

# XRV SERIES

- ▶ Suitable for micro motion and smooth motion
- ▶ Fast response and short settling time
- ▶ Low friction
- ▶ No commutation needed
- ▶ High precision

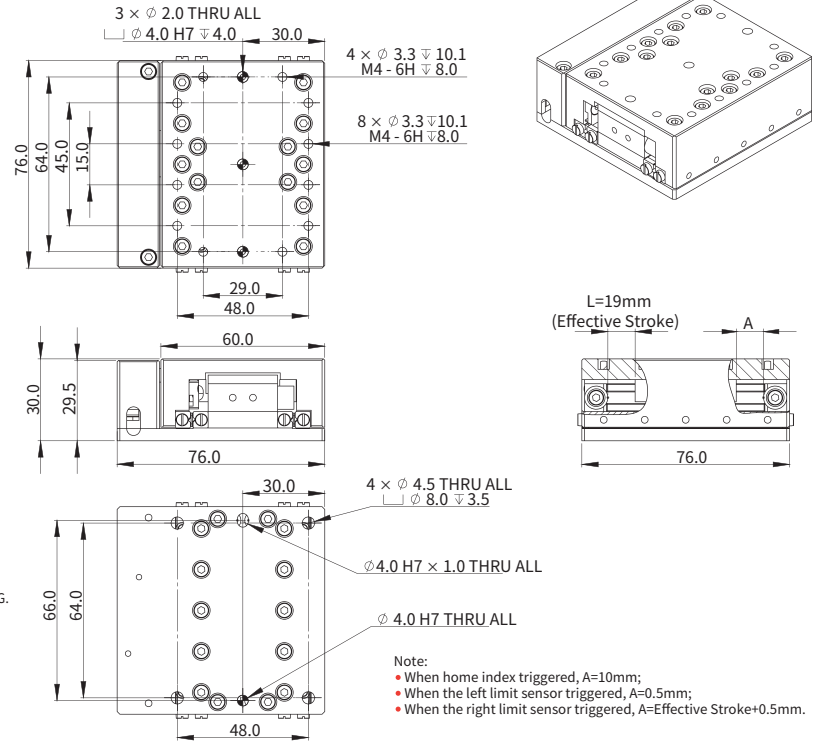
## XRV76

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	20
Motor	-	AVA1-20
Continuous Force	N	2.74
Peak Force	N	8.20
Resolution	μm	ABI21: 0.5/0.2
		AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21 0.5/0.2: ±1
		AT2 0.2/0.05: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	Kg	0.1
No-load Moving Mass	Kg	0.17
No-load Total Mass	Kg	0.48
Max. Allowable Payload	Kg	1.0
Max. Allowable Roll Moment Load	Nm	0.4
Max. Allowable Pitch Moment Load	Nm	0.5
Max. Allowable Yaw Moment Load	Nm	0.4

① Stroke refers to hardstop-to-hardstop mechanical stroke. The limit sensor are positioned 0.5mm from the hardstops.

② The rated load is based on the load in which the acceleration of the mass is at least 1G.

### Dimension Drawing



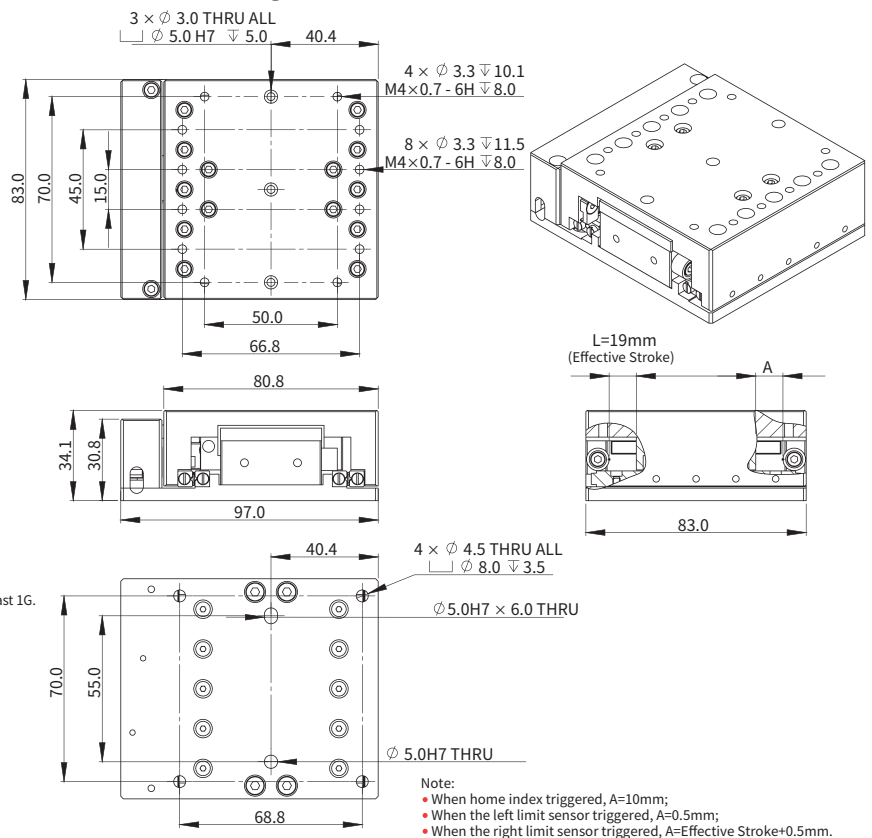
## XRV97

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	20
Motor	-	AVA2-20
Continuous Force	N	10.08
Peak Force	N	30.20
Resolution	μm	ABI21: 0.5/0.2
		AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21 0.5/0.2: ±1
		AT2 0.2/0.05: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	Kg	0.7
No-load Moving Mass	Kg	0.27
No-load Total Mass	Kg	1.16
Max. Allowable Payload	Kg	2.4
Max. Allowable Roll Moment Load	Nm	0.6
Max. Allowable Pitch Moment Load	Nm	0.5
Max. Allowable Yaw Moment Load	Nm	0.4

① Stroke refers to hardstop-to-hardstop mechanical stroke. The limit sensor are positioned 0.5mm from the hardstops.

② The rated load is based on the load in which the acceleration of the mass is at least 1G.

### Dimension Drawing

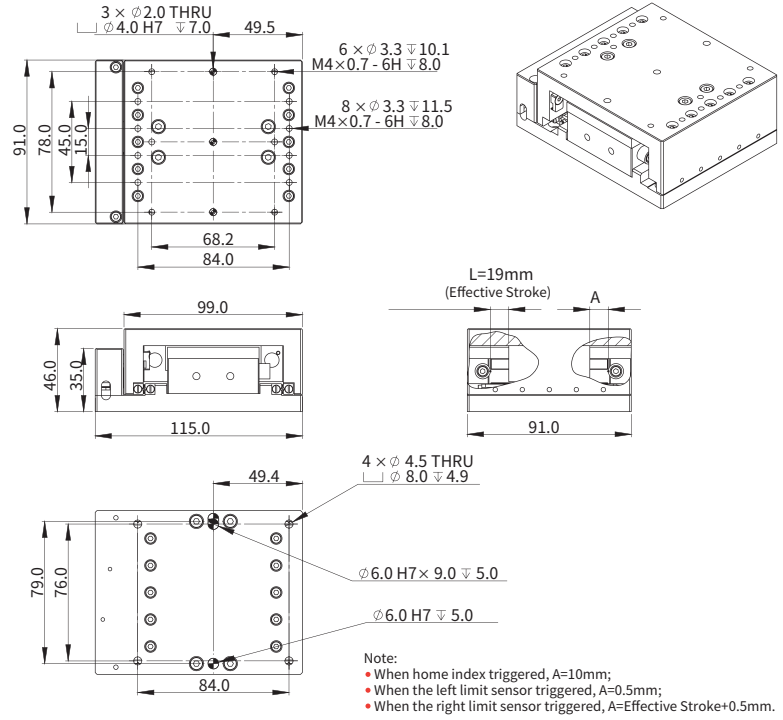


## XRV115

Specifications	Unit	Value
Stroke <sup>1</sup>	mm	20
Motor	-	AVA3-20
Continuous Force	N	17.92
Peak Force	N	53.8
Resolution	μm	ABI21: 0.5/0.2
		AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21 0.5/0.2: ±1
		AT2 0.2/0.05: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>2</sup>	Kg	1.4
No-load Moving Mass	Kg	0.43
No-load Total Mass	Kg	2.21
Max. Allowable Payload	Kg	5.2
Max. Allowable Roll Moment Load	Nm	0.8
Max. Allowable Pitch Moment Load	Nm	0.5
Max. Allowable Yaw Moment Load	Nm	0.4

- <sup>1</sup> Stroke refers to hardstop-to-hardstop mechanical stroke. The limit sensor are positioned 0.5mm from the hardstops.  
<sup>2</sup> The rated load is based on the load in which the acceleration of the mass is at least 1G.

### Dimension Drawing



## Ordering Part Number (OPN)

**XRV1 T E0F 1A 1**

Model - Coil Type:

XRV1: XRV76-AVA1-20-0.5A  
 XRV2: XRV97-AVA2-20-0.5A  
 XRV3: XRV115-AVA3-20-0.5A

Termination:

1: Flying Leads

Cover Type:

T: Standard (Black Anodized)

Cable Length:

A: 0.5m

Encoder Type:

E0F: ABI-21 (0.5μm)  
 E0G: ABI-21 (0.2μm)  
 ECF: ATOM2 (0.2μm)  
 ECJ: ATOM2 (0.2μm)

Scale Type:

1: Steel tape, 11ppm/K<sup>1</sup>  
 2: Glass G8 Soda Lime, 8ppm/K<sup>2</sup>

Note:

- <sup>1</sup> ABI-21 uses steel tape scale only.  
<sup>2</sup> ATOM2 uses glass scale only.

