



## Slot vacuum chucks

**Standard sizes**  
**Adapter mats**  
**Custom made chucks**

All vacuum slot chucks have integrated slots in their surface area according to customer requirements. To clamp parts that do not cover the full surface area rubber adapter mats or foils can be used to cover the area not needed under vacuum.

### Application

- Light milling work
- Drilling (e.g. semiconductors, electronic parts)
- Engraving
- Also for complicated workpieces

### Advantages

- Very flat (28 mm)

- Large range of uses (rubber adapter mat can be reused or exchanged)
- Can be used in high speed cutting for precision work with the aid of the plane parallel black mat that can be machined down to achieve optimum accuracy
- Clamping very small workpieces

### Handling

- Makes workpiece positioning easier with the aid of height adjustable end stops
- Limiting of vacuum area can be achieved by the moveable hose connection, masking foil or rubber adapter mat. (See page 56 for examples)



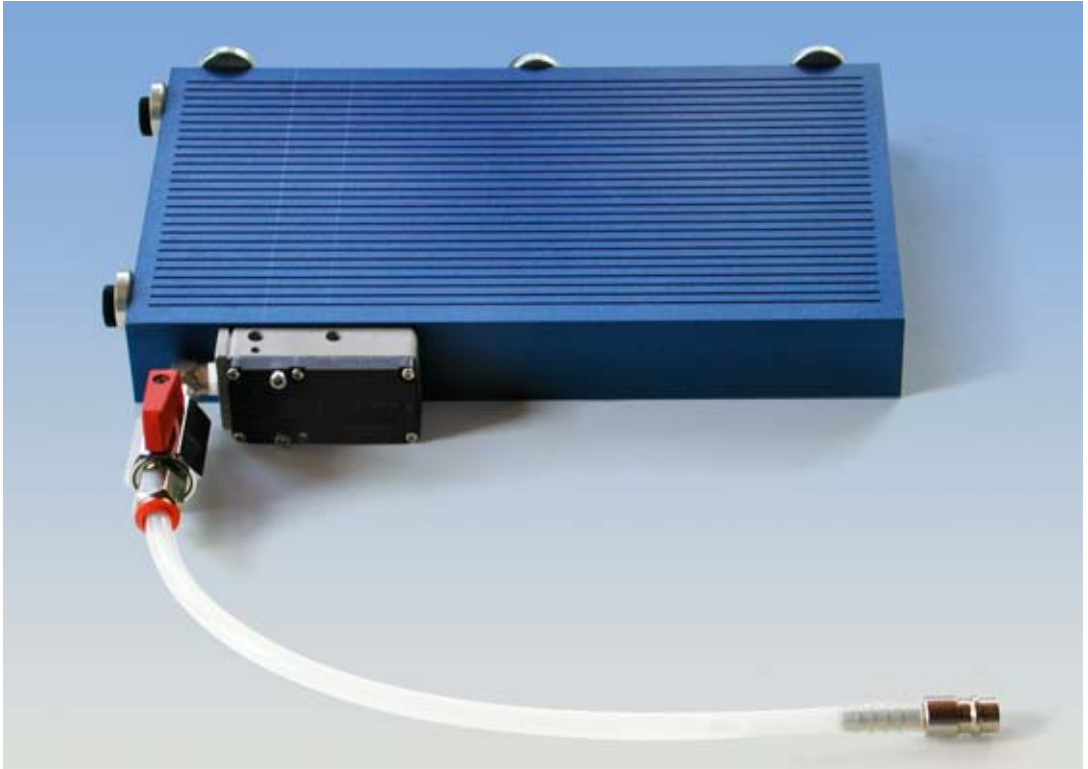
Slot chuck with rubber adapter mat and workpiece



Customized slot type vacuum chuck

## Slot vacuum chuck starter set

### Slot vacuum chuck with integrated vacuum supply



Comprising: Slot - vacuum chuck 32 x 100 x 200 mm in aluminium alloy This chuck already has vacuum supply integrated (see below) and is immediately ready to use. For workpiece adjustment there are excentric stops on two sides of the vacuum chuck. The rubber adapter mat can be configured as required by punching holes through it, thereby enabling clamping of small parts. A vacuum stopper allows limitation of area affected by vacuum thereby extending the clamping possibilities of this vacuum clamping system substantially.

It has an oil pressure hose and a plug for commercial pneumatic connection.

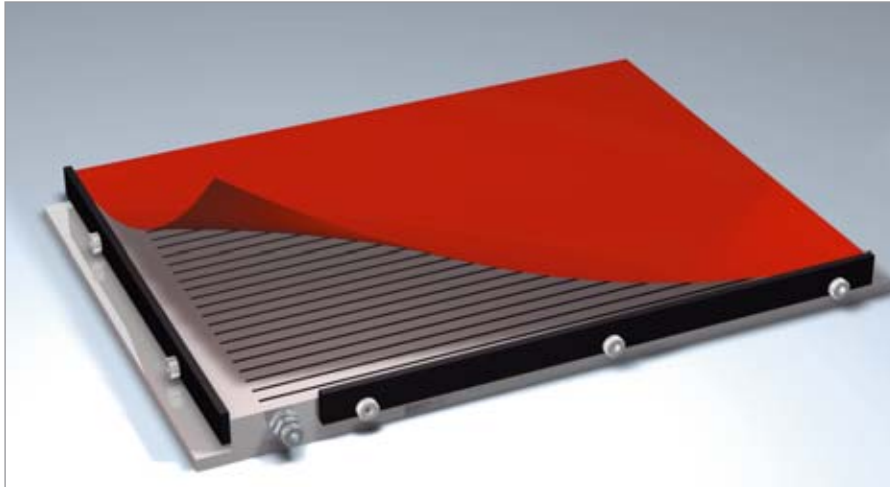
Vacuum supply using compressed air. Operating pressure of 4-6 bar. Depending upon operating conditions a final vacuum of 940 mbar can be achieved. During vacuum applications 60 litres of air are used. The noise level of approx. 57 dbA. is relatively low but can be reduced further at any time by a suitable muffler from our extensive range of accessories.

#### Supply includes:

- Chuck 32x100x200mm
- 1 Vacuum supply (Venturi – injector)
- 2 Clamps (#30617) for clamping chuck to machine table
- 1 Vacuum stopper
- 1 Rubber adapter mat
- 1 Friction booster
- 1 Pressure oil hose with connector for Compressed air connection

# Slot vacuum chucks

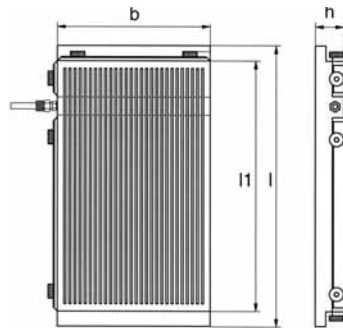
Vacuum plate 28mm high



Slot chuck with rubber adapter mat and work-piece

No.	Clamp. area l <sub>1</sub> x <b>b</b>	Total dim. l <sub>x</sub> wx <b>h</b>	kg
84422	150x100	170x100x28	1,5
84423	200x100	220x100x28	1,9
84424	250x150	270x150x28	3,4
84425	200x200	220x200x28	3,6
84426	300x150	320x150x28	3,9
84427	350x150	370x150x28	4,4
84428	400x200	420x200x28	6,6
84429	350x250	370x250x28	7,5
84430	300x300	320x300x28	7,8
84431	400x250	420x250x28	8,5
84432	400x300	420x300x28	10,2
84433	400x400	420x400x28	13,6
84434	500x300	520x300x28	12,1

No.	Clamp. area l <sub>1</sub> x <b>b</b>	Total dim. l <sub>x</sub> wx <b>h</b>	kg
94587	100x200	100x200x32	2,0
95166	150x200	150x200x32	3,5
95167	200x300	200x300x32	5,2



All vacuum slot chucks have a 10mm clamping edge. The slot width is 1mm with a middle distance of 5mm. For the larger plates this may vary to 2mm at 10mm.

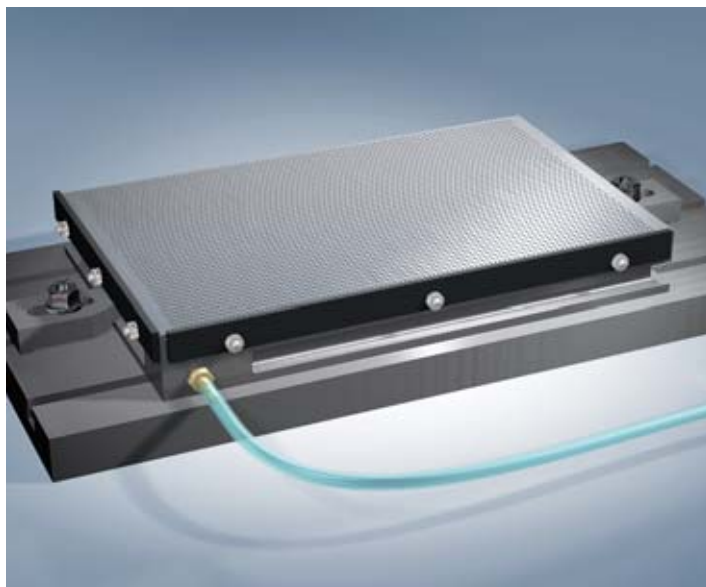
**Supply includes:**

- 1 Vacuum chuck
- 1 Vacuum stopper
- 1 Rubber adapter mat
- 3 Height adjustable end stops
- 1m Hose with connector for quick coupling

**Special dimensions available on request!**

## Slot vacuum chucks

### Vacuum plate 38/48mm high



#### Supply includes:

- 1 Vacuum chuck
- 1 Vacuum stopper
- 1 Rubber adapter mat
- 3 Height adjustable end stops
- 1m Hose with connector for quick coupling

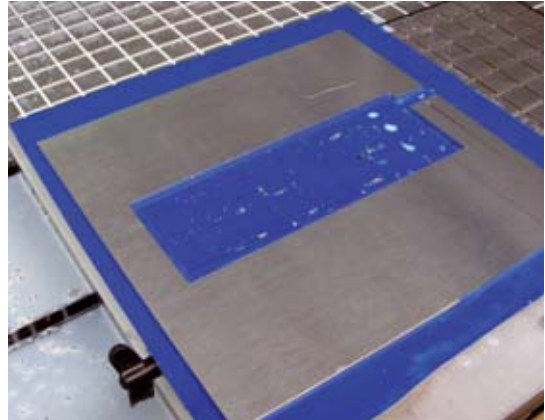
lxwxh (mm)	No.	Aluminium		
		s	a	kg
150x100x38	<b>80016</b>	1	5	1
200x100x38	<b>80017</b>	1	5	2
250x150x38	<b>80018</b>	1	5	3
300x150x38	<b>80019</b>	1	5	4
350x150x38	<b>80020</b>	1	5	5
400x200x48	<b>80021</b>	1	5	8
500x200x48	<b>80022</b>	2	10	13
600x200x48	<b>80023</b>	2	10	15
400x250x48	<b>80024</b>	2	10	13
500x250x48	<b>80025</b>	2	10	16
400x300x48	<b>80026</b>	2	10	15
500x300x48	<b>80027</b>	2	10	19
400x400x48	<b>80130</b>	2	10	21
600x300x48	<b>80028</b>	2	10	23
600x400x48	<b>80136</b>	2	10	31
800x400x48	<b>80029</b>	2	10	41
1000x500x48	<b>80429</b>	2	10	65

No.	Steel		
	s	a	kg
<b>80002</b>	1	5	4
<b>80003</b>	1	5	6
<b>80004</b>	1	5	11
<b>80005</b>	1	5	13
<b>80006</b>	1	5	15
<b>80007</b>	1	5	24
<b>80008</b>	2	10	37
<b>80009</b>	2	10	45
<b>80010</b>	2	10	37
<b>80011</b>	2	10	47
<b>80012</b>	2	10	45
<b>80013</b>	2	10	56
<b>80372</b>	2	10	60
<b>80014</b>	2	10	67
<b>80373</b>	2	10	90
<b>80015</b>	2	10	120
<b>80428</b>	2	10	188

# Rubber adapter mat

The blue rubber adapter mat is placed between part and chuck. It covers areas of the chuck not in use and secures part against slipping due to high friction value.

Rubber adapter mat - blue  
Only available as a complete roll

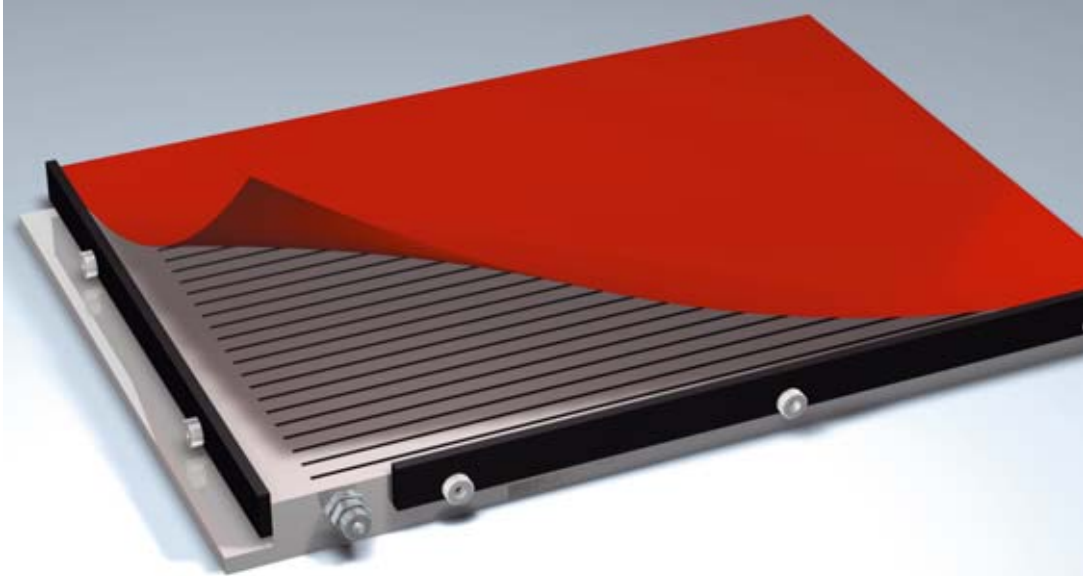


No.	LxB	thickness	kg
14972	2000 x 400	1	-



Vacuum Fixture for drilling operation, approx. 4600mm long, with additional manually clamps.

## Slot vacuum chucks and rubber adapter mat



**1**

Lay the rubber adapter mat onto the chuck covering all the slots.

**2**

Position workpiece with the help of adjustable end stops. Then draw round the contour using an ordinary pen

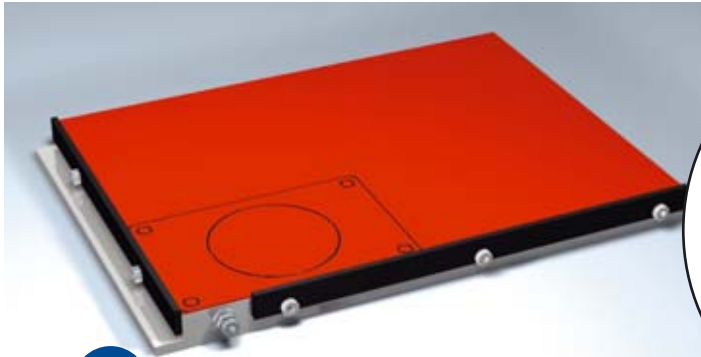


### Application

Simply follow steps 1-5 and a custom built fixture is ready in seconds. When vacuum is switched on mat and workpiece are sucked down together. The excellent friction values offer especially good resistance to displacement forces during machining.

Using the slot chuck with the rubber adapter mat allows drilling of holes and milling or cutting of pockets and cutouts into the mat to a depth of 1,5mm without losing vacuum. As the mat suffers hardly any wear and tear it can be used often for workpieces with the same contour. Certain applications allow the tool to work to depths of 1,5mm into the mat.

Height tolerance of the mats according to DIN 7715, part 5



**3** Here you can see the workpiece contour

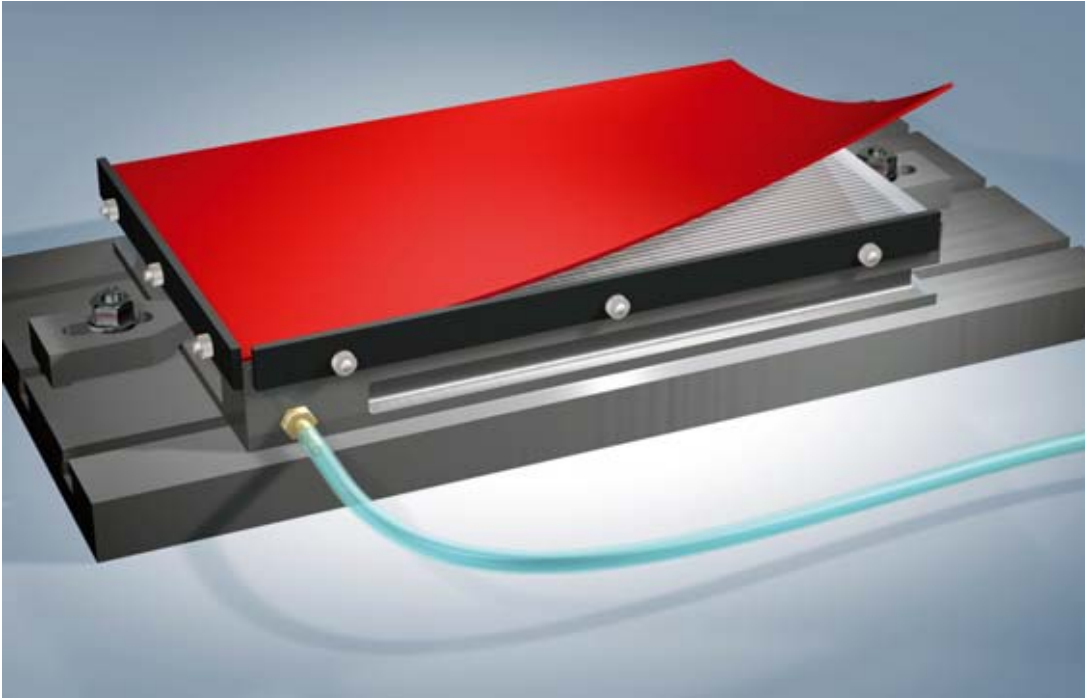


**4** Remove the mat and punch holes into the area corresponding to the actual clamping surface of the workpiece. The holes should be approx. 3-8 mm Dia. in a 10mm grid and lie on slots of the chuck



**5** Replace workpiece onto the mat. The excellent friction of the rubber material counteracts high-displacement forces better than any other vacuum system.

## Rubber adapter mats for slot vacuum chucks



**Rubber adapter mats, brown**, for use on slot type vacuum chucks (see also page 54) Brown mats have very high friction properties, low accuracy and cannot be machined (as opposed to black mats).

Dimension tolerance according to DIN 7715 Part 5.

Rubber adapter mats with less tolerance (0,05mm) are available on request

No.	lxwxh
00005	150x100x3
00006	200x100x3
00007	250x150x3
00008	200x200x3
00416	200x300x3
00609	200x500x3
00564	200x600x3
00009	300x150x3
00010	350x150x3
00011	400x200x3
00013	350x250x3
00014	300x300x3
00015	400x250x3
00016	400x300x3
00017	400x400x3
00415	500x300x3
00164	500x500x3

No.	lxwxh
00418	500x1000x3
00437	600x300x3
00414	600x400x3
00409	1000x1000x3
00682	1000x2000x3
00732	1000x2000x1
00733	1000x2000x1,5

## Rubber adapter mats for slot vacuum chucks



**Rubber adapter mats, black,** made of synthetic polymer for use on slot type vacuum chucks. Black mats have low friction properties and achieve high accuracy (tolerance approx. 0,05mm) after they have been milled over by customer directly on their machine.

No.	lxwxh
<b>00845</b>	100x150x3
<b>00846</b>	100x200x3
<b>00847</b>	150x250x3
<b>00848</b>	200x200x3
<b>00280</b>	200x300x3
<b>00849</b>	200x500x3
<b>00850</b>	200x600x3
<b>00851</b>	150x300x3
<b>00825</b>	200x400x3
<b>00852</b>	250x350x3
<b>00853</b>	300x300x3
<b>00796</b>	250x400x3
<b>00854</b>	300x400x3
<b>00855</b>	400x400x3
<b>00856</b>	400x500x3
<b>00857</b>	500x500x3
<b>00858</b>	300x600x3

No.	lxwxh
<b>00791</b>	400x600x3
<b>00859</b>	500x1000x3
<b>00860</b>	1000x1000x3
<b>00861</b>	1000x2000x3

## Slot vacuum chucks - special versions

Slot vacuum chucks for workpieces with complicated geometrical forms, also with cut-outs i.e. screens; ideal for light machining operations like engraving or grinding etc.

The vacuum supply is connected to a moveable hose within the plate. In order to reduce the area affected by vacuum the hose is pulled towards the user and the end sealed with a plastic chip put into the plate between the lines marked.

All slots can be covered also using covering foil (accessories). On the same principle as the rubber adapter mat, the workpiece contour is traced onto the foil. The foil within the contour is then slit using a knife resulting in a custom built fixture in seconds.

By using adapter plates it is also possible to create multiple fixtures.

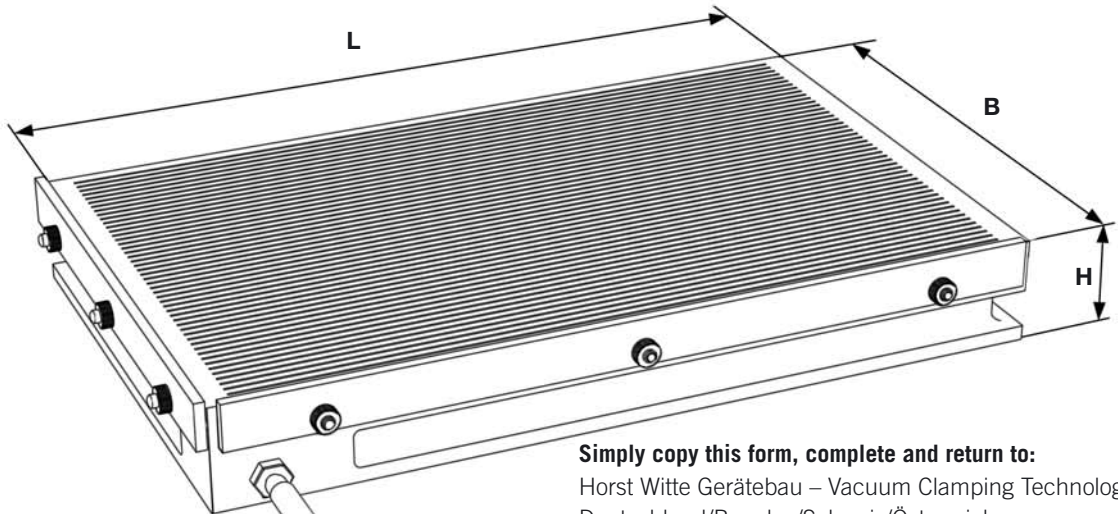


Slot vacuum chuck with special adapter plate

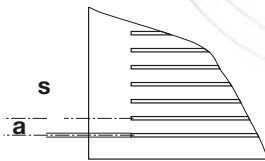


Slot vacuum chuck with 3 vacuum areas, which work combined or independently

# Inquiry form for Slot vacuum chucks



**Slots:**



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

**Slot dimensions:**

s (Slot width) = \_\_\_\_\_

a (Slot distance) = \_\_\_\_\_

**End stops:**

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

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

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

Material: Aluminium

Surface: Anodized, Colour: Natural

More details on request

**Please complete and return for a quotation**

\_\_\_\_\_  
 Name

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

\_\_\_\_\_  
 Company

\_\_\_\_\_  
 Street

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

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