

# INSTA™

INSTA GRAPHIC SYSTEMS



## MODEL 421

### OPERATION AND MAINTENANCE MANUAL

### International Symbols



Power Off



Power On



Hot Surface



Risk of Electrical Shock



Protective Earth Terminal



Ground



Wet Conditions



Caution



Warning

### Safety Summary



#### WARNING

In case of power cord damage, do not attempt to repair or replace the power cord. Contact the manufacturer or the local distributor.



#### WARNING

Hot Surface. Avoid contact.



#### WARNING

If this equipment is used in a manner not specified by the manufacturer, protection may be impaired.



#### CAUTION

During normal operation, the base of the machine needs to be installed or placed above the wall socket.



#### CAUTION

The machine is to be operated by one person only.



#### CAUTION

To reduce the risk of electric shock and injury to persons, disconnect from power supply before servicing and /or cleaning.



#### CAUTION

Do not handle the plug with wet hands, or machinery under wet conditions.

## Congratulations!

Your selection of the Insta Graphic Systems heat seal machine is a sound business decision. Insta equipment is the result of the highest quality engineering and time-tested design. Your new machine combined with Insta's reputation of innovation in the heat-sealing field, insures the continuing capability of delivering the perfect application.

This manual describes installation, operation, and maintenance procedures for your new 421 series machine, as well as easy to use instructions for on-the-spot maintenance.

Your 421 series machine will have a long, trouble free life. Read this manual. Keep it with your machine; it's your key to proper operation and lasting service.

## Limited Machine Warranty

Insta Graphic Systems warrants this heat seal machine, when operated under normal conditions, to be free from manufacturing defects in material and workmanship for a period of one year on parts (lifetime on the heating element) and 90 days on labor from the invoice date.

This warranty will be effective only when Insta authorizes the original purchaser to return the product to the factory in Cerritos, California, freight prepaid, and only when the product upon examination has proven to be defective.

This warranty does not apply to any machine that has been subjected to misuse, negligence or accident.

Insta shall not be liable for the injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product.

No claim of any kind shall be greater in amount than the sale price of the product or part to which claim is made.

*This is the sole warranty given by the company, it is in lieu of any other warranties, expressed or implied, in law or in fact, including the warranties of merchantability and fitness for a particular use, and is accepted as such by the purchaser in taking delivery of this product.*

## Installation



### DOMESTIC – 421 SERIES

Use a **separate** 15 amp AC circuit. Only industrial extension cords with proper wire size should be used: size 16/3 wire for distances up to 25 feet, and size 14/3 for distances up to 50 feet.



### INTERNATIONAL – 421 SERIES

Use a **designated** 16 amp AC circuit. Only industrial extension cords with proper wire size (2.5 sq. mm) shall be used.



### IMPORTANT

The appliance must be plugged into a proper receptacle of the proper size and rating. Equally important the line voltage must be able to accommodate this appliance as well as other appliances operating on this circuit.

## Specifications

### MODEL 421

120 V AC, 50/60 Hz, 900 Watts, 7.5 Amps  
230 V AC, 50/60 Hz, 900 Watts, 4.1 Amps

Weight Model 421    29 Pounds (13.2 KG)

## Degree of Protection

IP (Ingress Protection) rating according to IEC 60529.

### NOTE

*IEC 60529 does not specify sealing effectiveness against the following: mechanical damage of the equipment; the risk of explosion; certain types of liquid conditions, e.g. those that are produced by condensation; corrosive vapours; fungus; vermin*

**IP54 = IP**  
1<sup>st</sup> Digit 5  
2<sup>nd</sup> Digit 4

1 <sup>st</sup> Digit	Protection from solid objects	2 <sup>nd</sup> Digit	Protection from moisture
0	Non protected	0	Non protected
1	Objects greater than 50mm	1	Dripping water
2	Objects greater than 12mm	2	Dripping water when tilted up to 15 deg.
3	Objects greater than 2.5mm	3	Spraying water
4	Objects greater than 1mm	4	Splashing water
5	Dust protected	5	Water jets
6	Dust tight	6	Heavy seas
--	---	7	.15m – 1m immersion
--	---	8	1m + submersion

## Operation

1. Turn the power on by pressing the **POWER** button on the controller.
2. Set desired temperature and time. Open the upper platen arm to its fully open position, away from the lower platen. (See Solid State Controller Section)
3. Allow the machine to warm up until the selected temperature is reached.
4. Set the desired pressure by adjusting the pressure knob on top of the machine counterclockwise to increase pressure.
5. Place the substrate on lower platen, smoothing out all wrinkles. Push and hold the cap retainer in the down position. For a cap, pull the sweatband out, place the crown on the lower platen.
6. Position transfer or lettering on substrate.
7. Close the machine by pulling handle down into locked position.
8. The timer will start automatically and a buzzer will beep at the end of the time cycle.
9. At the end of the time cycle, open the machine by lifting handle to the full open position.
10. Unlock cap retainer and remove substrate.



**NOTE**

*The lower platen may be adjusted to accommodate various caps, sleeves, pant legs. Slide the lower platen z bracket assembly by loosening the lock down knob located in the base of the of the z bracket. Move the complete lower platen assembly forward or backward to the desired location. Once in position, lock down the complete assembly by tightening down the lock down knob.*

## Environmental Conditions

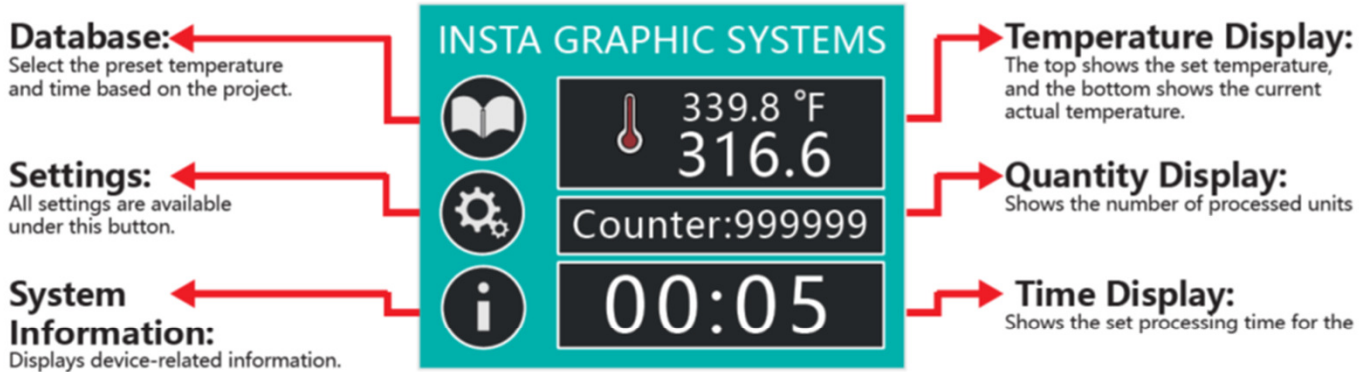
Only operate Insta heat seal machines under suitable environmental conditions.

1. Placed on a even, non flammable surface.
2. Can support a minimum of 35 lbs. if placed above a platform.
3. Do not restrict access to the main power switch.
4. Maintain a clearance around any forms of liquid.
5. Do not over extend the power cord.
6. The operational voltage should not be 10% max/min of the rated value.
7. Avoid voltage spikes.

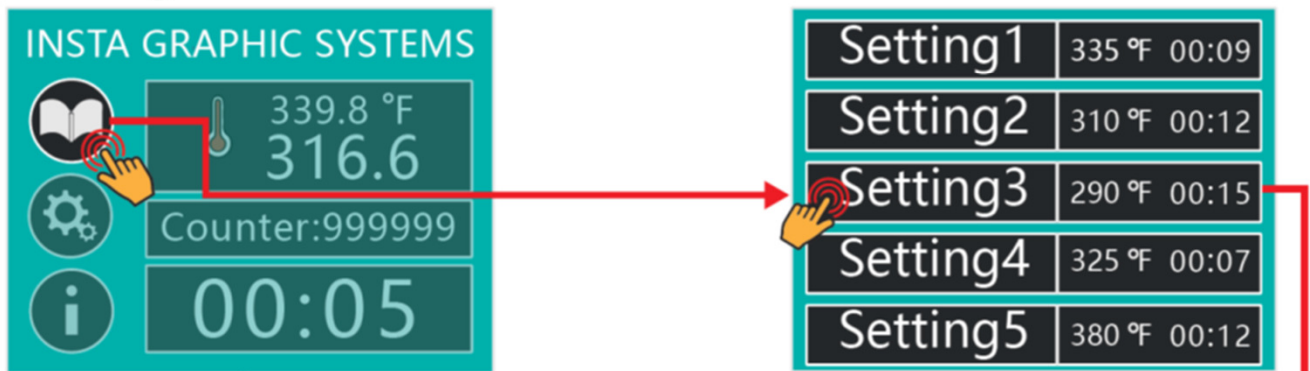
This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance. To provide continued protection against risk of electric shock, connect to properly grounded outlets only. Commercial use only. Do not immerse in water.

## 1. Main Interface Explanation:

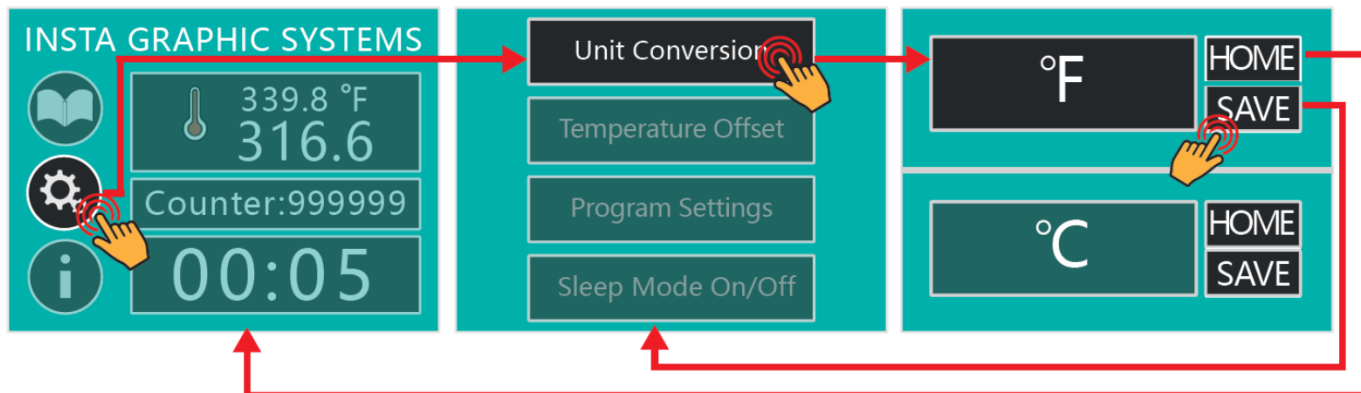


## 2. Setting Selection:



**Setting Selection:** Click the database on the main interface to switch to the settings interface. Select any option to return to the main screen automatically.

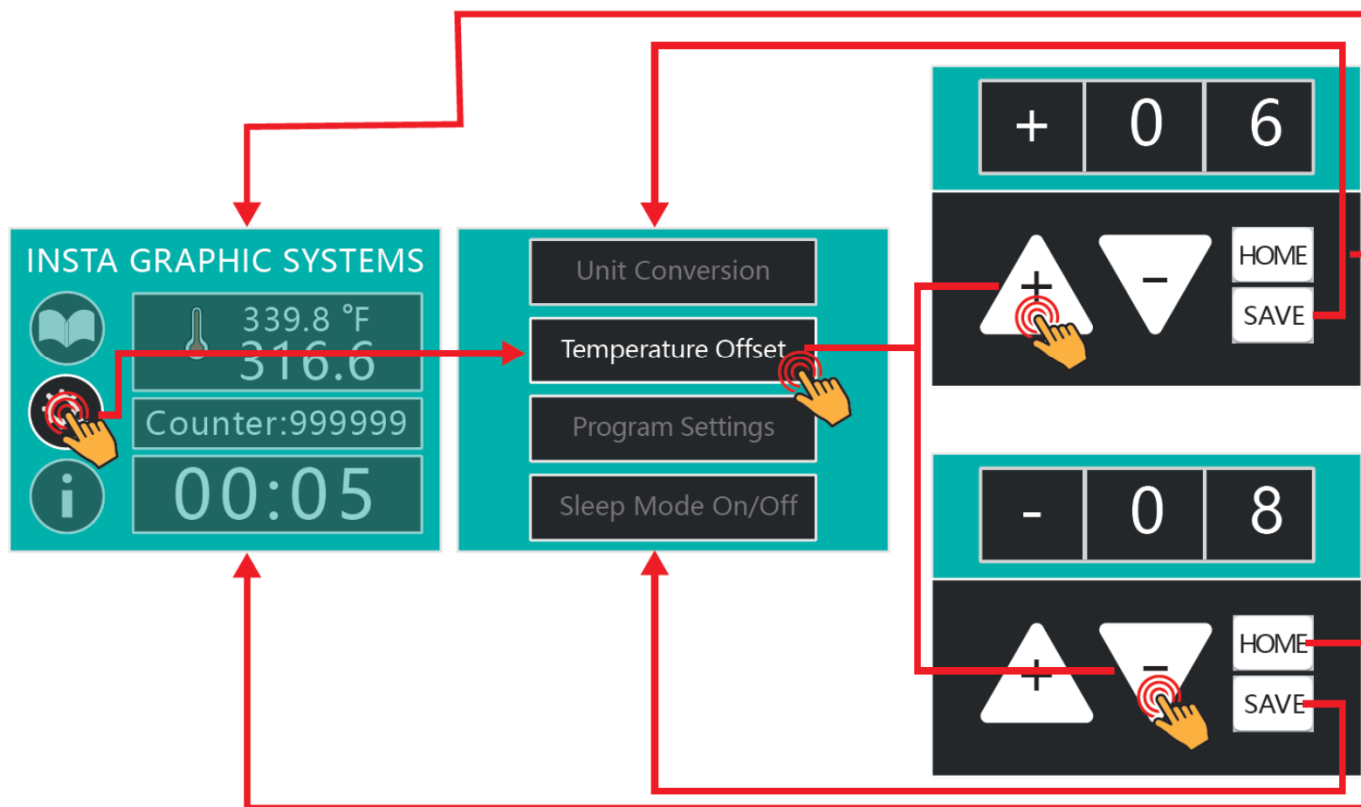
### 3. Temperature Conversion:



#### Temperature Conversion:

To switch between Fahrenheit and Celsius, click "Settings" from the main interface. Select "Unit Change" to switch between Fahrenheit and Celsius. After choosing, save and return to the previous screen.

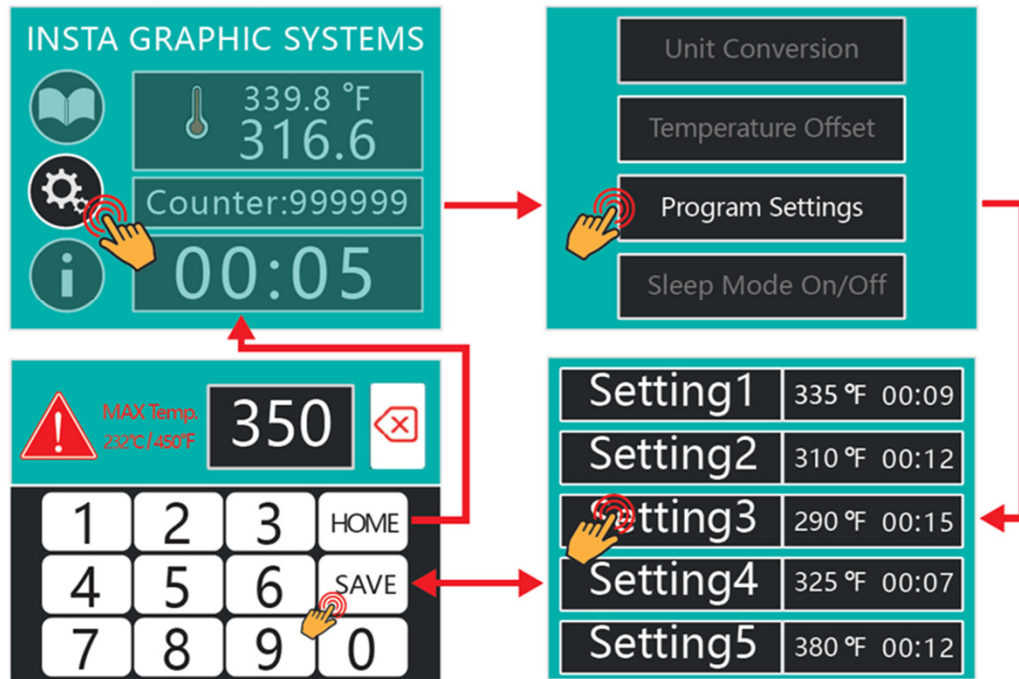
### 4. Temperature Offset Adjustment:



#### Temperature Offset Adjustment:

If the actual temperature does not match the displayed temperature, adjust the temperature offset by clicking "Settings" and making the correction.

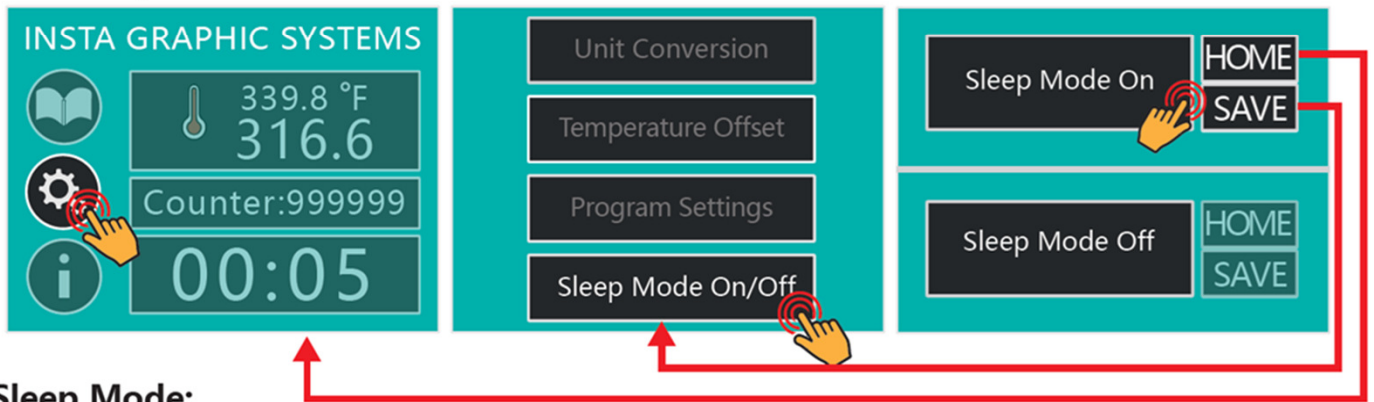
### 5. Program Settings:



#### Program Settings:

The machine can store 5 different programs for easy switching between modes. To set the time and temperature, click "Program Settings" from the main interface, set the desired values, and save.

### 6. Sleep Mode:



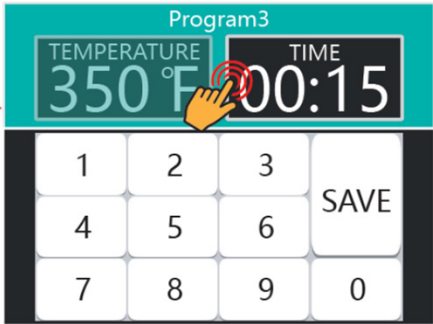
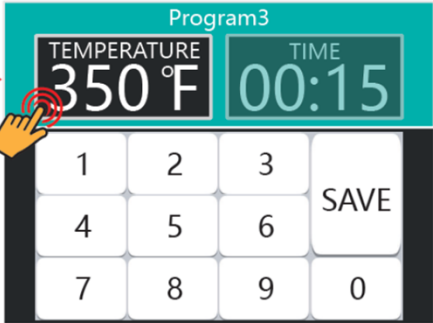
#### Sleep Mode:

The machine has a sleep mode feature, which can be toggled on or off in the settings.

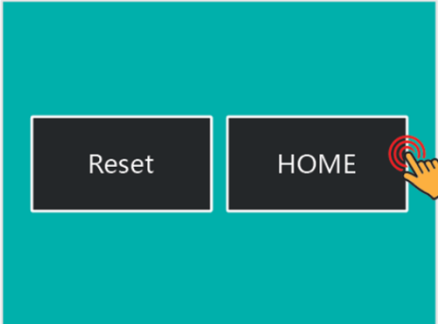
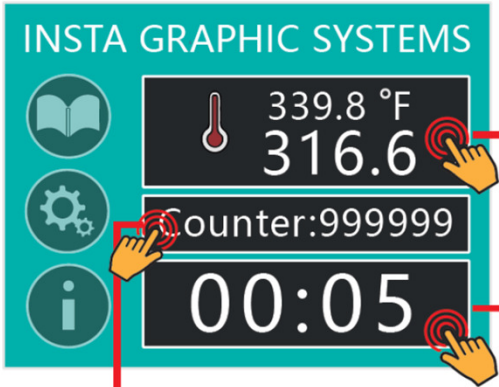


### 7.Quick Adjustments:

**Adjusting Temperature:**  
Directly adjust the program's temperature from the main interface.

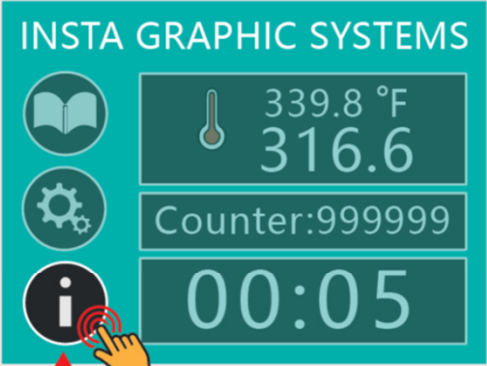


**Adjusting Time:**  
Directly adjust the program's time from the main interface.



**Reset Counter:**  
Click the counter button on the main screen to reset.

### 8.System Information:



**System Information:**  
For support, contact INSTA GRAPHIC SYSTEMS, located at 13925 E. 166th Street, Cerritos, CA.

## Preventive Maintenance Suggestions

The Insta heat seal machines are relatively maintenance free. For long trouble-free life, the following preventive maintenance should be followed:

1. Do not heat seal items such as buttons, pins, snaps, or zippers that tend to cut the silicone rubber pad or scratch the Teflon heat platen.
2. Periodically clean the Teflon-coated heat platen with a non-abrasive piece of cloth. Stubborn stains may be cleaned, **when platen is cool**, with mineral spirits.
3. When the heat platen is hot and not in use, keep in open position (away from the silicone rubber pad).
4. To prevent soiling of substrate, periodic wiping of the entire exterior machine, including platens, with a clean rag is recommended. If necessary, use mineral spirits for cleaning a **cold** machine. Since mineral spirits are flammable, use precautions and keep away from sparks, flame, or hot heat platen.
5. The Model 421 machines require periodic lubrication with a high-temperature, non-melting grease (MPPL023).
  - A. Lubricate the post, handle and cam assembly depending upon usage. (Once every month if used continuously.)

## General Maintenance

It is recommended that you have the following items available:

- A. Regular screw driver
- B. Phillips head screw driver
- C. Small adjustable wrench
- D. Needle nose pliers with insulated handle
- E. Set of Allen wrenches
- F. Grease gun
- G. Special high temperature grease MPPL023

With the above items you should be able to accomplish most repairs.



**WARNING**  
*Power cord replacement should be from the manufacturer only (because it requires a specially prepared cord).*

## Replacement of Silicone Rubber Pads

1. Make sure heat platen is cool.
2. Use tube of MPPC006 adhesive to bond silicone rubber pad to metal platen.

**NOTE:** *Read instructions on the tube package*

3. Be sure that the surface of the silicone platen is clean. Use a **mild** solvent such as **mineral spirits**.
4. The pad and metal must be thoroughly dry and clean, before starting the bonding operation.
5. Apply adhesive sealant to the metal platen. Spread a thin even coat and apply pad immediately. Apply pressure and position pad making sure that there is no air entrapment.

**NOTE:** *A serrated blade such as used for laying down rubber floor tiles would be helpful.*

6. Allow to cure overnight under low pressure at normal room temperature.

FOR USE BY QUALIFIED PERSONNEL ONLY

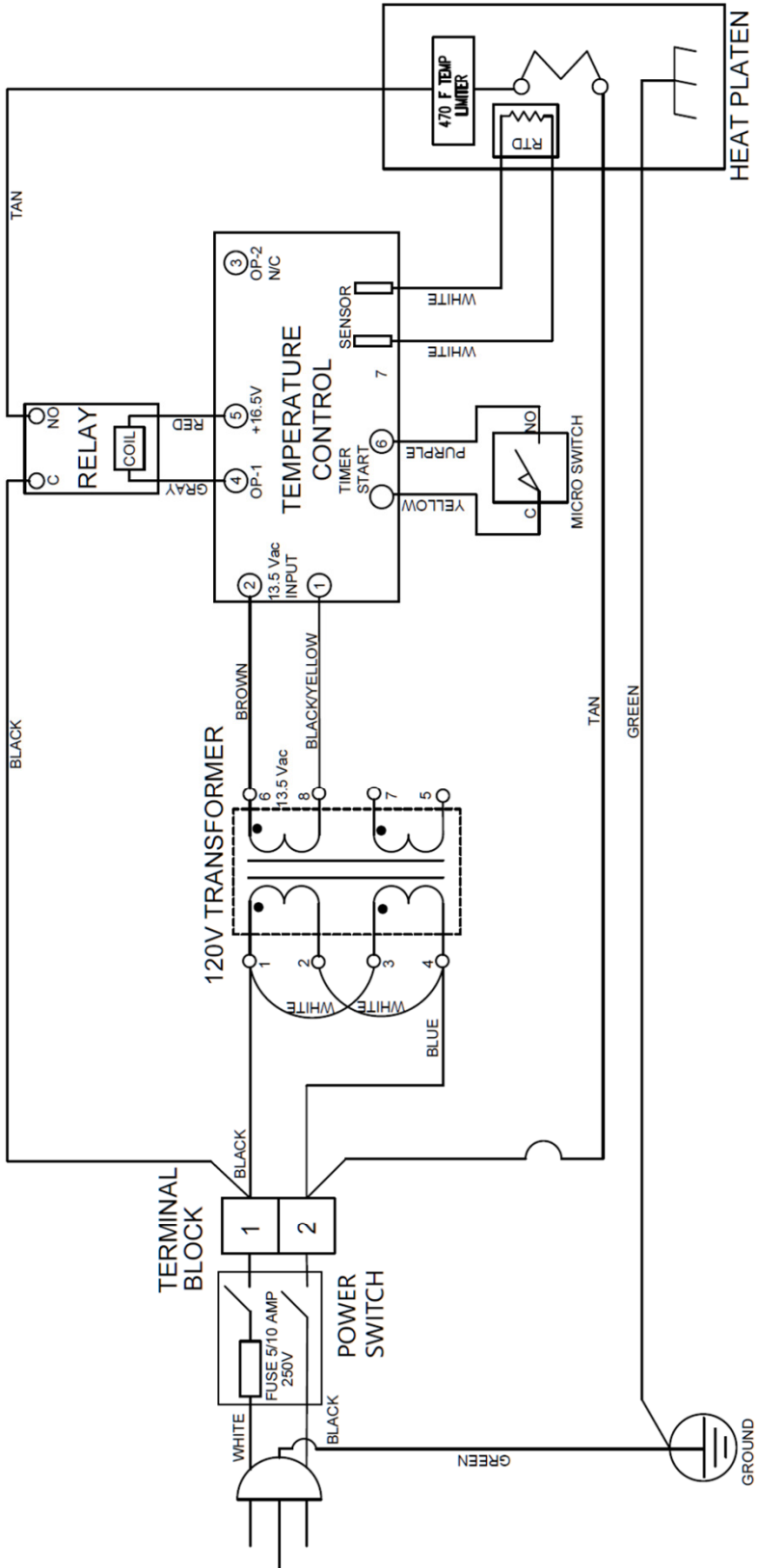
### Safety and Danger Zone Diagram



<p><b>Operating Environment</b></p> <p>To maximize user safety, ensure that the following operating conditions are met:</p>	<ol style="list-style-type: none"><li>1. After unpacking the machine, rotate the knob clockwise to release the platen pressure.</li><li>2. The machine is placed on an even, non-flammable surface.</li><li>3. The surface can support a minimum of 35 lbs (136 kg).</li><li>4. The workspace does not restrict access to the main power switch or power cord.</li><li>5. The workspace is free of any forms of liquid.</li><li>6. The power cord is not overextended.</li><li>7. The machine is connected to a surge protector.</li></ol> <p>Taking these steps is crucial in maximizing user safety and ensuring a long, trouble-free life for your machine!</p>
---	--

FOR USE BY QUALIFIED PERSONNEL ONLY

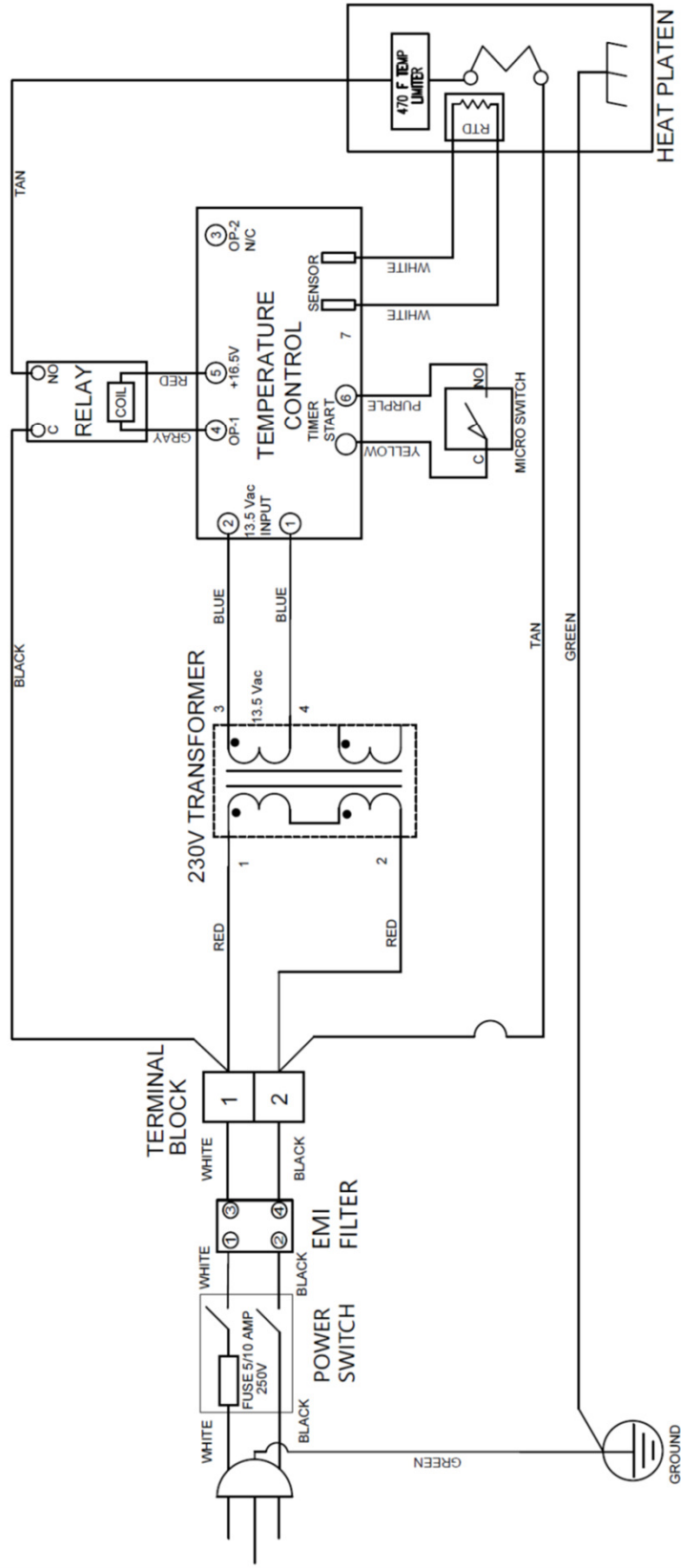
# MODEL 420/421-120V



MODEL 420/421-120V WIRING DIAGRAM

FOR USE BY QUALIFIED PERSONNEL ONLY

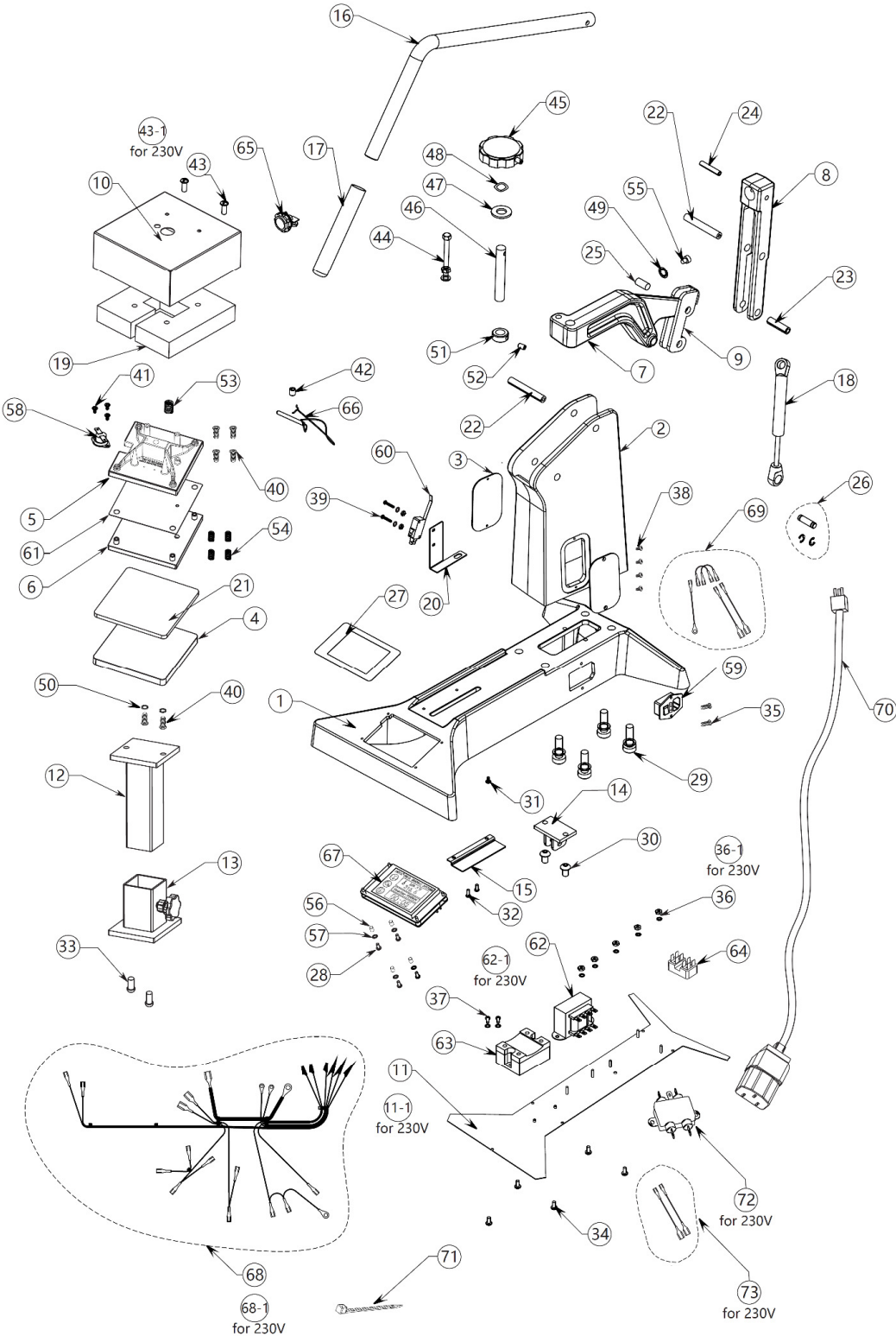
## MODEL 420/421-230V



MODEL 420/421-230V WIRING DIAGRAM

FOR USE BY QUALIFIED PERSONNEL ONLY

# MODEL 421



**FOR USE BY QUALIFIED PERSONNEL ONLY**

<b>MODEL 421</b>			
<b>ITEM NO</b>	<b>PART NAME</b>	<b>120V AC</b>	<b>230V AC</b>
1	BASE	MP420-001	MP420-001
2	BASE UPRIGHT	MP420-002	MP420-002
3	METAL COVER	MP420-003	MP420-003
4	LOWER PLATEN	MP420-004	MP420-004
5	UPPER HEATING PLATE	MP421-005	MP421-005
6	LOWER HEATING PLATE	MP421-006	MP421-006
7	ARM	MP420-007	MP420-007
8	BREAK OVER ARM MACHINING	MPA90213	MPA90214
9	CONNECTING PLATE	MP420-009	MP420-009
10	SHROUD,UPPER PLATEN	MP421-010	MP421-010
11	PLATE BOTTOM COVER	MP420-0111	MP420-0112
12	PLATEN SUPPORT ASSEMBLY	MP421-012	MP421-012
13	STAND SUPPORT ASSEMBLY	MP421-013	MP421-013
14	FIXED PLATE	MP421-014	MP421-014
15	CLEVIS ASSY, GAS SPRING	MP421-015	MP421-015
16	HANDLE	MP420-017	MP420-017
17	GRIP	MP420-021	MP420-021
18	GAS SPRING	MP420-019	MP420-019
19	INSULATION	MP421-022	MP421-022
20	MTG.BRACKET MIRCO SWITCH	MP420-023	MP420-023
21	SILICONE RUBBER PAD	MP421-024	MP421-024
22	PIN, ROLL 63*9.85*2mm	MP420-025	MP420-025
23	PIN, ROLL 36*10*2mm	MP420-026	MP420-026
24	PIN, ROLL 35.56*6.35*1.5mm	MP420-027	MP420-027
25	PIN, ROLL 15*9.5mm	MP420-028	MP420-028
26	PIN, LOWER CLEVIS	MP420-029	MP420-029
27	COVER PLATE	MP420-030	MP420-030
28	SCREW, ROUND HD M3*18mm	MP420-031	MP420-031
29	SCREW, HEX SOCKET M10*35mm with WASHER	MP420-032	MP420-032
30	SCREW, HEX SOCKET M6*12mm	MP420-033	MP420-033
31	SCREW, ROUND HD M4*4mm	MP420-034	MP420-034
32	SCREW, ROUND HD M4*6mm	MP420-035	MP420-035
33	SCREW, ROUND HD M6*14mm	MP420-036	MP420-036
34	PAN HEAD SLOTTED SCREW M4*7mm	MP420-038	MP420-038
35	PAN HEAD SLOTTED SCREW M4*8mm	MP420-039	MP420-039
36	HEX NUT M4 with WASHER	MP420-040	MP420-040
37	SCREW, ROUND HD M2.5*4mm with WASHER	MP420-041	MP420-041



**FOR USE BY QUALIFIED PERSONNEL ONLY**

<b>MODEL 421</b>			
<b>ITEM NO</b>	<b>PART NAME</b>	<b>120V AC</b>	<b>230V AC</b>
38	COUNTERSUNK SCREW M3x6mm	MP420-042	MP420-042
39	SCREW, ROUND HD M3*16mm with NUT and WASHER	MP420-043	MP420-043
40	SCREW, HEX SOCKET FLAT HD M6*16mm	MP420-044	MP420-044
41	SCREW, ROUND HD M3*4mm	MP420-045	MP420-045
42	SET SCREW M4*4mm	MP420-046	MP420-046
43	SCREW, HEX SOCKET M5*10mm	MP420-047	MP420-047
44	SCREW, HEX HD M6*77*25mm wth NUT and WASHER	MP420-048	MP420-048
45	KNOB with SET SCREW M5*10mm	MP420-049	MP420-049
46	ADJUSTMENT SCREW M12*87.5mm	MP420-050	MP420-050
47	WASHER, OD 28mm ID 13mm 2.5mm thickness	MP420-051	MP420-051
48	WASHER, OD 19mm ID 13mm 0.25mm thickness	MP420-052	MP420-052
49	WASHER M5	MP420-053	MP420-053
50	GASKET	MP421-054	MP421-054
51	COLLAR ADJUSTMENT	MP420-055	MP420-055
52	SET SCREW M5*5mm	MP420-056	MP420-056
53	HELICOIL INSERT, M12*1.75*1.5Dmm	MP420-057	MP420-057
54	HELICOIL INSERT, M6*1*1.5Dmm	MP420-058	MP420-058
55	BUMPER	MP420-059	MP420-059
56	GASKET, OD 3.2mm ID 66mm 9mm high	MP420-060	MP420-060
57	INSULATION GASKET, OD 3mm ID 6mm, 1mm thickness	MP420-061	MP420-061
58	HI-TEMPERATURE LIMITER	MP420-062	MP420-062
59	POWER SWITCH	MP420-0631	MP420-0632
60	MICRO SWITCH	MP420-064	MP420-064
61	MICA SHEET	MP421-0651	MP421-0652
62	TRANSFORMER	MP420-0661	MP420-0662
63	RELAY,SOLID STATE, OMRON	MP420-067	MP420-067
64	POWER SOCKET	MP420-068	MP420-068
65	TERMINAL	MP420-069	MP420-069
66	SENSOR	MP420-070	MP420-070
67	DIGITAL CONTROL	MP420-071	MP420-071
68	WIRE HARNESS	MP420-0721	MP420-0722
69	TERMINAL WIRE	MP420-0731	MP420-0732
70	POWER CORD	MP420-0741	MP420-0742
71	CABLE TIE	MP420-075	MP420-075
72	EMC FILTER		MP420-076
73	FILTER CONNECTING WIRE		MP420-077

## INSTA GRAPHIC SYSTEMS

### Heat Press Limited Warranty

This limited warranty (“warranty”) is given only to the original end-user/retail purchaser (referred to in this warranty as “Original Purchaser”) of the accompanying product and accessories (collectively referred to in this warranty as “The Product”).

#### What is covered?

- “The Product” includes Machines, Parts and/or Accessories.
- Except as otherwise provided herein, Insta Graphic Systems (“Insta”) warrants that The Product will be free from defects in materials and workmanship when used under normal conditions.

#### What is the length of the Warranty Periods?

- Machines: Life time on the heating element, one year parts and 90 days labor from the original purchase date (end-user).
- Additional Parts and Accessory Items: 90 days from the original purchase date.

#### This warranty does not cover:

- Physical damage to the Product;
- Damage caused by improper installation, improper or abnormal use, misuse, neglect or accident (including but not limited to transporting The Product without the proper preparation and/or packaging);

This limited warranty is VOID, if

- the Product has been altered or modified in any way (including but not limited to attempted warranty repair without authorization from Insta and/or alteration/removal of the serial number).
- the warranty period is expired,
- the serial number label is missing or unrecognizable,
- the defect was subject to abuse, improper use not conforming to product manual instructions
- the defect was subject to Force Majeure, such as acts of God, flood, lightning, earthquake, war, vandalism, theft, brownouts or sags (damage due to low voltage disturbances)

What to do if you think your Product is eligible for warranty service: Immediately report your issue to [service@instagraph.com](mailto:service@instagraph.com) or call Insta’s Service Center at 800-421-6971. Supply the model, serial number and purchase date of the equipment.

#### What Insta will ask you to do?

After contacting Insta you may be asked to deliver (by hand if you prefer) or send The Product properly packaged, freight prepaid, to Insta or Insta’s service center together with your bill of

sale. A Return Authorization is required for all returned goods. Failure to obtain the RA will result in the refusal of the shipment.

**You are responsible for the cost of shipping, packing of The Product and insurance (if you desire). You are also responsible for loss or damage to The Product in shipping.**

If The Product does not operate as warranted above during the applicable warranty period, Insta shall, at its option and expense (except for shipping cost), repair the defective product or part, deliver to the customer an equivalent product or part to replace the defective item. All products that are replaced will become the property of Insta.

If The Product is not covered by this warranty, you will be charged for any service and/or replacement parts/products at Insta's then current published rates, as well as, for the freight.

What happens when Insta elects to replace your Machine?

When a replacement Machine is authorized by Insta, Insta will send a replacement Machine and issue a Return Authorization for the return of the Product. The Purchaser will be charged for the new machine at the time of the shipment. Once the machine is returned and the warranty confirmed, The Purchaser will receive a credit/refund. The replacement machine you receive (will be covered by the balance of the limited warranty period remaining on the original product, plus an additional thirty (30) days. You will keep the replacement machine that is sent to you and your original machine shall become the property of Insta.

THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, WHETHER EXPRESSED BY AFFIRMATION, PROMISE, DESCRIPTION, DRAWING, MODEL OR SAMPLE. ANY AND ALL WARRANTIES OTHER THAN THIS ONE, WHETHER EXPRESSED OR IMPLIED INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. INSTA SHALL HAVE NO LIABILITY FOR DEFECTS OF ANY NATURE WHATSOEVER EXCEPT AS PROVIDED FOR HEREIN.

This Limited Warranty (and Insta's obligation to you) may not be changed in any way unless you and Insta sign the same piece of paper in which we (1) refer to The Product and your bill of sale date, (2) describe the change to this warranty and (3) agree to make that change.

Important:

We recommend that you keep all original packing materials, in the event that you need to ship the Product.



13925 E. 166<sup>th</sup> St. • Cerritos, CA USA 90702 • (800) 421-6971 • Fax (562) 404-3010

Parts Orders • (800) 421-6971 • (562) 404-3000 Ext. 214

Technical Support • (800) 426-3609 • (562) 404-3000 Ext. 351

In-House Repair • (800) 426-3609