

Structural Stiffness and Rigidity in the Nova Hybrid Stand

-- Roger Latimer

It is called a hybrid in that it blends the best characteristics of materials for optimum performance.

Teknatool have always prided themselves on optimized engineering design solutions. To achieve the greatest long-term performance and economy.

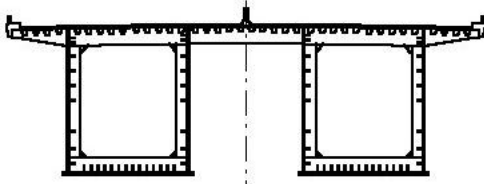
This design unitizes a high rigidity structural casting with a box section steel leg member, the box section is one of the highest rigidity structural members.

The stand consists of three engineering elements:

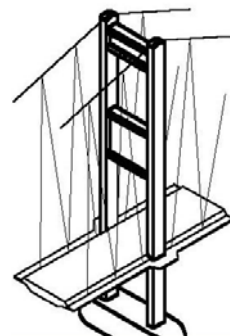
The Cast Iron Top combines the structural interface between the main bed of the lathe and the legs.

The Legs purpose is to be a rigid member to translate the forces from the lathe to the floor mount mechanism. The leg stiffness is critical it shouldn't be able to flex or vibrate.

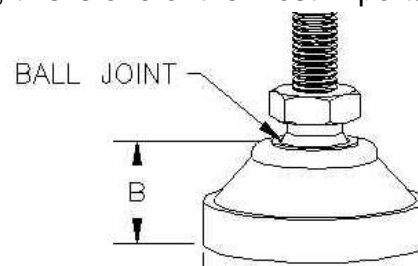
Here are some classic engineering uses of box section.



(c) Cross-section of the superstructure at midspan



The third structural element is the **Foot Pad Assembly**, this is one of the most important, the foot pads are individually adjustable, both in height and adjust for unevenness in the floor with ball joint ends. The ball joint also incorporates a rubber shock absorber as well as distributing the load evenly from the four feet to the floor, the shock absorber dissipates energy. Imagine a car without shock absorbers.



The 1624 hybrid stand has taken design and performance to a new level.

Try the lathe out for yourself. Its engineering and design puts the lathe in a class all of its own.

