






**ZERO**  
POINT



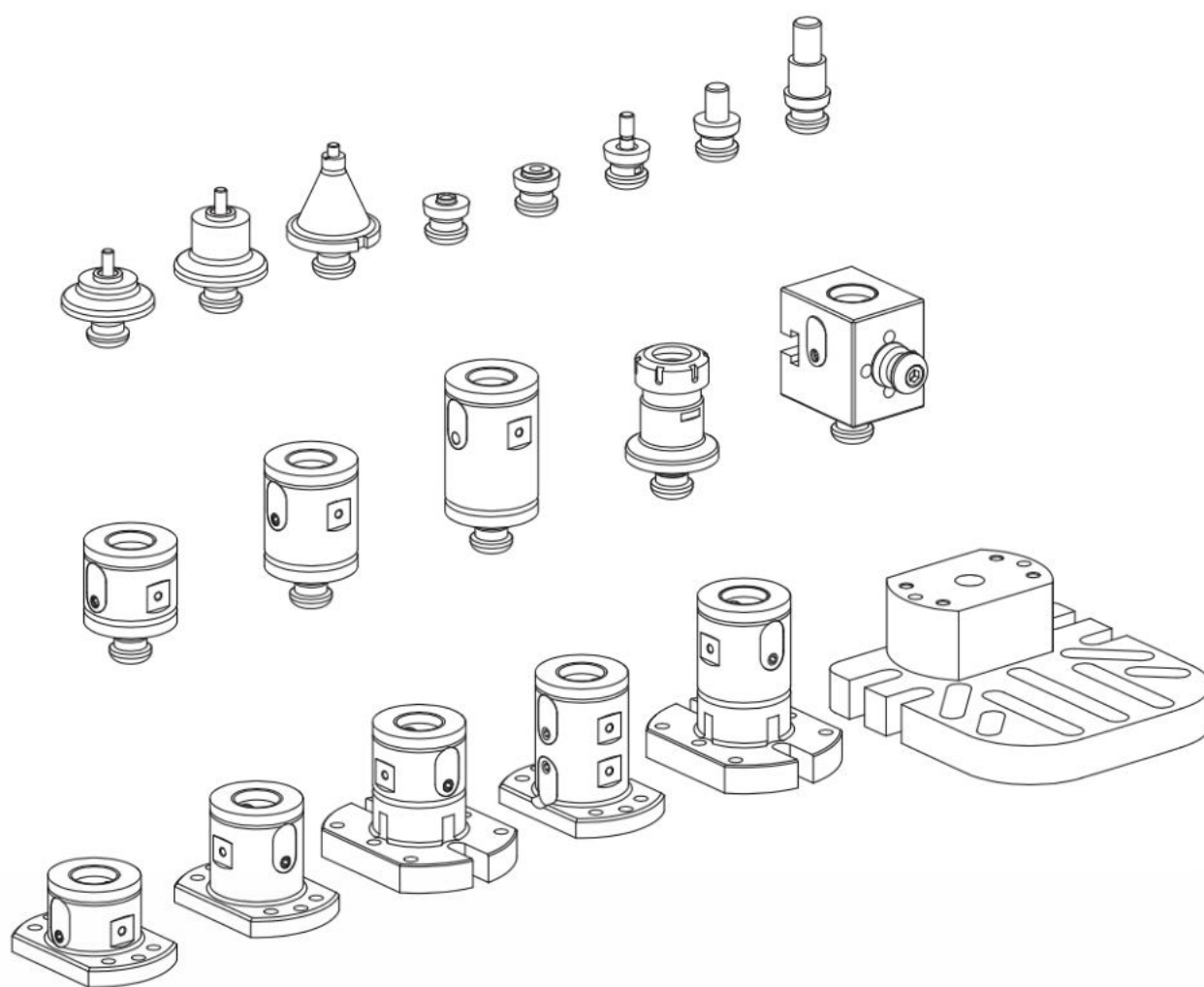
# SISTEMA DE FIXAÇÃO UNILOCK

O sistema Unilock foi desenvolvido especialmente para maquinar trabalhos em 5 lados e é ideal para fixar peças de trabalho complexas, podendo inclusive todo o trabalho ser realizado com apenas 1 operação de fixação.



- Maquinação de 5 lados;** 
- Construção modular:** máxima flexibilidade; 
- Set-up da peça na máquina mais rápido e** 
- sem erros;**
- Mobilidade da peça entre as máquinas, sem** 
- perda dos pontos referencia;**
- Força de aperto, precisão e repetibilidade** 
- elevadas.**

# UMA GRANDE VARIEDADE DE SOLUÇÕES



As peças são fixadas através da construção de vários módulos, com várias opções em catálogo relativamente a alturas e diâmetros, bem como de uma diversidade de acessórios que vai ao encontro de qualquer necessidade, mediante a complexidade de cada projeto.

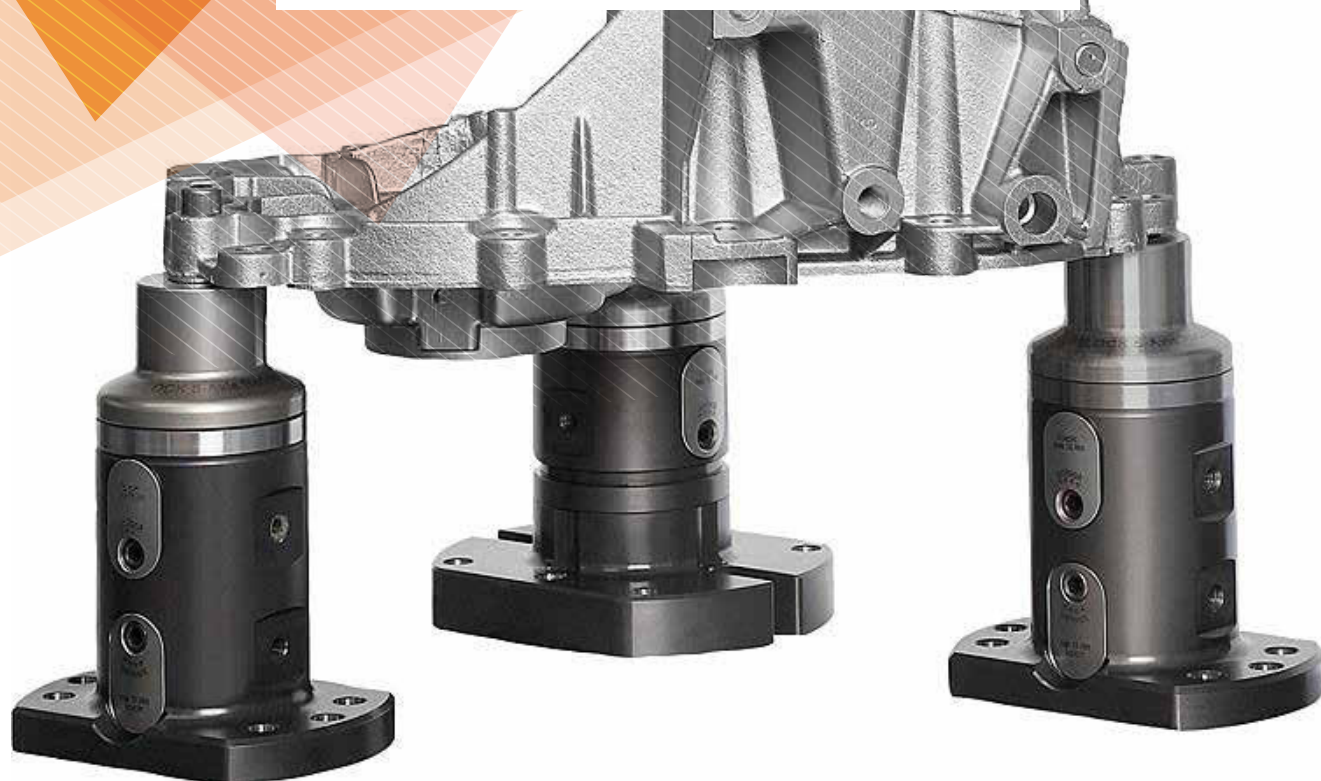
**Módulos Básicos**

**Módulos Adicionais**

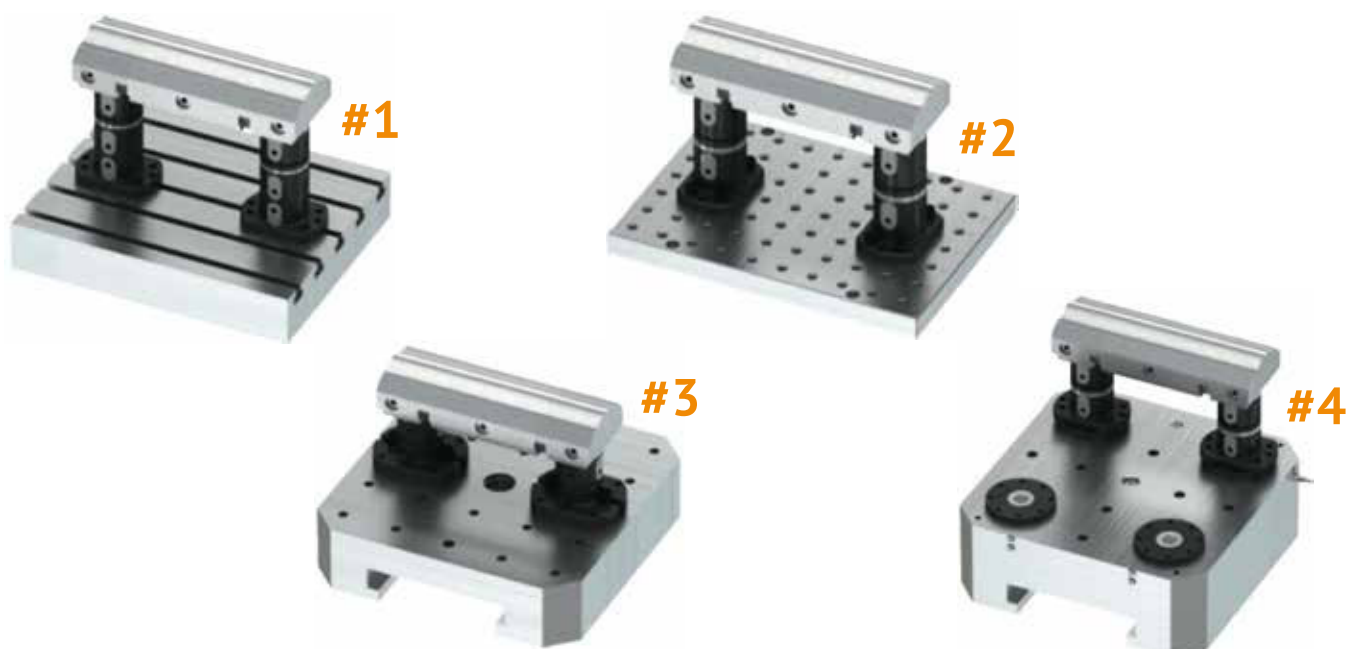
**Acessórios**



Em conjunto, os módulos e acessórios garantem a criação de uma grande variedade de sistemas.

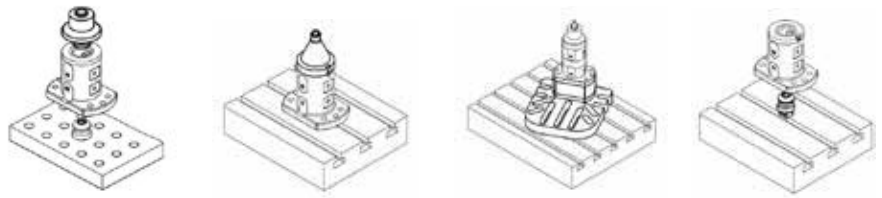


O sistema **UNILOCK** pode ser montado em mesas magnéticas, em sistemas zero point pneumáticos, directamente nas mesas das CNC's ou pode ser adaptado aos sistemas de fixação zero point mais comuns.





PARCEIRO B2YOU



**KIPP**

# SISTEMA DE FIXAÇÃO UNILOCK





**B2YOU®**

**Vamos falar!**

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256 667 405





Sistemas de Fixação

**ZERO POINT**

# Technical information zero-point clamping system



## Application

The modular structured flexible zero-point clamping system was specifically developed for the machining and non-machining fields.

This system enables a quick and accurate clamping and referencing of fixtures and workpieces on all production machines, machining centres, EDM's and inspection equipment.

Whether subplate, fixture, vice or workpiece, this system allows an exchange with a defined reference point in a matter of seconds and repeat accuracy of less than 0.005 mm.

## The advantages

- Modular system
- Compact flat design
- Workpiece or fixture change within seconds
- Pneumatic system
- Positive locking
- Holding forces up to 75 kN and pull-in forces up to 15 kN
- Turbo function
- Positioning via short conical locator
- Works reliably in every mounting position
- Sealing air function

## Your benefit

- Can be combined with our modular clamping system
- Better machine room utilisation
- Increased productive machine running times, significantly reduced set-up times
- Reliable system
- Very high cutting forces possible
- High operating and process safety
- Increased pull-in forces are standard
- Very high repeat accuracy
- Clamping cylinder installation in both vertical and horizontal positions
- Blow out function can be activated when changing pallets.









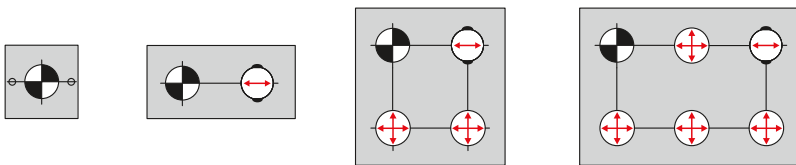
# Technical information zero-point clamping system



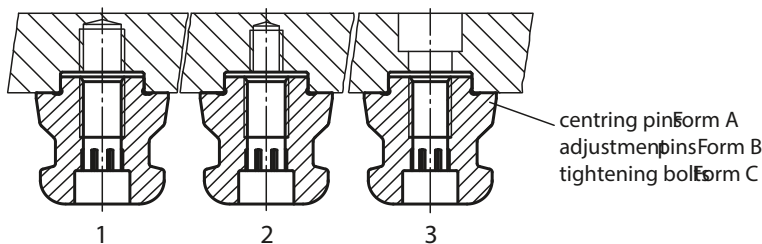
## Spigot arrangement/set-up

The workpieces, fixtures or subplates are positioned and clamped using spigots. There are three different spigot types.

-  Centring spigot      fixed in x and y direction (reference point)
-  Compensating pin      fixes the free axis (studs)
-  Clamping spigot      Spigot with undersize (no centring function only clamping function)
-  Cylindrical pin      For individual clamping, positioning is done with centring spigot + 2 cylindrical pins



- 1 = fastening with grub screw DIN 913
- 2 = fastening with DIN 912 screw through the tightening bolt
- 3 = fastening with DIN 912 screw through the fixture or workpiece

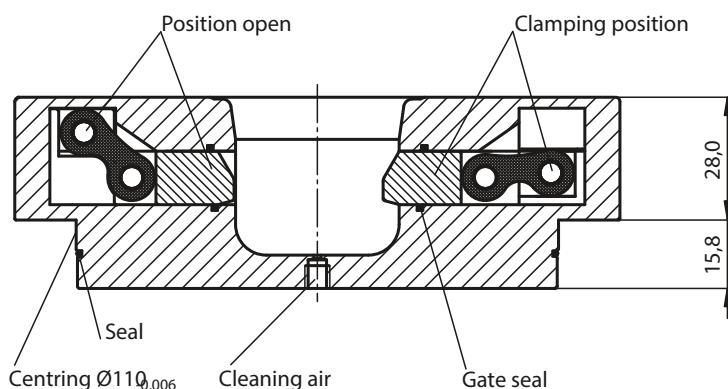


## The function

The proven UNI lock clamping module was made even flatter due to a new mechanism. The built-in toggle system together with guided clamping slides ensures high process reliability of the system.



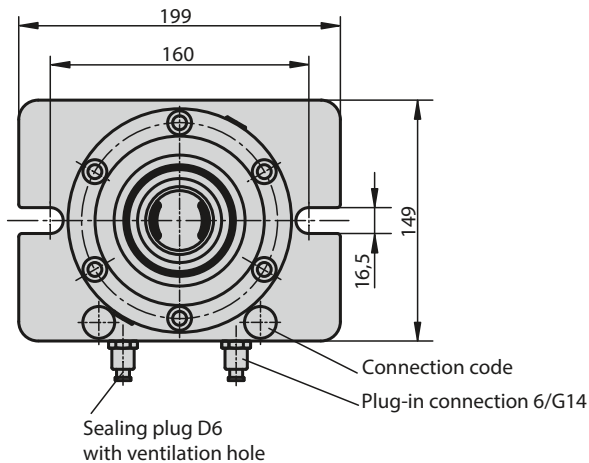
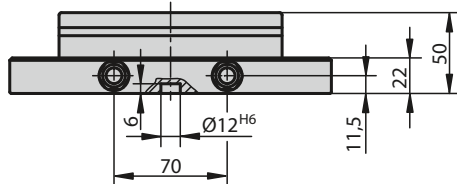
## Toggle lever mechanism



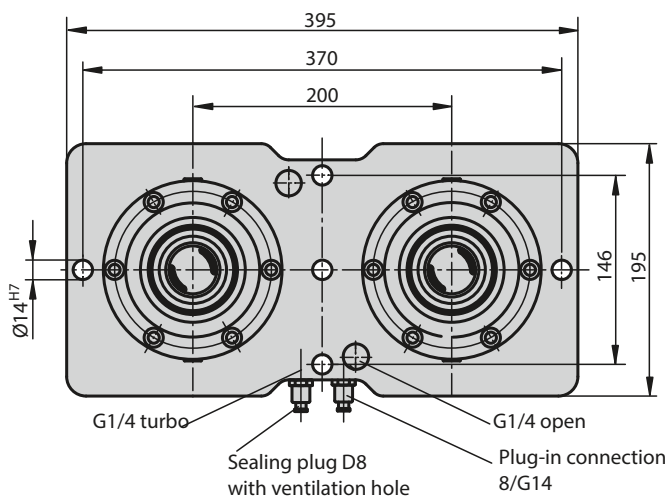
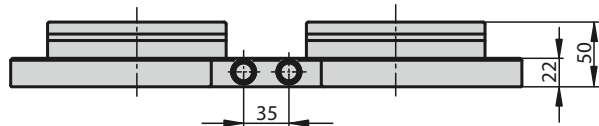
## UNI lock clamping station



1x



2x



Material:

Clamping module mild steel.

Base plate steel 1.1730.

Version:

Clamping module contact surfaces case-hardened and ground.

Base plate ground on both sides.

Sample order:

K1009.1000149199

Note:

Completely mounted multi-clamping stations with integrated UNI lock Ø138 mm mounting clamps. The clamping stations are secured to the machine table directly or with clamps.

Common bore patterns are pre-centred on the rear side for mounting.

Clamping stations can be aligned via the 14H7 reference holes.

The clamping stations are actuated via a central pneumatic connection.

The high clamping forces are generated by the integrated spring package (the unit clamps in the de-pressurized state).

The release process occurs pneumatically.

The following retaining forces are possible with the UNI lock clamping bolt in conjunction with mounting screws M10, M12, M16.

- Retaining force (M10) 35,000N/module

- Retaining force (M12) 50,000N/module

- Retaining force (M16) 75,000N/module

On request:

Clamping station in special dimensions.

Technical data:

- Opening pressure: 6bar, lubricated air

- Turbo pressure: 6bar

- Air connection: G1/4

- Repeat accuracy  $\leq 0.005$  mm

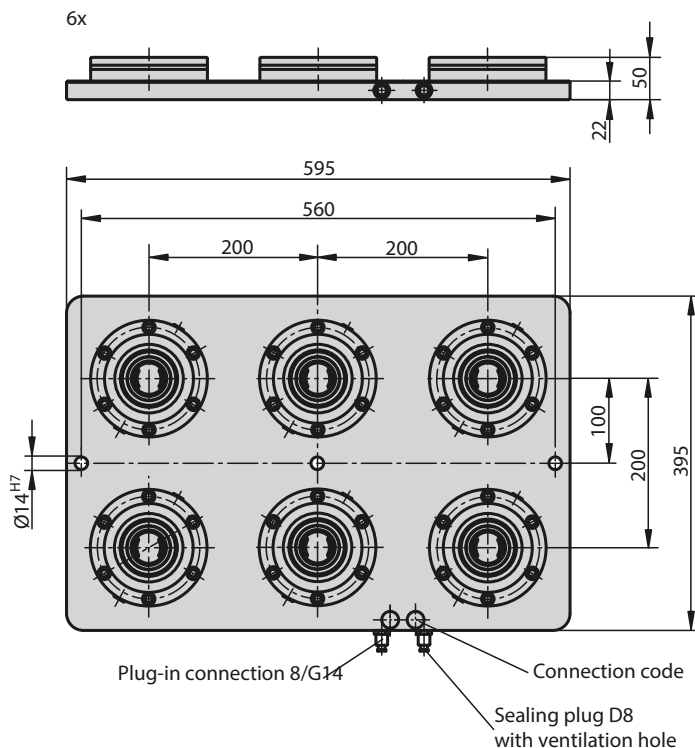
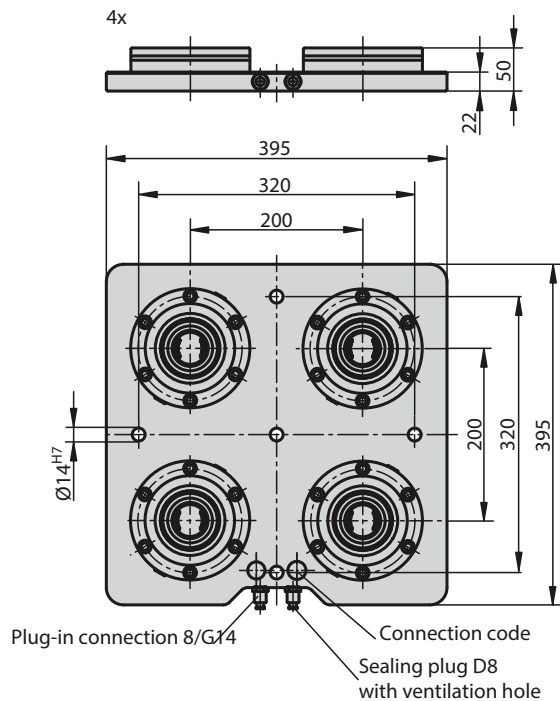
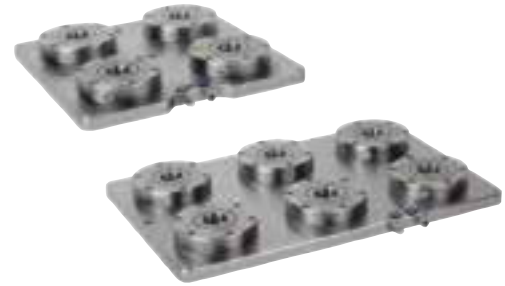
- Reference holes 14H7 to align the clamping plate.

- Pneumatic connectors for 6 mm pneumatic hose.

## KIPP UNI lock damping station

Order No.	Type	weight kg
K1009.1000149199	1x	7.2
K1009.2200395195	2x	17.681

## UNI lock clamping station



**Material:**  
Clamping module mild steel.  
Base plate steel 1.1730.

**Version:**  
Clamping module contact surfaces case-hardened and ground.  
Base plate ground on both sides.

**Sample order:**  
K1009.4200395395

**Note:**  
Completely mounted multi-clamping stations with integrated UNI lock Ø138 mm mounting clamps. The clamping stations are secured to the machine table directly or with clamps. Common bore patterns are pre-centred on the rear side for mounting. Clamping stations can be aligned via the 14H7 reference holes. The clamping stations are actuated via a central pneumatic connection. The high clamping forces are generated by the integrated spring package (the unit clamps in the de-pressurized state). The release process occurs pneumatically.

The following retaining forces are possible with 1 UNI lock clamping bolt in conjunction with mounting screws M10, M12, M16.

- Retaining force (M10) 35,000N/module
- Retaining force (M12) 50,000N/module
- Retaining force (M16) 75,000N/module

**On request:**  
Clamping station in special dimensions.

- Technical data:**
- Opening pressure: 6bar, lubricated air
  - Turbo pressure: 6bar
  - Air connection: G1/4
  - Repeat accuracy  $\leq 0.005$  mm
  - Reference holes 14H7 to align the clamping plate.
  - Pneumatic connectors for 6 mm pneumatic hose.

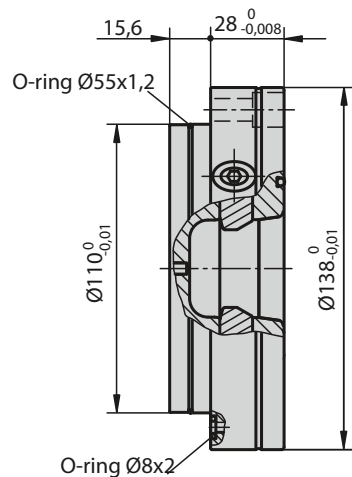
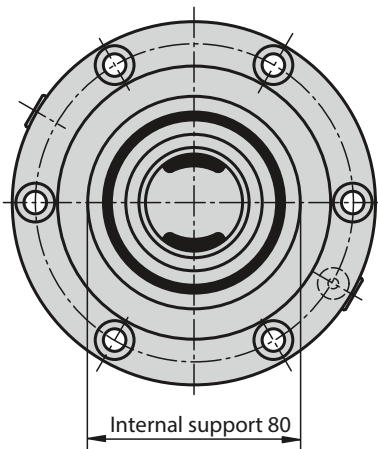
## KIPP UNI lock damping station

Order No.	Type	weight kg
K1009.4200395395	4x	58
K1009.6200595395	6x	52.2

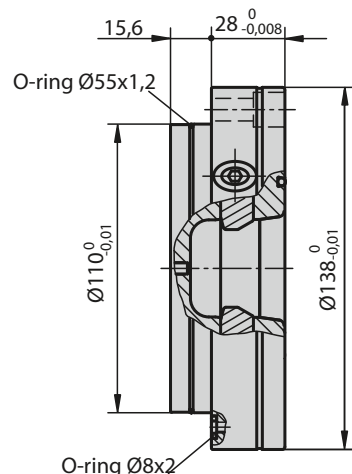
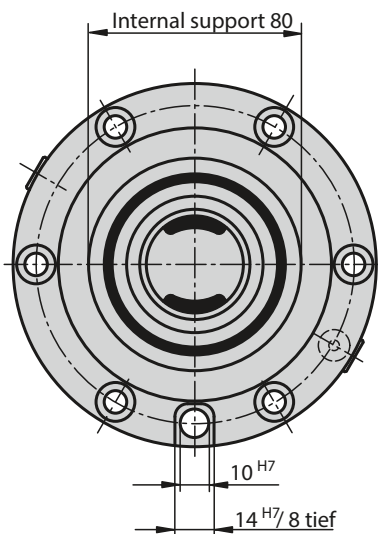
## UNI lock installation clamp



Without rotation lock



With rotation lock



Material:  
Steel.

Version:  
Contact surfaces case-hardened and ground.

Sample order:  
K1003.138280

## Note:

The UNI lock mounting clamps can be mounted in any position, with or without projection on machine tables, in fixtures (tooling plates, cubes, tombstones, etc.). The modular design lets the number of clamps and distance between the clamps to be ideally adjusted to suit your clamping task. The clamps can be supplied with or without rotation lock.

The high clamping forces are generated by the integrated spring package (the unit clamps in the de-pressurized state). The release process occurs pneumatically.

The following retaining forces are possible with the UNI lock clamping bolt in conjunction with mounting screws M10, M12, M16:

- Retaining force (M10) 35,000N
- Retaining force (M12) 50,000N
- Retaining force (M16) 75,000N

## Supplied with:

- 1x clamping module incl. 6x mounting bolts.
- 6x screw caps.
- 2x air connection O-rings.
- 1x installation O-ring.

## Technical data:

- Opening pressure: 6bar, lubricated air
- Turbo pressure: 6bar
- Air connection: G1/8
- Repeat accuracy  $\leq 0.005$  mm

## KIPP UNI lock installation clamp

Order No.	Version	weight kg
K1003.138280	Without rotation lock	3.56
K1003.138281	With rotation lock	3.52



K1122

## UNI lock double clamping module



Material:  
Steel.

Version:  
Contact surfaces case-hardened and ground.

Sample order:  
K1122.1381500

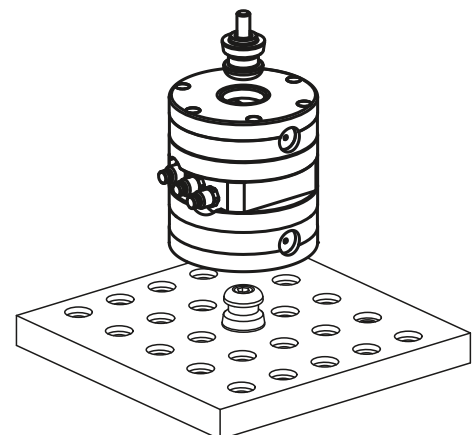
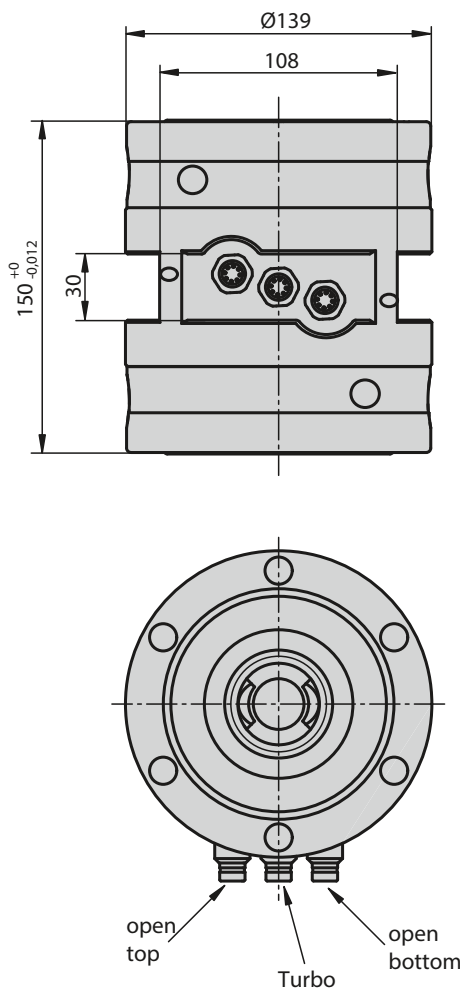
Note:  
UNI lock double clamp modules are particularly suitable for the direct clamping of workpieces. Workpieces with complex geometry can be completely machined on 4 and 5 sides. UNI lock double clamp modules can be mounted in any position.

The high clamping forces are generated by the integrated spring package. (the unit clamps while not pressurised). Clamping is released pneumatically. The following clamping forces are possible with the UNI lock clamping pin in conjunction with M10, M12, M16 fastening screws:  
Clamping force (M10) 35,000 N  
Clamping force (M12) 50,000 N  
Clamping force (M16) 75,000 N

Supplied with:  
1 double clamp module incl. 3x pneumatic connections.



Technical data:  
Opening pressure: 6 bar, lubricated air  
Turbo pressure: 6 bar  
Air connection: G 1/8  
Repeat accuracy  $\leq 0.005$  mm

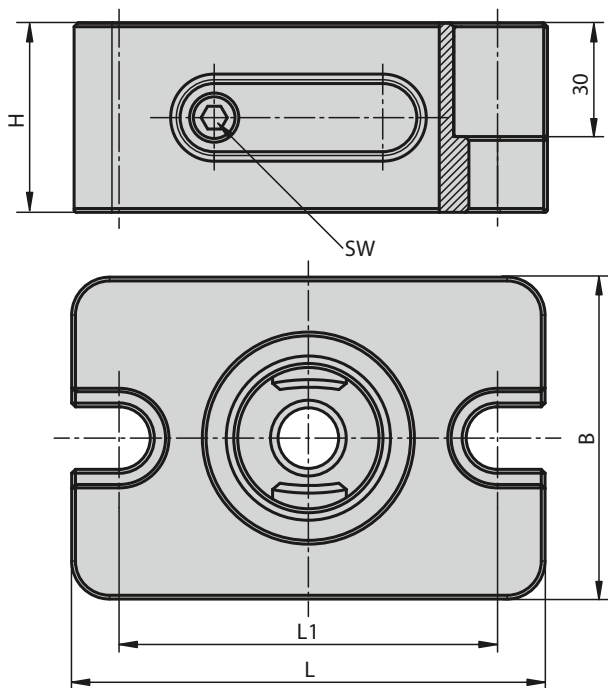


### KIPP UNI lock double clamping module

Order No.	Type	weight kg
K1122.1381500	double clamp	3

K1123

## UNI lock manual clamping module



Material:  
Steel.

Version:  
Contact surfaces case-hardened and ground.

Sample order:  
K1123.1605050

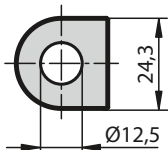
Note:  
UNI lock manual clamping modules can be adapted directly to machine tables with grid holes or T-slots, and to grid hole subplates with 50 mm grid spacing system size M10/M12/M16.  
The UNI lock manual clamping module H 50 is particularly suitable for machines with reduced Z travel. The low installation height of the manual clamping module facilitates full utilisation of the Z travel.  
The UNI lock manual clamping module H 50 can be mounted in any position.

Supplied with:  
1 manual clamping module incl. fastening accessories.

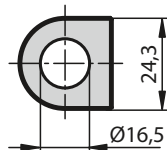
Technical data:  
Repeat accuracy  $\leq 0.005$  mm

### Mounting accessories

M12:



M16:



### KIPP UNI lock manual clamping module

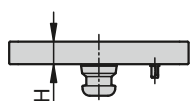
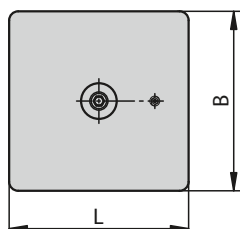
Order No.	B	H	L	L1	SW	weight kg
K1123.1605050	85	50	125	100	6	3.52

# Interchangeable subplates

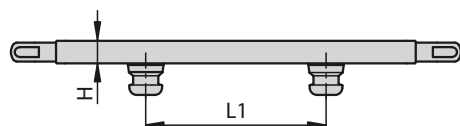
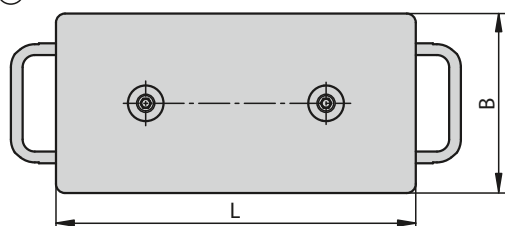
for UNI lock zero-point clamping system



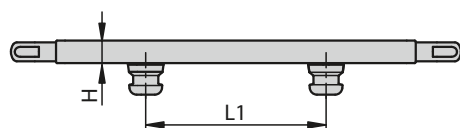
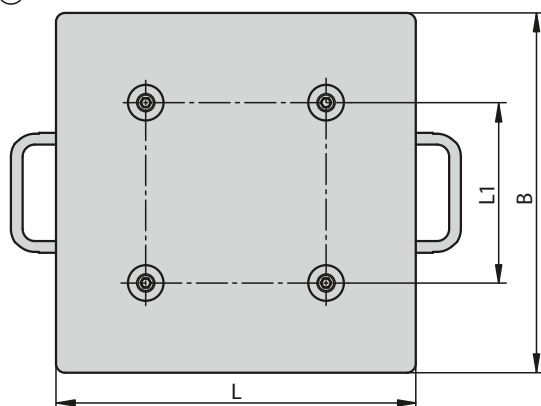
Ⓐ



Ⓑ



Ⓒ



Material:  
High-strength aluminium.

Sample order:  
K1218.1000200200

Note:  
Interchangeable subplates are particularly suitable for quickly exchanging fixtures on zero point clamping plates. Ground on both sides, standard clamping pin gauge of 200 mm. Complete with clamping pins and handles.

On request:  
Further gauges and special sizes.



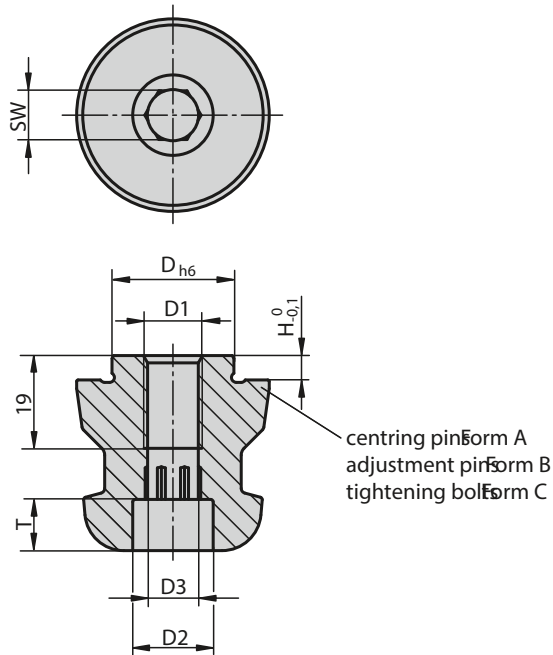
## KIPP Interchangeable subplates for UNI lock zero pointamping system

Order No.	Form	B	H	L	L1	weight ca. kg
K1218.1000200200	A	199	25	199	-	1
K1218.2200200200	B	199	25	399	200	3
K1218.4200400400	C	399	25	399	200	5

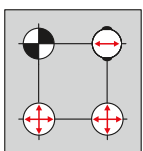
K0967

# UNI lock clamping pin

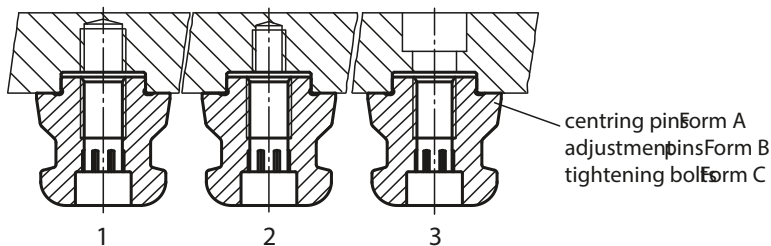
size 80 mm



- Centring pins Form A fixes in x and y axis (reference point)
- Adjustment pins Form B fixes the free axis (bayonet pin)
- ⊕ Tightening bolts Form C Pins with undersize (no centring function, clamping only)



- 1 = fastening with grub screw DIN 913
- 2 = fastening with DIN 912 screw through the tightening bolt
- 3 = fastening with DIN 912 screw through the fixture or workpiece



Material:  
Steel.

Version:  
Hardened and black oxidised.  
Contact faces ground.

Sample order:  
K0967.140160512

Note:  
The UNI lock clamping bolt is suitable for clamping and positioning workpieces and fixtures. Clamping bolts are screwed onto the exchange element and adapted to the various basic modules.



K0967

## UNI lock clamping pin

size 80 mm

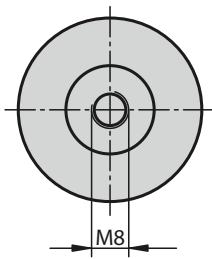
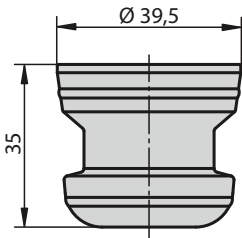


### KIPP UNI lock damping bolt

Order No.	Form	D	D1	D2	D3	H	T	SW
K0967.140160512	A	16	M12	16,5	10,3	5	10,5	10
K0967.140180512	A	18	M12	16,5	10,3	5	10,5	10
K0967.140200512	A	20	M12	16,5	10,3	5	10,5	10
K0967.140220516	A	22	M16	18,5	14,2	5	12,5	17
K0967.140240516	A	24	M16	18,5	14,2	5	12,5	17
K0967.140250512	A	25	M12	16,5	10,3	5	10,5	10
K0967.140250516	A	25	M16	18,5	14,2	5	12,5	17
K0967.140251012	A	25	M12	16,5	10,3	10	10,5	10
K0967.140251016	A	25	M16	18,5	14,2	10	12,5	17
K0967.240220516	B	22	M16	18,5	14,2	5	12,5	17
K0967.240240516	B	24	M16	18,5	14,2	5	12,5	17
K0967.240250512	B	25	M12	16,5	10,3	5	10,5	10
K0967.240250516	B	25	M16	18,5	14,2	5	12,5	17
K0967.240251012	B	25	M12	16,5	10,3	10	10,5	10
K0967.240251016	B	25	M16	18,5	14,2	10	12,5	17
K0967.340220516	C	22	M16	18,5	14,2	5	12,5	17
K0967.340240516	C	24	M16	18,5	14,2	5	12,5	17
K0967.340250512	C	25	M12	16,5	10,3	5	10,5	10
K0967.340250516	C	25	M16	18,5	14,2	5	12,5	17
K0967.340251012	C	25	M12	16,5	10,3	10	10,5	10
K0967.340251016	C	25	M16	18,5	14,2	10	12,5	17

## K1010

### Protection bolts



Material:  
Aluminium.

Version:  
Black anodized

Sample order:  
K1010.040

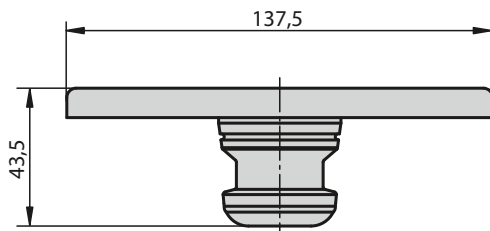
Note:  
Protection bolts to cover the hole.

#### KIPP Protection bolts

Order No.	Dimensions
K1010.040	see drawing

## K1010

### Protective plug



Material:  
Aluminium.

Version:  
Black anodized

Sample order:  
K1010.138

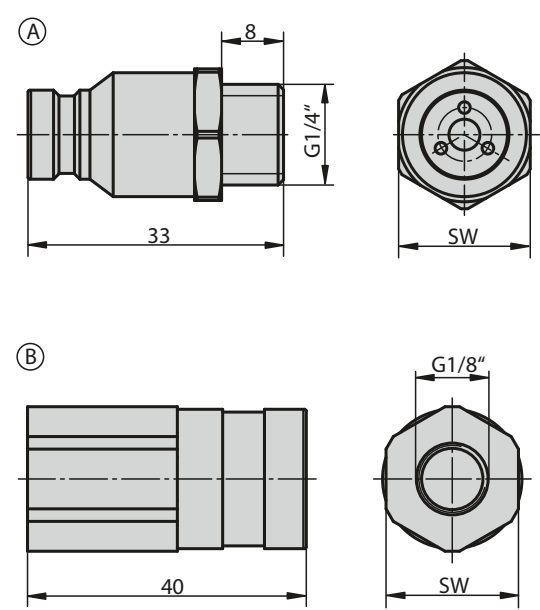
Note:  
Protective cap for clamping module D = 138.

#### KIPP Protective plug

Order No.	Dimensions
K1010.138	see drawing



Quick-fit couplings



Material:  
Steel.

Version:  
galvanized.

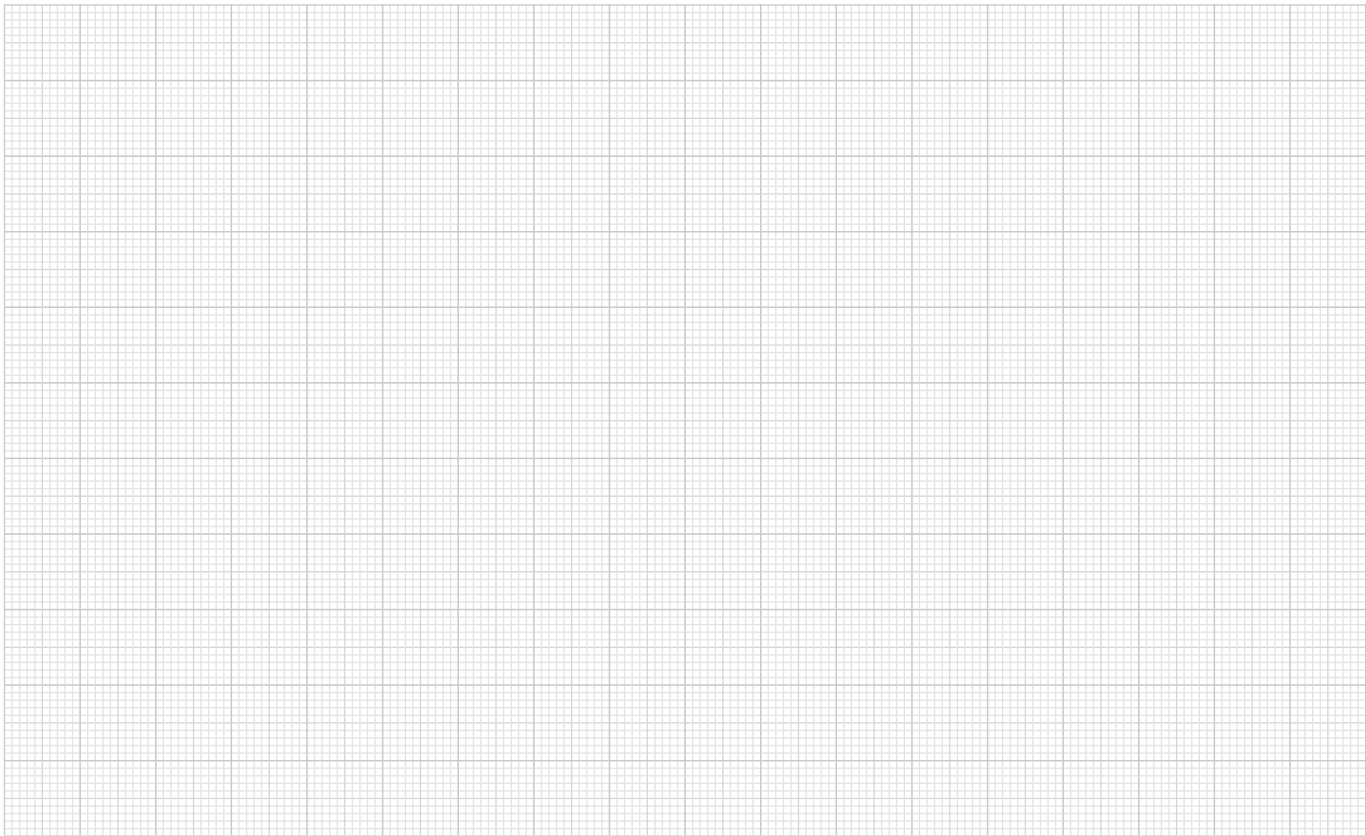
Sample order:  
K1011.0014

Note:  
Quick-fit couplings suitable for UNI lock clamping  
stations.

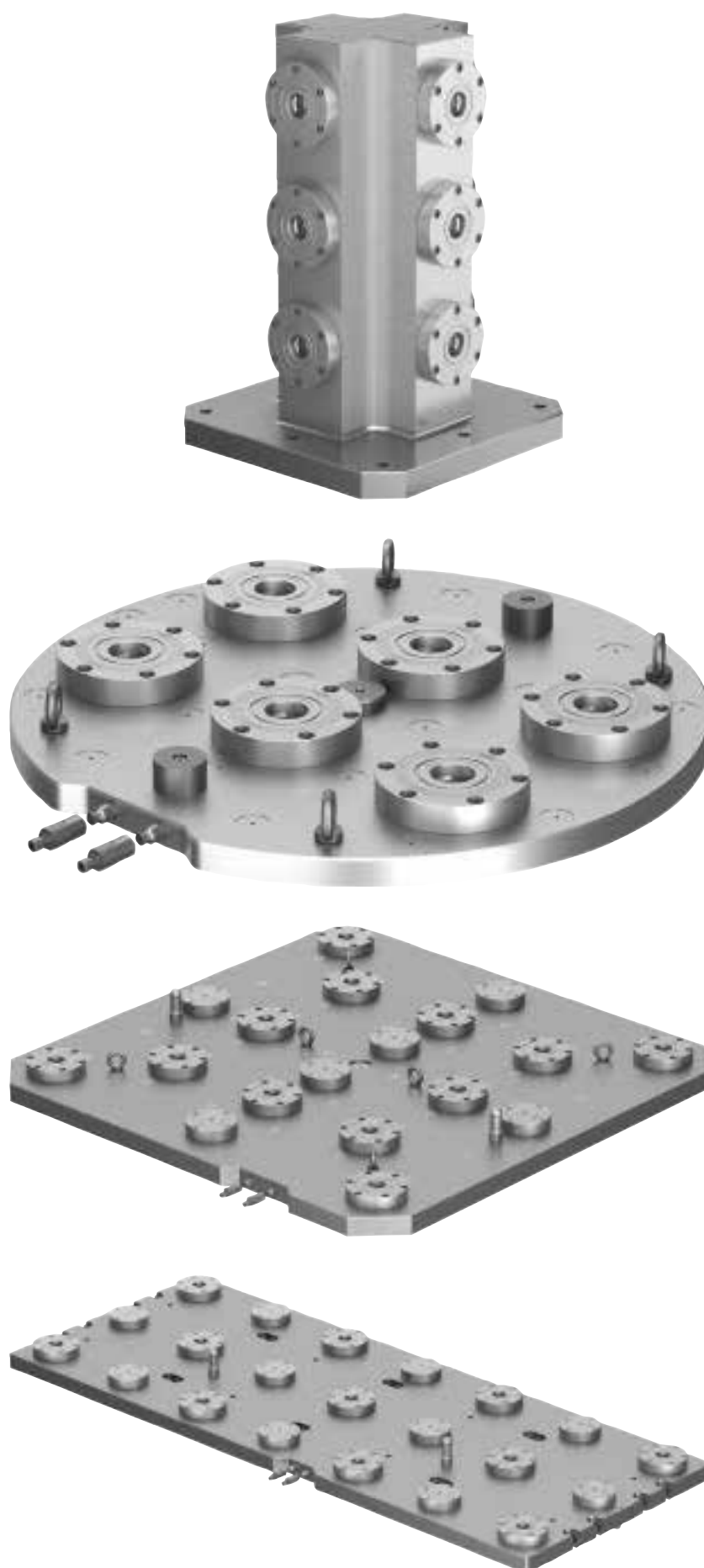
KIPP Quick-fit couplings

Order No.	Form	SW
K1011.0014	A	17
K1011.1018	B	19

Notes



## Example





Example



