

# Wrap-It-Heat

## Infinite Controlled Drum Heater For Metal Drums

### GENERAL CONSIDERATIONS

Wrap-It-Heat, Model SRX-16 Drum Heater is designed to heat **Non-Flammable, Heat Sensitive Materials**. Model SRX-16 features an infinite control (variable) in series with a three heat switch. The function of the infinite control is to cycle the current **ON** and **OFF**. As the control is advanced to a higher number on the dial, the **ON** time of the heater is increased to a point of **Full ON** at the highest setting. The cycling of the control will provide a gentle warming action of the heater in each of the three heat switch settings except at **Full ON**. Standard units come in 120 volt rating. The three heat switch allows three wattage settings per control setting and voltage rating. They are **HIGH**: for maximum watts; **MEDIUM**: for ½ maximum watts; and **LOW**: for ¼ maximum watts. SRX-16 comes with a spring loaded toggle clamp for a snug fit to drum, a six foot power cord and three pin plug for grounded electrical operations. SRX-16 is to be used on **METAL** drums only. SRX-16 cannot be used on plastic, plastic lined or fiber drums. **THESE HEATERS ARE NOT WATERPROOF. DO NOT LET THEM GET WET.**



### SET UP INSTRUCTIONS

After reviewing the **Warning Sheet** included with the operating instruction and the enclosed brochure sheet, place the SRX-16 over the drum rim. Mount the SRX-16 near the drum base. Tighten the clamp spring nuts after closing the clamp to ensure you have a snug fit between the drum heater and the metal drum. **CAUTION:** Failure to secure an absolute tight fit between the drum heater and the drum may result in heater failure. If two SRX-16's are placed upon the same drum, be sure that the power cord of the uppermost drum heater falls upon an unheated section (clamping area) of the lower drum heater.

Before energizing your drum heater, make sure that the content level in the drum you are heating is **above** the top edge of the heater band. Should the material fall below the band, the heater may not cycle, eventually decreasing heater service life. Model SRX-16 is equipped with two pilot lights; one green and the other red. The **green** pilot light will glow continuously as long as the heater is plugged into an active electrical outlet. The **red** pilot light will cycle on and off as the control cycles.

When you are heating **non-flammable, non-hazardous**, material for the first time using your new model SRX-16, the material temperature should be monitored with a thermometer. Record the control setting position for future reference.

The control setting you have determined for one material and set of environmental conditions, may not be accurate for a different material. Please repeat the entire set-up procedure with the new material to ensure the best results with your new Wrap-It-Heat, Model SRX-16.

### SRX-16 SPECIFICATIONS

DIAMETER.....	14-1/2"
SHIP WEIGHT.....	10 LBS
OPERATING VOLTS.....	120V AC SINGLE PHASE
POWER OUTPUT.....	1500W @ 120V
AMPERAGE DRAW.....	12.5 amps @ 120V

In addition to Model SRX-16 for 16 gallon drums, the following sizes are also available in the SRX Series: SRX-55 for 55 gallon drums, SRX-30 for 30 gallon drums and SRX-05 for 5 gallon pails.

**Expo Engineered Wrap-It-Heat SRX Series Drum and Pail Heaters are U.L. Listed and C.S.A. Certified.**

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# Wrap-It-Heat Model SRX-16

## OPERATING INSTRUCTIONS

CAPACITY (GAL.)	55	55	30	16	5
VOLTS	120V	240V	120V	120V	120V
WATTS	1750W	3000W	1750W	1500W	1500W
TEMPERATURE CHANGE IN DEGREES FAHRENHEIT	TIME IN HOURS FOR TEMPERATURE CHANGE				
10	0.97	0.56	0.53	0.33	0.10
20	1.93	1.13	1.05	0.66	0.21
30	2.90	1.69	1.58	0.98	0.31
40	3.87	2.26	2.11	1.31	0.41
50	4.84	2.82	2.64	1.64	0.51
60	5.80	3.38	3.16	1.97	0.62
70	6.77	3.95	3.69	2.30	0.72
80	7.74	4.51	4.22	2.63	0.82
90	8.70	5.08	4.75	2.95	0.92
100	9.67	5.64	5.27	3.28	1.03
110	10.64	6.21	5.80	3.61	1.13
120	11.60	6.77	6.33	3.94	1.23
130	12.57	7.33	6.86	4.27	1.33
140	13.54	7.90	7.38	4.59	1.44

### NOTES:

THESE TIMES ARE FOR WATER. FOR OTHER MATERIALS, MULTIPLY THE ABOVE TIMES BY THE SPECIFIC HEAT.

THESE **MINIMUM** TIMES ASSUME THAT ALL THE BAND HEAT ENTERS THE DRUM AND THAT NO HEAT IS LOSS.

THE IDEAL CONDITIONS CAN BE APPROACHED BY:

- 1) COVERING THE TOP
- 2) INSULATING THE SIDES, TOP AND BOTTOM
- 3) INSULATING THE HEATER BAND. DO NOT COVER THE CONTROL BOX.
- 4) KEEPING THE DRUM OUT OF THE WIND
- 5) STIRRING THE DRUM CONTENTS OCCASSIONALLY
- 6) THE SURROUNDING ENVIRONMENT IS AT LEAST AT THE SAME TEMPERATURE AS THE DRUMS CONTENTS.

All material being heated with Model SRX-16 should be mixed during the heating process to secure an accurate temperature reading. The material near the outside of the drum and adjacent to the heater will heat faster than the material near the center of the drum.

Model SRX-16 is designed to heat **sensitive materials** which are subject to damage by too rapid an application of heat. If you are not thoroughly familiar with the material being heated, set the infinite control upon setting number **one** and the three heat switch in the **LOW** position.

The temperature of the material in the drum also depends upon drum placement (drafts, etc), heater placement upon the drum (snug fit) and the heat receptive properties of your material. The drum seam or any other defects in the drum surface should be spanned by the unheated clamp area of the heater. **CAUTION:** Be aware the fact that the temperature of the heat band adjacent to the drum surface can reach 450°F to 500°F when the three heat switch is in the high position. These band temperatures were determined while heating a 16 gallon drum full of water. The heat band temperatures may vary when heating your material.

Expo's 120 volt/1500 watt drum heater is equipped with a special, electrically grounded, three pin plug. **Under no circumstances should the plug be altered or removed; your warranty will automatically be voided.**

## UNDERSTANDING THE DRUM HEATER CONTROLS

Each SRX Model drum heater is equipped with (1) three heat switch and (1) infinite control switch

The three heat switch is provided to allow you to heat materials that can or cannot be damaged by heat. When heating materials such as honey or similar materials which can char by excessive heat, the switch must be turned to **LOW**. This will reduce the input wattage to **25%** of the heaters capability and allows you to heat **non-flammable**, viscous materials without ruining them. The **MEDIUM** setting will generate **50%** of the heaters capability. This setting is used for less viscous materials. The **HIGH** setting naturally will generate the heaters total capability. This setting is used on **non-flammable** material which as the ability to absorb heat very rapidly such as **non-flammable** oils, water oil mix, water, etc.

The infinite control knob is numbered **OFF** and then numbers **LO** thru **6** and then **HIGH**. Please refer to the **Ratio of On-Time** listed below:

<b>LO = 7.9%</b>	<b>First dash mark: = 13%</b>	<b>2 = 21%</b>	<b>Second dash mark: = 29%</b>
<b>3 = 37%</b>	<b>Third dash mark: = 45%</b>	<b>4 = 53%</b>	<b>Fourth dash mark: = 60%</b>
<b>5 = 68%</b>	<b>Fifth dash mark: = 76%</b>	<b>6 = 84%</b>	<b>Sixth dash mark: = 92%</b>
<b>HI = 100%</b>			



You are now ready to start. Set the three heat switch on either **Low, Medium or High** depending on your material you are heating. Slowly increase the infinite control from **LO** to **1<sup>st</sup> dash mark** to **2** etc. (see knob above). Monitor the temperature of the material. When you reach your desired material temperature, either reduce your three heat switch setting if it is able the low setting and monitor the temperature. If the temperature drops, increase the infinite control switch until the temperature reaches the desired temperature. The temperature can be maintained by varying the three switch and/or the infinite control. It is important that you stir or airrate your material and monitor its temperature with a thermometer.

**NOTE: Do no leave heater on unless the unit is attended to by you or your personnel. Do not leave heater on overnight or over the weekend unattended.**

**NOTE: The chart above shows temperature change vs time in hours on water.**

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# WARNING

## READ THIS WARNING BEFORE OPERATING THE DRUM HEATER FOR METAL DRUMS AND PAILS!

**THE FOLLOWING PRECAUTIONS MUST BE OBSERVED TO AVOID POSSIBLE INJURY OR PROPERTY DAMAGE!!**

THE DRUM OR PAIL HEATER **MUST NOT** BE USED IN AREA WHERE **FLAMMABLE VAPORS** MAY, **AT ANY TIME**, BE PRESENT. FAILURE TO OBSERVE THIS CAUTION CAN RESULT IN FIRE OR EXPLOSION.

### **MONITOR THE TEMPERATURE WHILE HEATING YOUR MATERIAL!**

DO NOT USE DRUM OR PAIL HEATER TO HEAT **FLAMMABLE MATERIALS**. EXPLOSION OR FIRE COULD RESULT. THE DRUM OR PAIL HEATER SURFACE IS **HOT** DURING OPERATION. DO NOT USE DRUM OR PAIL HEATER ON OR NEAR WHERE COMBUSTIBLE SUBSTANCES CAN BE IGNITED, RESULTING IN A FIRE.

### **NEVER USE THE DRUM HEATER TO HEAT FLAMMABLE MATERIALS OR USE IN A HAZARDOUS AREA!**

TO AVOID HEATER FAILURE, DO NOT ALLOW THE HEATER AND/OR CONTROLS TO BECOME WET OR SPILL UPON THEM.

THE DRUM OR PAIL HEATER MUST BE **ELECTRICALLY GROUNDED** TO AVOID THE POSSIBILITY OF ELECTRICAL SHOCK TO THE OPERATOR. NEVER ALTER OR REMOVE THE SPECIAL HIGH AMPERE, THREE PIN, ELECTRICALLY GROUNDED PLUG SUPPLIED AS AN INTEGRAL PART OF THE HEATER.

THE **USER** MUST DETERMINE THE SUITABILITY OF THE DRUM OR PAIL HEATER FOR THE INTENDED HEATING APPLICATION. **DO NOT LEAVE** THE DRUM OR PAIL HEATER **UNATTENDED** DURING THE HEATING CYCLE. DISCONNECT THE HEATER FROM THE WALL RECEPTACLE WHEN IT IS **NOT** IN USE.

THE DRUM OR PAIL HEATER IS FOR **INDOOR USE ONLY**.

THE LEVEL OF THE MATERIAL BEING HEATED MUST BE ABOVE THE TOP EDGE OF THE DRUM AND PAIL HEATER TO ENSURE THE BEST TEMPERATURE SENSING AND INSURE LONG HEATER LIFE.

### **VENT CONTAINER WHILE HEATING OR IT MAY EXPLODE (OPEN VENT PLUG).**

**DO NOT** USE DRAIN SPOUTS OR VALVES ON DRUMS OR PAILS THAT CAN FAIL AT ELEVATED TEMPERATURES, CAUSING LEAKS, LOSS OF MATERIAL AND/OR POSSIBLE PERSONAL INJURY TO THE OPERATOR.

### **MAKE ABSOLUTELY SURE THAT THE DRUM OR PAIL HEATER IS TIGHTLY CLAMPED UPON THE CONTAINER!**

**NEVER** USE A DRUM OR PAIL HEATER INSIDE OR ADJACENT TO **HEAVY AIRBORNE DUST LOCATIONS** SUCH AS GRAIN ELEVATORS, GRAIN SILOS, HAY STORAGE AREAS, ETC....

KNOW HOW APPLIED HEAT WILL AFFECT YOUR MATERIAL BEFORE USING THE DRUM OR PAIL HEATER. IF YOU ARE NOT SURE HOW TO HEAT YOUR MATERIAL, DO NOT USE THE DRUM OR PAIL HEATER UNTIL YOU ARE INFORMED AS TO HOW THE APPLICATION OF HEAT WILL AFFECT YOUR MATERIAL – CONTACT YOUR MATERIAL SUPPLIER.