

Radiation Products Design Inc

**INSTRUCTIONS** 

# **RPD INFORMATION**

Address	5218 Barthel Industrial Drive
	Albertville, MN 55301

- Website www.rpdinc.com
- Email sales@rpdinc.com
- Phone 763-497-2071 or 800-497-2071
- **Fax** 763-497-2295

# **RPD PRODUCT INFORMATION**

Item Number	Description
869-910	Foam Cutter w/ Adjustable Heat, 110-120V,
	50/60 Hz





## DISCLAIMER

Please read the enclosed safety and operating instructions before you use the FOAM CUTTER the first time in order to ensure safe and proper handling.

# OVERALL VIEW (FIG 1)

- 1. On/Off switch
- 2. Temperature adjustment knob
- 3. Standby LED
- 4. Knurled screw for clamping the cutting wire
- 5. Over arm
- 6. Wire spool
- 7. Screw for wire spool
- 8. Spool carrier
- 9. Screw for spool carrier
- 10. Guide slot
- 11. Cutting Wire
- 12. Lower wire guide
- 13. Slot for angle stop
- 14. Angle gauge
- 15. Extension

### DESCRIPTION

With the FOAM CUTTER you can cut Styrofoam in a clean and safe way. The standard equipment includes a spool with cutting wire ( $\emptyset$  0.2 mm, length 30 m) and an adjustable angle stop with an extension.

# **SPECIFICATIONS**

Voltage: Primary 115 Volt, 50/60Hz Secondary max. 10.5 Volt, 50/60Hz Power Rating: max. 20 watt Secondary Current: max. 1.0 A Dimensions of Work Surface: 370 x 260 mm Max. Cutting Height: 5.5" (140 mm) **Throat:** 13.75" (350 mm) Weight: 6.6 lb (2.9 kg)

# SAFETY INSTRUCTIONS

- 1. Provide good ventilation, when using the device.
- 2. Observe the material suppliers safety instructions when cutting.
- 3. The cutting wire is hot. Risk of skin burn!
- 4 Do not use the device near curtains or other combustible materials.
- 5. Do not leave the device unattended when it is switched on.
- 6. Only use the supplied cutting wire or original replacement wire, Item 869-9101, otherwise the transformer will become unusable.
- 7. Switch off the device after use.

## SAFETY SYMBOLS

Ð	EN61558-2-6 EN61558-2-17	Self-protecting safety isolating transformer
	EN61558-1	Class II construction

(double insulated)

## ASSEMBLING

Fit the over arm 1 (Fig. 2) underneath the device by using the enclosed knurled screw. Fasten the cable 2 to the over arm with the screw 3. Tighten the screw to ensure good electrical contact (10.5 volt low voltage). Slide the spool carrier 8 (Fig. 1) on to the arm and fasten it with the screw 9. See OPERATION, Installing the cutting wire (Page 5).

## OPERATION

#### Installing the Cutting Wire

- 1. Switch off the device and unplug it from the receptacle.
- Carefully unwind the cutting wire approximately 8" (20 cm).
- 3. Open the lower wire guide by turning the knurled screw **4** (Fig. 1).
- 4. Thread the wire approx. 2" (5 cm) into the lower wire guide **12** (Fig. 1).
- 5. Clamp the wire by turning the knurled screw 4 (Fig. 1).
- Push the over arm 5 (Fig. 1) lightly downwards with your left hand, thread the wire through the guide slot 10 (Fig. 1) and fasten the wire spool 6 (Fig. 1) so that the wire is slightly tensioned.
- 7. Release the arm. The wire is tensioned by the spring force of the over arm.
- Check that the wire is at right angle with work surface. Adjust, if necessary by sliding the spool carrier 8 (Fig. 1) or by bending the over arm right or left.
- 9. Connect the plug into the receptacle and turn power switch on. Your device is now ready for use.

### Cutting

10. Switch on the device with the switch **1** (Fig. 1).

Note: It is normal that the wire extends somewhat after being heated for the first time. Stretch the wire slightly by the first heating and tension it again. The wire will now retain its length.

- 11. Adjust the temperature with the temperature adjustment knob 2 (Fig. 1). The best way to find the ideal temperature is to try different temperatures yourself. For simple, straightforward cuts you use a high temperature, for complicated shapes a lower temperature. Please note that too high temperatures will cause untidy edges.
- 12. Now move the work piece through the wire with a light pressure and even speed. Be aware that too high pressure in the direction of the cut when cutting complicated shapes will tend to bend the wire.

## Inside Hole Cutting

Drill 0.25" (0.64 cm) diameter hole through the Styrofoam. Thread the cutting wire through the Styrofoam and into the lower guide. Clamp the wire by the knurled screw **4** (Fig. 1). Repeat steps in OPERATION, Installing the cutting wire (Page 5).

### Miter Cutting

Miter cutting can be done in two ways with the FOAM CUTTER: by adjusting the spool carrier on the over arm or with the adjustable angle gauge. **Adjusting the spool carrier:** loosen the screws **1** and **2** (Fig. 3) and select the required angle by sliding the spool carrier. Tighten the screw **1** again and re-tension the wire with knob 2.

#### Note:

#### Adjusting the spool carrier will lengthen the heated part of the wire and thus increase the electrical resistance. The temperature must be adjusted accordingly.

Working with the stop: Select the required miter on the angle stop and secure the adjustment with the screw 1 (Fig. 4). Move the extension 2 so that you can pass the cutting wire without difficulty. Press the work piece against the stop and guide the stop along the slot 3.

**Note:** The stop can be fixed for parallel cutting. Turn the screw **1** (Fig.5) to clamp the stop in the slot. Guide the work piece past the cutting wire along the stop.

#### **Important Hints**

- When cutting double miter (e.g. roof), don't remove the cut off part after the first cutting. Use it as an underlay for the second cut.

- The wire has a higher temperature at the exit side of the work piece, which may cause surface melting. To prevent this, the wire can be cooled by blowing on it.

- Small sections of long profiles can best be cut by laying a waste piece 1 (Fig. 6) between the stop and the work piece and then cutting against the stop. The cutting wire then cuts into the waste piece and the edges remain clean.

– You can make a simple device yourself for cutting circular segments. Fix a drawing-pin at the center of the required circle on the working table with a piece of tape. Fix the work piece onto the pin and turn the work piece around the pin (Fig. 7).

– The cutting wire normally breaks above the guide bushing. Insert the wire a few inches further in the lower wire guide and fasten it again at regular intervals to prevent the wire from breaking.

#### Cleaning the device

Caution: First switch off the device and remove plug from the receptacle! Clean the wire and the bushing regularly to prevent unnecessary evaporation of polystyrene residue.

## PARTS LISTING

Item #	Description
869-9101	NiChrome Wire, 98 ft. x .008" Dia. on spool

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