

**DESCRIPTION**

GEX Parts P4405, P4410 and P4420 form a system designed for easy installation inside of the Thermo Scientific GENESYS 30 Spectrophotometer, allowing users to measure GEX DoseStix and WINdose style dosimeters. The holders can be inserted and secured in and out of the baseplate without the use of any tools.

**APPLICATION**

For use in conjunction with the GENESYS 30 Spectrophotometer to measure the optical absorbance of dosimeters.

**SPECIFICATIONS**

**Physical Specifications:**

Part No.	Product Description	Product Dimensions	Packaging Dimensions	Product Weight
P4405	Holder System Baseplate	14.5 (L) x 11.2 (W) x 1.3 (H) cm	12.7 cm x 12.7 cm x 12.7cm (13" x 10" x 2")	0.6 kg (1.3 lbs.)
P4410	DoseStix Holder	30.0 (L) x 50.0 (W) x 60.0 (H) mm	12.7 cm x 12.7 cm x 12.7cm (5" x 5" x 5")	0.06 kg (0.14 lb.)
P4420	WINdose Holder	Receiver Outer Dimensions: 41.0 (L) x 55.0 (W) x 44.0 (H) mm  Hinged Holder Dimensions: 2.9" (L) x 0.5" (W) x 0.525" (H)	12.7 cm x 12.7 cm x 12.7cm (5" x 5" x 5")	0.08 kg (0.18 lb.)

<b>Material</b>	Holders: Nylatron Baseplate: Anodized aluminum
<b>Color</b>	Grey
<b>Packaging</b>	Cardboard box and wrapped in bulk packaging or shipped mounted inside of the GENESYS 30.

**Calibration:**

Not applicable.

**Maintenance:**

The holders should be cleaned as part of a preventative maintenance program at a frequency dependent on the level of cleanliness of the area. Any accumulated particulate can be removed using compressed air.

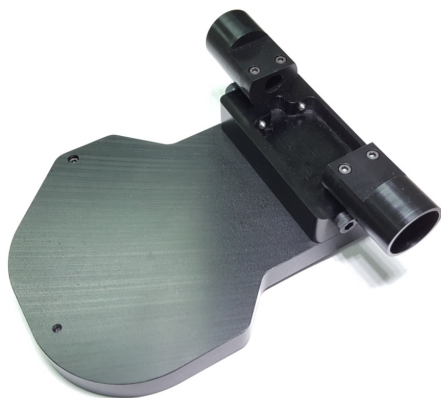
The holders should be physically taken apart and cleaned with a lint-free wipe and isopropyl alcohol or equivalent at least annually.

Avoid dropping or physically damaging the holders. If damage occurs, verify performance and consult GEX Customer Service.

**Storage:**

No environmental storage requirements.

**PRODUCT PHOTOS**



**P4405**



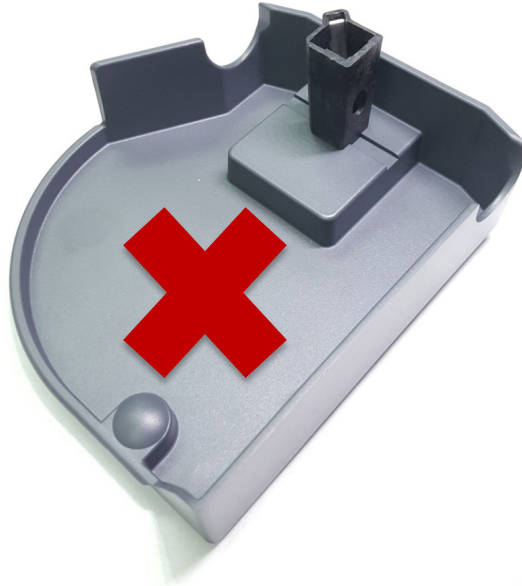
**P4410**



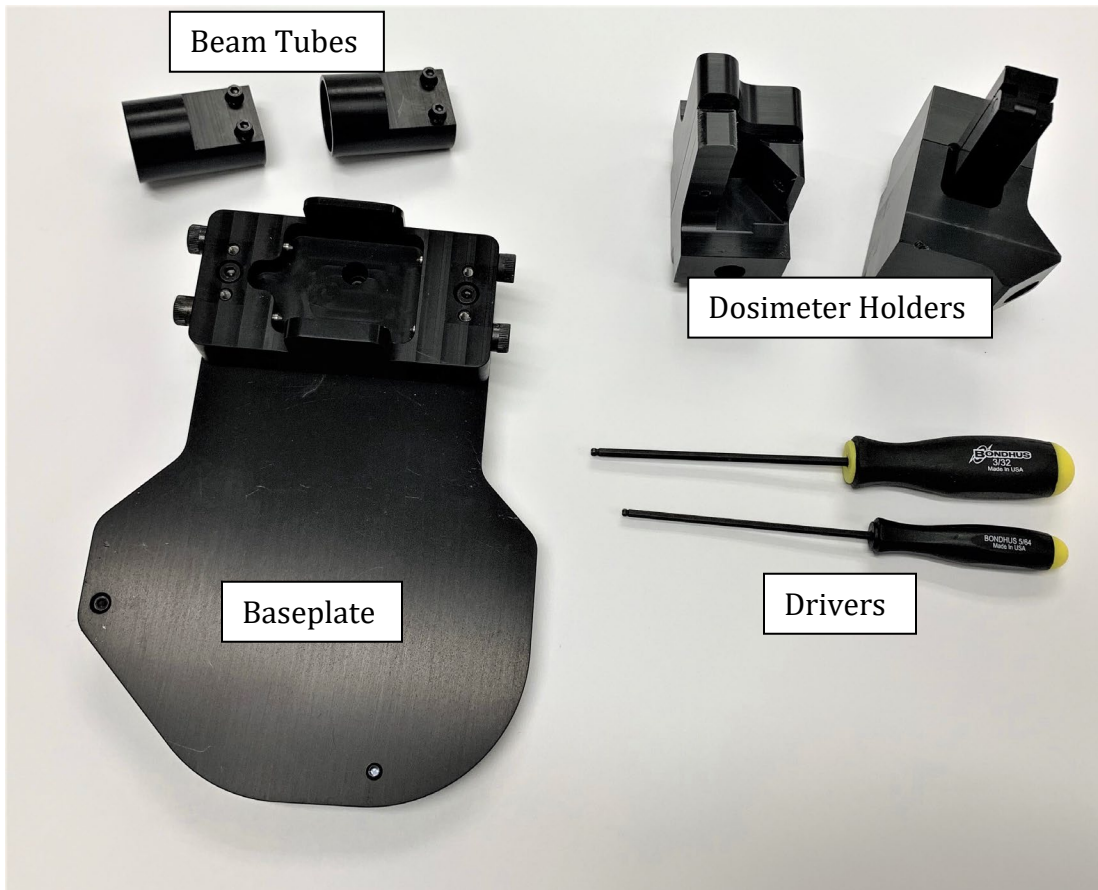
**P4420**

**INSTALLATION**

1. If the instrument is not delivered with the GEX Dosimeter Holder Baseplate installed, the user must install it on site.
2. Remove the Thermo baseplate from the GENESYS 30 Spectrophotometer; it will not be used and can be stored in the original product box. The baseplate is held in place with magnets and lifts out.



**Figure 1: Thermo GENESYS 30 baseplate (Do Not Use)**



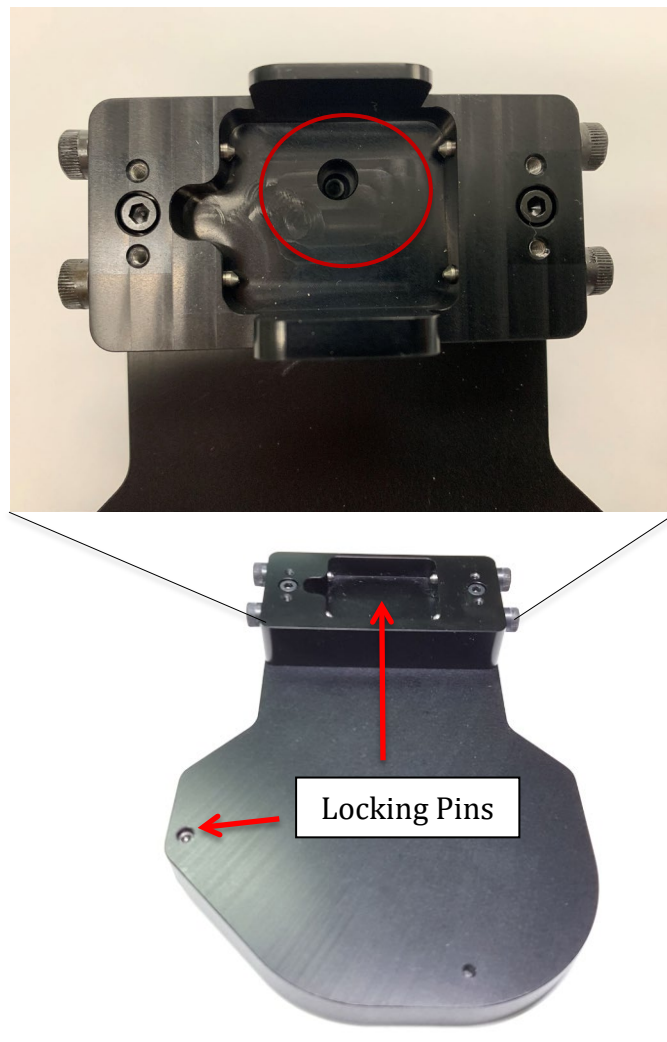
**Figure 2: GEX Dosimeter Holder System parts and drivers**

3. Remove the beam tubes from the GEX baseplate (if you receive them attached) using a 3/32" driver tool. See Figure 3 below.



**Figure 3: Removing the beam tubes**

4. Loosen the two baseplate locking pin screws by one half to one full turn using a 5/64" driver.



**Figure 4: Locking Pins**

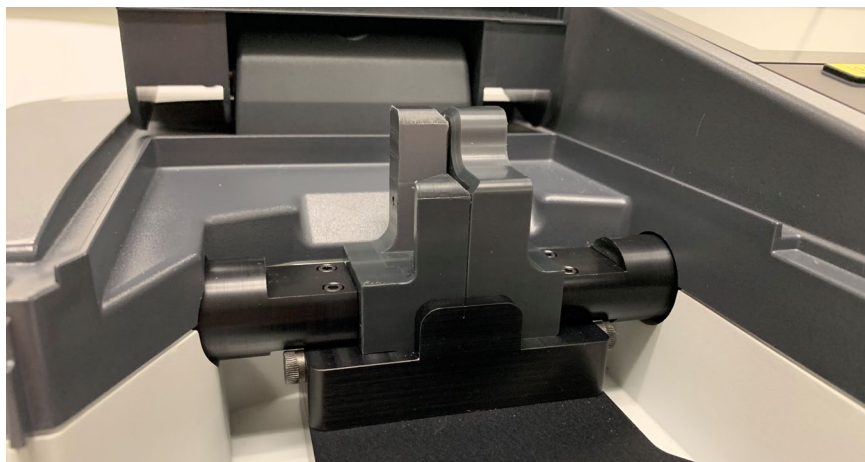
5. Carefully insert the bare baseplate into the GENESYS 30 sample chamber by lining up the locking pins with the cups in the base of the spectrophotometer.
6. Ensure that the baseplate is flush against the plastic bottom of the sample compartment housing of the G30. There should not be a gap between the baseplate and the housing of the instrument (the spacing between the lines in Figure 5 below should be evenly distributed).



**Figure 5: Baseplate installed flush with instrument body**

**NOTE:** Securing magnets are located in both the baseplate and in the bottom of the G30 sample compartment. The magnets are strong. Be careful when lowering the baseplate into the GENESYS 30.

7. Tighten the two locking pins firmly using the 5/64" driver tool. The pins are made from brass and can be stripped if tightened with excessive force; apply very firm pressure but not excessive force.
8. Verify that the baseplate is secure. Grasp the baseplate in front or back and attempt to dislodge the baseplate. If not secure, loosen the locking pins, and retry Steps 5-7 until it is secure.
9. Re-install the beam tubes using the 3/32" driver tool. Ensure the beam tubes fit into the GENESYS 30 lens cavities without interference.
10. Test the fit of the dosimeter holders P4410 or P4420 into the pocket.
  - a. Insert each holder into the holder pocket to secure the holder in position. The holders are keyed on the bottom to only allow insertion in one direction.
  - b. The holder should snap in easily but securely.
  - c. The beam tubes may need to be loosened to allow the dosimeter holder to insert properly; doing so will not affect performance.



## **QUALIFICATION**

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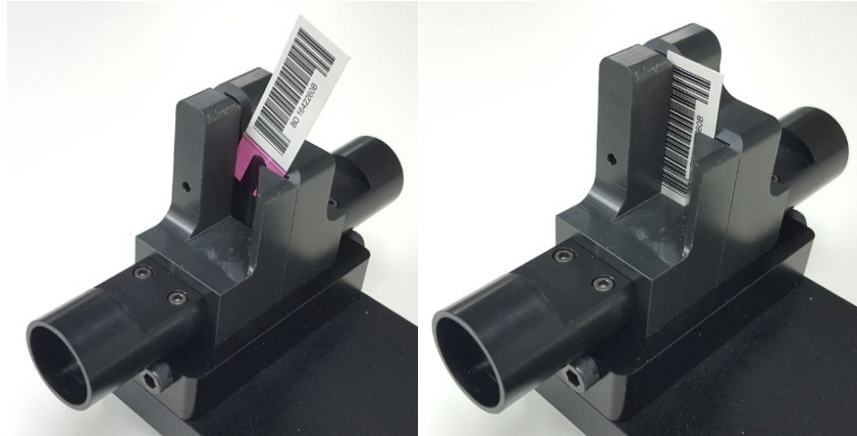
The holder system should be qualified with IQ/OQ testing to confirm that it is installed correctly, and that measurement repeatability with the complete system is within specification. Refer to *GEX Doc #100-267, DoseControl Implementation Guide* and *GEX Doc #100-281, DoseControl Hardware IQ/OQ Qualification Protocol* for details.

## **USAGE**

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### **DoseStix Dosimeter Holder (GEX P/N: P4410)**

The DoseStix dosimeter holder allows any DoseStix dosimeter to be inserted with the barcode facing out of the slot to allow for barcode scanning. The user slides the dosimeter into position, pushing the DoseStix until it stops. See images below.



### **WINdose Dosimeter Holder (GEX P/N: P4334)**

The WINdose dosimeter holder is used for 1 cm square radiochromic films. There are two parts; the receiver and the holder (see images below).

1. The dosimeter holder is keyed to the receiver and can only be inserted when properly aligned. The dosimeter is inserted into the hinged holder and is closed.



**GUARANTEE**

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**Guarantee:**

1 year satisfactionp guarantee. Product may be returned within one year from the date of delivery for any customer dissatisfaction.

**RELATED DOCUMENTS**

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- GEX Doc# 100-167, GENESYS 30 Spectrophotometer – Production Specifications and Usage (PSU)
- GEX Doc #100-280, IQOQ Plan and Protocol for DoseControl System

**REVISION HISTORY**

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<b>DATE</b>	<b>CHANGE DESCRIPTION</b>	<b>REVISION</b>
05/12/17	Initial release.	A
10/03/18	Replaced reference of “Genesys” with “GENESYS”. Description section updated. Replaced figures 9 and 10 with new images. ECO 70403.	B
05/23/19	Added new related documents and re-wrote installation procedures with many new pictures. ECO 70444.	C