System 3R – Tooling

Delphin – Modular clamping system
Becoming better every day – since 1802

GF Machining Solutions
When all you need is everything, it’s good to know that there is one company that you can count on to deliver complete solutions and services. From unmatched Electrical Discharge Machining (EDM), Laser texturing, Laser micromachining, Additive Manufacturing and first-class Milling and Spindles to Tooling and Automation, all of our solutions are backed by unrivaled Customer Services and expert GF Machining Solutions training. Our AgieCharmilles, Microlution, Mikron Mill, Liechti, Step-Tec and System 3R technologies help you raise your game – and our digital business solutions for intelligent manufacturing, offering embedded expertise and optimized production processes across all industries, increase your competitive edge.

We are System 3R.
We are GF Machining Solutions.
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<td>S 282 830</td>
<td>26</td>
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</table>
One Machine Base – lots of Workpiece Fixation

Pre-assemble on the pallet, vices of all types and sizes.

Milling magnets are particularly suitable for five sided machining. The magnet pallet can be changed immediately without losing time for set-up.

Delphin drawbars can easily be screwed to vacuum plates.
T-slot pallets with Delphin drawbars can be changed quickly. The T-slots are particularly suitable for clamping: workpieces of any kind, vices, rotary tables, stops, dividing attachments and prisms.

System 3R offers industry robots and handling devices which are stationary or travel on rails and load the Delphin system easily.

The drawbar serve as an interface between the machine table and the customer workpiece. Direct part clamping is very popular, especially in mold making. This ensures accurate positioning of the molds or other workpieces on various machines.

Customer specific fixture can easily switch between different machines like milling machine, CMM and grinding machine without losing accuracy or time for set-up.
Different Delphin Applications

4-fold Baseplate
4-fold baseplates with a sealing frame are becoming popular for automated handling of pallets and parts.

Built-up
Free positioning with Built-up chucks.

High temperature & Additive manufacturing
Delphin high temperature chucks are particularly well in additive manufacturing.

Pallet gripper
The Delphin gripper is the coupling interface between robot and pallet.

Spindel
Two chucks on a spindle are very popular for the production of turbin shovels. This clamping solution guarantee high stability by high acceleration force.

Tower
Simple and uncomplicated vertical palletizing of vices, pallets and fixations. Less problems with chips because they fall down.
5-fold Baseplate
5-fold baseplates are popular with an Delphin index chuck in the middle. Thus, even small pallets can be used and it has more space in the magazine.

6-fold Baseplate
Base plates with any number of Delphin chucks are possible.

2-fold Baseplate
2-fold baseplates are especially suitable for single vices.

Rotable Presetting Station
While the machine is running, workpieces can be pre-positioned on the rotable presetting station.

Customised Application
Delphin offers you maximal flexibility and freedom to design your customised application.
Milling with Delphin

Thanks to high clamping force and mechanical locking, the Delphin clamping system is particularly suitable for milling, even under the highest load. The modular property is extraordinary fitting for various devices and fixtures, which are needed in milling.

EDM with Delphin

Attaching electrodes or workpieces to a pallet has the great advantage of being able to transfer the accuracy of upstream processes such as CMM and milling etc. into the EDM process. Due to the Delphin clamping system, especially large electrodes and workpieces are possible.

Measuring with Delphin

For an intermediate control, the workpiece can be measured on a measuring machine without removing the fixture. Thanks to the drawbars, the workpiece can be placed again with high precision into the production machine for further processing.

Automation with Delphin

Depending on the Delphin system, activation is either pneumatic or hydraulic. The control signals can be sent from the machine or from the robot to the corresponding machine valves which then perform activation of the Delphin system.

Modern robot and software work perfect together with the Delphin clamping system and let your machine work day and night.
Why Delphin?

- Highest repeatability
- Highest process reliability

Quality

Flexibility

Productivity

- The Delphin clamping system is modular and adapts to your machine
- Standardized interface for all machines

- Fastest possible pallet, device and workpiece change
- Less set-up time
- Unmanned work with Delphin automation
## Product Overview

<table>
<thead>
<tr>
<th></th>
<th>DelphinCompact</th>
<th>DelphinClassic</th>
<th>Delphin BIG</th>
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<tbody>
<tr>
<td><strong>Manual use</strong></td>
<td>Manual and automatic use</td>
<td>Manual use</td>
<td>For large part manufacturing</td>
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<tr>
<td><strong>Application</strong></td>
<td>Milling, Wire cutting</td>
<td>Milling, Laser</td>
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<td>Die sinking, Laser</td>
<td>Die sinking, Wire cutting</td>
<td>Automation</td>
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<tr>
<td><strong>Recommended workpiece weight / chuck</strong></td>
<td>up to 500 kg</td>
<td>up to 500 kg</td>
<td>up to 2 000 kg</td>
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<tr>
<td><strong>Clamping force</strong></td>
<td>15 kN, with turbo locking</td>
<td>10 kN</td>
<td>50 kN, with turbo locking</td>
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<tr>
<td><strong>Holding force</strong></td>
<td>60 kN</td>
<td>60 kN</td>
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<td><strong>Security</strong></td>
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<td><strong>Releasing</strong></td>
<td>Pneumatic 4-10 bar hydraulic up to 30 bar</td>
<td>Pneumatic 6-10 bar hydraulic up to 30 bar</td>
<td>Hydraulic 40-60 bar</td>
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<td><strong>Softlanding and lift-up function</strong></td>
<td>up to 1 mm</td>
<td>no</td>
<td>up to 2 mm</td>
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<tr>
<td><strong>Lift-up weight / chuck</strong></td>
<td>up to 150 kg at 6 bar up to 1 000 kg at 30 bar</td>
<td>up to 2 500 kg at 60 bar</td>
<td></td>
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<tr>
<td><strong>Centre distance (c-c)</strong></td>
<td>120-400 mm</td>
<td>120-400 mm</td>
<td>400-1 000 mm</td>
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<tr>
<td><strong>Diameter</strong></td>
<td>Ø 115 mm</td>
<td>Ø 115 mm</td>
<td>Ø 150 mm</td>
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<td><strong>Repeatability</strong></td>
<td>within 0.003 mm</td>
<td>within 0.003 mm</td>
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<td><strong>System centring accuracy</strong></td>
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<td>within 0.005 mm</td>
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<td>Hardened stainless steel</td>
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**DelphinCompact Chuck**

- Clamping mechanism with mechanical self-locking for maximum work safety
- Spring centring for pinpoint accuracy
- Z-references with cleaning & pallet detection function
- Pneumatic turbo locking function for maximum clamping force up to 15 kN
- Raised collar reduces pollution of the clamping mechanism
- Combined pneumatic function: chuck releasing and lift-up of the device or workpiece. 1 mm lift-up height of maximum 150 kg/chuck at 6 bar
- Full application compatibility uses the same drawbars as previous Delphin chuck types.

**Key Facts**
- Very compact design: outer diameter 115 mm
- Stainless steel - to be used in milling, EDM, WEDM, turning and grinding processes
- High clamping force (up to 15 kN with turbo locking)
- Pneumatic opening, with lift-up function of 150 kg at 6 bar
Dirt insensitive
Floating ball cage allows a larger angular deviation between pallet and chuck during loading and unloading. In addition, the design is dirt insensitive.

Lift-up
The lift-up function lets the pallet gently land on the Z-supports and protect them against impacts. Furthermore, the lift-up function significantly improves the presence control of a pallet.

Cleaining of Z-support
Perfectly balanced Z-support surface for the best possible cleanliness against dirt and for detection.

Centering
Conical spring centring for absolutely zero play between drawbar and chuck. It results in the highest repeatability, excellent rigidity and less vibration.
**Required air pressure**

Many clamping systems need compressed air with minimum 6 bar. The DelphinCompact chuck requires only 4 bar air pressure to open the chuck and release the drawbar. This saves money and increases the process security.

**Holding force**

The holding force indicates the maximum permissible pull out force. This force determines the safety until a pallet is pulled out of the chuck. Delphin chucks have a minimum holding force of 60 kN.

**Drain hole**

When unloading a pallet, it can happen that dirt and water from the milling process pass into the clamping system. The Delphin system has a drain hole. Therefore, dirt and water flush out and the chuck keeps the functionality.

**Clamping force / pull in force**

The “clamping force” or “pull in force” indicates how much the drawbar is pulled into the system. Together with other features like the centering, it is responsible for the stability and rigidity of a system.
DelphinCompact – for automation and manual applications

**Technical data**
+ Clamping force with 6 bar turbo pressure: up to 15 kN
+ Holding force: 60 kN
+ Air pressure open: 4-10 bar
+ Oil pressure open: Max 30 bar
+ Lift-up function pneumatic: 150 kg at 6 bar, lift-up 1 mm
+ Lift-up function hydraulic: 1 000 kg at 30 bar, lift-up 1 mm
+ Repeatability: within 0.003 mm
+ Material: hardened stainless steel

**Built-in** (into machine table or base plate)

**Built-up** (on machine table)

**Suitable for:**
- Milling
- Wire cutting
- Laser
- Die sinking
- Automation

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**Built-in chuck, DelphinCompact, C 250 000**
For simple installation in the machine table or in a baseplate.

**Built-in chuck, without lift-up, DelphinCompact, C 250 010**
For simple installation in the machine table or in a baseplate. Specially designed for tower or other applications with lateral load.

**Built-in chuck index, DelphinCompact, C 250 050**
For simple installation in the machine table or in a baseplate.

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**Built-up chuck, DelphinCompact, C 250 310**
For direct installation on a machine table. Mounting holes to be drilled at installation.

**Built-up chuck index, DelphinCompact, C 250 350**
For direct installation on a machine table. Mounting holes to be drilled at installation.
DelphinCompact 4-fold Baseplate

- Standardised compact baseplate design for cc 200 mm and cc 250 mm.
- Baseplate prepared for AirDock and chuckadapter function.
- Standardised fixation hole pattern to fit all standard T-slot-tables.
- Prepared for the use of sealing frames – Recommended for a proper use in automated cells & applications.
- Additional air connection from the side (G 1/8").
- Standardised air connection interface on the bottom side and AirDisc to adapt to machines pneumatic interface.
- Additional air connection interface from baseplate to machines interface. Machine-specific AirDisc’s available.

Key Facts
- Standardised design
- Prepared for a proper use in automated solutions
- Easy adaptation to machine-specific air connections via AirDisc
- High clamping force (up to 60 kN with turbo locking)
- Pneumatic opening, with lift-up function (1 mm) of 600 kg at 6 bar
DelphinCompact Baseplates – for automated and manual applications

**Technical data**
+ Clamping force with 6 bar turbo pressure: up to 60 kN
+ Holding force: 240 kN
+ Release pressure: 4-30 bar hydraulic or pneumatic
+ Lift-up function pneumatic:
  - 600 kg at 6 bar, lift-up 1 mm
+ Lift-up function hydraulic:
  - 4,000 kg at 30 bar, lift-up 1 mm
+ Repeatability: within 0.003 mm
+ Material: stainless steel

**4-fold Baseplates, DelphinCompact,**
- **cc 200 mm,** [without AirDisc]
- **cc 250 mm,** [without AirDisc]

**Suitable for:**
- Milling
- Laser
- Automation

**4-fold Baseplate, DelphinCompact, with 4 sealing rings** [without AirDisc; with 2 fittings for side connection]
- S 252 201
  - cc 200 mm
- S 252 251
  - cc 250 mm

**Also suitable for:**
- Die sinking

**4-fold Baseplate, DelphinCompact, with sealing frame** [without AirDisc; with 2 fittings for side connection]
- S 252 202
  - cc 200 mm
- S 252 252
  - cc 250 mm

**4-fold Baseplate, DelphinCompact, with sealing frame with AirDock valves** [without AirDisc] Suitable for chuck adapter pallets.
- S 252 203
  - cc 200 mm
- S 252 253
  - cc 250 mm
Delphin – Accessories

Load- & Washstation, Delphin
(without AirDisc, with 2 fittings for side connection)

**S 252 204**
- cc 200 mm

**S 252 254**
- cc 250 mm

AirDisc, C 253 0XX
On request, this AirDisc can be designed to any machine specific interface.

Standard AirDisc, C 253 040
Machine specific interface disk from machine table to DelphinCompact baseplate. Suitable for many machines.

Sealing frames, DelphinCompact

**C 252 210**
For baseplate C 252 200.
- cc 200 mm

**C 252 260**
For baseplate C 252 250.
- cc 250 mm
**DelphinClassic Chuck**

- **Clamping mechanism with mechanical self locking for maximum work safety**
- **Spring centring for pinpoint accuracy**
- **Big Z-references for stable base**
- **Full application compatibility uses the same drawbar as all Delphin chuck types.**
- **Chuck release of the pallet, device or workpiece by air.**
- **Raised collar reduces pollution of the clamping mechanism**

**Key Facts**

- Very compact design: outer diameter 115 mm
- Stainless steel – to be used in milling, EDM, WEDM, turning and grinding processes
- High clamping force up to 10 kN.
DelphinClassic Chuck

**Large Z-support**
Large and precision-ground contact surfaces for the best possible support and maximum rigidity.

**Centering**
Conical spring centring for absolutely zero play between drawbar and chuck. It results the highest repeatability, excellent rigidity and less vibration.

**Dirt insensitive**
Floating ball cage allows a larger angular deviation between pallet and chuck during loading and unloading. In addition the design is dirt insensitive.
DelphinClassic Chuck

**Required air pressure**

The DelphinClassic chuck requires 6 bar air pressure to open the chuck and release the drawbar.

**Holding force**

The holding force indicates the maximum permissible pull out force. This force determines the safety until a pallet is pulled out of the chuck. Delphin chucks have a minimum holding force of 60 kN.

**Clamping force / pull in force**

The “clamping force” or “pull in force” indicates how much the drawbar is pulled into the system. Together with other features like the centering, it is responsible for the stability and rigidity of a system.
DelphinClassic – for manual applications

Technical data
+ Clamping force: 10 kN
+ Holding force: 60 kN
+ Air pressure open: 6-10 bar
+ Oil pressure open: Max 30 bar
+ Repeatability: within 0.003 mm
+ Material: hardened stainless steel

Suitable for:
- Milling
- Wire cutting
- Laser
- Die sinking

Built-in chuck, DelphinClassic, C 272 000
For simple installation in the machine table or in a baseplate.

Built-up chuck, DelphinClassic, C 272 310
For direct installation on a machine table.
Mounting holes to be drilled at installation.
DelphinClassic Baseplate

With the starter baseplate you are prepared for the fastest possible pallet, device and workpiece change. The Delphin baseplate offers maximum flexibility and process reliability throughout the entire production process. High clamping force with maximum accuracy is guaranteed.

**Accurate surface for quick positioning**

**Accurate central hole for quick positioning**

**Standardized fixation hole pattern to fit all standard T-slot-tables**

**Standardised baseplate**

**Air connection from the front side (G 1/8” with 6 fitting)**

**Key Facts**

- High clamping force up to 40 000 N
- Pneumatic opening
- Mechanical self locking for highest process reliability
DelphinClassic Baseplates – for manual applications

Technical data
+ Clamping force: up to 40 kN
+ Holding force: 240 kN
+ Release pressure: 6-10 bar
+ Repeatability: within 0.003 mm
+ Material: Hardened stainless steel and hard anodized aluminum.

Suitable for:
- Milling
- Laser
- Automation

4-fold Baseplate, DelphinClassic
(with 1 fittings for side connection)

C 272 250
- cc 250 mm

4-fold Baseplates, DelphinClassic,
cc 250 mm, (without AirDisc)
Delphin Drawbars

Function of the drawbars

Drawbars are mounted directly into a workpiece, pallet or fixture. There are three different types of drawbars. One defines the zero point and centers thus in 2 axes. The second drawbar is centering in one axis. All other drawbars have no centering, only clamping function.

- **For centering in 2 axis**
  - = zero point

- **For centering in 1 axis**
  - = angle definition

- **No centring**
  - = only clamping
Delphin Drawbars

**Drawbar – centring on 2 axes**
C 282 000
Fixed in pallet
- Material: stainless steel, hardened and ground
- Dimensions, screwed in: ø28 x 40.5 mm.

**Drawbar – centring on 1 axis**
C 282 100
Fixed in pallet
- Material: stainless steel, hardened and ground
- Dimensions, screwed in: ø28 x 40.5 mm.

**Drawbar – without centring**
C 282 200
Fixed in pallet
- Material: stainless steel, hardened and ground
- Dimensions, screwed in: ø28 x 40.5 mm.

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**Function of the Delphin drawbar**

- centring on 2 axes
- centring on 1 axis
- without centring

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**Drawbar – Sets**

**Set with 2 drawbars**
S 812 000
- Scope of delivery:
  1 x C 282 000 [centring on 2 axes]
  1 x C 282 100 [centring on 1 axis]

**Set with 4 drawbars**
S 812 100
- Scope of delivery:
  1 x C 282 000 [centring on 2 axes]
  1 x C 282 100 [centring on 1 axis]
  2 x C 282 200 [without centring]

**Set with 6 drawbars**
S 812 200
- Scope of delivery:
  1 x C 282 000 [centring on 2 axes]
  1 x C 282 100 [centring on 1 axis]
  4 x C 282 200 [without centring]
**Delphin Pallets**

**Pallets with 4 drawbars, Delphin, C 282 820**
- Prepared for automation
- Material: Aluminium
- Parallelism: 0.04 mm
- 4 drawbars already assembled

**Set of pallets, S 282 820**
- C 282 820 supplied in a set of 5 pcs.

**Pallets with 4 drawbars, Delphin, C 282 830**
- Prepared for automation
- Material: Aluminium
- Parallelism: 0.04 mm
- 4 drawbars already assembled

**Set of pallets, S 282 830**
- C 282 830 supplied in a set of 5 pcs.
Delphin Accessories

**AirDock valves chuck-side, S 254 000**
Needed to build chuck adapter base plates.
Suitable for vacuum application and pressure up to 8 bar.
• Set of 2.

**AirDock valves pallet-side, S 254 010**
Needed to build chuck adapter pallets.
Suitable for vacuum application and pressure up to 8 bar.
• Set of 2.

**OilDock valves chuck-side, S 254 060**
Needed to build chuck adapter base plates.
Thanks to the sealed design no intrusion of cooling water is possible.
Suitable for hydraulic pressure up to 200 bar.
• Set of 2.

**OilDock valves pallet-side, S 254 070**
Needed to build chuck adapter pallets.
Thanks to the sealed design no intrusion of cooling water is possible.
Suitable for hydraulic pressure up to 200 bar.
• Set of 2.
Delphin Accessories

**Pneumatic control unit, DelphinCompact, C 254 950**
Control unit specially for DelphinCompact.
- Including 10 m tube Ø 6 mm and 2 fittings.

**Connection fittings for Baseplate, S 254 050**
To be used when connecting air from the side to the Delphin Baseplate.

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**Pneumatic control unit, C 810 720**
The pneumatic control unit will be used for the baseplate.
- Sliding hand valve
- Connecting fitting G 1/8
- Coupling
Delphin Accessories

**Reference mandrel, C 288 170**
Alignment aid for chuck installation.
- Material: steel stainless, hardened and ground
- For all chucks
- Diameter D = 110 mm.

**Protective pallet Delphin, S 254 100**
Chip and air pressure [turbo locking] protection for DelphinCompact and DelphinClassic chucks.
- Fits for chuck with sealing ring
- Scope of delivery:
  - 1 x C 282 000 Drawbar
  - 1 x C 266 040 Protective pallet.

**Protective Drawbar DelphinClassic, C 286 060**
Chip protection for chuck, seals centre bore, Z-support of chuck remains usable.
- Material: plastic
- Dimensions: Ø28 x 32 mm
- M8 for dismounting.

**Set accessories fixation for Baseplate**
For fixing on machine table.

**C 289 130**
- 6 x M12x45 cylinder head screw
- 6 x M12x55 cylinder head screw
- 6 x M12x14 T-slot nut.

**C 289 140**
- 6 x M12x45 cylinder head screw
- 6 x M12x55 cylinder head screw
- 6 x M12x18 T-slot nut.
Delphin Accessories

Indexing pins for indexing pallet, S 814 000
For customer installation in indexing pallet.
- Material: steel, hardened
- Dimensions: Ø8 x 20 mm
- Scope of delivery: 4 pieces
- Require mounting device C 286 080

Mounting device for indexing pins, C 286 080
For customer installation of index pins S 814 000 in pallet.

Sealing Cords for Frames
Sealing Cord 4 m, S 817 200
Sealing Cord FKM 4 m, S 817 220
- Sealing cord for the most Delphin sealing frames.
- Suitable for: C 252 210, C 252 260
- Length: 4 m

Pre-centring pin / Pre-centring bush
Pre-centring for mid-sized to large workpieces.
Should always be used wherever possible.

C 286 160
Pre-centring pin for the pallet / device

C 286 250
Pre-centring bush for DelphinCompact and DelphinClassic

Spare Parts
For Delphin chucks. Includes O-rings, compression springs or disc springs, balls, screws, screw cover and assembly tool.

<table>
<thead>
<tr>
<th>Table chuck type</th>
<th>Item No.</th>
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<tbody>
<tr>
<td>DelphinClassic</td>
<td>S 272 000</td>
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<tr>
<td>DelphinCompact</td>
<td>S 250 000</td>
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<td>HCP</td>
<td>S 840 040</td>
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<td>HSP</td>
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<td>HHP</td>
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<td>HHPA</td>
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<td>PSP</td>
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<td>PHP</td>
<td>S 840 020</td>
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<tr>
<td>PHPA</td>
<td>S 840 050</td>
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</tbody>
</table>
**DelphinBIG Chuck**

**Key Facts**
- Can be used for large workpieces
- High clamping force (up to 50 kN with turbo locking)
- Release by hydraulic, with lift-up function of 2 500 kg at 60 bar.
- Simple loading thanks to integrated pre-centring
- Thermal expansion of the workpieces of up to ±0.4 mm can be accommodated
DelphinBIG – for automation and manual applications

Technical data
+ Clamping force with 30 bar turbo pressure: up to 50 kN
+ Holding force: 100 kN
+ Oil pressure release: Max 30–60 bar
+ Lift-up function: 2 500 kg, 2 mm at 60 bar release pressure
+ Repeatability: within 0.005 mm
+ Material: steel, hardened

Suitable for:
Milling

Chuck built-in
[into machine table or base plate]

Chuck built-up
[on machine table]

Built-in chuck, DelphinBIG, C 297 000
For simple installation in the machine table.

Built-up chuck, Delphin BIG, C 297 310
Mounting holes can be made by customer
Recommendation: at least 4 chucks per application
• Chuck C 297 000

Spare Parts DelphinBIG, S 850 000
For Delphin BIG chucks. Includes O-rings, compression springs or disc springs, balls, screws, screw cover and assembly tool.

Ring centring in 2 axes, DelphinBIG, C 298 010
including fixation screws

Ring centring in 1 axis, DelphinBIG, C 298 110
including fixation screws

Ring without centring, Delphin BIG, C 298 210
including fixation screws
About GF Machining Solutions

Multi–technology solutions provider

Our commitment to you and your specific applications is proven by the value-adding intelligence, productivity and quality delivered by our multi–technology solutions. Your success is our chief motivator. That’s why we are continuously advancing our legendary technical expertise. Wherever you are, whatever your market segment and whatever the size of your operation, we have the complete solutions and the customer-centric commitment to accelerate your success—today.

Wire-cutting EDM
GF Machining Solutions’ wire-cutting EDM is fast, precise and increasingly energy efficient. From ultraprecise machining of miniaturized components down to 0.02 mm to powerful solutions for demanding high-speed machining with respect to surface accuracy, our wire EDM solutions position you for success.

Die-sinking EDM
GF Machining Solutions is revolutionizing die-sinking EDM with features like iGAP technology to dramatically boost machining speed and reduce electrode wear. All of our die-sinking systems offer fast removal and deliver mirror finishes of Ra 0.1 μm (4 μin).

Hole-drilling EDM
GF Machining Solutions’ robust hole-drilling EDM solutions enable you to drill holes in electrically conductive materials at a very high speed—and, with a five-axis configuration, at any angle on a workpiece with an inclined surface.

Milling
Precision tool and mold manufacturers enjoy a competitive edge with our Mikron MILL S solutions’ fast and precise machining. The Mikron MILL P machines achieve above-average productivity thanks to their high performance and Automation. Customers seeking fastest return on investment benefit from the affordable efficiency of our MILL E solutions.

High Performance Airfoil Machining
Our Liechti turnkey solutions enable the highly dynamic manufacturing of precision airfoils. Thanks to the unique performance and our expertise in airfoil machining, you increase productivity by producing at the lowest cost per part.

Spindles
As part of GF Machining Solutions, Step-Tec is engaged in the very first stage of each machining center development project. Compact design combined with excellent thermal and geometric repeatability ensure the perfect integration of this core component into the machine tool.

Laser texturing
Aesthetic and functional texturing is easy and infinitely repeatable with our digitized Laser technology. Even complex 3D geometries, including precision parts, are textured, engraved, microstructured, marked and labeled.

Laser micromachining
GF Machining Solutions offers the industry’s most complete line of Laser micromachining platforms optimized for small, high-precision features to meet the increasing need for smaller, smarter parts to support today’s leading-edge products.

Laser Additive Manufacturing (AM)
GF Machining Solutions and 3D Systems, a leading global provider of additive manufacturing solutions and the pioneer of 3D printing, have partnered to introduce new metal 3D printing solutions that enable manufacturers to produce complex metal parts more efficiently.

Milling
Precision tool and mold manufacturers enjoy a competitive edge with our Mikron MILL S solutions’ fast and precise machining. The Mikron MILL P machines achieve above-average productivity thanks to their high performance and Automation. Customers seeking fastest return on investment benefit from the affordable efficiency of our MILL E solutions.

Digitalization solutions
To drive its digital transformation, GF Machining Solutions acquired symmedia GmbH, a company specialized in software for machine connectivity. Together, we offer a complete range of Industry 4.0 solutions across all industries. The future requires the agility to adapt quickly to continual digital processes. Our intelligent manufacturing offers embedded expertise, optimized production processes, and workshop Automation: solutions for smart and connected machines.

Software

Tooling and Automation
Our customers experience complete autonomy while maintaining extreme accuracy, thanks to our highly accurate System 3R reference systems for holding and positioning electrodes and work pieces. All types of machines can easily be linked, which reduces set-up times and enables a seamless transfer of workpieces between different operations.

Automation
Together with System 3R, we also provide scalable and cost-effective Automation solutions for simple, single machine cells or complex, multi-process cells, tailored to your needs.

Tooling

Customer Services

Worldwide for you
Ensuring the best performance throughout the lifetime of our customers’ equipment is the goal of our three levels of support. Operations Support offers the complete range of original wear parts and certified consumables. Machine Support includes spare parts, technical support, and a range of preventive services to maximize machine uptime. Business Support offers customer-specific business solutions.
Optimize the uptime of your equipment with our Customer Services

- Ensuring productivity.
- Reducing running costs and wasted parts.
- Maximizing the return on your System 3R investments.
- Extending the product lifetime of your System 3R equipment while maintaining optimum precision.
- Ensuring robot cell safety satisfies present machine directives.

System 3R’s Customer Services is uniquely positioned to help you maximize the availability, value, precision and productivity of your System 3R equipment. Our cost-effective, customer-centric and expert services put your success at the center, ramp up your productivity and ensure predictable, uninterrupted uptime. System 3R’s service engineers are your expert partners for a wide range of success-triggering services.

For more info ask your local System 3R dealer.

For contact details, please refer to:
www.system3r.com.