

HEINRICH KIPP WERK



LOCKINGelements

Edition 07 16

CONTENTS



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PRODUKTGROUPS

Quarter-turn clamp locks	
grip plastic or stainless steel	6
Quarter-turn clamp locks flat stainless steel	7
Clamping plates for quarter-turn clamp locks	8
Ball lock pin	10
Ball lock pin stainless steel	11
Ball lock pin without head	12
Ball lock pin with twist knob	13
Locating bush for ball lock pin	14
Ball lock bushes	16
Ball lock bushes with twist lock	17
Locking pin for ball lock bushes	18
Magnetic bush	19
Pin for magnetic bush	20
Sliding clamp for slotted holes	22
Shim plates for sliding clamp for slotted hole	23
Sliding clamp for square bars	24
Base plates for sliding clamp for square bars	25

TECHNICAL INFORMATIONS

Quarter-turn clamp lock	
and Clamping plate K1061 and K1062	5
Ball lock pins K1063, K1064 and	
Locating bushes K1065	9
Ball lock bushes K1066 and K1067	15
Magnetic bushes K1068 and K1069	15
Sliding clamps K1070 and K1072	21





SERVICE HOURS (CET) MONDAY-THURSDAY FRIDAY

7.00 am - 5.30 pm 7.00 am - 3.30 pm



Technical Information for quarter-turn clamp lock and clamping plate K1061 + K1062



1. Application:





Make sure that the knob is in the "OFF" position.

the quarter-turn clamp lock into the clamping plate.

Insert the pin for

To lock components, turn the knob to the "ON" position. A click signals the opening/closing.

2. Function:

The knob is linked to the pin via an axle. When connecting the quarter-turn clamp lock and clamping plate, the pin engages with the clamping plate when it is turned and clamps the components.



Application examples: Altering camera positions





Production tolerances:



Repeat accuracy:

Improved repeat accuracy can be achieved with the aid of additional locating pins (not supplied).





Quarter-turn clamp locks

grip plastic or stainless steel



Form A mounting option

Form B mounting option

DЗ

æ

D1





Material:

Housing steel. Pin stainless steel. Knob stainless steel or thermoplastic PA (polyamide)

Version:

Housing nickel-plated. Pin bright. Knob reinforced PA fibreglass, black. Knob stainless steel, bright.

Sample order: K1061.516

Note:

M2 or M3 mounting screws are supplied. Form A mounting option for plate thickness 6 or 12 mm. Form B mounting option for plate thickness 6 to 20 mm.

Accessories:

Clamping plates K1062



KIPP Quarter-turn clamp locks, grip plastic or stainless steel

Order No. Plastic	Order No. Stainless steel	D	D1	D2	D3	D4	Н	H1	L	Μ	D5	D6	D7	D8	Т	T1
K1061.516	K1061.5161	5	14	25	20	21	19 / 19	6,5	15,5	M2 3-deep	14	26	4,4	2,4	6	6-10
K1061.817	K1061.8171	8	18	34	32	28	26 / 25,5	10	17	M3 4-deep	18	35	6,5	3,4	6	6-14
K1061.823	K1061.8231	8	18	34	32	28	26 / 25,5	10	23	M3 4-deep	18	35	6,5	3,4	12	12-20

KIPP Quarter-turn clamp lock, technical information

Order No. Plastic	Order No. Stainless steel	clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1061.516	K1061.5161	60	1,8	1,2	130 °C / 200 °C
K1061.817	K1061.8171	90	3,2	2,6	130 °C / 200 °C
K1061.823	K1061.8231	90	3,2	2,6	130 °C / 200 °C



Quarter-turn clamp locks flat

stainless steel



Form A mounting option

Form B mounting option





10

Material:

Housing steel. Pin stainless steel. Knob stainless steel.

Version:

Housing nickel-plated. Pin bright. Knob stainless steel, bright.

Sample order:

K1061.5162

Note:

M2 or M3 mounting screws are supplied. Form A mounting option for plate thickness 6 or 12 mm. Form B mounting option for plate thickness 6 to 20 mm.

Accessories:

Clamping plates K1062



KIPP Quarter-turn clamp locks, flat, stainless steel

Order No.	D	D1	D2	D3	D4	Н	H1	L	М	D5	D6	D7	D8	T	T1
K1061.5162	5	14	25	20	21	11,5	6,5	15,5	M2 3-tief	14	26	4,4	2,4	6	6-10
K1061.8172	8	18	34	32	28	15,4	10	17	M3 4-tief	18	35	6,5	3,4	6	6-14
K1061.8232	8	18	34	32	28	15,4	10	23	M3 4-tief	18	35	6,5	3,4	12	12-20

KIPP Quarter-turn clamp lock, technical information

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1061.5162	60	1,8	1,2	200 °C
K1061.8172	90	3,2	2,6	200 °C
K1061.8232	90	3,2	2,6	200 °C



Clamping plates for quarter-turn clamp locks

Form B

Clamping plate recessed

for plate thickness > 10 mm



Form A Clamping plate surface mounted for plate thickness from 6 to 10 mm



Form A mounting option





locating pin

nut



Quarter-turn clamp lock



D5

DЗ

3×120

D1-0.08

Material: Housing steel. Nut stainless steel.

Version: Housing nickel-plated. Nut bright.

Sample order: K1062.50

Note:

M2 or M3 mounting screws are supplied. Form A mounting option for plate thickness 6 to 10 mm. Form B mounting option for plate thickness over 10 mm.

KIPP Clamping plates for quarter-turn clamp locks

Order No. Clamping plate surface mounted	Order No. Clamping plate countersunk	D	D1	D2	D4	A	М	H2	SW	Η	H1	D3 for screw to DIN 912	D5 D	D6	L	L1
K1062.50	K1062.501	5	- / 14	25	21	10,5 / -	M14X1,5 / -	8	22	16/9	4,5	- / M2	15 / 14	25 / 26	3,5 / 5	- / 5
K1062.80	K1062.801	8	- / 20	32	26	13/-	M20X1,5 / -	10	30	18/11	5,5	- / M3	21 / 20	32 / 33	3,5 / 6	- / 5

Technical information for ball lock pins K1063, K1064 and locating bushes K1065



Note:

These are designed to quickly clamp 2 plates. The system can be used for changing mechanisms in assembly applications or for making other manual adjustments, such as conversions in automatic systems.

Repeat accuracy of \pm 0.25 for screwed-in and pushed-in version. The repeat accuracy can be increased with the aid of additional locating pins.



With the knob pressed down, insert the ball lock pin into the locating bush.



Release the knob to clamp the plates.



To remove, press the knob down and pull the ball lock pin out of the bush.

Assembly:

The mounting situation is customer specific. Plates of different thicknesses can be joined. The different mounting options form A to D are described on the product pages.

Recommended tolerances when using 2 items



Application without locating bush

Installation dimensions

Attention:

The specified pullout forces only apply in conjunction with locating bush K1065.



For ball lock pin D =	D	D4 min.	Т	T1
6	6	12,5	4,9	~6,6
10	10	8	5	~7,2

Application example:

Quick installation and removal of flange plates for paper rolls.





Ball lock pins





Mounting dimensions

Screw-in ball lock pin



Push-in ball lock pin



KIPP Ball lock pin

Order No.	D	D1	D2	D3	D4	М	L	L1	Н	H1	H2	H3	SW	D5	D6	T max.
K1063.621	6	12	25	8	-	M8	21	19	22,2	18	6	5,5	10	8	13	10
K1063.1024	10	16	35	11	3	M12x1,5	23,5	21,5	34,4	29	12	7	13	12	17	16

KIPP Ball lock pin, technical information

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1063.621	30	3	0,5	180 °C
K1063.1024	50	9	1,5	180 °C



Material:

Housing and push button steel. Ball, spring and snap ring stainless steel. O-ring FKM.

Version:

Housing nickel-plated. Knob tempered and nickel-plated. Ball tempered.

Sample order: K1063.621

Note:

Installation dimensions for Form A for plate thickness 6 mm. Installation dimensions for Form B for plate thickness 6 to 16 mm.

Attention:

The specified pullout forces only apply in conjunction with locating bush K1065.

Accessories:

Locating bush K1065.





Ball lock pins stainless steel



Mounting dimensions

Screw-in ball lock pin



Push-in ball lock pin





Material:

Housing and push button stainless steel. Ball, spring and snap ring stainless steel. O-ring FKM.

Version:

Housing bright. Push button bright. Ball tempered.

Sample order: K1063.6211

Note:

Installation dimensions for Form A for plate thickness 6 mm. Installation dimensions for Form B for plate thickness 6 to 16 mm.

Attention:

The specified pullout forces only apply in conjunction with locating bush K1065.

Accessories:

Locating bush K1065.



KIPP Ball lock pin stainless steel

Order No.	D	D1	D2	D3	М	L	L1	Н	H1	H2	H3	SW	D5	D6	T max.
K1063.6211	6	12	23	8	M8	21	19	25,8	18	6	5,5	10	8	13	10
K1063.10241	10	16	32	12	M12x1,5	23,5	21,5	39,4	29	12	7	13	12	17	16

KIPP Ball lock pin stainless steel, technical information

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1063.6211	30	3	0,5	180 °C
K1063.10241	50	9	1,5	180 °C



Ball lock pins without head



Mounting dimensions



Material:

Housing and push button steel. Ball, spring and snap ring stainless steel. O-ring FKM.

Version:

Housing nickel-plated. Knob tempered and nickel-plated. Ball tempered.

Sample order: K1063.10242

Note:

Installation dimensions for Form A for plate thickness 6 mm. Installation dimensions for Form B for plate thickness 6 to 16 mm.

Attention:

The specified pullout forces only apply in conjunction with locating bush K1065.

Accessories:

Locating bush K1065.



KIPP Ball lock pin without head

Order No.	D	D1	D2	D3	М	L	L1	Н	H1	SW	D6	T max.
K1063.10242	10	16	16	11	M12x1,5	23,5	21,5	34,4	28	13	17	16

KIPP Ball lock pin without head, technical information

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1063.10242	50	9	1,5	180 °C



Ball lock pins

with twist knob





Mounting dimensions









Material:

Housing and pin steel. Knob thermoplastic PA (polyamide). Ball and spring stainless steel.

Version:

Housing nickel-plated. Pin tempered and nickel-plated. Knob reinforced fibreglass, black. Ball tempered.

Sample order: K1064.620

Note:

Installation dimensions for Form A for plate thickness 6 or 12 mm. Installation dimensions for Form B for plate thickness up to 20 mm. Includes M2 or M3 mounting screws.

Attention:

The specified pullout forces only apply in conjunction with locating bush K1065.

Accessories:

Locating bush K1065.



KIPP Ball lock pin with twist knob

Order No.	D	D1	D2	D3	D4	Н	H1	L	Μ	D5	D6	D7	D8	T	T1
K1064.620	6	14	25	25	21	24,5	6,5	19,5	M2 3 tief	14	26	4,4	2,4	6	6-10
K1064.1022	10	18	34	34	28	31	10	21,5	M3 4 tief	18	35	6,5	3,4	6	6-14
K1064.1028	10	18	34	34	28	31	10	27,5	M3 4 tief	18	35	6,5	3,4	12	12-20

KIPP Ball lock pins with twist knob, technical information

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1064.620	30	3	0,5	130 °C
K1064.1022	50	9	1,5	130 °C
K1064.1028	50	9	1,5	130 °C





Locating bushes

for ball lock pin





Installation dimensions counterpart

Form A





Mounting example

Form B









Material:

Steel or stainless steel

Version: Steel nickel-plated. Stainless steel bright.

Sample order: K1065.61

Note:

Mounting dimensions for Form A: Mounting with nut, max. plate thickness 10 mm. Mounting dimensions for Form B: Screwed in, for plate thicknesses over 10 mm or in a blind hole.

On request:

Suitable nuts and assembly tool.

KIPP Locating bushes for ball lock pin

Order No.	Version	D	D1	М	Н	D2	D3
K1065.6	Steel	6	16	M12x1,5	15	16	13
K1065.10	Steel	10	20	M16x1,5	17	20	17
K1065.61	Stainless steel	6	16	M12x1,5	15	16	13
K1065.101	Stainless steel	10	20	M16x1,5	17	20	17

Technical information for ball lock bushes K1066 and K1067



Note:

These are used to hold panels or thin plates. The locking pin locks mechanically in the bush with 3 balls. The ball lock bush with rotary lock only releases the locking pin when the bush is manually rotated. The repeat accuracy of \pm 0.25 mm can be increased with the aid of additional locating pins.

Application:

Ball lock bushes and ball lock bushes with rotary lock.

Application example: End fixating of a sliding unit.



Technical information for magnetic bushes K1068 and K1069

Note:

These are used to hold panels or thin plates. The pin is held in the bush housing by a magnet. The repeat accuracy of \pm 0.25 mm can be increased with the aid of additional locating pins.

Application:





Application example:

Quick installation or removal of hatches





Ball lock bushes



Installation dimensions counterpart



















Material:

Housing steel. Balls and springs stainless steel.

Version: Housing nickel-plated. Balls tempered.

Sample order: K1066.7

Note:

The 3 balls inside the bush hold the locking pin with the specified retaining force. Installation dimensions for Form A: min. plate thickness 6 mm. Installation dimensions for Form B: max. plate thickness 10 mm. Installation dimensions for Form C: plate thickness > 10 mm. Installation dimensions for Form D: blind hole.

On request:

Suitable nuts.

Accessories:

Locking pin K1067.



KIPP Ball lock bushes

Order No.	Clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1066.7	7	1,8	1,8	180 °C
K1066.15	15	1,8	1,8	180 °C







Ball lock bushes with twist lock



Installation dimensions counterpart





Form C









Material:

Housing and locking elements steel. Balls and springs stainless steel.

Version:

Housing and locking element nickel-plated. Balls tempered.

Sample order:

K1066.71

Note:

The 3 balls inside the bush hold the locking pin with the specified retaining force. The element is secured or released by twisting the bottom part of the bush. Installation dimensions for Form A: min. plate thickness 6 mm. Installation dimensions for Form B: max. plate thickness 10 mm. Installation dimensions for Form C: plate thickness > 10 mm. Installation dimensions for Form D: blind hole.

On request:

Suitable nuts.

Accessories:

Locking pin K1067.

Application:





not locked

locked

KIPP Ball lock bushes with twist lock

Order No.	clamping force N	Shearing force kN	Pullout force kN	Temperature resistance up to
K1066.71	7	1,8	1,8	180 °C
K1066.151	15	1,8	1,8	180 °C



Locking pin

for ball lock bushes



Mounting instructions:





Material: Steel.

Version: Bright.

Sample order: K1067.8

Note: Repeat accuracy \pm 0.25. The repeat accuracy can be increased with the aid of locating pins.



KIPP Locking pin for ball lock bushes

Order No.	Shearing force	Temperature
	kN	resistance
		up to
K1067.8	1,8	180 °C



Magnetic bush



Installation dimensions counterpart

Form A





5

тах.



Form C





Form B



shearing force



Material:

Housing stainless steel. Magnet neodymium.

Version: Housing bright.

Sample order: K1068.6

Note:

A magnet in the bush attracts the pin (K1069) and holds it with the specified retaining force. Repeat accuracy \pm 0.25. The repeat accuracy can be increased with the aid of additional locating pins. Installation dimensions for Form A: min. plate thickness 6 mm. Installation dimensions for Form B: max. plate thickness 10 mm. Installation dimensions for Form C: plate thickness > 10 mm. Installation dimensions for Form D: blind hole.

On request: Suitable nuts.

Accessories:

Pin K1069

Recommended installation tolerances:



KIPP Magnetic bush

Order No.	Clamping force	Shearing force	Temperature
	N	kN	resistance
			up to
K1068.6	7	0,8	80 °C

clamping force

K1069

Pin for magnetic bush



Mounting dimensions









Material: Steel.

Version: Bright.

Sample order: K1069.6

Note:

Accessory to K1068. The pin is attracted to the magnetic bush K1068. Mounting option with nut (not included) or by screwing directly into the workpiece.

KIPP Pin for magnetic bush

Order No.	Shear force kN
K1069.6	0,9

Technical information for sliding clamps K1070 and K1072



Note:

The items are used as movable clamping elements on applications such as measuring scales.

Turning the knob to "ON", operates the clamping mechanism.

If the sliding clamp is mounted directly on a base plate and the plate is secured with a slotted hole or square, the clamping plate and the base plate can be moved.

If the sliding clamp is mounted directly on a base plate and the base plate is secured the plate and slotted hole or square bar can be moved.

Operating mode 1:

Sliding clamp with base element moveable - plates with slotted hole or square fixed



Operating mode 2:

Plates with slotted hole or square bar moveable - Sliding clamp with base element fixated





Sliding clamps

for slotted holes







Installation dimensions counterpart



Displacement on static load from one direction



The forces apply to steel or stainless steel plates





Material:

Housing die-cast zinc. Knob thermoplastic PA (polyamide).

Pins and wedge stainless steel. Thrust pad POM.

Version:

Housing chromed. Knob black or orange, glass-bead reinforced.

Sample order: K1070.32

Note:

Sliding clamps for slotted holes are inserted into an upper plate with an 10-mm-wide slotted hole and then fixed to the base plate. The knob must be turned to the "OFF" position while the component is being installed. The sliding clamps are used for precision plates with a thickness of 3 mm or 6 mm. For other thicknesses shim plates K1071 must be used.

By turning the knob, the pins mounted in the bottom section of sliding clamp are drawn together by the springs and forced downwards. The two pins press against the surface and clamp the sliding clamp. Two spring plungers lift the sliding clamp in the "ON" position allowing easier movement.

Accessories:

Base plates K1071.

Functional principle:

The sliding locks have 2 different operating principles.

Operating principle 1:

The sliding lock is movable.

The sliding lock is bolted onto a loose plate or block placed under a fixated slotted plate. The sliding lock together with the plate or block can be slid up and down the fixated slotted plate.

Operating principle 2:

The sliding lock is fixated.

The sliding lock is bolted onto a fixated plate or block placed under a loose slotted plate. The sliding lock cannot move but the slotted plate can be slid up and down over the fixated plate or block.

KIPP Sliding clamps for slotted holes

Order No. Knob	Order No. Knob	Т	T2	Retaining force max.	Temperature resistance
black	orange			N	up to
K1070.31	K1070.32	3	3	500	90 °C
K1070.61	K1070.62	6	6	500	90 °C



Shim plates

for sliding clamps for slotted hole





Material: Stainless steel

Version: Bright.

Sample order: K1071.2

Note:

Shim plates are required for sliding clamps for slotted holes with a plate thickness more than 3 mm or 6 mm.



Sliding clamp for slotted holes	Suitable shim plate	Precision plate T1 (mm)
K1070.31	-	3 _{-0,25}
K1070.32	K1071.2	5 _{-0,3}
	-	6 _{-0,3}
K1070.61 K1070.62	K1071.2	8 _{-0,36}
KTOTO.OZ	K1071.3	9 _{-0,36}

KIPP Shim plates for sliding clamps for slotted hole

Order No.	Т	
K1071.2	2	
K1071.3	3	



Sliding clamps

for square bars





НЗ _{h9}

Displacemen

 W_{h9}



Material:

Housing die-cast zinc. Knob thermoplastic PA (polyamide). Pins and wedge stainless steel. Leaf spring phosphated bronze.

Version:

Housing chromed. Knob black or orange, glass-bead reinforced. Pins and wedge bright.

Sample order:

K1072.16162

Note:

Sliding clamps are mounted on a base plate and secured with four screws.

A square bar is then inserted through the opening in the housing. The square bar can be moved in the "ON" position; turning the knob to "OFF" holds the square bar in position.

By turning the knob, the pins mounted in the bottom section of the sliding clamp are drawn together by the springs and forced downwards. The two pins press against the surface and fixate the sliding clamp. Two spring plungers lift the sliding clamp in the "ON" position allowing easier movement.

Accessories:

Base plates K1073. Scales stainless steel K0759.

Functional principle:

The sliding locks have 2 different operating principles.

Operating principle 1:

The sliding lock is movable.

The sliding lock is bolted onto a base plate (K1073), loose plate or block placed under a fixated rectangular bar. The sliding lock together with the plate or block can be slid up and down the fixated bar.

Operating principle 2:

Static load

The sliding lock is fixated.

The sliding lock is bolted onto a fixated plate or block placed under a loose rectangular bar. The sliding lock cannot move but the bar can be slid up and down over the fixated plate or block.

Order No. Knob black	Order No. Knob orange	L	D	D1	Η	H1	H2	H3	H4	H5	Р	W	S	Retaining force max. N	Temperature resistance up to
K1072.12121	K1072.12122	40	28	4,5	36	22	18,5	12	-	6	32	12	-	500	90 °C
K1072.16161	K1072.16162	40	28	4,5	40	26	22,5	16	-	8	32	16	-	500	90 °C
K1072.2591	K1072.2592	50	35	5,5	37	23	18,5	9	1	4,5	40	25	16	800	90 °C
K1072.25121	K1072.25122	50	35	5,5	40	26	21,5	12	1	6	40	25	16	800	90 °C
K1072.32121	K1072.32122	50	35	5,5	40	26	21,5	12	1	6	40	32	16	800	90 °C
K1072.32161	K1072.32162	50	35	5,5	44	30	25,5	16	1	8	40	32	16	800	90 °C

Displacement on static load from one direction



The forces apply to steel or stainless steel square material

KIPP Sliding clamp for square bars



Base plates

for sliding clamp for square bars







Material: Stainless steel

Version: Bright.

Sample order: K1073.40

Note:

Base plates raise the sliding clamp by 3 mm. It is used to mount the sliding clamp to a fixated square bar.

KIPP Base plate for sliding clamps for square bars

Order No.	L	D1	Р
K1073.40	40	4,5	32
K1073.50	50	5,5	40





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