

DGV SERIES

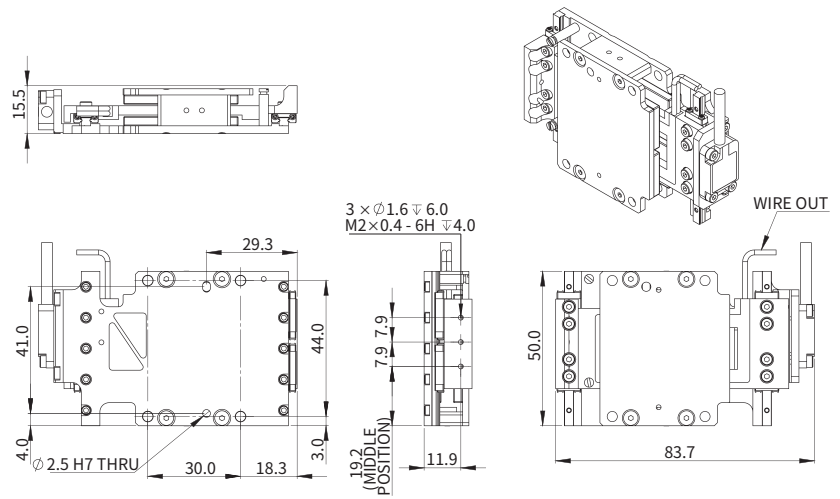
- ▶ Direct drive linear mechanism by planar voice coil motor
- ▶ Zero cogging effect, zero backlash
- ▶ Suitable for short stroke, high speed, and high frequency linear application

DGV16

Specifications	Unit	Value
Stroke ¹	mm	10
Motor	-	AVA1-C2-10
Continuous Force	N	4.00
Peak Force	N	12.0
Resolution	μm	ABI21: 1.0/0.5/0.2 AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21: 1.0/0.5/0.2: ±1 AT2: 0.2/0.05: ±0.5
Straightness	μm	±3
Flatness	μm	±3
Rated Payload ²	Kg	0.17
No-load Moving Mass	Kg	0.028
No-load Total Mass	Kg	0.220
Max. Allowable Payload	Kg	0.4
Max. Allowable Roll Moment Load	Nm	1.3
Max. Allowable Pitch Moment Load	Nm	0.3
Max. Allowable Yaw Moment Load	Nm	1.3

- ¹ Stroke refers to hardstop-to-hardstop mechanical stroke. Effective stroke equals to mechanical stroke for this short-stroke stage.
² The rated load is based on the load in which the acceleration of the mass is at least 1G.

Dimension Drawing

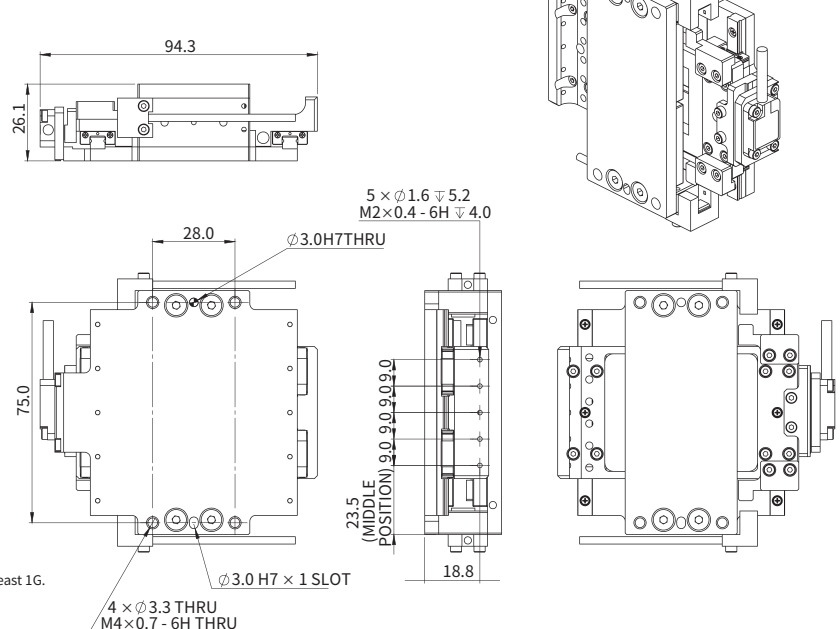


DGV26

Specifications	Unit	Value
Stroke ¹	mm	20
Motor	-	AVA2-20
Continuous Force	N	10.08
Peak Force	N	30.2
Resolution	μm	ABI21: 1.0/0.5/0.2 AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21: 1.0/0.5/0.2: ±1 AT2: 0.2/0.05: ±0.5
Straightness	μm	±3
Flatness	μm	±3
Rated Payload ²	Kg	0.40
No-load Moving Mass	Kg	0.110
No-load Total Mass	Kg	0.750
Max. Allowable Payload	Kg	0.5
Max. Allowable Roll Moment Load	Nm	1.4
Max. Allowable Pitch Moment Load	Nm	0.6
Max. Allowable Yaw Moment Load	Nm	1.4

- ¹ Stroke refers to hardstop-to-hardstop mechanical stroke. Effective stroke equals to mechanical stroke for this short-stroke stage.
² The rated load is based on the load in which the acceleration of the mass is at least 1G.

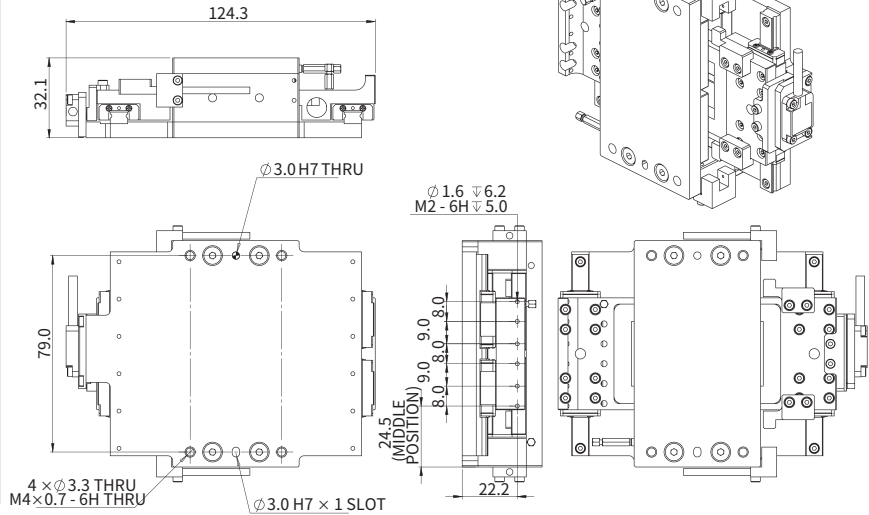
Dimension Drawing



DGV32

Specifications	Unit	Value
Stroke ¹	mm	20
Motor	-	AVA3-20
Continuous Force	N	17.92
Peak Force	N	53.8
Resolution	μm	ABI21: 1.0/0.5/0.2
		AT2: 0.2/0.05
Bidirectional Repeatability	μm	ABI21: 1.0/0.5/0.2: ±1
		AT2: 0.2/0.05: ±0.5
Straightness	μm	±3
Flatness	μm	±3
Rated Payload ²	Kg	0.74
No-load Moving Mass	Kg	0.160
No-load Total Mass	Kg	1.100
Max. Allowable Payload	Kg	1.1
Max. Allowable Roll Moment Load	Nm	5.5
Max. Allowable Pitch Moment Load	Nm	1.6
Max. Allowable Yaw Moment Load	Nm	5.5

Dimension Drawing



- ¹ Stroke refers to hardstop-to-hardstop mechanical stroke. Effective stroke equals to mechanical stroke for this short-stroke stage.
- ² The rated load is based on the load in which the acceleration of the mass is at least 1G.

Ordering Part Number (OPN)

DGV1 E E0E 1 A 1

Model - Coil Type:

DGV1: DGV16-AVA1-C2-10-0.5A
 DGV2: DGV26-AVA2-20-0.5A
 DGV3: DGV32-AVA3-20-0.5A

Termination:
 1: Flying Leads

Cover Type:

E: EN

Cable Length:
 A: 0.5m

Encoder Type:

E0E: ABI-21 (1.0μm)
 E0F: ABI-21 (0.5μm)
 E0G: ABI-21 (0.2μm)
 ECF: ATOM2 (0.2μm)
 ECJ: ATOM2 (0.05μm)

Scale Type:
 1: Steel tape, 11ppm/K¹
 2: Glass G8 Soda Lime, 8ppm/K²

Note:

- ¹ ABI-21 uses steel tape scale only.
- ² ATOM2 uses glass scale only.

