



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.

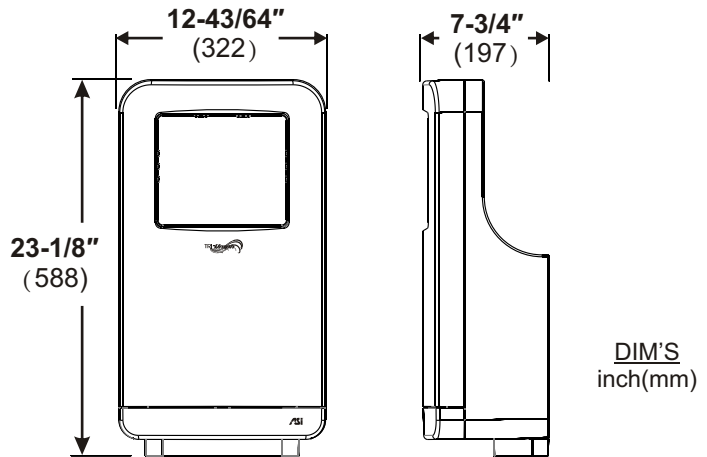


MODEL # 20200-1

MODEL # 20200-2

MODEL # 20200-3

Patent Pending



TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage, 20200-1	120 VAC, 50/60 Hz, 1.2kW
Operating Voltage, 20200-2	240 VAC, 50/60 Hz, 1.2kW
Operating Voltage, 20200-3	277 VAC, 60 Hz, 1.2kW
Output Warm Air Volume	55 - 76 CFM {89 - 124 m ³ /h}, Adjustable by Owner
Output Warm Air Temp	122°F {50°C} at ambient T = 77°F {25°C}, MAX, Adjustable by Owner
Output Air Speed	145 mph (213 ft/s) [65 m/s {234 km/h}] - 224 mph (328 ft/s) [100 m/s {360 km/h}], Adjustable by Owner
Sound Pressure	MIN 65 dB-A to 69.8 dB-A MAX @ 2m
Motor Type	1 HP, 11 - 20 krpm, Adjustable, Brush Type, Dual Ball Bearings
Motor Thermal Protection	120 VAC, Auto Resetting Thermostat turns unit off at 275°F {135°C}
	240 VAC/ 277 VAC, Auto Resetting Thermostat turns unit off at 203°F {95°C}
Heater Element	ON/ OFF Heating options; Range Adjustable by Owner, 300 - 450 W
Heater Thermal Protection	Auto Resetting Thermostat turns heater element off at 185°F {85°C}, Resets at 167°F {75°C}, Thermal cut-off at 288°F {142°C}
Drying Time	Less than 15 seconds
Standby Power	1W
LED Color	Standby: color red; Active: color blue
Circuit Operation	Infrared Automatic, self adjusting
Sensor Range	4-23/32"±25/64" {120 ± 10}
Timing Protection	60 seconds auto shut off
Timing Duration	1 second delayed turn off after last sensor read
Cover Type	1/8" {3.0} thick molded ABS plastic
Net Weight	23.8 lbs {10.8 kg}
Shipping Weight	28.2 lbs {12.8 kg}
Unit Size	12-43/64" W x 23-1/8" H x 7-3/4" D {322 x 588 x 197}

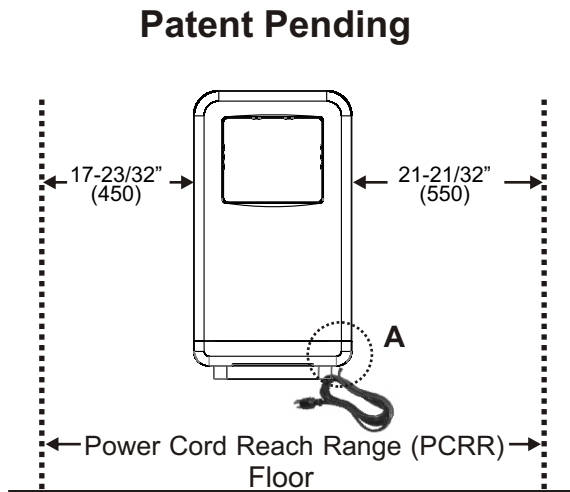
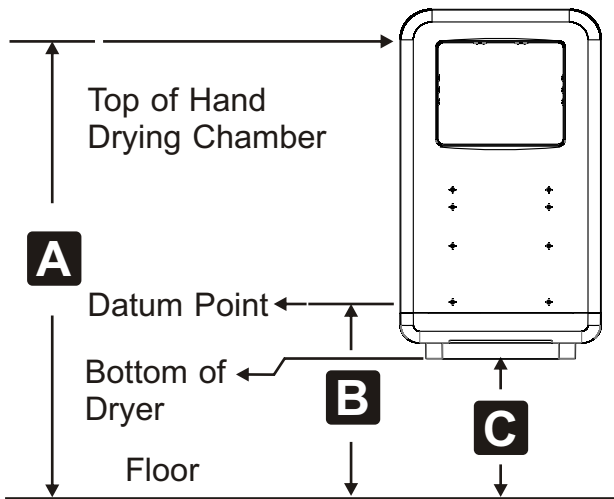
Input	Model	Motor			Heater		Total	
		Vac	Inrush A(W)	Operating A (W)	Vac	Inrush / Operating A(W)	Inrush A(W)	Operating A(W)
110	20200-1	110	8.59 (945)	5.73 (630)	110	3.44 (378)	12.03 (1323)	9.17 (1008)
115	20200-1	115	8.98 (1033)	5.99 (689)	115	3.59 (413)	12.58 (1446)	9.58 (1102)
120	20200-1	120	9.38 (1125)	6.25 (750)	120	3.75 (450)	13.13 (1575)	10.00 (1200)
208	20200-2	208	4.06 (845)	2.71 (563)	208	1.63 (338)	5.69 (1183)	4.33 (901)
220	20200-2	220	4.30 (1125)	2.86 (630)	220	1.72 (378)	6.02 (1323)	4.58 (1008)
230	20200-2	230	4.49 (1033)	2.99 (689)	230	1.80 (413)	6.29 (1446)	4.79 (1102)
240	20200-2	240	4.69 (1125)	3.13 (750)	240	1.88 (450)	6.56 (1575)	5.00 (1200)
277	20200-3	240	4.69 (1125)	3.13 (750)	240	1.88 (450)	6.56 (1575)	5.00 (1200)

Recommended Mounting Heights

Above Finished Floor (AFF)

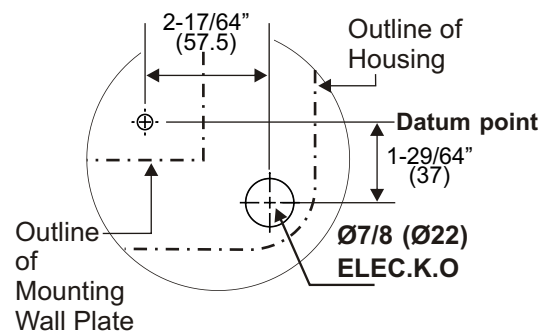
See Mounting Template on Installation Guide 1203270822

DIM'S inch(mm)	A From Top of Hand Drying Chamber	B From Datum Point	C From Bottom of Dryer
Men	45-9/32" (1150)	27-61/64" (710)	24-31/64" (622)
Women	42-33/64" (1080)	25-13/64" (640)	21-47/64" (552)
Children 4-7 years	30-45/64" (780)	13-25/64" (340)	9-59/64" (252)
Children 8-10 years	34-41/64" (880)	17-21/64" (440)	13-55/64" (352)
Children 11-13 years	37-63/64" (965)	20-43/64" (525)	17-13/64" (437)
Children 14-16 years	42-33/64" (1080)	25-13/64" (640)	21-47/64" (552)
Handicapped	35-7/16" (900)	18-7/64" (460)	14-41/64" (372)



Socket Location

The dryer is supplied with a power cord. The power cord entry position is in the rear, right side bottom of dryer. The length of the power cord is 39-3/8" (1M). The power cord can reach to the right side within the distance of 21-21/32" (550) and reach to the left side within the distance of 17-23/32" (450). Alternatively the unit may be hard wired to a terminal block through a rear panel KO.



Detail A Unit Rear

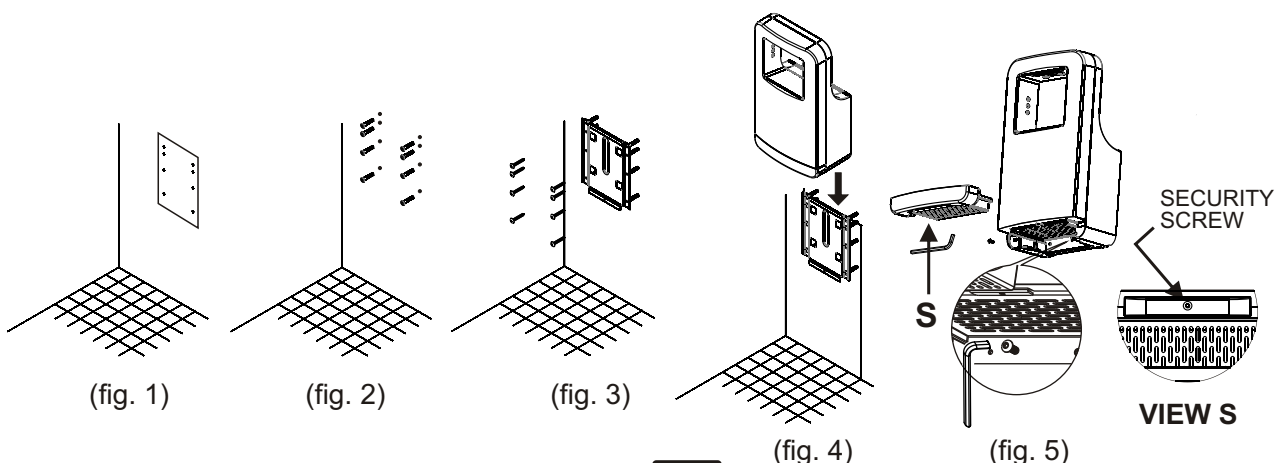
Installation

See Installation Guide 1203270822

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 requiring hard wiring should be performed only by a qualified electrician.
2. Place template against wall at desired height (see mounting height recommendations) and mark locations of eight (8) 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. Use L-Key (supplied) to unlock security hex socket screw and withdraw filter access drawer.
4. a. Drill eight (8) holes at locations marked of $\varnothing 9/32"$ ($\varnothing 7$) x 1-3/8" (35) deep if using wall anchors supplied with unit (fig.1)
 b. Remove template and Insert eight (8) plastic anchors (supplied) into drilled holes (fig. 2). Install supplied anchors flush with wall face, or install other fastening system suitable for wall conditions (not supplied).
 c. Attach base plate to wall by inserting eight (8) screws (supplied) to fix backplate into plastic anchors (fig. 3). For wood wall/studs use $\varnothing 1/4$ inch (M6) screws at length that will ensure 1 inch (25) min. stud penetration. For masonry walls use expansion bolts or anchors for $\varnothing 1/4$ inch (M6) screws to ensure penetration 1/4 inch (6) deeper than anchor. Shim if necessary to ensure base plate is flat against wall.
5. a. Hang the dryer on the base plate (fig. 4).
 b. **For in-wall (concealed) power supply -**
 Provide supply wire to KO location according to local code and attach securely to chassis at KO with strain relief connector (supplied).
 c. **For Surface Mounted Conduit (exposed) power supply or using power cord (supplied) -**
 Provide appropriate conduit to entry location according to local code and attach securely to chassis with correct strain relief connector (not supplied) or install unit on wall within PCRR to duplex outlet.
 d. Install locking screw (supplied) into wall plate through the hole at backplate center bottom. (fig. 5)
6. a. Connect hard wired power provided at KO location to terminal block behind cover panel (RH-bottom) behind filter drawer. Turn on circuit breaker to initiate 'stand by- ready to operate' status.

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 " \oplus ". 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.
- b. Connect power cord to initiate 'stand by- ready to operate' status.
7. Replace the filter access drawer, being careful to not over-tighten the security screw.
 8. See separate sections for owner options on heater operation and air speed adjustment.

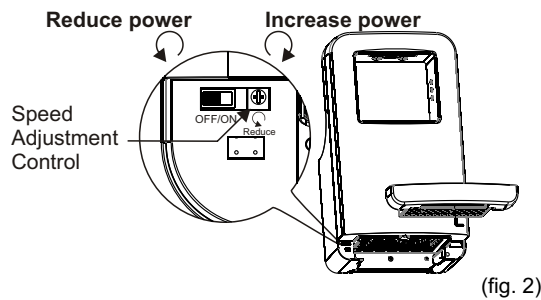
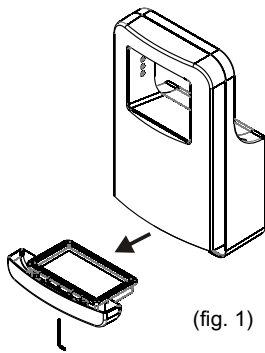


Air Speed Adjustment

Sound volume during operation may be modified by adjusting the motor speed. When lowering the motor speed, the drying time will increase. The factory setting for dryer motor speed is high.

To adjust the dryer motor speed:

1. Use L-Key (supplied) to unlock and withdraw filter access drawer. (fig. 1).
2. Use small flat blade screwdriver, gently turn adjustment control (fig. 2) shaft clock-wise [CW] to increase power to maximum (shaft will hard stop; DO NOT OVERTURN!). Turn tool gently CCW to reduce power as required (shaft will hard stop; DO NOT OVERTURN!). Note that at minimum power the unit may not start if low line Voltage condition exists.
3. Replace the filter access drawer and lock the security screw, being careful to not over tighten screw.



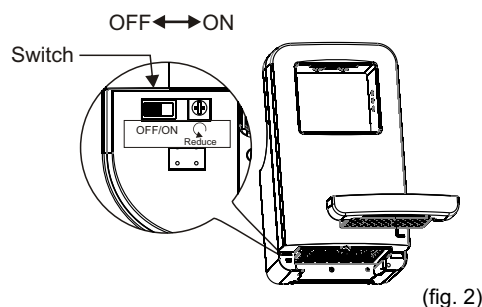
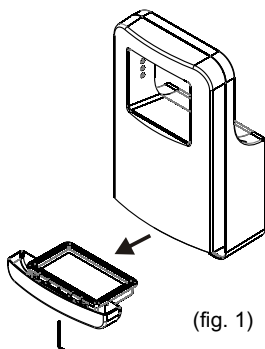
Patent Pending

Heater Element Switch ON / OFF

Dryer has a switch that can turn the heater ON or OFF. The heater switch doesn't affect the drying time. In cold climates, it may be more comfortable if it is on when drying hands. However, it will save a third of the energy if it is off. This function can be adjusted depending on the needs of the owner. The factory setting for the heater is ON.

To turn the heater ON/OFF:

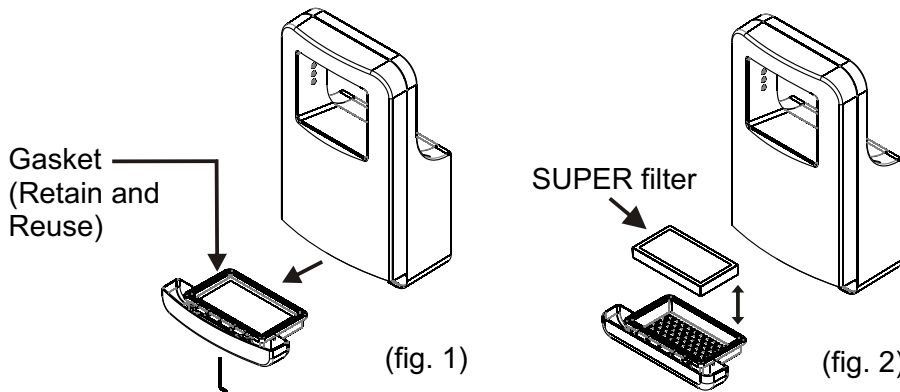
1. Use L-Key (supplied) to unlock and withdraw the filter access drawer. (fig. 1).
2. Switch it to the right to turn ON the heater. Switch it to the left to turn OFF the heater (fig. 2).
3. Replace the filter access drawer and lock the security screw, being careful to not over tighten screw.



Patent Pending

How to Change the SUPER Filter

1. Use L-Key (supplied) to unlock and withdraw the filter access drawer. (fig. 1).
2. Change the SUPER filter (fig. 2) by lifting up out of the drawer by lifting tabs. Dispose of the old filter appropriately and replace with a new filter, HEPA side (white) up. See P/L for replacement P/N.
3. Replace the filter access drawer and lock the security screw, being careful to not over tighten screw.



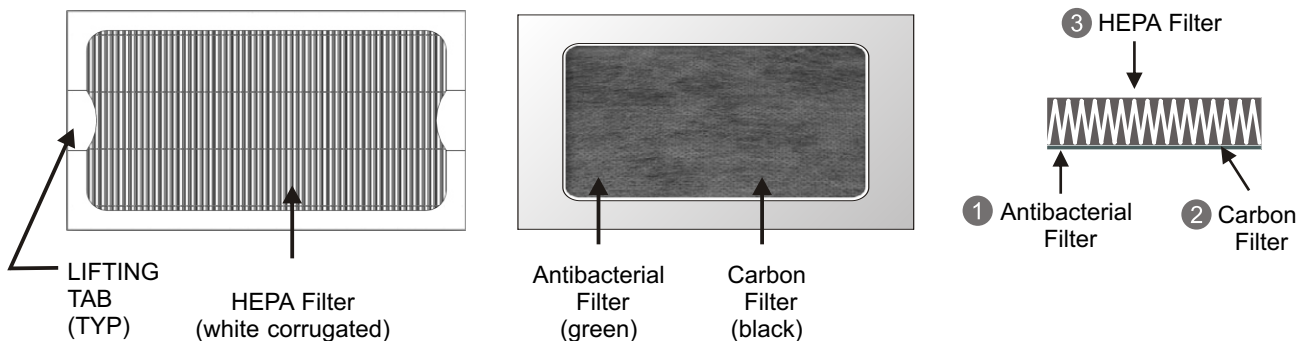
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Recommended Period for Changing the SUPER filter

SUPER Filter-

- In general use (normal indoor washrooms), it's recommended to change the SUPER filter every six (6) months.
- In dusty environments (factories, outdoor washrooms), it's recommended to change it every three (3) months.

SUPER filter Assembly Information



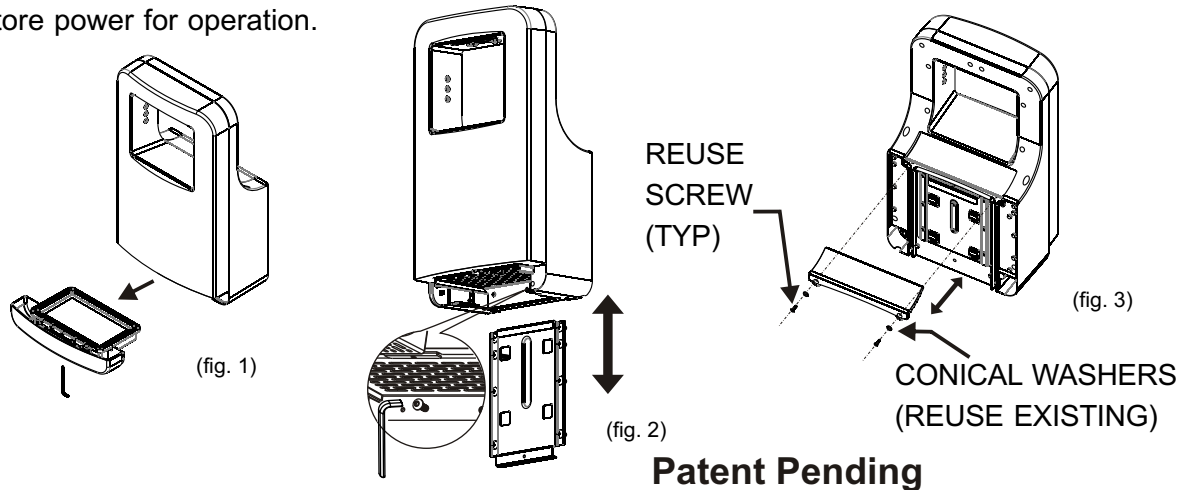
Instructions for use, maintenance and changing the absorbent ceramic water evaporator

The absorbent ceramic can absorb 70g of water, and has the capacity to take a full load approximately 280 times per day. The ceramic also can evaporate water. During normal use, water will be evaporated continuously and maintain the absorbent function.

Maintenance simply requires clearing its surface. Normally, its lifetime will be the same as the machine. Improper use or maintenance could result in breakage; see below for replacement instructions.

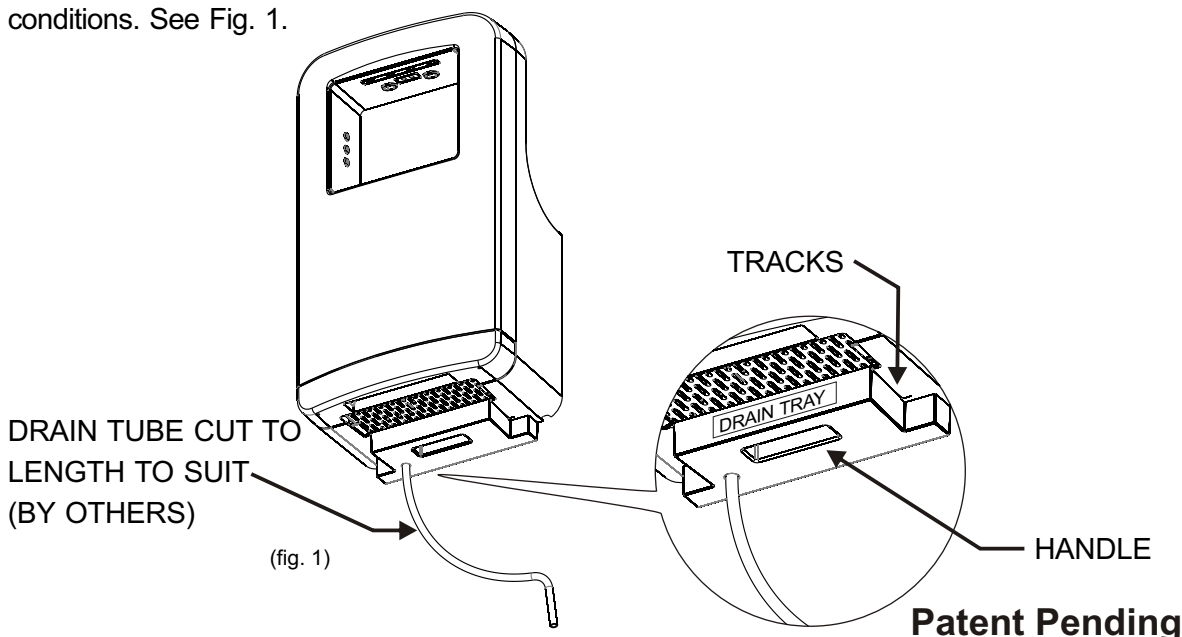
SEE PAGE 9. MAKE SURE POWER IS OFF PRIOR TO STEP Fig. 2

1. Use the L-Key to loosen the security screw and remove the filter access drawer. (fig. 1)
2. Use the L-Key to remove and retain the security screw from the base plate and remove the dryer. (Fig. 2)
3. Use a Philips screwdriver to loosen the two (2) screws on the ceramic, and replace it with a new one, making sure to use the washers and being careful to not over tighten the screws. (fig. 3)
4. Rehang the dryer back on the wall plate and secure the security screw into the base plate.
5. Reconnect in-wall power cord, if so equipped. Replace terminal cover.
6. Replace the filter drawer and lock the security screw, being careful to not over tighten the screw.
7. Restore power for operation.



Instructions for use of the drain tray

Generally, the remaining water following usage will evaporate from the absorbent ceramic plate. During high usage frequency events excessive water will flow automatically to the drain tray. The capacity of the drain tray is 8 oz (240 ml). It is recommended that the drain tray be cleaned every three (3) months under heavy usage conditions and every four to six (4 ~ 6) months under light usage conditions in indoor washrooms. The drain tray is retained on tracks molded into the bottom opening of the filter access drawer. It is important that the wide end of the drain tray be inserted first and be positioned fully at the back of the track. The bottom center recess is to be used as a finger grip handle to assist in removing and reinstalling the drain tray. Water will flow through the overflow drain port if the drain tray is full. A drain tube (not included) may be added as required by owner preference. The size of the drain tubing (by others) is I.D. 15/64" (Ø6), O.D. 25/64" (Ø10), length is determined per installation to suit conditions. See Fig. 1.



Warranty

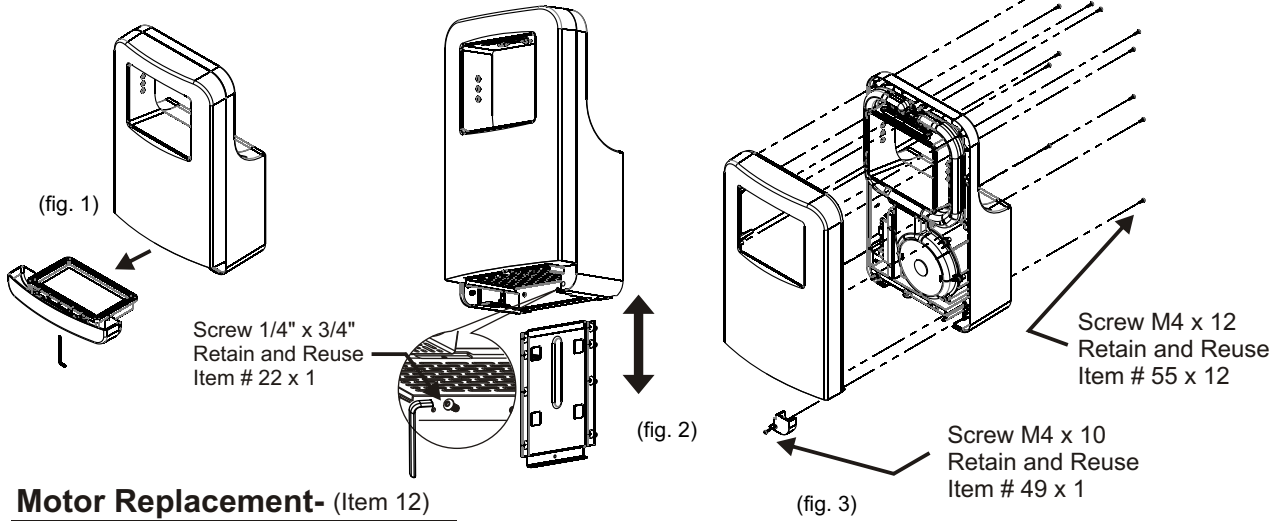
All of our dryers are designed and manufactured to provide years of dependable performance. Component parts are guaranteed to be free of defects in material and workmanship for a period of **Five (5)** years. This guarantee will be honored provided that the dryer is installed and maintained in accordance 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 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-2 (on item 34) to make sure it is not set too low and SW-1 (on item 34) to "ON".
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. If symptom continues after sensor replacement, then replace CBM.
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-LED module, VR-2/ SW-1 and CBM wire harnesses.
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.

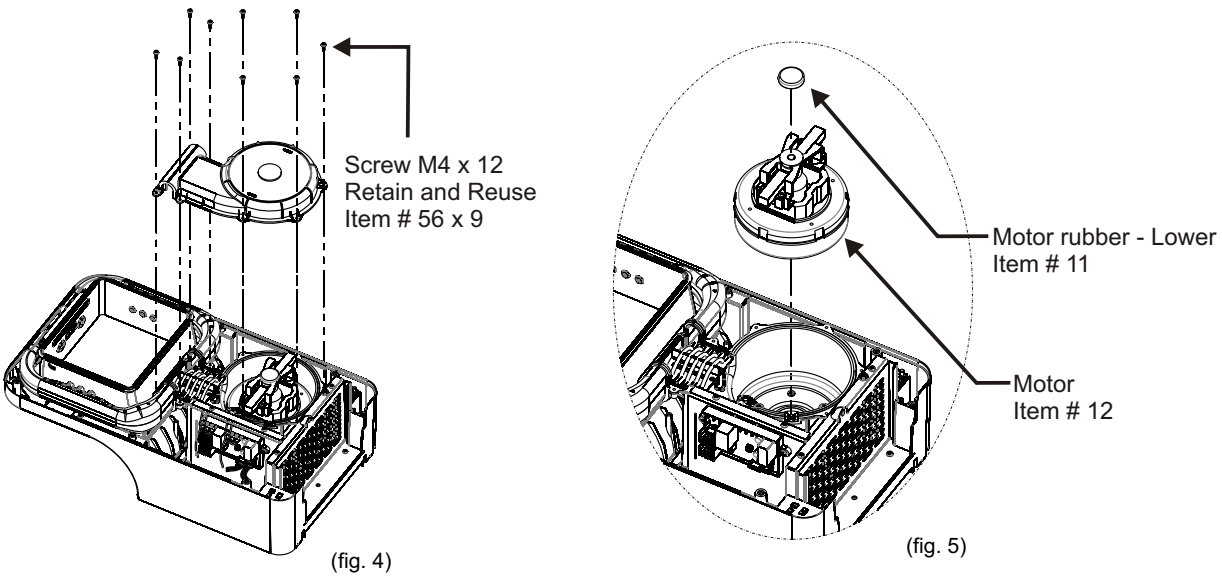
Common First Disassembly Steps

First, Make sure power is OFF before starting step fig. 2. **Second**, Either unplug power cord or disconnect in-wall power connections behind terminal cover (item 6) prior to starting step fig. 2.



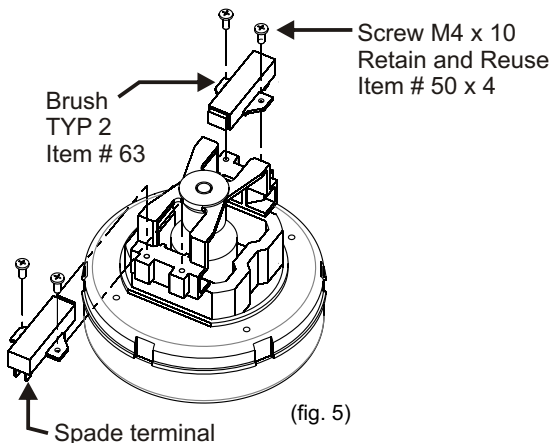
Motor Replacement- (Item 12)

Start with steps fig's 1-3



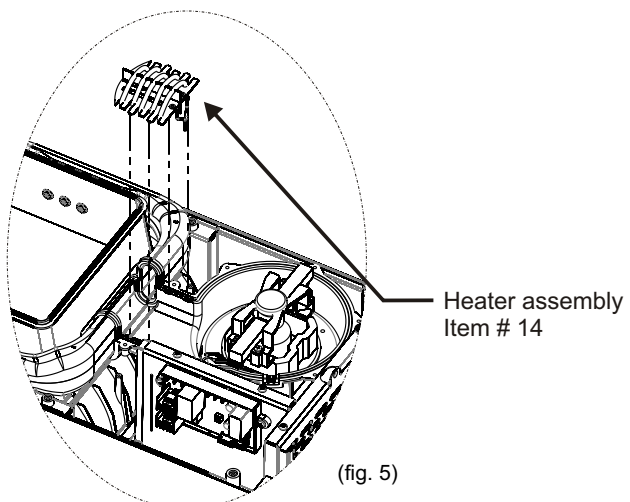
Brush Replacement- (Item 63)

Start with steps fig's 1-3. Remove blower housing upper (Item 9) see step fig. 4 under motor replacement.



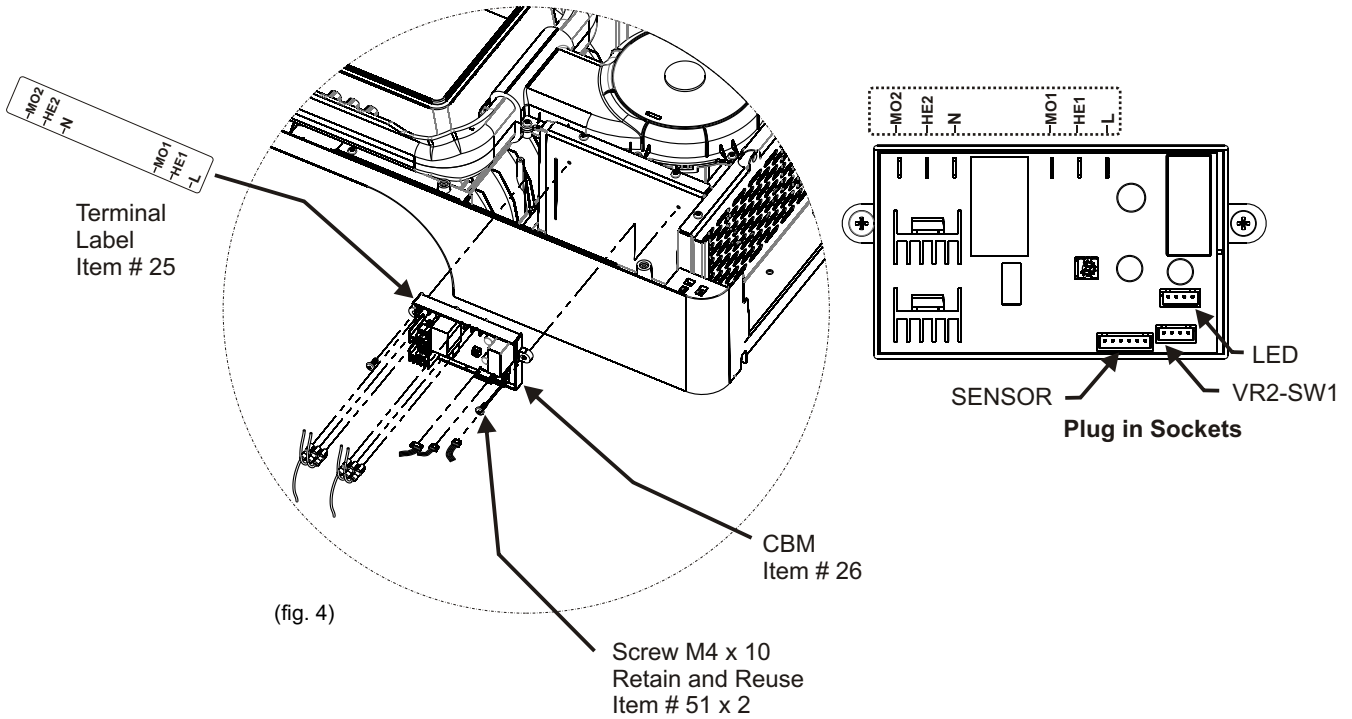
Heater Replacement- (Item 14)

Start with steps fig's 1-3. Remove blower housing upper (Item 9) see step fig. 4 under motor replacement.



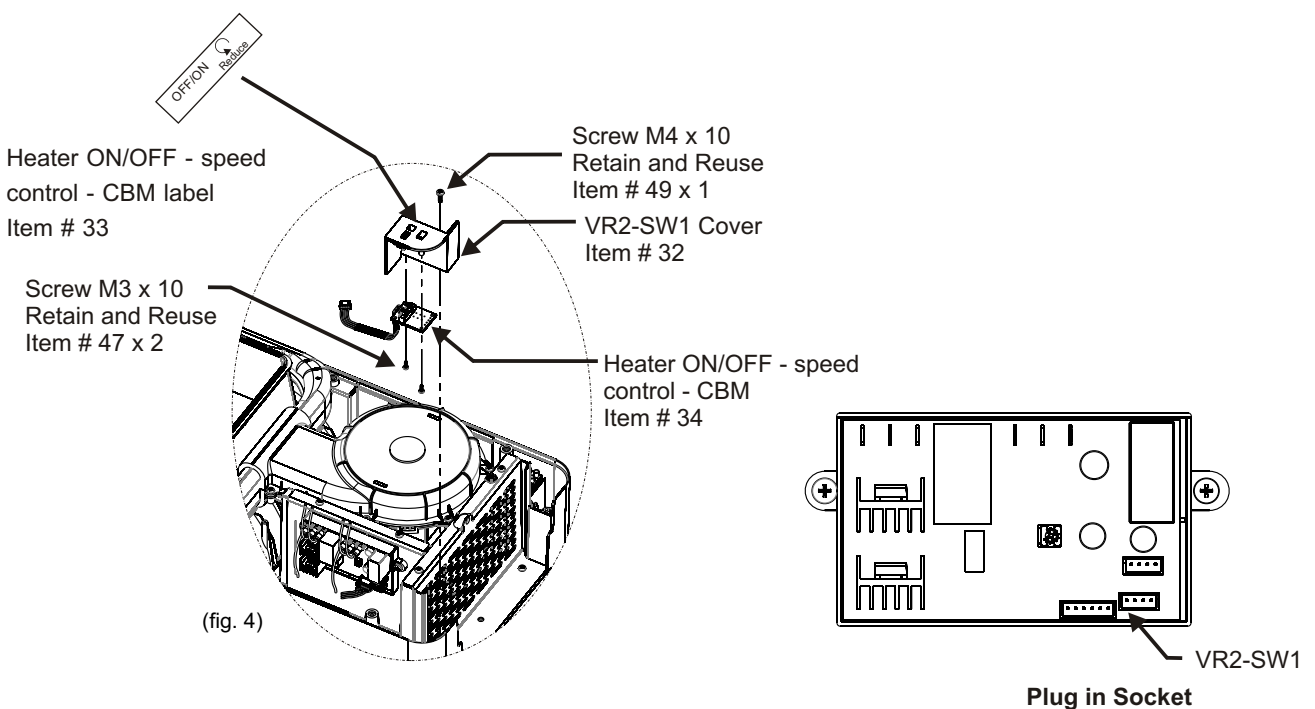
CBM Replacement- (Item 26)

Start with steps fig's 1-3



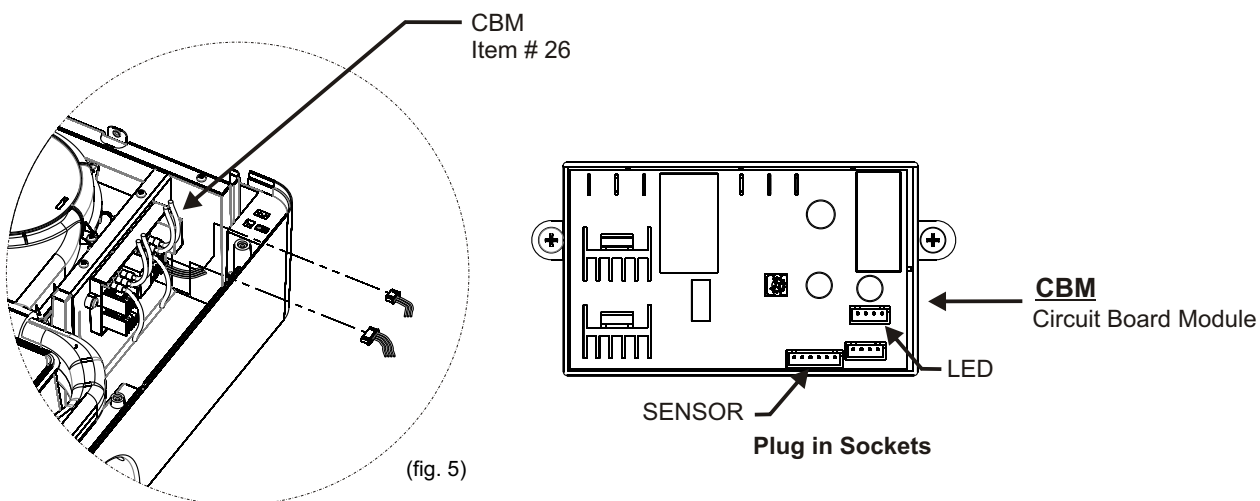
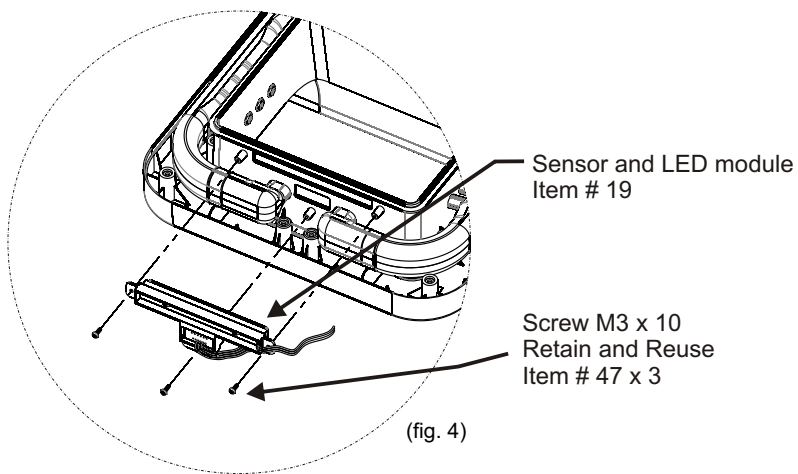
Heater ON/OFF - Speed Control - CBM Replacement- (Item 34)

Start with steps fig's 1-3



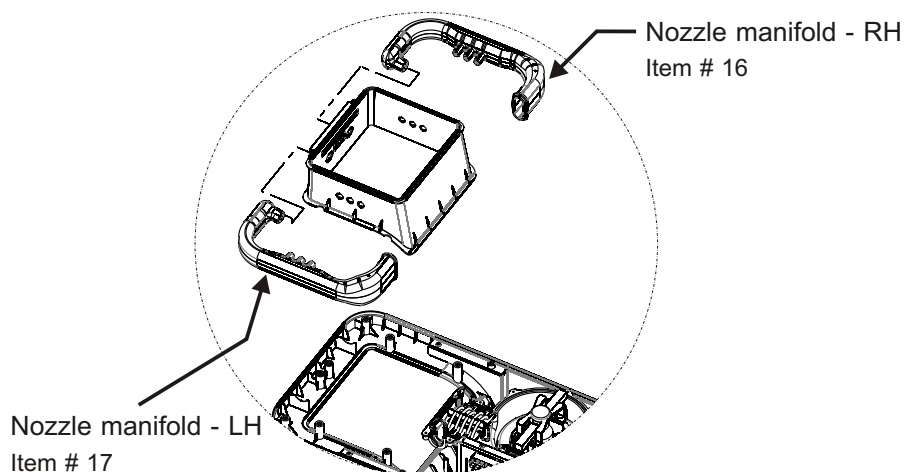
Sensor Module Replacement- (Item 19)

Start with steps fig's 1-3



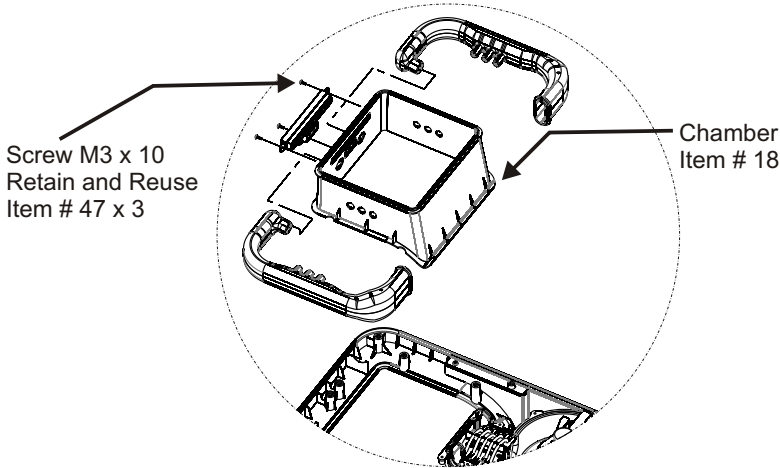
Nozzle Manifold Replacement- (Item 16, 17)

Start with steps fig's 1-3. Remove blower housing' upper (Item 9) see step fig. 4 under motor replacement.



Chamber Replacement- (Item 18)

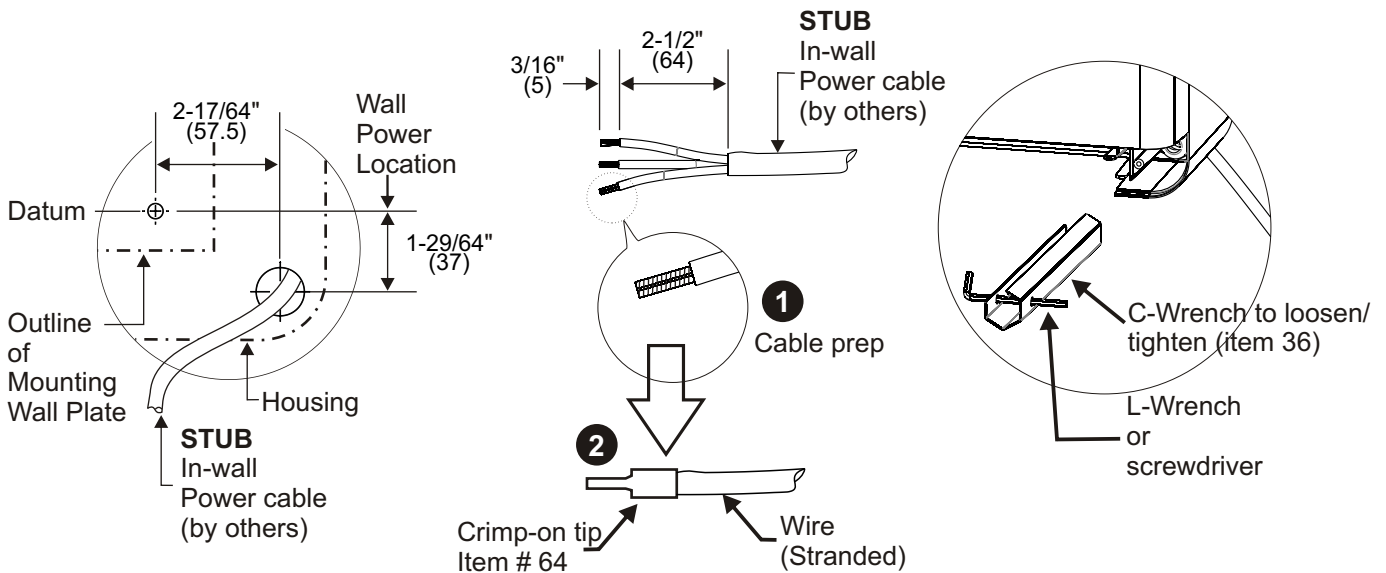
Start with steps fig's 1-3. Remove blower housing' upper (Item 9) see step fig. 4 under motor replacement.



Conversion from power cord (as supplied) to in-wall power supply (by others)-
See also installation guide 1203270822.

Start with steps fig's 1-3. Make sure power is OFF before starting.

Remove power cord (item # 60) from terminal block and strain relief using C-socket wrench. Provide power supply (by others) in appropriate voltage for model selected at location per diagram in detail A (pg 2 this manual) and step 5.b. (pg 3 this manual). Feed power cord into cord-grip strain relief (item # 36) and follow step 6.a. Connections A-C (pg 3 this manual). Insertion of 16AWG ~ 14AWG stranded wires into terminal block (item # 35) receptacles will be easier and provide better results if crimp-on wire tips (item # 64) are installed on wire ends prior to feeding cable through cord-grip (item # 36). If solid wire power cable is provided, tips are not required.



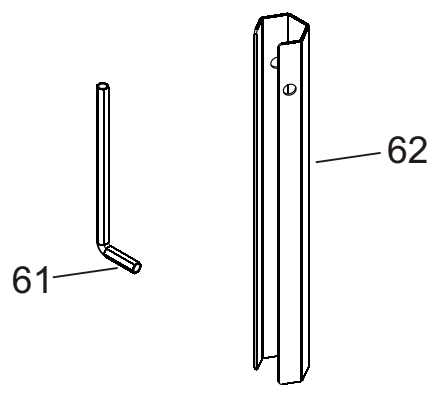


Repair parts list

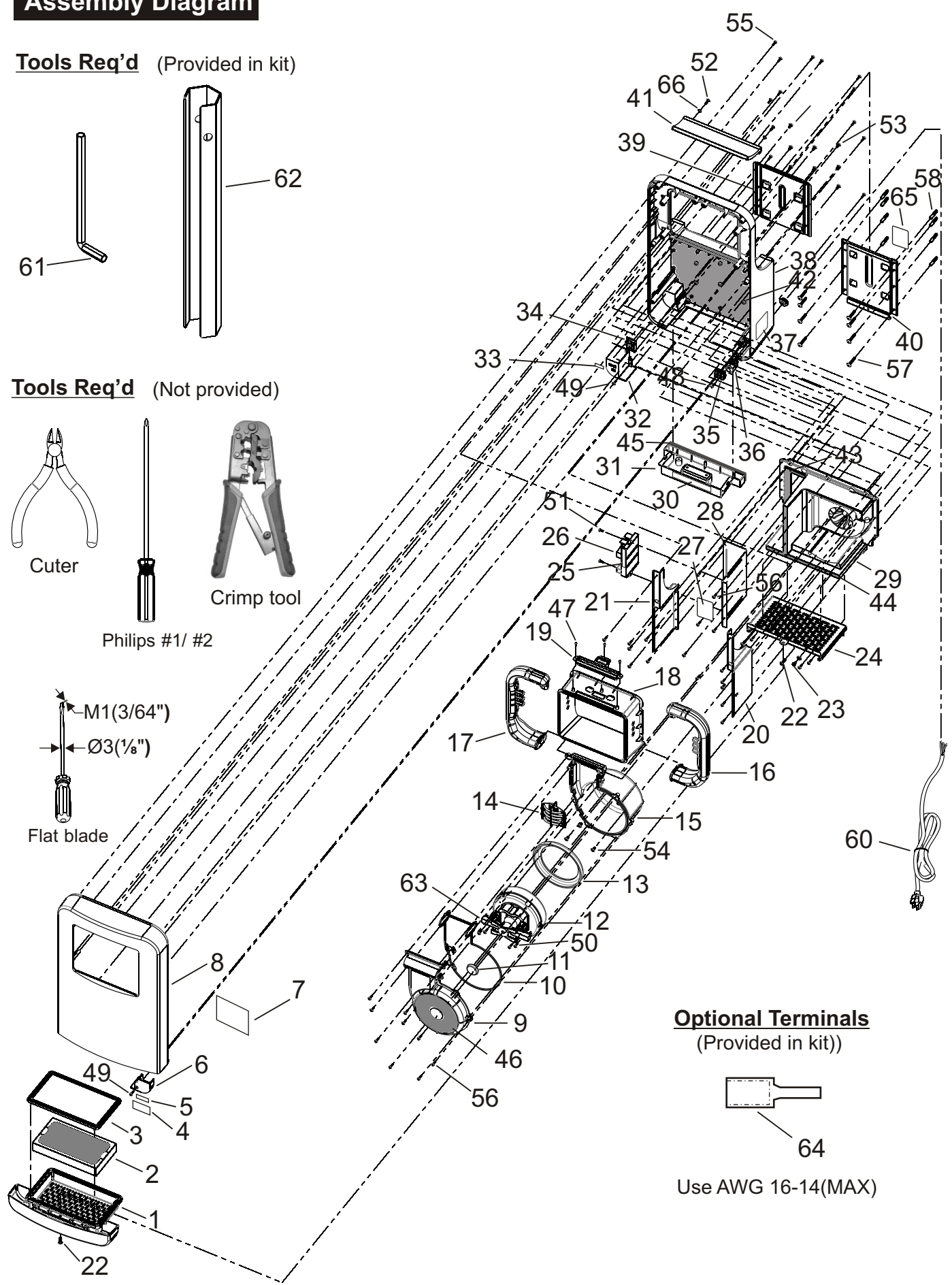
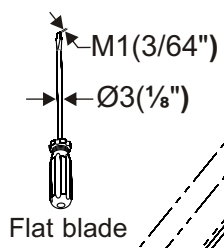
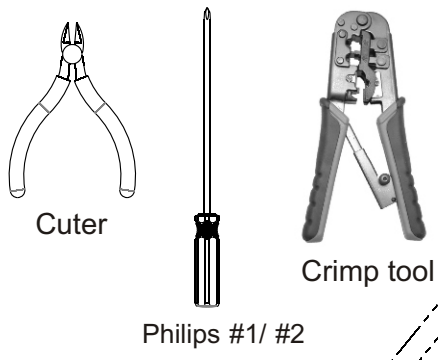
Key	Part #	Description	Qty	Key	Part #	Description	Qty
1	A0194	Drawer assembly	1	35	A0010	Terminal block	1
2	A0278	Super filter	1	36	A0226	Cable holder	1
3	A0195	Filter rubber seal	1	37		Rating label	1
4		CAUTION label	1		A0227	20200-1	
	A0234	120Vac - 15A			A0228	20200-2	
	A0132	240Vac - 8A			A0229	20200-3	
	A0192	277Vac - 8A		38	A0230	Cover - rear	1
5	A0196	LNG label	1	39	A0231	Base plate - cover side	1
6	A0197	Terminal cover	1	40	A0232	Base plate - wall side	1
7	A0198	Label, Circuit Diagram	1	41	A0233	Absorbent ceramic	1
8	A0199	Cover - front	1	42	A0234	Foam gasket A (on Cover - front)	1
9	A0200	Blower housing - Upper	1	43	A0235	Foam gasket B (on Main bracket -RH)	1
10	A0201	Blower housing rubber seal	1	44	A0236	Foam gasket C (on Main bracket - Bottom)	1
11	A0202	Motor rubber - Lower	1	45	A0237	Foam gasket D (on Drain tray)	1
12		Motor	1	46	A0238	Foam gasket E (on Blower housing - Upper)	1
	A0147	1HP@120Vac		47	-	Self threading screw M3x10,philips pan head	7
	A0148	1HP@240Vac	1	48	-	Self threading screw M3x16,philips pan head	2
13	A0029	Motor rubber cup ring	1	49	-	Self threading screw M4x10,philips pan head	2
14		Heater assembly	1	50	-	Screw M4x10,philips pan head	4
	A0203	450W@120Vac,32Ω		51	-	Screw M4x10,philips pan head with external tooth lock washer	2
	A0204	450W@240Vac,128Ω		52	-	Self threading screw M4x16,philips pan head	2
15	A0205	Blower housing - Lower	1	53	-	Self threading screw M5x10,philips pan head	8
16	A0206	Nozzle manifold - RH	1	54	-	Self threading screw M5x15,philips pan head	3
17	A0207	Nozzle manifold - LH	1	55	-	Screw M4x12,philips pan head	12
18	A0208	Chamber	1	56	-	Self threading screw M4x12,philips pan head	30
19	A0209	Sensor and LED module	1	57	-	Self threading screw №10x1-1/4",philips pan head	8
20	A0210	Bracket - RH	1	58	-	Plastic expansion anchor Ø9/32" x 1-3/8" (Ø7 x 35)	8
21	A0211	Bracket - LH	1	59	A0239	Wires Harness (Not Shown)	1
22	A0212	Security hex screw	2	60	A0240	Power cord,120Vac	1
23	A0011	Grounding screw with cup	1	61	A0124	L-Wrench	1
24	A0213	Air intake screen	1	62	A0241	C-Wrench	1
25	A0214	Terminal label	1	63	A0279	Motor brush	2
26		Circuit Board Module (CBM)	1	64	A0242	Crimp-on wire tips for terminal block	3
	A0215	120Vac		65	A0243	Instruction label	1
	A0216	240Vac		66	A0244	Conical washer	2
	A0217	277Vac					
27	A0218	Socket ID label	1				
28	A0219	CBM bracket	1				
29	A0220	Main bracket	1				
30	A0221	Drain tray label	1				
31	A0222	Drain tray	1				
32	A0223	VR2-SW1 cover	1				
33	A0224	Heater ON/OFF - speed control - CBM label	1				
34	A0225	Heater ON/OFF - speed control - CBM	1				

Assembly Diagram

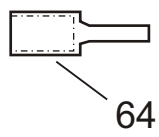
Tools Req'd (Provided in kit)



Tools Req'd (Not provided)



Optional Terminals
 (Provided in kit)



Use AWG 16-14(MAX)