

# ALLMATIC DUO PLUS 125 – TOTAL FLEXIBILITY!

The new DUO Plus 125 from ALLMATIC  
is robust, durable and opens up completely  
new possibilities in the field of clamping technology.



# ALLMATIC GRIPP – MECHANICAL DUO PLUS 125 VERSION

## Scope of application:

- Horizontal installation
- Suitable for conventional clamping and for gripper clamping or a combination of both
- The support jaws enable a wide range of unmachined parts from flame-cut and sawn materials through to complex castings to be clamped securely and economically. Gripper studs suitable for materials with a strength of up to approx. 1,000 N/mm<sup>2</sup>

## Product features:

- Clamping range adjustment for clamping two workpieces of different sizes
- Reproducible clamping forces enable excellent repeating accuracy of the workpiece position
- Mechanical power-transfer device
- Fully enclosed and maintenance-free high-pressure spindle – high chip protection, minimum cleaning requirements, constant clamping forces up to 40 kN
- Use with a torque wrench – max. 40 Nm



Robust and compact base made of GGG 60

Outlet for coolant and chips

Hardened, ground and polished guideway

M8 thread for workpiece stop

Precision aligning slots (longitudinal/transverse) in the bottom surface for optimal alignment on the machine table

Setting and adjusting the spindle position

Optional: mounting holes in the bottom surface for zero-point clamping system are possible

**Order No. jaw width 125: 6921438000055**

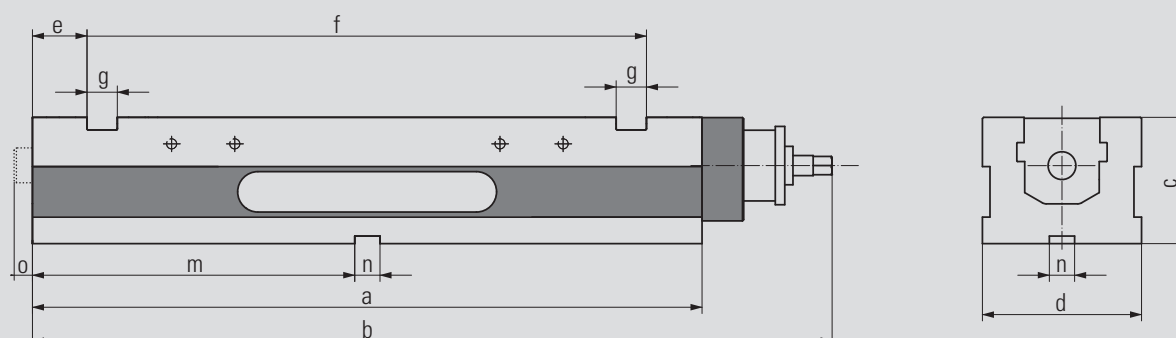
## Scope of supply:

- 1 high-pressure vice without jaws
  - 4 side clamps
  - 3 socket screw wrenches
  - 1 wrench socket WS 14
- (Please order clamping jaws separately)

## Note:

Delivery does not include a torque wrench (see accessories).

An overview of the clamping jaws and other accessories is given on the following pages.



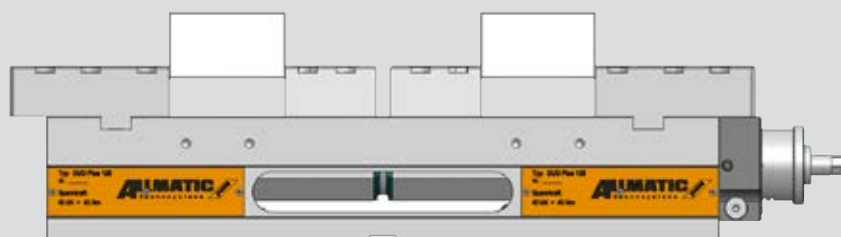
## Technical data

Jaw width	125	
Dimensions / tolerances in mm	a	530
	b	633
	c	100
	d	126
	e	43.2
	f	443
	g	24
	m	255.2
	n	20
o	0 – 15	

Jaw width	125
Max. torque in Nm	40
Max. clamping force in kN	40
Weight in kg	40

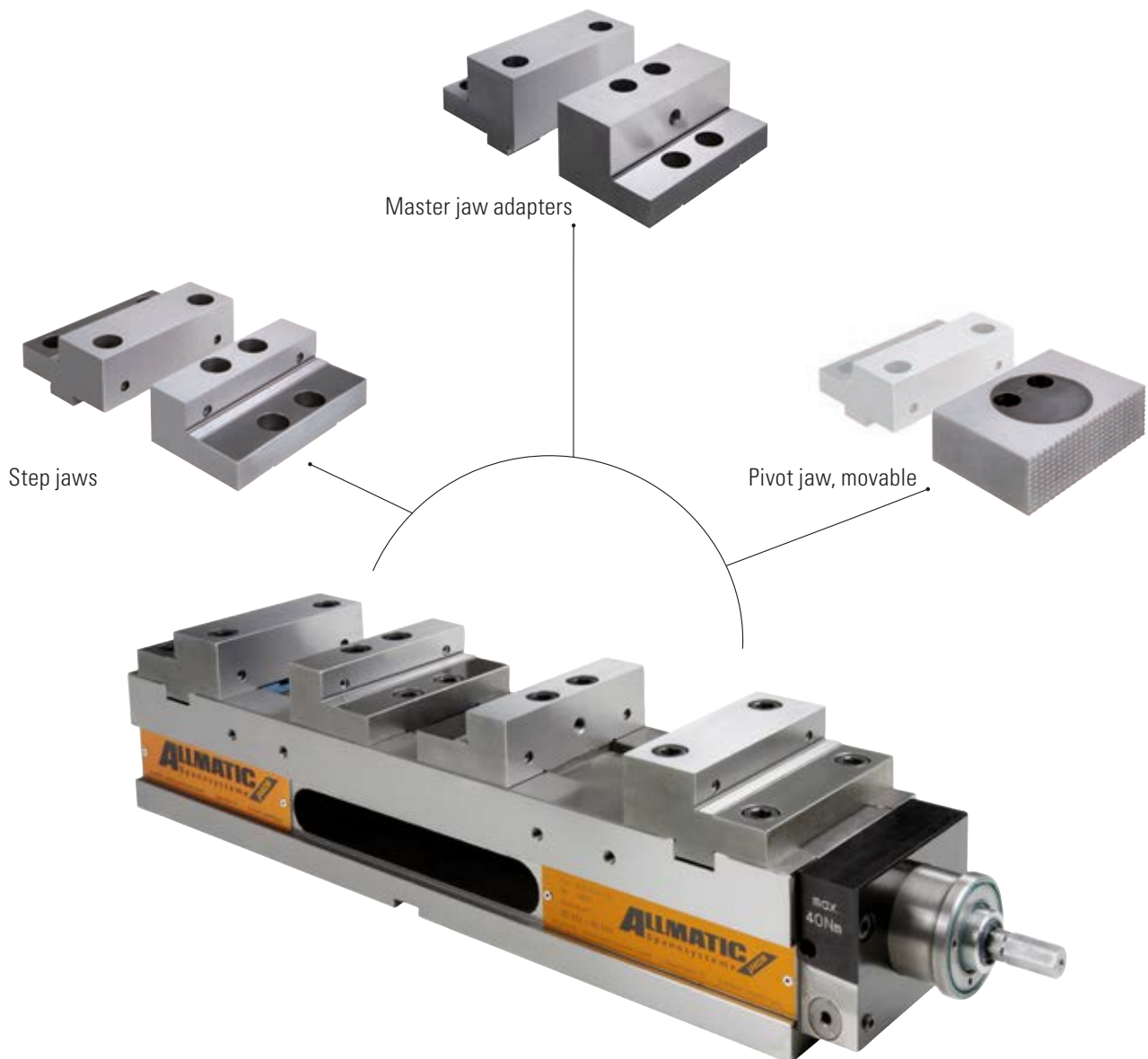
With the spindle in a symmetrical position, turn the torque wrench clockwise to bring movable jaw 1 up against the workpiece in station 1 (see page 6). The workpiece is fixed with a force of approx. 1000 N. Turn the torque wrench further to bring movable jaw 2 up against the workpiece in station 2 and fix it there. If you continue turning beyond the “locking point”, the coupling will disengage. The pressure spindle activates the mechanical power intensifier.

Turning as far as the preset torque level (max. 40 Nm) produces a controlled clamping force build-up. Workpieces must be placed in both stations before clamping begins. Tolerances of  $\pm 2.5$  mm between workpiece 1 and workpiece 2 are compensated for. The new function of the clamping range adjustment enables the clamping of two differently sized workpieces.





# ALLMATIC GRIPP – MECHANICAL/DUO PLUS 125



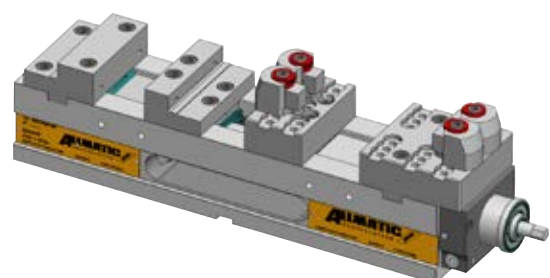
## For conventional clamping of workpieces

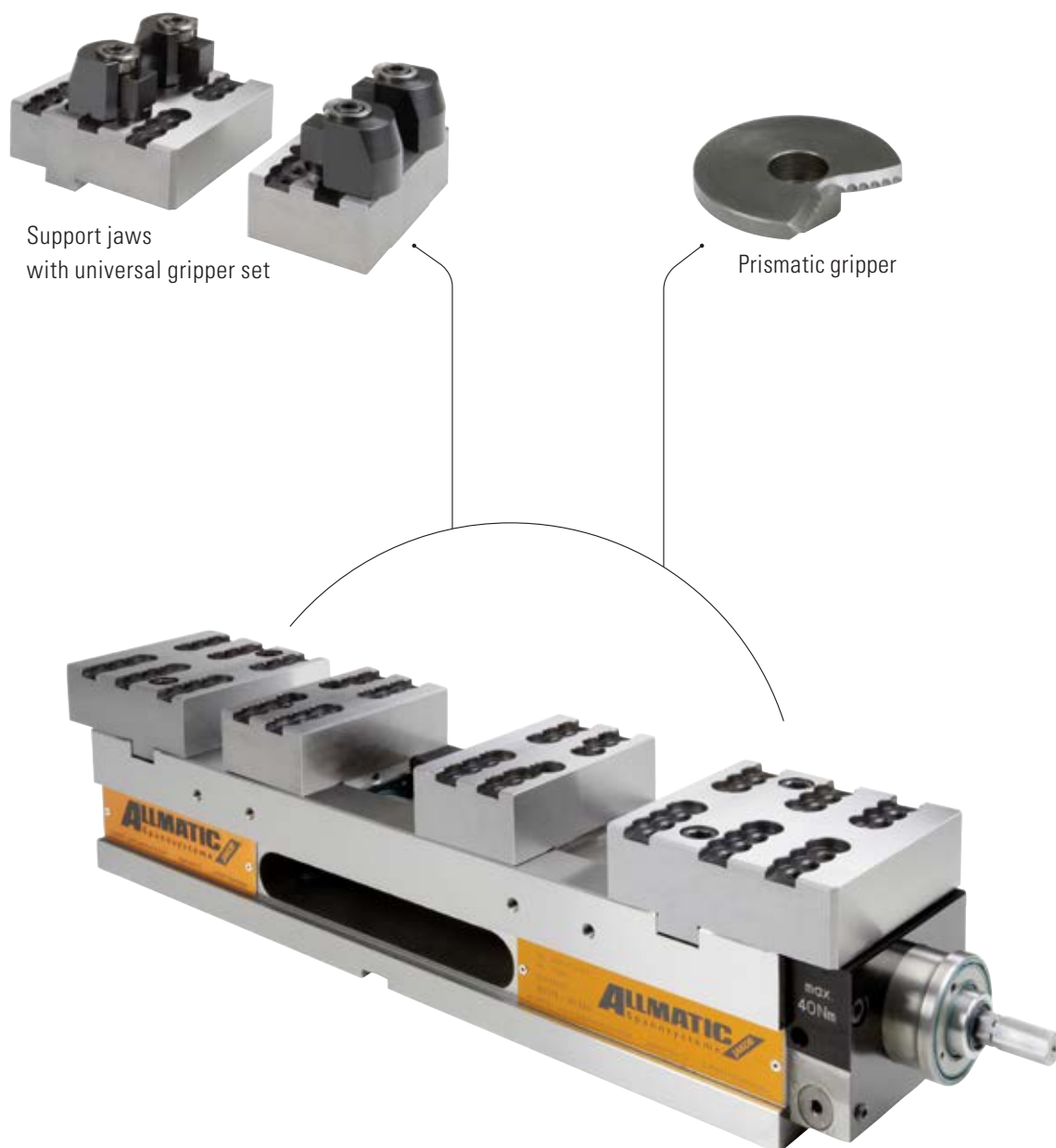
On the following pages, you will find a wide range of jaws, suitable for clamping pre-machined workpieces.



### IMPORTANT

A combination of both clamping options is possible!





### For clamping complex unmachined parts

The support jaws and gripper studs enable you to clamp different unmachined parts quickly and securely.

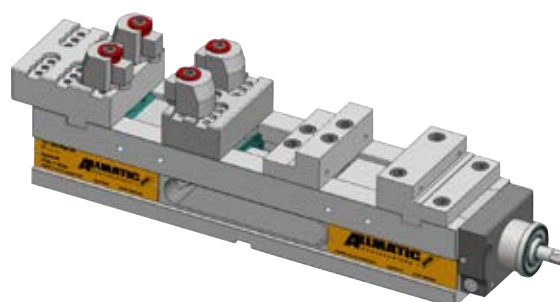
### Gripper clamping

- Support jaws are used to mount the universal gripper set
- Gripper studs can be screwed onto grid plates in variable positions, to clamp unmachined workpieces of different sizes



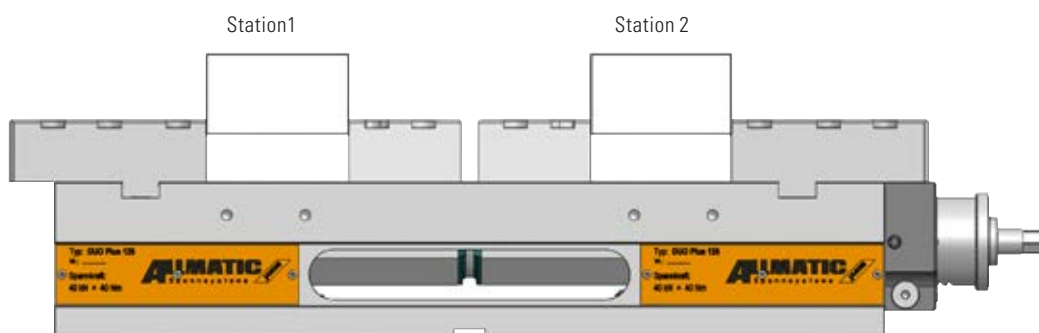
#### IMPORTANT

A combination of both clamping options is possible!

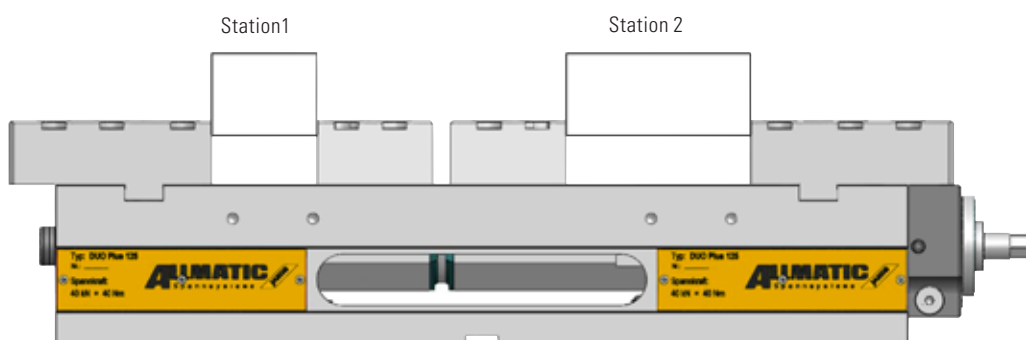


# CLAMPING RANGES – DUO PLUS 125

## With symmetrical spindle position



## With loaded spindle position



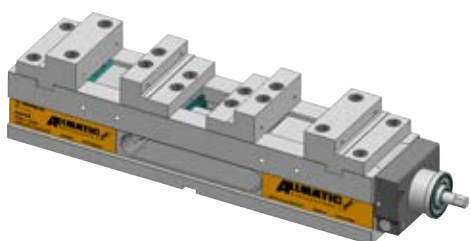
### Clamping range adjustment

For the first time, the new DUO Plus 125 enables you to adjust the clamping range by changing the spindle position. This makes it possible to clamp workpieces of different sizes. The greatest workpiece differences are reached when using the support jaws in combination with the universal gripper set.

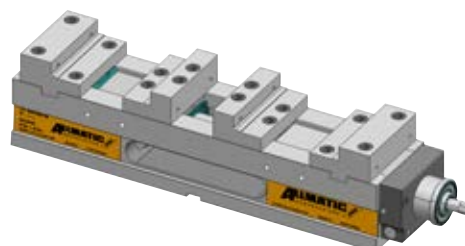
In view of the endless clamping combination possibilities, we have developed a **clamping width calculator** for you. All you need to do is enter the type and size of the workpiece. The program then suggests a complete range of clamping possibilities. This includes the recommendation for jaws with grippers, the requirement to adjust the spindle, and a detailed description of the clamping set-up. Visit us at:

[www.almatic.de](http://www.almatic.de)

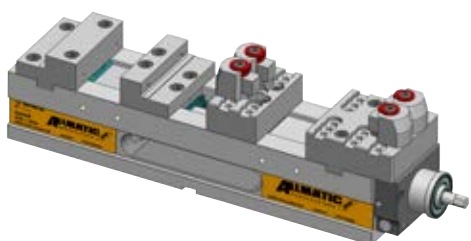
# CLAMPING RANGES – DUO PLUS 125



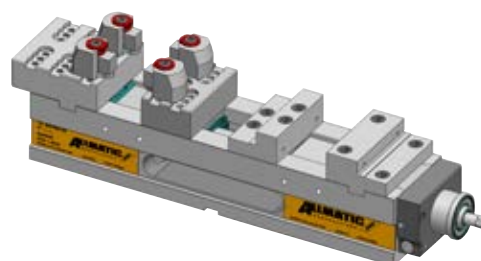
	Station 1	Station 2
Clamping ranges	0 – 89 mm	0 – 89 mm
Clamping ranges with spindle adjustment	0 – 64 mm	50 – 114 mm



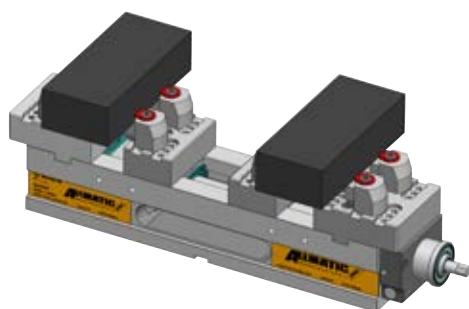
	Station 1	Station 2
Clamping ranges	82 – 172 mm	82 – 172 mm
Clamping ranges with spindle adjustment	43 – 147 mm	93 – 197 mm



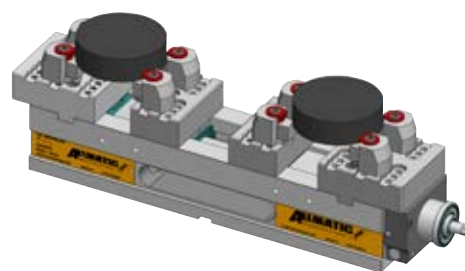
	Station 1	Station 2
Clamping ranges	0 – 89 mm	10 – 202 mm
Clamping ranges with spindle adjustment	0 – 64 mm	60 – 225 mm



	Station 1	Station 2
Clamping ranges	10 – 202 mm	0 – 89 mm
Clamping ranges with spindle adjustment	10 – 175 mm	93 – 197 mm



	Station 1	Station 2
Clamping ranges	10 – 202 mm	10 – 202 mm
Clamping ranges with spindle adjustment	10 – 175 mm	60 – 225 mm



	Station 1	Station 2
Clamping ranges	∅ 60 – 220 mm	60 – 220 mm
Clamping ranges with spindle adjustment	∅ 60 – 190 mm	80 – 240 mm



## IMPORTANT

Combining the clamping ranges at Station one and Station two is not always possible when the spindle is adjusted!

Use our clamping range calculator at: [www.allmatic.de](http://www.allmatic.de)



# APPLICATION EXAMPLES – DUO PLUS 125

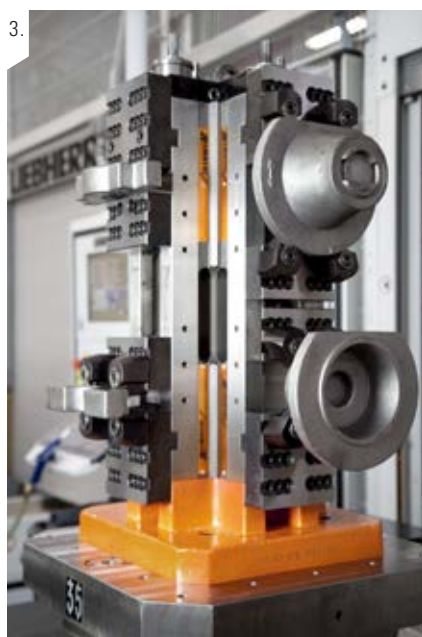
1.



2.



# APPLICATION EXAMPLES – DUO PLUS 125



## Application examples

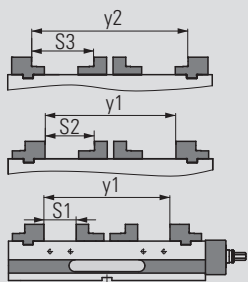
1. First and second clamping of a round casting with different diameters on support jaws and using the universal gripper set.
2. Complete machining of a workpiece in a second clamping by combining the clamping of unmachined parts and conventional clamping.
- 3.– 5. Wide variety of clamping possibilities with the DUO Plus 125 as a monobloc with step jaws, support jaws with the universal gripper set, and soft inserts.

**ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)**

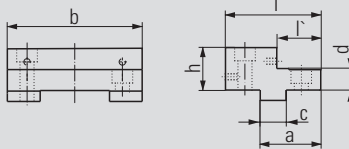
**Step jaws**



- Material: hardened steel
- Ground and polished clamping surfaces
- High and step sides with thread for parallels

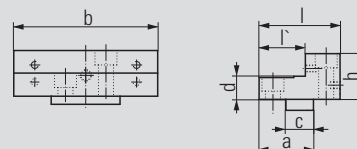


**Order no. fixed:**  
6921484006731



Jaw width	125	
Dimensions in mm	a	55
	b	124.4
	c	24
	d	20
	h	39.5
	l	87
	l'	42

**Order no. movable:**  
6921484002731



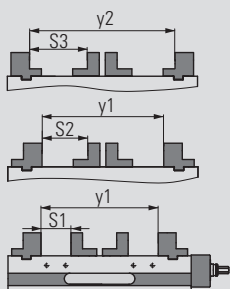
Jaw width	125	
Dimensions in mm	a	47
	b	124.4
	c	24
	d	20
	h	39.5
	l	70
	l'	40

y1	331
y2	417
Clamping range S1	0 – 89
Clamping range S2	40 – 129
Clamping range S3	82 – 172

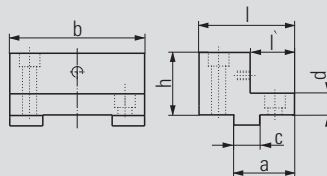
**Master jaw adapters**



- Material: hardened steel
- High side of jaw hardened
- Additional thread on the high clamping surface for mounting the HD jaws
- Ground and polished clamping surfaces
- Click system on the high side

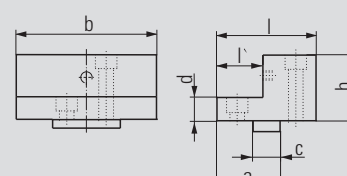


**Order no. fixed:**  
6921284012131



Jaw width	125	
Dimensions in mm	a	77
	b	126
	c	24
	d	20
	h	58
	l	85
	l'	32

**Order no. movable:**  
6921284012131

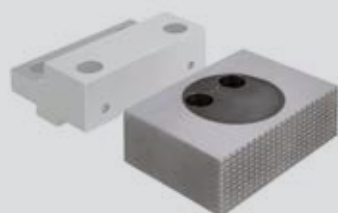


Jaw width	125	
Dimensions in mm	a	52
	b	126
	c	24
	d	20
	h	58
	l	80
	l'	32

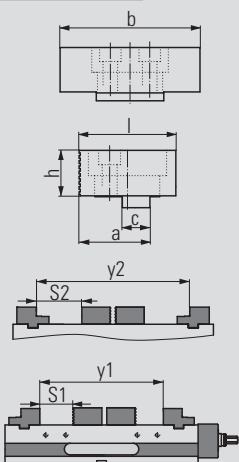
y1	331
y2	401
Clamping range S1	0 – 84
Clamping range S2	28 – 117
Clamping range S3	66 – 151

## ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)

### Pivot jaw, movable



- Material: hardened steel
- With Click-System
- One side smooth, ground and polished; one side serrated
- Rotatable through 360°
- Picture with step jaw (see order no. 2530)



Order no. 6921684020042

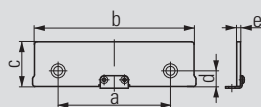
Jaw width	125	
Dimensions in mm	a	62
	b	124.4
	c	24
	h	39.5
	l	84

y1	331
y2	417
Clamping range S1	0 – 74
Clamping range S2	42 – 117

### Click parallels (pair)



- For parallel raising of workpieces
- Hardened, ground and polished parallels
- Bolt-on parallels with Click system
- For the high side of the jaws



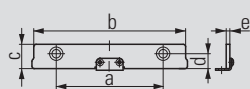
Order no. 6921185035042

Jaw width	125	
Dimensions in mm	a	88
	b	125
	c -0.01	35
	d	12.25
	e	3

### Click parallels (pair)



- For parallel raising of workpieces
- Hardened, ground and polished parallels
- Bolt-on parallels with Click system
- For the high side of the jaws



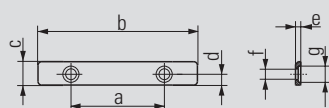
Order no. 6921185020042

Jaw width	125	
Dimensions in mm	a	88
	b	125
	c -0.01	20
	d	12.25
	e	3

### Parallels (pair)



- For parallel raising of workpieces
- Hardened and ground parallels
- Screw-fastened parallels
- For the step side of the jaws

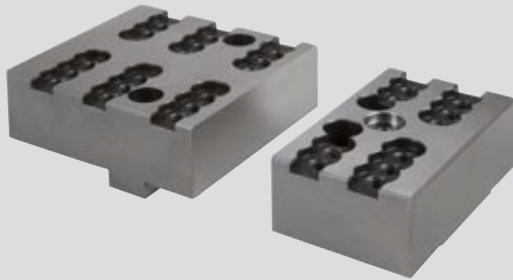


Order no. 6921485015031

Jaw width	125	
Dimensions in mm	a	88
	b	124
	c	15
	d	6
	e	3
	f	Ø 6
	g	Ø 9

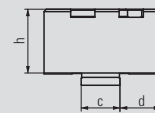
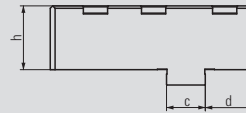
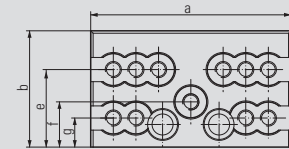
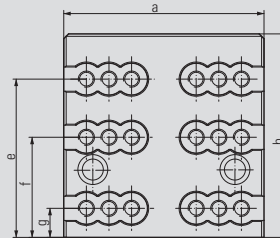
## ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)

### Support jaws for universal gripper set



Order no. fixed:  
6921484005042

Order no. movable:  
6921484004042

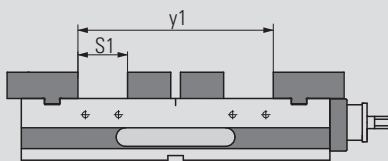


- Material: hardened steel
- For mounting the universal gripper set and the prismatic gripper
- For clamping unmachined parts
- For clamping pre-machined workpieces
- Front surface can be used as clamping surface
- Use of the Click system
- Universal gripper set **not** included



Jaw width		125
Dimensions in mm	a	124
	b	126
	c	24
	d	30
	e	98
	f	62
	g	18
	h	39.5

Jaw width		125
Dimensions in mm	a	124
	b	72
	c	24
	d	25
	e	48
	f	28
	g	18
	h	39.5



y1	335
Clamping range S1	0 – 89

**The clamping range dimensions change due to spindle adjustment!**

### Soft jaws

Order no. available on request



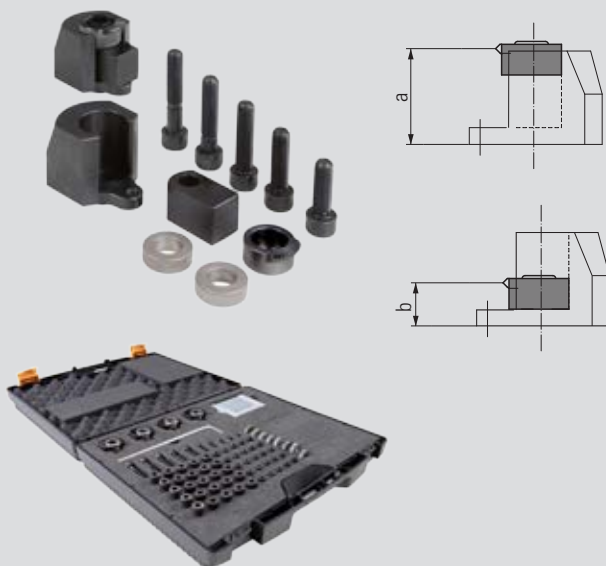
- For mounting onto the support jaws





## ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)

### Universal gripper set



Order no. 6921884027031

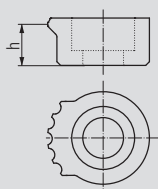
Jaw width	125	
Dimensions in mm	a	40
	b	18

- For clamping complex unmachined parts
- The individual elements of the universal gripper set can be reworked in order to vary both gripper height and support height of the workpiece

Comprising:

- 4 x gripper studs 6921884026000
- 4 x gripper stud mounts 6921884072000
- 4 x supports 6921884028000
- 8 x shims
- Support bolts
- M10 fastening bolts in various lengths
- M6 threaded pins in various lengths
- Socket screw wrench
- Storage case

### Gripper stud

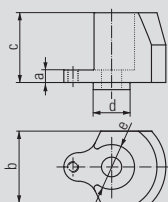


Order no. 6921884026000

Dimensions in mm	h	11
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- Gripper stud for universal gripper set

### Gripper stud mount

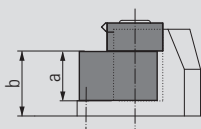
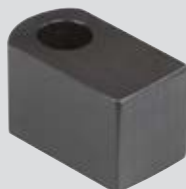


Order no. 6921884027000

Dimensions in mm	a	7
	b	40
	c	39
	d	Ø 20
	e	Ø 25

- Mount for gripper stud 6921884026000

### Support



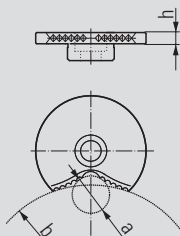
Order no. 6921884028000

Dimensions in mm	a	22
	b	29

- Support for universal gripper set

## ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)

### Prismatic gripper

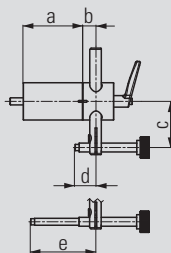


Order no. 6921884029031

Dimensions in mm	a	Ø 20
	b	Ø 120
	h	6

- Replaces gripper stud 6921884026000 in the universal gripper set
- Special shape distributes the applied clamping force – particularly advantageous for clamping workpieces that require fits to be made

### Workpiece stop

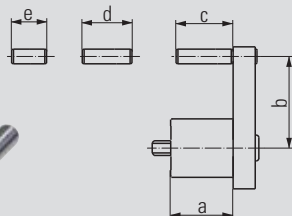


Order no. 6921285650144

Dimensions in mm	a	67
	b	15
	c	33 – 92
	d	12 – 63.5
	e	53.5 – 113.5

- Can be mounted on either side of the vice in the designated positions
- M8 fastening thread
- Position of the third workpiece axis can be preset and clamped  
Workpiece stop can be swivelled away once the workpiece has been clamped
- This allows the stop side of the workpiece to also be machined (repeating accuracy:  $\pm 0.01$ )

### Workpiece stop



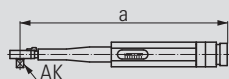
Order no. 6921685670042

Dimensions in mm	a	34
	b	27 – 59
	c	31
	d	27
	e	19

- Can be mounted on either side of the vice in the designated positions
- M8 fastening thread
- Can be pre-mounted with various fixed dimensions
- Position of the third workpiece axis can be preset

## ALLMATIC GRIPP – mechanical / DUO Plus 125 version (accessories)

### Torque wrench



Order no. 0651114113188

Dimensions in mm	a	307
	AK (Drive square)	3/8"

- Can be preset to 10 – 60 Nm
- For use on the high-pressure gripper spindle DUO Plus 125

### Side clamps (pair)



Order no. 6921025000031

- For securing the vice on the machine table
- Supplied as a set of 2 items

### Aligning and fixing set



Order no. – see table

T-slot/ Thread	Cat. no.
12/M10	6921285600031
14/M12	6921285601031
16/M14	6921285602031
18/M16	6921285603031
20/M16	6921285606031
22/M16	6921285607031

- For aligning (positioning) and securing the vice on the machine table
- Size according to T-slot or thread in the machine table