



HEINRICH KIPP WERK



5-AXIS VICE KIPPflexX

Edition 2022



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KIPPflexX 5-axis vice

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Reg. Nr. 002081 QM



SERVICE HOURS (CET)

MONDAY-THURSDAY	7.00 am - 5.30 pm
FRIDAY	7.00 am - 3.30 pm

KIPPflexX 5-axis vice

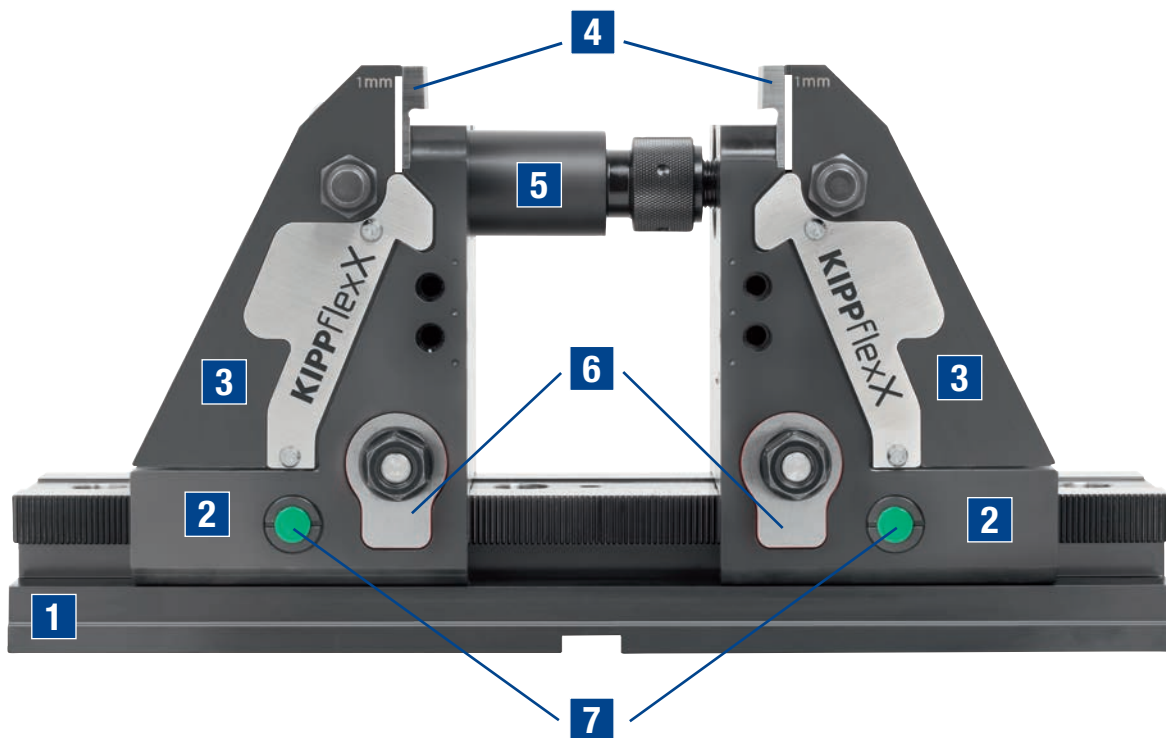


Function

The KIPPflexX 5-axis vice is the 3rd generation of vices for 5-axis milling machines.

The new generation, KIPPflexX, convinces by being much more user-friendly through the use of a crank handle and the proven clamping physics from the 5-axis vice compact series.

The KIPPflexX 5-axis vice can be used for clamping blanks or with positive-down effect. An enormous clamping force of 52 kN, optimum accessibility for short tools and very high rigidity are further advantages milling machine operators.



- 1** Base plate
- 2** Positioning elements
- 3** Vice jaws
- 4** Jaw plates
- 5** Extension shafts and threaded spindle
- 6** Clamping element with nut
- 7** Thrust pin for pre-centring

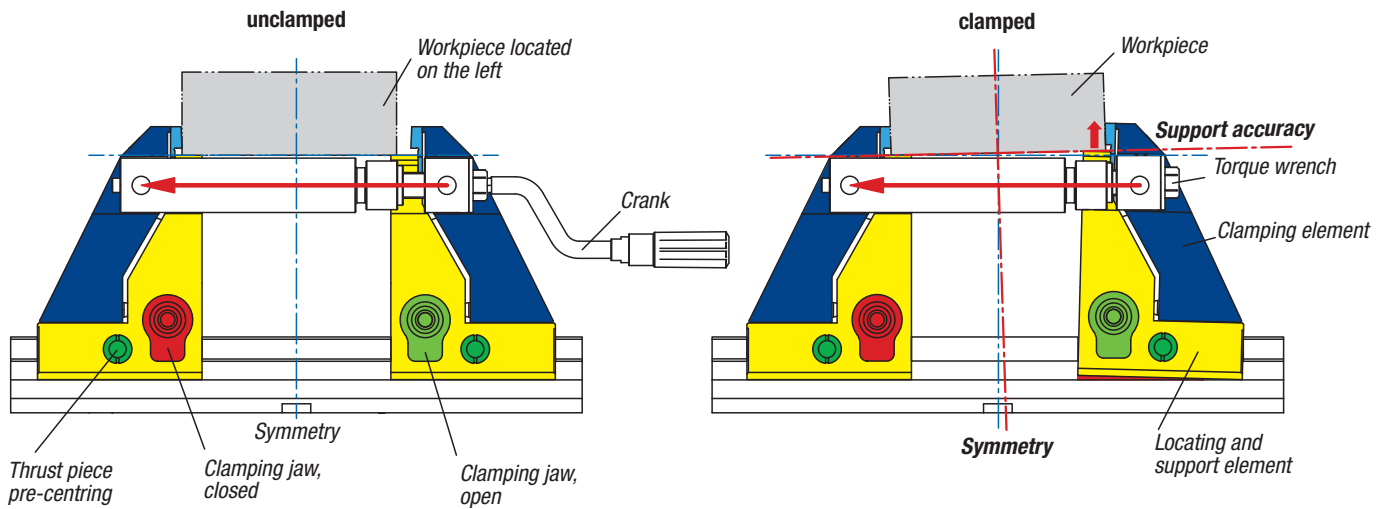
ADVANTAGES:

- Normal vice and centric vice 2 in 1
- Clamping with integrated positive- down effect
- Quick adjustment with the crank function
- Very high clamping force directly on the workpiece
- Highest rigidity in the system
- Best tool accessibility from all sides

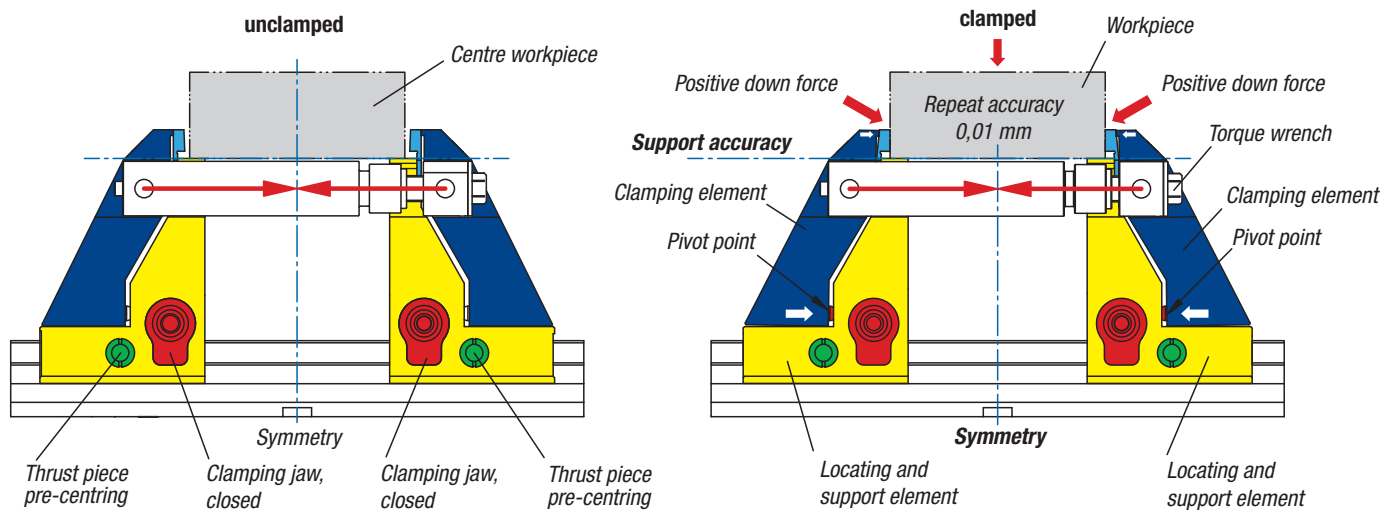
Technical explanation of the difference between positive-down force clamping and normal clamping



Blank clamping / Vice principle



Downthrust clamping



Clamping jaw (red) open on one side
-> used as a standard vice



Clamping jaw closed on both sides
-> used as a centric vice with pull-down effect

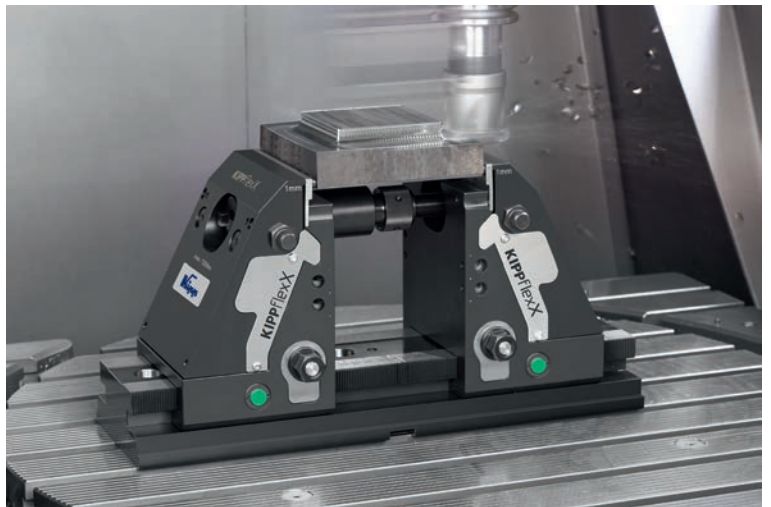
Applications



5-axis vice KIPPflexX in use clamping a blank.
The left red jaw is open. Quick adjustment is carried out using the crank handle.

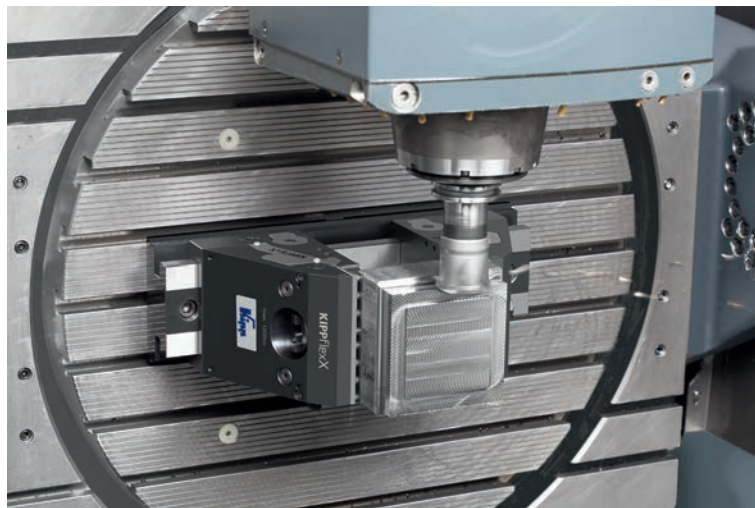


Positive-down effect clamping with the KIPPflexX.
Both jaws are closed so that a sure positive down force takes place onto the workpiece rest.



5-side machining on a 5-axis milling machine.
Optimum tool accessibility for machining directly over the 5-axis vice KIPPflexX.



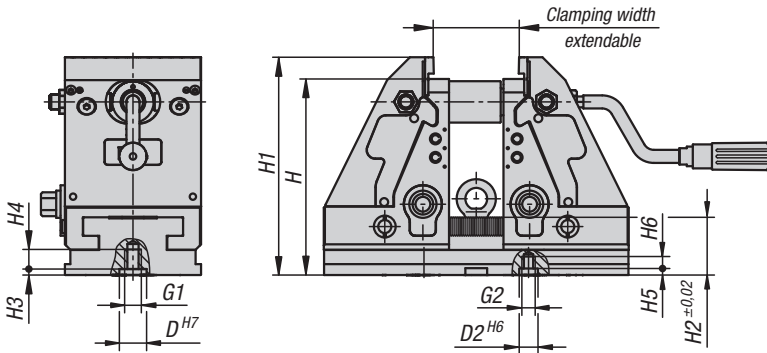
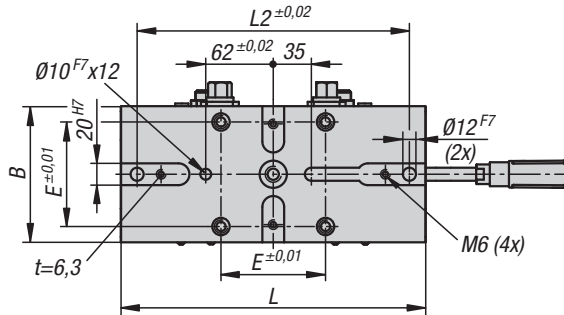


KIPPflexX 5-axis vice

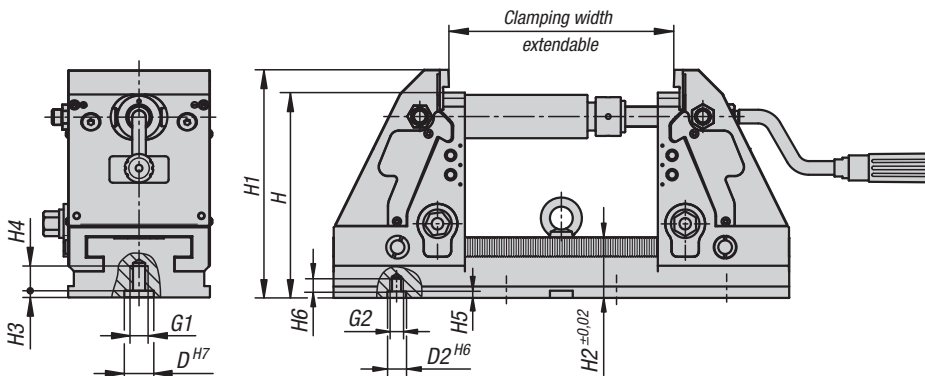
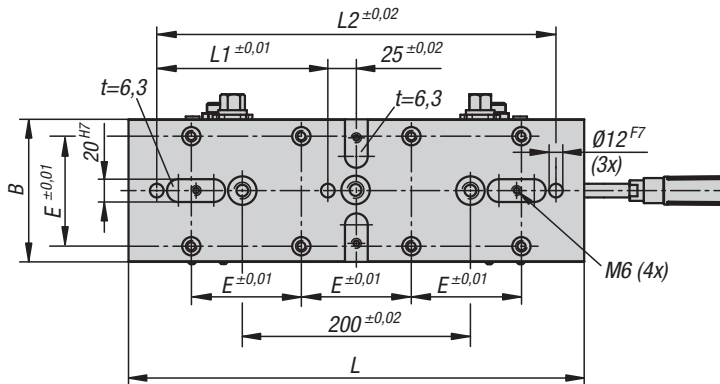
jaw plates smooth



L = 280



L = 400



The KIPPflexX 5-axis vice features excellent stability and flexibility, and is extremely easy to use. The KIPPflexX 5-axis vice can be used as a positive-down force vice or normal vice. When the positive down force function is used, the workpiece can be held with a repeat accuracy of ± 0.01 mm. A workpiece clamping height of 155/180 mm enables easy access during machining. The clamping width is preset using the crank handle, cutting down on setup times. Additionally, the closed geometries and the resistance to dirt that they provide keep maintenance and repair times to a minimum.

Material:
Steel.

Version:
Baseplate and workpiece support hardened.

Sample order:
K1555.124001251800

Note:
Additional product information can be found in the operating instructions.

Method of operation:
Quick adjustment using crank handle.

Advantages:
For use as centric-clamping device with positive down force function or vice.
Straightforward, infinite clamping width adjustment using crank handle.
Optimum clamping height for 5-axis machining.
Flexible options for connection to machine tables.

On request:
Various spare parts, larger clamping widths.

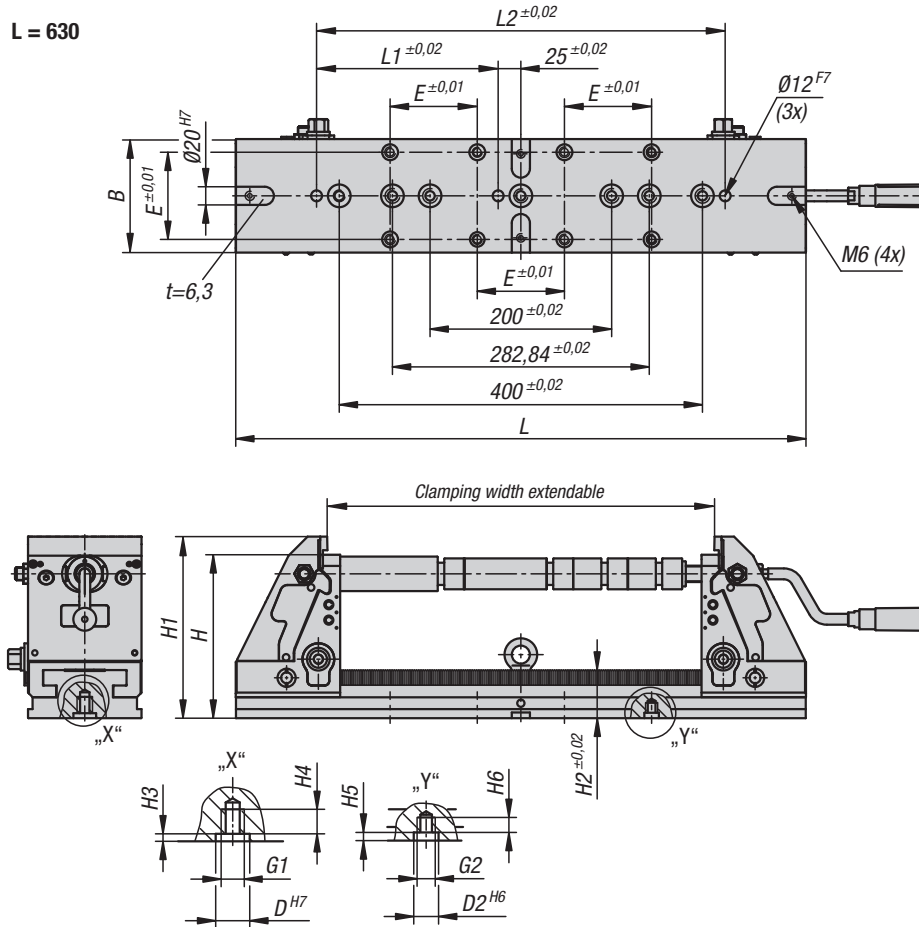
Supplied with:
Depending on the baseplate length, see operating instructions.

KIPPflexX 5-axis vice

jaw plates smooth



L = 630



Accessories:

- Baseplates K1556
- Jaw plates with pins K1557
- Combination jaw plates, smooth/with pins K1557
- Jaw plates, machinable K0975
- Seating ledges K0974
- Extension shafts K0990
- Cylinder clamping set K0989
- Stop set K0993
- Clamping pin K0967.140250516, K0967.240250516
- Clamping claw sets K1008
- Slot nuts K0954.1814X20
- Fitted bolts K0815.12065
- Socket head screws K0869.12X60
- Torque wrench K1489.01

Clamping force:

see diagram

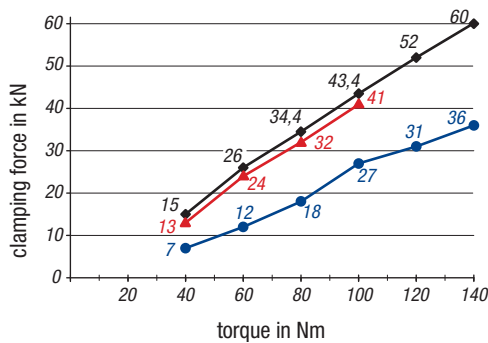
Applications:

Suitable for T-slot and grid hole tables and zero-point clamping systems.
Size 282.84mm for diagonal alignment on zero-point clamping systems with gauge 52/96/200mm.

Tolerances:

With a clamping depth of > 5 mm, the repeat accuracy while the positive down force function is being used is ± 0.01 .

5-axis vice KIPPflexX clamping force diagram



- Spindle tractive force
- ▲ Normal vice / clamping blanks
- Positive-down effect clamping by 1 mm travel

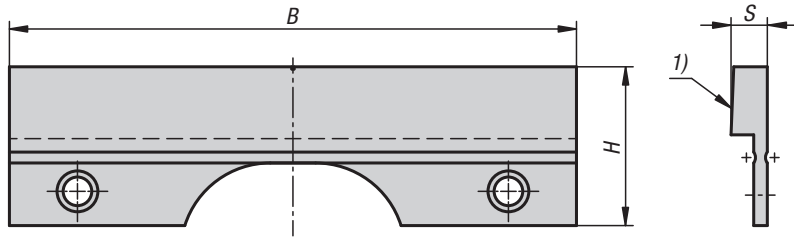
KIPP KIPPflexX 5-axis vice jaw plates smooth

Order No.	B	L	H	L1	L2	H1	H2	H3	H4	H5	H6	D	D2	E	G1	G2	Clamping width extendable	Tractive force max. kN
K1555.122800901550	90	280	155	-	250	175	53	5,5	18	6	11	25H7	12H6	52	M12	M8	28-180	see diagram
K1555.124000901550	90	400	155	150	350	175	53	5,5	18	6	11	25H7	12H6	52	M12	M8	28-300	see diagram
K1555.122801251800	125	280	180	-	250	200	53	5,5	18	6	11	25H7	16H6	96	M12	M10	28-180	see diagram
K1555.124001251800	125	400	180	150	350	200	53	5,5	18	6	11	25H7	16H6	96	M12	M10	28-300	see diagram
K1555.126301251800	125	630	180	200	450	200	53	5,5	18	6	11	25H7	16H6	96	M12	M10	28-528	see diagram

K1557

Smooth jaw plates

KIPPflexX 5-axis vice



The smooth jaw plates are used for pull-down clamping of pre-machined and ground workpiece surfaces.

Material:
Steel.

Version:
Hardened, bright.
Laser marked scale.
Clamping surface carbide coated.

Sample order:
K1557.1250

Note:
Additional product information can be found in the operating instructions.

Accessories:
Torx screws M6x10

Applications:
For pre-machined and ground workpiece surfaces

Drawing reference:
1) Clamping surface carbide coated

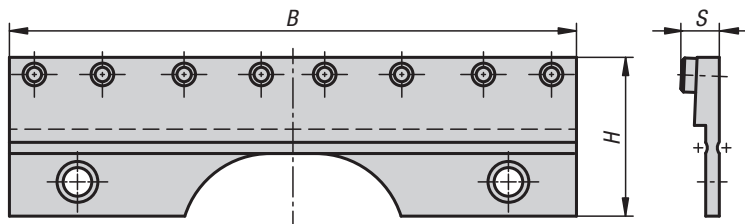
KIPP Smooth jaw plates, KIPPflexX 5-axis vice

Order No.	B	H	S
K1557.0900	90	35	8,5
K1557.1250	125	35	8,5

K1557

Jaw plates with pins

KIPPflexX 5-axis vice



The jaw plates with pins are used for positive clamping without pre-forming; e.g. on blanks, castings and for roughing out.

Material:
Steel.

Version:
Hardened, bright jaw plates.
Hardened, black-oxidised jaw pins.
Laser marked scale.

Sample order:
K1557.1251

Note:
Additional product information can be found in the operating instructions.

Accessories:
Torx screws M6x10

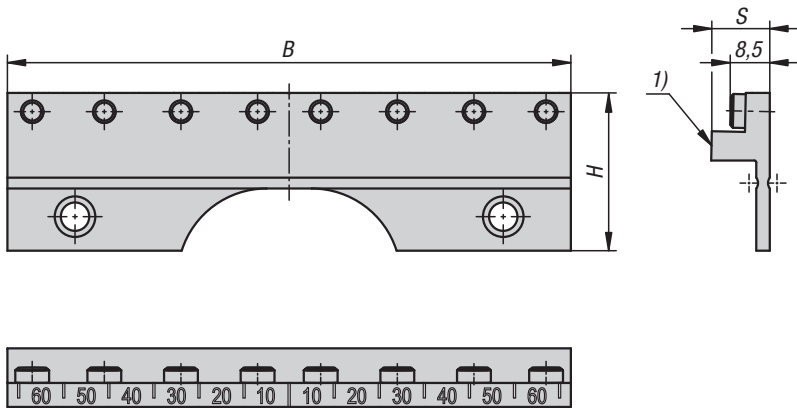
Applications:
Positive clamping without pre-forming.

KIPP Jaw plates with pins, KIPPflexX 5-axis vice

Order No.	No. of pins	B	H	S
K1557.0901	6	90	35	8,5
K1557.1251	8	125	35	8,5

Combination jaw plates

smooth and with pins



The combination jaw plates are used for positive clamping without pre-machining, e.g. for blanks, heavy duty cutting, castings etc. and for pull-down clamping of pre-machined and ground workpiece surfaces.

Material:
Steel.

Version:
Jaw plates hardened, bright.
Jaw pins hardened, black oxidised.
Clamping surface carbide coated.
Laser marked scale.

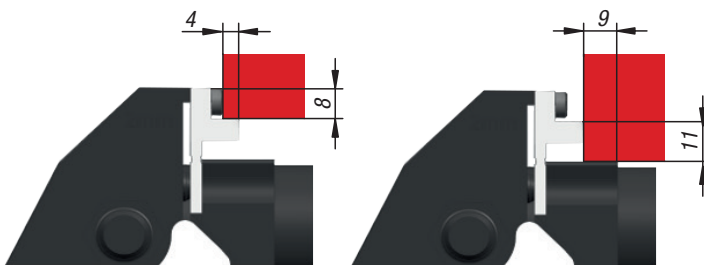
Sample order:
K1557.1252

Note:
Additional product information can be found in the operating instructions.

Accessories:
Torx screws M6x10

Applications:
Positive clamping without pre-machining.
Pre-machined and ground workpiece surfaces.

Drawing reference:
1) Clamping surface carbide coated



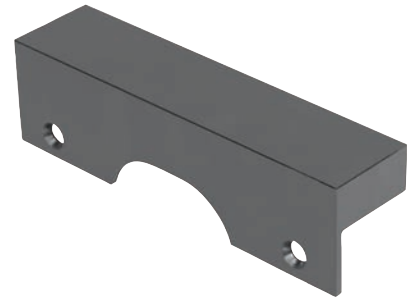
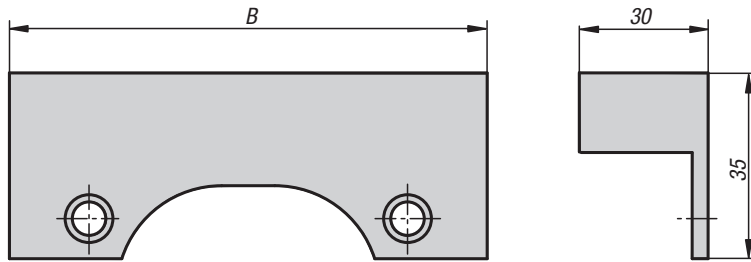
KIPP Combination jaw plates, smooth and with pins

Order No.	B	H	S	No. of pins
K1557.0902	90	35	13	6
K1557.1252	125	35	13	8

K0975

Jaw plates

machinable



Material:
Carbon steel.

Version:
Black oxidised.

Sample order:
K0975.0902

Note for ordering:
Supplied singly.

Note:
Machinable jaw plates are ideal for gripping on workpiece contours and machining in steps.

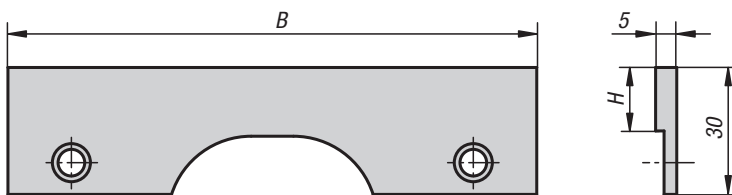
KIPP Jaw plates, machinable

Order No.	B
K0975.0902	90
K0975.1252	125

K0974

Seating ledges

screw-on



Material:
Steel.

Version:
Bright.

Sample order:
K0974.0900515

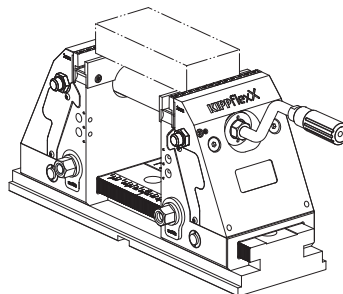
Note:
Screw-on seating ledges are used to set the seating height of the workpiece. The desired seating height is achieved by milling over the screwed on ledges. A very high accuracy of the height to the machine table can be achieved.

Supplied in pairs.

Accessories:
for K0973, K1555

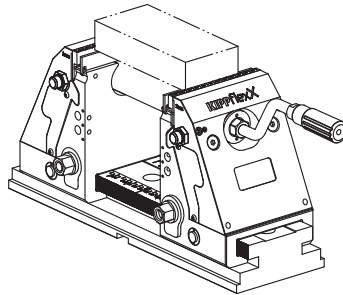
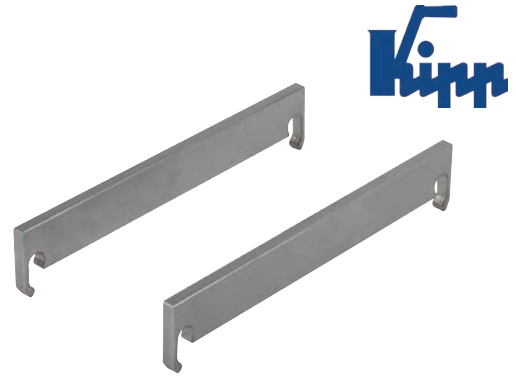
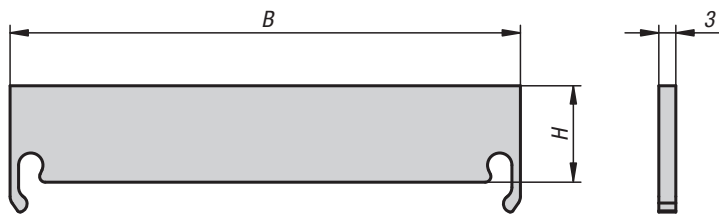
KIPP Seating ledges, screw-on

Order No.	B	H
K0974.0900515	90	15
K0974.1250515	125	15



K0974

Seating ledges



Material:
Hardened steel

Version:
Bright.

Sample order:
K0974.0900312

Note:
The seating ledges are suitable for adjusting the clamping depth of the workpiece on the compact 5-axis clamping system/ KIPPflexX. The 12 mm version does not interfere with the positive-down effect. By the 17 mm version, the positive-down force is reduced but causes less edge deformation.

Supplied in pairs.

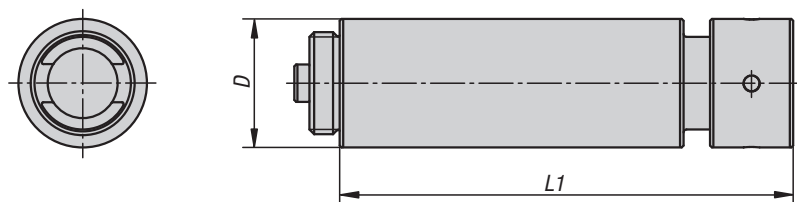
Accessories:
for K0973, K1555

KIPP Seating ledges

Order No.	B	H
K0974.0900312	90	12
K0974.0900317	90	17
K0974.1250312	125	12
K0974.1250317	125	17

K0990

Extension shafts



Material:
Carbon steel.

Version:
Black oxidised.

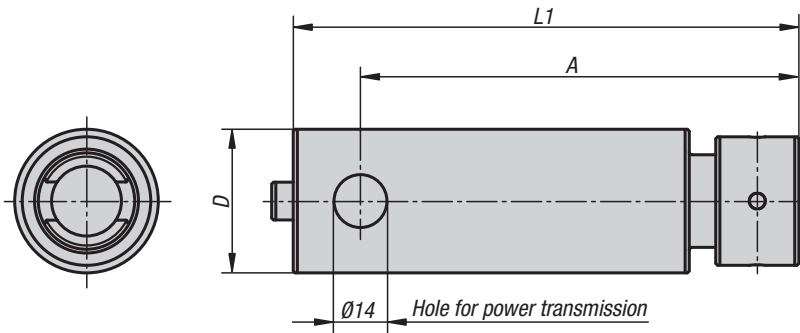
Sample order:
K0990.060

Note:
For setting the clamping width.
Supplied with union nut.
The extension shafts can be combined as required.

KIPP Extension shafts

Order No.	D	L1	Clamp range
K0990.060	34	60	extension by 60 mm
K0990.120	34	120	extension by 120 mm
K0990.240	34	240	extension by 240 mm
K0990.480	34	480	extension by 480 mm

Adapter shafts



Material:

Carbon steel.

Version:

Black oxidised.

Sample order:

K0991.060

Note:

For setting the clamping width.

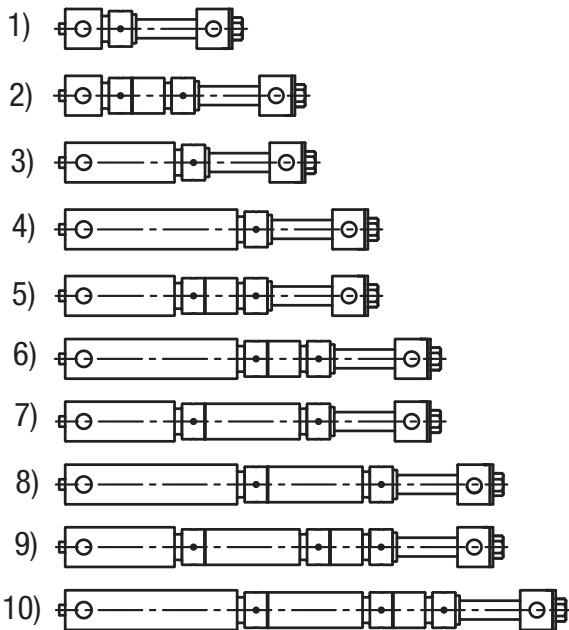
Supplied with union nut.

The adapter shafts are linked to the vice jaws by the lateral holes.

An adapter shaft must be mounted in every compact 5-axis clamp/KIPPflexX.

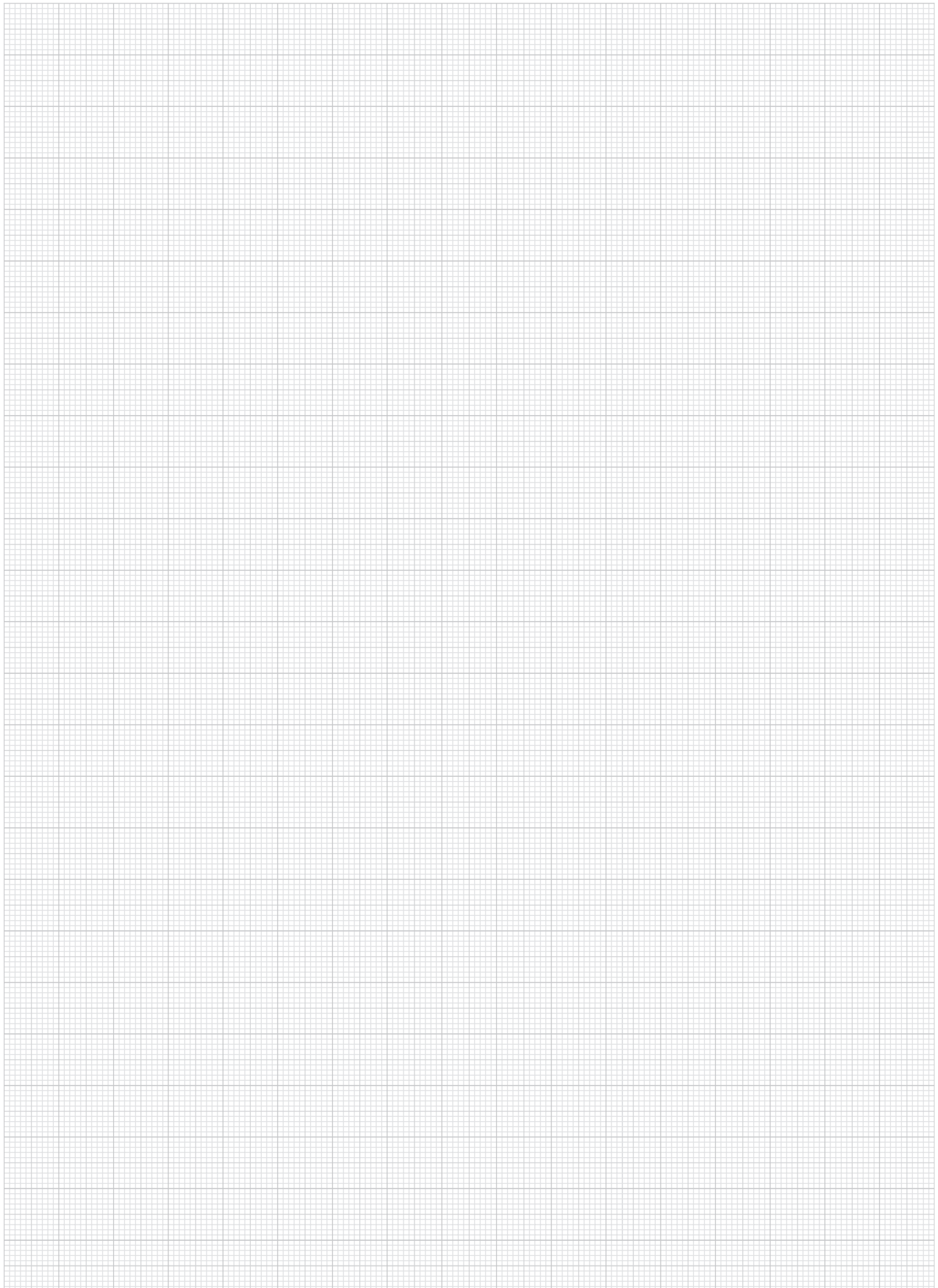
Drawing reference:

- 1) Clamping width 20-72 mm - Adapter shaft 60 mm + threaded spindle
- 2) Clamping width 72-135 mm - Adapter shaft 60 mm + expansion rod 60 mm + threaded spindle
- 3) Clamping width 80-140 mm - Adapter shaft 120 mm + threaded spindle
- 4) Clamping width 140-200 mm - Adapter shaft 180 mm + threaded spindle
- 5) Clamping width 140-200 mm - Adapter shaft 120 mm + extension shaft 60 mm + threaded spindle
- 6) Clamping width 200-260 mm - Adapter shaft 180 mm + extension shaft 60 mm + threaded spindle
- 7) Clamping width 200-260 mm - Adapter shaft 120 mm + extension shaft 120 mm + threaded spindle
- 8) Clamping width 260-320 mm - Adapter shaft 180 mm + extension shaft 120 mm + threaded spindle
- 9) Clamping width 260-320 mm - Adapter shaft 120 mm + extension shaft 120 mm + extension shaft 60 mm + threaded spindle
- 10) Clamping width 320-380 mm - Adapter shaft 180 mm + extension shaft 120 mm + extension shaft 60 mm + threaded spindle



KIPP Adapter shafts

Order No.	A	D	L1	Clamp range
K0991.060	56	38	74	20-80
K0991.120	116	38	134	80-140
K0991.180	176	38	194	140-200

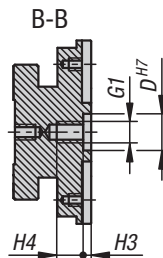
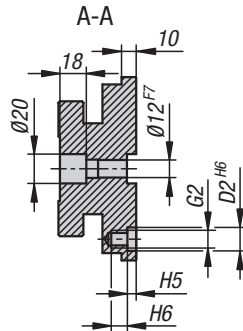
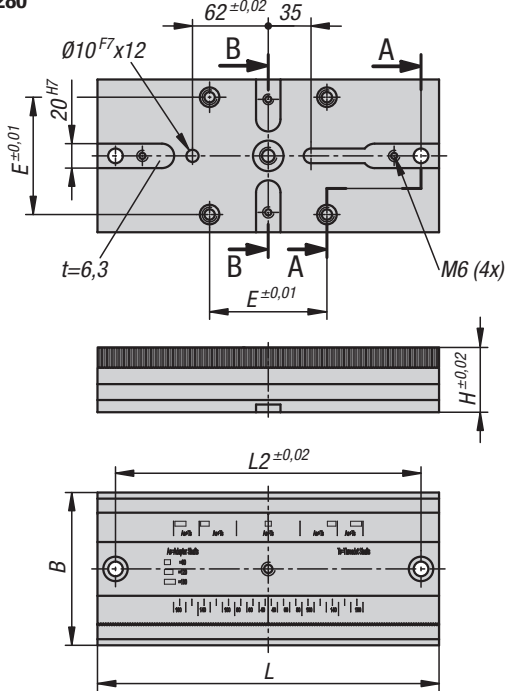


Ba seplates

KIPPflexX 5-axis vice



L = 280



The baseplates offer versatile connection options. The locating slots on the underside can be used to perform alignment directly on the machine table using slot keys. Fastening in 12F7 grid holes with grid spacing of 50 mm is also possible. Claw clamps or separate clamping devices can be located on the side recess. The baseplate is also suitable for all standard zero-point clamping systems with a centre distance of 52/96/200 mm.

The integrated central hole can also be used for alignment. In this case, a specific centre pin is used to perform central alignment on the machine table.

Material:
Steel.

Version:
Hardened and black oxidised.
Contact faces ground.

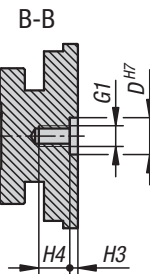
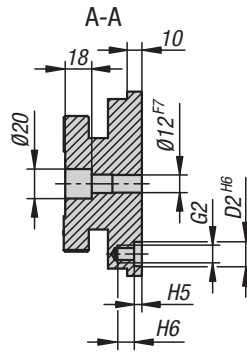
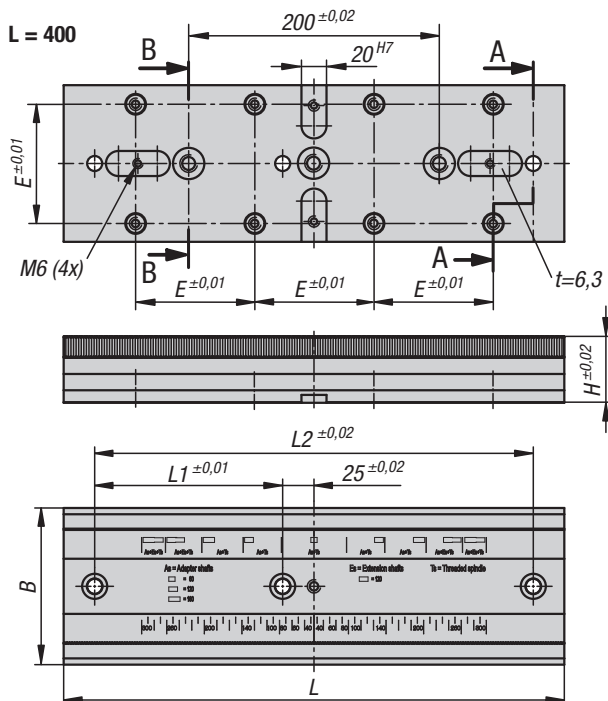
Sample order:
K1556.125400

Note:
Additional product information can be found in the operating instructions.

On request:
other dimensions.

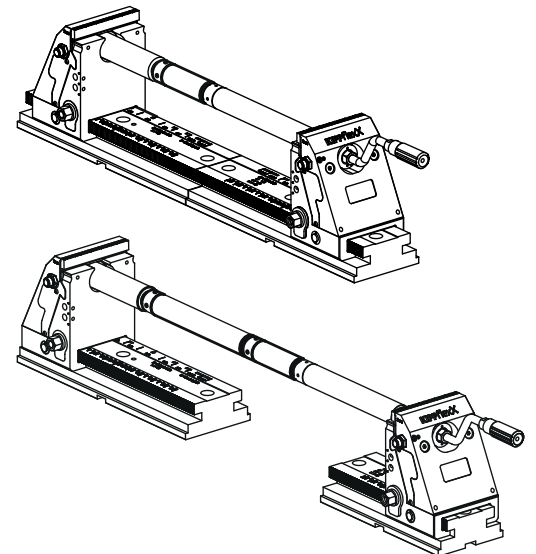
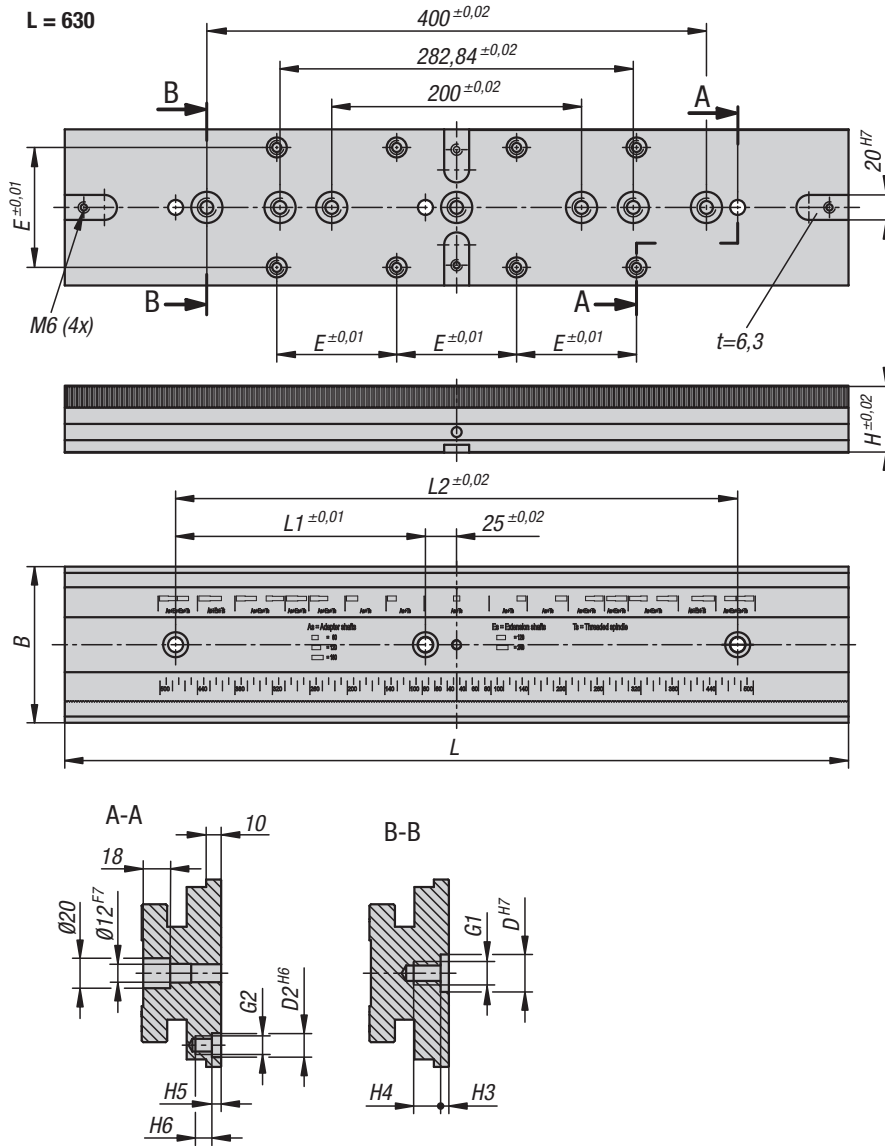
Applications:
Suitable for T-slot tables, basic elements with grid holes and zero-point clamping systems.

L = 400



Baseplates

KIPPflexX 5-axis vice



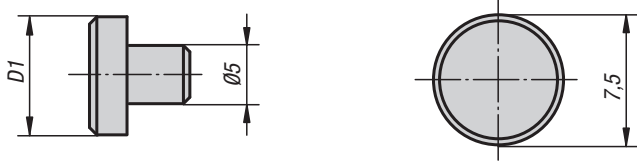
KIPP Baseplates, KIPPflexX 5-axis vice

Order No.	B	H	L	L1	L2	H3	H4	H5	H6	D	D2	E	G1	G2
K1556.090280	90	53	280	-	250	5,5	18	6	11	25H7	12H6	52	M12	M8
K1556.090400	90	53	400	150	350	5,5	18	6	11	25H7	12H6	52	M12	M8
K1556.125280	125	53	280	-	250	5,5	18	6	11	25H7	16H6	96	M12	M10
K1556.125400	125	53	400	150	350	5,5	18	6	11	25H7	16H6	96	M12	M10
K1556.125630	125	53	630	200	450	5,5	18	6	11	25H7	16H6	96	M12	M10

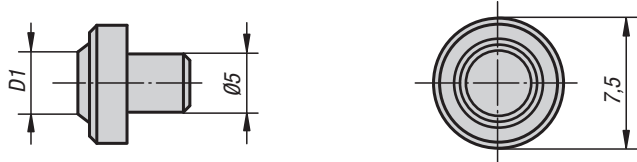
Jaw pins



flattened



cup point



Material, version:
Tool steel, hardened.

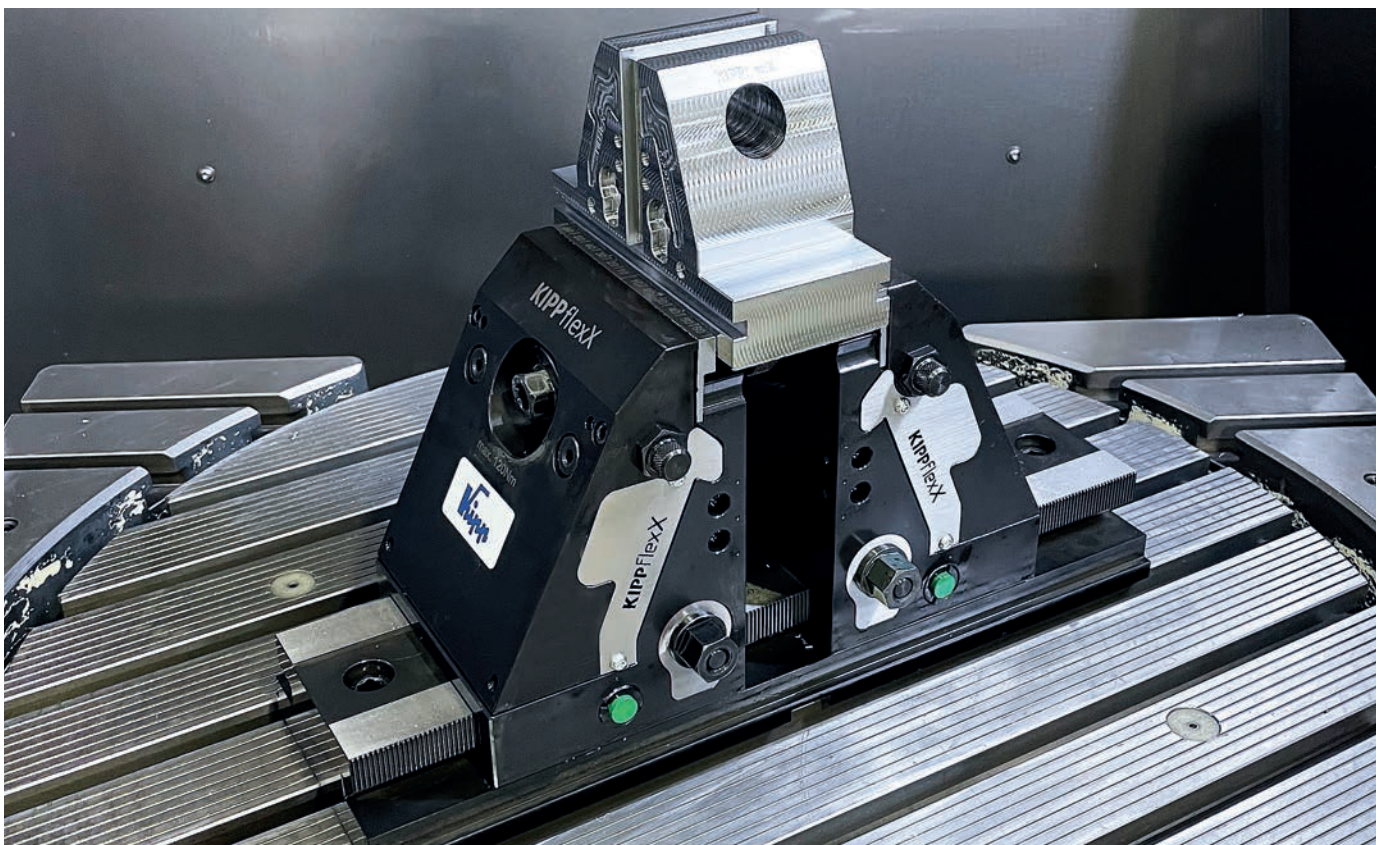
Sample order:
K0946.05600

Note:
Suitable for standard jaw plates and jaw adapters of round workpieces.
Installed by pressing in.

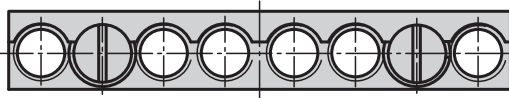
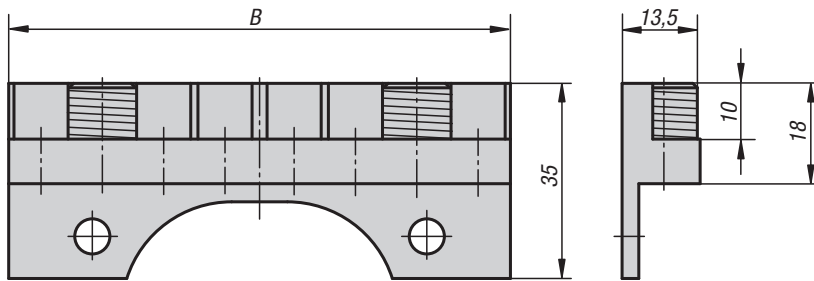
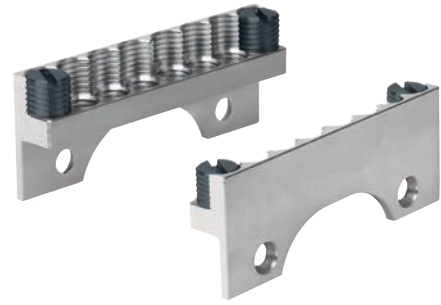
KIPP Jaw pins

Order No.	Version 1	D1	Application
K0946.05000	flattened	7,5	material over 1000 N/mm ² tensile strength
K0946.05400	cup point	4	material up to ca. 1000 N/mm ² tensile strength
K0946.05600	cup point	6	material up to ca. 1000 N/mm ² tensile strength

Applications



Cylinder clamping sets



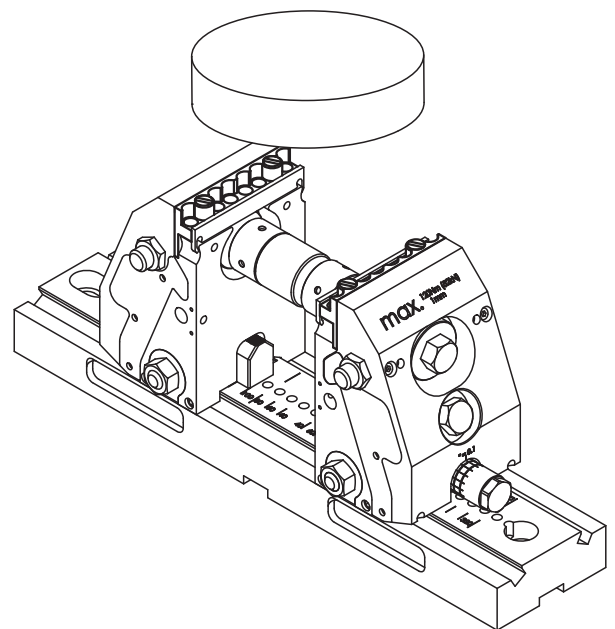
Material:
Tool steel.

Version:
Vice jaw hardened, bright.
Pins hardened, black oxidised.

Sample order:
K0989.09035

Note:
For holding round workpieces.
Max. clamping travel of jaw is 1 mm.

Supplied in pairs.



KIPP Cylinder clamping sets

Order No.	B	Clamping range min. - max.
K0989.09035	90	20 mm - 250 mm
K0989.12535	125	20 mm - 320 mm

Couplings

for cross-clamping

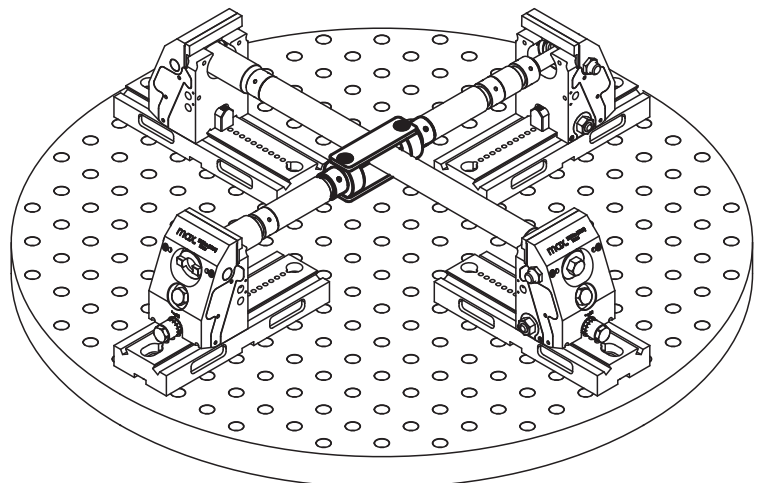
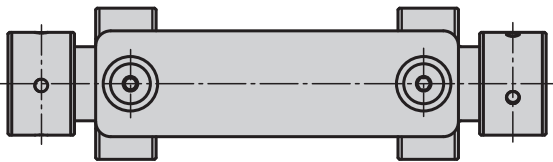
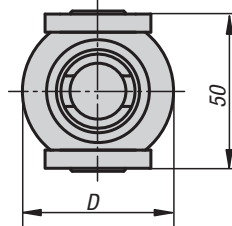
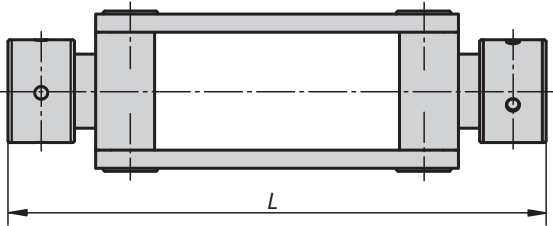


Material:
Carbon steel.

Version:
Black oxidised.

Sample order:
K0992.178

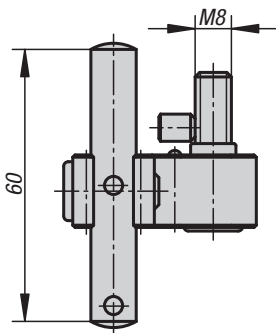
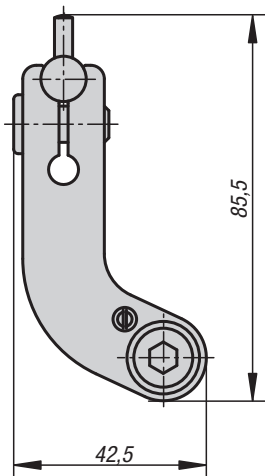
Note:
Two 5-axis clamping systems can be connected using a coupling for cross-clamping, allowing a workpiece to be held on four sides.



KIPP Couplings for cross-clamping

Order No.	D	L
K0992.178	50	178

Stop sets



Material:

Steel.

Version:

Swivel arm, black oxidised.
Stop pin bright.

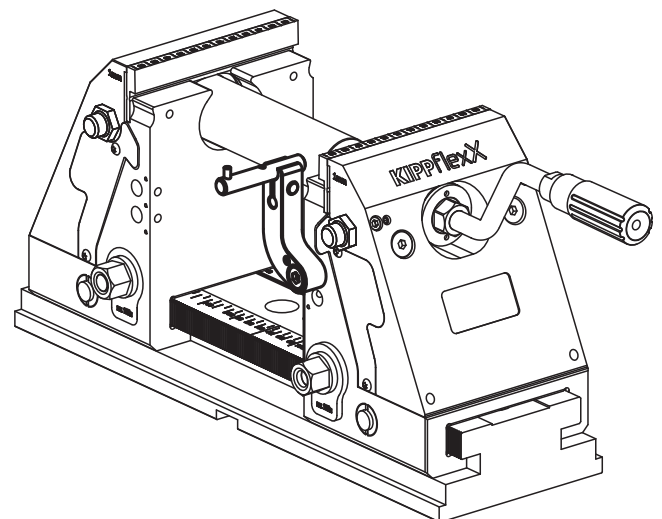
Sample order:

K0993.150

Note:

Stop set for direct fastening to jaws. The stop can be swivelled aside for machining the workpiece without losing the stop dimension.

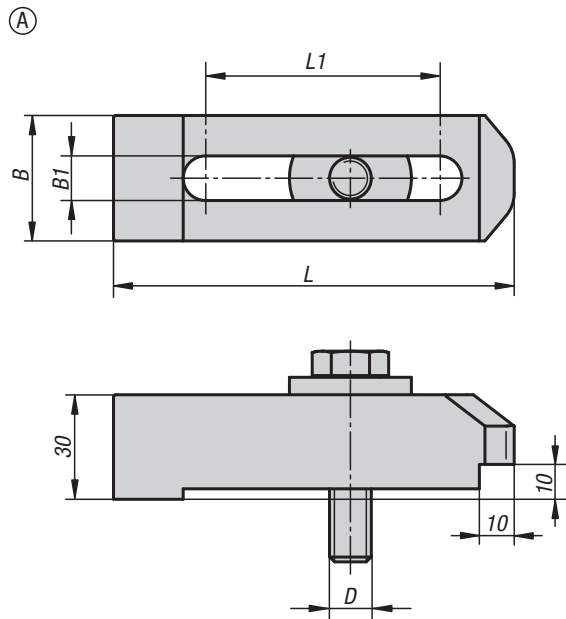
Supplied complete with attachment parts.



KIPP Stop sets

Order No.	Suitable for
K0993.150	5-axis vice

Clamping claw sets

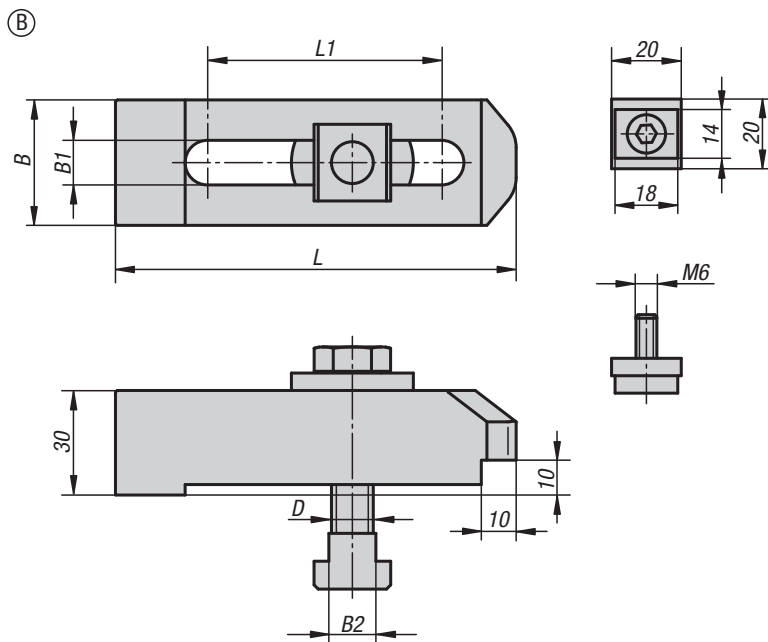


Material:
Carbon steel.

Version:
Black oxidised.

Sample order:
K1008.0012

Note:
Clamping claw set for compact 5-axis clamping system/ KIPPflexX.
All common T-slots, grid and fastening hole spacings can be covered.



KIPP Clamping claw sets

Order No.	B	B1	B2	D
K1008.0012	40	12,8	-	M12
K1008.0016	40	16,8	-	M16
K1008.1412	40	12,8	13,5	M12
K1008.1816	40	16,8	17,5	M16

Torque wrench

for 5-axis clamping system



Material:

Steel.

Version:

Surface: hard chromed

Sample order:

K1489.01

Note:

Torque wrench 40-200 set:

Precision +/- 3% of the scale value (in direction of actuation)

(5107-3 CT +/- 4% release precision)

Secure: - haptic (short path trip)

- acoustic (snap element)

Designed for rough workshop use.

Broad spectrum of use for controlled screw tightening. Applications in industry and trades.

Optimised sealing ring for protection from foreign matter.

Ratchet repair set for customer-oriented self-assembly permits use for decades.

Handle with anti-roll for easier power transmission through more grip.

Adjustment aid through indexing points for optimised operator guidance guarantees secure and fast setting of the desired torque value by turning the handle.

Secure locking of the setting values through detent on the swivel head.

Lock symbols signal the respective locking condition.

Possibility to fasten rope loop through openings on the locking mechanism swivel head.

Easily readable, contrast-rich scale.

Permanent readability through laser labelling of the scale sleeve.

Integrated switch lever.

Certified acc. to DIN EN ISO 6789-2:2017.

With calibration certificate and serial number.

Supplied in stable hexagonal hinged box.

Square acc. to DIN 3120, ISO 1174-1, DIN EN ISO 6789-2:2017.

Key insert (hex):

With knurling

Surface: chrome-plated, polished

DIN 3124, ISO 2725-1

Recommendation:

Annual check interval for torque wrenches, in which the upper limit is 5,000 load cycles.

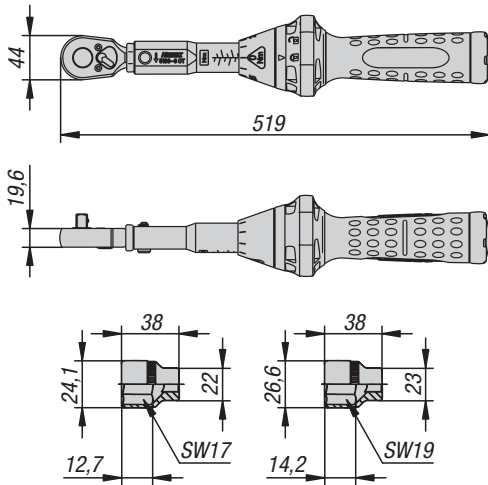
Supplied with:

Set comprising:

Torque wrench

Key insert SW17

Key insert SW19



Functional principle:

Operating principle of torque wrench

Unlock.

Press handle ca. 8 mm forward and rotate in the desired direction.

Continue to turn handle to set the desired torque.

Turn the handle backwards a little.

Lock.

Suitable for:

3 Axis clamping system

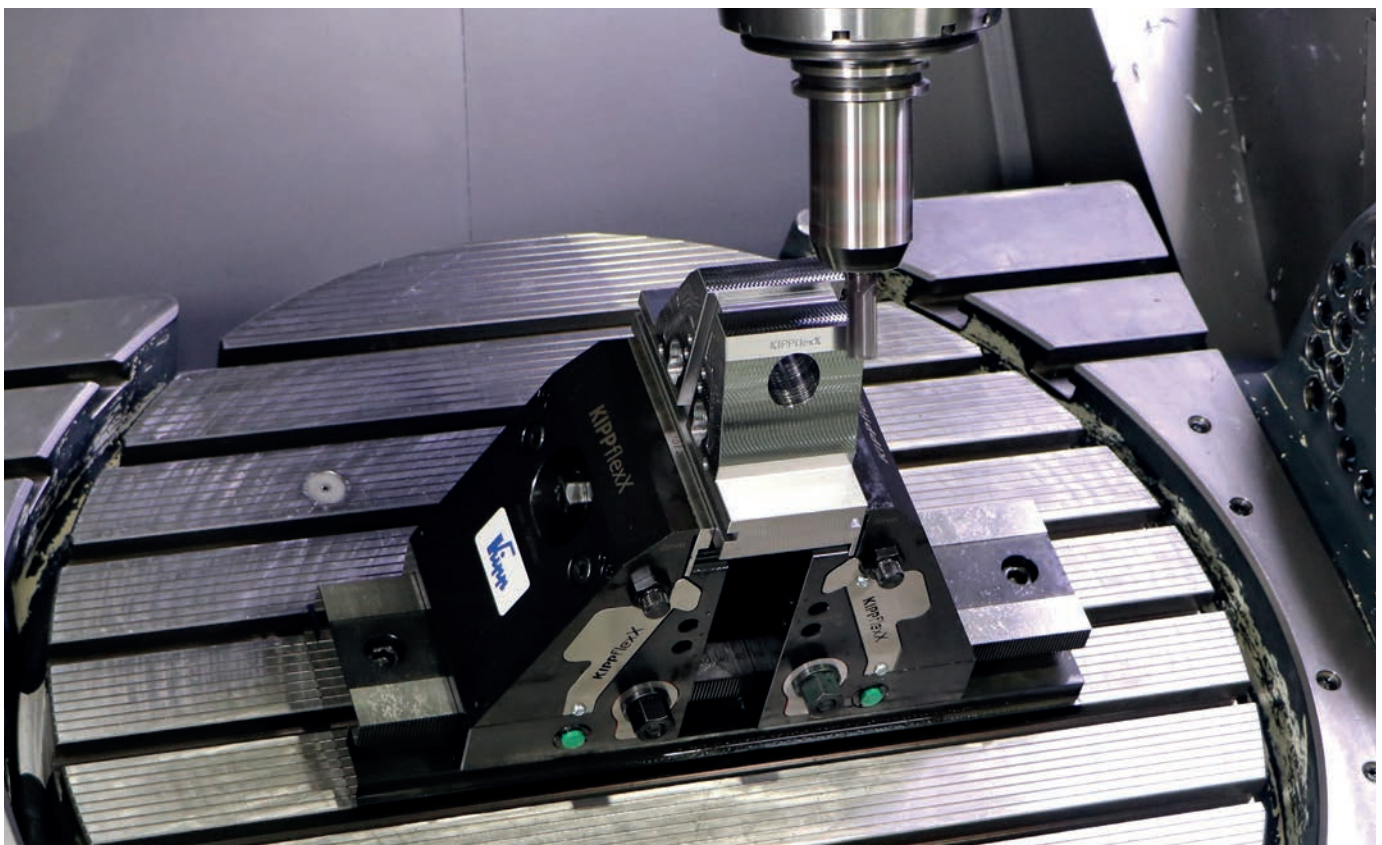
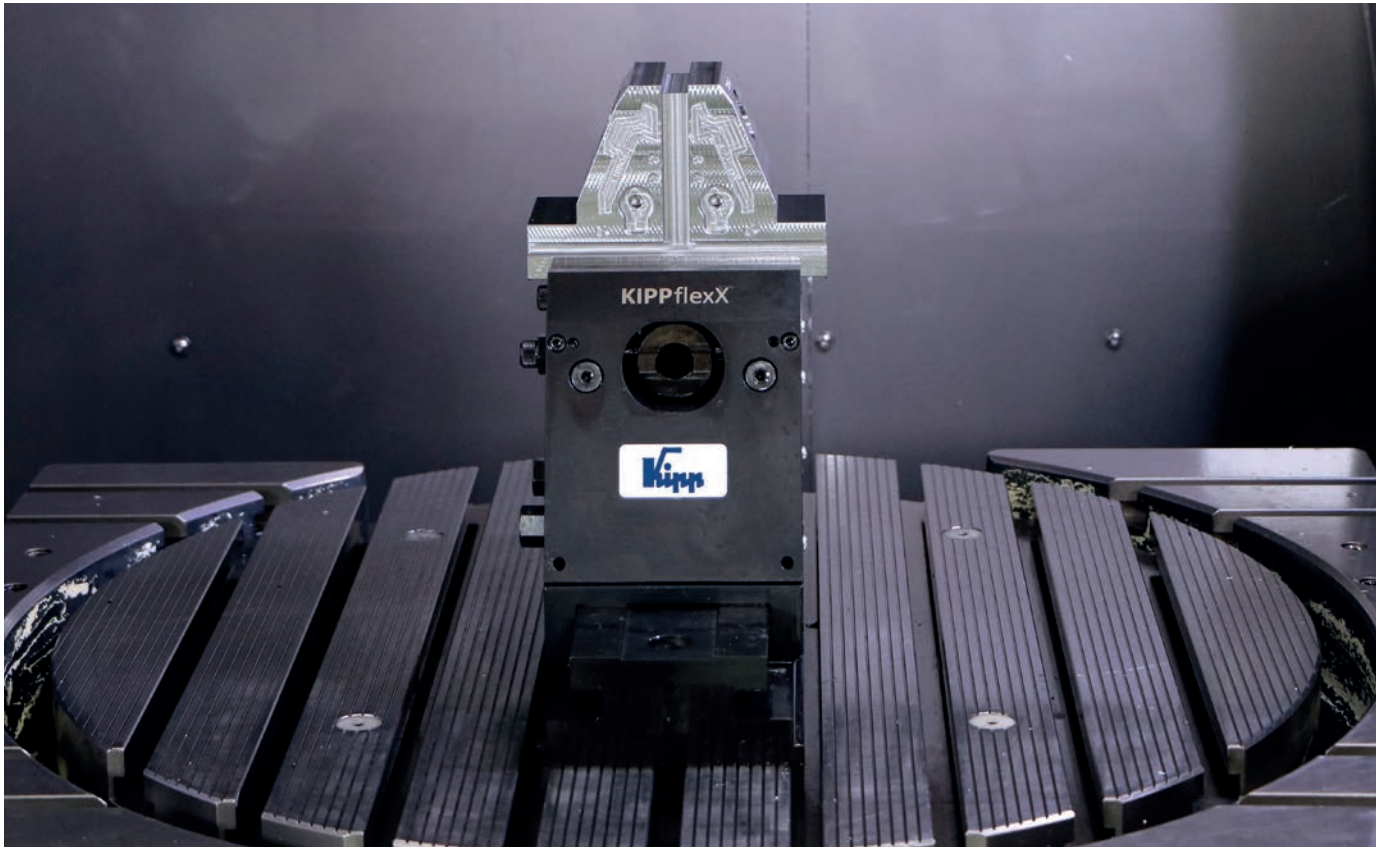
5 Axis clamping system

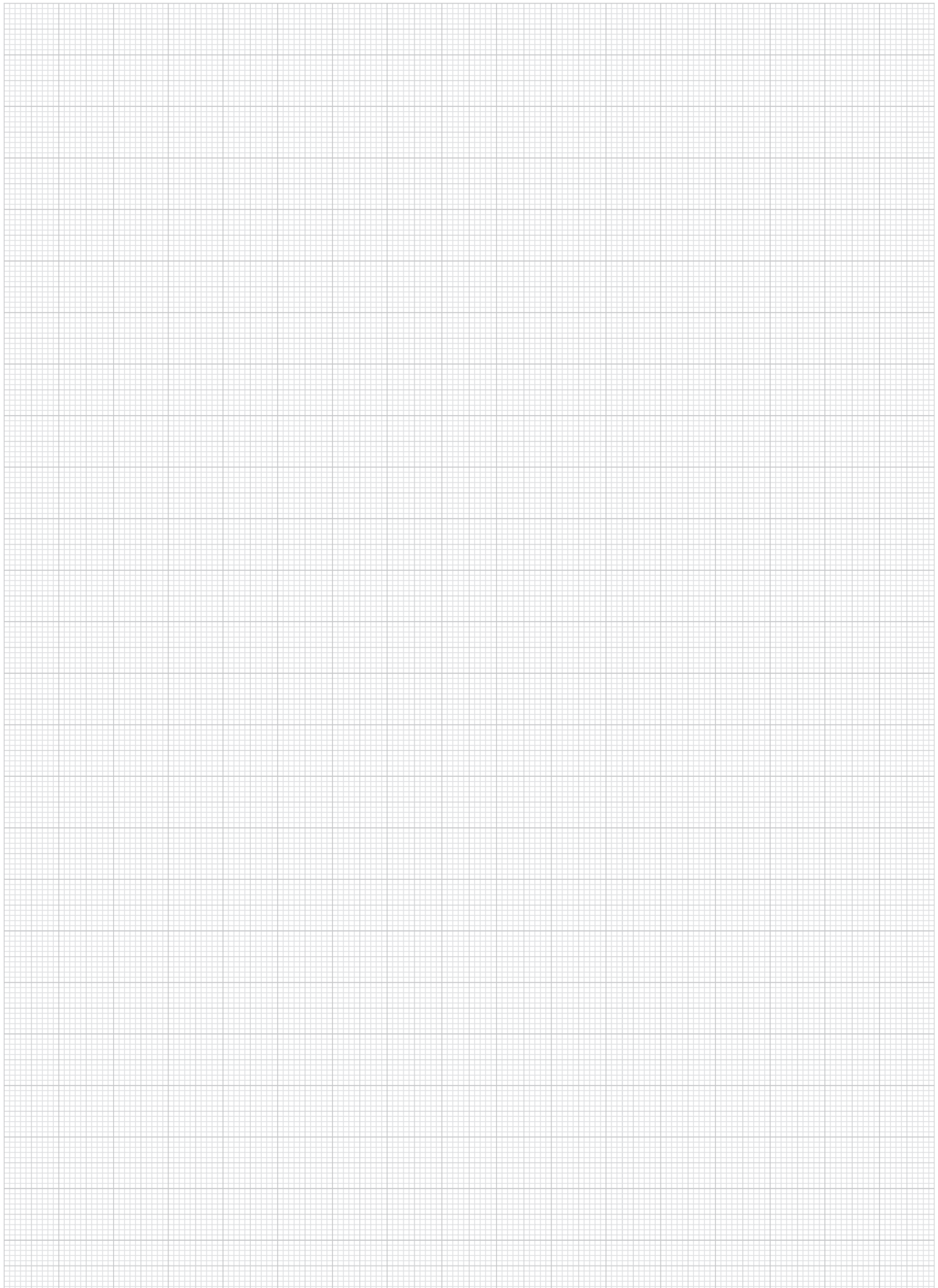
5 Axis Clamping system compact

KIPPflexX 5-axis vice

KIPP Torque wrench for 5-axis clamping system

Order No.	Item	Version 1	Product type	Torque Nm
K1489.01	Torque Wrench	set	revolving grip	40 - 200





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