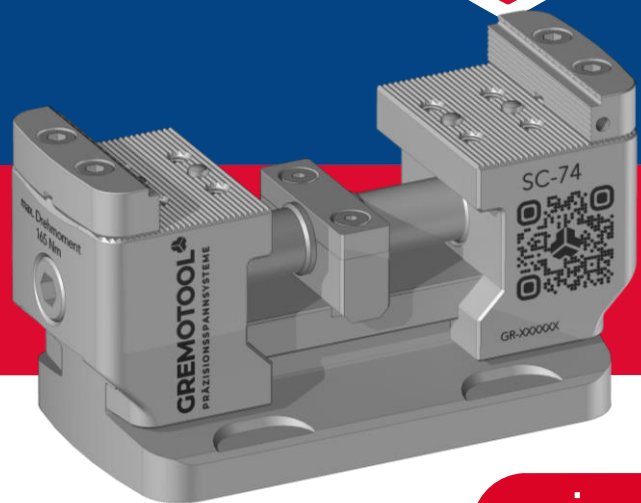


# GREMOTOOL

PRÄZISIONSSPANNSYSTEME

SC-Series



swiss made 



GREMOTOOL  
Precision Clamping Systems

Wilerstrasse 3  
CH-9200 Gossau

info@gremotool.ch  
www.gremotool.ch

Telefon +41 (0)71 930 03 90

# Overview

SC-Series

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# Product presentation

## SC-Series

With the SC series, you enable your production to machine workpieces from 5 sides without reclamping. This eliminates the need for additional clamping, which significantly reduces set-up times and increases the accuracy of the elements. The SC series is ideal for clamping in 5-axis machining centers, the advantages are obvious.



# Product presentation

## Benefits of the SC-Series

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### Clamping Force

The high clamping forces of the SC series can be influenced by the torque applied to the spindle. This allows you to clamp plastic workpieces without deformation and forged parts with a secure hold without destroying the clamp.

### Centering precision

The special spindle and construction of the SC series ensure the user precise centering of +/- 0.01 mm in the center of the clamp. This means that the workpiece is still on the same place, which does not change the zero point.

### Accessibility

The height of the clamp makes it possible to finish the workpiece from five sides in one clamping operation without the spindle colliding with the machine table. In addition, the rotationally symmetrical design of the clamp ensures that the orientation of the clamp is irrelevant for the machining process.

### Compact

The compact clamp fits in any machine or on any base plate. The clamps are easy to replace by hand due to their low weight.

### Low maintenance

Thanks to the design, the chips do not remain anywhere in the clamp. The clamp can therefore be operated with low maintenance.

### Short set-up times

The SC series can be equipped with various connection options. The standard base from Gremotool is suitable for grooved tables and pallet systems. Solutions for perforated grid plates and clamping device handling can also be offered.

### Versatility

The SC series can be used as a fixed jaw clamp or as a center clamp. This only requires a small modification on the clamp.

Thanks to the principle of the center clamp, several clamps can be placed next to each other to securely clamp long workpieces.

With a central jaw, the SC series can be transformed into a two-workpiece clamp.

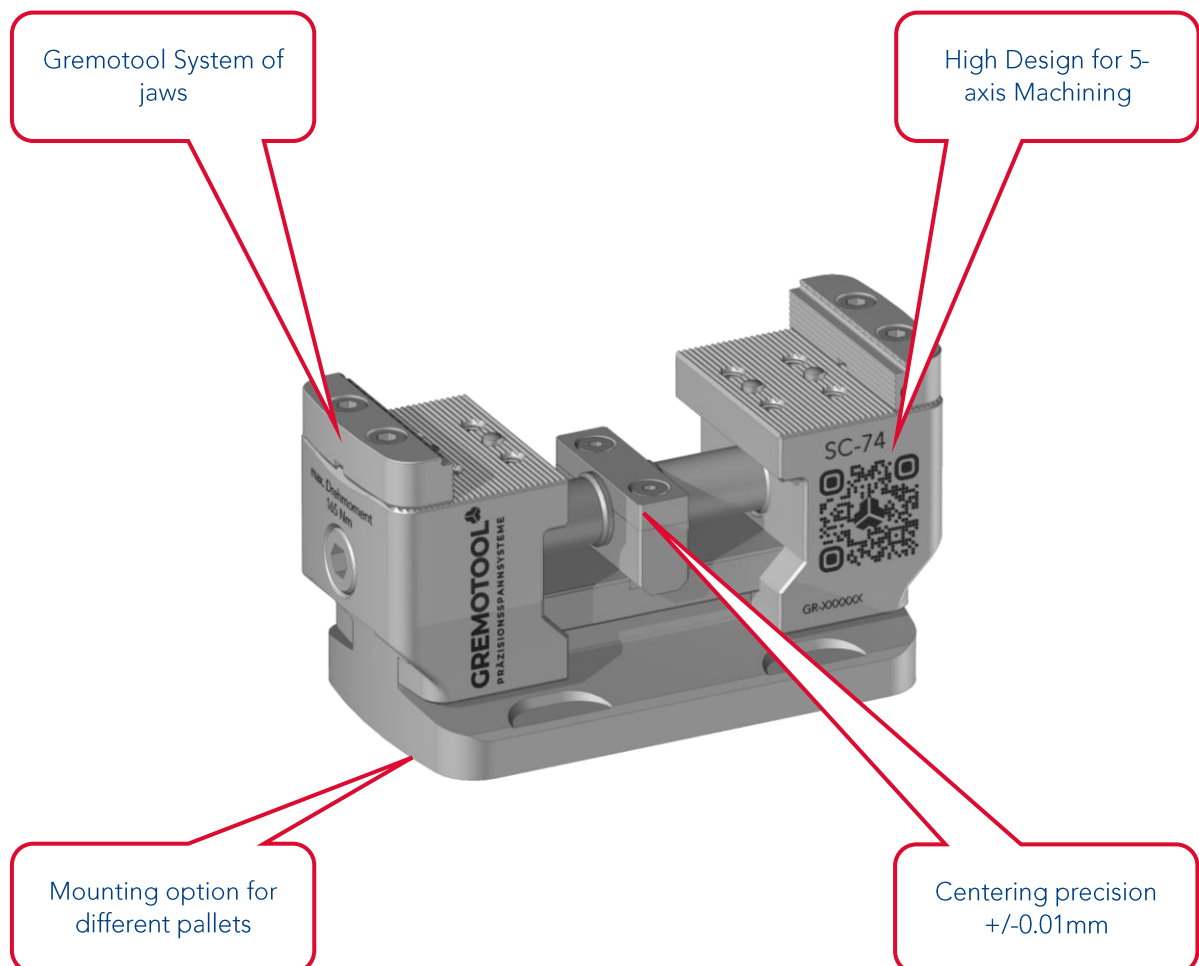
### Large range of jaws

The entire Gremotool jaws can be used on the SC series from gripping to soft jaws made of aluminium, no wishes remain unfulfilled for workpiece clamping requirements.

The jaws are equipped with the uniform Gremotool serration. This means you can change the jaws very fast.

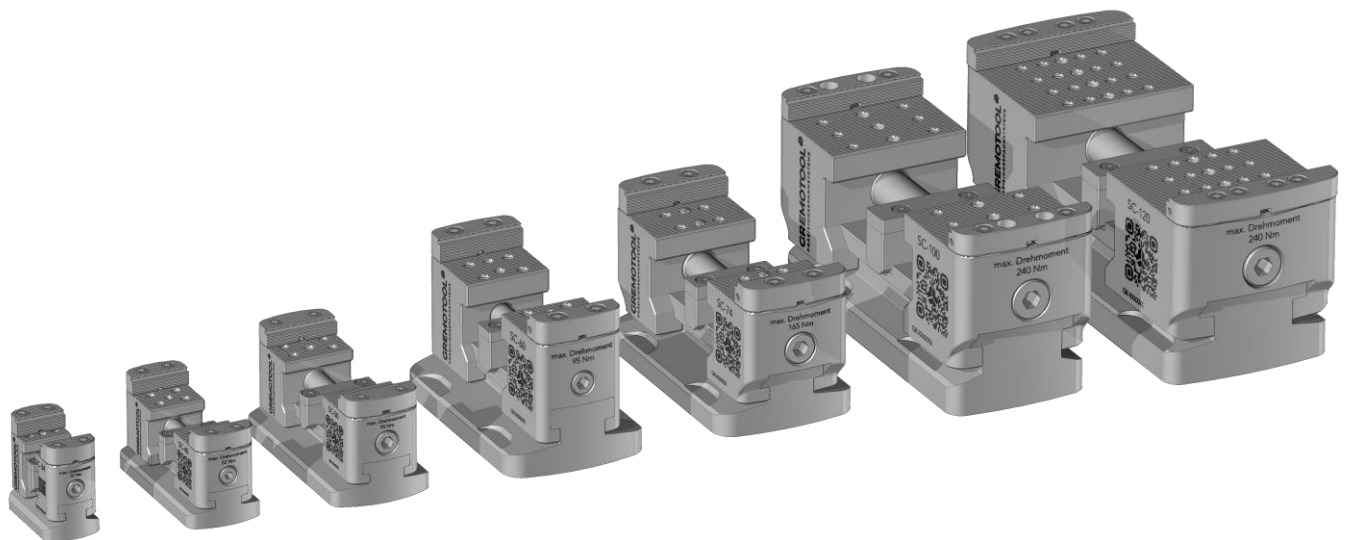
# Product presentation

Benefits of the SC-Series



# Overview of size options

SC-Series



# Sizing guide

SC-Series



SC-Size		SC-34	SC-40	SC-50	SC-60
Jaw width	[mm]	34	40	50	60
Clamping range	[mm]	0-36	0-86	0-106	0-128
Support height *	[mm]	62	62	71	105
Max. Torque range	[Nm]	52	52	95	95
Max. Clamping Force	[kN]	15	15	25	25
Total length	[mm]	70	120	148	170
Total width	[mm]	40	52	70	100
Total height **	[mm]	65	65	74	108
Spanner width	[mm]	6	6	8	8
Mass	[kg]	0.8	1.7	3.7	7.3
Fixed jaw possible		No	No	No	Yes

\* With standard SC-gripper jaw

\*\* without jaw

# Sizing guide

SC-Series



SC-Size		SC-74	SC-100	SC-120
Jaw width	[mm]	74	100	120
Clamping range	[mm]	0-156	0-228	0-270
Support height *	[mm]	105	130	130
Max. Torque range	[Nm]	165	240	240
Max. Clamping Force	[kN]	45	65	65
Total length	[mm]	200	272	314
Total width	[mm]	100	100	120
Total height **	[mm]	108	133	133
Spanner width	[mm]	10	12	12
Mass	[kg]	9.5	18.4	26.5
Fixed jaw possible		Yes	Yes	Yes

\* With standard SC-gripper jaw

\*\* without jaw

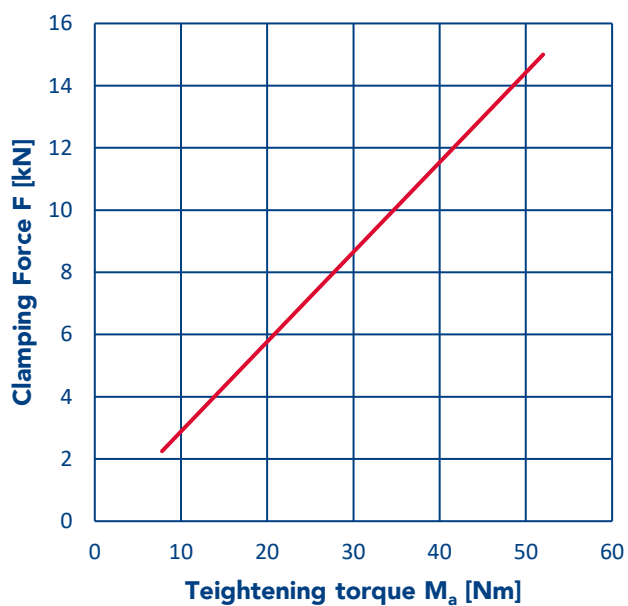


# Torque range

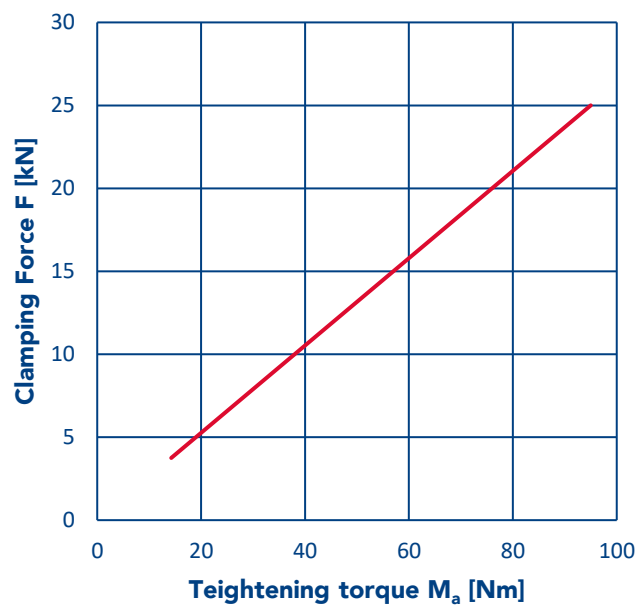
SC-Series



**SC-34 / SC-40**



**SC-50 / SC-60**



<b><math>M_a</math> max.</b>	52 Nm
<b><math>M_a</math> min.</b>	7.8 Nm
<b>F max.</b>	15 kN
<b>F min.</b>	2.25 kN

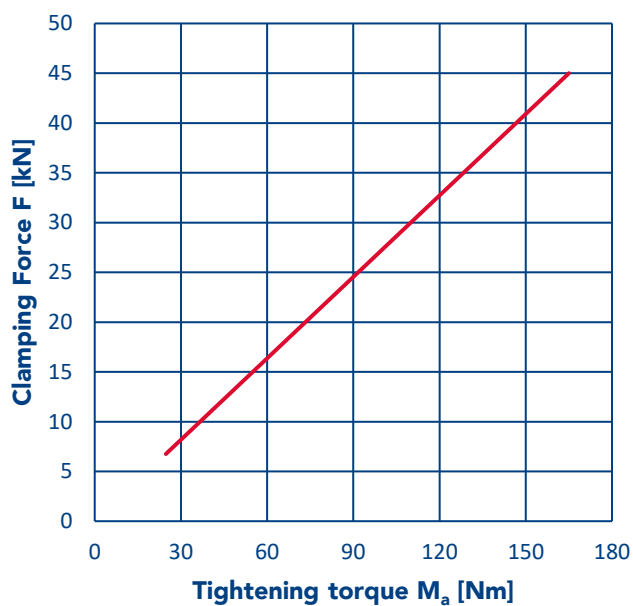
<b><math>M_a</math> max.</b>	95 Nm
<b><math>M_a</math> min.</b>	14.25 Nm
<b>F max.</b>	25 kN
<b>F min.</b>	3.75 kN

# Torque range

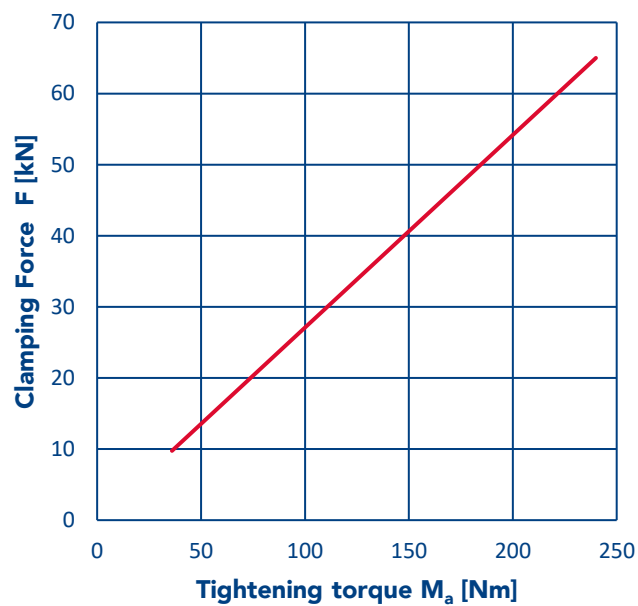
SC-Series



**SC-74**



**SC-100 / SC-120**

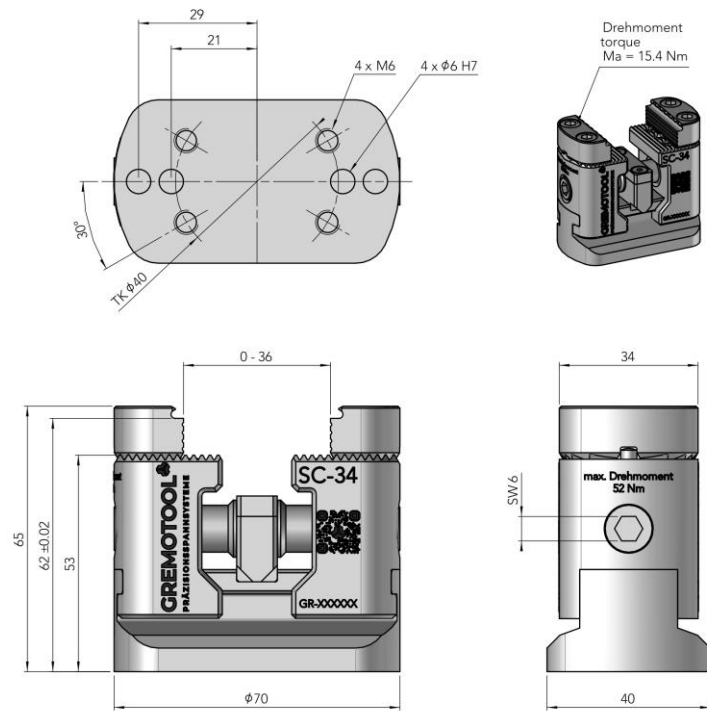


<b><math>M_a</math> max.</b>	165 Nm
<b><math>M_a</math> min.</b>	24.75 Nm
<b>F max.</b>	45 kN
<b>F min.</b>	6.75 kN

<b><math>M_a</math> max.</b>	240 Nm
<b><math>M_a</math> min.</b>	36 Nm
<b>F max.</b>	65 kN
<b>F min.</b>	9.75 kN

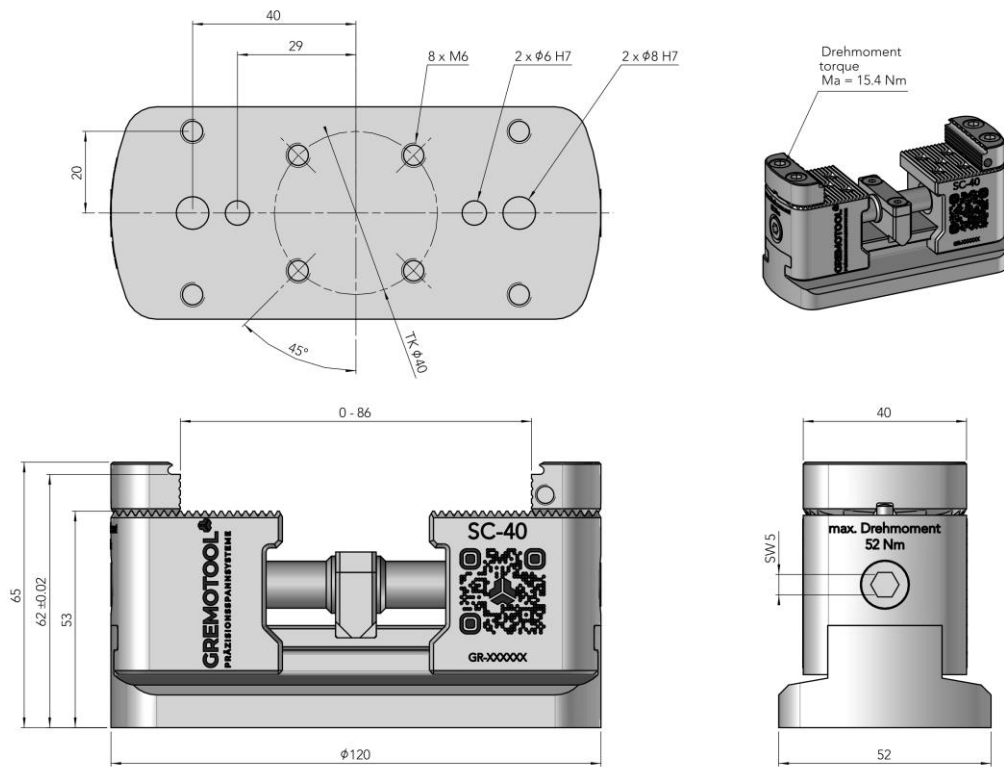
# Dimension

SC-34



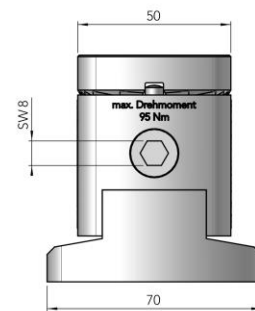
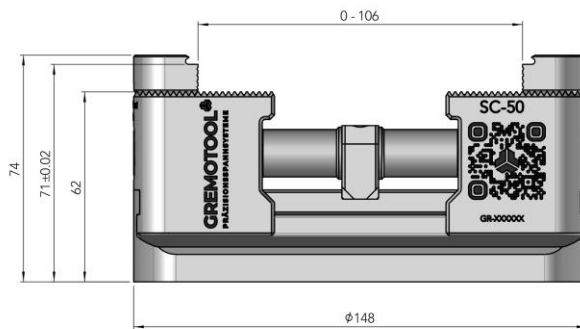
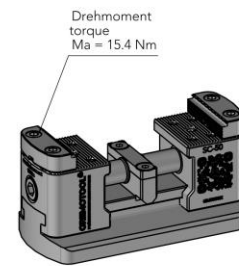
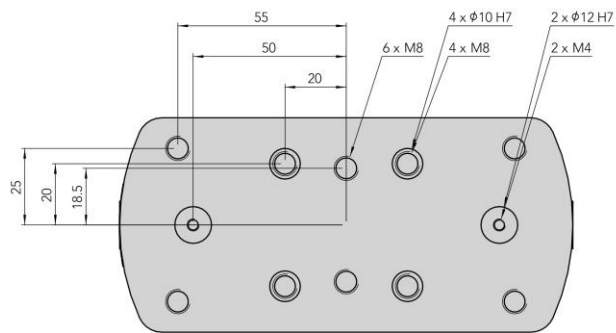
# Dimension

SC-40



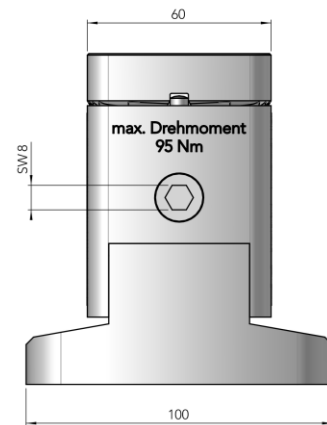
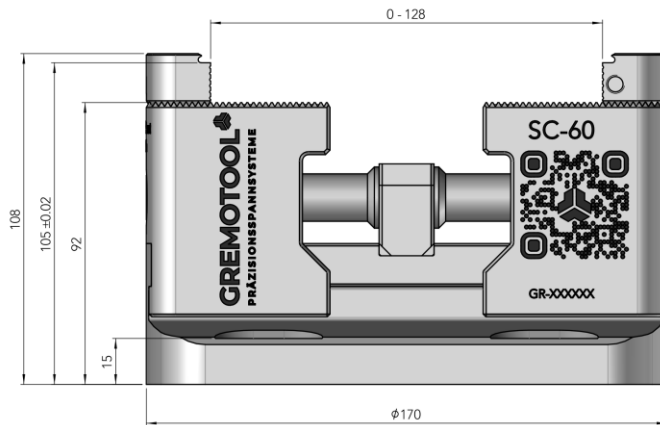
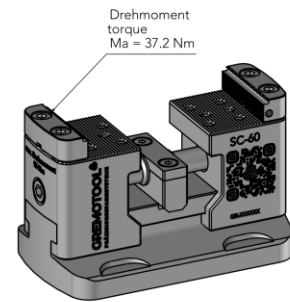
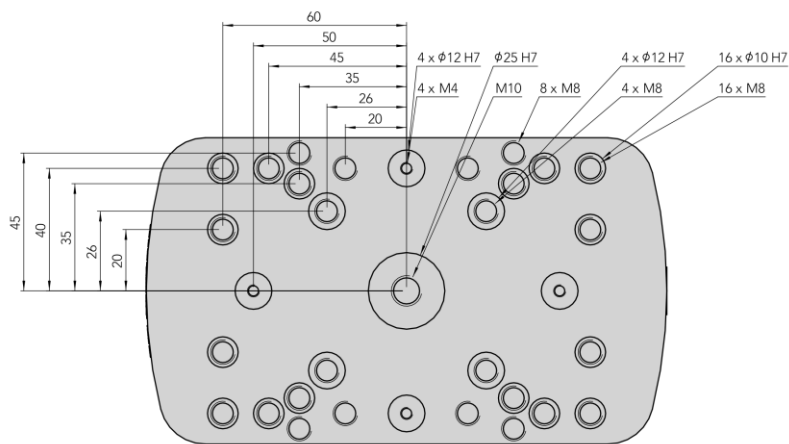
# Dimension

SC-50



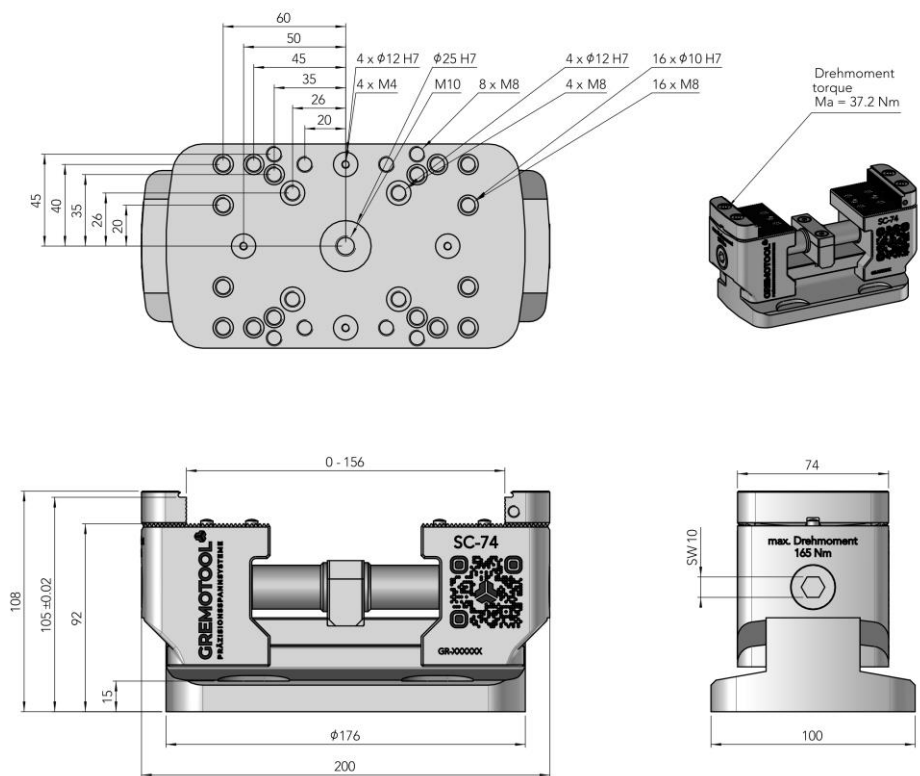
# Dimension

## SC-60



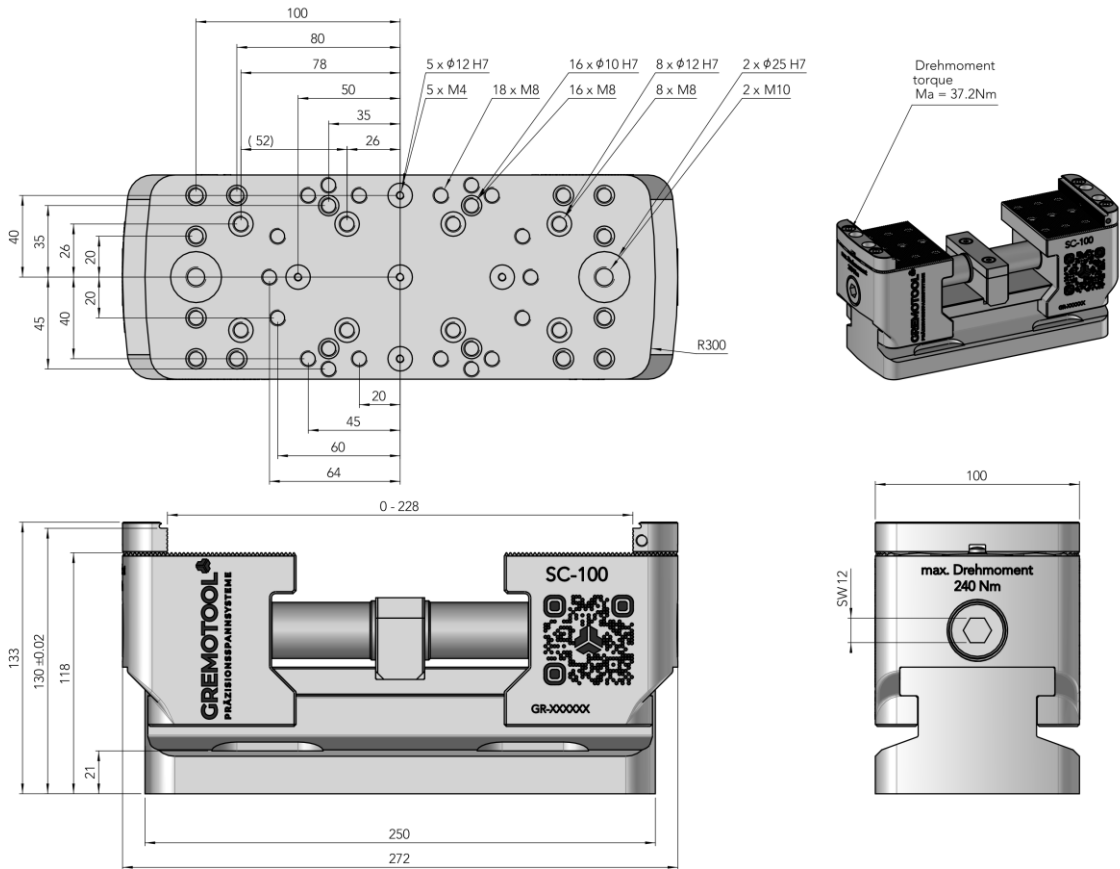
# Dimension

SC-74



# Dimension

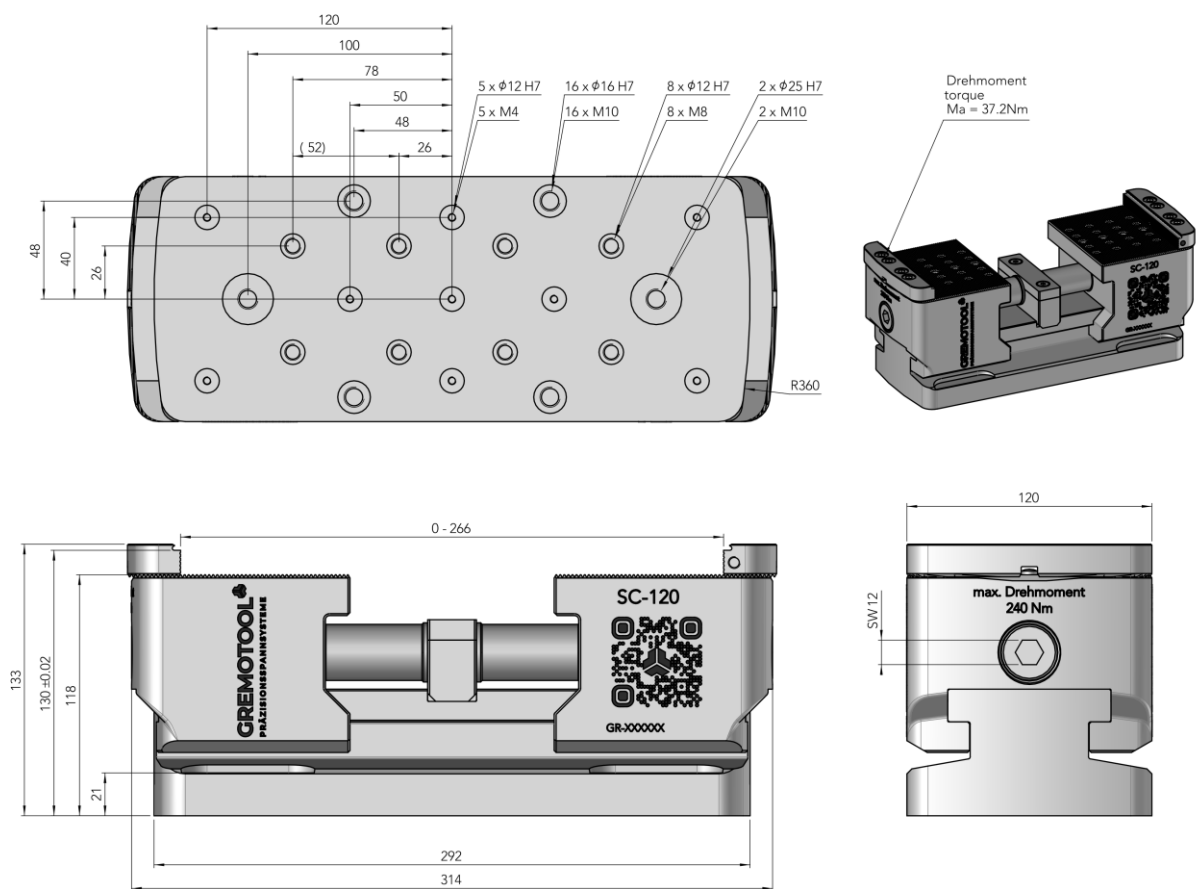
## SC-100





# Dimension

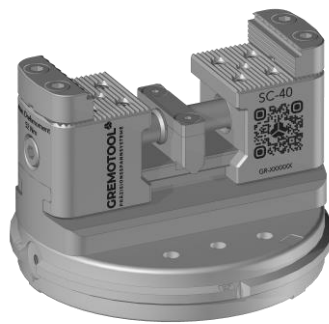
## SC-120



# Applications

## Zero-point clamping system

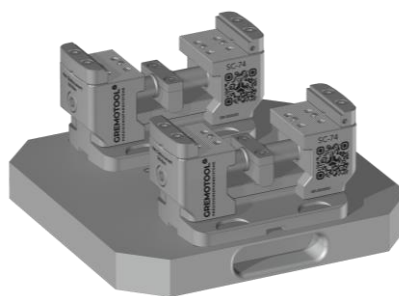
The basic bodies of the SC series make it possible to use many of the common pallet systems. For this purpose, only 2 fitting holes are required to align the SC correctly on the pallet.



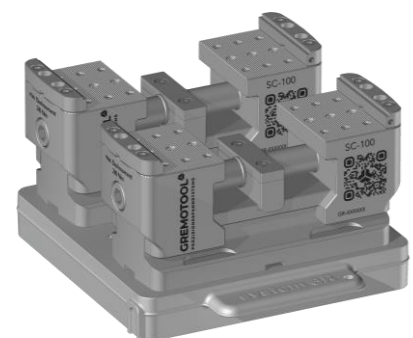
**Clamping Device:** 1x SC-40  
**Zero-point clamping System:** GPS-120



**Clamping Device:** 1x SC-50  
**Zero-point clamping System:** ITS-148



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

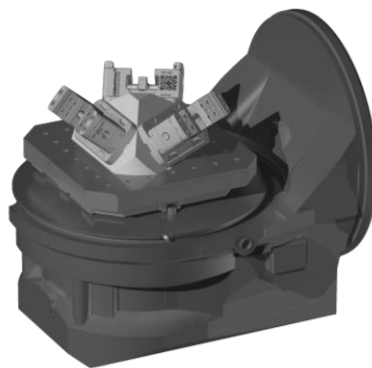


**Clamping Device:** 2x SC-100  
**Zero-point clamping System:** Dynafix

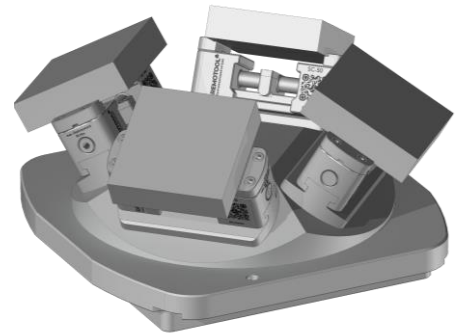
# Applications

## Fixture

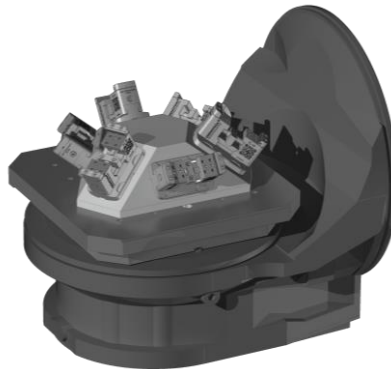
To achieve maximum flexibility and running time on the processing machines, you can use the SC series on pyramids, towers, or prisms. The elevated design and the large selection of jaws allows to maximise machine capacity.



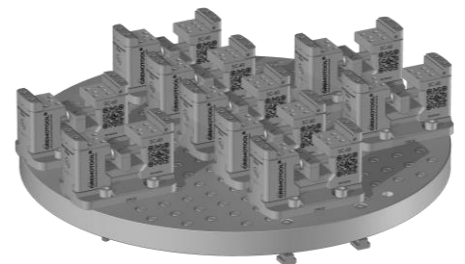
**Clamping Device:** 3x SC-60  
**Fixture:** Pyramid



**Clamping Device:** 4x SC-50  
**Fixture:** Pyramid



**Clamping Device:** 6x SC-60  
**Fixture:** Pyramid

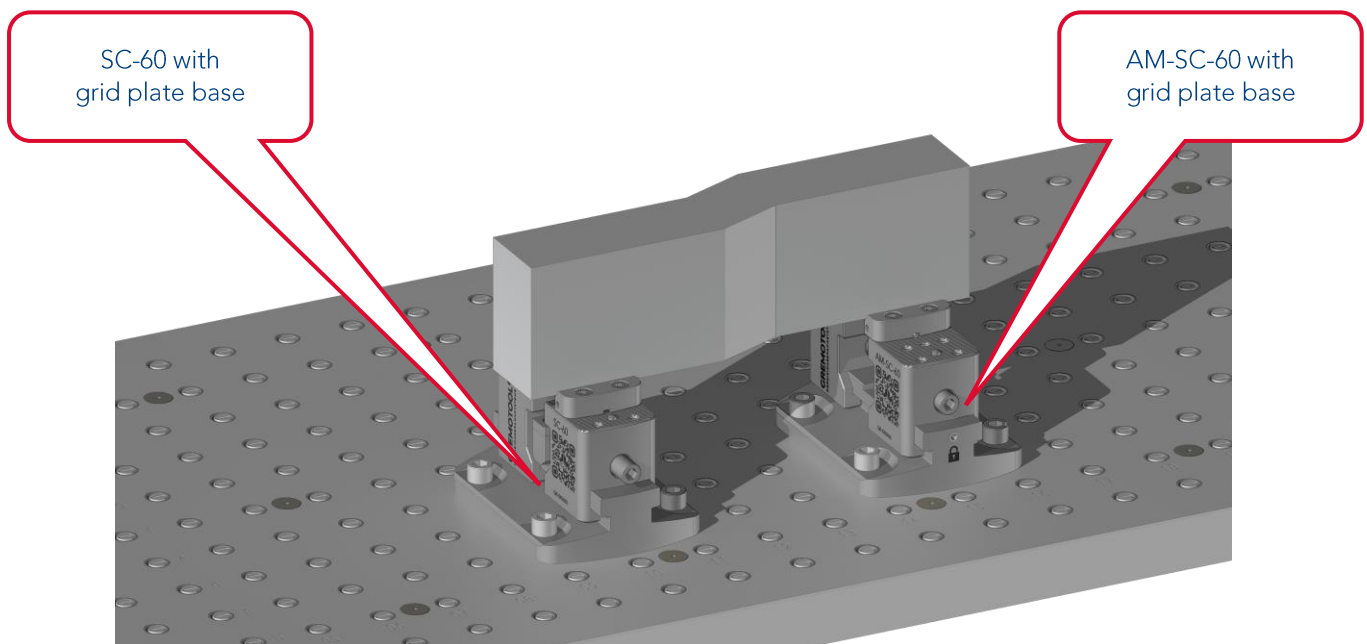


**Clamping Device:** 9x SC-60f  
**Fixture:** Perforated grid plate

# Self-adjusting

## AM-SC-series

The requirements for clamping devices have become increasingly complex with the growing possibilities of production technology. Some workpieces are machined from all sides in one clamping operation and then cut off. Other workpieces have attributes that do not allow a second centric clamping or must not be damaged by it. These examples and also long structural components can warp due to clamping or material removal. For these workpieces, Gremotool has further developed the AM-SC series to meet customer requirements.



### Self-adjusting

Self-adjusting means that the workpiece can be clamped at any position on the clamping device and then the entire unit is fixed in place. This makes it possible to fix long workpieces without distortion or workpieces with asymmetrical clamping surfaces. No pendulum or mould jaws are required to hold the workpiece-es securely.

### Advantages of AM-SC

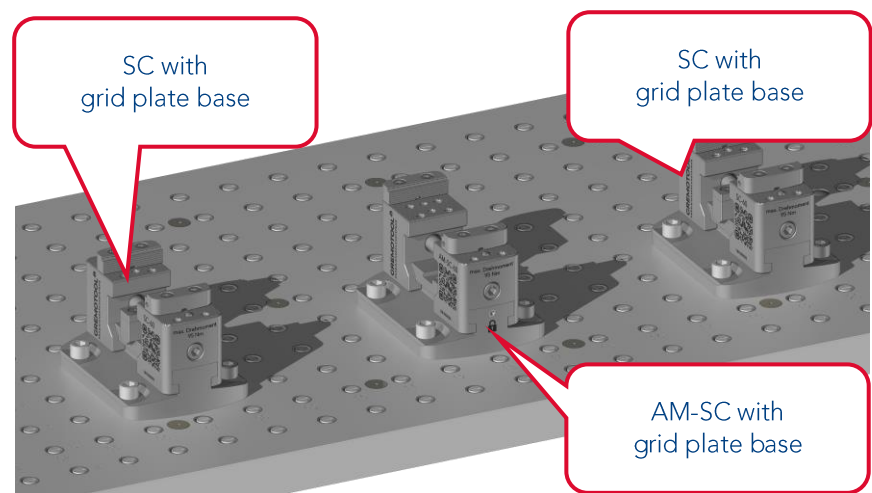
The AM-SC series has the same dimensions and clamping force as the SC series. For each size of the SC series, there is a corresponding vice from the AM series. Thanks to the identical dimensions, the centrally clamping devices can be used safely on the same workpiece with the AM-SC variant without any special modifications.

# Self-adjusting

## Applications example

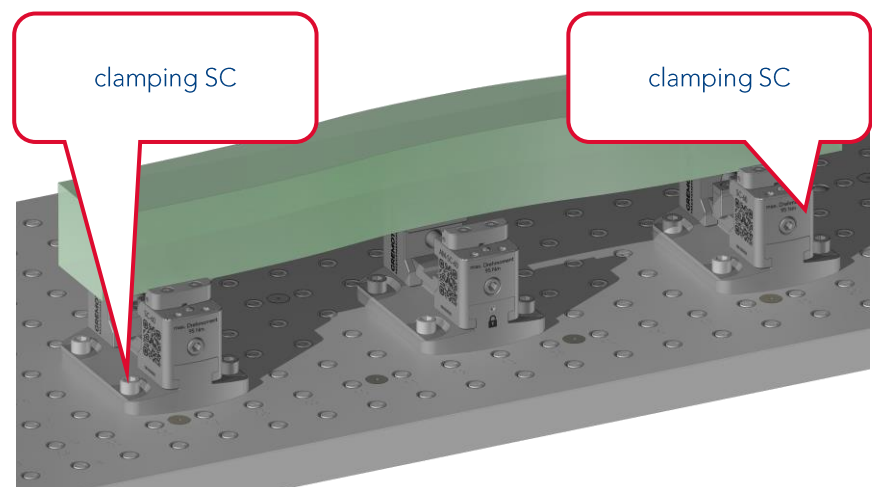
### 1. Set up vice

The clamping devices are mounted on the table of the machine tool. The two centric SCs are placed on the outside of the width of the workpiece. The self-adjusting modules are then placed in the centre. The jaws are adjusted to the dimensions of the workpiece.



### 2. clamping centrally

The workpiece is inserted into the clamping fixture. The outer SC centre clamps are placed against the workpiece first and then the specified clamping torque is applied.

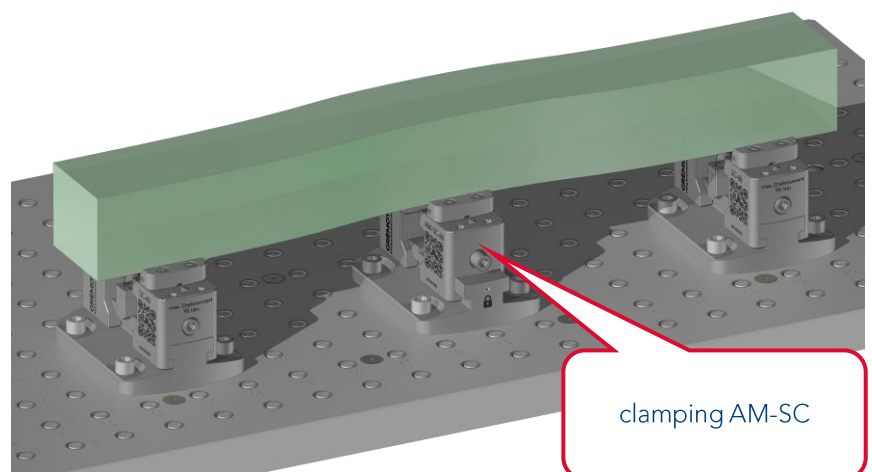


# Self-adjusting

## Applications example

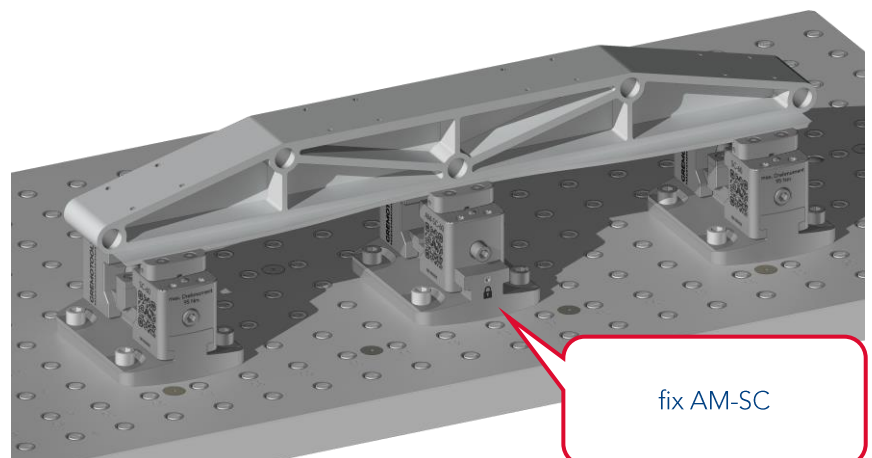
### 3. clamping self-adjusting module

The workpiece is now fixed by the outer clamping devices. To further improve the clamping stability, the self-adjusting modules now stabilise the workpiece in the centre. The clamping position of the AM-SC adapts to the workpiece during clamping and subsequent application of the same torque.



### 4. Fix self-adjusting module

As the position of the AM-SC is not necessarily in the centre, they must be fixed in place to ensure stable tension. To do this, the fixing screw is tightened to the specified torque. Nothing further stands in the way of distortion-free production.



# Accessories

## Jaws

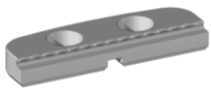
Pair of SC gripping jaws is included with delivery of Smart Clamp, so, you can clamp raw parts at no additional costs.

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	X	X	
<b>SC-gripper jaw</b>	<b>Nr. 837150</b>	X	X	X	X	X	X	X	
<b>Standard gripper jaw</b>	<b>Nr. 837250</b>	X	X	X	X	X	X	X	
<b>Height gripper jaw</b>	<b>Nr. 837300</b>	X	X	X	X	X	X	X	
<b>Combi jaw</b>	<b>Nr. 837350</b>	X	X	X	X	X	X	X	
<b>Automation gripper jaw</b>	<b>Nr. 837380</b>	X	X	X	X	X	X	X	
<b>Automation step jaw</b>	<b>Nr. 837400</b>	X	X	X	X	X	X	X	
<b>Step jaw flat</b>	<b>Nr. 837410</b>	X	X	X	X	X	X	X	
<b>Standard step jaw</b>	<b>Nr. 837450</b>	X	X	X	X	X	X	X	
<b>Prism jaw</b>	<b>Nr. 837500</b>	X	X	X	X	X	X	X	
<b>Soft jaw Aluminium</b>	<b>Nr. 837702</b>	X	X	X	X	X	X	X	
<b>Soft jaw Steel</b>	<b>Nr. 837703</b>	X	X	X	X	X	X	X	

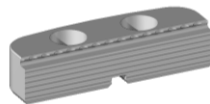
For the exact data of the jaws, please check the jaw catalogue.

# Accessories

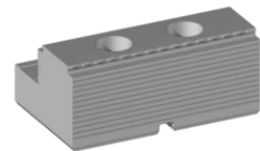
## Jaw



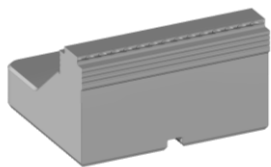
**Nr. 837110**



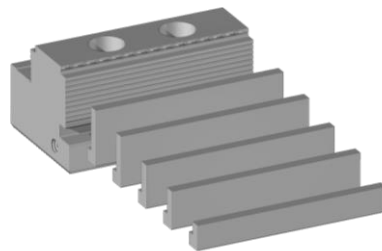
**Nr. 837150**



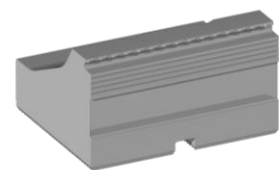
**Nr. 837250**



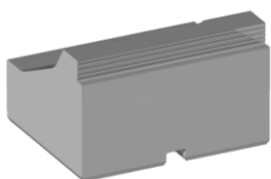
**Nr. 837300**



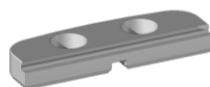
**Nr. 837350**



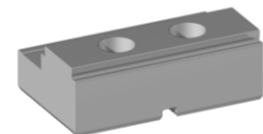
**Nr. 837380**



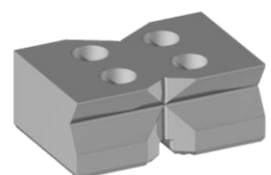
**Nr. 837400**



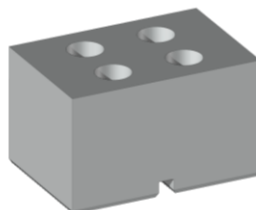
**Nr. 837410**



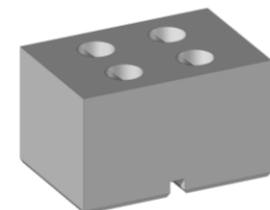
**Nr. 837450**



**Nr. 837500**



**Nr. 837702**



**Nr. 837703**



# Accessories

## Automation Solutions

The SC series can be included in any automation solution. From workpiece handling to clamping device handling to pallet handling, you are best recommended with the SC series.

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

SC-Size	SC-34	SC-40	SC-50	SC-60	SC-74	SC-100	SC-120
<b>GPS 70</b>	1	1					
<b>Macro</b>	1	1					
<b>Macro Magnum</b>	1,2,3	1,2	1				
<b>GPS 120</b>	1,2	1	1				
<b>GPS 240</b>			1	1,2	1,2	1,2	
<b>Dynafix 280</b>				1,2,3	1,2,3	1,2	
<b>Dynafix 350</b>				1,2,3,4,6	1,2,3,4,6	1,2,3	1,2
<b>Delphin 398</b>				1,2,3,4,6	1,2,3,4,6	1,2,3	1,2,3
<b>Delphin 448</b>				1,2,3,4,6	1,2,3,4,6	1,2,3	1,2,3

# Accessories

## Automation Solutions

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

SC-Grösse	SC-34	SC-40	SC-50	SC-60	SC-74	SC-100	SC-120
<b>ITS 50</b>	1						
<b>ITS 70</b>	1	1					
<b>ITS 148</b>	1	1	1				
<b>VPC 52 / 96</b>	1,2	1,2	1	1	1	1	1
<b>UPC 320</b>				1,2,3	1,2,3	1,2,3	1,2
<b>MTS 400</b>				1,2,3,4,6	1,2,3,4,6	1,2,3	1,2,3

Further manufacturers can be requested directly by Gremotool.

### Device handling

The SC series can be changed directly on zero point Systems. For this purpose, the respective suitable drawing for the zero-point system will be integrated in the SC Serie. The clamping process can be carried out manually or by a suitable robot.

### Direct clamping

The SC series can be equipped with straightening-elements for the table slot. This allows the user to fix the center clamp quick and correctly on the slot table.

If the milling table has a hole grid, the straightening elements can be selected on the base of this table. Thanks to the fits, the position is completely determined when fixing. These accessories can be requested and obtained by Gremotool.



## Imprint

Gremotool GmbH  
Wilerstrasse 3  
CH-9200 Gossau  
Schweiz

[www.gremotool.ch](http://www.gremotool.ch)  
[info@gremotool.ch](mailto:info@gremotool.ch)  
+41 (0)71 930 03 90

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Publication August 2024, 3rd Edition

