



Vacuum Clamping Systems Clamping Solutions for Woodworking



Schmalz

World of Vacuum Technology

Consistent customer orientation and groundbreaking innovations, excellent quality and comprehensive consulting competence make Schmalz the world's leading partner for vacuum technology in automation, handling and clamping applications.

As a company that acts globally and offers innovative products and services, we provide our customers with efficient solutions tailored precisely to their particular applications' requirements. We inspire our customers everywhere where production processes are designed more efficiently through the use of vacuum technology.

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Vacuum Clamping Systems from Schmalz

As a long-term partner of well-known machine manufacturers, Schmalz offers considerable experience and expertise in vacuum clamping technology. Whether initial equipment, retrofit solutions or spare parts – Schmalz offers a large selection of high-quality clamping equipment for your application.

With its versatile vacuum clamping system Multi-Clamp, Schmalz has developed a solution in its program for the manual processing of workpieces, such as sawing, grinding, drilling or screwing.



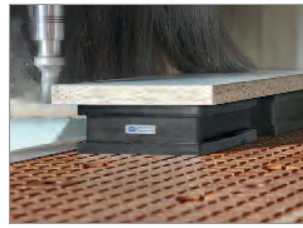
Are you a machine manufacturer or outfitter?

Schmalz supplies complete clamping systems for your vacuum-driven machine table, regardless of manufacturer and individually adapted to your needs. Please contact us: Tel. +49 (0)7443 2403-109, clamping-systems@schmalz.de.



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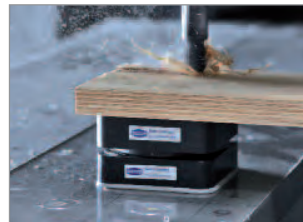


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Contact



Up to 1,500 N suction force
and 900 N horizontal force



Height of the vacuum blocks
accurate up to ± 0.1 mm

Grid Table Systems

For Efficient Five-Axis Processing on
Grid Tables

Schmalz vacuum blocks for grid tables enable simple and flexible use; without complex installation. The non-slip fixings enable secure clamping of the workpieces even with high processing forces. This makes them ideal for complex five-axis applications without a wear plate.

Introduction



Vacuum blocks VC-R (p. 6)

- For all common grid tables
- Fixation via positioning inserts
- Integrated sensing valve
- Height 25 and 45 mm (stackable)



Vacuum blocks VC-B (p. 7)

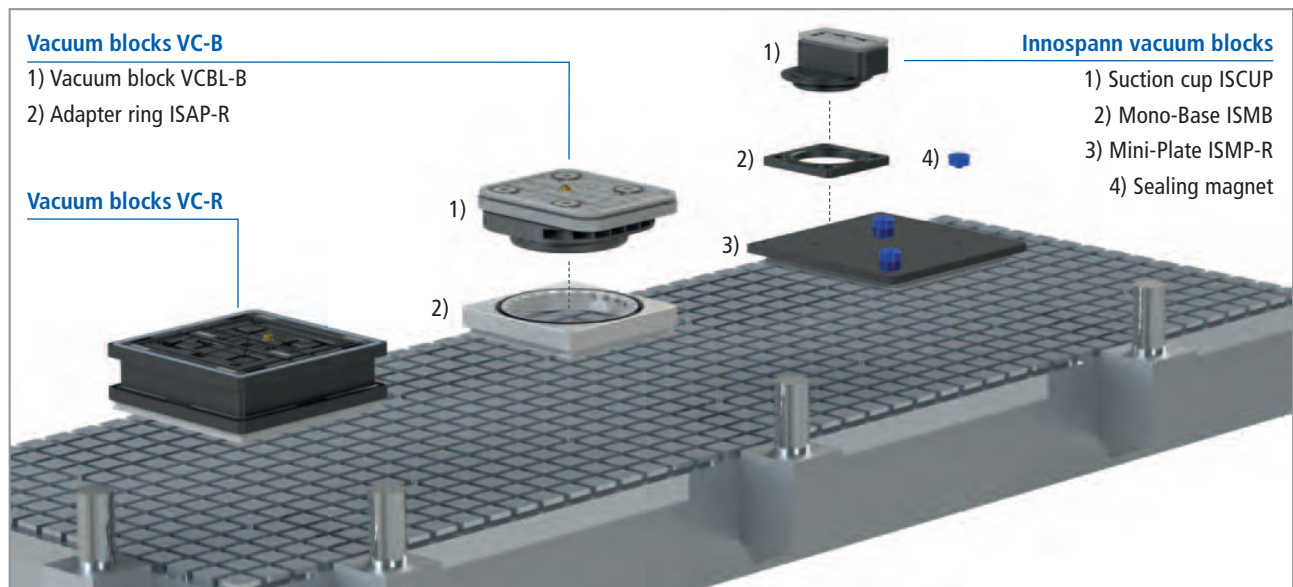
- For all common grid tables
- Requires an adapter ring ISAP-R as vacuum block mounting
- Integrated sensing valve
- Various heights possible



Innospann vacuum blocks for grid tables (p. 8)

- For all common grid tables
- Consisting of a suction cup mounting and a suction cup
- Various heights possible

Design



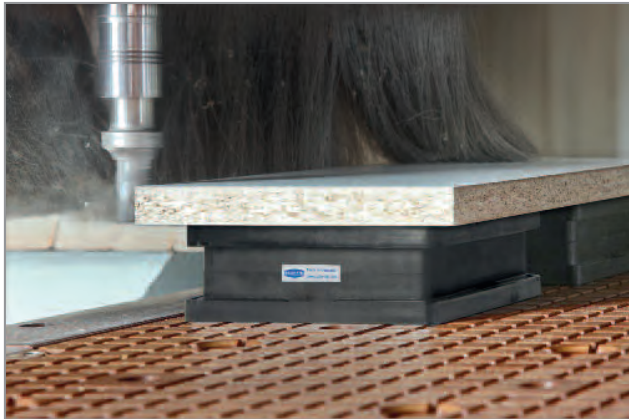
Designation Code

Designation code explained using the example of: VCBL-R 160x160x45 30/50 TV

VCBL-R		160x160x45		30/50	TV
Type	Suction area L x B (length x width)	Height H	Suitable for grid dimensions	Product addition	
VCBL-R Vacuum block for grid tables	160 x 160 mm	45 mm	30 x 30 mm and 50 x 50 mm	TV with sensing valve	
VCBL-B Vacuum block for mounting with adapter ring ISAP-R	from 130 x 30 mm to 160 x 160 mm	from 25 mm to 45 mm	30 x 30 mm 40 x 40 mm 50 x 50 mm		

Vacuum Blocks VC-R and Further Clamping Equipment

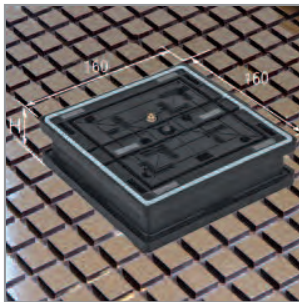
Height 25 mm and 45 mm



Vacuum block VCBL-R for complex five-axis processing

Application

- Vacuum clamping system for CNC machining centers with grid table
- Suitable for all common grid geometries (slot widths 6.5 mm and 7.5 mm, slot depths 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 block VCBL-R 160x160x45 30/50 TV

Vacuum Block VCBL-R 160x160

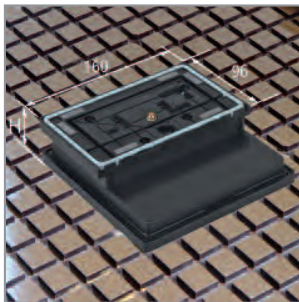
- Plastic vacuum block with positioning insert for all common grid tables
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table
- Heights 25 mm and 45 mm; further heights possible through stacking

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	For grid dimensions [mm]	Part no.
VCBL-R 160x160x45 30/50 TV	160 x 160	45	30 x 30 / 50 x 50	10.01.12.02670
VCBL-R 160x160x45 40 TV	160 x 160	45	40 x 40	10.01.12.02671
VCBL-R 160x160x25 30/50 TV	160 x 160	25	30 x 30 / 50 x 50	10.01.12.02674
VCBL-R 160x160x25 40 TV	160 x 160	25	40 x 40	10.01.12.02675

Ordering data spare parts

Type	Part no.
Spare parts set (4 x positioning inserts, fastening screws)	10.01.12.02691
Spare parts set (seals and friction pad)	10.01.12.02693
Sensing valve TV-4.3	10.01.12.01615



Vacuum block VCBL-R 160x96x45 30/50 TV

Vacuum Block VCBL-R 160x96

- Plastic vacuum block with positioning insert for all common grid tables, suitable for narrow workpieces
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table
- Heights 25 mm and 45 mm; further heights possible through stacking

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	For grid dimensions [mm]	Part no.
VCBL-R 160x96x45 30/50 TV	160 x 96	45	30 x 30 / 50 x 50	10.01.12.02672
VCBL-R 160x96x45 40 TV	160 x 96	45	40 x 40	10.01.12.02673
VCBL-R 160x96x25 30/50 TV	160 x 96	25	30 x 30 / 50 x 50	10.01.12.02676
VCBL-R 160x96x25 40 TV	160 x 96	25	40 x 40	10.01.12.02677

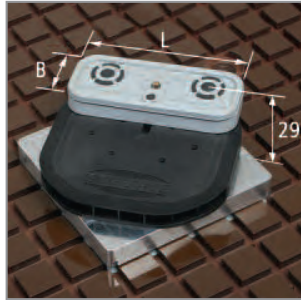
Vacuum Blocks VC-R and Further Clamping Equipment

Height 25 mm and 45 mm

Vacuum Block VCBL-R 160x96

Ordering data spare parts

Type	Part no.
Spare parts set (4 x positioning inserts, fastening screws)	10.01.12.02691
Spare parts set (seals and friction pad)	10.01.12.02693
Sensing valve TV-4.3	10.01.12.01615



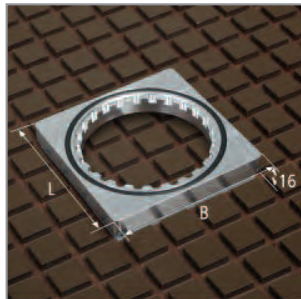
Vacuum block VCBL-B 120x50x29 TV
(shown here with adapter ring)

Vacuum Block VCBL-B

- Plastic vacuum block
- Can only be used with an adapter ring ISAP-R as vacuum block mounting (overall height 45 mm)
- Top suction plate replaceable
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table
- Ordering data spare parts see page 32

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-B 140x115x29 TV	140 x 115	29	10.01.12.01136
VCBL-B 125x75x29 TV	125 x 75	29	10.01.12.01152
VCBL-B 120x50x29 TV	120 x 50	29	10.01.12.01151
VCBL-B 130x30x29 TV	130 x 30	29	10.01.12.01149



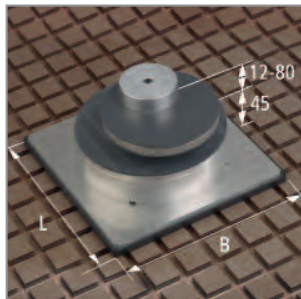
Adapter ring ISAP-R 130x130x16

Adapter Ring ISAP-R for Vacuum Block VCBL-B

- Mounting for vacuum block VCBL-B, suitable for all common grid geometries (slot depths 5 x 5 mm to 7 x 7 mm)
- Vacuum blocks can be rotated at angle steps of 15°

Ordering data adapter ring

Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Part no.
ISAP-R 130x130x16 30/40 5/7	130 x 130 x 16	30 x 30 / 40 x 40	10.01.15.00279
ISAP-R 160x160x16 50 5/7	160 x 160 x 16	50 x 50	10.01.15.00296



Mechanical clamp ISMC-R

Mechanical Clamp ISMC-R

- Aluminum mechanical clamp for narrow and curved workpieces, such as frame parts
- Is placed directly in the grid without an additional adapter ring
- Clamping force 700 N, clamping range from 12 mm to 80 mm

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Stroke [mm]	Part no.
ISMC-R 175x175x45 12-80 30/50	175 x 175 x 45	30 x 30 / 50 x 50	10	10.01.15.00244
ISMC-R 212x212x45 12-80 40	212 x 212 x 45	40 x 40	10	10.01.12.01720

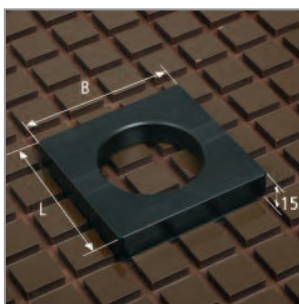


Innospann vacuum blocks for grid tables, freely positionable on the Mini-Plate ISMP-R

Application

- Flexible vacuum clamping system for CNC machining centers with grid table
- Fits all common grid geometries (slot depth 5 x 5 mm to 7 x 7 mm)
- Suitable for complex five-axis processing
- The suction cup mountings are placed directly in the grid and fitted with suction cups in accordance to the workpiece
- Variable total height through various suction cup heights and optional spacer rings

Step 1: Select Suction Cup Mounting

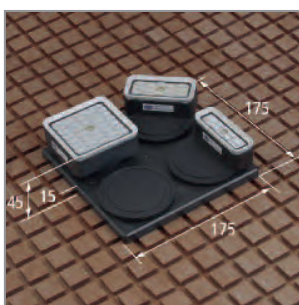


Mono-Base ISMB-R

Mono-Base ISMB-R

- Mounting possibility for a single suction cup
- The suction cups used are continuously rotatable

Ordering data Mono-Base			
Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Part no.
ISMB-R 96x96x15 15/30 5/7	96 x 96 x 15	15 x 15 / 30 x 30	10.01.15.00286
ISMB-R 90x90x15 40x40	90 x 90 x 15	40 x 40	10.01.15.00380
ISMB-R 110x110x15 50x50 5/7	110 x 110 x 15	50 x 50	10.01.15.00372

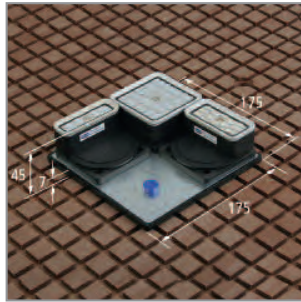


Quad-Base ISQB-R (shown here with suction cups)

Quad-Base ISQB-R

- Mounting possibility for up to four suction cups
- The suction cups used are continuously rotatable
- Includes covers for unused mountings

Ordering data Quad-Base			
Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Part no.
ISQB-R 175x175x15 30/50 5/7	175 x 175 x 15	30 x 30 / 50 x 50	10.01.15.00183



Mini-Plate ISMP-R (shown here with Mono-Bases and suction cups)

Mini-Plate ISMP-R

- Mounting possibility for up to four suction cups
- Mono-Bases ISMB required as suction cup mountings, can be positioned freely on the Mini-Plate
- With workpieces with a larger working surface, multiple Mini-Plates can be placed edge to edge
- Unused vacuum openings are closed with sealing magnets

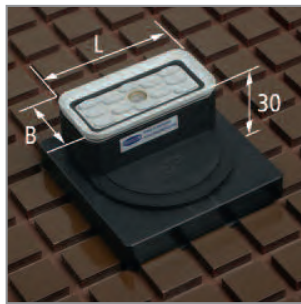
Ordering data Mini-Plate

Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Part no.
ISMP-R 175x175x7 30/50 5/7	175 x 175 x 7	30 x 30 / 50 x 50	10.01.15.00184

Ordering data Mono-Base for Mini-Plate ISMP-R

Type	Dimensions L x B x H [mm]	For grid dimensions [mm]	Part no.
ISMB 80x80x8	80 x 80 x 8	-	10.01.15.00188

Step 2: Select Suction Cup



Suction cup ISCUP Cup 2 80x40x30 (shown here with Mono-Base)

Suction Cups ISCUP

- Plastic suction cup for Innospann suction cup mountings
- Top sealing frame and friction plate replaceable

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005
ISCUP Cup 4 100x100x30*	100 x 100	30	10.01.15.00403

*Only for Mono-Base ISMB-R suction cup mounting

Step 3: Select Accessories and Spare Parts

Accessories and spare parts for Innospann systems are found on page 44.



Up to 850 N suction force and
500 N horizontal force



Height of the vacuum blocks
accurate up to ± 0.06 mm

Flat Table Systems

Quick and Simple Setup on Flat Surfaces

Schmalz clamping solutions enable the quick and uncomplicated setup of CNC machining centers with flat table. First the vacuum blocks and then the workpiece are fixed for machine processing via two independent vacuum circuits. Schmalz provides vacuum blocks with a hose connection for universal flat tables and a hose-free version for flat aluminum tables with an integrated vacuum distribution.



Vacuum blocks VC-G with hose connection (p. 12)

- For flat tables with 2-circuit vacuum system
- Pre-fixation and fixation with vacuum
- Height 100 mm



Innospann vacuum blocks for flat tables with hose connection (p. 14)

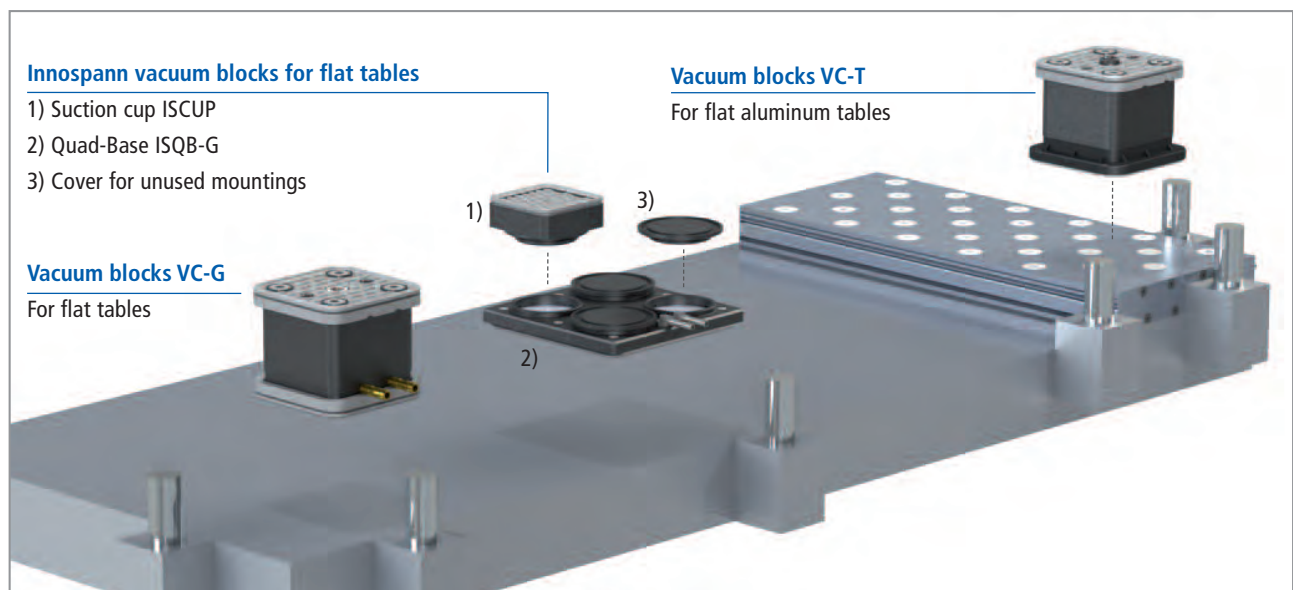
- For flat tables with 2-circuit vacuum system
- Consisting of suction cup and suction cup mounting
- Pre-fixation and fixation with vacuum
- Various heights possible



Vacuum blocks VC-T hose-free (p. 16)

- For flat aluminum tables
- Pre-fixation and fixation with vacuum
- Height 100 mm

Design



Designation Code

Designation code explained using the example of: VCBL-G 120x120x100 AS

VCBL-G		120x120x100		AS	
Type		Suction area L x B (length x width)	Height H	Product addition	
VCBL-G Vacuum block for flat tables		120 x 120 mm	100 mm	AS	with lifting system
VCBL-T Vacuum block for flat aluminum tables		from 130 x 30 mm to 140 x 115 mm	100 mm	SH	with clamping lever

Vacuum Blocks VC-G for Flat Tables

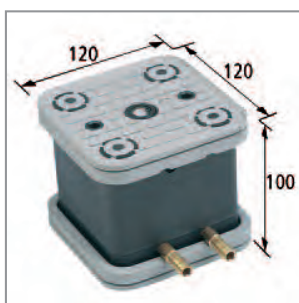
Height 100 mm



Vacuum blocks VC-G

Application

- Universal vacuum clamping system with hose connection for CNC machining centers with flat table (2-circuit system)
- Hose nozzle diameter 10 mm
- Enables damage-free clamping with highest precision and holding force



Vacuum block VCBL-G 120x120x100

Vacuum Block VCBL-G 120x120

- Plastic vacuum block with hose connection
- Top and bottom suction plates replaceable
- Optional lifting system (AS) for easier positioning of the workpiece

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-G 120x120x100	120 x 120	100	10.01.12.00053
VCBL-G 120x120x100 AS	120 x 120	100	10.01.12.00054

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00010
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01341
Bottom suction plate	10.01.12.00063
Wearing parts set for lifting system AS (ball, socket and filter)	10.01.12.00173
Wearing parts set for lifting system AS (complete system)	10.01.12.00554
Hose set (2 x 1.5 m hose)	10.01.12.00203



Vacuum block VCBL-G 125x75x100

Vacuum Block VCBL-G 125x75

- Plastic vacuum block with hose connection
- Top and bottom suction plates replaceable

Ordering data vacuum block

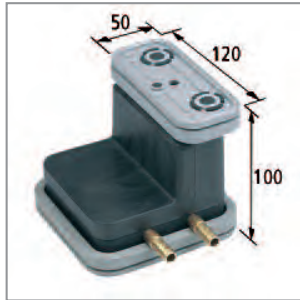
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-G 125x75x100	125 x 75	100	10.01.12.00056

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom suction plate	10.01.12.00063

Vacuum Blocks VC-G for Flat Tables

Height 100 mm



Vacuum block VCBL-G 120x50x100

Vacuum Block VCBL-G 120x50

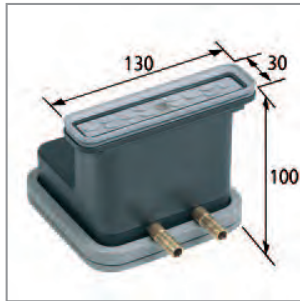
- Plastic vacuum block with hose connection, suitable for narrow workpieces
- Top and bottom suction plates replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-G 120x50x100	120 x 50	100	10.01.12.00055

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Bottom suction plate	10.01.12.00063



Vacuum block VCBL-G 130x30x100

Vacuum Block VCBL-G 130x30

- Plastic vacuum block with hose connection, especially suitable for narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-G 130x30x100	130 x 30	100	10.01.12.00059

Ordering data spare parts

Type	Part no.
Top suction plate (supporting plate, sealing frame and friction plate)	10.01.12.00723
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom suction plate	10.01.12.00063



Vacuum block VCBL-G 140x115x75

Vacuum Block VCBL-G 140x115 for Templates

- Plastic vacuum block with hose connection
- Bottom suction plate replaceable, top suction plate not replaceable
- Top suction plate with two separate suction areas for the use of templates; suction area 1 holds the template, suction area 2 clamps the workpiece onto the template

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-G 140x115x75	140 x 115	75	10.01.12.00875

Ordering data spare parts

Type	Part no.
Bottom sealing frame	10.01.12.00063

Flat Table Systems



Vacuum Blocks VC-G for Flat Tables



Mechanical clamp VCMC-G 154x128

Mechanical Clamp VCMC-G 154x128

- Aluminum mechanical clamp with hose connection (hose outer diameter 8 mm)
- For narrow and curved workpieces, such as frame parts
- Clamping force 700 N

Ordering data mechanical clamp				
Type	Dimensions L x B x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-G 154x128x85 25-100	154 x 128 x 85	25 – 100	25	10.01.12.01995
VCMC-G 154x128x100 10-100	154 x 128 x 100	10 – 100	40	10.01.12.01997

Ordering data spare parts		
Typ	Dimensions Ø x H [mm]	Part no.
Clamping disc, eccentric (standard)	Ø 110 x 25.5	10.01.12.01930
Clamping disc, eccentric (flat)	Ø 110 x 14	10.01.12.01980
Clamping disc, eccentric (high)	Ø 110 x 40.5	10.01.12.01936

www.schmalz.com/vc-g

Further Flat Table Systems

Innospann Vacuum Blocks for Flat Tables



Innospann on a flat table vacuum blocks for clamping frame parts

Application

- Flexible vacuum clamping system with hose connection for CNC machining centers with flat table
- The suction cup mountings Mono-Base and Quad-Base are equipped with two vacuum connections and can be positioned freely on the machine table
- The suction cup mountings are pre-fixed onto the machine table via the vacuum connection
- The second connection is used for the safe and precise clamping of the workpiece
- Variable total height through various suction cup heights and optional spacer rings

Step 1: Select Suction Cup Mounting



Mono-Base ISMB-G

Mono-Base ISMB-G

- Mounting possibility for a single suction cup with hose connection
- The suction cups used are continuously rotatable

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB-G 80x80x55	80 x 80 x 55	10.01.15.00128
ISMB-G 80x80x70	80 x 80 x 70	10.01.15.00156



Quad-Base ISQB-G (shown here with suction cups)

Quad-Base ISQB-G

- Mounting possibility for up to four suction cups, with hose connection
- The suction cups used are continuously rotatable
- Includes covers for unused mountings

Ordering data Quad-Base

Type	Dimensions L x B x H [mm]	Part no.
ISQB-G 175x175x22	175 x 175 x 22	10.01.15.00007

Step 2: Select Suction Cup



Suction cups IS Cup 1 and 3 (shown here with Mono-Base)

Suction Cups IS Cup

- Plastic suction cup for Innospann suction cup mountings
- Top sealing frame and friction plate replaceable

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
IS Cup 1 80x80x30	80 x 80	30	10.01.15.00003
IS Cup 2 80x40x30	80 x 40	30	10.01.15.00004
IS Cup 3 80x28x30	80 x 28	30	10.01.15.00005

Step 3: Select Accessories and Spare Parts

Accessories and spare parts for Innospann systems are found on page 44.

Vacuum Blocks VC-T for Flat Aluminum Tables

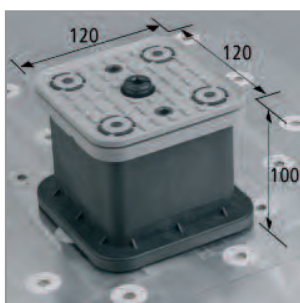
Height 100 mm



Vacuum blocks VC-T

Application

- Hose-free vacuum clamping system for flat aluminum tables with integrated vacuum line
- The vacuum blocks can be positioned and pre-fixed freely on the machine table in accordance with the workpiece
- The workpieces are then clamped safely and precisely for processing



Vacuum block VCBL-T 120x120x100 AS

Vacuum Block VCBL-T 120x120

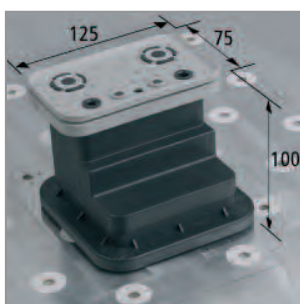
- Hose-free plastic vacuum block
- Top suction plate and bottom sealing frame replaceable
- Optional lifting system (AS) for easier positioning of the workpiece

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-T 120x120x100	120 x 120	100	10.01.12.00001
VCBL-T 120x120x100 AS	120 x 120	100	10.01.12.00002

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00010
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01341
Bottom sealing frame	10.01.12.00013
Wearing parts set for lifting system AS (ball, socket and filter)	10.01.12.00173
Wearing parts set for lifting system AS (complete system)	10.01.12.00554



Vacuum block VCBL-T 125x75x100

Vacuum Block VCBL-T 125x75

- Hose-free plastic vacuum block
- Top suction plate and bottom sealing frame replaceable

Ordering data vacuum block

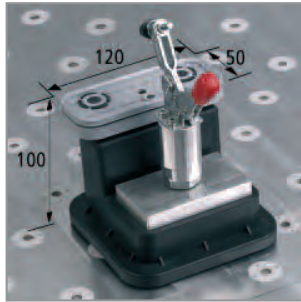
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-T 125x75x100	125 x 75	100	10.01.12.00003

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom sealing frame	10.01.12.00013

Vacuum Blocks VC-T for Flat Aluminum Tables

Height 100 mm



Vacuum block VCBL-T 120x50x100 SH

Vacuum Block VCBL-T 120x50

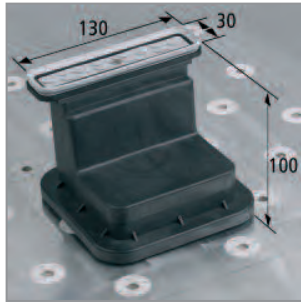
- Hose-free plastic vacuum block, suitable for narrow workpieces
- Top suction plate and bottom sealing frame replaceable
- Optional mechanical clamping lever (SH) for additional clamping of narrow workpieces

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-T 120x50x100	120 x 50	100	10.01.12.00004
VCBL-T 120x50x100 SH	120 x 50	100	10.01.12.00009

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Bottom sealing frame	10.01.12.00013



Vacuum block VCBL-T 130x30x100

Vacuum Block VCBL-T 130x30

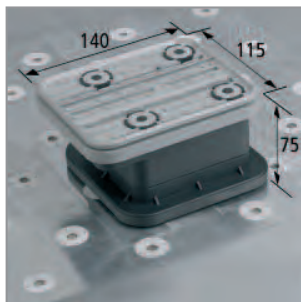
- Hose-free plastic vacuum block, especially suitable for narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-T 130x30x100	130 x 30	100	10.01.12.00117

Ordering data spare parts

Type	Part no.
Top suction plate (supporting plate, sealing frame and friction plate)	10.01.12.00723
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom sealing frame	10.01.12.00013



Vacuum block VCBL-T 140x115x75

Vacuum Block VCBL-T 140x115 for Templates

- Plastic vacuum block with hose connection
- Bottom sealing frame replaceable, top suction plate not replaceable
- Top suction plate with two separate suction areas for the use of templates; suction area 1 holds the template, suction area 2 clamps the workpiece onto the template

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-T 140x115x75	140 x 115	75	10.01.12.00005

Ordering data spare parts

Type	Part no.
Bottom sealing frame	10.01.12.00013



Up to 950 N suction force and
550 N horizontal force



Height of the vacuum blocks
accurate up to ± 0.06 mm

Console Table Systems

Efficiency Through Flexibility and Quality

Whether using a 1-circuit or 2-circuit system, panel processing or frame production – console vacuum blocks from Schmalz can be positioned precisely and are quick and easy to replace when changing the order. Choose from our comprehensive program of high-quality vacuum blocks and spare parts in original equipment manufacturer quality.

Introduction



Vacuum blocks VC-K1 for consoles from Schmalz (p. 20)

- For 1-circuit vacuum systems
- Hose-free
- Pre-fixation on the console with guide strips
- Height 50, 85, 100 and 125 mm



Vacuum blocks VC-K2 for consoles from Schmalz (p. 26)

- For 2-circuit vacuum systems
- Hose-free
- Pre-fixation on the console with vacuum
- Height 50, 75, 100 and 125 mm



Vacuum blocks VC-B for consoles from Biesse* (p. 32)

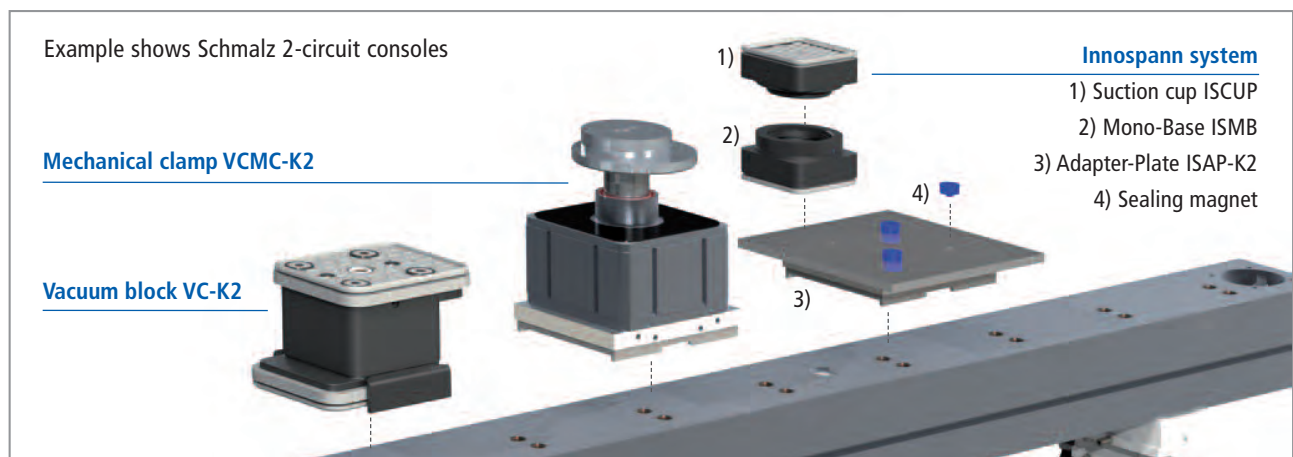
- For 1-circuit vacuum systems
- Hose-free
- Pre-fixation in the vacuum block mountings
- Integrated sensing valve
- Height 29, 48 and 74 mm



Vacuum blocks VC-S for consoles from SCM / Morbidelli* (p. 35)

- For 1-circuit vacuum systems
- Hose-free
- Mechanical pre-fixation on the console
- Integrated sensing valve
- Height 32.7 and 50 mm

Design



Designation Code

Designation code explained using the example of: VCBL-K2 125x75x100 D-360

Type	Suction area L x B (length x width)	Height H	Product addition
VCBL-K2 Vacuum block for Schmalz consoles with 2-circuit vacuum system	125 x 75 mm	100 mm	D-360 rotatable by 360°
VCBL-K1 Vacuum block for Schmalz consoles with 1-circuit vacuum system VCBL-B Vacuum block for consoles from Biesse VCBL-S Vacuum block for consoles from SCM / Morbidelli	from 130 x 30 mm to 140 x 115 mm	from 29 mm to 125 mm	AS with lifting system FI with fixing flap L mounted lengthwise Q mounted crosswise TV with sensing valve S with hose connection

*Biesse and SCM / Morbidelli are registered and protected trademarks. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from these manufacturers.

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

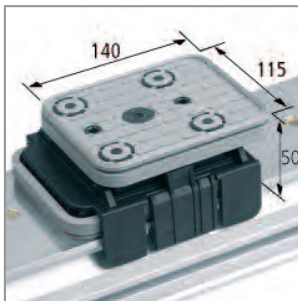
Height 50 mm



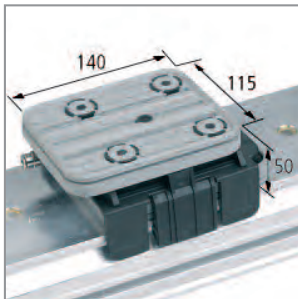
Vacuum blocks VC-K1

Application

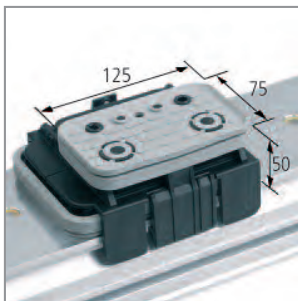
- Hose-free vacuum clamping system for CNC machining centers with console table (1-circuit system)
- Enables damage-free clamping with the highest precision and holding force
- The vacuum blocks are pre-fixed to the consoles via guide strips and secured against movement during setup
- Vacuum is used to clamp the vacuum blocks to the console and the workpiece on the vacuum blocks



Vacuum block VCBL-K1 140x115x50



Vacuum block VCBL-K1 140x115x50



Vacuum block VCBL-K1 125x75x50 L

Vacuum Block VCBL-K1 140x115

- Plastic vacuum block with guide strips for Schmalz 1-circuit console
- Top and bottom suction plates replaceable
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 140x115x50	140 x 115	50	10.01.12.00210
VCBL-K1 140x115x50 TV	140 x 115	50	10.01.12.00369
VCBL-K1 140x115x50*	140 x 115	50	10.01.12.00275

*Top suction plate with two separate suction areas for the use of templates (not replaceable). Suction area 1 holds the template, suction area 2 clamps the workpiece onto the template.

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00488
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01236
Bottom suction plate	10.01.12.00228
Wearing parts set (guide strips + installation accessories)	10.01.12.01256
Wearing parts set (metal strips + installation accessories)	10.01.12.00618
Wearing parts set (sensing valve + installation accessories)	10.01.12.00920

Vacuum Block VCBL-K1 125x75

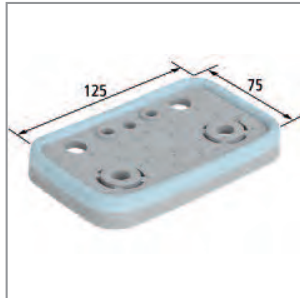
- Plastic vacuum block with guide strips for Schmalz 1-circuit console
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

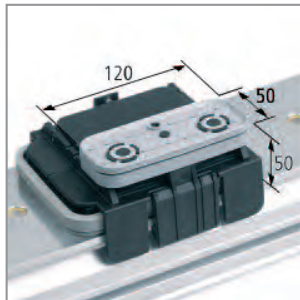
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 125x75x50 Q	125 x 75	50	10.01.12.00211
VCBL-K1 125x75x50 Q TV	125 x 75	50	10.01.12.00370
VCBL-K1 125x75x50 L	125 x 75	50	10.01.12.00230
VCBL-K1 125x75x50 L TV	125 x 75	50	10.01.12.00371
VCBL-K1 125x75x50 D-360	125 x 75	50	10.01.12.00497

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

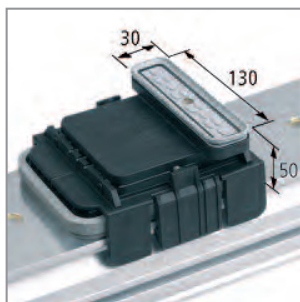
Height 50 mm



Top suction plate with foam rubber seal



Vacuum block VCBL-K1 120x50x50 L



Vacuum block VCBL-K1 130x30x50 Q

Vacuum Block VCBL-K1 125x75

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom suction plate	10.01.12.00228
Wearing parts set (guide strips + installation accessories)	10.01.12.01256
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Block VCBL-K1 120x50

- Plastic vacuum block with guide strips for Schmalz 1-circuit console, suitable for narrow workpieces
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 120x50x50 Q	120 x 50	50	10.01.12.00770
VCBL-K1 120x50x50 L	120 x 50	50	10.01.12.00769
VCBL-K1 120x50x50 D-360	120 x 50	50	10.01.12.00825

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Bottom suction plate	10.01.12.00228
Wearing parts set (guide strips + installation accessories)	10.01.12.01256
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Block VCBL-K1 130x30

- Plastic vacuum block with guide strips for Schmalz 1-circuit console, especially suitable for narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable
- The top part of the vacuum block is mounted crosswise (Q) or lengthwise (L)

Ordering data vacuum block

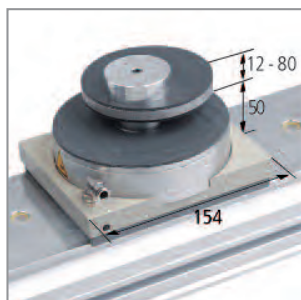
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 130x30x50 Q	130 x 30	50	10.01.12.00379
VCBL-K1 130x30x50 L	130 x 30	50	10.01.12.00378

Ordering data spare parts

Type	Part no.
Top suction plate (supporting plate, sealing frame and friction plate)	10.01.12.00702
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom suction plate	10.01.12.00228
Wearing parts set (guide strips + installation accessories)	10.01.12.01256
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

Height 50 mm



Mechanical clamp VCMC-K1 154x128

Mechanical Clamp VCMC-K1 154x128

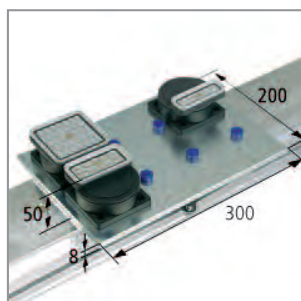
- Aluminum mechanical clamp for Schmalz 1-circuit console
- For narrow and curved workpieces, such as frame parts
- Pre-fixing on the console via a separate vacuum connection (hose exterior diameter 6 mm)
- Clamping force 700 N

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-K1 154x128x50 12-80	154 x 128 x 50	12 – 80	10	10.01.12.00781

Ordering data spare parts

Type	Part no.
Wearing parts set (bolts + installation accessories)	10.01.12.01169



Adapter-Plate ISAP-K1 300x200x8
(shown here with Mono-Bases and
suction cups)

Adapter-Plate ISAP-K1

- Adapter-Plate for flexible positioning of suction cups on Schmalz 1-circuit consoles
- Especially suitable for narrow and curved workpieces
- Mono-Bases serve as suction cup mountings
- Pre-fixation for mechanical clamping
- Application also possible in mixed operation with standard vacuum blocks

Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-K1 300x200x8	300 x 200 x 8	10.01.14.00025
ISAP-K1 600x300x26 (XXL)	600 x 300 x 26	10.01.14.00876

Ordering data Mono-Base

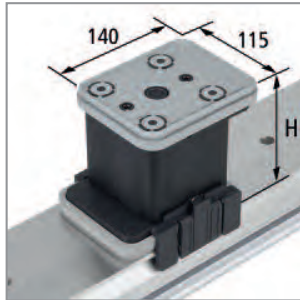
Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x26 for ISAP-K1 300x200	80 x 80 x 26	10.01.15.00214
ISMB 80x80x8 for ISAP-K1 600x300	80 x 80 x 8	10.01.15.00188

Ordering data suction cup

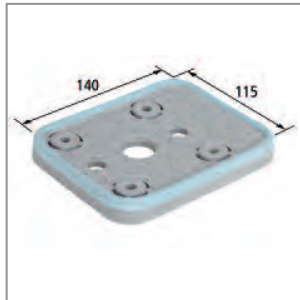
Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

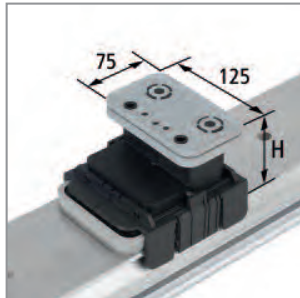
Height 85 mm, 100 mm and 125 mm



Vacuum block VCBL-K1 140x115x125



Top suction plate with foam rubber seal



Vacuum block VCBL-K1 125x75x85

Vacuum Block VCBL-K1 140x115

- Plastic vacuum block with guide strips for Schmalz 1-circuit console
- Top and bottom suction plates replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 140x115x85	140 x 115	85	10.01.12.01553
VCBL-K1 140x115x100	140 x 115	100	10.01.12.02481
VCBL-K1 140x115x125	140 x 115	125	10.01.12.02363

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00488
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01236
Bottom suction plate	10.01.12.00228
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Block VCBL-K1 125x75

- Plastic vacuum block with guide strips for Schmalz 1-circuit console
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or rotatable by 360° (D-360)

Ordering data vacuum block

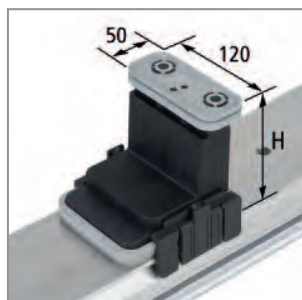
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 125x75x85 Q	125 x 75	85	10.01.12.01554
VCBL-K1 125x75x85 L	125 x 75	85	10.01.12.01555
VCBL-K1 125x75x85 D-360	125 x 75	85	10.01.12.01557
VCBL-K1 125x75x100 Q	125 x 75	100	10.01.12.02482
VCBL-K1 125x75x100 L	125 x 75	100	10.01.12.02483
VCBL-K1 125x75x125 Q	125 x 75	125	10.01.12.02364
VCBL-K1 125x75x125 L	125 x 75	125	10.01.12.02370
VCBL-K1 125x75x125 D-360	125 x 75	125	10.01.12.02213

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom suction plate	10.01.12.00228
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

Height 85 mm, 100 mm and 125 mm



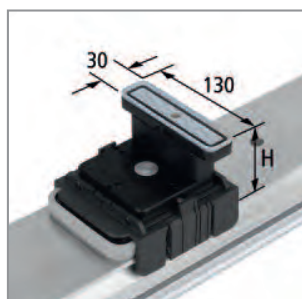
Vacuum block VCBL-K1 120x50x125 Q

Vacuum Block VCBL-K1 120x50

- Plastic vacuum block with guide strips for Schmalz 1-circuit console, suitable for narrow workpieces
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)

Ordering data vacuum block			
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 120x50x85 Q	120 x 50	85	10.01.12.01689
VCBL-K1 120x50x85 L	120 x 50	85	10.01.12.01690
VCBL-K1 120x50x85 D-360	120 x 50	85	10.01.12.01556
VCBL-K1 120x50x100 Q	120 x 50	100	10.01.12.02484
VCBL-K1 120x50x100 L	120 x 50	100	10.01.12.02485
VCBL-K1 120x50x125 Q	120 x 50	125	10.01.12.02371
VCBL-K1 120x50x125 L	120 x 50	125	10.01.12.02372
VCBL-K1 120x50x125 D-360	120 x 50	125	10.01.12.02214

Ordering data spare parts	
Type	Part no.
Top suction plate	10.01.12.00011
Bottom suction plate	10.01.12.00228
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Vacuum block VCBL-K1 130x30x85 Q

Vacuum Block VCBL-K1 130x30

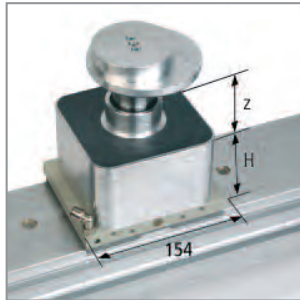
- Plastic vacuum block with guide strips for Schmalz 1-circuit console, especially suitable for narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable
- The top part of the vacuum block is mounted crosswise (Q) or lengthwise (L)

Ordering data vacuum block			
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K1 130x30x85 Q	130 x 30	85	10.01.12.01691
VCBL-K1 130x30x85 L	130 x 30	85	10.01.12.01692
VCBL-K1 130x30x100 Q	130 x 30	100	10.01.12.02486
VCBL-K1 130x30x100 L	130 x 30	100	10.01.12.02487
VCBL-K1 130x30x125 Q	130 x 30	125	10.01.12.02373
VCBL-K1 130x30x125 L	130 x 30	125	10.01.12.02374

Ordering data spare parts	
Type	Part no.
Top suction plate (supporting plate, sealing frame and friction plate)	10.01.12.00702
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom suction plate	10.01.12.00228

Vacuum Blocks VC-K1 (1-Circuit Vacuum Systems)

Height 85 mm, 100 mm and 125 mm



Mechanical clamp VCMC-K1 154x128

Mechanical Clamp VCMC-K1 154x128

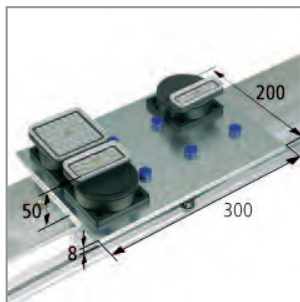
- Aluminum mechanical clamp for Schmalz 1-circuit console
- For narrow and curved workpieces, such as frame parts
- Pre-fixation on the console via a separate vacuum connection (hose outer diameter 6 mm)
- Clamping force 700 N

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-K1 154x128x85 25-100	154 x 128 x 85	25 – 100	25	10.01.12.01926
VCMC-K1 154x128x125 10-100	154 x 128 x 125	10 – 100	40	10.01.12.02497

Ordering data spare parts

Type	Dimensions Ø x H [mm]	Part no.
Clamping disc, eccentric (standard)	Ø 110 x 25	10.01.12.01930
Clamping disc, eccentric (flat)	Ø 110 x 14	10.01.12.01980
Clamping disc, eccentric (high)	Ø 110 x 40	10.01.12.01936



Adapter-Plate ISAP-K1 300x200x8
(shown here with Mono-Bases and suction cups)

Adapter-Plate ISAP-K1

- Adapter-Plate for the flexible positioning of suction cups on Schmalz 1-circuit consoles
- Especially suitable for narrow and curved workpieces
- Mono-Bases serve as suction cup mountings, optionally with spacer ring for additional height
- Application also possible in mixed operation with standard vacuum blocks

Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-K1 300x200x8	300 x 200 x 8	10.01.14.00025
ISAP-K1 600x300x26 (XXL)	600 x 300 x 26	10.01.14.00876

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x22	80 x 80 x 22	10.01.15.00009
Spacer ring ISZR-V 80x21	Ø 80 x 21	10.01.15.00606
Spacer ring ISZR-V 80x25	Ø 80 x 25	10.01.15.00295
Spacer ring ISZR-V 80x36	Ø 80 x 36	10.01.15.00604
Spacer ring ISZR-V 80x40	Ø 80 x 40	10.01.15.00040
Spacer ring ISZR-V 80x61	Ø 80 x 61	10.01.15.00603
Spacer ring ISZR-V 80x65	Ø 80 x 65	10.01.15.00602

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005

Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

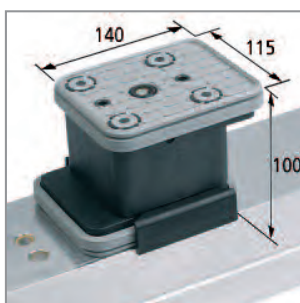
Height 100 mm



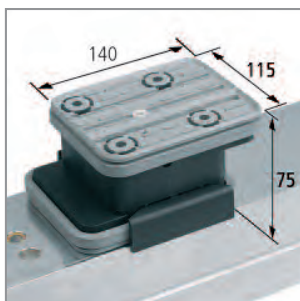
Vacuum blocks VC-K2

Application

- Hose-free vacuum clamping system for CNC machining centers with console table (2-circuit system)
- The vacuum blocks are pre-fixed to the consoles and secured against movement during setup
- Safe and precise clamping of the workpiece and the vacuum blocks on the console with the second vacuum



Vacuum block VCBL-K2 140x115x100



Vacuum block VCBS-K2 140x115x75

Vacuum Block VCBL-K2 140x115

- Plastic vacuum block for Schmalz 2-circuit console
- Top and bottom suction plates replaceable
- Optional lifting system (AS) for easier positioning of the workpiece

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 140x115x100	140 x 115	100	10.01.12.00445
VCBL-K2 140x115x100 AS	140 x 115	100	10.01.12.00446
VCBS-K2 140x115x75*	140 x 115	75	10.01.12.00856

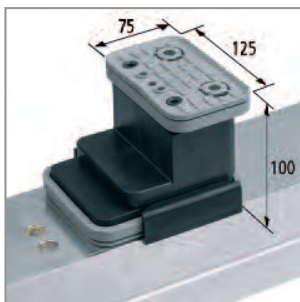
*Top suction plate with two separate suction areas for the use of templates (not replaceable). Suction area 1 holds the template, suction area 2 clamps the workpiece onto the template.

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00488
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01236
Bottom suction plate	10.01.12.00798
Wearing parts set for lifting system AS (ball, socket and filter)	10.01.12.00173
Wearing parts set for lifting system AS (complete lifting system)	10.01.12.00554
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Block VCBL-K2 125x75

- Plastic vacuum block for Schmalz 2-circuit console
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or rotatable by 360° (D-360)



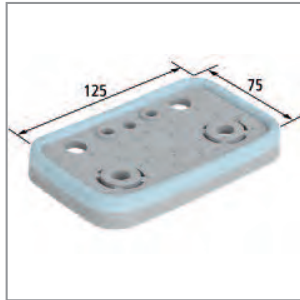
Vacuum block VCBL-K2 125x75x100 Q

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 125x75x100 Q	125 x 75	100	10.01.12.00447
VCBL-K2 125x75x100 L	125 x 75	100	10.01.12.00506
VCBL-K2 125x75x100 D-360	125 x 75	100	10.01.12.01079

Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

Height 100 mm

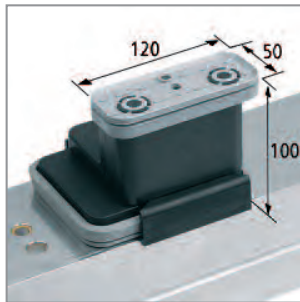


Top suction plate with foam rubber seal

Vacuum Block VCBL-K2 125x75

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Vacuum block VCBL-K2 120x50x100 L

Vacuum Block VCBL-K2 120x50

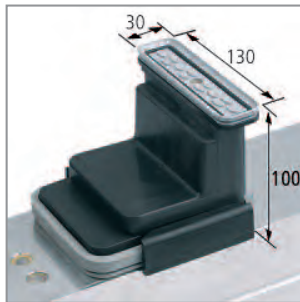
- Plastic vacuum block for Schmalz 2-circuit console, suitable for narrow workpieces
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 120x50x100 Q	120 x 50	100	10.01.12.00126
VCBL-K2 120x50x100 L	120 x 50	100	10.01.12.00853
VCBL-K2 120x50x100 D-360	120 x 50	100	10.01.12.01020

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Vacuum block VCBL-K2 130x30x100 Q

Vacuum Block VCBL-K2 130x30

- Plastic vacuum block with guide strip for Schmalz 2-circuit console, especially suitable for narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable
- The top part of the vacuum block is mounted crosswise (Q) or lengthwise (L)

Ordering data vacuum block

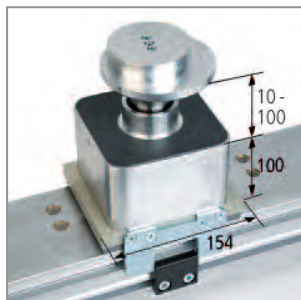
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 130x30x100 Q	130 x 30	100	10.01.12.00854
VCBL-K2 130x30x100 L	130 x 30	100	10.01.12.00855

Ordering data spare parts

Type	Part no.
Top suction plate (supporting plate, sealing frame and friction plate)	10.01.12.00723
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618

Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

Height 100 mm



Mechanical clamp
VCMC-K2 154x128x100 10-100 FI

Mechanical Clamp VCMC-K2 154x128

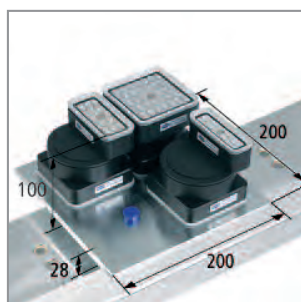
- Aluminum mechanical clamp for Schmalz 2-circuit console
- For narrow and curved workpieces, such as frame parts
- Pre-fixing on the console via vacuum or vacuum and fixing flap (FI)
- Clamping force 700 N

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-K2 154x128x100 10-100	154 x 128 x 100	10 – 100	40	10.01.12.01885
VCMC-K2 154x128x100 10-100 FI	154 x 128 x 100	10 – 100	40	10.01.12.01962

Ordering data spare parts

Type	Dimensions Ø x H [mm]	Part no.
Clamping disc, eccentric (standard)	Ø 110 x 25	10.01.12.01930
Clamping disc, eccentric (flat)	Ø 110 x 14	10.01.12.01980
Clamping disc, eccentric (high)	Ø 110 x 40	10.01.12.01936



Adapter-Plate ISAP-K2 200x200x28
(shown here with Mono-Bases and suction cups)

Adapter-Plate ISAP-K2

- Adapter-Plate for flexible positioning of suction cups on Schmalz 2-circuit consoles
- Especially suitable for narrow and curved workpieces
- Mono-Bases serve as suction cup mountings
- Application also possible in mixed operation with standard vacuum blocks

Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-K2 200x200x28	200 x 200 x 28	10.01.14.00029
ISAP-K2 600x300x28 (XXL)	600 x 300 x 28	10.01.14.00897

Ordering data Mono-Base

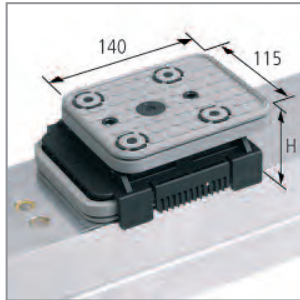
Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x42	80 x 80 x 42	10.01.15.00078

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005

Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

Height 50 mm, 75 mm and 125 mm



Vacuum block VCBL-K2 140x115x50

Vacuum Block VCBL-K2 140x115

- Plastic vacuum block for Schmalz 2-circuit console with replaceable suction plates
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

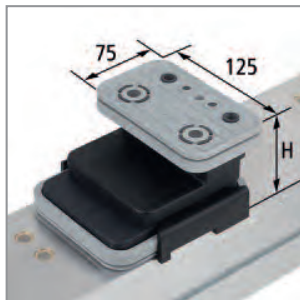
Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 140x115x50	140 x 115	50	10.01.12.00626
VCBL-K2 140x115x50 TV	140 x 115	50	10.01.12.00627
VCBL-K2 140x115x75	140 x 115	75	10.01.12.02136
VCBL-K2 140x115x75 TV	140 x 115	75	10.01.12.02195
VCBL-K2 140x115x125	140 x 115	125	10.01.12.02116
VCBL-K2 140x115x125 TV	140 x 115	125	10.01.12.02128
VCBL-S-K2 140x115x50*	140 x 115	50	10.01.12.00636

*Top suction plate with two separate suction areas for the use of templates (not replaceable). Suction area 1 holds the template, suction area 2 clamps the workpiece onto the template.

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00488
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01236
Bottom suction plate	10.01.12.00798
Wearing parts set (sensing valve + installation accessories)	10.01.12.00920
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Vacuum block VCBL-K2 125x75x75 Q

Vacuum Block VCBL-K2 125x75

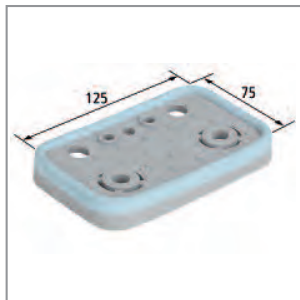
- Plastic vacuum block for Schmalz 2-circuit console with replaceable suction plates
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 125x75x50 Q	125 x 75	50	10.01.12.00644
VCBL-K2 125x75x50 L	125 x 75	50	10.01.12.00628
VCBL-K2 125x75x50 Q TV	125 x 75	50	10.01.12.00645
VCBL-K2 125x75x50 L TV	125 x 75	50	10.01.12.00637
VCBL-K2 125x75x50 D-360	125 x 75	50	10.01.12.00629
VCBL-K2 125x75x75 Q	125 x 75	75	10.01.12.02199
VCBL-K2 125x75x75 L	125 x 75	75	10.01.12.02200
VCBL-K2 125x75x75 Q TV	125 x 75	75	10.01.12.02201
VCBL-K2 125x75x75 L TV	125 x 75	75	10.01.12.02202
VCBL-K2 125x75x75 D-360	125 x 75	75	10.01.12.02211
VCBL-K2 125x75x125 Q	125 x 75	125	10.01.12.02118
VCBL-K2 125x75x125 L	125 x 75	125	10.01.12.02124
VCBL-K2 125x75x125 Q TV	125 x 75	125	10.01.12.02129
VCBL-K2 125x75x125 L TV	125 x 75	125	10.01.12.02132
VCBL-K2 125x75x125 D-360	125 x 75	125	10.01.12.02593

Ordering data spare parts

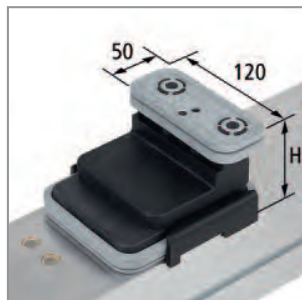
Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Top suction plate with foam rubber seal

Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

Height 50 mm, 75 mm and 125 mm



Vacuum block VCBL-K2 120x50x75 Q

Vacuum Block VCBL-K2 120x50

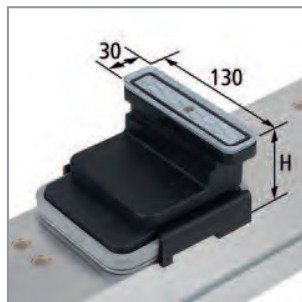
- Plastic vacuum block for Schmalz 2-circuit console, suitable for narrow workpieces
- Top and bottom suction plates replaceable
- The top part of the vacuum block is mounted crosswise (Q), lengthwise (L) or is rotatable by 360° (D-360)
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 120x50x50 Q	120 x 50	50	10.01.12.00772
VCBL-K2 120x50x50 L	120 x 50	50	10.01.12.00771
VCBL-K2 120x50x50 D-360	120 x 50	50	10.01.12.00874
VCBL-K2 120x50x75 Q	120 x 50	75	10.01.12.02203
VCBL-K2 120x50x75 L	120 x 50	75	10.01.12.02204
VCBL-K2 120x50x75 Q TV	120 x 50	75	10.01.12.02205
VCBL-K2 120x50x75 L TV	120 x 50	75	10.01.12.02206
VCBL-K2 120x50x75 D-360	120 x 50	75	10.01.12.02212
VCBL-K2 120x50x125 Q	120 x 50	125	10.01.12.02119
VCBL-K2 120x50x125 L	120 x 50	125	10.01.12.02125
VCBL-K2 120x50x125 Q TV	120 x 50	125	10.01.12.02130
VCBL-K2 120x50x125 L TV	120 x 50	125	10.01.12.02133
VCBL-K2 120x50x125 D-360	120 x 50	125	10.01.12.02594

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Vacuum block VCBL-K2 130x30x75 Q

Vacuum Block VCBL-K2 130x30

- Plastic vacuum block for Schmalz 2-circuit console, suitable for especially narrow workpieces
- Top suction plate replaceable completely or in individual components, bottom suction plate completely replaceable
- The top part of the vacuum block is mounted crosswise (Q) or lengthwise (L)
- The optional sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-K2 130x30x50 Q	130 x 30	50	10.01.12.00646
VCBL-K2 130x30x50 L	130 x 30	50	10.01.12.00647
VCBL-K2 130x30x75 Q	130 x 30	75	10.01.12.02207
VCBL-K2 130x30x75 L	130 x 30	75	10.01.12.02208
VCBL-K2 130x30x75 Q TV	130 x 30	75	10.01.12.02209
VCBL-K2 130x30x75 L TV	130 x 30	75	10.01.12.02210
VCBL-K2 130x30x125 Q	130 x 30	125	10.01.12.02120
VCBL-K2 130x30x125 L	130 x 30	125	10.01.12.02126
VCBL-K2 130x30x125 Q TV	130 x 30	125	10.01.12.02131
VCBL-K2 130x30x125 L TV	130 x 30	125	10.01.12.02134

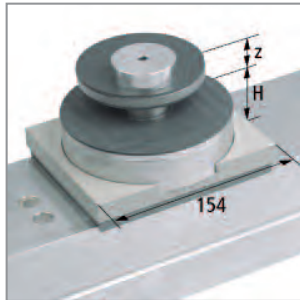
Vacuum Blocks VC-K2 (2-Circuit Vacuum Systems)

Height 50 mm, 75 mm and 125 mm

Vacuum Block VCBL-K2 130x30

Ordering data spare parts

Type	Part no.
Top suction plate for H = 50 mm (supporting plate, sealing frame and friction plate)	10.01.12.00702
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.00805
Bottom suction plate	10.01.12.00798
Wearing parts set (metal strips + installation accessories)	10.01.12.00618



Mechanical clamp VCMC-K2 154x128

Mechanical Clamp VCMC-K2 154x128

- Aluminum mechanical clamp for Schmalz 2-circuit console
- For narrow and curved workpieces, such as frame parts
- Pre-fixing on the console with vacuum
- Clamping force 700 N

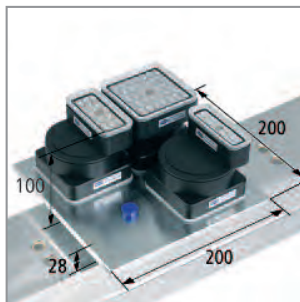
Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-K2 154x128x50 12-80	154 x 128 x 50	12 – 80	10	10.01.12.00737
VCMC-K2 154x128x75 12-80	154 x 128 x 75	12 – 80	10	10.01.12.02218
VCMC-K2 154x128x125 10-100	154 x 128 x 125	10 – 100	40	10.01.12.02217

Ordering data spare parts*

Type	Dimensions Ø x H [mm]	Part no.
Clamping disc, eccentric (standard)	Ø 110 x 25	10.01.12.01930
Clamping disc, eccentric (flat)	Ø 110 x 14	10.01.12.01980
Clamping disc, eccentric (high)	Ø 110 x 40	10.01.12.01936

*Only suitable for type VCMC-K2 154x128x125 10-100



Adapter-Plate ISAP-K2 200x200x26
(shown here with Mono-Bases and suction cups)

Adapter-Plate ISAP-K2

- Adapter-Plate for flexible positioning of suction cups on Schmalz 2-circuit consoles
- Especially suitable for narrow and curved workpieces
- Mono-Bases serve as suction cup mountings, optionally with spacer ring for additional height
- Application also possible in mixed operation with standard vacuum blocks

Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-K2 200x200x26	200 x 200 x 26	10.01.14.00117
ISAP-K2 600x300x26 (XXL)	600 x 300 x 26	10.01.14.01061

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x8	80 x 80 x 8	10.01.15.00188
Spacer ring ISZR-V 80x25	Ø 80 x 25	10.01.15.00295
Spacer ring ISZR-V 80x75	Ø 80 x 75	10.01.15.00489

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211

Vacuum Blocks VC-B for Consoles from Biesse*

Height 29 mm, 48 mm and 74 mm

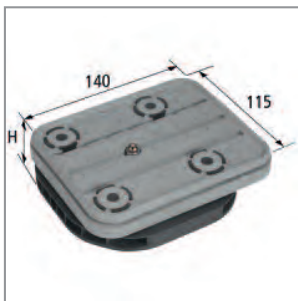


Vacuum blocks VC-B

Application

- Hose-free vacuum clamping system from Schmalz for console tables from Biesse (1-circuit system)
- The vacuum blocks are pre-fixed in the vacuum block mountings from Biesse and secured against movement during setup
- Workpiece and vacuum blocks are clamped safely and precisely by vacuum

*Biesse is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from Biesse.



Vacuum block VCBL-B 140x115x29 TV

Vacuum Block VCBL-B 140x115

- Plastic vacuum block for the vacuum block mountings from Biesse
- Top suction plate replaceable
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-B 140x115x29 TV	140 x 115	29	10.01.12.01136
VCBL-B 140x115x48 TV	140 x 115	48	10.01.12.01467
VCBL-B 140x115x74 TV	140 x 115	74	10.01.12.01416

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00228
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01236
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Vacuum block VCBL-B 125x75x48 TV

Vacuum Block VCBL-B 125x75

- Plastic vacuum block for the vacuum block mountings from Biesse
- Top suction plate replaceable
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Height
VCBL-B 125x75x29 TV	125 x 75	29	10.01.12.01152
VCBL-B 125x75x48 TV	125 x 75	48	10.01.12.01468
VCBL-B 125x75x74 TV	125 x 75	74	10.01.12.01417

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651

Vacuum Blocks VC-B for Consoles from Biesse

Height 29 mm, 48 mm and 74 mm



Vacuum block VCBL-B 120x50x48 TV

Vacuum Block VCBL-B 120x50

- Plastic vacuum block for the vacuum block mountings from Biesse, suitable for narrow workpieces
- Top suction plate replaceable
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-B 120x50x29 TV	120 x 50	29	10.01.12.01151
VCBL-B 120x50x48 TV	120 x 50	48	10.01.12.01469
VCBL-B 120x50x74 TV	120 x 50	74	10.01.12.01418

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00012
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Vacuum block VCBL-B 130x30x48 TV

Vacuum Block VCBL-B 130x30

- Plastic vacuum block for the vacuum block mountings from Biesse, especially suitable for narrow workpieces
- Top sealing frame and friction plate replaceable
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-B 130x30x29 TV	130 x 30	29	10.01.12.01149
VCBL-B 130x30x48 TV	130 x 30	48	10.01.12.01470
VCBL-B 130x30x74 TV	130 x 30	74	10.01.12.01419

Ordering data spare parts

Type	Part no.
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.01438
Wearing parts set (suction plate and sensing valve + installation accessories)	10.01.12.01543
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Mechanical clamp VCMC-B D120x48

Mechanical Clamp VCMC-B

- Aluminum mechanical clamp for the vacuum block mountings from Biesse
- For narrow and curved workpieces, such as frame parts
- Pre-fixation in the vacuum block mounting
- Clamping force 700 N

Ordering data mechanical clamp

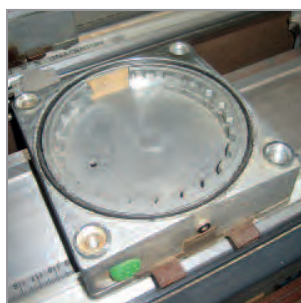
Type	Dimensions Ø x H [mm]	Clamping range z [mm]	Stroke [mm]	Part no.
VCMC-B D120x48 12-80	Ø 120 x 48	12 – 80	10	10.01.12.01477
VCMC-B D120x74 12-80	Ø 120 x 74	12 – 80	10	10.01.12.01479

Vacuum Blocks VC-B for Consoles from Biesse

Height 29 mm, 48 mm and 74 mm



Adapter-Plate ISAP-B 195x195 (shown here with Mono-Bases and suction cups)



All types VC-B (p. 32 – 34) suitable for this mounting

Adapter-Plate ISAP-B 195x195

- Adapter-Plate for flexible positioning of suction cups on consoles from Biesse
- Especially suitable for narrow and curved workpieces
- Mono-Bases serve as suction cup mountings, optionally with spacer ring for additional height
- Application also possible in mixed operation with standard vacuum blocks

Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-B 195x195x5	195 x 195 x 5	10.01.14.00109

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x8	80 x 80 x 8	10.01.15.00188
Spacer ring ISZR-V 80x19	Ø 80 x 19	10.01.15.00388
Spacer ring ISZR-V 80x45	Ø 80 x 45	10.01.15.00054

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211

Vacuum Blocks VC-S for Consoles from SCM / Morbidelli*

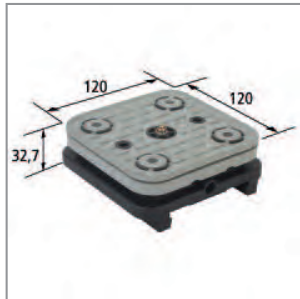
Height 32.7 mm and 50 mm



Vacuum blocks VC-S

Application

- Hose-free vacuum clamping system from Schmalz for console tables from SCM / Morbidelli (1-circuit system)
- Flexible and inexpensive alternative to the original vacuum blocks
- The vacuum blocks are pre-fixed to the console
- The integrated sensing valve (TV) enables unused vacuum blocks to remain on the machine table
- TV system from SCM = S1 system from Schmalz (width of the mounting 72.5 mm)
- TVS system from SCM = S1...TV-S system from Schmalz with hose connection (width of the mounting 72.5 mm)
- TVN system from SCM = S4 system from Schmalz (width of the mounting 109 mm)



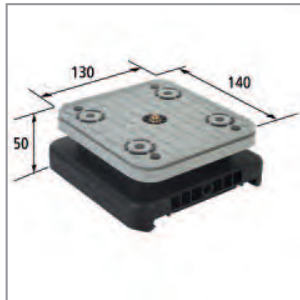
Vacuum block VCBL-S1 120x120x32.7 TV

Vacuum Block VCBL-S 120x120

- Plastic vacuum block for TV and TVS systems from SCM / Morbidelli
- Top suction plate replaceable

Ordering data vacuum block			
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-S1 120x120x32.7 TV	120 x 120	32.7	10.01.12.02317
VCBL-S1 120x120x32.7 TV-S	120 x 120	32.7	10.01.12.02386

Ordering data spare parts	
Type	Part no.
Top suction plate	10.01.12.00010
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01341
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Vacuum block VCBL-S4 140x130x50 TV

Vacuum Block VCBL-S 140x130

- Plastic vacuum block for TVN systems from SCM / Morbidelli
- Top suction plate replaceable

Ordering data vacuum block			
Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-S4 140x130x50 TV	140 x 130	50	10.01.12.02321

Ordering data spare parts	
Type	Part no.
Top suction plate	10.01.12.02325
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Application in mixed operation

*SCM / Morbidelli is a registered and protected trademark. The articles listed here are products of J. Schmalz GmbH that have been designed to fit CNC machining centers from SCM / Morbidelli.

Vacuum Blocks VC-S for Consoles from SCM / Morbidelli

Height 32.7 mm and 50 mm



Vacuum block VCBL-S4 125x75x50
D-360 TV

Vacuum Block VCBL-S 125x75

- Plastic vacuum block for TV, TVS and TVN systems from SCM / Morbidelli
- Top suction plate replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-S1 125x75x32.7 TV	125 x 75	32.7	10.01.12.02318
VCBL-S1 125x75x32.7 TV-S	125 x 75	32.7	10.01.12.02387
VCBL-S1 125x75x32.7 D-360 TV	125 x 75	32.7	10.01.12.01302
VCBL-S4 125x75x50 TV	125 x 75	50	10.01.12.02322
VCBL-S4 125x75x50 D-360 TV	125 x 75	50	10.01.12.01473

Ordering data spare parts

Type	Part no.
Top suction plate	10.01.12.00011
Top suction plate with foam rubber seal for rough surfaces	10.01.12.01718
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Vacuum block VCBL-S1 120x50x32.7 TV-S

Vacuum Block VCBL-S 120x50

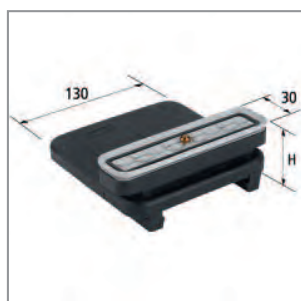
- Plastic vacuum block for TV, TVS and TVN systems from SCM / Morbidelli
- Suitable for narrow workpieces
- Top suction plate replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-S1 120x50x32.7 TV	120 x 50	32.7	10.01.12.02319
VCBL-S1 120x50x32.7 TV-S	120 x 50	32.7	10.01.12.02388
VCBL-S1 120x50x32.7 D-360 TV	120 x 50	32.7	10.01.12.01301
VCBL-S4 120x50x50 TV	120 x 50	50	10.01.12.02323
VCBL-S4 120x50x50 D-360 TV	120 x 50	50	10.01.12.01474

Ordering data spare parts

Type	Artikel-Nr.
Top suction plate	10.01.12.00012
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Vacuum block VCBL-S1 130x30x32.7 TV

Vacuum Block VCBL-S 130x30

- Plastic vacuum block for TV, TVS and TVN systems from SCM / Morbidelli
- Suitable especially for narrow workpieces
- Top sealing frames and friction plate replaceable

Ordering data vacuum block

Type	Suction area L x B [mm]	Height H [mm]	Part no.
VCBL-S1 130x30x32.7 TV	130 x 30	32.7	10.01.12.02320
VCBL-S1 130x30x32.7 TV-S	130 x 30	32.7	10.01.12.02389
VCBL-S1 130x30x32.7 D-360 TV	130 x 30	32.7	10.01.12.01300
VCBL-S4 130x30x50 TV	130 x 30	50	10.01.12.02324
VCBL-S4 130x30x50 D-360 TV	130 x 30	50	10.01.12.01475

Vacuum Block VC-S for Consoles from SCM / Morbidelli

Height 32.7 mm and 50 mm

Vacuum Block VCBL-S 130x30

Ordering data spare parts

Type	Part no.
Top sealing frame	10.01.12.00804
Top friction plate	10.01.12.01438
Wearing parts set (suction plate and sensing valve + installation accessories)	10.01.12.01543
Wearing parts set (sensing valve + installation accessories)	10.01.12.01651



Mechanical clamp
VCMC-S4 145x145x50

Mechanical Clamp VCMC-S

- Aluminum mechanical clamp for TV, TVS and TVN systems from SCM / Morbidelli
- For narrow and curved workpieces, such as frame parts

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Clamping range z* [mm]	Stroke [mm]	Part no.
VCMC-S1 120x120x50	120 x 120 x 50	12 – 80	10	10.01.12.01768
VCMC-S1 120x120x50 S**	120 x 120 x 50	12 – 80	10	10.01.12.02275
VCMC-S4 145x145x50	145 x 145 x 50	12 – 80	10	10.01.12.01481

*Clamping force 700 N **With hose connection for hose diameter 10-8



Adapter-Plate ISAP-S1 195x195x8.7

Adapter-Plate ISAP-S 195x195

- Adapter-Plate ISAP-S can accommodate up to four suction cup mountings Mono-Base
- Application also possible in mixed operation with standard vacuum blocks
- Type S1 and type S4 suitable for TV / TVN consoles from SCM / Morbidelli
- Type S2 suitable for clip-on bolts (clearance of the bolts = 135 mm) of the standard vacuum blocks from SCM / Morbidelli
- Type S3 suitable for rotating vacuum blocks from SCM / Morbidelli

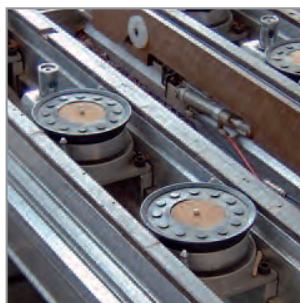
Ordering data Adapter-Plate

Type	Dimensions L x B x H [mm]	Part no.
ISAP-S1 195x195x8.7	195 x 195 x 8.7	10.01.14.00123
ISAP-S4 195x195x11	195 x 195 x 11	10.01.14.00231
ISAP-S2 195x195x4	195 x 195 x 4	10.01.14.00173
ISAP-S3 195x195x4	195 x 195 x 4	10.01.14.00176

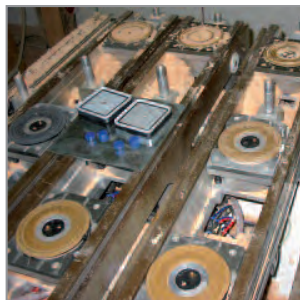
Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x8	80 x 80 x 8	10.01.15.00188
Spacer ring ISZR-V 80x15*	Ø 80 x 15	10.01.15.00052

*Only suitable for type S4



Mountings for type S2



Mountings for type S3

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211



Vacuum Clamping System Innospann

Retrofitting of CNC Machining Centers

The vacuum clamping system Innospann enables every CNC machining center to be retrofitted independently of manufacturer and type. Modernization facilitates quick and flexible retrofitting following frequent product changes – for efficient manufacturing processes starting from one-piece production. Schmalz thus provides an economic alternative to investment in a new machine.



Up to 80 percent
bottom setup times



Up to 50 percent
higher holding force

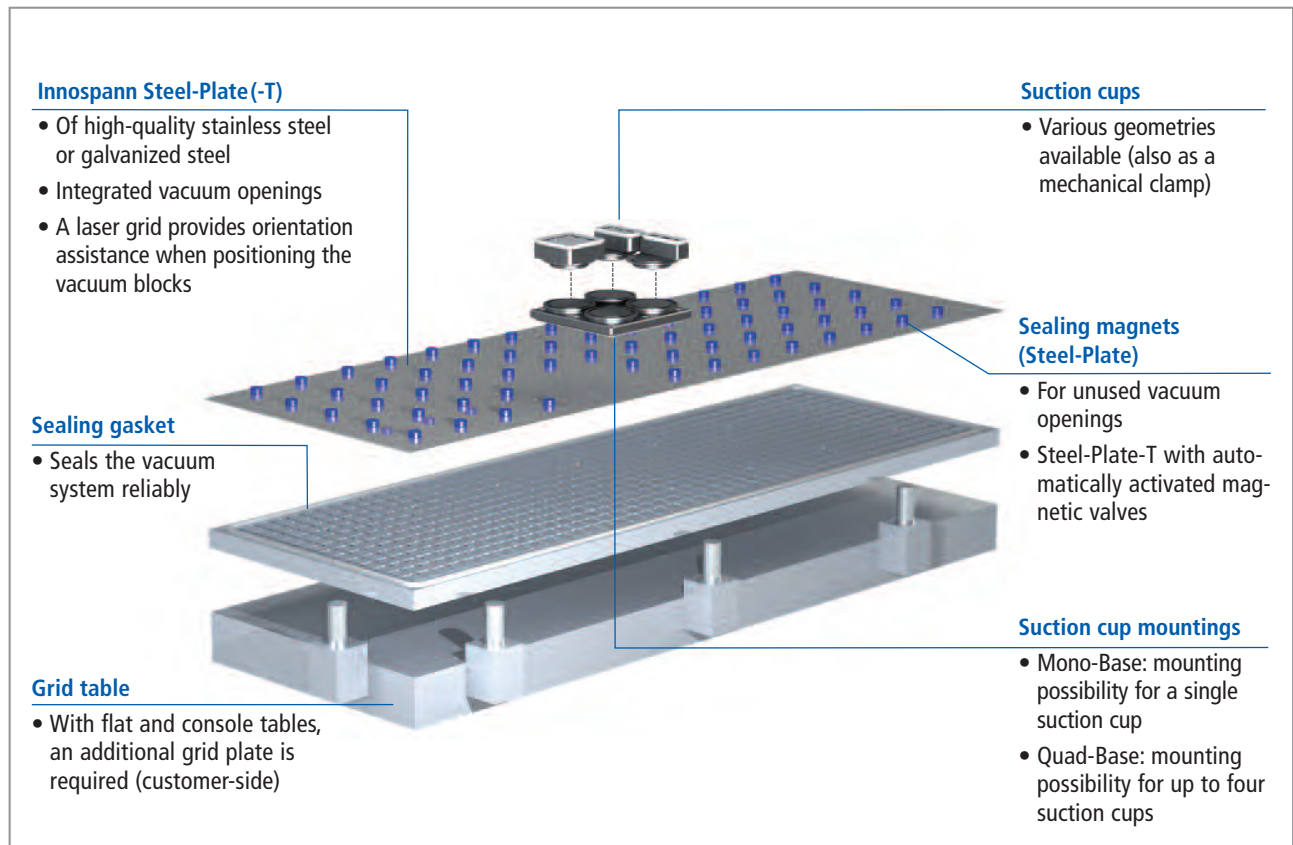


Height of the vacuum blocks
accurate up to +/- 0.1 mm

Solutions by Retrofitting the Machine Table

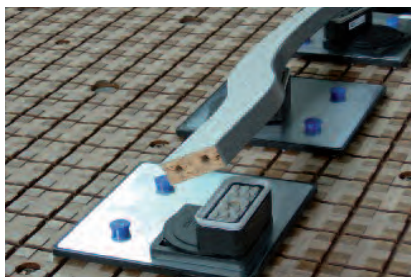
The machine table is retrofitted by installing a Steel-Plate on a grid plate. For grid tables, the existing grid can be used. Flat and console tables require an intermediate plate with grid. The grid can also be milled directly into a flat table. The integrated vacuum grooves avoid separate hosing. The vacuum blocks can be freely positioned on the Steel-Plate.

Innospann Steel-Plate and Steel-Plate-T (p. 40)



Solutions Without Retrofitting the Machine Table

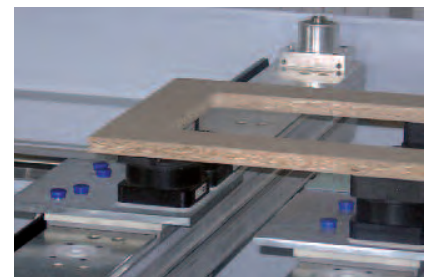
As an alternative to a complete retrofit, Schmalz provides vacuum block models which can be set directly onto the existing machine table. The Adapter-Plate for console tables provides additional flexibility in the positioning of the vacuum blocks.



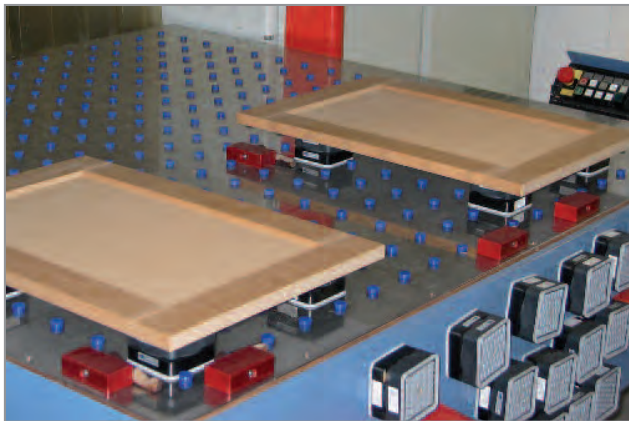
Innospann vacuum blocks for grid tables (p. 8)



Innospann vacuum blocks for flat tables (p. 14)



Vacuum blocks and Adapter-Plates for console tables (p. 20)

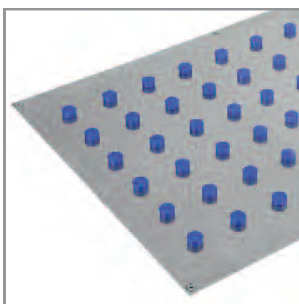


Innospann Steel-Plate with Mono-Bases and suction cups

Application

- Vacuum clamping system for retrofitting CNC machining centers with flat, grid or console table
- 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

Step 1: Select Steel-Plate



Steel-Plate

Steel-Plate

- 3 mm stainless-steel or galvanized steel (LC) plate with integrated vacuum openings
- Adapted to the machine table individually

Ordering data Steel-Plate

Type	Dimensions L x B [mm]	Valve interval [mm]	Part no.
Steel-Plate for Mono-Base	variable	approx. 75	on request
Steel-Plate-LC for Mono-Base	variable	approx. 75	on request
Steel-Plate for Quad-Base	variable	approx. 150	on request
Steel-Plate-LC for Quad-Base	variable	approx. 150	on request

Step 2: Select Suction Cup Mounting



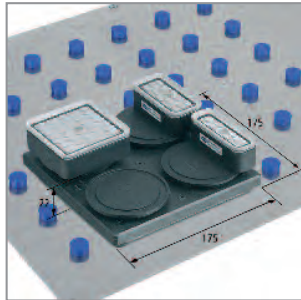
Mono-Base ISMB (shown here with suction cups)

Mono-Base ISMB

- Mounting possibility for a single suction cup
- The suction cups used are continuously rotatable

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB 80x80x8	80 x 80 x 8	10.01.15.00188
ISMB 80x80x22	80 x 80 x 22	10.01.15.00009
ISMB 80x80x42	80 x 80 x 42	10.01.15.00078
ISMB 80x80x67	80 x 80 x 67	10.01.15.00079



Quad-Base ISQB (shown here with suction cups)

Quad-Base ISQB

- Mounting possibility for up to four suction cups
- The suction cups used are continuously rotatable
- Includes covers for unused mountings

Ordering data Quad-Base

Type	Dimensions L x B x H [mm]	Part no.
ISQB 175x175x22	175 x 175 x 22	10.01.15.00001

Step 3: Select Clamping Equipment



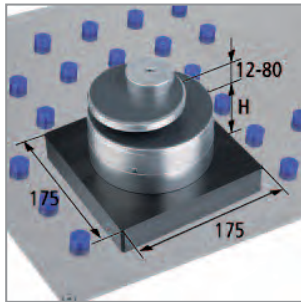
Suction cup ISCUP Cup 2 80x40x30

Suction Cups ISCUP

- Plastic suction cup for Innospann suction cup mountings
- Sealing frame and friction plate are simple and quick to replace
- Further suction cup heights available as accessories

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005
ISCUP Cup 4 100x100x30	100 x 100	30	10.01.15.00403



Mechanical clamp ISMC-S 175x175

Mechanical Clamp ISMC-S

- Mechanical clamp for narrow and curved workpieces, such as frame parts
- Can be placed and positioned directly on the Steel-Plate (no suction cup mounting required)
- Clamping force 700 N, Clamping range 12-80 mm

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Total height incl. Steel-Plate [mm]	Stroke [mm]	Part no.
ISMC-S 175x175x52 12-80	175 x 175 x 52	55	10	10.01.15.00270
ISMC-S 175x175x72 12-80	175 x 175 x 72	75	10	10.01.15.00140
ISMC-S 175x175x97 12-80	175 x 175 x 97	100	10	10.01.15.00254

Step 4: Select Accessories and Spare Parts

Accessories and spare parts for Innospann systems are found on page 44.

Steel-Plate-T

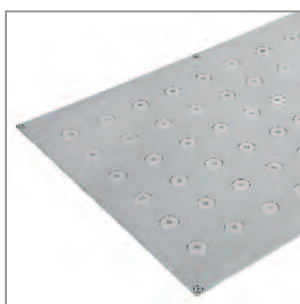


Innospann Steel-Plate-T with Mono-Bases and suction cups

Application

- 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-T
- A laser grid provides orientation assistance
- Unused vacuum openings are sealed automatically thanks to integrated magnetic valves
- Variable total height through various suction cup heights and optional spacer rings

Step 1: Select Steel-Plate-T



Steel-Plate-T

Steel-Plate-T

- 3 mm stainless-steel or galvanized steel (LC) plate with integrated magnetic valves
- Adapted to the machine table individually

Ordering data Steel-Plate-T

Type	Dimensions L x B [mm]	Valve interval [mm]	Part no.
Steel-Plate-T for Mono-Base	variable	approx. 75	on request
Steel-Plate-T-LC for Mono-Base	variable	approx. 75	on request
Steel-Plate-T for Quad-Base	variable	approx. 150	on request
Steel-Plate-T-LC for Quad-Base	variable	approx. 150	on request

Step 2: Select Suction Cup Mounting



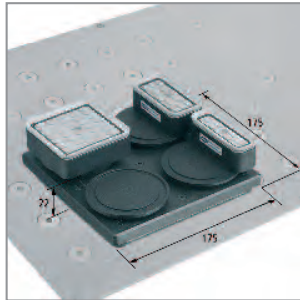
Mono-Base ISMB-T (shown here with suction cups)

Mono-Base ISMB-T

- Mounting possibility for a single suction cup
- The suction cups used are continuously rotatable

Ordering data Mono-Base

Type	Dimensions L x B x H [mm]	Part no.
ISMB-T 80x80x22	80 x 80 x 22	10.01.15.00145
ISMB-T 80x80x42	80 x 80 x 42	10.01.15.00154
ISMB-T 80x80x67	80 x 80 x 67	10.01.15.00155



Quad-Base ISQB-T (shown here with suction cups)

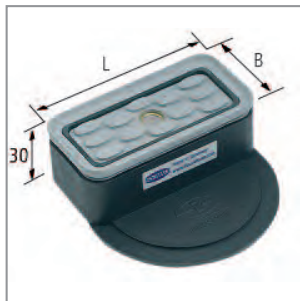
Quad-Base ISQB-T

- Mounting possibility for up to four suction cups
- The suction cups used are continuously rotatable
- Includes covers for unused mountings

Ordering data Quad-Base

Type	Dimensions L x B x H [mm]	Part no.
ISQB-T 175x175x22	175 x 175 x 22	10.01.15.00153

Step 3: Select Clamping Equipment



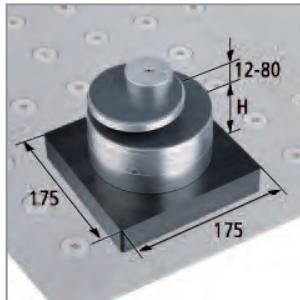
Suction cup ISCUP Cup 2 80x40x30

Suction Cups ISCUP

- Plastic suction cup for Innospann suction cup mountings
- Sealing frame and friction plate are simple and quick to replace
- Further suction cup heights available as accessories

Ordering data suction cup

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005
ISCUP Cup 4 100x100x30	100 x 100	30	10.01.15.00403



Mechanical clamp ISMC-ST 175x175

Mechanical Clamp ISMC-ST

- Mechanical clamp for narrow and curved workpieces, such as frame parts
- Can be placed and positioned directly on the Steel-Plate-T (no suction cup mounting required)
- Clamping force 700 N, clamping range 12-80 mm

Ordering data mechanical clamp

Type	Dimensions L x B x H [mm]	Total height incl. Steel-Plate-T [mm]	Stroke [mm]	Part no.
ISMC-ST 175x175x52 12-80	175 x 175 x 52	55	10	10.01.15.00273
ISMC-ST 175x175x72 12-80	175 x 175 x 72	75	10	10.01.15.00272
ISMC-ST 175x175x97 12-80	175 x 175 x 97	100	10	10.01.15.00256

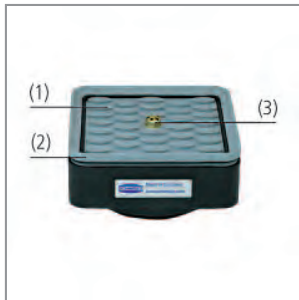
Step 4: Select Accessories and Spare Parts

Accessories and spare parts for Innospann systems are found on page 44.

Vacuum Clamping System Innospann



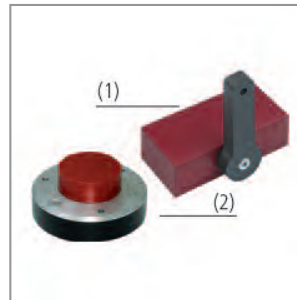
Accessories and Spare Parts



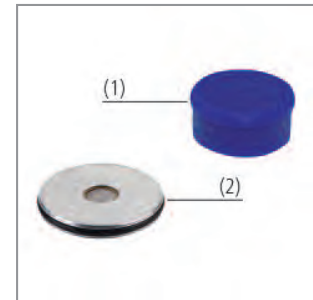
Suction cup with friction plate (1), sealing frame (2) and sensing valve (3)



Spacer ring



Magnetic stop (1) and vacuum stop (2)



Sealing magnet (1) and magnetic valve (2)

Suction Cups ISCUP

Type	Suction area L x B [mm]	Height H [mm]	Part no.
ISCUP Cup 1 80x80x16	80 x 80	16	10.01.15.00209
ISCUP Cup 2 80x40x16	80 x 40	16	10.01.15.00210
ISCUP Cup 3 80x28x16	80 x 28	16	10.01.15.00211
ISCUP Cup 1 80x80x30	80 x 80	30	10.01.15.00003
ISCUP Cup 2 80x40x30	80 x 40	30	10.01.15.00004
ISCUP Cup 3 80x28x30	80 x 28	30	10.01.15.00005
ISCUP Cup 4 100x100x30	100 x 100	30	10.01.15.00403
ISCUP Cup 1 80x80x30 TV	80 x 80	30	10.01.15.00303
ISCUP Cup 2 80x40x30 TV	80 x 40	30	10.01.15.00305
ISCUP Cup 4 100x100x30 TV	100 x 100	30	10.01.15.00405
ISCUP 80x80x30 AS	80 x 80	30	10.01.15.00266
ISCUP 80x80x45 AS	80 x 80	45	10.01.15.00195
Wearing parts set VST*	-	-	10.01.15.00347

*Sensing valve mounted with hollow screw for Innospann suction cups

Sealing Gaskets

Type	Dimensions [mm]	Part no.
For suction cups	10 x 4 x 1,000	10.01.15.00062
For underside of Quad-Base	Ø 8 x 1,000	10.07.04.00002

Spacer Rings

- Provides additional clamping height for Steel-Plate(-T)

Type	Dimensions Ø x H [mm]	Part no.
Spacer ring ISZR-V 80x15	Ø 80 x 15	10.01.15.00052
Spacer ring ISZR-V 80x20	Ø 80 x 20	10.01.15.00053
Spacer ring ISZR-V 80x34	Ø 80 x 34	10.01.15.00228
Spacer ring ISZR-V 80x40	Ø 80 x 40	10.01.15.00073
Spacer ring ISZR-V 80x45	Ø 80 x 45	10.01.15.00054
Spacer ring ISZR-V 80x48	Ø 80 x 48	10.01.15.00055

Friction Plates for Suction Cups

Type	Dimensions L x B [mm]	Part no.
For suction cup 80x80	66 x 66	10.01.15.00017
For suction cup 80x40	66 x 26	10.01.15.00018
For suction cup 80x28	66 x 14	10.01.15.00019
For suction cup 100x100	86 x 86	10.01.15.00402
Filter for friction plate	Ø 11	10.07.01.00085

Limit Stop Systems

- Provides easy and accurate workpiece positioning

Type	Dimensions L x B x H [mm]	Part no.
Vacuum stop, stroke = 19 mm	Ø 80 x 19.5	10.01.15.00384
Magnetic stop, H = 70 mm	80 x 50 x 70	10.01.15.00012
Magnetic stop, H = 95 mm	80 x 50 x 95	10.01.15.00013
Magnetic stop, H = 120 mm	80 x 50 x 120	10.01.15.00014

Sealing Frames for Suction Cups

Type	Dimensions L x B [mm]	Part no.
For suction cup 80x80	81 x 81	10.01.15.00020
For suction cup 80x40	81 x 43	10.01.15.00021
For suction cup 80x28	81 x 31	10.01.15.00022
For suction cup 100x100	100 x 100	10.01.15.00404

Sealing Magnets and Magnetic Valves

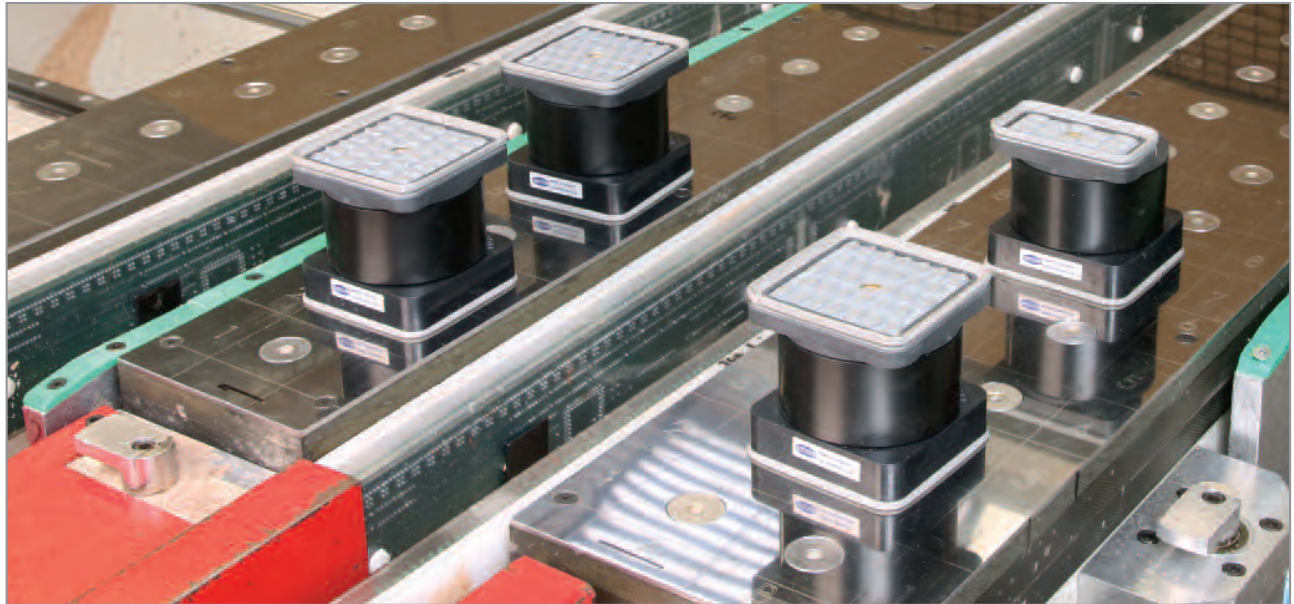
- To seal unused vacuum openings with Innospann Steel-Plate(-T) and Adapter-Plate

Type	Dimensions Ø [mm]	Part no.
Sealing magnets set for Steel-Plate and Adapter-Plate (qty: 4)	19	10.01.14.00847
Magnetic valve for Steel-Plate-T (qty: 1)	25	10.01.15.00133

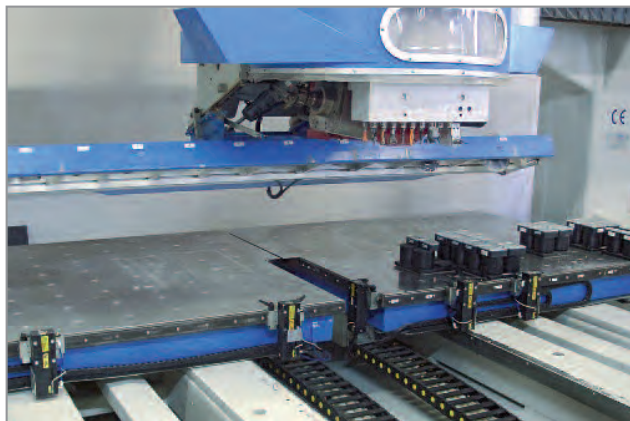
Vacuum Clamping System Innospann



Retrofitting Examples



Innospann Steel-Plate-T | Retrofitting of a console table with Innospann Steel-Plate-T, Mono-Bases and suction cups



Innospann Steel-Plate-T | Retrofitting of a flat table with Steel-Plate-T, Quad-Bases and diverse suction cups



Innospann Steel-Plate-T | Retrofitting of a flat table with Steel-Plate-T, Mono-Bases and diverse suction cups, fixed on an intermediate plate



Innospann Steel-Plate | Retrofitting of a grid table with Steel-Plate, Mono-Bases and diverse suction cups



Innospann Steel-Plate | Retrofitting of a console table with Steel-Plate, Mono-Bases and diverse suction cups



**Rotatable 360° for flexible
five-side processing**



Portable for mobile use

Vacuum Clamping System Multi-Clamp

Manual Fixing and Machining of Workpieces

The vacuum clamping system Multi-Clamp is the perfect tool for quick and flexible clamping of small and medium-sized workpieces. They can be fixed in any position and processed all-round. The Multi-Clamp is portable and can be used in a variety of industrial, workshop and building-site contexts.

Vacuum Clamping System Multi-Clamp



Introduction



Complete system Multi-Clamp VC-M

Application

- Multi-functional vacuum clamping system for manual machining steps, such as sawing, grinding, drilling or screwing
- Usage for the machining of small to medium-sized workpieces and the assembly of compact components
- Workpieces can be fixed in any position and machined all-round without the need to reclamp
- The Multi-Clamp can be secured to almost any even surface (using screws or by sucking) and is suitable for mobile use

Design

The vacuum clamping system Multi-Clamp consists of a suction plate and the rotating and swiveling unit Multi-Base. The vacuum is generated via an integrated vacuum ejector or an external vacuum pump.

Multi-Clamp suction plate

160 x 160 mm; for almost all workpieces



Multi-Clamp suction plate round

Ø 210 mm; for wooden workpieces



Multi-Clamp suction plate oval

200 x 55 mm and 300 x 100 mm;
for narrow and elongated workpieces



Rotating and swiveling unit Multi-Base

Fig. shows
Multi-Base VC-M-B



Clamping lever for the quick change of the Multi-Clamp suction plate

Continuously slewable 360° for flexible all-round machining

Continuously rotatable 90° for the simple processing of planes and edges

Connection for compressed air supply

Base plate for screwing to the workbench (optional fixing with vacuum)

Multi-Clamp Suction Plate as Stand-Alone Solution



Multi-Clamp suction plate
VC-M-SP 160x160

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

- Multi-Clamp suction plate VC-M-SP with integrated vacuum generation (ejector)
- Multi-Clamp suction plate VC-M-SPV for operation with external vacuum generation (e.g. Multi-Clamp vacuum pump)

Ordering data suction plate

Type	Max. vacuum [mbar]	Air consumption [l/min]	Max. suction capacity [m³/h]	Weight [kg]	Part no.
Suction plate VC-M-SP 160x160	850	48	2.3	0.7	10.01.12.01836
Suction plate VC-M-SPV 160x160	-	-	-	0.7	10.01.12.01853

Multi-Clamp with Integrated Vacuum Generation



Multi-Clamp complete system VC-M

Multi-Clamp VC-M

- Complete system consisting of rotating and swiveling unit Multi-Base VC-M-B and Multi-Clamp suction plate VC-M-SP 160x160

Ordering data complete system

Type	Max. vacuum [mbar]	Air consumption [l/min]	Max. suction capacity [m³/h]	Weight [kg]	Part no.
Complete system VC-M	850	48	2.3	4.6	10.01.12.01845

Ordering data accessories

Type	Max. vacuum [mbar]	Air consumption [l/min]	Max. suction capacity [m³/h]	Weight [kg]	Part no.
Multi-Base VC-M-B	-	-	-	3.9	10.01.12.01854
Suction plate VC-M-SP 160x160	850	48	2.3	0.7	10.01.12.01836
Suction plate VC-M-SP 300x100	850	48	2.3	1.9	10.01.12.02052
Suction plate VC-M-SP 200x55	850	48	2.3	0.8	10.01.12.02003
Suction plate VC-M-SP 210	850	48	2.3	1.6	10.01.12.02002

Multi-Clamp for Operation with External Vacuum Generation



Multi-Clamp complete system VC-M-V

Multi-Clamp VC-M-V

- Complete system consisting of rotating and swiveling unit Multi-Base VC-M-BV and Multi-Clamp suction plate VC-M-SPV 160x160
- Multi-Base VC-M-BV with suction-capable base plate and manual slide valve for quick activation and deactivation of the vacuum
- An additional vacuum pump is required to generate the vacuum

Ordering data complete system

Type	Max. vacuum [mbar]	Air consumption [l/min]	Max. suction capacity [m³/h]	Weight [kg]	Part no.
Complete system VC-M-V	-	-	-	4.7	10.01.12.01852

Vacuum Clamping System Multi-Clamp

Systems and Accessories



Multi-Clamp VC-M-V

Ordering data accessories

Type	Max. vacuum [mbar]	Air consumption [l/min]	Max. suction capacity [m³/h]	Weight [kg]	Part no.
Multi-Base VC-M-BV	-	-	-	4.1	10.01.12.02050
Suction plate VC-M-SPV 160x160	-	-	-	0.7	10.01.12.01853
Suction plate VC-M-SPV 300x100	-	-	-	1.9	10.01.12.02053
Suction plate VC-M-SPV 200x55	-	-	-	0.8	10.01.12.02009
Suction plate VC-M-SPV 210	-	-	-	1.6	10.01.12.02008



Multi-Clamp vacuum pump VC-M-PU

Multi-Clamp Vacuum Pump VC-M-PU

- Portable vacuum pump in a robust case with an integrated cable drum
- Simple vacuum monitoring via gauge
- Protection category IP 54

Ordering data vacuum pump

Type	Max. vacuum [mbar]	Max. suction capacity [m³/h]	Voltage		Weight [kg]	Part no.
			50 Hz	60 Hz		
VC-M-PU-4-AC 230V	850	3.9	230	-	8.5	10.01.12.02040
VC-M-PU-4-AC 110V	850	4.0	-	110	8.5	10.01.12.02051

Accessories



Foot switch FU

Ordering data

Type	Part no.
Foot switch FU 5 3/2 (fitting hoses included in scope of delivery)	10.01.12.02055
Accessory set for the operation of two Multi-Clamps VC-M-V with one vacuum pump (hose set with pneumatic quick-connect coupling, y-piece and straight piece)	10.01.12.02054
Accessory for the operation of two Multi-Clamps VC-M with one ejector (y-piece)	10.01.12.02061
Friction pad REIB-INS	10.01.12.02000
Sealing cord DI-SCHN (available by the meter)	10.01.12.02056

Application Areas

Whether sawing, grinding, drilling or screwing – Multi-Clamp facilitates quick and flexible workpiece clamping and reclamping during countless work steps.



Sawing



Grinding

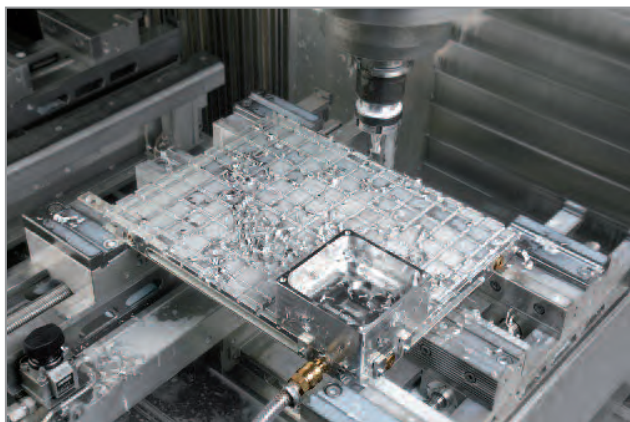


Drilling



Screwing

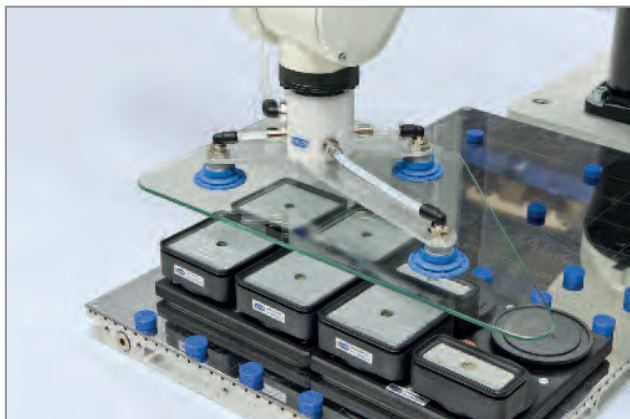
Clamping Solutions for Metal and Plastics Processing



Vacuum clamping system Matrix-Plate

The Matrix-Plate enables distortion-free, process-safe clamping of flat underface, planar metal and plastics workpieces for CNC machining. One-sided friction pads enable very high absorption of lateral forces. The Matrix-Plate can also be used for the precise and secure fixing of complex components. The Matrix-Plate is secured to the machine table via clamping claws or a zero point clamping system and is modularly extendable.

Clamping Solutions for Glass Processing



Vacuum clamping system ISCUP-G

The vacuum clamping system ISCUP-G enables the secure and damage-free clamping of two-dimensional glass workpieces for automated and partially-automated processing. A friction pad especially developed for glass applications guarantees maximum precision, even with low production tolerances. Based on the Innospann component system from Schmalz, the system is highly flexible in its configuration and integration.

Clamping Solutions for 3D-Freeform Surfaces



Basic Holding Fixture for manual 3D-clamping

The Basic Holding Fixture (BHF) is used to fix complex components with only a few actions for manual or machine processing. Flexible setting possibilities and a high degree of freedom reduces setup work to a minimum. The BHF can be deployed in every common machine or work surface.

Advanced Holding Fixture for automated 3D-clamping

Schmalz has automated the 3D-clamping system setup function almost completely through a technology study. The Advanced Holding Fixture (AHF) has a height-adjustable cylinder barrel positioned via a central drive. It is especially suitable for specific CNC laser and milling processes.

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Vacuum Handling Systems

Loading CNC Machining Centers Ergonomically



Complete handling system with vacuum tube lifter Jumbo and crane

Vacuum handling systems from Schmalz have been a tried-and-tested feature of the woodworking industry for a number of decades. Ergonomic and secure handling of workpieces rationalizes the loading of CNC machining centers and panel saws.

Individually-tailored handling solutions from a single source

- Ergonomic vacuum lifters (tube lifter Jumbo or lifting device VacuMaster)
- Lightweight aluminum cranes (crane systems or jib cranes)
- Comprehensive services ranging from consultation and project planning up to assembly and commissioning



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