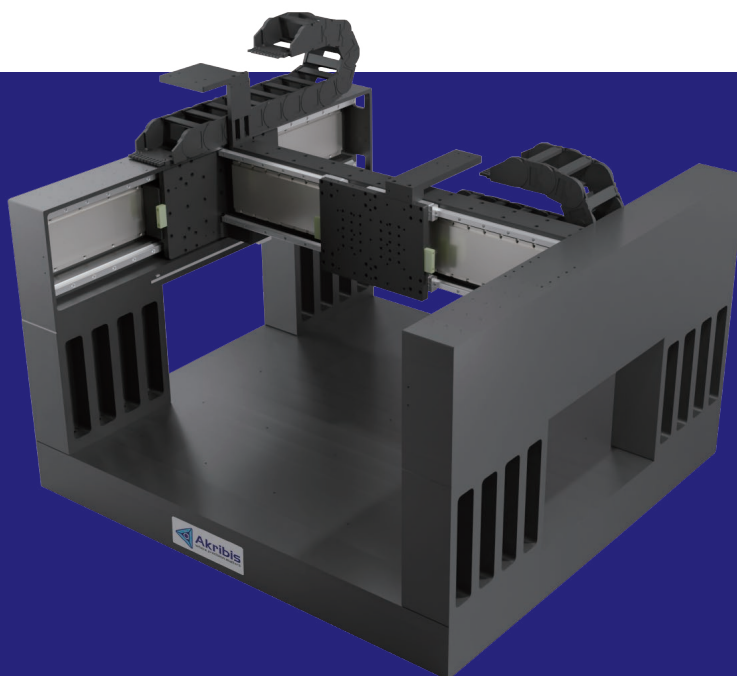




VRG-III SERIES

- ▶ A versatile gantry stage motor force in line with the bridge's COG
- ▶ Use ironcore AJM, AKM motor
- ▶ High force density

EN-26.3.1

VRG-III

Motor Specifications	Unit	L	U
Motor Model	-	AKM100-B4×2	AJM100-B4
Continuous Force (NC) @100°C ^①	N	1445.3×2	446.8
Peak Force	N	3221.1×2	1409.1
Force Constant ±10%	N/Arms	153.0	97.1
Back EMF Constant ±10%	V _{peak} /(m/s)	124.9	79.3
Resistance (L-L) @25°C ±10% ^②	Ω	2.3	5.2
Inductance (L-L) ±30% ^③	mH	58.0	23.6
Continuous Current (NC) @100°C ^④	Arms	9.6	4.6
Peak Current	Arms	28.8	18.0
Max. Bus Voltage	V _{dc}	600	600
Magnetic Period	mm	42	20
Mechanical Specifications	Unit	L	U
Effective Stroke	mm	600	600
Resolution	μm	0.5/0.1/SINCOS	0.5/0.1/SINCOS
Repeatability	μm	±2/±1	±2/±1
Straightness	μm	±10	±10
Flatness	μm	±10	±10
Rated Payload	kg	NA	50
No-load Moving Mass	kg	53	6
No-load Total Mass	kg	685	685
Max. Static Moment Load	Nm	NA	20

① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.

② Resistance is measured by DC current with standard 0.5m lead wire.

③ Inductance is measured by current frequency of 1 kHz.

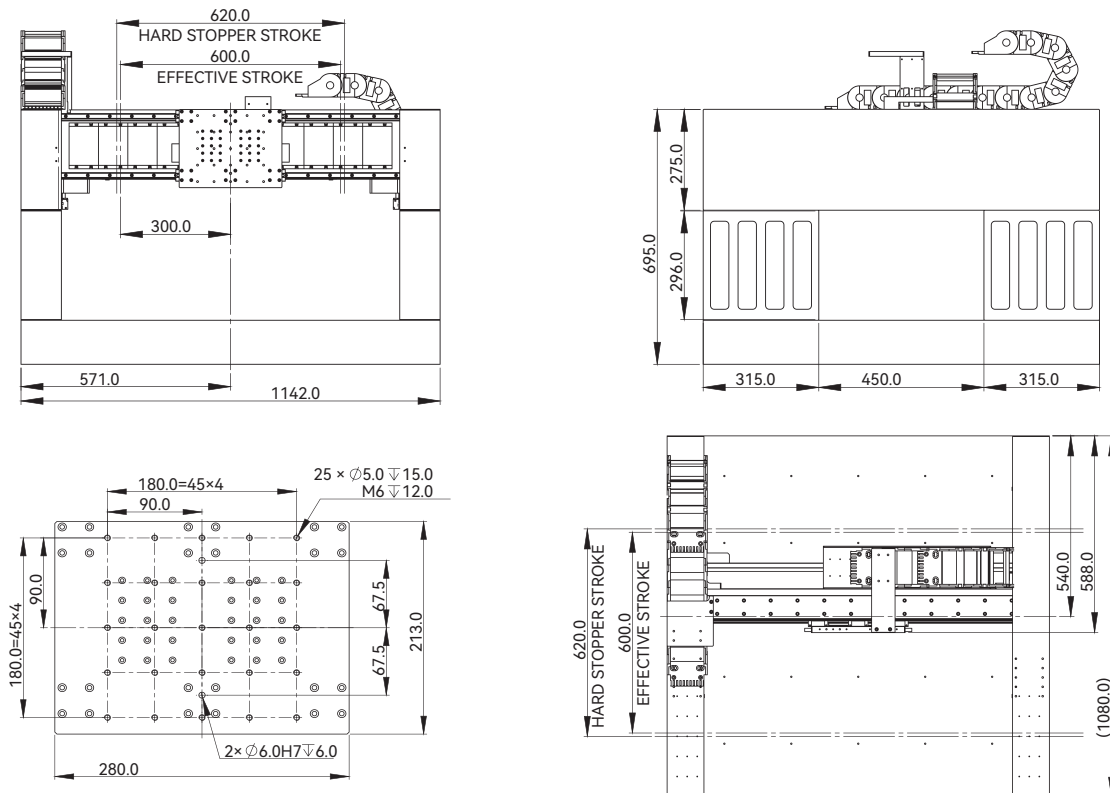
④ The table above presents the highest capability of this stage layout.

• Contact us for more options and details.

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

The contents of datasheet are subject to change without prior notice.

Dimensional Drawing



Ordering Part Number (OPN)

VRG3-H0202-K03J03A731-A2

Model:

VRG3

Gantry Config:^①

H: H-Gantry
T: T-Gantry

Lower Axis Stroke:^②

02: 200mm
03: 300mm
04: 400mm
05: 500mm
06: 600mm
07: 700mm
08: 800mm

Upper Axis Stroke:^②

02: 200mm
03: 300mm
04: 400mm
05: 500mm
06: 600mm
07: 700mm
08: 800mm

Lower Axis Motor:

K03: AKM30-B2-J (Peak Force: 483.2N)
K04: AKM30-B2-K (Peak Force: 483.2N)
K05: AKM30-B4-J (Peak Force: 966.3N)
K06: AKM30-B4-K (Peak Force: 966.3N)
K22: AKM50-B2-J (Peak Force: 805.3N)
K23: AKM50-B2-K (Peak Force: 805.3N)
K24: AKM50-B4-J (Peak Force: 1610.5N)
K25: AKM50-B4-K (Peak Force: 1610.5N)
K42: AKM100-B2-J (Peak Force: 1610.5N)
K43: AKM100-B2-K (Peak Force: 1610.5N)
K44: AKM100-B4-J (Peak Force: 3221.1N)
K45: AKM100-B4-K (Peak Force: 3221.1N)

Termination:

2: Motor: DSUB 9W4/
Encoder: DSUB 15/Hall: DSUB 9
3: Motor: M23/
Encoder&Hall: M23

Cable Length:

A: 0.5m
B: 3.0m

Scale Type:

1: Steel Tape, 11ppm/K

Encoder Type:

AD0: ABA-20, BiSS C (50nm)
A71: ABA-50, Mitsubishi 2-Wires (50nm)
A73: ABA-50, EnDat 2.2 (50nm)
ABA: ABI-51X, SINCOS (1Vpp)
ABF: ABI-51X, TTL (0.5μm)
ABH: ABI-51X, TTL (0.1μm)
R2F: Quantic, TTL (0.5μm)
R2H: Quantic, TTL (0.1μm)

Upper Axis Motor:

J03: AJM30-B4-J (Peak Force: 429.4N)
J04: AJM30-B4-K (Peak Force: 429.4N)
J30: AJM80-B2-J (Peak Force: 550.2N)
J31: AJM80-B2-K (Peak Force: 550.2N)
J45: AJM100-B2-J (Peak Force: 704.5N)
J46: AJM100-B2-K (Peak Force: 704.5N)
J47: AJM100-B4-J (Peak Force: 1409.1N)
J48: AJM100-B4-K (Peak Force: 1409.1N)

Note:

① All Gantries are Black Anodized. H= Dual motor dual encoder, T= Single motor single encoder.

② Standard stroke in intervals of 100mm only, for more options, customization is required.

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