



---

## Voice Coil Driven Objective Focuser **AVF75**

---



### Precision Design for Ultimate Performance

The AVF75 Voice Coil Driven Objective Focuser enables microscope objective and optics positioning at a large travel without sacrificing speed or nanometer-level performance. Designed to accommodate optical instruments and next-generation laser micromachining applications, the AVF75 is ideal for demanding optical positioning applications that require high precision, high throughput and long travels.

### Key Applications

The AVF75 is ideal for many applications, including:

- ◆ Microscopy
- ◆ Biotechnology
- ◆ Medical device manufacturing
- ◆ Laser processing
- ◆ Semiconductor / wafer inspection

### KEY FEATURES:

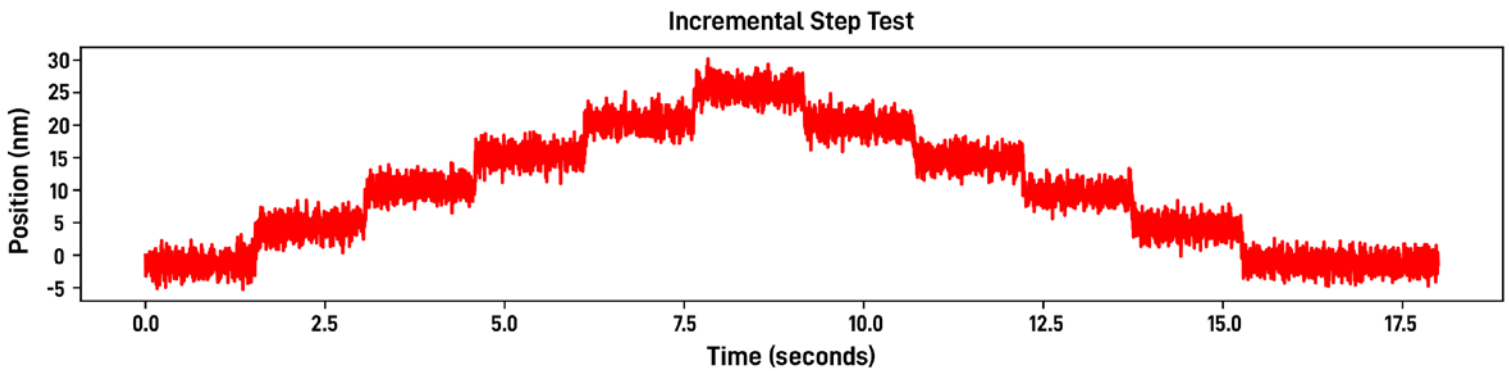
- ◆ **400  $\mu\text{m}$**  closed-loop travel
- ◆ **OUTSTANDING STEP-AND-SETTLE** and scanning performance
- ◆ Designed for **USE WITH LARGER, HIGH-NA OBJECTIVES**
- ◆ **SUPERIOR POSITIONING RESOLUTION** and linearity
- ◆ **MOUNTING FLEXIBILITY** 29 mm diameter clear aperture

## AVF75 SPECIFICATIONS

Mechanical Specifications	AVF75-400
Travel <sup>(1)</sup>	400 μm
Resolution (Min. Incremental Motion) <sup>(2)</sup>	5 nm
Accuracy <sup>(3)</sup>	±100 nm
Bidirectional Repeatability <sup>(3)</sup>	±50 nm
Pitch	30 urad (6 arc sec)
Yaw	30 urad (6 arc sec)
Straightness (X,Y)	100 nm
Max Payload <sup>(4)</sup>	0.3 kg
Moving Mass <sup>(5)</sup>	1.1 kg
Stage Mass <sup>(5)</sup>	1.7 kg
Material	Anodized Aluminum

**Notes:**

1. Other travels available - consult factory.
2. Drive dependent - consult factory.
3. Certified with each stage.
4. On-axis loading listed. Higher load designs available - consult factory.
5. Mass assumes 0.3 kg payload.



## AVF75 ORDERING OPTIONS

### Travel (Required)

---

**-400** 400  $\mu$ m closed-loop travel

### Objective Adapter (Optional)

---

**-OA1** W0.8 X 1/36" objective adapter

**-OA2** M19 X 0.75 objective adapter

**-OA3** M25 X 0.75 objective adapter

**-OA4** M26 X 0.75 objective adapter

**-OA5** M27 X 0.75 objective adapter

**-OA6** M28 X 0.75 objective adapter

**-OA7** M32 X 0.75 objective adapter

**-OA8** M26 X 1/36" objective adapter

### Integration (Required)

---

Aerotech offers both standard and custom integration services to help you get your system fully operational as quickly as possible. The following standard integration options are available for this system. Please consult Aerotech if you are unsure what level of integration is required or if you desire custom integration support with your system.

**-TAS Integration - Test as system**

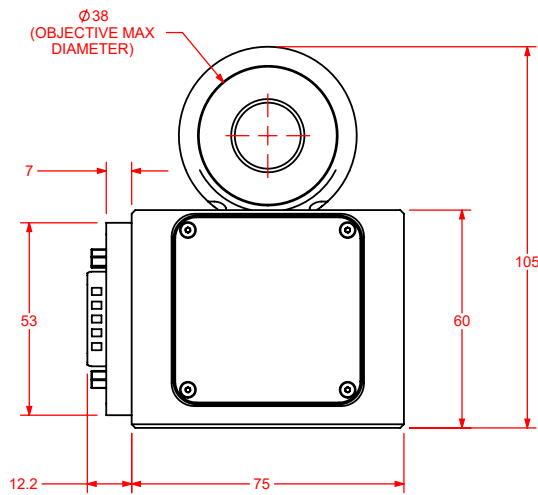
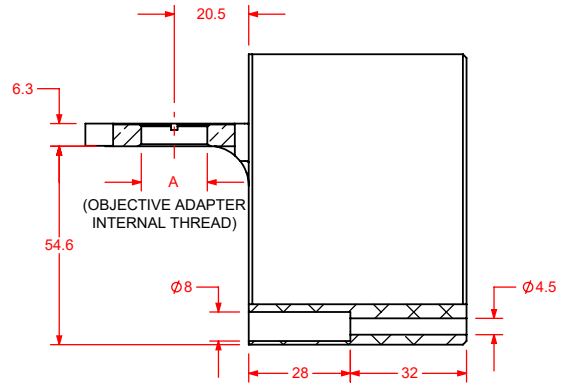
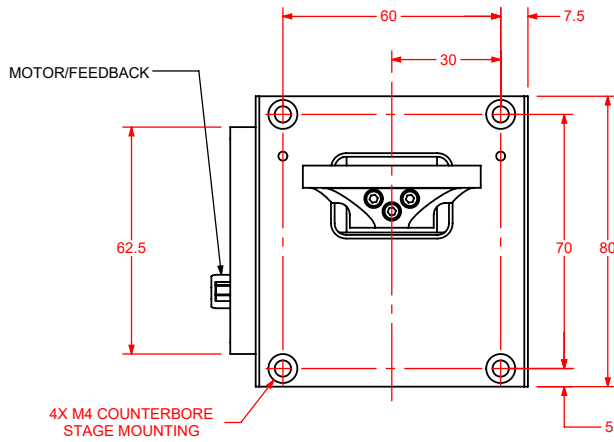
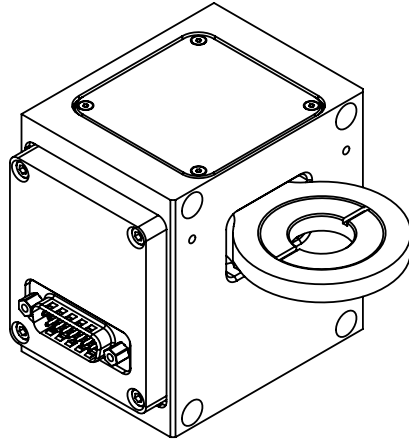
Testing, integration and documentation of a group of components as a complete system that will be used together (ex: drive, controller and stage). This includes parameter file generation, system tuning and documentation of the system configuration.

**-TAC Integration - Test as components**

Testing and integration of individual items as discrete components. This is typically used for spare parts, replacement parts or items that will not be used or shipped together (ex: stage only). These components may or may not be part of a larger system.



# AVF75 DIMENSIONS



BASIC MODEL	A
AVF75-XXX	M19X0.75
	M25X0.75
	M26X0.75
	M27X0.75
	M28X0.75
	M32X0.75
	M26X1/36"
	W0.8X1/36"
*M36X0.75	

\* CARRIAGE THREAD SIZE WITH ADAPTER REMOVED

DIMENSIONS: MILLIMETERS

