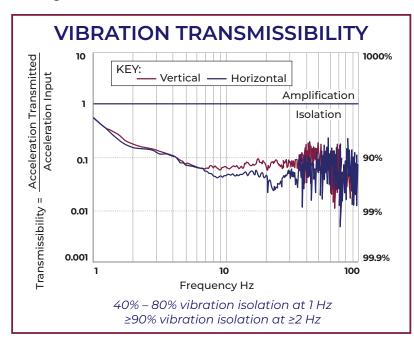
## **DAEIL SYSTEMS DVIA-P**

#### DESCRIPTION

The DVIA-P Series is an active pneumatic vibration isolation system that uses integrated, ultra-precise, motorized linear stages to control vibration for advanced processing tools that require both low-frequency vibration isolation and ultra-fast settling time.



#### SOPHISTICATED CONTROLS

## A Stage Feedforward

Stage feedforward counteracts movement from motorized stages by producing an equal and opposite force based on advanced information about the stage position.

## **B** Acceleration Feedback

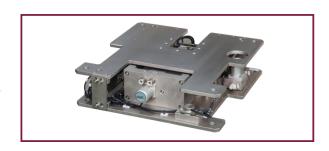
The acceleration feedback system uses sensors and actuators to detect and minimize vibrations from the floor and motorized linear stages.

## Position Feedback

Position feedback measures displacement through position sensors, and the digital controller drives actuators to return the isolated base to its original position, improving accuracy.

## Floor Feedforward

The floor feedforward system filters floor vibrations based on known factors like applied force and ambient vibrations, and tunes feedforward gains to operate actuators.



#### **KEY FEATURES**

#### **Superior Vibration Isolation Performance**

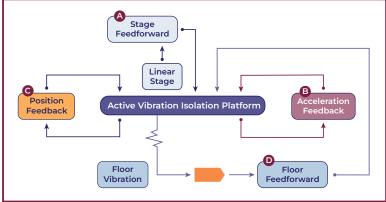
Advanced feedback and feedforward vibration control algorithms are embedded in the DVIA-P, delivering 40 – 70% at 2 Hz in six degrees of freedom.

### Designed for Semiconductor Manufacturing Equipment

The powerful actuators integrated with advanced controls generate a significant amount of force to support the semiconductor and metrology equipment with integrated motorized linear stages.

## Turnkey Solution for Tool and Site Requirements

VEC will design the isolation system based on your unique tool requirements, including pedestals, system enclosure, structural calculations for permitting, and seismic restraints.



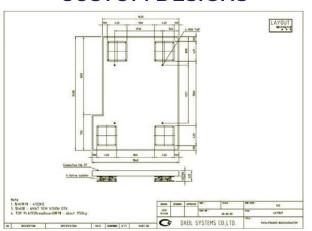




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# **DAEIL SYSTEMS DVIA-P**

## **CUSTOM DESIGNS**



Using site survey data VEC designs the DVIA-P isolation system based on the unique requirements of your tool.

#### **APPLICATIONS**

- CD-SEM
- Photomask Repair
- Photomask Qualification
- Automated AFM
- Mask Aligner
- X-Ray Metrology
- X-Ray Defect Inspection
- E-Beam Lithography System
- Non-Contact 3D Surface Metrology
- Thin Flim Thickness Metrology

## **TECHNICAL SPECIFICATIONS**

Model		DVIA-P1000	DVIA-P2200	DVIA-P4000	DVIA-P7000	DVIA-P10000	DVIA-P20000	DVIA-P30000
Isolator Dimensions (LxWxH)		240x240x110 mm	350x350x110mm	420x420x110mm	450x450x120mm	450x450x120mm	645x600x284mm	735x700x284mm
Load Capacity		500 – 1,700 kg	110 – 3,700 kg	2100 – 7,000 kg	3600 – 12,000 kg	5000 – 17,000 kg	11000 – 38,000 kg	15000 – 50,000 kg
Actuator		Pneumatic Servo Valve Actuator						
Maximum Actuator Force		Vertical: 25,000 N Horizontal: 300 N	Vertical: 36,260 N Horizontal: 588 N	Vertical: 68,600 N Horizontal: 2,646 N	Vertical: 117,600 N Horizontal: 4,410 N	Vertical: 167,580 N Horizontal: 8,330 N	Vertical: 372,400 N Horizontal: 11,760 N	Vertical: 490,000 N Horizontal: 11,760 N
Degrees of Freedom		6 degrees						
Active Isolation Range		0.5 – 150 Hz						
Vibration Isolation at 2 Hz		40 – 70%						
Vibration Isolation at ≥4 Hz		90%						
Input Voltage (V)		AC Single Phase 100 – 240 V						
Power Consumption (W)		100 W						
Operating Range	Temperature (°C)	5 – 50 °C						
	Humidity (%)	20 – 90%						
Required Air Pressure		≥0.5 MPa ( ≥5 bar)						
Required CDA		250 NL/min						



For more information about the DVIA-P, scan this QR code







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