

AZT Series

Dual guide vertical voice coil stage with Theta axis



- High speed high acceleration
- Fast response and quick setting time
- Compact
- No backlash

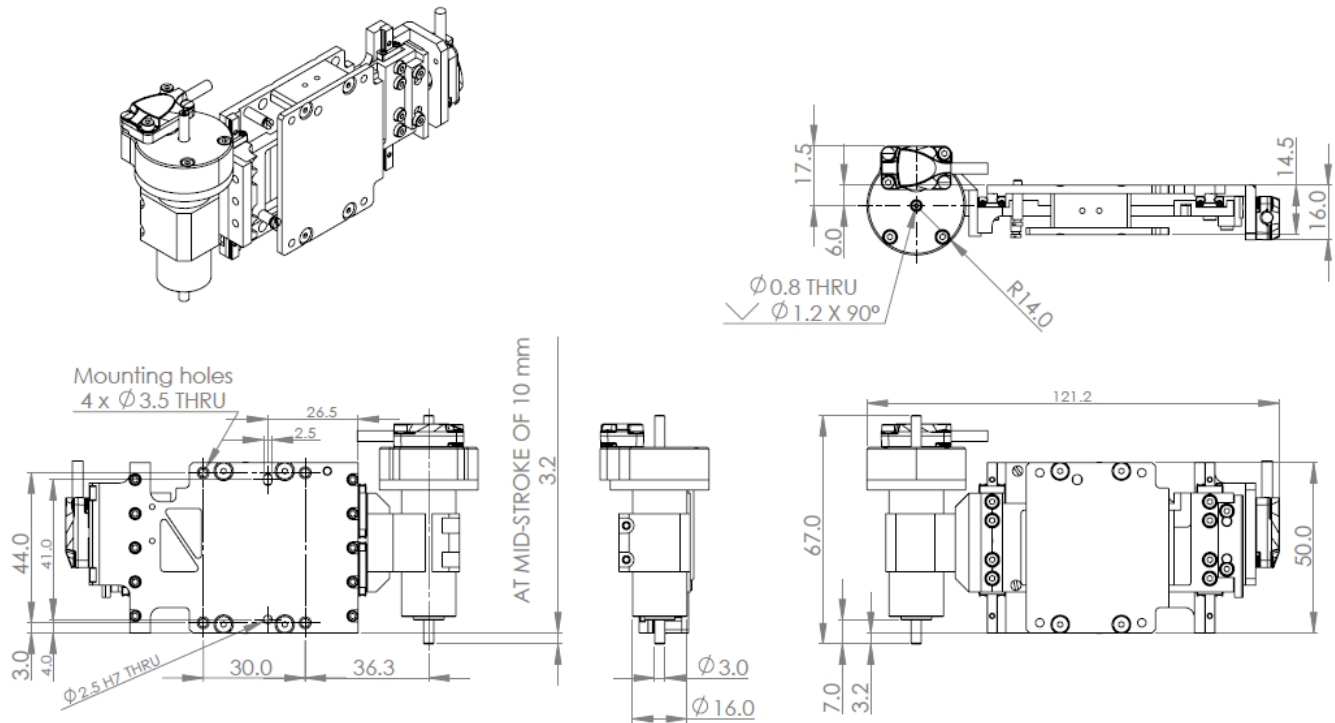
Features

- Direct drive and direct measurement
- Fast response and quick settling time
- No backlash
- Choice of encoder resolutions of up to 0.1µm
- Integrated reference mark
- Compact, light and easily integrated
- Through hole on the Theta motor shaft allows vacuum channel

Motor Parameter

Model	DGV 16		ARC16-40	
	Unit		Unit	
Stroke	mm	10.0	degree	360
Continuous Force Coil @100 °C/Torque	N	4.0	mNm	9.1
Peak Force/Torque	N	12.0	mNm	36.4
Continuous current	A	2.0	Arms	2.6
Peak Current	A	6.0	Arms	10.4
Force Constant/Torque constant	N/A	2.3	mNm/Arms	3.5
Back EMF Constant	V/m/s	2.3	mV/rpm	0.3
Resistance	Ohms	1.0	Ohm	0.16
Inductance	mH	0.134	mH	0.02
Motor constant	N/SqRt(W)	2.3	mNm/SqRt(W)	8.8
Lines per revolution			lines/rev	2,600
Resolution	um	0.5	counts/rev (X40)	104,000
Moving mass/Rotor Inertia	Kg	0.028	gcm ²	47.67
Moving mass including Theta axis	Kg	0.083		
Total mass	Kg	0.275		

Mounting Holes



Performance Parameter

DGX 16	unit	
Straightness	um	$\pm 3\mu\text{m}/25\text{mm}$
Flatness	um	$\pm 3\mu\text{m}/25\text{mm}$
Bidirectional repeatability (1um resolution)	um	$\pm 2\mu\text{m}$

Part Numbering

Model	Motor Type	Stroke	Resolution	Theta Motor	Resolution
AZT16	AVA1	10	1	ARC16H	52000

Example: AZT16-AVA1-10-1-ARG16H-52000