



Vacuum Clamping Technology

# Clamping Solutions Wood

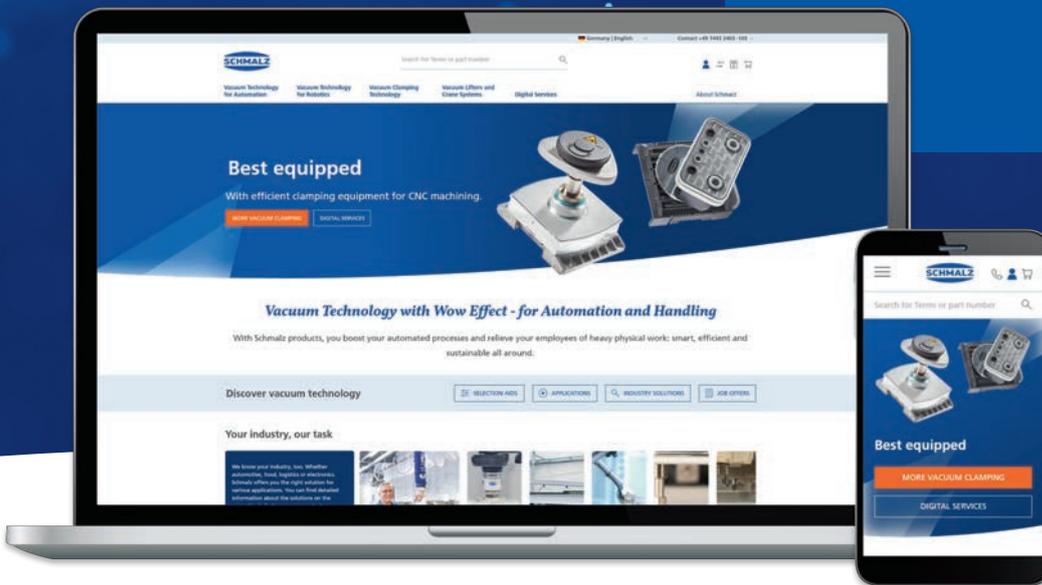
Edition 7

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# Schmalz: Vacuum Technology for Intelligent Automation and Ergonomic Handling

**1800**  
**employees**  
working hard for our customers.



**29**  
**locations**  
for outstanding customer service worldwide.

## *Schmalz is one of the Market Leaders in Vacuum Automation and Ergonomic Handling Systems.*

**9**  
**percent**  
of our revenue is invested in innovative ideas and new products.

The wide range of products in the Vacuum Automation unit includes individual components such as suction cups and vacuum generators, as well as complete gripping systems and clamping solutions for holding workpieces, for example in CNC machining centers. The Handling Systems unit offers innovative handling solutions with vacuum lifters and crane systems for industrial and handicraft applications.

**590**  
**copyrights**  
are proof of our groundbreaking innovations.

Our products are used in different applications for example in the logistics industry, the automotive industry, the electronics sector and in furniture production.

With comprehensive consulting, a focus on innovation and first-class quality, Schmalz offers its customers long-lasting benefits. Schmalz's intelligent solutions make production and logistics processes more flexible and efficient, while also preparing them for the increasing trend toward digitalization.

### Vacuum Automation



Components



Systems



Clamping solutions

### Handling Systems

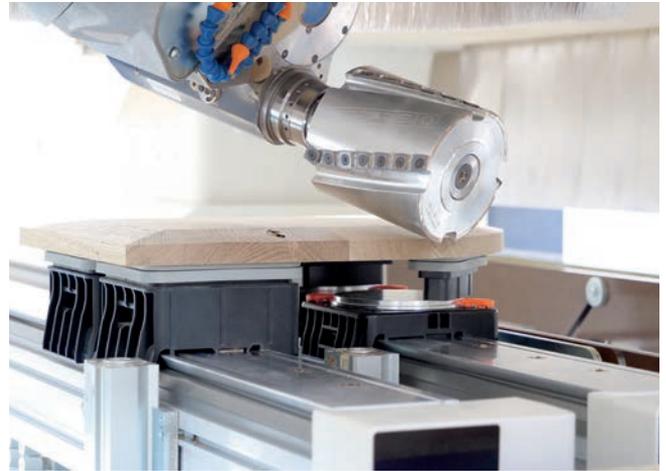


Vacuum lifters and crane systems

# Clamping Technology from the Market Leader

Before a workpiece can be reliably machined, it must always be clamped. Vacuum clamping offers several advantages over other clamping methods: Fast, precise, damage-free and low-distortion clamping, high holding force and five-sided machining.

Schmalz offers a wide range of high-quality clamping equipment for all common machine manufacturers and types. Whether single-circuit or two-circuit vacuum systems, whether grid, nesting or flat tables, whether panel processing or frame production: Schmalz clamping devices are of first-class quality, can be positioned easily and precisely, and can be replaced quickly and easily when changing jobs. If parts need to be replaced quickly and cost-effectively due to wear or damage, Schmalz offers replacement suction plates for all vacuum blocks.



## OUR PROMISE



High-quality clamping tools from the original equipment manufacturer



Large variety of vacuum blocks for all common machine manufacturers



Precise machining due to high dimensional accuracy



Fast delivery from stock

## WHAT USERS SAY

***"The holding force is 20 percent higher than the original. We will gradually switch over completely to the Schmalz solution."***

Markus Hermann  
Managing Director Müller Manufaktur Möbelbau GmbH



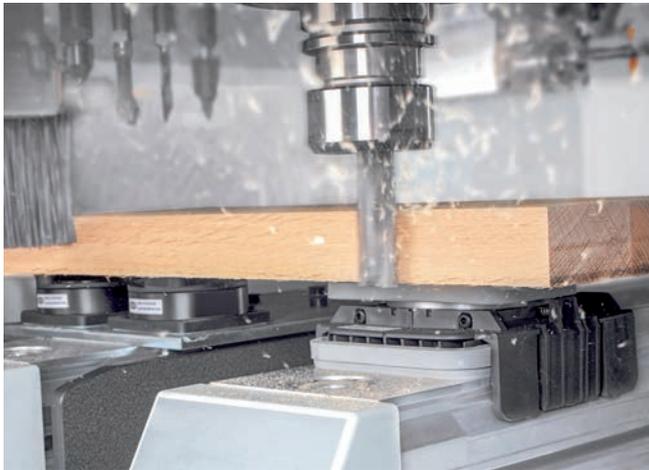
**Schmalz Media Center**  
Watch application and how-to videos





## The Industry Standard for CNC Woodworking

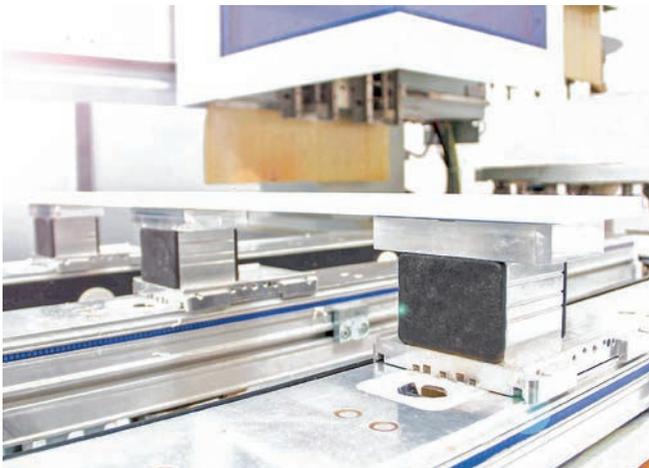
Being a long-time partner of well-known machine manufacturers, Schmalz offers considerable experience and expertise in vacuum clamping technology. From initial outfitting to retrofitting solutions and spare parts, Schmalz offers a wide range of high-quality clamping equipment for all common machine manufacturers and machine types. Whether you're using a single-circuit or two-circuit vacuum system, a grid, nesting or flat table, and whether it's for panel processing or frame production – Schmalz clamping equipment can be positioned precisely and is quick and easy to replace when changing orders.



Vacuum blocks VCBL-K1 in mixed use with Adapter-Plate ISAP-K1 for processing a wooden board



Vacuum blocks VCBL-K2 for processing a wooden board

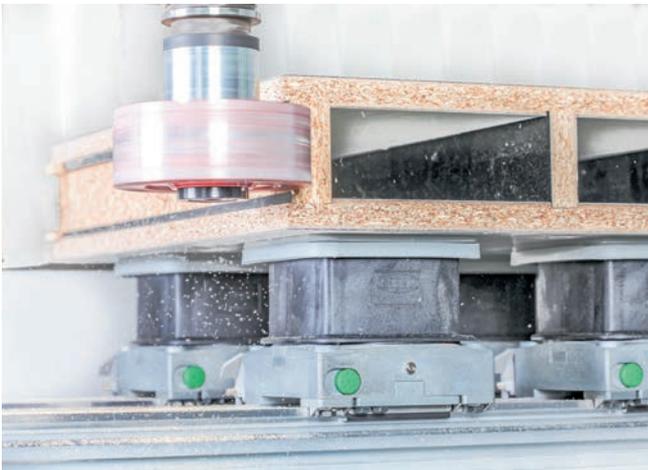


Aluminum vacuum blocks VCBL-A-K2 for processing furniture parts

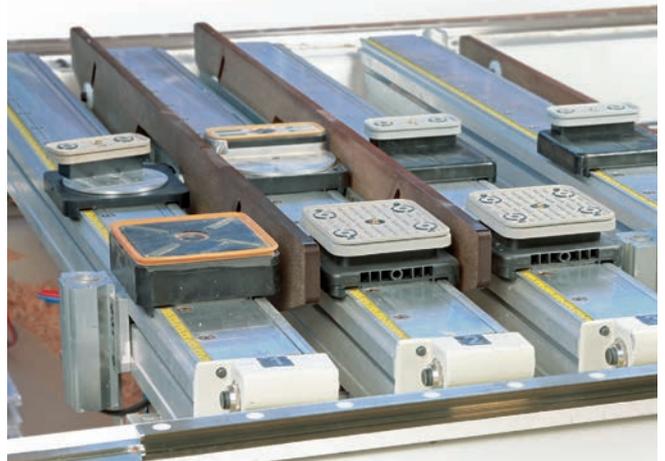


Mechanical clamps VCMC-K1-QUICK for clamping frame parts





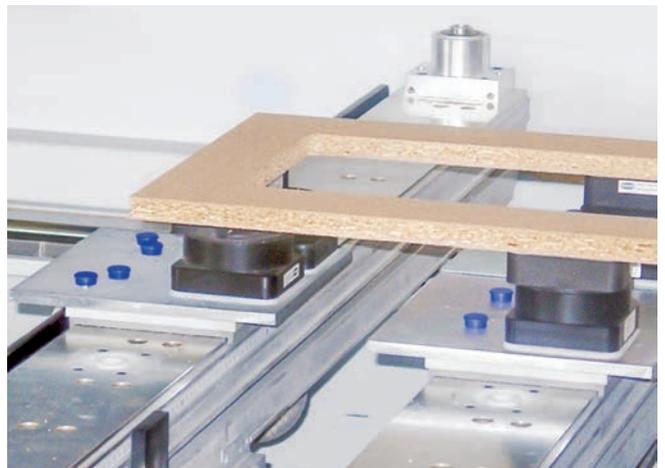
Schmalz vacuum blocks VCBL-B for clamping wooden components, compatible with Biesse\* vacuum block mountings



Schmalz vacuum blocks VCBL-S4 for CNC machining centers from SCM / Morbidelli\* used together with the originally fitted vacuum blocks



Adapter-Plates AP-R with vacuum block VCBL-B for clamping wooden parts



Console table K2 with Adapter-Plates ISAP-K2 and suction cups ISCUP for clamping particle board frames

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# Clamping Equipment for Console Table Systems



All products – all information:

[WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY](http://WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY)

# Overview of Section

## Selection Aid

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### Design of Console Table Systems Selection of Vacuum Blocks According to Suction Area and Height

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## Clamping equipment for 1-circuit systems



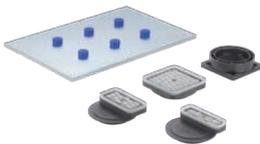
### Vacuum Blocks VCBL-K1

- 1-circuit vacuum systems
- Hose-free
- Mechanical pre-fixation to the console

Vacuum block VCBL-K1 for use on CNC machining centers with single-circuit console table systems from Schmalz.



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### Adapter-Plates ISAP-K1

- 1-circuit vacuum systems
- Mechanical pre-fixation to the console
- Use of Innospann suction cups

Innospann Adapter-Plate ISAP-K1 for use on CNC machining centers with single-circuit console table systems from Schmalz.

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### Aluminum Vacuum Blocks VCBL-A-K1

- 1-circuit vacuum systems
- Vacuum block made of aluminum
- Hose-free with mechanical pre-fixation to the console

Vacuum block VCBL-A-K1 made of aluminum for use in milling of solid wood and applications with high cutting forces.



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### Mechanical Clamps VCMC-K1-QUICK

- 1-circuit vacuum systems
- For frames and window profiles
- Mechanical pre-fixation on console

Mechanical clamp VCMC-K1-QUICK for use on CNC machining centers with single-circuit console table systems from Schmalz.

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## Clamping equipment for 2-circuit systems



### Vacuum Blocks VCBL-K2

- 2-circuit vacuum systems
- Hose-free
- Prefixing on console with vacuum

Vacuum block VCBL-K2 for use on CNC machining centers with two-circuit console table systems from Schmalz.



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### Adapter-Plates ISAP-K2

- 2-circuit vacuum systems
- Pre-fixation to console by means of vacuum
- Use of Innospann suction cups

Innospann Adapter-Plate ISAP-K2 for use on CNC machining centers with two-circuit console table systems from Schmalz.



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## Overview of Section



### Aluminum Vacuum Blocks VCBL-A-K2

- 2-circuit vacuum systems
- Aluminum vacuum block
- Hose-free pre-fixation to console by means of vacuum

Vacuum block VCBL-A-K2 made of aluminum for use in milling of solid wood and applications with high cutting forces.



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### Mechanical Clamps VCMC-K2-QUICK

- 2-circuit vacuum systems
- For frames and window profiles
- Fixation on console by vacuum or mechanically

Mechanical clamp VCMC-K2-QUICK for use on CNC machining centers with two-circuit console table systems from Schmalz.

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## Clamping equipment for systems from Biesse\*



### Vacuum Blocks VCBL-B

- Vacuum system for Biesse consoles
- Hose-free with touch valve
- Pre-fixation in the vacuum block mounting

Vacuum block VCBL-B for use on CNC machining centers with console table systems from the machine manufacturer Biesse.



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### Adapter-Plates ISAP-B

- Vacuum system for Biesse consoles
- Pre-fixation in the vacuum block mounting
- Use of Innospann suction cups

Innospann Adapter-Plate ISAP-B for use on CNC machining centers with console table systems from the machine manufacturer Biesse.

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### Mechanical Clamps VCMC-B-QUICK

- Clamping system for Biesse ATS and EPS console tables
- For frames and window profiles
- Mechanical fixation in the mounting

Mechanical clamp VCMC-B-QUICK for use on CNC machining centers with ATS and EPS console tables from Biesse.

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## Clamping equipment for systems from SCM / Morbidelli\*



### Vacuum Blocks VCBL-S1

- For SCM TV and TVS consoles (old design) with 72.5 mm width
- Integrated touch valve
- With mechanical pre-fixation

Vacuum block VCBL-S1 for use on CNC machining centres with console table system of the manufacturers SCM or Morbidelli.



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### Vacuum Blocks VCBL-S4

- For SCM TVN consoles with 109 mm console width
- Integrated touch valve
- With mechanical pre-fixation

Vacuum block VCBL-S4 for use on CNC machining centres with console table system of the manufacturers SCM or Morbidelli.



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## Overview of Section



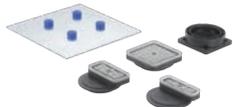
### Vacuum Blocks VCBL-S6

- For SCM TV consoles of the series Flex, Flexmatic, Start or Pilot with 98 mm console width
- Integrated touch valve and NFC tag
- With mechanical pre-fixation

Vacuum block VCBL-S6 for use on CNC machining centres with console table system of the manufacturers SCM or Morbidelli.



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### Adapter-Plates ISAP-S

- Vacuum system for SCM consoles
- Mechanical pre-fixation to the console
- Use of Innospann suction cups

Innospann Adapter-Plate ISAP-S1 and ISAP-S4 for use on CNC machining centers with console table systems from the machine manufacturers SCM / Morbidelli.

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### Adapter-Plates AP-S4

- Vacuum system for SCM consoles
- Integrated touch valve
- With mechanical pre-fixation

Adapter-Plate AP-S4 in connection with VCBL-B for use on console table systems from the Italian machine manufacturers SCM / Morbidelli.



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### Mechanical Clamps VCMC-S4-QUICK

- Clamping system for SCM TVN consoles
- For frames and window profiles
- With mechanical pre-fixation

Mechanical clamp VCMC-S4-QUICK for use on CNC machining centers from SCM / Morbidelli with TVN console tables.

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### Mechanical Clamps VCMC-S6-QUICK

- Clamping system for SCM TV consoles
- For frames and window profiles
- With mechanical pre-fixation

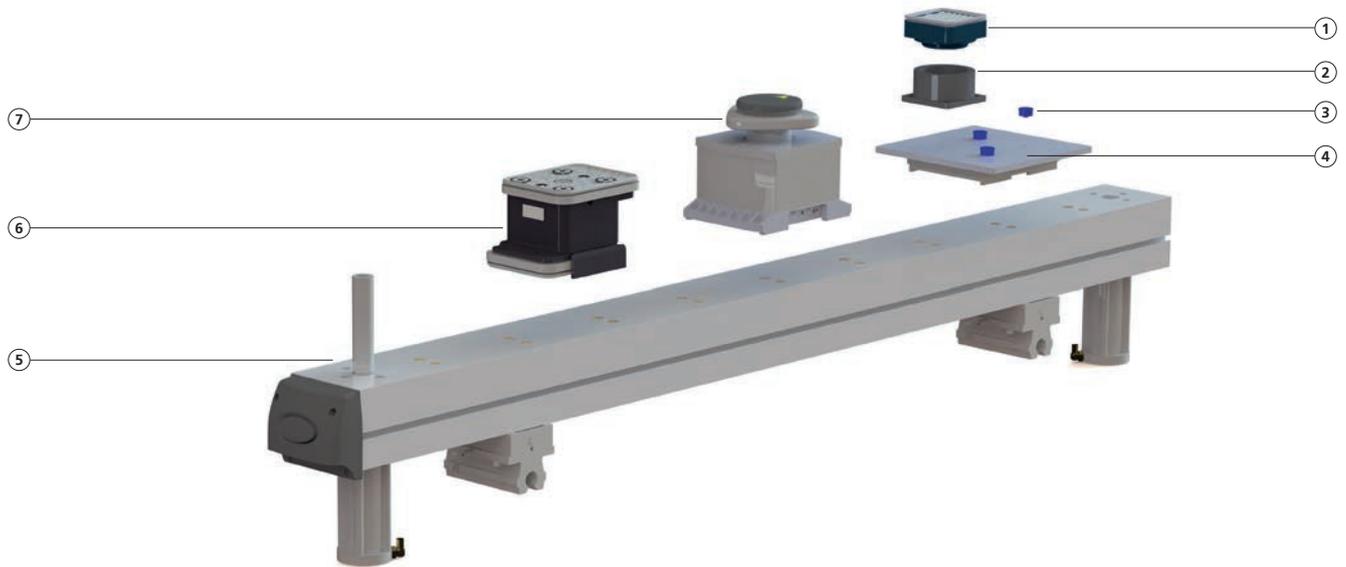
Mechanical clamp VCMC-S6-QUICK for use on CNC machining centers from SCM / Morbidelli with TV console tables.

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 Schmalz Select preferred product range – Article selection in the product family. Further information: [WWW.SCHMALZ.COM/SELECT](http://WWW.SCHMALZ.COM/SELECT)

# Selection Aid

## Design of Console Table Systems



**Innospann system**

- ① Suction cup IS Cup
- ② Mono-Base ISMB
- ③ Sealing magnet
- ④ Adapter-Plate ISAP-K2

⑤ Console table  
1-circuit or 2-circuit system

⑥ Vacuum blocks  
e.g. VCBL-K2

⑦ Mechanical clamps  
e.g. VCMC-K2

## Blocksaugerauswahl nach Saugfläche und Höhe

Suction area L x W [mm]	Height										
	25 mm	29 mm	32,7 mm	48 mm	50 mm	74 mm	75 mm	85 mm	100 mm	110 mm	125 mm
145x145							VCBL-S			VCBL-S	
160x120									VCBL-A-K1		VCBL-A-K1
									VCBL-A-K2		VCBL-A-K2
140x115			VCBL-S		VCBL-K1		VCBL-K2	VCBL-K1	VCBL-K2		VCBL-K1
					VCBL-A-K1						VCBL-K2
					VCBL-K2						
140x130		VCBL-B		VCBL-B	VCBL-S	VCBL-B					
120x120			VCBL-S		VCBL-S						
125x75	VCBL-S	VCBL-B	VCBL-S	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2	VCBL-K1	VCBL-A-K1	VCBL-S	VCBL-K1
					VCBL-A-K1		VCBL-S	VCBL-S	VCBL-K2		VCBL-A-K1
					VCBL-K2				VCBL-A-K2		VCBL-K2
					VCBL-S						VCBL-A-K2
120x50		VCBL-B	VCBL-S	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2	VCBL-K1	VCBL-K2	VCBL-S	VCBL-K1
					VCBL-A-K1		VCBL-S	VCBL-S	VCBL-A-K2		
					VCBL-K2						
					VCBL-S						
130x30		VCBL-B	VCBL-S	VCBL-B	VCBL-K1	VCBL-B	VCBL-K2	VCBL-K1	VCBL-K2	VCBL-S	VCBL-K1
					VCBL-K2		VCBL-S	VCBL-S			VCBL-K2
					VCBL-S						

# Vacuum Blocks VCBL-K1

Height 50 mm, 85 mm and 125 mm



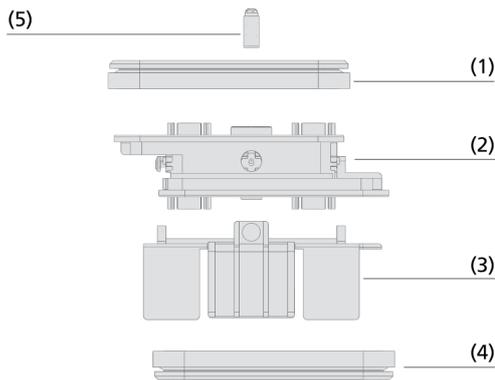
## Suitability for Industry Specific Applications



Vacuum Blocks VCBL-K1

## Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (single-circuit system)
- The vacuum blocks are pre-fastened to the consoles using guide strips and secured against movement during setup
- The vacuum clamps the vacuum blocks onto the console and the workpiece onto the vacuum blocks
- The optional touch valve (TV) allows unneeded vacuum blocks to be kept on the machine table
- Damage-free clamping with highest precision and holding force



System Design Vacuum Blocks VCBL-K1

## Design

- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Guide strip (3) for positioning and mechanical pre-fixing on the console
- Bottom suction plate (4) for fixing the vacuum block on the console
- Optional touch valve (5)



Vacuum blocks VCBL-K1 for clamping solid wood

## Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pad
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Suction plates can be replaced quickly, easily and economically without tools

# Vacuum Blocks VCBL-K1

Height 50 mm, 85 mm and 125 mm



## Designation Code Vacuum Blocks VCBL-K1

<b>VCBL-K1</b>	-	<b>125x75</b>	-	<b>x50</b>	-	<b>Q</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-K1	Vacuum block, 1-circuit console system

### 2 – Suction area

Code	LxW in mm
140x115...	140x115 to 130x30
130x30	

### 3 – Height

Code	Height in mm
x50...	50 to 125
x125	

### 4 – Product addition

Code	Type
D-360	rotatable by 360°
L	Mounted lengthwise
Q	Mounted crosswise

### 5 – Product addition

Code	Type
TV	with touch valve

The vacuum block VCBL-K1 is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction areas
- Main body made of plastic
- Bottom suction plate type VCSP-U - elastomer part

Available spare parts: suction plate (top), wear part set, suction plate (bottom), sealing frame, friction plate, metal strips, guide strip for vacuum block

Available accessories: suction plate (top) foam rubber



## Ordering Data Vacuum Blocks VCBL-K1

Type				Dimensions (LxW):			
				140x115	125x75	120x50	130x30
VCBL-K1	50	-	-	10.01.12.00210	-	-	-
VCBL-K1	50	-	TV	10.01.12.00369	-	-	-
VCBL-K1	50	D-360	-	-	10.01.12.00497	10.01.12.00825	10.01.12.01455
VCBL-K1	50	L	-	-	10.01.12.00230	10.01.12.00769	10.01.12.00378
VCBL-K1	50	L	TV	-	10.01.12.00371	-	-
VCBL-K1	50	Q	-	-	10.01.12.00211	10.01.12.00770	10.01.12.00379
VCBL-K1	50	Q	TV	-	10.01.12.00370	-	-

Type				Dimensions (LxW):			
				140x115	125x75	120x50	130x30
VCBL-K1	85	-	-	10.01.12.01553	-	-	-
VCBL-K1	85	D-360	-	-	10.01.12.01557	10.01.12.01556	10.01.12.01558
VCBL-K1	85	L	-	-	10.01.12.01555	10.01.12.01690	10.01.12.01692
VCBL-K1	85	Q	-	-	10.01.12.01554	10.01.12.01689	10.01.12.01691

Type				Dimensions (LxW):			
				140x115	125x75	120x50	130x30
VCBL-K1	125	-	-	10.01.12.02363	-	-	-
VCBL-K1	125	D-360	-	-	10.01.12.02213	10.01.12.02214	10.01.12.02929
VCBL-K1	125	L	-	-	10.01.12.02370	10.01.12.02372	10.01.12.02374
VCBL-K1	125	Q	-	-	10.01.12.03673	10.01.12.02364	10.01.12.02371



## Vacuum Blocks VCBL-K1

Height 50 mm, 85 mm and 125 mm



### Ordering Data Spare Parts Vacuum Blocks VCBL-K1

Type			Spare Parts		Part no.
VCBL-K1	140x115	50	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488 
VCBL-K1	125x75	50	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-K1	120x50	50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-K1	130x30	50	Set of parts subject to wear	VST VCSP	10.01.12.00702
VCBL-K1	140x115	85	Set of parts subject to wear	VST VCSP 130x30	10.01.12.02348
VCBL-K1	125x75	85	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-K1	120x50	85	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-K1	130x30	85	Set of parts subject to wear	VST VCSP 130x30	10.01.12.02348
VCBL-K1	140x115	125	Suction plate (top)	VCSP-O 140x115x16.5	10.01.12.00488 
VCBL-K1	125x75	125	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-K1	120x50	125	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-K1	130x30	125	Set of parts subject to wear	VST VCSP 130x30	10.01.12.02348

Type			Spare Parts		Part no.
VCBL-K1	140x115		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	125x75		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	120x50		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 
VCBL-K1	130x30		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228 

Type		Sealing frame	Friction plate
VCBL-K1	130x30	10.01.12.00804	10.01.12.00805

Type			Part no.
Metal strips for bottom suction plate			ERS VCBL-Einleger 10.01.12.00618
Guide strip vacuum block block, 1-circuit H=50 mm			ERS VCFL DRUC-FED 10.01.12.01256
Guide strip vacuum block block, 1-circuit H=125 mm			ERS VCFL-VCBL-K1 10.01.12.03351



### Ordering Data Accessories Vacuum Blocks VCBL-K1

Type		Accessories			Part no.
VCBL-K1	140x115	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x115x18.5 MOS	10.01.12.03507 
VCBL-K1	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511 

# Vacuum Blocks VCBL-K1



Height 50 mm, 85 mm and 125 mm



Further information: [WWW.SCHMALZ.COM/VCBL-K1](http://WWW.SCHMALZ.COM/VCBL-K1)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-K1](http://WWW.SCHMALZ.COM/VCBL-K1)

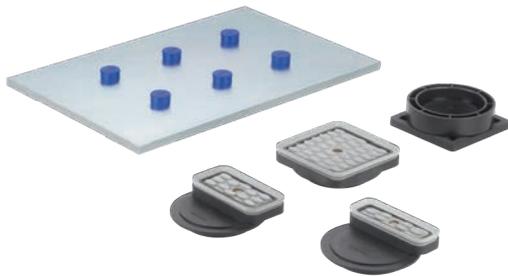


# Adapter-Plates ISAP-K1

Standard dimensions 300 x 200 mm, hole matrix spacing 75 mm



## Suitability for Industry Specific Applications

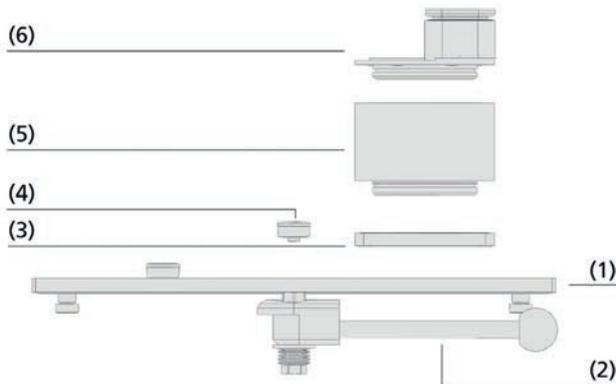


Adapter-Plates ISAP-K1

## Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (single-circuit system)
- The Adapter-Plates are positioned directly over the vacuum supply on the consoles
- Flexible loading of Adapter-Plates with up to six additional Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights
- Non-damaging and precise clamping with maximum holding force

## Design



System Design Adapter-Plates ISAP-K1

- Adapter-Plate (1) base plate
- Mechanical clamping mechanism (2) for pre-fixing the Adapter-Plate to the console
- Mono-Base (3) for positioning on top of the vacuum openings of the Adapter-Plate and suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)

## Product Highlights

- Ideal for narrow and curved workpieces, as plates and vacuum blocks can be flexibly combined
- Freely positionable suction cups and Mono-Bases allow almost any clamping layout
- Mixed operation with standard vacuum blocks possible for even more flexibility and short set-up times
- Accessories and spare parts can be replaced quickly, easily and cost-effectively without tools



Adapter-Plates ISAP-K1 with Mono-Base and suction cups for clamping curved wooden parts

# Adapter-Plates ISAP-K1

Standard dimensions 300 × 200 mm, hole matrix spacing 75 mm



## Designation Code Adapter-Plates ISAP-K1

<b>ISAP-K1</b>	–	<b>300x200x8</b>
1		2

### 1 – Abbreviated designation

Code	Type
ISAP-K1	Innospann adapter plate, 1-circuit console system

### 2 – Dimensions

Code	LxWxHeight in mm
300x200x8	300x200x8

The adapter plate ISAP-K1 is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnets for closing the vacuum openings
- Hand lever for mechanical fixation on the console

Available spare parts: sealing magnet

Available accessories: Mono-Base, spacer ring, suction cup



## Ordering Data Adapter-Plates ISAP-K1

Type	Part no.
ISAP-K1 300x200x8	10.01.14.00025



## Ordering Data Spare Parts Adapter-Plates ISAP-K1

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847 



## Ordering Data Accessories Adapter-Plates ISAP-K1

Type	Part no.
Mono-Base	ISMB 80x80x8 10.01.15.00188 

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x18 10.01.15.00213
Spacer ring, Innospann	ISZR-V 80x93 10.01.15.01081

Type	Part no.
Cup	ISCUP Cup 1 80x80x16 10.01.15.00209 
Cup	ISCUP Cup 2 80x40x16 10.01.15.00210 
Cup	ISCUP Cup 3 80x28x16 10.01.15.00211 

# Adapter-Plates ISAP-K1

Standard dimensions 300 x 200 mm, hole matrix spacing 75 mm



Further information: [WWW.SCHMALZ.COM/ISAP-K1](http://WWW.SCHMALZ.COM/ISAP-K1)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



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[WWW.SCHMALZ.COM/  
ISAP-K1](http://WWW.SCHMALZ.COM/ISAP-K1)

# Aluminum Vacuum Blocks VCBL-A-K1

Height 50 mm, 100 mm and 125 mm



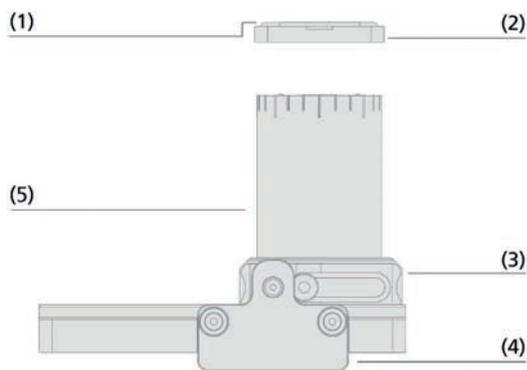
## Suitability for Industry Specific Applications

### Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (single-circuit system)
- Application primarily in processing of solid wood due to blocks optimized for use with high cutting forces
- Specially coordinated friction materials guarantee the best possible adhesion and high precision
- Body made of aluminium creates a strong and stiff connection between machine table and workpiece
- Various suction areas and working heights available



Aluminum Vacuum Blocks VCBL-A-K1



### Design

- Sealing (1) also usable for structured surfaces
- Sealing frame with friction pad (2) optimized for solid wood applications
- Clamping mechanism (3) for pre-fastening to the console
- Guide strip (4) fits all single-circuit console tables
- Robust main body (5) made of aluminum for maximum stiffness and optimal milling results

System Design Aluminum Vacuum Blocks VCBL-A-K1

### Product Highlights

- Aluminum structure guarantees low-vibration connection between machine table and workpiece
- Special friction pad for rough surfaces enables maximum cutting parameters
- High-strength pre-fixation on the console using an additional mechanical clamp
- Different working heights allow 5-axis machining depending on the machine



Aluminum vacuum blocks VCBL-A-K1 for clamping solid wood

# Aluminum Vacuum Blocks VCBL-A-K1

Height 50 mm, 100 mm and 125 mm



## Designation Code Aluminum Vacuum Blocks VCBL-A-K1

<b>VCBL-A-K1</b>	-	<b>125x75</b>	-	<b>x50</b>	-	<b>D-360</b>
1		2		3		4

### 1 – Abbreviated designation

Code	Type
VCBL-A-K1	Vacuum block, aluminum, 1-circuit console system

### 2 – Suction area

Code	LxW in mm
160x120...	160x120 to 120x50
120x50	

### 3 – Height

Code	Height in mm
x50...	50 to 125
x125	

### 4 – Product addition

Code	Type
D-360	Rotatable by 360°
Q	Mounted crosswise

The vacuum block VCBL-A-K1 is delivered assembled. The product consists of:

- Top sealing frame in aluminum with friction pad and seal, available in various sizes and suction surfaces
- Main body made of aluminum with integrated suction plate at the bottom

Available spare parts: sealing ring, sealing frame

Available accessories: clamping unit



## Ordering Data Aluminum Vacuum Blocks VCBL-A-K1

Type	Dimensions (LxW):					
			160x120	140x115	125x75	120x50
VCBL-A-K1	50	-	-	10.01.12.03648	-	-
VCBL-A-K1	50	D-360	-	-	10.01.12.03821	10.01.12.03824
VCBL-A-K1	50	Q	-	-	10.01.12.03653	-
VCBL-A-K1	100	-	10.01.12.03881	-	-	-
VCBL-A-K1	100	D-360	-	-	10.01.12.03883	10.01.12.03884
VCBL-A-K1	100	Q	-	-	10.01.12.03882	-
VCBL-A-K1	125	-	10.01.12.03042	-	-	-
VCBL-A-K1	125	D-360	-	-	10.01.12.03234	10.01.12.03814
VCBL-A-K1	125	Q	-	-	10.01.12.03060	-



## Ordering Data Spare Parts Aluminum Vacuum Blocks VCBL-A-K1

Type	Spare Parts			Part no.
VCBL-A-K1	160x120	Sealing ring (glued)	DR 178.3/170.25x6 MOS NK-20	10.01.12.03248
VCBL-A-K1	125x75	Sealing ring (glued)	DR 121/113x6 MOS NK-20	10.01.12.03247

Type	Spare Parts		Part no.
VCBL-A-K1	Sealing frame (bottom)	VCDR 166x113x6.6 VCSP	10.01.12.03246



# Aluminum Vacuum Blocks VCBL-A-K1

Height 50 mm, 100 mm and 125 mm



## Ordering Data Accessories Aluminum Vacuum Blocks VCBL-A-K1

Accessories		Part no.
Clamping unit	KLEM-EINH 69.5x35x12.5	10.01.12.04990



Further information: [WWW.SCHMALZ.COM/VCBL-A-K1](http://WWW.SCHMALZ.COM/VCBL-A-K1)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-A-K1](http://WWW.SCHMALZ.COM/VCBL-A-K1)



Clamping range 10 mm to 100 mm · With quick adjustment



## Suitability for Industry Specific Applications

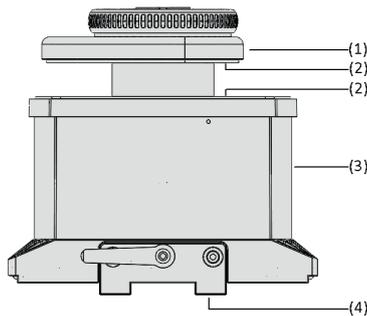


Mechanical Clamps VCMC-K1-QUICK

## Applications

- Mechanical clamping system for CNC machining centers with console table (single-circuit system)
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- For setup, the clamp is fixed to the console by mechanical clamping and the clamping height is adjusted to the workpiece with the tool-free quick adjustment
- Clamping of the workpiece by activating the vacuum at the machine table

## Design



- Triangular clamping disc (1) can be adjusted without tools in clamping height and support surface on the workpiece
- The clamping disc is lowered via the piston by activating the vacuum and clamps the workpiece
- Friction material (2) for optimizing lateral force absorption
- Main body (3) made of aluminum with interface to the machine table
- Guide strips (4) for secure fixing of the clamp on the console

System Design Mechanical Clamps VCMC-K1-QUICK



Mechanical clamps VCMC-K1-QUICK for clamping of frame parts

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest setup times
- Clamping forces up to 700 N guarantee high holding forces even on narrow workpieces
- Mechanical clamping secures the clamp on the console
- No additional medium required on the machine, as the clamping device is activated by the operating vacuum of the CNC machining centre
- Special friction materials on the clamping plate and clamping surface ensure that the workpiece is held securely even with high machining forces

# Mechanical Clamps VCMC-K1-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Designation Code Mechanical Clamps VCMC-K1-QUICK

VCMC-K1	-	QUICK	-	170x135	-	x50	-	15-85
1		2		3		4		5

### 1 – Abbreviated designation

Code	Type
VCMC-K1	Mechanical clamp, single-circuit console system

### 2 – Design

Code	Type
QUICK	With tool-free height adjustment

### 3 – Dimensions

Code	LxW in mm
170x135	170x135

### 4 – Clamping height

Code	H in mm
x50...x125	50 to 125

### 5 – Clamping range

Code	Clamping range in mm
15-85...10-100	15-85 and 10-1000

The mechanical clamp VCMC-K1-QUICK is delivered completely assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Mount on the console with mechanical clamping

Available spare parts: clamping disc, sealing frame, clamping unit

Available accessories: clamping range extension, clamping unit



## Ordering Data Mechanical Clamps VCMC-K1-QUICK

Type	Part no.
VCMC-K1-QUICK 170x135x50 15-85	10.01.12.04692
VCMC-K1-QUICK 170x135x85 15-85	10.01.12.04746
VCMC-K1-QUICK 170x135x100 10-100	10.01.12.04614
VCMC-K1-QUICK 170x135x125 10-100	10.01.12.04744



## Ordering Data Spare Parts Mechanical Clamps VCMC-K1-QUICK

Type	Spare Parts		Part no.
VCMC-K1-QUICK 170x135x50 15-85	Clamping disc	SPAN-TELL 128x30 EXZ VCMC	10.01.12.04740
VCMC-K1-QUICK 170x135x85 15-85	Clamping disc	SPAN-TELL 128x30 EXZ VCMC	10.01.12.04740
VCMC-K1-QUICK 170x135x100 10-100	Clamping disc	SPAN-TELL 110 EXZ VCMC	10.01.12.04239
VCMC-K1-QUICK 170x135x125 10-100	Clamping disc	SPAN-TELL 110 EXZ VCMC	10.01.12.04239

Spare Parts	Part no.
Sealing frame (bottom)	VCDR 166x113x6.6 VCBL-K1 10.01.12.03629
Clamping unit	KLEM-EINH 70x24.5x4.5 VCMC-K2 10.01.12.04255

# Mechanical Clamps VCMC-K1-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Ordering Data Accessories Mechanical Clamps VCMC-K1-QUICK

Type	Accessories	Part no.
VCMC-K1-QUICK 170x135x50 15-85	Extension with hexagon	VRL-S M20x1x40.3 10.01.12.04374
VCMC-K1-QUICK 170x135x85 15-85	Extension with hexagon	VRL-S M20x1x40.3 10.01.12.04374
Type		Part no.
Accessories-clamping systems	ZUB VCMC	10.01.12.04008
Clamping unit	KLEM-EINH 69.5x35x12.5	10.01.12.04990



## Technical Data Mechanical Clamps VCMC-K1-QUICK

Type	Clamping range [mm]
VCMC-K1-QUICK 170x135x50 15-85	15.0 ... 85.0
VCMC-K1-QUICK 170x135x85 15-85	15.0 ... 85.0
VCMC-K1-QUICK 170x135x100 10-100	10.0 ... 100.0
VCMC-K1-QUICK 170x135x125 10-100	10.0 ... 100.0



Further information: [WWW.SCHMALZ.COM/VCMC-K1-QUICK](http://WWW.SCHMALZ.COM/VCMC-K1-QUICK)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCMC-K1-QUICK](http://WWW.SCHMALZ.COM/VCMC-K1-QUICK)



# Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



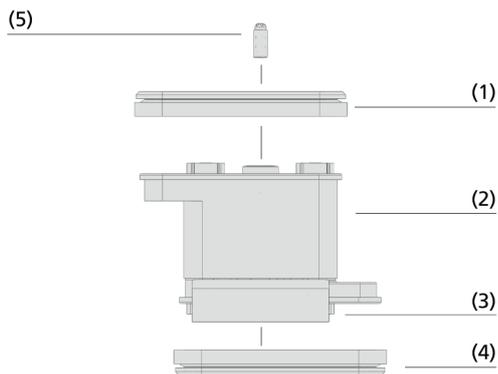
## Suitability for Industry Specific Applications



### Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- The vacuum blocks are pre-fixed to the consoles by means of vacuum and secured against movement during setup
- Safe and precise clamping of the workpiece and the vacuum blocks on the console with the second vacuum circuit
- The optional touch valve allows unneeded vacuum blocks to remain on the machine table
- Damage-free clamping with highest precision and holding force

Vacuum Blocks VCBL-K2



### Design

- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Guide strip (3) for easy positioning on the console
- Bottom suction plate (4) for fixing the vacuum block on the console
- Optional touch valve (5)

System Design Vacuum Blocks VCBL-K2



Vacuum blocks VCBL-K2 for clamping a workpiece

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Suction plates can be replaced quickly, easily and economically without tools

# Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



## Designation Code Vacuum Blocks VCBL-K2

<b>VCBL-K2</b>	-	<b>125x75</b>	-	<b>x50</b>	-	<b>Q</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-K2	Vacuum block, 2-circuit console system

### 2 – Suction area

Code	LxW in mm
140x115...	140x115 to 130x30
130x30	

### 3 – Height

Code	Height in mm
x50...	50 to 125
x200	

### 4 – Product addition

Code	Type
D-360	Rotatable by 360°
L	Mounted lengthwise
Q	Mounted crosswise

### 5 – Product addition

Code	Type
AS	With lifting system

The vacuum block VCBL-K2 is delivered assembled. The assembly consists of:

- Top suction plate type VCSP-O - elastomer part, available in different dimensions and suction areas
- Main body made of plastic
- Bottom suction plate type VCSP-U - elastomer part

Available spare parts: suction plate (top), wear part set, suction plate (bottom), sealing frame, friction plate, spare part set with steel inserts

Available accessories: suction plate foam rubber



## Ordering Data Vacuum Blocks VCBL-K2

Type			Dimensions (LxW):			
			140x115	125x75	120x50	130x30
VCBL-K2	50	-	10.01.12.00626	-	-	-
VCBL-K2	50	D-360	-	10.01.12.00629	10.01.12.00874	-
VCBL-K2	50	L	-	10.01.12.00628	10.01.12.00771	10.01.12.00647
VCBL-K2	50	Q	-	10.01.12.00644	10.01.12.00772	10.01.12.00646

Type			Dimensions (LxW):			
			140x115	125x75	120x50	130x30
VCBL-K2	75	-	10.01.12.02136	-	-	-
VCBL-K2	75	D-360	-	10.01.12.02211	10.01.12.02212	-
VCBL-K2	75	L	-	10.01.12.02200	10.01.12.02204	10.01.12.02208
VCBL-K2	75	Q	-	10.01.12.02199	10.01.12.02203	10.01.12.02207

Type				Dimensions (LxW):			
				140x115	125x75	120x50	130x30
VCBL-K2	100	-	-	10.01.12.00445	-	-	-
VCBL-K2	100	-	AS	10.01.12.00446	-	-	-
VCBL-K2	100	D-360	-	-	10.01.12.01079	10.01.12.01020	-
VCBL-K2	100	L	-	-	10.01.12.00506	10.01.12.00853	10.01.12.00855
VCBL-K2	100	Q	-	-	10.01.12.00447	10.01.12.00126	10.01.12.00854

# Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



## Ordering Data Vacuum Blocks VCBL-K2

Type			Dimensions (LxW):			
			140x115	125x75	120x50	130x30
VCBL-K2	125	-	10.01.12.02116	-	-	-
VCBL-K2	125	D-360	-	10.01.12.02593	10.01.12.02594	-
VCBL-K2	125	L	-	10.01.12.02124	10.01.12.02125	10.01.12.02126
VCBL-K2	125	Q	-	10.01.12.02118	10.01.12.02119	10.01.12.02120



## Ordering Data Spare Parts Vacuum Blocks VCBL-K2

Type	Spare Parts			Part no.
VCBL-K2	140 x 115	50	Suction plate (top)	VCSP-O 140x115x16.5 10.01.12.00488 
VCBL-K2	125 x 75	50	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011 
VCBL-K2	120 x 50	50	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012 
VCBL-K2	130 x 30	50	Set of parts subject to wear	VST VCSP 10.01.12.00702
VCBL-K2	140 x 115	75	Suction plate (top)	VCSP-O 140x115x16.5 10.01.12.00488 
VCBL-K2	125 x 75	75	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011 
VCBL-K2	120 x 50	75	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012 
VCBL-K2	130 x 30	75	Set of parts subject to wear	VST VCSP 130x30 10.01.12.02348
VCBL-K2	140 x 115	100	Suction plate (top)	VCSP-O 140x115x16.5 10.01.12.00488 
VCBL-K2	125 x 75	100	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011 
VCBL-K2	120 x 50	100	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012 
VCBL-K2	130 x 30	100	Set of parts subject to wear	VST VCSP 10.01.12.00723
VCBL-K2	140 x 115	125	Suction plate (top)	VCSP-O 140x115x16.5 10.01.12.00488 
VCBL-K2	125 x 75	125	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011 
VCBL-K2	120 x 50	125	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012 
VCBL-K2	130 x 30	125	Set of parts subject to wear	VST VCSP 130x30 10.01.12.02348

Type	Spare Parts			Part no.
VCBL-K2	140 x 115		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2 10.01.12.00798 
VCBL-K2	125 x 75		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2 10.01.12.00798 
VCBL-K2	120 x 50		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2 10.01.12.00798 
VCBL-K2	130 x 30		Suction plate (bottom)	VCSP-U 140x115x16.5 VCBL-K2 10.01.12.00798 

Type	Sealing frame	Friction plate
VCBL-K2	130x30 10.01.12.00804	10.01.12.00805

Type	Spare Parts		Part no.
VCBL-K2	Set of spare parts	Metal strips for bottom suction plate	ERS VCBL-Einleger 10.01.12.00618

# Vacuum Blocks VCBL-K2

Height 50 mm, 75 mm, 100 mm and 125 mm



## Ordering Data Accessories Vacuum Blocks VCBL-K2

Type		Accessories			Part no.
VCBL-K2	140x115	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x115x18.5 MOS	10.01.12.03507
VCBL-K2	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511



## Further information: [WWW.SCHMALZ.COM/VCBL-K2](http://WWW.SCHMALZ.COM/VCBL-K2)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



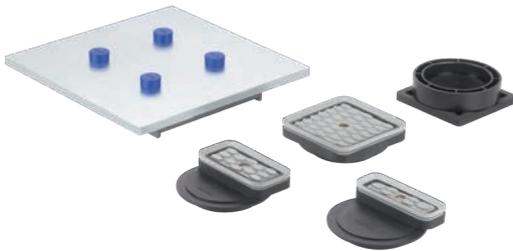
[WWW.SCHMALZ.COM/VCBL-K2](http://WWW.SCHMALZ.COM/VCBL-K2)

# Adapter-Plates ISAP-K2

Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



## Suitability for Industry Specific Applications

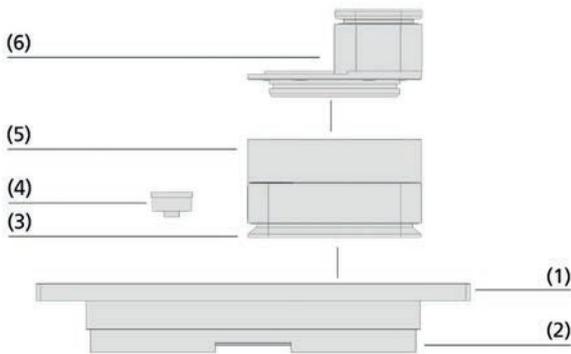


Adapter-Plates ISAP-K2

## Applications

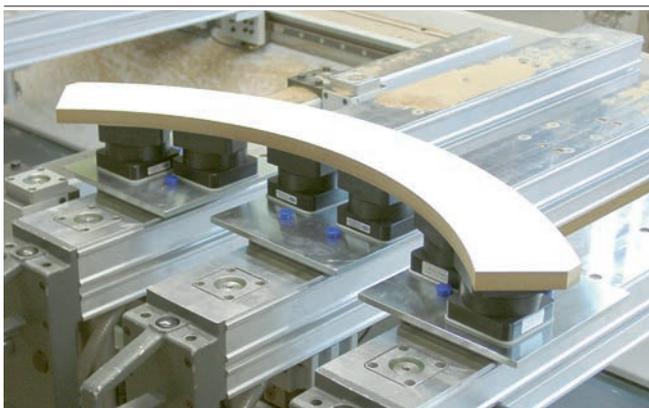
- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- The Adapter-Plates are positioned directly over the vacuum supply on the consoles
- The Adapter-Plates can be flexibly equipped with up to four additional Mono-Bases and suction cups
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights
- Non-damaging and precise clamping with maximum holding force

## Design



- Adapter-Plate (1) base plate
- Interface to the machine table (2)
- Mono-Base (3) for positioning on the top of the vacuum openings of the Adapter-Plate and suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)

System Design Adapter-Plates ISAP-K2



Adapter-Plates ISAP-K2 with Mono-Bases and suction cups for clamping wooden components

## Product Highlights

- Ideal for narrow and curved workpieces, as plates and vacuum blocks can be flexibly combined
- Freely positionable suction cups and Mono-Bases allow almost any clamping layout
- Mixed operation with standard vacuum blocks possible for even more flexibility and short set-up times
- Accessories and spare parts can be replaced quickly, easily and cost-effectively without tools

# Adapter-Plates ISAP-K2

Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



## Designation Code Adapter-Plates ISAP-K2

<b>ISAP-K2</b>	–	<b>200x200x26</b>
1		2

### 1 – Abbreviated designation

Code	Type
ISAP-K2	Innospann adapter plate, 2-circuit console system

### 2 – Dimensions

Code	LxWxH in mm
200x200x26...	200x200x26 and
200x200x28	200x200x28

The Adapter-Plate ISAP-K2 is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnets for closing the vacuum openings

Available spare parts: sealing magnet

Available accessories: Mono-Base, spacer ring, suction cup



## Ordering Data Adapter-Plates ISAP-K2

Type	Part no.
ISAP-K2 200x200x26	10.01.14.00117
ISAP-K2 200x200x28	10.01.14.00029 



## Ordering Data Spare Parts Adapter-Plates ISAP-K2

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847 



## Ordering Data Accessories Adapter-Plates ISAP-K2

Type	Part no.
Mono-Base	ISMB 80x80x8 10.01.15.00188 
Mono-Base	ISMB 80x80x42 10.01.15.00078 

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x25 10.01.15.00295
Spacer ring, Innospann	ISZR-V 80x45 10.01.15.00054

Type	Part no.
Cup	ISCUP Cup 1 80x80x30 10.01.15.00003 
Cup	ISCUP Cup 2 80x40x30 10.01.15.00004 
Cup	ISCUP Cup 3 80x28x30 10.01.15.00005 
Cup	ISCUP Cup 1 80x80x16 10.01.15.00209 
Cup	ISCUP Cup 2 80x40x16 10.01.15.00210 
Cup	ISCUP Cup 3 80x28x16 10.01.15.00211 

## Adapter-Plates ISAP-K2



Standard dimensions 200 × 200 mm, hole matrix spacing 75 mm



Further information: [WWW.SCHMALZ.COM/ISAP-K2](http://WWW.SCHMALZ.COM/ISAP-K2)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
ISAP-K2](http://WWW.SCHMALZ.COM/ISAP-K2)



Height 100 mm



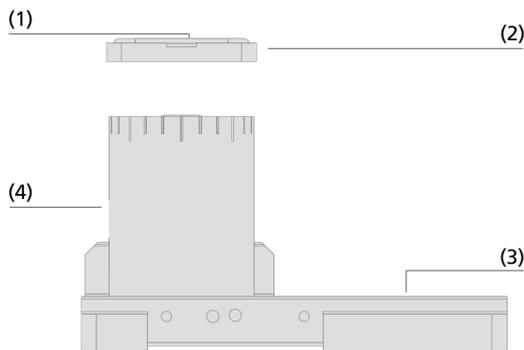
## Suitability for Industry Specific Applications



Aluminum Vacuum Blocks VCBL-A-K2

## Applications

- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- Application primarily in processing of solid wood due to blocks optimized for use with high cutting forces
- Specially coordinated friction materials guarantee the best possible adhesion and high precision
- Body made of aluminum creates strong and stiff connection between machine table and workpiece
- Vacuum blocks are fixed to the console using one vacuum circuit, while the second circuit clamps the workpiece to the vacuum block
- Various suction areas and working heights available



## Design

- Sealing (1) also usable for structured surfaces
- Friction pad (2) optimized for solid wood applications
- Guide strip (3) fits all two-circuit console tables
- Robust main body (4) made of aluminum for maximum stiffness and optimal milling results

System Design Aluminum Vacuum Blocks VCBL-A-K2



Aluminum vacuum blocks VCBL-A-K2 for clamping solid wood

## Product Highlights

- Aluminum structure guarantees low-vibration connection between machine table and workpiece
- Special friction pad for rough surfaces enables maximum cutting parameters
- Different working heights available, depending on the machine also 5-axis machining possible

# Aluminum Vacuum Blocks VCBL-A-K2

Height 100 mm



## Designation Code Aluminum Vacuum Blocks VCBL-A-K2

<b>VCBL-A-K2</b>	-	<b>125x75</b>	-	<b>x100</b>	-	<b>D-360</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>

### 1 – Abbreviated designation

Code	Type
VCBL-A-K1	Vacuum block, aluminum, 2-circuit console system

### 2 – Suction area

Code	LxW in mm
160x120... 120x50	160x120 to 120x50

### 3 – Height

Code	Height in mm
x100	100

### 4 – Product addition

Code	Type
D-360	Rotatable by 360°
Q	Mounted crosswise

The vacuum block VCBL-A-K2 is delivered assembled. The product consists of:

- Top sealing frame in aluminum with friction pad and seal, available in various sizes and suction surfaces
- Main body made of aluminum with integrated suction plate at the bottom

Available spare parts: sealing ring, sealing frame

Available accessories: clamping unit



## Ordering Data Aluminum Vacuum Blocks VCBL-A-K2

Type			Dimensions (LxW):		
			160x120	125x75	120x50
VCBL-A-K2	100	-	10.01.12.03204	-	-
VCBL-A-K2	100	D-360	-	10.01.12.03612	10.01.12.03813
VCBL-A-K2	100	Q	-	10.01.12.03201	-



## Ordering Data Spare Parts Aluminum Vacuum Blocks VCBL-A-K2

Type		Spare Parts		Part no.
VCBL-A-K2	160x120	Sealing ring (glued)	DR 178.3/170.25x6 MOS NK-20	10.01.12.03248
VCBL-A-K2	125x75	Sealing ring (glued)	DR 121/113x6 MOS NK-20	10.01.12.03247

Type	Spare Parts	Part no.
VCBL-A-K2	Sealing frame (bottom)	VCDR 166x113x6.6 VCSP
		10.01.12.02191



## Ordering Data Accessories Aluminum Vacuum Blocks VCBL-A-K2

Accessories	Part no.
Clamping unit	KLEM-EINH 69.5x35x12.5
	10.01.12.04990

# Aluminum Vacuum Blocks VCBL-A-K2

Height 100 mm



Further information: [WWW.SCHMALZ.COM/VCBL-A-K2](http://WWW.SCHMALZ.COM/VCBL-A-K2)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-A-K2](http://WWW.SCHMALZ.COM/VCBL-A-K2)

# Mechanical Clamps VCMC-K2-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Suitability for Industry Specific Applications

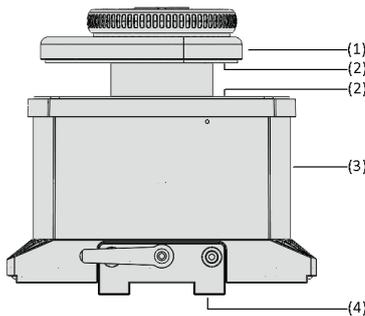


Mechanical Clamps VCMC-K2-QUICK

## Applications

- Mechanical clamping system for CNC machining centers with console table (two-circuit system)
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- For setup, the clamp is fixed to the console with the first vacuum circuit and optionally also mechanically clamped; the clamping height is adapted to the workpiece with the tool-free quick adjustment
- Clamping of the workpiece by activating the second vacuum circuit on the machine table

## Design



- Triangular clamping disc (1) can be adjusted without tools in clamping height and support surface on the workpiece
- The clamping disc is lowered via the piston by activating the vacuum and clamps the workpiece
- Friction material (2) for optimizing lateral force absorption
- Main body (3) made of aluminum with interface to the machine table for fixing the clamp by vacuum
- Optional mechanical clamping (4) to fix the clamp on the console

System Design Mechanical Clamps VCMC-K2-QUICK



Mechanical clamp VCMC-K2-QUICK when clamping frame parts

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest setup times
- Clamping forces up to 700 N guarantee high holding forces even on narrow workpieces
- Fixation by vacuum and optional mechanical clamping secure the clamp on the console
- No additional medium required on the machine, as the clamping device is activated by the operating vacuum of the CNC machining center
- Special friction materials on the clamping disc and clamping surface ensure that the workpiece is held securely even with high machining forces

# Mechanical Clamps VCMC-K2-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Designation Code Mechanical Clamps VCMC-K2-QUICK

VCMC-K2	–	QUICK	–	170x135	–	x50	–	15-85
1		2		3		4		5

### 1 – Abbreviated designation

Code	Type
VCMC-K2	Mechanical clamp, two-circuit console system

### 2 – Design

Code	Type
QUICK	With tool-free height adjustment

### 3 – Dimensions

Code	LxW in mm
170x135	170x135

### 4 – Clamping height

Code	H in mm
x50...x125	50 to 125

### 5 – Clamping range

Code	Clamping range in mm
15-85...10-100	15-85 and 10-100

The mechanical clamp VCMC-K2-QUICK is delivered assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Mounting on the console

Available spare parts: clamping disc

Available accessories: mechanical clamping, conversion kit for automatic machine table, clamping range extension



## Ordering Data Mechanical Clamps VCMC-K2-QUICK

Type	Part no.
VCMC-K2-QUICK 170x135x50 15-85	10.01.12.04693
VCMC-K2-QUICK 170x135x75 15-85	10.01.12.04745
VCMC-K2-QUICK 170x135x100 10-100	10.01.12.04613
VCMC-K2-QUICK 170x135x125 10-100	10.01.12.04743



## Ordering Data Spare Parts Mechanical Clamps VCMC-K2-QUICK

Type	Spare Parts	Part no.
VCMC-K2-QUICK 170x135x50 15-85	Clamping disc	SPAN-TELL 128x30 EXZ VCMC
VCMC-K2-QUICK 170x135x75 15-85	Clamping disc	SPAN-TELL 128x30 EXZ VCMC
VCMC-K2-QUICK 170x135x100 10-100	Clamping disc	SPAN-TELL 110 EXZ VCMC
VCMC-K2-QUICK 170x135x125 10-100	Clamping disc	SPAN-TELL 110 EXZ VCMC

Type	Part no.
Sealing frame (bottom)	VCDR 166x113x6.6 VCSP
	10.01.12.02191

# Mechanical Clamps VCMC-K2-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Ordering Data Accessories Mechanical Clamps VCMC-K2-QUICK

Type	Spare Parts		Part no.
VCMC-K2-QUICK 170x135x50 15-85	Extension with hexagon	VRL-S M20x1x40.3	10.01.12.04374
VCMC-K2-QUICK 170x135x75 15-85	Extension with hexagon	VRL-S M20x1x40.3	10.01.12.04374
VCMC-K2-QUICK 170x135x100 10-100	Upgrade set AP	ZUB VCMC-K2	10.01.12.04611

Spare Parts	Type	Part no.
Clamping unit	KLEM-EINH 69.5x35x12.5	10.01.12.04990
Positioning aid	ZUB VCMC	10.01.12.04008
Clamping unit and positioning aid	ZUB VCMC	10.01.12.05154



## Technical Data Mechanical Clamps VCMC-K2-QUICK

Type	Clamping range [mm]
VCMC-K2-QUICK 170x135x50 15-85	15.0 ... 85.0
VCMC-K2-QUICK 170x135x75 15-85	15.0 ... 85.0
VCMC-K2-QUICK 170x135x100 10-100	10.0 ... 100.0
VCMC-K2-QUICK 170x135x125 10-100	10.0 ... 100.0



Further information: [WWW.SCHMALZ.COM/VCMC-K2-QUICK](http://WWW.SCHMALZ.COM/VCMC-K2-QUICK)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCMC-K2-QUICK](http://WWW.SCHMALZ.COM/VCMC-K2-QUICK)



# Vacuum Blocks VCBL-B

Height 29 mm, 48 mm and 74 mm



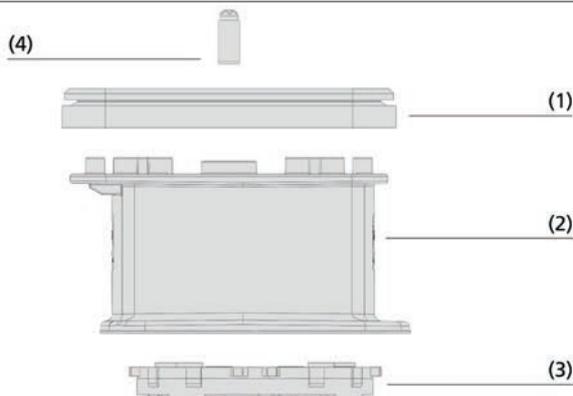
## Suitability for Industry Specific Applications

### Applications

- Hose-free vacuum clamping system from Schmalz for console tables from Biesse (single-circuit system)
- Fully compatible with the OEM vacuum blocks, allowing mixed operation
- The vacuum blocks can be inserted in any direction in 15° increments in the standard mountings
- Clamping straps on the vacuum block ring and magnets ensure secure fixation in the vacuum block mounting
- The integrated touch valve allows vacuum blocks that are not currently in use to remain on the machine table



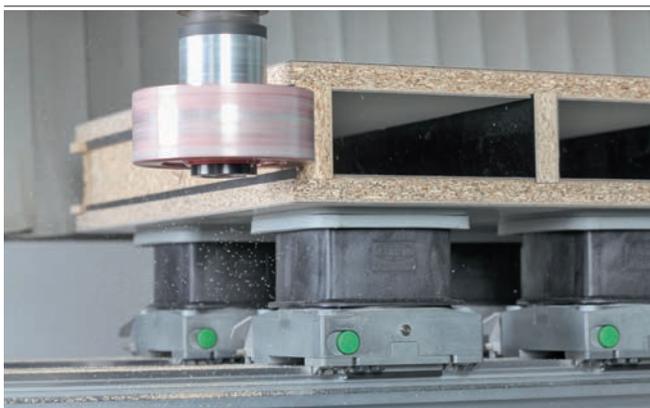
Vacuum Blocks VCBL-B



### Design

- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Mechanical clamp (3)
- Touch valve (4) made of soft plastic
- Heights of 29 mm and 48 mm (for three and four-axis machines) and additionally 74 mm (for five-axis machines)

System Design Vacuum Blocks VCBL-B



Vacuum blocks VCBL-B for gripping particle boards

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- More flexibility and short set-up times, as it is quick and easy to position (can be rotated in steps of 15°)
- Suction plates can be replaced quickly, easily and economically without tools

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Vacuum Blocks VCBL-B

Height 29 mm, 48 mm and 74 mm

## Designation Code Vacuum Blocks VCBL-B

<b>VCBL-B</b>	-	<b>140x130</b>	-	<b>x74</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>

**1** – Abbreviated designation

Code	Type
VCBL-B	Vacuum block, Biesse system

**2** – Suction area

Code	LxW in mm
140x30... 130x30	140x30 to 130x30

**3** – Height

Code	Height in mm
x29...x74	29 to 74

**4** – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-B is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Main body made of plastic
- Plastic adapter ring

Available spare parts: suction plate (top) VCSP-O, wear part set, touch valve TV, adapter ring

Available accessories: suction plate (top) foam rubber

## Ordering Data Vacuum Blocks VCBL-B

Type	Dimensions (LxW):					
	140x130	125x75	120x50	130x30		
VCBL-B 29 TV	10.01.12.03165 	10.01.12.03166 	10.01.12.03167 	10.01.12.03168 		
VCBL-B 48 TV	10.01.12.03169 	10.01.12.03170 	10.01.12.03171 	10.01.12.03172 		
VCBL-B 74 TV	10.01.12.03173 	10.01.12.03174 	10.01.12.03175 	10.01.12.03176 		

## Ordering Data Spare Parts Vacuum Blocks VCBL-B

Type	Spare Parts		Part no.
VCBL-B 140 x 130	Suction plate (top)	VCSP-O 140x130x16.5	10.01.12.02325 
VCBL-B 125 x 75	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011 
VCBL-B 120 x 50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012 
VCBL-B 130 x 30	Set of parts subject to wear	VST VCSP 130x30	10.01.12.02348

Type	Spare Parts	Part no.
VCBL-B	Touch Valve	TV D9 4.3 10.01.12.02514

Type	Spare Parts	Part no.
VCBL-B	Adapter ring	ADP-RING-100.5x15.5-VCBL-B 10.01.12.03345

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# Vacuum Blocks VCBL-B

Height 29 mm, 48 mm and 74 mm



## Ordering Data Accessories Vacuum Blocks VCBL-B

Type		Accessories			Part no.
VCBL-B	140x130	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x130x18.3 MOS	10.01.12.03506
VCBL-B	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511



Further information: [WWW.SCHMALZ.COM/VCBL-B](http://WWW.SCHMALZ.COM/VCBL-B)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/VCBL-B](http://WWW.SCHMALZ.COM/VCBL-B)

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

## Adapter-Plates ISAP-B

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



### Suitability for Industry Specific Applications

#### Applications

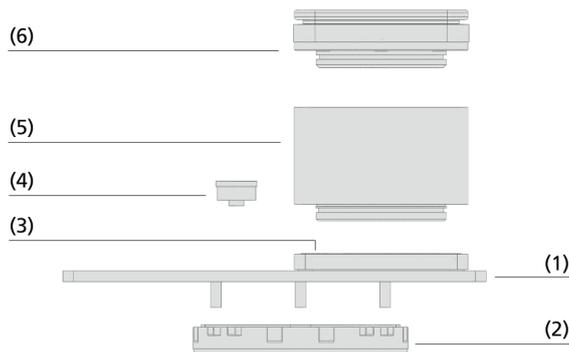
- Hose-free vacuum clamping system from Schmalz for console tables from Biesse (single-circuit system)
- The Adapter-Plates are positioned directly into the suction cup mounts on the consoles
- The Adapter-Plates can be flexibly equipped with up to four additional Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- The modular concept with connectible spacer rings enables various working heights, which allows for mixed use with suction cups from the original equipment manufacturer
- Damage-free clamping with highest precision and holding force



Adapter-Plates ISAP-B

#### Design

- Adapter-Plate (1) base plate
- Adapter-Ring (2) suitable for the suction cup mounts of the Biesse consoles
- Mono-Base (3) for positioning on the top of the vacuum openings of the Adapter-Plate and suction cup (6) for fixing the workpiece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (4)



System Design Adapter-Plates ISAP-B

#### Product Highlights

- Ideal for narrow and curved workpieces, as plates and vacuum blocks can be flexibly combined
- Freely positionable suction cups and Mono-Bases allow almost any clamping layout
- Mixed operation with standard vacuum blocks possible for even more flexibility and short set-up times
- Accessories and spare parts can be replaced quickly, easily and cost-effectively without tools



Adapter-Plates ISAP-B with Mono-Base and suction cups for clamping wooden components

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Adapter-Plates ISAP-B

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



## Designation Code Adapter-Plates ISAP-B

<b>ISAP-B</b>	–	<b>195x195x5</b>
1		2

### 1 – Abbreviated designation

Code	Type
ISAP-B	Innospann adapter plate, biesse console system

### 2 – Dimensions

Code	LxWxHeight in mm
195x195x5	195x195x5

The Adapter-Plate ISAP-B is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnet for closing the vacuum openings
- Adapter ring made of plastic

Available spare parts: sealing magnet

Available accessories: Mono-Base, spacer ring, suction cups



## Ordering Data Adapter-Plates ISAP-B

Type	Part no.
ISAP-B 195x195x5	10.01.14.00109



## Ordering Data Spare Parts Adapter-Plates ISAP-B

Type	Part no.
Sealing magnet	ISMST 19-7 4ISMST 10.01.14.00847



## Ordering Data Accessories Adapter-Plates ISAP-B

Type	Part no.
Mono-Base	ISMB 80x80x8 10.01.15.00188

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x19 10.01.15.00388
Spacer ring, Innospann	ISZR-V 80x45 10.01.15.00054

Type	Part no.
Cup	ISCUP Cup 1 80x80x16 10.01.15.00209
Cup	ISCUP Cup 2 80x40x16 10.01.15.00210
Cup	ISCUP Cup 3 80x28x16 10.01.15.00211

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## Adapter-Plates ISAP-B

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



Further information: [WWW.SCHMALZ.COM/ISAP-B](http://WWW.SCHMALZ.COM/ISAP-B)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
ISAP-B](http://WWW.SCHMALZ.COM/ISAP-B)

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.



# Mechanical Clamps VCMC-B-QUICK

Clamping range 15 mm to 85 mm · With quick adjustment



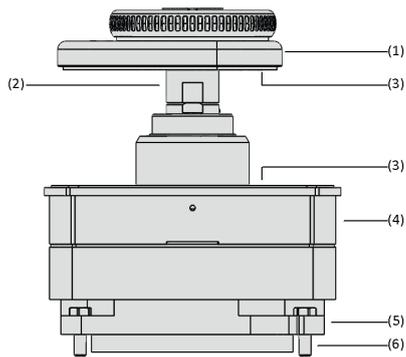
## Suitability for Industry Specific Applications



Mechanical Clamps VCMC-B-QUICK

## Applications

- Mechanical clamping system for CNC machining centers from Biesse with console tables with ATS and EPS suction cup mountings
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- Tool-free adjustment of the clamping height to the workpiece within seconds; extension of the clamping range possible through extension
- Clamping of the workpiece by activating the vacuum at the machine table



System Design Mechanical Clamps VCMC-B-QUICK

## Design

- Triangular clamping plate (1) is adjustable in clamping height and contact surface on the workpiece without tools and is lowered by activating the vacuum
- Extension (2) for adjusting the clamping range
- Friction material (3) for optimizing lateral force absorption
- Main body (4) made of aluminum with interface (5) to Biesse console
- Hexagon head screws (6) for fixing the clamp in the mounting



Mechanical clamps VCMC-B-QUICK for clamping of frame parts

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest set-up times
- Clamping force of 700 N ensures safe clamping even with narrow workpieces
- No additional medium required, as the clamp can be activated via operating vacuum of the CNC machining centre
- Special friction materials on the clamping disc and clamping surface ensure a secure hold even with high machining forces
- Can be used for a wide range of workpieces thanks to its very large clamping range

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Mechanical Clamps VCMC-B-QUICK

Clamping range 15 mm to 85 mm · With quick adjustment

## Designation Code Mechanical Clamps VCMC-B-QUICK

VCMC-B	–	QUICK	–	150x135	–	x48	–	15-85
1		2		3		4		5

**1 – Abbreviated designation**

Code	Type
VCMC-B	Mechanical clamp, Biesse system

**2 – Design**

Code	Type
QUICK	With tool-free height adjustment

**3 – Dimensions**

Code	LxW in mm
150x135	150x135

**4 – Clamping height**

Code	H in mm
x48...x74	48 and 74

**5 – Clamping range**

Code	Clamping range in mm
15-85	15-85

The mechanical clamp VCMC-B-QUICK is delivered assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Hexagonal bolts

Available spare parts: clamping disc

Available accessories: clamping range extension

## Ordering Data Mechanical Clamps VCMC-B-QUICK

Type	Part no.
VCMC-B-QUICK 150x135x48 15-85	10.01.12.04750
VCMC-B-QUICK 150x135x74 15-85	10.01.12.04752

## Ordering Data Spare Parts Mechanical Clamps VCMC-B-QUICK

Spare Parts	Part no.
Clamping disc   SPAN-TELL 128x30 EXZ VCMC	10.01.12.04740

## Ordering Data Accessories Mechanical Clamps VCMC-B-QUICK

Accessories	Part no.
Extension with hexagon   VRL-S M20x1x40.3	10.01.12.04374

## Technical Data Mechanical Clamps VCMC-B-QUICK

Type	Clamping range [mm]
VCMC-B-QUICK 150x135x48 15-85	15.0 ... 85.0
VCMC-B-QUICK 150x135x74 15-85	15.0 ... 85.0

\*Biesse is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

Clamping Equipment for Systems from Biesse\*

# Mechanical Clamps VCMC-B-QUICK



Clamping range 15 mm to 85 mm · With quick adjustment



Further information: [WWW.SCHMALZ.COM/VCMC-B-QUICK](http://WWW.SCHMALZ.COM/VCMC-B-QUICK)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCMC-B-QUICK](http://WWW.SCHMALZ.COM/VCMC-B-QUICK)

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[WWW.SCHMALZ.COM/VCMC-B-QUICK](http://WWW.SCHMALZ.COM/VCMC-B-QUICK)

# Vacuum Blocks VCBL-S1

For TV and TVN systems from SCM · Height 32.7 mm and 50 mm



## Suitability for Industry Specific Applications

### Applications

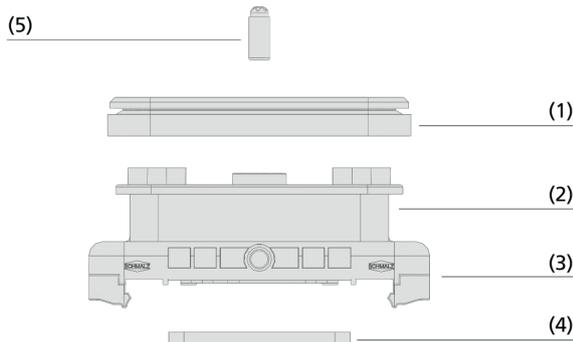
- Hose-free Schmalz clamping system for console tables from SCM / Morbidelli, fully compatible with original equipment
- The vacuum blocks are mechanically pre-fixed via the console
- The integrated touch valve allows unused vacuum blocks to remain on the machine table
- TV system from SCM = S1 system from Schmalz (width of console 72.5 mm)
- TVS system from SCM = S1 system from Schmalz with hose connection (width of console 72.5 mm)



Vacuum Blocks VCBL-S1

### Design

- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Dovetail mount (3) for mechanical pre-fixation on SCM / Morbidelli consoles
- Sealing frame (4) optimized for easy sliding of the vacuum block on the console
- Touch valve (5) for activating the vacuum



System Design Vacuum Blocks VCBL-S1

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Suction plates can be replaced quickly, easily and economically without tools



Vacuum blocks VCBL-S used with SCM consoles

\*SCM / Morbidelli is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Vacuum Blocks VCBL-S1

For TV and TVN systems from SCM · Height 32.7 mm and 50 mm



## Designation Code Vacuum Blocks VCBL-S1

<b>VCBL-S1</b>	-	<b>120x50</b>	-	<b>32.7</b>	-	<b>D-360</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-S1	Vacuum block, SCM / Morbidelli TV system

### 2 – Suction area

Code	LxW in mm
140x115...	140x115 to 130x30
130x30	

### 3 – Height

Code	Height in mm
x32.7...	32.7 and 50
x50	

### 4 – Product addition

Code	Type
D-360	Rotatable by 360°

### 5 – Product addition

Code	Type
TV	With touch valve
TV-S	With touch valve and hose connection

The vacuum block VCBL-S1 is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in different dimensions and suction surfaces
- Main body made of plastic
- Bottom sealing frame

Available spare parts: suction plate (top), sealing frame, touch valve TV, wear part set

Available accessories: suction plate foam rubber



## Ordering Data Vacuum Blocks VCBL-S1

Type				140x115	120x120	125x75	120x50	130x30
VCBL-S1	32.7	D-360	TV	10.01.12.01299	-	10.01.12.01302	10.01.12.01301	10.01.12.01300
VCBL-S1	32.7	-	TV	-	10.01.12.02317	10.01.12.02318	10.01.12.02319	10.01.12.02320
VCBL-S1	32.7	-	TV-S	-	10.01.12.02386	10.01.12.02387	10.01.12.02388	10.01.12.02389
VCBL-S1	50.0	D-360	TV	-	-	-	10.01.12.02271	-
VCBL-S1	50.0	-	TV	-	10.01.12.02969	10.01.12.03495	10.01.12.02591	10.01.12.02945



## Ordering Data Spare Parts Vacuum Blocks VCBL-S1

Type	Spare Parts		Part no.
VCBL-S1	120x120	Suction plate (top)	VCSP-O 120x120x16.5 10.01.12.00010
VCBL-S1	125x75	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011
VCBL-S1	120x50	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012
VCBL-S1	130x30	Set of spare parts	ERS VCSP 10.01.12.01543

Type	Spare Parts		Part no.
VCBL-S1	Touch Valve	TV D9 4.3	10.01.12.02514

Type	Spare Parts		Part no.
VCBL-S1	Sealing frame (bottom)	VCDR 115.5x43x5 VCBL-S	10.01.12.03569

\*SCM / Morbidelli is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Vacuum Blocks VCBL-S1

For TV and TVN systems from SCM · Height 32.7 mm and 50 mm

**Ordering Data Accessories Vacuum Blocks VCBL-S1**

Type	Accessories			Part no.	
VCBL-S1	125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511

**Further information: [WWW.SCHMALZ.COM/VCBL-S1](http://WWW.SCHMALZ.COM/VCBL-S1)**



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-S1](http://WWW.SCHMALZ.COM/VCBL-S1)

\*SCM / Morbidelli is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Vacuum Blocks VCBL-S4

For TVN systems from SCM · Height 50 mm



## Suitability for Industry Specific Applications

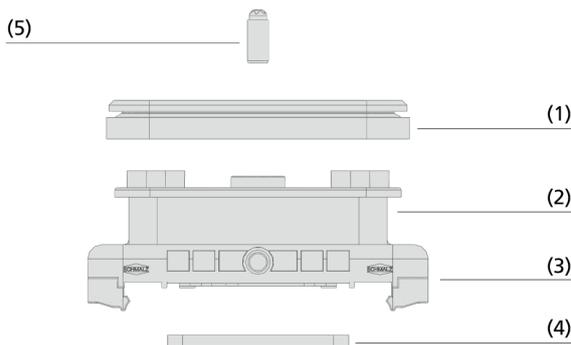
### Applications

- Hose-free Schmalz clamping system for console tables from SCM / Morbidelli, fully compatible with original equipment
- The vacuum blocks are mechanically pre-fixed via the console
- The integrated touch valve allows unused vacuum blocks to remain on the machine table
- TVN system from SCM = S4 system from Schmalz (width of console 109 mm)



Vacuum Blocks VCBL-S4

### Design



- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Dovetail mount (3) for mechanical pre-fixation on SCM / Morbidelli consoles
- Sealing frame (4) optimized for easy sliding of the vacuum block on the console
- Touch valve (5) for activating the vacuum

System Design Vacuum Blocks VCBL-S4



Vacuum blocks VCBL-S used with SCM consoles

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Suction plates can be replaced quickly, easily and economically without tools

\*SCM / Morbidelli is a registered and protected trademark. The products listed here were developed by J. Schmalz GmbH to fit machines from this manufacturer.

# Vacuum Blocks VCBL-S4

For TVN systems from SCM · Height 50 mm



## Designation Code Vacuum Blocks VCBL-S4

<b>VCBL-S4</b>	-	<b>120x50</b>	-	<b>50</b>	-	<b>D-360</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-S4	Vacuum block, SCM / Morbidelli TVN system

### 2 – Suction area

Code	LxW in mm
140x130... 130x30	140x130 to 130x30

### 3 – Height

Code	Height in mm
x50	50

### 4 – Product addition

Code	Type
D-360	Rotatable by 360°

### 5 – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-S4 is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in different dimensions and suction surfaces
- Main body made of plastic
- Bottom sealing frame

Available spare parts: suction plate (top), sealing frame, touch valve TV, wear part set

Available accessories: suction plate foam rubber



## Ordering Data Vacuum Blocks VCBL-S4

Type				140x130	125x75	120x50	130x30
VCBL-S4	50	-	TV	10.01.12.02321	10.01.12.02322	10.01.12.02323	10.01.12.02324
VCBL-S4	50	D-360	TV	-	10.01.12.01473	10.01.12.01474	10.01.12.01475



## Ordering Data Spare Parts Vacuum Blocks VCBL-S4

Type		Spare Parts	Part no.
VCBL-S4	140x130	Suction plate (top)	VCSP-O 140x130x16.5 10.01.12.02325
VCBL-S4	125x75	Suction plate (top)	VCSP-O 125x75x16.5 10.01.12.00011
VCBL-S4	120x50	Suction plate (top)	VCSP-O 120x50x15.5 10.01.12.00012
VCBL-S4	130x30	Set of spare parts	ERS VCSP 10.01.12.01543

Type	Spare Parts	Part no.
VCBL-S4	Touch Valve	TV D9 4.3 10.01.12.02514

Type	Spare Parts	Part no.
VCBL-S4 140x130x50 TV	Sealing frame (bottom)	VCDR 141x77.2x5.1 VCBL-S 10.01.12.03138
VCBL-S4 125x75x50 TV	Sealing frame (bottom)	VCDR 141x77.2x5.1 VCBL-S 10.01.12.03138
VCBL-S4 125x75x50 D-360 TV	Sealing frame (bottom)	VCDR 141x77.4x3 VCBL-S 10.01.14.00235
VCBL-S4 120x50x50 TV	Sealing frame (bottom)	VCDR 141x77.2x5.1 VCBL-S 10.01.12.03138
VCBL-S4 120x50x50 D-360 TV	Set of parts subject to wear	VST VCBL-S DI-RA 10.01.12.03318
VCBL-S4 130x30x50 TV	Set of parts subject to wear	VST VCBL-S DI-RA 10.01.12.03318
VCBL-S4 130x30x50 D-360 TV	Set of parts subject to wear	VST VCBL-S DI-RA 10.01.12.03318

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# Vacuum Blocks VCBL-S4

For TVN systems from SCM · Height 50 mm



## Ordering Data Accessories Vacuum Blocks VCBL-S4

Type	Accessories			Part no.
VCBL-S4 140x130x50 TV	Suction plate (top)	Foam rubber suction plate	VCSP-O 140x130x18.3 MOS	10.01.12.03506
VCBL-S4 125x75x50 TV	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511
VCBL-S4 125x75x50 D-360 TV	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.7 MOS	10.01.12.03511



## Further information: [WWW.SCHMALZ.COM/VCBL-S4](http://WWW.SCHMALZ.COM/VCBL-S4)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/VCBL-S4](http://WWW.SCHMALZ.COM/VCBL-S4)

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# Vacuum Blocks VCBL-S6

For TV systems from SCM · Height 50 mm, 75 mm and 110 mm



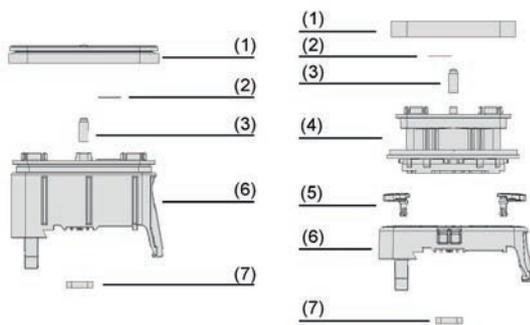
## Suitability for Industry Specific Applications



Vacuum Blocks VCBL-S6

## Applications

- Modular system for use on SCM and Morbidelli console tables, compatible with the original equipment
- Available in various dimensions and working heights with accessories for a wide range of woodworking applications
- Safe clamping of demanding workpieces with curved contours or rough surfaces
- Can also be used for Flexmatic machine tables with automatic positioning and Start/Pilot with position detection thanks to the trip dog and magnet accessories



System Design Vacuum Blocks VCBL-S6

## Design

- Suction plate with membrane (1) made of elastomer for optimum sealing behaviour, high friction forces and protection against penetrating chips
- Integrated NFC tag (2) for reading out product data via smartphone
- Easy-action touch valve (3) for automatic activation of the vacuum
- Suction cup (4) can be inserted into the mounting in 15° steps and fixed by turning the clamping levers (5)
- Robust main body (6) made of glass-fibre reinforced plastic with dovetail mount for fixing on SCM/Morbidelli consoles
- Durable sealing frame (7) optimized for effortless sliding of the suction cup on the console

## Product Highlights

- Proven clamping concept guarantees highest holding forces and precision for optimum efficiency and quality in the production process
- Range of flexible suction cups and accessories enables a wide range of applications in woodworking
- Shorter set-up times and reduced spare parts costs due to pluggable suction cups, tool-free fixing and simple spare parts exchange
- Replaceable suction plate with membrane prevents penetration of dirt and ensures constant performance
- Integrated NFC tag for quick readout of product data and matching spare parts



Vacuum block VCBL-S6 used with SCM consoles

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# Vacuum Blocks VCBL-S6

For TV systems from SCM · Height 50 mm, 75 mm and 110 mm



## Designation Code Vacuum Blocks VCBL-S6

<b>VCBL-S6</b>	-	<b>120x50</b>	-	<b>x50</b>	-	<b>S-360-15</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-S6	Vacuum block, SCM/Morbidelli TV system
VCBL-S6-CUP	Suction cup, SCM/Morbidelli TV system

### 2 – Suction area

Code	LxW in mm
145x145...	145x145 to 130x30
130x30	

### 3 – Height

Code	LxW in mm
x25...x110	25 to 110

### 4 – Product addition

Code	Type
S-360-15	Rotatable in 15° steps

### 5 – Product addition

Code	Type
TV	With sensing valve
TV+ME	With sensing valve and membrane

Vacuum blocks with a suction area of 145 x 145 mm are delivered assembled.

Narrow vacuum blocks with suction area 125 x 75 mm, 120 x 50 mm and 130 x 30 mm consist of several parts:

- Mounting AP-S6 incl. foam sealing frame and O-ring
- Suction cup incl. suction plate, touch valve and NFC tag
- Mounting and suction cup are available separately

Available spare parts: suction plate VCSP-O, foam sealing frame VCDR, touch valve TV, suction cup VCBL-S6-CUP, mounting AP-S6

Available accessories: suction plate foam rubber, switching cams for position detection, magnet for position detection



## Ordering Data Vacuum Blocks VCBL-S6

Type				Dimensions (LxW):			
				145x145	125x75	120x50	130x30
VCBL-S6	50	-	TV+ME	10.01.12.04460	-	-	-
VCBL-S6	50	S-360-15	TV+ME	-	10.01.12.04461	-	-
VCBL-S6	50	S-360-15	TV	-	-	10.01.12.04462	10.01.12.04463
VCBL-S6	75	-	TV+ME	10.01.12.04456	-	-	-
VCBL-S6	75	S-360-15	TV+ME	-	10.01.12.04457	-	-
VCBL-S6	75	S-360-15	TV	-	-	10.01.12.04458	10.01.12.04459
VCBL-S6	110	-	TV+ME	10.01.12.04452	-	-	-
VCBL-S6	110	S-360-15	TV+ME	-	10.01.12.04453	-	-
VCBL-S6	110	S-360-15	TV	-	-	10.01.12.04454	10.01.12.04455

Type				Dimensions (LxW):		
				125x75	120x50	130x30
VCBL-S6	CUP	25	TV+ME	10.01.12.04638	-	-
VCBL-S6	CUP	25	TV	-	10.01.12.04639	10.01.12.04654
VCBL-S6	CUP	50	TV+ME	10.01.12.04628	-	-
VCBL-S6	CUP	50	TV	-	10.01.12.04629	10.01.12.04630
VCBL-S6	CUP	85	TV+ME	10.01.12.04625	-	-
VCBL-S6	CUP	85	TV	-	10.01.12.04626	10.01.12.04627

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## Vacuum Blocks VCBL-S6

For TV systems from SCM · Height 50 mm, 75 mm and 110 mm



### Ordering Data Vacuum Blocks VCBL-S6

Type	Part no.
AP-S6-145x145x25	10.01.12.04440 



### Ordering Data Spare Parts Vacuum Blocks VCBL-S6

Type	Spare Parts		Part no.
VCBL-S6 145x145	Suction plate (top)	VCSP-O 145x145x16.5 ME	10.01.12.04445
VCBL-S6 125x75	Suction plate (top)	VCSP-O 125x75x16.5 ME	10.01.12.04766
VCBL-S6 120x50	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-S6 130x30	Set of spare parts	ERS VCSP	10.01.12.01543

Type	Spare Parts	Part no.
VCBL-S6	Sealing frame (bottom)	VCDR 135x25.5x6 VCBL

Type	Spare Parts	Part no.
VCBL-S6	Touch Valve	TV D9 4.3



### Ordering Data Accessories Vacuum Blocks VCBL-S6

Type	Accessories		Part no.
VCBL-S6 145x145	Suction plate (top)	Foam rubber suction plate	VCSP-O 145x145x17.9 ME-MOS
VCBL-S6 125x75	Suction plate (top)	Foam rubber suction plate	VCSP-O 125x75x17.9 ME-MOS

Type	Accessories		Part no.
VCBL-S6	Switching cam	Trip cams for Flexmatic machine tables	SCHA-NOCK 12x7.6x21.8 VCBL-S6

Type	Accessories		Part no.
VCBL-S6	Accessories-clamping systems	Magnet for launch and pilot machine tables	ZUB VCBL-S6

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## Vacuum Blocks VCBL-S6

For TV systems from SCM · Height 50 mm, 75 mm and 110 mm



Further information: [WWW.SCHMALZ.COM/VCBL-S6](http://WWW.SCHMALZ.COM/VCBL-S6)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-S6](http://WWW.SCHMALZ.COM/VCBL-S6)

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# Adapter-Plates ISAP-S

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



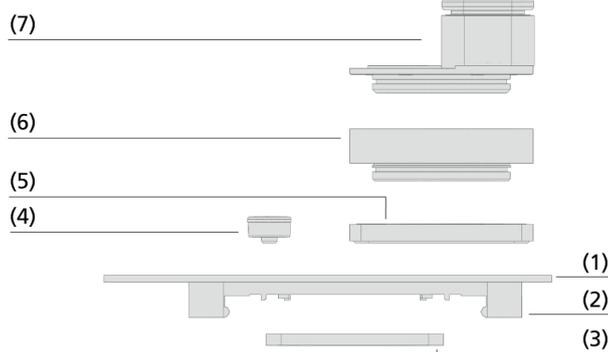
## Suitability for Industry Specific Applications



Adapter-Plates ISAP-S

## Applications

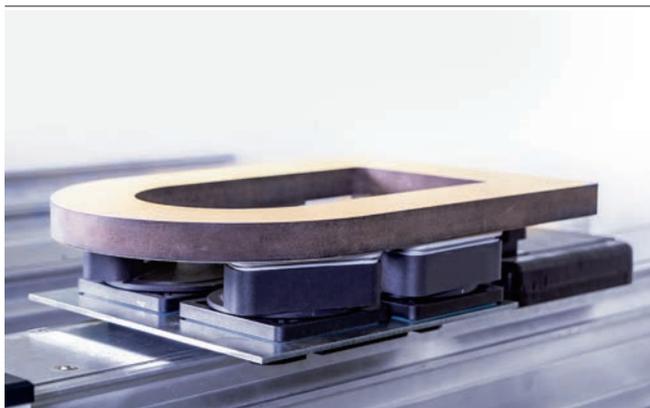
- Hose-free Schmalz clamping system for console tables from SCM / Morbidelli, fully compatible with original equipment
- The Adapter-Plates are positioned directly onto the vacuum supply on the consoles
- Equipping the ISAP-S with up to four additional Mono-Bases and suction cups
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- Overall height can be adapted with the spacer rings
- TV system from SCM = S1 system from Schmalz (width of the console 72.5 mm)
- TVN System from SCM = S4 System from Schmalz (width of the console 109 mm)



System Design Adapter-Plates ISAP-S

## Design

- Adapter-Plate (1) base plate
- Dovetail mount (2) for mechanical pre-fastening on SCM / Morbidelli consoles
- Sealing frame (3) optimized to allow easy repositioning of the Adapter-Plate on the console; and sealing magnet (4)
- Mono-Base (5) for positioning on top of the vacuum openings of the Adapter-Plate and suction cup (7) for fixing the workpiece are available as accessories
- Spacer ring (6) for adjusting the height to the machining height of the machine



Adapter-Plates ISAP-S with Mono-Base and suction cups for clamping of curved boards

## Product Highlights

- Ideal for narrow and curved workpieces, as plates and vacuum blocks can be flexibly combined
- Freely positionable suction cups and Mono-Bases allow almost any clamping layout
- Mixed operation with standard vacuum blocks possible for even more flexibility and short set-up times
- Accessories and spare parts can be replaced quickly, easily and cost-effectively without tools

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# Adapter-Plates ISAP-S

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



## Designation Code Adapter-Plates ISAP-S

<b>ISAP-S1</b>	–	<b>195x195x8.7</b>
1		2

### 1 – Abbreviated designation

Code	Type
ISAP-S1	Innospann adapter plate, SCM / Morbidelli TV-System
ISAP-S4	Innospann adapter plate, SCM / Morbidelli TVN-System

### 2 – Dimensions

Code	LxWxHeight in mm
195x195x8.7	195x195x8.7
195x195x11	195x195x11

The Adapter-Plates ISAP-S1 and ISAP-S4 are delivered assembled. The products consist of:

- Main body of aluminum
- Sealing magnets for closing the vacuum openings

Available spare parts: sealing magnet, wear part set

Available accessories: Mono-Base, spacer ring, suction cup



## Ordering Data Adapter-Plates ISAP-S

Type	Part no.
ISAP-S1 195x195x8.7	10.01.14.00123
ISAP-S4 195x195x11	10.01.14.00231



## Ordering Data Spare Parts Adapter-Plates ISAP-S

Type	Spare Parts		Part no.
ISAP-S1 195x195x8.7	Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847
ISAP-S4 195x195x11	Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847

Type	Spare Parts			Part no.
ISAP-S1	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03573
ISAP-S4	Set of parts subject to wear	Bottom sealing frame	VST VCBL-S DI-RA	10.01.12.03318



## Ordering Data Accessories Adapter-Plates ISAP-S

Type	Part no.
Mono-Base	ISMB 80x80x8 10.01.15.00188

Type	Part no.
Spacer ring, Innospann	ISZR-V 80x15 10.01.15.00052

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# Adapter-Plates ISAP-S

Standard dimensions 195 × 195 mm, hole matrix spacing 75 mm



## Ordering Data Accessories Adapter-Plates ISAP-S

Type		Part no.
Cup	ISCUP Cup 1 80x80x16	10.01.15.00209
Cup	ISCUP Cup 2 80x40x16	10.01.15.00210
Cup	ISCUP Cup 3 80x28x16	10.01.15.00211



## Further information: [WWW.SCHMALZ.COM/ISAP-S](http://WWW.SCHMALZ.COM/ISAP-S)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/ISAP-S](http://WWW.SCHMALZ.COM/ISAP-S)

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# Adapter-Plates AP-S4

Holder for vacuum blocks VCBL-B



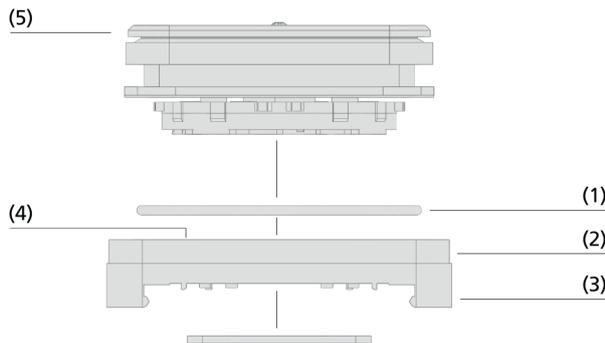
## Suitability for Industry Specific Applications



### Applications

- Specially developed Adapter-Plate for using vacuum blocks VCBL-B on console table systems from SCM / Morbidelli
- The Adapter-Plates are used on the TVN consoles of SCM/Morbidelli (console width 109 mm) and are mechanically pre-fastened to the console
- Vacuum blocks VCBL-B are placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to orient the suction area as desired

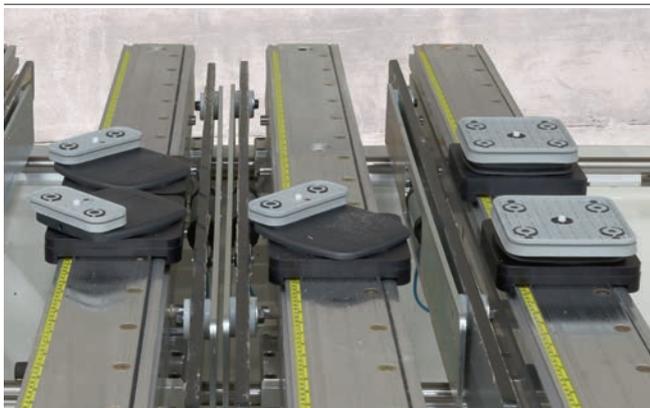
Adapter-Plates AP-S4



### Design

- Sealing ring (1) for sealing against the bottom surface of suction cup
- Robust main body (2) made of plastic
- Dovetail mount (3) for mechanical pre-fastening in TVN consoles from SCM / Morbidelli
- Suction cup mount (4) matches vacuum blocks VCBL-B
- Vacuum block VCBL-B (5) are available as accessories

System Design Adapter-Plates AP-S4



Adapter-Plates AP-S4 with vacuum block VCBL-B for clamping of different workpiece sizes

### Product Highlights

- Modular system consisting of Adapter-Plate and vacuum blocks offers maximum flexibility in positioning the vacuum blocks
- Vacuum blocks of different heights allow several working heights and, depending on the machine, also 5-axis machining
- Mixed operation with Schmalz VCBL-S4 and original equipment vacuum blocks possible due to compatible heights
- Unused suction cups can be left on the machine table thanks to the touch valve

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# Adapter-Plates AP-S4

Holder for vacuum blocks VCBL-B



## Designation Code Adapter-Plates AP-S4

<b>AP-S4</b>	–	<b>145x145x36</b>
1		2

### 1 – Abbreviated designation

Code	Type
AP-G	Adapter-Plate, SCM / Morbidelli TVN-system

### 2 – Dimensions

Code	LxWxH in mm
145x145x21...	145x145x21 and
145x145x36	145x145x36

The adapter plate AP-S4 is delivered assembled. The product consists of:

- Main body made of plastic
- S4 bottom sealing frame

Available spare parts: sealing frame

Available accessories: vacuum block VCBL-B



## Ordering Data Adapter-Plates AP-S4

Type	Part no.
AP-S4-145x145x21	10.01.12.03623 
AP-S4-145x145x36	10.01.12.04013



## Ordering Data Spare Parts Adapter-Plates AP-S4

Type	Part no.
Sealing frame (bottom)	VCDR 125x77.2x3.1 ISAP 10.01.12.03746



## Ordering Data Accessories Adapter-Plates AP-S4

Type	Part no.
Vacuum block	VCBL-B 120x50x29 TV 10.01.12.03167 
Vacuum block	VCBL-B 125x75x29 TV 10.01.12.03166 
Vacuum block	VCBL-B 130x30x29 TV 10.01.12.03168 
Vacuum block	VCBL-B 140x130x29 TV 10.01.12.03165 

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# Adapter-Plates AP-S4

Holder for vacuum blocks VCBL-B



Further information: [WWW.SCHMALZ.COM/AP-S4](http://WWW.SCHMALZ.COM/AP-S4)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
AP-S4](http://WWW.SCHMALZ.COM/AP-S4)

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## Mechanical Clamps VCMC-S4-QUICK

For TVN systems from SCM · Clamping range up to 85 mm · With quick adjustment



### Suitability for Industry Specific Applications

#### Applications

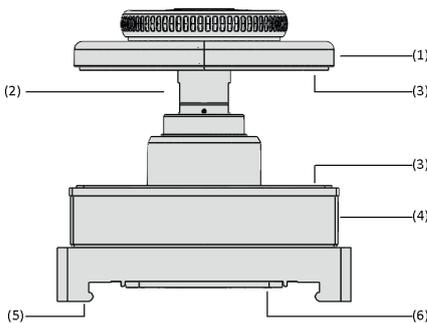
- Mechanical clamping system for CNC machining centers from SCM / Morbidelli with TVN console tables
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- Set-up is efficient, safe and tool-free; the clamp is mechanically pre-fixed
- Tool-free adjustment of the clamping height to the workpiece within seconds; extension of the clamping range possible through extension
- Clamping of the workpiece by activating the vacuum on the machine table



Mechanical Clamps VCMC-S4-QUICK

#### Design

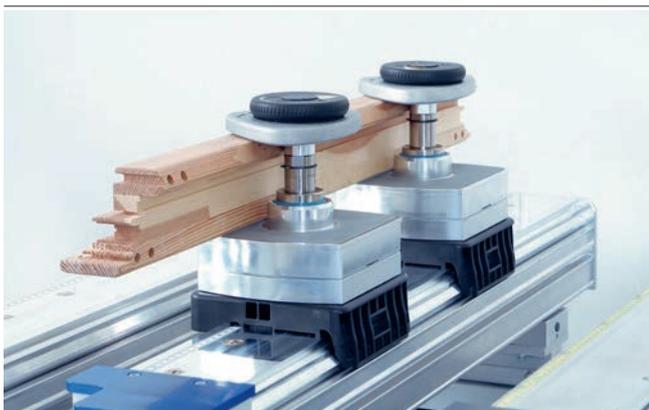
- Triangular clamping disc (1) is adjustable in clamping height and contact surface on the workpiece without tools and is lowered by activating the vacuum
- Extension (2) for adjusting the clamping range
- Friction material (3) for optimizing lateral force absorption
- Robust main body (4) made of aluminum with dovetail mount (5) for fixing on TVN consoles from SCM / Morbidelli
- Durable sealing frame (6) optimized for effortless sliding of the clamp on the console



System Design Mechanical Clamps VCMC-S4-QUICK

#### Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest set-up times
- Holds even narrow workpieces securely with clamping forces of up to 700 N
- No additional medium required, as the clamp can be activated via operating vacuum of the CNC machining centre
- Special friction materials on the clamping disc and clamping surface ensure a secure hold even with high machining forces



Mechanical clamps VCMC-S4-QUICK for clamping of frame parts

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# Mechanical Clamps VCMC-S4-QUICK

For TVN systems from SCM · Clamping range up to 85 mm · With quick adjustment



## Designation Code Mechanical Clamps VCMC-S4-QUICK

VCMC-S4	–	QUICK	–	145x145	–	x50	–	15-85
1		2		3		4		5

### 1 – Abbreviated designation

Code	Type
VCMC-S4	Mechanical clamp, SCM/Morbidelli TVN system

### 2 – Design

Code	Type
QUICK	With tool-free height adjustment

### 3 – Dimensions

Code	LxW in mm
145x145	145x145

### 4 – Clamping height

Code	H in mm
x50	50

### 5 – Clamping range

Code	Clamping range in mm
15-85	15-85

The mechanical clamp VCMC-S4-QUICK is delivered completely assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Mounting for TVN console

Available spare parts: clamping disc, sealing frame

Available accessories: clamping range extension



## Ordering Data Mechanical Clamps VCMC-S4-QUICK

Type	Part no.
VCMC-S4-QUICK 145x145x50 15-85	10.01.12.04760



## Ordering Data Spare Parts Mechanical Clamps VCMC-S4-QUICK

Spare Parts	Part no.
Clamping disc	SPAN-TELL 128x30 EXZ VCMC 10.01.12.04740
Sealing frame (bottom)	VCDR 141x77.2x5.1 VCBL-S 10.01.12.03138



## Ordering Data Accessories Mechanical Clamps VCMC-S4-QUICK

Accessories	Part no.
Extension with hexagon	VRL-S M20x1x40.3 10.01.12.04374



## Technical Data Mechanical Clamps VCMC-S4-QUICK

Type	Clamping range [mm]
VCMC-S4-QUICK 145x145x50 15-85	15.0 ... 85.0

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# Mechanical Clamps VCMC-S4-QUICK

For TVN systems from SCM · Clamping range up to 85 mm · With quick adjustment



Further information: [WWW.SCHMALZ.COM/VCMC-S4-QUICK](http://WWW.SCHMALZ.COM/VCMC-S4-QUICK)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCMC-S4-QUICK](http://WWW.SCHMALZ.COM/VCMC-S4-QUICK)

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# Mechanical Clamps VCMC-S6-QUICK

For TV systems from SCM · Clamping range up to 100 mm · With quick adjustment



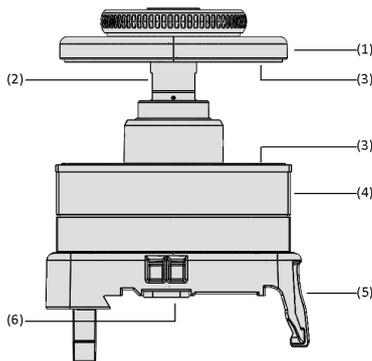
## Suitability for Industry Specific Applications



Mechanical Clamps VCMC-S6-QUICK

## Applications

- Mechanical clamping system for CNC machining centers from SCM / Morbidelli with TV console tables
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- Set-up is efficient, safe and tool-free; the clamp is mechanically pre-fixed
- Tool-free adjustment of the clamping height to the workpiece within seconds; extension of the clamping range possible through extension
- Clamping of the workpiece by activating the vacuum on the machine table



System Design Mechanical Clamps VCMC-S6-QUICK

## Design

- Triangular clamping disc (1) is adjustable in clamping height and contact surface on the workpiece without tools and is lowered by activating the vacuum
- Extension (2) for adjusting the clamping range
- Friction material (3) for optimizing lateral force absorption
- Robust main body (4) made of aluminum with dovetail mount (5) for fixing on TV consoles from SCM / Morbidelli
- Durable sealing frame (6) optimized for effortless sliding of the clamp on the console



Mechanical clamps VCMC-S6-QUICK for clamping of frame parts

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest set-up times
- Holds even narrow workpieces securely with clamping forces of up to 700 N
- No additional medium required, as the clamp can be activated via operating vacuum of the CNC machining centre
- Special friction materials on the clamping disc and clamping surface ensure a secure hold even with high machining forces

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# Mechanical Clamps VCMC-S6-QUICK

For TV systems from SCM · Clamping range up to 100 mm · With quick adjustment

## Designation Code Mechanical Clamps VCMC-S6-QUICK

VCMC-S6	–	QUICK	–	150x135	–	x75	–	15-85
1		2		3		4		5

### 1 – Abbreviated designation

Code	Type
VCMC-S6	Mechanical clamp, SCM/Morbidelli TV system

### 2 – Design

Code	Type
QUICK	With tool-free height adjustment

### 3 – Dimensions

Code	LxW in mm
150x135	150x135

### 4 – Clamping height

Code	H in mm
x75...x110	75 and 110

### 5 – Clamping range

Code	Clamping range in mm
15-85...10-100	15-58 and 10-100

The mechanical clamp VCMC-S6-QUICK is delivered assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Dovetail mount

Available spare parts: clamping disc, sealing frame

Available accessories: clamping range extension

## Ordering Data Mechanical Clamps VCMC-S6-QUICK

Type	Part no.
VCMC-S6-QUICK 150x135x75 15-85	10.01.12.04765
VCMC-S6-QUICK 150x135x110 10-100	10.01.12.04777

## Ordering Data Spare Parts Mechanical Clamps VCMC-S6-QUICK

Type	Spare Parts	Part no.
VCMC-S6-QUICK 150x135x75 15-85	Clamping disc	SPAN-TELL 128x30 EXZ VCMC
VCMC-S6-QUICK 150x135x110 10-100	Clamping disc	SPAN-TELL 110 EXZ VCMC

Spare Parts	Part no.
Sealing frame (bottom)	VCDR 135x25.5x6 VCBL
	10.01.12.04560

## Ordering Data Accessories Mechanical Clamps VCMC-S6-QUICK

Type	Accessories	Part no.
VCMC-S6-QUICK 150x135x75 15-85	Extension with hexagon	VRL-S M20x1x40.3
		10.01.12.04374

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# Mechanical Clamps VCMC-S6-QUICK

For TV systems from SCM · Clamping range up to 100 mm · With quick adjustment



## Technical Data Mechanical Clamps VCMC-S6-QUICK

Type	Clamping range [mm]
VCMC-S6-QUICK 150x135x75 15-85	15.0 ... 85.0
VCMC-S6-QUICK 150x135x110 10-100	10.0 ... 100.0



Further information: [WWW.SCHMALZ.COM/VCMC-S6-QUICK](http://WWW.SCHMALZ.COM/VCMC-S6-QUICK)



Spare parts and accessories



Technical data



Design and CAD data



Documentation



Multimedia



[WWW.SCHMALZ.COM/VCMC-S6-QUICK](http://WWW.SCHMALZ.COM/VCMC-S6-QUICK)

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# Clamping Equipment for Grid and Nesting Table Systems



All products – all information:

[WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY](http://WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY)

# Overview of Section

## Selection Aid

Page



### Design of Grid Table Systems Grid Dimension – How to Measure Correctly

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## Clamping equipment for grid table systems



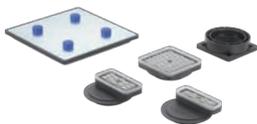
### Vacuum Blocks VCBL-R

- Vacuum system for grid tables
- Fixation via positioning inserts
- Integrated touch valve

Vacuum Blocks VCBL-R for use in CNC machining centers with all common grid table designs.



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### Adapter-Plates ISAP-R

- Vacuum System for grid tables
- Use of Innospann suction cups

Innospann Adapter-Plate ISAP-R for use in CNC machining centers with all common grid table designs.

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### Adapter-Plates AP-R

- Vacuum system for grid tables
- For all common grid geometries
- Use with VCBL-B

Adapter-Plate AP-R in combination with vacuum blocks VCBL-B for use in CNC machining centers with all common grid table design.



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### Mechanical Clamps VCMC-R-QUICK

- Vacuum system for grid tables
- For frames and window profiles

Mechanical clamp VCMC-R-QUICK for use on CNC machining centers with all common vacuum grid tables.

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## Clamping equipment for nesting table systems



### Vacuum Blocks VCBL-G-K1

- Vacuum system for nesting machine tables
- With a hose connection
- Target value for operating vacuum: -600 mbar

Vacuum block VCBL-G-K1 for use directly on the MDF wear plate of a CNC machining center with a nesting machine table.



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### Adapter-Plates AP-G

- Vacuum system for nesting machine tables
- With a hose connection
- Target value for operating vacuum: -600 mbar

Adapter-Plate AP-G with vacuum blocks VCBL-B for use directly on the MDF wear plate of a CNC machining center with a nesting machine table.

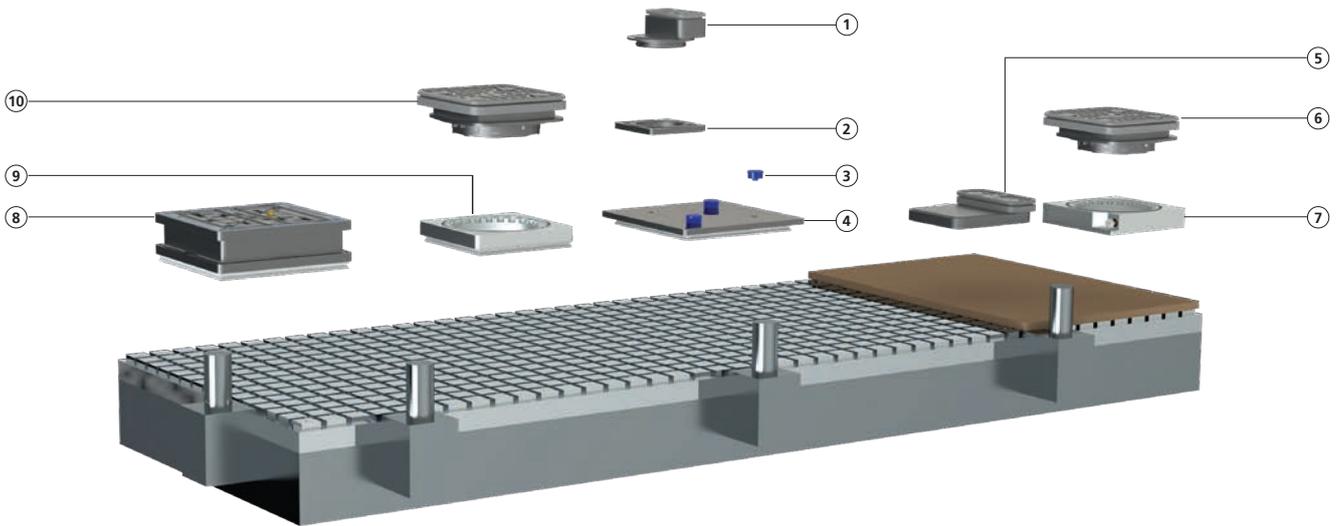


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Schmalz Select preferred product range – Article selection in the product family. Further information: [WWW.SCHMALZ.COM/SELECT](http://WWW.SCHMALZ.COM/SELECT)

# Selection Aid

## Design of Grid Table Systems



**Innospann system**

- ① Suction cups ISCUP
- ② Mono-Base ISMB
- ③ Sealing magnet
- ④ Innospann Adapter-Plate ISAP-R

- ⑤ Vacuum blocks VCBL-G-K1

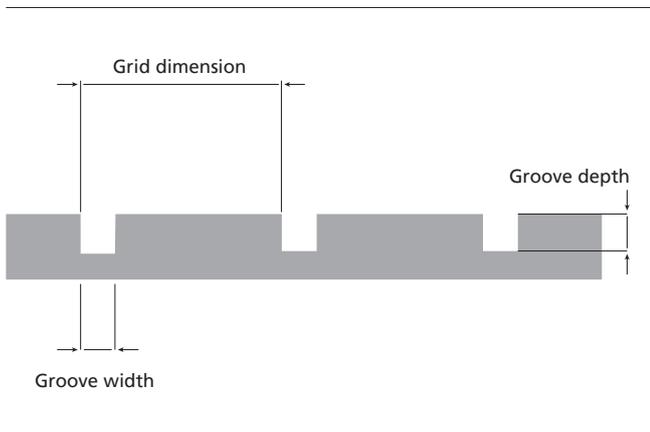
**VCBL-B system for grid tables**

- ⑥ Vacuum blocks VCBL-B
- ⑦ Adapter-Plate AP-R

- ⑧ Vacuum blocks VCBL-R

**VCBL-B system für nesting tables**

- ⑨ Adapter-Plate AP-R
- ⑩ Vacuum blocks VCBL-B



### Measuring the Grid Dimensions Correctly

Schmalz offers vacuum blocks for grid tables with all common grid geometries. The grid dimensions are listed in the technical data for the particular product family.

The figure shows how to correctly measure the grid dimensions, the groove width and the groove depth

# Vacuum Blocks VCBL-R

Height 25 mm, 45 mm and 125 mm



## Suitability for Industry Specific Applications

### Applications

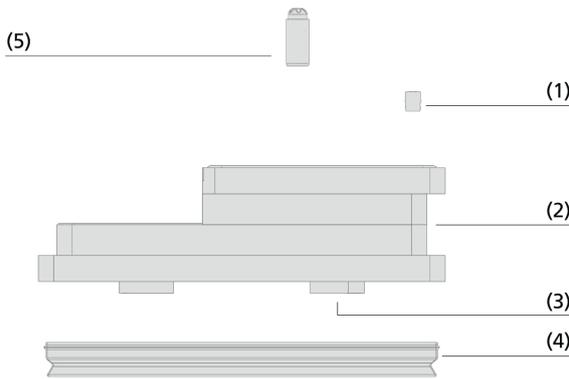
- Vacuum clamping system for CNC machining centers with grid tables
- Suitable for all common grid geometries (slot width 6 mm to 7.5 mm, slot depth 6 mm to 7 mm)
- Suitable for complex five-axis processing, such as the production of recesses and the trimming of panels
- Simple and fast positioning of the vacuum blocks with the corresponding positioning inserts
- Safe and non-slip clamping of the workpiece with the special friction pad on the suction area



Vacuum Blocks VCBL-R

### Design

- Friction pad (1) for absorption of lateral forces
- Robust main body (2) made of plastic
- Positioning insert (3) for various groove widths
- Inserts are easy to change so that the vacuum block can be used for different grid sizes
- Sealing frame (4)
- Touch valve (5) made of soft plastic



System Design Vacuum Blocks VCBL-R

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Different overall heights allow even complex lateral processing
- Long service life and fast, cost-effective replacement of spare parts



Vacuum blocks VCBL-R for clamping particle boards

# Vacuum Blocks VCBL-R

Height 25 mm, 45 mm and 125 mm



## Designation Code Vacuum Blocks VCBL-R

<b>VCBL-R</b>	-	<b>160x160</b>	-	<b>x125</b>	-	<b>30x30</b>	-	<b>TV</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-R	Vacuum block, grid table system

### 2 – Suction area

Code	LxW in mm
160x160... 110x110	160x160 to 110x110

### 3 – Height

Code	Height in mm
x25...x150	25 to 150

### 4 – Grid dimensions

Code	Grid dimension in mm
30x30	30x30
30/50	30x30 to 50x50
40x40	40x40

### 5 – Product addition

Code	Type
TV	With touch valve

The vacuum block VCBL-R is delivered assembled. The product consists of:

- Top sealing frame type VCDR
- Main body made of plastic
- Bottom sealing frame

Available spare parts: touch valve, locking angle and screws, seals and friction pads



## Ordering Data Vacuum Blocks VCBL-R

Type				Dimensions (LxW):		
				160x160	160x96	110x110
VCBL-R	25	30/50	TV	10.01.12.02674	10.01.12.02676	-
VCBL-R	25	40x40	TV	10.01.12.02675	10.01.12.02677	-
VCBL-R	45	30x30	TV	-	-	10.01.12.02883
VCBL-R	45	30/50	TV	10.01.12.02670	10.01.12.02672	-
VCBL-R	45	40x40	TV	10.01.12.02671	10.01.12.02673	-
VCBL-R	125	30/50	TV	10.01.12.03421	10.01.12.03422	-
VCBL-R	150	30/50	TV	10.01.12.03112	-	-



## Ordering Data Spare Parts Vacuum Blocks VCBL-R

Type	Spare Parts		Part no.
VCBL-R	160x160	DR 188/180x6 MOS NK-20	10.01.12.02901
VCBL-R	160x96	DR 141/149x6 MOS NK-20	10.01.12.02902

Type	Part no.
Touch Valve	TV D9 4.3 10.01.12.02514

Type*	Part no.
Locking angle and screws	ERS VCBL-R Winkel 10.01.12.02691
Seals and friction pads	ERS VCBL-R 10.01.12.02693

\*Spare parts do not match VCBL-R 110x110

# Vacuum Blocks VCBL-R

Height 25 mm, 45 mm and 125 mm



## Technical Data Vacuum Blocks VCBL-R

Type	Recommended slot width x slot depth [mm]
VCBL-R 160x160x25 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x160x25 40x40 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x160x45 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x160x45 40x40 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x160x125 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x160x150 30/50 TV	6 x 7
VCBL-R 160x96x25 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x96x25 40x40 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x96x45 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x96x45 40x40 TV	6,5x6,5 / 7,5x7,5
VCBL-R 160x96x125 30/50 TV	6,5x6,5 / 7,5x7,5
VCBL-R 110x110x45 30x30 TV	6,4x6,1



Further information: [WWW.SCHMALZ.COM/VCBL-R](http://WWW.SCHMALZ.COM/VCBL-R)



Spare parts and accessories



Technical data



Design and CAD data



Documentation



Multimedia



[WWW.SCHMALZ.COM/VCBL-R](http://WWW.SCHMALZ.COM/VCBL-R)

# Adapter-Plates ISAP-R

Dimensions Adapter-Plates (L x W) 175 x 175 mm



## Suitability for Industry Specific Applications

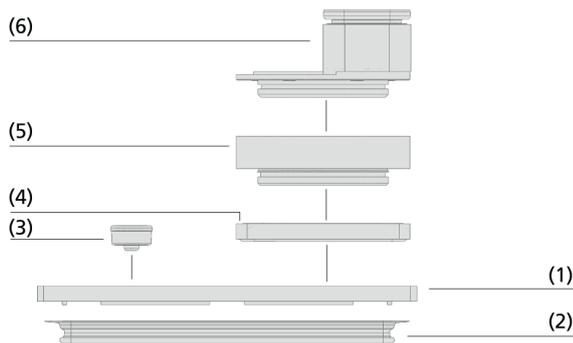


Adapter-Plates ISAP-R

## Applications

- Vacuum clamping system for CNC machining centers with grid tables
- The Adapter-Plates are inserted directly into the grid on the machine table and are suitable for mixed use with standard vacuum blocks
- The Adapter-Plates can be flexibly equipped with up to four additional Mono-Bases ISMB and suction cups ISCUP
- Particularly suitable for narrow and curved workpieces with small suction surfaces and delicate molds
- Overall height can be adapted with the spacer rings
- Suitable for all common grid geometries (slot width 5 mm to 7 mm, slot depth 5 mm to 7 mm)

## Design



- Adapter-Plate (1) base plate
- Sealing frame (2) for sealing off the vacuum in the grid
- Mono-Base (4) for positioning on top of the vacuum openings of the Adapter-Plate and suction cup (6) for fixing the work-piece are available as accessories
- Spacer ring (5) for adjusting the height to the machining height of the machine
- Sealing magnet (3)

System Design Adapter-Plates ISAP-R



Adapter-Plates ISAP-R with Mono-Base and suction cups for clamping curved workpieces

## Product Highlights

- Ideal for narrow and curved workpieces, as plates and vacuum blocks can be flexibly combined
- Freely positionable suction cups and Mono-Bases allow almost any clamping layout
- Mixed operation with standard vacuum blocks possible for even more flexibility and short set-up times
- Accessories and spare parts can be replaced quickly, easily and cost-effectively without tools

# Adapter-Plates ISAP-R

Dimensions Adapter-Plates (L x W) 175 x 175 mm



## Designation Code Adapter-Plates ISAP-R

ISAP-R	-	175x175x7	-	30/50
1		2		3

### 1 – Abbreviated designation

Code	Type
ISAP-R	Innospann adapter plate, grid table system

### 2 – Dimensions

Code	LxWxHeight in mm
175x175x7	175x175x7

### 3 – Grid dimensions

Code	Grid dimension in mm
30/50	30x30 and 50x50

The adapter plate ISAP-R is delivered assembled. The product consists of:

- Base plate made of steel
- Sealing magnets for closing the vacuum openings

Available spare parts: sealing magnet

Available accessories: Mono-Base, suction cup



## Ordering Data Adapter-Plates ISAP-R

Type	Part no.
ISAP-R 175x175x7 30/50	10.01.15.00184



## Ordering Data Spare Parts Adapter-Plates ISAP-R

Type	Part no.
Sealing magnet   ISMST 19-7 4ISMST	10.01.14.00847



## Ordering Data Accessories Adapter-Plates ISAP-R

Type	Part no.
Mono-Base   ISMB 80x80x8	10.01.15.00188

Type	Part no.
Cup   ISCUP Cup 1 80x80x30	10.01.15.00003
Cup   ISCUP Cup 2 80x40x30	10.01.15.00004
Cup   ISCUP Cup 3 80x28x30	10.01.15.00005



## Technical Data Adapter-Plates ISAP-R

Type	Recommended slot width x slot depth [mm]
ISAP-R 175x175x7 30/50	5x5 / 7x7

# Adapter-Plates ISAP-R



Dimensions Adapter-Plates (L x W) 175 x 175 mm



Further information: [WWW.SCHMALZ.COM/ISAP-R](http://WWW.SCHMALZ.COM/ISAP-R)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
ISAP-R](http://WWW.SCHMALZ.COM/ISAP-R)



# Adapter-Plates AP-R

Standard dimensions 130 x 130 mm and 160 x 160 mm



## Suitability for Industry Specific Applications

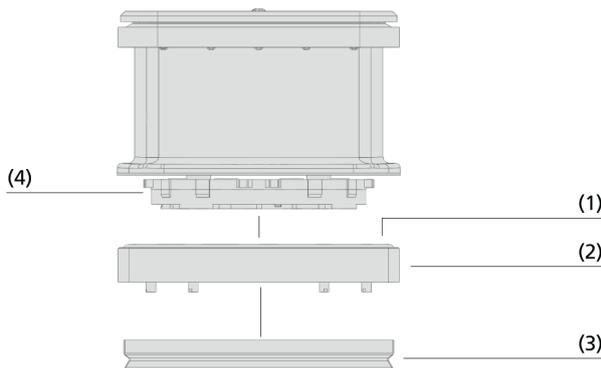


Adapter-Plates AP-R

## Applications

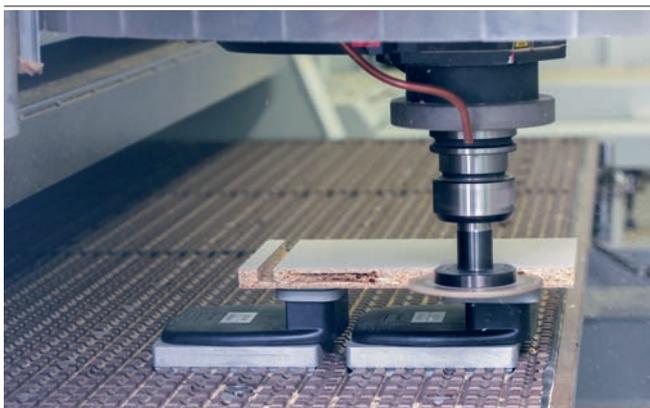
- Specially developed Adapter-Plate for using vacuum blocks VCBL-B on grid tables
- The Adapter-Plate is placed directly on the grid of the nesting machine table
- Vacuum blocks VCBL-B can be placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to align the suction area as desired
- The vacuum blocks are available in three different heights (29, 48 and 74 mm) and four different suction areas as an accessory

## Design



- Sealing ring (1) for sealing against the bottom surface of suction cup
- Robust main body (2) made of aluminum
- Sealing frame (3) available for various table grids
- Adapter-Plate mount matches vacuum blocks VCBL-B (4) which are available as accessories

System Design Adapter-Plates AP-R



Adapter-Plates AP-R with vacuum block VCBL-B when clamping a wooden particle board

## Product Highlights

- Modular system consisting of Adapter-Plate and suction cups offers maximum flexibility in positioning the suction cups
- Vacuum blocks of different heights allow several working heights and, depending on the machine, also 5-axis machining
- Unused vacuum blocks VCBL-B can remain on the machine table thanks to the touch valve

# Adapter-Plates AP-R

Standard dimensions 130 × 130 mm and 160 × 160 mm



## Designation Code Adapter-Plates AP-R

AP-R	–	130x130x16	–	30/40
1		2		3

### 1 – Abbreviated designation

Code	Type
AP-R	Adapter-Plate, grid table system

### 2 – Dimensions

Code	LxWxH in mm
130x130x16...	130x130x16 to
160x160x16	160x160x16

### 3 – Grid dimensions

Code	Grid dimension in mm
30/40	30x30 to 40x40
50x50	50x50

The adapter plate AP-R is delivered assembled. The product consists of:

- Main body made of aluminum
- Bottom sealing frame

Available spare parts: sealing frame

Available accessories: vacuum blocks



## Ordering Data Adapter-Plates AP-R

Type	Part no.
AP-R-130x130x16-30/40	10.01.15.00279
AP-R-160x160x16-50x50	10.01.15.00296



## Ordering Data Spare Parts Adapter-Plates AP-R

Type	Spare Parts	Part no.	
AP-R-130x130x16-30/40	Sealing frame	ISDR 120x120x13.5 R 30/40	10.01.15.00353
AP-R-160x160x16-50x50	Sealing frame	ISDR 150x150x13.5 R 30/50	10.01.15.00352



## Ordering Data Accessories Adapter-Plates AP-R

Type	Part no.	
Vacuum block	VCBL-B 140x130x29 TV	10.01.12.03165
Vacuum block	VCBL-B 125x75x29 TV	10.01.12.03166
Vacuum block	VCBL-B 120x50x29 TV	10.01.12.03167
Vacuum block	VCBL-B 130x30x29 TV	10.01.12.03168
Vacuum block	VCBL-B 140x130x48 TV	10.01.12.03169
Vacuum block	VCBL-B 125x75x48 TV	10.01.12.03170
Vacuum block	VCBL-B 120x50x48 TV	10.01.12.03171
Vacuum block	VCBL-B 130x30x48 TV	10.01.12.03172
Vacuum block	VCBL-B 140x130x74 TV	10.01.12.03173
Vacuum block	VCBL-B 125x75x74 TV	10.01.12.03174
Vacuum block	VCBL-B 120x50x74 TV	10.01.12.03175
Vacuum block	VCBL-B 130x30x74 TV	10.01.12.03176

# Adapter-Plates AP-R

Standard dimensions 130 x 130 mm and 160 x 160 mm



## Technical Data Adapter-Plates AP-R

Type

Recommended slot width x slot depth

AP-R-130x130x16-30/40

[mm]

5x5 / 7x7

AP-R-160x160x16-50x50

5x5 / 7x7



Further information: [WWW.SCHMALZ.COM/AP-R](http://WWW.SCHMALZ.COM/AP-R)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
AP-R](http://WWW.SCHMALZ.COM/AP-R)

# Mechanical Clamps VCMC-R-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Suitability for Industry Specific Applications



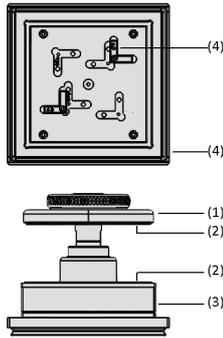
Mechanical Clamps VCMC-R-QUICK

## Applications

- Mechanical clamping system for CNC machining centers with vacuum grid table, suitable for all common grid geometries
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- For setup, the clamp is positioned in the grid with mounting brackets and the clamping height is adapted to the workpiece with the tool-free quick adjustment
- Fixing the clamp and clamping the workpiece by activating the vacuum on the machine table

## Design

- Triangular clamping disc (1) can be adjusted without tools in clamping height and support surface on the workpiece
- The clamping disc is lowered via the piston by activating the vacuum and clamps the workpiece
- Friction material (2) for optimizing lateral force absorption
- Main body (3) made of aluminum with interface to the grid table with mounting brackets and sealing frame (4)



System Design Mechanical Clamps VCMC-R-QUICK

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest setup times
- Clamping forces up to 700 N guarantee high holding forces even on narrow workpieces
- No additional medium required on the machine, as the clamping device is activated by the operating vacuum of the CNC machining center
- Special friction materials on the clamping plate and clamping surface ensure that the workpiece is held securely even with high machining forces



Mechanical clamps VCMC-R-QUICK for clamping of frame parts

# Mechanical Clamps VCMC-R-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Designation Code Mechanical Clamps VCMC-R-QUICK

VCMC-R	–	QUICK	–	150x130	–	x100	–	30/40
1		2		3		4		5

### 1 – Abbreviated designation

Code	Type
VCMC-R	Mechanical clamp, grid table system

### 2 – Design

Code	Type
QUICK	With tool-free height adjustment

### 3 – Dimensions

Code	LxW in mm
150x130...	150x130 to
160x160	160x160

### 4 – Clamping height

Code	H in mm
x45...x100	45 to 100

### 5 – Grid dimensions

Code	Grid dimension in mm
30/40	30x30 and 40x40
30/40/50	30x30 and 40x40 and 50x50

The mechanical clamp VCMC-R-QUICK is delivered assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Sealing frame and mounting bracket

Available spare parts: clamping disc, sealing frame, mounting bracket

Available accessories: clamping range extension



## Ordering Data Mechanical Clamps VCMC-R-QUICK

Type	Part no.
VCMC-R-QUICK 150x130x100 30/40	10.01.12.04612
VCMC-R-QUICK 160x160x45 30/40/50	10.01.12.04763



## Ordering Data Spare Parts Mechanical Clamps VCMC-R-QUICK

Type	Spare Parts	Part no.
VCMC-R-QUICK 150x130x100 30/40	Clamping disc	SPAN-TELL 110 EXZ VCMC 10.01.12.04239
VCMC-R-QUICK 160x160x45 30/40/50	Clamping disc	SPAN-TELL 128x30 EXZ VCMC 10.01.12.04740

Type	Spare Parts	Part no.
VCMC-R-QUICK 160x160x45 30/40/50	Sealing frame	ISDR 150x150x13.5 R 30/50 10.01.15.00352

Spare Parts	Part no.
Sealing frame	ISDR 120x120x13.5 R 30/40 10.01.15.00353
Locking angle and screws	ERS VCBL-R Winkel 10.01.12.02691



# Mechanical Clamps VCMC-R-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



## Ordering Data Accessories Mechanical Clamps VCMC-R-QUICK

Type	Accessories	Part no.
VCMC-R-QUICK 160x160x45 30/40/50	Extension with hexagon	VRL-S M20x1x40.3
		10.01.12.04374



## Technical Data Mechanical Clamps VCMC-R-QUICK

Type	Clamping range [mm]
VCMC-R-QUICK 150x130x100 30/40	10.0 ... 100.0
VCMC-R-QUICK 160x160x45 30/40/50	15.0 ... 85.0



Further information: [WWW.SCHMALZ.COM/VCMC-R-QUICK](http://WWW.SCHMALZ.COM/VCMC-R-QUICK)



Spare parts and accessories



Technical data



Design and CAD data



Documentation



Multimedia



[WWW.SCHMALZ.COM/VCMC-R-QUICK](http://WWW.SCHMALZ.COM/VCMC-R-QUICK)



# Vacuum Blocks VCBL-G-K1

Height 30 mm



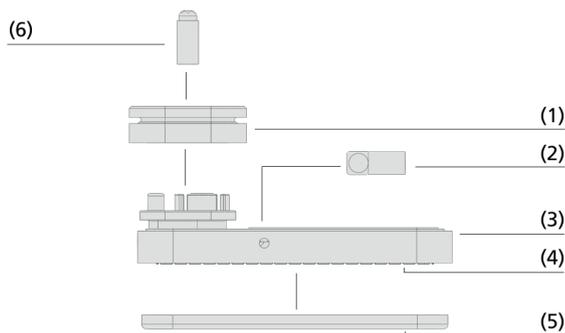
## Suitability for Industry Specific Applications



### Applications

- Vacuum blocks for use directly on the MDF wear plate of a nesting machine table
- The vacuum blocks are supplied with vacuum via hoses that are connected to the template connection of the machine
- The low working height of 30 mm makes it ideal for 3-axis machining centers with low Z-values
- All vacuum blocks are equipped with a touch valve for activating the vacuum only after contacting the workpiece to preserve the workpiece surface

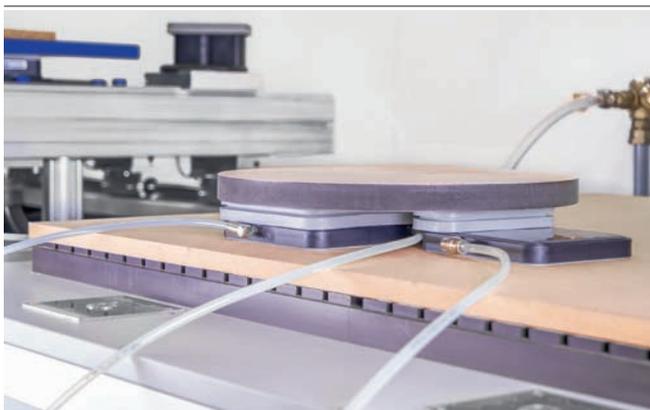
Vacuum Blocks VCBL-G-K1



### Design

- Top suction plate (1) for fixing the workpiece
- Hose connection (2) with M5 internal thread for connection to the template connection of the CNC machine
- Robust main body (3) made of aluminum
- Special friction pad on the bottom (4)
- Replaceable foam rubber seal (5) for applying suction to the MDF sheet
- Touch valve (6) made of soft plastic

System Design Vacuum Blocks VCBL-G-K1



Vacuum blocks VCBL-G-K1 used on an MDF wear plate

### Product Highlights

- Hose connection option allows easy connection to the vacuum supply
- Easy replacement of the suction plate in case of wear
- Friction pad milled to size on the underside optimized for smooth surfaces
- Smooth-running plastic touch valve allows damage-free fixation of the workpiece

# Vacuum Blocks VCBL-G-K1

Height 30 mm



## Designation Code Vacuum Blocks VCBL-G-K1

<b>VCBL-G-K1</b>	–	<b>120x50</b>	–	<b>x30</b>
<b>1</b>		<b>2</b>		<b>3</b>

### 1 – Abbreviated designation

Code	Type
VCBL-G-K1	Vacuum blocks for nesting tables, 1-circuit system

### 2 – Suction area

Code	LxW in mm
120x50...	120x50 and 140x115
140x115	

### 3 – Height

Code	Height in mm
x30	30

The vacuum block VCBL-G-K1 is delivered assembled. The product consists of:

- Suction plate with the dimensions 140x115 mm or 120x50 mm
- Main body made of aluminum
- Friction plate bottom
- Plug union type STV

Available spare parts: suction plate, touch valve, plug union



## Ordering Data Vacuum Blocks VCBL-G-K1

Type	Part no.
VCBL-G-K1 140x115x30	10.01.12.03766
VCBL-G-K1 120x50x30	10.01.12.03776



## Ordering Data Spare Parts Vacuum Blocks VCBL-G-K1

Spare Parts	Part no.
Suction plate (top)   VCSP-O 120x50x15.5	10.01.12.00012
Suction plate (bottom)   VCSP-U 140x115x16.5 VCBL-K1	10.01.12.00228

Spare Parts	Part no.
Touch Valve   TV D9 4.3	10.01.12.02514

Type	Spare Parts	STV-W M5-AG 6	STV-W M5-AG 4
VCBL-G-K1	Plug union, elbow	10.08.02.00235	10.08.02.00155



## Technical Data Vacuum Blocks VCBL-G-K1

Type	Hose type construction
VCBL-G-K1 140x115x30	Hose D = 6 d = 4
VCBL-G-K1 120x50x30	Hose D = 6 d = 4

# Vacuum Blocks VCBL-G-K1

Height 30 mm



Further information: [WWW.SCHMALZ.COM/VCBL-G-K1](http://WWW.SCHMALZ.COM/VCBL-G-K1)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-G-K1](http://WWW.SCHMALZ.COM/VCBL-G-K1)



# Adapter-Plates AP-G

Standard dimensions 130 × 130 mm



## Suitability for Industry Specific Applications

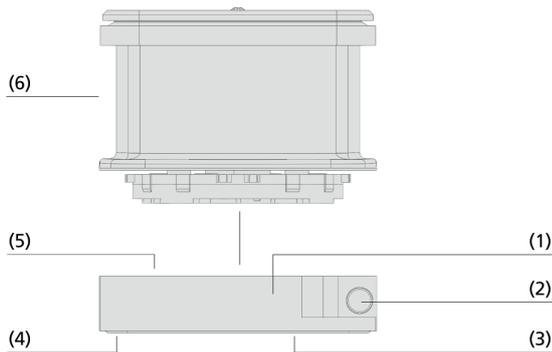


Adapter-Plates AP-G

## Applications

- Adapter-Plate for using vacuum blocks VCBL-B on nesting machine tables
- The Adapter-Plate is supplied with vacuum via a hose that is connected to the template connection of the machine
- Vacuum blocks VCBL-B are placed into the suction cup mount of the Adapter-Plate at any orientation in 15° steps to orient the suction area as desired
- The vacuum blocks are available in three different heights (29, 48 and 74 mm) and four different suction areas

## Design

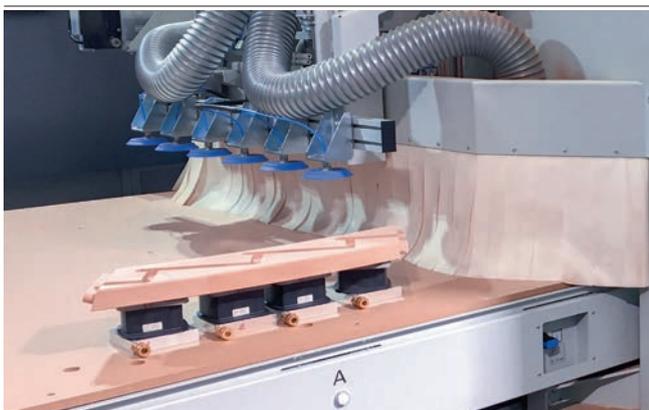


- Robust main body (1) made of aluminum
- Push button (2) for manual blow-off of the Adapter-Plate during positioning
- Special friction pad on the bottom (3)
- Replaceable foam rubber seal (4) for applying suction to the MDF sheet
- Suction cup mount (5) matches vacuum blocks VCBL-B
- Vacuum block VCBL-B (6) are available as accessories

System Design Adapter-Plates AP-G

## Product Highlights

- Modular system of Adapter-Plate and suction cups offers maximum flexibility with short set-up times
- Vacuum blocks of different heights allow several working heights and, depending on the machine, also 5-axis machining
- Friction pad milled to size on the underside optimized for smooth surfaces
- Push-button for manual ventilation of the underside allows quick positioning without switching off the vacuum
- Unused vacuum blocks VCBL-B can remain on the machine table thanks to the touch valve



Adapter-Plates AP-G with vacuum block VCBL-B when clamping a wooden workpiece

# Adapter-Plates AP-G

Standard dimensions 130 × 130 mm



## Designation Code Adapter-Plates AP-G

<b>AP-G</b>	–	<b>145x130x26</b>
1		2

### 1 – Abbreviated designation

Code	Type
AP-G	Adapter-Plate for nesting tables, flat table systems

### 2 – Dimensions

Code	LxWxHeight in mm
145x130x26	145x130x26

The adapter plate AP-G is delivered assembled. The product consists of:

- Main body made of aluminum
- Friction plate bottom

Available accessories: vacuum block, push-in fitting union, screw plug with collar, push-in nipple, compressed air coupling



## Ordering Data Adapter-Plates AP-G

Type	Part no.
AP-G-145x130x26	10.01.12.03876 



## Ordering Data Accessories Adapter-Plates AP-G

Type		Part no.
Vacuum block	VCBL-B 140x130x29 TV	10.01.12.03165 
Vacuum block	VCBL-B 125x75x29 TV	10.01.12.03166 
Vacuum block	VCBL-B 120x50x29 TV	10.01.12.03167 
Vacuum block	VCBL-B 130x30x29 TV	10.01.12.03168 
Vacuum block	VCBL-B 140x130x48 TV	10.01.12.03169 
Vacuum block	VCBL-B 125x75x48 TV	10.01.12.03170 
Vacuum block	VCBL-B 120x50x48 TV	10.01.12.03171 
Vacuum block	VCBL-B 130x30x48 TV	10.01.12.03172 
Vacuum block	VCBL-B 140x130x74 TV	10.01.12.03173 
Vacuum block	VCBL-B 125x75x74 TV	10.01.12.03174 
Vacuum block	VCBL-B 120x50x74 TV	10.01.12.03175 
Vacuum block	VCBL-B 130x30x74 TV	10.01.12.03176 

Type		Part no.
Plug union, elbow	STV-W G1/4-AG 4	10.08.02.00157
Plug union, elbow	STV-W G1/4-AG 6	10.08.02.00159
Plug union, elbow	STV-W G1/4-AG 8	10.08.02.00161
Plug union, elbow	STV-W G1/4-AG 12	10.08.02.00162
Plug union, straight	STV-GE G1/4-AG 10	10.08.02.00251
Sealing screw with collar	VRS-SB G1/4-AG ISKT O-Ring	10.08.06.00044

# Adapter-Plates AP-G

Standard dimensions 130 × 130 mm



## Ordering Data Accessories Adapter-Plates AP-G

Type		Part no.
Plug-in nipple	EINS-NIP G1/4-IG 7.2 MS	10.01.12.04712

Type		Part no.
Pneumatic coupling	DRUC-KUPP D27 G1/4-AG NW7.2	10.01.12.04713



## Further information: [WWW.SCHMALZ.COM/AP-G](http://WWW.SCHMALZ.COM/AP-G)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
AP-G](http://WWW.SCHMALZ.COM/AP-G)





# Clamping Equipment for Flat Table Systems



All products – all information:

[WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY](http://WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY)

Selection Aid

Page



## Design of Flat Table Systems

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### Smooth table systems for wood processing



#### Vacuum Blocks VCBL-G-K2

- 2-circuit vacuum system
- With two hose connections
- Pre-fixation by means of vacuum

Vacuum block VCBL-G-K2 for universal use with any CNC machining center with a flat table.



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#### Mechanical Clamps VCMC-G-QUICK

- Clamping system for vacuum flat tables
- For frames and window profiles
- Pre-fixation by vacuum

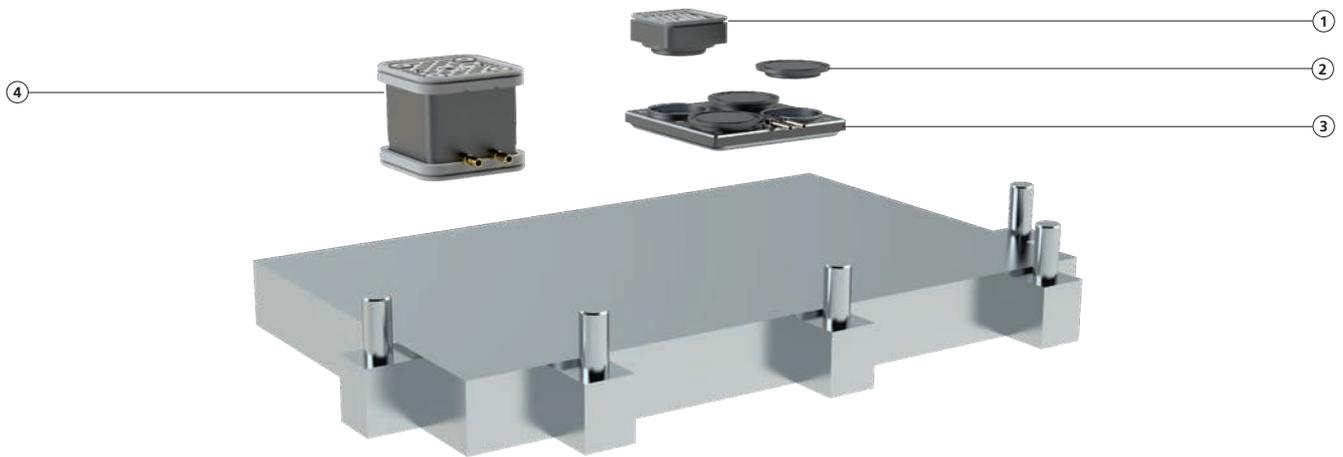
Mechanical clamp VCMC-G-QUICK for universal use on all CNC machining centers with flat table.

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# Selection Aid

## Design of Flat Table Systems for Woodworking



### Innospann system

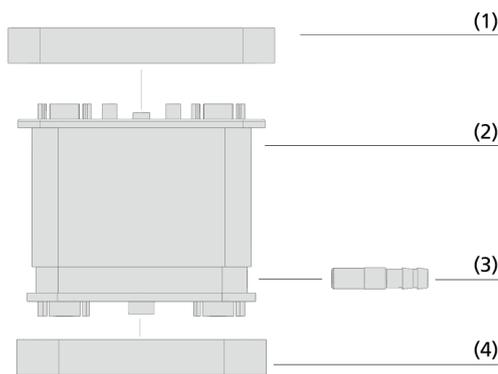
- ① Suction cup ISCUP
- ② Covers for unused mountings
- ③ Quad-Base ISQB-G
- ④ Vacuum blocks VCBL-G

# Vacuum Blocks VCBL-G-K2

Height 100 mm



Vacuum Blocks VCBL-G-K2



System Design Vacuum Blocks VCBL-G-K2



Vacuum blocks VCBL-G-K2 for clamping particle boards

## Suitability for Industry Specific Applications

### Applications

- Universal vacuum clamping system with hose connection for CNC machining centers with flat table (2-circuit system)
- The vacuum block is connected to the machine vacuum supply by two hoses
- One vacuum line (circuit 1) supplies the bottom suction plate for fixing the vacuum block to the machine table, while the second line (circuit 2) supplies the top suction plate for fixing the workpiece to the vacuum block
- Enables damage-free clamping with the highest precision and holding force

### Design

- Top suction plate (1) for fixing the workpiece
- Robust main body (2) made of plastic
- Hose connections (3) for vacuum supply
- Bottom suction plate (4) for fixing the vacuum block on the console

### Product Highlights

- Highest holding forces in wood applications thanks to optimized seals and friction pads
- Highest dimensional accuracy for more precision in the production process
- Wide range of products offers maximum flexibility and enables short set-up times
- Suction plates can be replaced quickly, easily and economically without tools

# Vacuum Blocks VCBL-G-K2

Height 100 mm



## Designation Code Vacuum Blocks VCBL-G-K2

<b>VCBL-G-K2</b>	-	<b>120x120</b>	-	<b>x100</b>	-	<b>ST</b>	-	<b>AS</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

### 1 – Abbreviated designation

Code	Type
VCBL-G-K2	Vacuum blocks for flat table systems, 2-circuit console system

### 2 – Suction area

Code	LxW in mm
120x120...	120x120 to 130x30
130x30	

### 3 – Height

Code	Height in mm
x100	100

### 4 – Product addition

Code	Type
ST	With hose sleeves

### 5 – Product addition

Code	Type
AS	With lifting system

The vacuum block VCBL-G-K2 is delivered assembled. The product consists of:

- Top suction plate type VCSP-O - elastomer part, available in various dimensions and suction surfaces
- Main body made of plastic
- Bottom suction plate type VCSP-U - Elastomer part

Available spare parts: suction plate (top), wear part set, sealing frame, friction plate, suction plate (bottom)

Available accessories: hose set, suction plate foam rubber



## Ordering Data Vacuum Blocks VCBL-G-K2

Type				Dimensions (LxW):			
				120x120	125x75	120x50	130x30
VCBL-G-K2	100	ST		10.01.12.00053	10.01.12.00056	10.01.12.00055	10.01.12.00059
VCBL-G-K2	100	ST+AS		10.01.12.00054	-	-	-



## Ordering Data Spare Parts Vacuum Blocks VCBL-G-K2

Type	Spare Parts		Part no.
VCBL-G-K2 120x120x100 ST	Suction plate (top)	VCSP-O 120x120x16.5	10.01.12.00010
VCBL-G-K2 120x120x100 ST+AS	Suction plate (top)	VCSP-O 120x120x16.5	10.01.12.00010
VCBL-G-K2 125x75x100 ST	Suction plate (top)	VCSP-O 125x75x16.5	10.01.12.00011
VCBL-G-K2 120x50x100 ST	Suction plate (top)	VCSP-O 120x50x15.5	10.01.12.00012
VCBL-G-K2 130x30x100 ST	Set of parts subject to wear	VST VCSP	10.01.12.00723

Type	Sealing frame	Friction plate
VCBL-G-K2 130x30	10.01.12.00804	10.01.12.00805

Type	Spare Parts	Part no.
VCBL-G-K2	Suction plate (bottom)	VCSP-U 120x120x16.5 VCBL-G
		10.01.12.00063



# Vacuum Blocks VCBL-G-K2

Height 100 mm



## Ordering Data Accessories Vacuum Blocks VCBL-G-K2

Type	Accessories			Part no.
VCBL-G-K2	Accessories-clamping systems	2 x 1.5m hose with connectors	ZUB VCBL-G	10.01.12.00203

Type	Accessories			Part no.
VCBL-G-K2	125x75	Suction plate (top)	Foam rubber suction plate VCSP-O 125x75x17.7 MOS	10.01.12.03511



Further information: [WWW.SCHMALZ.COM/VCBL-G-K2](http://WWW.SCHMALZ.COM/VCBL-G-K2)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



Multimedia



[WWW.SCHMALZ.COM/  
VCBL-G-K2](http://WWW.SCHMALZ.COM/VCBL-G-K2)

# Mechanical Clamps VCMC-G-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment



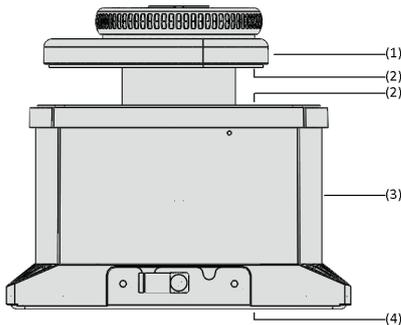
## Suitability for Industry Specific Applications



Mechanical Clamps VCMC-G-QUICK

## Applications

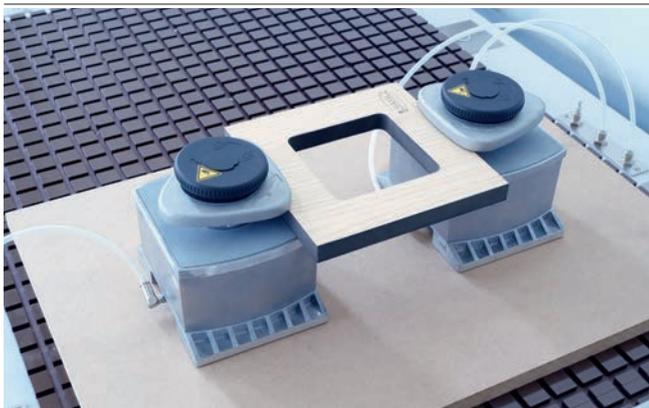
- Mechanical clamping system for CNC machining machines with flat table system
- Particularly suitable for narrow and curved workpieces such as frame parts and window profiles
- Set-up is efficient, safe and tool-free; the clamp is fixed to the machine table by vacuum
- Tool-free adjustment of the clamping height to the workpiece within seconds
- Clamping of the workpiece by activating the vacuum on the machine table



System Design Mechanical Clamps VCMC-G-QUICK

## Design

- Triangular clamping disc (1) is adjustable in clamping height and contact surface on the workpiece without tools and is lowered by activating the vacuum
- Friction material (2) for optimizing lateral force absorption
- Main body (3) made of aluminum with hose connections for connecting the vacuum
- Changeable sealing frame as interface (4) to the flat table for fixing the clamp by vacuum



Mechanical clamps VCMC-G-QUICK for clamping of frame parts

## Product Highlights

- Triangular clamping disc with tool-free quick adjustment enables shortest set-up times
- Clamping force of 700 N ensures safe clamping even with narrow workpieces
- No additional medium required, as the clamp can be activated via operating vacuum of the CNC machining centre
- Special friction materials on the clamping disc and clamping surface ensure a secure hold even with high machining forces
- Can be used for a wide range of workpieces thanks to its very large clamping range

# Mechanical Clamps VCMC-G-QUICK

Clamping range 10 mm to 100 mm · With quick adjustment

## Designation Code Mechanical Clamps VCMC-G-QUICK

VCMC-G	–	QUICK	–	170x135	–	x100	–	10-100
1		2		3		4		5

**1** – Abbreviated designation

Code	Type
VCMC-G	Mechanical clamp, flat table system

**2** – Design

Code	Type
QUICK	With tool-free height adjustment

**3** – Dimensions

Code	LxW in mm
170x135	170x135

**4** – Clamping height

Code	H in mm
x100	100

**5** – Clamping range

Code	Clamping range in mm
10-100	10-100

The mechanical clamp VCMC-G-QUICK is delivered completely assembled. The product consists of:

- Clamping disc with quick adjustment
- Main body made of aluminum
- Sealing frame

Available spare parts: clamping disc, sealing frame

## Ordering Data Mechanical Clamps VCMC-G-QUICK

Type	Part no.
VCMC-G-QUICK 170x135x100 10-100	10.01.12.04759

## Ordering Data Spare Parts Mechanical Clamps VCMC-G-QUICK

Spare Parts	Part no.
Clamping disc	SPAN-TELL 110 EXZ VCMC 10.01.12.04239
Sealing frame (bottom)	VCDR 166x113x6.6 VCMC-G 10.01.12.04758

## Technical Data Mechanical Clamps VCMC-G-QUICK

Type	Clamping range [mm]
VCMC-G-QUICK 170x135x100 10-100	10.0 ... 100.0

## Further information: [WWW.SCHMALZ.COM/VCMC-G-QUICK](http://WWW.SCHMALZ.COM/VCMC-G-QUICK)



Spare parts and accessories



Technical data



Design and CAD data



Documentation



Multimedia


[WWW.SCHMALZ.COM/VCMC-G-QUICK](http://WWW.SCHMALZ.COM/VCMC-G-QUICK)

# Flexibilization of CNC Machining Centers



All products – all information:

[WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY](http://WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY)



## Retrofitting of the Machine Table Retrofitting Examples

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### Innospann systems for wood processing



#### Innospann Steel-Plate ISST

- Steel-Plate with vacuum openings
- For flexible positioning of clamping equipment from the modular Innospann system

Innospann Steel-Plate for flexible retooling of all machines with flat, grid and console tables to a hose-free vacuum system.



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#### Innospann Clamping Equipment IS CUP/ISMB/ISQB

- Suitable for ISST, ISAP as well as flat and grid tables
- Consisting of suction cup and vacuum block mounting

Modular clamping system for use on Steel-Plate ISST and Adapter-Plates ISAP or directly on smooth and grid tables.



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#### Accessories and Spare Parts

- Suction cups, friction plates, sealing gaskets
- Spacer rings, stops and magnets

Used in combination with the Schmalz Innospann systems.



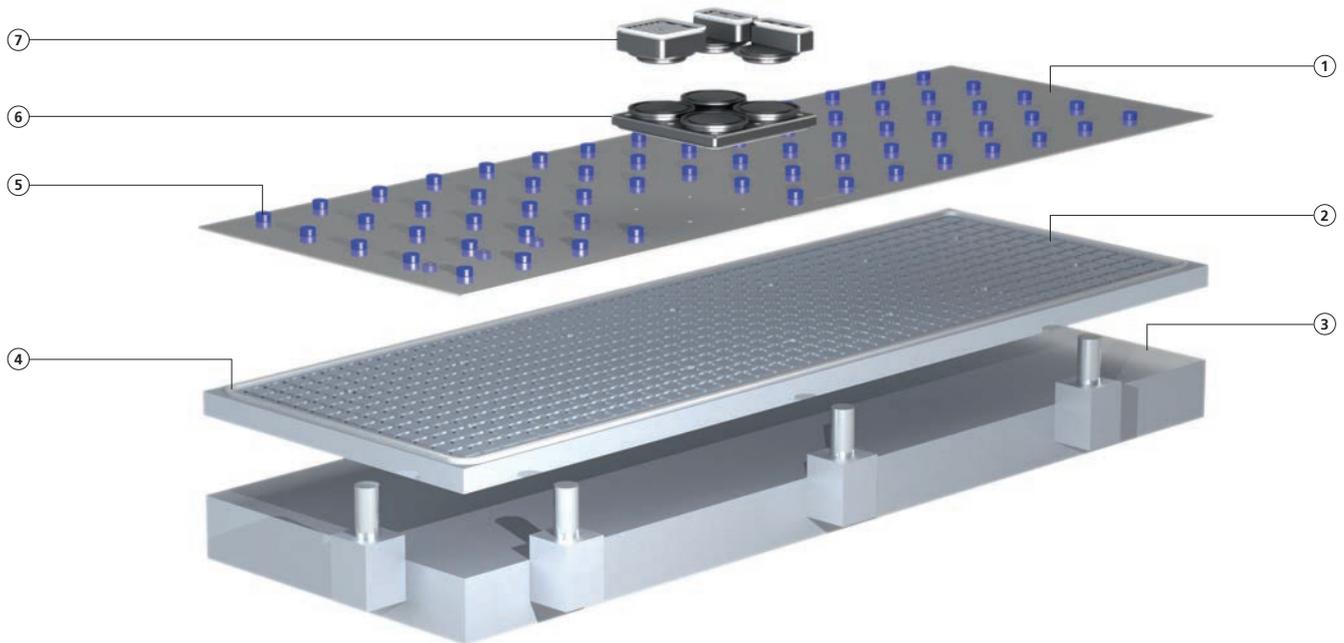
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Schmalz Select preferred product range – Article selection in the product family. Further information: [WWW.SCHMALZ.COM/SELECT](http://WWW.SCHMALZ.COM/SELECT)

# Design of Innospann Systems

## Retrofitting the Machine Table

The machine table is refitted by installing a steel sheet (Steel-Plate) on a grid plate. For grid tables, you can use the existing grids. Flat and console tables require an intermediate plate with a grid. Optionally, you can also mill a grid directly into a flat table. The integrated vacuum line eliminates the hoses. The vacuum blocks can be positioned on the Steel-Plate in any location.



**① Innospann Steel-Plate**

- Made from high-quality stainless steel or galvanized steel
- Integrated vacuum openings
- Laser grid provides orientation during positioning

**② ③ Grid table or grid plate**

- For flat or console tables, the customer must mount a grid plate on the table

**④ Sealing gasket**

**⑤ Sealing magnet**

**⑥ Suction cup mountings**

- Mono-Base for one suction cup
- Quad-Base for up to four suction cups

**⑦ Suction cups**

- Suction cups in various shapes
- Mechanical clamps

## Retrofitting Examples



Innospann Steel-Plate mounted on a console table



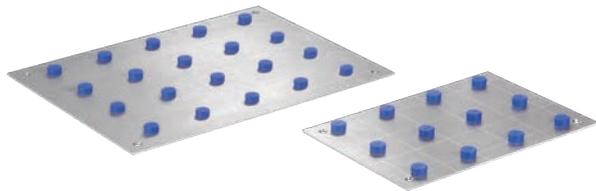
Innospann Steel-Plate mounted on a flat table



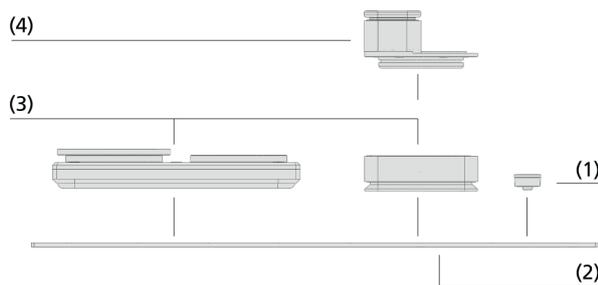
Innospann Steel-Plate mounted on a grid table

# Innospann Steel-Plate ISST

Hole grid measure 75 mm and 150 mm



Innospann Steel-Plate ISST



System Design Innospann Steel-Plate ISST



Innospann Steel-Plate with Mono-Bases and suction cups

## Suitability for Industry Specific Applications

### Applications

- Vacuum clamping system for retrofitting CNC machining centers with flat, grid or console tables
- Facilitates efficient and flexible single piece and small series production especially for the manufacture of furniture
- The suction cup mountings Mono-Base and Quad-Base are fitted with suction cups and can be positioned freely on the Steel-Plate
- A laser grid provides orientation assistance
- Unused vacuum openings can be closed manually using sealing magnets
- Variable total height through various suction cup heights and optional spacer rings

### Design

- Unused vacuum openings can be closed with sealing magnets (1)
- Innospann Steel-Plate (2) made from high-quality stainless or galvanized steel with integrated vacuum openings
- Suction cup mountings (3): Mono-Base or Quad-Base
- Suction cups (4) in various shapes

### Product Highlights

- Can be retrofitted on all common machine types (flat, grid and console tables)
- Two different valve distances allow free positioning of Mono-Bases and Quad-Bases
- Lasered grid as orientation aid for positioning the suction cup
- Flexible use and short set-up times thanks to sealing magnets for uncovered vacuum openings

# Innospann Steel-Plate ISST

Hole grid measure 75 mm and 150 mm

## Designation Code Innospann Steel-Plate ISST

<b>ISST</b>	-	<b>MS</b>	-	<b>variabel</b>	-	<b>75</b>
1		2		3		4

### 1 – Abbreviated designation

Code	Type
ISST	Innospann Steel-Plate

### 2 – Version

Code	Type
MS	Sealing magnet
TVR	Touch ball valve

### 3 – Dimensions

Code	LxWxH in mm
variabel	Variable

### 4 – Valve spacing

Code	Valve spacing in mm
75...150	75 and 150

The Steel-Plate ISST is delivered assembled. The product consists of:

- Stainless steel plate or galvanized steel made to measure with hole pattern and laser grid

Available accessories: sealing magnets

## Ordering Data Innospann Clamping Equipment ISCU/ISMB/ISQB

Type	Dimensions L x W [mm]	Valve spacing [mm]	Part no.
ISST-MS for Mono-Base	Variable	Approx. 75	On request
ISST-MS for Quad-Base	Variable	Approx. 150	On request

## Further information: [WWW.SCHMALZ.COM/ISST](http://WWW.SCHMALZ.COM/ISST)



Spare parts and accessories



Technical data



Design and CAD data



Documentation



Multimedia



[WWW.SCHMALZ.COM/ISST](http://WWW.SCHMALZ.COM/ISST)

Innospann Cup, Mono-Base and Quad-Base



## Suitability for Industry Specific Applications

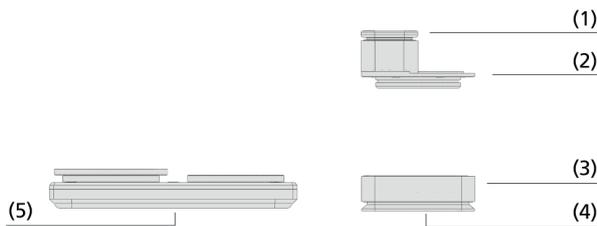


### Applications

- The suction cup mounts Mono-Base ISMB and Quad-Base ISQB are positioned on the Steel-Plate ISST or the Innospann Adapter-Plate ISAP
- Alternatively, the mounts ISQB or ISMB are available for direct adaptation to flat or grid tables
- The suction cups ISCUP are connected to the base and are continuously rotatable in the base
- The suction cups are available in three sizes to ensure maximum flexibility
- Variable total height through various suction cup heights and optional spacer rings

Innospann Clamping Equipment ISMB/ISQB/ISCUP

### Design



- Sealing frame (1) for fixing the workpiece
- Robust main body (2) of the suction cups with suction surfaces in three different sizes and pluggable Innospann connector
- Suction cup mounting Mono-Base (3) for mounting and using individual suction cups
- Sealing frame or foam rubber sealing profile (4) downwards to machine table or Steel-Plate
- Suction cup holder Quad-Base (5) for mounting up to four suction cups

System Design Innospann Clamping Equipment ISMB/ISQB/ISCUP



Innospann Cup and Mono-Base while clamping a wooden workpiece

### Product Highlights

- Flexible use, as bases and suction cups can be freely positioned on Steel-Plate, Adapter-Plate as well as on grid and flat tables
- Modular system enables quick, easy and inexpensive replacement of wearing parts
- Adaptation to the working height with the aid of spacer rings

# Innospann Clamping Equipment IScup/ISMB/ISQB

Innospann Cup, Mono-Base and Quad-Base



## Designation Code Innospann Clamping Equipment IScup/ISMB/ISQB

### Module 1: Suction Cup



#### 1 - Abbreviated designation

Code	Type
IScup	Top part of the suction cups for ISMB and ISQB

#### 2 - Version

Code	Type
CUP 1...4	Cup 1 to 4

#### 3 - Suction area

Code	LxW in mm
100x100...	100x100 to 80x28
80x28	80x28

#### 4 - Height

Code	Height in mm
x16...x30	16 to 30

#### 5 - Product addition

Code	Type
TV	With touch valve

### Module 2: Base



#### 1 - Abbreviated designation

Code	Type
ISMB	Mono-Base for Steel-Plate and Adapter-Plate

#### 2 - Version

Code	Type
-	Steel-Plate-MS
G	Flat table
R	Grid table

#### 3 - Dimensions

Code	LxWxH in mm
80x80x8...	80x80x8 to 80x80x70
80x80x70	
96x96x15...	96x96x15 to 90x90x15
90x90x15	

#### 4 - Grid dimensions

Code	Grid dimension in mm
15/30	15x15 to 30x30
40x40	40x40



#### 1 - Abbreviated designation

Code	Type
ISQB	Quad-Base for Steel-Plate

#### 2 - Version

Code	Type
-	Steel-Plate-MS
G	Flat table
R	Grid table

#### 3 - Dimensions

Code	LxWxH in mm
175x175x22	175x175x22
175x175x15	175x175x15

#### 4 - Grid dimensions

Code	Grid dimension in mm
30/50	30x30 and 50x50

The Innospann modular system can be constructed from two basic modules:

- Innospann Mono-Base ISMB or Innospann Quad-Base ISQB
- Innospann Suction Cup IScup

The different versions of the articles can be freely combined and extended. Cup, base and spacer rings are delivered separately. Available spare parts: see Innospann accessories and spare parts



# Innospann Clamping Equipment ISCUP/ISMB/ISQB

Innospann Cup, Mono-Base and Quad-Base



## Ordering Data Innospann Clamping Equipment ISCUP/ISMB/ISQB

Type		Part no.
Cup	ISCUP Cup 1 80x80x16	10.01.15.00209
Cup	ISCUP Cup 2 80x40x16	10.01.15.00210
Cup	ISCUP Cup 3 80x28x16	10.01.15.00211
Cup	ISCUP Cup 4 100x100x30	10.01.15.00403
Cup	ISCUP Cup 4 100x100x30 TV	10.01.15.00405
Cup	ISCUP Cup 1 80x80x30	10.01.15.00003
Cup	ISCUP Cup 1 80x80x30 TV	10.01.15.00303
Cup	ISCUP 80x80x30 A5	10.01.15.00266
Cup	ISCUP Cup 2 80x40x30	10.01.15.00004
Cup	ISCUP Cup 2 80x40x30 TV	10.01.15.00305
Cup	ISCUP Cup 3 80x28x30	10.01.15.00005

Type		Part no.
Mono-Base	ISMB 80x80x8	10.01.15.00188
Mono-Base	ISMB 80x80x22	10.01.15.00009
Mono-Base	ISMB 80x80x26	10.01.15.00214
Mono-Base	ISMB 80x80x42	10.01.15.00078
Mono-Base	ISMB-G 80x80x55	10.01.15.00128
Mono-Base	ISMB-G 80x80x70	10.01.15.00156
Mono-Base	ISMB-R 96x96x15 15/30	10.01.15.00286
Mono-Base	ISMB-R 90x90x15 40x40	10.01.15.00380

Type		Part no.
Quad-Base	ISQB 175x175x22	10.01.15.00001
Quad-Base	ISQB-G 175x175x22	10.01.15.00007
Quad-Base	ISQB-R 175x175x15 30/50	10.01.15.00183



Further information: [WWW.SCHMALZ.COM/ISCUP](http://WWW.SCHMALZ.COM/ISCUP)



Spare parts  
and accessories



Technical data



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[WWW.SCHMALZ.COM/ISCUP](http://WWW.SCHMALZ.COM/ISCUP)

Accessories and spare parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



## Suitability for Industry Specific Applications



### Applications

- Suitable accessories and spare parts for Schmalz Innospann systems
- Modular extension and adaptation of the system to workpiece geometry and working height
- Cost-effectiveness increased by working with the Innospann system
- In many cases, wear or damage to the suction cups or other parts does not require replacement of the entire suction cup
- It is often sufficient to replace single components to make the vacuum system operational again

Accessories and Spare Parts

### Design

- Sealing frame and friction plates for high lateral forces and good sealing properties
- Spacer rings for various working heights
- Suction cups with foam rubber seals
- Replacement magnets for Steel-Plate vacuum openings

### Product Highlights

- Low costs for spare parts, since almost every part of the suction cup system can be replaced
- Maximum flexibility and reduction of set-up times thanks to suction cups in various geometries
- Adjustment to the working height by means of spacer rings enables use on almost any CNC machining center



## Ordering Data Accessories and Spare Parts

Type		Part no.
Spacer ring, Innospann	ISZR-V 80x15	10.01.15.00052
Spacer ring, Innospann	ISZR-V 80x20	10.01.15.00053
Spacer ring, Innospann	ISZR-V 80x40	10.01.15.00073
Spacer ring, Innospann	ISZR-V 80x45	10.01.15.00054
Spacer ring, Innospann	ISZR-V 80x48	10.01.15.00055

Type		Part no.
Sealing frame	ISDR 81x81x12 Cup 1 NK-50	10.01.15.00020
Sealing frame	ISDR 81x43x12 Cup 2 NK-50	10.01.15.00021
Sealing frame	ISDR 81x31x12 Cup 3 NK-50	10.01.15.00022
Sealing frame	ISDR 100x100x12 Cup 4	10.01.15.00404
Sealing frame	ISDR 167x167x9.3 NBR-55	10.01.15.00182

# Accessories and Spare Parts

Accessories and spare parts ISMST, ISRPL, ISDR, DI-PROF, ISZR-V, VCMV, SIEB, TV



## Ordering Data Accessories and Spare Parts

Type		Part no.
Friction plate	ISRPL 66x14x8.5	10.01.15.00019
Friction plate	ISRPL 66x26x8.5	10.01.15.00018
Friction plate	ISRPL 66x66x8.5	10.01.15.00017
Friction plate	ISRPL 66x66x8.5 NK-45 d12	10.01.15.00343
Friction plate	ISRPL 66x26x8.5 NK-45 d12	10.01.15.00344
Friction plate	ISRPL 86x86x8.7 NBR-55 d5	10.01.15.00402

Type		Part no.
Sealing magnet	ISMST 19-7 4ISMST	10.01.14.00847
Mono-Base	ISMB 80x80x61	10.01.15.00414
Sealing profile (meter)	DI-PROF 4x10 MOS EPDM HR	10.01.15.00062
Magnetic valve	VCMV 3 25	10.01.15.00133
Touch Valve	TV D9 4.3	10.01.12.02514
Touch Valve	TV D11 4.3	10.01.15.00347
Sieve, round	SIEB 11x1 MS-A2 100	10.07.01.00085
Cover	ABDK 80x4 ISQB	10.01.15.00083



Further information: [WWW.SCHMALZ.COM/ISZR](http://WWW.SCHMALZ.COM/ISZR)



Spare parts  
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Technical data



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[WWW.SCHMALZ.COM/ISZR](http://WWW.SCHMALZ.COM/ISZR)



# Clamping Equipment for Manual Work



All products – all information:

[WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY](http://WWW.SCHMALZ.COM/CLAMPING-TECHNOLOGY)

## Clamping solutions for manual work

Page

**Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV**

- Suction plate for direct fixing on the workbench
- Internal or external vacuum generation available

Simple, universal clamping solution for holding workpieces for manual machining or assembly.



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**Multi-Clamp System VC-M / VC-M-V**

- System consists of suction plate and rotation/swiveling unit Multi-Base
- Internal or external vacuum supply possible

Vacuum clamping system Multi-Clamp universally applicable for fixing workpieces for manual processing.



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**Multi-Clamp Vacuum Pump VC-M-PU**

- Portable electrical vacuum pump
- Ready to connect to the AC power supply

The Multi-Clamp vacuum pump VC-M-PU is designed especially for mobile use with the vacuum clamping system Multi-Clamp.

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 Schmalz Select preferred product range – Article selection in the product family. Further information: [WWW.SCHMALZ.COM/SELECT](http://WWW.SCHMALZ.COM/SELECT)

# Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Suction area (L x W) 160 x 160 mm



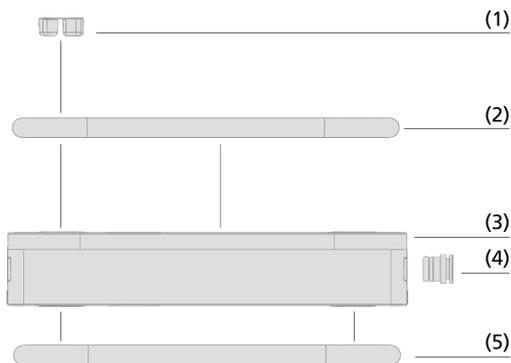
## Suitability for Industry Specific Applications



### Applications

- Multi-Clamp suction plate for clamping small and medium-size workpieces for manual processing or mounting
- The bottom suction area fixes the suction plate to the workbench, while the vacuum on the top side fixes the workpiece
- Version VC-M-SP with integrated vacuum generation through the Venturi principle (can be operated on any conventional compressed air supply)
- Version VC-M-SPV with connection for external vacuum pump for independent use at any location

Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



### Design

- Friction pads (1) for increasing the lateral force absorption
- Top sealing profile (2) for fixing the workpiece
- Robust main body (3) made of plastic
- Compressed air or vacuum inlet (4) based on the design
- Downward sealing profile (5) for fixing the suction plate to the workbench

System Design Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



Multi-Clamp suction plate VC-M-SP for manual processing of wooden workpieces

### Product Highlights

- More gentle on the workpiece than conventional clamping systems thanks to soft friction and sealing materials
- Integrated vacuum generation in version VC-M-SP makes additional vacuum pump unnecessary
- Ready for immediate use, universally applicable and easy to operate

# Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Suction area (L × W) 160 × 160 mm



## Designation Code Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

<b>VC-M-SPV</b>	–	<b>160x160x30</b>
1		2

### 1 – Abbreviated designation

Code	Type
VC-M-SP	Multi-Clamp suction plate, integrated vacuum generation
VC-M-SPV	Multi-Clamp suction plate, external vacuum generation

### 2 – Dimensions

Code	LxWxHeight in mm
160x160x30	160x160x30

The Multi-Clamp suction plate is supplied in individual parts. The delivery consists of:

- Suction plate with mounted seal
- Manually operated valve
- Vacuum hose

Available spare parts: sealing profile, friction insert

Available accessories: accessory set for operating two suction plates with one pump or one ejector



## Ordering Data Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Part no.
VC-M-SP 160x160x30	10.01.12.01836 
VC-M-SPV 160x160x30	10.01.12.01853



## Ordering Data Spare Parts Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Spare Parts	Part no.
Sealing profile (meter)   DI-PROF 8x10.5 MOS EPDM-15	10.01.12.02056
Friction insert   REIB-INS 8.1x18 VC-M	10.01.12.02000



## Ordering Data Accessories Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Accessories	Part no.
VC-M-SP 160x160x30	Operation of two VC-M with one ejector   ZUB VC-M für Ejektorbetrieb	10.01.12.02061
VC-M-SPV 160x160x30	Operation of two VC-M-V with one pump   ZUB VC-M-V	10.01.12.02054



## Technical Data Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV

Type	Weight [g]	Suction rate [m³/h]	Air consumption [l/min]
VC-M-SP 160x160x30	875	3	48
VC-M-SPV 160x160x30	896	3	-

# Multi-Clamp Suction Plates VC-M-SP / VC-M-SPV



Suction area (L x W) 160 x 160 mm



Further information: [WWW.SCHMALZ.COM/VC-M-SP](http://WWW.SCHMALZ.COM/VC-M-SP)



Spare parts  
and accessories



Technical data



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Documentation



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[WWW.SCHMALZ.COM/  
VC-M-SP](http://WWW.SCHMALZ.COM/VC-M-SP)



# Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate



## Suitability for Industry Specific Applications

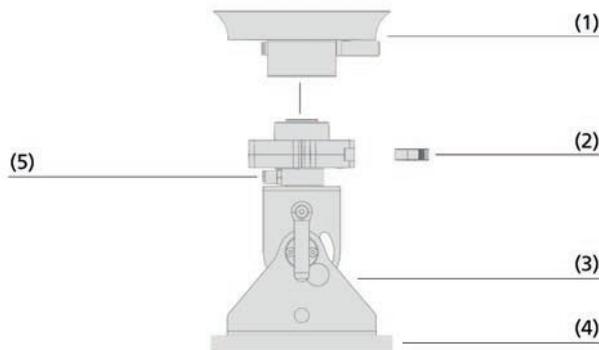


Multi-Clamp System VC-M / VC-M-V

## Applications

- Effortless clamping of small and medium sized workpieces
- Processing of workpieces from all sides with a continuous rotate and pivot function
- Version VC-M with integrated vacuum generation through the Ventauri principle can be operated on any conventional compressed air supply
- Version VC-M-V with connection for external vacuum pump for independent use at any location
- VC-M-V can be fixed to the table by vacuum, VC-M is fixed mechanically

## Design



- Suction plate (1) can be freely rotated by 360° and continuously swiveled up to 90°, allowing for flexible work from any angle
- Different suction plates are available to suit the application
- Clamping lever (2) for quickly changing the Multi-Clamp suction plate
- Stable main body (3) made of metal
- Fixation on the worktable (4) possible mechanically or via vacuum
- Vacuum generation (5) optionally integrated via compressed air or via external vacuum pump

System Design Multi-Clamp System VC-M / VC-M-V



Multi-Clamp VC-M for manual processing of wooden workpieces

## Product Highlights

- More gentle on the workpiece than conventional clamping systems thanks to soft friction and sealing materials
- Integrated vacuum generation in version VC-M makes additional vacuum pump unnecessary
- Flexible 5-sided machining, as Multi-Base can be rotated continuously (360°) and swivelled (90°)
- Cost-effective stand-alone clamping solution, as the Multi-Clamp suction plate can also be used individually

# Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate

## Designation Code Multi-Clamp System VC-M / VC-M-V

<b>VC-M-V</b>	–	<b>265x170x220.5</b>
<b>1</b>		<b>2</b>

### 1 – Abbreviated designation

Code	Type
VC-M	Clamping system Multi-Clamp, integrated vacuum generation
VC-M-V	Clamping system Multi-Clamp, external vacuum generation

### 2 – Dimensions

Code	LxWxH in mm
165x165x220.5...	165x165x220.5 to
265x170x220.5	265x170x220.5

The Multi-Clamp system is delivered assembled. The product consists of:

- Suction plate with sealing
- Multi-Base with turning and swivelling unit
- Vacuum hose

Available spare parts: friction insert, sealing profile

Available accessories: Multi-Base VC-M-B, Multi-Clamp suction plate VC-M-SP, Multi-Base VC-M-BV,

Multi-Clamp suction plate VC-M-SPV, Multi-Clamp vacuum pump VC-M-PU, foot-operated interrupter FU, accessories

## Ordering Data Multi-Clamp System VC-M / VC-M-V

Type	Part no.
VC-M 165x165x220.5	10.01.12.01845
VC-M-V 265x170x220.5	10.01.12.01852

## Ordering Data Spare Parts Multi-Clamp System VC-M / VC-M-V

Spare Parts	Part no.
Friction insert	REIB-INS 8.1x18 VC-M 10.01.12.02000
Sealing profile (meter)	DI-PROF 8x10.5 MOS EPDM-15 10.01.12.02056

## Ordering Data Accessories Multi-Clamp System VC-M / VC-M-V

Type	Part no.
Multi-Base	VC-M-B 170x165x209 10.01.12.01854
Multi-Clamp - Suction plate	VC-M-SP 200x55 10.01.12.02003
Multi-Clamp - Suction plate	VC-M-SP 210 10.01.12.02002
Multi-Clamp - Suction plate	VC-M-SP 300x100 10.01.12.02052
Multi-Base	VC-M-BV 265x170x209 10.01.12.02050
Multi-Clamp - Suction plate	VC-M-SPV 200x55 10.01.12.02009
Multi-Clamp - Suction plate	VC-M-SPV 210 10.01.12.02008
Multi-Clamp - Suction plate	VC-M-SPV 300x100 10.01.12.02053

## Multi-Clamp System VC-M / VC-M-V

Complete system consisting of the rotation/swiveling unit Multi-Base and a suction plate



### Ordering Data Accessories Multi-Clamp System VC-M / VC-M-V

Type	VC-M-PU 4 110V-AC	VC-M-PU 4 230V-AC	FU 5 3/2 R	FU 7.2 3/2 R
VC-M 165x165x220.5	-	-	-	10.01.12.03565
VC-M-V 265x170x220.5	10.01.12.02051	10.01.12.02040	10.01.12.03036	-

Type	Accessories	Part no.
VC-M 165x165x220.5	Operation of two VC-M with one ejector ZUB VC-M für Ejektorbetrieb	10.01.12.02061
VC-M-V 265x170x220.5	Operation of two VC-M-V with one pump ZUB VC-M-V	10.01.12.02054



### Technical Data Multi-Clamp System VC-M / VC-M-V

Type	Weight [g]	Air consumption [l/min]	Suction rate [m <sup>3</sup> /h]
VC-M 165x165x220.5	5,762	48	3
VC-M-V 265x170x220.5	5,450	-	3



Further information: [WWW.SCHMALZ.COM/VC-M](http://WWW.SCHMALZ.COM/VC-M)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation



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[WWW.SCHMALZ.COM/VC-M](http://WWW.SCHMALZ.COM/VC-M)

# Multi-Clamp Vacuum Pump VC-M-PU

Suction rate of 4.1 m<sup>3</sup>/h



## Suitability for Industry Specific Applications



### Applications

- Portable vacuum pump for use in combination with the Schmalz Multi-Clamp
- Thanks to its compact and solid design and its power, the pump is suitable for a multitude of additional applications
- Plug-and-play solution thanks to vacuum connection via quick-connect coupling and AC power supply

Multi-Clamp Vacuum Pump VC-M-PU

### Design

- Dry-running, oil-free vacuum pump
- Ready-to-connect design with quick-connect coupling (ND 5 mm) and AC plug
- Integrated easy-to-clean filter

### Product Highlights

- Powerful, dry-running vacuum pump suitable for a variety of applications
- Integrated manometer enables quick reading of the vacuum level
- Integrated cable drum avoids loose cables hanging around
- Ergonomic design optimized for mobile use on the construction site

# Multi-Clamp Vacuum Pump VC-M-PU

Suction rate of 4.1 m<sup>3</sup>/h



## Designation Code Multi-Clamp Vacuum Pump VC-M-PU

VC-M-PU	–	4	–	110V-AC
1		2		3

### 1 – Abbreviated designation

Code	Type
VC-M-PU	Multi-Clamp vacuum pump

### 2 – Performance class

Code	Suction capacity in m <sup>3</sup> /h
4	4

### 3 – Supply voltage

Code	Type
110V-AC	110 Volt single-phase
230V-AC	230 Volt single-phase

The Multi-Clamp vacuum pump is delivered assembled. The product consists of:

- Dry-running vacuum pump
- Housing with integrated cable drum and vacuum manometer

Available accessories: foot interrupter, accessory set for operation of two VC-M-V with one pump



## Ordering Data Multi-Clamp Vacuum Pump VC-M-PU

Type	Part no.
VC-M-PU 4 110V-AC	10.01.12.02051
VC-M-PU 4 230V-AC	10.01.12.02040



## Ordering Data Accessories Multi-Clamp Vacuum Pump VC-M-PU

Type	Part no.		
Foot-operated interrupter	with catch	FU 5 3/2 R	10.01.12.03036
Accessories	Operation of two VC-M-V with one pump	ZUB VC-M-V	10.01.12.02054



## Technical Data Multi-Clamp Vacuum Pump VC-M-PU

Type	Rated power 50 Hz [kW]	Rated power 60 Hz [kW]	Protection type IP	Suction rate (50 Hz) [m <sup>3</sup> /h]	Suction rate (60 Hz) [m <sup>3</sup> /h]	Voltage 50 Hz	Voltage 60 Hz	Weight [kg]
VC-M-PU 4 110V-AC	0.18	0.22	IP 54	4.1	4.1	-	110V-AC	8.5
VC-M-PU 4 230V-AC	0.18	0.22	IP 54	4.1	4.1	230V-AC	-	8.5

# Multi-Clamp Vacuum Pump VC-M-PU

Suction rate of 4.1 m<sup>3</sup>/h



Further information: [WWW.SCHMALZ.COM/VC-M-PU](http://WWW.SCHMALZ.COM/VC-M-PU)



Spare parts  
and accessories



Technical data



Design and CAD  
data



Documentation

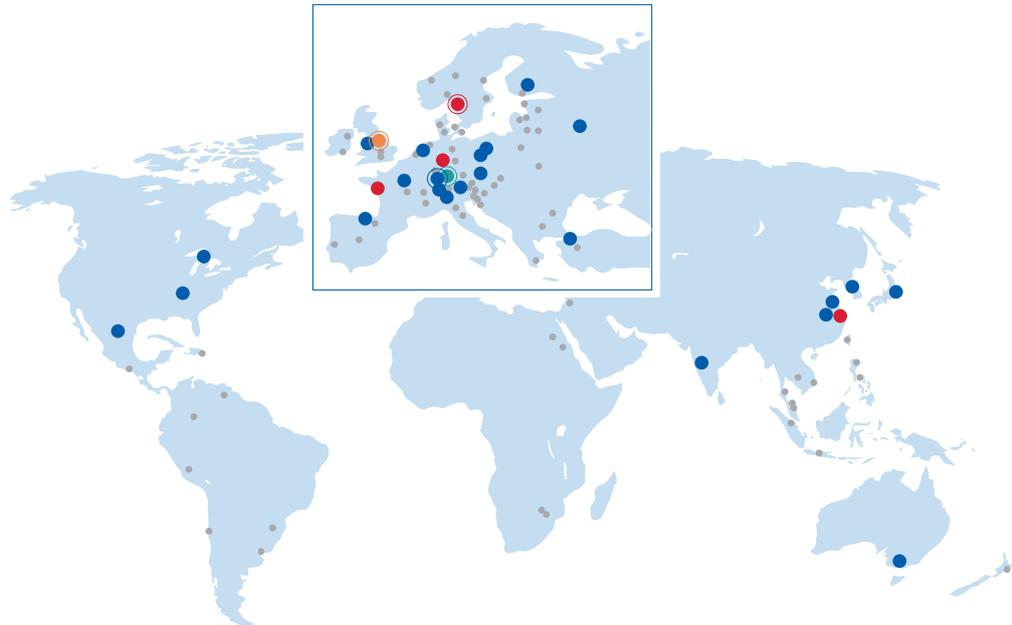


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[WWW.SCHMALZ.COM/  
VC-M-PU](http://WWW.SCHMALZ.COM/VC-M-PU)





**GERMANY**

J. Schmalz GmbH  
 Johannes-Schmalz-Str. 1  
 72293 Glatten  
 T: +49 7443 2403-0  
 F: +49 7443 2403-259  
 schmalz@schmalz.de

**AUSTRALA**

Schmalz Australia Pty. Ltd.  
 25 Turbo Drive  
 Bayswater North VIC 3153  
 T: +61 3 9215 8800  
 F: +61 3 9720 7879  
 schmalz@schmalz.com.au

**AUSTRIA**

Schmalz GmbH  
 Commerz Park West 1  
 4061 Pasching  
 T: +43 7229 / 24 24 4  
 schmalz@schmalz.at

**CANADA**

Schmalz Vacuum Technology Ltd.  
 14-2900 Argentia Rd.  
 L5N 7X9 Mississauga, Ontario  
 T: +1 905 569 9520  
 F: +1 905 569 8256

**CHINA**

Schmalz (China) Co., Ltd.  
 No. 60, West Dalian Road,  
 Taicang City, Jiangsu Province  
 215400  
 T: +86 512 5376 0001  
 schmalz@schmalz.net.cn

**CZECH REPUBLIC**

Schmalz  
 Družstevní 2169  
 75301 Hranice  
 T: +420 581 621 021  
 ales.havranek@schmalz.cz

**FINLAND**

Oy Schmalz Ab  
 Taivaltie 5  
 01380 VANTAA  
 T: +358 10 2312011  
 F: +358 9 85746 94  
 schmalz@schmalz.fi

**FRANCE**

Schmalz S.A.S.  
 Le Prométhée  
 65, Avenue du Général de Gaulle  
 77420 Champs-sur-Marne  
 T: +33 1 6473 1730  
 F: +33 1 6006 6371  
 schmalz@schmalz.fr

**INDIA**

Schmalz India Pvt. Ltd.  
 EL – 38 'J' Block  
 M.I.D.C., Bhosari  
 Pune - 411026  
 T: +91 20 691155-00  
 schmalz@schmalz.co.in

**ITALY**

Schmalz S.r.l.  
 Via Ticino 105  
 28066 Galliate (NO)  
 T: +39 0321 621 510  
 F: +39 0321 621 714  
 schmalz@schmalz.it

**JAPAN**

Schmalz K.K.  
 3001-7 Odana-cho  
 Tsuzuki-ku  
 224-0027 Yokohama  
 T: +81 45 565 5150  
 F: +81 45 565 5151  
 schmalz@schmalz.co.jp

**MEXICO**

Pirineos 500, Bodega 18  
 Parque Industrial Benito Juarez  
 Micro Parque Santiago II, 76120  
 Querétaro, Querétaro  
 Estado de México  
 T: +52 442 209-5218  
 schmalz@schmalz.com.mx

**NETHERLANDS**

Schmalz B.V.  
 Generatorstraat 34  
 7556 RC Hengelo  
 T: +31 74 25557 57  
 F: +31 74 25557 58  
 schmalz@schmalz.nl

**POLAND**

Schmalz Sp.z.o.o.  
 ul. Fabianowska 131/A1  
 62-052 Komorniki  
 T: +48 61 628 67 70  
 schmalz@schmalz.pl

**RUSSIA**

OOO Schmalz  
 Mozhayskoe highway 165, bldg 1  
 121596, Moskau  
 T: +7 495 96712 48  
 F: +7 495 96712 49  
 schmalz@schmalz.ru

**SOUTH KOREA**

#503~507, 118  
 LS-ro 116Beon-gil  
 Dongan-gu, Anyang-si,  
 Gyeonggi-do, 14118  
 T: +82 31 816 2403  
 F: +82 31 816 2404  
 schmalz@schmalz.co.kr

**SPAIN**

Schmalz S.A.  
 Avda. Ribera de Axpe. 49  
 P.A.E. UDONDO-Edificio B-Nave 2  
 48950 Erandio (Vizcaya)  
 T: +34 94 480 5585  
 F: +34 94 480 7264  
 schmalz@schmalz.es

**SWITZERLAND**

Schmalz GmbH  
 Eigentalstrasse 1  
 8309 Nürensdorf  
 T: +41 44 555 05 05  
 schmalz@schmalz.ch

**TURKEY**

Schmalz Vakum San. ve Tic. Ltd. Şti.  
 Aydınlı Mah. Patlayıcı Maddeler Yolu  
 Dumankaya Botanik A-89  
 34953 - TUZLA - ISTANBUL  
 T: +90 216 34001 21  
 F: +90 216 34001 24  
 schmalz@schmalz.com.tr

**UNITED STATES**

Schmalz Inc.  
 5850 Oak Forest Drive  
 Raleigh, NC 27616  
 T: +1 919 71308 80  
 F: +1 919 71308 83  
 schmalz@schmalz.us

**UNITED KINGDOM**

Schmalz UK Limited  
 Unit 2 Woodrow Business Centre  
 4 Woodrow Way, Irlam  
 Manchester, M44 6NN  
 T: +44 161 243 4642  
 schmalz@schmalz.co.uk

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VACUUM AUTOMATION  
CLAMPING TECHNOLOGY CATALOG

Time of printing: 04/2023

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Publisher:

**J. Schmalz GmbH**  
Johannes-Schmalz-Str. 1  
72293 Glatten, Germany  
T: +49 7443 2403-0  
[schmalz@schmalz.de](mailto:schmalz@schmalz.de)  
[WWW.SCHMALZ.COM](http://WWW.SCHMALZ.COM)





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**J. Schmalz GmbH**

Johannes-Schmalz-Str. 1  
 72293 Glatten, Germany  
 T: +49 7443 2403-0  
 schmalz@schmalz.de  
 WWW.SCHMALZ.COM



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