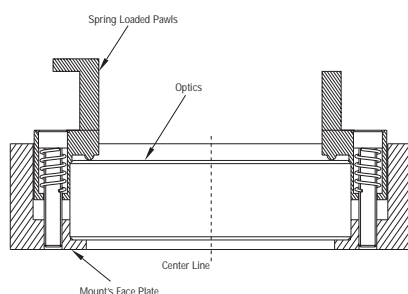


ULTIMA® Series

Precision Kinematic Optical Mounts

Key Features

- *Spring-loaded pawls gently hold optics in the mount*
- *Minimizes mount-induced wavefront distortion*
- *Thick plates and extra-stiff springs for long-term stability*
- *Precision 100 or 127 TPI adjustment screws*
- *Quick-change actuators*
- *Large choice of precision actuators*
- *English or metric compatible*
- *Mounts for 1, 2, 3, and 4 in. (25.4, 50.8, 76.2, and 101.6 mm) optics*



Spring-loaded pawls are used to hold the optic to minimize the wavefront distortion or can be clamped to provide enhanced security.

CAD See our website
for CAD files



ULTIMA® Precision Kinematic Optical Mounts minimize mount-induced wavefront distortion. Side set screw mounting, found in most optical mounts, is fine for many applications but our tests have shown that this technique induces wavefront distortion in the optic if the set screw is tightened a little too much.

ULTIMA-AC optical mounts use spring-loaded pawls to gently, but securely, hold high precision optics from the back against three points on the front plate of the mount. Wavefront distortion in the optic is minimized because the forces acting on the optic are axial, instead of radial and are more distributed. For applications requiring secure mounting, the pawls can be tightened further, compressing the springs, and clamping the optic between the three points on the front plate and the pawls.

Like all ULTIMA mounts, thick front and rear plates and optimized, stiff springs improve the long-term stability and provide greater protection against vibrations. These mounts for 1, 2, 3, and 4 in. (25.4, 50.8, 76.2, and 101.6 mm) diameter optics are provided with high precision, 100 TPI adjustment screws, or you can use the base model and select the actuators of your choice separately (see ULTIMA Actuators). The actuators can be quickly changed to accommodate a broad selection of adjustment screws, micrometers, and motorized or electrostrictive actuators.

Convenient clearance mounting holes on each of two sides are compatible with either 8-32 or M4 screws providing quicker, more precise, and more secure mounting.

Model	Dimension [in. (mm)]								Pawl Qty	Actuator Qty AJS100-0.5K
	A Sq.	B Sq.	C Optics	D Nom	E Nom	F Nom	G Min	G Max		
U100-AC2K	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	2.24 (56.9)	1.36 (34.5)	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	2	2
U100-AC3K	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)	2.24 (56.9)	1.36 (34.5)	0.99 (25.1) ⁽¹⁾	0.20 (5.1)	0.32 (8.1)	2	3
U100-AC	2.00 (50.8)	1.00 (25.4)	1.00 (25.4)		1.36 (34.5)	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	2	
U200-AC2K	2.88 (73.2)	1.50 (38.1)	2.00 (50.8)	2.28 (57.8)	1.50 (38.1)	1.19 (30.2)	0.39 (9.9)	0.61 (15.5)	3	2
U200-AC3K	2.88 (73.2)	1.50 (38.1)	2.00 (50.8)	2.28 (57.8)	1.50 (38.1)	1.19 (30.2) ⁽¹⁾	0.39 (9.9)	0.61 (15.5)	3	3
U200-AC	2.88 (73.2)	1.50 (38.1)	2.00 (50.8)		1.50 (38.1)	1.19 (30.2)	0.39 (9.9)	0.61 (15.5)	3	
U300-AC2K	3.83 (97.3)	2.00 (50.8)	3.00 (76.2)	2.35 (59.6)	1.57 (39.9)	1.26 (32.1)	0.34 (8.6)	0.73 (18.5)	3	2
U300-AC3K	3.83 (97.3)	2.00 (50.8)	3.00 (76.2)	2.35 (59.6)	1.57 (39.9)	1.26 (32.1) ⁽¹⁾	0.34 (8.6)	0.73 (18.5)	3	3
U300-AC	3.83 (97.3)	2.00 (50.8)	3.00 (76.2)		1.57 (39.9)	1.26 (32.1)	0.34 (8.6)	0.73 (18.5)	3	
U400-AC2K	4.75 (120.7)	2.50 (63.5)	4.00 (101.6)	2.47 (62.8)	1.69 (42.9)	1.32 (33.6)	0.51 (13.0)	0.85 (21.6)	3	2
U400-AC3K	4.75 (120.7)	2.50 (63.5)	4.00 (101.6)	2.47 (62.8)	1.69 (42.9)	1.32 (33.6) ⁽¹⁾	0.51 (13.0)	0.85 (21.6)	3	3
U400-AC	4.75 (120.7)	2.50 (63.5)	4.00 (101.6)		1.69 (42.9)	1.32 (33.6)	0.51 (13.0)	0.85 (21.6)	3	

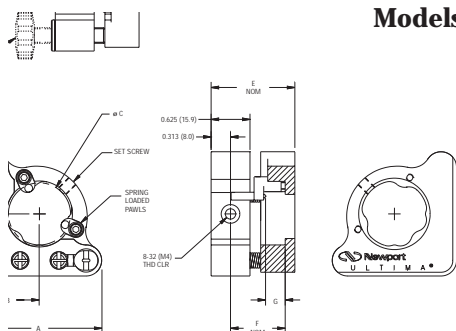
1) Actuator position dependent.

Note:

U200-AC has (3) 8-32 (M4) clearance holes with 0.375 in. (9.5 mm) spacing.

U300-AC has (3) 8-32 (M4) clearance holes with 0.50 in. (12.7 mm) spacing.

U400-AC has (3) 8-32 (M4) clearance holes with 1.00 in. (25.4 mm) spacing.



Models U100/200/300/400-AC

Ordering Information

Model	Description	Optic Diameter [in. (mm)]	Adjustment Screw Thread	Drive Type	Angular Range (°)	Sensitivity ⁽¹⁾ (arc sec)	Translation ⁽²⁾ [in. (mm)]
1 in. (25.4 mm) Optical Mounts							
U100-AC	1 in. Aperture Base	1.0 (25.4)					
U100-AC2K	1 in. Aperture with (2) AJS100-0.5K Actuators	1.0 (25.4)	100 TPI	Knob	±5	3.8	
U100-AC3K	1 in. Aperture with (3) AJS100-0.5K Actuators	1.0 (25.4)	100 TPI	Knob	±5	3.8	0.38 (9.7)
2 in. (50.8 mm) Optical Mounts							
U200-AC	2 in. Aperture Base	2.0 (50.8)					
U200-AC2K	2 in. Aperture with (2) AJS100-0.5K Actuators	2.0 (50.8)	100 TPI	Knob	±5	2.4	
U200-AC3K	2 in. Aperture with (3) AJS100-0.5K Actuators	2.0 (50.8)	100 TPI	Knob	±5	2.4	0.38 (9.7)
3 in. (76.2 mm) Optical Mounts							
U300-AC	3 in. Aperture Base	3.0 (76.2)					
U300-AC2K	3 in. Aperture with (2) AJS100-0.5K Actuators	3.0 (76.2)	100 TPI	Knob	±3.5	1.8	
U300-AC3K	3 in. Aperture with (3) AJS100-0.5K Actuators	3.0 (76.2)	100 TPI	Knob	±3.5	1.8	0.38 (9.7)
4 in. (101.6 mm) Optical Mounts							
U400-AC	4 in. Aperture Base	4.0 (101.6)					
U400-AC2K	4 in. Aperture with (2) AJS100-0.5K Actuators	4.0 (101.6)	100 TPI	Knob	±3.5	1.3	
U400-AC3K	4 in. Aperture with (3) AJS100-0.5K Actuators	4.0 (101.6)	100 TPI	Knob	±3.5	1.3	0.38 (9.7)

1) Typical, based on 1° rotation of actuator screw.

2) Translation of the optic occurs by turning all 3 actuators.

5 and 6 in. (127 and 152.4 mm) aperture versions available on special request.