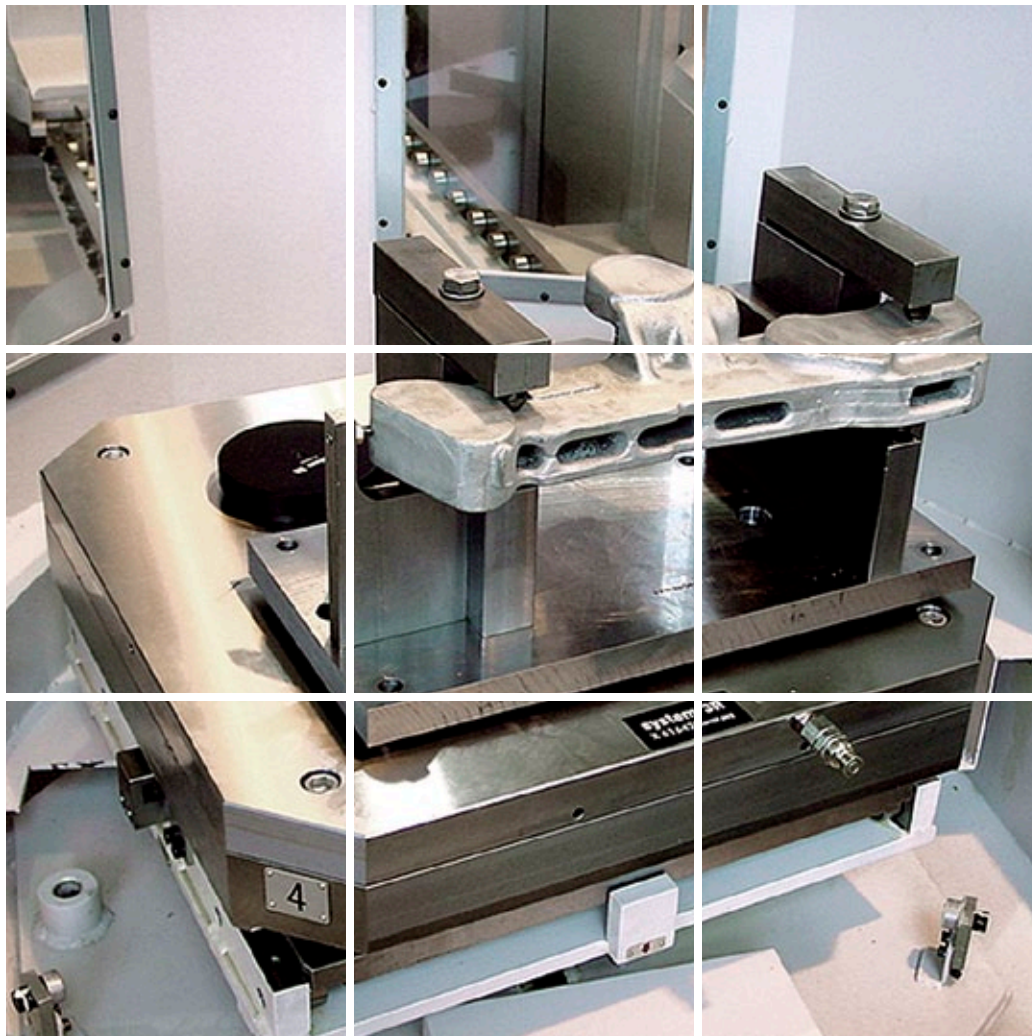


## Delphin - the modular clamping system



# Preconditions for efficient, economical and flexible production

Every production plant uses clamping elements, jigs, fixtures, reference pallet systems and many other facilities to be able to clamp the range of workpieces machined efficiently and economically.

The Delphin modular zero-point clamping system allows the machine table to be equipped individually with position-determining chucks.

It thus allows the complete work area to be used and offers substantial advantages in relation to reducing setting times and enhanced flexibility thanks to substitution of preset workpieces.

Consequently, it opens up entirely new options for manual and automated workpiece change.

- ✓ Maximisation of machine runtimes by reduction in setting times by up to 90%
- ✓ Setting outside of the machine
- ✓ Standardisation of clamping systems
- ✓ Optimisation of production technology and product quality
- ✓ Unmanned production by automation
- ✓ Modernisation of existing machines by retrofitting with Delphin

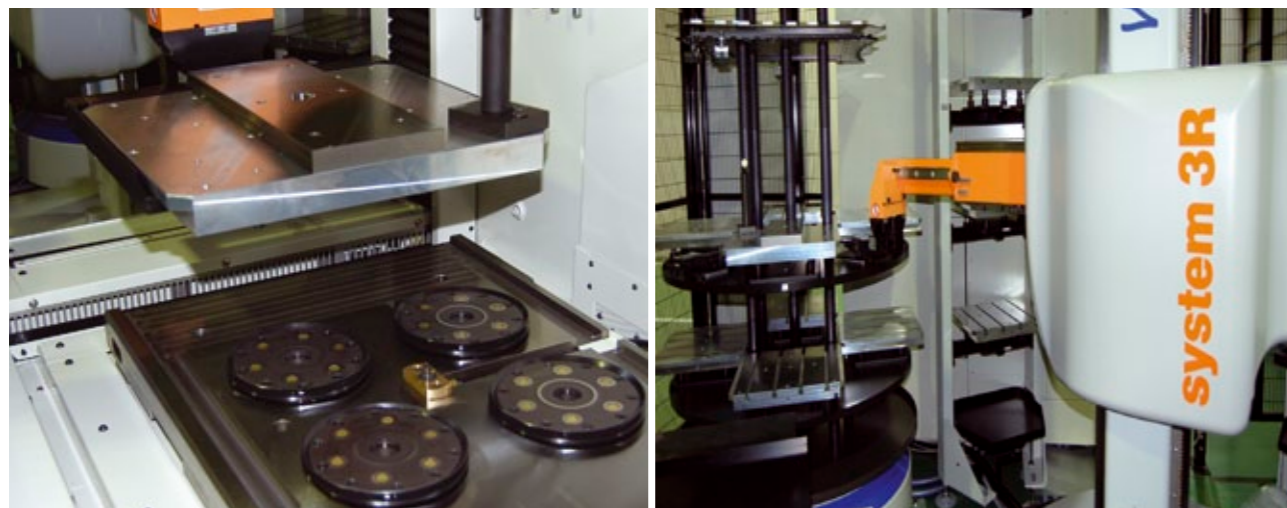


# Automation with Delphin

Automation demands special preconditions in a clamping system, and these are already met by the Delphin versions. Actuation is either pneumatic or hydraulic, depending on Delphin clamping system.

The control signals can be sent by the machine/by the robot to the corresponding machine valves. These valves then control the media lines inside the machine.

There is also the option of sending the machine/robot signals directly to the Delphin chucks via the hydraulic unit. However, this requires permanently coupling the media hoses to the connection manifold.



# Delphin Chucks

Delphin	HCP	HSP/HHP	PSP/PHP
<b>Workpiece weight</b> recommended	<1000 kg	<2000 kg	<2000 kg
<b>Centre distance</b> recommended	100 - 200 mm	200 - 400 mm	200 - 400 mm
<b>Clamping force</b>	15 kN	15 kN	13 kN
<b>Holding force</b>	60 kN	60 kN	60 kN
<b>Presence control</b>	yes	no/yes	no/yes
<b>Lift-off function</b>	yes, 1 mm	yes, 2 mm	no
<b>Releasing</b>	hydraulic 30-70 bar	hydraulic 30-70 bar	pneumatic 6 bar
<b>Clamping</b>	mechanical	mechanical	mechanical

- ✓ Combination of positioning cone and spring-loaded centring for maximum accuracy
- ✓ Low-wear and precise in the long term
- ✓ Automation-capable (HCP / HHP / PHP)
- ✓ Protection of the Z-support of the chuck when loading heavy devices (HCP / HSP / HHP)
- ✓ Suitable for conventional milling and 5-axis machining (HSC), die-sinking EDM and measuring machines
- ✓ The simplest solution for clamping spigot mounting
- ✓ All-round Z-support ring for protecting the bore against dirt



# Delphin Clamping Spigots

## Specifications:

- Repeat accuracy of the devices and workpieces < 0.005 mm
- Mechanical clamping by spring force
- Hydraulic release and lift-off of the devices
- Hydraulic pressure 30 to 70 bar

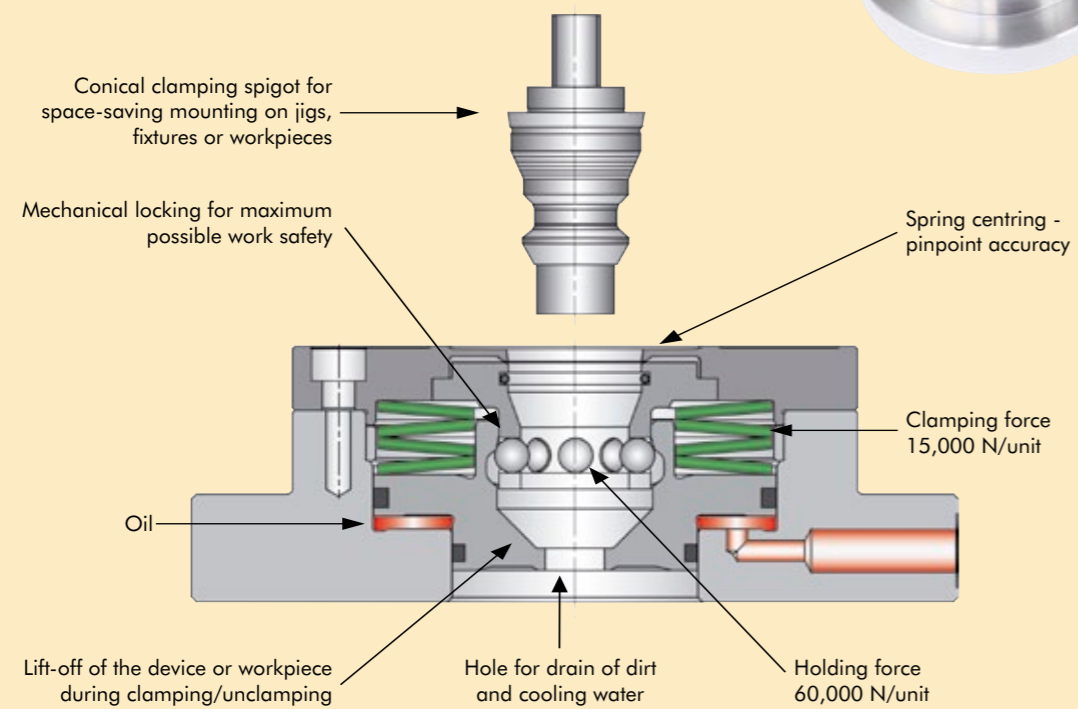


Delphin clamping spigots, centring in:

2 axes	1 axis	without centring
C 282 000	C 282 100	C 282 200

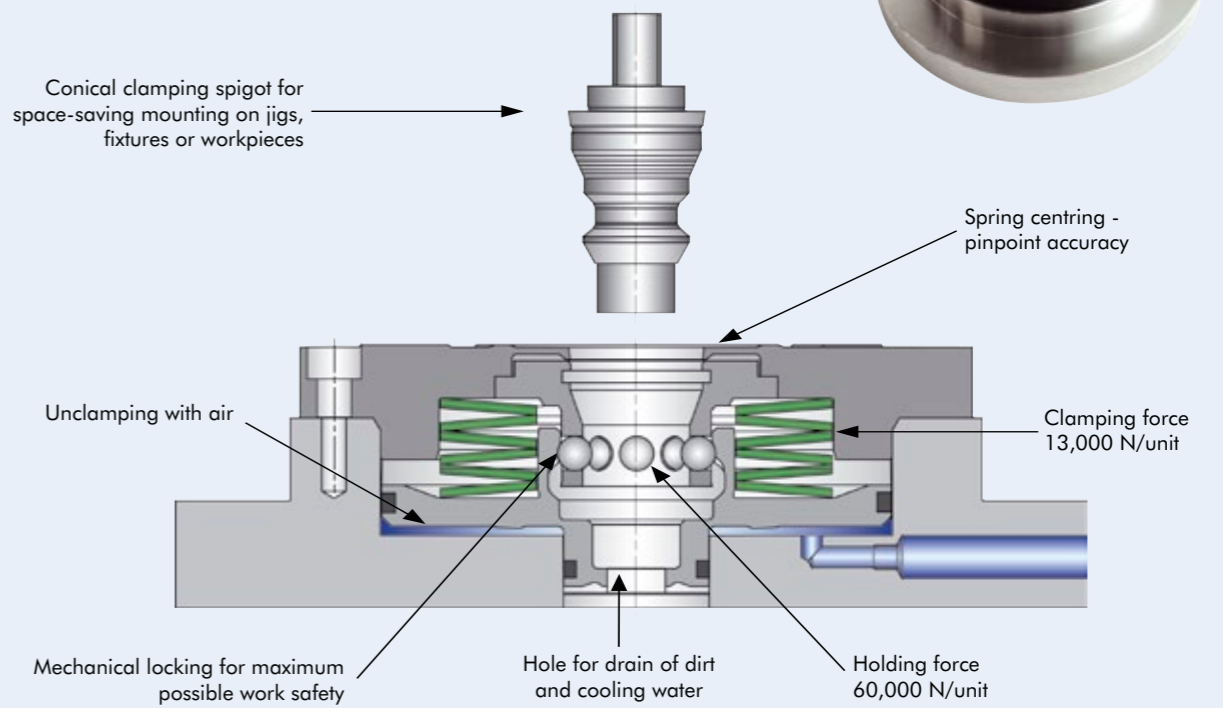
## Delphin - Chuck HSP Hydraulic Standard Performance

The hydraulic system for manual equipping



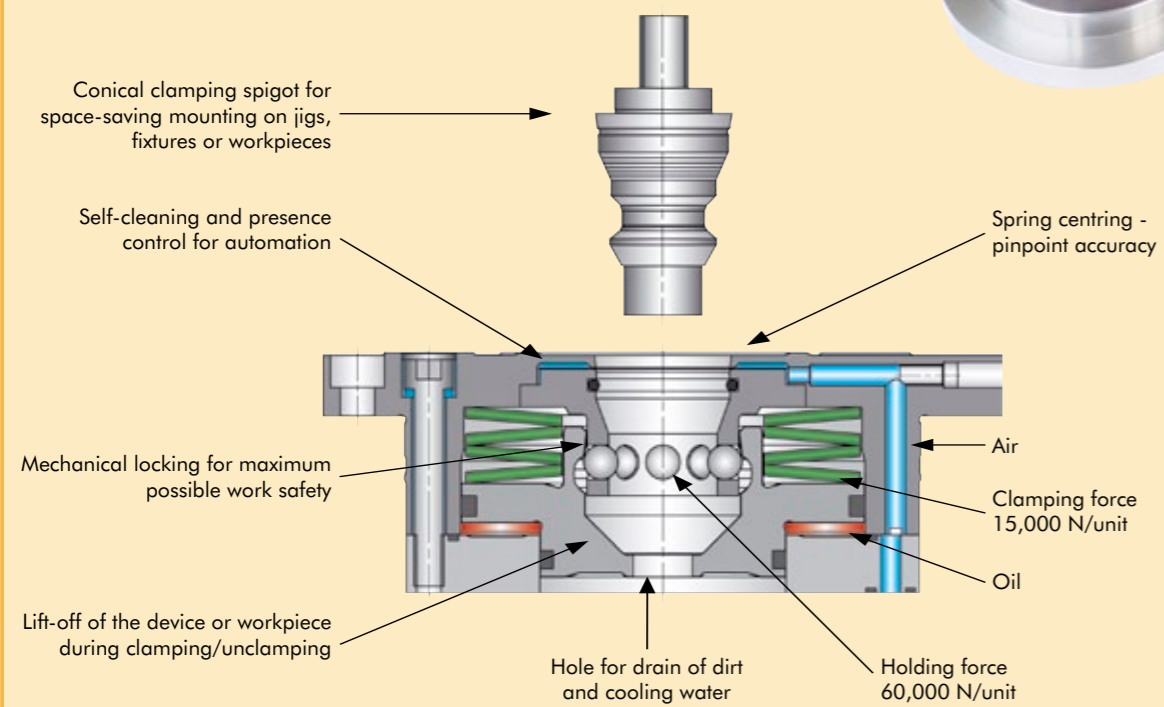
## Delphin - Chuck PSP Pneumatic Standard Performance

The pneumatic system for manual equipping



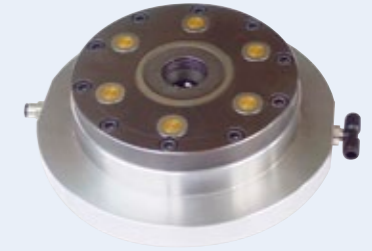
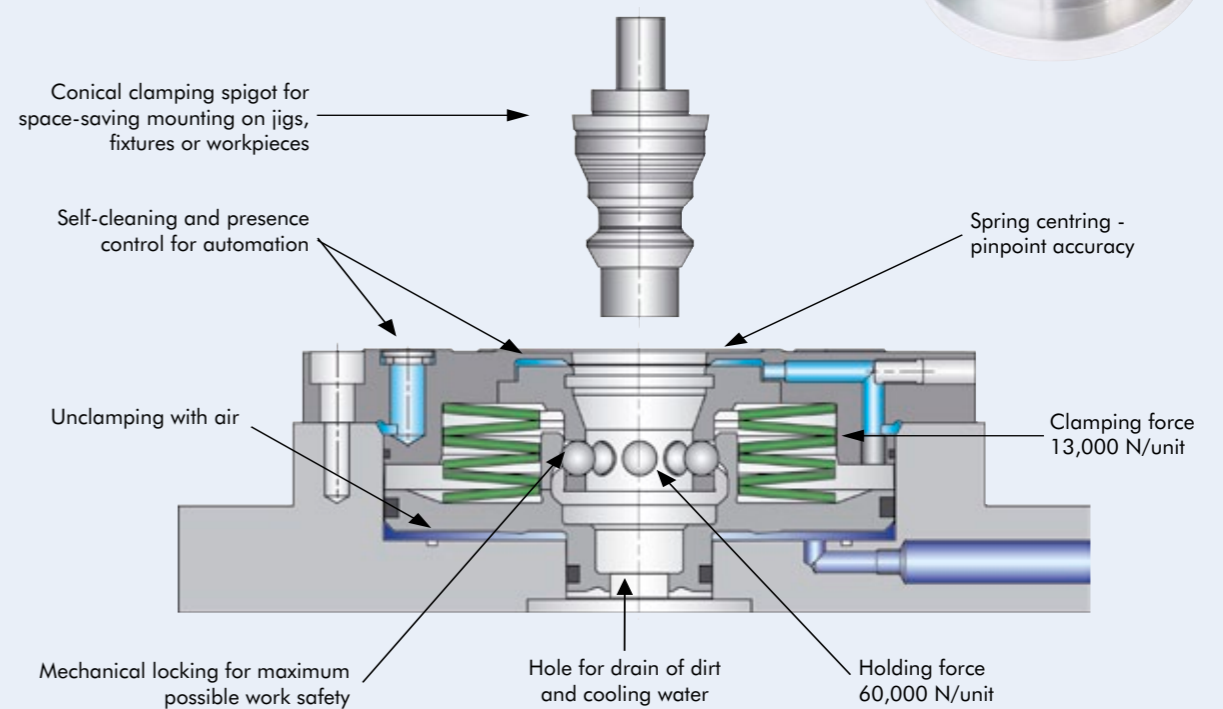
## Delphin - Chuck HHP Hydraulic High Performance

The hydraulic system suitable for automation



## Delphin - Chuck PHP Pneumatic High Performance

The pneumatic system suitable for automation



## Delphin - Chuck HCP Hydraulic ComPact

The hydraulic compact system, suitable for automation



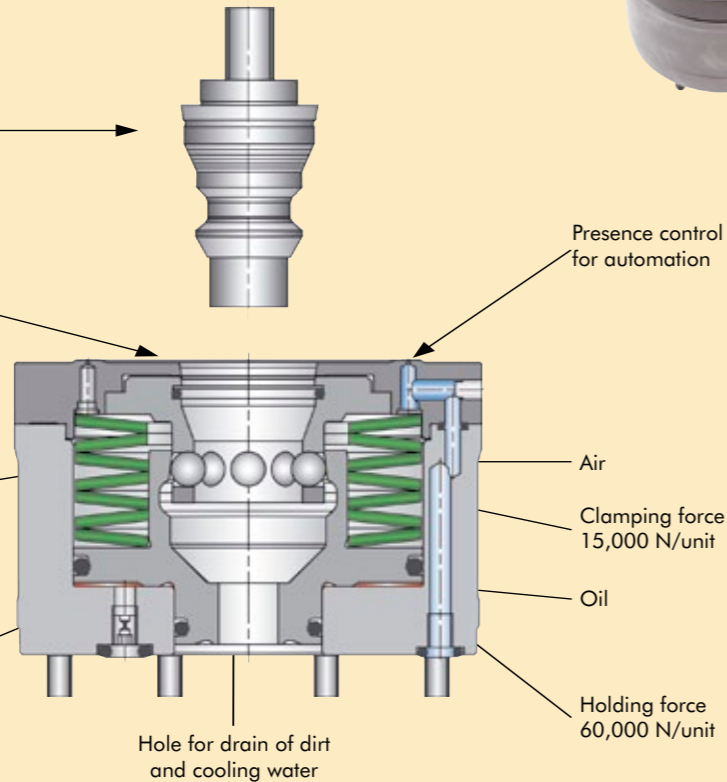
Conical clamping spigot for space-saving mounting on jigs, fixtures or workpieces

Spring centring - pinpoint accuracy

Presence control for automation

Mechanical locking for maximum possible work safety

Lift-off of the device or workpiece during clamping/unclamping



Air





Clamping force 15,000 N/unit

Oil

Holding force 60,000 N/unit

Hole for drain of dirt and cooling water

## Delphin Chucks

	Item number	Pumps /Control units
	Standard	
<b>Chucks HCP</b>		<b>Pumps hydraulic</b>
Built-in HCP	C 220 000	
Semi built-in HCP with O-ring	C 220 100	Hand pump
Semi built-in HCP with thread	C 220 120	C 287 120 
<b>Chucks HSP</b>		
Built-in HSP	C 260 000	
Semi built-in HSP (with thread)	C 260 120	Pump hybrid manual with control box
Built-up HSP	C 260 310 / C 260 320*	C 287 150 
<b>Chucks HHP</b>		
Built-in HHP	C 280 000	
Semi built-in HHP with O-ring	C 280 100	
Semi built-in HHP with thread	C 280 120	
Built-up HHP	C 280 310 / C 280 320*	
<b>Chucks PSP</b>		<b>Control units pneumatic</b>
Built-in PSP	C 240 000	
Semi built-in PSP (with thread)	C 240 120	
Built-up PSP	C 240 310 / C 240 320*	for PSP C 810 720 
<b>Chucks PHP</b>		
Built-in PHP	C 290 000	
Semi built-in PHP (with thread)	C 290 120	for PHP
Built-up PHP	C 290 310 / C 290 320*	C 296 000 

\* with fixation holes

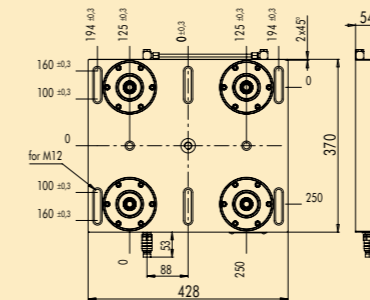
**Detailed Information**  
as index versions, further baseplates and accessories you will find in our Delphin main catalogue T-2175.

The PDF can be downloaded in the Internet:  
[www.system3r.ch](http://www.system3r.ch)

## Delphin Take 4 / Take 6 Baseplates HSP

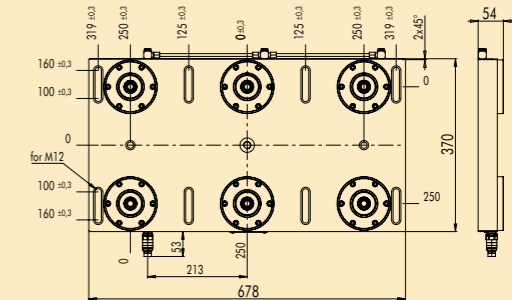
Take 4 HSP  
C 265 400

4 hydraulic chucks HSP



Take 6 HSP  
C 265 600

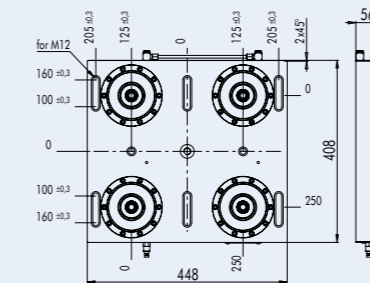
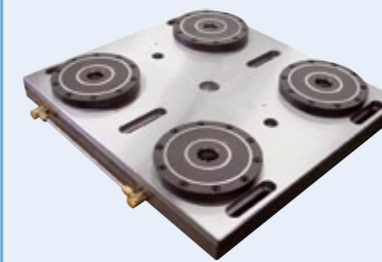
6 hydraulic chucks HSP



## Delphin Take 4 / Take 6 Baseplates PSP

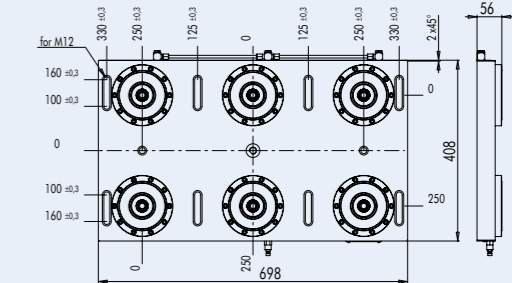
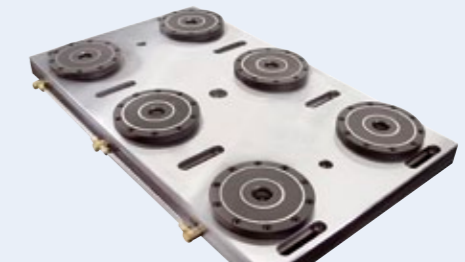
Take 4 PSP  
C 242 400

4 pneumatic chucks PSP



Take 6 PSP  
C 242 600

6 pneumatic chucks PSP



### Specifications:

- Material: steel, heat pre-treated and ground
- Centre distance 250 mm
- Defined hole pattern suitable for all machines
- Central bore for quick positioning
- Milled edge for quick positioning

