

# Core Recycling Unit



## User Guide

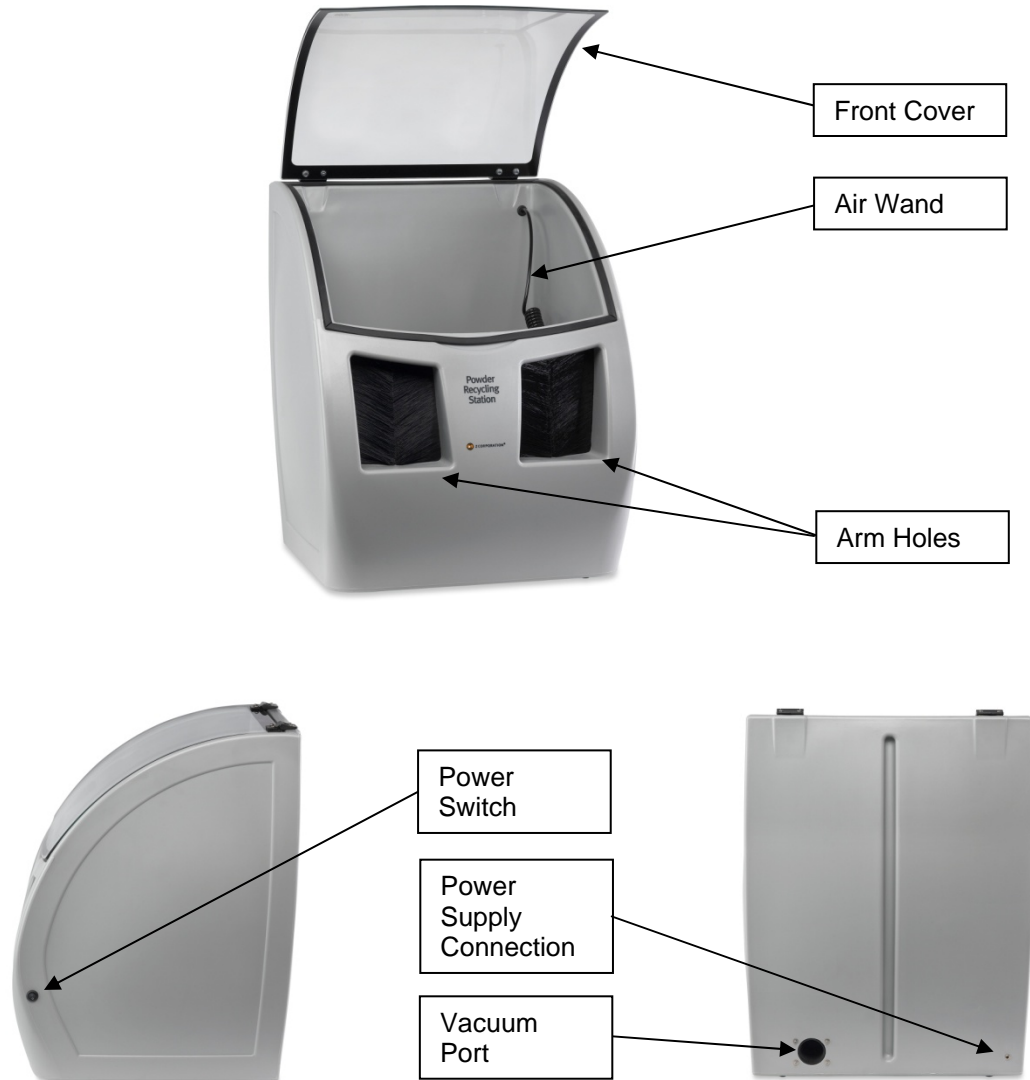
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**BDSYSTEMS®**

# 1 Introduction

The Powder Recycling Unit provides a convenient way to depowder your parts. It provides compressed air for blowing powder off the part, and a vacuum port where you can connect a vacuum or a ZPrinter 150/250 for recovering the powder.



## 2 Operation

### 2.1 Preparation

Before you use your Powder Recycling Unit for depowdering parts, do the following:

1. Connect the Power Supply to the Recycling Unit using the connection on the rear of the cabinet.
2. Plug the Power Supply into AC Power.
3. Connect the vacuum source you will be using to the vacuum port in the rear of the cabinet. This external vacuum source can be either:
  - o The vacuum hose from a ZPrinter 150/ZPrinter 250
  - o A separate vacuum

**Note:** If you use a separate vacuum, we recommend you do not attempt to recycle the collected powder back into your ZPrinter.

### 2.2 Depowdering

1. Activate your vacuum source.
  - o For a ZPrinter 150/250, use the front panel Control Knob to select **EXTERNAL DEPOWDER**.
  - o For a separate vacuum, turn it on.
2. Open the Powder Recycling Unit and place your part on the metal grate.
3. Close the Recycling Unit.
4. Turn on the Recycling Unit power.
5. Reach in through the armholes.

Use the air wand to blow powder off your part. You can vary the air pressure applied to the part by simply moving the wand closer or farther away.

Use brushes and other tools as needed to remove powder from confined areas on the part.

The loosened powder will be collected by your vacuum through the holes in the metal grate.

6. When you are done depowdering, turn off the Recycling Unit and turn off your vacuum source.
7. We recommend you allow your part(s) to continue drying in the Recycling Unit for another 2 – 4 hours before infiltrating. Parts strengthen as they dry.

### 2.3 Clean Up

Once you have finished depowdering, turn on your vacuum source and the Recycling Unit and use the air wand to clean up the interior of the Unit. Also clean the inside of the glass window.

### 3 Maintenance

Your Powder Recycling Unit requires no regular mechanical maintenance other than cleaning.

#### 3.1 Cleaning

As needed, vacuum your Powder Recycling Unit inside and out. Remove the metal grate and vacuum out any accumulated powder. Then wipe the Unit as needed with a cloth slightly dampened with distilled water to remove dust and other debris.

Allow the Unit to dry completely before using again.



**Caution:** Do not use fluid to clean the grate – if the vacuum is running the water might be sucked into the collected powder, causing it to begin to harden.

### 4 Specifications

Dimensions	22" wide x 22" deep x 28" high (56 cm wide x 56 cm deep x 71 cm high)
Weight	50 lbs. (22.7 kg)
Operating Environment	
Temperature	<ul style="list-style-type: none"> <li>• Maximum Temp. Range: 50-80° F (10 – 26.6° C)</li> <li>• Recommended Temp. Range: 55-75° F (12.7 – 23.9°C)</li> </ul>
Relative Humidity	<ul style="list-style-type: none"> <li>• Maximum RH Range: 15 – 60%, non-condensing</li> <li>• Recommended RH Range: 20 – 55%, non-condensing</li> </ul>
Noise Level	80 dB during depowdering
Power Requirements	<p>Power is provided by an external power supply, similar to that used with a laptop computer. A power supply is supplied with the Unit.</p> <p><u>Included supply</u>                      Input: 100 - 230 VAC, 50 - 60 Hz, 1.5 A.                      Output: 24 VDC, 5 A</p>
Country of Origin	Manufactured and assembled in USA.

## 5 Initial Installation

The Powder Recycling Unit is shipped completely assembled. Follow these steps to prepare the Unit for use.

1. Open the carton carefully and remove the Unit.
2. Place the Station on a table.
3. Remove any packing material around or inside the Station.
4. Locate the power supply and remove its packing material.
5. Plug the power supply into the AC outlet, and into the Station.

## 6 Support

If you have any questions about using your Powder Recycling Station, contact your Dealer or check the Support section of our 3DP User Web site: [zcentral.zcorp.com](http://zcentral.zcorp.com). Or you may contact Z Corporation directly:

### United States (Corporate Headquarters)

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Burlington, MA 01803 USA  
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Fax: +1-781-852-5100  
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### Technical Support – North and South America

Phone: +1 781 852 5050  
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### Denmark

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Denmark  
Phone: +45 48 14 11 22

### Technical Support – Europe/Middle East/Africa

Phone: +44 20 8144 3907

### Japan/Hong Kong

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Nishi-ku  
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### Technical Support – Asia Pacific

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## Warranty

Your Powder Recycling Station is guaranteed to be free of defects in materials and workmanship, when used for production of early-stage appearance models and prototypes and with Z Corporation consumables, for the period described below under WARRANTY PERIOD. All consumables and materials are guaranteed to perform as described in their specifications when stored and used as directed, up to the expiry date printed on the label. THE COMPANY MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL WARRANTIES INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY OTHER OBLIGATIONS OR LIABILITIES WHETHER IN CONTRACT, WARRANTY, NEGLIGENCE OR OTHERWISE. THE COMPANY IS NOT LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR INCIDENTAL DAMAGES INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS OR BUSINESS INTERRUPTION ARISING OUT OF THE USE OR INABILITY TO USE PRODUCTS OR SERVICES SOLD HEREUNDER. IN NO EVENT WILL THE COMPANY'S LIABILITY EXCEED THE TOTAL CHARGE OF THIS POWDER RECYCLING STATION.

WARRANTY PERIOD: In the U.S., warranty is for 1 year and covers service, parts and training material. In the EU, warranty is for 1 year and covers service, parts and training material.

## Symbols

The following symbols are used on the Powder Recycling Station and in this manual.



General Caution: User should use care to avoid possible damage to equipment.

## Change History

Rev. A 07/20/2010 ECN # 3025 RAB