

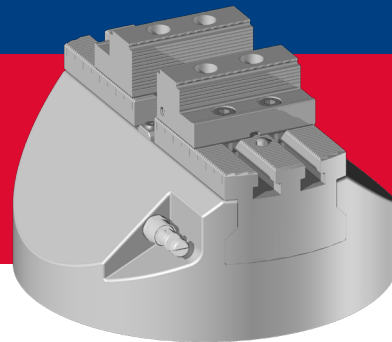
# GREMOTOOL

PRÄZISIONSSPANNSYSTEME



## PMC/HMC-Series

pneumatic / hydraulic



swiss  
made 



GREMOTOOL  
Precision Clamping Systems

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# Overview

PMC/HMC-Series

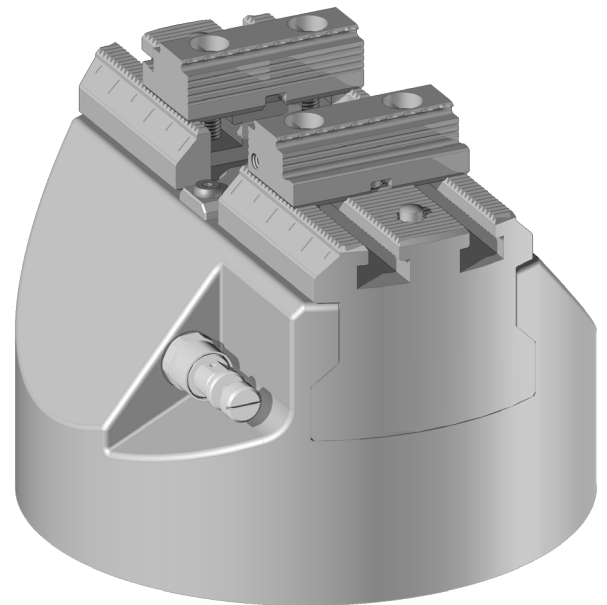
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# Product presentation

PMC/HMC-Series

The PMC/HMC series was designed based on today's industry requirements in series. Do to versatility means that's it doesn't longer matters whether the user or the workpiece has been placed by the robot. The most process-safe center clamp for automated 5-axis machining is the PMC/HMC series.



# Product presentation

Advantage the PMC/HMC-Series

## High and adjustable clamping force

High clamping forces ensure a secure hold, but can also lead to deformation of the workpiece. For this reason, the PMC/HMC series offers the best solution. If the PMC/HMC is operated with maximum pressure, the centre clamp ensures high clamping forces. If these are too high, the clamping force can be individually adjusted to the workpiece via the differential pressure.

## Accessibility

Special attention has been paid to the PMC/HMC series, to ensure the accessibility to the workpiece from all sides. The external geometry even allows processing with milling the bottom of the production part, between the workpiece and the clamp.

## Quick tooling

The various connection options of the PMC/HMC series allows very fast to position the clamp precisely on the machine table. You are free to use it on a T-slotted table, grid plate or zero point pallet. Media transfer is also based via quick-coupling interface.

## Compact

The compact design of the PMC/HMC series allows to be used on all machining Centers. From PMC/HMC outer diameter 150mm up to 350mm, availability suitable Center clamps by Gremotool.

## Large range of jaws

The complete Gremotool jaw assortment is available on the PMC/HMC series. From saving raw material grip jaws to soft jaws, made of aluminum for contour clamping, no wishes will be left concerned the requirements of workpiece clamping. A pair of standard gripp jaws is supplied with each PMC, so you are already able to clamp parts without additional costs.

## Tripple clamping security

The internal design of the PMC/ HMC series ensures that the workpiece is firmly fixed even in case of pressure decrease. Only the operating medium under pressure can move the mechanics and thus the jaws. This effect is further increased by integrated springs. This makes it impossible to move the jaws without control medium.

## Pneumatic or hydraulic

The PMC/HMC series can be operated with pneumatics or hydraulics. The choice of operating mode has an effect on the external dimensions and clamping force. medium has no influence on the.

## Low maintenance

The chip- and water-repellent design of the PMC/HMC series prevents foreign particles from penetrating the mechanics. As a result, lubrication is maintained and maintenance intervals are longer. Care has been taken in the design to ensure that there are no pockets in which chips and water can get caught. This allows easy cleaning of the center clamp with an air gun.

## Centring precision

The solid construction of the PMC/HMC series does not allow any displacements and guarantees a precise centering of +/- 0.02 mm of the workpieces. This means that the zero point does not have to be of the zero point and thus you save machining time.

## Automation solutions

To control the PMC series, you can obtain various solutions from Gremotool. Whether the robot leads a media coupling to the PMC or you drive it manually via a rotary feed-through or a manual valve, it is up to you. We have ready frequently used solutions.

# Sizing guide

## PMC-Pneumatic series

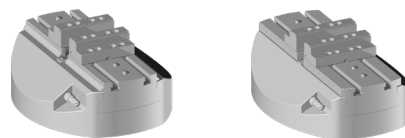


PMC Dimension		PMC-50	PMC-60	PMC-60I	PMC-74
Jaw wide	[mm]	50	60	74	74
Clamping force	[mm]	30-110	26-114	26-134	26-154
Support height *	[mm]	138	153	153	153
Max. Clamping pressure	[bar]	7	7	7	7
Max. Clamping force	[kN]	20	35	40	50
total length	[mm]	148	170	190	210
total width	[mm]	148	170	190	210
total height**	[mm]	125	125	125	125
weight*	[kg]	18.2	23.1	25.8	33.3

\* incl. standard gripper jaw and standard base plate  
 \*\* without jaw and standard base plate

# Sizing guide

PMC-Pneumatic series



PMC Dimension		PMC-100	PMC-120
Jaw wide	[mm]	100	120
Clamping force	[mm]	29-250	26-294
Support height *	[mm]	156	156
Max. Clamping pressure	[bar]	7	7
Max. Clamping force	[kN]	60	60
total length	[mm]	310	350
total width	[mm]	260	260
total height**	[mm]	125	125
weight*	[kg]	64.5	62.7

\* incl. standard gripper jaw and standard base plate  
 \*\* without jaw and standard base plate

# Sizing guide

HMC-Series hydraulic



HMC Dimmension		<b>HMC-50</b>	<b>HMC-60</b>	<b>HMC-60I</b>	<b>HMC-74</b>
Jaw wide	[mm]	50	60	74	74
Clamping force	[mm]	30-110	26-114	26-134	26-154
Support height *	[mm]	138	153	153	153
Max. Clamping pressure	[bar]	60	60	60	60
Max. Clamping force	[kN]	20	35	40	50
total length	[mm]	148	170	190	210
total width	[mm]	148	170	190	210
total height**	[mm]	125	125	125	125
weight*	[kg]	18.8	24.3	26.8	34

\* incl. standard gripper jaw and standard base plate  
 \*\* without jaw and standard base plate

# Sizing guide

## HMC-Series hydraulic



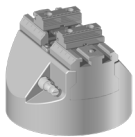
HMC Dimension		HMC-100	HMC-120
Jaw wide	[mm]	100	120
Clamping force	[mm]	29-150	26-294
Support height *	[mm]	156	156
Max. Clamping pressure	[bar]	60	60
Max. Clamping force	[kN]	60	60
total length	[mm]	310	350
total width	[mm]	260	260
total height**	[mm]	125	125
weight*	[kg]	63.6	66.5

\* incl. standard gripper jaw and standard base plate  
 \*\* without jaw and standard base plate

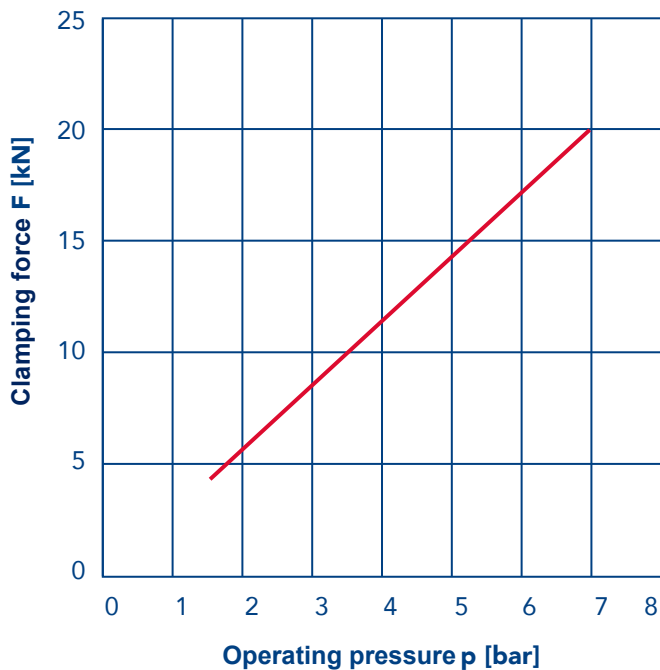


# Clamping force

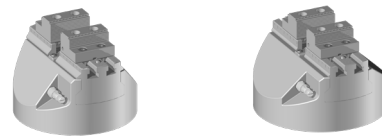
PMC-Pneumatic series



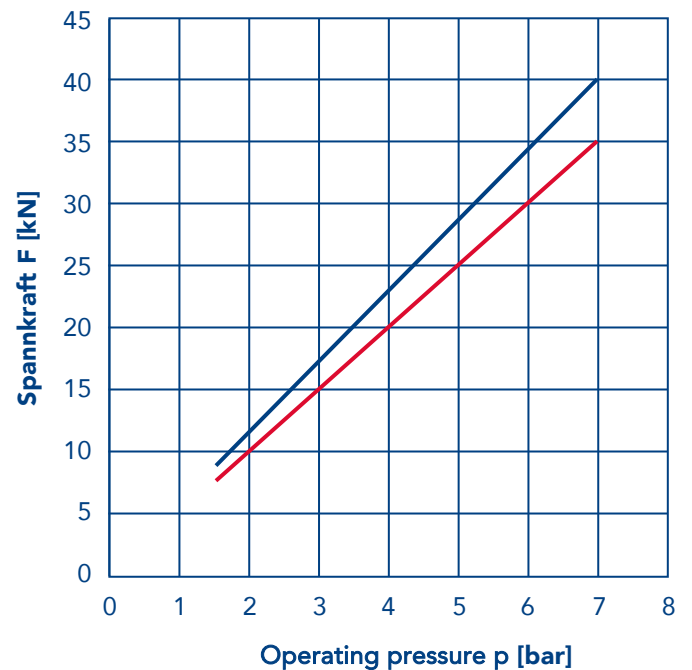
**PMC-50**



<b>p max</b>	7 bar
<b>p min</b>	1.5 bar
<b>F max</b>	20 kN
<b>F min</b>	4.5 kN



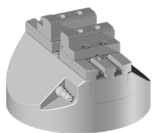
**PMC-60 / PMC-60I**



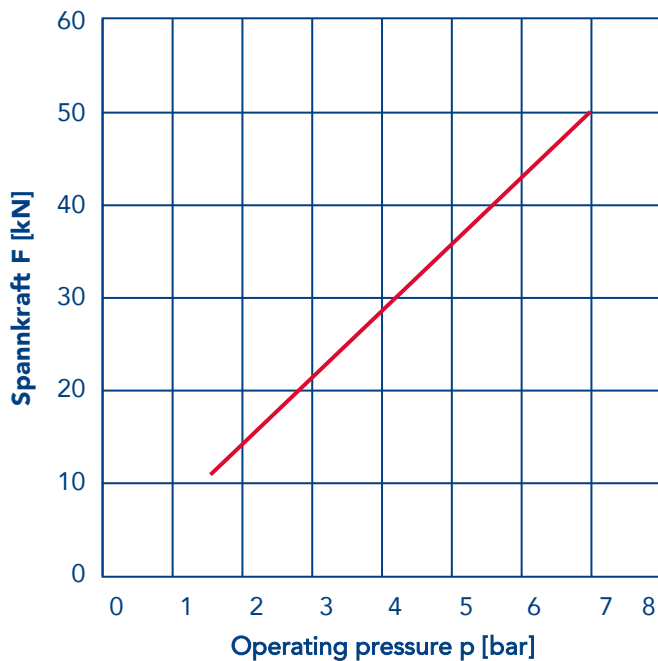
<b>p max</b>	7 bar	7 bar
<b>p min</b>	1.5 bar	1.5 bar
<b>F max</b>	35 kN	40 kN
<b>F min</b>	7.5 kN	8.5 kN

# Clamping force

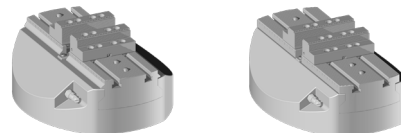
PMC-Pneumatic series



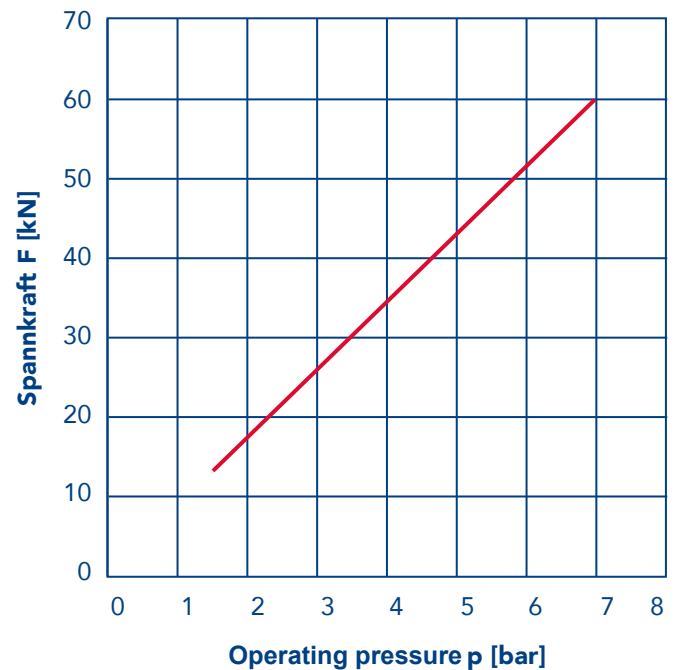
**PMC-74**



<b>p max</b>	7 bar
<b>p min</b>	1.5 bar
<b>F max</b>	50 kN
<b>F min</b>	10.5 kN



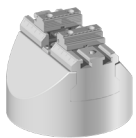
**PMC-100 / PMC-120**



<b>p max</b>	7 bar
<b>p min</b>	1.5 bar
<b>F max</b>	60 kN
<b>F min</b>	13 kN

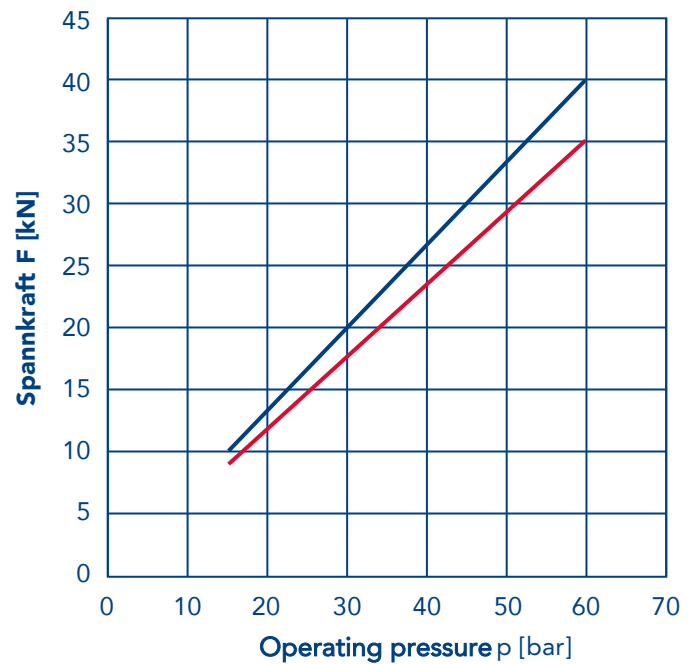
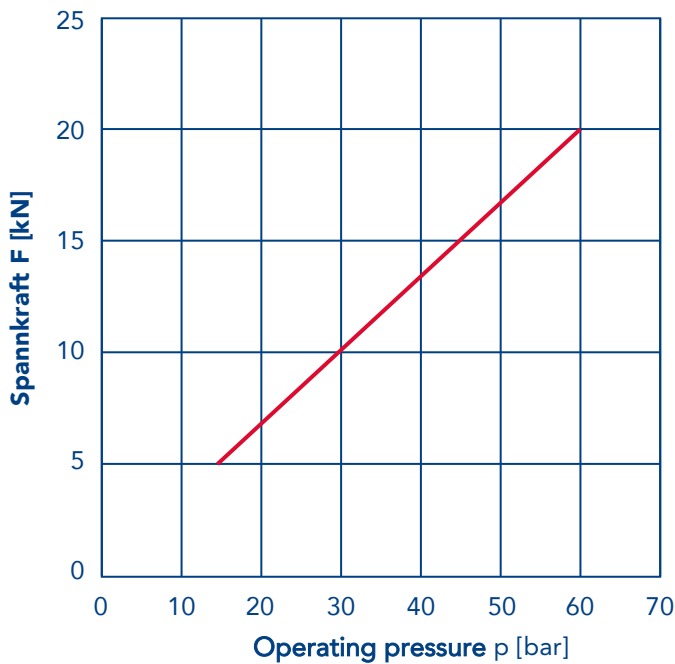
# Clamping force

HMC-Series hydraulic



**HMC-50**

**HMC-60 / HMC-60I**

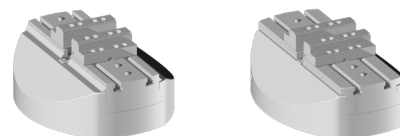
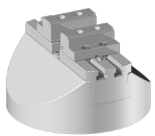


<b>p max</b>	60 bar
<b>p min</b>	15 bar
<b>F max</b>	20 kN
<b>F min</b>	5 kN

<b>p max</b>	60 bar	60 bar
<b>p min</b>	15 bar	15 bar
<b>F max</b>	35 kN	40 kN
<b>F min</b>	9 kN	10 kN

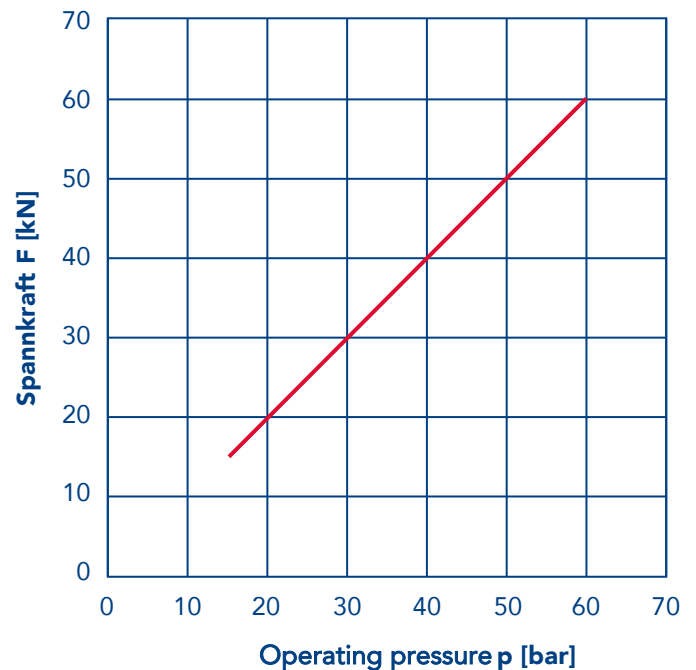
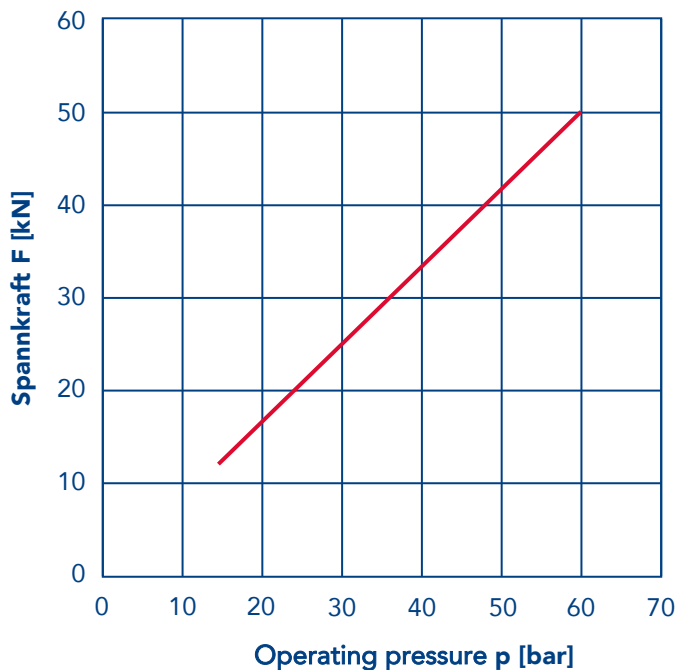
# Clamping force

HMC-Series hydraulic



**HMC-74**

**HMC-100 / HMC-120**

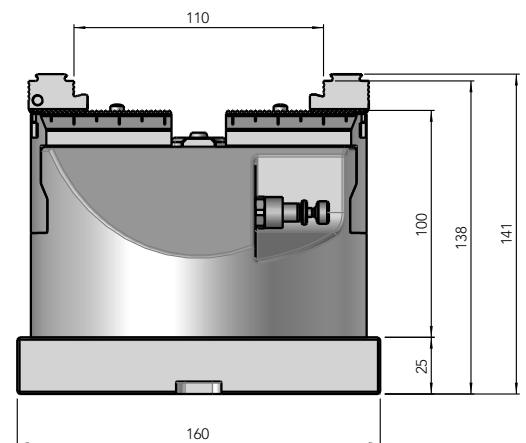
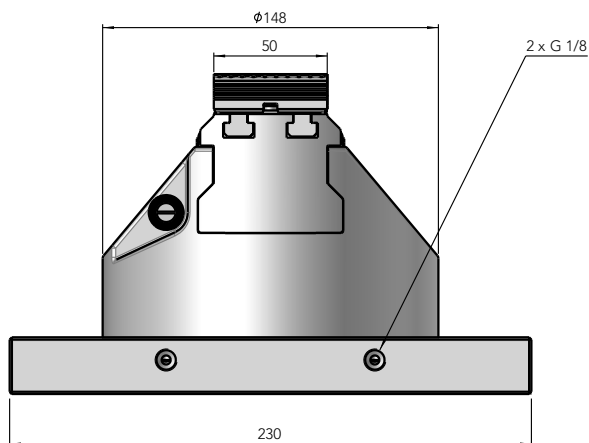
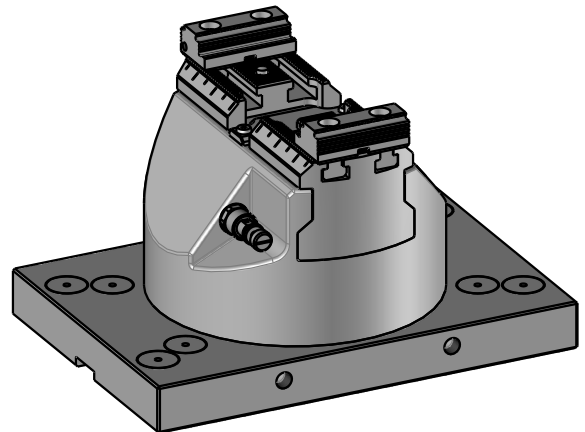
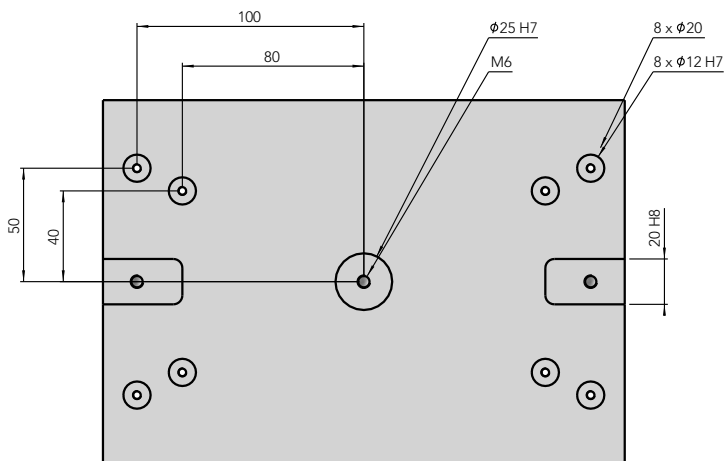


<b>p max</b>	60 bar
<b>p min</b>	15 bar
<b>F max</b>	50 kN
<b>F min</b>	12.5 kN

<b>p max</b>	60 bar
<b>p min</b>	15 bar
<b>F max</b>	60 kN
<b>F min</b>	15 kN

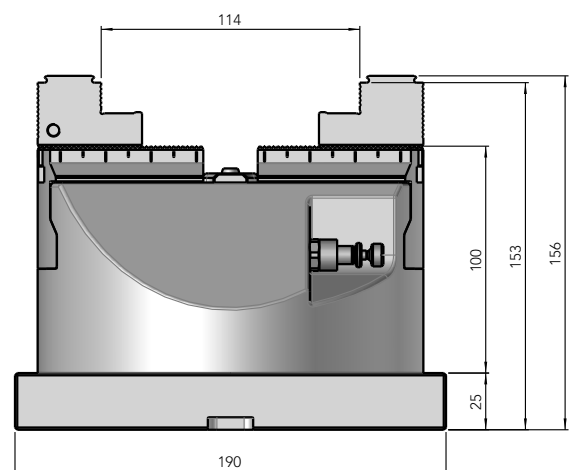
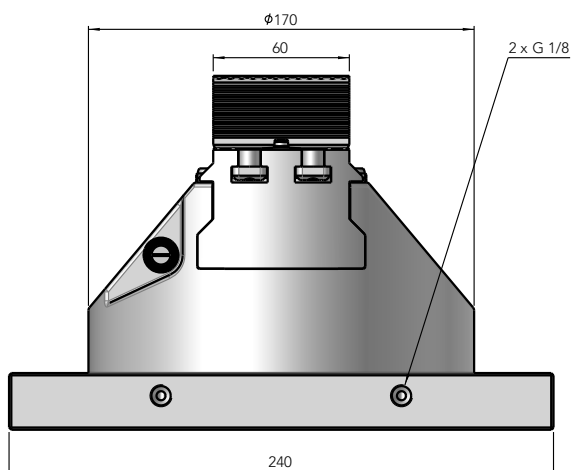
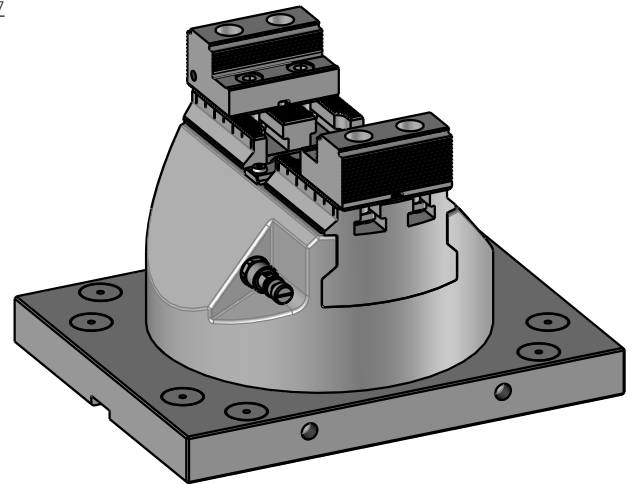
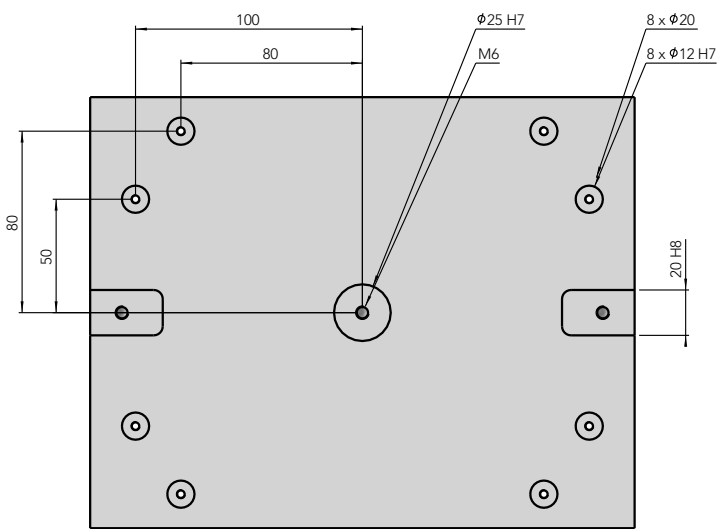
# Dimensionen

PMC-50 / HMC-50



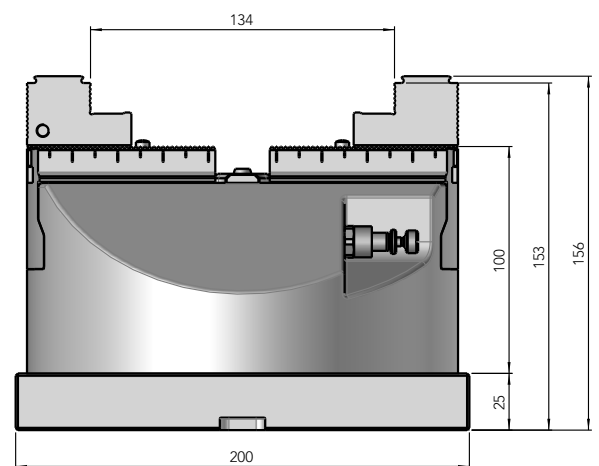
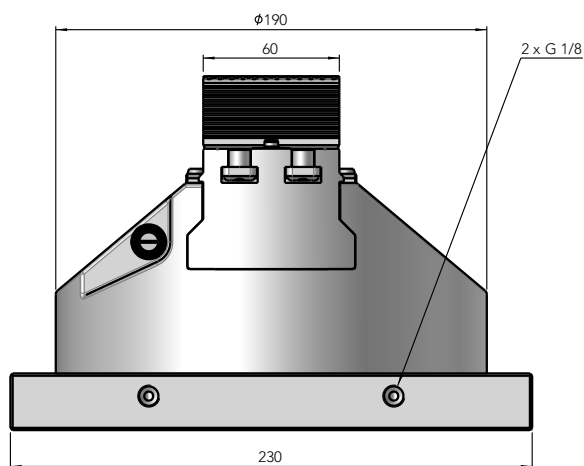
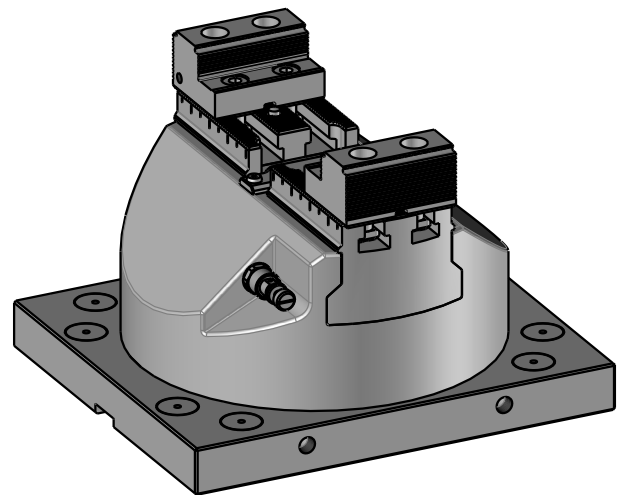
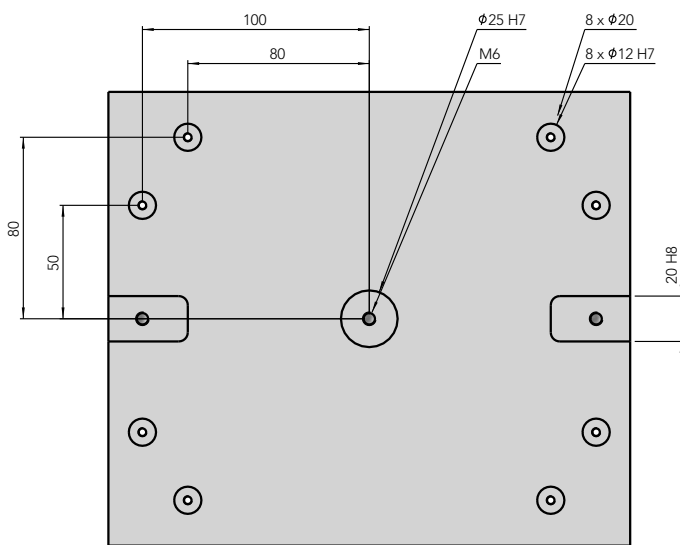
# Dimensionen

PMC-60 / HMC-60



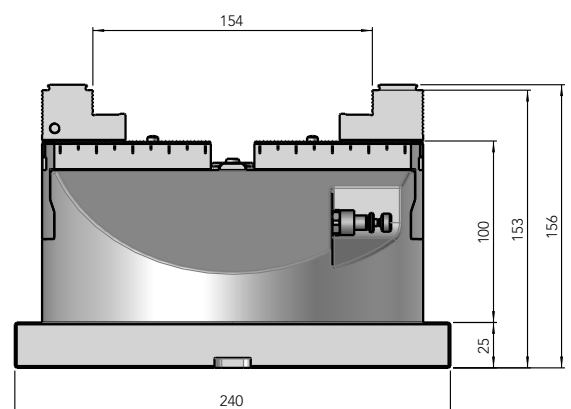
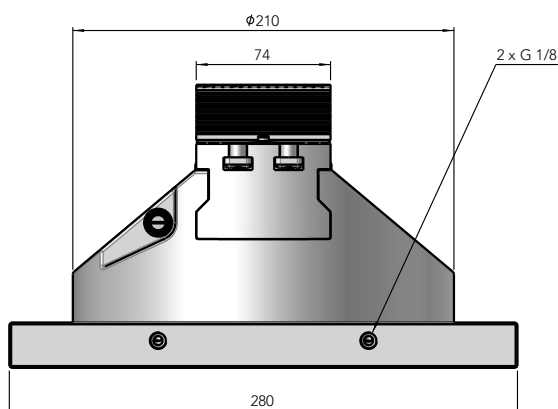
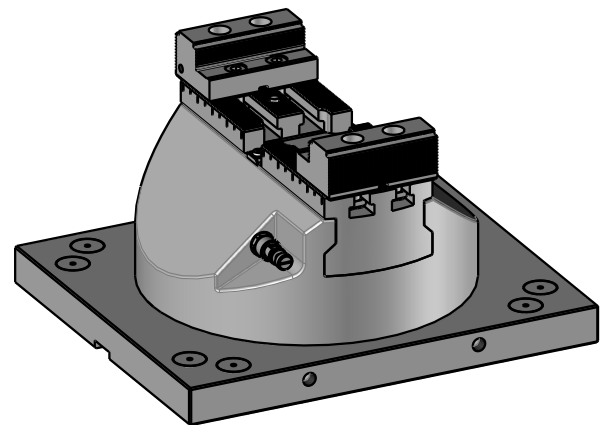
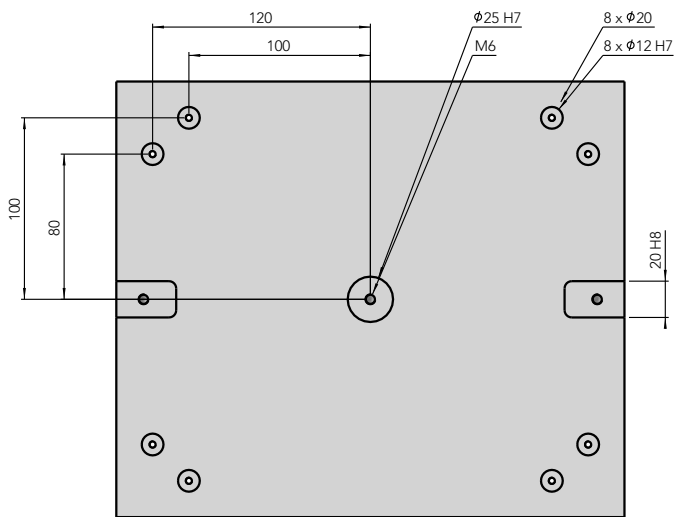
# Dimensionen

PMC-60I / HMC-60I



# Dimensionen

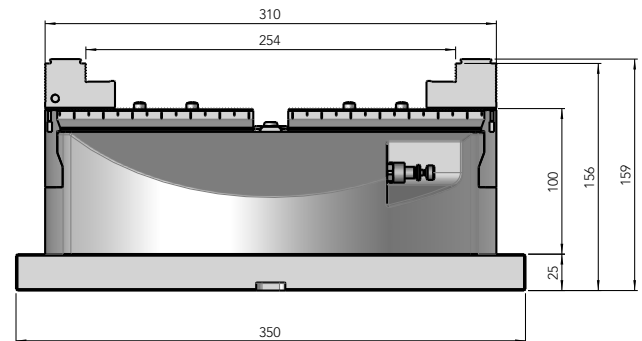
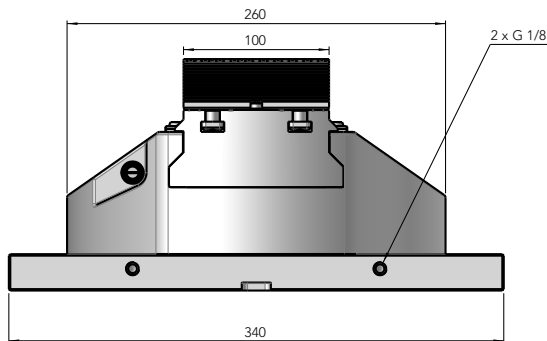
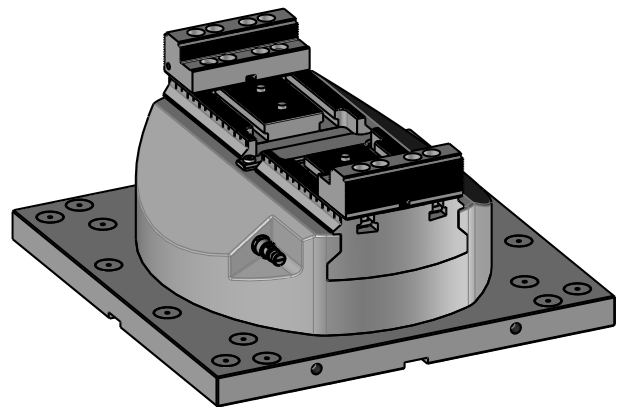
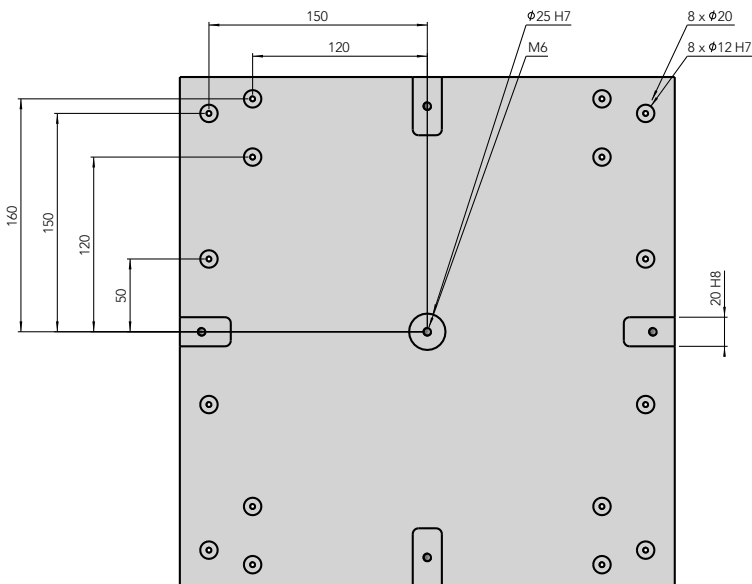
PMC-74 / HMC-74





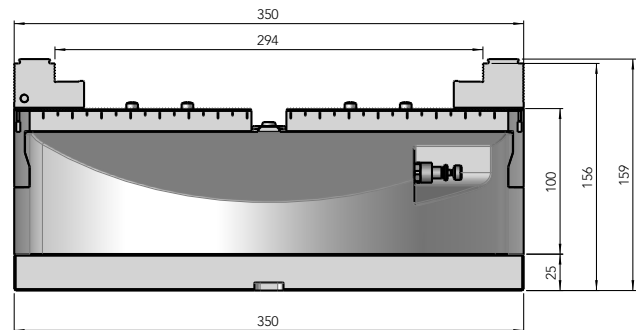
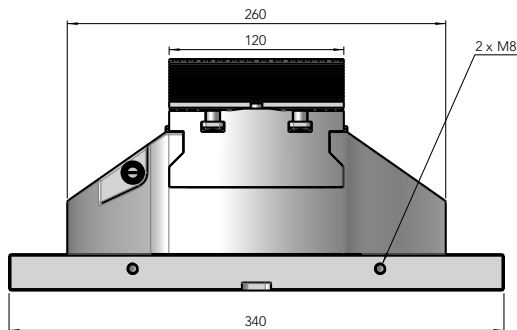
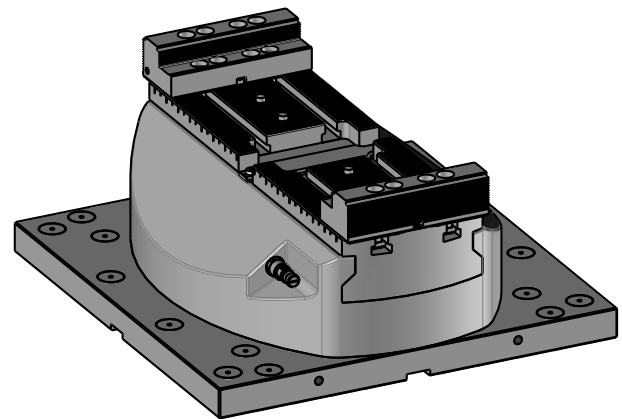
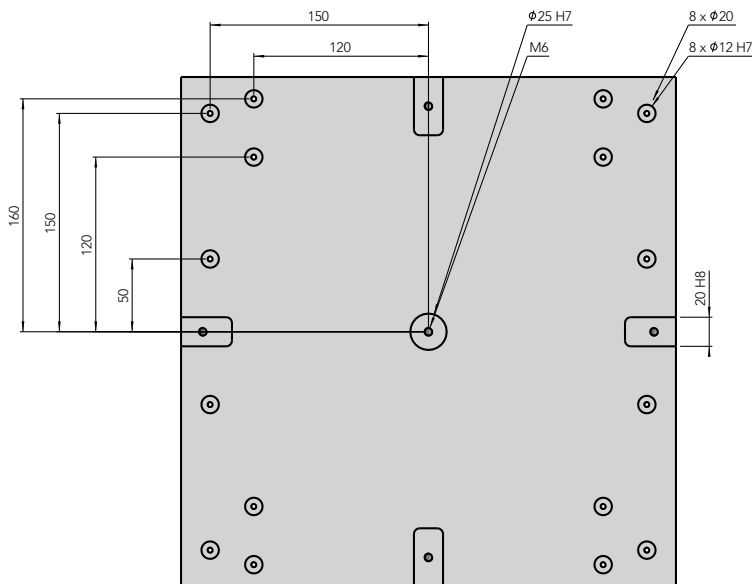
# Dimensionen

PMC-100 / HMC-100



# Dimensionen

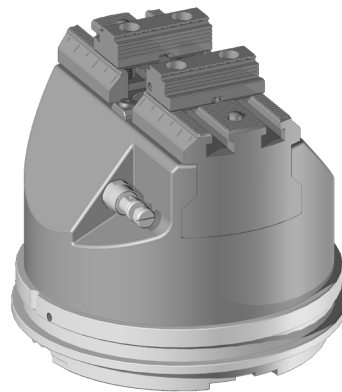
PMC-120 / HMC-120



# Applications

## On pallet system

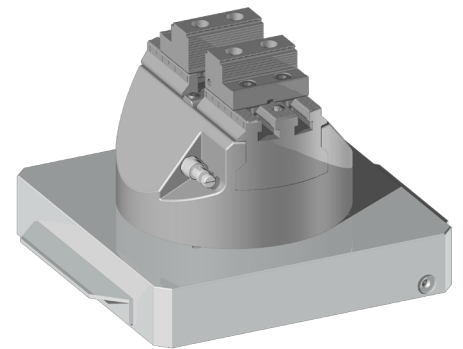
The PMC/HMC series can be used on many different pallet systems. In addition, it is possible to mount them directly with the standard base plate using any machining tables.



1 x PMC-50

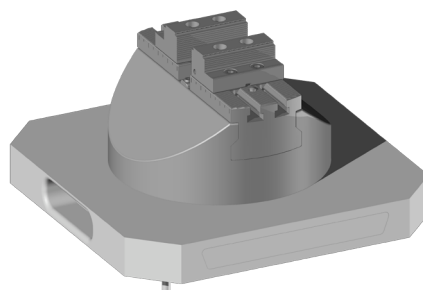
Marco Magnum

Clamping Device



1 x PMC-60

Zero point clamping system GPS-240



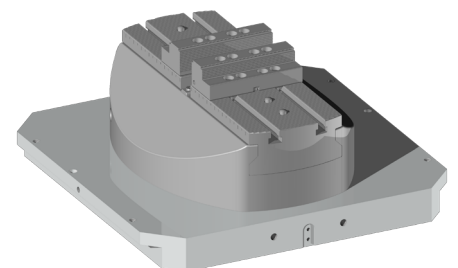
1 x HMC-74

UPC-320

Clamping device

1 x HMC-120

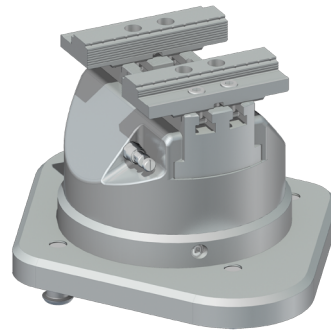
Zero point clamping system Delphin-398



# Applications

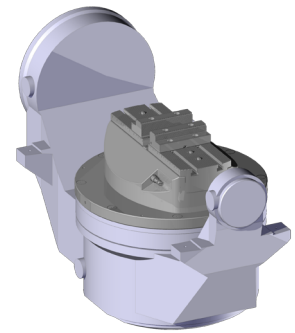
## Fixtures

In order to allow the customer the best possible use of the clamping devices the PMC/HMC series can be used on various fixtures. Due to the wide range of jaws, these clamping devices are suitable for all requirements.



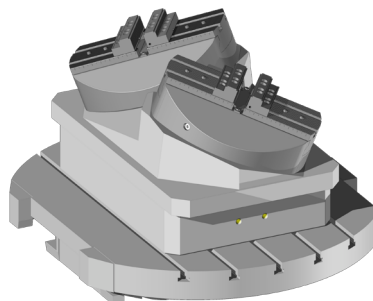
1 x PMC-60

Clamping device



1 x PMC-120

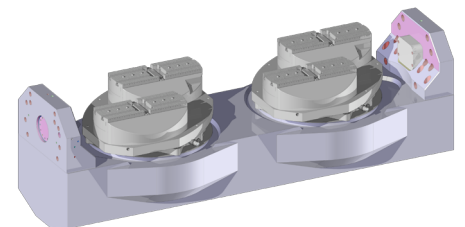
Zero point clamping system



2 x HMC-120

Clamping device

Zero point clamping system



4 x HMC-120



# Accessories

## Jaws

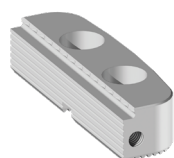
Pair of standard gripper jaws is supplied with each PMC/HMC, so you are already able to clamp parts at no additional costs.

PMC-Size		PMC-50	PMC-60	PMC-60I	PMC-74	PMC-100	PMC-120
HMC-Size		HMC-50	HMC-60	HMC-60I	HMC-74	HMC-100	HMC-120
SC-gripper jaw	<b>Nr. 837150</b>	X	X	X	X	X	X
Standard gripper jaw	<b>Nr. 837250</b>	X	X	X	X	X	X
High gripper jaw	<b>Nr. 837300</b>	X	X	X	X	X	X
Combi jaw	<b>Nr. 837350</b>	X	X	X	X	X	X
One-sided gripper jaw	<b>Nr. 837380</b>	X	X	X	X	X	X
Step jaw	<b>Nr. 837450</b>	X	X	X	X	X	X
Prisma jaw	<b>Nr. 837500</b>	X	X	X	X	X	X
Soft jaw aluminum	<b>Nr. 837702</b>	X	X	X	X	X	X
Soft jaw Steel	<b>Nr. 837703</b>	X	X	X	X	X	X

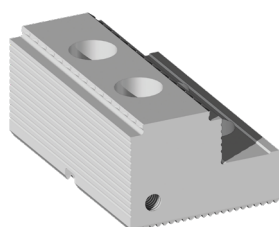
For the exact data of the jaws, please check the jaw catalog.

# Accessories

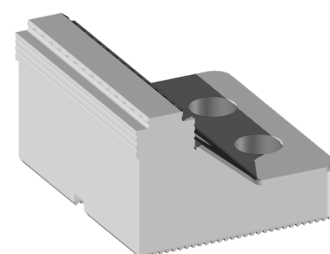
## Jaw



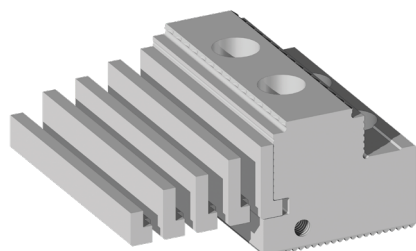
**Nr. 837150**



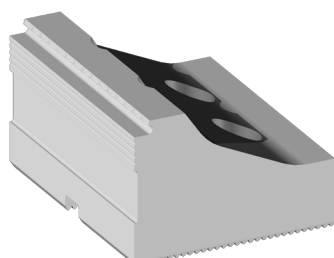
**Nr. 837250**



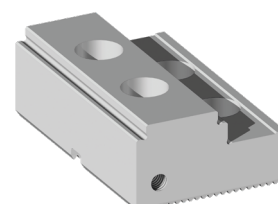
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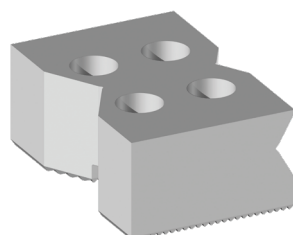
**Nr. 837350**



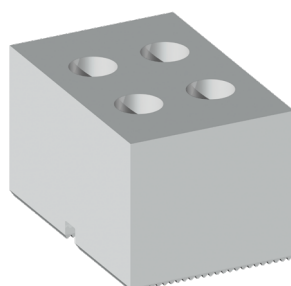
**Nr. 837380**



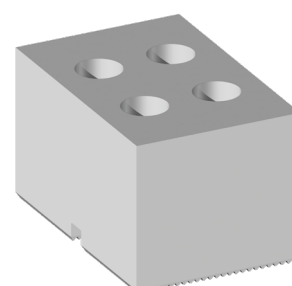
**Nr. 837450**



**Nr. 837500**



**Nr. 837702**



**Nr. 837703**

# Accessories

## Automation solutions

The PMC/HMC series has been specially designed for the needs of the automated industry. It offers the possibility to use it in pallet handling or workpiece handling. Thanks to a rotary union in the table, the PMC/HMC can be used in automated operation without additional couplings.

The PMC/HMC series can also be equipped with couplings that are attached by the robot (handling system). This means that your current machine structure can continue to be used without any limitations.

### Pallets from +GF+ / System 3R (Number of possible devices)

PMC-Size	PMC-50	PMC-60	PMC-60I	PMC-74	PMC-100	PMC-120
HMC-Size	HMC-50	HMC-60	HMC-60I	HMC-74	HMC-100	HMC-120
Macro Magnum	1*					
GPS 240	1*	1*	1*	1*		
Delphin 398		1,2	1	1	1	1
Delphin 448		1,2	1,2	1,2	1,2	1,2
Dynafix 280						
Dynafix 350						

\* Only pneumatic devices possible.

# Accessories

## Automation solutions

### Pallets from Erowa (Number of possible devices)

PMC-Size	PMC-50	PMC-60	PMC-60I	PMC-74	PMC-100	PMC-120
HMC-Size	HMC-50	HMC-60	HMC-60I	HMC-74	HMC-100	HMC-120
ITS-148	1*					
UPC 320		1	1	1	1	
MTS 400			1	1	1	1

\* Only pneumatic devices possible  
Further manufacturers can be requested directly by Gremotool.

### Direct clamping

The standard base plate of the PMC series offers an easy mounting on all machine tables. For machine tables with T-slot, matching groove stones can be attached on the bottom of the base plate for precise positioning. Use a perforated grid plate, so you are able to precise with fitting shoulder screws.

### Robot couplings

If your machine does not have a rotary unity in the table, you can use a robot coupling from Gremotool for automated production. We offer two different types of robot couplings. The removable coupling is gripped by the robot and placed on the coupling of the PMC, after that the gripper is unloaded. Once the workpiece has been changed, the robot removes the coupling from the PMC, so that the machining process can start. The fixed robot coupling is permanently installed on the robot. The robot attaches and opens the PMC, removes the coupling and changes the workpiece. To close the PMC and to clamp the workpiece, the robot (handling system) must be coupled and uncoupled.

### Manual drive

If the machine tool is used without robot, the PMC can also be controlled manually. For this option, outside the machine a hand or foot tooling can be used. If a permanent connection between the PMC and the valve is not possible, quick couplings can be used for the simple coupling process.





### Impressum

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Our General terms and Conditions apply, which can be found on [www.gremotool.ch](http://www.gremotool.ch).

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