

## PTR205 - Oct. 09, 2018

Item # PTR205 was discontinued on Oct. 09, 2018. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

► Recoat Fusion-Spliced Fibers to Restore Flexibility  
► Available with Manual or Automatic Mold Assembly and Recoat Injector  
► 50 mm or 100 mm Maximum Recoat Length

**PTR303B**  
Fiber Recoater for Manual Mold Assembly  
(Shown with Tablet Controller)

**PTR205**  
Fiber Recoater with Automatic Mold  
Assembly (Shown with Fiber Holder  
Inserts; Not Included)

**RM430A**  
Mold Assembly for Manual  
Recoater (Sold Separately)

**VHH000**  
Top Fiber Block Insert  
(Sold Separately)

**VHH500**  
Bottom Fiber Block Insert  
(Sold Separately)

Strip Clean Cleave Splice Taper/Combine **Recoat** Test

[Hide Overview](#)

### OVERVIEW

#### Features

- Recoat Spliced Fibers to Restore the Flexibility of the Fiber
- Manual and Automatic System Options
  - Automatic Mold Assembly and Recoat Injectors for High-Volume Production
  - Manual Mold Assembly with Automatic Recoat Injector
  - Manual Mold Assembly with Manual Recoat Injector
- Fully Programmable with Push Button Operation
  - Handset Controller Included with Automatic Recoater
  - Tablet Controller Included with Recoaters for Manual Mold Assemblies
- 50 mm or 100 mm Maximum Recoat Length
- Durable Quartz Mold Plate Capable of >10,000 Recoats
- Replacement Components Sold Separately Below

Thorlabs' Vytran® Fiber Recoaters restore the coating to a fusion-spliced fiber. The recoat material is injected through a cross-channel in the top plate into the mold assembly. Recoaters with manual or automatic mold assemblies are available. Our manual recoaters use a hinged top that can be opened and closed by hand while automatic recoaters utilize a pneumatic mold assembly that directly injects recoat material into the mold cavity. Both the automatic and manual recoaters use a split-quartz mold. The mold's surface is coated to prevent any recoat material that migrates between the plates from curing and forming imperfections on the finished recoat.

Each recoater uses a volumetric dispensing pump to inject the recoat material into the mold cavity. This pump is available with an automatic injection system (Item #s PTR205, PTR303, and PTR304) or a manual injection system (Item #s PTR303B and PTR304B). The recoated fiber is then cured with an ultraviolet (UV) source. The fiber recoating process restores the buffer coating to a stripped fiber, giving it the same flexibility as when originally manufactured. Unlike standard heat shrink protection sleeves, a recoated fiber can be handled and coiled normally, without risking the fusion-spliced section of fiber.

The recoat process starts with the fusion-spliced section of fiber being placed in the middle of the mold assembly. Once set in position, inserts in the fiber blocks secure the spliced fiber in place. Recoat material is pumped into the cavity and then UV-cured. Due to their ability to restore a fusion-spliced fiber to original condition, fiber recoaters are ideal for manufacturing high-stress or sensitive fibers such as undersea optical fiber cables, submarine communication cabling, fiber lasers or Distributed Bragg Reflector (DBR) lasers.

#### Mold Assemblies

The PTR205 automatic recoater comes standard with a mold assembly for  $\text{\O}430\ \mu\text{m}$  coated fibers. For our recoaters using manual mold assemblies, the mold assembly is sold separately so that customers can choose the right mold coating diameter for their application. Custom mold coating sizes are available up to  $\text{\O}900\ \mu\text{m}$ . Pre-installation of the mold assembly at the factory is also available. Contact Tech Support for more information on custom molds or factory assembly.

#### Inserts for Fiber Holding Blocks

In addition to the above, we offer a variety of inserts for use in the fiber holding blocks of the recoaters in order to support a wide range of fiber coating diameters. The inserts cover a range of fiber coatings from  $\text{\O}125\ \mu\text{m}$  to  $\text{\O}900\ \mu\text{m}$ ; a total of four are necessary for each recoater, two top inserts and two bottom inserts.

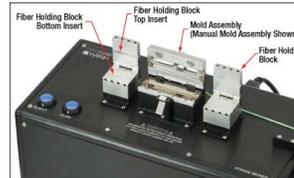
#### Recoat Materials

Thorlabs offers both high-index (Item # AB950200) and low-index (Item # PC373) recoat materials for use in these recoaters. Recoaters with manual injection pumps (Item #s PTR303B and PTR304B) are compatible with both types of recoat material; all other recoaters are compatible with the high-index material only. Our manual recoaters with an automatic injection system (Item #s PTR303 and PTR304) can be customized to work with both the low- and high-index recoat material; please contact Tech Support for more information.

#### Building a Complete Fiber Processing System?

To build a complete system, you will need to purchase a base unit plus additional components that are dependent upon the size of the fiber being processed. We recommend that you contact us prior to ordering for assistance with choosing a system and all the necessary components. This also allows us to install and factory-align all system components within the base unit prior to shipping, ensuring optimal performance out-of-the-box.

To take advantage of this assistance, please e-mail us directly at [techsupport@thorlabs.com](mailto:techsupport@thorlabs.com) and a representative will contact you shortly.



Click to Enlarge  
Thorlabs' Fiber Recoater detailing the mold assembly, fiber block holders, and fiber block inserts.

SPECS

| Item #                                 | PTR205  | PTR303  | PTR303B                            | PTR304                                 | PTR304B |
|--|---|---|------------------------------------|--|---------|
| Recoater Type                          | Automatic                                       | Manual  |                                    |  |         |
| Recoater Mold                          | Pneumatic Split Quartz Plates <sup>a</sup>      | Hinged Split Quartz Plates  |                                    |  |         |
| Recoat Diameter <sup>b</sup>           | 430 $\mu$ m                                     | 280 $\mu$ m, 430 $\mu$ m, or 600 $\mu$ m <sup>c</sup>                 |                                    |  |         |
| Maximum Recoat Length                  | 50 mm   |   |                                    | 100 mm                                 |         |
| Recoat Material                        | High-Index UV Curable Acrylate                  | High- or Low-Index UV Curable Acrylate                                | High-Index UV Curable Acrylate     | High- or Low-Index UV Curable Acrylate |         |
| UV/Thermal Source                      | 32 UV LEDs                                      | Four 10 W Halogen Lamps<br>(Replacement Item # UVRB, Available Below) |                                    |  |         |
| Recoat Injection                       | Automatic                                       | Manual <sup>d</sup>   | Automatic                          | Manual                                 |         |
| Recoat Volume                          | Programmable ( $\mu$ L)                         | Manual  | Programmable ( $\mu$ L)            | Manual                                 |         |
| Recoat Injection Rate                  | Programmable ( $\leq 1.8 \mu$ L/s)              | Manual  | Programmable ( $\leq 1.8 \mu$ L/s) | Manual                                 |         |
| Lamp Delay Time <sup>e</sup>           | 5 s (Typical)                                   |   |                                    |  |         |
| Cure Time <sup>e</sup>                 | 17 s (Typical)                                  |   |                                    |  |         |
| Mold Cleaning Requirement <sup>f</sup> | At Start Up And Shut Down <sup>g</sup>          | After Every Recoat  |                                    |  |         |
| Total Cycle Time                       | 45 s (Typical)                                  | 60 s (Typical)  |                                    |  |         |
| Dimensions (L x W x H)                 | 10.25" x 5.0" x 5.0" (260 mm x 127 mm x 127 mm) |   |                                    |  |         |
| AC Power                               | 110 - 120 V / 200 - 240 V, 47-63 Hz             |   |                                    |  |         |
| Controller Type                        | Handset   | Tablet  | Tablet                             | Tablet                                 | Tablet  |

- Requires an 80 - 120 psi Dry Compressed Air Source
- Custom sizes available; contact Tech Support.
- Depends on the Mold Assembly (See the Mold Assembly Presentation Below)
- Replacement Item # PTRRRM, Available Separately Below
- Programmable with the Handset or Tablet Controller; Mold Size and Recoat Material Dependent
- The mold should be cleaned with either acetone or isopropyl alcohol, applied with a cotton swab. If the mold has an accumulation of cured material stuck on the plates, allow the cleaning solution (preferably acetone) about 60 - 90 seconds to soften and lift the material from the surface.
- The mold assembly of these recoaters should be cleaned before the first recoating process of the day and then again after the last recoating process of the day.

TABLET CONTROLLER

Tablet Controller GUI Interface

The recoaters for manual mold assemblies include a tablet controller, which provides a simple interface for configuring, controlling, and monitoring operation. The screenshots below (from the PTR303) highlight key features of the graphical user interface. Additionally, the user can enter passwords and set permissions, allowing only authorized users to access and change the settings. The controller can be operated in one of four languages: English, French, Russian, or Chinese.



Click to Enlarge  
**Home Screen**

The home screen provides a status bar (top), tool bar (bottom), inject button, cure button, and a button to view or edit the parameters (magnifying glass and pen icon). The symbols on the right of the screen make up the recoater widget that from left to right show the injection status, syringe status, recoat material status, cure time, and recoat length.



Click to Enlarge  
**Injection Parameters**

This screen allows the user to access and change all injection parameters. The current setting is displayed next to the parameter name.



Click to Enlarge  
**Cure Parameters**

This screen allows the user to access and change all cure parameters. The current setting is displayed next to the parameter name.



Click to Enlarge  
**Injection Quantity Calculator**

This screen provides a useful approximation of the recoat material required for a given mold size, fiber diameter, and recoat length. Touching a parameter on the right will bring up the parameter edit screen.



Click to Enlarge  
**Material Usage (PTR303 and PTR304 Only)**



Click to Enlarge  
**Purge Sequence (PTR303 and PTR304 Only)**



|                           |                                 |                    |   |   |                            |   |   |   |   |   |   |   |     |  |
|---------------------------|---------------------------------|--------------------|---|---|----------------------------|---|---|---|---|---|---|---|-----|--|
| Recoat Process            | Automatic                       | ✓                  | ✓ | - | -                          | - | - | - | - | - | - | - | -   |  |
|                           | Manual                          | -                  | - | ✓ | ✓                          | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | -   |  |
| Proof Tester              | Linear                          | -                  | ✓ | - | -                          | - | - | ✓ | ✓ | - | - | ✓ | -   |  |
|                           | Rotary                          | -                  | - | - | -                          | - | - | - | - | ✓ | ✓ | - | ✓   |  |
| Recoat Injection Pump     | Automatic                       | ✓                  | ✓ | ✓ | -                          | ✓ | - | ✓ | - | ✓ | - | - | -   |  |
|                           | Manual                          | -                  | - | - | ✓                          | - | ✓ | - | ✓ | - | ✓ | - | -   |  |
| Maximum Recoat Length     | 50 mm                           | ✓                  | ✓ | ✓ | ✓                          | - | - | ✓ | ✓ | ✓ | ✓ | - | -   |  |
|                           | 100 mm                          | -                  | - | - | -                          | ✓ | ✓ | - | - | - | - | - | -   |  |
| Recoat Material           | High Index<br>(Item # AB950200) | ✓                  | ✓ | ✓ | ✓                          | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | -   |  |
|                           | Low Index<br>(Item # PC373)     | -                  | - | - | ✓                          | - | ✓ | - | ✓ | - | ✓ | - | -   |  |
| Controller Type           | Handset                         | ✓                  | ✓ | - | -                          | - | - | ✓ | ✓ | ✓ | ✓ | ✓ | -   |  |
|                           | Tablet                          | -                  | - | ✓ | ✓                          | ✓ | ✓ | - | - | - | - | - | ✓   |  |
| Mold Cleaning Requirement |                                 | Daily <sup>b</sup> |   |   | After Every Recoat Process |   |   |   |   |   |   |   | N/A |  |

- These recoaters are designed to be used with high- or low-index recoater material. Thorlabs also offers the PRL201, which is designed for polyimide-coated fibers.
- The mold assembly of these recoaters should be cleaned before the first recoating process of the day and then again after the last recoating process of the day.

#### Hide Fiber Recoater with Automatic Mold Assembly and Recoat Injector

### Fiber Recoater with Automatic Mold Assembly and Recoat Injector

- ▶ Available Standard for Ø430 µm Coatings
- ▶ Recoats Fibers up to 50 mm in Length
- ▶ Compatible with High-Index Recoat Material
- ▶ Ideal for Medium- to High-Volume Manufacturing

#### Included

- Automatic Fiber Recoater
- Pneumatic Mold Assembly for Ø430 µm Coatings
- Quick Snap-On Connectors for Compressed Air Source
- Location-Specific Power Cord
- Handset Controller
- 1/8" Outer Diameter Pressure Supply Tubing and Fittings Kit

Thorlabs' Automatic Fiber Recoater completely automates the fiber recoat process; fully programmable, it can be operated either through the handset controller (which gives full programming capabilities) or via buttons on the top of the machine.

Our PTR205 Automatic Fiber Recoater uses a pneumatic mold assembly to control the mold plates. This design allows the recoat material to be directly injected into the mold cavity, eliminating any excess material, which would require cleaning after every recoat. Additionally, once the fiber is secured in the fiber holding blocks, the entire recoat process is performed automatically. This clean, automated process makes the PTR205 ideal for high-volume manufacturing. This recoater is designed for fiber coatings of Ø430 µm and requires the purchase of fiber block inserts (sold below). Choose the inserts that match the coating diameter of the fiber being used. It is compatible with high-index recoat material only (sold below). The pneumatic design of the mold assembly requires an external 80 - 120 psi compressed air source (not available from Thorlabs).

#### Must be Purchased Separately

- Fiber Holding Block Top Inserts (Two Required)
- Fiber Holding Block Bottom Inserts (Two Required)
- High-Index Recoat Material (One Bottle Required)
- 80 - 120 psi Compressed Air/Gas Source (Not Available from Thorlabs)

#### Optional

- Replacement UV Bulb

A handset controller, which comes standard with the PTR205, allows the user to control and program fully the unit. All recoat parameters can be set through this controller.

Customized mold sizes for recoat diameters up to 900 µm; please contact Tech Support for more information.

| Part Number | Description   | Price       | Availability |
|-------------|---|-------------|--------------|
| PTR205      | Fiber Recoater with Automatic Mold Assembly and Recoat Injector | \$26,086.50 | Lead Time    |

#### Hide Fiber Recoaters for Manual Mold Assembly and Automatic Recoat Injector

### Fiber Recoaters for Manual Mold Assembly and Automatic Recoat Injector



Click to Enlarge  
The PTR304 (shown with mold assembly) has a maximum recoat length of 100 mm, while the PTR303 has a maximum recoat length of 50 mm.

- ▶ Compatible with Mold Assemblies with Coating Diameters of 280 µm, 430 µm, or 600 µm
- ▶ Recoaters for Fiber Lengths up to 50 mm or 100 mm
- ▶ Ideal for Low-Volume Manufacturing and R&D
- ▶ Compatible with High-Index Recoat Material

#### Included

- Fiber Recoater
- Location-Specific Power Cord
- Tablet Controller

#### Must be Purchased Separately

- Mold Assembly (One Required)
- Fiber Holder Top Inserts (Two Required)
- Fiber Holder Bottom Inserts (Two Required)
- High-Index Recoat Material (One Bottle Required)

#### Optional

- Replacement UV Bulb

These fiber recoaters use a hinged mold assembly (sold below) to form the mold cavity for recoating. This design allows the recoat material to be injected through a cross-channel in the mold's top plate. Intended for low-volume manufacturing and R&D applications, the mold assembly can be easily swapped out and the process parameters can be easily changed, providing flexibility and adaptability, but requires cleaning between each recoat process.

These recoaters feature an automated pump to inject the recoat material. The amount of material dispensed by the automatic injector is controlled by hand via the top-mounted "Inject" button or programmed into the machine by the included tablet controller. The automatic injector is only compatible with high-index recoat material (sold below); however, an add-on unit that can use both low- and high-index recoat materials is available. Please contact Tech Support for more information.

When selecting one of these recoaters, both a mold assembly and appropriately sized fiber holding block inserts (two top and two bottom, sold below) must be chosen. The mold assemblies are available for coating diameters of 280 µm, 430 µm, and 600 µm and maximum recoating lengths of 50 mm (Item # PTR303) or 100 mm (Item # PTR304). Customized recoat diameters up to 900 µm are also available; please contact Tech Support for more information.

The PTR303 and PTR304 recoaters include a tablet controller that both allow the user to program and control the recoater unit (see image to the right). Adjustable settings include the inject rate, inject amount, cure time, lamp power, and programming custom recipes. An injection calculator provides an estimate of recoat parameters that can be refined by the user. The tablet is shipped preloaded with files for common recoat parameters, but can store an unlimited number of files; please see the *Tablet Controller* tab for details.

| Part | Description | Price | Availability |
|------|-------------|-------|--------------|
|------|-------------|-------|--------------|

| Number |   |             |       |
|--------|---|-------------|-------|
| PTR303 | Fiber Recoater with Manual Mold Assembly and Automatic Recoat Injector with Tablet Controller, 50 mm Max Fiber Recoat Length  | \$5,950.00  | Today |
| PTR304 | Fiber Recoater with Manual Mold Assembly and Automatic Recoat Injector with Tablet Controller, 100 mm Max Fiber Recoat Length | \$10,225.00 | Today |

[Hide Fiber Recoaters for Manual Mold Assembly and Manual Recoat Injector](#)

### Fiber Recoaters for Manual Mold Assembly and Manual Recoat Injector



Click to Enlarge  
The PTR304B (shown with mold assembly) has a maximum recoat length of 100 mm, while the PTR303B has a maximum recoat length of 50 mm.

- ▶ Compatible with Mold Assemblies with Coating Diameters of 280 µm, 430 µm, or 600 µm
- ▶ Recoaters for Fiber Lengths up to 50 mm or 100 mm
- ▶ Compatible with High- and Low-Index Recoat Material
- ▶ Ideal for Low-Volume Manufacturing and R&D

These fiber recoaters use a hinged mold assembly (sold below) to form the mold cavity for recoating. This design allows the recoat material to be injected through a cross-channel in the mold's top plate. Intended for low-volume manufacturing and R&D applications, the mold assembly can be easily swapped out and the process parameters can be easily changed, providing flexibility and adaptability, but requires cleaning between each recoat process.

#### Included

- Fiber Recoater
- Location-Specific Power Cord
- Tablet Controller

#### Must be Purchased Separately

- Mold Assembly (One Required)
- Fiber Holder Top Inserts (Two Required)
- Fiber Holder Bottom Inserts (Two Required)
- High- or Low-Index Recoat Material (One Bottle Required)

#### Optional

- Replacement UV Bulb
- Replacement Manual Injector (PTR303B Only)

These recoaters feature a manual recoat injection system. The user is required to dispense the recoat material into the mold cavity. This manual injection system is compatible with both low- and high-index recoat material (sold below). Additionally, a replacement injector for the PTR303B recoater is available below.

When selecting one of these recoaters, both a mold assembly and appropriately sized fiber holding block inserts (two top and two bottom, sold below) must be chosen. The mold assemblies are available for coating diameters of 280 µm, 430 µm, and 600 µm and maximum recoating lengths of 50 mm (Item # PTR303B) or 100 mm (Item # PTR304B). Customized recoat diameters up to 900 µm are also available; please contact Tech Support for more information.

The PTR303B and PTR304B recoaters include a tablet controller that both allow the user to program and control the recoater unit (see image to the right). Adjustable settings include the inject rate, inject amount, cure time, lamp power, and programming custom recipes. An injection calculator provides an estimate of recoat parameters that can be refined by the user. The tablet is shipped preloaded with files for common recoat parameters, but can store an unlimited number of files; please see the *Tablet Controller* tab for details.

| Part Number | Description  | Price      | Availability |
|-------------|--|------------|--------------|
| PTR303B     | Fiber Recoater with Manual Mold Assembly and Manual Recoat Injector with Tablet Controller, 50 mm Max Fiber Recoat Length  | \$4,714.00 | Today        |
| PTR304B     | Fiber Recoater with Manual Mold Assembly and Manual Recoat Injector with Tablet Controller, 100 mm Max Fiber Recoat Length | \$9,000.00 | Lead Time    |

[Hide Mold Assemblies - One Required for Manual Fiber Recoaters](#)

### Mold Assemblies - One Required for Manual Fiber Recoaters

- ▶ Mold Assemblies Compatible with Thorlabs' Manual Fiber Recoaters
- ▶ Three Available Mold Coating Sizes: Ø280 µm, Ø430 µm, and Ø600 µm
- ▶ 50 mm or 100 mm Maximum Recoat Length
- ▶ Comes Installed from Factory when Purchased with Manual Recoater

| Item # | Coating Size | Maximum Recoat Length | Compatible Recoaters  |
|--------|--------------|-----------------------|---|
| RM280A | Ø280 µm      | 50 mm                 | PTR303, PTR303B<br>PTR203 <sup>®</sup> , PTR203B <sup>®</sup> |
| RM430A | Ø430 µm      |                       |   |
| RM600A | Ø600 µm      |                       |   |
| RM280L | Ø280 µm      | 100 mm                | PTR304, PTR304B<br>PTR204 <sup>®</sup> , PTR204B <sup>®</sup> |
| RM430L | Ø430 µm      |                       |   |
| RM600L | Ø600 µm      |                       |   |

The Mold Assemblies are composed of split quartz mold plates which, when closed, form the cylindrical mold cavity around the exposed section of the fiber being recoated. They are available for Ø280 µm, Ø430 µm, or Ø600 µm fiber coatings and in maximum fiber recoat lengths of 50 mm (compatible with Item #s PTR303 and PTR303B) and 100 mm (compatible with Item #s PTR304 and PTR304B). Custom mold sizes up to Ø900 µm are available; please contact Tech Support for more information. Mold assemblies with a 50 mm recoat length feature a lever to assist with opening or closing the mold.

Recoat material (sold below) is injected into the mold assembly by either an automatic or manual injection system. Then, UV light cures the recoat material. Cure times are dependent on the mold size and recoat material, but they range from approximately 12 - 15 seconds for the RM280A mold assembly with high-index AB950200 recoat material to 30 - 60 seconds with the low-index PC373 recoat material.

When purchasing a manual fiber recoater for the first time, it is necessary to choose a mold assembly that is appropriate for the desired fiber coating diameter. Additional mold assemblies may also be purchased and swapped out by the user. The assembly simply screws to the top of the device, making the removal and install simple and easy. Because of this, our manual recoaters are adaptable and flexible in the field and can be modified to accept varying diameters of fiber quickly. It is also necessary to order the proper inserts (sold below) that best match the fiber diameter being used, whether purchasing a fiber recoater for the first time or updating a current recoater for a different fiber diameter.

Please note that these mold assemblies are only for the manual recoaters (Item #s PTR303, PTR303B, PTR304, and PTR304B); the automatic recoater (Item # PTR205) is sold with its own assembly already installed.

| Part Number | Description   | Price      | Availability |
|-------------|---|------------|--------------|
| RM280A      | Recoater Mold Assembly with Lever, Ø280 µm Coating, 50 mm Max Recoat Length | \$4,119.78 | Today        |
| RM430A      | Recoater Mold Assembly with Lever, Ø430 µm Coating, 50 mm Max Recoat Length | \$4,119.78 | Today        |
| RM600A      | Recoater Mold Assembly with Lever, Ø600 µm Coating, 50 mm Max Recoat Length | \$4,119.78 | Lead Time    |
| RM280L      | Recoater Mold Assembly, Ø280 µm Coating, 100 mm Max Recoat Length           | \$6,222.00 | Today        |
| RM430L      | Recoater Mold Assembly, Ø430 µm Coating, 100 mm Max Recoat Length           | \$6,222.00 | Today        |
| RM600L      | Recoater Mold Assembly, Ø600 µm Coating, 100 mm Max Recoat Length           | \$6,222.00 | Today        |

[Hide Inserts for Fiber Holding Blocks - Two Top and Two Bottom Required](#)

## Inserts for Fiber Holding Blocks - Two Top and Two Bottom Required

- ▶ Fiber Block Inserts for Thorlabs' Fiber Recoaters
- ▶ Compatible with Fiber Coating Diameters from 90 µm to 990 µm
- ▶ Choose Two Top Inserts and Two Bottom Inserts

For all the recoaters sold above, the proper set of inserts needs to be selected. A total of four inserts (two top and two bottom) are required for a full unit. The inserts are seated in and secured to the fiber holding blocks. They can easily be swapped out for different sizes, allowing our recoaters to adapt quickly should different fiber coating sizes be desired. These inserts are compatible with fiber coatings ranging from Ø90 µm to Ø990 µm.

Custom sizes are available; please contact Tech Support for additional information.

| Compatible Fiber Buffer/Coating Diameters & Recoaters |               |                  |                  |                  |  |
|---|---------------|------------------|------------------|------------------|--|
| Item #  | Top or Bottom | Nominal Diameter | Minimum Diameter | Maximum Diameter | Compatible Recoaters   |
| VHH000  | Top           | -                | 90 µm            | 660 µm           | PTR205,<br>PTR303, PTR303B,<br>PTR304, & PTR304B<br><br>PTR203 <sup>a</sup> , PTR203B <sup>b</sup> ,<br>PTR204 <sup>b</sup> , PTR204B <sup>b</sup> |
| VHH900 <sup>a</sup>                                   | Top           | 900 µm           | 700 µm           | 1000 µm          |  |
| VHH100  | Bottom        | 100 µm           | 90 µm            | 110 µm           |  |
| VHH125  | Bottom        | 125 µm           | 113 µm           | 137 µm           |  |
| VHH160  | Bottom        | 160 µm           | 144 µm           | 176 µm           |  |
| VHH250  | Bottom        | 250 µm           | 225 µm           | 275 µm           |  |
| VHH300  | Bottom        | 300 µm           | 250 µm           | 350 µm           |  |
| VHH400  | Bottom        | 400 µm           | 350 µm           | 450 µm           |  |
| VHH500  | Bottom        | 500 µm           | 450 µm           | 550 µm           |  |
| VHH600  | Bottom        | 600 µm           | 540 µm           | 660 µm           |  |
| VHH900S <sup>a</sup>                                  | Bottom        | 900 µm           | 810 µm           | 990 µm           |  |

- Custom mold sizes are available for Ø900 µm fiber coatings for both our automatic and manual fiber recoaters. Please contact Tech Support for more information.
- Discontinued Products

| Part Number | Description   | Price    | Availability |
|-------------|---|----------|--------------|
| VHH000      | Top Insert for FHB1 and PTR Series, Flat                                  | \$51.00  | Today        |
| VHH900      | Top Insert for Use with VHH900S   | \$162.18 | Today        |
| VHH100      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø90 µm - Ø110 µm Coating  | \$162.18 | Today        |
| VHH125      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø113 µm - Ø137 µm Coating | \$162.18 | Today        |
| VHH160      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø144 µm - Ø176 µm Coating | \$162.18 | Today        |
| VHH250      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø225 µm - Ø275 µm Coating | \$162.18 | Today        |
| VHH300      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø250 µm - Ø350 µm Coating | \$162.18 | Today        |
| VHH400      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø350 µm - Ø450 µm Coating | \$162.18 | Today        |
| VHH500      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø450 µm - Ø550 µm Coating | \$162.18 | Today        |
| VHH600      | Bottom V-Groove Insert for FHB1 and PTR Series, Ø540 µm - Ø660 µm Coating | \$162.18 | Today        |
| VHH900S     | Bottom V-Groove Insert for FHB1 and PTR Series, Ø810 µm - Ø990 µm Coating | \$162.18 | Today        |

[Hide Recoat Materials - Choose Appropriate Material](#)

## Recoat Materials - Choose Appropriate Material

- ▶ AB950200: High-Index Recoat Material
- ▶ PC373: Low-Index Recoat Material

Thorlabs offers UV-curable acrylate recoat materials to be used in our PTR series fiber recoaters. We offer both high-index (Item # AB950200) and low-index (Item # PC373) material in 1 oz bottles. The high-index material can be used in all recoaters (except the PRL201), whereas the low-index material can only be used in recoaters with the manual injection pump option.

| Item #   | Recoat Material | Compatible Recoaters  |
|----------|-----------------|---|
| AB950200 | High Index      | PTR303, PTR303B, PTR304, PTR304B, & PTR205  |
|          |                 | PTR203 <sup>a</sup> , PTR203B <sup>a</sup> , PTR204 <sup>a</sup> , & PTR204B <sup>a</sup> |
| PC373    | Low Index       | PTR303B & PTR304B   |
|          |                 | PTR203B <sup>a</sup> & PTR204B <sup>a</sup>   |

- Discontinued Products

| Part Number | Description                      | Price    | Availability |
|-------------|----------------------------------|----------|--------------|
| AB950200    | High-Index Recoat Material, 1 oz | \$271.32 | Today        |
| PC373       | Low-Index Recoat Material, 1 oz  | \$395.76 | Today        |

[Hide Replacement UV Bulb for Manual Recoaters](#)

## Replacement UV Bulb for Manual Recoaters

- ▶ Replacement UV Bulbs for Manual Recoaters Listed to the Right
- ▶ 10 W Tungsten-Halogen Lamp
- ▶ Replacements Sold Individually
  - ▶ Four Bulbs Used in 50 mm Length Recoaters
  - ▶ Eight Bulbs Used in 100 mm Length Recoaters

The UVRB is a replacement bulb for the Vytran fiber recoaters listed to the right. Recoaters with a 50 mm recoat length are shipped with the four bulbs required for operation and recoaters with a 100 mm recoat length are shipped with eight bulbs.

Based on a schedule of 2000 recoats per month with 15 seconds per recoat, we recommend replacing the bulbs monthly. Instructions for bulb replacement are provided in the manual for each recoater or workstation (available from our website by clicking the red Docs icon next to each base unit Item #).

Please note that any fingerprints on the surface of the bulb will shorten the bulb's life; avoid handling the glass envelope of the bulb. If the envelope is touched, clean with a soft lens tissue wetted with acetone or alcohol.

### Compatible Systems

- PTR303, PTR303B, PTR304, and PTR304B Manual Fiber Recoaters
- PTR306, PTR306B\*, PTR307, and PTR307B Manual Fiber Recoaters with Proof Testers
- FFS2000 and FFS2000PT Fiber Preparation and Splicing Workstations
- FFS2000PM and FFS2000WS Fiber Preparation, Splicing, and Proof Testing Workstations
- Discontinued PTR203, PTR203B\*, PTR204, PTR204B\*, PTR206, PTR206B, PTR207, and PTR207B\* Recoaters

\*Older models of the PTR203B, PTR204B, PTR206B, and PTR207B (sold before 2015) used two different types of UV bulbs (high or low power) for curing the recoat material, depending on whether low- or high-index material was being used. All current models use the high-power UVRB, which can be programmed for high- or low-powered output. For help with replacing the older, low-power bulb, please contact Tech Support.

| Part Number | Description  | Price   | Availability |
|-------------|--|---------|--------------|
| UVRB        | Replacement Recoat Bulb for Manual Fiber Recoaters, Qty. 1 | \$52.02 | Today        |

[Hide Replacement Injector for Manual Recoaters](#)

## Replacement Injector for Manual Recoaters

- ▶ Replacement Manual Injector for Dispensing Recoat Material into the Mold
- ▶ Compatible with Select Vytran Manual Recoaters and PC373 and AB950200 Recoat Materials

### Compatible Systems

- PTR303B Manual Fiber Recoater
- PTR306B and PTR307B Manual Fiber Recoaters with Proof Tester
- Discontinued PTR203B, PTR206B, and PTR207B Recoaters

The PTRRRM is a replacement manual injector for the Vytran fiber recoaters listed to the right. Each of these systems is shipped with a manual injector required for operation.

The manual injector can be mounted to compatible fiber recoaters via the 4-40 screws on the recoater housing (see photo to the right). Use a 3/32" hex key to secure the injector prior to use. To connect the PTRRRM to the recoater mold, tighten the connector at the end of the green plastic tubing, then loosen by a 1/4 turn to allow for rotation.

The injector is equipped with a distribution valve and two-position selection lever for directing the flow of recoat material. A knurled dispensing screw with an internal plunger acts as a syringe for the recoat material. To fill the syringe, point the lever downward (i.e., toward the recoat bottle), then rotate the knurled dispensing screw counterclockwise until it spins freely to fill the syringe (shown in the photo to the right). Then, to inject the recoat material into the mold, point the lever horizontally (i.e., facing the knurled screw) and rotate the screw clockwise until near the end of the travel range is reached. Avoid bottoming out the dispenser as this may damage the internal plunger; also take care when re-engaging the threads to avoid cross threading the dispensing screw. Several fill/inject steps may be needed until air is displaced within the system. Use lens tissue and an acetone or alcohol cleaning solution to collect any excess recoat material that flows from the mold.



Click to Enlarge  
The PTRRRM is mounted to a recoater via two 4-40 mounting screws.



Click to Enlarge

| Part Number | Description                                     | Price      | Availability |
|-------------|---|------------|--------------|
| PTRRRM      | Replacement Injector for Manual Fiber Recoaters | \$1,251.54 | Today        |