

Multiple clamping system



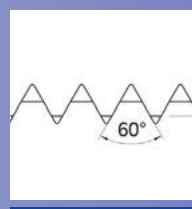
CV

Serration 2.5 x 60°

Multiple clamping system

- Quick change system „CLAK-System“ for jaws and parallels optional available
- Wide range of accessories

Page 222



CV / TB

Comparison

Different serrations

- CV
- TB

Page 238



CV-S

Serration 2.5 x 60°

Multiple clamping system

- Quick change system „CLAK-System“ for jaws and parallels optional available
- Wide range of accessories
- SinterGrip jaws

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CV-VCS

CROSS TOMBSTONE

Multiple clamping system

- Steel cross tombstone ready to use on horizontal machining centres
- Wide range of accessories

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CV-CN

COLUMN

Multiple clamping system

- Full usability on CNC indexing tables
- Modular system: Wide range of accessories
- Quick change system „CLAK-System“ for jaws and parallel claks optional available
- Compact design

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TB

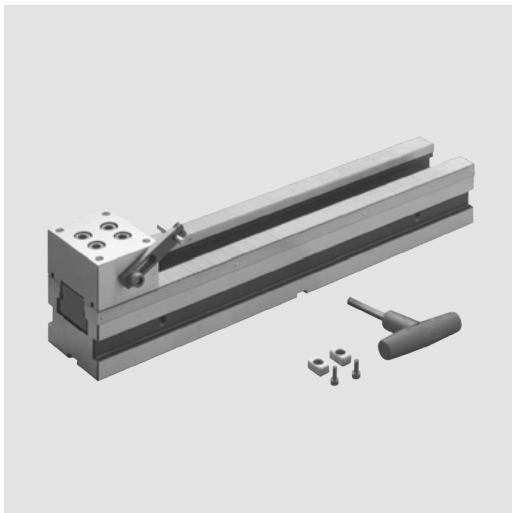
Serration 2.0 x 60°

Multiple clamping system

- Excellent price-performance ratio

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- Serration 2.5 x 60°
- Quick change system „CLAK-System“ optional available



Application/customer benefits

- Full usability of the machine table
- Modular system: Extensive range of accessories
- Quick change system „CLAK-System“ for jaws and parallel claks optional available (see page 229)
- Maximum efficiency due to quick change over
- Can be used for single or multiclamp

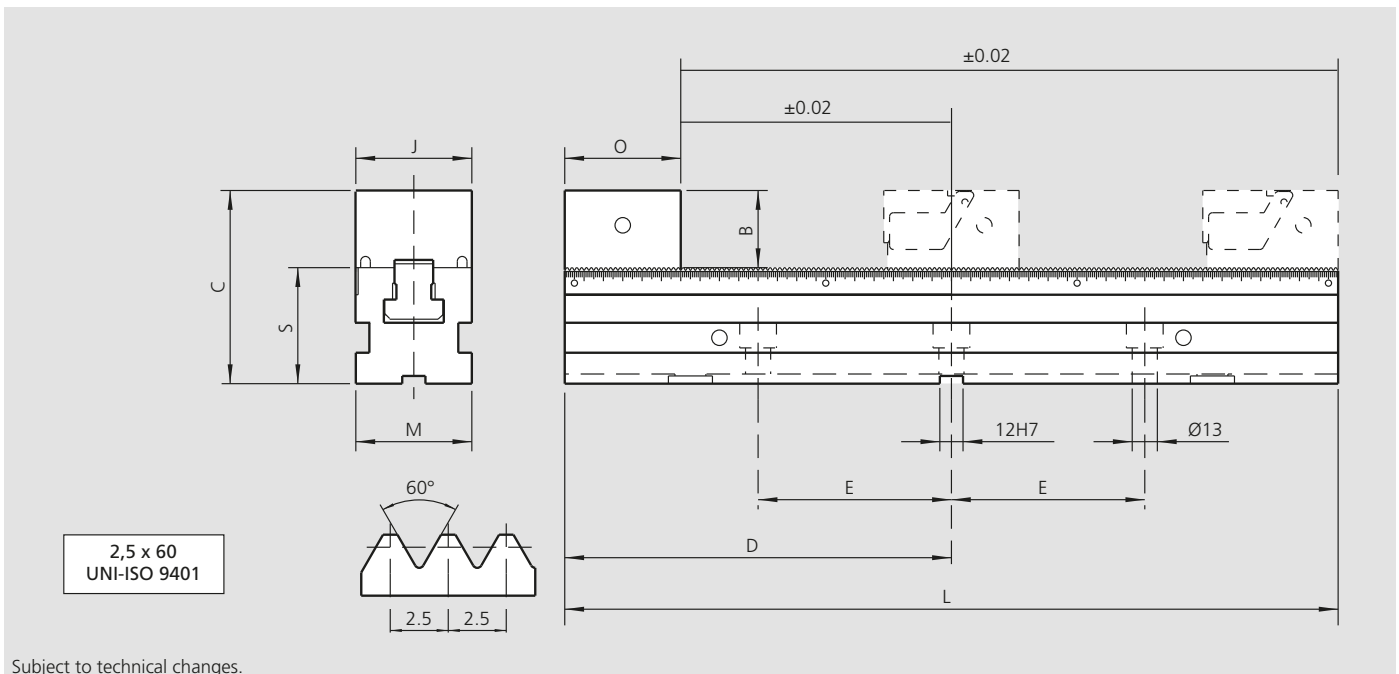
Technical features

- Serration 2.5 x 60°
- Jaw width 38 mm, 60 mm und 90 mm, Length 250 mm, 400 mm, 500 mm and 630 mm
- Optional: Interfaces for zero point clamping system APS / WPS / ZeroAct (on request)

Standard equipment

Multiple clamping system:
 Base, fix jaw (one side smooth, one side grooved), 1 pair of positioning keys, clamping wrench, workstop

Technical data



Subject to technical changes.

Type	Id. No.	B [mm]	C [mm]	D [mm]	E [mm]	J [mm]	L [mm]	M [mm]	O [mm]	S ±0.01 [mm]	Weight [kg]
CV 38-250	77584004	40	100	125	100	38	250	60	60	60	6
CV 38-400	77584001			200	100		400				9
CV 38-500	77584002			250	150		500				11
CV 38-630	77584003			315	200		630				13
CV 60-250	77584104	40	100	125	100	60	250	60	60	60	6.5
CV 60-400	77584101			200	100		400				9.5
CV 60-500	77584102			250	150		500				11.5
CV 60-630	77584103			315	200		630				13.5
CV 90-250	77584204	45	115	125	100	90	250	90	70	70	11
CV 90-400	77584201			200	100		400				16
CV 90-500	77584202			250	150		500				19.5
CV 90-630	77584203			315	200		630				23.5

- Serration 2.5 x 60°
- Quick change system „CLAK-System“ optional available

Application/customer benefits

- Full usability of the machine table
- Modular system: Extensive range of accessories
- Quick change system „CLAK-System“ for jaws and parallel claks optional available (see page 229)
- Maximum efficiency due to quick change over
- Can be used for single or multiclamp

Technical features

- Serration 2.5 x 60°
- Jaw width 38 mm, 60 mm und 90 mm, Length 250 mm, 400 mm, 500 mm and 630 mm
- Optional: Interfaces for zero point clamping system APS / WPS / ZeroAct (on request)

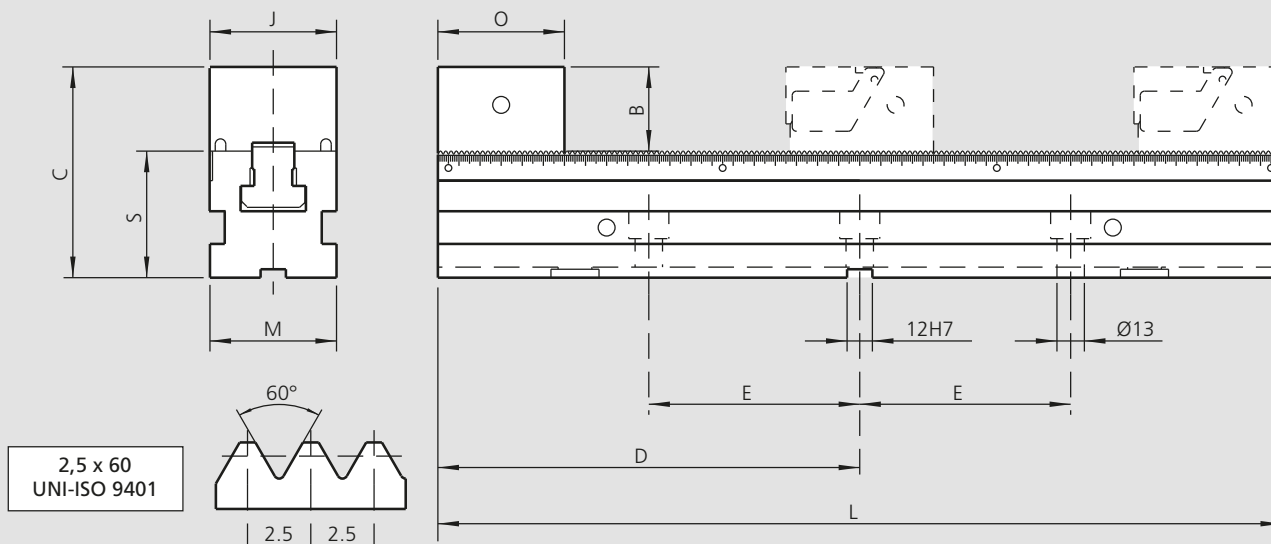
Standard equipment

Multiple clamping system:

Base, fix jaw (one side with SinterGrip; one side smooth), CV-S 60: 2pcs. STD SinterGrip inserts / CV-S 90: 3pcs. STD SinterGrip inserts (SinterGrip inserts ALU or HRC on request), 1 pair of positioning keys, clamping wrench, workstop



Technical data

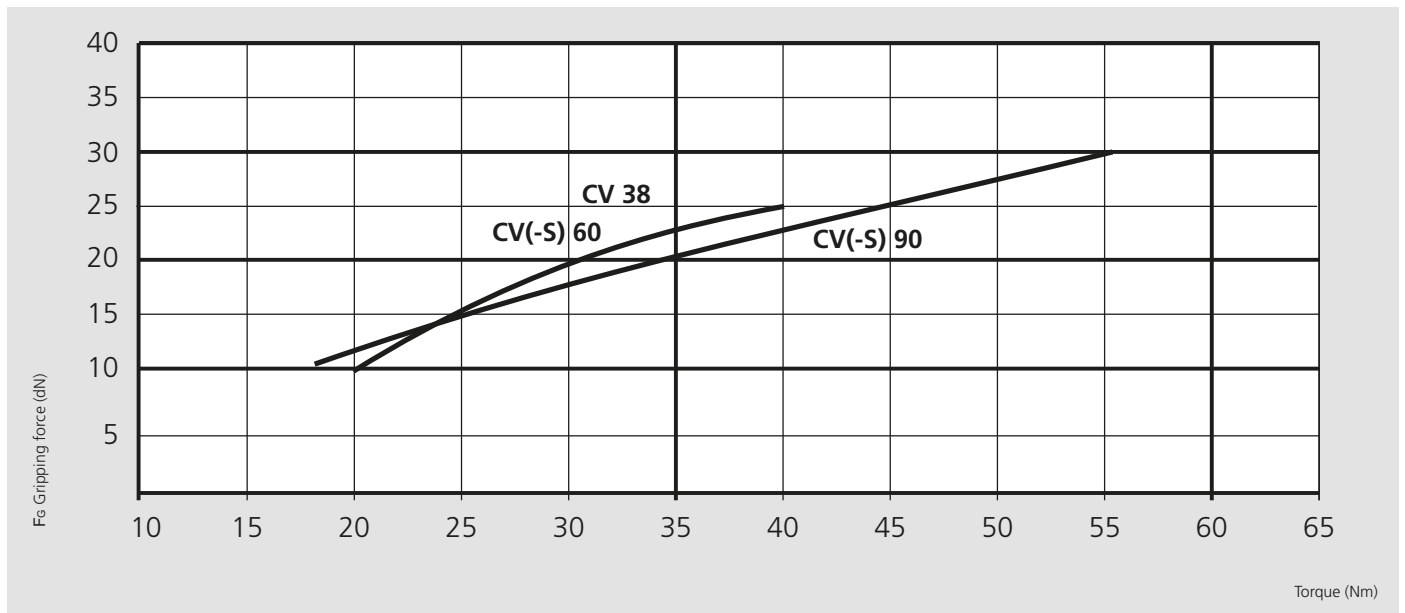


Subject to technical changes.

Type	Id. No.	B [mm]	C [mm]	D [mm]	E [mm]	J [mm]	L [mm]	M [mm]	O [mm]	S ±0.01 [mm]	Weight [kg]
CV-S 60-250	77584664	40	100	125	100	60	250	60	60	60	6.5
CV-S 60-400	77584661			200	100		400				9.5
CV-S 60-500	77584662			250	150		500				11.5
CV-S 60-630	77584663			315	200		630				13.5
CV-S 90-250	77584694	45	115	125	100	90	250	90	70	70	11
CV-S 90-400	77584691			200	100		400				16
CV-S 90-500	77584692			250	150		500				19.5
CV-S 90-630	77584693			315	200		630				23.5

- Serration 2.5 x 60°
- Quick change system „CLAK-System“ optional available

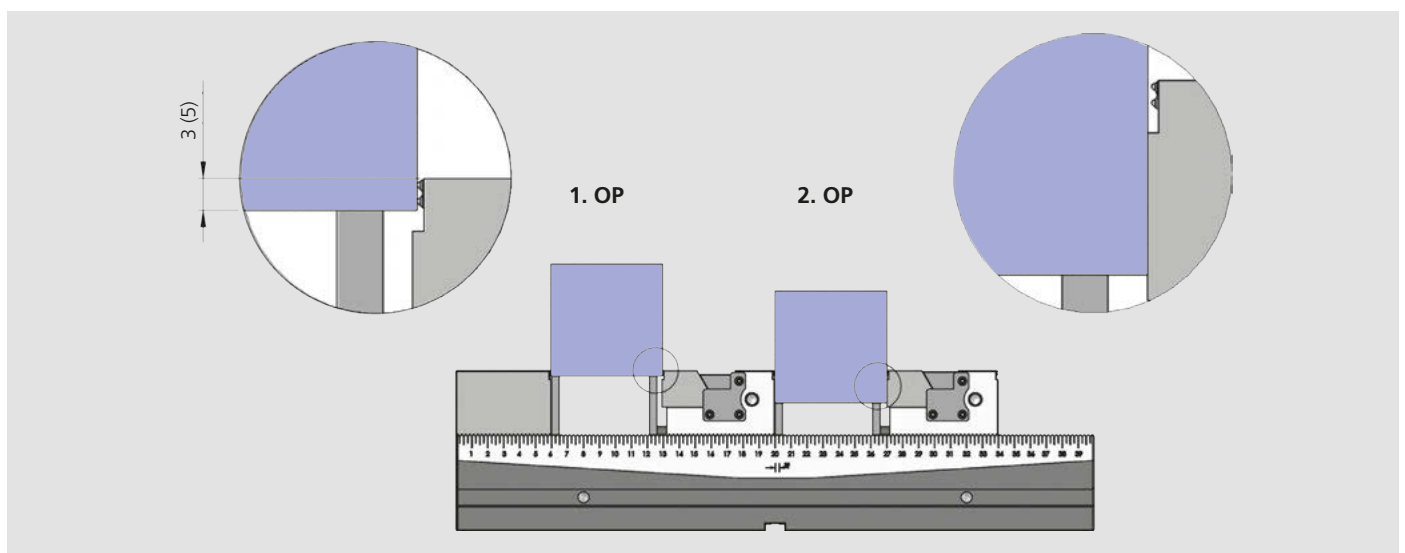
Clamping force diagrams



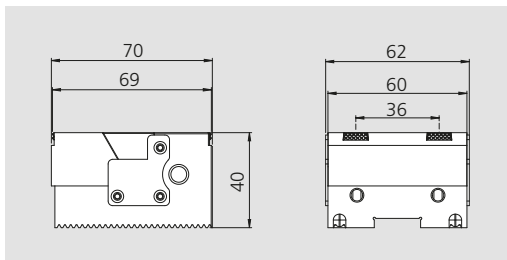
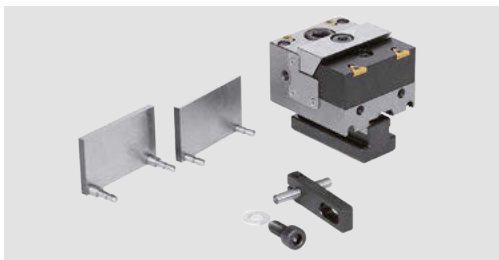
Clamping capacity

Type	A max. [mm]			
	Diagram 1	Diagram 2	Diagram 3	Diagram 4
CV 38-250	120	25	-	-
CV 38-400	270	100	43	15
CV 38-500	370	150	76	40
CV 38-630	500	215	120	73
CV(-S) 60-250	120	25	-	-
CV(-S) 60-400	270	100	43	15
CV(-S) 60-500	370	150	76	40
CV(-S) 60-630	500	215	120	73
CV(-S) 90-250	99	-	-	-
CV(-S) 90-400	249	84	29	-
CV(-S) 90-500	349	134	62	26
CV(-S) 90-630	479	199	106	59

Application examples CV-S



Movable jaw set CV-S 60

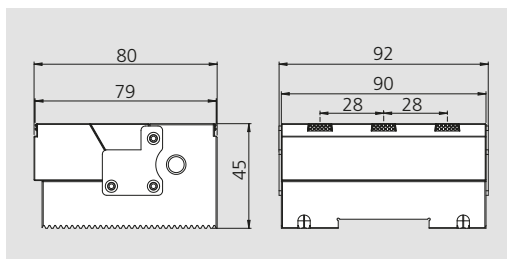
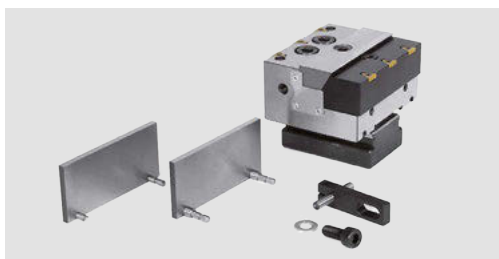


Consisting of:
Movable jaw set complete with 1 work stop, 4 SinterGrip inserts STD for steel*, 1 pair of parallels H37



Type	Id. No.	Weight [kg]
CV-S 60	77584660	1.4

Movable jaw set CV-S 90

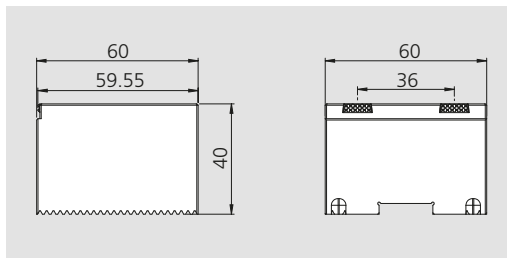


Consisting of:
Movable jaw set complete with 1 work stop, 6 SinterGrip inserts STD for steel*, 1 pair of parallels H42



Type	Id. No.	Weight [kg]
CV-S 90	77584690	2.9

Fixed jaw set CV-S 60

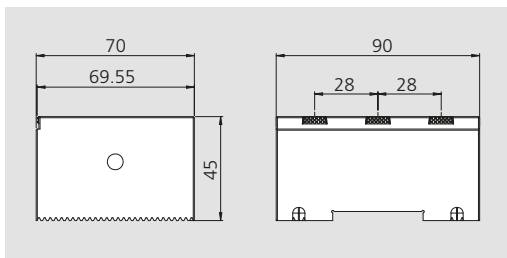


Consisting of:
Fixed jaw set complete with 1 work stop, 2 SinterGrip inserts STD for steel*



Type	Id. No.	Weight [kg]
CV-S 60	58467260	1.4

Fixed jaw set CV-S 90



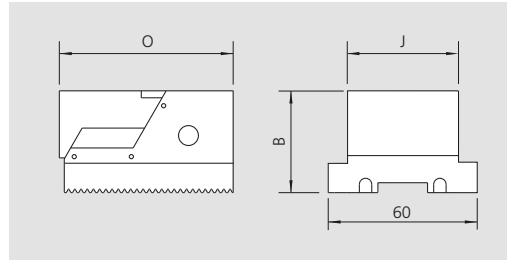
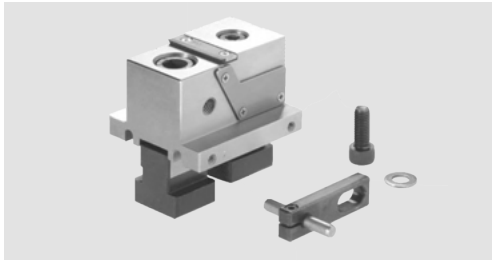
Consisting of:
Fixed jaw set J60 complete with 1 work stop, 3 SinterGrip inserts STD for steel*



Type	Id. No.	Weight [kg]
CV-S 90	58467290	2.9

* ALU or HRC on request.

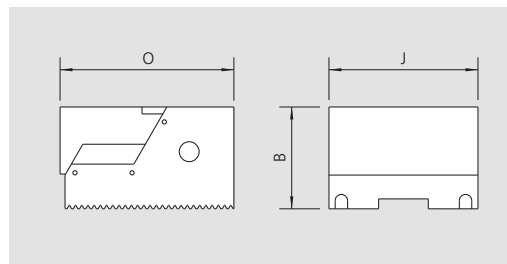
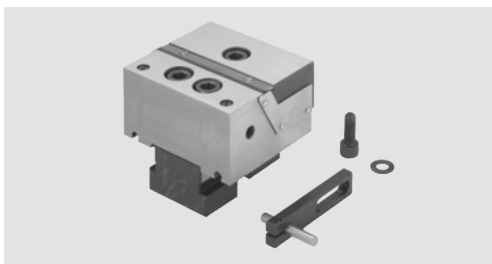
Adjustable jaws with pull down, smooth, set



Consisting of:
Adjustable jaws smooth
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 38	77584023	40	38	70	1

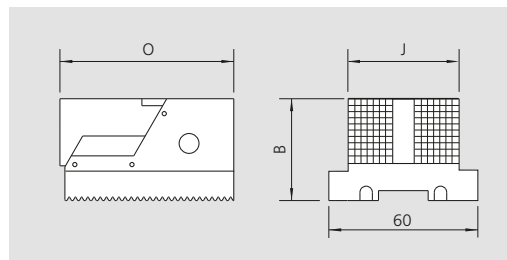
Adjustable jaws with pull down, smooth, set



Consisting of:
Adjustable jaws smooth
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 60	77584123	40	60	70	1.4
CV 90	77584223	45	90	80	2.9

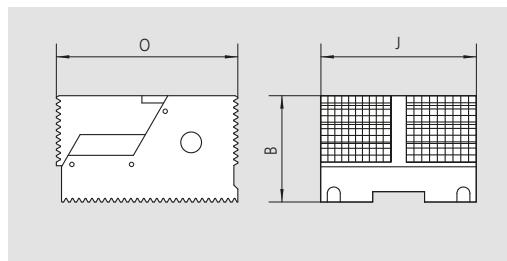
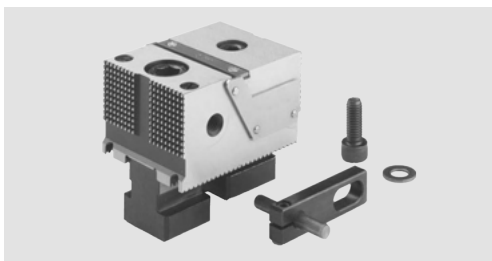
Adjustable jaws with pull down, grooved, set (for raw workpieces)



Consisting of:
Adjustable jaws grooved
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 38	77584028	40	38	70	1

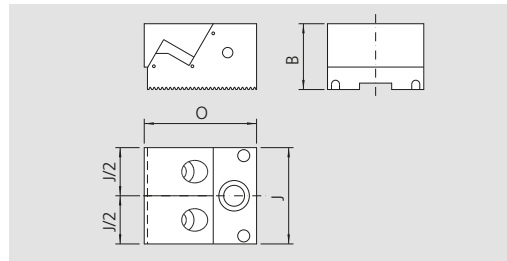
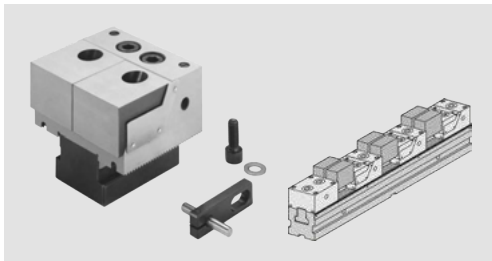
Adjustable jaws with pull down, grooved, set (for raw workpieces)



Consisting of:
Adjustable jaws grooved
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 60	77584128	40	60	70	1.4
CV 90	77584228	45	90	80	2.9

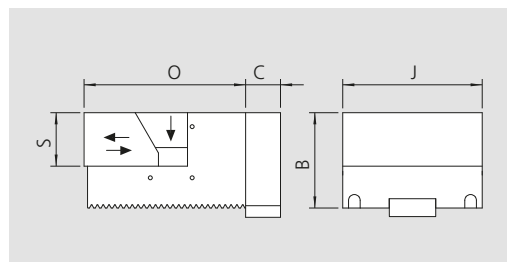
Adjustable jaws double with pull down, smooth, set



Consisting of:
Adjustable jaws
double smooth
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 60	77584124	40	60	70	1.5
CV 90	77584224	45	90	80	3

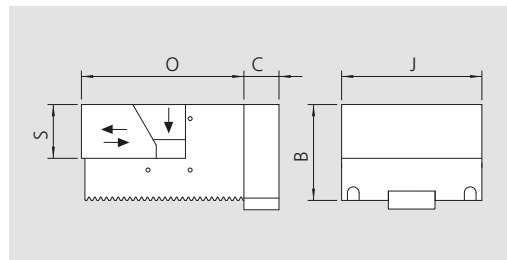
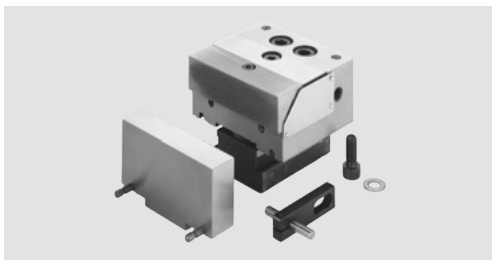
Adjustable jaws with aluminium-clamping inserts, set



Consisting of:
Adjustable jaws with
aluminium-clamping
inserts
incl. workstop

Type	Id. No.	B [mm]	C [mm]	J [mm]	O [mm]	S [mm]	Weight [kg]
CV 60	77584145	40	15	60	69.5	23	1.2
CV 90	77584245	45	20	90	80	25	2.7

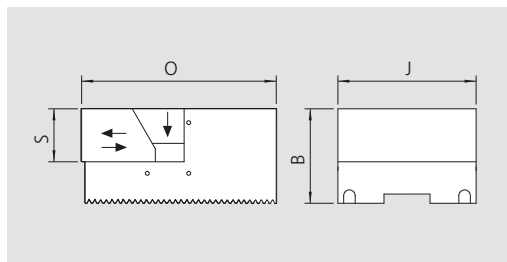
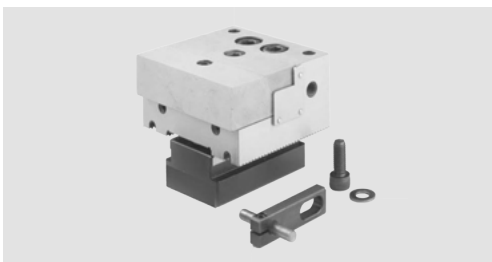
Adjustable jaws with soft steel-clamping inserts, set



Consisting of:
Adjustable jaws with soft
steel-clamping inserts
incl. workstop

Type	Id. No.	B [mm]	C [mm]	J [mm]	O [mm]	S [mm]	Weight [kg]
CV 60	77584146	40	15	60	69.5	23	1.4
CV 90	77584246	45	20	90	80	25	3

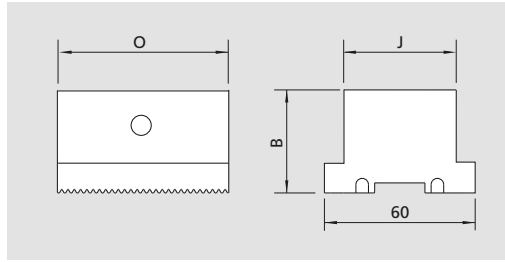
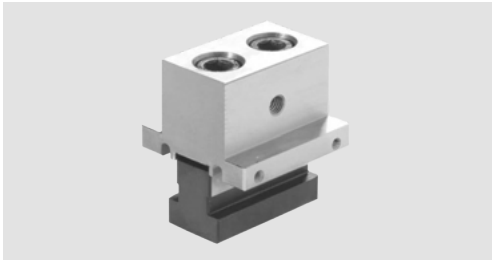
Adjustable jaws with hard steel-clamping inserts, set



Consisting of:
Adjustable jaws with hard
steel-clamping inserts
incl. workstop

Type	Id. No.	B [mm]	J [mm]	O [mm]	S [mm]	Weight [kg]
CV 60	77584147	40	60	69.5	23	1.4
CV 90	77584247	45	90	80	25	3

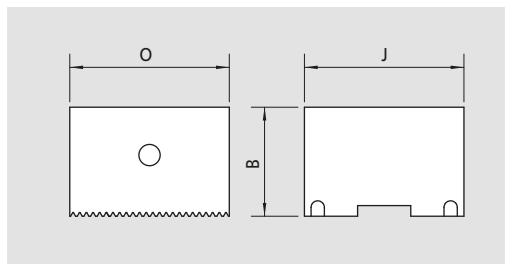
Fix jaws with T-nut, set



Consisting of:
 Fix jaws with T-nuts
 Workstop
 smooth / grooved

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 38	58407200	40	38	60	1

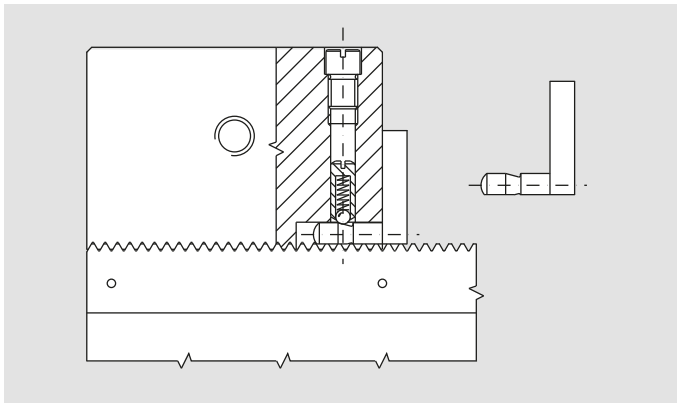
Fix jaws with T-nut, set



Consisting of:
 Fix jaws with T-nuts
 Workstop
 smooth / grooved

Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
CV 60	58417200	40	60	60	1.4
CV 90	58427200	45	90	70	2.9

CLAK-System: Quick change for multiple clamping system CV



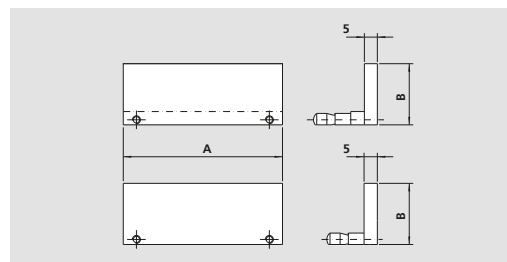
The exclusive and proven CLAK-System, for the quick change of parallels and jaws has been applied for use with the CV. The CLAK-System ensures highest repeatability and minimum set-up times.

This equipment offers:

- The quick change of parallels and jaws
- The elimination of clamps and locks thanks to the patented selflocking system
- The increase in accuracy

All components are heat treated and precision ground.

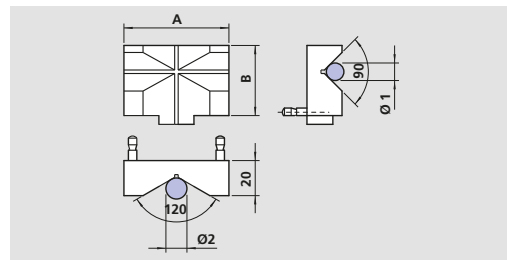
Parallels with quick change „CLAK-System“, set



Consisting of:
4 pairs of parallels with quick change „CLAK-System“

Type	Id. No.	A [mm]	B [mm]				Weight [kg]
CV 38	58409204	38	18	23	28	37	0.4
CV 60	58419204	60	18	23	28	37	0.49
CV 90	58429204	90	18	23	33	42	0.77

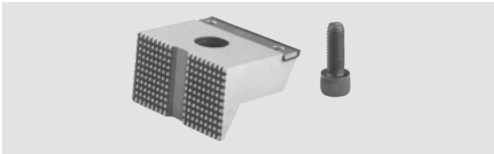
Prism jaw with quick change „CLAK-System“



Consisting of:
Prism jaw with quick change „CLAK-System“

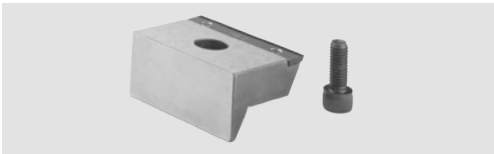
Type	Id. No.	A [mm]	B [mm]	Ø 1		Ø 2	
				min. [mm]	max. [mm]	min. [mm]	max. [mm]
CV 38	58409400	38	40	10	24	9	45
CV 60	58419400	60	40	10	28	11	70
CV 90	58429400	90	45	10	28	11	70

Clamping insert, hard, serrated



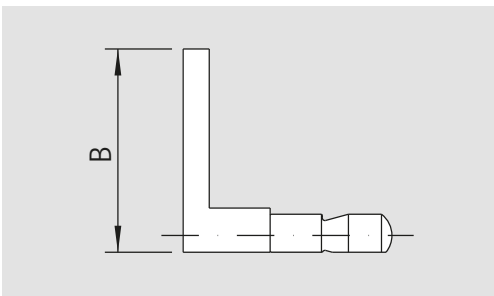
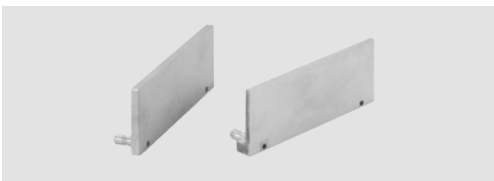
Type	Id. No.
CV 38	58404419
CV 60	58414419
CV 90	58424419

Clamping insert, hard, smooth



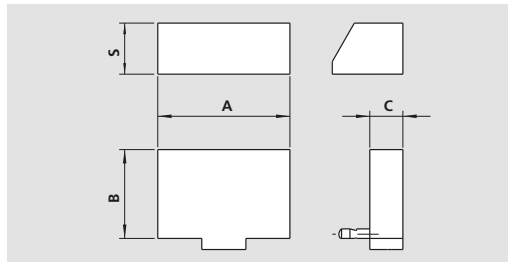
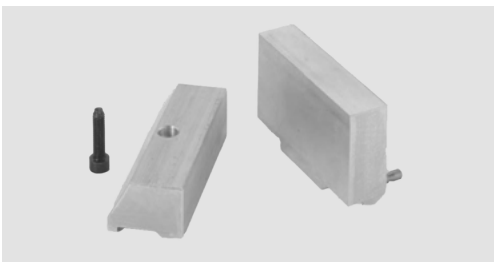
Type	Id. No.
CV 38	58400409
CV 60	58410409
CV 90	58420409

Pair of parallels, with quick change „CLAK-System“



Type	Id. No.	B [mm]
CV 38	58403518	18
CV 38	58403523	23
CV 38	58403528	28
CV 38	58403537	37
CV 60	58413518	18
CV 60	58413523	23
CV 60	58413528	28
CV 60	58413535	35
CV 60	58413537	37
CV 90	58423518	18
CV 90	58423523	23
CV 90	58423533	33
CV 90	58423540	40
CV 90	58423542	42

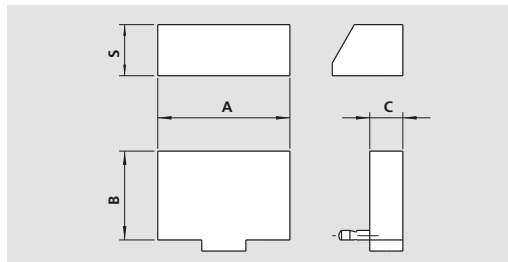
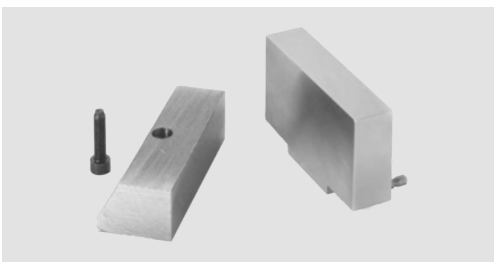
Pair of parallels, soft, in aluminium, with quick change „CLAK-System“



Consisting of:
 Pair of soft clamping inserts in aluminium, with jaw quick change „CLAK-System“

Type	Id. No.	A [mm]	B [mm]	C [mm]	S [mm]	Weight [kg]
CV 60	58419549	60	40	15	23	0.19
CV 90	58429549	90	45	20	25	0.4

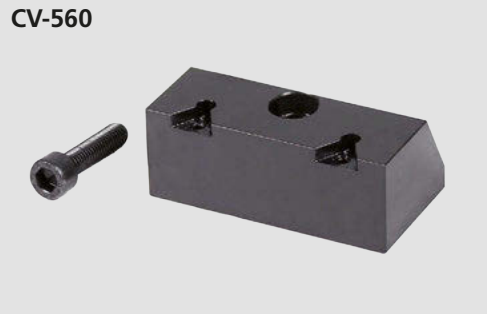
Pair of clamping inserts, soft, in steel, with quick change „CLAK-System“



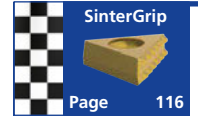
Consisting of:
 Pair of soft clamping inserts in steel, with jaw quick change „CLAK-System“

Type	Id. No.	A [mm]	B [mm]	C [mm]	S [mm]	Weight [kg]
CV 60	58419649	60	40	15	23	0.58
CV 90	58429649	90	45	20	25	1.2

SinterGrip clamping jaw



Consisting of:
Jaw and mounting screw,
without SinterGrip inserts



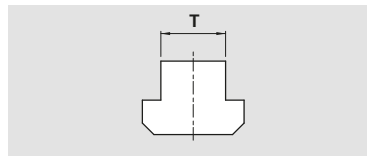
Type	Id. No.
CV-S 60	58460469
CV-S 90	58460499

Workstop



Type	Id. No.
CV 38 / 60	58315010 for fixed support
CV 90	58325010 for fixed support
CV 38 / 60 / 90	58315020 for movable support

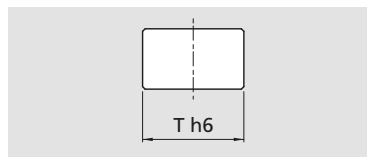
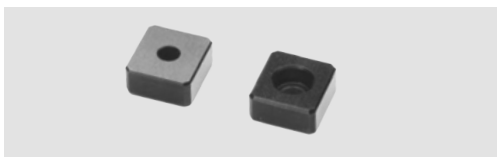
Pair of clamps



Consisting of:
Pair of clamps
complete with screw and T-nut

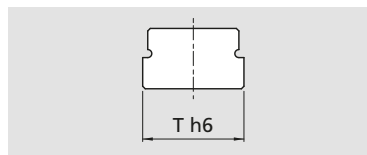
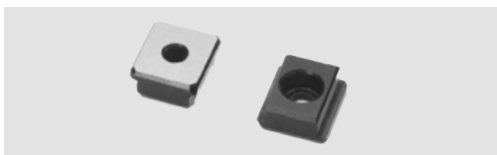
Type	Id. No.						
	T	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
CV 38 / 60		58012792	58012793	58012794	58012795	58012796	58012797
CV 90		58022792	58022793	58022794	58022795	58022796	58022797

Pair of standard positioning keys



Type	Id. No.	T h6 mm
CV 38 / 60 / 90	58011592	12

Pair of special positioning keys with special dimensions



Type	Id. No.						
	Th6	12 mm - h6	14 mm - h6	16 mm - h6	18 mm - h6	20 mm - h6	22 mm - h6
CV 38 / 60 / 90		-	58011593	58011594	58011595	58011596	58011597

■ Steel cross tombstone



Application/customer benefits

- Steel cross tombstone ready to use on horizontal machining centres
- Easy mounting of the multiple clamping system CV / CV-S
- Best use of the machine table

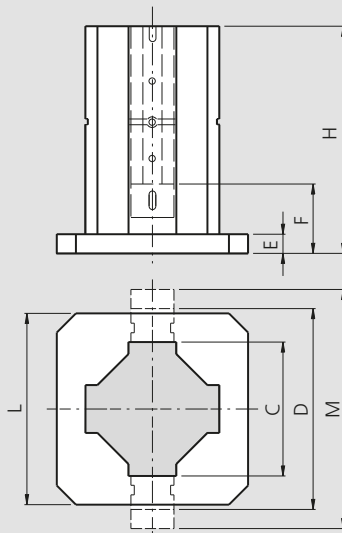
Technical Features

- Prepared to mount of 4 multiple clamping devices CV / CV-S
- Interface for JIS pallets and for zero point clamping systems APS / WPS / ZeroAct

Standard equipment

Tombstone

Technical data



Subject to technical changes.

	Type	Id. No.	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	L [mm]	M [mm]	Weight [kg]
Steel	CV-VCS 38/60-400	58418011	250	370	40	120	460	400	450	110
	CV-VCS 38/60-500	58418021	250	370			560	400	450	123
	CV-VCS 38/60-500	58418022	300	420			560	500	500	165
	CV-VCS 38/60-630	58418031	250	370			690	400	450	142
	CV-VCS 38/60-630	58418032	300	420			690	500	500	187
	CV-VCS 38/60-630	58418033	380	500			690	630	580	261
	CV-VCS 90-400	58428011	250	390	40	130	460	400	480	110
	CV-VCS 90-500	58428021	250	390			560	400	480	123
	CV-VCS 90-500	58428022	300	440			560	500	530	165
	CV-VCS 90-630	58428031	250	390			690	400	480	142
	CV-VCS 90-630	58428032	300	440			690	500	530	187
	CV-VCS 90-630	58428033	380	520			690	630	610	261
Aluminium	CV-VCS 38/60-630	58427931	250	370	40	120	690	400	450	66
	CV-VCS 38/60-630	58427932	250	370			690	500	450	76
	CV-VCS 38/60-630	58427933	250	500			690	630	580	122
	CV-VCS 90-630	58427931	250	390	40	130	690	400	480	66
	CV-VCS 90-630	58427932	250	390			690	500	480	76
	CV-VCS 90-630	58427933	250	520			690	630	610	122

- Serration 2.5 x 60°
- Quick change system „CLAK-System“ optional available



Application/customer benefits

- Full usability on CNC indexing tables
- Compact design
- Modular system: Extensive range of accessories
- Quick change system „CLAK-System“ for jaws and parallel claks optional available (see page 229)
- Maximum efficiency due to quick change over
- Can be used for single or multiclamp

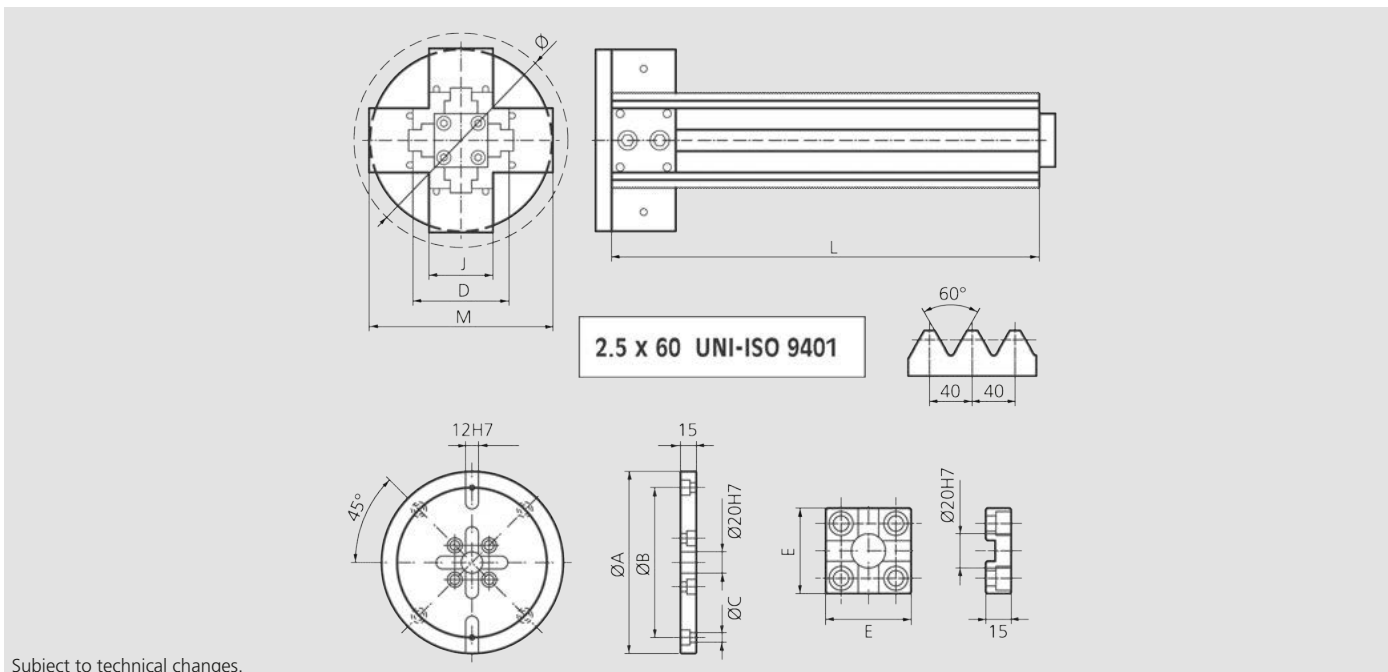
Technical features

- Serration 2.5 x 60°
- Jaw width 38 mm, 60 mm und 90 mm, Length 250 mm, 400 mm, 500 mm and 630 mm
- Optional: Special interface flanges for CNC indexing tables and special adaptation for end supports / tailstocks

Standard equipment

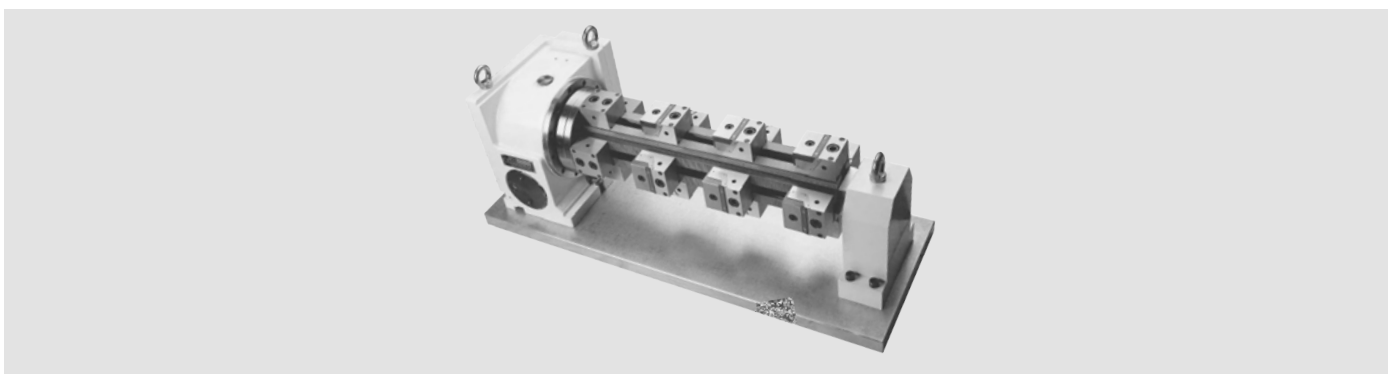
1 column, 4 fixed jaws, 1 blank flange, 1 interface plate for end supports / tailstocks, 1 clamping wrench, 4 workstops

Technical data



Subject to technical changes.

Type	Id. No.	J [mm]	D [mm]	M [mm]	L [mm]	Ø rot. [mm]	Ø A [mm]	Ø B [mm]	Ø C [mm]	E [mm]	Weight [kg]
CV-CN 60-400	77584111				400						19
CV-CN 60-500	77584112	60	90	170	500	200	170	140	9	50	23
CV-CN 60-630	77584113				630						29
CV-CN 90-400	77584211				400						34
CV-CN 90-500	77584212	90	115	205	500	230	210	180	11	70	41
CV-CN 90-630	77584213				630						50



- Serration 2.0 x 60°
- Excellent price / performance ratio



Application/customer benefits

- Full usability of the machine table
- Modular system: Extensive range of accessories
- Maximum efficiency due to quick change over
- Can be used for single or multiclamp
- Set with 4 clamping positions

Technical features

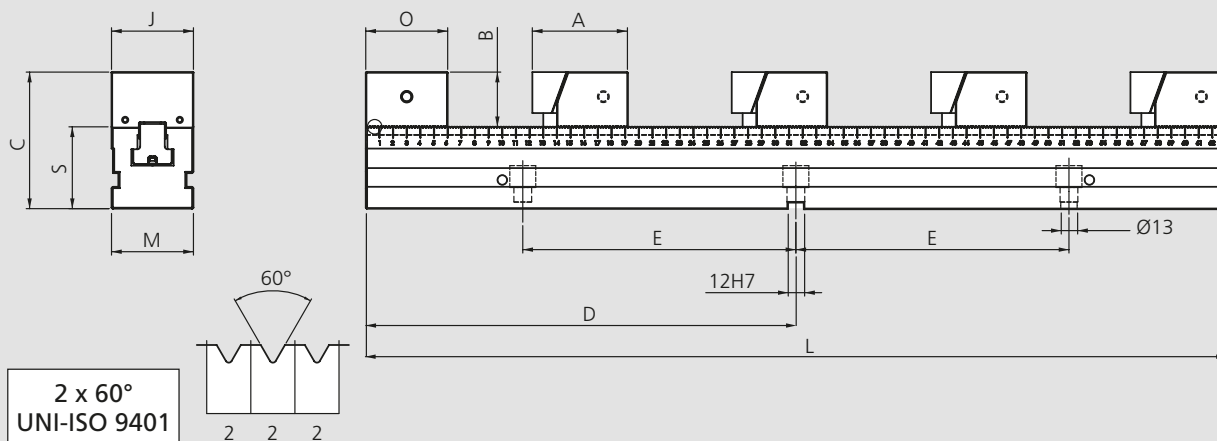
- Serration 2.0 x 60°

Standard equipment

Multiple clamping system set:

- 1 Base (different sizes)
- 1 Fix jaw
- 4 Movable jaws
- 4 Workstops
- 1 Clamping wrench

Technical data

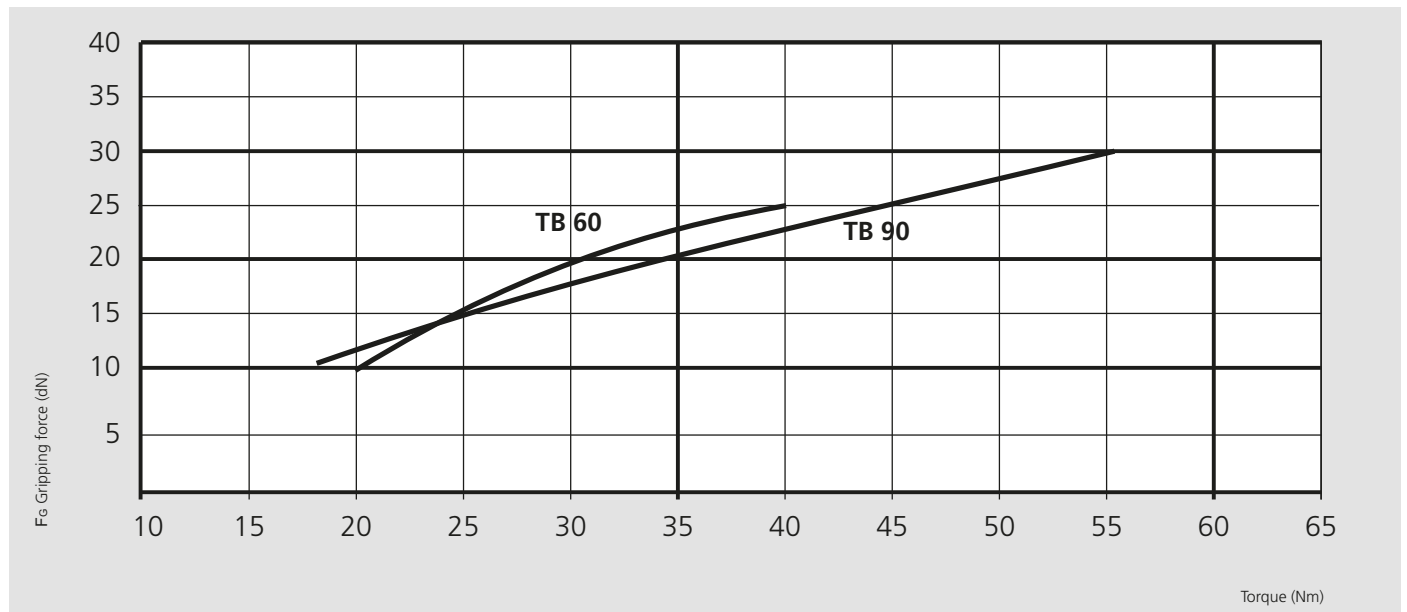


Subject to technical changes.

Type	Id. No.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	J [mm]	L [mm]	M [mm]	O [mm]	S ±0.01 [mm]	Weight [kg]
TB 60-400	77588101	70	40	100	200	100	60	400	60	60	60	16.9
TB 60-500	77588102				250	150		500				18.9
TB 60-630	77588103				315	200		630				22.0
TB 90-400	77588201	80	45	115	200	100	90	400	90	70	70	27.6
TB 90-500	77588202				250	150		500				32.8
TB 90-630	77588203				315	200		630				36.7

- Serration 2.0 x 60°
- Excellent price / performance ratio

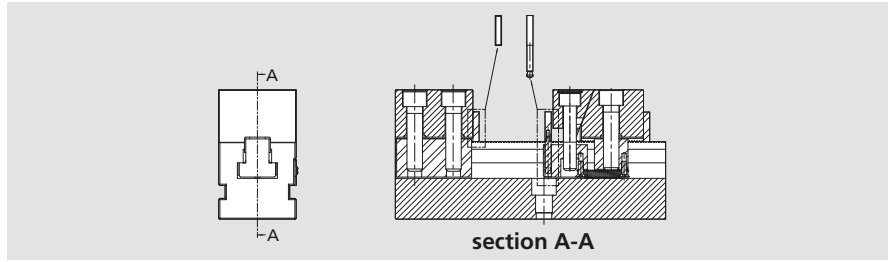
Clamping force diagrams



Clamping capacity

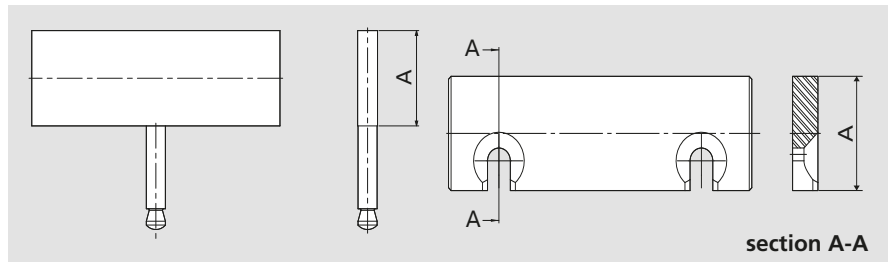
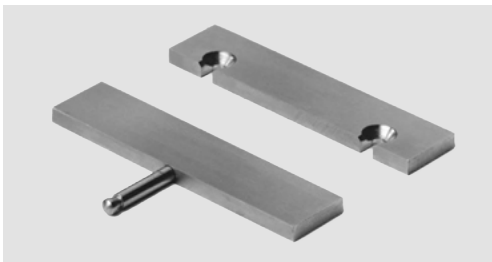
Type	A max. [mm]			
	Diagram 1	Diagram 2	Diagram 3	Diagram 4
TB 60-400	270	100	43	15
TB 60-500	370	150	76	40
TB 60-630	500	215	120	73
TB 90-400	249	84	29	-
TB 90-500	349	134	62	26
TB 90-630	479	199	106	59

4 pairs of TB parallels, set



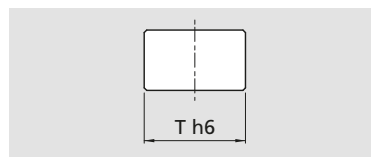
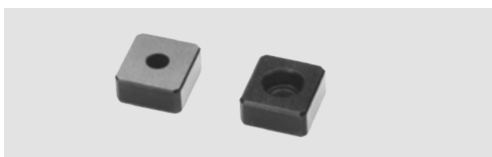
Type	Id. No.	Weight [kg]
TB 60	58819204	0.4
TB 90	58829204	0.7

Pair of TB parallels



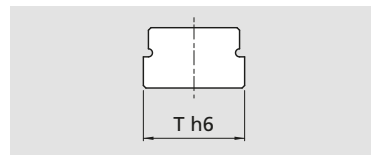
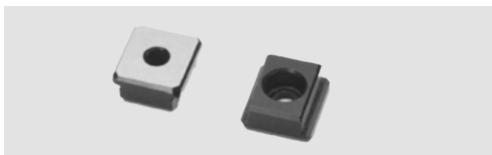
Type	Id. No.	A [mm]
TB 60	58813518	18
TB 60	58813523	23
TB 60	58813528	28
TB 60	58813537	37
TB 90	58823518	18
TB 90	58823523	23
TB 90	58823533	33
TB 90	58823542	42

Pair of T-nuts



Type	Id. No.	T h6 [mm]
TB 60 / 90	58011592	12

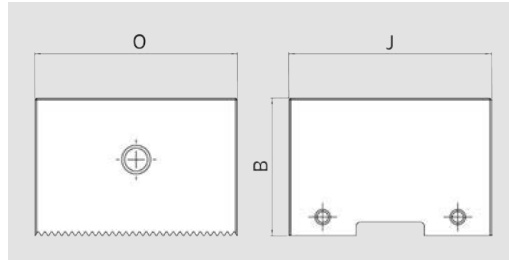
Pair of T-nuts with special dimensions



Type	Id. No.						
	Th6	12 mm - h6	14 mm - h6	16 mm - h6	18 mm - h6	20 mm - h6	22 mm - h6
TB 60 / 90	-	58011593	58011594	58011595	58011596	58011597	

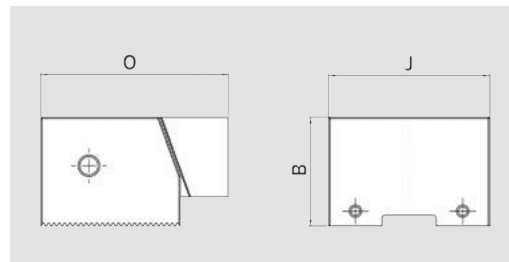
Accessories

Fix jaws, set



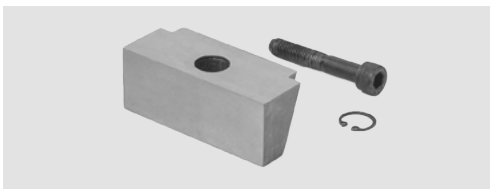
Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
TB 60	58817220	40	60	70	1.3
TB 90	58827220	45	90	80	2.8

Adjustable jaws with pull down, smooth, set



Type	Id. No.	B [mm]	J [mm]	O [mm]	Weight [kg]
TB 60	77588123	40	60	70	1.4
TB 90	77588223	45	90	80	3

Clamping insert, smooth



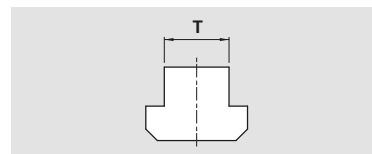
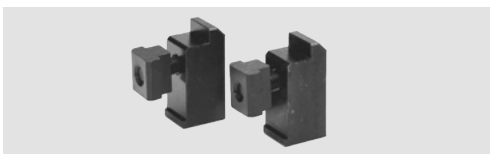
Type	Id. No.
TB 60	58810409
TB 90	58820409

Workstop



Type	Id. No.
TB 60	58315010 fixed
TB 90	58325010 fixed
TB 60 / 90	58315020 movable

Pair of clamps, incl. T-nut and clamping screw



Type	Id. No.					
	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
TB 60	58012792	58012793	58012794	58012795	58012796	58012797
TB 90	58022792	58022793	58022794	58022795	58022796	58022797

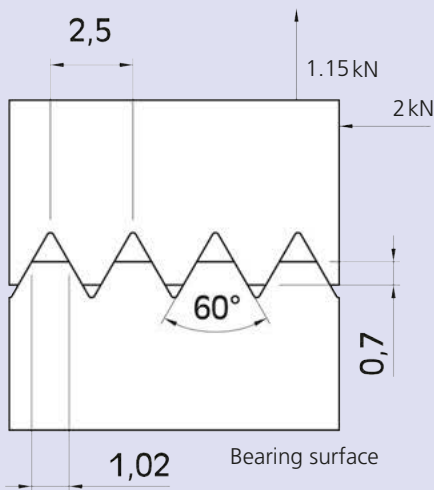


Competitor

Improved absorption
of the transverse forces

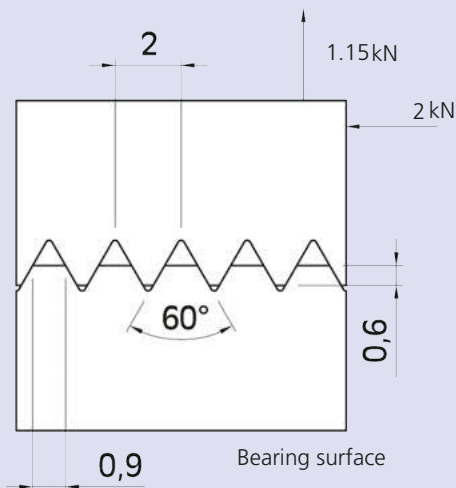
CV multiple clamping system

Serration 2.5 x 60°

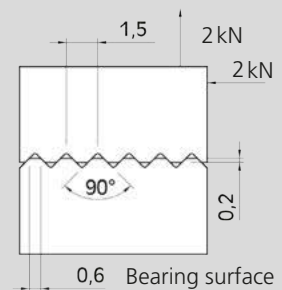


TB multiple clamping system

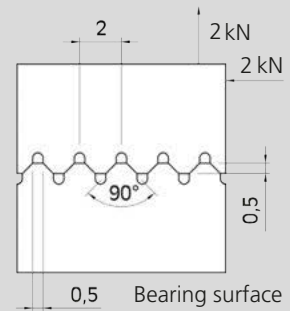
Serration 2.0 x 60°



Serration 1.5 x 90°



Serration 2.0 x 90°



Serration 2.0 x 90°

