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[\(/Products/other-products\)](#)

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## Blade Adapters for Moment Weight Scales



**Single axis adapters for dovetail, fir tree, and round hole blade roots.** Space Electronics "Gravity Wedge" Blade Adapters are more repeatable and easier to use than any other style of adapter. Tare moment is not altered by insertion of the blade. Repeatability is often better than 1 part in 100,000. There is no clamping knob to tighten, so operator effort is reduced and the disturbing force to the scale is minimized. The unique slanted aperture guides the blade into position. A wedge at the bottom of the adapter forces the blade forward, causing the lower surface of the blade to contact the adapter at the Z-plane. The gravity moment then rotates the blade downward, so that the upper surface of the Z-plane also contacts the precision interface surface. Our adapters are made of hardened tool steel. Wear is minuscule, and thermal expansion is 30% of the expansion of an aluminum adapter.

Description	Specifications	Literature
<p>The Space Electronics dovetail adapters are precision ground and lapped to tolerance. Our adapters are made of hardened tool steel, so that wear is minuscule, and thermal expansion is 30% of the expansion of an aluminum adapter. We carefully analyze both the blade and its mating surface on the hub to ensure that we truly simulate the conditions in the engine (i.e. the blade contacts the adapter at the Z-plane).</p> <p>All adapters are custom designed based on the exact dimensions of the turbine blade. We need the following information in order to design an adapter:</p> <ol style="list-style-type: none"><li>1. Drawing(s) of the outline of the root of the blade. These drawings must include dimensions and tolerances.</li><li>2. The nominal pan weight and the nominal moment weight of the blade.</li><li>3. The distance from the center of rotation of the engine to the Z-plane of the blade. (Note: the Z-plane is the nominal line of contact between the blade root and the engine.)</li><li>4. A sample blade. This allows us to assure proper fit, clamping pressure, and ease of use, and it also permits verification of the dimensions on the drawings.</li><li>5. It is helpful (but not essential) for us to receive drawing(s) of the outline of the mating slot in the rotor hub for the root of the blade. These drawings should include dimensions and tolerances. This allows us to predict the variation in contact surface between the blade and the rotor, and to verify dimensions shown on the drawing of the root of the blade.</li></ol>		