

Zeiss UPMC CMM
The Trane Company
Pueblo, CO

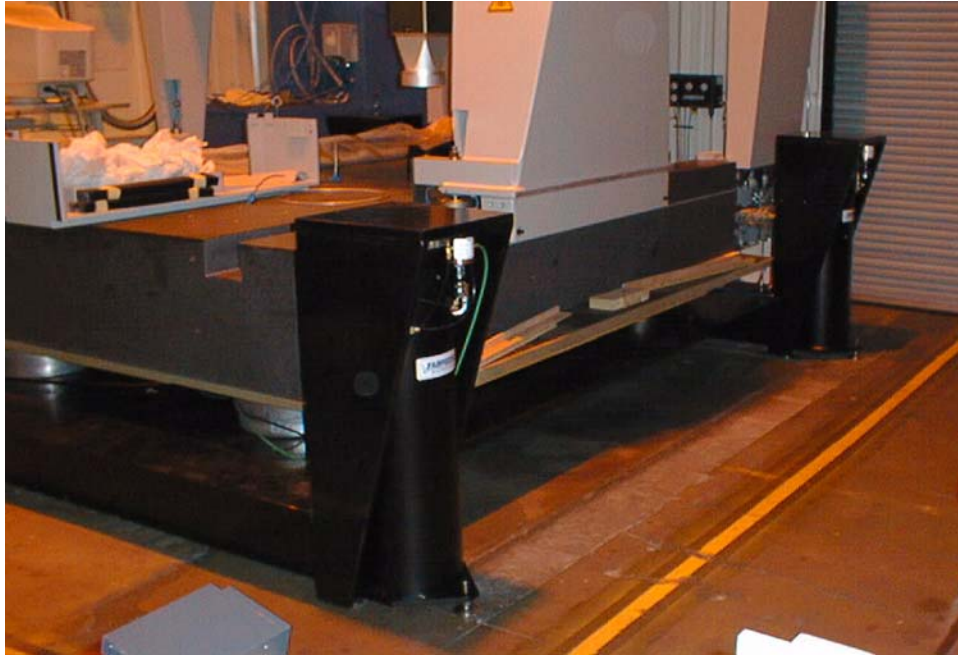


Fabreeka designed and installed this custom support frame with pneumatic isolators for the Zeiss UPMC Carat machine.

The existing pneumatic isolators did not provide sufficient isolation due to large vibration amplitudes at their natural frequency. This condition, called resonance, caused the vibration in the floor to be amplified rather than isolated.



Fabreeka provided custom pneumatic isolators which have a low natural frequency in both the vertical and horizontal axes. The isolators have a vertical natural frequency of 1.2 Hz, which provides significant isolation at the disturbing frequencies occurring in the facility floor.



The machine was to be installed on an existing isolated foundation. However, due to vibrational growth in the facility, the isolated foundation actually amplified vibration to levels that could not be isolated by the isolators normally supplied with the machine.



Removing the existing foundation was not feasible; therefore, the support frame was designed to accommodate the custom isolators. As shown above, the isolators are actually positioned just outside the existing foundation footprint.