

Uncrating OPUS® Pre-packed Columns

80 cm Internal Diameter (ID)

READ AND UNDERSTAND PRIOR TO REMOVING THE COLUMN FROM THE CRATE

Thank you for your OPUS® column order! This Uncrating Guide provides step-by-step instructions to help you uncrate your OPUS 80R column safely. Your OPUS® column has been securely packaged and shipped in a custom designed heat treated wooden crate to ensure product quality.

WARNING: OPUS 80R columns require two or more individuals to remove the column from the crate.

WARNING: OPUS 80R columns are heavy and must be moved with caution. See Table 1 for approximate weights (bed height information is contained on the white product label on the column).

WARNING: Abide by any local or company specific safety guidelines when uncrating and/or moving the OPUS 80R column.

WARNING: Do no grab the white inlet and outlet ports sticking up from the top of the black cap when uncrating and/or moving the OPUS 80R column.

WARNING: OPUS 80R columns are designed with integral casters. Use caution when pushing the column out of the crate and down the padded ramp. Keep hands, feet and other appendages clear to avoid injury or death.

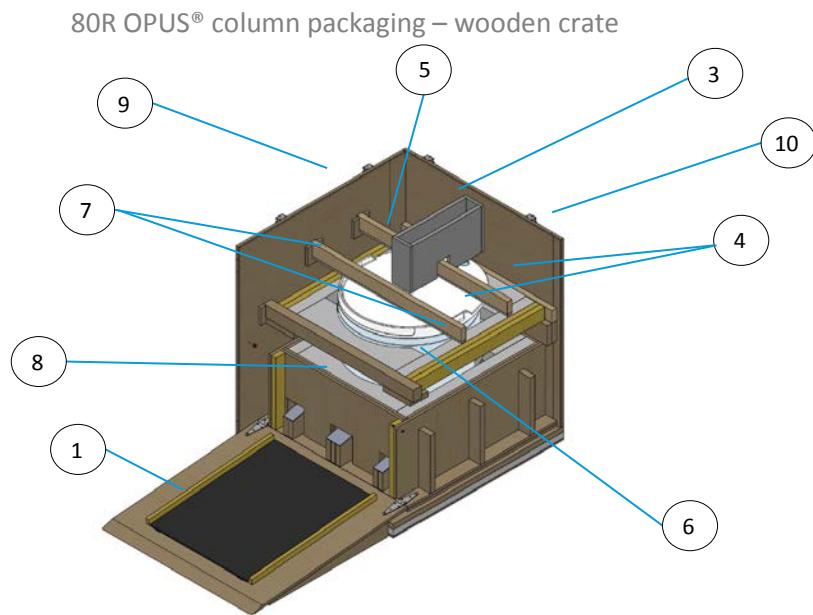
Table 1:

| Example bed height | Approximate weight of pre-packed column |
|--------------------|---|
| 10cm | 250 kgs |
| 20cm | 315 kgs |
| 30cm | 375 kgs |

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The wooden crate (Figure. 1) has eight removable parts which are numbered below:



1. Fold down ramp
2. Top lid (not shown)
3. Rectangular foam guard
4. Top cross support guard (x2)
5. Upper foam disc
6. Upper foam guard
7. Left and Right upper column supports
8. Bottom foam guard
9. Left Side Panel
10. Rear Panel
11. Right Side Panel (not shown)

The packaging is designed to fit the OPUS® 80R column so the casters do not touch the bottom of the crate. The top lid is attached to the body of the crate with (6) quarter turn latches. The remaining support members are held in place with Phillips flat head screws. Once the supports are removed, the column could be push/pull out of the crate. Do not pull or push on the inlet/outlet ports or tubing set if so equipped.

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How to uncrate your OPUS® 80R Pre-packed Column

Step 1: The top lid is attached to the body of the crate with (6) quarter turn latches. Unlatch all (6) and lift off the top lid and set aside. See Figure 2.

Step 2: The front ramp is held in place by (2) carriage bolts and wing nuts. Remove them and carefully lower the front ramp. Keep one or more hands on the ramp at all times prior to removing (2) bolts so the ramp doesn't fall. Use two or more individuals to lower the ramp if necessary. See Figure 2.

Step 3: The upper foam guard protects the H tube configuration while in transit. Carefully maneuver and lift off foam so as not to damage the tube set (optional configuration). See Figure 3.

Step 4: Use a power screwdriver to remove the (4) Phillips flat head black wood screws from the left and right side panel of the crate in preparation of removing the top cross supports. See Figure 3.

Step 5: Remove the foam disc from the top of the column. See Figure 3.

Step 6: Use a power screwdriver to remove the (8) Phillips flat head black wood screws in the upper foam guard that hold the left and right column supports in place. See Figure 3.

Step 7: Use a power screwdriver to remove the (4) Phillips flat head black wood screws from the left and right side panels of the crate that hold the upper foam guard in place. Lift upper foam guard up and out. See Figure 3.

Step 8: Remove the bottom foam guard by lifting up and out. See Figure 3.

Step 9: Use a power screwdriver to remove all Phillips flat head black wood screws from the base of all panels so each could be removed and set aside for OPUS® column removal. See Figure 3.

Step 10: Note: Removing the OPUS® 80R column is a 2 person operation.

Do not pull or push on the inlet/outlet ports or tubing set, if so equipped. The first operator stands on the ramp and pulls from the black top cap. They will be pulling the column and keeping it from rolling down the ramp. The second operator stands at the opposite side of the crate and pushes the white column tube towards the first operator. They will be pushing the column off the rails onto its casters. Roll the column off the crate using the padded ramp. See Figure 4.

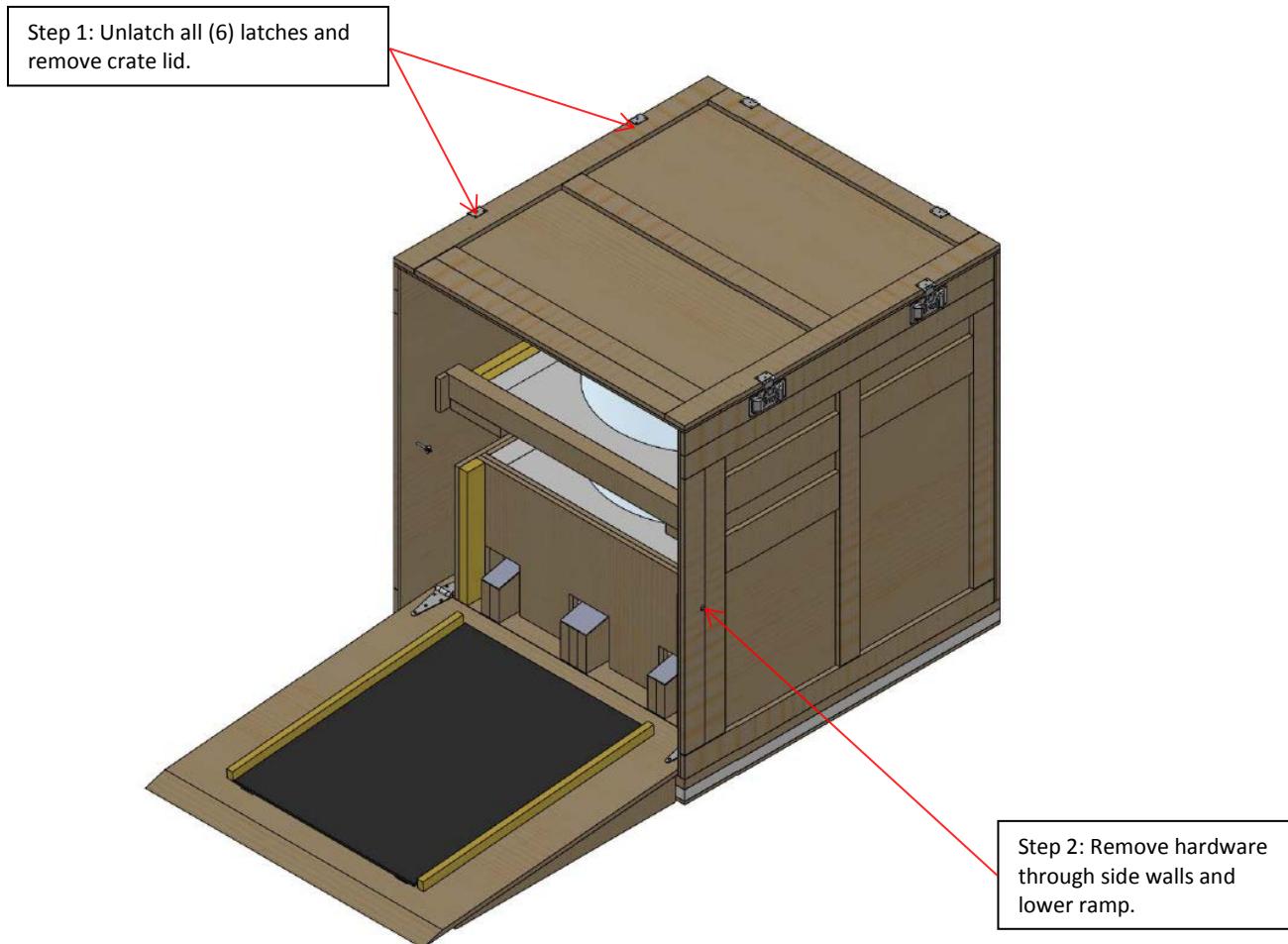
Alternately, an OPUS® 80R column is equipped with grooves on the bottom cap so it can be attached to a strap (not included) for hoisting purposes. Please contact Repligen for more information on availability of hoisting straps.

Step 11: Store the OPUS® 80R column according to the storage temperature noted on the white product label or customer's internal SOPs.

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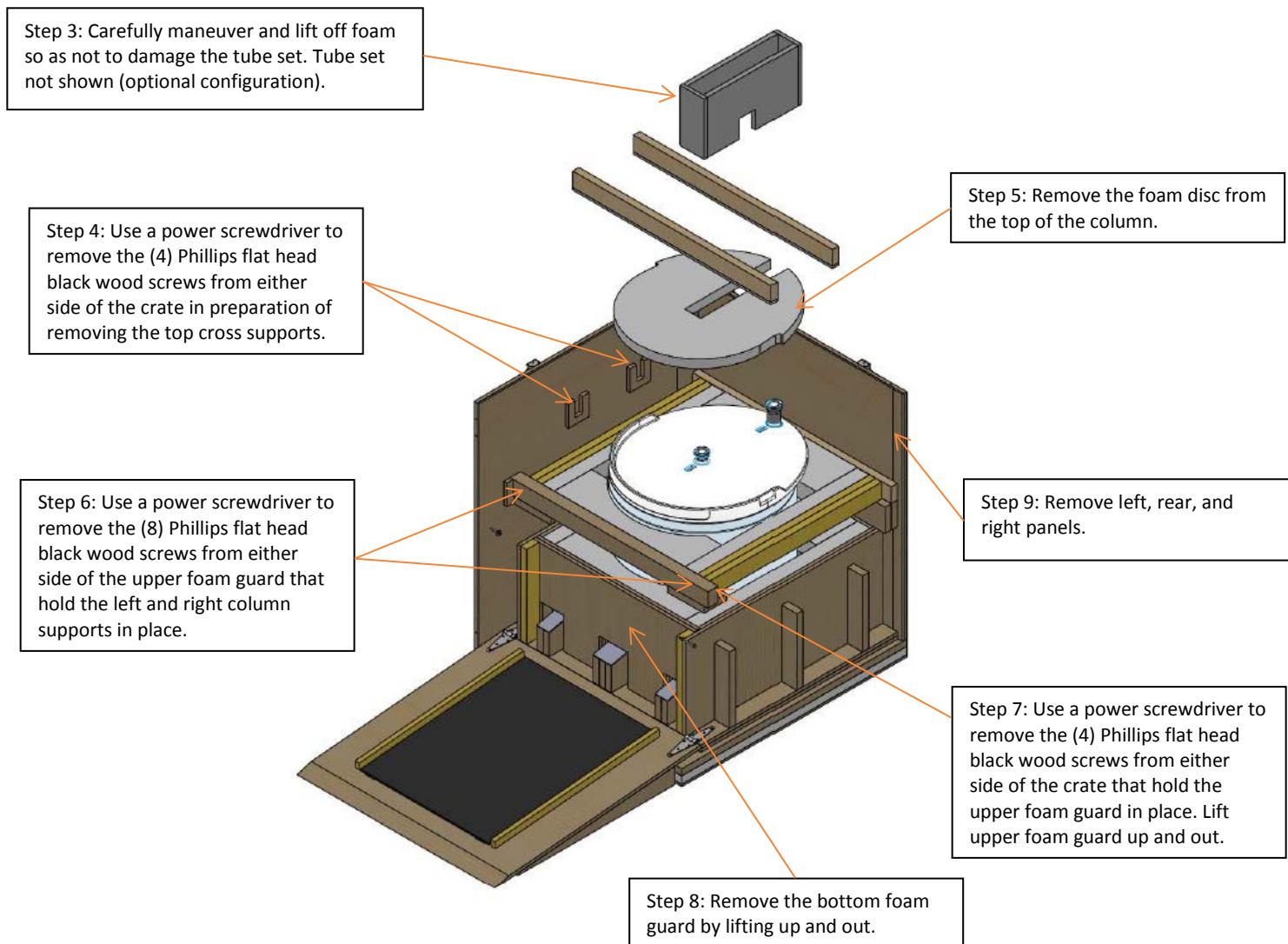
Figure 2



Uncrating OPUS® Pre-packed Columns

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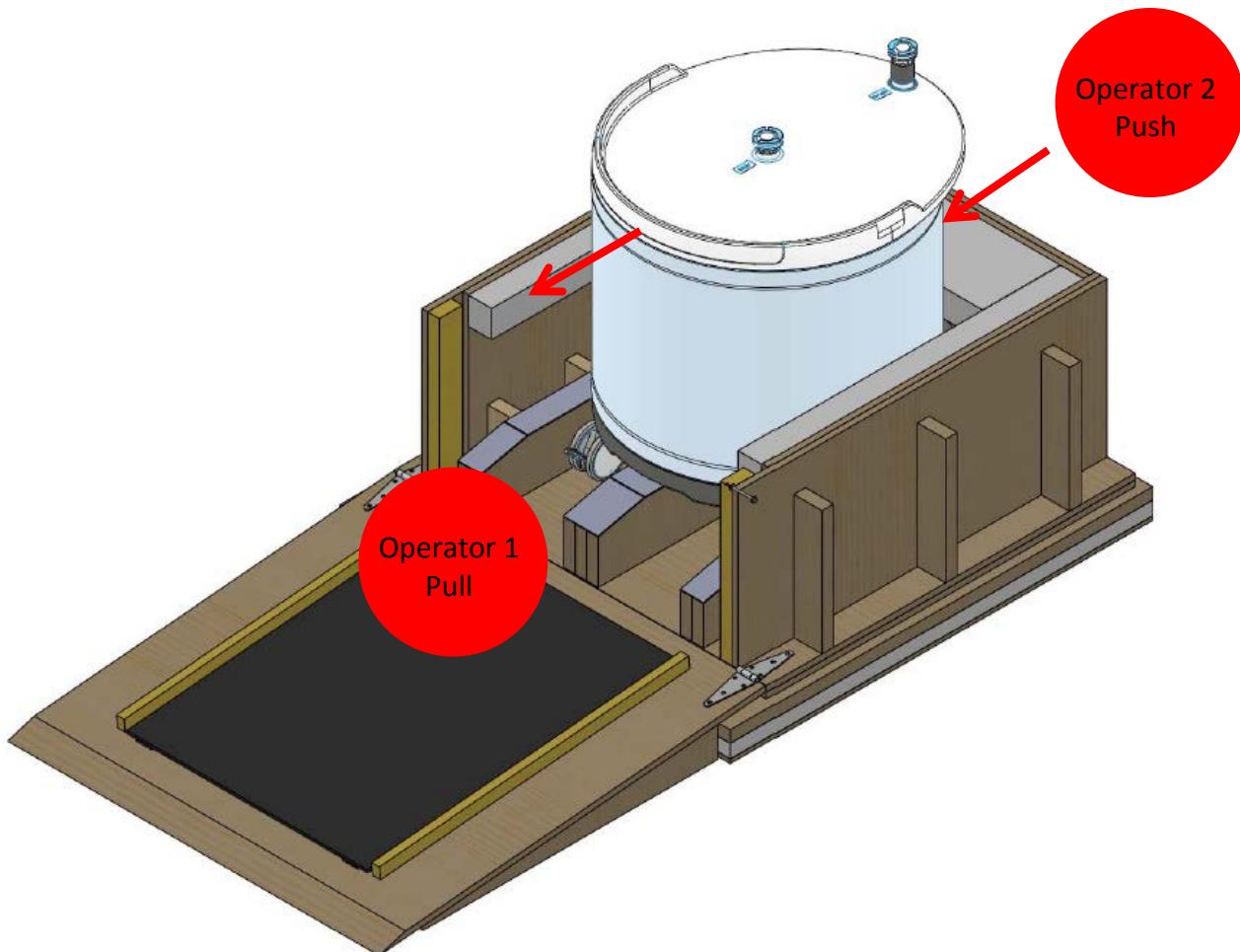
Figure 3



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Figure 4



OPUS® column is now ready to be removed from the Crate

The full OPUS® column User Guide may be downloaded at: www.repligen.com

For more information or questions, please contact Repligen:

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