



# XMGV SERIES

- ▶ Direct drive
- ▶ Zero cogging, zero backlash, ironless linear motor actuator
- ▶ Stroke from 15mm to 30mm
- ▶ Suitable for high speed and high acceleration application
- ▶ Smooth motion even at low speed (minimum velocity ripple)
- ▶ Use cross roller guide for high stiffness

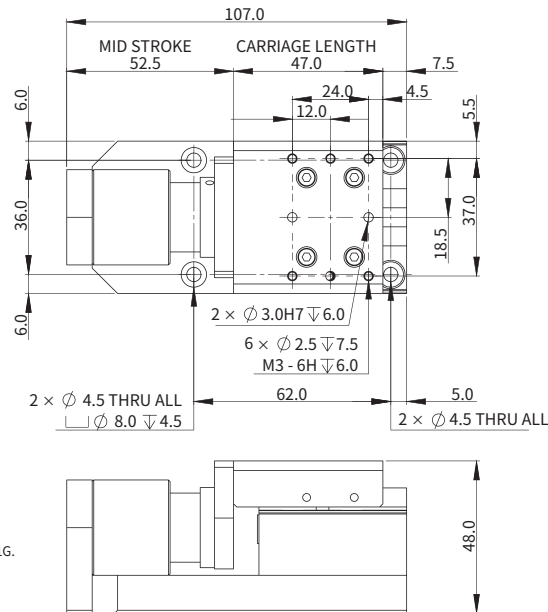
## XMGV30

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	15
Motor	-	AVM30-15
Continuous Force	N	4.63
Peak Force	N	29.40
Resolution	μm	ABI21: 0.2 AT2: 0.05/SINCOS
Repeatability	μm	ABI21 0.2: ±1 AT2 0.05/SINCOS: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	kg	0.6
No-load Moving Mass	kg	0.14
No-load Total Mass	kg	0.51
Max. Allowable Roll Moment Load	Nm	0.8
Max. Allowable Pitch Moment Load	Nm	1.0
Max. Allowable Yaw Moment Load	Nm	1.2

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



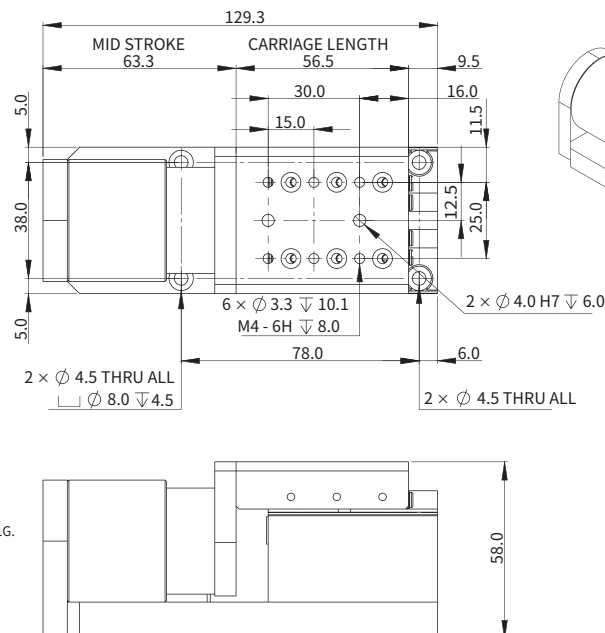
## XMGV40

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	20
Motor	-	AVM40-20
Continuous Force	N	9.93
Peak Force	N	58.05
Resolution	μm	ABI21: 0.2 AT2: 0.05/SINCOS
Repeatability	μm	ABI21 0.2: ±1 AT2 0.05/SINCOS: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	kg	1.5
No-load Moving Mass	kg	0.20
No-load Total Mass	kg	0.80
Max. Allowable Roll Moment Load	Nm	1.4
Max. Allowable Pitch Moment Load	Nm	2.6
Max. Allowable Yaw Moment Load	Nm	3.2

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



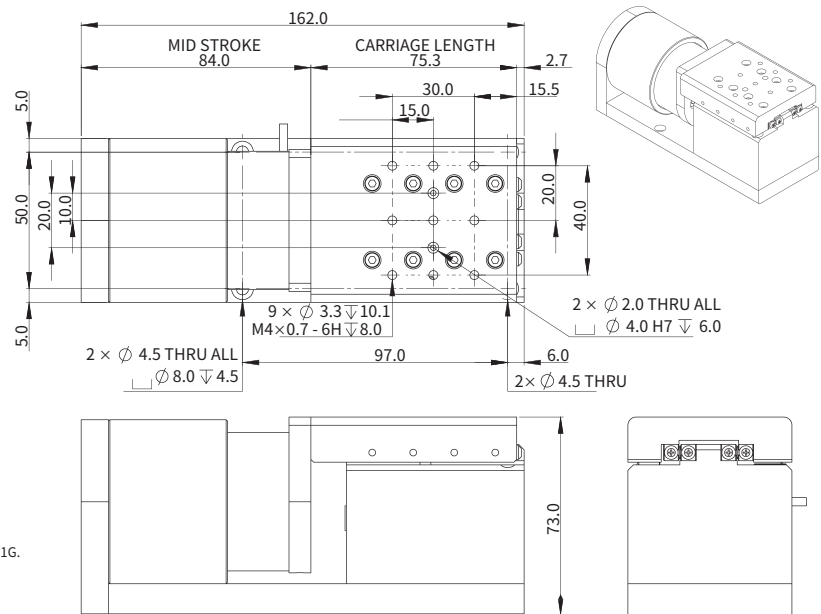
## XMGV60

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	25
Motor	-	AVM60-25
Continuous Force	N	26.35
Peak Force	N	119.00
Resolution	μm	ABI21: 0.2 AT2: 0.05/SINCOS
Repeatability	μm	ABI21 0.2: ±1 AT2 0.05/SINCOS: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	kg	4.0
No-load Moving Mass	kg	0.45
No-load Total Mass	kg	1.90
Max. Allowable Roll Moment Load	Nm	3.4
Max. Allowable Pitch Moment Load	Nm	9.0
Max. Allowable Yaw Moment Load	Nm	11.0

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



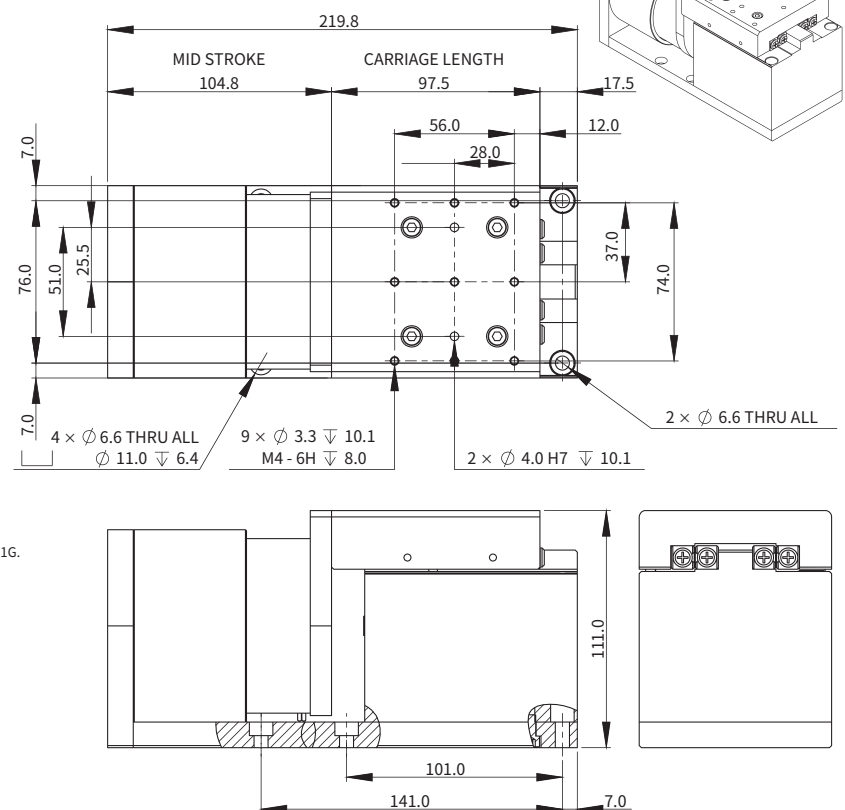
## XMGV90

Specifications	Unit	Value
Stroke <sup>①</sup>	mm	30
Motor	-	AVM90-30
Continuous Force	N	89.10
Peak Force	N	315.00
Resolution	μm	ABI21: 0.2 AT2: 0.05/SINCOS
Repeatability	μm	ABI21 0.2: ±1 AT2 0.05/SINCOS: ±0.5
Straightness	μm	±2.5
Flatness	μm	±2.5
Rated Payload <sup>②</sup>	kg	14.0
No-load Moving Mass	kg	1.63
No-load Total Mass	kg	5.31
Max. Allowable Roll Moment Load	Nm	16.0
Max. Allowable Pitch Moment Load	Nm	21.0
Max. Allowable Yaw Moment Load	Nm	25.6

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



Ordering Part Number (OPN)

Introduction

Sizing Guide

Frequently Asked Questions

Motion Control of Gantry Stages

Linear Module

Voice Coil Module

Stacked Stages

Gantry Stages

X
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Model:

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Termination:

1: Flying Leads

Cable Length:

A: 0.5m

Cover Type:

T: Standard (Black Anodized)

Scale Type:

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

Coil Type:

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Note:

- 1 For Coil Type, only allow the following combinations:  
XMGV30 : AVM30-15-0.5A  
XMGV40 : AVM40-20-0.5A  
XMGV60 : AVM60-25-0.5A  
XMGV90 : AVM90-30-0.5A  
2 ABI-21 uses steel tape scale only.  
3 ATOM2 uses glass scale only.

★ Products can be customized to meet specific working environment, please contact cust-service@akribis-sys.com.