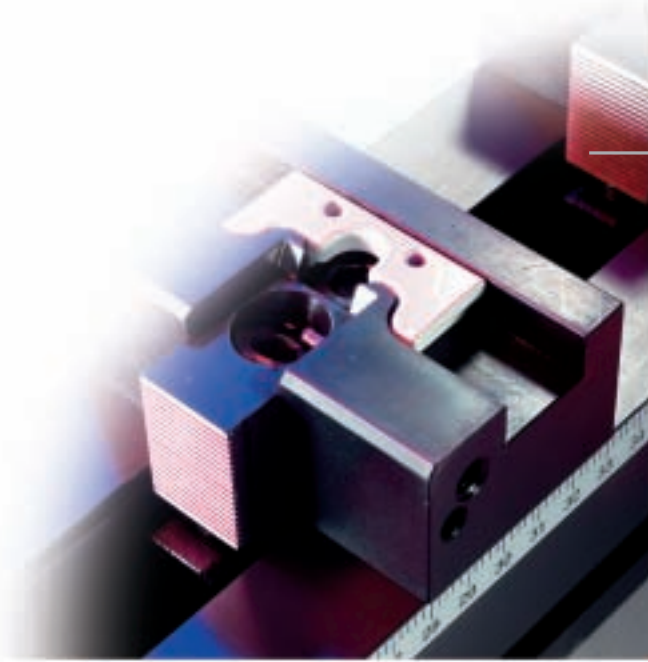


## *Multiple clamping with the multigrip system*

# *multigrip*

**GRESSLER**



### ***Innovative Clamping System simply different.***

- *Vertical index-dovetailing with protection against damage*
- *Smooth work-piece support*
- *Simple maintenance*
- *Highest processing safety*

### ***Applications***

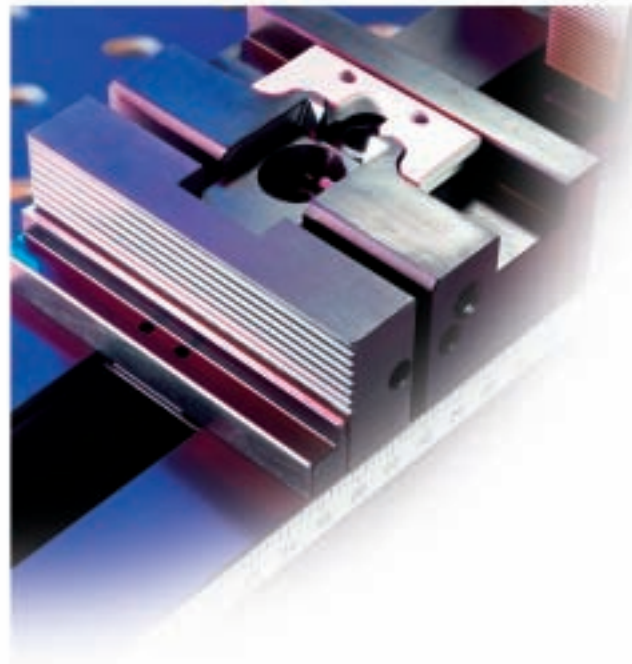
- *Multiple clamping*
- *Single piece clamping of large parts*
- *Clamping of large plates*
- *Package clamping*
- *Mirrored clamping*

### ***Minimise the setting-up time***

*Optimal use of the machine capacity due to multi-clamping with a new type of jaw positioning.*

### ***Security during high feed rates***

*Safe work-piece clamping with the stable block vice and its ideal force transfer and efficient press-down effect.*



# Efficient multi-clamping...

## multigrip

### Make full use of the machine capacity

With multi-clamping you can process several pieces simultaneously in one clamping action.

### Reduced setting-up time

Simple and quick, with a new type of system. With the vertical dovetailing on the inner face of the clamping rail the jaw modules can be precisely positioned. The adjustable jaws are adjusted and fixed with just a half turn of the screw.

### Minimal cleaning effort

The unique design prevents soiling so that there is no need to clean when adjusting the clamping width, and disturbance free clamping remains guaranteed at all times.

### Security during high feed rates

The block vice and integrated press-down effect reduce vibration and increase stability during the process. Clamping jaws with press-down effect guarantee safe clamping of the work-piece with ideal force transfer. This guarantees long-lasting precision even during high feed rates.

#### Jaws, fixed

- Capable of being used, smooth or profiled
- Capable of being moved using the index-dovetailing

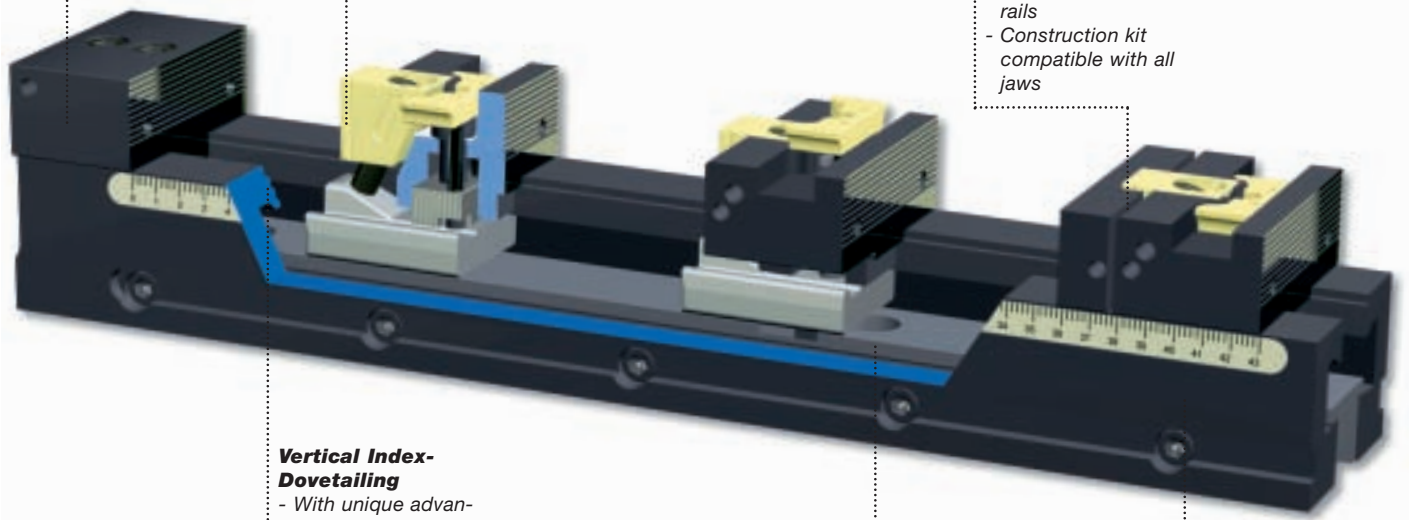
#### Adjustable jaws

- Plate with «click in» holder
- A bolt, rotate 1/4 opens to fixing or new positioning
- Clamping jaw with press-down
- Fixed construction area for following work-piece



#### Jaw Assortment

- Jaw attachment, without press-down for wide support
- Work-piece specific jaws
- Work-piece supports capable of swivelling
- Compatible with all multigrip clamping rails
- Construction kit compatible with all jaws



#### Vertical Index-Dovetailing

- With unique advantages on the inside surface of the side rail
- Work-piece support on a smooth upper surface
- No-effort cleaning
- No jamming of swarf
- Protected against damage and wear and tear



#### Clamping

- Close-tolerance holes for grid plates
- Longitudinal grooves for T-nut table
- Zero-point positioning system

#### Clamping rails

- Widths of 65 and 90 mm, each in three standard lengths
- Protected against corrosion

### **GRESSEL clamping systems**

*With innovation and experience GRESSEL clamping systems have become the epitome of cleverness, precision and safety. Moreover their being highly economical, long-lasting and flexible has brought them international recognition.*

## **Application with convincing advantages for high productivity in manufacturing.**



### **Flexible and modular**

*The jaw system constructed in line with the construction kit principle, with various jaw attachments and work-piece supports that can be swivelled, offers complete flexibility for the processing of different work-pieces.*



*All jaws can easily be fitted to the different multigrip rail sizes. This thought out design makes multigrip a flexible and modular clamping system with a high level of cost efficiency.*

### **Advantages at a glance**

- Short setting-up times
- minimal effort cleaning with the vertical dovetailing
- High clamping force with block and press-down clamping
- High level of processing safety even during high feed rates
- Simple and quick to set up
- Modular and flexible jaw system
- Reinforced against wear and tear

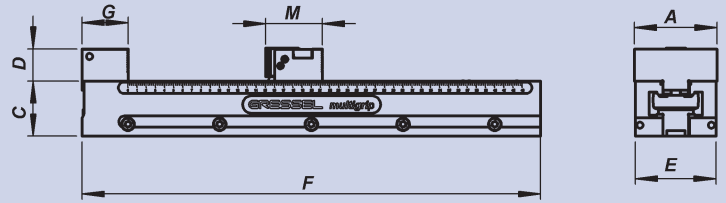
### **Applications with convincing advantages for high manufacturing productivity.**

*Increasing variety of parts and shorter delivery times demand efficient and time-saving clamping solutions. The innovative multi-clamping system multigrip enables manufacturing efficiency to increase. multigrip also satisfies individual needs in the simplest way with a wide assortment of jaws or work-piece specific modifications. You want to reduce your costs with individual clamping solutions?*

*The GRESSEL Team would be pleased to advise you.*

**... for optimal use of the machine running time.  
Reduce setting-up time during manufacture to a minimum.**

# Basic Set



## multigrip Basic Set

The Basic Set comprises a clamping rail (different lengths available), including a jaw, fixed and an adjustable jaw for price information only.

The system can be extended with additional adjustable jaws or clamping rails to specifically meet your individual requirements.

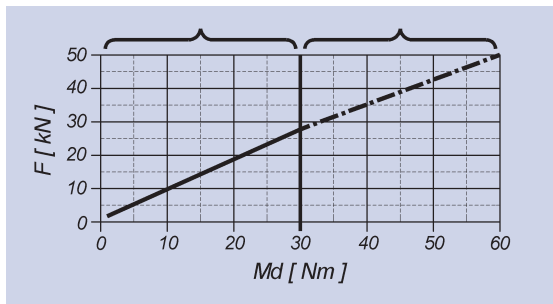
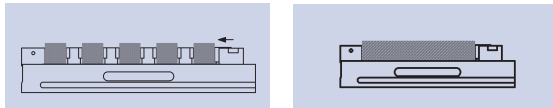
All parts must be individually ordered.

Type	No. adjust. jaw	clamping force (kN)	weight *	Dimension (mm)						
				jaw width						
				A	C	D	E	F	G	M
multigrip 65-220	1	20	6.3	64	60	34.8	65	220	50	61.5-65.5
multigrip 65-320	1	20	8.0	64	60	34.8	65	320	50	61.5-65.5
multigrip 65-400	1	20	9.5	64	60	34.8	65	400	50	61.5-65.5
multigrip 65-500	1	20	11.4	64	60	34.8	65	500	50	61.5-65.5
multigrip 90-400	1	25	13.4	90	60	34.8	88	400	50	61.5-65.5
multigrip 90-500	1	25	16.1	90	60	34.8	88	500	50	61.5-65.5
multigrip 90-600	1	25	18.7	90	60	34.8	88	600	50	61.5-65.5
multigrip 90-650	1	25	19.9	90	60	34.8	88	650	50	61.5-65.5

\* weight = clamping rail, fixed jaw plus adjust. jaw

# Clamping Capacity

## Clamping force

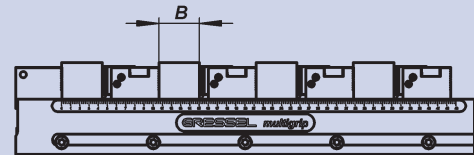


### Several work-pieces

Clamping force max.  
25 kN per piece.

### Single work-piece

Clamping force max.  
50 kN per piece.



## Vice widths

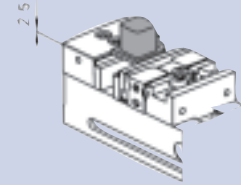
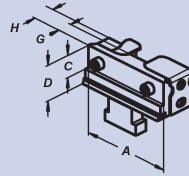
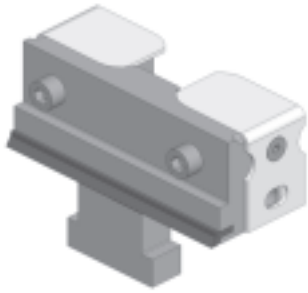
The vice width (B) shows the maximum size of work-piece according to the number of clamping positions for individual length.

The vice widths are valid for application during use of adjustable jaws without jaw attachments, and can therefore be reduced appropriately according to the concerned use case.

Type	Number of work-pieces						
	1	2	3	4	5	6	7
	Maximum work-piece size B in (mm)						
multigrip 65 - 220	105	20	-	-	-	-	-
multigrip 65 - 320	205	70	25	2.5	-	-	-
multigrip 65 - 400	285	110	51.7	22.5	5	-	-
multigrip 65 - 500	385	160	85	47.5	25	10	-
multigrip 90 - 400	285	110	51.7	22.5	5	-	-
multigrip 90 - 500	385	160	85	47.5	25	10	-
multigrip 90 - 600	485	210	118.3	72.5	45	26.7	13.6
multigrip 90 - 650	535	235	135	85	55	35	20.7



## Jaw attachment with guide



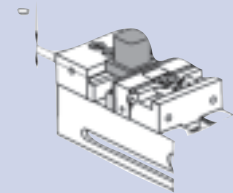
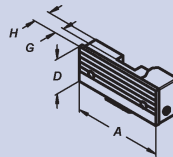
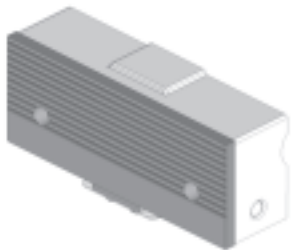
### Clamping depth min. 2.5 mm

Type	Dimension (mm)					Order No.
	Jaw width					
	A	C	D	G	H	
Jaw attachment 40	40	22	35	14	23	FSA.040.004.02
Jaw attachment 65	64	22	35	14	23	FSA.065.004.02
Jaw attachment 90	90	22	35	14	23	FSA.090.004.02

### Reduced Clamping depth

The press down effect of the adjustable jaw is not there while using jaw attachments.

## Jaw attachment with clamping spring



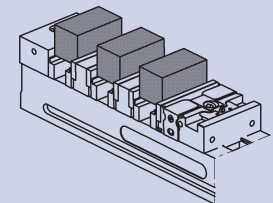
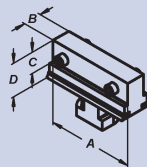
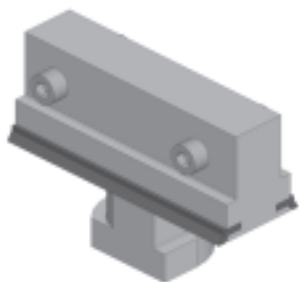
### Clamping depth min. 10 mm

Type	Dimension (mm)				Order No.
	Jaw width				
	A	D	G	H	
Jaw attachment 65	66	36	10	18	FSA.065.070.01
Jaw attachment 90	92	36	10	18	FSA.090.070.01

### Reduced Clamping depth

The press down effect of the adjustable jaw is not there while using jaw attachments.

## Intermediate jaw for package clamping



### Intermediate jaw for package clamping

Type	Dimension (mm)				Order No.
	Jaw width				
	A	B	C	D	
Intermediate jaw 65	64	19	22	35	FSA.065.005.01
Intermediate jaw 90	90	19	22	35	FSA.090.005.01

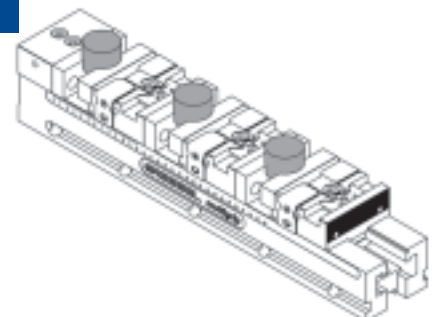
### For several blank work-pieces: Package clamping for processing from the full

- Position of the work-piece outer edge without precise reference (work-piece tolerance adds up)
- Minimum clamping depth of 2.5 mm while using intermediate jaw and a jaw attachment with guide.

## Clamping of moulded parts

**multigrip** can be used exceptionally well for clamping moulded parts by using **soft jaw attachments**.

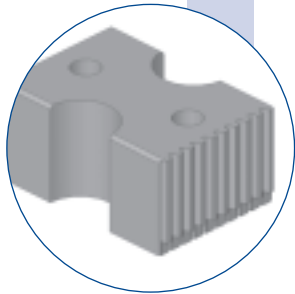
For **dimensions** of the soft jaws, please refer to the supplementary sheet on **multigrip** jaw assortment.



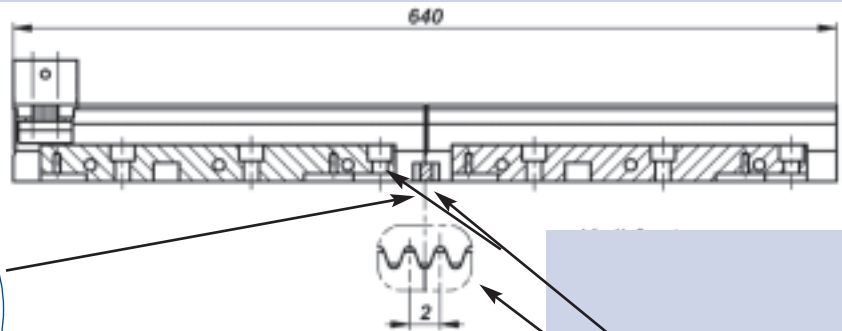
# Extending the clamping rail

- simple
- quick
- precise

with general indexing



multigrip 65-320



Fixed wedge for indexing-specific connection

## For large work-pieces:

For example, plates or a large number of small work-pieces.

Using the machine table.

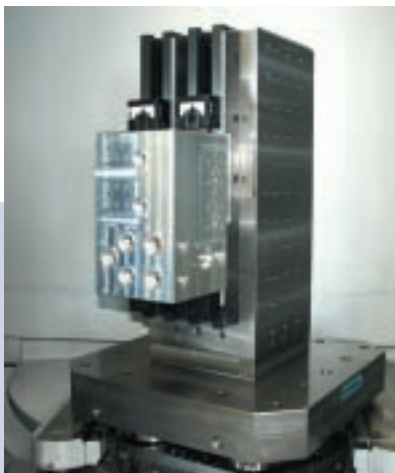
- Extension of length with the help of two rails. Positioning with Rhombus pins / bolts.
- The indexing takes place through dovetailing in the side rails and wedge.
- Increased clamping power up to 50 kN in case of single work-piece clamping.

## Applications



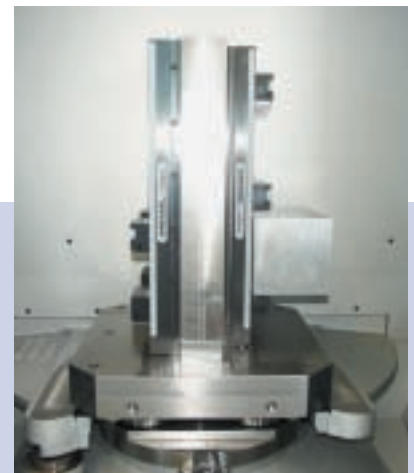
**Single work-piece** clamping of large blank parts with two **multigrip** and clamping power up to 50 kN.

### Clamping tower ...



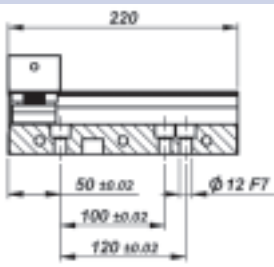
... with each **multigrip** pair for clamping a large work-piece or several small parts.

### Double angle tower ...

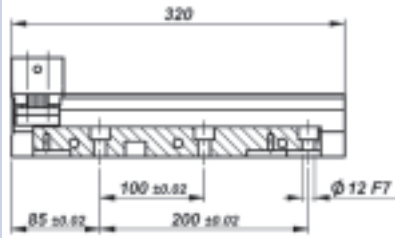


**8 Standard versions**

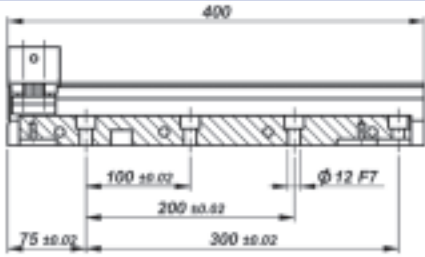
**multigrip 65-220**



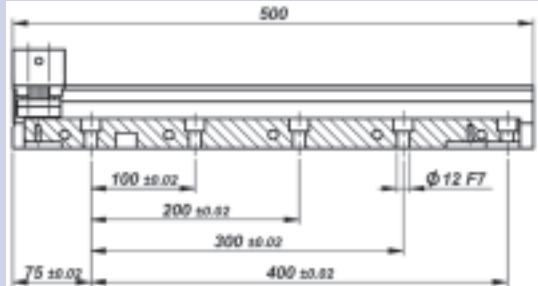
**multigrip 65-320**



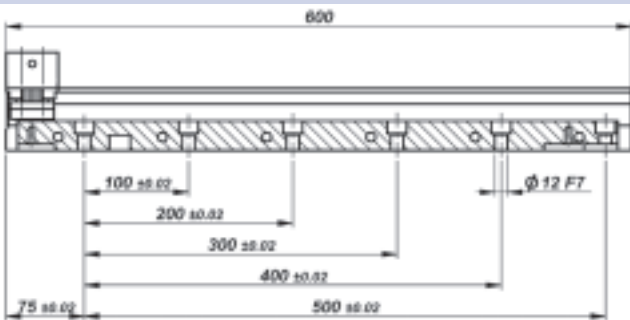
**multigrip 65-400 / multigrip 90-400**



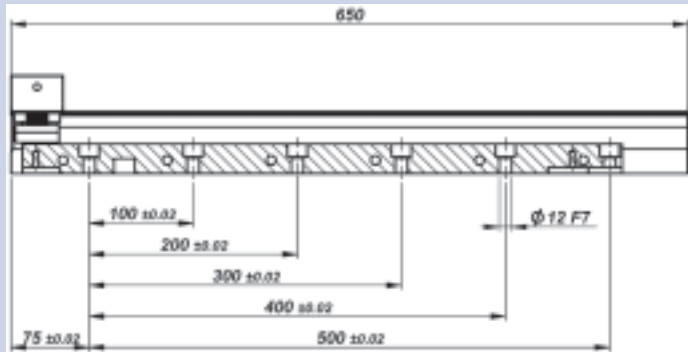
**multigrip 65-500 / multigrip 90-500**



**multigrip 90-600**



**multigrip 90-650**



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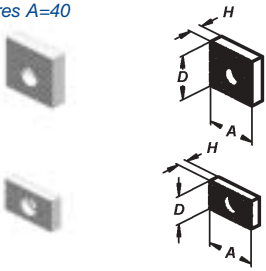
[info@gressel.ch](mailto:info@gressel.ch)

[www.gressel.ch](http://www.gressel.ch)



# Jaw assortment multigrip

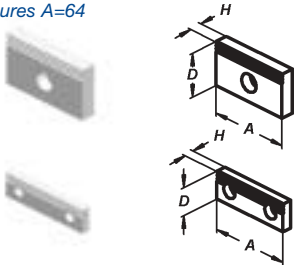
Figures A=40



## Serrated jaw

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Serrated jaw 40	40	35	11		FSA.040.009.11
Serrated jaw 65	64	35	11		FSA.065.009.11
Serrated jaw 90	90	35	11		FSA.090.009.11
Serrated jaw 40	40	22	8.5		FSA.040.035.11
Serrated jaw 65	64	22	8.5		FSA.065.035.11
Serrated jaw 90	90	22	8.5		FSA.090.035.11

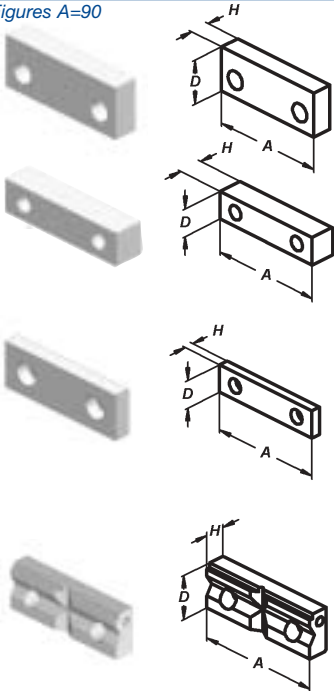
Figures A=64



## Grip jaw

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Grip jaw 40	40	35	10		FSA.040.014.11
Grip jaw 65	64	35	10		FSA.065.014.11
Grip jaw 90	90	35	10		FSA.090.014.11
Grip jaw 40	40	22	7.7		FSA.040.038.11
Grip jaw 65	64	22	7.7		FSA.065.038.11
Grip jaw 90	90	22	7.7		FSA.090.038.11

Figures A=90



## Soft jaw

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Soft jaw 40	40	35	16		FSA.040.013.11
Soft jaw 65	64	35	16		FSA.065.013.11
Soft jaw 90	90	35	16		FSA.090.013.11
Soft jaw 40	40	22	20		FSA.040.037.11
Soft jaw 65	64	22	20		FSA.065.037.11
Soft jaw 90	90	22	20		FSA.090.037.11

## Polished jaw

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Polished jaw 40	40	22	7.7		FSA.040.036.11
Polished jaw 65	64	22	7.7		FSA.065.036.11
Polished jaw 90	90	22	7.7		FSA.090.036.11

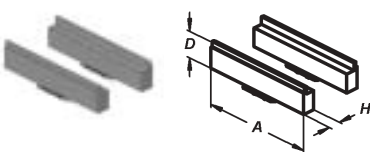
## Prism jaw

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Prism jaw 72	72	35	16		ECA.072.013.01
Prism jaw 80	80	35	16		ECA.080.013.01
Prism jaw 100	100	35	16		ECA.100.013.01

# Work-piece supports

## Work-piece supports

Type	Dimension (mm)				Order No.
	jaw width				
	A	D	H		
Work-piece supports 65-11	64	11	10		FSA.065.011.01
Work-piece supports 65-16	64	16	10		FSA.065.016.01
Work-piece supports 65-21	64	21	10		FSA.065.021.01
Work-piece supports 65-25	64	25	10		FSA.065.025.01
Work-piece supports 65-28	64	28	10		FSA.065.028.01
Work-piece supports 65-30	64	30	10		FSA.065.030.01
Work-piece supports 65-32.5	64	32.5	10		FSA.065.032.01
Work-piece supports 90-11	90	11	10		FSA.090.011.01
Work-piece supports 90-16	90	16	10		FSA.090.016.01
Work-piece supports 90-21	90	21	10		FSA.090.021.01
Work-piece supports 90-25	90	25	10		FSA.090.025.01
Work-piece supports 90-28	90	28	10		FSA.090.028.01
Work-piece supports 90-30	90	30	10		FSA.090.030.01
Work-piece supports 90-32.5	90	32.5	10		FSA.090.032.01



## Clamping jaws and accessories



### Connecting piece

Type	Order No.
Connecting piece for connecting two clamping rails	FSM.000.062.11

### Clamping jaw – suitable for adjustable jaw 40/65/90

Type	Order No.
Standard clamping jaw (profiled surface)	FSM.000.042.11
Grip clamping jaw	FSZ.000.032.11
Clamping jaw with pyramid profile	FSZ.000.033.11

### Torque wrench

Type	Dimension (mm)			Order No.
	Md	Lenght	Hex.	
Torque wrench	8-54 Nm	280	SW 8	FSA.000.015.01

## Positioning and fixing



Type	Description	Scope of delivery	Size	Order No.
<b>Dowel bolt</b>	Dowel bolt f7	Set incl. 2 pieces	Ø12 F7 M12	FSA.000.005.01
<b>Precision T-nut piece</b>	T-nut piece with screw	Set incl. 2 pieces	for T-Nut 14 mm	MAA.110.014.01
			for T-Nut 16 mm	MAA.110.016.01
<b>Fixture bolt</b>	fixture bolt for T-nut piece	Set incl. 2 pieces	for T-Nut 14 mm	FSA.000.024.01
			for T-Nut 16 mm	FSA.000.026.01
<b>Expander Bolt</b>			12mm, 31, 5/24	XNN.14300.120
			16mm, 50/43	XNN.14300.160

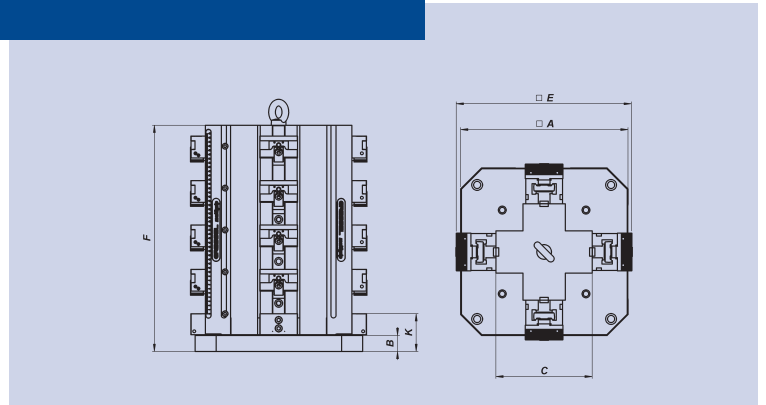
### On grid plates

In case of several laterally positioned clamping rails, the reference position of the jaw is fixed, depending on the grid plate and the clamping system.

To be able to fasten the clamping rails without force even in case of extreme tolerance positions, the holes are maintained in the F7 tolerance field. This offers adequate space for inserting the fastening screws.

An expander bolt is used for more precise alignment. The expander bolt can be removed after the alignment and fastening. The free hole now creates place for another fastening screw.

## Clamping towers



### Clamping towers

Type	Dimension (mm)						weight (kg)	Order No.
	A	B	C	E	F	K		
<b>multigrip 65-4V</b>	400	40	230	420	540	90	255	FSM.065.240.09
<b>multigrip 90-4V</b>	500	40	230	420	640	90	323	FSM.090.250.09