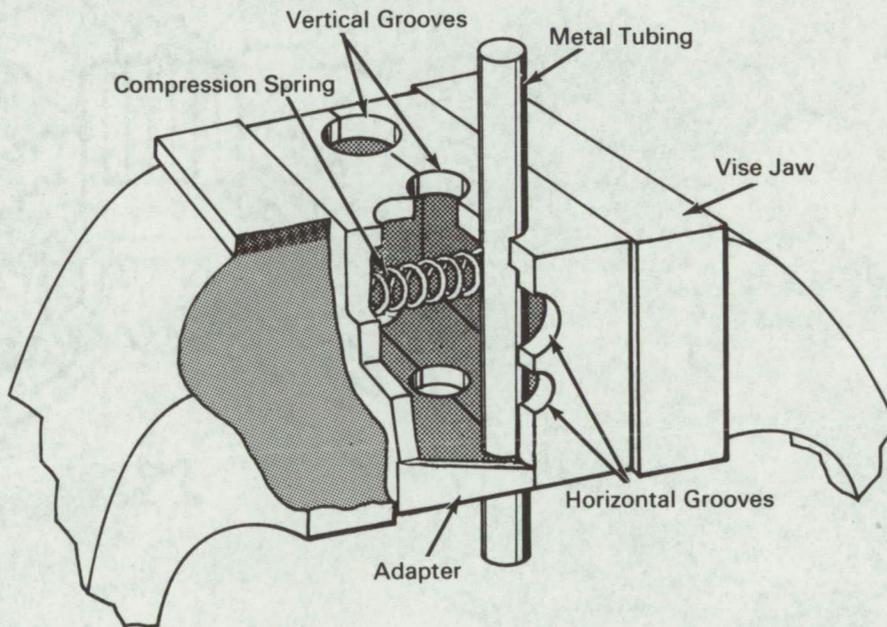


NASA TECH BRIEF



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Bench Vise Adapter Grips Tubing Securely and Safely



The problem:

Securing thin-walled tubing vertically or horizontally in a bench vise during cutting and flaring operations, without marring or damaging it.

The solution:

A plastic self-compressing adapter with grooves, which attaches to the jaws of a bench vise.

How it's done:

The adapter is in two sections that fit over the jaws of a bench vise. Rounded grooves corresponding to

the radius of the tubing to be worked are formed horizontally and vertically along the clamping surface of each section. When the two sections are brought together by the closing jaws of the vise, the grooves mate to hold the tubing securely. Any practical size and number of grooves can be incorporated; the grooves can even be made to run diagonally. Use of a plastic material, because of its resilience, provides a good grip on tubing and reduces deforming and marring hazards. Compression springs within each section prevent the collapse or deformation of tubing under excessive vise pressure, and ensure that the work remains in place when vise pressure is partially released.

(continued overleaf)

Notes:

1. This development is in the conceptual stage only and as of the date of this publication neither a model nor a prototype has been constructed.
2. Magnets could be incorporated in both sections to prevent detachment from the jaws when the vise is opened.
3. The adapter could find application in the plumbing, air-conditioning, and aerospace industries, or in any industry where work with thin-wall tubing is done.

4. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
P.O. Box 1537
Houston, Texas, 77001
Reference: B66-10056

Patent status:

No patent action is contemplated by NASA.

Source: Benjamin T. Howland
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