

## Hexagonal Design C03

- Two- to Six Finger Gripper -

### Characteristics:

- centric, linear and parallel or swiveling finger movement, can also be combined
- adjustable in finger length, amount and position.
- inside and outside gripper
- lubrication and maintenance free slide bearings
- self-locking free
- multiple position monitoring through proximity switch, optional

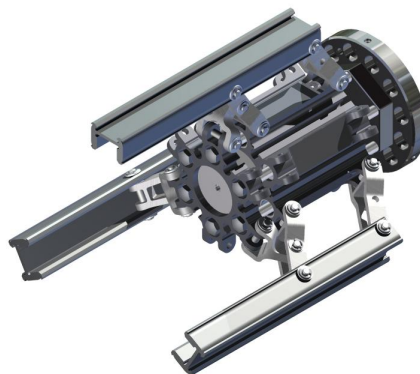


Illustration: type C103-300080-A-PNO-00

Technical Data						
Type C03			Finger Length (F)			
			0 mm	20 mm	40 mm	60 mm
<b>Finger Movement A</b> (parallel open / parallel close)	Stroke [mm]		30			
	Gripping Width* [mm]		138 to 168			
	Gripping Force*** [N]		349 to 1.800			
<b>Finger Movement B**</b> (parallel open / swiveling close)	Stroke [mm]	32	39	46	53	61
	Gripping Width* [mm]	136 to 168	129 to 168	122 to 168	115 to 168	107 to 168
	Gripping Force*** [N]	343 to 1.683	295 to 1.148	258 to 871	230 to 701	207 to 587
<b>Finger Movement C**</b> (swiveling open / swiveling close)	Stroke [mm]	32	43	54	64	80
	Gripping Width* [mm]	136 to 168	131 to 174	125 to 179	119 to 183	112 to 192
	Gripping Force*** [N]	338 to 1.619	277 to 884	235 to 608	204 to 463	180 to 374
<b>Drive</b>		pneumatic			electrical*	
<b>Operating Air Pressure / Voltage</b>		1,5 to 6 bar			24V (DC)	
<b>Cycle Time (undamped)</b>		0,3 s			-	
<b>Energy Consumption per Cycle</b>		0,25 liter (at 6 bar)			-	
<b>Operating Temperature</b>		-30 to +80°C				
<b>Mass</b>	Operating Unit	660 g			950 g	
	per Finger Mechanism	max. 100 g				
<b>Loading Capacity** per Finger with Gripping Mass and Acceleration</b>	$M_{x \max.}$	1 Nm $\Rightarrow$ ( $F_{y \max.}$ : 12,5 N at finger length F = 80mm)				
	$M_{y \max.}$	2 Nm $\Rightarrow$ ( $F_{x \max.}$ : 25 N at finger length F = 80mm)				
	$M_{z \max.}$	2 Nm				
	$F_{z \max.}$	100 N				

\* data referring to fingers' outer edge

\*\* larger strokes through adjustment of gripping width and pivoting angle on request

\*\*\* higher gripping force always at finger position "open" (data referring to 6 bar air pressure)

\* on request

\*\* loading capacity autonomous of gripping force

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**C03**

### Quantity and Position of Fingers



**Basic Shape C03**

**C103-200**

**C103-300**

**C103-400**



**C103-410**

**C103-420**

**C103-500**

**C103-600**

### Finger Movement

#### Shape A

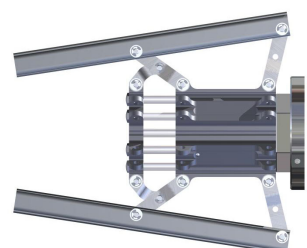
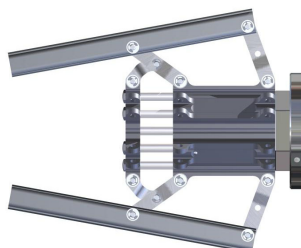
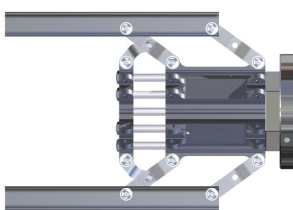
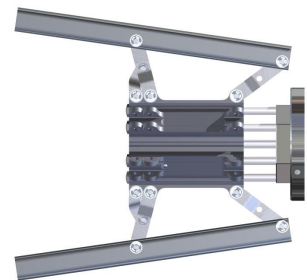
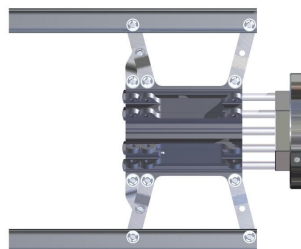
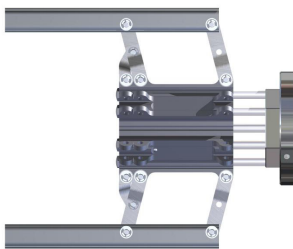
*(parallel open / parallel close)*

#### Shape B

*(parallel open / swiveling close)*

#### Shape C

*(swiveling open / swiveling close)*



**Special Movement through combining shapes are possible upon request!**



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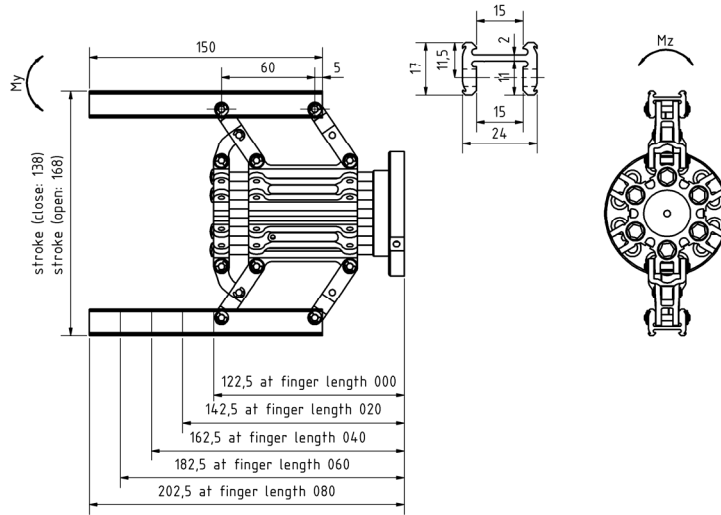
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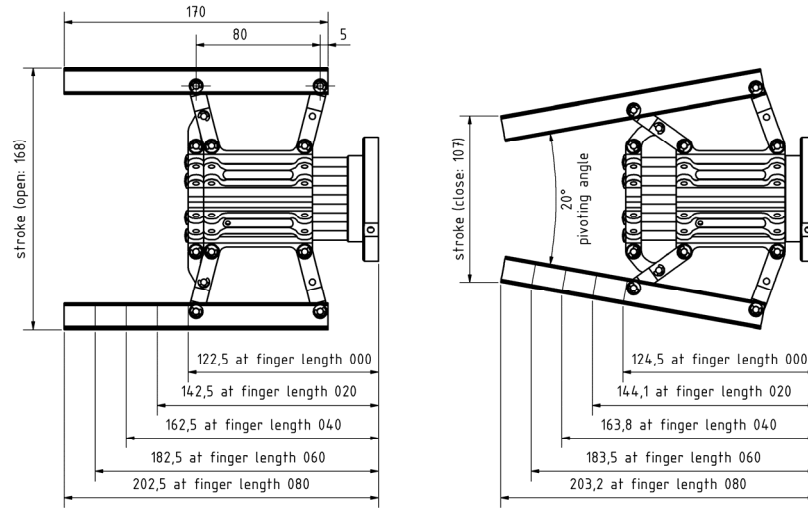


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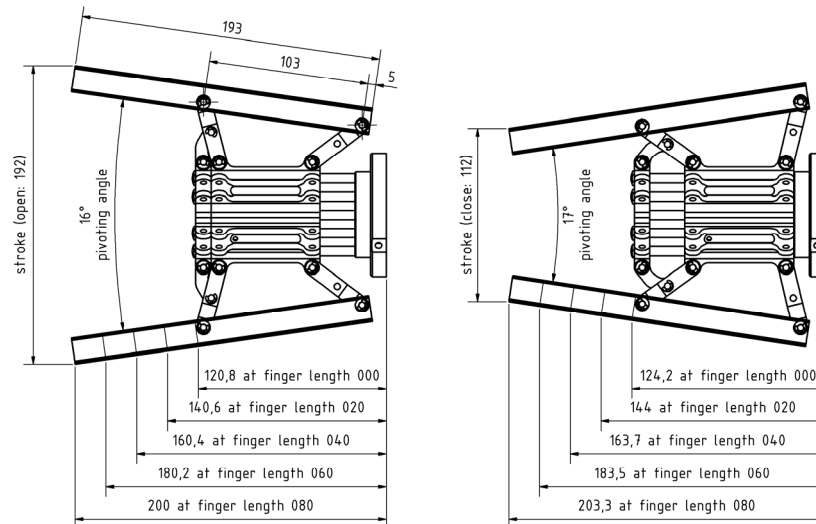
Finger Movement A



Finger Movement B



Finger Movement C



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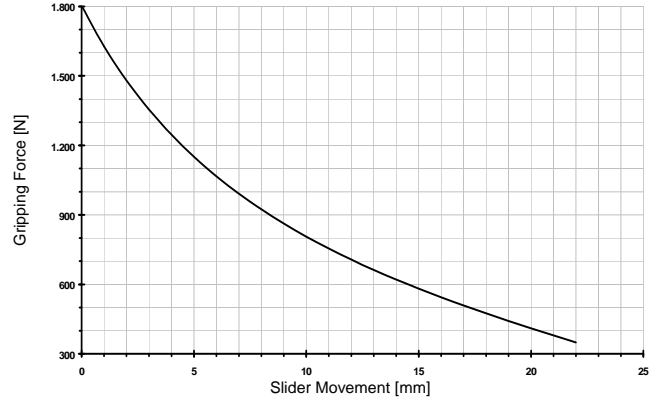
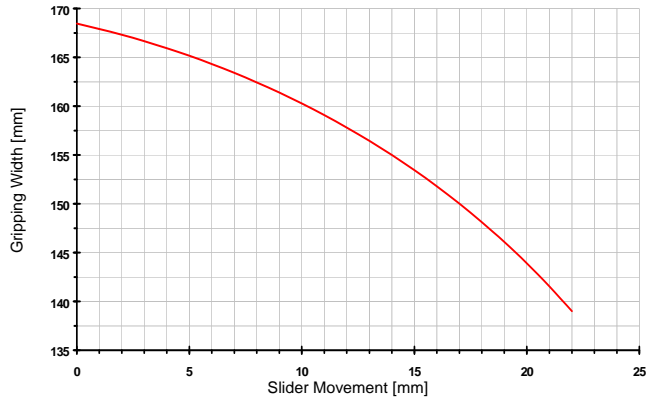
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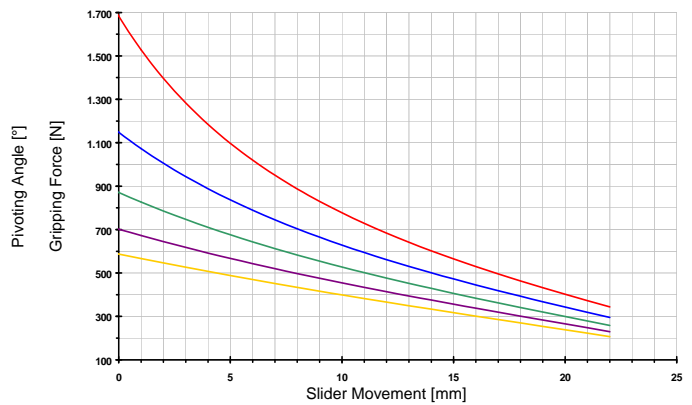
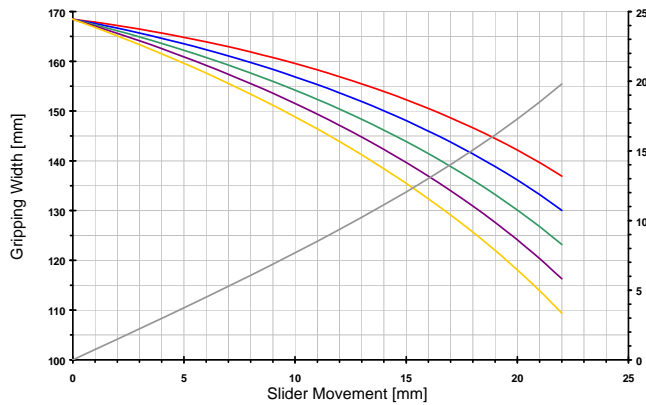
C03

## Force- and Gripping-Width-Diagram

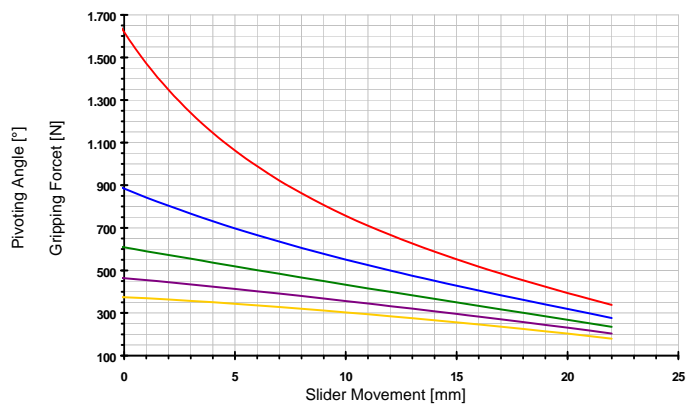
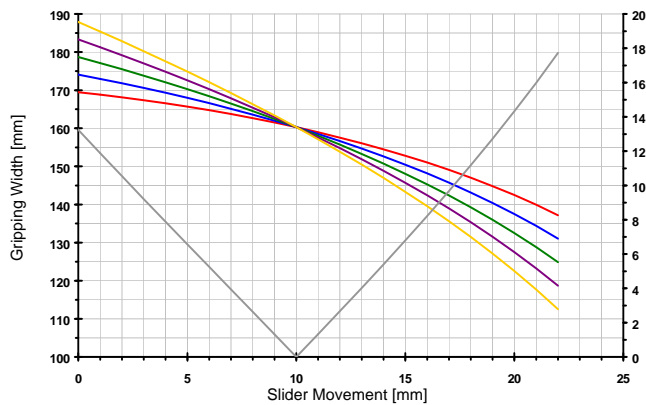
### Finger Movement A



### Finger Movement B



### Finger Movement C



— 0 mm    — 20 mm    — 40 mm    — 60 mm    — 80 mm    — Pivoting Angle



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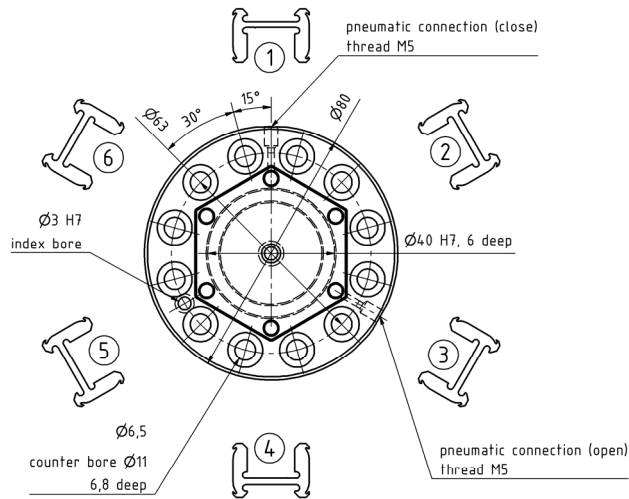
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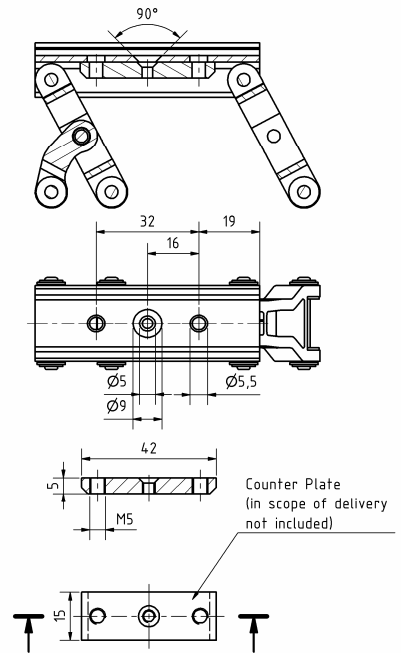
**C03**

### Finger Position Referring to Grippers Flange



**Front View**

### Standard – Bore - Plan



Order Number Counter Plate:  
1007-C103-GP03

**Only for Finger Length F = 0mm**

Finger Quantity	Position						Ident.
	1	2	3	4	5	6	
2	X			X			200
			X			X	201
		X			X		202
3	X		X		X		300
		X		X		X	301
4	X		X	X		X	400
	X	X		X	X		401
		X	X		X	X	402
	X		X	X	X		410
	X		X		X	X	411
		X	X	X		X	412
	X	X	X		X		413
	X	X		X		X	414
	X		X	X	X	415	

Finger Quantity	Position						Ident.
	1	2	3	4	5	6	
4	X	X	X	X			420
		X	X	X	X		421
			X	X	X	X	422
	X			X	X	X	423
	X	X			X	X	424
5	X	X	X			X	425
	X	X		X	X	X	500
	X		X	X	X	X	501
	X		X	X	X	X	502
	X	X	X		X	X	503
6	X	X	X	X		X	504
	X	X	X	X	X		505
	X	X	X	X	X	X	600

Standard Style



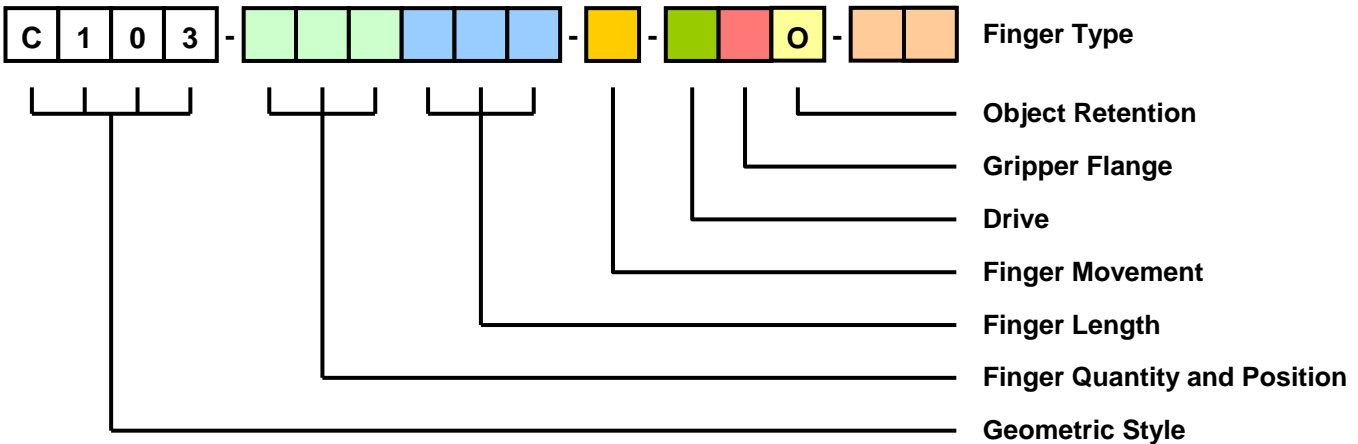
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**Order Number**



**Finger Quantity and Position**

View table on previous page

<b>Finger Length</b>		
	<i>Length (F)</i>	<i>Ident.</i>
<b>Standard</b>	0 mm	<b>000</b>
	20 mm	<b>020</b>
	40 mm	<b>040</b>
	60 mm	<b>060</b>
	80 mm	<b>080</b>
	Special Length	<b>Declaration in mm</b>

<b>Finger Movement</b>	
<i>Style</i>	<i>Ident.</i>
parallel open parallel close	<b>A</b>
parallel open swiveling close	<b>B</b>
swiveling open swiveling close	<b>C</b>
Combination of Finger Movement Styles*	<b>K</b>

<b>Gripper Flange</b>	
<i>Style</i>	<i>Ident.</i>
Normal	<b>N</b>
Rotary Feedthrough (in flange integrated)	<b>D</b>

\* on request

<b>Drive</b>	
<i>Style</i>	<i>Ident.</i>
pneumatic	<b>P</b>
electrical	<b>E</b>

<b>Object Retention at Blackout</b>	
<i>Style</i>	<i>Ident.</i>
Without Object Retention	<b>O</b>

<b>Finger Type</b>	
<i>Style</i>	<i>Ident.</i>
Without Bore	<b>00</b>
With Bore	<b>01</b>



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