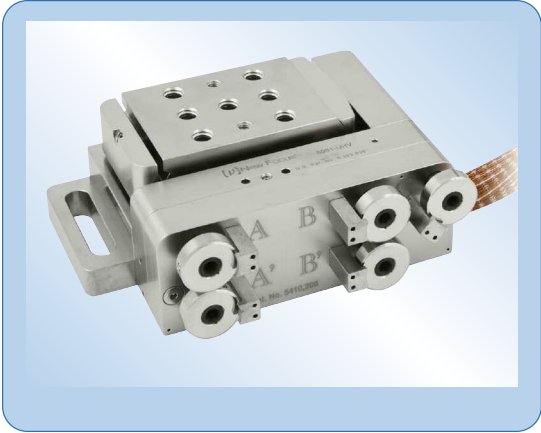


# Ultra High Vacuum Motorized Five-Axis Tilt Aligner



## Model 8081(M)-UHV Features:

- Ultra High Vacuum Compatible ( $10^{-9}$  Torr)
- Outgas less than 5 ppm of volatile mass at 85° C over 3 hrs
- X, Y, Z,  $\Theta_x$ ,  $\Theta_y$  adjustments
- Minimum Incremental Motion < 30 nm
- Maximum Load of 13N

The 8081-UHV is our motorized Five-axis aligner that allows high remote and precision alignment in UHV ( $10^{-9}$  Torr) environments as well as for VUV/EUV applications. The Picomotor™ actuators to each stage allows better than <30 nm of various combinations of X, Y, Z,  $\Theta_x$ , and  $\Theta_y$ . The 8081-UHV has been tested and measured to outgas levels less than 5 ppm of volatile mass at 85 °C over three hours. Mass Spectrograms detailing the exact outgassing compounds are available upon request. Also available in metric version.

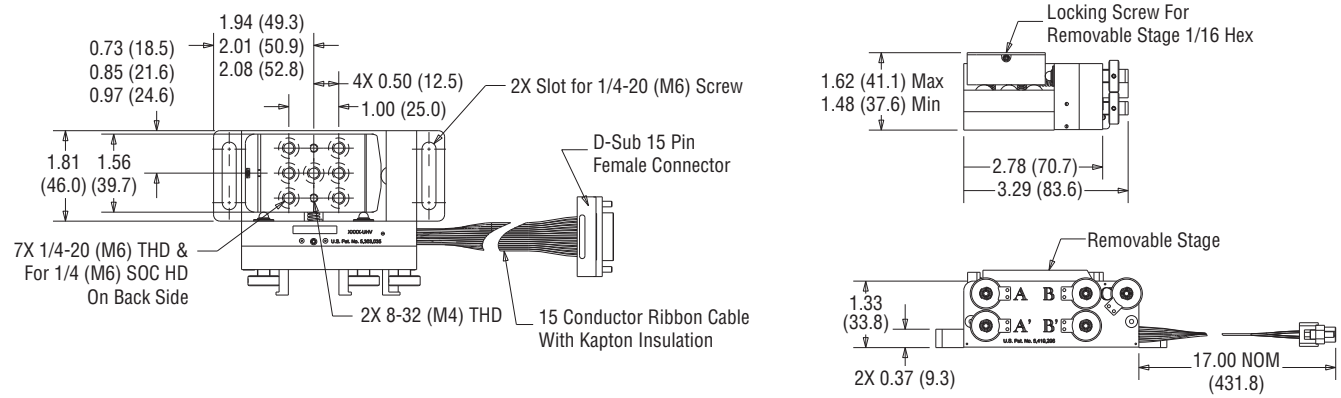
## Specifications

Specifications	8081-UHV (8081M-UHV)
Motorized Axes	5
Axes of Travel	X, Y, Z, $\Theta_x$ , $\Theta_y$
Travel Range (mm)	X=5, Y&Z=3
Travel, Angular (°)	$\Theta_x=8$ , $\Theta_y=10$
Minimum Incremental Motion (X, Y, Z) (nm)	<30
Resolution- Angular ( $\mu$ rad)	$\Theta_x, \Theta_y \leq 0.7$
Load Capacity [lb (N)]	3 (13)
Thread Type	8-32 and 1/4-20 (M4 and M6)
Operating Temperature (°C)	10-40
Survival Temperature Range (non-operating) (°C)	-40-85
Vacuum Compatibility	$10^{-9}$ Torr
Wire Type	Kapton® Ribbon Ultrahigh Vacuum Rated
Connector Type	DB15 Female



# Ultra High Vacuum Motorized Five-Axis Tilt Aligner

## Dimensions



## Ordering Information

Model	Description
8081-UHV	Ultra High Vacuum Motorized XYZ $\Theta_x$ $\Theta_y$ Tilt Aligner, 1/4-20
8081M-UHV	Ultra High Vacuum Motorized XYZ $\Theta_x$ $\Theta_y$ Tilt Aligner, M6
8081-UHV-C	8081-UHV cable, 1.83m, DB15 Female to 6-pin RJ25 Connector
8725	Multi-Axis Adapter
8742-4-KIT	Four-Axis 8742 Picomotor Controller/Driver Kit
8766-KIT-NF	Six-Axis Picomotor Driver Module Kit, iPico



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DS-111206