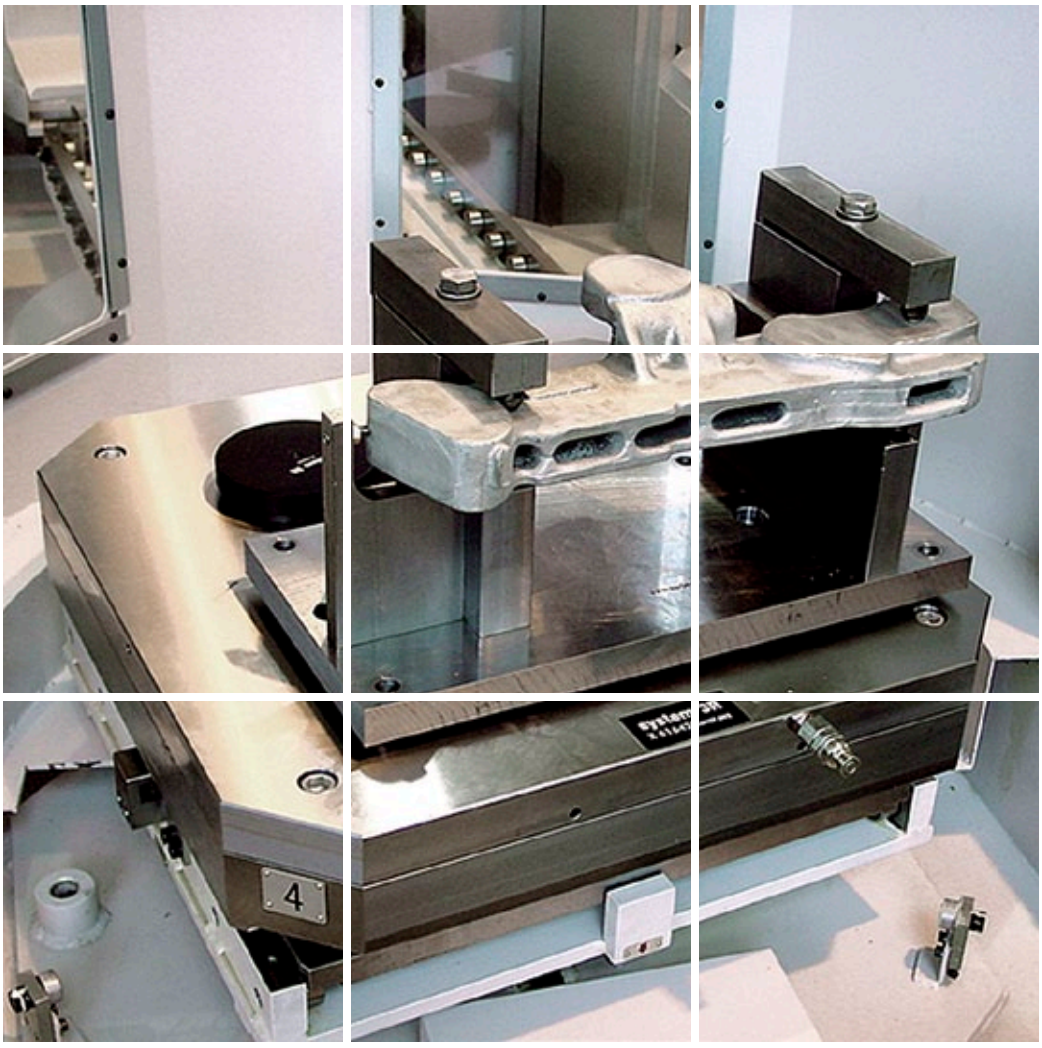
Delphin - the modular clamping system



Preconditions for efficient, economical and flexible production

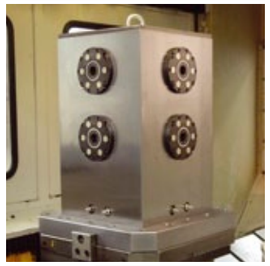
Every production plant uses clamping elements, jigs, fixtures, reference pallet systems and many other facilities to be able to clamp the range of workpieces machined efficiently and economically.

The Delphin modular zero-point clamping system allows the machine table to be equipped individually with position-deter-mining 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

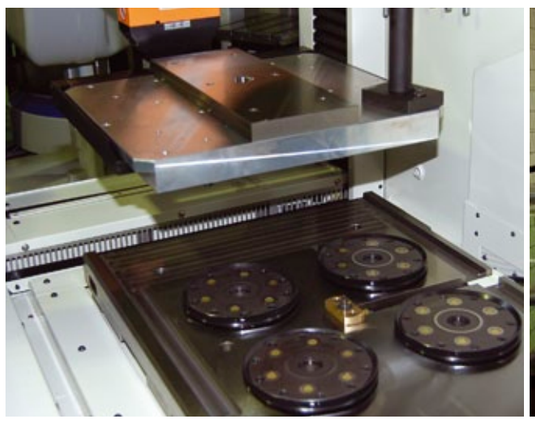


Automation with Delphin

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
Workpiece weight recommended	<1000 kg	<2000 kg	<2000 kg
Centre distance recommended	100 - 200 mm	200 - 400 mm	200 - 400 mm
Clamping force	15 kN	15 kN	13 kN
Holding force	60 kN	60 kN	60 kN
Presence control	yes	no/yes	no/yes
Lift-off function	yes, 1 mm	yes, 2 mm	no
Releasing	hydraulic 30-70 bar	hydraulic 30-70 bar	pneumatic 6 bar
Clamping	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:

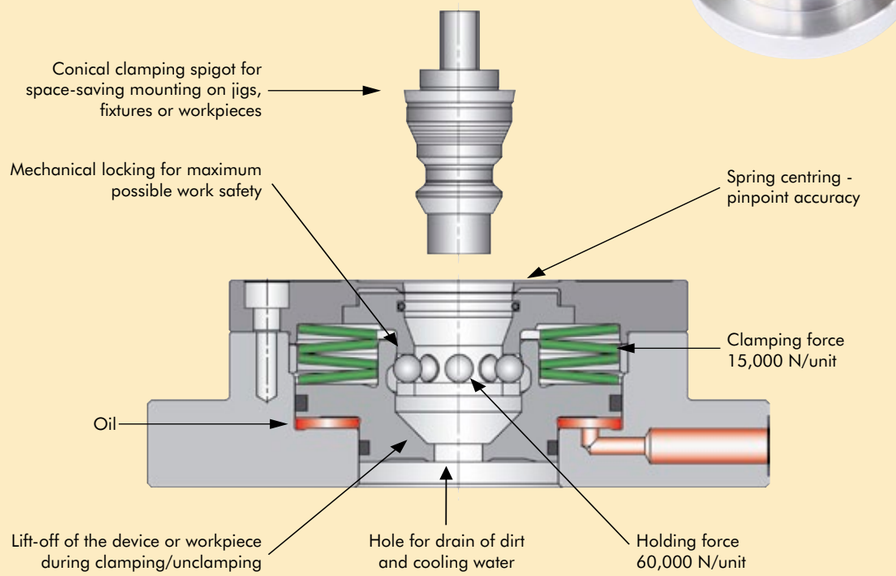
- Repeat accuracy of the devices and workpieces < 0.005 mm
- Mechanical clamping by spring force
- Hydraulic release and lift-off of the devices
- Hydraulic pressure 30 to 70 bar

Delphin clamping spigots, centring in:		
2 axes	*1 axis*	*without centring*
C 282 000	*C 282 100*	*C 282 200*

Delphin - Chuck HSP

Hydraulic **S**tandard **P**erformance

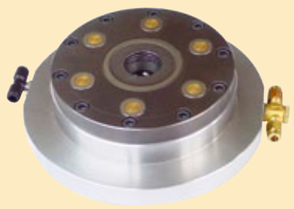
The hydraulic system for manual equipping

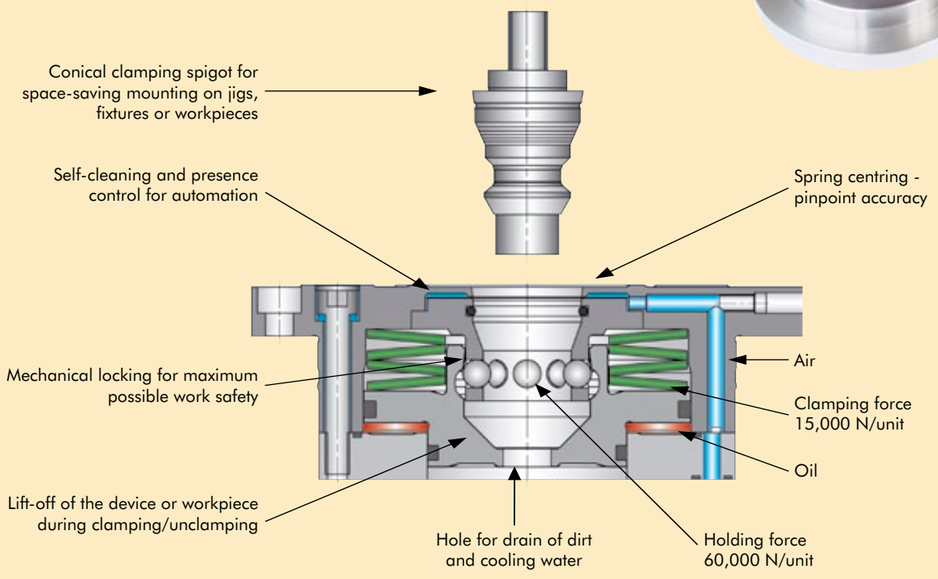


Delphin - Chuck HHP

Hydraulic **H**igh **P**erformance

The hydraulic system suitable for automation

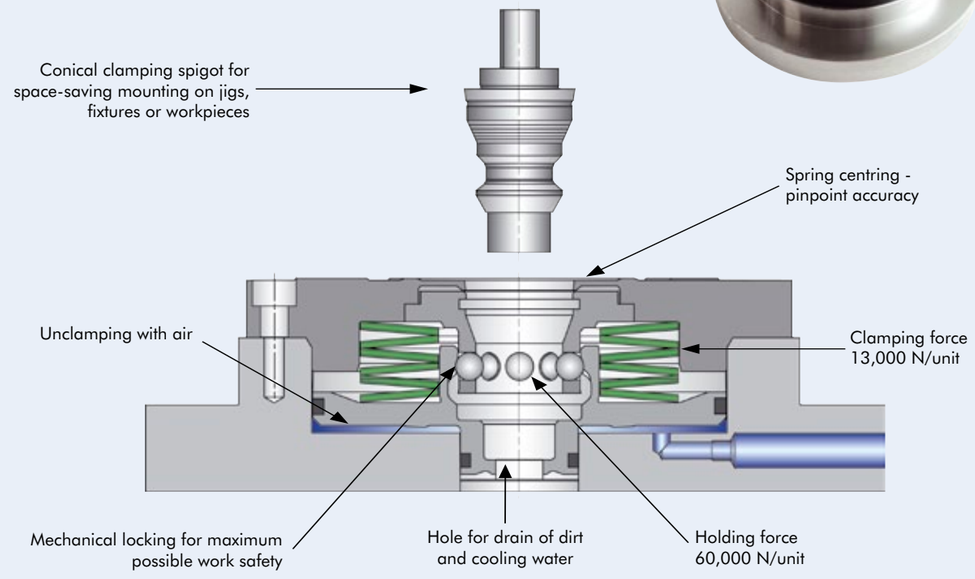




Delphin - Chuck PSP

Pneumatic **S**tandard **P**erformance

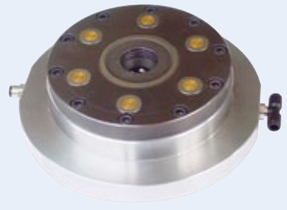
The pneumatic system for manual equipping

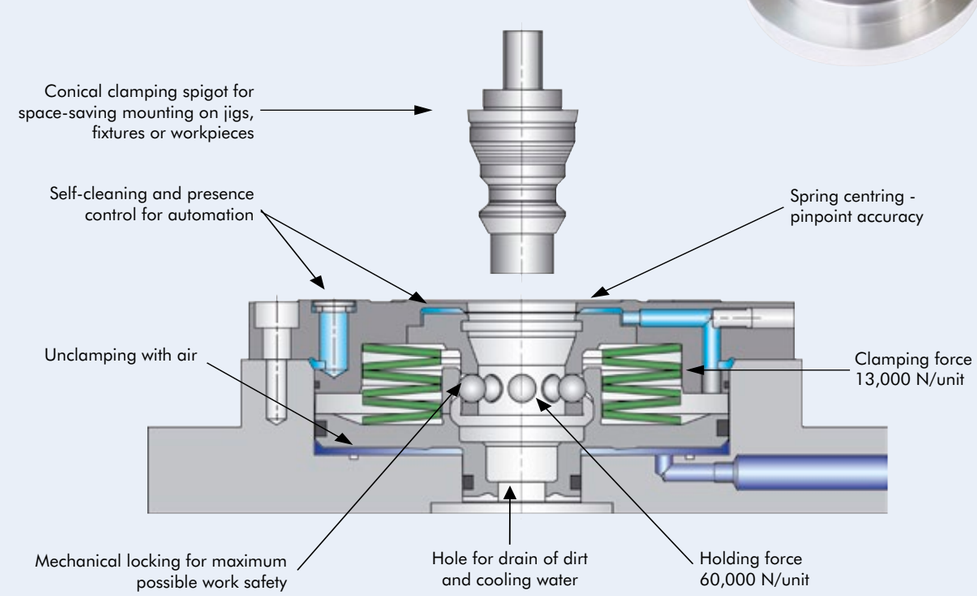


Delphin - Chuck PHP

Pneumatic **H**igh **P**erformance

The pneumatic system suitable for automation

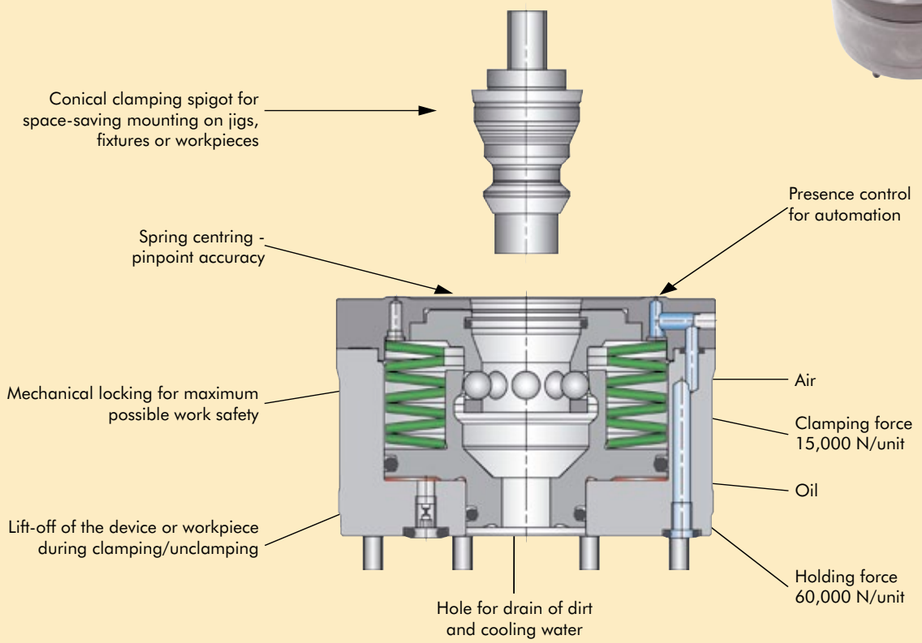




Delphin - Chuck HCP

Hydraulic **C**om**P**act

The hydraulic compact system, suitable for automation



Delphin Chucks

	Item number	*Pumps /Control units*
	Standard	
Chucks HCP		**Pumps hydraulic**
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
Chucks HSP		
Built-in HSP	C 260 000	
Semi built-in HSP (with thread)	C 260 120	Pump hybrid manual
Built-up HSP	C 260 310 / C 260 320*	with control box
Chucks HHP		C 287 150
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*	
Chucks PSP		**Control units pneumatic**
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
Chucks PHP		
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*

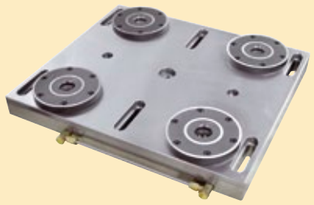
Detailed Information
as index versions, further baseplates and accessories you will find in our Delphin main catalogue T-2175.

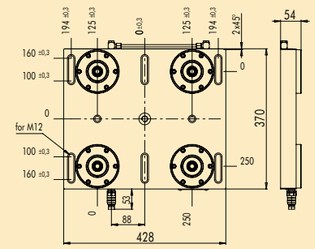
The PDF can be downloaded in the Internet: www.system3r.ch

Delphin Take 4 / Take 6 Baseplates HSP

Take 4 HSP
C 265 400

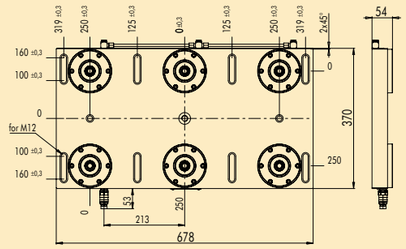
4 hydraulic chucks HSP





Take 6 HSP
C 265 600

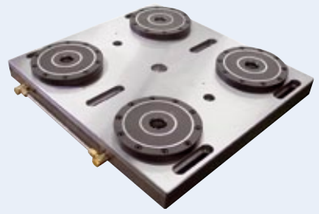
6 hydraulic chucks HSP

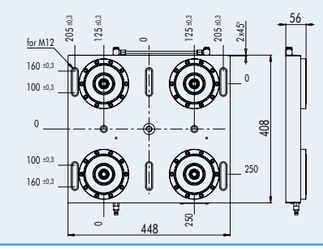


Delphin Take 4 / Take 6 Baseplates PSP

Take 4 PSP
C 242 400

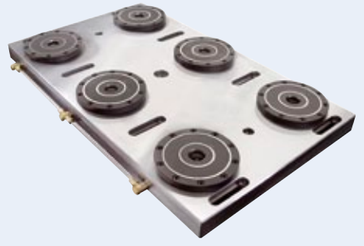
4 pneumatic chucks PSP

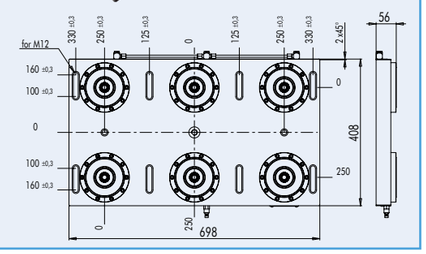




Take 6 PSP
C 242 600

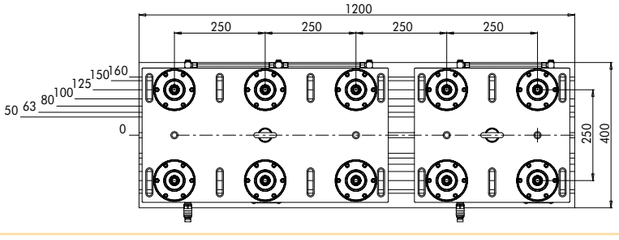
6 pneumatic chucks PSP

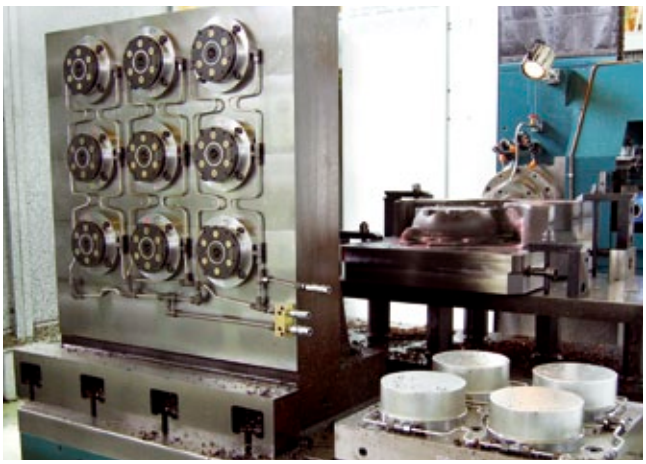
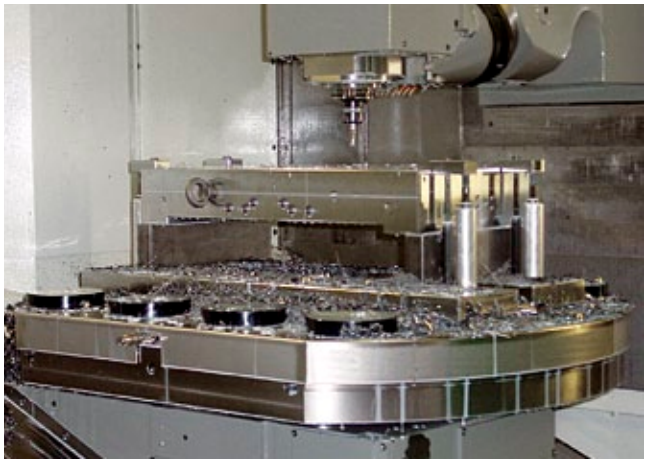


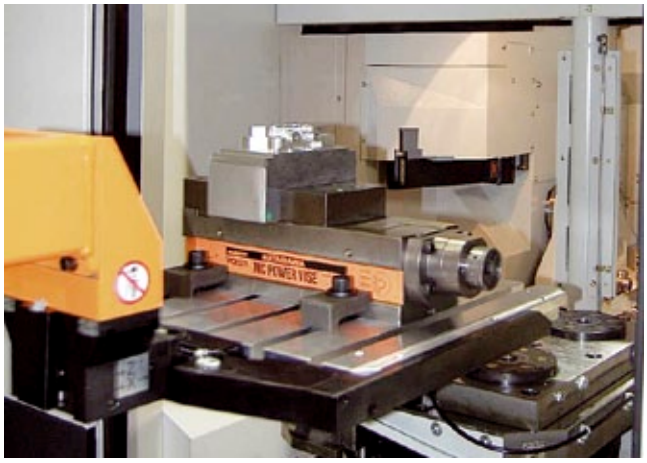


Specifications:

- 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





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system 3R

+GF+

A00401-E 2009.07 Subject to modifications • System 3R, a member of the Georg Fischer Group