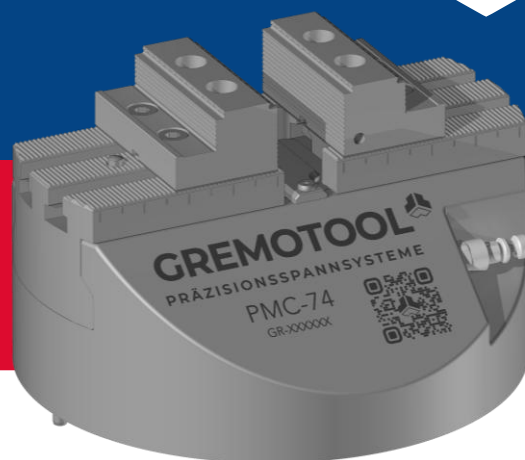


# GREMOTOOL

PRÄZISIONSSPANNSYSTEME

## PMC/HMC-Series

pneumatic/ hydraulic



swiss  
made



GREMOTOOL  
Precision Clamping Systems

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www.gremotool.ch

Telefon +41 (0)71 930 03 90

# Overview

PMC/HMC-Series

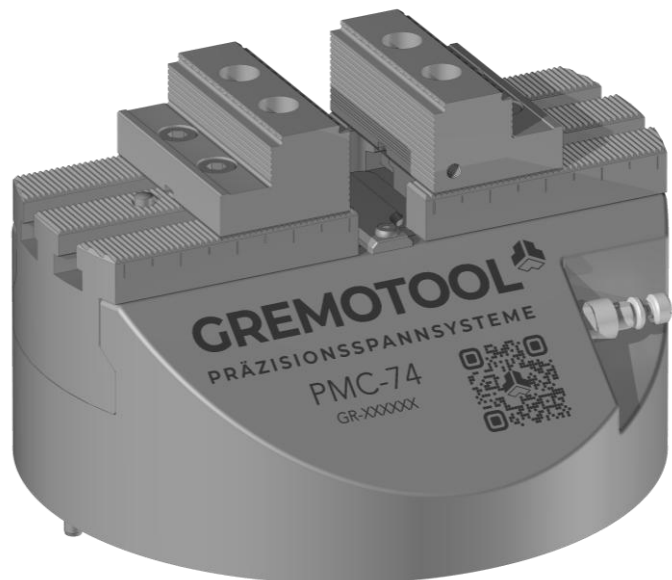
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# Product presentation

PMC/HMC-Series

The PMC/HMC series was designed based on today's industry requirements in series. Thanks to its versatility, it no longer matters whether the workpiece is inserted into the centre clamp by the user or by robot. The PMC/HMC series is the most process-reliable centre clamp for automated 5-axis machining.



# Product presentation

## Benefits of 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.

### 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.

### 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.

### Compact

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

### Low maintenance

The chip- and water-repellent design of the PMC/HMC series prevents the penetration of foreign particles into 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 centre clamp with an air or water pistol.

### 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 aluminium for contour clamping, no wishes will be left concerned the requirements of workpiece clamping.

The jaws are equipped with the standardized Gremotool jaw system. This allows you to change the jaws very fast.

### Pneumatic or hydraulic

The PMC/HMC series can be operated with pneumatics or hydraulics. The choice of operating mode doesn't influence the external dimensions and clamping force.

### 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 need to be recentred, saving processing time.

### Short set-up times

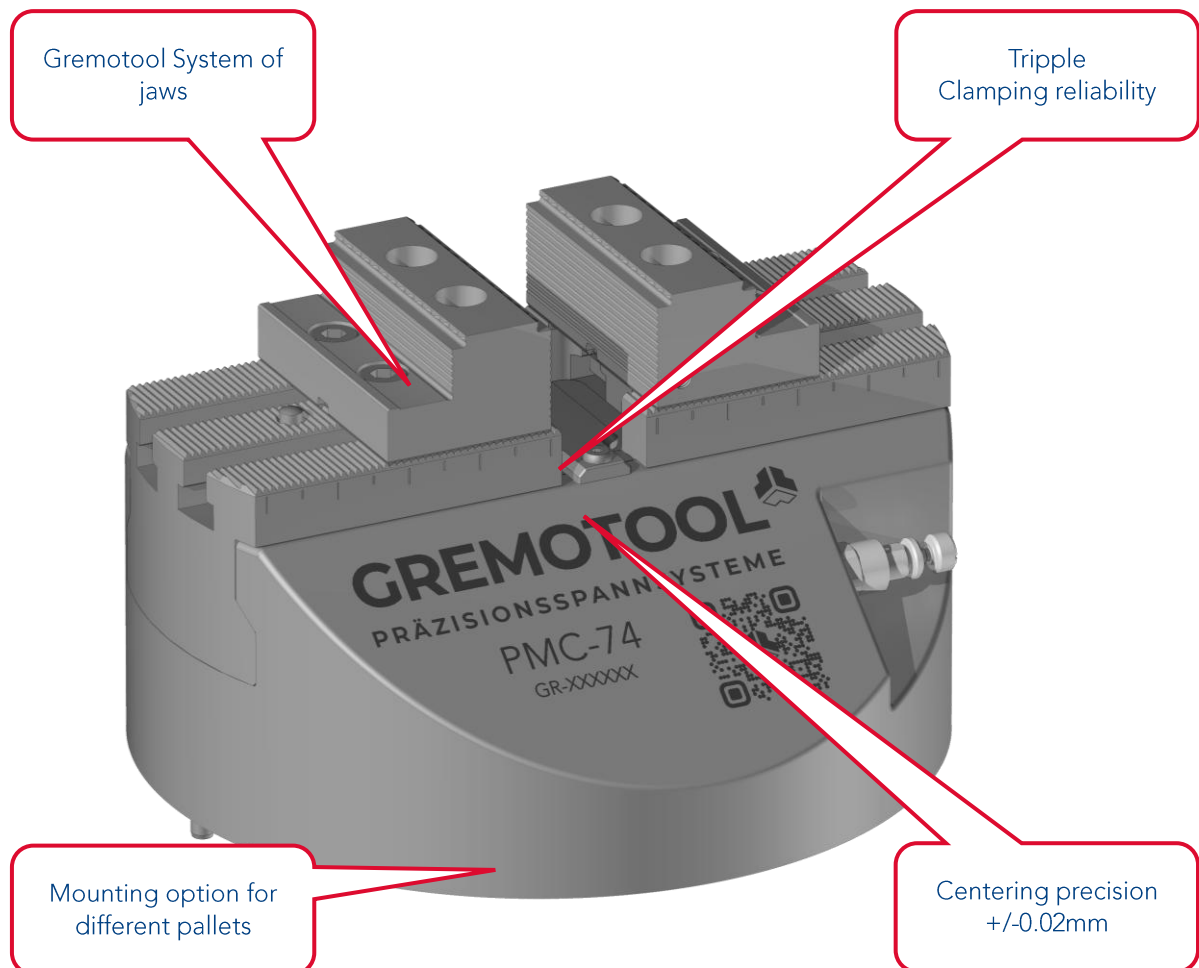
The various connection options of the PMC/HMC series allows to position the clamp precisely on the machine table very fast. You are free to use it on a grooved table, a perforated grid plate or a zero-point pallet. Media transfer is also based via quick-coupling interface.

### 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 developed solutions for the most common interfaces.

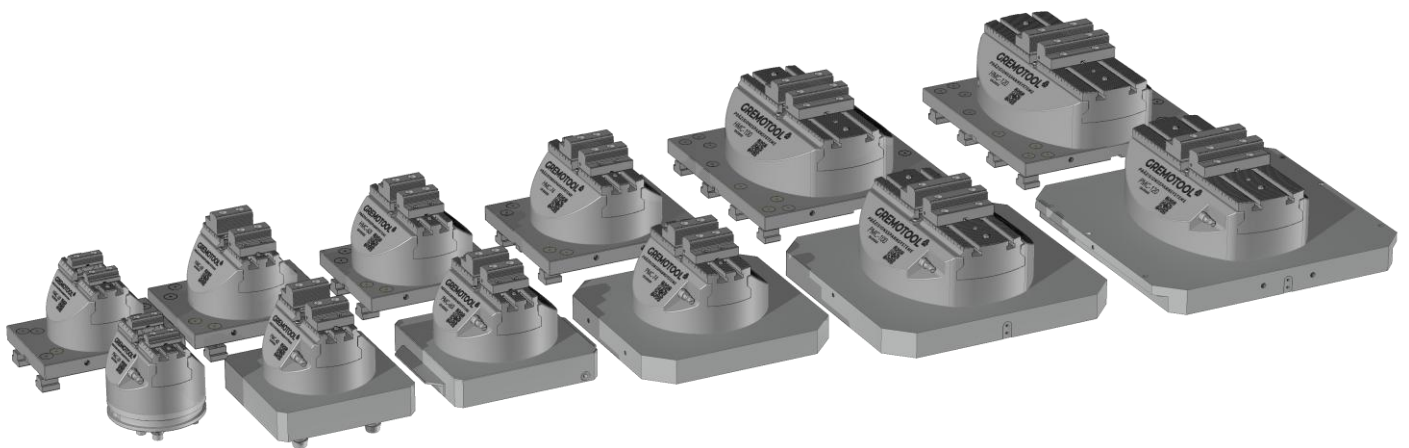
# Product presentation

Benefits of the PMC/HMC-Series



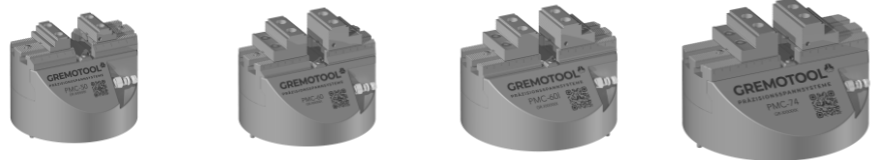
# Overview of size options

PMC/HMC-Series



# Sizing guide

## PMC-Pneumatic Series



PMC-Size		PMC-50	PMC-60	PMC-60I	PMC-74
Jaw width	[mm]	50	60	60	74
Clamping range	[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
Mass	[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-Size		PMC-100	PMC-120
Jaw width	[mm]	100	120
Clamping range	[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
Mass	[kg]	64.5	62.7

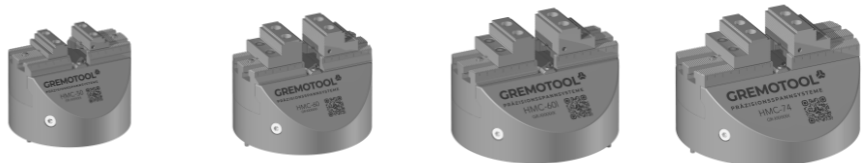
\* incl. Standard gripper jaw and standard base plate

\*\* without jaw and standard base plate



# Sizing guide

## HMC-Hydraulic Series



HMC-Size		HMC-50	HMC-60	HMC-60I	HMC-74
Jaw width	[mm]	50	60	60	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
Mass	[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-Hydraulic Series



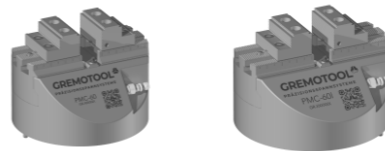
HMC-Size		HMC-100	HMC-120
Jaw width	[mm]	100	120
Clamping Force	[mm]	29-250	26-294
Support height *	[mm]	156	156
Max. Clamping pressure	[bar]	60	60
Max. Clamping Force	[kN]	60	60
Total length	[mm]	310	350
Total width	[mm]	260	260
Total height **	[mm]	125	125
Mass	[kg]	63.6	66.5

\* incl. Standard gripper jaw and standard base plate

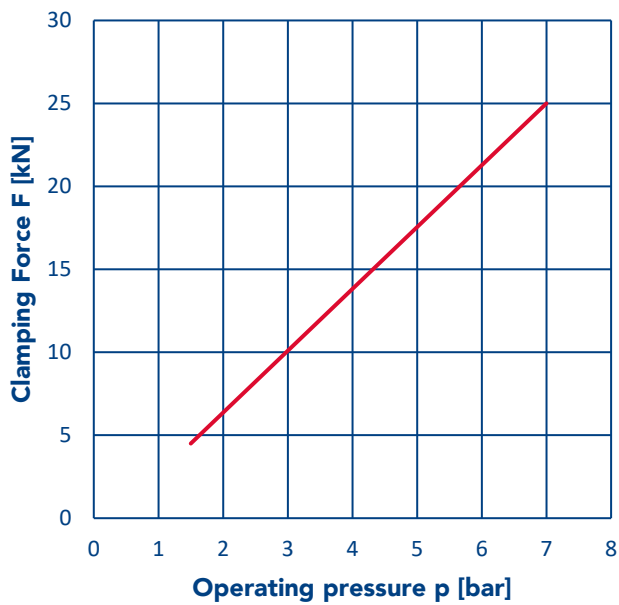
\*\* without jaw and standard base plate

# Clamping Force

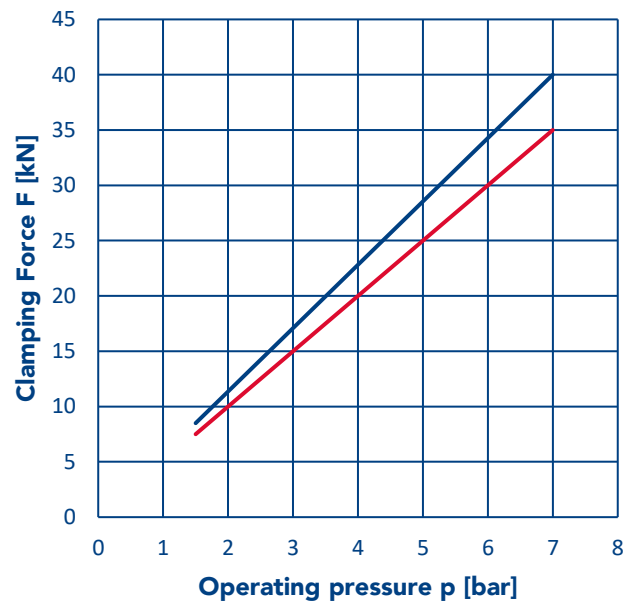
PMC-Pneumatic Series



**PMC-50**



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



<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

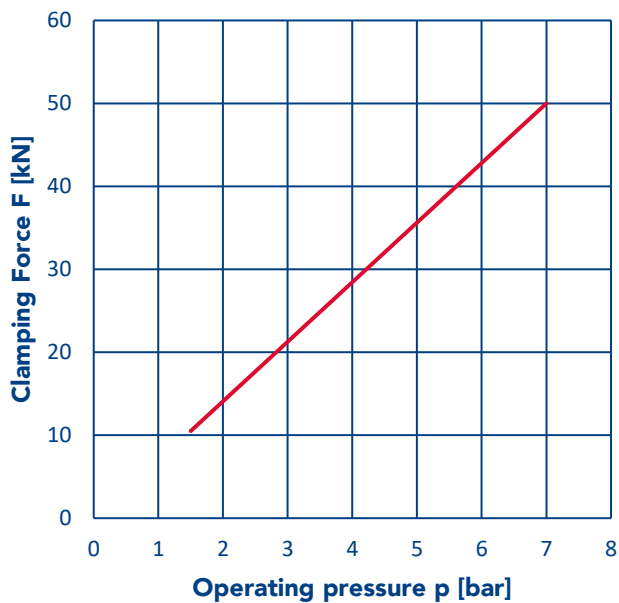
<b>p max.</b>	7 bar	7 bar
<b>p min.</b>	1.5 bar	1.5 bar
<b>F max.</b>	35 kN	40 kN
<b>F min.</b>	7.5 kN	8.5 kN

# Clamping Force

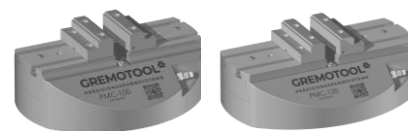
PMC-Pneumatic Series



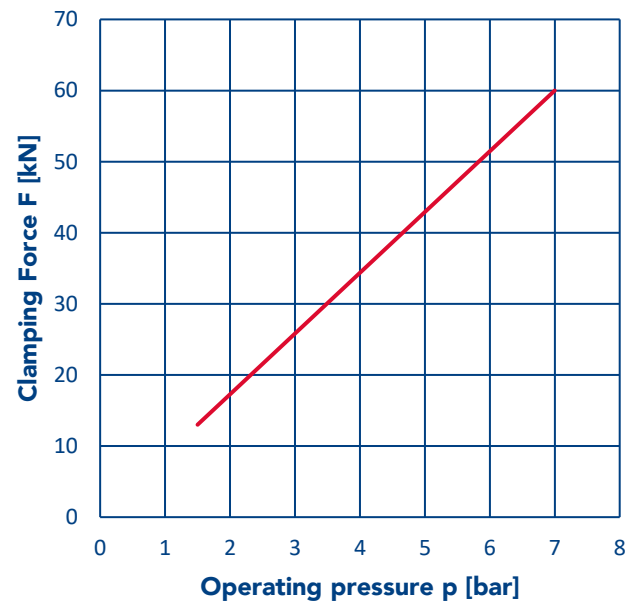
**PMC-74**



<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



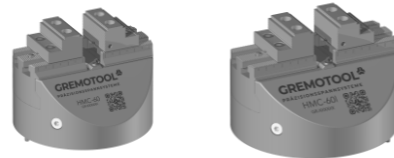
**PMC-100 / PMC-120**



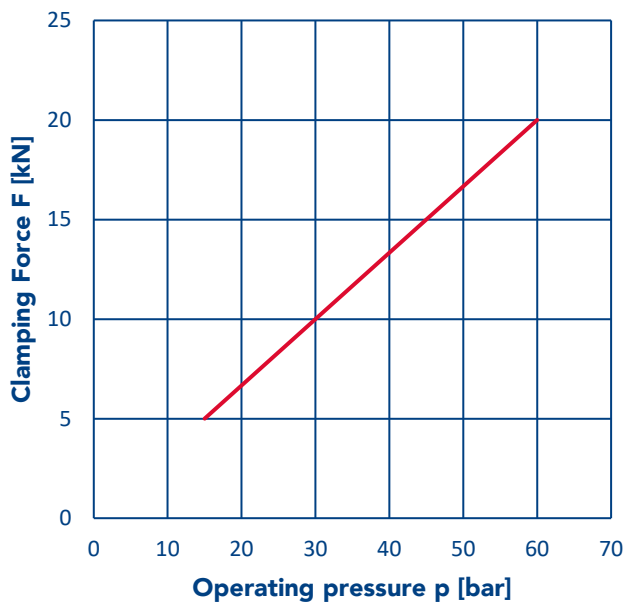
<b>p max.</b>	7 bar
<b>p min.</b>	1.5 bar
<b>F max.</b>	60 kN
<b>F min.</b>	13 kN

# Clamping Force

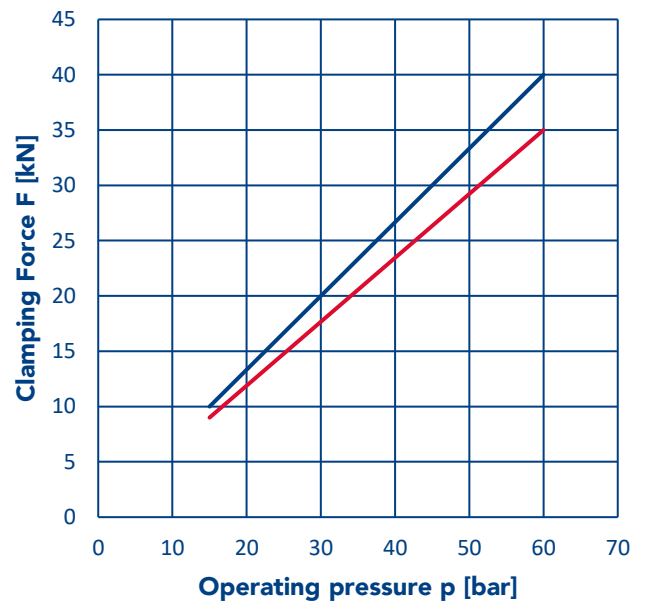
HMC-Hydraulic Series



**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

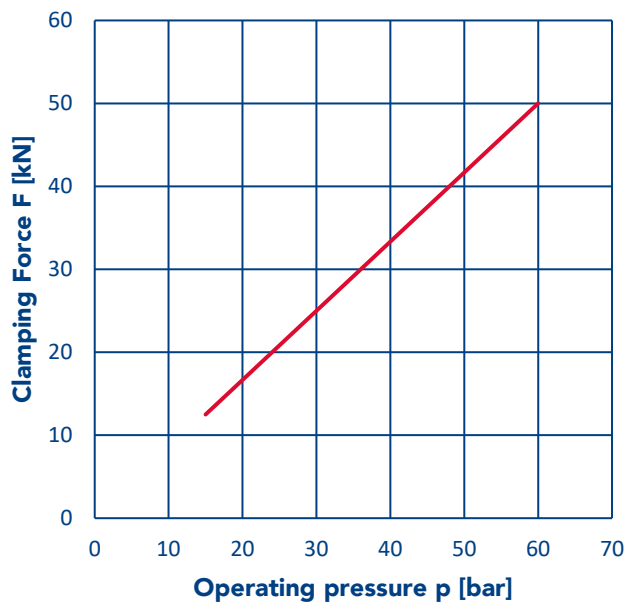
<b>p max.</b>	60 bar	60 bar
<b>p min.</b>	15 bar	15 bar
<b>F max.</b>	35 kN	40 kN
<b>F min.</b>	9 kN	10 kN

# Clamping Force

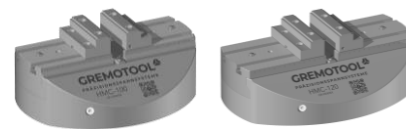
HMC-Hydraulic Series



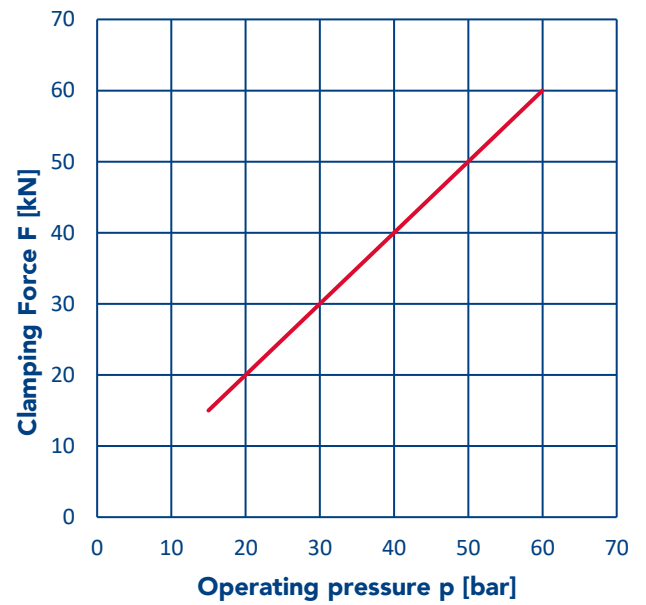
**HMC-74**



<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



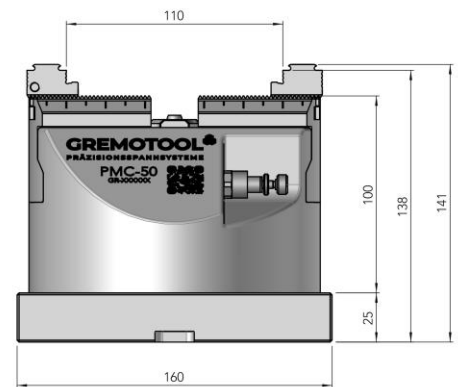
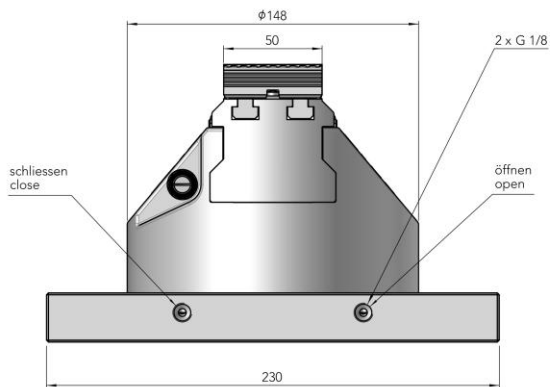
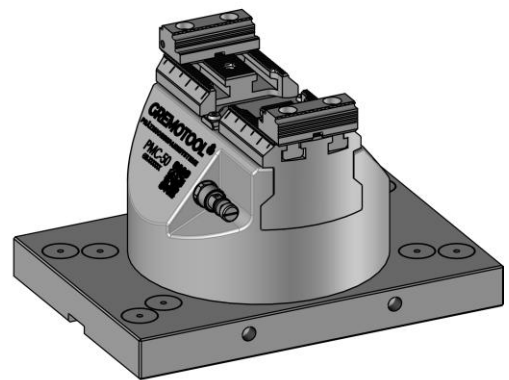
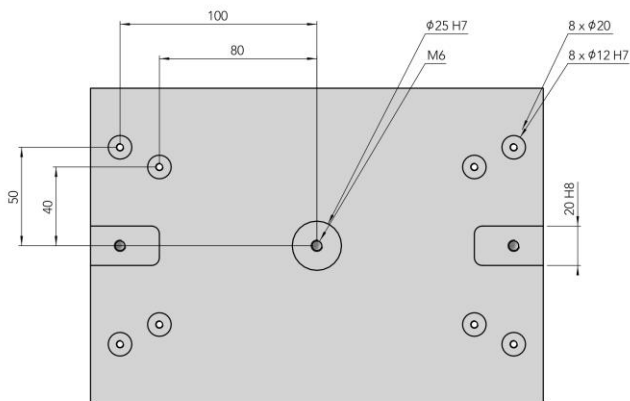
**HMC-100 / HMC-120**



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

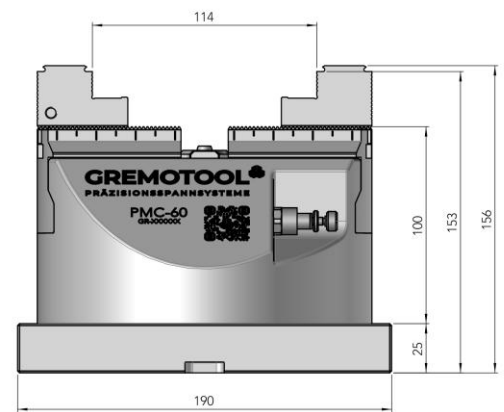
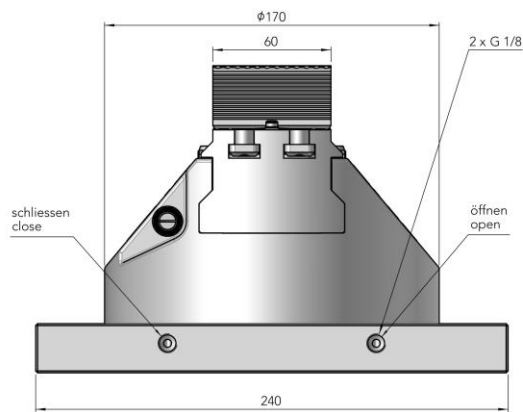
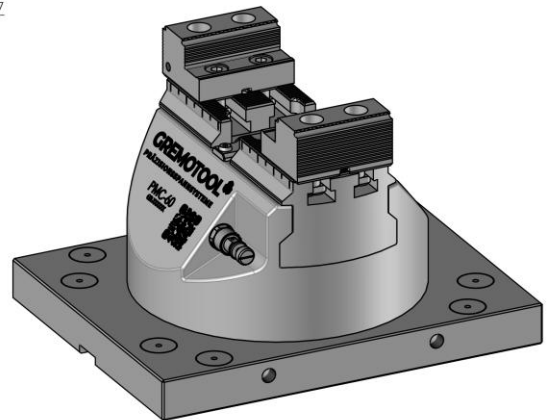
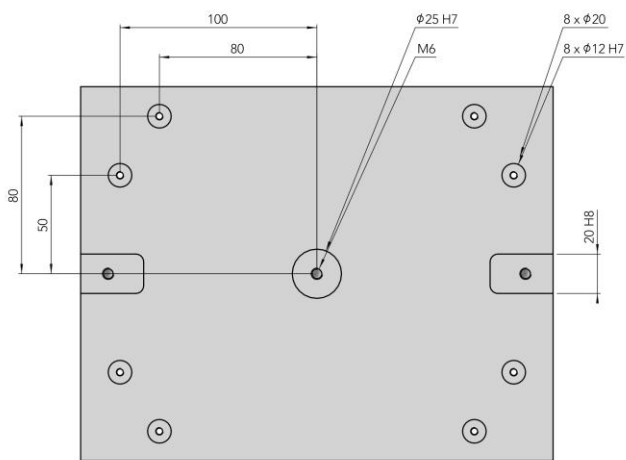
# Dimension

PMC-50 / HMC-50



# Dimension

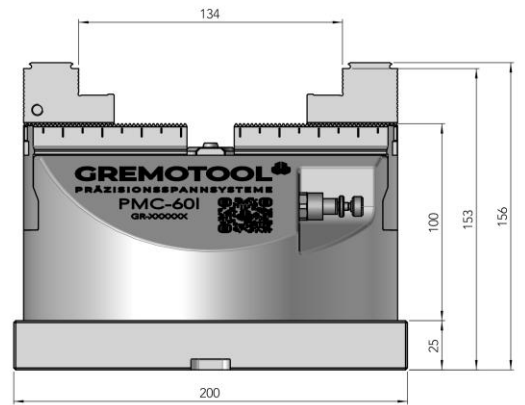
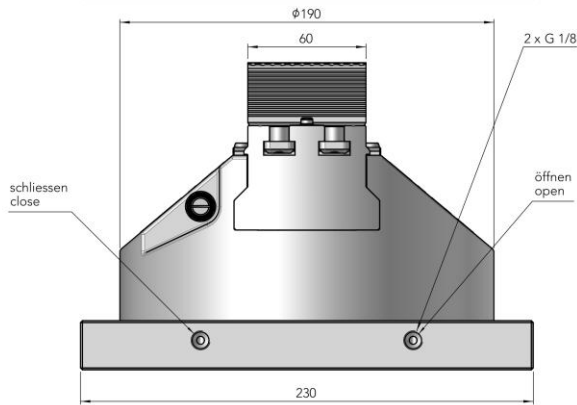
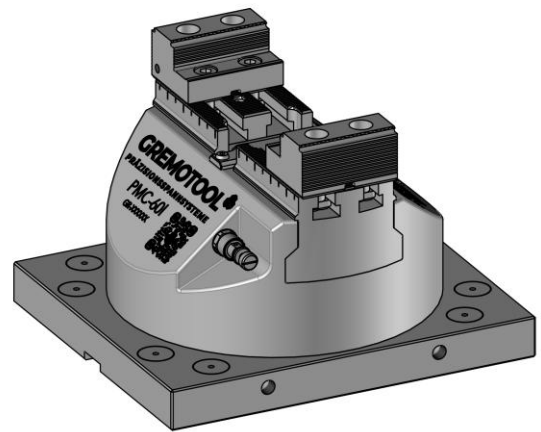
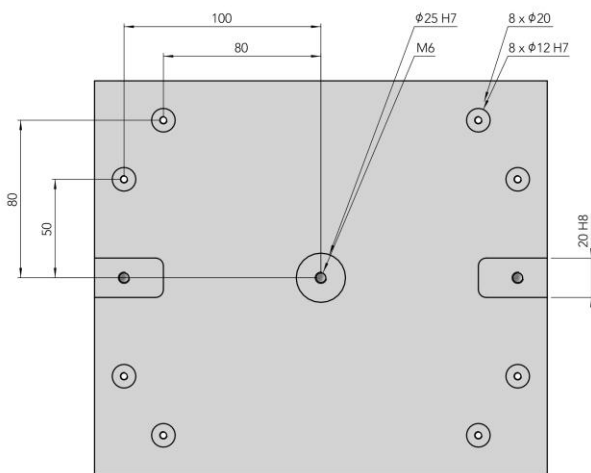
PMC-60 / HMC-60





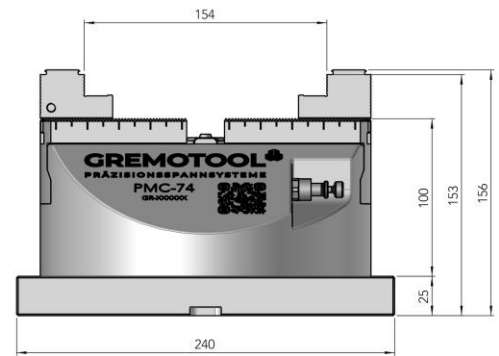
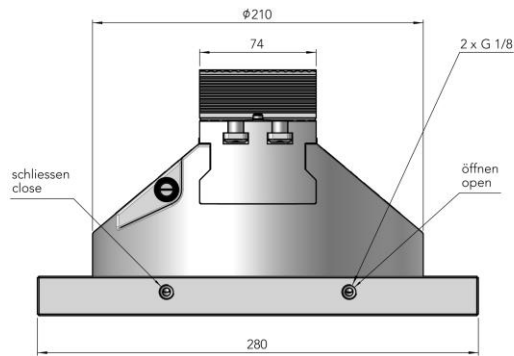
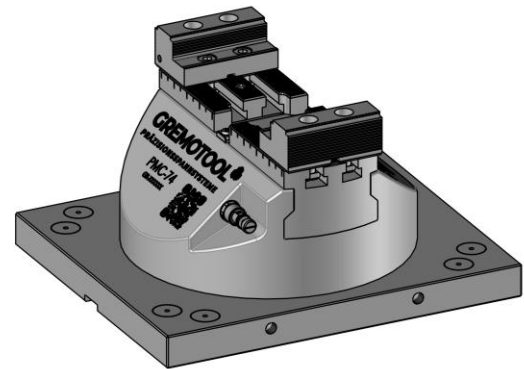
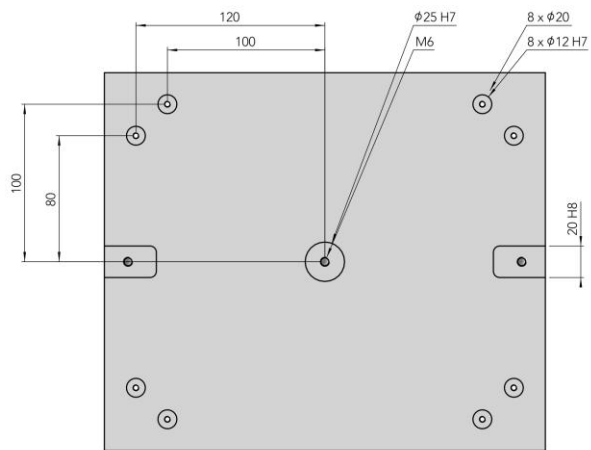
# Dimension

PMC-60I / HMC-60I



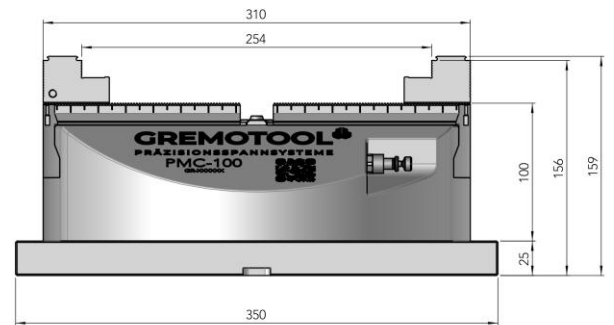
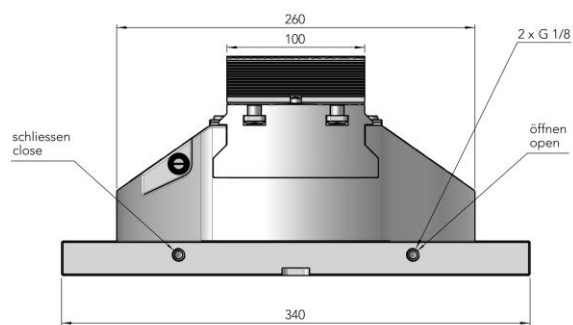
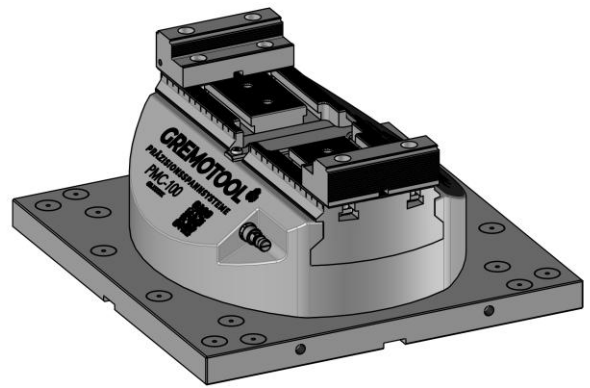
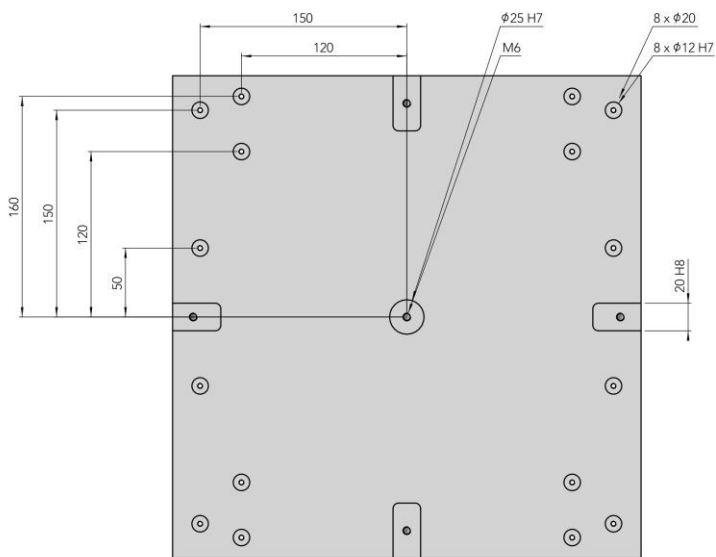
# Dimension

PMC-74 / HMC-74



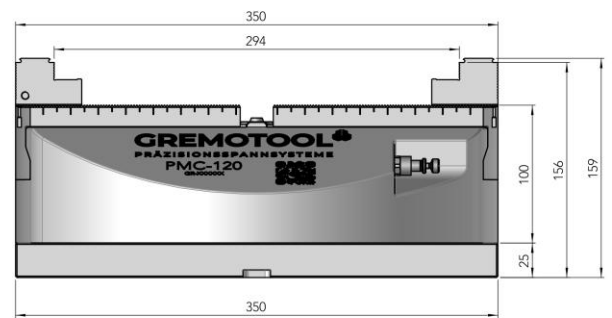
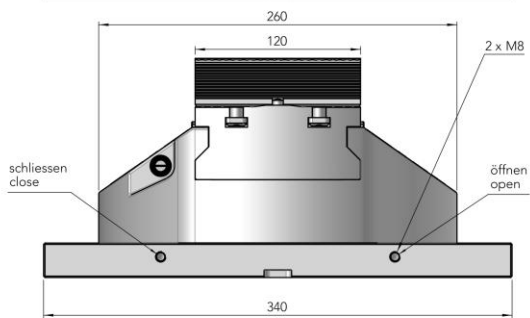
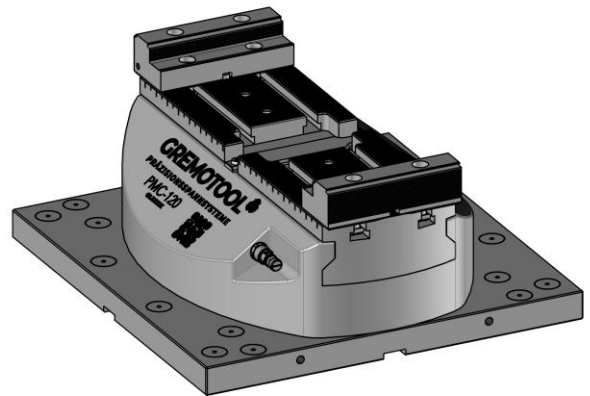
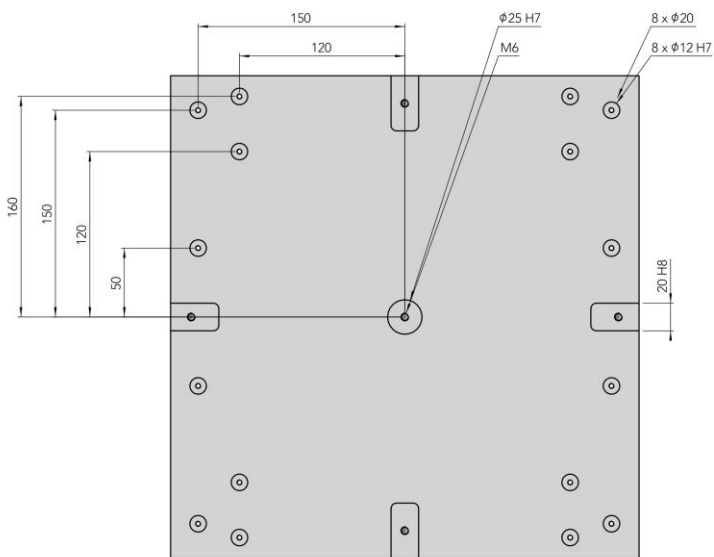
# Dimension

PMC-100 / HMC-100



# Dimension

PMC-120 / HMC-120



# Applications

## Zero-point clamping systems

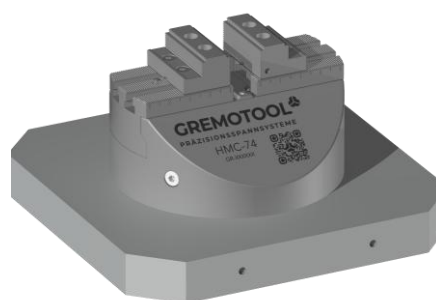
The PMC/HMC series can be used on many different pallet systems. In addition, it is possible to mount them directly with the standard base plate using any machining tables.



**Clamping Device:** 1x PMC-50  
**Zero-point clamping System:** Macro-Magnum



**Clamping-Device:** 1x PMC-60  
**Zero-point clamping System:** GPS-240



**Clamping Device:** 2x HMC-74  
**Zero-point clamping-System:** UPC-320

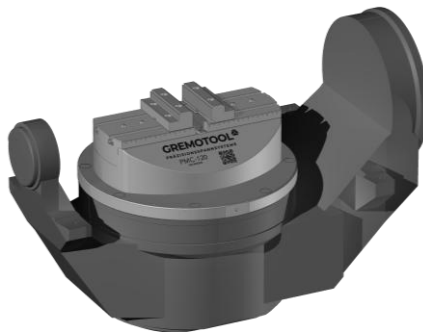


**Clamping device:** 1x HMC-120  
**Zero-point clamping System:** Delphin-398

# Applications

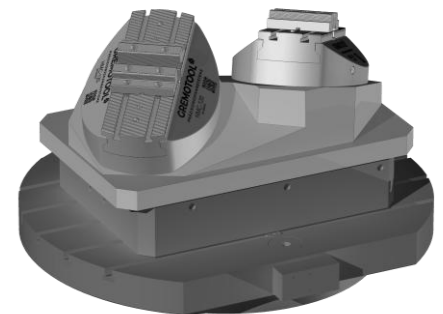
## Fixture

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.



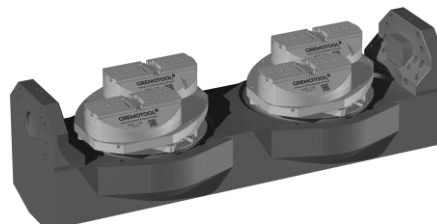
**Clamping Device:**  
**Fixture:**

**1x PMC-120  
Base Plate**



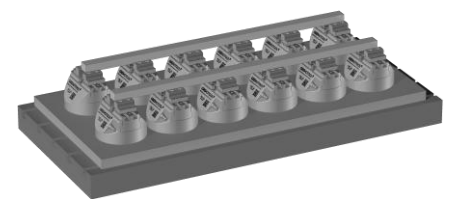
**Clamping Device:**  
**Fixture:**

**2x HMC-120  
Prisma Offset**



**Clamping Device:**  
**Fixture:**

**4x HMC-120  
NPS-Offset**



**Clamping Device:**  
**Fixture:**

**12x PMC-60  
Base Plate**

# Accessories

## Jaws

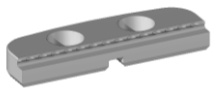
Pair of standard gripper jaws is supplied with each PMC/HMC, so, you are already able to clamp parts at no additional costs.

Width of jaws [mm]		34	40	50	60	74	100	120	150
<b>SC-gripper jaw flat</b>	<b>Nr. 837110</b>			X	X	X	X	X	
<b>SC-gripper jaw</b>	<b>Nr. 837150</b>			X	X	X	X	X	
<b>Standard gripper jaw</b>	<b>Nr. 837250</b>			X	X	X	X	X	
<b>Height gripper jaw</b>	<b>Nr. 837300</b>			X	X	X	X	X	
<b>Combi jaw</b>	<b>Nr. 837350</b>			X	X	X	X	X	
<b>Automation gripper jaw</b>	<b>Nr. 837380</b>			X	X	X	X	X	
<b>Automation step jaw</b>	<b>Nr. 837400</b>			X	X	X	X	X	
<b>Step jaw flat</b>	<b>Nr. 837410</b>			X	X	X	X	X	
<b>Standard step jaw</b>	<b>Nr. 837450</b>			X	X	X	X	X	
<b>Prism jaw</b>	<b>Nr. 837500</b>			X	X	X	X	X	
<b>Soft jaw Aluminium</b>	<b>Nr. 837702</b>			X	X	X	X	X	
<b>Soft jaw Steel</b>	<b>Nr. 837703</b>			X	X	X	X	X	

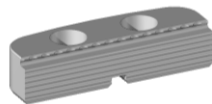
For the exact data of the jaws, please check the jaw catalogue.

# Accessories

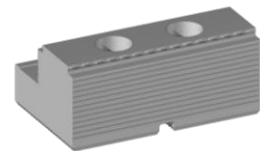
## Jaws



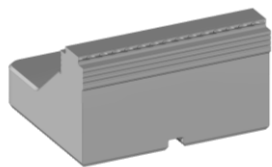
**Nr. 837110**



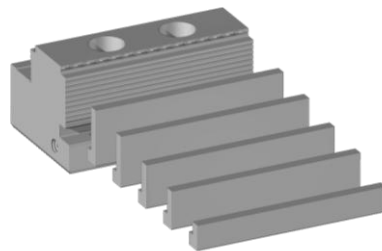
**Nr. 837150**



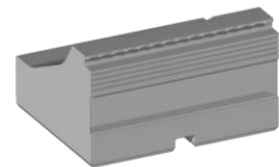
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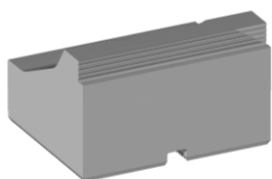
**Nr. 837300**



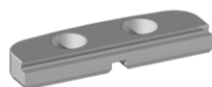
**Nr. 837350**



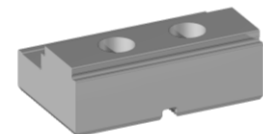
**Nr. 837380**



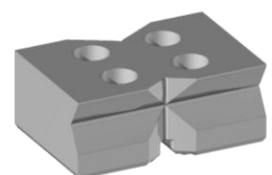
**Nr. 837400**



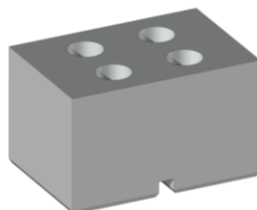
**Nr. 837410**



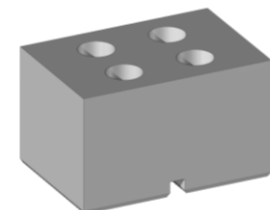
**Nr. 837450**



**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*		
Dynafix 280						
Dynafix 350						
Delphin 398			1,2	1	1	1
Delphin 448			1,2	1,2	1,2	1,2

\* Possible only Pneumatic clamps

# Accessories

## Automation Solutions

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

\* Possible only Pneumatic clamps  
Further manufacturers can be requested directly by Gremotool.

### Direct Clamping

The standard base plate of the PMC/HMC series offers a simple installation on all machine tables. For machine tables with a T-slot, matching sliding blocks can be attached to the underside of the base plate for precise positioning. If you use a perforated grid plate, you can use the precise fits to position the PMC/HMC series exactly on the machine with the fitting shoulder screw.

### Robot couplings

If your machine does not have a rotary unity in the table, for automated production you can use a robot coupling from Gremotool. We offer two different types of robot couplings.

The removable coupling is gripped by the robot and placed on the coupling of the PMC/HMC, after that the gripper is unloaded. Once the workpiece has been changed, the robot removes the coupling from the PMC/HMC, so that the processing can start.

The fixed robot coupling is permanently installed on the robot. The robot attaches and opens the PMC/HMC, removes the coupling and changes the workpiece. To close the PMC/HMC 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/HMC 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/HMC 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 accessed at [www.gremotool.ch](http://www.gremotool.ch)

Further catalogues can be downloaded from the website [www.gremotool.ch](http://www.gremotool.ch).

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