Technical Note P721T0002, valid for P-721.xLQ, P-721.CDQ, P-725

PIFOC® Quick Lock Thread Options
Assembly & Installation Instructions

Introduction

This Technical Note describes the assembly/disassembly and installation/de-installation of PIFOC® microscope objective nanofocussing positioners and scanners with the quick lock feature.

The quick lock feature was developed to allow use of the same PIFOC® unit with any of the supported microscope barrel and objective thread types. Previous PIFOC®s could each be used only with a single microscope thread size.

Quick lock PIFOC®s can be installed without rotating the unit, eliminating inconvenient cable windup.

Design

With quick lock, the threads matching the microscope barrel and objective are on interchangeable inserts. The lower insert accepts the microscope objective and simply threads into the PIFOC® body. The upper insert threads into the microscope barrel and mates to the PIFOC® body by means of a tightening ring accessible through a slot in the body (Fig. 1).

Warnings: Possible Damage

Only moderate torque is necessary to secure the brass inlay in the P-721/P-725 body.

Do not open the body of the P-721/P-725. The preloaded piezoelectric stacks will damage the flexures if the body is opened.

Disassembly

1 Insert the tightening tool into one of the holes in the tightening ring. On an assembled unit, the tightening ring will be visible through the slot. Make sure the tool is well seated before applying pressure in the direction indicated by arrows on the unit.

2 Loosen the upper insert with the tool at least enough to allow the insert to rotate freely. Further loosening will allow it to be removed completely.

3 The lower insert is simply threaded into the PIFOC® body. With the upper insert removed, its wrench slots can be accessed using the flat wrench provided (Fig. 3).

4 If the upper insert needs to be disassembled, refer to Fig. 2.

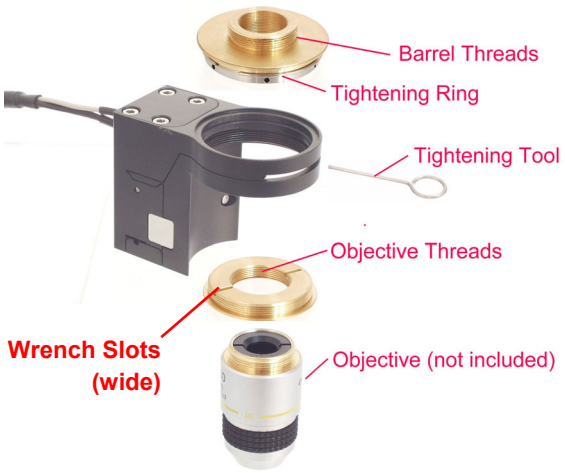

Fig. 1: PIFOC® with quick lock insert and microscope objective.

Assembly

Reverse the steps above to reassemble.

Fig. 2: Upper insert assembly/disassembly

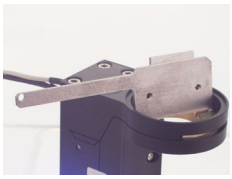

Fig. 3 Accessing lower insert with flat wrench wide face