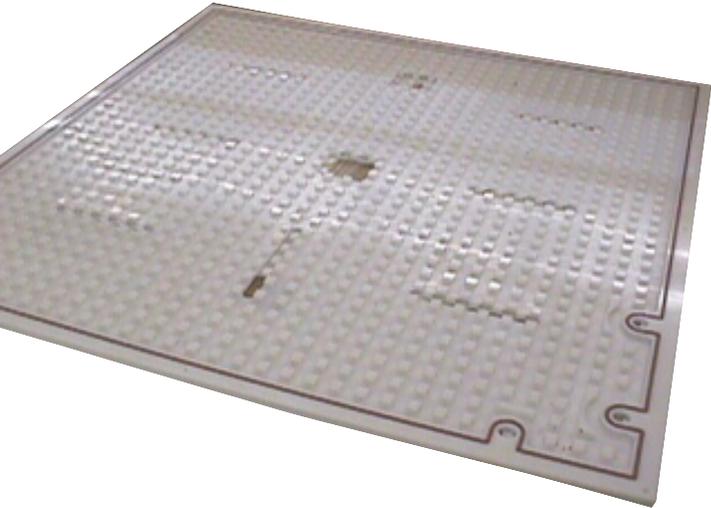


Vacuum Plenum



The Vacuum Plenum is available on most Thermwood machines. The Vacuum Plenum is made of half inch polyethylene and machined to fit the table top including mounting holds. These are grided tops that are covered with a sheet of spoilboard to assist in part hold down using vacuum.

The conventional method of holding the workpiece in a CNC machining center is by using a vacuum and a vacuum fixture. These are secured to the table top and must be changed each time a new part needs to be machined. The system works, however, there are drawbacks and for many parts there is a better way. The major drawback is the need to locate and mount a fixture for each part. This setup can take anywhere from a few minutes to a half an hour or more. If you are running small quantities of each part, setup

can become a significant part of the overall operation. The fixture must also be built and maintained. Vacuum seals wear out and must be replaced and changes to the part or program may require changes to the fixture. For small parts, this may be the only method of hold down and Thermwood equipment fully supports conventional vacuum.

On larger panels there is a better way. Thermwood machines can be equipped with a Universal Hold Down System. The Universal Hold Down System is a unique method pioneered and developed by Thermwood. It uses a high flow vacuum system which pulls air from a grided plenum which covers the table top. The plenum is covered with a special porous particleboard which acts as a spoilboard. Air actually flows through the spoilboard creating a low pressure area across the entire table surface. When a part is laid on the spoilboard, the low pressure area holds the part firmly in place. Even with the continuous leak, a panel placed on the table is held in place with 2 to 4 pounds per square inch. A one foot by one foot panel is held with 300 to 500 pounds which is adequate for most materials. This system works without seals, fixtures or setup. It works even if there are cuts in the spoilboard or if holes are drills through the part or areas cut from the center of the part.

The Vacuum Plenum works with both Universal Hold Down as well as Conventional Vacuum Hold Down. The Universal Hold Down Table works extremely well on large parts. On small parts conventional vacuum may have to be used to adequately hold the parts.

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