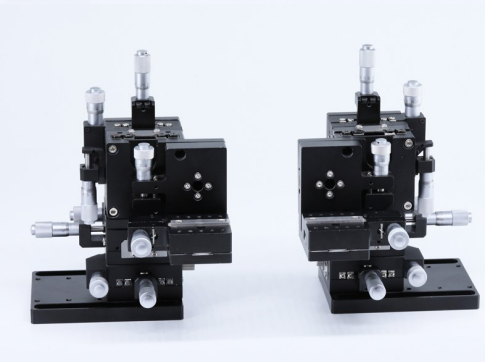
UFP Series 3/5/6-Axis Manual Fiber Coupling Stages, ≤0.5 µm Sensitivity

Model UFP Series Fiber Coupling Stages ·
waveqvanta.com/products/ufp-series-3-5-6-axis-manual-fiber-coupling-stages

Integrated 3-, 5- and 6-axis micrometer stages with coarse/fine linear tuning for fiber coupling work.



The UFP fiber coupling stages combine XYZ linear motion with optional tilt and rotation axes in one compact micrometer-driven assembly. Each linear axis offers ±6.5 mm coarse and ±0.3 mm fine travel with fine sensitivity of 0.5 µm or better; the 5-axis models add θx/θy tilt and the 6-axis models add θz rotation.

Key features

- X, Y and Z axes with ±6.5 mm coarse and ±0.3 mm fine travel
- Linear sensitivity ≤10 µm (coarse) and ≤0.5 µm (fine)
- 5-axis models add θx and θy tilt of ±3°, with ≤25.2″ and ≤23.4″ sensitivity
- 6-axis models add θz rotation of ±4° with ≤34″ sensitivity
- Crossed-roller guides on linear axes; crossed-roller rings on angular axes (UFP5C, UFP6C)
- Micrometer drive on all axes; left- (-L) or right-hand (-R) versions
- Black anodized aluminum alloy body

Specifications

Axes	3 (XYZ), 5 (XYZ θx θy) or 6 (XYZ θx θy θz)
X / Y / Z Travel	Coarse ±6.5 mm; fine ±0.3 mm
X / Y / Z Sensitivity	Coarse ≤10 µm; fine ≤0.5 µm
θx Range (UFP5C, UFP6C)	±3° (sensitivity ≤25.2″)
θy Range (UFP5C, UFP6C)	±3° (sensitivity ≤23.4″)
θz Range (UFP6C)	±4° (sensitivity ≤34″)
Guide Mechanism	Crossed-roller guide (UFP3C); crossed-roller guide + crossed-roller ring (UFP5C, UFP6C)
Drive Type	Micrometer
Drive Location	Left (-L) or right (-R)
Load Capacity	1.5 kg (UFP3C); 1 kg (UFP5C); 0.5 kg (UFP6C)
Weight	1.74 kg (UFP3C); 2.37 kg (UFP5C); 2.7 kg (UFP6C)
Body Material and Finish	Black anodized aluminum alloy

Model overview

Model	Axes	Drive Side	θx	θy	θz	Guide	Load (kg)	Weight (kg)
UFP3C-L	XYZ	Left	–	–	–	Crossed-roller guide	1.5	1.74
UFP3C-R	XYZ	Right	–	–	–	Crossed-roller guide	1.5	1.74
UFP5C-L	XYZ θx θy	Left	±3° (≤25.2″)	±3° (≤23.4″)	–	Crossed-roller guide + ring	1	2.37
UFP5C-R	XYZ θx θy	Right	±3° (≤25.2″)	±3° (≤23.4″)	–	Crossed-roller guide + ring	1	2.37
UFP6C-L	XYZ θx θy θz	Left	±3° (≤25.2″)	±3° (≤23.4″)	±4° (≤34″)	Crossed-roller guide + ring	0.5	2.7
UFP6C-R	XYZ θx θy θz	Right	±3° (≤25.2″)	±3° (≤23.4″)	±4° (≤34″)	Crossed-roller guide + ring	0.5	2.7

Typical applications

- Fiber-to-fiber and fiber-to-device coupling

- Optical waveguide alignment
- Fiber-optic component assembly and testing
- Laboratory beam coupling setups