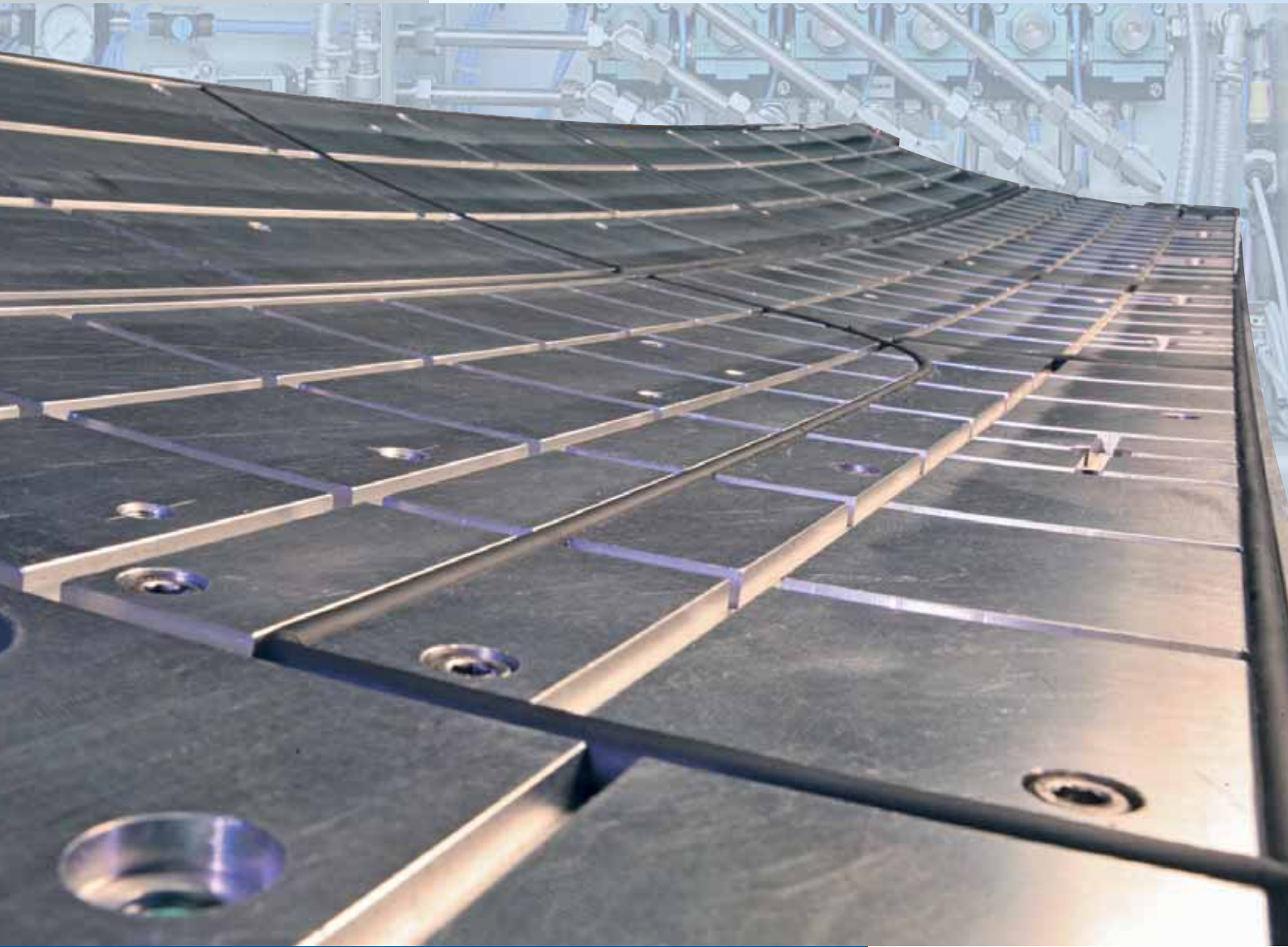


Vacuum Clamping Technology

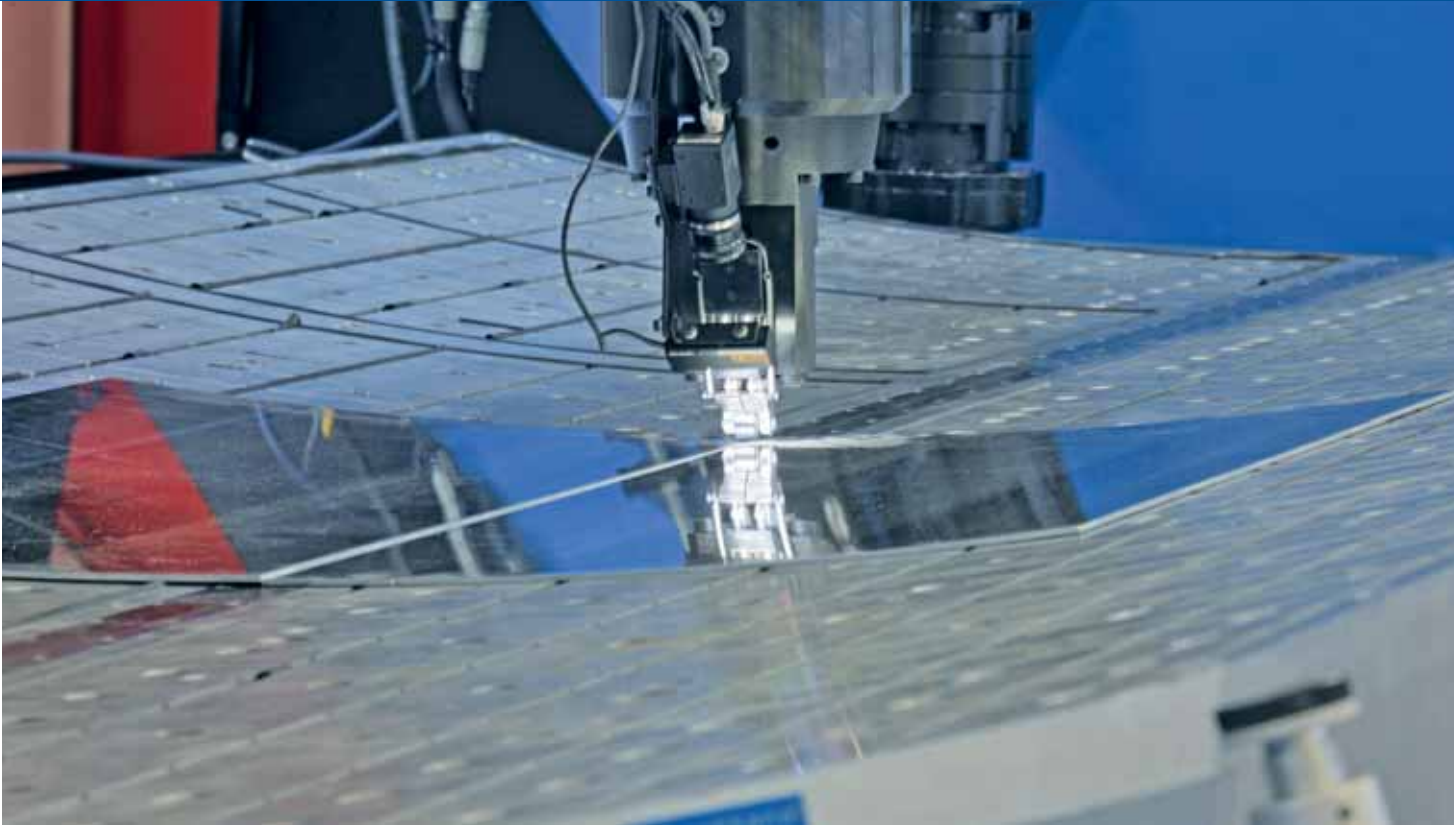
Catalogue 2014^{E03}



Innovative Clamping Systems

- Manufacturing and measuring technology
- New technologies
- Research and development





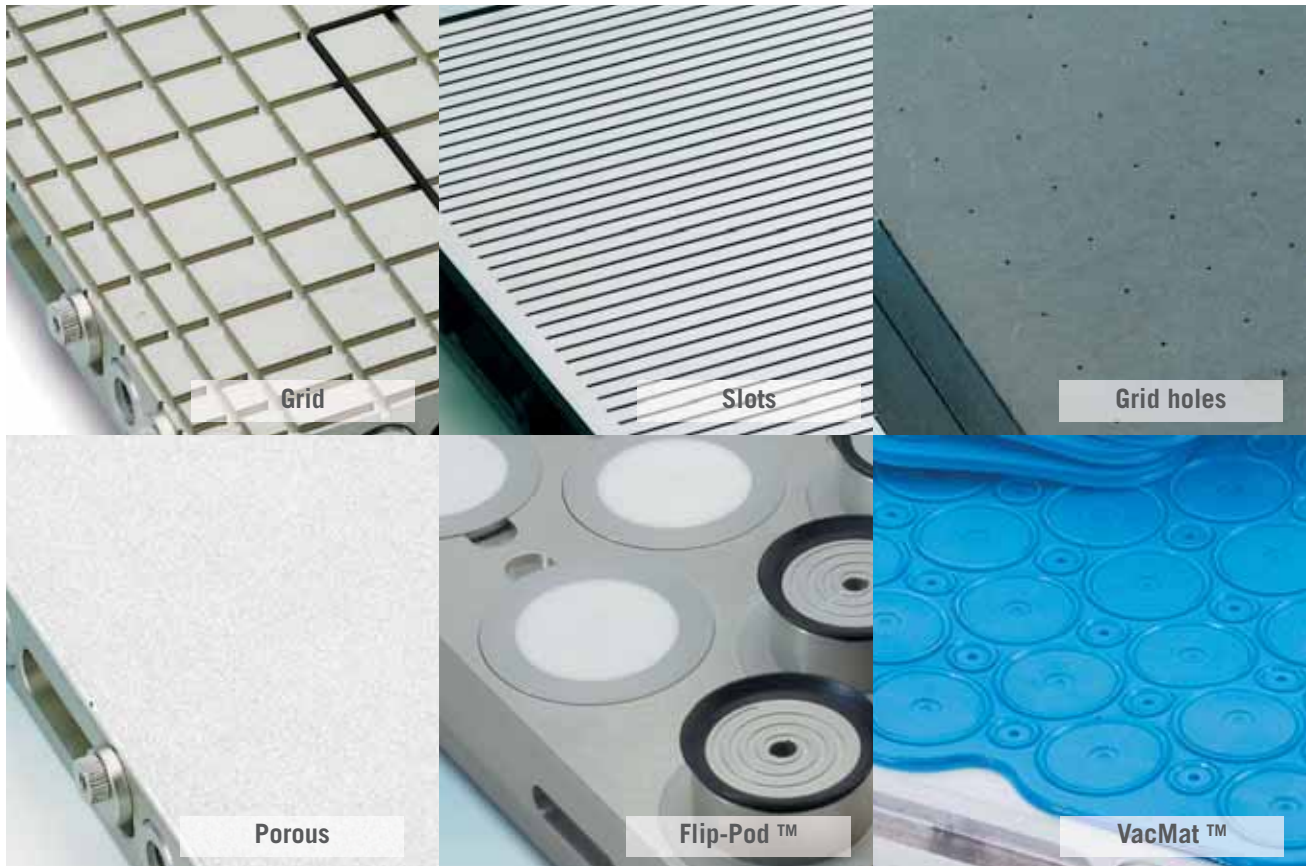
Vacuum clamping systems from Witte

- Machining (milling, turning, drilling, grinding)
- Engraving
- Polishing
- Deburring
- Coating
- Printing
- Irradiation
- Measuring (tactile, optical)
- Testing, simulating
- Moving and positioning
- Friction-stir welding
- Laser welding processes
- Visual analysis

Vacuum supply for Witte vacuum clamping systems is created using either oil lubricated rotary vane pumps or the proven liquid ring pumps. There are more than 27 variations and sizes available as pumps or units. Venturi valves are obtainable. On turning machines vacuum is catered for via rotating joints directly through the hollow spindle of the machine. Vacuum clamping systems with integrated pumps, tanks, energy modules can be operated completely independently and free from

any external supply lines. Complex vacuum fixtures can be equipped with mechanical, pneumatic, hydraulic or electrical clamping, positioning and /or handling units.

System solutions in detail



Possible material of vacuum chucks

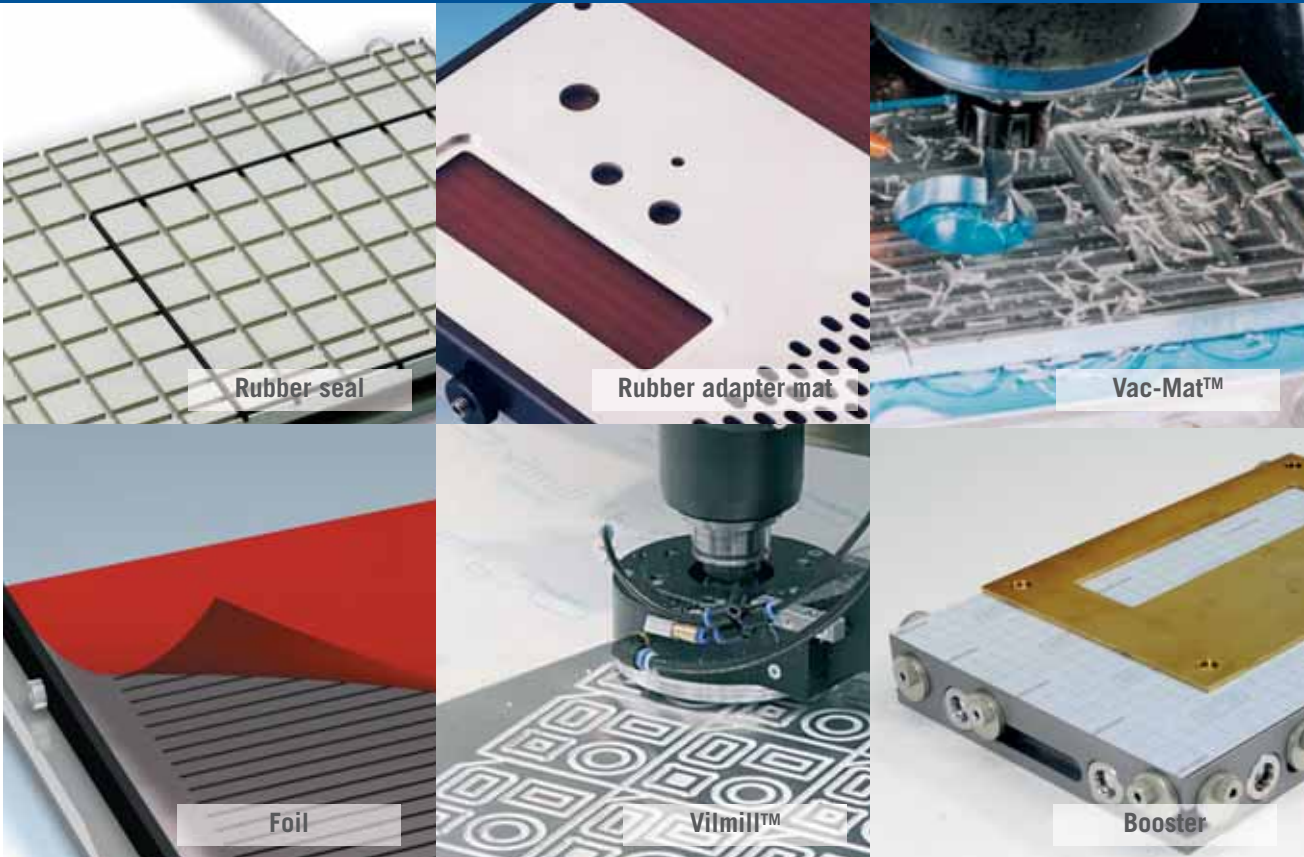
- Steel*
- Aluminium
- Plastic*
- Ceramic*
- Sinterbronze

*) Available only on request

Chuck types

- Grid chuck
- Slot chuck
- Grid hole chuck
- Vac-Mat chuck
- Microporous chuck
- Macroporous chuck
- Flip-Pod chuck
- Grid slot chuck

- Heatable clamping chucks
- Coolable clamping chucks
- Light transmitting clamping chucks



Replacement materials:

Rubber seal, rubber adapter mat, Vac-Mat™, Foil, Booster, Vilmill™

System complements



Freeze clamping technology

Witte IceVice freeze clamping technology:

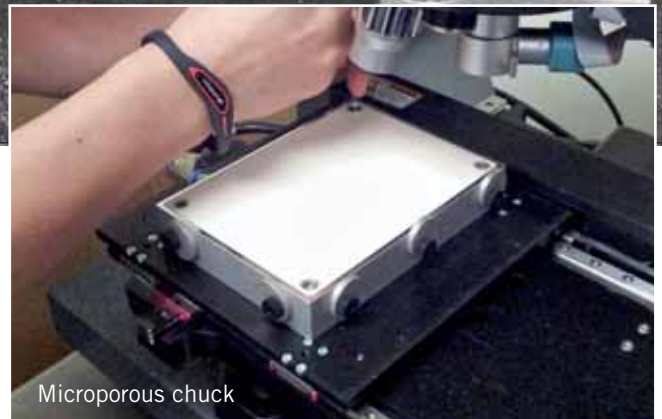
Witte Weiguß mould clamping technology Ideal for manufacturing of parts, which are almost impossible to clamp conventionally due to lack of suitable clamping surfaces.

Witte Weiguß mould clamping technology:

Ideal for manufacturing of parts, which are almost impossible to clamp conventionally due to lack of suitable clamping surfaces.



Mould clamping technology



Microporous chuck

Vacuum chucks



Vac-Mat™



Flip-Pod™



Slot chuck



VAC - Mat™ Sets



Grid vacuum chuck



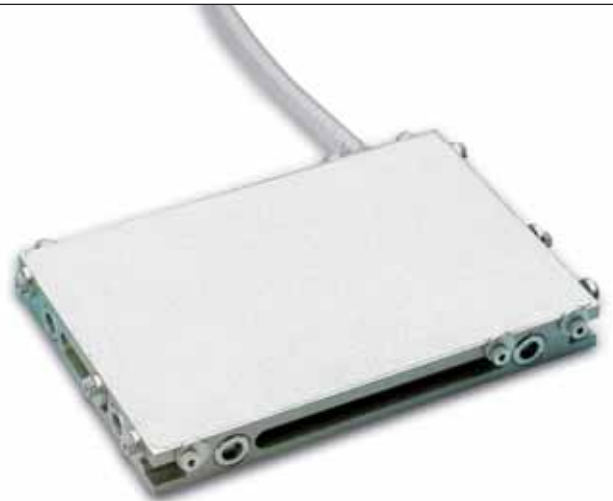
Slot vacuum chuck



Grid hole vacuum chuck

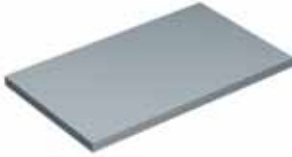


FLIP-POD™ vacuum-system

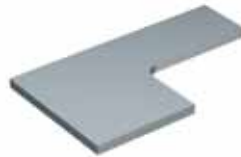


Microporous vacuum system

Clamping with vacuum



Square or rectangular part



Part with cutout



Round parts



Slot chuck with perforated rubber adapter mat



Slot chuck with perforated rubber adapter mat



Slot chuck with perforated rubber adapter mat



Grid chuck with O-shaped seal



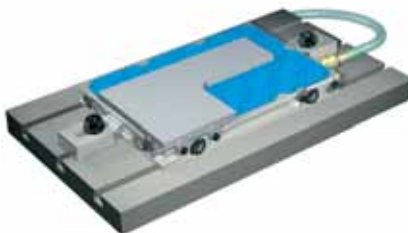
Grid chuck with O-shaped seal



Circular grid chuck



Witte VAC-MAT™



Witte VAC-MAT™



Chuck specially designed for workpieces

Setting up a vacuum system



Workpieces with small surfaces

Vacuum supply:

A modular vacuum unit with integrated liquid separator, storage tank and pressure control. Altogether almost 50 different variations of vacuum pumps and unit are available

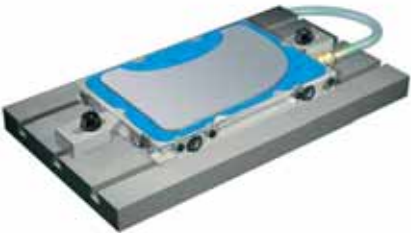


Vacuum distributor, connection unit or safety appliance:

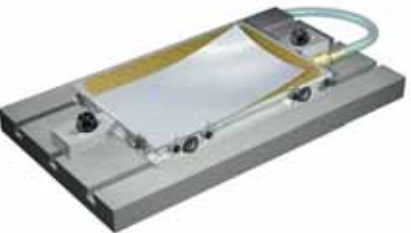
Distribution of operating vacuum to the chucks. Gauges, choice of manual or magnetic valves and pressure controls for watching over operating vacuum level. All these variations are available.



Slot chuck with perforated rubber adapter mat



Witte VAC-MAT™



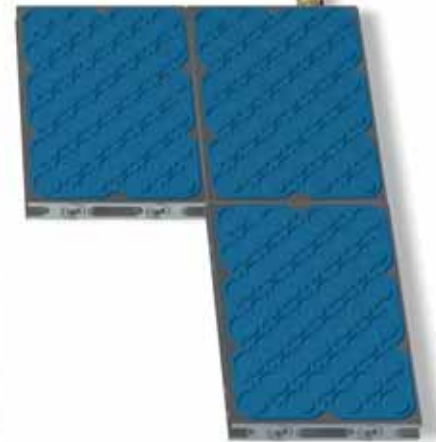
Chuck with insert made out of sintered metal or Witte Metapor® for foils and skins



Grid vacuum chuck



Microporous vacuum system



VAC - Mat™ Chucks

Vacuum chucks:

Chucks to accommodate your requirements and clamping operations.