

## Grid type vacuum chucks

### Modular Grid Chucks with standard sizes or made to order

#### Applications

For simple shaped workpieces  
with a rough surface and heavy duty milling

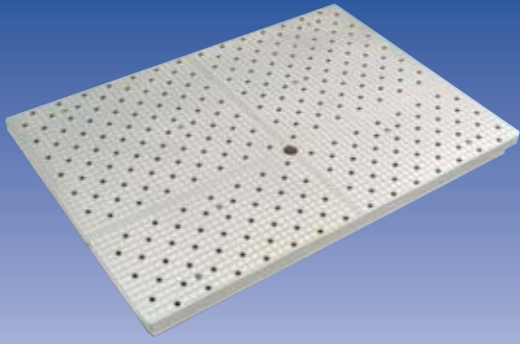
- Grinding
- Milling
- Turning

#### Advantages

- Strong hold down force
- Universally applicable
- Secure clamping of rough workpieces  
due to the high friction properties
- The O-shaped seal evens out any irregularities  
between workpiece and chuck surface

#### Handling

- Any shape or size of chuck made to measure
- Recommended grid size depends on  
workpiece contour and dimensions
- Clamping area defined by Polymer O-shaped seal
- Fine vacuum grid plates for  
extremely small workpieces in any form
- Acts as a base for many special solutions  
in connection with special vacuum adapter mats



Vacuum grid type plate with additional threaded bores



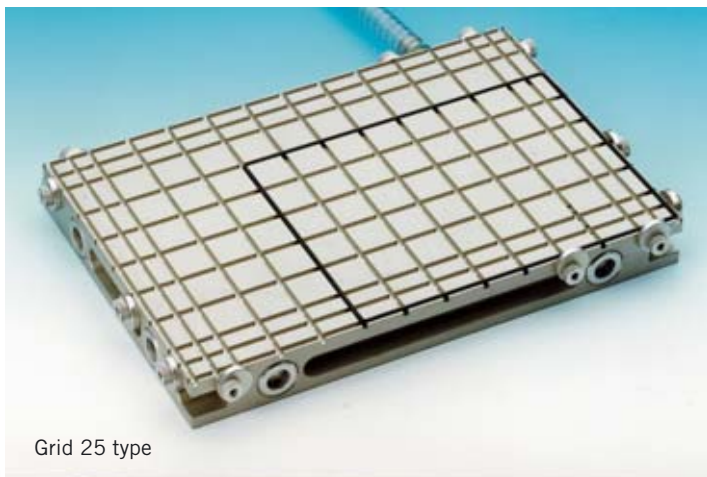
Custom build vacuum cube with integrated storage tank, magnetic Valve and 6 pc grid type chucks.

## Modular grid chucks

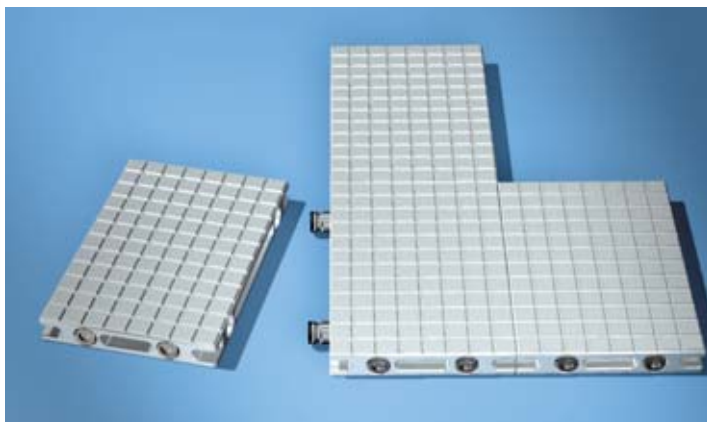
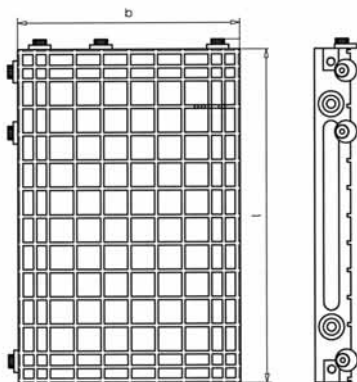
Witte grid chucks are manufactured in high-tensile aluminium. Steel versions are available on request.



Grid 12,5 type



Grid 25 type



**Special dimensions available on request!**

The modular concept allows connection of several vacuum chucks. The vacuum supply to each chuck continues through the connection elements.

No.	Description/Grid	l x w x h	kg
82978	Grid type vacuum chuck, modular/25	300x200x32,5	5
84161	Grid type vacuum chuck, modular/25	300x400x32,5	10
84162	Grid type vacuum chuck, modular/25	600x400x32,5	20
89676	Grid type vacuum chuck, modular/12,5	300x200x32,5	5
90249	Grid type vacuum chuck, modular/12,5	400x300x32,5	10
92289	Grid type vacuum chuck, modular/12,5	600x400x32,5	20

### Supply includes:

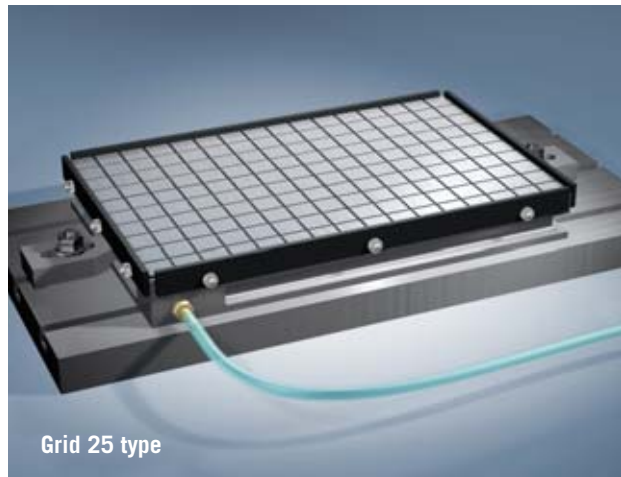
- 1 x Tail end
- 7 x Blind plug
- 10 x O-ring
- 1 x Plug, inside dia 12
- 10m O-shaped seal,  $\varnothing 3,5\text{mm}$ , #00170
- 2 Step heel clamps no.30617, alu
- 1m Vacuum suction hose with wire spiral 18/12
- Height adjustable, excentric end stops with discs

## Standard grid chucks

These tried and tested standard grid type vacuum chucks made by Witte are as described in the table made of high tensile aluminium or steel.

The grid sizes are either 12,5 mm or 25 mm. The height adjustable rim assists the vacuum hold down force as well as a positioning aid

**Special dimensions available on request!**



Grid 25 type

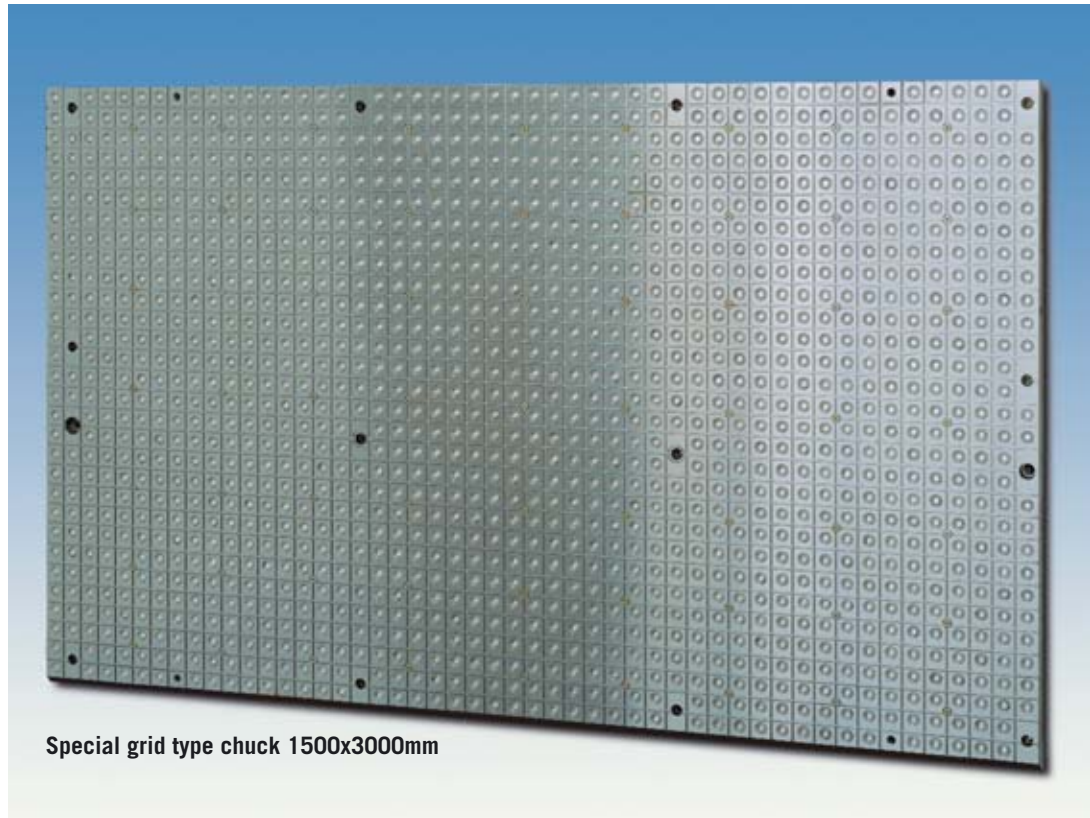
lxwxh (mm)	Aluminium		Grid 25		Steel		Grid 25	
	Grid 12.5 No	kg	No	kg	Grid 12.5 No	kg	No	kg
150x100x38	<b>80802</b>	1	<b>80214</b>	1	<b>80819</b>	4	<b>80228</b>	4
200x100x38	<b>80803</b>	2	<b>80215</b>	2	<b>80820</b>	6	<b>80229</b>	6
250x150x38	<b>80804</b>	3	<b>80216</b>	3	<b>80821</b>	11	<b>80230</b>	11
300x150x38	<b>80805</b>	4	<b>80217</b>	4	<b>80822</b>	13	<b>80231</b>	13
350x150x38	<b>80806</b>	5	<b>80218</b>	5	<b>80823</b>	15	<b>80232</b>	15
400x200x38	<b>80807</b>	8	<b>80219</b>	8	<b>80824</b>	24	<b>80233</b>	24
500x200x48	<b>80808</b>	13	<b>80220</b>	13	<b>80825</b>	37	<b>80234</b>	37
600x200x48	<b>80809</b>	15	<b>80221</b>	15	<b>80826</b>	45	<b>80235</b>	45
400x250x48	<b>80810</b>	13	<b>80222</b>	13	<b>80827</b>	37	<b>80236</b>	37
500x250x48	<b>80811</b>	16	<b>80223</b>	16	<b>80828</b>	47	<b>80237</b>	47
400x300x48	<b>80812</b>	15	<b>80224</b>	15	<b>80829</b>	45	<b>80238</b>	45
500x300x48	<b>80813</b>	20	<b>80225</b>	20	<b>80830</b>	56	<b>80239</b>	56
400x400x48	<b>80814</b>	21	<b>80374</b>	21	<b>80831</b>	60	<b>80375</b>	60
600x300x48	<b>80815</b>	23	<b>80226</b>	23	<b>80832</b>	67	<b>80240</b>	67
600x400x48	<b>80816</b>	31	<b>80376</b>	31	<b>80833</b>	90	<b>80377</b>	90
800x400x48	<b>80817</b>	41	<b>80227</b>	41	<b>80834</b>	121	<b>80241</b>	121
1000x500x48	<b>80818</b>	65	<b>80427</b>	65	<b>80835</b>	192	<b>80426</b>	192

### Supply includes:

- 1 x Tail end
- 1 x Plug, inside dia 12
- 1m Vacuum suction hose with wire spiral 18/12
- Height adjustable end stops
- 10m O-shaped seal, ø3,5mm. #00170

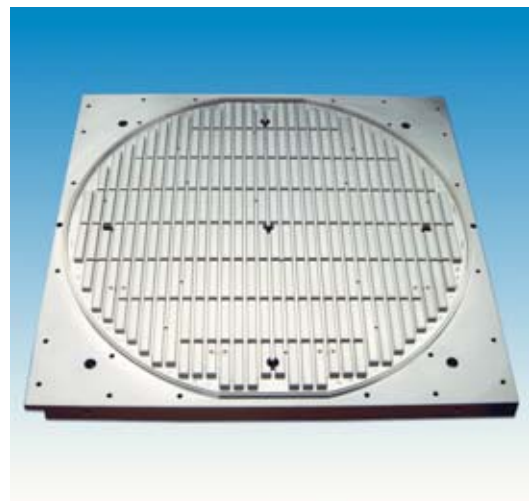


## Custom built grid chucks



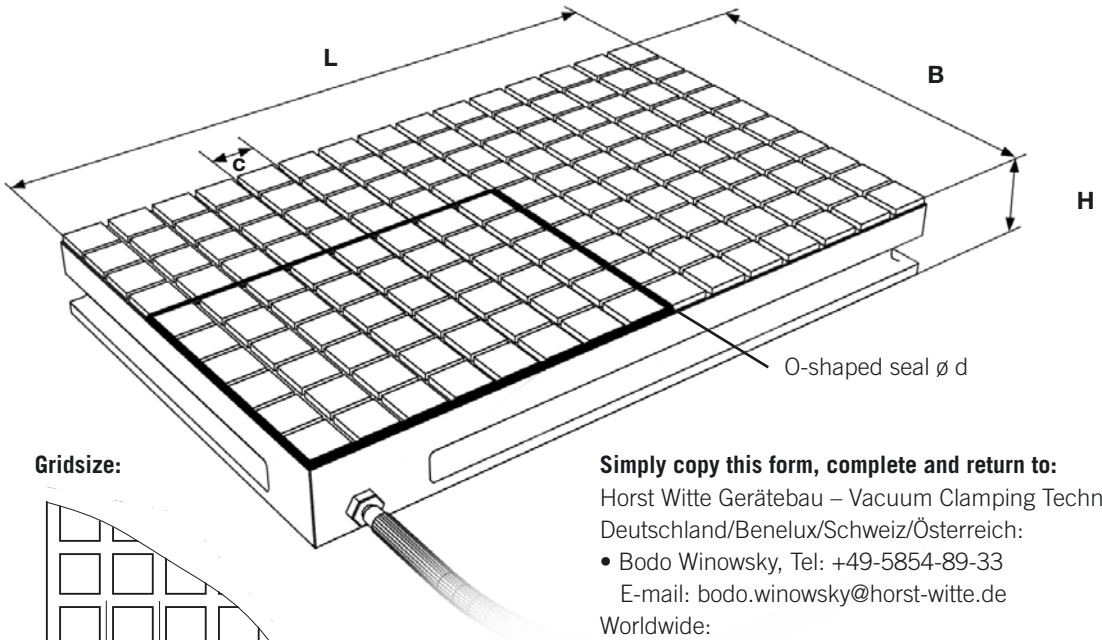
In addition to standard sizes shown here Witte grid type chucks are also custom built to suit your requirements up to dimensions of more than 40m<sup>2</sup>. Dimensions of chuck and clamping area, grid size, slot width, downforce and best type of clamping surface are all details taken into account to supply a chuck which gives optimal results for the application in question. Use our inquiry form on page 43 or get in touch with our agent in your area or with us directly.

Chucks can be made according to a customers workpiece design drawing, we can help in finding the best way to clamp your workpiece

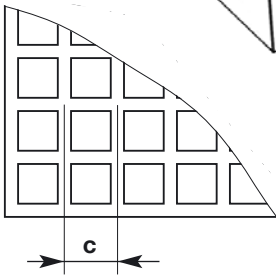


Customized vacuum chuck for the aircraft industry, similar chucks have also been supplied for the spacecraft industry

# Inquiry form for Grid type vacuum chucks:



**Gridsize:**



**Simply copy this form, complete and return to:**

Horst Witte Gerätebau – Vacuum Clamping Technology  
 Deutschland/Benelux/Schweiz/Österreich:

- Bodo Winowsky, Tel: +49-5854-89-33  
 E-mail: bodo.winowsky@horst-witte.de

Worldwide:

- Martin Schröder, Tel: +49-5854-89-978  
 E-mail: martin.schroeder@horst-witte.de
- Rudolf Behn, Tel: +49-5854-89-28  
 E-mail: rudolf.behn@horst-witte.de

**Outer dimensions:**

**l=** \_\_\_\_\_

**w=** \_\_\_\_\_

**h=** \_\_\_\_\_

**Gridsize:**

**c=** \_\_\_\_\_

**O-shaped seal-ø:**

**d=** \_\_\_\_\_

**End stops:**

Height adjustable end stops \_\_\_\_\_

In form of excentric washers \_\_\_\_\_

Without or: \_\_\_\_\_

Material: Aluminium

Surface: Anodized, colour: Natural

More details on request

**Complete and return for a quotation**

\_\_\_\_\_  
 Name

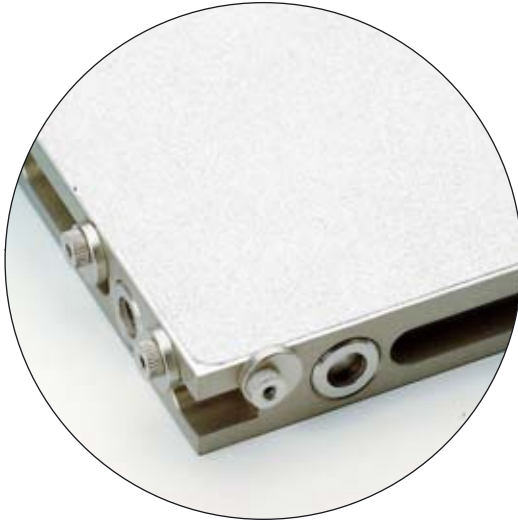
\_\_\_\_\_  
 Postal code/Town

\_\_\_\_\_  
 Company

\_\_\_\_\_  
 Street

\_\_\_\_\_  
 Type of work

\_\_\_\_\_  
 Tel / Fax



## $\mu$ -porous Vacuum chucks

### Modular chucks Custom built chucks

These chucks have a porous surface area made out of sinterbronze, ceramic or porous aluminium depending on the application and workpiece.

METAPOR® opens a whole new perspective for different clamping solutions

#### Application

Preferred workpieces:

- Thin walled (i.e. paper, foils, plate bars, metal strips)
- Fine (i.e. optical)
- Soft materials (i.e. rubbers)

for work such as:

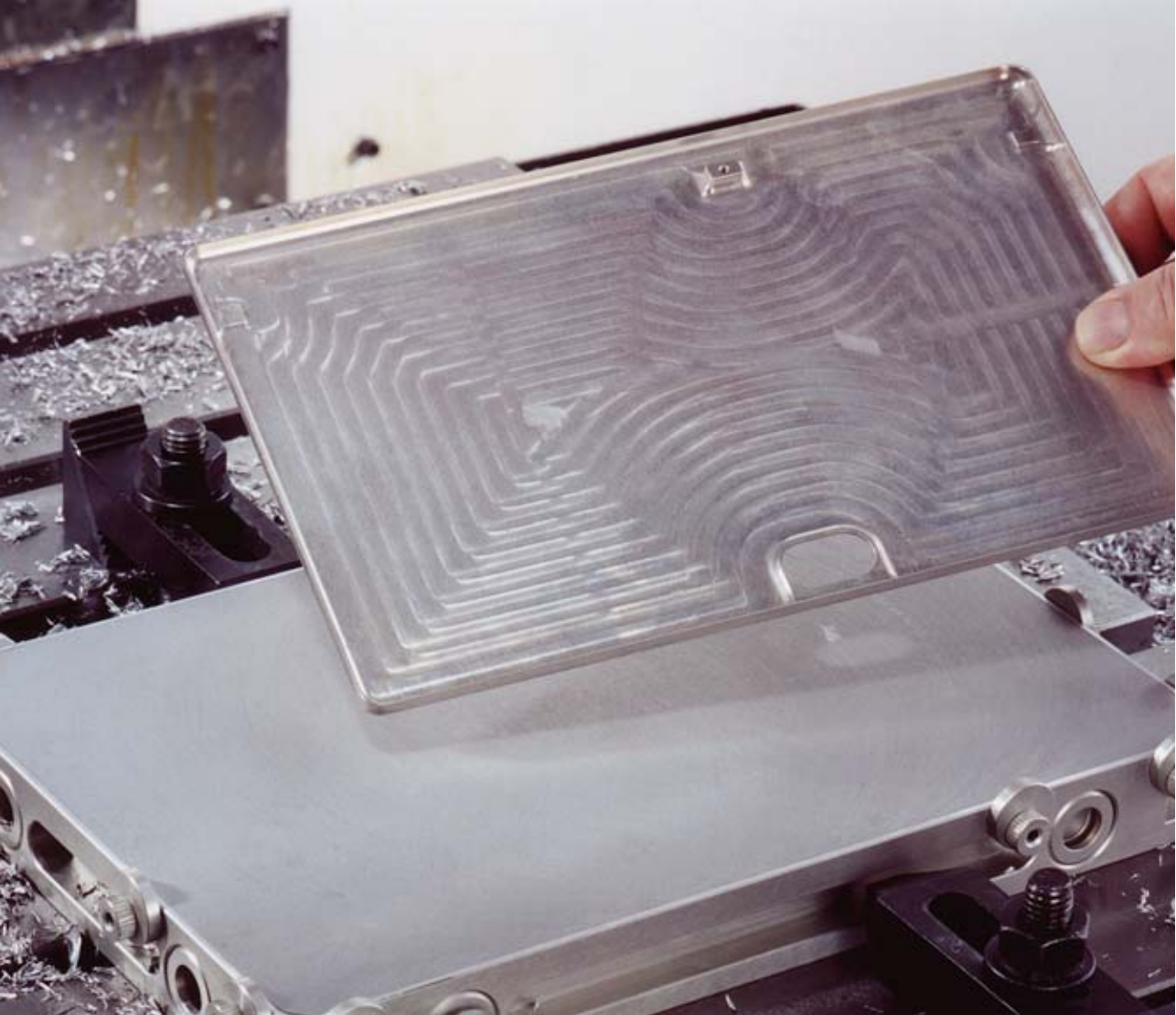
- High precision measuring
- Precision milling
- Silicon wafer production
- Clean room surroundings (KI.10)  
- only Metapor CE-100

#### Advantages

- Due to the absence of grooves and holes workpieces are not deformed for instance on inserts in the clamping area
- Milling through the workpiece is possible with the use of our Friction booster
- METAPOR® has different quality grades and can also qualify for Clean room surroundings (KI. 10)

#### Handling

- Modular chucks can be interconnected to enlarge the surface area.



Witte modular grid chucks are manufactured in high-tensile aluminium. Steel versions are available on request.

Custom built vacuum chuck with Metapor insert

**Special dimensions available on request !**





## $\mu$ -porous Vacuum chucks

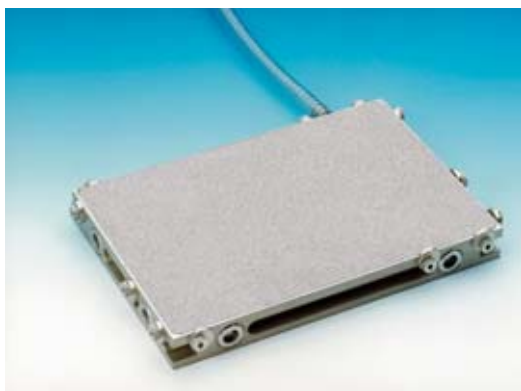
Modular chucks can be interconnected to enlarge the surface area. The inserts can be out of Sintermetal or METAPOR®



### Sintermetal Vacuum chucks

Inlay out of well tested Sinterbronze

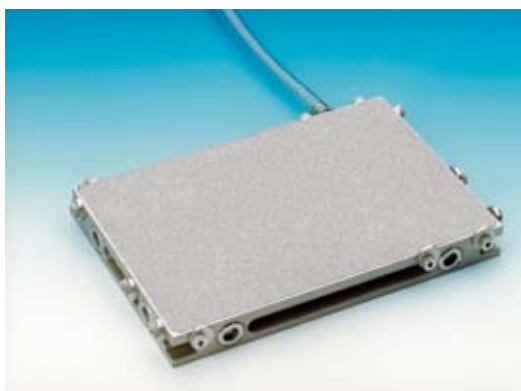
No.	lxwxh	kg
<b>84686</b>	300x200x38	7,1
<b>84687</b>	300x400x38	14,2
<b>84688</b>	600x400x38	28,4



### METAPOR® Vacuum chucks with BF 100 AL:

Inlay out of an air permeable material called METAPOR® BF 100 AL, a description can be found on page 106

No.	lxwxh	kg
<b>83401</b>	300x200x38	6,1
<b>84380</b>	300x400x38	12,2
<b>84381</b>	600x400x38	24,4



### METAPOR® Vacuum chucks with MC 100 AL:

Inlay out of an air permeable material called METAPOR® MC 100 AL, with a higher degree of porosity compared to BF 100 AL

No.	lxwxh	kg
<b>91021</b>	300x200x38	6,1
<b>92290</b>	300x400x38	12,2
<b>92291</b>	600x400x38	24,4

Special dimensions available on request !

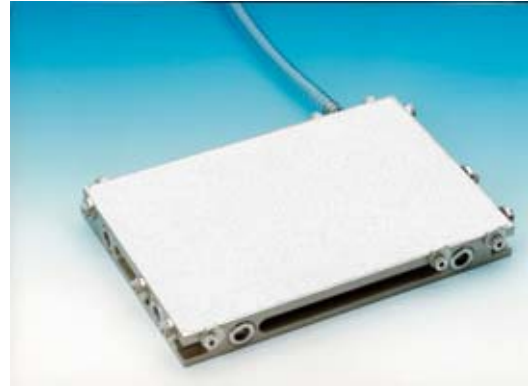
## μ-porous Vacuum chucks

**Modular chucks can be interconnected to enlarge the surface area. The inserts can be out of Sintermetal or METAPOR®**

### METAPOR® Vacuum chucks with CE 100:

Inlay out of METAPOR® CE100 WHITE, is a fine porous material with a medium pore diameter which is lower than that of of BF100 or MC100. This Material has a very homogenous total porosity. Especially interesting for the silicon wafer production

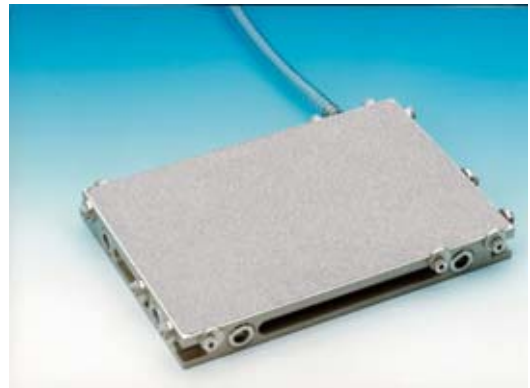
No.	lxwxh	kg
<b>91488</b>	300x200x38	6,1
<b>92294</b>	300x400x38	12,2
<b>92296</b>	600x400x38	24,4



### METAPOR® Vacuum chucks with HD 210:

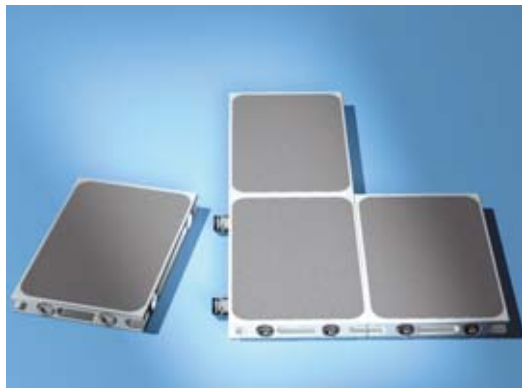
Inlay out of an air permeable material called METAPOR® HD 210, this material can be used up to 210°C

No.	lxwxh	kg
<b>94315</b>	300x200x38	6,1
<b>94316</b>	300x400x38	12,2
<b>94317</b>	600x400x38	24,4



#### Supply includes:

- 1 x Tail end
- 7 x Blind plug
- 10 x O-ring
- 1 x Plug, inside dia 12
- 2 Step heel clamps no.30617, alu
- 1m Vacuum suction hose with wire spiral 18/12
- Height adjustable excentric end stops



**Witte METAPOR® chucks are also available in a modular version if required**

## Sintermetal & METAPOR<sup>®</sup> vacuum fixtures

### Examples of custom made chucks



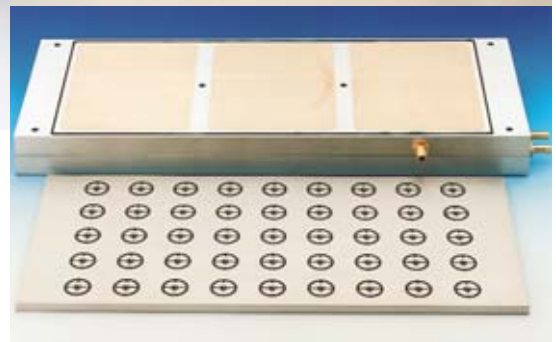
Picture shows a special sinter metal vacuum fixture used in quality control department of CD manufacturer



3D Vacuum chuck



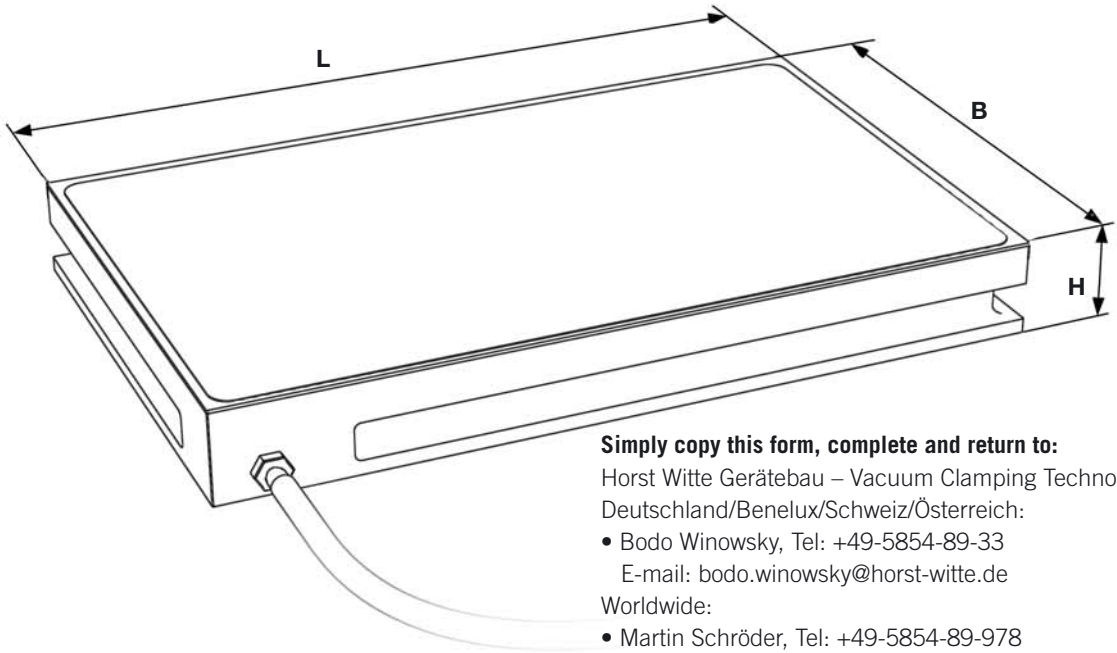
Vacuum chuck for credit cards



Right: Sinter metal vacuum chuck with special adapter plate for clamping hard metal blanks during laser machining process.

It has an integrated cooling labyrinth which prevents inaccuracies, due to development of warmth which occurs during the laser machining process

# Inquiry form for $\mu$ -porous Vacuum chucks



**Simply copy this form, complete and return to:**

Horst Witte Gerätebau – Vacuum Clamping Technology  
 Deutschland/Benelux/Schweiz/Österreich:

- Bodo Winowsky, Tel: +49-5854-89-33  
 E-mail: bodo.winowsky@horst-witte.de

Worldwide:

- Martin Schröder, Tel: +49-5854-89-978  
 E-mail: martin.schroeder@horst-witte.de
- Rudolf Behn, Tel: +49-5854-89-28  
 E-mail: rudolf.behn@horst-witte.de

**Outer dimensions:**

l= \_\_\_\_\_

w= \_\_\_\_\_

h= \_\_\_\_\_

**Inlay Material**

Sintermetal \_\_\_\_\_

METAPOR \_\_\_\_\_

**End stops:**

Height adjustable end stops \_\_\_\_\_

In form of excentric washers \_\_\_\_\_

Without or: \_\_\_\_\_

Material: Aluminium

Surface: Anodized, Colour: Natural

More details on request

**Complete and return for quotation**

\_\_\_\_\_  
 Name

\_\_\_\_\_  
 Postal code/Town

\_\_\_\_\_  
 Company

\_\_\_\_\_  
 Street

\_\_\_\_\_  
 Type of work

\_\_\_\_\_  
 Tel / Fax