

AIR QUALITY
 AIR SUPPLY MUST BE FREE OF CONTAMINANTS AND MOISTURE. FILTERED AIR SUPPLY TO ISO 8573.1 QUALITY CLASS 3

CLASS: 3 (RECOMMENDED)
 DIRT: 5 MICRON PARTICAL SIZE OR SMALLER
 WATER: -4 F, PRESSURE DEWPOINT (128 ppm. vol.) AT 100 psig
 OIL: 1.0 mg/m**3 (INCLUDING VAPOR)

CLASS: 4 (MINIMUM)
 DIRT: 15 MICRON PARTICAL SIZE OR SMALLER
 WATER: +37.4 F, PRESSURE DEWPOINT (940 ppm. vol.) AT 100 psig
 OIL: 5 mg/m**3 (INCLUDING VAPOR)

STANDARD FEATURES
 MOTORS: DUAL HR-4, MAX FORCE 30 to 36 N
 TRAVEL: 100mm (X & Y)
 SPEED: 250mm/sec MAX.
 ENCODER OUTPUT: ANALOG 1 Vp-p (STANDARD)
 OPTIONAL: 5um, 1um, 0.5um, 0.1um, 50nm, 20nm, 10nm, or 5nm USING 4096 INTERPOLATION. (CONTROLLER DEPENDENT) (CONSULT FACTORY FOR ADDITIONAL REQUIREMENTS)
 SYSTEM REPEATABILITY: +/- 2 ENCODER COUNTS (CONTROLLER DEPENDENT)
 HOME: STANDARD
 BEARINGS: PRECISION AIR BEARING NOT TO EXCEED AIR QUALITY SPECIFICATION
 ENCLOSURES: ALUMINUM
 ATMOSPHERES: STANDARD & CLEAN ROOM
 TEMPERATURE: 10 to 35 DEG C
 HUMIDITY: 10% to 80% NON-CONDENSING
 ASSEMBLY MASS: 12.2 kg
 X MOVING MASS: 8.0 kg Y MOVING MASS:1.9 kg

AIR BEARING PERFORMANCE SPECIFICATIONS
 OPERATING PRESSURE: 60 PSIG TO 80 PSIG, 120 PSIG MAX.
 MAXIMUM LOAD RATING: 63 kg (139 lbs) (@ 60 psig)
 HORIZONTAL STRAIGHTNESS: 0.25 um / 25 mm (10 micro-inch /inch)
 VERTICAL STRAIGHTNESS: 0.25 um / 25 mm (10 micro-inch /inch)
 HORIZONTAL STIFFNESS: 105*10e6 N/m (600,000 lbs/in)
 VERTICAL STIFFNESS: 250*10e6 N/m (1,400,000 lbs/in)
 PITCH MOMENT: 20 N-m (177 in-lbs)
 ROLL MOMENT: 24 N-m (212 in-lbs)
 YAW MOMENT: 10 N-m (89 in-lbs)
 ALL SPECIFICATIONS LISTED FOR 60 psig OPERATING PRESSURE
 LOADING, STIFFNESS, AND MOMENT SPECIFICATIONS INCREASE AT HIGHER OPERATING PRESSURES

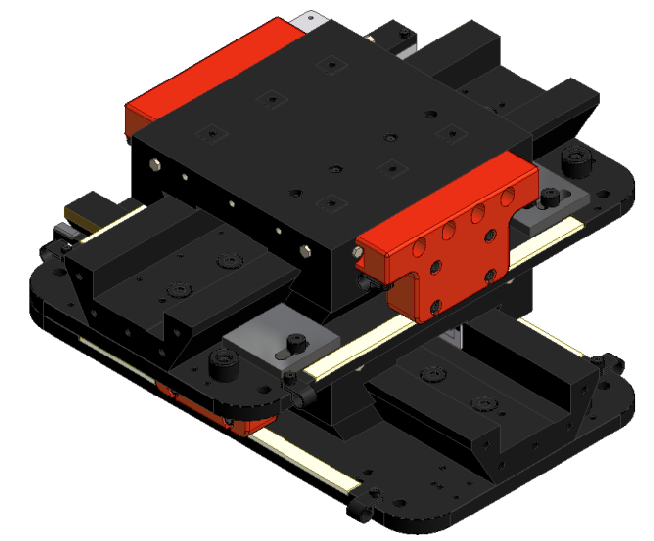
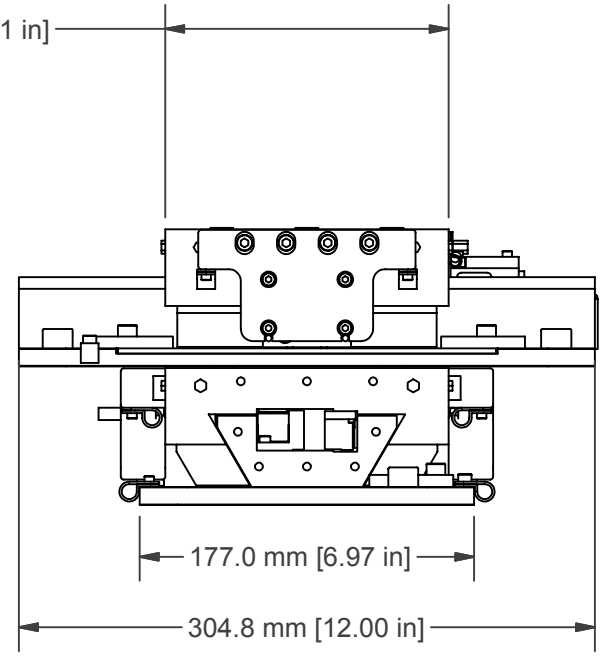
ACCESSORIES
 MOTOR AMPLIFIERS

OPTIONAL EQUIPMENT
 MOTION CONTROLLERS

CUSTOM DESIGNS FOR OEM INTEGRATION
 USE IN-LINE PRESSURE SWITCH TO KILL MOTOR POWER IF AIR PRESSURE DROPS BELOW RATED OPERATING VALUE.
NO NOT OPERATE UNLESS AIR PRESSURE IS APPLIED!

ALIO INDUSTRIES PROPRIETARY INFORMATION

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DRAWN	NBROWN	10/1/2006
CHECKED		
Tolerances:	Surface Roughness:	
x.x ± .05 in		
x.xx ± .01 in		
x.xxx ± .005 in	✓ RMS MAX.	
ANGLES ± 0.5°		
MATERIAL		
FINISH	SEE NOTES	

TITLE		
AI-D4-10000E-AB-XY		
SIZE	DWG NO	REV
B	0010-00543	001
SCALE	ALIO STD TEMPLATE - REV 006	SHEET 1 OF 1

A

A

B

B

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