



DEPARTMENT OF THE ARMY  
UNITED STATES MILITARY ACADEMY  
West Point, New York 10996

REPLY TO  
ATTENTION OF

MADN-EE-PR

14 April 2023

MEMORANDUM FOR MICC-Fort Drum

SUBJECT: Brand Name Exact Match Memo for Unison Buy **WestPointPRCBCH0001**  
of Thorlabs Stepper Motors and Controllers

1. This memorandum outlines the requirements for Thorlabs Stepper Motors and Controllers to be used in the Photonics Research Center (PRC) in Building 753. As part of the PRC's High Energy Laser (HEL) research program, we require additional stepper motors and controllers that are compatible with the existing system. These stepper motors are used for high-resolution adjustment of optical components that guide the laser beam.
2. Our current setup consists of three optical components, each with two degrees of freedom, that can be finely adjusted with a stepper motor. To properly align our laser beam, all stepper motors need to be capable of being controlled from one single software interface and connected to a computer by one USB hub. The current setup for the HEL project uses a Thorlabs stepper motor (ZFS13) and controller (KST101) to partially control one of the three mirrors and is controlled by proprietary Thorlabs software. If other stepper motors and controllers are used, they will not be compatible with the Thorlabs stepper motor controller software. While it is critical to ensure equipment compatibility with the existing stepper motor/controller, enabling us to control all three optical components from one user interface via the Thorlabs software, no specific vendor is required provided they meet the requirements of this memorandum.
3. The requested Thorlabs Stepper Motors and Controllers are the only products that will meet the government's requirements for commonality of capabilities and operation.
4. For the reasons listed above, the Photonics Research Center requests approval of a brand name or exact match purchase of the Thorlabs Stepper Motors, Controllers and Power Supply.
5. If there are any questions, please contact the Contracting Officer at [usarmy.drum.acc-micc.mbx.micc@army.mil](mailto:usarmy.drum.acc-micc.mbx.micc@army.mil).

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Fort Drum, NY