor array shines blue light during operation to guide user to optimal hand placement for fastest drying time.
- **R**ub hands lightly and rapidly under the nozzle.
- **D**ryer stops when hands are removed from sensor zone or if maximum time is reached.
- **S**ensor Adjustment Control:
  Clockwise: Lengthen the sensing range(+)
  Counterclockwise: Shorten the sensing range(-)
  DO NOT OVERTURN!

Cleaning and Maintenance

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

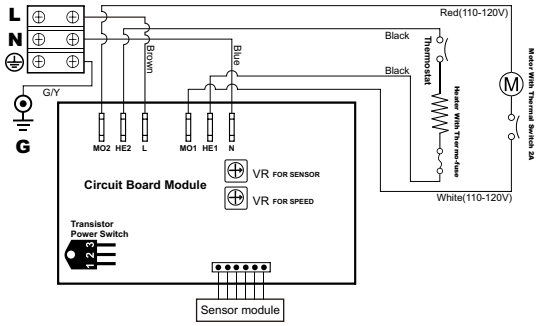
- Disconnect the electrical supply.
- Remove the two cover-mounting screws.
- Remove the cover.
- Clean all dust lint from the interior of the dryer.
- Wipe the cover with a damp cloth and mild cleaning solution. Do not Soak. Never use abrasives to clean the cover.
- Replace the cover. Do not over tighten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



Patented

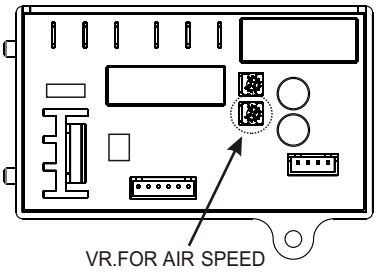
Circuit Diagram

Supply:220-240VAC, 50/60Hz



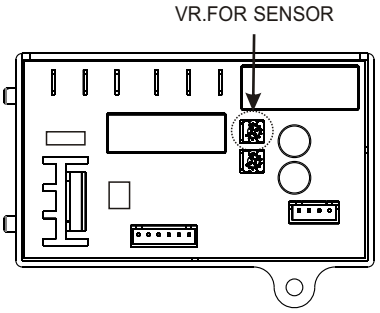
Warm air speed adjustment

1.Switch off the power, loosen the cover screws and remove the cover.
2.Use small Philips head screwdriver or plastic flat blade probe to turn VR shaft. Clock-wise [CW] to increase power to maximum (+) ↻, turn tool gently [CCW] to reduce power as required(-) ↺.



Sensor range adjustment

1.The range is 4" to 9" [100 mm to 230 mm], standard setting is 7" [170 mm ± 20 mm].
2.Clockwise: Increases the sensing range(+) ↻ .
3.Counterclockwise: Decreases the sensing range(-) ↺.
4.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.
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.
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 or disconnect heater element from circuit;check resistance (Ω) of element with multimeter. If Ω is off-scale infinitely large then replace element. If Ω is between 25 and 30 then check motor brushes for wear and replace them if remaining graphite is ⩽ 25/64" [10mm]. If after reassembly and testing there is stil no motor function then replace motor. 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	Ensure that there is no obstruction on or in front of the IR sensor. Clean any dirt or debris off the sensor lens. Check VR for sensor range setting. If problem persists, disconnect the power and remove the dryer cover and replace CBM, IR sensor module.
The air stream is low pressure and velocity	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. Check VR for speed setting. Disassemble the blower-motor/fan housing. Check the motor brushes for worn condition (⩽ 25/64" [10 mm] graphite remains) and replace them, if necessary.

Repair parts list

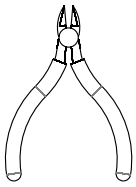
Key	Part #	Description	Qty
1	A0245	Blower housing - Upper	1
2	A0168	Motor rubber - Upper	1
3	A0246	Motor brushes	2
4		Motor	1
	A0247	500W@120Vac	
5		Heater assembly	1
	A0249	500W@120Vac,28.8Ω	
6	A0251	Motor rubber - Lower	1
7	A0252	Blower housing - Lower	1
8	A0001	Rubber grommet -Base	4
9	A0028	Metal washer	4
10	A0029	Nylon bushing	4
11	A0253	Base plate	1
12	A0011	Grounding screw with cup washer	1
13	A0133	Mylar shield with LNG marked	1
14	A0183	Nylon cable clamp	1
15	A0010	Terminal block	1
16	A0254	Blower mounting bracket	1
17		Circuit Board Module (CBM)	1
	A0430	220-240Vac	
18	A0258	Sensor bracket	1
19	A0512	Sensor module	1
20	A0433	Label, Circuit Diagram 220V	1
21		Cover	1
	A0294	Steel - Powder coating white ASI-JD	
	A0296	Stainless steel - Satin ASI-JD	
	A0416	Steel - Powder coating matte black ASI-JD	
22	A0068	CAUTION label	1
23	A0099	Security hex cap head 1/4"-20 x 5/8" screw with lock washer	2
24	A0176	Cable protector	1
25	-	Self threading screw 1/4"x1-1/2", philips pan head	4
26	-	Screw M4x10, philips pan head	2
27	-	Self threading screw M4x10, philips pan head	8
28	-	Screw M3x16,philips pan head	2
29	-	Screw M4x10,philips pan head with external tooth lock washer	1
30	-	Screw M5x8,philips pan head with external tooth lock washer	2
31	-	Screw M5x10,philips pan head	2
32	-	Wires Harness (Not Shown)	1
33	A0124	Security hex wrench	1
34	A0276	CBM terminal legend label	1
35		Rating label	1
	A0297	10-0199-2 220-240 VAC	
36		Caution Branch Circuit label	1
	A0268	8.0A- 240Vac	
37	A0335	Power cord (No shown)	1

Assembly Diagram

Tools Req'd (Provided in kit)

Security hex wrench
Item 33

Tools Req'd (Not provided)

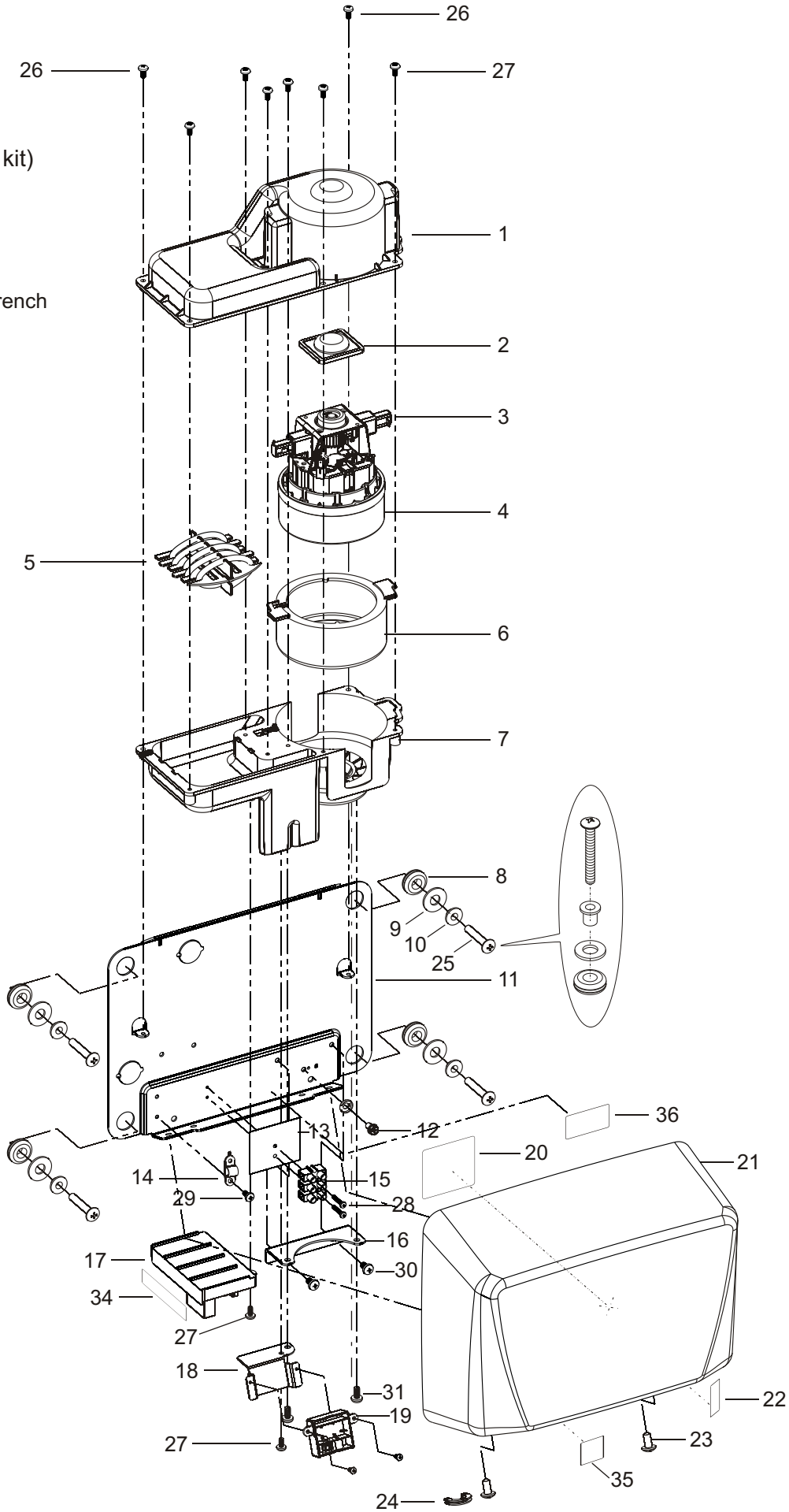


Wire cutter

Philips #1/ #2

Crimp tool

Flat blade



Patented