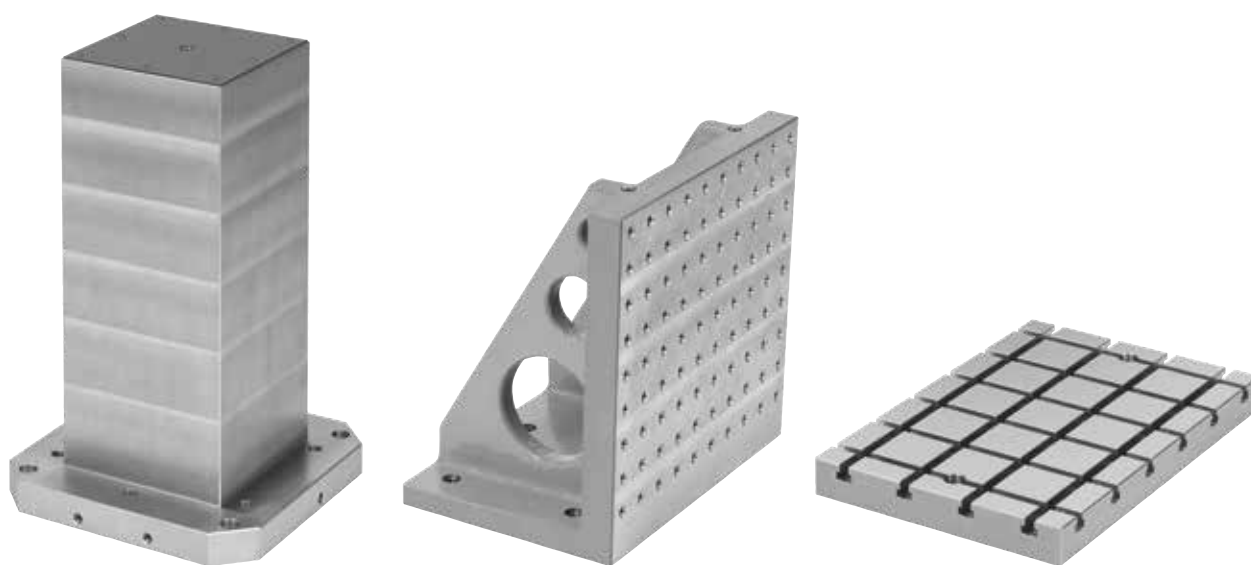
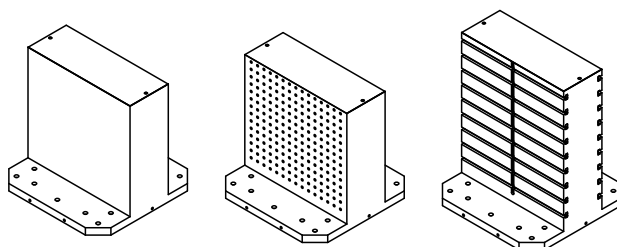
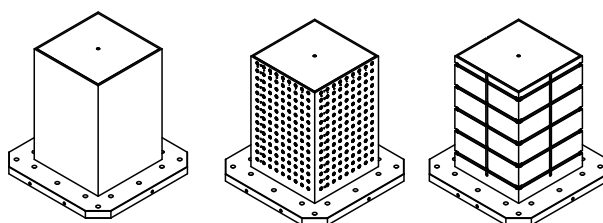
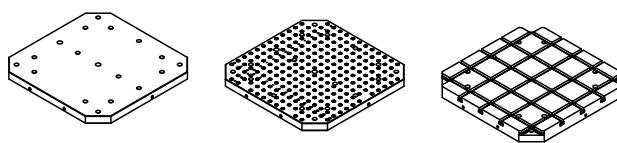


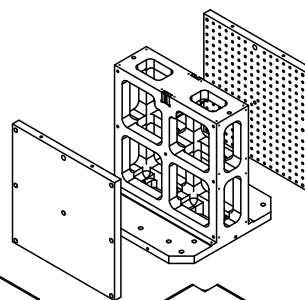
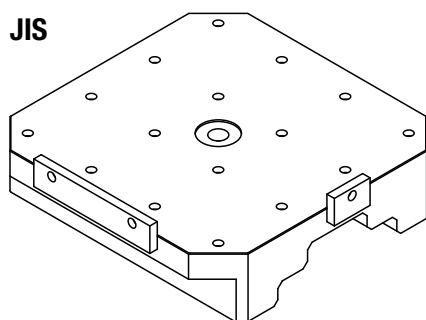
Basic elements



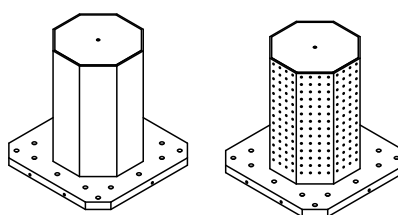
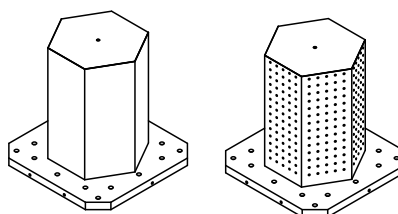
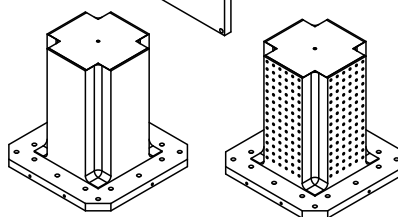
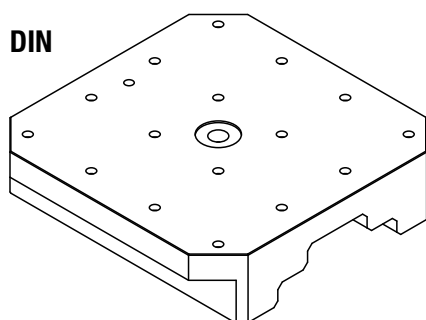




JIS



DIN



Positioning the base elements

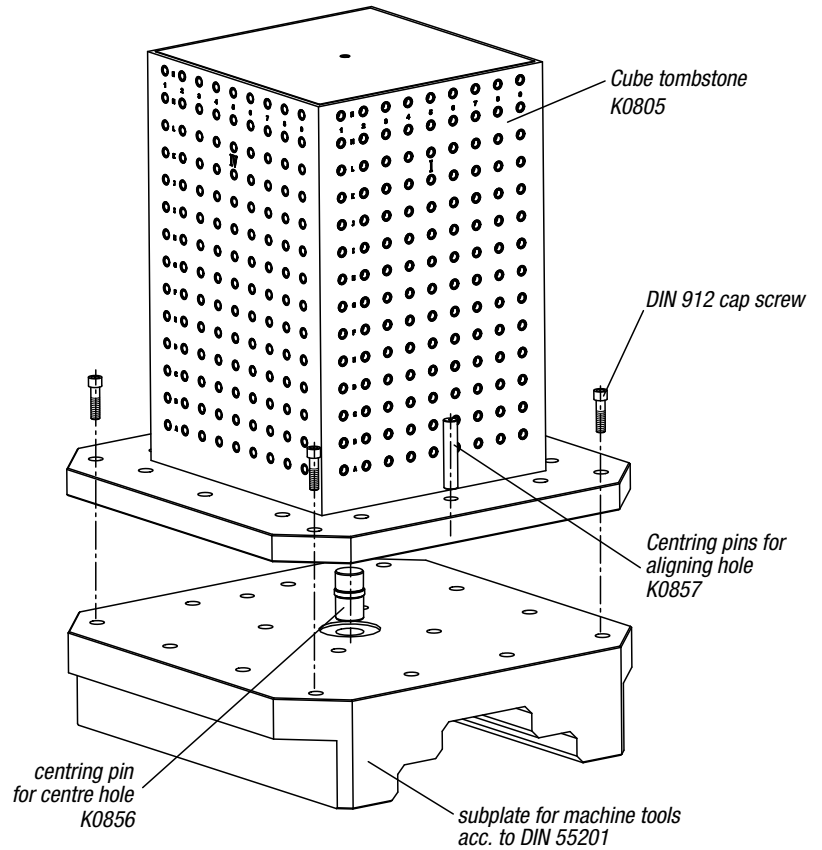


Double side tombstone K0803, cube tombstone K0805 and subplates K0806 have two positioning options:

a) Positioning on subplates for machine-tools acc. to DIN 55 201.

Positioning procedure:

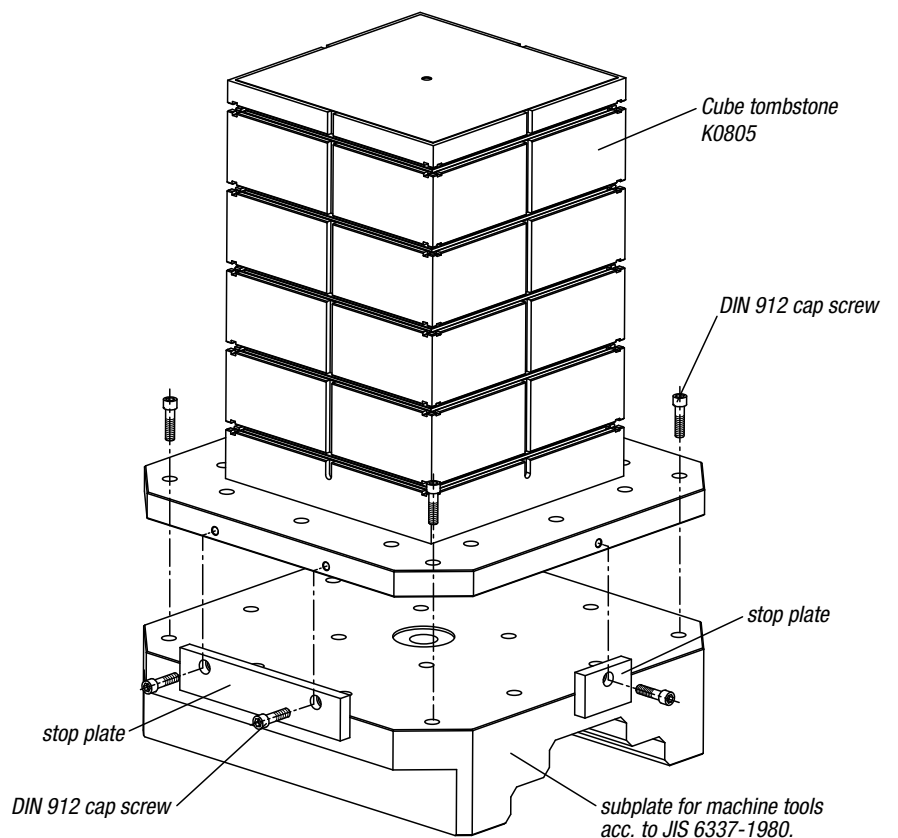
1. Insert locating pin in the centre bore of the subplate.
2. Position the tombstones, cube tombstones and subplates over the central hole.
3. Use the locating pin for the aligning hole to align the basic elements.



b) Positioning on subplates for machine tools acc. to JIS 6337-1980.

Positioning procedure:

1. Mount stop plates on the machine table.
2. Attach stop points to the reference faces (stop plates) using socket head screws.

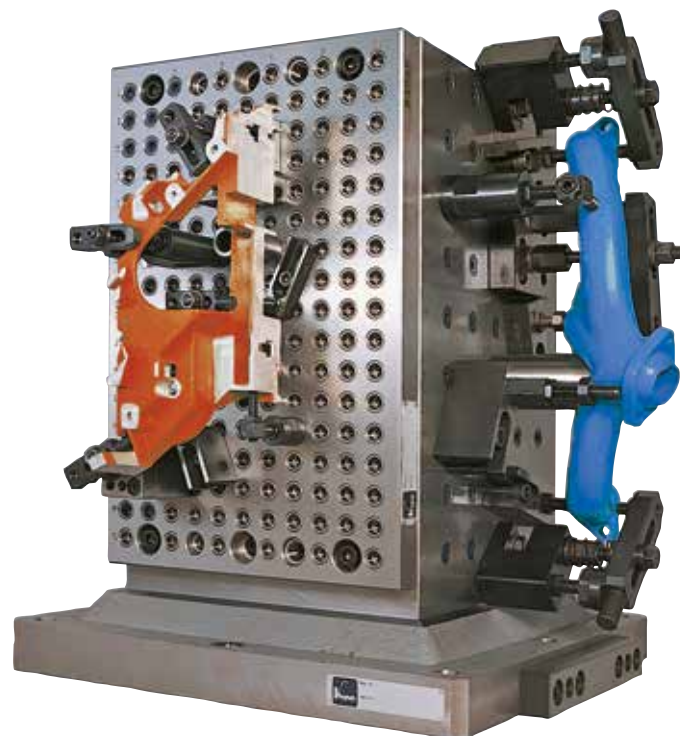
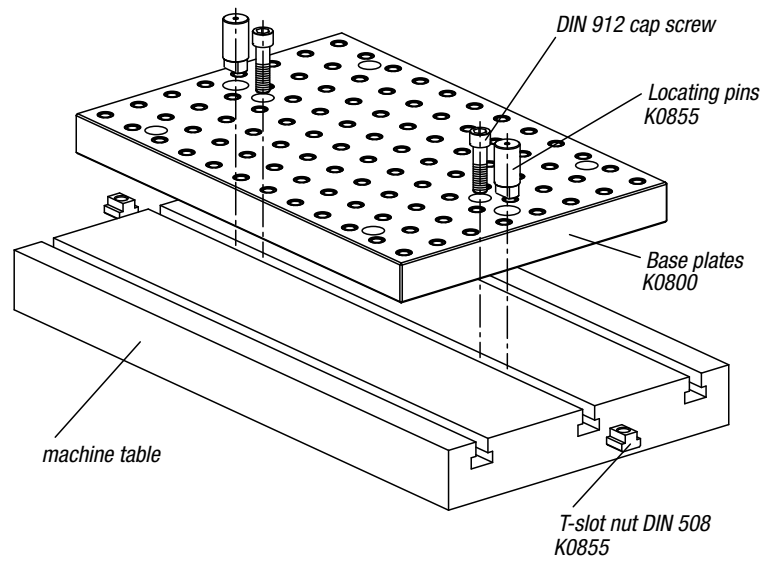


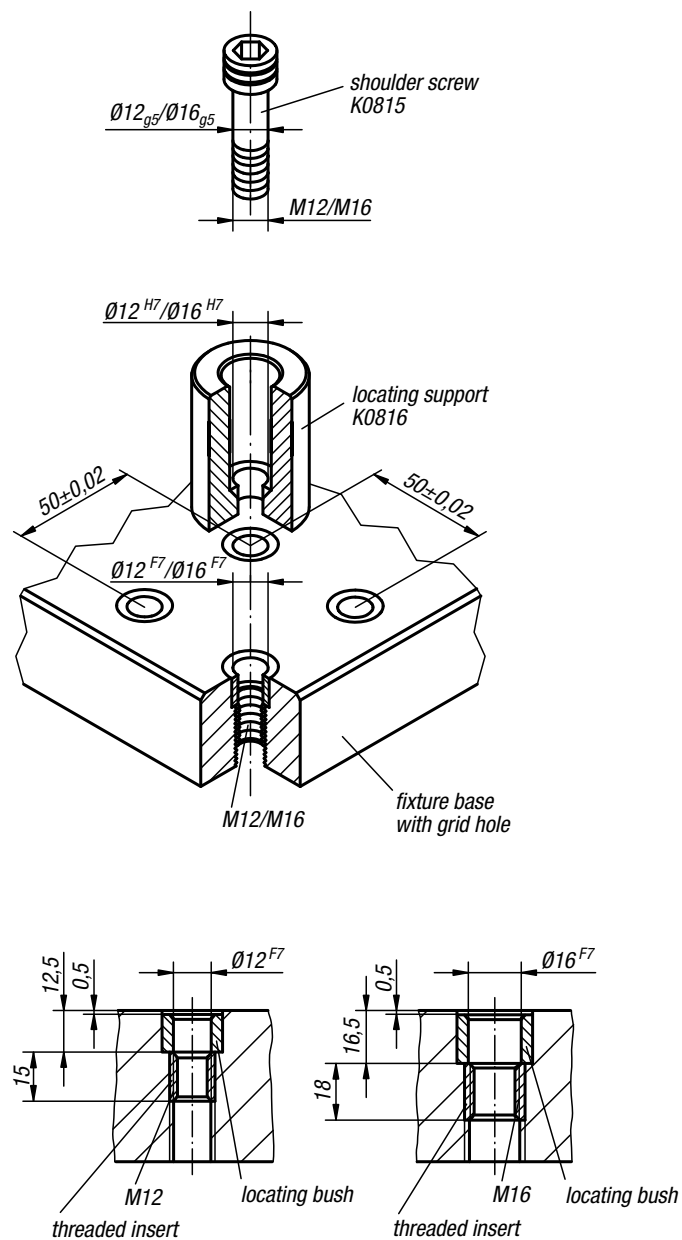
Positioning base elements on machine tables



Locating pins are used for positioning tooling plates K0800. The tooling plates each have four precision holes for the locating pins (two holes on each axis).

An M6 screw inserted into the head of the locating pin is used to insert this pin accurately into the T-slots or to remove it.





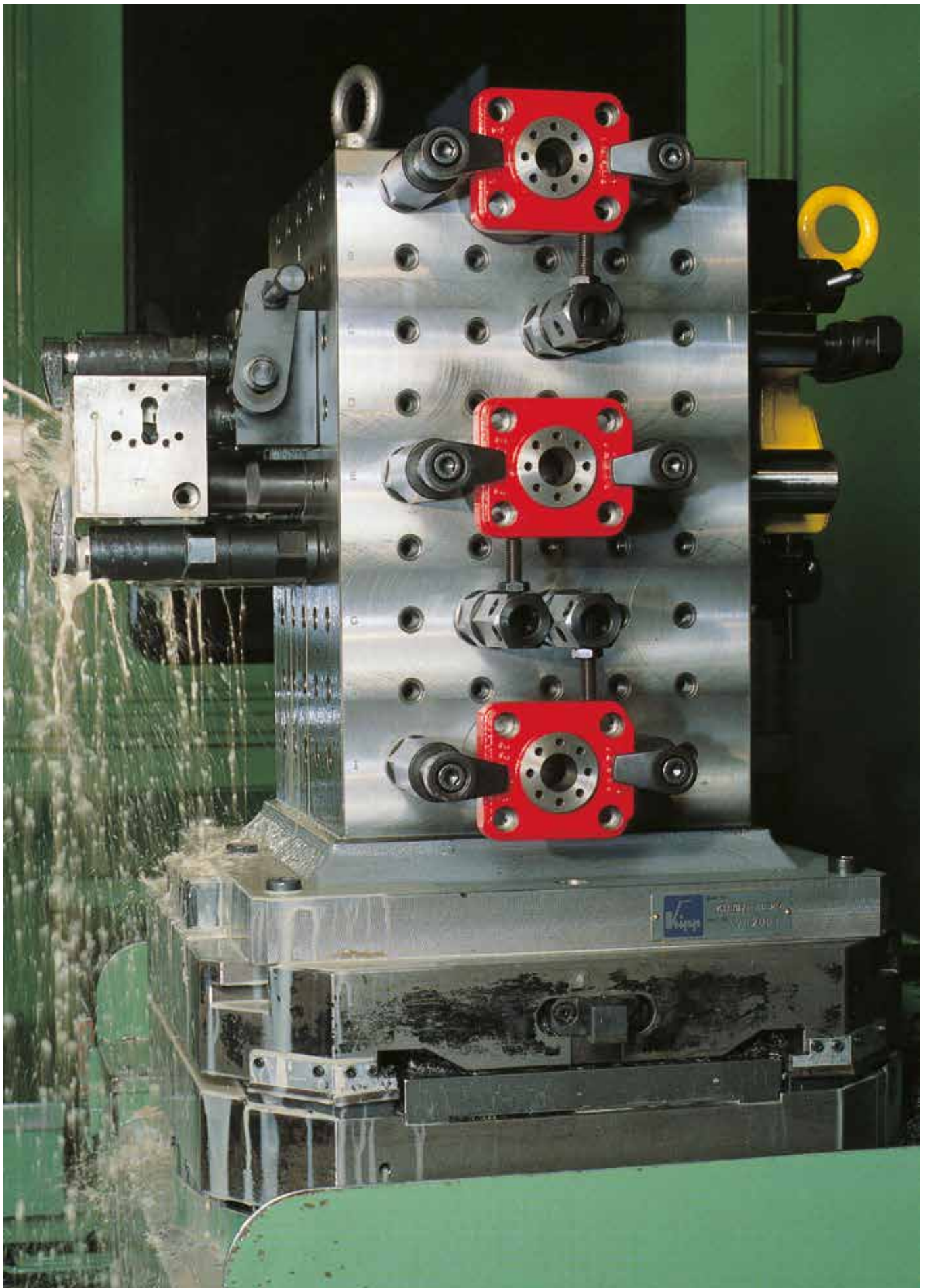
Grid hole:

The characteristic feature of the grid hole is its dual function: the coaxial arrangement of the locating and the threaded parts allows positioning and fastening at the same time with one grid hole (see illustrations). As a result, the size of the fixture elements can be reduced to a minimum and their flexibility increased accordingly.

Each grid hole consists of two parts:

- reamed bush. Material: hardened tool steel.
- threaded insert. Material: carbon steel, tempered to ca. 1100-1300 N/mm².

Since the reamed bushes are recessed 0.5 mm from the surface of the fixture bases, the mounting surfaces can be re-machined in the event of wear.



“KIPPblock” workholding towers are used as an alternative to cast or steel tooling columns. Due to its low specific weight (lighter than aluminium), mineral cast towers are suitable for keeping the loading on 4 and 5-axis machines as low as possible. Ideal for use on machines with high accelerations and rapid traverse speeds.

The flexibility of design is highly convincing. Steel jacketed versions are also available in a wide range of shapes and sizes.

ADVANTAGES:

- Outstanding absorption properties, 6-10 times better than grey cast iron
- Very low specific weight, lighter than aluminium
- Low heat conductivity
- Flexible planning regarding design
- Up to 30% increased service life of cutting tools

For many years mineral cast has been used as an alternative to iron castings and steel constructions. Today it is the leading technology for many applications. It is thanks to mineral cast that new innovations in electronics and medical technology were made possible.

MINERAL CAST TECHNOLOGY

1. Mineral cast is a dual component system consisting of a mineral filler and an epoxy resin bonding agent.
2. The mineral filler makes up roughly 90% of the total weight.
3. Mineral cast is produced using a cold casting method injected into precision negative moulds at room temperature.
4. Due to the true form and high precision casting method, added elements such as plates, thread inserts, guides or tubes can be precisely placed in the casting mould.



Mineral cast

KIPPblock



Mineral cast pyramid

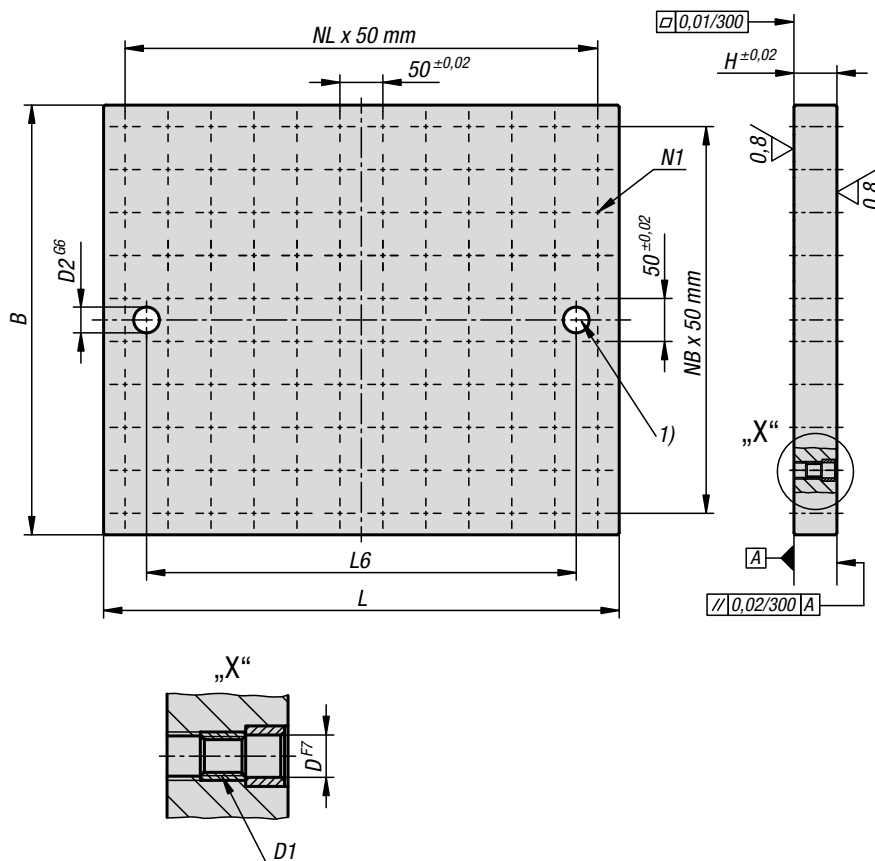
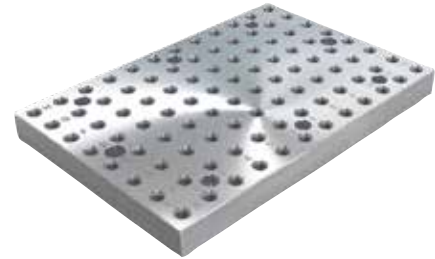


**Mineral cast workholding tower
with steel jacket**



Baseplates, grey cast iron

with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K0800.21240060

Note:
Grid spacing 50 ± 0.02 mm.
Baseplates with grid holes are used for constructing modular fixtures. These baseplates are positioned and mounted directly on machine tables.
The two aligning holes are used to align the baseplate on the machine table.
Fastening holes are produced by the customer to suit their machine table.
The alphanumerically labelled grid holes guarantee a defined assignment of clamping elements by repeat setups.
Please order positioning pins to equip the baseplates separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

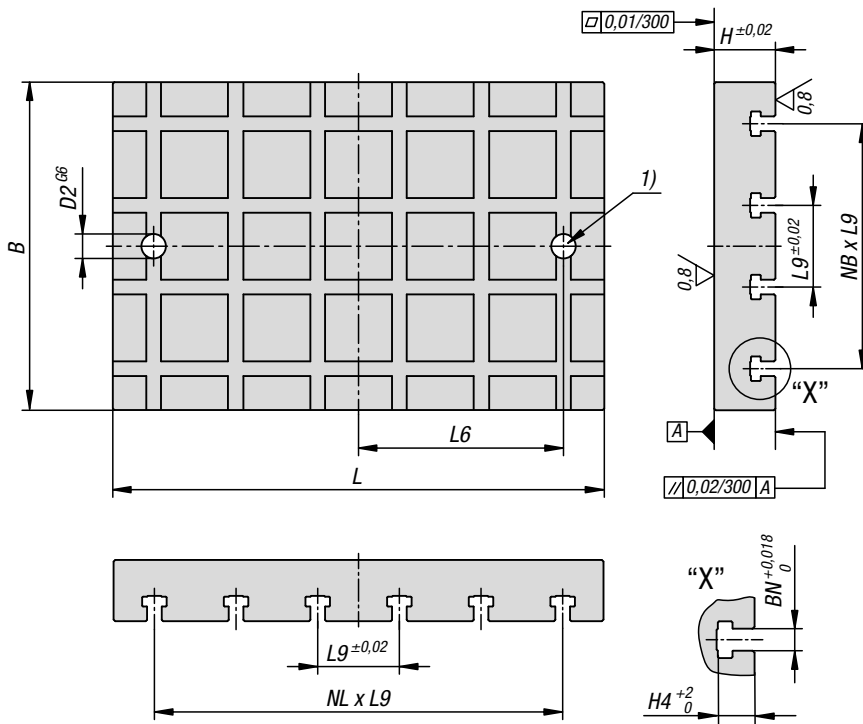
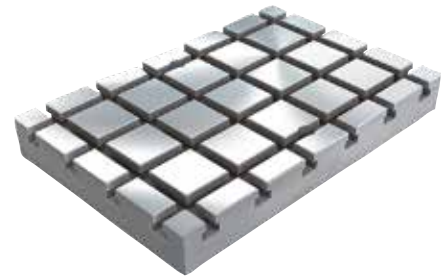
Drawing reference:
1) locating hole

KIPP Baseplates, grey cast iron with grid holes

Order No.	L	B	H	L6	D	D1	D2	N1=No. of grid holes	NL=No. lengthwise	NB=No. across
K0800.21240060	600	400	50	500	12	M12	30	96	11	7
K0800.21250060	600	500	50	500	12	M12	30	120	11	9
K0800.21260060	600	600	50	500	12	M12	30	144	11	11
K0800.21240080	800	400	50	700	12	M12	30	128	15	7
K0800.21245090	900	450	50	800	12	M12	30	158	17	8
K0800.21250100	1000	500	50	900	12	M12	30	200	19	9
K0800.21260120	1200	600	50	1100	12	M12	30	288	23	11
K0800.21640060	600	400	50	500	16	M16	30	96	11	7
K0800.21650060	600	500	50	500	16	M16	30	120	11	9
K0800.21660060	600	600	50	500	16	M16	30	144	11	11
K0800.21640080	800	400	50	700	16	M16	30	128	15	7
K0800.21645090	900	450	50	800	16	M16	16	158	17	8
K0800.21650100	1000	500	50	900	16	M16	30	200	19	9
K0800.21660120	1200	600	50	1100	16	M16	30	288	23	11

Baseplates, grey cast iron

with T-slots



Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K0800.31440060

Note:
Baseplates with T-slots are used for constructing modular fixtures. These baseplates are positioned and mounted directly on machine tables. The precise longitudinal and transverse slot spacing ensures very high repeat clamping accuracy. The two locating holes are used to align the baseplate on the machine table. Fastening holes are produced by the customer to suit their machine table. Please order locating pins to locate the baseplates separately. Ring bolts with T-nuts for hoisting are supplied. Other dimensions available on request.

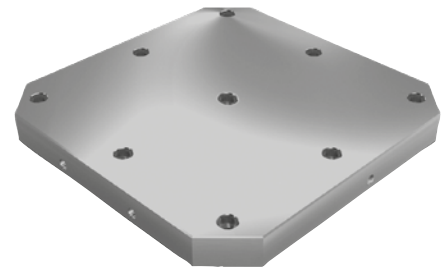
Drawing reference:
1) locating hole

KIPP Baseplates, grey cast iron with T-slots

Order No. BN=Slot width 14	Order No. BN=Slot width 18	L	B	H	D2	L6	L9	NL=No. lengthwise	NB= No. across
K0800.31440060	K0800.31840060	600	400	60/75	30	500	100	5	3
K0800.31450060	K0800.31850060	600	500	60/75	30	500	100	5	4
K0800.31460060	K0800.31860060	600	600	60/75	30	500	100	5	5
K0800.31440080	K0800.31840080	800	400	60/75	30	700	100	7	3
K0800.31445090	K0800.31845090	900	450	60/75	30	800	100	8	3
K0800.31450100	K0800.31850100	1000	500	60/75	30	900	100	9	4
K0800.31460120	K0800.31860120	1200	600	60/75	30	1100	100	11	5

Subplates, grey cast iron

with pre-machined clamping faces



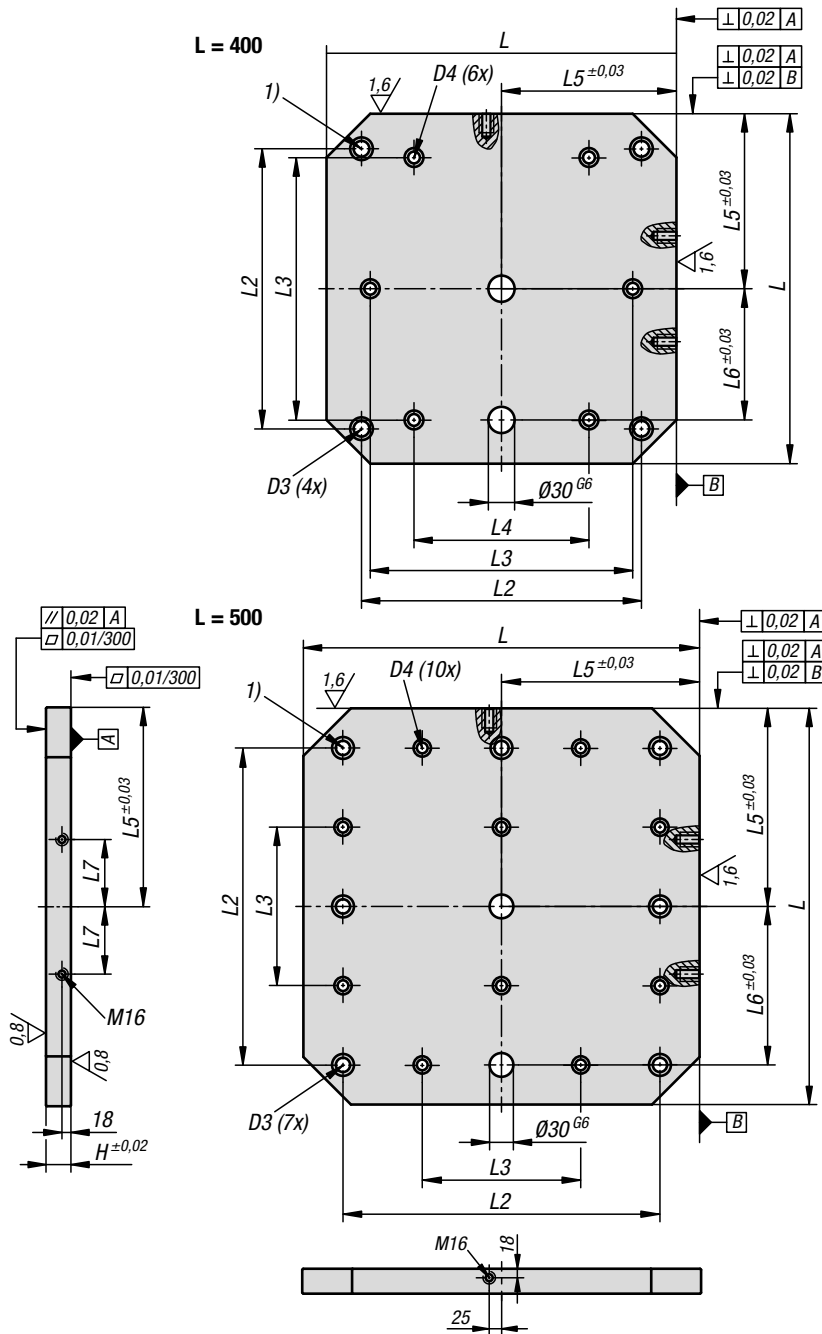
Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K0806.1004040

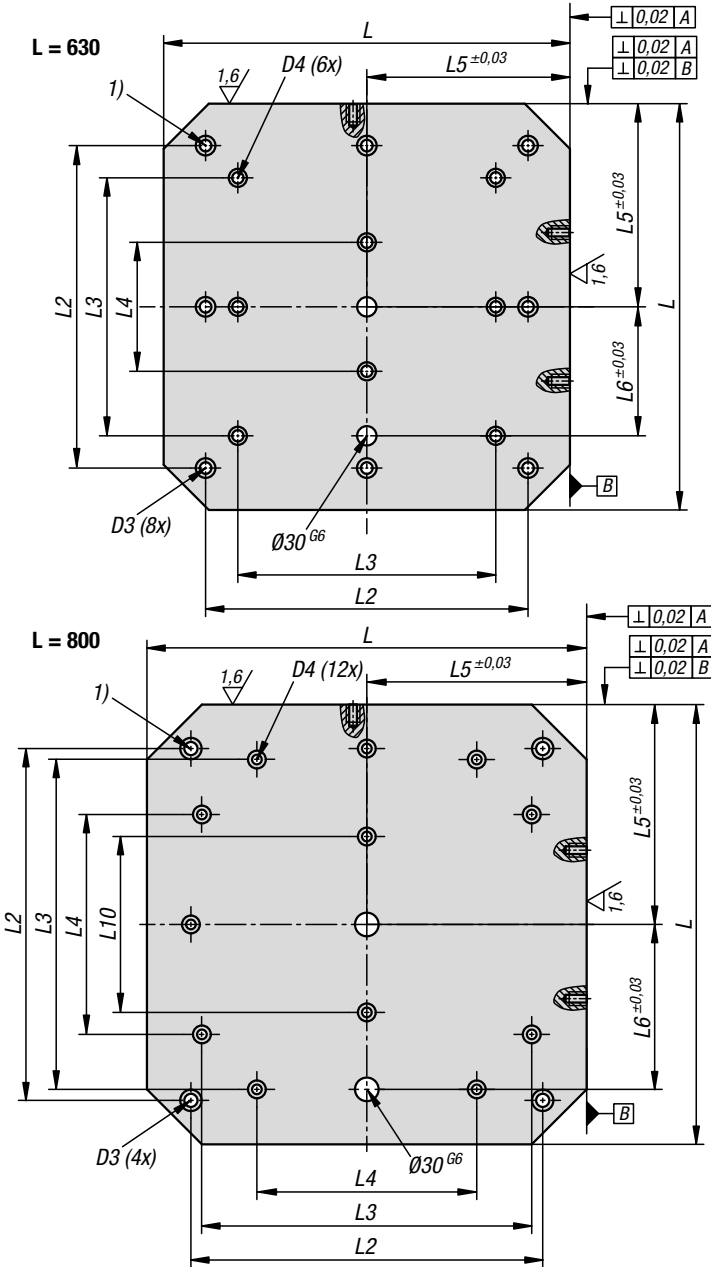
Note:
Subplates with pre-machined clamping faces provide a quick and economic way of producing bodies with specific grid or individual holes. The subplates conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)



Subplates, grey cast iron

with pre-machined clamping faces

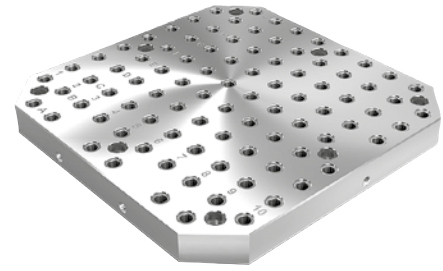


KIPP Subplates, grey cast iron with pre-machined clamping faces

Order No.	L	H	D3	D4	L2	L3	L4	L5	L6	L7	L10
K0806.1004040	400	50	M16	M12	320	300	200	200	150	55	-
K0806.1005050	500	50	M16	M12	400	200	-	250	200	75	-
K0806.1006363	630	50	M16	M16	500	400	200	315	200	100	-
K0806.1008080	800	50	M16	M16	640	600	400	400	300	135	320

Subplates, grey cast iron

with grid holes



Material:
GJL 300.

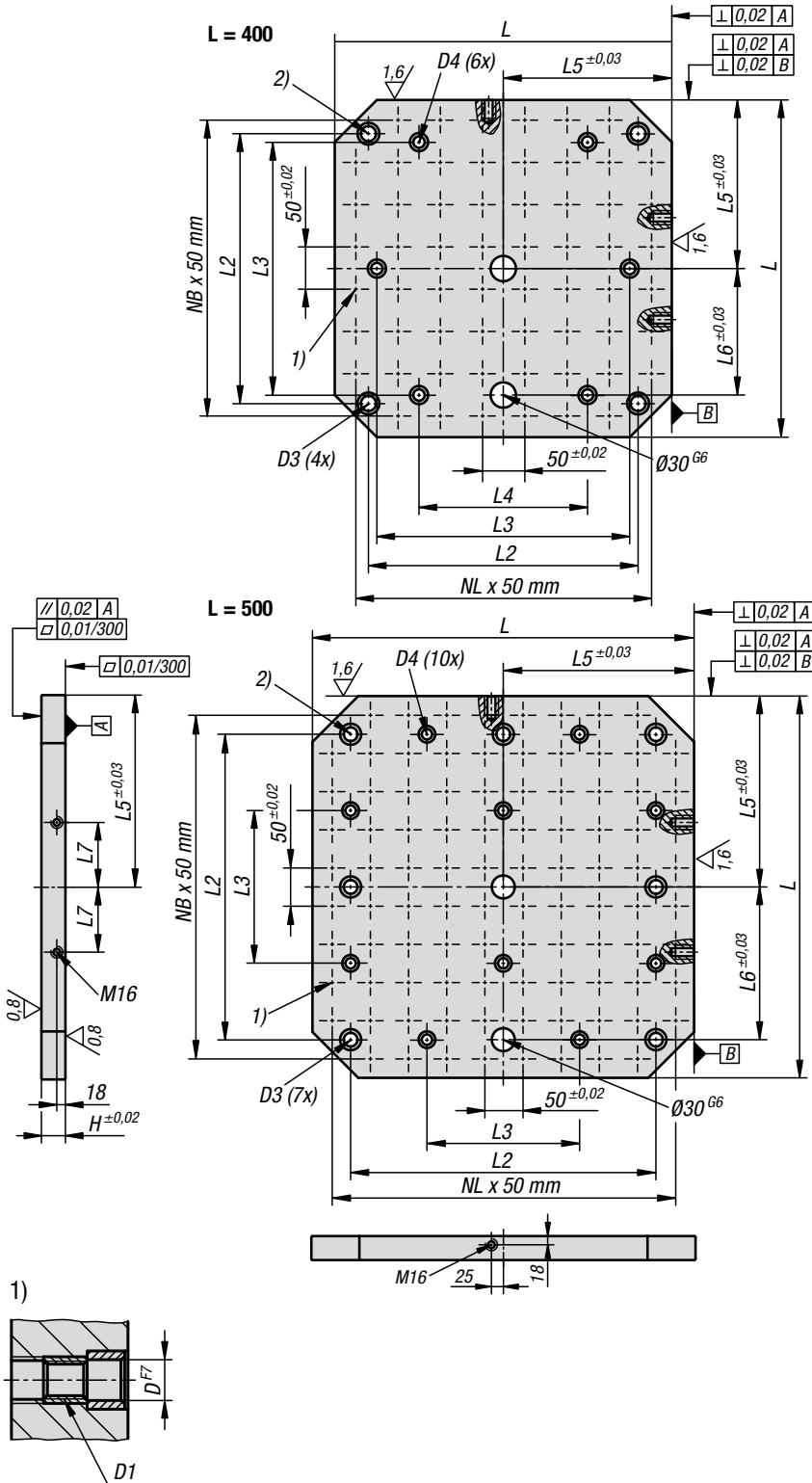
Version:
Support and mounting surfaces ground

Sample order:
K0806.2124040

Note:
Grid spacing 50 ± 0.02 mm.
Plates with grid holes are used for constructing modular fixtures. These plates are positioned and fastened directly on machine tables.
The alphanumerically labelled grid holes guarantee a defined assignment of clamping elements by repeat setups.
The subplates conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

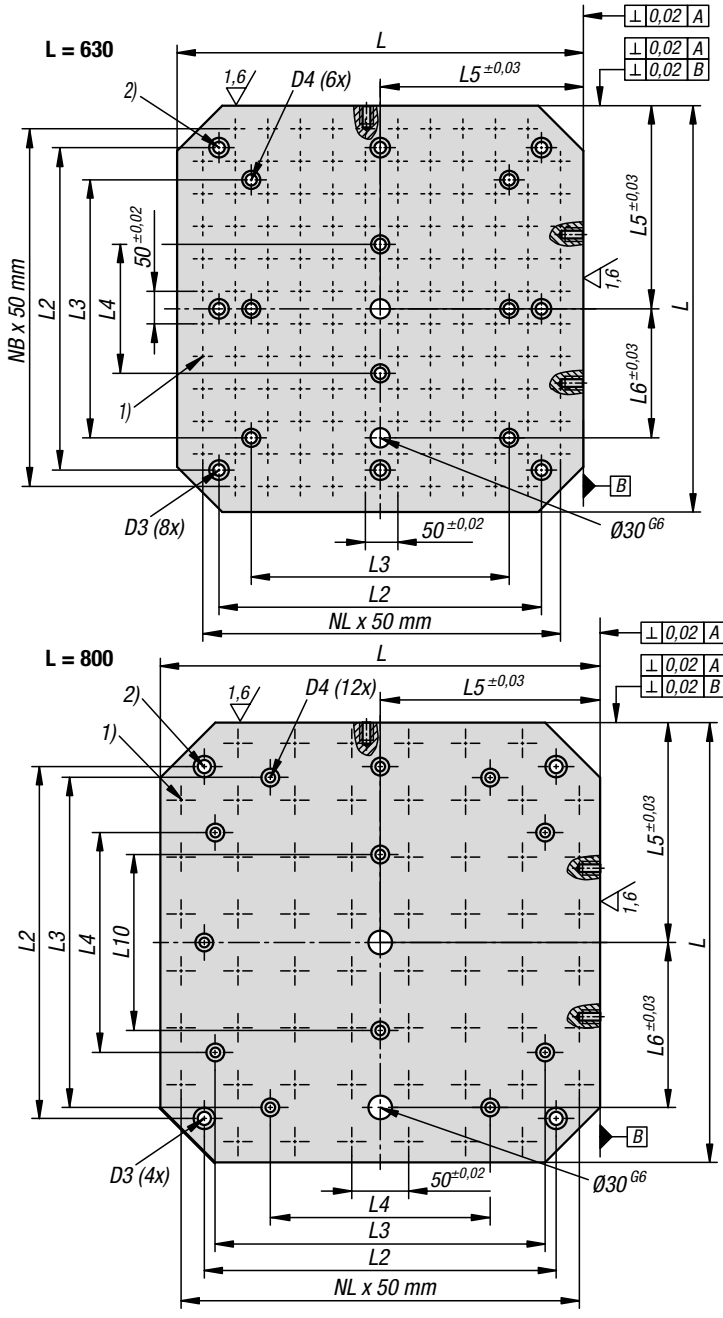
Drawing reference:

- 1) grid hole
- 2) hole for DIN 912 cap screw (D3/D4)



Subplates, grey cast iron

with grid holes

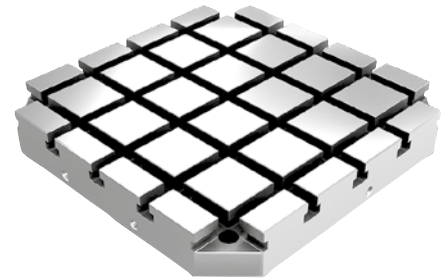


KIPP Subplates, grey cast iron with grid holes

Order No.	L	H	D	D1	D3	D4	L2	L3	L4	L5	L6	L7	L10	N1=No. of grid holes	NL=No. lengthwise	NB=No. across
K0806.2124040	400	50	12	M12	M16	M12	320	300	200	200	150	55	-	59	7	7
K0806.2125050	500	50	12	M12	M16	M12	400	200	-	250	200	75	-	93	9	9
K0806.2126363	630	50	12	M12	M16	M16	500	400	200	315	200	100	-	139	11	11
K0806.2128080	800	50	12	M12	M16	M16	640	600	400	400	300	135	320	237	15	15
K0806.2164040	400	50	16	M16	M16	M12	320	300	200	200	150	55	-	59	7	7
K0806.2165050	500	50	16	M16	M16	M12	400	200	-	250	200	75	-	93	9	9
K0806.2166363	630	50	16	M16	M16	M16	500	400	200	315	200	100	-	139	11	11
K0806.2168080	800	50	16	M16	M16	M16	640	600	400	400	300	135	320	237	15	15

Subplates, grey cast iron

with T-slots



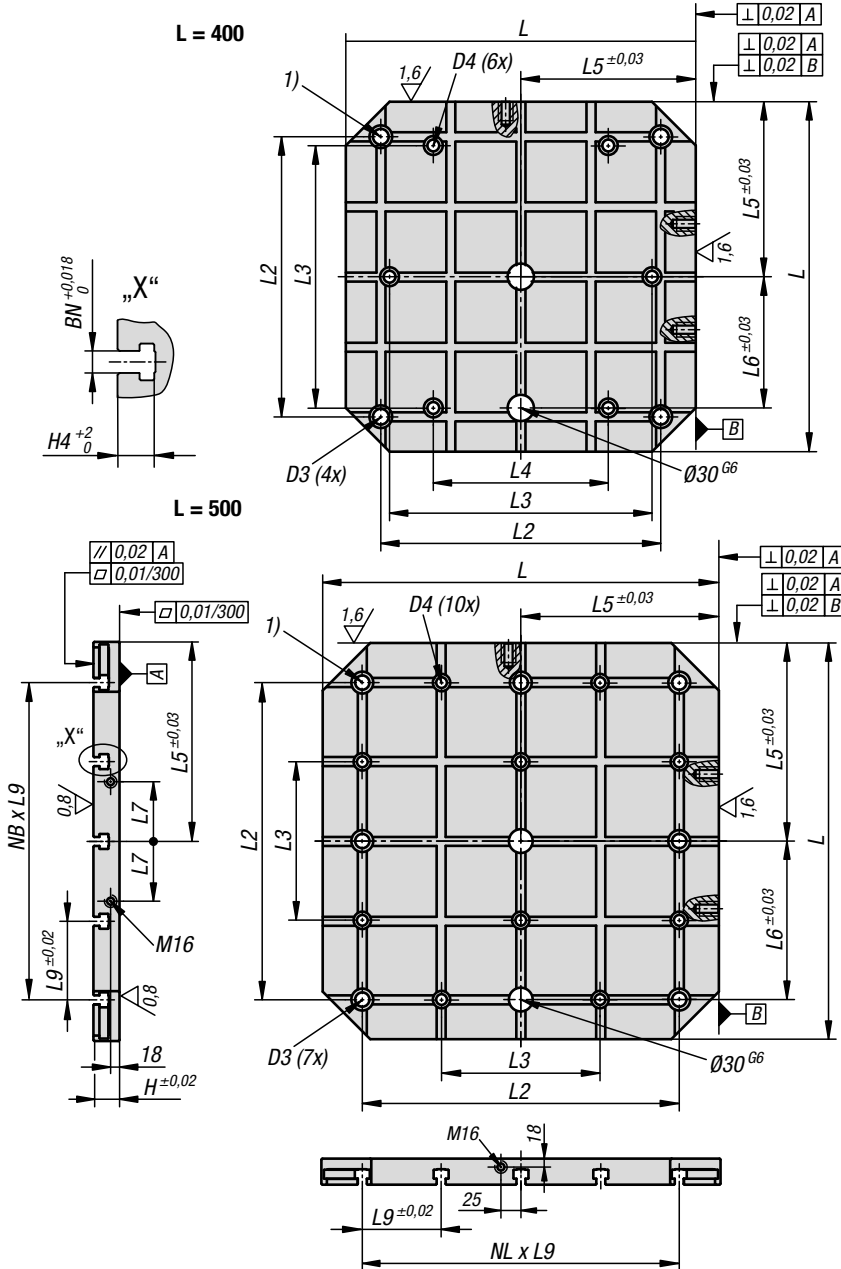
Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K0806.3144040

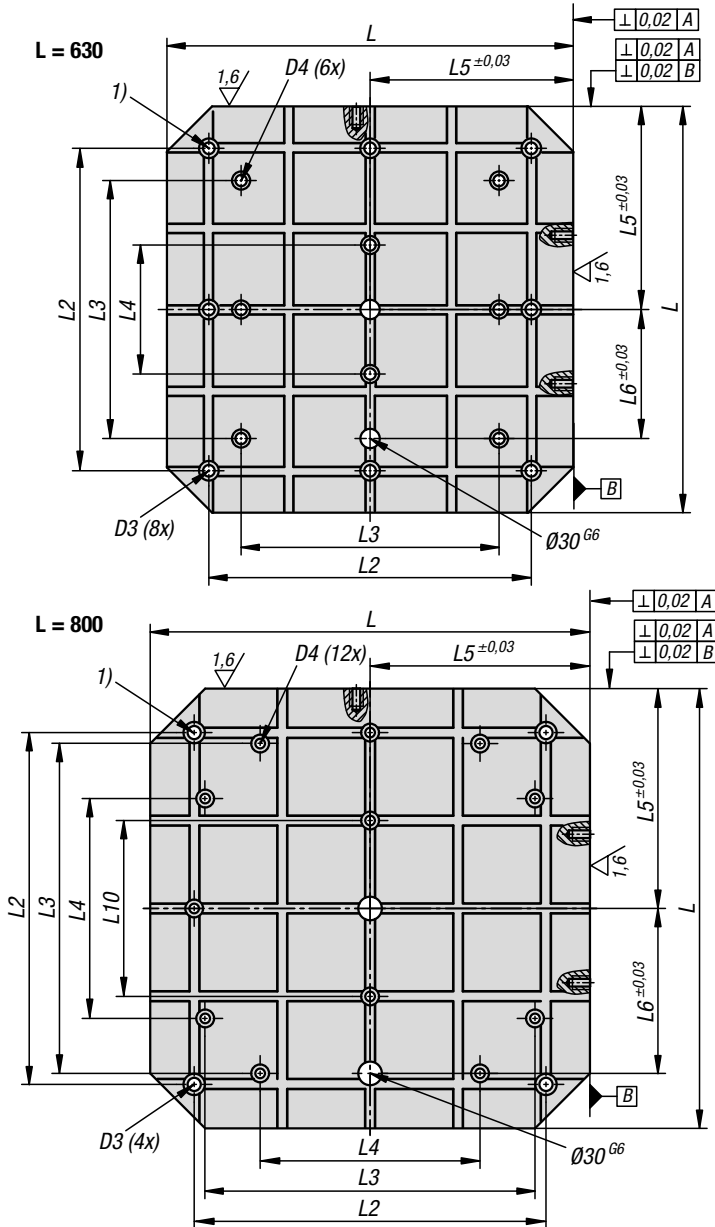
Note:
Subplates with T-slots are used for constructing modular fixtures. These subplates are positioned and fastened directly on machine tables. The precise longitudinal and transverse slot spacing ensures very high repeat clamping accuracy. The subplates conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts with T-nuts for hoisting are supplied. Other dimensions available on request.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)



Subplates, grey cast iron

with T-slots



KIPP Subplates, grey cast iron with T-slots

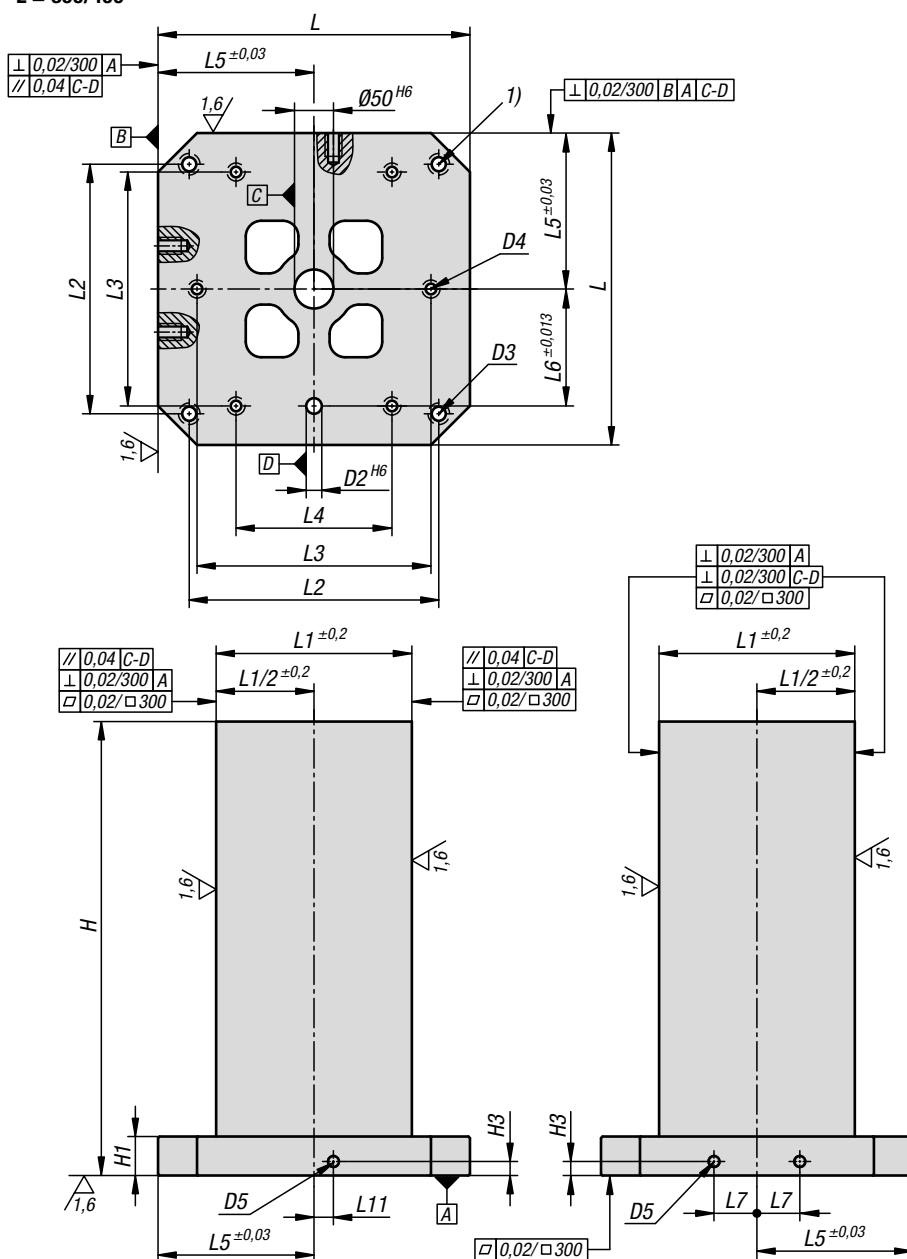
Order No.	L	H	D3	D4	L2	L3	L4	L5	L6	L7	L9	L10	Slot width	NL=No. lengthwise	NB=No. across
K0806.3144040	400	60	M16	M12	320	300	200	200	150	55	80	-	14	4	4
K0806.3145050	500	60	M16	M12	400	200	-	250	200	75	100	-	14	4	4
K0806.3146363	630	60	M16	M16	500	400	200	315	200	100	125	-	14	4	4
K0806.3148080	800	60	M16	M16	640	600	400	400	300	135	160	320	14	4	4
K0806.3184040	400	75	M16	M12	320	300	200	200	150	55	80	-	18	4	4
K0806.3185050	500	75	M16	M12	400	200	-	250	200	75	100	-	18	4	4
K0806.3186363	630	75	M16	M16	500	400	200	315	200	100	125	-	18	4	4
K0806.3188080	800	75	M16	M16	640	600	400	400	300	135	160	320	18	4	4

Workholding cubes, grey cast iron

with pre-machined clamping faces



L = 300/400



Material:

GJL 300.

Version:

Support and clamping faces are precision-machined. The clamping faces have a +0.5 mm allowance.

Sample order:

K0805.100030050

Note:

Workholding cubes with pre-machined clamping faces provide a quick and economic way of producing base elements with specific grid or individual holes. The foot is ready for mounting on the machine table. The four clamping faces can be machined to the end dimensions by the user. The workholding cubes conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980.

Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.

Ring bolts for hoisting are supplied.

Other dimensions available on request.

Drawing reference:

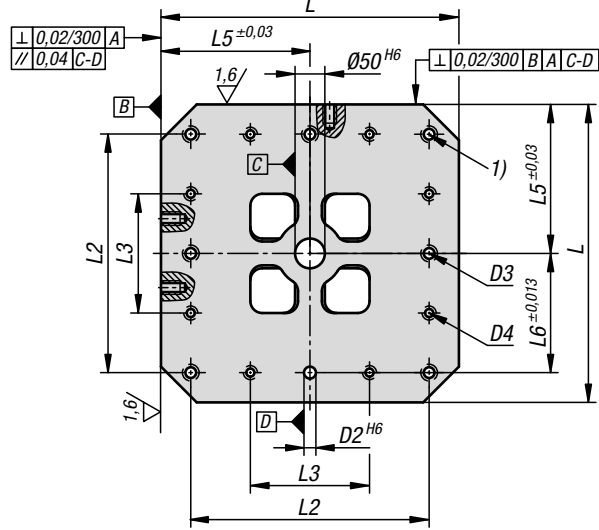
1) hole for DIN 912 cap screw (D3/D4)

Workholding cubes, grey cast iron

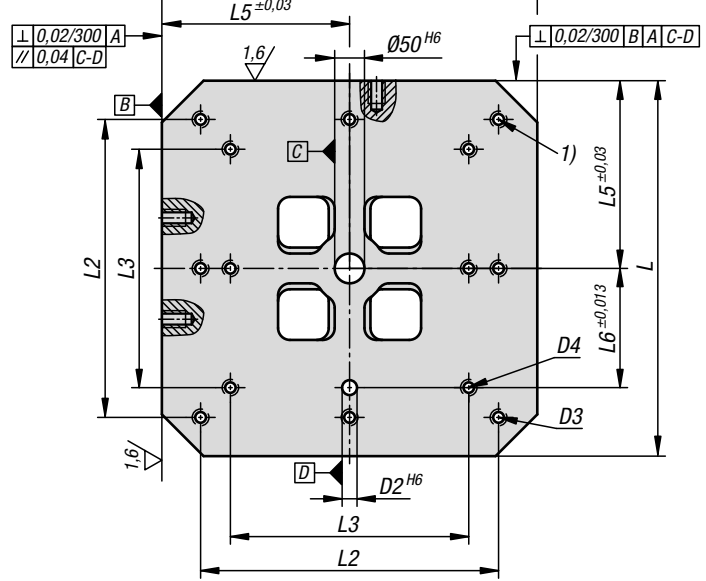
with pre-machined clamping faces



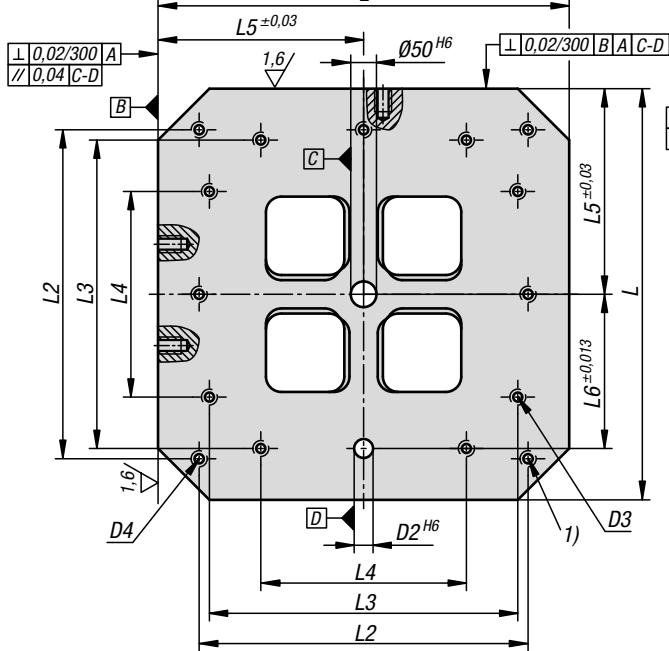
L = 500



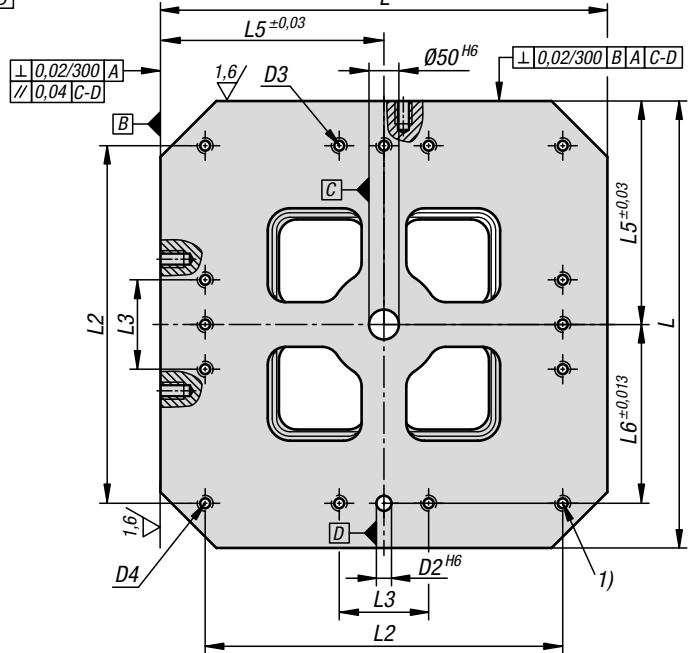
L = 630



L = 800



L = 1000

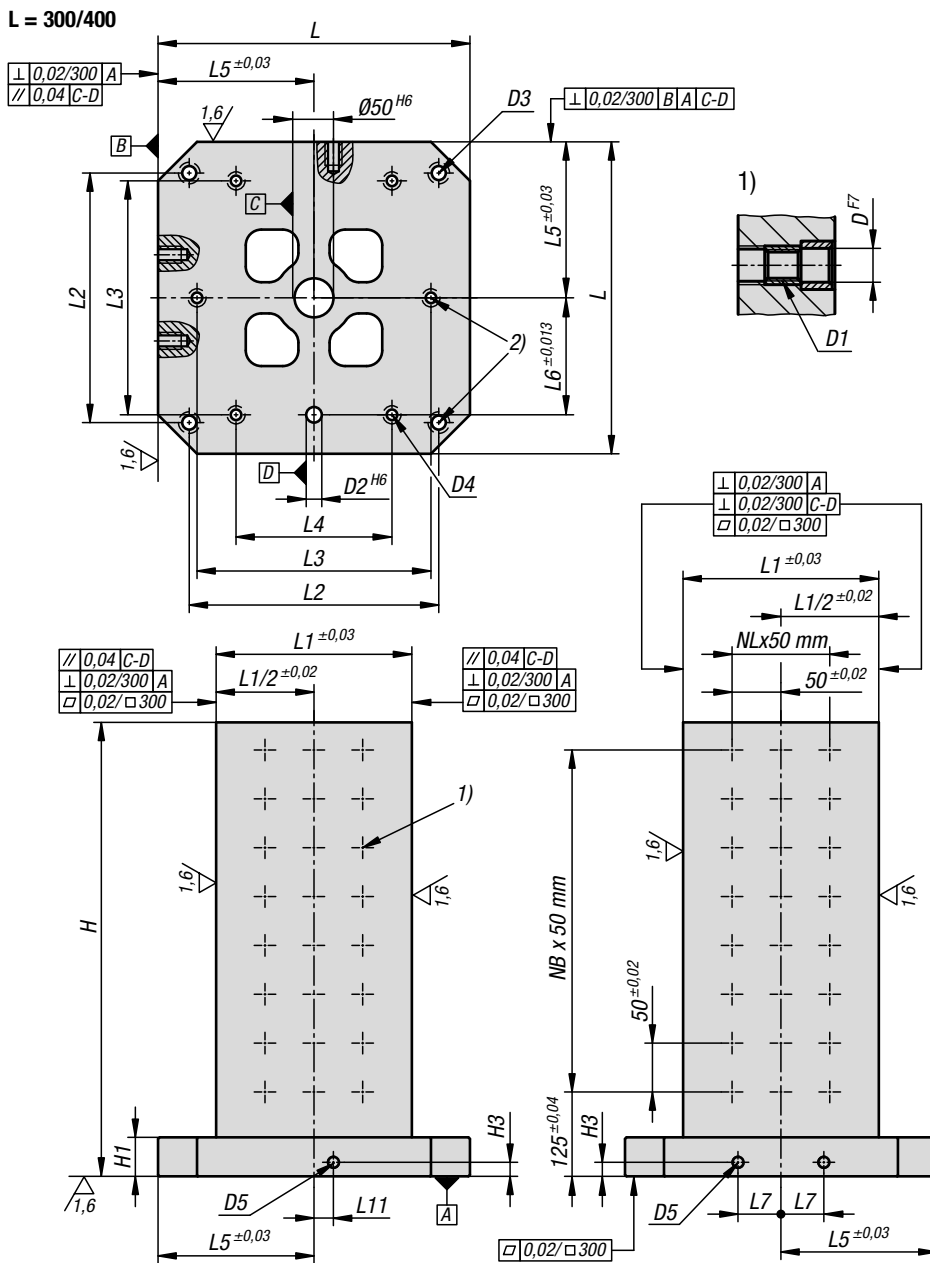
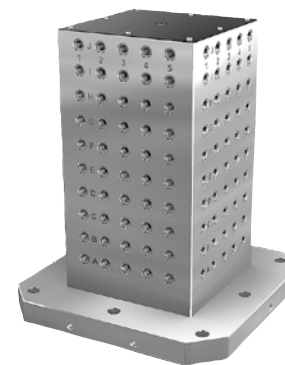


KIPP Workholding cubes, grey cast iron with pre-machined clamping faces

Order No.	L	H	H1	D2	D3	D4	D5	H3	L1	L2	L3	L4	L5	L6	L7	L11
K0805.100030050	300	500	50	20	M12	M10	M12	15	151	250	200	-	150	100	40	0
K0805.100040050	400	500	50	20	M16	M12	M16	18	251	320	300	200	200	150	55	25
K0805.100040065	400	650	50	20	M16	M12	M16	18	251	320	300	200	200	150	55	25
K0805.100050060	500	600	50	20	M16	M12	M16	18	301	400	200	-	250	200	75	25
K0805.100050075	500	750	50	20	M16	M12	M16	18	301	400	200	-	250	200	75	25
K0805.100063070	630	700	50	25	M16	M16	M16	18	351	500	400	-	315	200	100	25
K0805.100063085	630	850	50	25	M16	M16	M16	18	351	500	400	-	315	200	100	25
K0805.100080080	800	800	50	25	M16	M16	M16	18	501	640	600	400	400	300	135	25
K0805.100080100	800	1000	50	25	M16	M16	M16	18	501	640	600	400	400	300	135	25
K0805.100100100	1000	1000	55	25	M20	M20	M16	18	601	800	200	-	500	400	165	25
K0805.100100125	1000	1250	55	25	M20	M20	M16	18	601	800	200	-	500	400	165	25

Workholding cubes, grey cast iron

with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K0805.212030050

Note:
Grid spacing 50 ± 0.02 mm.
Tombstones with grid holes are used on horizontal machining centres.
The alphanumerically labelled grid holes guarantee a defined assignment of clamping elements by repeat setups.
The tombstones conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D3/D4)

KIPP Workholding cubes, grey cast iron with grid holes

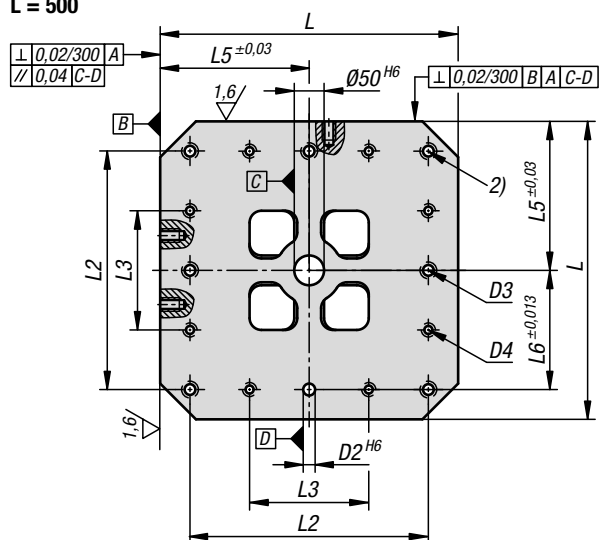
Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L	H	H1	D1	D2	D3	D4	D5	H3	L1	L2
K0805.212030050	K0805.216030050	300	500	50	M12/M16	20	M12	M10	M12	15	150	250
K0805.212040050	K0805.216040050	400	500	50	M12/M16	20	M16	M12	M16	18	250	320
K0805.212040065	K0805.216040065	400	650	50	M12/M16	20	M16	M12	M16	18	250	320
K0805.212050060	K0805.216050060	500	600	50	M12/M16	20	M16	M12	M16	18	300	400
K0805.212050075	K0805.216050075	500	750	50	M12/M16	20	M16	M12	M16	18	300	400
K0805.212063070	K0805.216063070	630	700	50	M12/M16	25	M16	M16	M16	18	350	500
K0805.212063085	K0805.216063085	630	850	50	M12/M16	25	M16	M16	M16	18	350	500
K0805.212080080	K0805.216080080	800	800	50	M12/M16	25	M16	M16	M16	18	500	640
K0805.212080100	K0805.216080100	800	1000	50	M12/M16	25	M16	M16	M16	18	500	640
K0805.212100100	K0805.216100100	1000	1000	55	M12/M16	25	M20	M20	M16	18	600	800
K0805.212100125	K0805.216100125	1000	1250	55	M12/M16	25	M20	M20	M16	18	600	800

Workholding cubes, grey cast iron

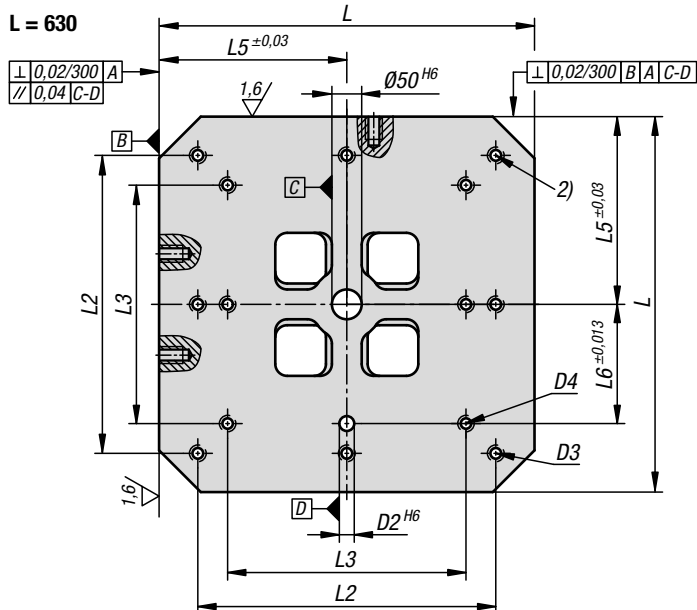
with grid holes



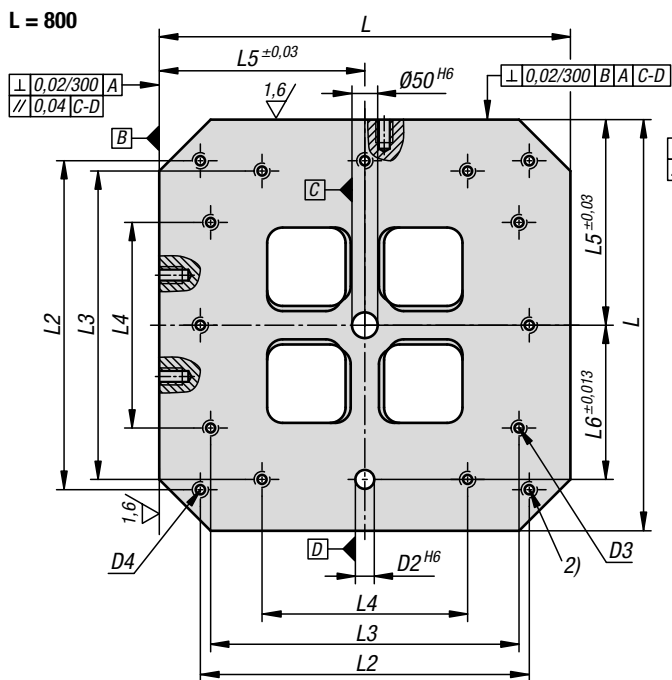
L = 500



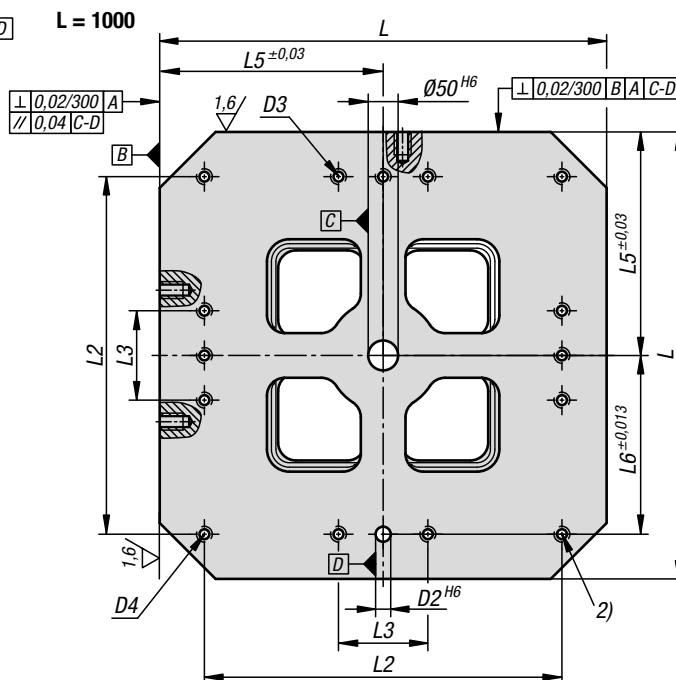
L = 630



L = 800



L = 1000



KIPP Workholding cubes, grey cast iron with grid holes

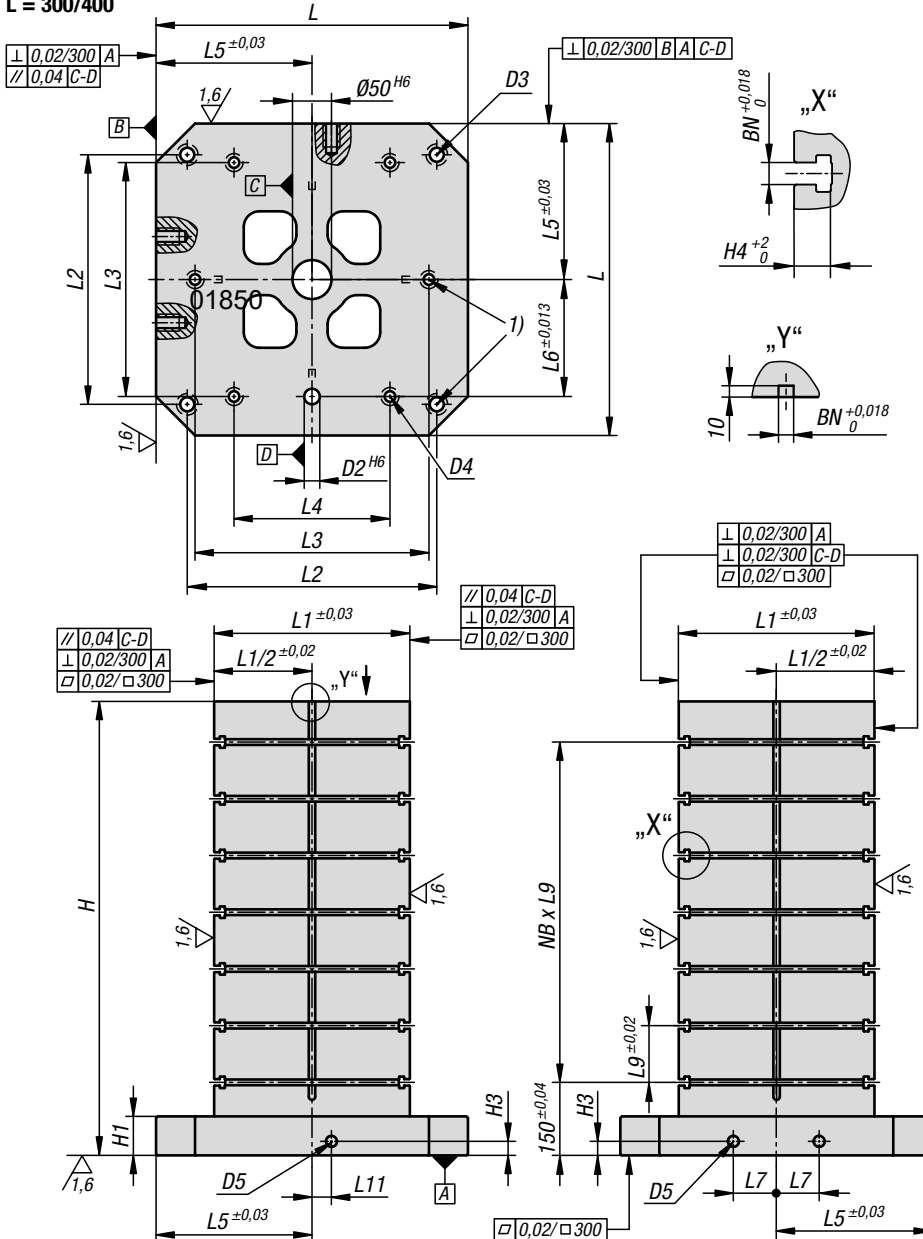
Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L3	L4	L5	L6	L7	L11	No. of grid holes	NL=No. lengthwise	NB= No. across
K0805.212030050	K0805.216030050	200	-	150	100	40	0	64	1	7
K0805.212040050	K0805.216040050	300	200	200	150	55	25	128	3	7
K0805.212040065	K0805.216040065	300	200	200	150	55	25	176	3	10
K0805.212050060	K0805.216050060	200	-	250	200	75	25	200	4	9
K0805.212050075	K0805.216050075	200	-	250	200	75	25	260	4	12
K0805.212063070	K0805.216063070	400	-	315	200	100	25	288	5	11
K0805.212063085	K0805.216063085	400	-	315	200	100	25	360	5	14
K0805.212080080	K0805.216080080	600	400	400	300	135	25	504	8	13
K0805.212080100	K0805.216080100	600	400	400	300	135	25	648	8	17
K0805.212100100	K0805.216100100	200	-	500	400	165	25	792	10	17
K0805.212100125	K0805.216100125	200	-	500	400	165	25	1012	10	22

Workholding cubes, grey cast iron

with T-slots



L = 300/400



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K0805.314040050

Note:
Workholding cubes with T-slots are used for constructing modular fixtures on horizontal machines. The precise longitudinal and transverse slot spacing ensures very high repeat clamping accuracy. The workholding cubes conform to machine tables acc. to DIN 55201 and JIS 6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

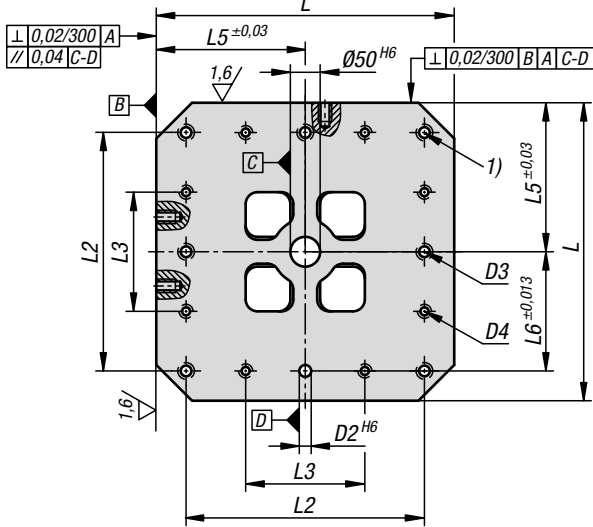
Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Workholding cubes, grey cast iron

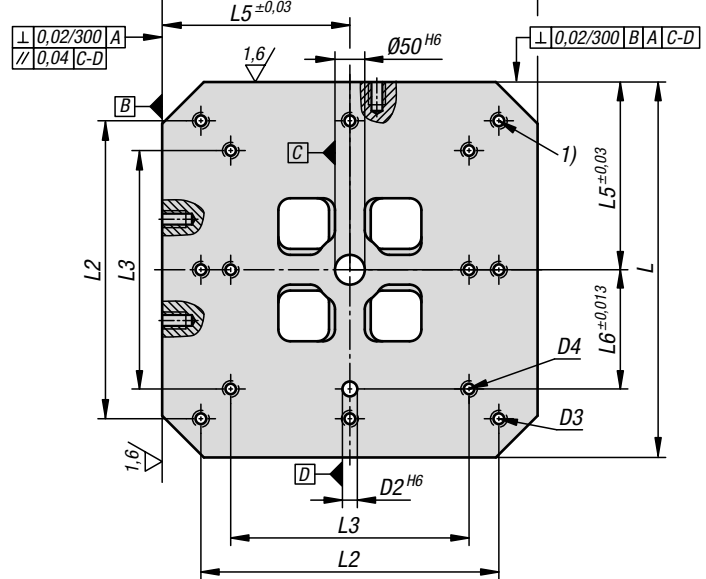
with T-slots



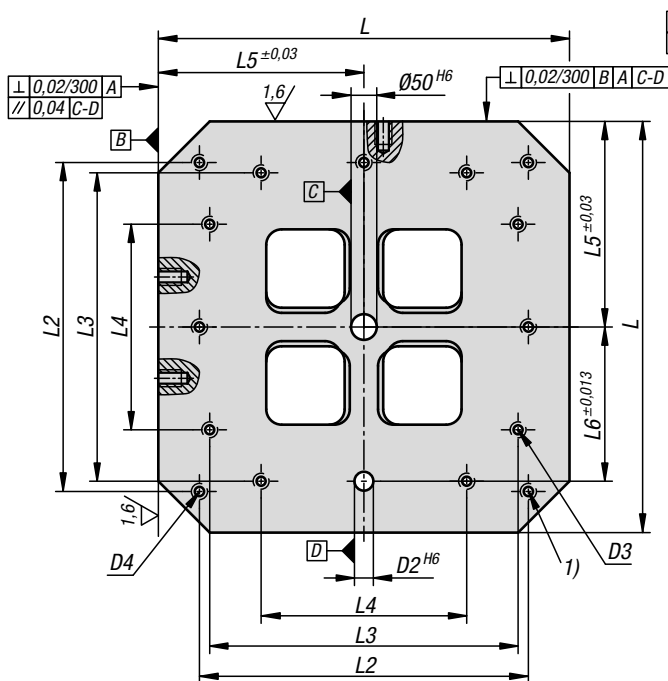
L = 500



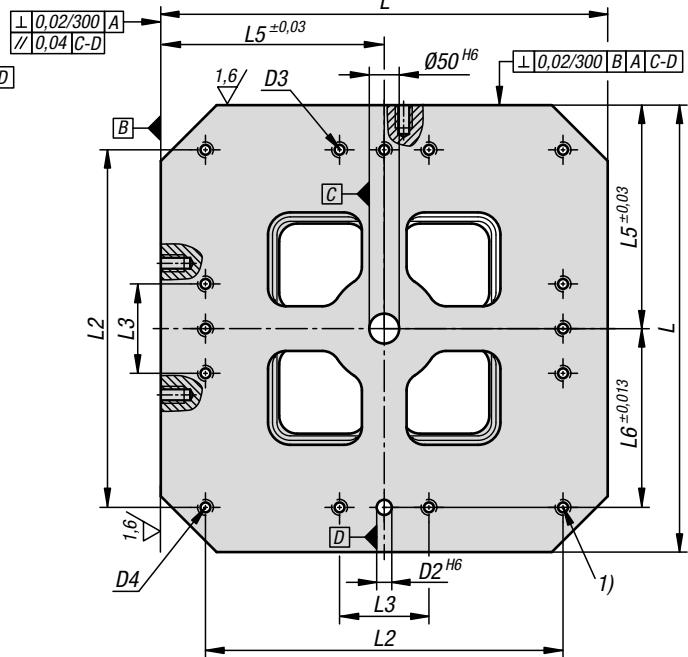
L = 630



L = 800



L = 1000

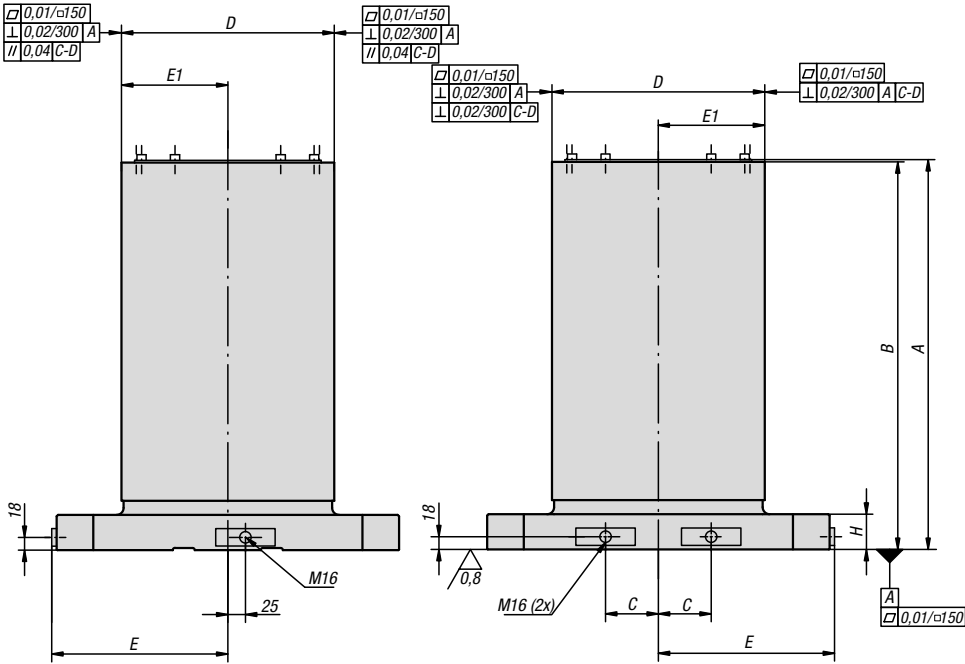


KIPP Workholding cubes, grey cast iron with T-slots

Order No. BN=Slot width 14	Order No. BN=Slot width 18	L	H	H1	D2	D3	D4	D5	H3	L1	L2	L3	L4	L5	L6	L7	L9	L11	NB= No. across
K0805.314040050	K0805.318040050	400	500	50	20	M16	M12	M16	18	250	320	300	200	200	150	55	100	25	3
K0805.314040065	K0805.318040065	400	650	50	20	M16	M12	M16	18	250	320	300	200	200	150	55	100	25	4
K0805.314050060	K0805.318050060	500	600	50	20	M16	M12	M16	18	300	400	200	-	250	200	75	100	25	4
K0805.314050075	K0805.318050075	500	750	50	20	M16	M12	M16	18	300	400	200	-	250	200	75	100	25	5
K0805.314063070	K0805.318063070	630	700	50	25	M16	M16	M16	18	350	500	400	-	315	200	100	125	25	4
K0805.314063085	K0805.318063085	630	850	50	25	M16	M16	M16	18	350	500	400	-	315	200	100	125	25	5
K0805.314080080	K0805.318080080	800	800	50	25	M16	M16	M16	18	500	640	600	400	400	300	135	150	25	4
K0805.314080100	K0805.318080100	800	1000	50	25	M16	M16	M16	18	500	640	600	400	400	300	135	150	25	5
K0805.314100100	K0805.318100100	1000	1000	55	25	M20	M20	M16	18	600	800	200	-	500	400	165	160	25	5
K0805.314100125	K0805.318100125	1000	1250	55	25	M20	M20	M16	18	600	800	200	-	500	400	165	160	25	6

Tombstones cube

without grid holes



Material:
GJL 300.

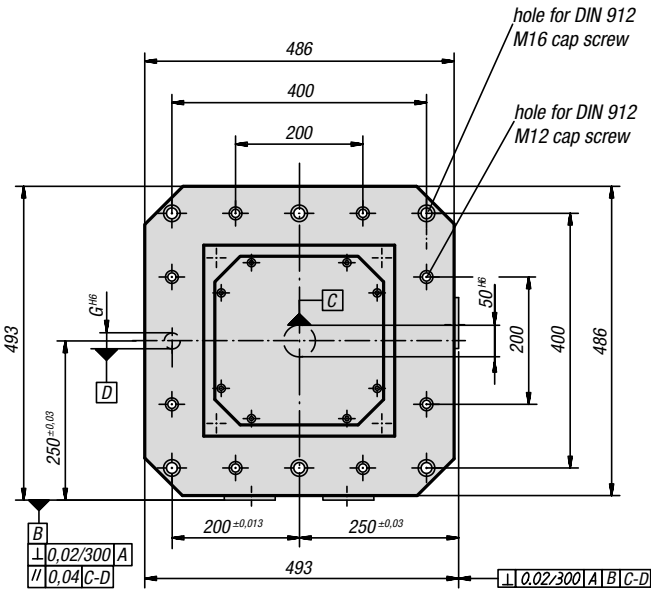
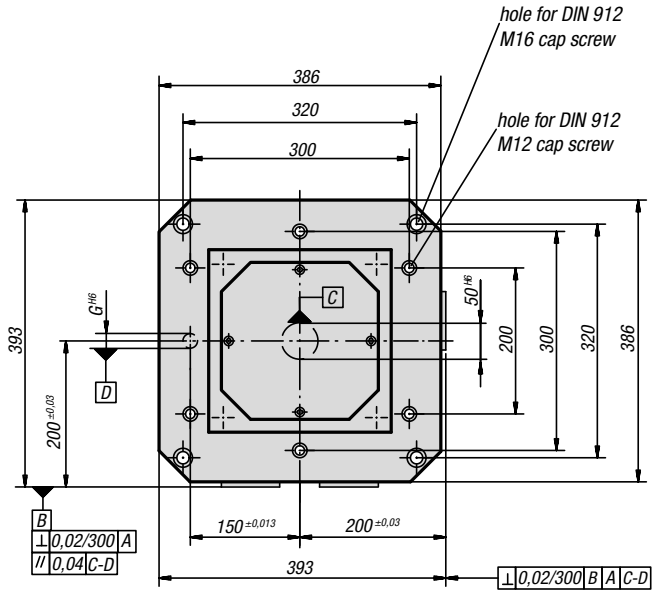
Version:
Reference surfaces precision machined.
The clamping surfaces have 0.5 mm allowance.

Sample order:
K0805.005030

Note:
The cube tombstones are matched to subplates for machine tools acc. to DIN 55201 and JIS 6337-1980.
Ring bolts for lifting are supplied. A cover prevents the cavities filling with swarf.

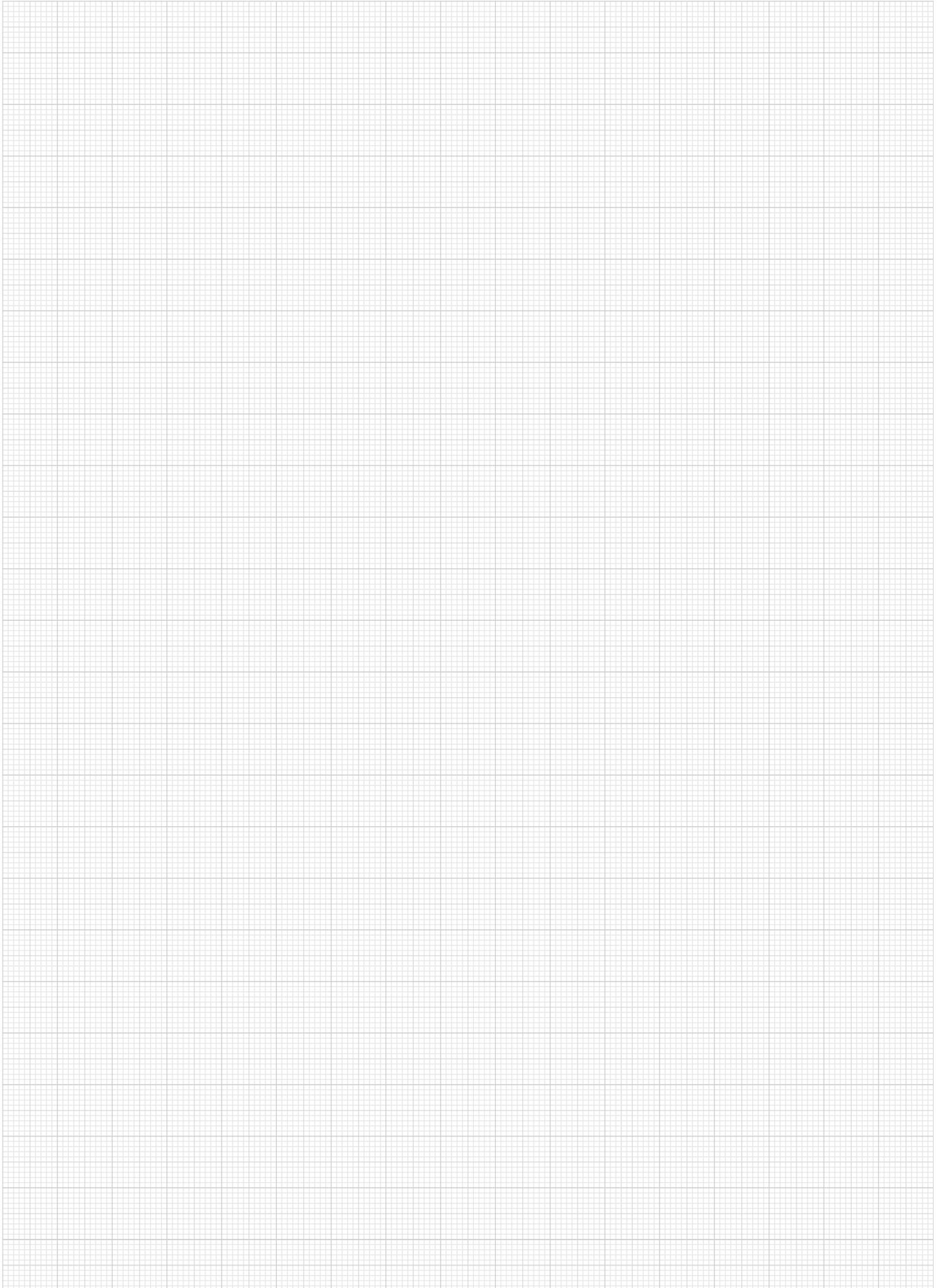
K0805.0040251

K0805.005030
K0805.0050301



KIPP Cube tombstones without grid holes

Order No.	A	B	C	D	E	E1	G	H	weight ca. kg
K0805.0040251	553	550	55	251 ±0,2	200	125,5 ±0,2	20	50	183
K0805.005030	553	550	75	301 ±0,2	250	150,5 ±0,2	20	50	231
K0805.0050301	653	650	75	301 ±0,2	250	150,5 ±0,2	20	50	268

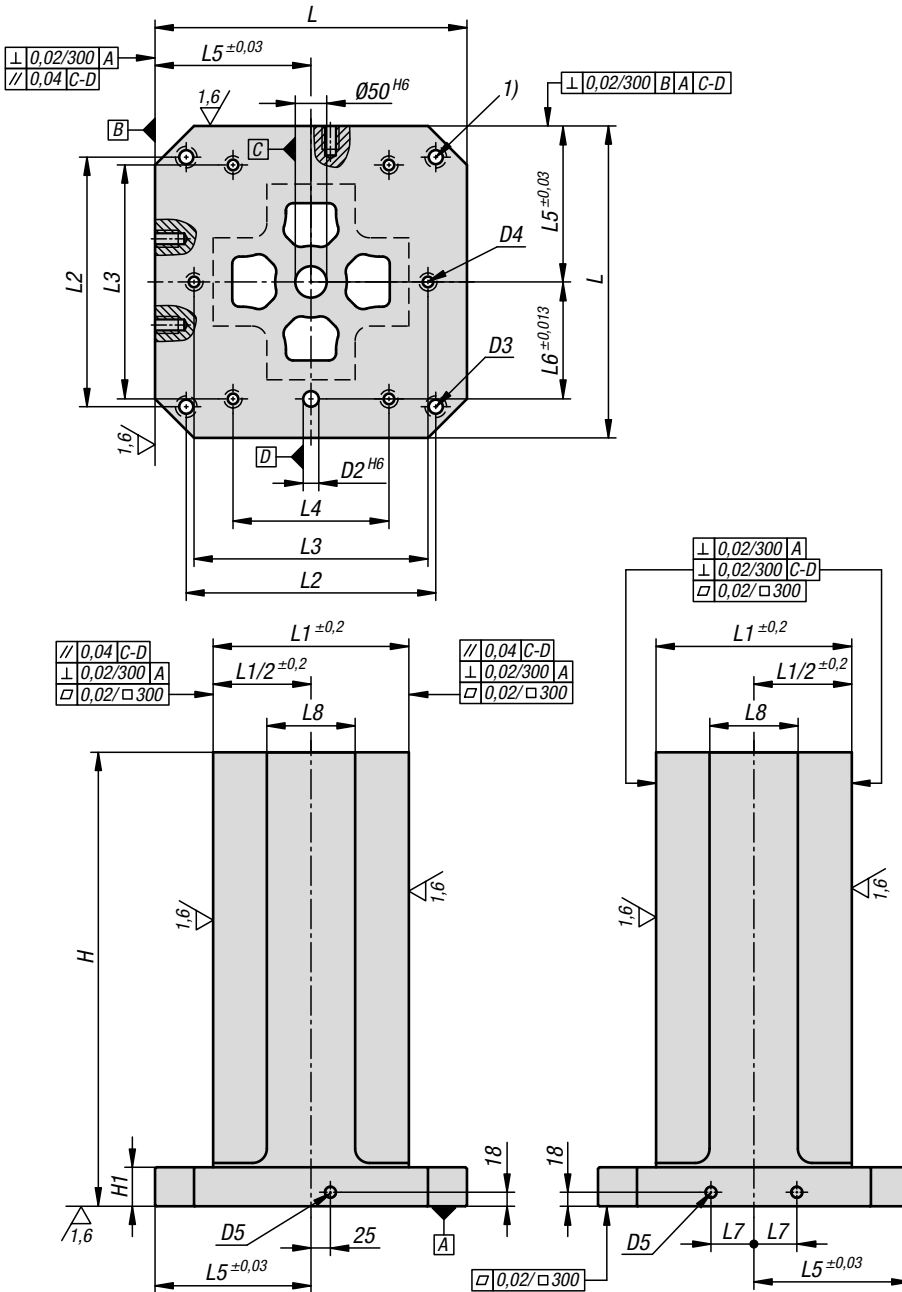


Clamping towers, grey cast iron, 4-sided,

with pre-machined clamping faces



L = 400



Material:
GJL 300.

Version:
Support and clamping faces are precision-machined. The clamping faces have a +1 mm allowance.

Sample order:
K1533.10040050

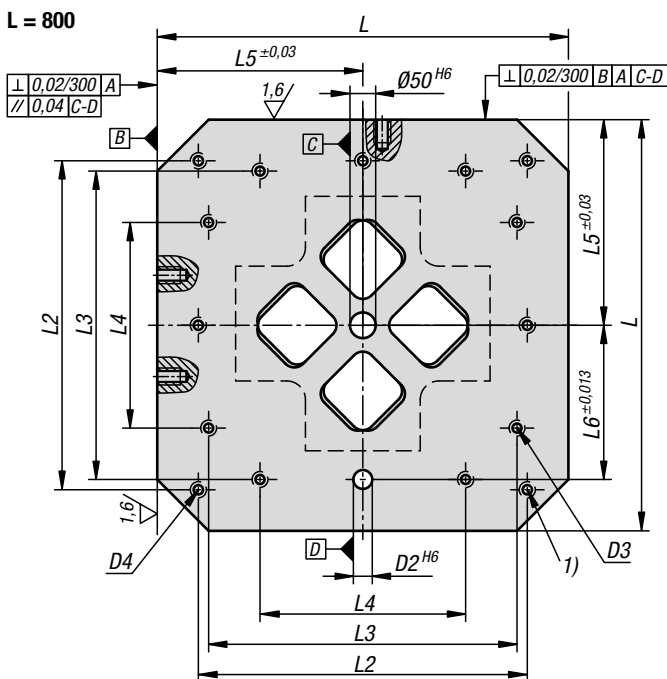
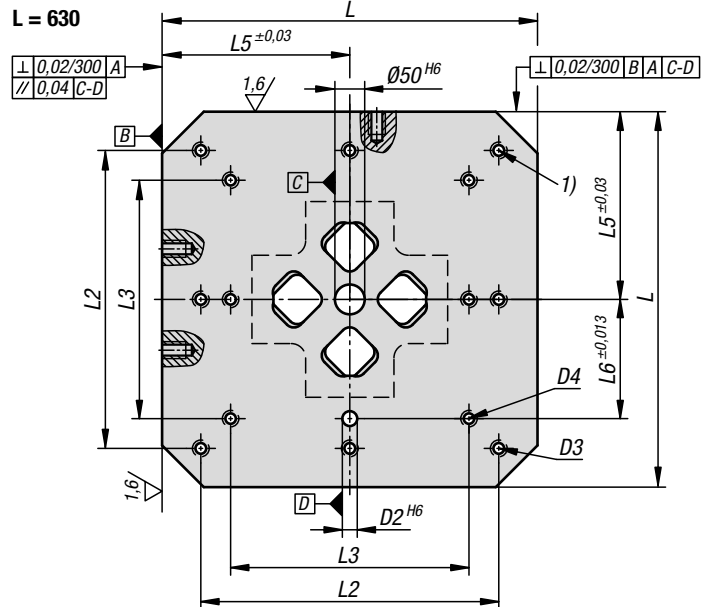
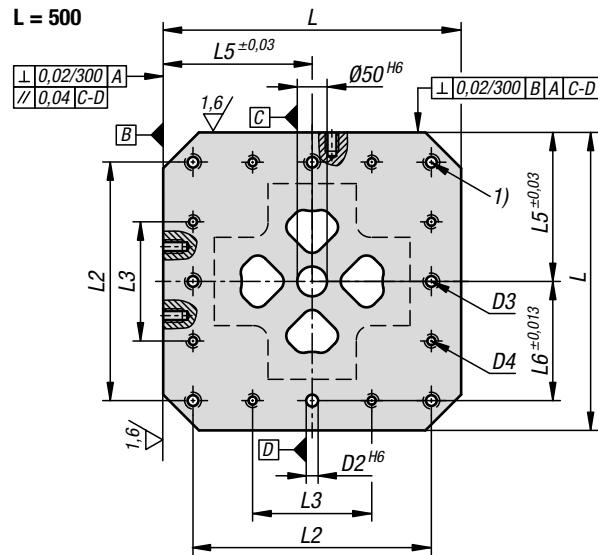
Note:
Clamping towers with pre-machined clamping faces provide a fast and economic way of producing bodies with specific grid or individual holes. The base is ready for mounting on the machine table. The clamping faces can be machined to the end dimensions by the user. The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

On request:
other dimensions.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Clamping towers, grey cast iron, 4-sided,

with pre-machined clamping faces

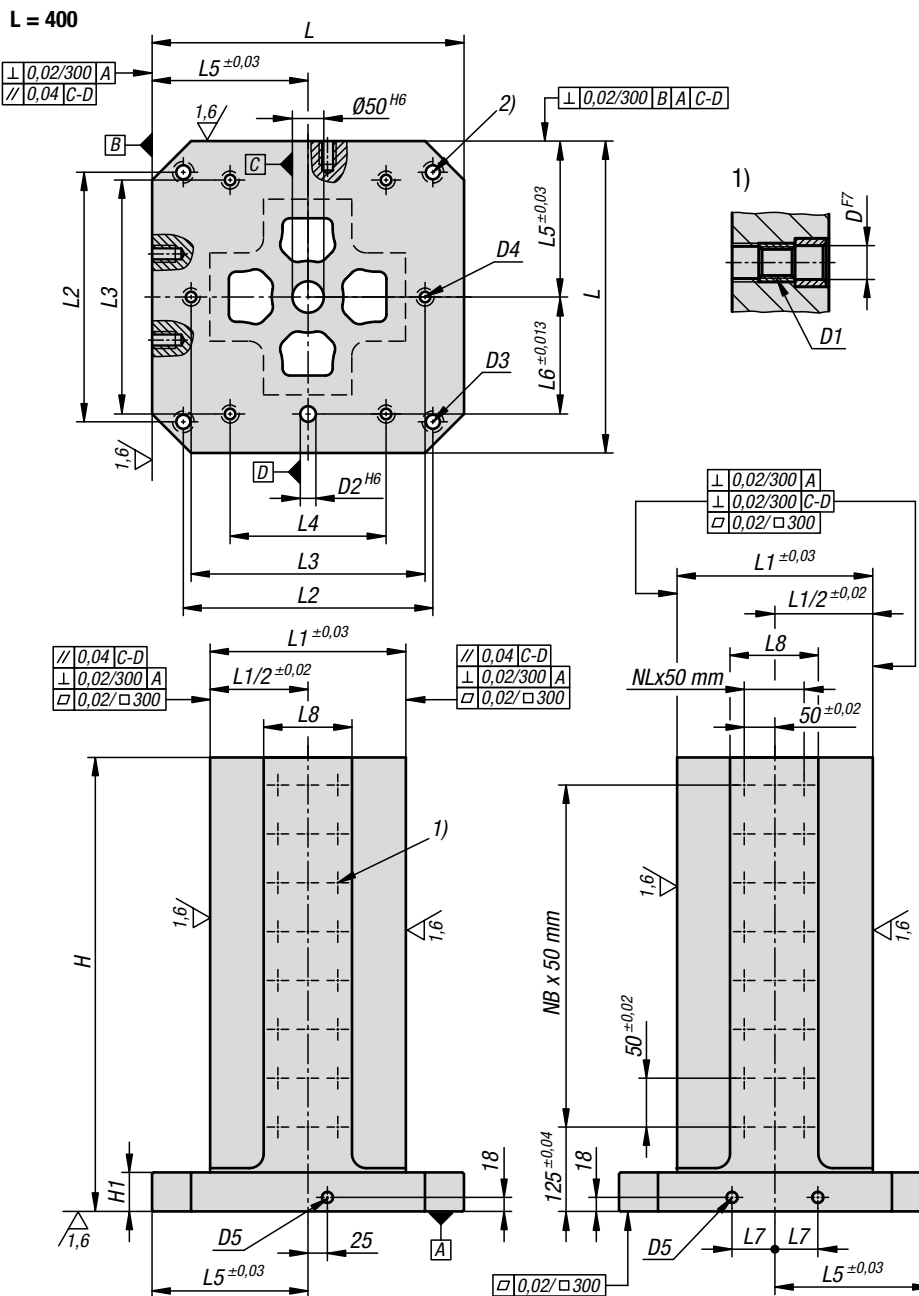
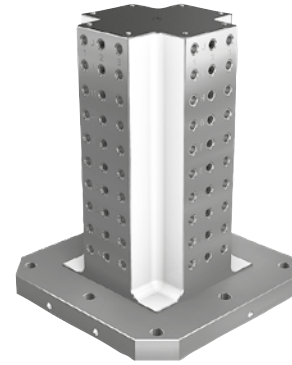


KIPP Clamping towers, grey cast iron, 4-sided, with pre-machined clamping faces

Order No.	L	H	H1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	L8
K1533.10040050	400	500	50	20	M16	M12	M 16	251	320	300	200	200	150	55	125
K1533.10040065	400	650	50	20	M16	M12	M 16	251	320	300	200	200	150	55	125
K1533.10050060	500	600	50	20	M16	M12	M 16	301	400	200	-	250	200	75	150
K1533.10050075	500	750	50	20	M16	M12	M 16	301	400	200	-	250	200	75	150
K1533.10063070	630	700	50	25	M16	M16	M 16	351	500	400	-	315	200	100	200
K1533.10063085	630	850	50	25	M16	M16	M 16	351	500	400	-	315	200	100	200
K1533.10080080	800	800	50	25	M16	M16	M 16	501	640	600	400	400	300	135	300
K1533.10080100	800	1000	50	25	M16	M16	M 16	501	640	600	400	400	300	135	300

Clamping towers, grey cast iron, 4-sided,

with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1533.21240050

Note:
Grid spacing 50 ± 0.02 mm.
Clamping towers with grid holes are used on horizontal machining centres.
The alphanumerically labelled grid holes mean that the clamping elements can be assigned in a defined manner in the event of repeat setups.
The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

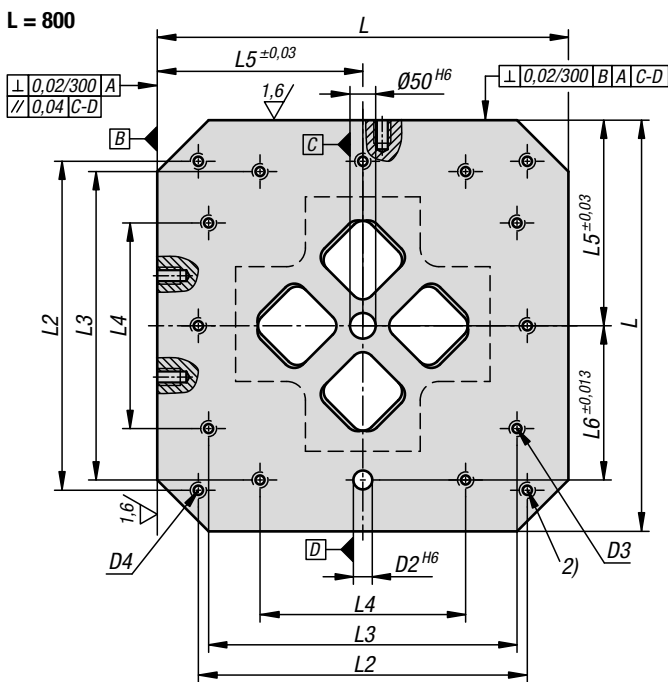
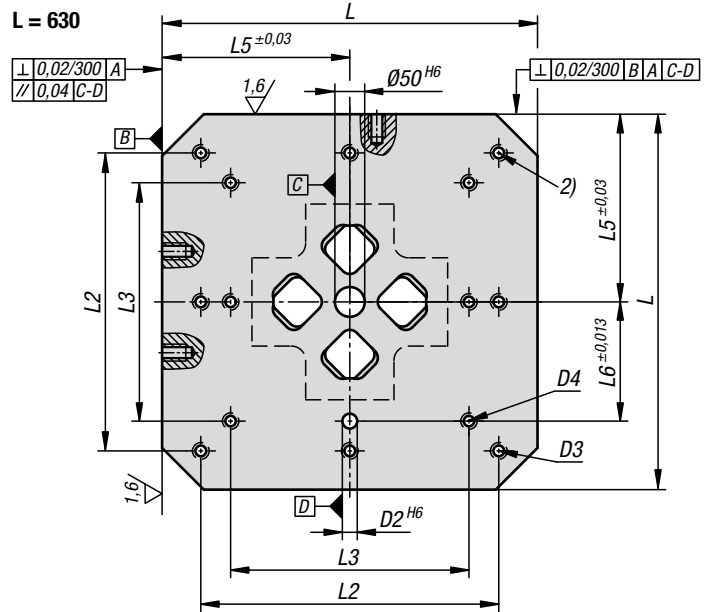
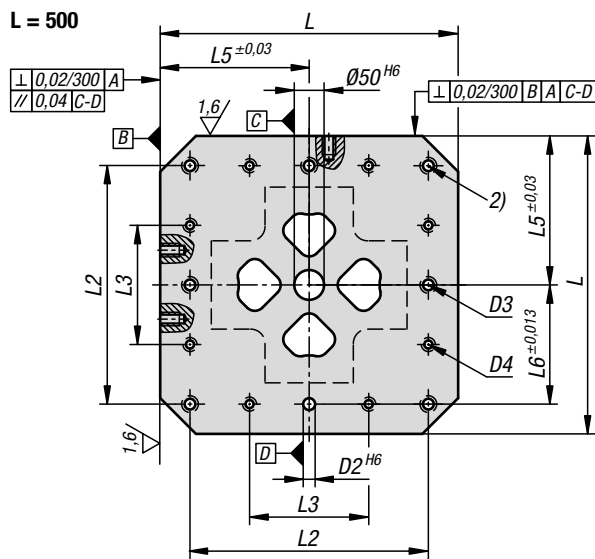
On request:
other dimensions.

Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D3/D4)

KIPP Clamping towers, grey cast iron, 4-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L	H	H1	D1	D2	D3	D4	D5	L1	L2
K1533.21240050	K1533.21640050	400	500	50	M12/M16	20	M16	M12	M 16	250	320
K1533.21240065	K1533.21640065	400	650	50	M12/M16	20	M16	M12	M 16	250	320
K1533.21250060	K1533.21650060	500	600	50	M12/M16	20	M16	M12	M 16	300	400
K1533.21250075	K1533.21650075	500	750	50	M12/M16	20	M16	M12	M 16	300	400
K1533.21263070	K1533.21663070	630	700	50	M12/M16	25	M16	M16	M 16	350	500
K1533.21263085	K1533.21663085	630	850	50	M12/M16	25	M16	M16	M 16	350	500
K1533.21280080	K1533.21680080	800	800	50	M12/M16	25	M16	M16	M 16	500	640
K1533.21280100	K1533.21680100	800	1000	50	M12/M16	25	M16	M16	M 16	500	640

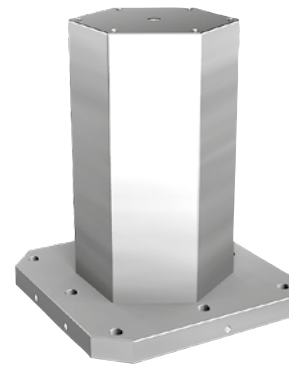
Clamping towers, grey cast iron, 4-sided, with grid holes



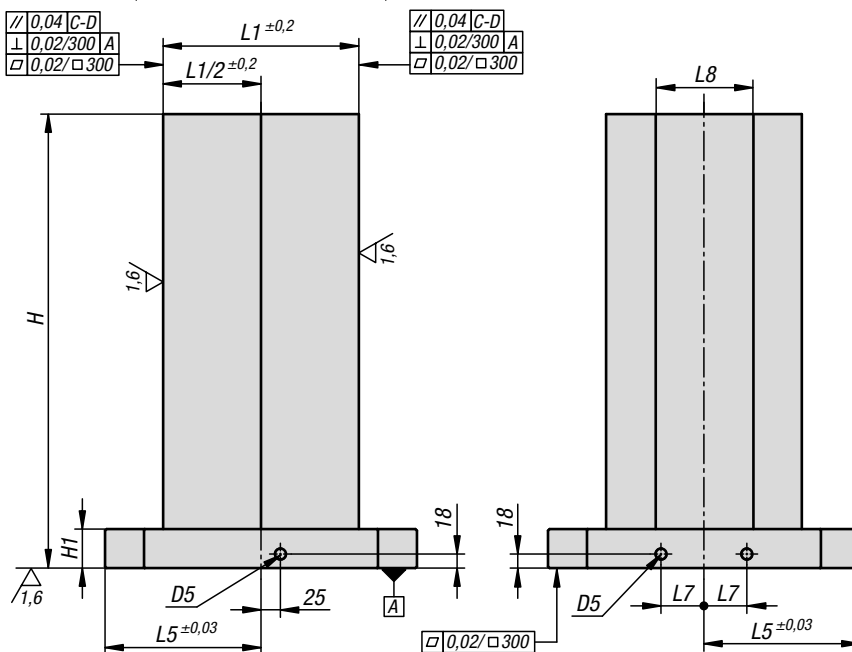
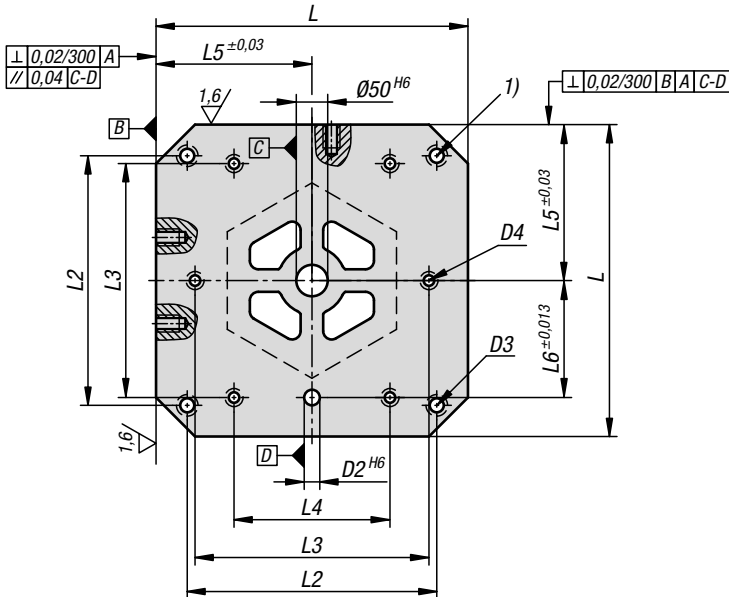
KIPP Clamping towers, grey cast iron, 4-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L3	L4	L5	L6	L7	L8	No. of grid holes	NL=No. lengthwise	NB= No. across
K1533.21240050	K1533.21640050	300	200	200	150	55	125	64	1	7
K1533.21240065	K1533.21640065	300	200	200	150	55	125	88	1	10
K1533.21250060	K1533.21650060	200	-	250	200	75	150	120	2	9
K1533.21250075	K1533.21650075	200	-	250	200	75	150	156	2	12
K1533.21263070	K1533.21663070	400	-	315	200	100	200	192	3	11
K1533.21263085	K1533.21663085	400	-	315	200	100	200	240	3	14
K1533.21280080	K1533.21680080	600	400	400	300	135	300	336	5	13
K1533.21280100	K1533.21680100	600	400	400	300	135	300	432	5	17

Clamping towers, grey cast iron, 6-sided, with pre-machined clamping faces



L = 400



Material:
GJL 300.

Version:
Support and clamping faces are precision-machined.
The clamping faces have a +1 mm allowance.

Sample order:
K1534.10040050

Note:
Clamping towers with pre-machined clamping faces provide a fast and economic way of producing bodies with specific grid or individual holes. The base is ready for mounting on the machine table. The clamping faces can be machined to the end dimensions by the user. The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980.

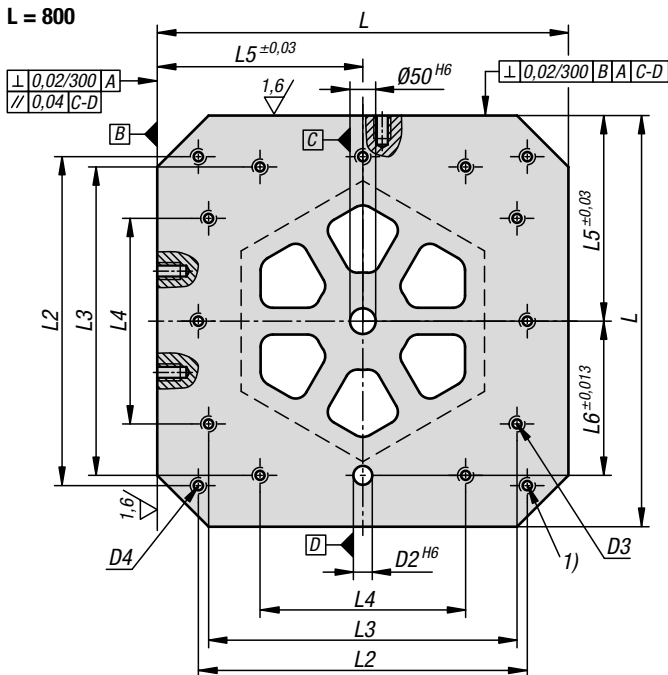
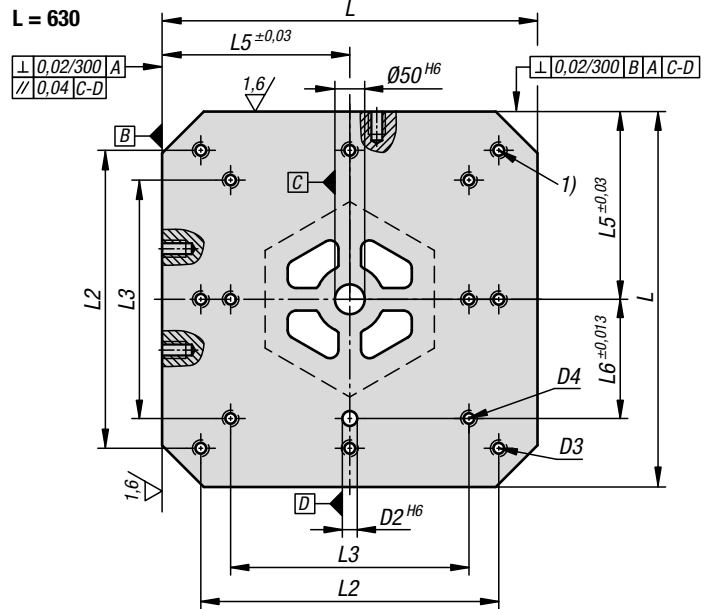
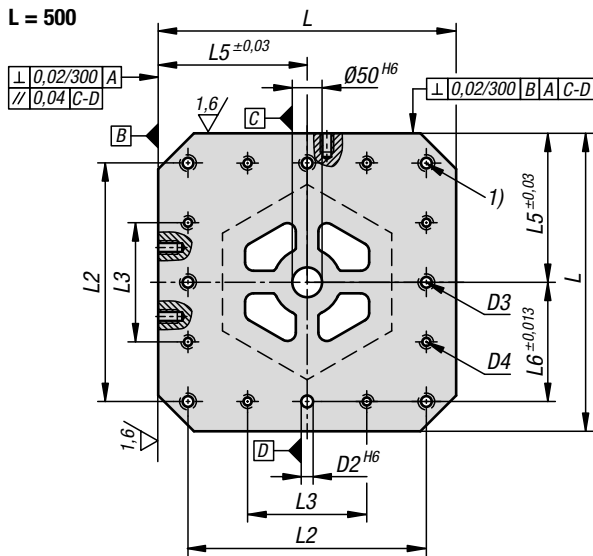
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

On request:
other dimensions.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Clamping towers, grey cast iron, 6-sided,

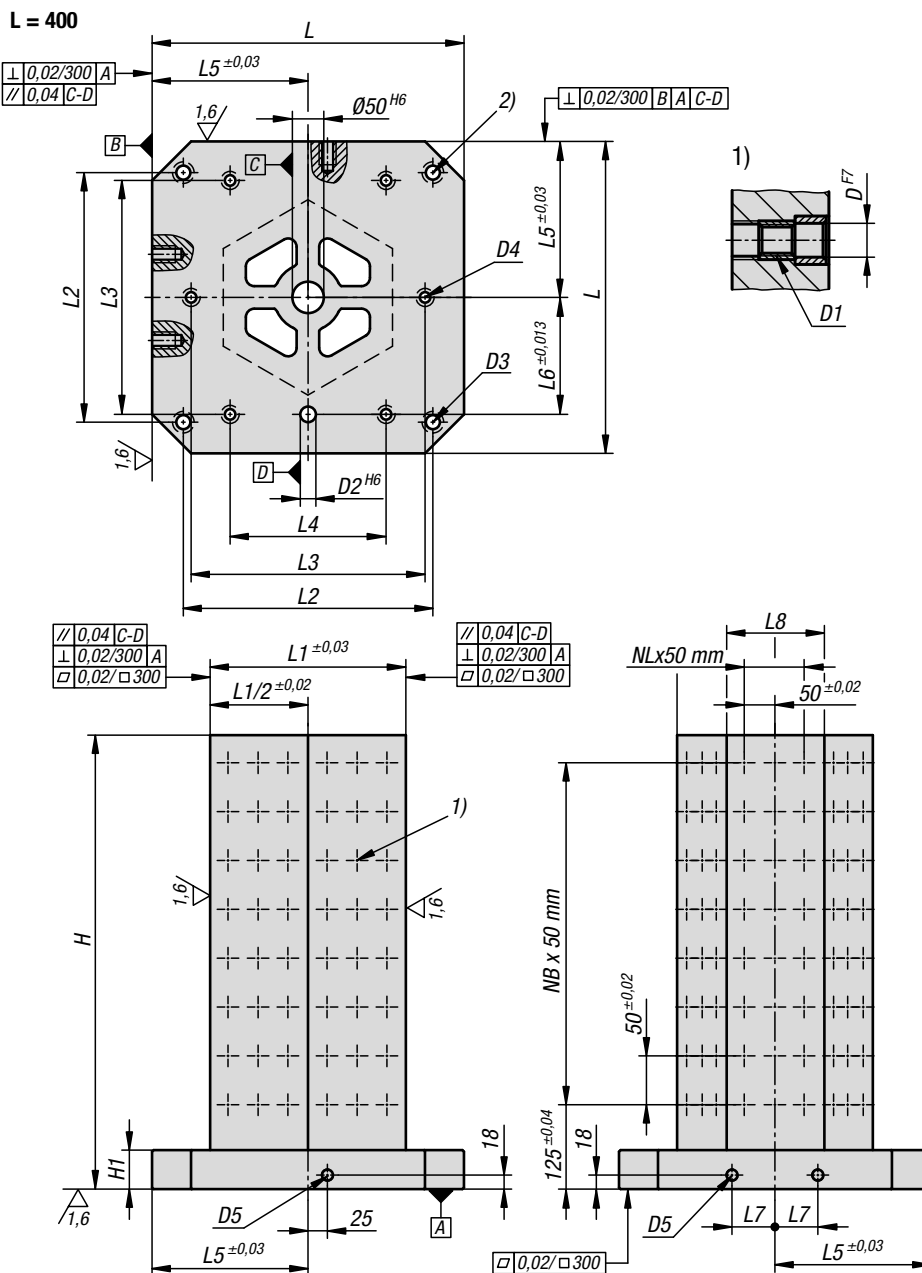
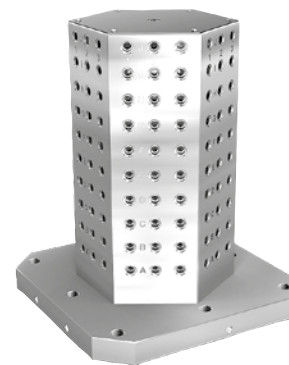
with pre-machined clamping faces



KIPP Clamping towers, grey cast iron, 6-sided, with pre-machined clamping faces

Order No.	L	H	H1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	L8
K1534.10040050	400	500	50	20	M16	M12	M 16	251	320	300	200	200	150	55	144,6
K1534.10040065	400	650	50	20	M16	M12	M 16	251	320	300	200	200	150	55	144,6
K1534.10050060	500	600	50	20	M16	M12	M 16	301	400	200	-	250	200	75	173,6
K1534.10050075	500	750	50	20	M16	M12	M 16	301	400	200	-	250	200	75	173,6
K1534.10063070	630	700	50	25	M16	M16	M 16	351	500	400	-	315	200	100	202,6
K1534.10063085	630	850	50	25	M16	M16	M 16	351	500	400	-	315	200	100	202,6
K1534.10080080	800	800	50	25	M16	M16	M 16	501	640	600	400	400	300	135	289,6
K1534.10080100	800	1000	50	25	M16	M16	M 16	501	640	600	400	400	300	135	289,6

Clamping towers, grey cast iron, 6-sided, with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1534.21240050

Note:
Grid spacing 50 ± 0.02 mm.
Clamping towers with grid holes are used on horizontal machining centres.
The alphanumerically labelled grid holes mean that the clamping elements can be assigned in a defined manner in the event of repeat setups.
The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

On request:
other dimensions.

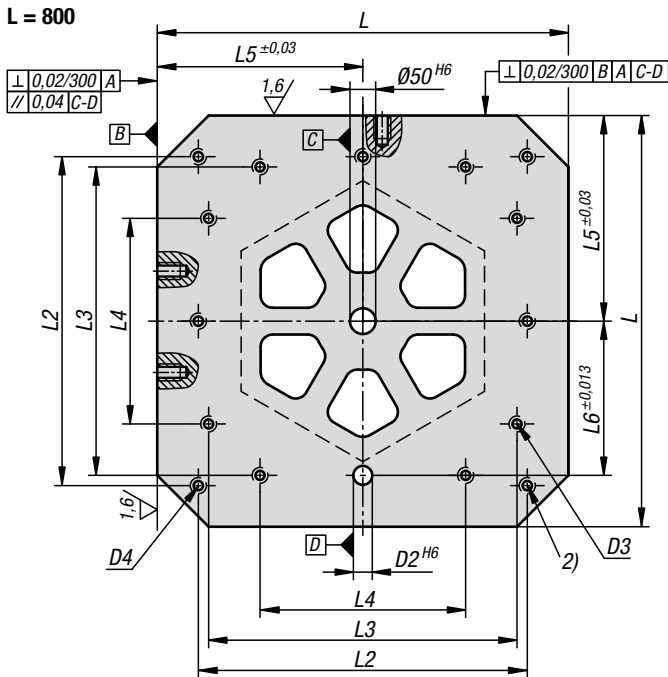
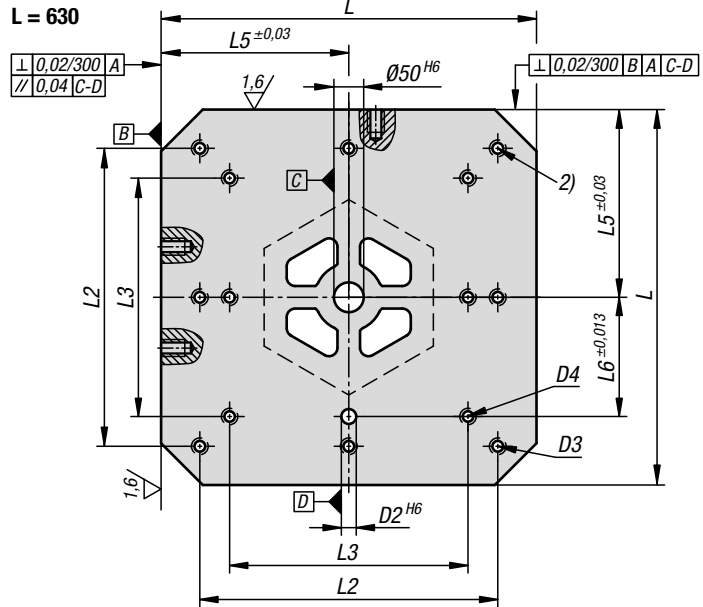
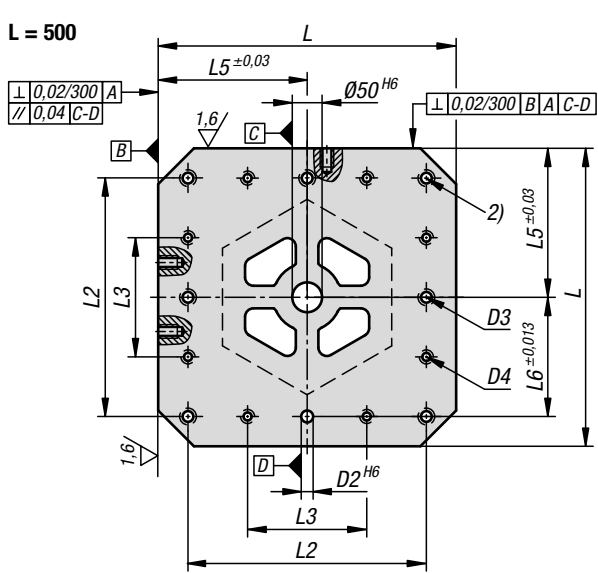
Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D3/D4)

KIPP Clamping towers, grey cast iron, 6-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L	H	H1	D1	D2	D3	D4	D5	L1	L2
K1534.21240050	K1534.21640050	400	500	50	M12/M16	20	M16	M12	M 16	250	320
K1534.21240065	K1534.21640065	400	650	50	M12/M16	20	M16	M12	M 16	250	320
K1534.21250060	K1534.21650060	500	600	50	M12/M16	20	M16	M12	M 16	300	400
K1534.21250075	K1534.21650075	500	750	50	M12/M16	20	M16	M12	M 16	300	400
K1534.21263070	K1534.21663070	630	700	50	M12/M16	25	M16	M16	M 16	350	500
K1534.21263085	K1534.21663085	630	850	50	M12/M16	25	M16	M16	M 16	350	500
K1534.21280080	K1534.21680080	800	800	50	M12/M16	25	M16	M16	M 16	500	640
K1534.21280100	K1534.21680100	800	1000	50	M12/M16	25	M16	M16	M 16	500	640

Clamping towers, grey cast iron, 6-sided,

with grid holes



KIPP Clamping towers, grey cast iron, 6-sided, with grid holes

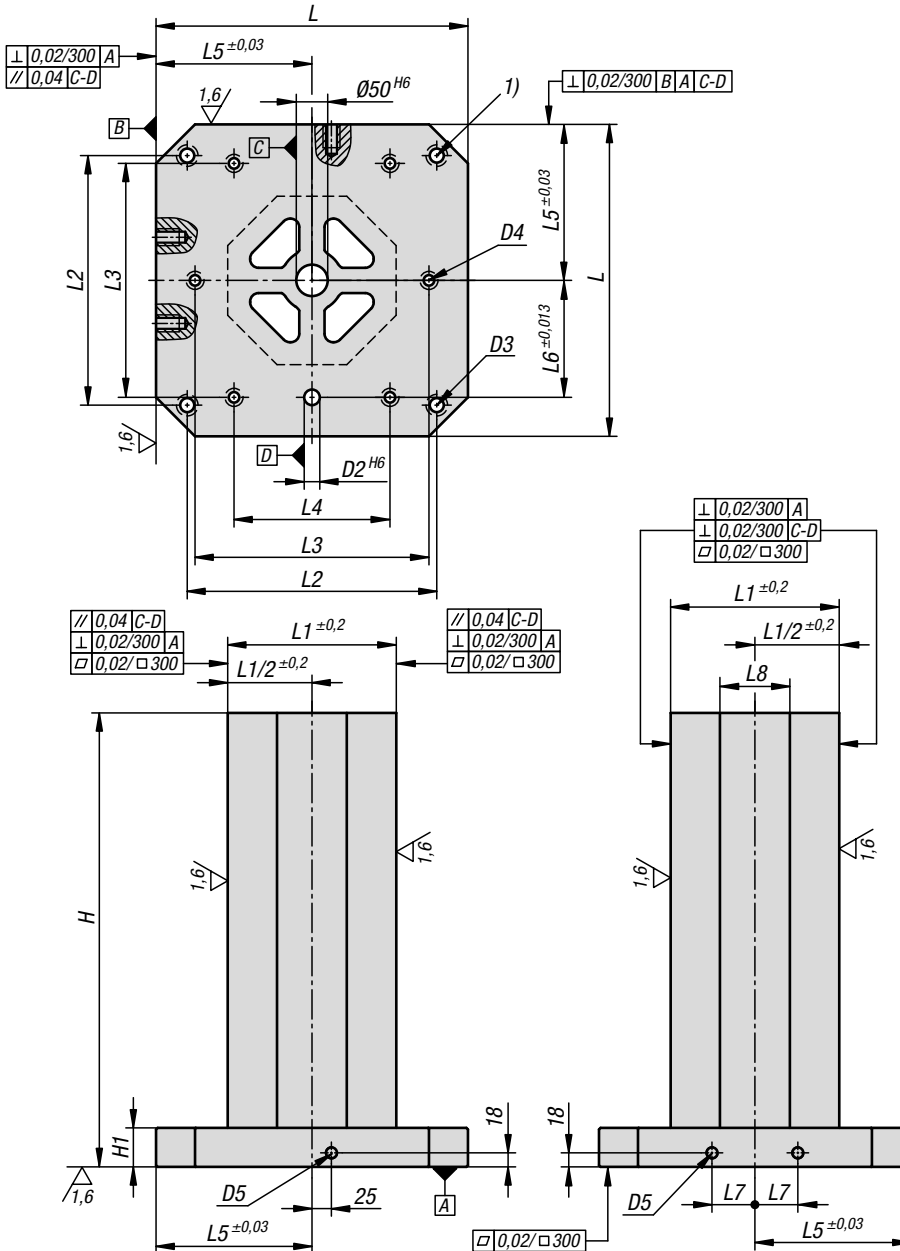
Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L3	L4	L5	L6	L7	L8	No. of grid holes	NL=No. lengthwise	NB= No. across
K1534.21240050	K1534.21640050	300	200	200	150	55	144	96	1	7
K1534.21240065	K1534.21640065	300	200	200	150	55	144	132	1	10
K1534.21250060	K1534.21650060	200	-	250	200	75	-	180	2	9
K1534.21250075	K1534.21650075	200	-	250	200	75	-	234	2	12
K1534.21263070	K1534.21663070	400	-	315	200	100	202	216	2	11
K1534.21263085	K1534.21663085	400	-	315	200	100	202	270	2	14
K1534.21280080	K1534.21680080	600	400	400	300	135	-	420	4	13
K1534.21280100	K1534.21680100	600	400	400	300	135	-	540	4	17

Clamping towers, grey cast iron, 8-sided,

with pre-machined clamping faces



L = 400



Material:
GJL 300.

Version:
Support and clamping faces are precision-machined.
The clamping faces have a +1 mm allowance.

Sample order:
K1535.10040050

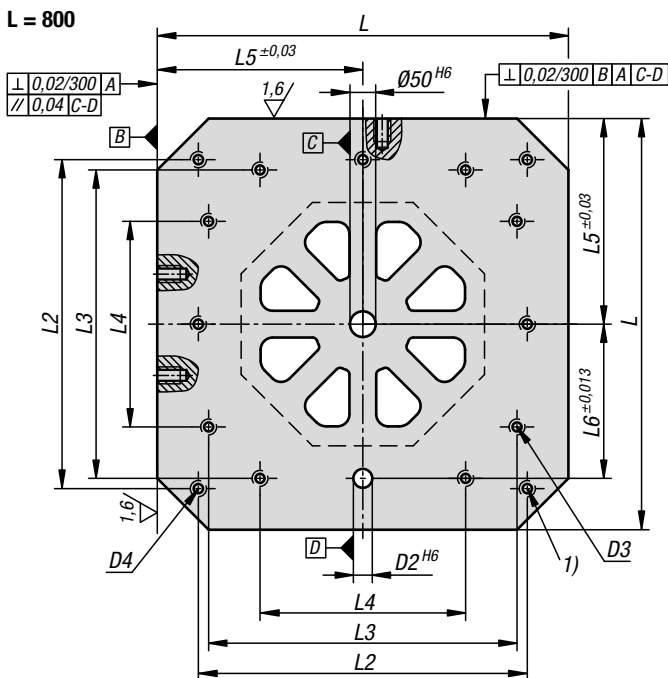
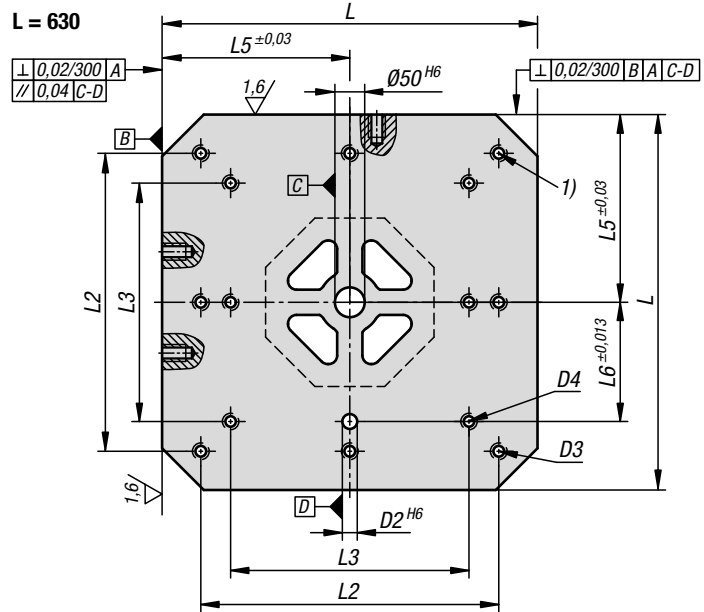
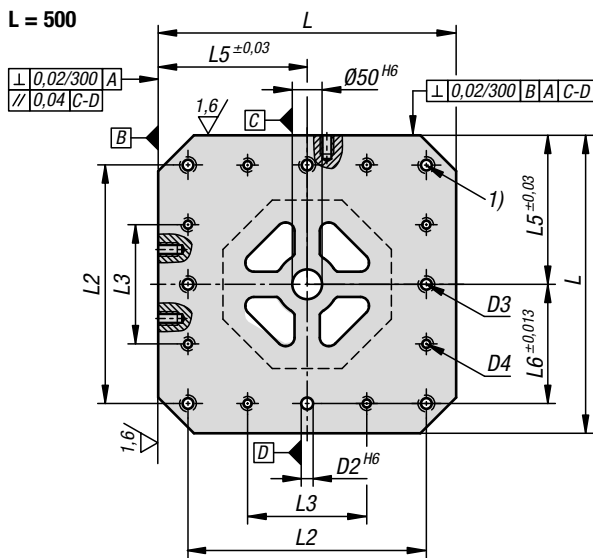
Note:
Clamping towers with pre-machined clamping faces provide a fast and economic way of producing bodies with specific grid or individual holes. The base is ready for mounting on the machine table. The clamping faces can be machined to the end dimensions by the user. The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

On request:
other dimensions.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Clamping towers, grey cast iron, 8-sided,

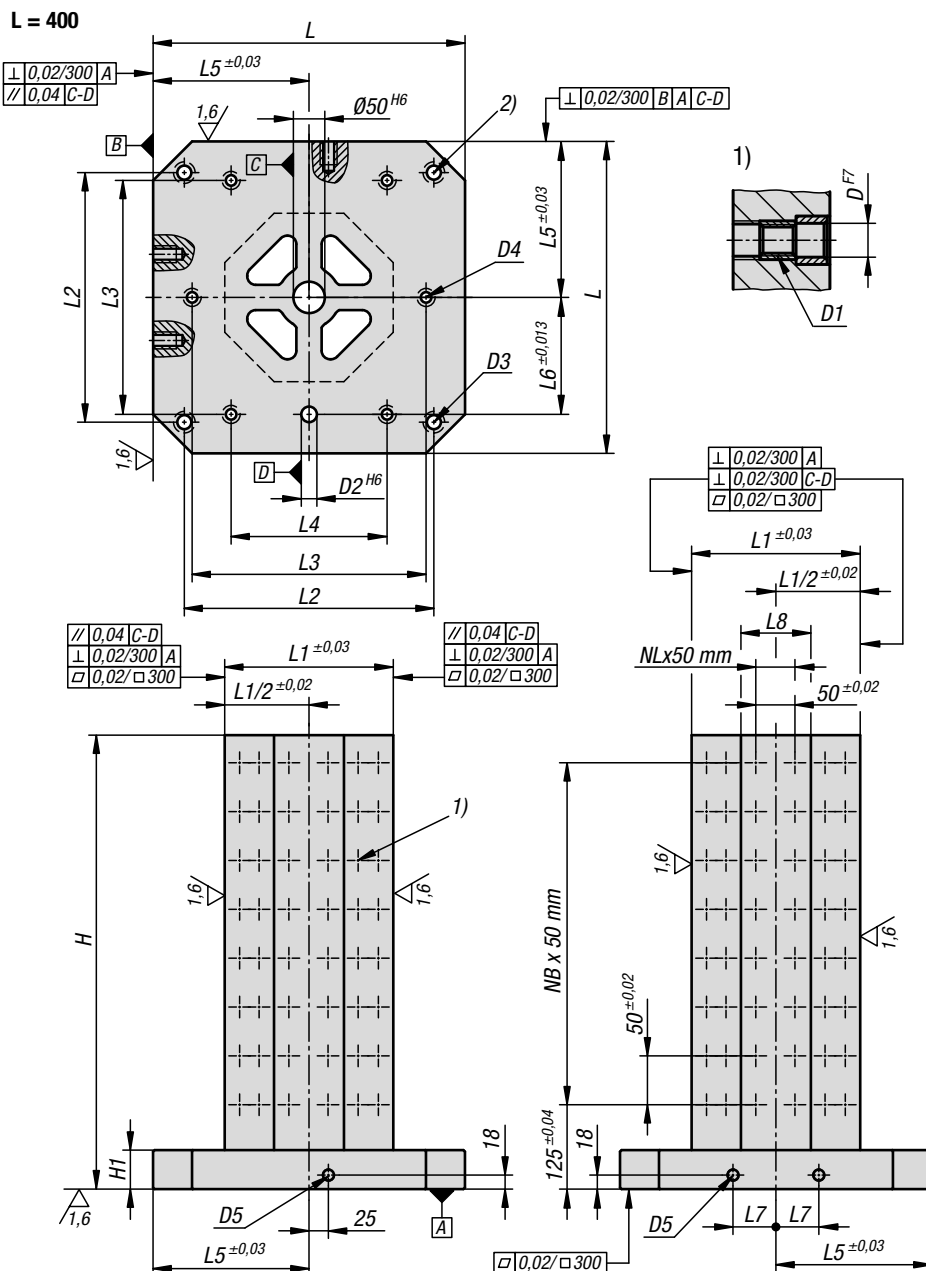
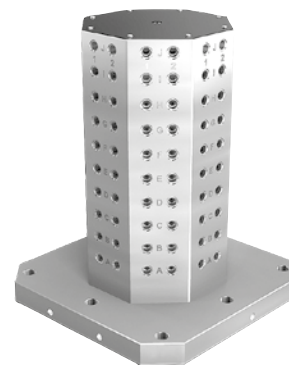
with pre-machined clamping faces



KIPP Clamping towers, grey cast iron, 8-sided, with pre-machined clamping faces

Order No.	L	H	H1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	L8
K1535.10040050	400	500	50	20	M16	M12	M 16	251	320	300	200	200	150	55	103,4
K1535.10040065	400	650	50	20	M16	M12	M 16	251	320	300	200	200	150	55	103,4
K1535.10050060	500	600	50	20	M16	M12	M 16	301	400	200	-	250	200	75	124,4
K1535.10050075	500	750	50	20	M16	M12	M 16	301	400	200	-	250	200	75	124,4
K1535.10063070	630	700	50	25	M16	M16	M 16	351	500	400	-	315	200	100	145,4
K1535.10063085	630	850	50	25	M16	M16	M 16	351	500	400	-	315	200	100	145,4
K1535.10080080	800	800	50	25	M16	M16	M 16	501	640	600	400	400	300	135	207,4
K1535.10080100	800	1000	50	25	M16	M16	M 16	501	640	600	400	400	300	135	207,4

Clamping towers, grey cast iron, 8-sided, with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1535.21240050

Note:
Grid spacing 50 ± 0.02 mm.
Clamping towers with grid holes are used on horizontal machining centres.
The alphanumerically labelled grid holes mean that the clamping elements can be assigned in a defined manner in the event of repeat setups.
The clamping towers conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

On request:
other dimensions.

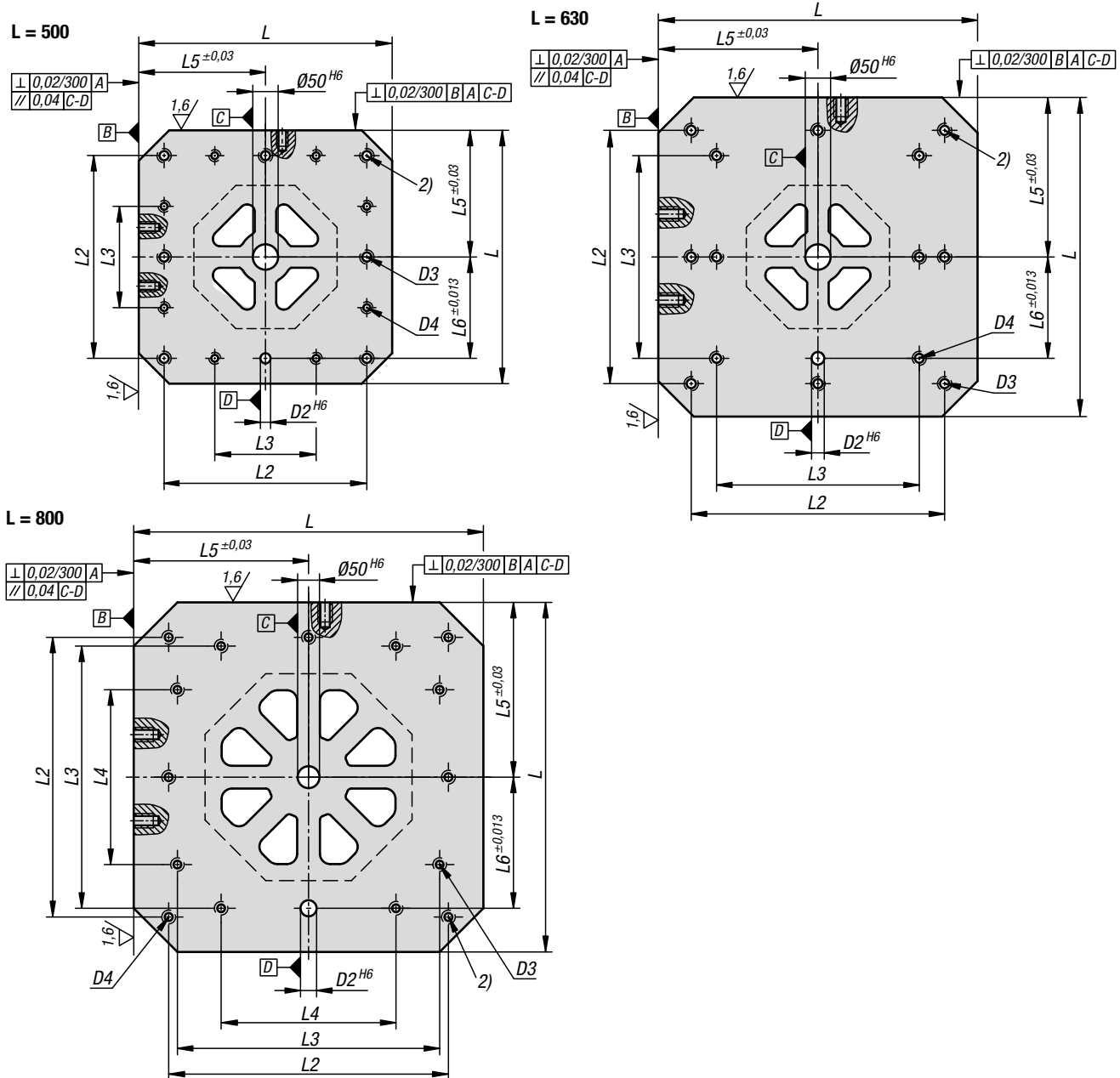
Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D3/D4)

KIPP Clamping towers, grey cast iron, 8-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L	H	H1	D1	D2	D3	D4	D5	L1	L2
K1535.21240050	K1535.21640050	400	500	50	M12/M16	20	M16	M12	M 16	250	320
K1535.21240065	K1535.21640065	400	650	50	M12/M16	20	M16	M12	M 16	250	320
K1535.21250060	K1535.21650060	500	600	50	M12/M16	20	M16	M12	M 16	300	400
K1535.21250075	K1535.21650075	500	750	50	M12/M16	20	M16	M12	M 16	300	400
K1535.21263070	K1535.21663070	630	700	50	M12/M16	25	M16	M16	M 16	350	500
K1535.21263085	K1535.21663085	630	850	50	M12/M16	25	M16	M16	M 16	350	500
K1535.21280080	K1535.21680080	800	800	50	M12/M16	25	M16	M16	M 16	500	640
K1535.21280100	K1535.21680100	800	1000	50	M12/M16	25	M16	M16	M 16	500	640

Clamping towers, grey cast iron, 8-sided,

with grid holes

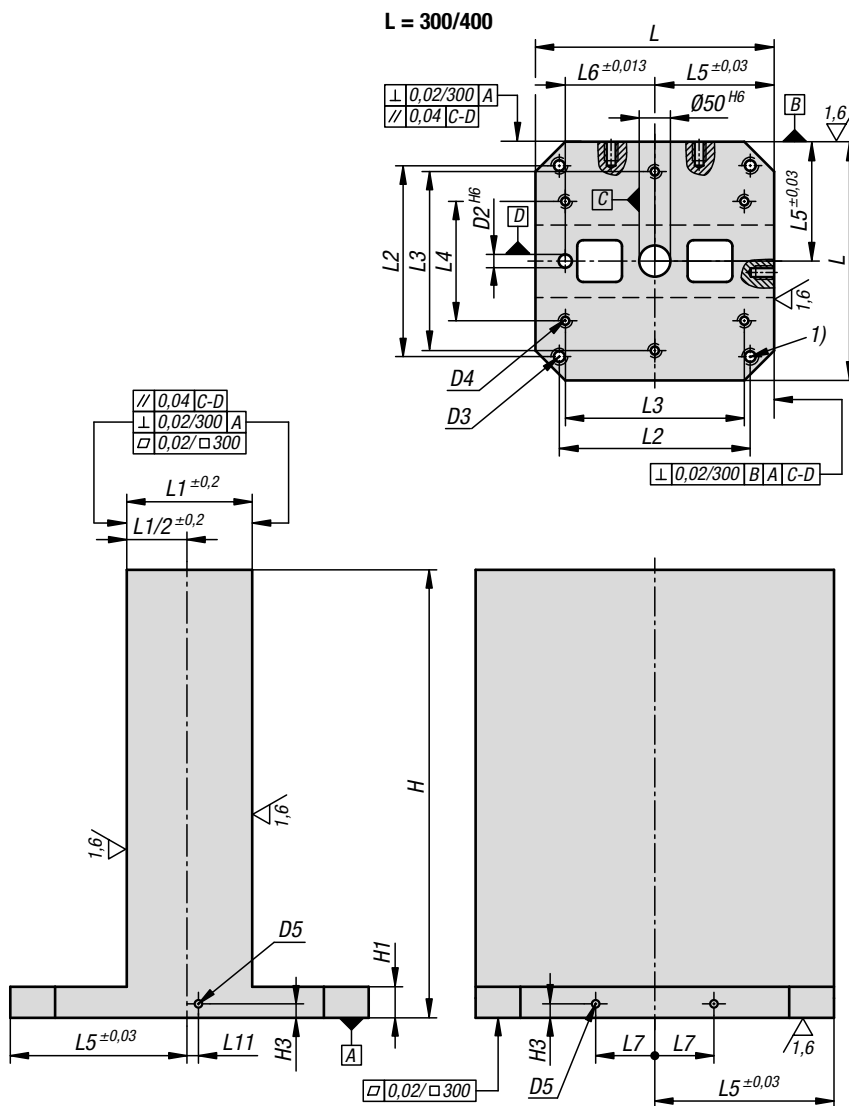


KIPP Clamping towers, grey cast iron, 8-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L3	L4	L5	L6	L7	L8	No. of grid holes	NL=No. lengthwise	NB= No. across
K1535.21240050	K1535.21640050	300	200	200	150	55	103	128	1	7
K1535.21240065	K1535.21640065	300	200	200	150	55	103	176	1	10
K1535.21250060	K1535.21650060	200	-	250	200	75	124	160	1	9
K1535.21250075	K1535.21650075	200	-	250	200	75	124	208	1	12
K1535.21263070	K1535.21663070	400	-	315	200	100	145	192	1	11
K1535.21263085	K1535.21663085	400	-	315	200	100	145	240	1	14
K1535.21280080	K1535.21680080	600	400	400	300	135	207	448	3	13
K1535.21280100	K1535.21680100	600	400	400	300	135	207	576	3	17

Tombstones, grey cast iron, double-sided,

with pre-machined clamping faces



Material:
GJL 300.

Version:
Support and clamping faces are precision-machined. The clamping faces have a +1 mm allowance.

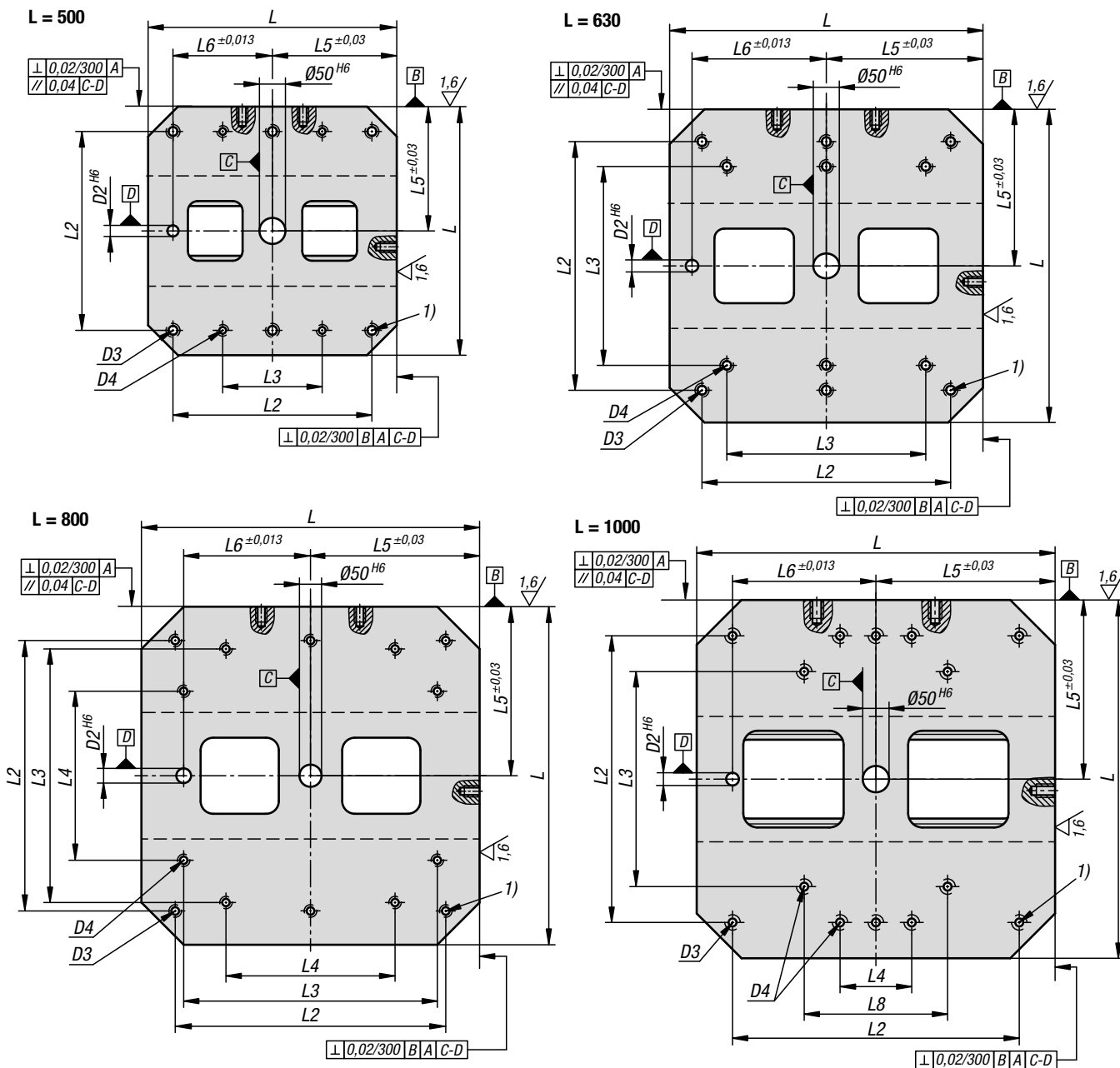
Sample order:
K0803.100030050

Note:
Tombstones with pre-machined clamping faces provide a fast and economic method of producing a body with specific grid or individual holes. The base is ready for mounting on the machine table. The two clamping faces can be machined to the end dimensions by the user. The tombstones conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Tombstones, grey cast iron, double-sided,

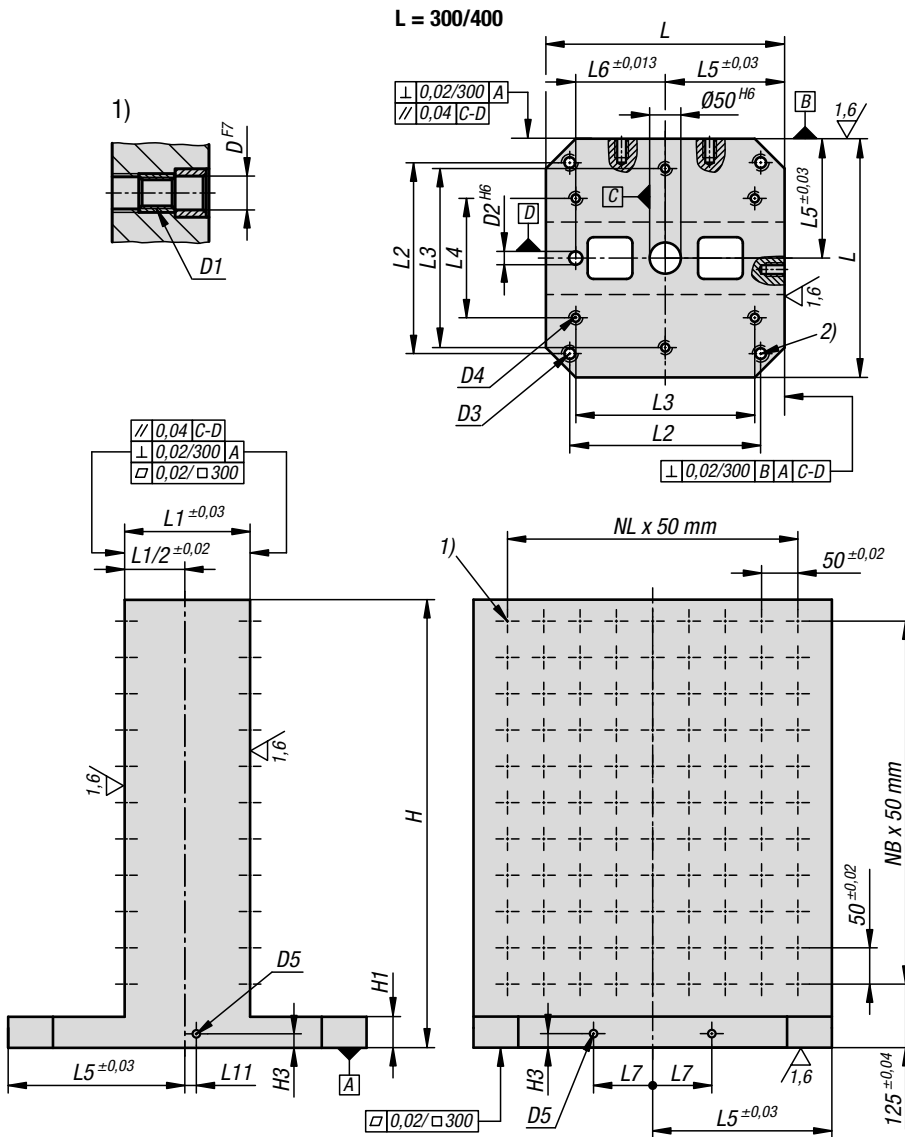
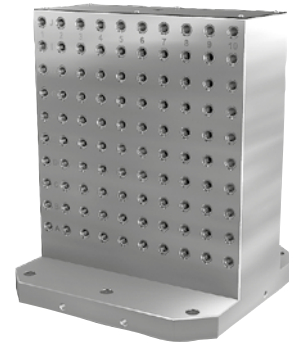
with pre-machined clamping faces



KIPP Tombstones, grey cast iron, double-sided, with pre-machined clamping faces

Order No.	L	H	H1	D2	D3	D4	D5	H3	L1	L2	L3	L4	L5	L6	L7	L8	L11
K0803.100030050	300	500	50	20	M12	M10	M12	15	81	250	200	-	150	100	40	-	0
K0803.100040050	400	500	50	20	M16	M12	M16	18	151	320	300	200	200	150	55	-	25
K0803.100040065	400	650	50	20	M16	M12	M16	18	151	320	300	200	200	150	55	-	25
K0803.100050060	500	600	50	20	M16	M12	M16	18	201	400	200	-	250	200	75	-	25
K0803.100050075	500	750	50	20	M16	M12	M16	18	201	400	200	-	250	200	75	-	25
K0803.100063070	630	700	50	25	M16	M16	M16	18	251	500	400	-	315	200	100	-	25
K0803.100063085	630	850	50	25	M16	M16	M16	18	251	500	400	-	315	200	100	-	25
K0803.100080080	800	800	50	25	M16	M16	M16	18	301	640	600	400	400	300	135	-	25
K0803.100080100	800	1000	50	25	M16	M16	M16	18	301	640	600	400	400	300	135	-	25
K0803.100100100	1000	1000	55	25	M20	M20	M16	18	351	800	600	200	500	400	165	400	25
K0803.100100125	1000	1250	55	25	M20	M20	M16	18	351	800	600	200	500	400	165	400	25

Tombstones, grey cast iron, double-sided, with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K0803.212030050

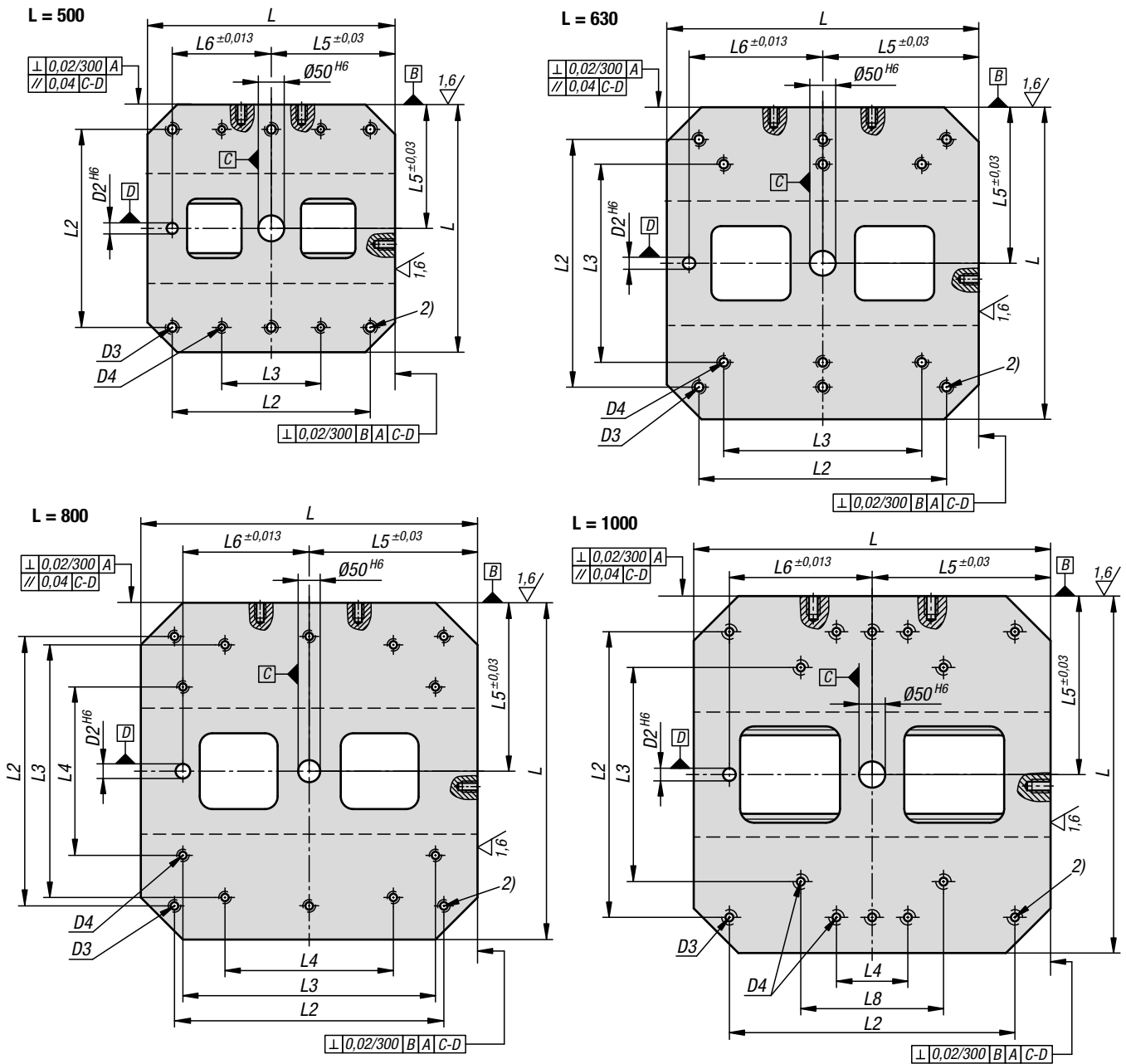
Note:
Grid spacing $50 \pm 0.02 \text{ mm}$.
Tombstones with grid holes are used on horizontal machining centres.
The alphanumerically labelled grid holes guarantee a defined assignment of clamping elements by repeat setups.
The tombstones conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980.
Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately.
Please order protection plugs to plug unused grid holes separately.
Ring bolts for hoisting are supplied.
Other dimensions available on request.

Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D3/D4)

KIPP Tombstones, grey cast iron, double-sided, with grid holes

Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L	H	H1	D1	D2	D3	D4	D5	H3
K0803.212030050	K0803.216030050	300	500	50	M12/M16	20	M12	M10	M12	15
K0803.212040050	K0803.216040050	400	500	50	M12/M16	20	M16	M12	M16	18
K0803.212040065	K0803.216040065	400	650	50	M12/M16	20	M16	M12	M16	18
K0803.212050060	K0803.216050060	500	600	50	M12/M16	20	M16	M12	M16	18
K0803.212050075	K0803.216050075	500	750	50	M12/M16	20	M16	M12	M16	18
K0803.212063070	K0803.216063070	630	700	50	M12/M16	25	M16	M16	M16	18
K0803.212063085	K0803.216063085	630	850	50	M12/M16	25	M16	M16	M16	18
K0803.212080080	K0803.216080080	800	800	50	M12/M16	25	M16	M16	M16	18
K0803.212080100	K0803.216080100	800	1000	50	M12/M16	25	M16	M16	M16	18
K0803.212100100	K0803.216100100	1000	1000	55	M12/M16	25	M20	M20	M16	18
K0803.212100125	K0803.216100125	1000	1250	55	M12/M16	25	M20	M20	M16	18

Tombstones, grey cast iron, double-sided, with grid holes

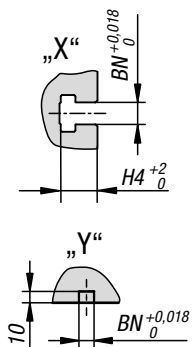


KIPP Tombstones, grey cast iron, double-sided, with grid holes

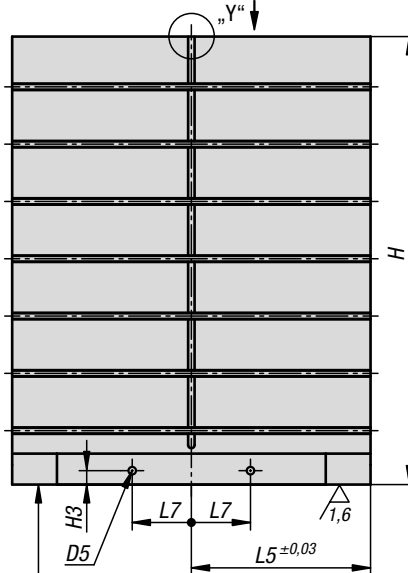
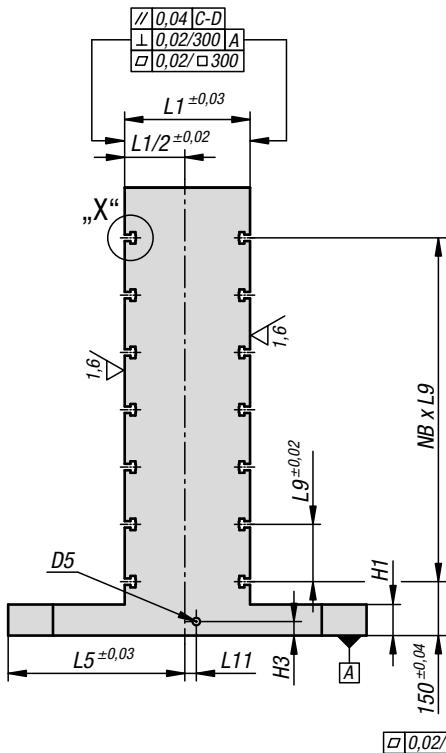
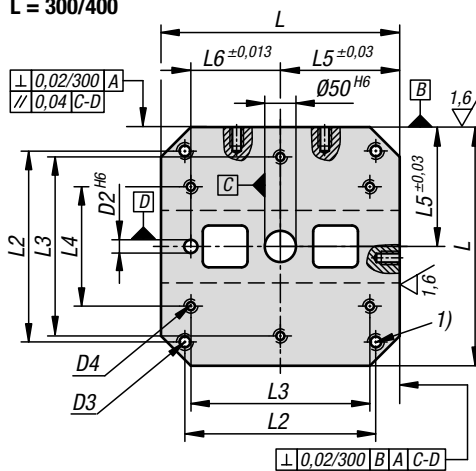
Order No. D=Reamed hole 12	Order No. D=Reamed hole 16	L1	L2	L3	L4	L5	L6	L7	L8	L11	No. of grid holes	NL=No. lengthwise	NB= No. across
K0803.212030050	K0803.216030050	80	250	200	-	150	100	40	-	0	96	5	7
K0803.212040050	K0803.216040050	150	320	300	200	200	150	55	-	25	128	7	7
K0803.212040065	K0803.216040065	150	320	300	200	200	150	55	-	25	176	7	10
K0803.212050060	K0803.216050060	200	400	200	-	250	200	75	-	25	200	9	9
K0803.212050075	K0803.216050075	200	400	200	-	250	200	75	-	25	260	9	12
K0803.212063070	K0803.216063070	250	500	400	-	315	200	100	-	25	288	11	11
K0803.212063085	K0803.216063085	250	500	400	-	315	200	100	-	25	360	11	14
K0803.212080080	K0803.216080080	300	640	600	400	400	300	135	-	25	420	14	13
K0803.212080100	K0803.216080100	300	640	600	400	400	300	135	-	25	540	14	17
K0803.212100100	K0803.216100100	350	800	600	200	500	400	165	400	25	684	18	17
K0803.212100125	K0803.216100125	350	800	600	200	500	400	165	400	25	874	18	22

Tombstones, grey cast iron, double-sided,

with T-slots



L = 300/400



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

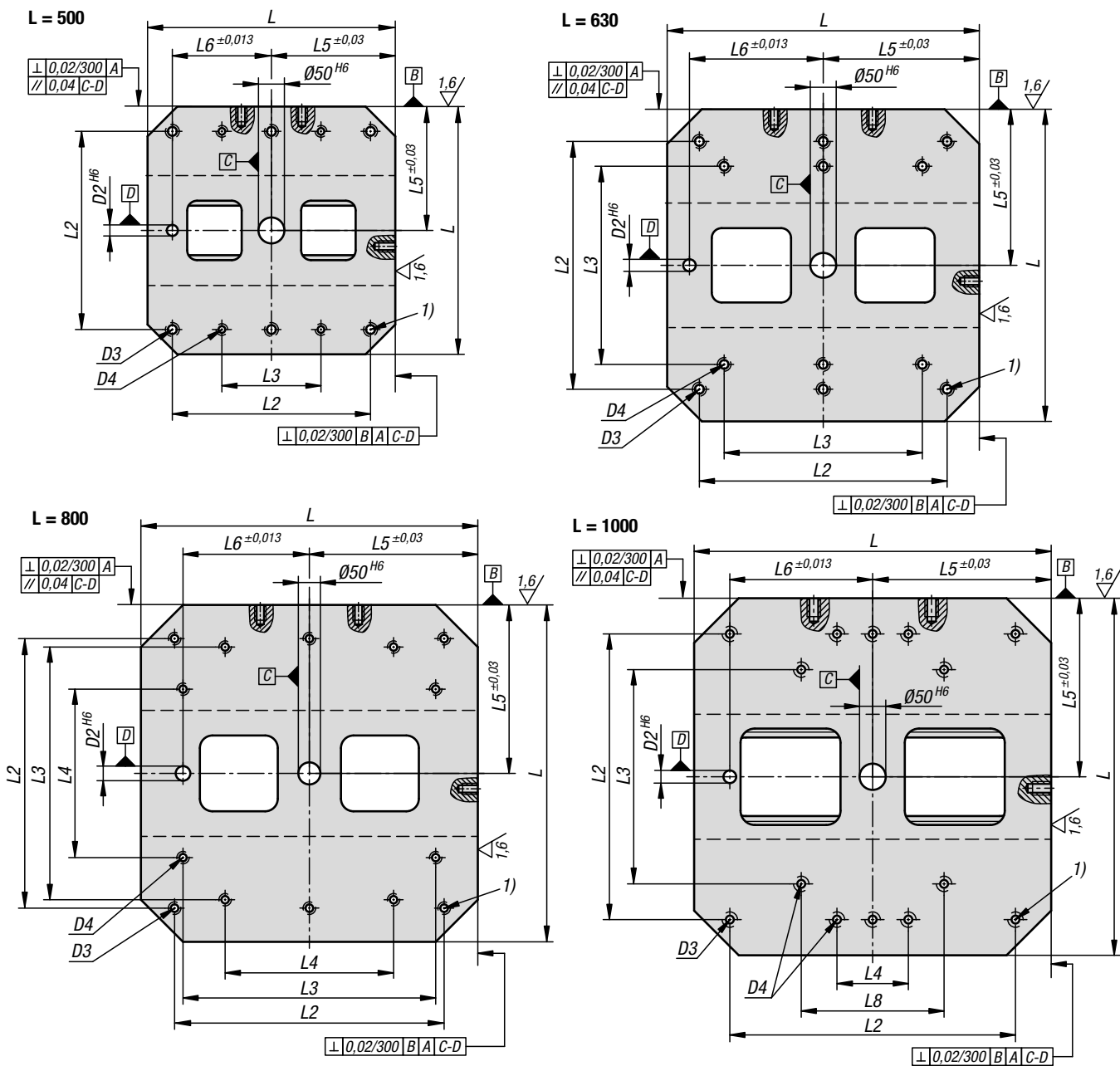
Sample order:
K0803.314040050

Note:
Workholding cubes with T-slots are used for constructing modular fixtures on horizontal machines. The precise longitudinal and transverse slot spacing ensures very high repeat clamping accuracy. The workholding cubes conform to machine tables for machine tools acc. to DIN 55201 and JIS 6337-1980. Please order locating pins for positioning subplates on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

Drawing reference:
1) hole for DIN 912 cap screw (D3/D4)

Tombstones, grey cast iron, double-sided,

with T-slots

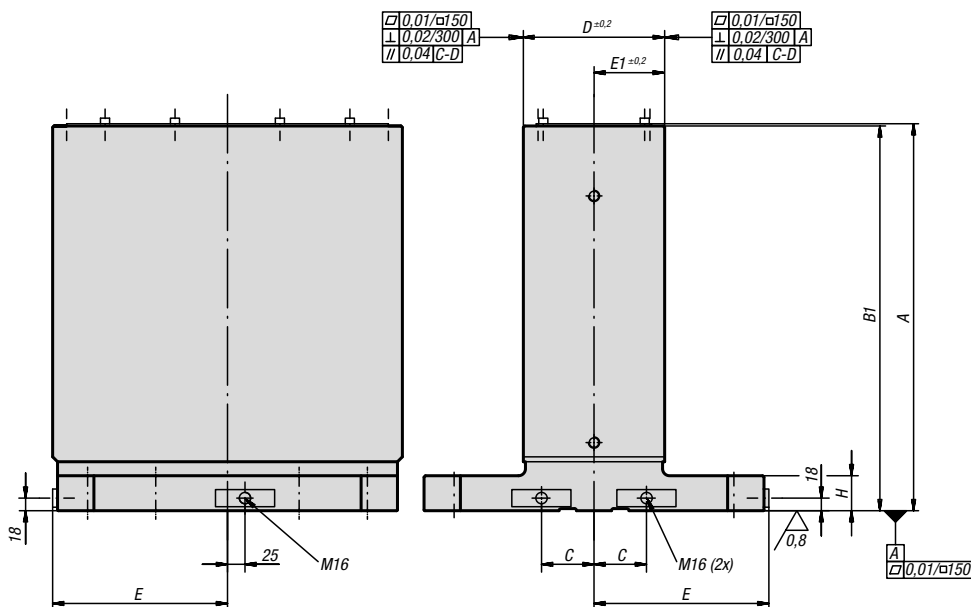


KIPP Tombstones, grey cast iron, double-sided, with T-slots

Order No. BN=Slot width 14	Order No. BN=Slot width 18	L	H	H1	D2	D3	D4	D5	H3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L11	NB= No. across
K0803.314040050	K0803.318040050	400	500	50	20	M16	M12	M16	18	150	320	300	200	200	150	55	-	100	25	3
K0803.314040065	K0803.318040065	400	650	50	20	M16	M12	M16	18	150	320	300	200	200	150	55	-	100	25	4
K0803.314050060	K0803.318050060	500	600	50	20	M16	M12	M16	18	200	400	200	-	250	200	75	-	100	25	4
K0803.314050075	K0803.318050075	500	750	50	20	M16	M12	M16	18	200	400	200	-	250	200	75	-	100	25	5
K0803.314063070	K0803.318063070	630	700	50	25	M16	M16	M16	18	250	500	400	-	315	200	100	-	125	25	4
K0803.314063085	K0803.318063085	630	850	50	25	M16	M16	M16	18	250	500	400	-	315	200	100	-	125	25	5
K0803.314080080	K0803.318080080	800	800	50	25	M16	M16	M16	18	300	640	600	400	400	300	135	-	150	25	4
K0803.314080100	K0803.318080100	800	1000	50	25	M16	M16	M16	18	300	640	600	400	400	300	135	-	150	25	5
K0803.314100100	K0803.318100100	1000	1000	55	25	M20	M20	M16	18	350	800	600	200	500	400	165	400	160	25	5
K0803.314100125	K0803.318100125	1000	1250	55	25	M20	M20	M16	18	350	800	600	200	500	400	165	400	160	25	6

Tombstones double-sided

without grid holes



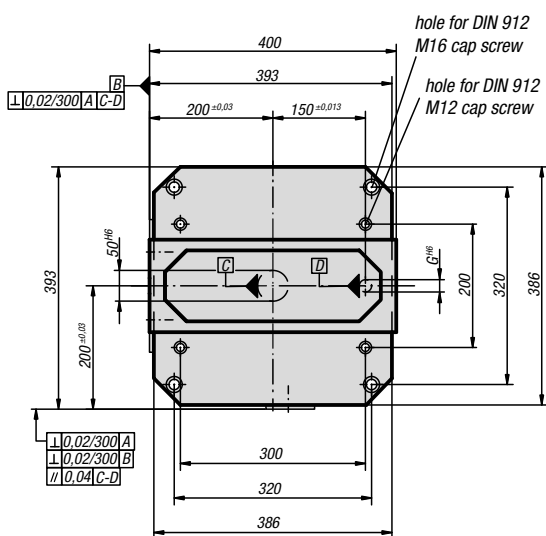
Material:
GJL 300.

Version:
Reference surfaces precision machined.
The clamping surfaces have 0.5 mm allowance.

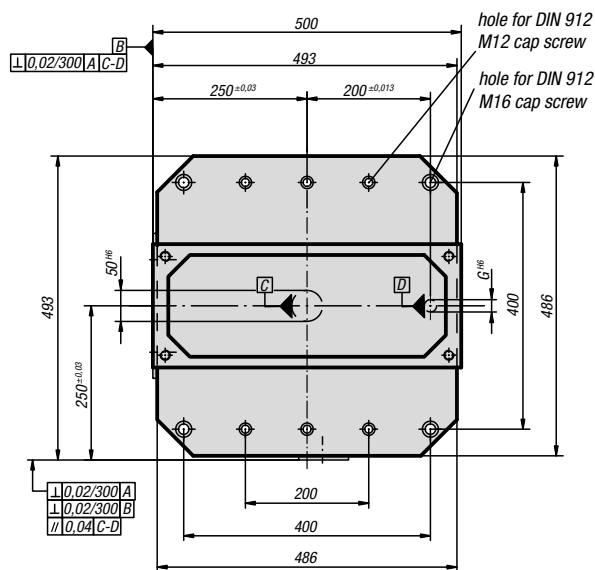
Sample order:
K0803.0040151

Note:
The double-sided tombstones are matched to subplates for machine tools acc. to DIN 55201 and JIS 6337-1980.
Ring bolts for lifting are supplied. A cover prevents the cavity of the tombstone filling up with swarf.

K0803.0040151



K0803.0050201

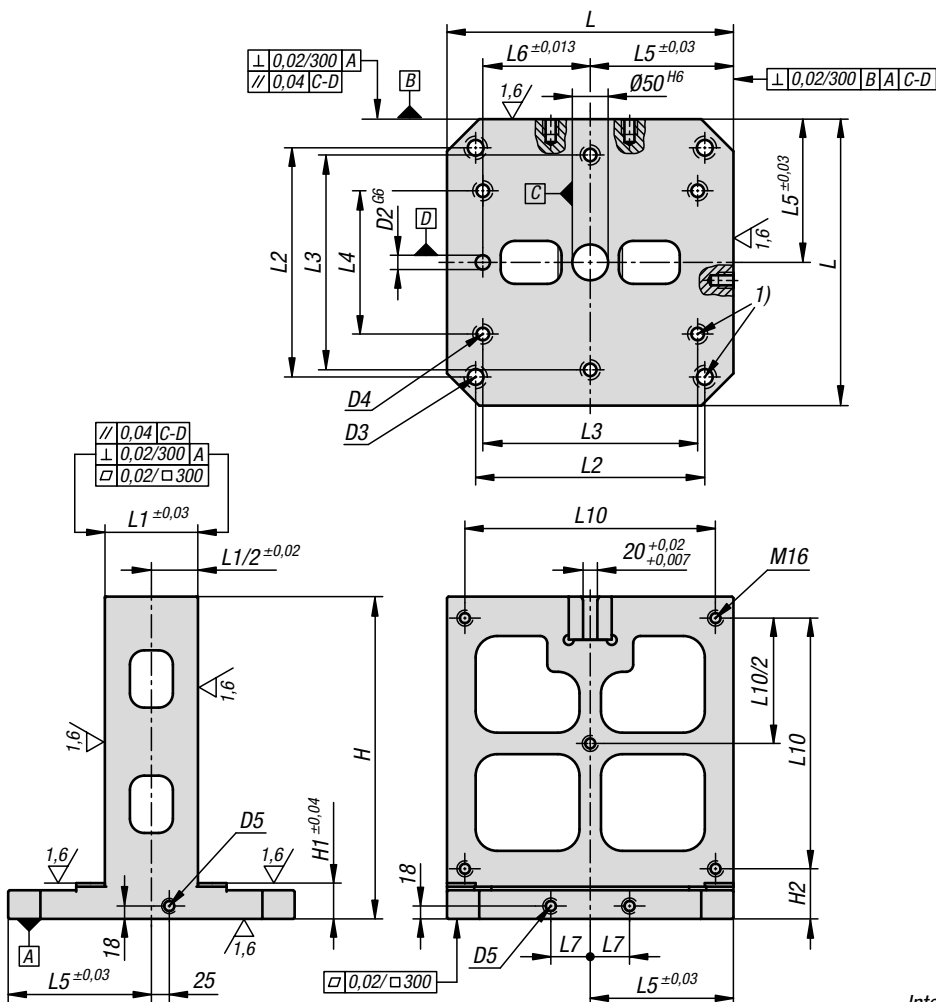


KIPP Tombstones double-sided without grid holes

Order No.	A	B1	C	D	E	E1	G	H	weight ca. kg
K0803.0040151	553	550	55	151 $\pm 0,2$	200	75,5 $\pm 0,2$	20	50	202
K0803.0050201	653	650	75	201 $\pm 0,2$	250	101,5 $\pm 0,2$	20	50	317

Tombstone, grey cast iron, double-sided,

for interchangeable subplates



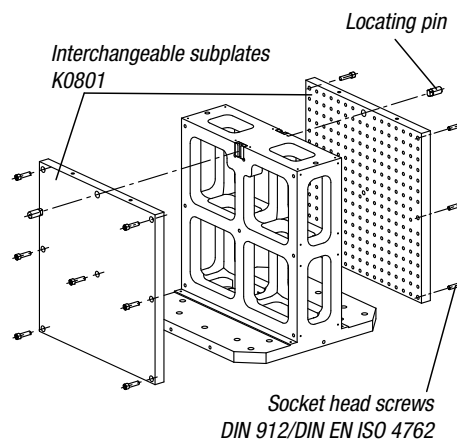
Material:
G.JL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K0804.14045

Note:
Interchangeable subplates can be positioned and mounted on both sides of the tombstone. This means that clamping fixtures can be replaced efficiently. The tombstones conform to machine tables for machine tools acc. to DIN 55201 and JIS6337-1980. Please order locating pins for positioning tombstones on machine tables acc. to DIN 55201 separately. Ring bolts for hoisting are supplied, as well as 2 positioning pins for positioning the interchangeable subplates.

Drawing reference:
1) hole for DIN 912 cap screw

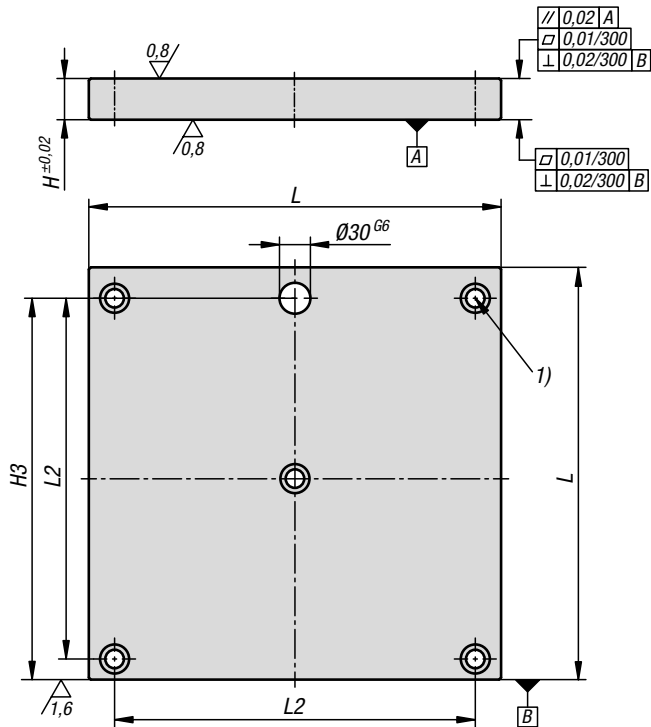
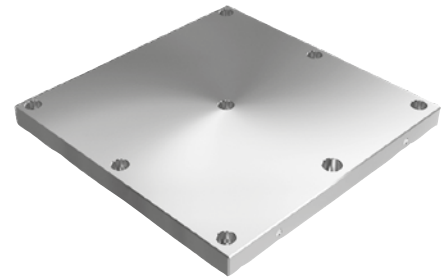


KIPP Tombstone, grey cast iron, double-sided, for interchangeable subplates

Order No.	L	L1	H	D2	D3	D4	D5	H1	H2	L2	L3	L4	L5	L6	L7	L10
K0804.14045	400	130	450	20	M16	M12	M 16	50	70	320	300	200	200	150	55	350
K0804.15055	500	150	550	20	M16	M12	M 16	55	75	400	200	-	250	200	75	450
K0804.16369	630	220	690	25	M16	M16	M 16	60	80	500	400	-	315	200	100	580
K0804.18086	800	250	860	25	M16	M16	M 16	60	80	640	600	400	400	300	135	750

Interchangeable subplates, grey cast iron,

with pre-machined clamping faces



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

K0801.1004040

Note:

Interchangeable subplates with pre-machine clamping faces are used double-sided, together with the tombstones. The interchangeable subplates are positioned and mounted on both sides of the tombstone. This means that clamping fixtures can be replaced efficiently. The interchangeable subplates can be machined accordingly by the customer.

Drawing reference:

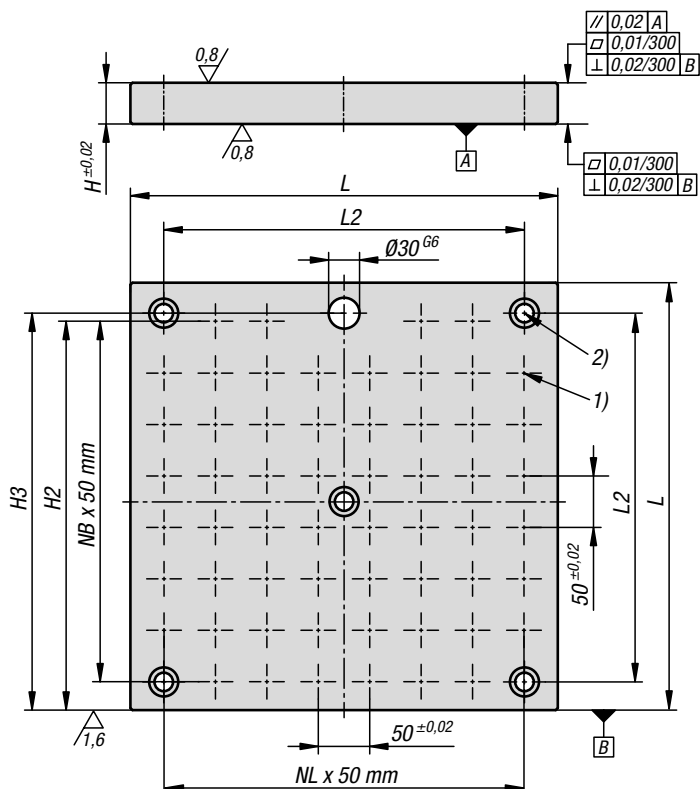
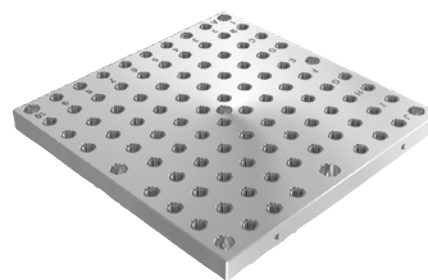
1) hole for DIN 912 cap screw, M16

KIPP Interchangeable subplates, grey cast iron, with pre-machined clamping faces

Order No.	L	H	H3	L2	No. of fastening holes
K0801.1004040	400	40	370	350	5
K0801.1005050	500	40	470	450	7
K0801.1006363	630	40	600	580	7
K0801.1008080	800	50	770	750	7

Interchangeable subplates, grey cast iron

with grid holes



Material:

GJL 300.

Version:

Mounting surfaces ground

Sample order:

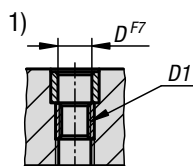
K0801.2124040

Note:

Interchangeable subplates with grid holes are used double-sided, together with the tombstones. The interchangeable subplates are positioned and mounted on both sides of the tombstone. This means that clamping fixtures can be replaced efficiently. The alphanumerically labelled grid holes mean that the clamping elements can be assigned in a defined manner in the event of repeat setups. Please order protection plugs to plug unused grid holes separately.

Drawing reference:

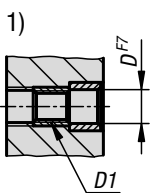
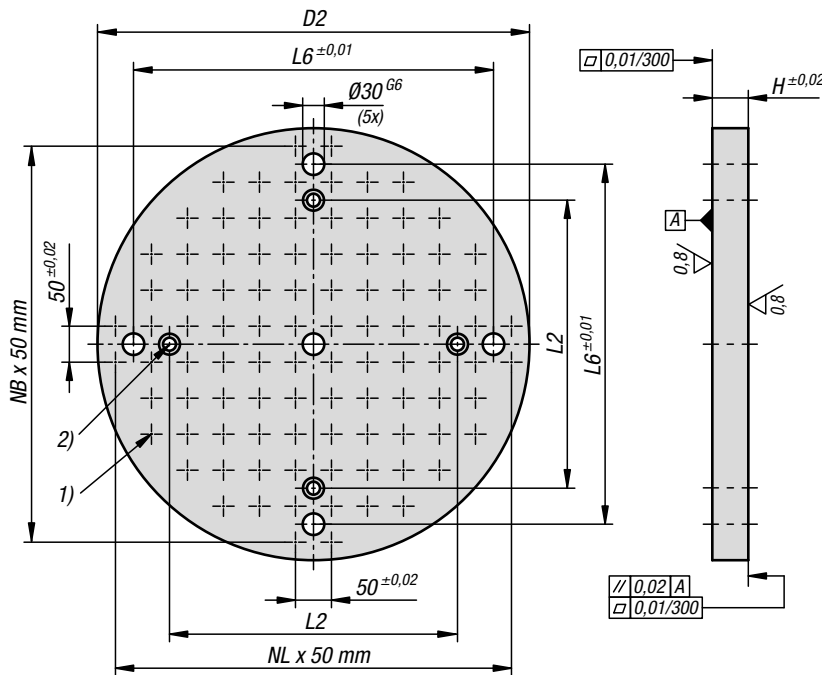
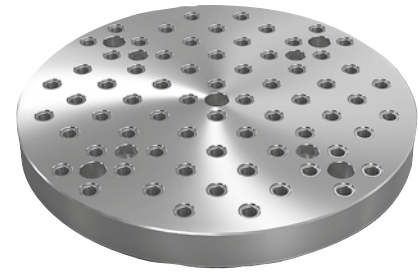
- 1) grid hole
- 2) hole for DIN 912 cap screw, M16



KIPP Interchangeable subplates, grey cast iron, with grid holes

Order No.	L	H	D	D1	H2	H3	L2	N1=No. of grid holes	NL=No. lengthwise	NB=No. across	No. of fastening holes
K0801.2124040	400	40	12	M12	370	370	350	58	7	7	5
K0801.2125050	500	40	12	M12	470	470	450	94	9	9	7
K0801.2126363	630	40	12	M12	585	600	580	138	11	11	7
K0801.2128080	800	50	12	M12	770	770	750	250	15	15	7
K0801.2164040	400	40	16	M16	370	370	350	58	7	7	5
K0801.2165050	500	40	16	M16	470	470	450	90	9	9	7
K0801.2166363	630	40	16	M16	585	600	580	138	11	11	7
K0801.2168080	800	50	16	M16	770	770	750	246	15	15	7

Baseplates, grey cast iron, round, with grid holes



Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K1532.21230050

Note:
Grid spacing $50 \pm 0,02$ mm.
Round baseplates with grid holes are used for setting up modular fixtures. These baseplates are positioned and mounted directly on machine tables. The aligning holes are used to align the baseplate on the machine table. Please order locating pins to locate the baseplates separately. Please order protection plugs to plug unused grid holes separately. Ring bolts for hoisting are supplied. Other dimensions available on request.

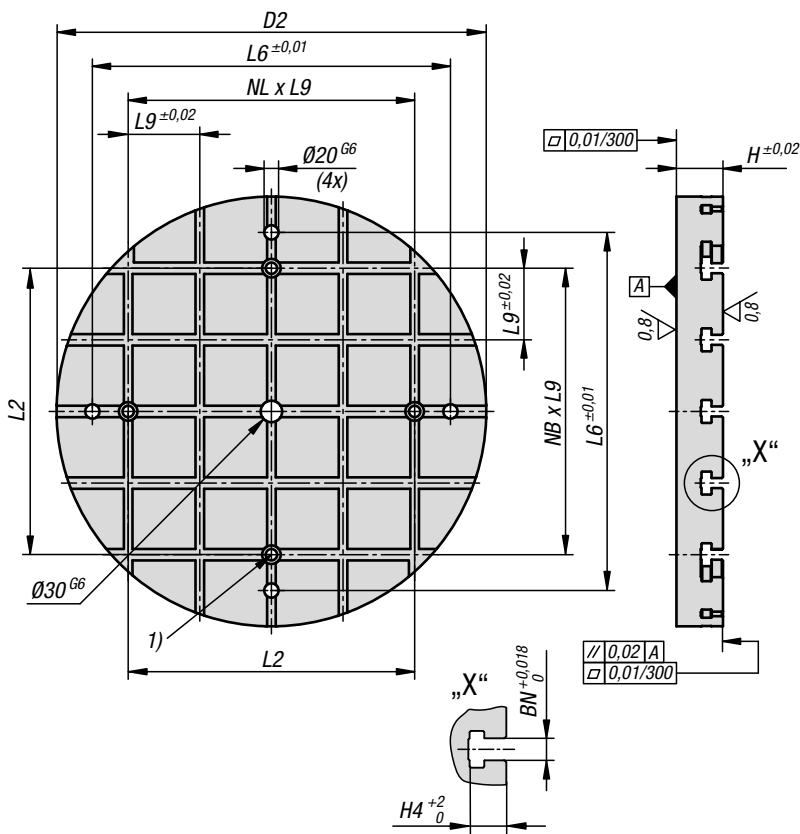
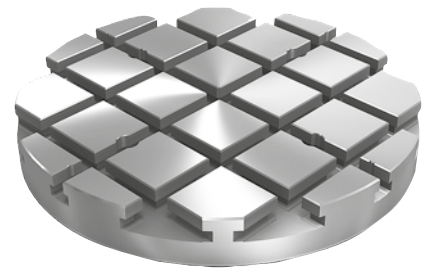
On request:
other dimensions.

Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw (D4)

KIPP Baseplates, grey cast iron, round, with grid holes

Order No.	D2	H	D	D1	D4	L2	L6	N1=No. of grid holes	NL=No. lengthwise	NB=No. across
K1532.21230050	300	50	12	M12	M12	150	220	24	5	5
K1532.21240050	400	50	12	M12	M12	250	320	44	7	7
K1532.21250050	500	50	12	M12	M16	300	400	68	9	9
K1532.21260050	600	50	12	M12	M16	400	500	96	11	11
K1532.21650050	500	50	16	M16	M16	300	400	68	9	9
K1532.21660050	600	50	16	M16	M16	400	500	96	11	11

Baseplates, grey cast iron, round, with T-slots



Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K1532.31430050

Note:
Round baseplates with T-slots are used for constructing modular fixtures. These baseplates are positioned and mounted directly on machine tables. The precise longitudinal and transverse slot spacing ensures very high repeat clamping accuracy. The aligning holes are used to align the baseplate on the machine table. Please order locating pins to locate the baseplates separately. Ring bolts with T-nuts for hoisting are supplied. Other dimensions available on request.

On request:
other dimensions.

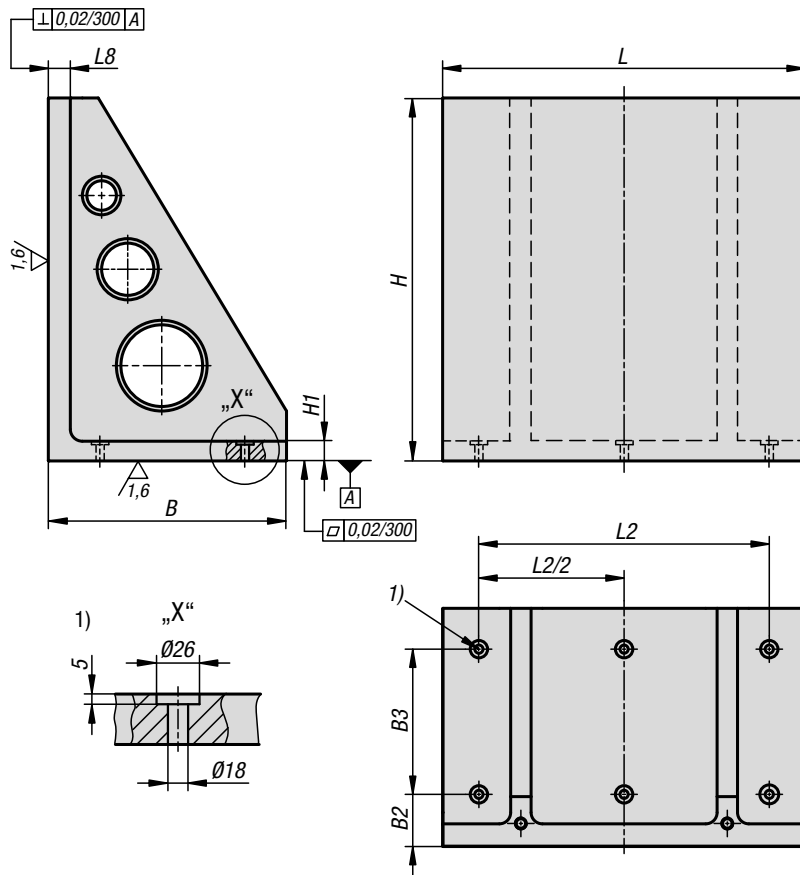
Drawing reference:
1) hole for DIN 912 cap screw (D4)

KIPP Baseplates, grey cast iron, round, with T-slots

Order No.	D2	H	D4	L2	L6	L9	BN=Slot width	NL=No. lengthwise	NB=No. across
K1532.31430050	300	50	M12	150	250	75	14	2	2
K1532.31440050	400	50	M12	250	350	75	14	4	4
K1532.31850065	500	65	M16	300	450	100	18	4	4
K1532.31860065	600	65	M16	400	550	100	18	4	4

Angle plates, grey cast iron, wide

with pre-machined clamping faces



Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1531.100302230

Note:
Angle plates are used for the vertical positioning and mounting of workpieces and fixtures. Angle plates with pre-machined clamping faces provide a quick and economic method of producing a base with specific grid or individual holes. Ring bolts for hoisting are supplied.

Drawing reference:
1) hole for DIN 912 cap screw

KIPP Angle plates, grey cast iron, wide with pre-machined clamping faces

Order No.	L	B	H	L2	B2	B3	H1	L8
K1531.100302230	300	220	300	250	90	100	30	40
K1531.100402840	400	280	400	320	90	160	30	40
K1531.100503450	500	340	500	400	90	200	35	50
K1531.100634363	630	435	630	500	100	250	40	50
K1531.100805280	800	525	800	640	115	320	45	50

Angle plates, grey cast iron, wide

with grid holes



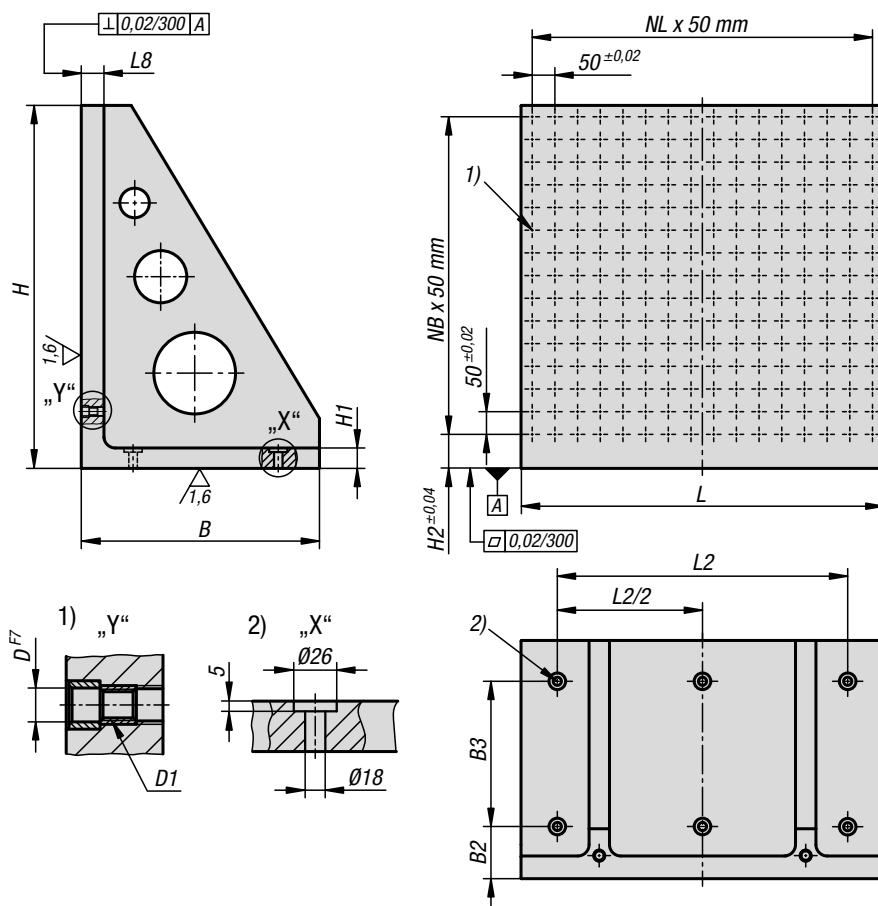
Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1531.212302230

Note:
Grid spacing 50 ± 0.02 mm.
Angle plates are used for the vertical positioning and mounting of workpieces and fixtures. These angle plates with grid holes provide a quick and economic method of clamping workpieces with standardised clamping elements. The alphanumerically labelled grid holes guarantee a defined assignment of clamping elements by repeat setups. Ring bolts for hoisting are supplied. Please order protection plugs to plug unused grid holes separately.

Drawing reference:
1) grid hole
2) hole for DIN 912 cap screw



KIPP Angle plates, grey cast iron, wide with grid holes

Order No.	L	H	L2	B	B2	B3	H1	H2	L8	D	D1	N1=No. of grid holes	NL=No. lengthwise	NB=No. across
K1531.212302230	300	300	250	220	90	100	30	75	40	12	M12	30	5	4
K1531.212402840	400	400	320	280	90	160	30	75	40	12	M12	56	7	6
K1531.212503450	500	500	400	340	90	200	35	75	50	12	M12	90	9	8
K1531.212634363	630	630	500	435	100	250	40	40	50	12	M12	144	11	11
K1531.212805280	800	800	640	525	115	320	45	75	50	12	M12	240	15	14
K1531.216302230	300	300	250	220	90	100	30	75	40	16	M16	30	5	4
K1531.216402840	400	400	320	280	90	160	30	75	40	16	M16	56	7	6
K1531.216503450	500	500	400	340	90	200	35	75	50	16	M16	90	9	8
K1531.216634363	630	630	500	435	100	250	40	40	50	16	M16	144	11	11
K1531.216805280	800	800	640	525	115	320	45	75	50	16	M16	240	15	14

Angle plates, grey cast iron, wide

with T-slots



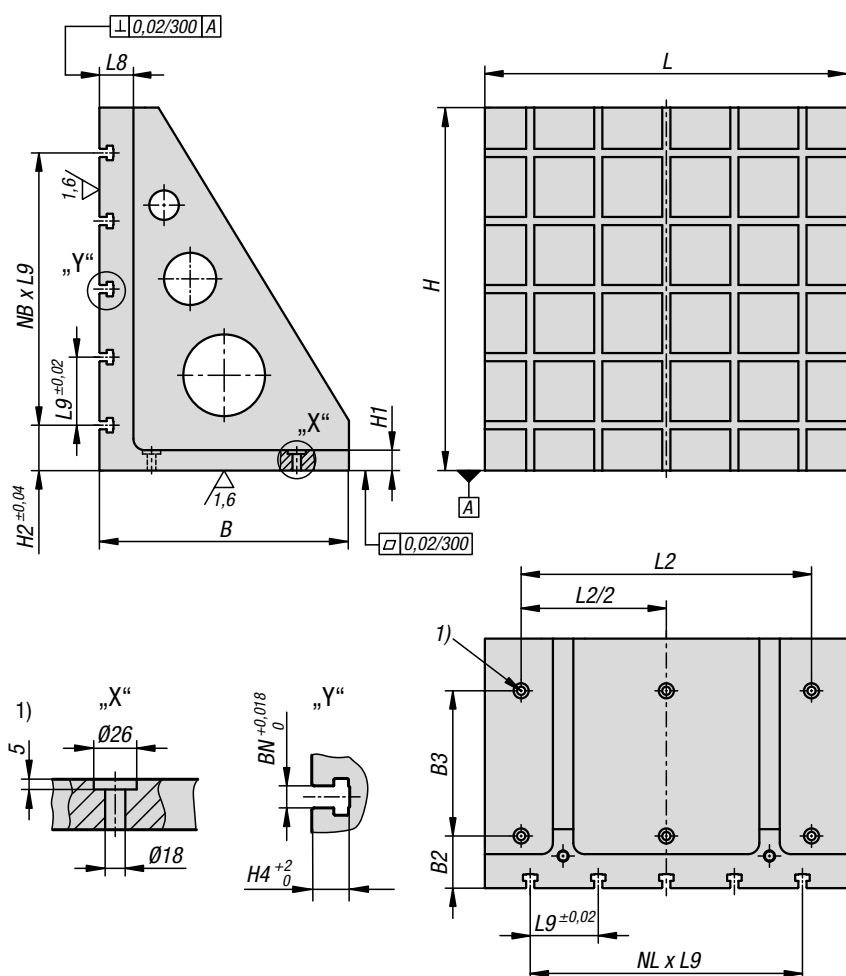
Material:
GJL 300.

Version:
Support and mounting surfaces precision machined

Sample order:
K1531.314302230

Note:
Angle plates are used for the vertical positioning and mounting of workpieces and fixtures. These angle plates with T-slots provide a quick and economic way of clamping workpieces with standardised clamping elements. The precise longitudinal and transverse slot spacing ensures high repeat clamping accuracy. Ring bolts for hoisting are supplied.

Drawing reference:
1) hole for DIN 912 cap screw

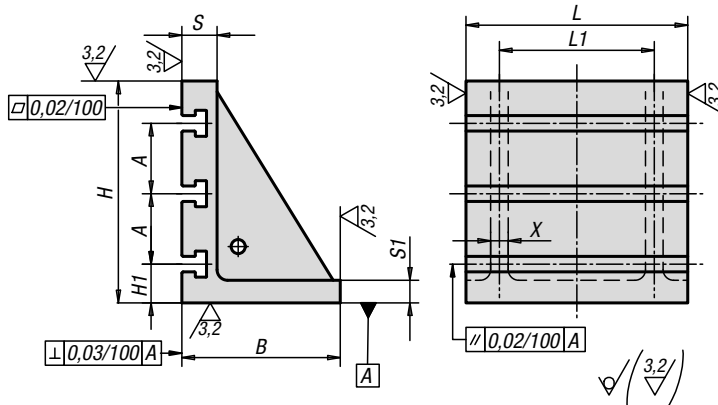


KIPP Angle plates, grey cast iron, wide with T-slots

Order No.	L	B	H	L2	B2	B3	H1	H2	L8	L9	BN=Slot width	NL=No. lengthwise	NB=No. across
K1531.314302230	300	220	300	250	90	100	30	50	60	100	14	2	2
K1531.314402840	400	300	400	320	90	160	30	50	60	100	14	3	3
K1531.314503450	500	350	500	400	90	200	35	50	60	100	14	4	4
K1531.314634363	630	450	630	500	100	250	40	65	65	125	14	4	4
K1531.314805280	800	550	800	640	115	320	45	100	75	150	14	4	4
K1531.318302230	300	220	300	250	90	100	30	50	60	100	18	2	2
K1531.318402840	400	300	400	320	90	160	30	50	60	100	18	3	3
K1531.318503450	500	350	500	400	90	200	35	50	60	100	18	4	4
K1531.318634363	630	450	630	500	100	250	40	65	65	125	18	4	4
K1531.318805280	800	550	800	640	115	320	45	100	75	150	18	4	4

Angle plates

with or without T-slots cast iron



Material:

GJL 250 annealed.

Sample order:

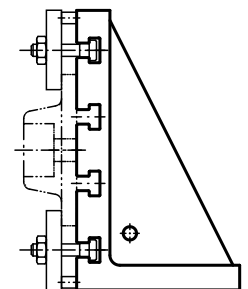
K1451.3203701

On request:

Other slot widths.

Drawing reference:

machined faces: +0.2 mm/ +0.5 mm
unmachined faces: ±2 mm



KIPP Angle plates with or without T-slots cast iron

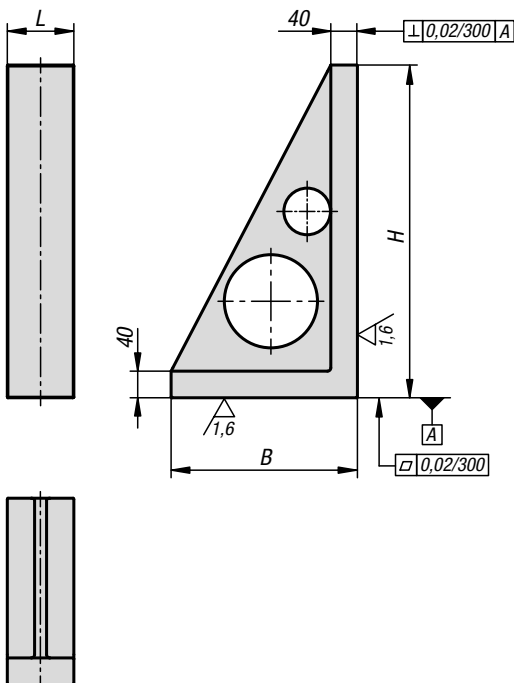
Order No. without slot	Order No. with t-slot	L	L1	B	H	H1	S	S1	A	X	T-slot
K1451.100125	-	100	40	100	125	-	20	10	-	10	-
K1451.125160	-	125	100	100	160	-	20	10	-	10	-
K1451.200250	-	200	120	125	250	-	30	15	-	15	-
K1451.250300	-	250	200	150	300	-	40	20	-	20	-
K1451.320370	K1451.3203701	320	280	200	370	-/65	50	25	-/80	25	-/14
K1451.400450	K1451.4004501	400	280	265	450	-/75	60	30	-/100	30	-/18
K1451.500550	K1451.5005501	500	360	315	550	-/75	70	35	-/100	35	-/18

Add-on elements



Angle plates, grey cast iron, narrow

with pre-machined clamping faces



Material:

GJL 300.

Version:

Support and mounting surfaces precision machined

Sample order:

K0807.100181030

Note:

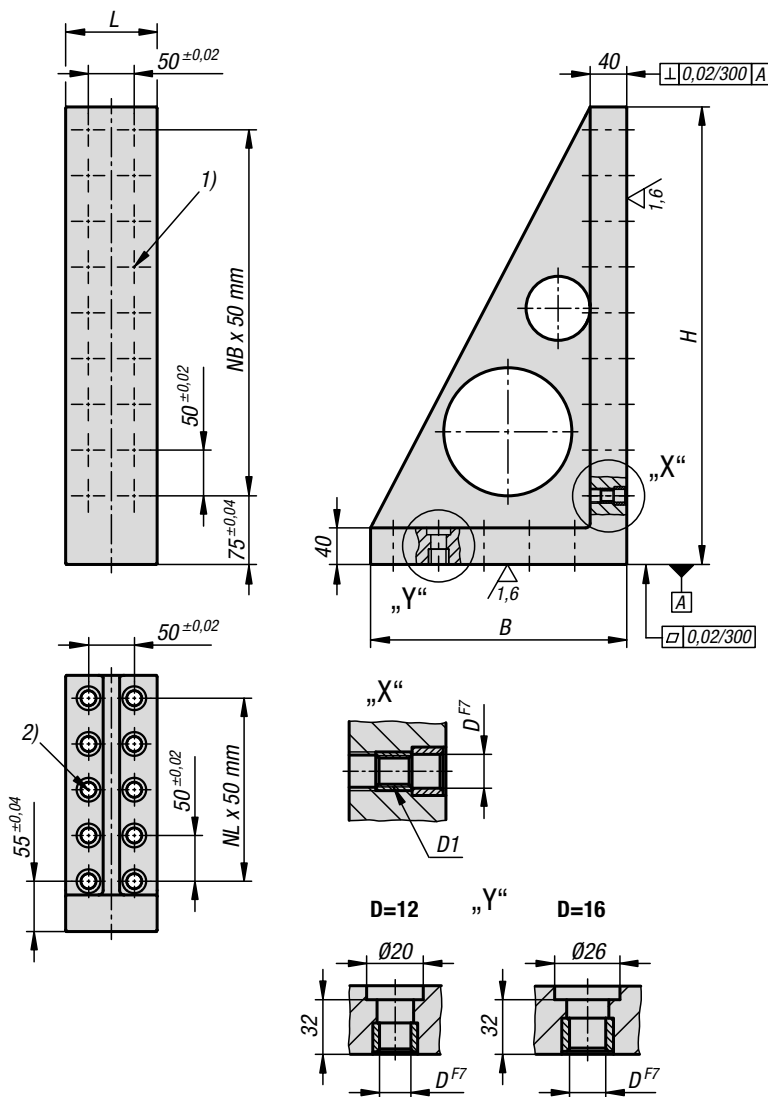
Angle plates are used for the vertical positioning and mounting of workpieces and fixtures. These angle plates with pre-machined clamping faces provide a quick and economic method of producing bodies with specific grid or individual holes.

KIPP Angle plates, grey cast iron, narrow with pre-machined clamping faces

Order No.	L	B	H
K0807.100181030	100	180	300
K0807.100231040	100	230	400
K0807.100281050	100	280	500

Angle plates, grey cast iron, narrow

with grid holes



Material:

GJL 300.

Version:

Support and mounting surfaces precision machined

Sample order:

K0807.212181030

Note:

Grid spacing $50 \pm 0,02$ mm.

Angle plates are used for the vertical positioning and mounting of workpieces and fixtures. The shoulder screws K0815 are used to position and fasten the angle plates on the grid plates K0800 or subplates K0806.

Size M12 angle plates are fastened using shoulder screws K0815.112065.

Size M16 angle plates are fastened using shoulder screws K0815.116065.

Please order protection plugs to plug unused grid holes separately.

Drawing reference:

1) grid hole

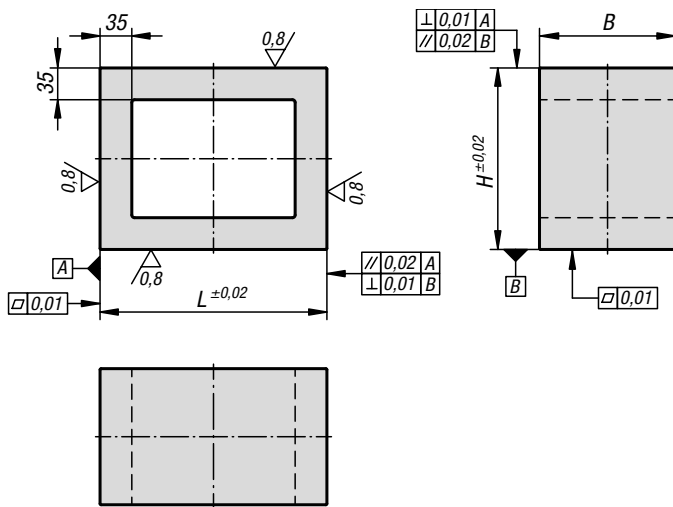
2) hole for shoulder screw

KIPP Angle plates, grey cast iron, narrow with grid holes

Order No.	L	B	H	D	D1	N1=No. of grid holes	No. of fastening holes	NL=No. lengthwise	NB=No. across
K0807.212181030	100	180	300	12	M12	10	6	2	4
K0807.212231040	100	230	400	12	M12	14	8	3	6
K0807.212281050	100	280	500	12	M12	18	10	4	8
K0807.216181030	100	180	300	16	M16	10	6	2	4
K0807.216231040	100	230	400	16	M16	14	8	3	6
K0807.216281050	100	280	500	16	M16	18	10	4	8

Tooling blocks, grey cast iron

with pre-machined clamping faces



Material:
GJL 300.

Version:
Support and mounting surfaces ground

Sample order:
K0809.100201515

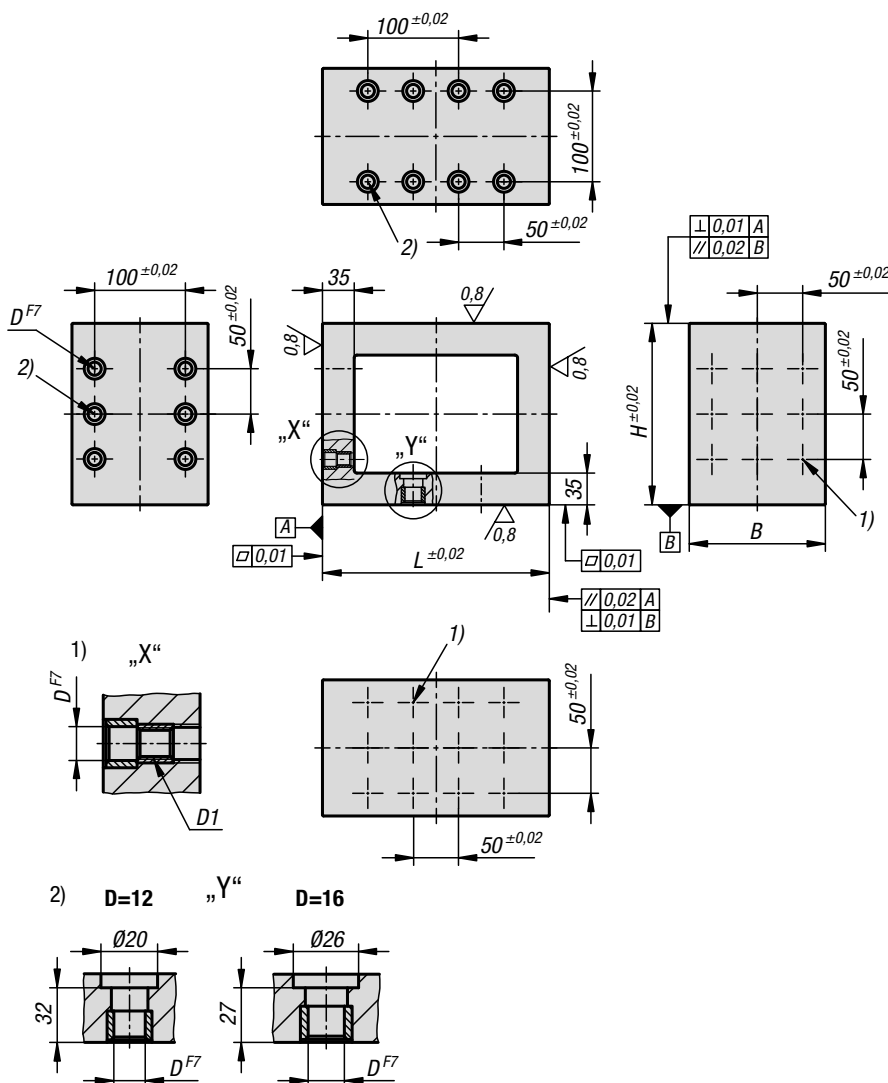
Note:
Tooling blocks with pre-machined clamping faces are used for constructing fixtures. These tooling blocks provide a fast and economic way of producing elements with specific grid or individual holes. Tooling blocks can also be used as a base for clamping smaller workpieces.
By length $L=300$, the middle reinforcing rib should be taken into consideration.

KIPP Tooling blocks, grey cast iron with pre-machined clamping faces

Order No.	L	B	H
K0809.100201515	200	150	150
K0809.100251520	250	150	200
K0809.100302025	300	200	250

Tooling blocks, grey cast iron

with grid holes



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

K0809.212201515

Note:

Grid spacing $50 \pm 0,02$ mm.

Tooling blocks with grid holes are used for constructing modular fixtures. They can be positioned and mounted precisely on grid systems. This means that the grid hole spacing is maintained on the raised clamping face.

Tooling blocks can also be used as a base element for clamping smaller workpieces.

Size M12 tooling blocks are fastened using shoulder screws K0815.112065. Size M16 tooling blocks are fastened using shoulder screws K0815.116065.

Please order protection plugs to plug unused grid holes separately.

Drawing reference:

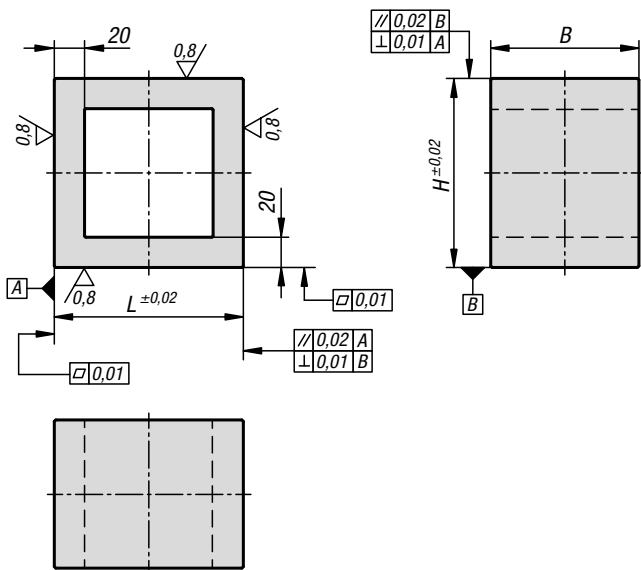
- 1) grid hole
- 2) hole for shoulder screw

KIPP Tooling blocks, grey cast iron with grid holes

Order No.	L	B	H	D	D1	N1=No. of grid holes	No. of fastening holes
K0809.212201515	200	150	150	12	M12	15	10
K0809.2122515201	250	150	200	12	M12	21	14
K0809.216201515	200	150	150	16	M16	15	10
K0809.2162515201	250	150	200	16	M16	21	14

Mini tooling blocks, grey cast iron

with pre-machined clamping faces



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

K0809.10012598125

Note:

Tooling blocks with pre-machined clamping faces are used for constructing fixtures. These tooling blocks provide a fast and economic method of producing bodies with specific grid or individual holes. Tooling blocks can also be used as a body for clamping smaller workpieces.

KIPP Mini tooling blocks, grey cast iron with pre-machined clamping faces

Order No.	L	B	H
K0809.10012598125	125	98	125

Mini tooling blocks, grey cast iron

with grid holes



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

K0809.21212598125

Note:

Grid spacing 50 ± 0.02 mm.

Tooling blocks with grid holes are used for constructing modular fixtures. They can be positioned and mounted precisely on grid systems. This means that the grid hole spacing is maintained on the raised clamping face.

Tooling blocks can also be used as a base element for clamping smaller workpieces.

Size M12 tooling blocks are fastened using shoulder screws K0815.112065.

Size M16 tooling blocks are fastened using shoulder screws K0815.116065.

Please order protection plugs to plug unused grid holes separately.

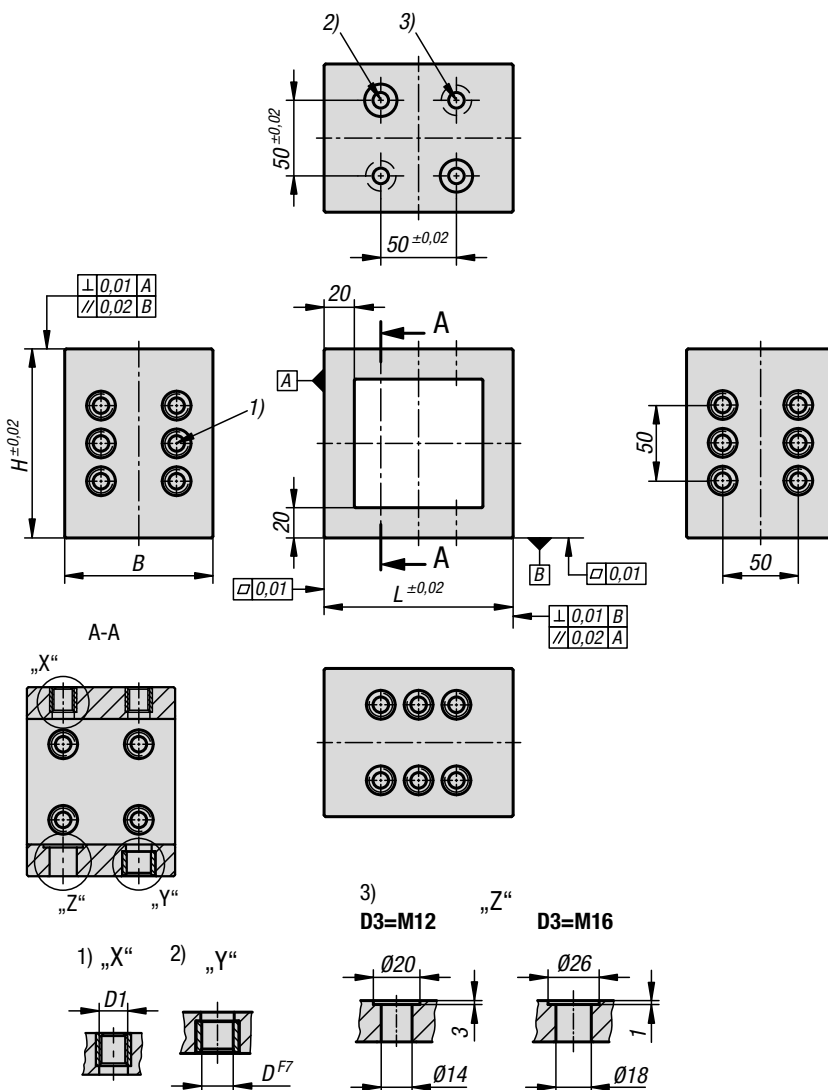
Please order protection plugs to plug unused grid holes separately.

Drawing reference:

1) tapped hole

2) hole for shoulder screw

3) hole for DIN 912 cap screw

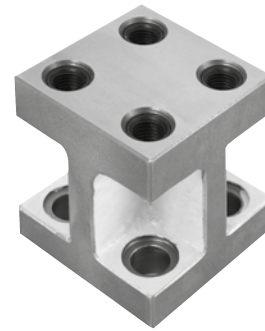


KIPP Mini tooling blocks, grey cast iron with grid holes

Order No.	L	B	H	D	D1	D3
K0809.21212598125	125	98	125	12	M12	M12
K0809.21612598125	125	98	125	16	M16	M16

Riser blocks, grey cast iron

Form H, short version



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

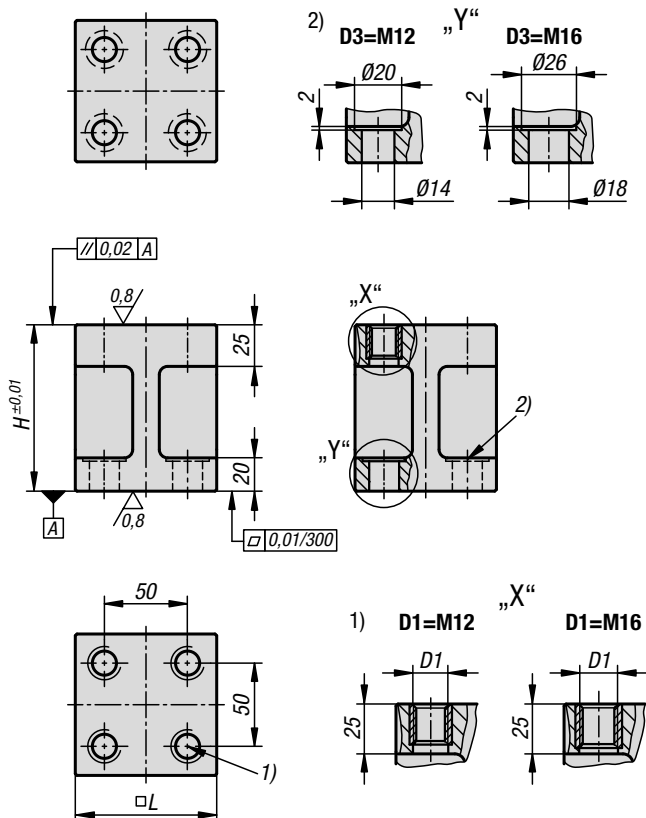
K1536.21208585100

Note:

Riser blocks are used for constructing modular fixtures. Several riser blocks can be mounted on each other. Support elements, clamping devices, and stops can then be mounted on the top riser block. Riser blocks are fastened using DIN 912 cap screws.

Drawing reference:

- 1) tapped hole
- 2) hole for DIN 912 cap screw

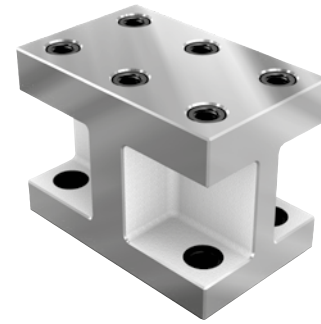


KIPP Riser blocks, grey cast iron Form H, short version

Order No.	D1	D3	H	L
K1536.21208585100	M12	M12	100	85
K1536.21208585125	M12	M12	125	85
K1536.21608585100	M16	M16	100	85
K1536.91608585125	M16	M16	125	85

Riser blocks, grey cast iron

Form H, long version



Material:

GJL 300.

Version:

Support and mounting surfaces ground

Sample order:

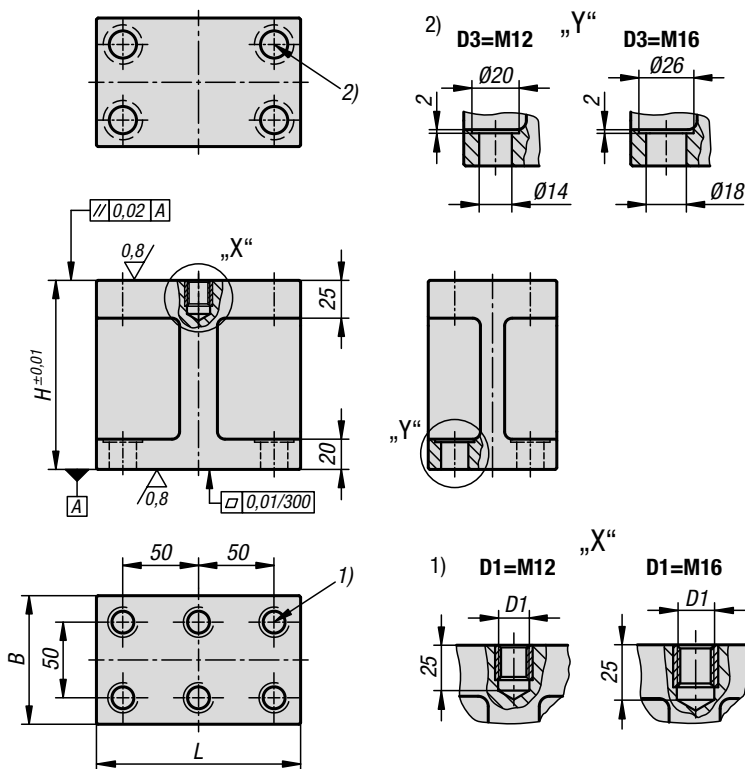
K1536.21213585100

Note:

Riser blocks are used for constructing modular fixtures. Several riser blocks can be mounted on each other. Support elements, clamping devices, and stops can then be mounted on the top riser block. Riser blocks are fastened using DIN 912 cap screws.

Drawing reference:

- 1) tapped hole
- 2) hole for DIN 912 cap screw

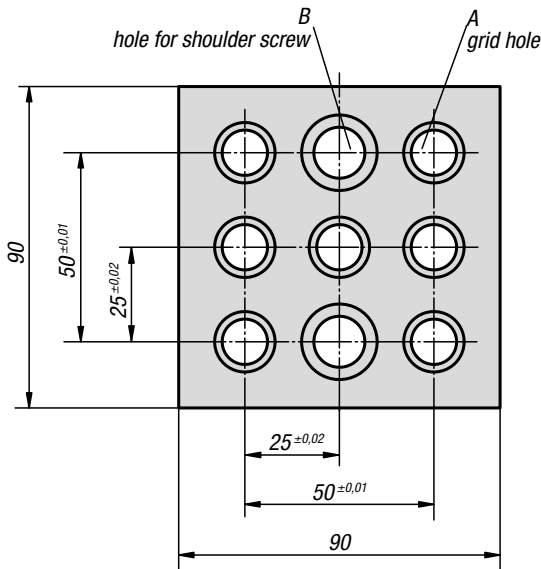
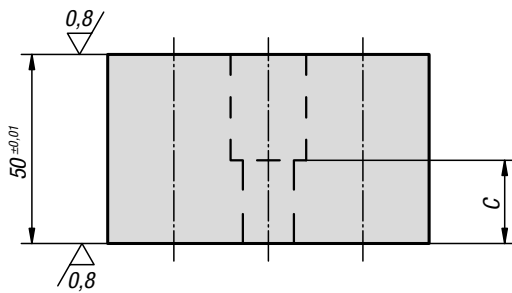


KIPP Riser blocks, grey cast iron Form H, long version

Order No.	L	B	H	D1	D3
K1536.21213585100	135	85	100	M12	M12
K1536.21213585125	135	85	125	M12	M12
K1536.21613585100	135	85	100	M16	M16
K1536.21613585125	135	85	125	M16	M16

Fastening blocks

Form M



Material:

Carbon steel.

Version:

Black oxidised.
Contact faces ground.

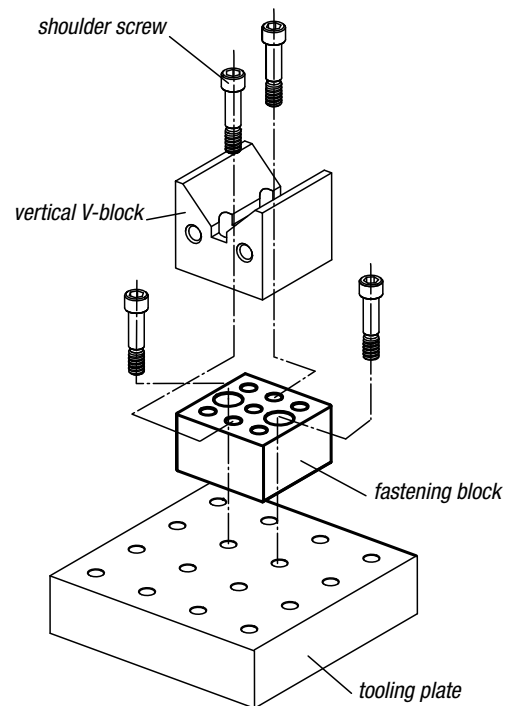
Sample order:

K0810.12112050

Note:

Fastening blocks are used as risers for all system elements which have no movable seating faces - these include locating supports K0816, vertical V-blocks K0819.600.

They also allow positioning and fastening elements within a 50 ± 0.01 mm pitch (see application example).



KIPP Fastening blocks Form M

Order No.	A locating hole	A thread	B Ø for shoulder screw	C	No. of grid holes	No. of mounting holes	Suitable shoulder screw	weight kg
K0810.12112050	12 F7	M12	12 F7	22	7	2	K0815.112055	2,693
K0810.12116050	16 F7	M16	16 F7	26	7	2	K0815.116055	2,38

Precision riser blocks

Form D

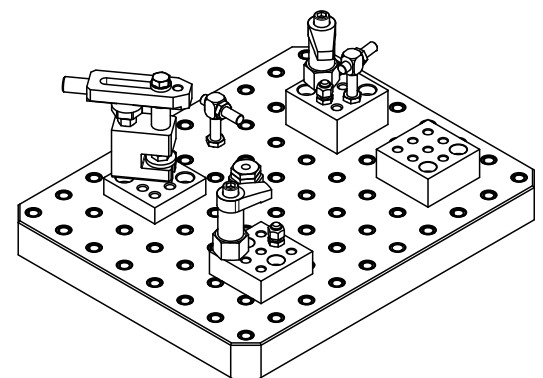
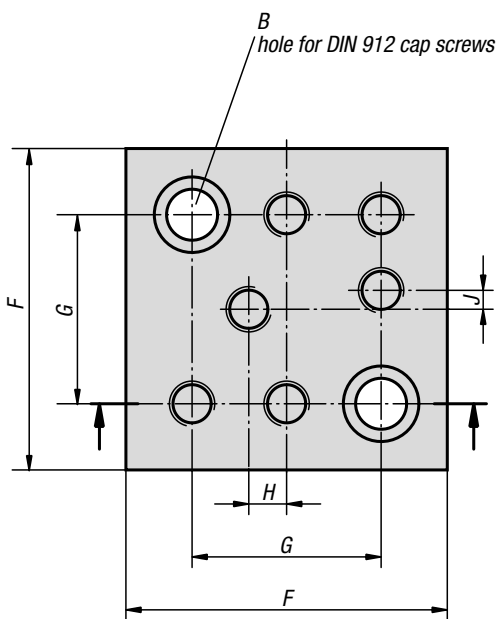
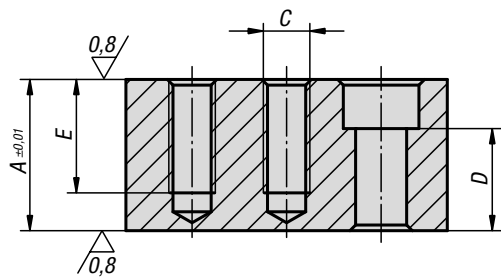


Material:
Carbon steel.

Version:
Black oxidised.
Contact faces ground.

Sample order:
K0811.14012025

Note:
Riser blocks are used to achieve a certain support height. The additional tapped holes in the risers are for mounting further fixture elements.



KIPP Precision riser blocks Form D

Order No.	A	B hole for DIN 912 screw	C	D	E	F	G	H	J	weight kg
K0811.14012025	25	M12	M12	12	25	85	50	10	5	1,218
K0811.14012032	32	M12	M12	19	32	85	50	10	5	1,56
K0811.14012040	40	M12	M12	27	30	85	50	10	5	1,97
K0811.14012050	50	M12	M12	37	30	85	50	10	5	2,5
K0811.14016025	25	M16	M16	8	25	85	50	10	5	1,039
K0811.14016032	32	M16	M16	15	32	85	50	10	5	1,33
K0811.14016040	40	M16	M16	23	35	85	50	10	5	1,7
K0811.14016050	50	M16	M16	33	35	85	50	10	5	2,123

Precision riser blocks

Form M

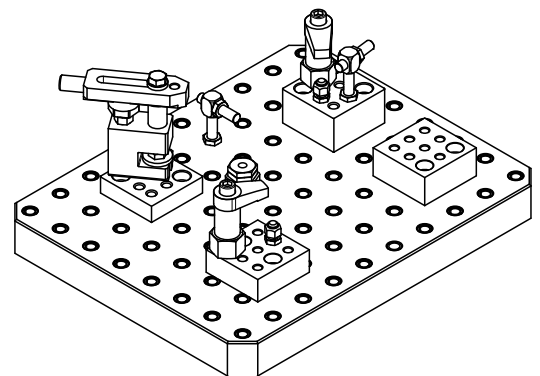
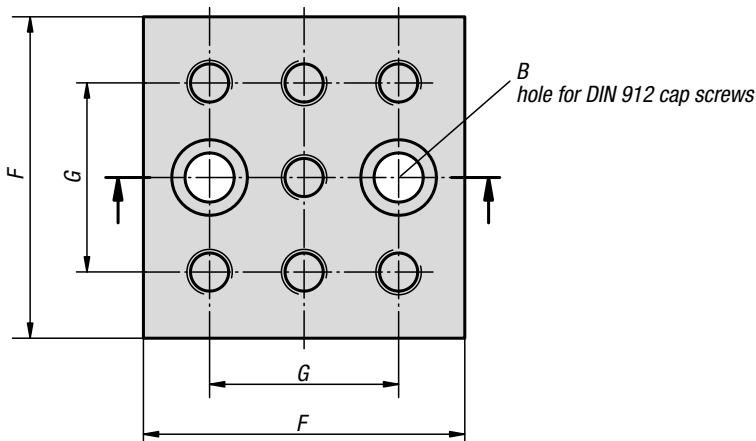
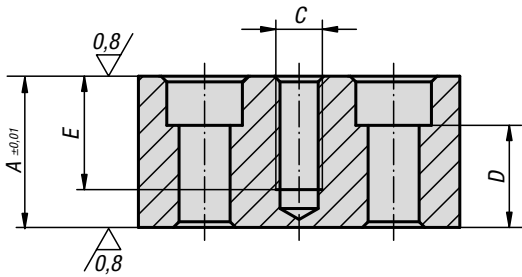


Material:
Carbon steel.

Version:
Black oxidised.
Contact faces ground.

Sample order:
K0811.14112025

Note:
Riser blocks are used to achieve a certain support height. The additional tapped holes in the risers are for mounting further fixture elements.



KIPP Precision riser blocks Form M

Order No.	A	B hole for DIN 912 screw	C	D	E	F	G	weight kg
K0811.14112025	25	M12	M12	12	25	85	50	1,199
K0811.14112032	32	M12	M12	19	32	85	50	1,535
K0811.14112040	40	M12	M12	27	30	85	50	1,955
K0811.14112050	50	M12	M12	37	30	85	50	2,43
K0811.14116025	25	M16	M16	8	25	85	50	1,007
K0811.14116032	32	M16	M16	15	32	85	50	1,31
K0811.14116040	40	M16	M16	23	35	85	50	1,648
K0811.14116050	50	M16	M16	33	35	85	50	2,104

Precision riser blocks

Form E

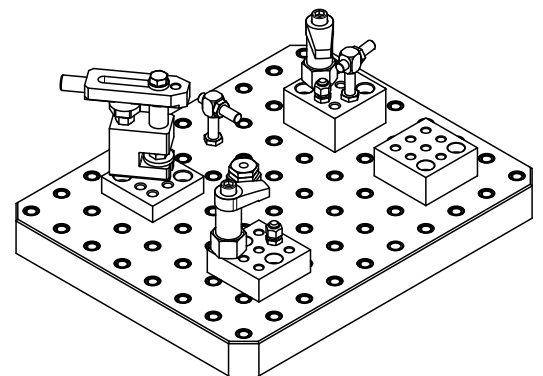
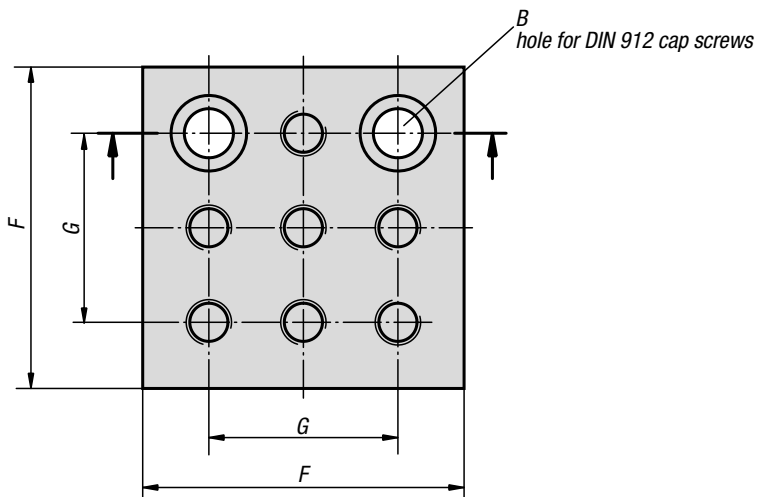
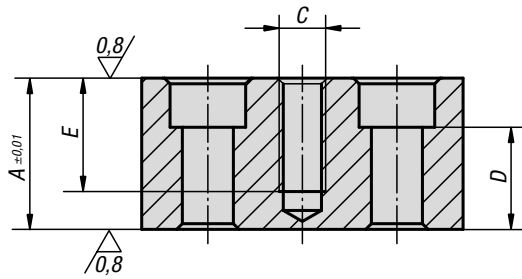


Material:
Carbon steel.

Version:
Black oxidised.
Contact faces ground.

Sample order:
K0811.14212025

Note:
Riser blocks are used to achieve a certain support height. The additional tapped holes in the risers are for mounting further fixture elements.



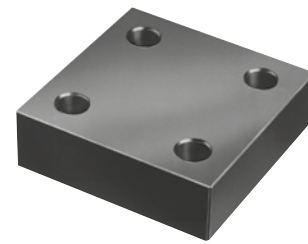
KIPP Precision riser blocks Form E

Order No.	A	B hole for DIN 912 screw	C	D	E	F	G	weight kg
K0811.14212025	25	M12	M12	12	25	85	50	1,208
K0811.14212032	32	M12	M12	19	25	85	50	1,52
K0811.14212040	40	M12	M12	27	30	85	50	1,95
K0811.14212050	50	M12	M12	37	30	85	50	2,454
K0811.14216025	25	M16	M16	8	25	85	50	1,005
K0811.14216032	32	M16	M16	15	32	85	50	1,289
K0811.14216040	40	M16	M16	23	35	85	50	1,68
K0811.14216050	50	M16	M16	33	35	85	50	2,18

Fastener elements, accessories



Connecting blocks

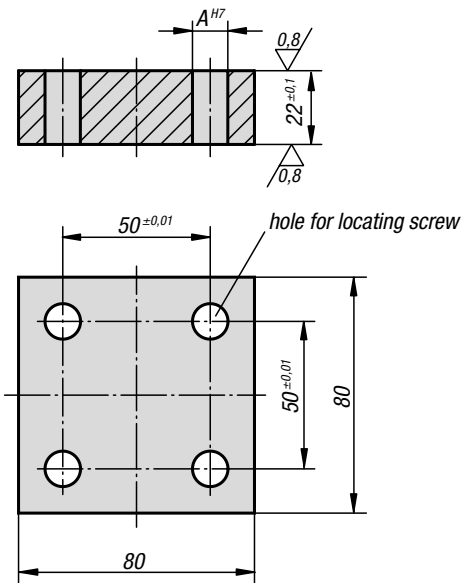


Material:
Carbon steel.

Version:
Black oxidised.
Contact faces ground.

Sample order:
K0854.40012050

Note:
When several tooling plates K0800 are used, connecting blocks are needed to maintain the correct grid hole pitch from one plate to the next. They are secured using 4 shoulder screws K0815.1...



KIPP Connecting blocks

Order No.	A	Suitable shoulder screw
K0854.40012050	12	K0815.112055
K0854.40016050	16	K0815.116065

Locating pins

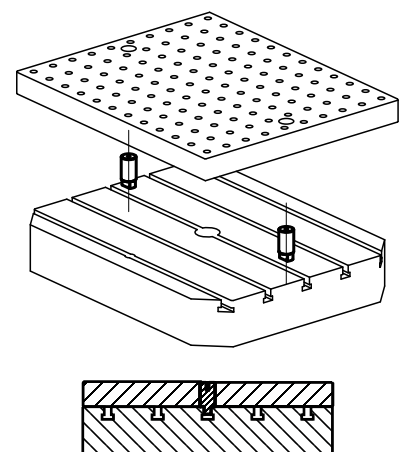
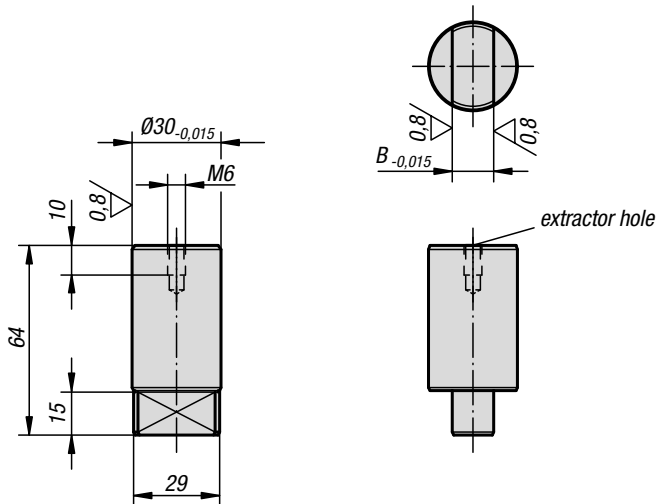


Material:
Carbon steel.

Version:
Tempered and black oxidised.
Precision diameters and guide faces ground.

Sample order:
K0855.14030

Note:
Locating pins are used for positioning grid plates
K0800 on machine tables.

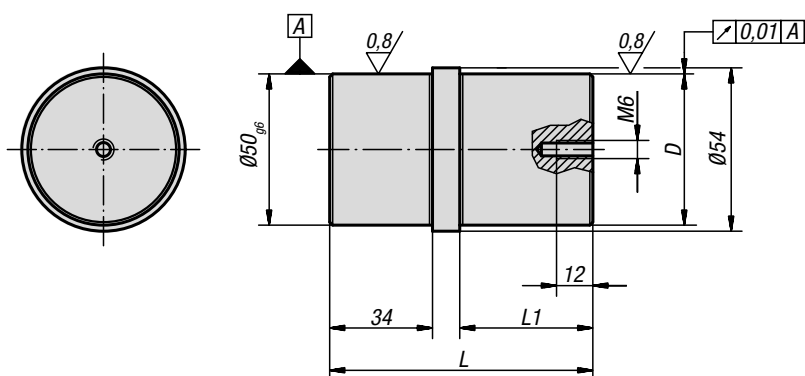


KIPP Locating pins

Order No.	B
K0855.14030	14
K0855.18030	18
K0855.20030	20
K0855.22030	22

Centring pins

for central hole

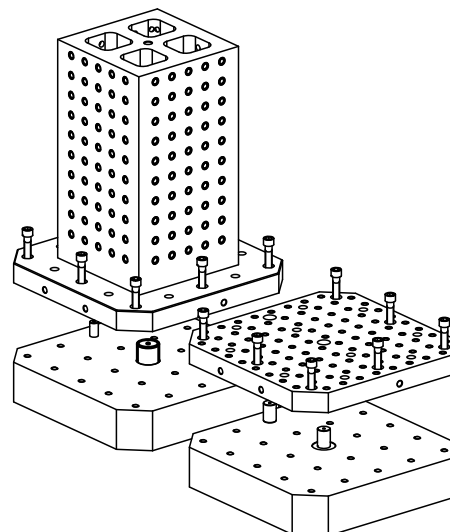


Material:
Steel.

Version:
Case-hardened.
Toleranced diameter ground.

Sample order:
K0856.5025

Note:
Centring pins for central holes are suitable for basic elements K0806, K0803, K0804 and K0805.

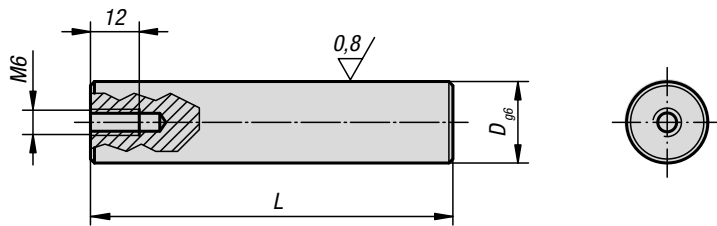


KIPP Centering pins for central hole

Order No.	D	L	L1
K0856.5025	25 g6	77	34
K0856.5030	30 h6	87	44
K0856.5050	50 g6	87	44

Centring pins

for aligning hole



Material:

Steel.

Version:

Case-hardened.

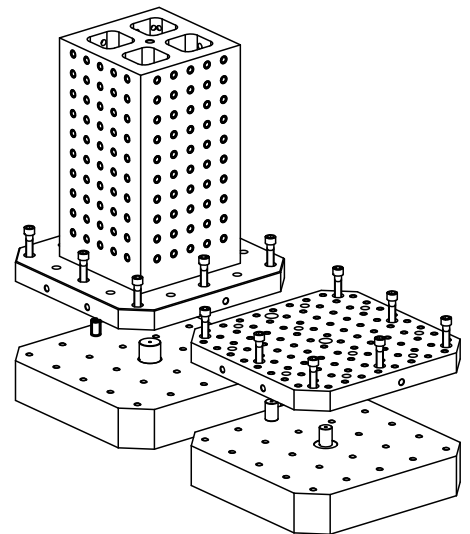
Toleranced diameter ground.

Sample order:

K0857.25125

Note:

Centring pins for aligning holes are suitable for basic elements K0803 and K0805.

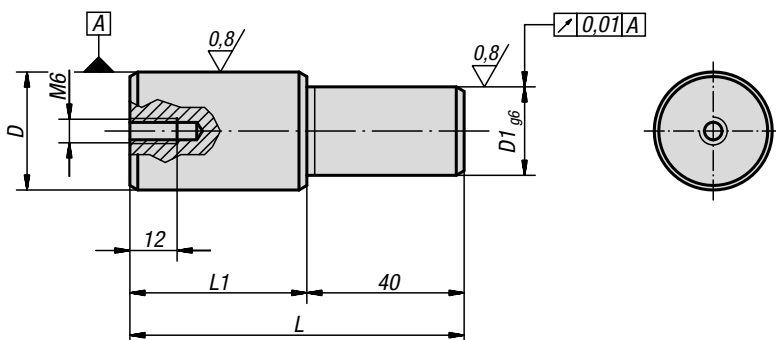


KIPP Centering pins for aligning hole

Order No.	D	L
K0857.20075	20	75
K0857.20089	20	89
K0857.25125	25	125

Centring pins

for aligning hole

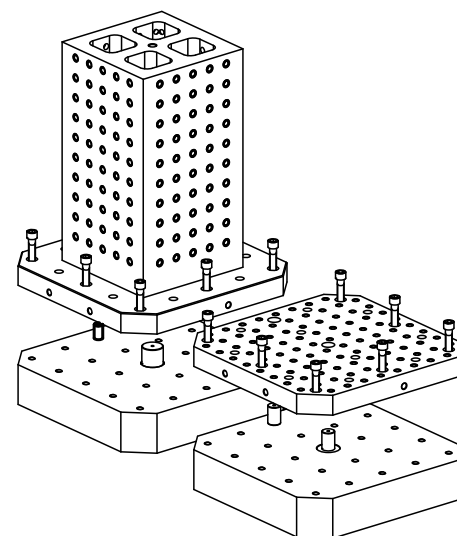


Material:
Steel.

Version:
Case-hardened.
Toleranced diameter ground.

Sample order:
K0858.2520

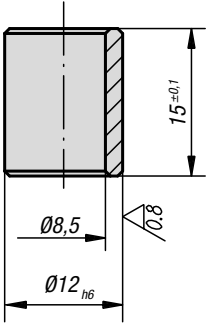
Note:
Centring pins for aligning holes are suitable for subplates K0806.



KIPP Centering pins for aligning hole

Order No.	D	D1	L	L1
K0858.2520	25 g6	20	75	35
K0858.3020	30 h6	20	85	45
K0858.3025	30 h6	25	85	45

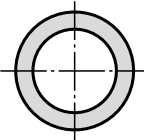
Locating sleeve



Material:
Tool steel.

Version:
Hardened and black oxidised.
Toleranced diameter ground.

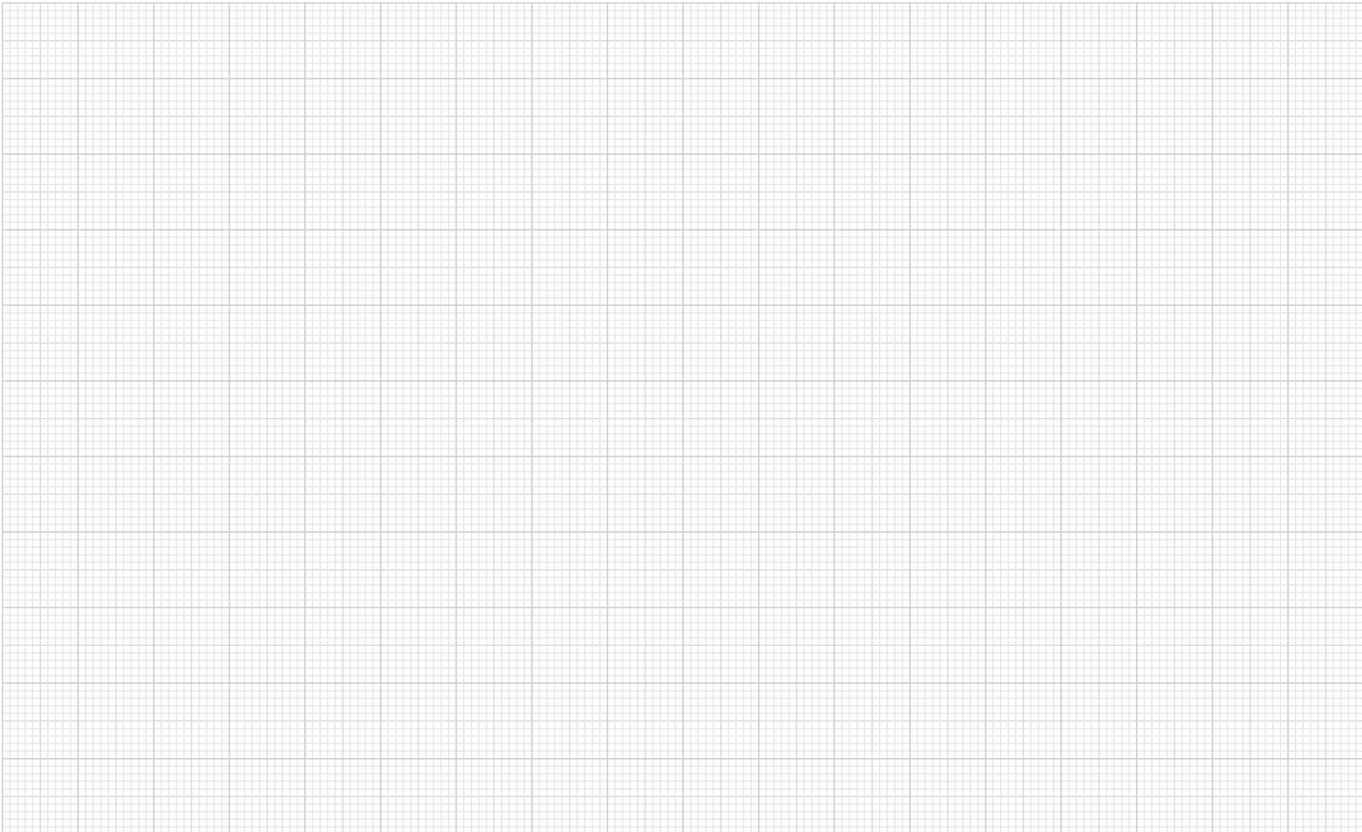
Sample order:
K0814.44008012



KIPP Locating sleeve

Order No.	Dimensions
K0814.44008012	see drawing

Notes



Locating bushings

for grid systems



Material:

Special case-hardened steel

Version:

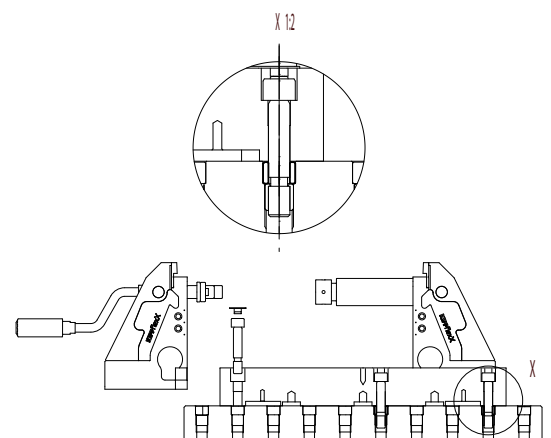
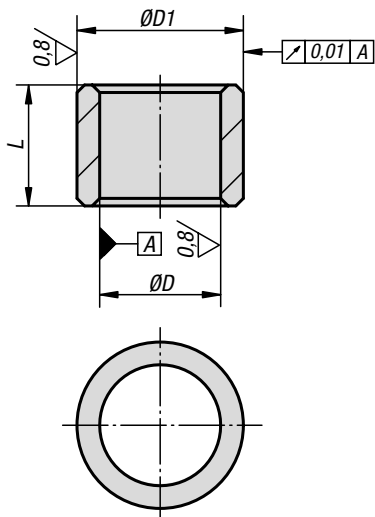
Hardened and ground.

Sample order:

K0861.01508305002

Note:

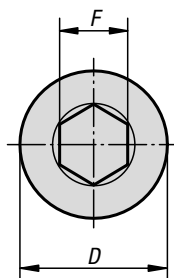
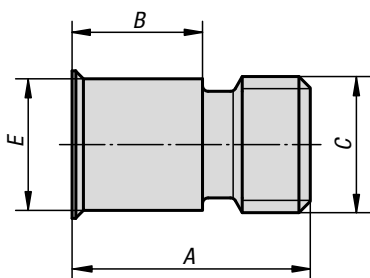
See next page for assembly instructions for changing locating bushings.



KIPP Locating bushings for grid systems

Order No.	D	D1	L
K0861.01508305002	12 H6	16 g5	8
K0861.01012304002	12 F7	18 g6	12
K0861.01016405002	16 F7	22 g6	16

Aluminium protection plugs

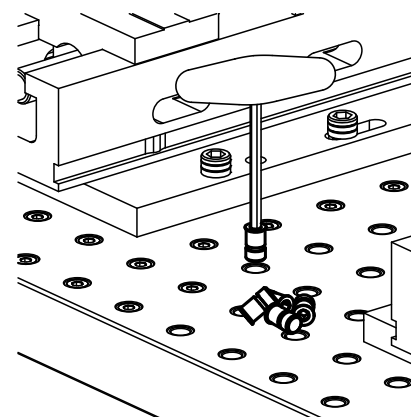


Material:
Aluminium.

Version:
Bright.

Sample order:
K0862.60108015

Note:
Use these plugs to seal grid holes and protect them from swarf and dirt.
Leave the protection plugs in holes not in use!
Aluminium plugs are used when aggressive coolants are used or when cutting dry.

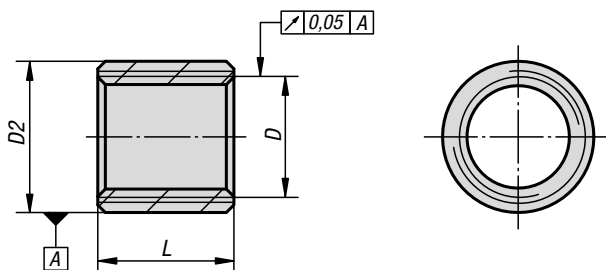


KIPP Aluminium protection plugs

Order No.	A	B	C	D	E	F
K0862.60108015	15	7,5	M8	12,6	11,8	5
K0862.60112021	21	11,5	M12	13	11,6	6
K0862.60116026	26	15	M16	17	15,6	8

Threaded bushings

for grid systems



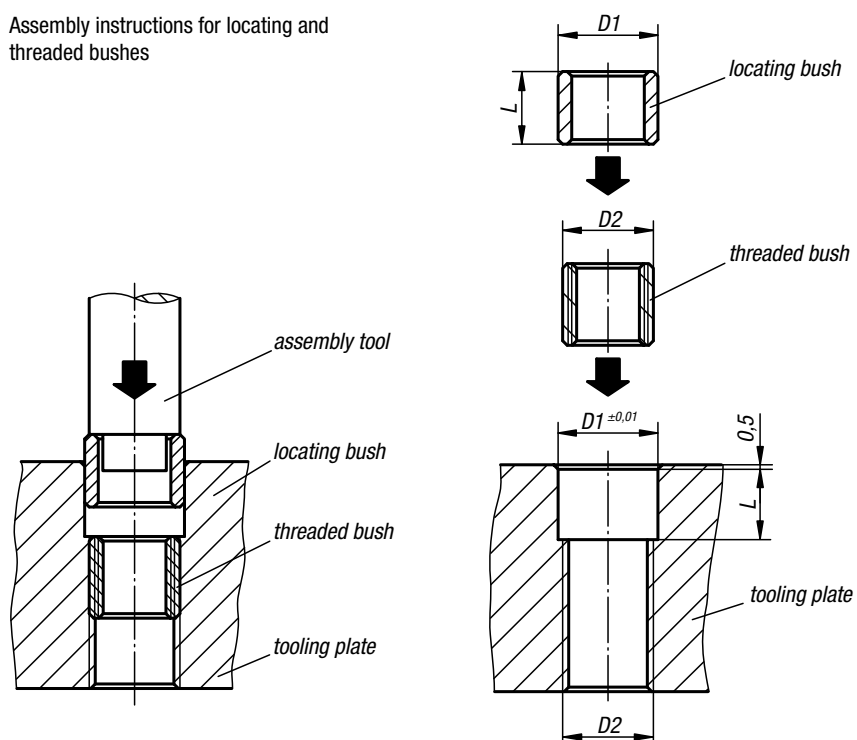
Material:
Carbon steel.

Version:
Tempered to 1100-1300 N/mm².

Sample order:
K0863.01508305003

Note:
Assembly instructions for changing threaded bushing.

Assembly instructions for locating and threaded bushes

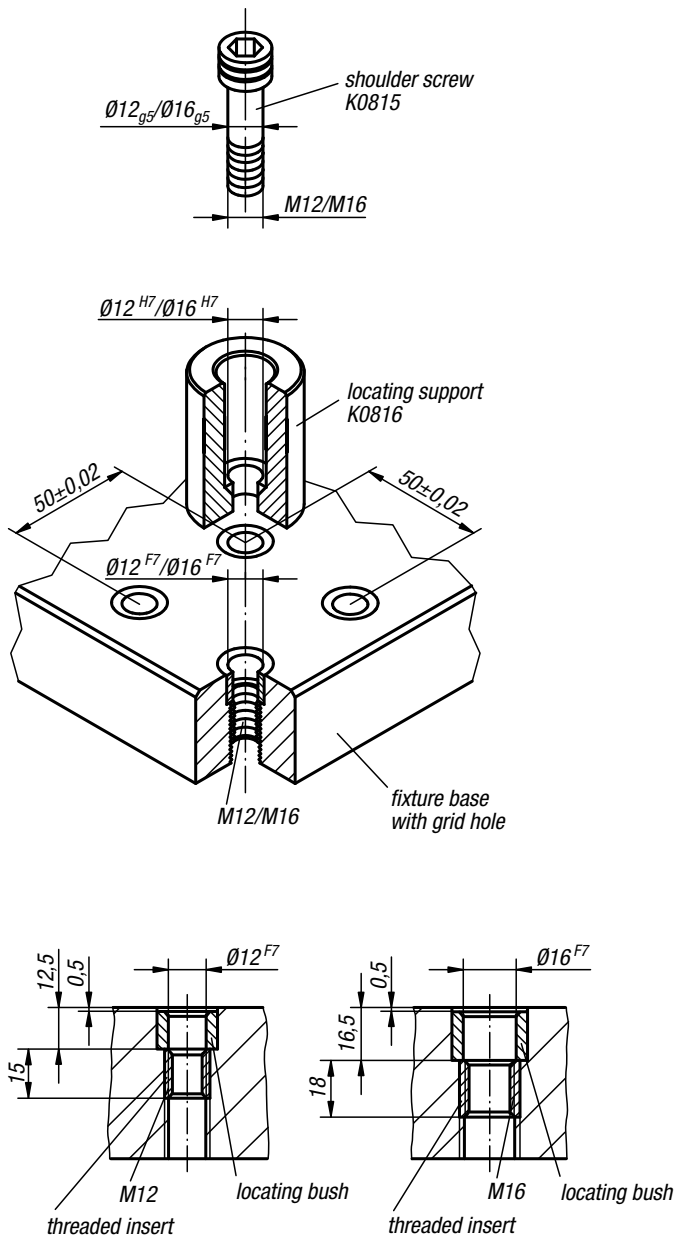


Inserting the locating and threaded bushing

1. Remove grease from the locating and threaded bushing.
2. Apply adhesive (Loctite 638) in the hole.
3. Apply adhesive (Loctite 638) on the threaded bushing and screw in.
4. Apply adhesive (Loctite 638) to the locating bushing and insert it. If the locating bushing cannot be inserted by hand, please use an assembly tool as shown application example.
5. Remove any adhesive pressed out by insertion of the locating and threaded bushing before it hardens.

KIPP Threaded bushings for grid systems

Order No.	D	D2	L
K0863.01508305003	M8	M12x1,75	12
K0863.01012304003	M12	M16x1,5	15
K0863.01016405003	M16	M20x1,5	18



Grid hole:

The characteristic feature of the grid hole is its dual function: the coaxial arrangement of the locating and the threaded parts allows positioning and fastening at the same time with one grid hole (see illustrations). As a result, the size of the fixture elements can be reduced to a minimum and their flexibility increased accordingly.

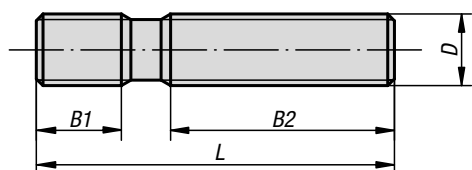
Each grid hole consists of two parts:

- reamed bush. Material: hardened tool steel.
- threaded insert. Material: carbon steel, tempered to ca. 1100-1300 N/mm².

Since the reamed bushes are recessed 0.5 mm from the surface of the fixture bases, the mounting surfaces can be re-machined in the event of wear.

Studs

DIN 6379



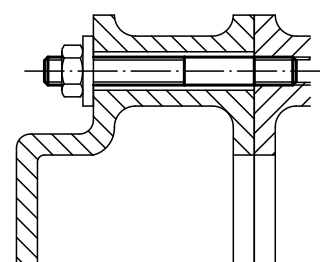
Material:
Carbon steel.

Version:
Thread rolled.
M6-M12 tempered to 10.9, black.
M14-M36 tempered to 8.8, black.

KIPP Studs DIN 6379

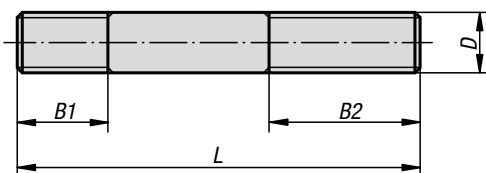
Order No.	D	L	B1	B2
K0697.0632	M6	32	9	16
K0697.0640	M6	40	9	20
K0697.0650	M6	50	9	30
K0697.0663	M6	63	9	40
K0697.0680	M6	80	9	50
K0697.06100	M6	100	9	63
K0697.0840	M8	40	11	20
K0697.0863	M8	63	11	40
K0697.0880	M8	80	11	50
K0697.08100	M8	100	11	63
K0697.08125	M8	125	11	75
K0697.08160	M8	160	11	100
K0697.1050	M10	50	13	25
K0697.1080	M10	80	13	50
K0697.10100	M10	100	13	75
K0697.10125	M10	125	13	75
K0697.10160	M10	160	13	100
K0697.10200	M10	200	13	125
K0697.1250	M12	50	15	25
K0697.1263	M12	63	15	32
K0697.1280	M12	80	15	50
K0697.12100	M12	100	15	63
K0697.12125	M12	125	15	75
K0697.12160	M12	160	15	100
K0697.12200	M12	200	15	125
K0697.1463	M14	63	17	32
K0697.1480	M14	80	17	50
K0697.14100	M14	100	17	63
K0697.14125	M14	125	17	75
K0697.14160	M14	160	17	100
K0697.14200	M14	200	17	125
K0697.14250	M14	250	17	160
K0697.1663	M16	63	19	32
K0697.1680	M16	80	19	50
K0697.16100	M16	100	19	63
K0697.16125	M16	125	19	75
K0697.16160	M16	160	19	100
K0697.16200	M16	200	19	125
K0697.16250	M16	250	19	160
K0697.16315	M16	315	19	180
K0697.16350	M16	350	19	200
K0697.16500	M16	500	20	315

Sample order:
K0697.12125



Order No.	D	L	B1	B2
K0697.1880	M18	80	23	50
K0697.18125	M18	125	23	75
K0697.18160	M18	160	23	100
K0697.18200	M18	200	23	125
K0697.18250	M18	250	23	150
K0697.18315	M18	315	23	180
K0697.2080	M20	80	27	32
K0697.20125	M20	125	27	70
K0697.20160	M20	160	27	100
K0697.20200	M20	200	27	125
K0697.20250	M20	250	27	160
K0697.20315	M20	315	27	200
K0697.20400	M20	400	27	250
K0697.20500	M20	500	27	315
K0697.22100	M22	100	31	45
K0697.22160	M22	160	31	100
K0697.22200	M22	200	31	125
K0697.22250	M22	250	31	160
K0697.22315	M22	315	31	180
K0697.22400	M22	400	31	250
K0697.24100	M24	100	35	45
K0697.24125	M24	125	35	63
K0697.24160	M24	160	35	100
K0697.24200	M24	200	35	125
K0697.24250	M24	250	35	160
K0697.24315	M24	315	35	200
K0697.24400	M24	400	35	250
K0697.24500	M24	500	35	315
K0697.24630	M24	630	35	315
K0697.27125	M27	125	39	56
K0697.27200	M27	200	39	125
K0697.27315	M27	315	39	200
K0697.27400	M27	400	39	250
K0697.27500	M27	500	39	315
K0697.30125	M30	125	43	56
K0697.30200	M30	200	43	125
K0697.30315	M30	315	43	200
K0697.30500	M30	500	43	315
K0697.30700	M30	700	43	400
K0697.301000	M30	1000	44	400
K0697.36160	M36	160	51	80
K0697.36200	M36	200	51	125
K0697.36250	M36	250	51	160
K0697.36315	M36	315	51	200
K0697.36400	M36	400	51	250
K0697.36500	M36	500	51	315
K0697.36700	M36	700	51	400

Studs



Material:

Carbon steel 1.1181.

Version:

Tempered to 8.8 and black oxidised.

Sample order:

K1910.308

Note:

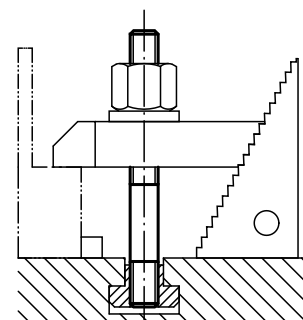
Permissible loading see Technical Information.
Thread end with oval point is permissible.

On request:

Stainless steel.

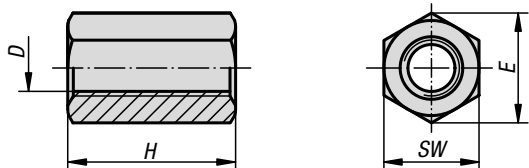
KIPP Studs

Order No.	D	L	B1	B2
K1910.105	M5	20	7	10
K1910.205	M5	30	7	10
K1910.106	M6	25	10	12
K1910.206	M6	35	10	12
K1910.306	M6	45	10	12
K1910.406	M6	60	10	12
K1910.108	M8	40	12	25
K1910.208	M8	50	12	25
K1910.308	M8	70	12	25
K1910.408	M8	80	12	25
K1910.110	M10	50	15	30
K1910.210	M10	67	15	30
K1910.310	M10	80	15	30
K1910.410	M10	100	15	30
K1910.112	M12	56	18	30
K1910.212	M12	67	18	30
K1910.312	M12	80	18	30
K1910.412	M12	100	18	30
K1910.512	M12	125	18	30
K1910.114	M14	60	20	30
K1910.214	M14	80	20	30
K1910.314	M14	100	20	30
K1910.414	M14	125	20	30
K1910.514	M14	150	20	30
K1910.116	M16	75	25	30
K1910.216	M16	100	25	30
K1910.316	M16	125	25	30
K1910.416	M16	150	25	30
K1910.120	M20	100	30	40
K1910.220	M20	125	30	40
K1910.320	M20	150	30	40
K1910.420	M20	180	30	40



Extension nuts

height 3xD



Material:

Carbon steel.

Version:

Steel grade 10, black oxidised.

Sample order:

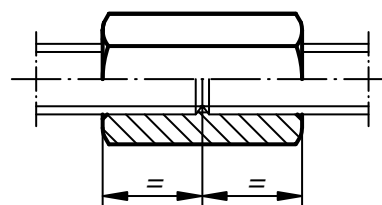
K0865.16

Note:

For functional and safety reasons screws should be screwed into a maximum of half the nut height from both sides. Minimum thread depth 1x diameter.

On request:

DIN ISO 272 spanner sizes.

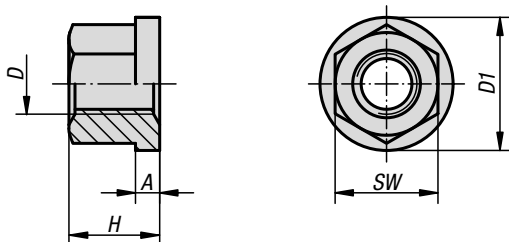


KIPP Extension nuts height 3xD

Order No.	D	H = 3 x D	SW	E
K0865.06	M6	18	10	11,5
K0865.08	M8	24	13	15
K0865.10	M10	30	17	19,6
K0865.12	M12	36	19	21,9
K0865.16	M16	48	24	27,7
K0865.20	M20	60	30	34,6

Hexagon nuts with collar

height 1.5xD, DIN 6331 enhanced



Material:

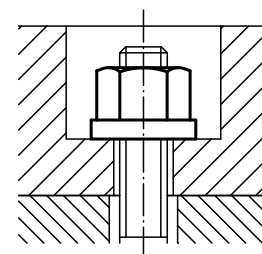
High-carbon steel, stainless steel A2 or A4.

Version:

Steel grade 10, bright (blackened).
Stainless steel bright.

Sample order:

K0701.16

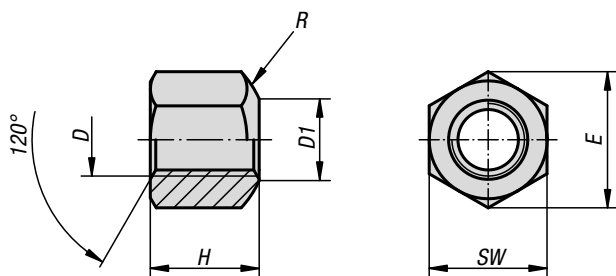
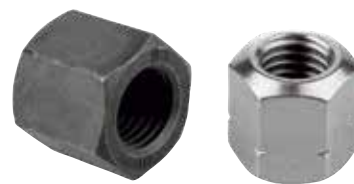


KIPP Hexagon nuts with collars, height 1.5xD, DIN 6331

Order No. high carbon steel	Order No. stainless steel A2	Order No. stainless steel A4	D	H = 1,5 x D	A	D1	SW
K0701.05	-	-	M5	7,5	2	12	9
K0701.06	K0701.806	-	M6	9	3	14	10
K0701.08	K0701.808	K0701.908	M8	12	3,5	18	13
K0701.10	K0701.810	-	M10	15	4	22	16
K0701.101	K0701.811	K0701.910	M10	15	4	22	17
K0701.12	K0701.812	-	M12	18	4	25	18
K0701.121	K0701.8121	K0701.912	M12	18	4	25	19
K0701.14	-	-	M14	21	4,5	28	22
K0701.16	K0701.816	K0701.916	M16	24	5	31	24
K0701.18	-	-	M18	27	5	34	27
K0701.20	K0701.820	K0701.920	M20	30	6	37	30
K0701.22	-	-	M22	33	6	40	34
K0701.24	-	-	M24	36	6	45	36
K0701.30	-	-	M30	45	8	58	46
K0701.36	-	-	M36	54	10	68	55

Hexagon nuts

height 1.5xD, DIN 6330 enhanced

**Material:**

Carbon steel or stainless steel A2.

Version:

Steel grade 10, bright (blackened).

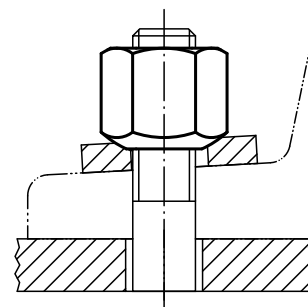
Stainless steel A2-70, bright

Sample order:

K0702.12

Note:

These hexagon nuts can be used with the conical seats K0729, Form D and G.

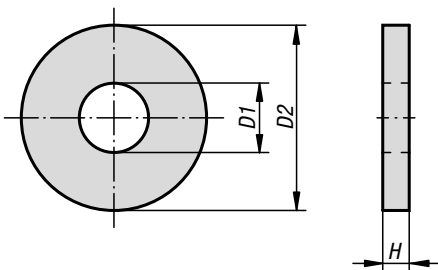


KIPP Hexagon nuts height 1.5xD, DIN 6330 enhanced

Order No.	Main material	D	H = 1,5 x D	D1	SW	E	R
K0702.05	high carbon steel	M5	7,5	6,5	9	10,4	7
K0702.06	high carbon steel	M6	9	7	10	11,5	9
K0702.08	high carbon steel	M8	12	9	13	15	11
K0702.10	high carbon steel	M10	15	11,5	16	18,4	15
K0702.101	high carbon steel	M10	15	11,5	17	19,6	15
K0702.12	high carbon steel	M12	18	14	18	20,7	17
K0702.121	high carbon steel	M12	18	14	19	21,9	17
K0702.14	high carbon steel	M14	21	16	22	25,4	20
K0702.16	high carbon steel	M16	24	18	24	27,7	22
K0702.18	high carbon steel	M18	27	20	27	31,2	24,5
K0702.20	high carbon steel	M20	30	22	30	34,6	27
K0702.22	high carbon steel	M22	33	24	32	36,9	29
K0702.24	high carbon steel	M24	36	26	36	41,6	32
K0702.30	high carbon steel	M30	45	32	46	53,1	41
K0702.36	high carbon steel	M36	54	38	55	63,5	50
K0702.806	stainless steel A2	M6	9	7	10	11,5	9
K0702.808	stainless steel A2	M8	12	9	13	15	11
K0702.810	stainless steel A2	M10	15	11,5	16	18,4	15
K0702.811	stainless steel A2	M10	15	11,5	17	19,6	15
K0702.812	stainless steel A2	M12	18	14	18	20,7	17
K0702.816	stainless steel A2	M16	24	18	24	27,7	22
K0702.820	stainless steel A2	M20	30	22	30	34,6	27

Washers for clamps

DIN 6340



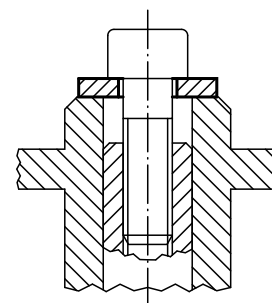
Material:
Steel.

Version:
Stamped out, pressed flat and tempered to 1200-1400 N/mm², black.

Sample order:
K0867.16

KIPP Heavy-duty washers DIN 6340

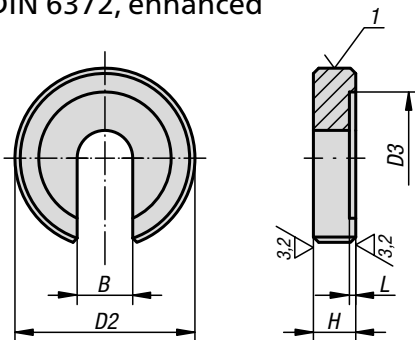
Order No. steel	D1	D2	H	for screw
K0867.06	6,4	17	3	M6
K0867.08	8,4	23	4	M8
K0867.10	10,5	28	4	M10
K0867.12	13	35	5	M12
K0867.16	17	45	6	M16
K0867.20	21	50	6	M20



K0730

C-washers

DIN 6372, enhanced



Material:
Carbon steel.

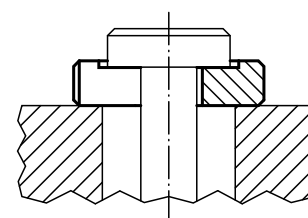
Version:
Tempered and black oxidised.

Sample order:
K0730.12

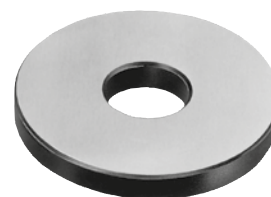
KIPP C-washers for fixtures DIN 6372, enhanced

Order No.	B	D2	D3	H	L
K0730.05	5,25	17	12	5	0,75
K0730.06	6,4	22	16	6	0,8
K0730.08	8,4	28	21	7	1
K0730.10	10,5	34	25	8	1,2
K0730.12	13	40	30	9	1,8
K0730.14	14,5	48	33	12	1,8
K0730.16	17	56	37	12	1,8
K0730.20	21	64	45	14	2
K0730.24	25	75	52	16	2
K0730.30	31	90	65	18	2
K0730.36	37	100	75	20	2,5

Drawing reference:
1) cross knurl



Spacing washers



Material:

Carbon steel.

Version:

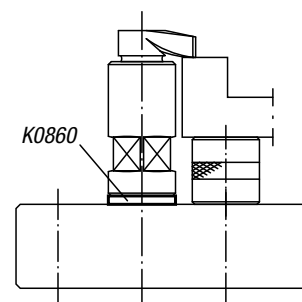
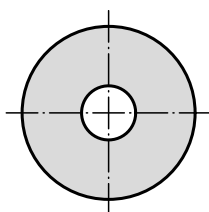
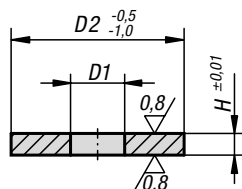
Tempered, black oxidised.
Contact faces ground.

Sample order:

K0860.16005

Note:

The spacing washer is used to alter the clamping range of hook clamps and hook holders. When a spacing washer is inserted between the base and the hook holder or riser cylinder it prevents damage to the support face.

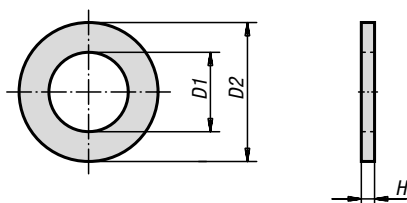


KIPP Spacer washers, ground

Order No.	D1	D2	H
K0860.08003	9	24	3
K0860.08005	9	24	5
K0860.08008	9	24	8
K0860.12001	12,5	40	1
K0860.12003	12,5	40	3
K0860.12005	12,5	40	5
K0860.16001	16,5	50	1
K0860.16003	16,5	50	3
K0860.16005	16,5	50	5
K0860.16105	16,5	60	5

Washers

medium, DIN EN ISO 7089 A



Material:

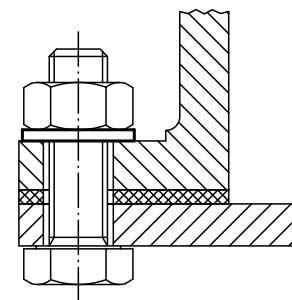
Steel, stainless steel A2 or stainless steel A4.

Version:

Steel, bright.
Stainless steel A2, bright.
Stainless steel A4, bright.

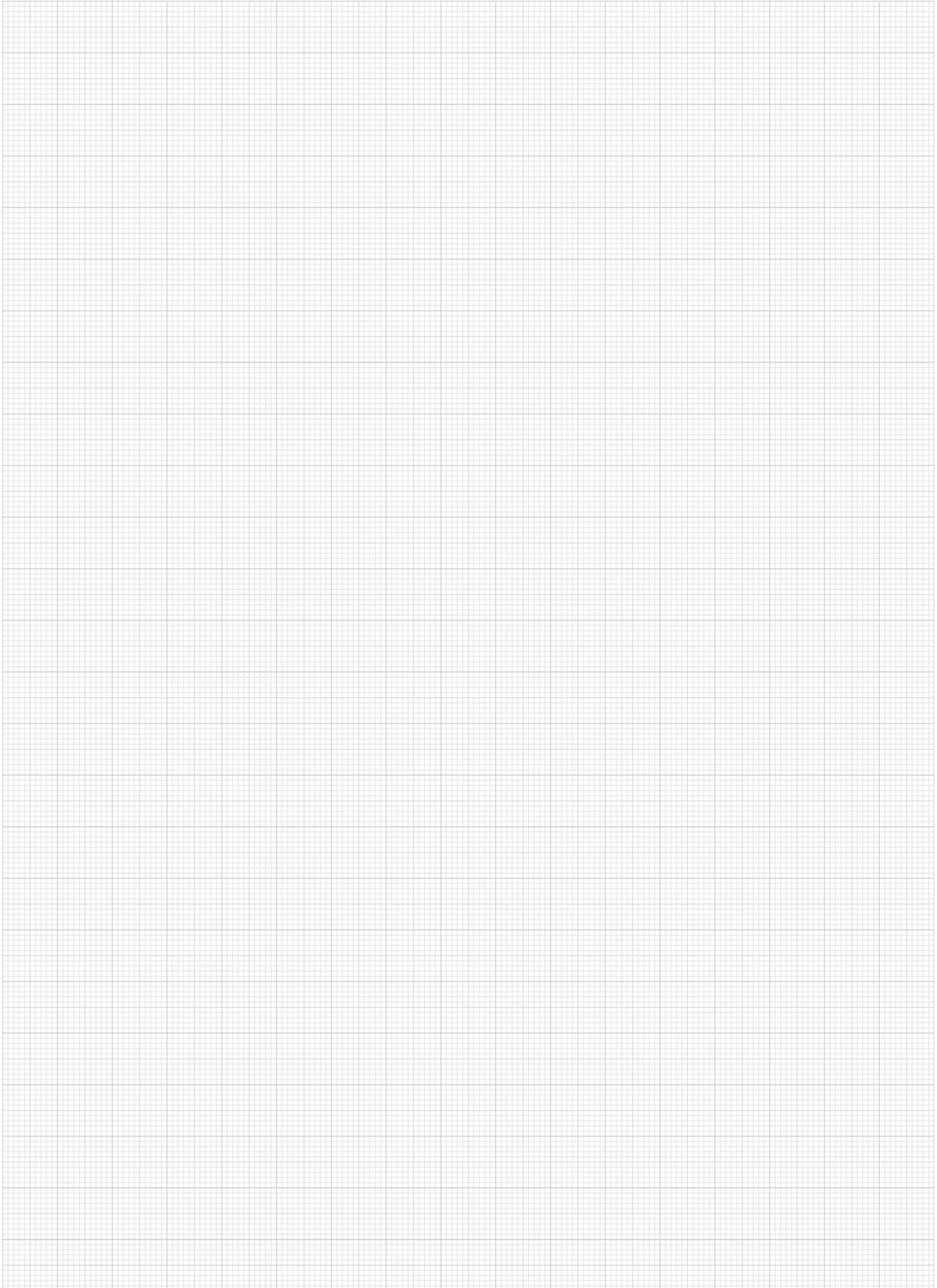
Sample order:

K0868.10



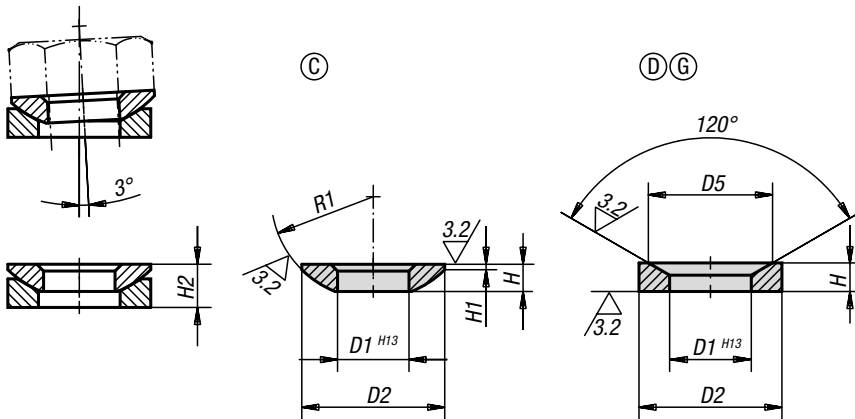
KIPP Medium washers DIN EN ISO 7089 A

Order No. steel	Order No. stainless steel A2	Order No. stainless steel A4	for screws	D1	D2	H
K0868.03	K0868.103	K0868.603	M3	3,2	7	0,5
K0868.04	K0868.104	K0868.604	M4	4,3	9	0,8
K0868.05	K0868.105	K0868.605	M5	5,3	10	1
K0868.06	K0868.106	K0868.606	M6	6,4	12	1,6
K0868.08	K0868.108	K0868.608	M8	8,4	16	1,6
K0868.10	K0868.110	K0868.610	M10	10,5	20	2
K0868.12	K0868.112	K0868.612	M12	13	24	2,5
K0868.14	K0868.114	K0868.614	M14	15	28	2,5
K0868.16	K0868.116	K0868.616	M16	17	30	3
K0868.20	K0868.120	K0868.620	M20	21	37	3
K0868.24	K0868.124	K0868.624	M24	25	44	4
K0868.30	K0868.130	K0868.630	M30	31	56	4
K0868.36	K0868.136	K0868.636	M36	37	66	5



Spherical washers

DIN 6319, 10/01



Material:

Mild steel, Q&T steel or stainless steel.

Version:

Mild steel, case hardened, manganese-phosphated.
Tempered steel (HV 390 ±40), manganese-phosphated.
Stainless steel, bright.

Sample order:

K0729.216

Note:

Conical seat Form G should be used over slots.

Drawing reference:

Form C: spherical washer
Form D: conical seat
Form G: conical seat for slots

KIPP Spherical washers Form C, DIN 6319, edition 10/01

Order No. mild steel	Order No. stainless steel	Form	D1	D2	H	H1	R1	Load rating max. kN (static load only)
K0729.105	-	C	5,25	10,5	2	0,4	7,5	6,5
K0729.106	K0729.0106	C	6,4	12	2,3	0,7	9	9/6
K0729.108	K0729.0108	C	8,4	17	3,2	0,6	12	17/12
K0729.110	K0729.0110	C	10,5	21	4	0,8	15	26/16
K0729.112	K0729.0112	C	13	24	4,6	1,1	17	38/24
K0729.114	-	C	15	28	5	1,2	22	53
K0729.116	K0729.0116	C	17	30	5,3	1,3	22	73/45
K0729.120	K0729.0120	C	21	36	6,3	2	27	117/71
K0729.124	K0729.0124	C	25	44	8,2	2,4	32	168/105
K0729.130	K0729.0130	C	31	56	11,2	3,6	41	269/191
K0729.136	K0729.0136	C	37	68	14	4,6	50	394/-
K0729.142	K0729.0142	C	43	78	17	6,5	58	542/-
K0729.148	K0729.0148	C	50	92	21	8	67	714/-
K0729.156	-	C	58	103	23	9,5	79	960
K0729.164	-	C	66	120	27	12	93	1269

Spherical washers

DIN 6319, 10/01



KIPP Conical seats Form D, DIN 6319, edition 10/01

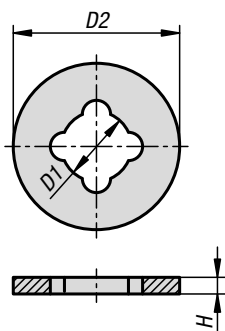
Order No. mild steel	Order No. stainless steel	Form	D1	D2	D5	H	H2	Load rating max. kN (static load only)
K0729.205	-	D	6	10,5	9,25	2,1	3,1	6,5
K0729.206	K0729.0206	D	7,1	12	11	2,8	4,2	9/6
K0729.208	K0729.0208	D	9,6	17	14,5	3,5	5,6	17/12
K0729.210	K0729.0210	D	12	21	18,5	4,2	6,5	26/16
K0729.212	K0729.0212	D	14,2	24	20	5	8	38/24
K0729.214	-	D	16,5	28	24,8	5,6	8,5	53
K0729.216	K0729.0216	D	19	30	26	6,2	9,5	73/45
K0729.220	K0729.0220	D	23,2	36	31	7,5	11,7	117/71
K0729.224	K0729.0224	D	28	44	37	9,5	15,2	168/105
K0729.230	K0729.0230	D	35	56	49	12	19,2	269/191
K0729.236	K0729.0236	D	42	68	60	15	23,5	394/-
K0729.242	K0729.0242	D	49	78	70	18	29	542/-
K0729.248	K0729.0248	D	56	92	82	22	35,5	714/-
K0729.256	-	D	65	103	92	25	39,7	960
K0729.264	-	D	75	120	110	30	46,5	1269

KIPP Conical seats Form G, DIN 6319 Edition 10/01

Order No. high carbon steel	Order No. stainless steel	Form	D1	D2	D5	H	H2	Load rating max. kN (static load only)
K0729.305	-	G	6	15	9,25	2,5	3,5	6,5
K0729.306	K0729.0306	G	7,1	17	11	4	5,4	9/6
K0729.308	K0729.0308	G	9,6	24	14,5	5	7,1	17/12
K0729.310	K0729.0310	G	12	30	18,5	5	7,3	26/16
K0729.312	K0729.0312	G	14,2	36	20	6	9	38/24
K0729.314	-	G	16,5	40	24,8	6	9,5	53
K0729.316	K0729.0316	G	19	44	26	7	10,4	73/45
K0729.320	K0729.0320	G	23,2	50	31	8	12,2	117/71
K0729.324	K0729.0324	G	28	60	37	10	15,7	168/105
K0729.330	K0729.0330	G	35	68	49	12	19,7	269/191
K0729.336	-	G	42	80	60	12	20,3	394

Washers plastic

captive



Material:
Polyamide.

Version:
white.

Sample order:
K1526.05

Note:
The washers are vibration dampers and protect the screw connection during e.g. pre-assembly. The washers also protect the surface from damage. Only suitable for threads with undercut i.e. ring bolts

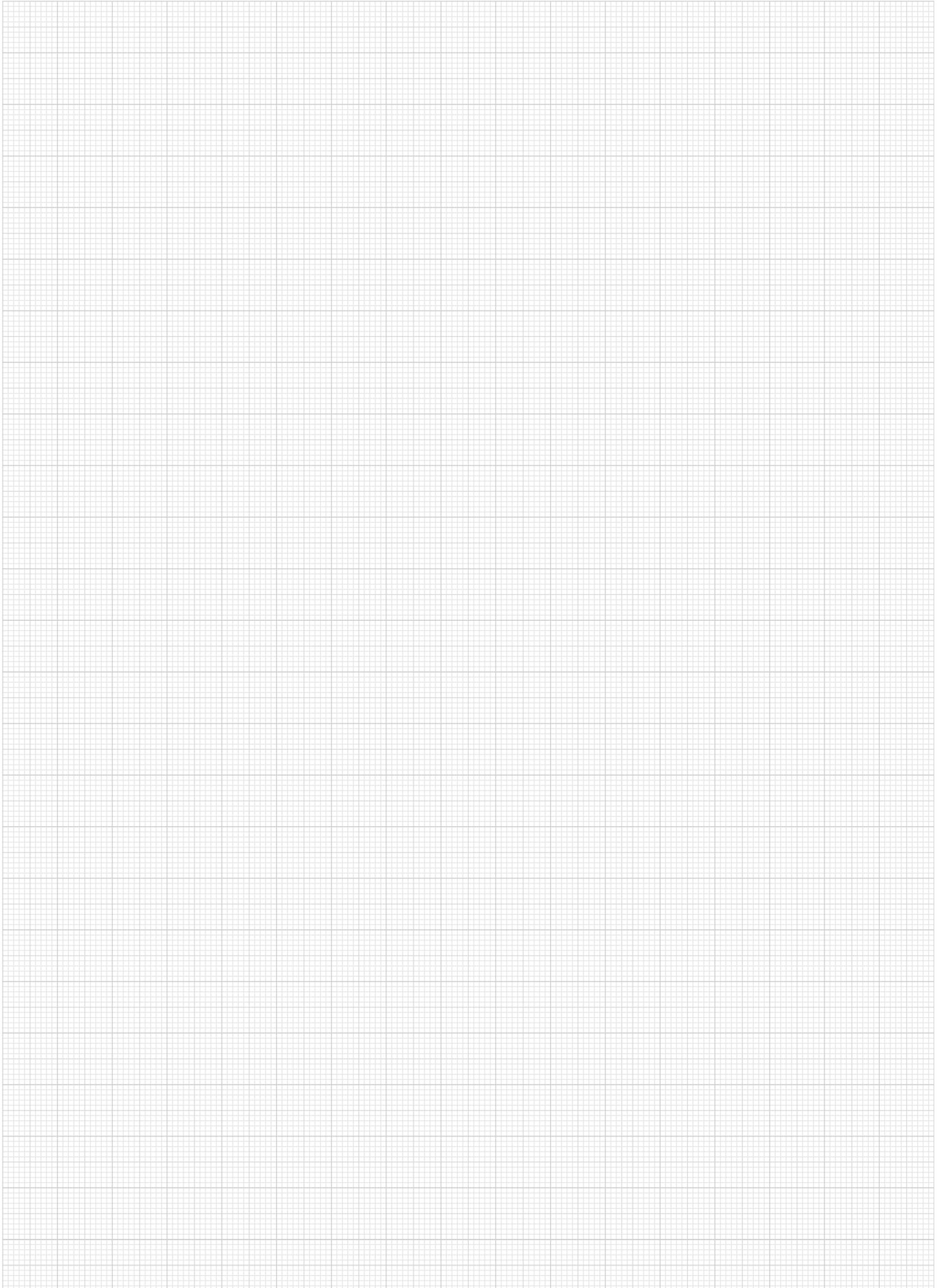
Application:
Press or twist the washers over the thread.

Attention:
When shim washers with rings bolts are used, the forces specified for the ring bolts cannot be guaranteed.



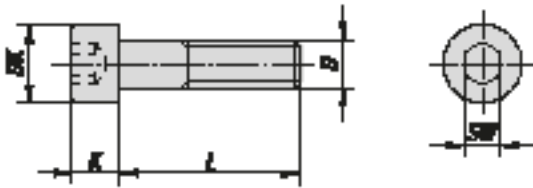
KIPP Captive washers, plastic

Order No.	D1	D2	G	H
K1526.05	4,3	10	M5	0,5
K1526.06	5,1	12	M6	0,5
K1526.08	6,2	14	M8	0,5
K1526.10	8,4	20	M10	1
K1526.12	9,8	20	M12	1
K1526.16	13,5	28	M16	1



Socket head screws

DIN 912 / DIN EN ISO 4762, steel or stainless steel



Material:

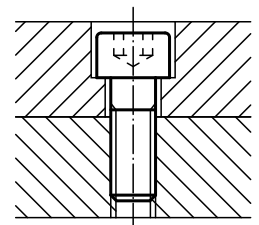
Steel, stainless steel A2 or stainless steel A4.

Version:

Steel grade 8.8, bright (black) or electro zinc-plated.
 Steel grade 10.9, bright (black) or electro zinc-plated.
 Steel grade 12.9, bright (black)
 Stainless steel A2-70, bright.
 Stainless steel A4-70, bright.

Sample order:

K0869.08X40 (include length L)



Socket head screws

DIN 912 / DIN EN ISO 4762, steel or stainless steel

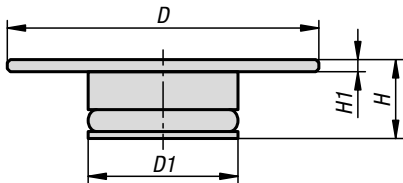
Order No. steel bright (black)	Order No. steel galvanised	Grade	D	L	DK	K	SW
K0869.304X	K0869.504X	10.9	M4	10/12/16/18/20/25	7	4	3
K0869.305X	K0869.505X	10.9	M5	10/12/16/18/20/25/30/40	8,5	5	4
K0869.306X	K0869.506X	10.9	M6	10/12/16/18/20/25/30/35/40/55/45/50/60	10	6	5
K0869.308X	K0869.508X	10.9	M8	16/18/20/25/30/35/40/45/50/60/70/80	13	8	6
K0869.310X	K0869.510X	10.9	M10	16/18/20/25/30/35/40/45/50/60/70/80/90/100	16	10	8
K0869.312X	K0869.512X	10.9	M12	20/25/30/35/40/45/50/60/70/80/90/100/110/120	18	12	10
K0869.314X	K0869.514X	10.9	M14	50/80/120	21	14	12
K0869.316X	K0869.516X	10.9	M16	30/35/40/45/50/60/70/80/90/100/110/120	24	16	14
K0869.320X	K0869.520X	10.9	M20	40/45/50/60/70/80/90/100/110/120	30	20	17

Order No. steel bright (black)	Grade	D	DK	K	L	SW
K0869.206X	12.9	M6	10	6	18/20/25/30/35/40/45/50/55/60/65/70/80/90/100	5
K0869.208X	12.9	M8	13	8	20/25/30/35/40/45/50/55/60/65/70/80/90/100/120	6
K0869.210X	12.9	M10	16	10	30/35/40/45/50/55/60/65/70/75/80/90/100/110/120/130/140	8
K0869.212X	12.9	M12	18	12	30/35/40/45/50/55/60/65/70/75/80/90/100/110/120/130/140	10
K0869.216X	12.9	M16	24	16	35/40/45/50/55/60/65/70/75/80/90/100/110/120/130/140/150/160/170/180/200	14
K0869.218X	12.9	M18	27	18	35/40/45/50/55/60/65/70/75/80/90/100/110/120/130/140/150/160/170/180/200	14
K0869.220X	12.9	M20	30	20	40/45/50/55/60/65/70/75/80/90/100/110/120/130/140/150/160/170/180/200	17

Order No. stainless steel A2	Order No. stainless steel A4	D	L	DK	K	SW
K0869.104X	K0869.604X	M4	10/12/16/18/20/25	7	4	3
K0869.105X	K0869.605X	M5	10/12/16/18/20/25/30/40	8,5	5	4
K0869.106X	K0869.606X	M6	10/12/16/18/20/25/30/35/40/45/50/55/60	10	6	5
K0869.108X	K0869.608X	M8	16/18/20/25/30/35/40/45/50/60/70/80	13	8	6
K0869.110X	K0869.610X	M10	16/18/20/25/30/35/40/45/50/60/70/80/90/100	16	10	8
K0869.112X	K0869.612X	M12	20/25/30/35/40/45/50/60/70/80/90/100/110/120	18	12	10
K0869.114X	K0869.614X	M14	50/80/120	21	14	12
K0869.116X	K0869.616X	M16	30/35/40/45/50/60/70/80/90/100/110/120	24	16	14
K0869.120X	K0869.620X	M20	40/45/50/60/70/80/90/100/110/120	30	20	17

Aluminium cap

for holes and screw heads with hex socket



Using caps on the holes in the machining area reduces set-up times, as less time is required for cleaning, e.g. the accumulation of coolants in screw heads.

Material:

Aluminium cap.
Screw stainless steel,
O-ring NBR.

Version:

Cap black anodised.

Sample order:

K1798.02310

Assembly:

Insert the cap into the hole or hexagon and tighten it with the help of a screwdriver until the screw head and the end face of the cap are flush.

Advantages:

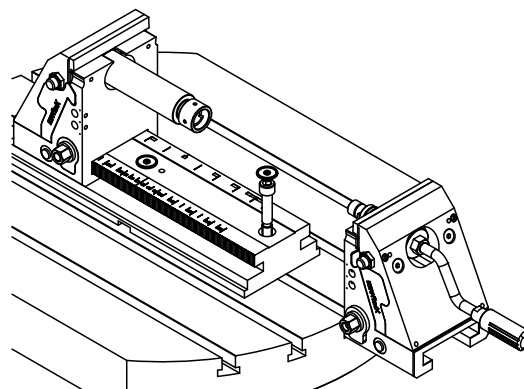
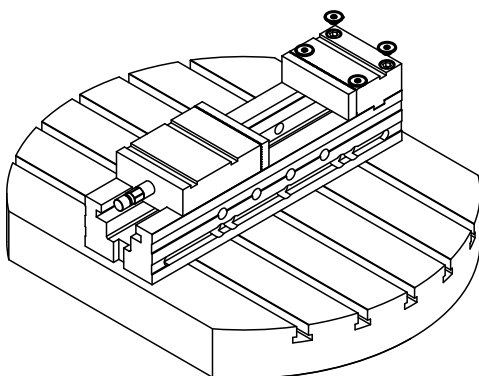
Non-destructive reusable system.
Prevents swarf and coolant from building up and accumulating in screw heads and counterbores.
Quick and easy assembly and dismantling. Minimises the spraying of coolants when blowing out with compressed air.

On request:

Individual versions and colours.

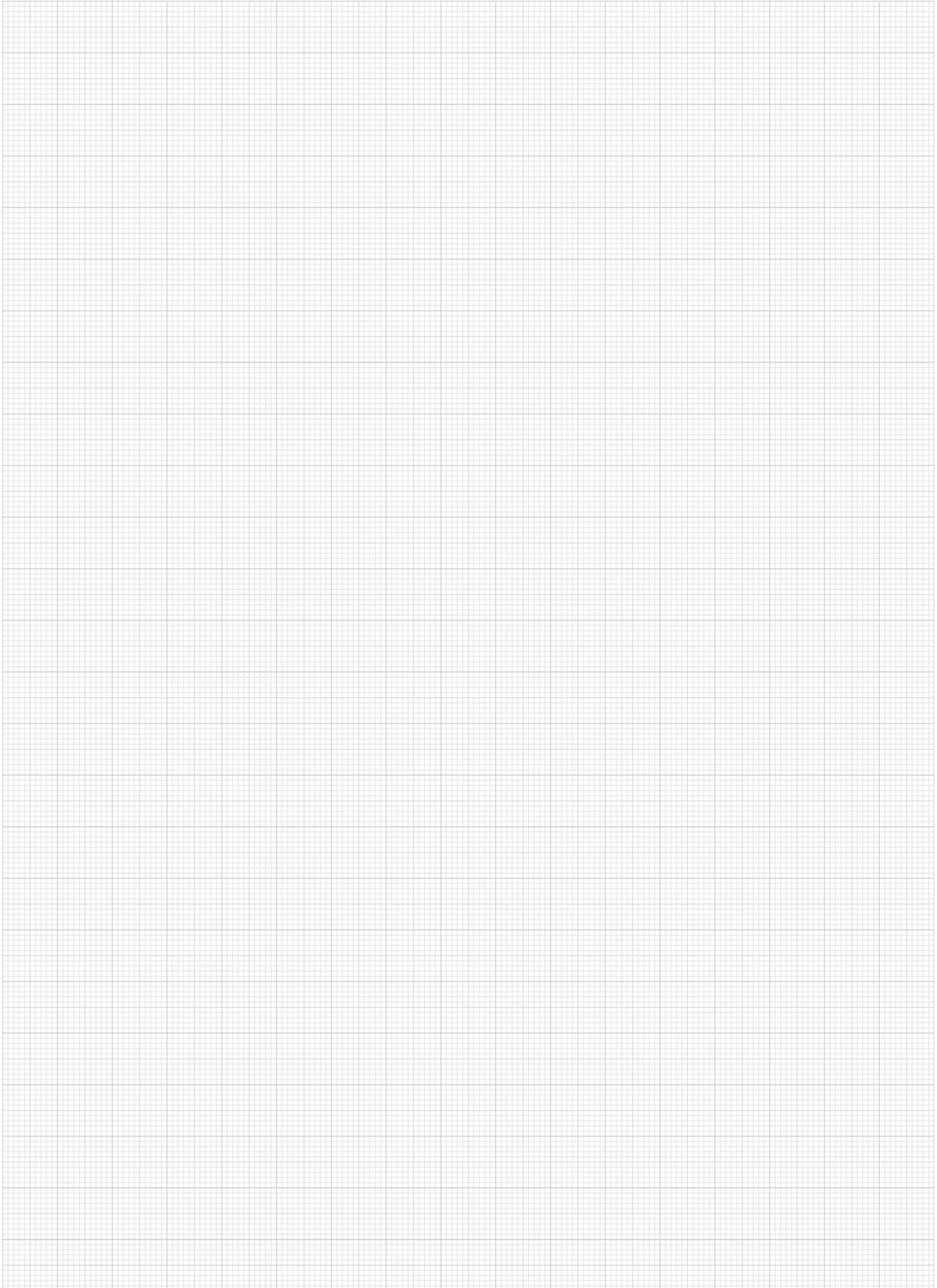
Accessories:

Socket head screws DIN 912.



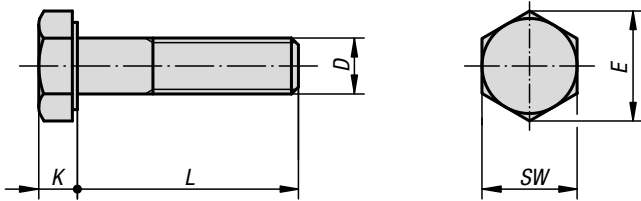
KIPP Aluminium cap for holes and screw heads with hex socket

Order No.	D	D1	H	H1	Suitable for bores / hex sockets
K1798.02108	21	7,9	6,5	1	8
K1798.02310	23	9,9	8,3	1	10
K1798.02914	29	13,9	9	1,2	14
K1798.03717	37	16,9	10,6	1,5	17



Hexagon head bolts

DIN 931/ISO 4014



Material:

Steel, stainless steel A2 or stainless steel A4.

Version:

Steel grade 8.8, bright (black) or electro zinc-plated.
 Steel grade 10.9, bright (black) or electro zinc-plated.
 Steel grade 12.9, bright (black)
 Stainless steel A2-70, bright.
 Stainless steel A4-70, bright.

Sample order:

K0870.110X50 (include length L)

On request:

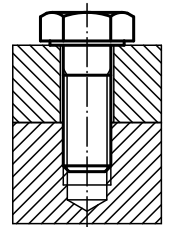
DIN ISO 272 spanner sizes.

KIPP Hexagon head bolts with shaft DIN 931/ISO 4014

Order No. steel Grade 8.8	Order No. steel Grade 10.9	Surface finish body	D	E	K	L	SW
K0870.04X	-	bright (black)	M4	7,66	2,8	25/30/35/40/45/50	7
K0870.05X	-	bright (black)	M5	8,79	3,5	25/30/35/40/45/50/60	8
K0870.06X	K0870.306X	bright (black)	M6	11,05	4	30/35/40/45/50/60/70	10
K0870.08X	K0870.308X	bright (black)	M8	14,38	5,3	35/40/45/50/60/70/80	13
K0870.10X	K0870.310X	bright (black)	M10	18,9	6,4	40/45/50/60/70/80/90/100	17
K0870.12X	K0870.312X	bright (black)	M12	21,1	7,5	45/50/60/70/80/90/100/110/120	19
K0870.16X	K0870.316X	bright (black)	M16	26,75	10	60/70/80/90/100/110/120	24
K0870.20X	K0870.320X	bright (black)	M20	33,53	12,5	70/80/90/100/110/120	30
K0870.404X	-	galvanised	M4	7,66	2,8	25/30/35/40/45/50	7
K0870.405X	-	galvanised	M5	8,79	3,5	25/30/35/40/45/50/60	8
K0870.406X	K0870.506X	galvanised	M6	11,05	4	30/35/40/45/50/60/70	10
K0870.408X	K0870.508X	galvanised	M8	14,38	5,3	35/40/45/50/60/70/80	13
K0870.410X	K0870.510X	galvanised	M10	18,9	6,4	40/45/50/60/70/80/90/100	17
K0870.412X	K0870.512X	galvanised	M12	21,1	7,5	45/50/60/70/80/90/100/110/120	19
K0870.416X	K0870.516X	galvanised	M16	26,75	10	60/70/80/90/100/110/120	24
K0870.420X	K0870.520X	galvanised	M20	33,53	12,5	70/80/90/100/110/120	30

Hexagon head bolts

DIN 931/ISO 4014

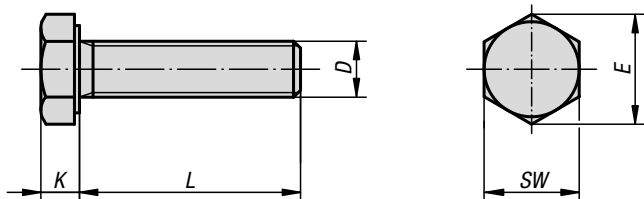


Order No. steel Grade 12.9	Surface finish body	D	E	K	L	SW
K0870.210X	bright (black)	M10	18,9	6,4	40/45/50/60/70/80/90/100	17
K0870.212X	bright (black)	M12	21,1	7,5	45/50/60/70/80/90/100/120	19
K0870.216X	bright (black)	M16	26,75	10	60/70/80/90/100/120	24
K0870.220X	bright (black)	M20	33,53	12,5	70/80/90/100/120	30

Order No. stainless steel A2	Order No. stainless steel A4	Surface finish body	D	E	K	L	SW
K0870.105X	K0870.605X	bright	M5	8,79	3,5	25/30/35/40/45/50/60	8
K0870.106X	K0870.606X	bright	M6	11,05	4	30/35/40/45/50/60/70	10
K0870.108X	K0870.608X	bright	M8	14,38	5,3	35/40/45/50/60/70/80	13
K0870.110X	K0870.610X	bright	M10	18,9	6,4	100/40/45/50/60/70/80/90	17
K0870.112X	K0870.612X	bright	M12	21,1	7,5	100/110/120/45/50/60/70/80/90	19
K0870.116X	K0870.616X	bright	M16	26,75	10	100/110/120/60/70/80/90	24

Hexagon head bolts

full thread DIN 933



Material:

Steel, stainless steel A2 or stainless steel A4.

Version:

Steel grade 8.8, bright (black) or electro zinc-plated.
 Steel grade 10.9, bright (black) or electro zinc-plated.
 Steel grade 12.9, bright (black)
 Stainless steel A2-70, bright.
 Stainless steel A4-70, bright.

Sample order:

K0871.05X40 (include length L)

KIPP Hexagon head bolts DIN 933/ISO 4017

Order No. steel Grade 8.8	Order No. steel Grade 10.9	Surface finish body	D	E	K	L	SW
K0871.04X	-	bright (black)	M4	7,66	2,8	10/12/16/18/20/25	7
K0871.05X	-	bright (black)	M5	8,79	3,5	10/12/16/18/20/25/30/35/40	8
K0871.06X	K0871.306X	bright (black)	M6	11,05	4	10/12/16/18/20/25/30/35/40/45/50/55/60	10
K0871.08X	K0871.308X	bright (black)	M8	14,38	5,3	16/18/20/25/30/35/40/45/50/60/70/80/90/100	13
K0871.10X	K0871.310X	bright (black)	M10	18,9	6,4	16/18/20/25/30/35/40/45/50/60/70/80/90/100	17
K0871.12X	K0871.312X	bright (black)	M12	21,1	7,5	20/25/30/35/40/45/50/60/70/80/90/100/110/120	19
K0871.14X	-	bright (black)	M14	24,49	8,8	30/35/40/45/50/60/70/80/90/100/110/120	22
K0871.16X	K0871.316X	bright (black)	M16	26,75	10	30/35/40/45/50/60/70/80/90/100/110/120	24
K0871.20X	K0871.320X	bright (black)	M20	33,53	12,5	40/45/50/60/70/80/90/100/110/120	30
K0871.404X	-	galvanised	M4	7,66	2,8	10/12/16/18/20/25	7
K0871.405X	-	galvanised	M5	8,79	3,5	10/12/16/18/20/25/30/35/40	8
K0871.406X	K0871.506X	galvanised	M6	11,05	4	10/12/16/18/20/25/30/35/40/45/50/55/60	10
K0871.408X	K0871.508X	galvanised	M8	14,38	5,3	16/18/20/25/30/35/40/45/50/60/70/80/90/100	13
K0871.410X	K0871.510X	galvanised	M10	18,9	6,4	16/18/20/25/30/35/40/45/50/60/70/80/90/100	17
K0871.412X	K0871.512X	galvanised	M12	21,1	7,5	20/25/30/35/40/45/50/60/70/80/90/100/110/120	19
K0871.414X	-	galvanised	M14	24,49	8,8	30/35/40/45/50/60/70/80/90/100/110/120	22
K0871.416X	K0871.516X	galvanised	M16	26,75	10	30/35/40/45/50/60/70/80/90/100/110/120	24
K0871.420X	K0871.520X	galvanised	M20	33,53	12,5	40/45/50/60/70/80/90/100/110/120	30

Hexagon head bolts

full thread DIN 933

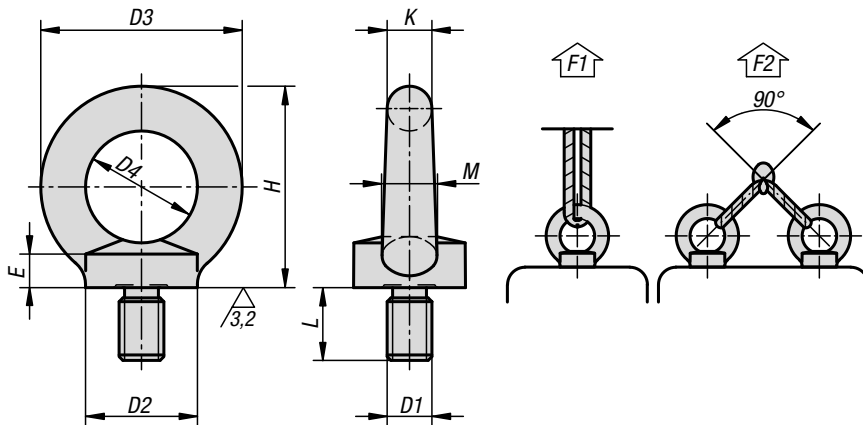


Order No.	Main material	Grade	Surface finish body	D	E	K	L	SW
K0871.206X	steel	12.9	bright (black)	M6	11,05	4	12/16/20/25/30	10
K0871.208X	steel	12.9	bright (black)	M8	14,38	5,3	16/20/25/30/35/40/45/50/60	13
K0871.210X	steel	12.9	bright (black)	M10	18,9	6,4	20/25/30/35/40/45/50/60	17
K0871.212X	steel	12.9	bright (black)	M12	21,1	7,5	25/30/35/40/45/50/60	19
K0871.216X	steel	12.9	bright (black)	M16	26,75	10	30/35/40/45/50/60/70/80/90/100	24
K0871.220X	steel	12.9	bright (black)	M20	33,53	12,5	40/45/50/60/70/80/90/100	30

Order No. stainless steel A4	Order No. stainless steel A2	Grade	Surface finish body	D	E	K	L	SW
K0871.603X	-	70	bright	M3	6,01	2	6/8/10	5,5
K0871.604X	K0871.104X	70	bright	M4	7,66	2,8	10/12/16/18/20/25/8	7
K0871.605X	K0871.105X	70	bright	M5	8,79	3,5	10/12/16/18/20/25/30/35/40	8
K0871.606X	K0871.106X	70	bright	M6	11,05	4	10/12/16/18/20/25/30/35/40/45/50/55/60	10
K0871.608X	K0871.108X	70	bright	M8	14,38	5,3	16/18/20/25/30/35/40/45/50/60/70/80/90/100	13
K0871.610X	K0871.110X	70	bright	M10	18,9	6,4	16/18/20/25/30/35/40/45/50/60/70/80/90/100	17
K0871.612X	K0871.112X	70	bright	M12	21,1	7,5	20/25/30/35/40/45/50/60/70/80/90/100/110/120	19
K0871.616X	K0871.116X	70	bright	M16	26,75	10	30/35/40/45/50/60/70/80/90/100/110/120	24
K0871.620X	K0871.120X	70	bright	M20	33,53	12,5	40/45/50/60/70/80/90/100/110/120	30

Ring bolts

DIN 580



Material:

1.1141 steel, 1.4301 stainless steel or 1.4401 stainless steel.

Version:

- Drop forged.
- Steel, bright.
- Steel electro zinc-plated. Drop forged.
- Steel, bright.
- Steel electro zinc-plated.

Sample order:

K0767.20

Note:

For high demand hoisting and carrying tasks in safety-relevant areas (machine construction, load handling equipment, lifting tackle).

The CE mark is impressed into the ring bolt.

F2 permissible load under max. 45° per ring bolt.

On request:

Certificate of conformity.

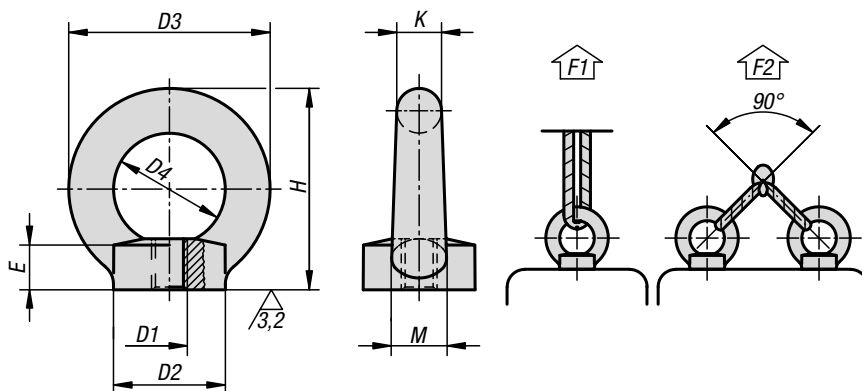
KIPP Ring bolts DIN 580

Order No. steel bright	Order No. steel galvanised	D1	L	D2	D3	D4	E	H	K	M	F1 max. kN	F2 max. kN
K0767.08	K0767.008	M8	13	20	36	20	6	36	8	10	1,4	0,95
K0767.10	K0767.010	M10	17	25	45	25	8	45	10	12	2,3	1,7
K0767.12	K0767.012	M12	20,5	30	54	30	10	53	12	14	3,4	2,4
K0767.16	K0767.016	M16	27	35	63	35	12	62	14	16	7	5
K0767.20	K0767.020	M20	30	40	72	40	14	71	16	19	12	8,3
K0767.24	K0767.024	M24	36	50	90	50	18	90	20	24	18	12,7

Order No. stainless steel 1.4301	Order No. stainless steel 1.4401	D1	L	D2	D3	D4	E	H	K	M	F1 max. kN	F2 max. kN
K0767.108	K0767.208	M8	13	20	36	20	6	36	8	10	1,4	0,95
K0767.110	K0767.210	M10	17	25	45	25	8	45	10	12	2,3	1,7
K0767.112	K0767.212	M12	20,5	30	54	30	10	53	12	14	3,4	2,4
K0767.116	K0767.216	M16	27	35	63	35	12	62	14	16	7	5
K0767.120	K0767.220	M20	30	40	72	40	14	71	16	19	12	8,3
K0767.124	K0767.224	M24	36	50	90	50	18	90	20	24	18	12,7

Ring nuts

DIN 582



Material:

1.1141 steel, 1.4301 stainless steel or 1.4401 stainless steel.

Version:

Drop forged.
Steel, bright.
Steel electro zinc-plated.

Sample order:

K0768.10

Note:

For high demand hoisting and carrying tasks in safety-relevant areas (machine construction, load handling equipment, lifting tackle).
The CE mark is impressed into the ring bolt.
F2 permissible load under max. 45° per ring bolt.

On request:

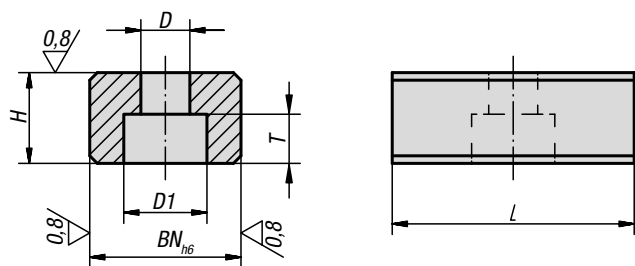
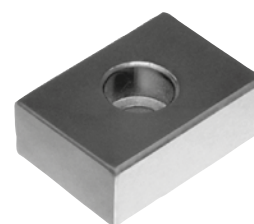
Certificate of conformity.

KIPP Ring nuts DIN 582

Order No. steel bright	Order No. steel galvanised	D1	D2	D3	D4	E	H	K	M	F1 max. kN	F2 max. kN
K0768.08	K0768.008	M8	20	36	20	8,5	36	8	10	1,4	0,95
K0768.10	K0768.010	M10	25	45	25	10	45	10	12	2,3	1,7
K0768.12	K0768.012	M12	30	54	30	11	53	12	14	3,4	2,4
K0768.16	K0768.016	M16	35	63	35	13	62	14	16	7	5
K0768.20	K0768.020	M20	40	72	40	16	71	16	19	12	8,3
K0768.24	K0768.024	M24	50	90	50	20	90	20	24	18	12,7

Order No. stainless steel 1.4301	Order No. stainless steel 1.4401	D1	D2	D3	D4	E	H	K	M	F1 max. kN	F2 max. kN
K0768.108	K0768.208	M8	20	36	20	8,5	36	8	10	1,4	0,95
K0768.110	K0768.210	M10	25	45	25	10	45	10	12	2,3	1,7
K0768.112	K0768.212	M12	30	54	30	11	53	12	14	3,4	2,4
K0768.116	K0768.216	M16	35	63	35	13	62	14	16	7	5
K0768.120	K0768.220	M20	40	72	40	16	71	16	19	12	8,3
K0768.124	K0768.224	M24	50	90	50	20	90	20	24	18	12,7

Slot keys

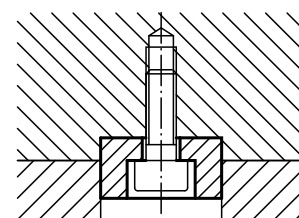


Material:
Steel.

Version:
Case-hardened, black oxidised and ground.

Sample order:
K0864.16

Note:
Slot keys are used to align fixtures and clamps on machine tables with DIN 650 T-slots. They are screwed into the fixture alignment slots. Slot keys are only used when the fixture and machine table have the same slot width.



KIPP Slot keys

Order No.	BN=Slot width	D	D1	H	L	T	for screws DIN 84 or 912
K0864.10	10	4,5	8	8	20	4,3	M4x10
K0864.12	12	5,3	10	8	20	5,3	M5x12
K0864.14	14	6,6	11	10	22	6,3	M6x16
K0864.16	16	6,6	11	10	22	6,3	M6x16
K0864.18	18	6,6	11	10	22	6,3	M6x16
K0864.20	20	6,6	11	10	22	6,3	M6x16
K0864.22	22	6,6	11	12	32	6,3	M6x16

T-slot keys



Material:
Carbon steel 1.1191

Version:
Black oxidised.

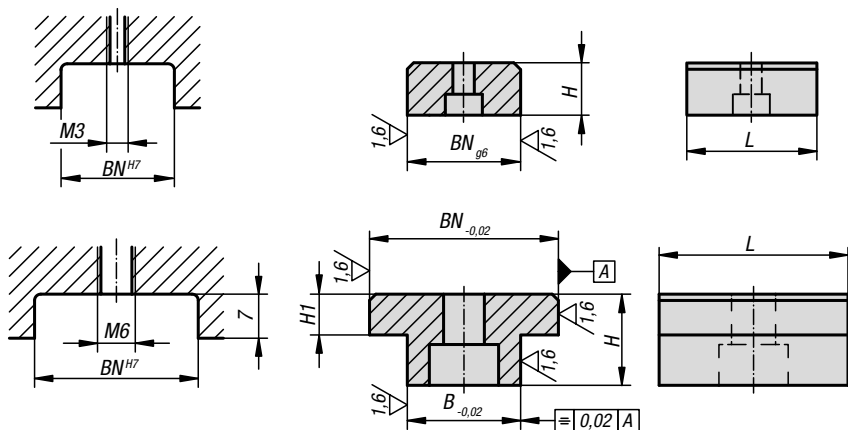
Sample order:
K0954.08X8 (include dimension BN)

Note:
Slot guide nuts are used for positioning fixture components quickly and exactly. The time-consuming work to align components is no longer required.
Version B can be mounted at 90° for a wider mark-out dimension. The slot guide nut can therefore be used for two different slot widths.

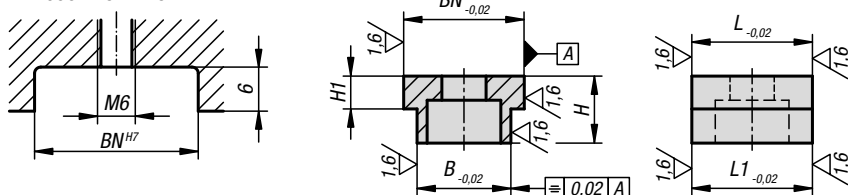
Application:
The slot guide nuts are screwed into a slot with the fixture components and then marked out on the counterpiece.

Advantages:
Very time-saving when mounting fixture components.

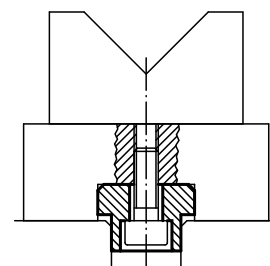
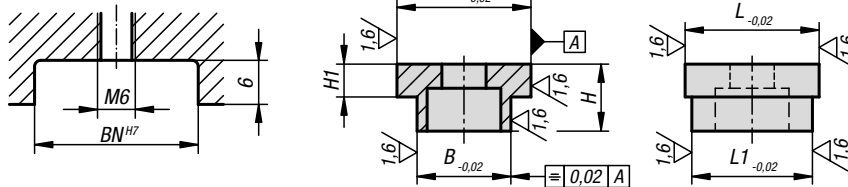
Ⓐ K0954.08x8



Ⓑ K0954.1814x18



K0954.1814x20

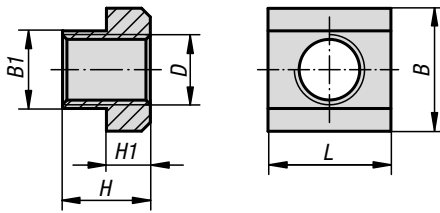


KIPP T-slot keys

Order No.	Form	Form-Type	BN=Slot width	B	H	H1	L	L1
K0954.08X	A	single	8	8	8	-	20	-
K0954.12X	A	single	20/22/30	12	14	6	30	-
K0954.14X	A	single	20/22/30	14	14	6	30	-
K0954.16X	A	single	20/22/30	16	14	6	30	-
K0954.18X	A	single	20/22/30	18	14	6	30	-
K0954.22X	A	single	20/22/30	22	14	6	30	-
K0954.1814X	B	both sides	18	14	10	4,9	18	18
K0954.1814X	B	both sides	20	14	10	4,9	20	18

Nuts for T-slots

DIN 508 enhanced



KIPP Nuts for T-slots to DIN 508 enhanced

Order No.	Main material	Slot width	B	B1	D	H	H1	L
K0377.05	high carbon steel	6	10	5,6	M5	8	4	10
K0377.06	high carbon steel	8	13	7,6	M6	10	6	13
K0377.061	high carbon steel	10	15	9,6	M6	12	6	15
K0377.08	high carbon steel	10	15	9,6	M8	12	6	15
K0377.081	high carbon steel	12	18	11,6	M8	14	7	18
K0377.082	high carbon steel	14	22	13,6	M8	16	8	22
K0377.10	high carbon steel	12	18	11,6	M10	14	7	18
K0377.101	high carbon steel	14	22	13,6	M10	16	8	22
K0377.12	high carbon steel	14	22	13,6	M12	16	8	22
K0377.121	high carbon steel	16	25	15,6	M12	18	9	25
K0377.122	high carbon steel	18	28	17,6	M12	20	10	28
K0377.123	high carbon steel	20	32	19,6	M12	24	12	32
K0377.124	high carbon steel	22	35	21,6	M12	28	14	35
K0377.14	high carbon steel	16	25	15,6	M14	18	9	25
K0377.141	high carbon steel	18	28	17,6	M14	20	10	28
K0377.16	high carbon steel	18	28	17,6	M16	20	10	28
K0377.161	high carbon steel	20	32	19,6	M16	24	12	32
K0377.163	high carbon steel	24	40	23,6	M16	32	16	40
K0377.164	high carbon steel	28	44	27,6	M16	36	18	44
K0377.18	high carbon steel	20	32	19,6	M18	24	12	32
K0377.181	high carbon steel	22	35	21,6	M18	28	14	35
K0377.20	high carbon steel	22	35	21,6	M20	28	14	35
K0377.201	high carbon steel	24	40	23,6	M20	32	16	40
K0377.202	high carbon steel	28	44	27,6	M20	36	18	44
K0377.22	high carbon steel	24	40	23,6	M22	32	16	40
K0377.24	high carbon steel	28	44	27,6	M24	36	18	44
K0377.241	high carbon steel	36	54	35,5	M24	44	22	54
K0377.27	high carbon steel	32	50	31,5	M27	40	20	50
K0377.30	high carbon steel	36	54	35,5	M30	44	22	54
K0377.36	high carbon steel	42	65	41,5	M36	52	26	65
K0377.204	aluminium	6	10	5,6	M4	8	4	10
K0377.206	aluminium	8	13	7,6	M6	10	6	13
K0377.2061	aluminium	10	15	9,6	M6	12	6	15
K0377.208	aluminium	12	18	11,6	M8	14	7	18
K0377.210	aluminium	14	22	13,6	M10	16	8	22
K0377.216	aluminium	22	35	21,6	M16	28	14	35
K0377.806	stainless steel A4	8	13	7,6	M6	10	6	13
K0377.808	stainless steel A4	10	15	9,6	M8	12	6	15
K0377.810	stainless steel A4	12	18	11,6	M10	14	7	18
K0377.812	stainless steel A4	14	22	13,6	M12	16	8	22
K0377.814	stainless steel A4	16	25	15,6	M14	18	9	25
K0377.816	stainless steel A4	18	28	17,6	M16	20	10	28

Material:

Carbon steel grade 10, EN AW-7075 or stainless steel 1.4571.

Version:

Steel tempered (black).

Aluminium and stainless steel bright. Steel tempered (black).

Aluminium and stainless steel bright.

Sample order:

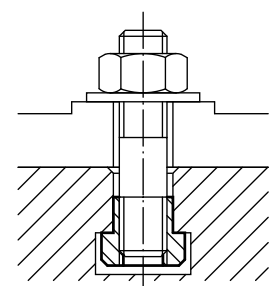
K0377.20

Note:

Aluminium T-slot nuts have steel threaded inserts.

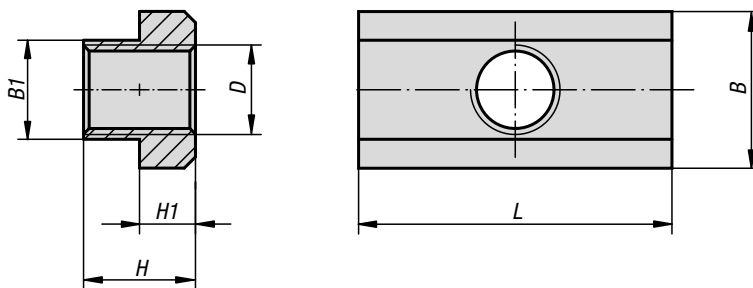
Strength of stainless steel version:

Rm = 700 N/mm², Rp0,2 = 450 N/mm².



Nuts for T-slots

long



Material:
Carbon steel.

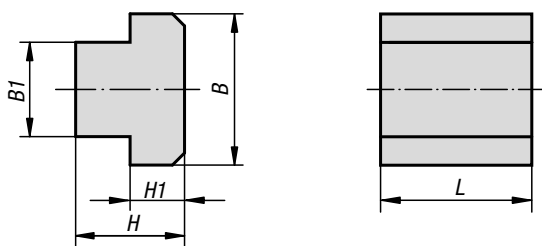
Version:
Tempered to 10.

Sample order:
K1911.12

KIPP Nuts for T-slots, long

Order No.	Slot width	B	B1	D	H	H1	L
K1911.08	10	15	9,7	M8	12	6	30
K1911.10	12	18	11,7	M10	14	7	36
K1911.12	14	22	13,7	M12	16	8	44
K1911.14	16	25	15,7	M14	18	9	50
K1911.16	18	28	17,7	M16	20	10	56
K1911.18	20	32	19,7	M18	24	12	64
K1911.20	22	35	21,7	M20	28	14	70
K1911.24	28	44	27,7	M24	36	18	88
K1911.30	36	54	35,6	M30	44	22	108

T-slot keys steel or stainless steel



Material:

High carbon steel or stainless steel 1.4305.

Sample order:

K0378.16

Note:

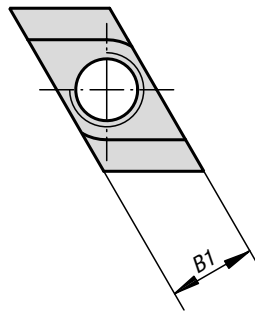
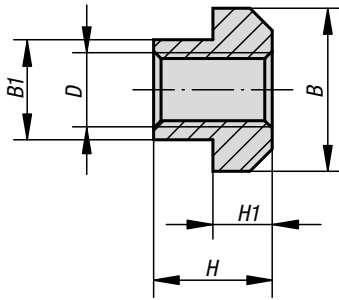
These blank nuts are used to make nuts for T-slots with all sorts of thread sizes cost-effectively.

KIPP T-slot keys steel or stainless steel

Order No. high carbon steel	Order No. stainless steel	Slot width	B	B1	H	H1	L
K0378.06	-	6	10	5,6	8	4	10
K0378.08	K0378.808	8	13	7,6	10	6	13
K0378.10	K0378.810	10	15	9,6	12	6	15
K0378.12	K0378.812	12	18	11,5	14	7	18
K0378.14	K0378.814	14	22	13,5	16	8	22
K0378.16	-	16	25	15,6	18	9	25
K0378.18	-	18	28	17,5	20	10	28
K0378.20	-	20	32	19,6	24	12	32
K0378.22	-	22	35	21,6	28	14	35
K0378.24	-	24	40	23,6	32	16	40
K0378.28	-	28	44	27,6	36	18	44
K0378.36	-	36	54	35,5	44	22	54
K0378.42	-	42	65	41,6	52	26	65

Nuts for T-slots

rhombic form



Material:

Carbon steel.

Version:

Tempered to 8 and black oxidised.

Sample order:

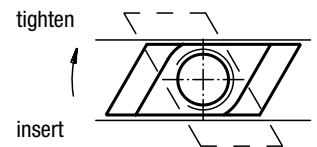
K0379.114

Note:

The benefit of rhombic nuts for T-slots is that they can be fitted in the slot from the top. They are particularly useful for long T-slots, or when the configuration on the machine table does not permit clamping screws or nuts for T-slots to be inserted from the side.

Application:

Insert from above then twist in the slot until it stops.

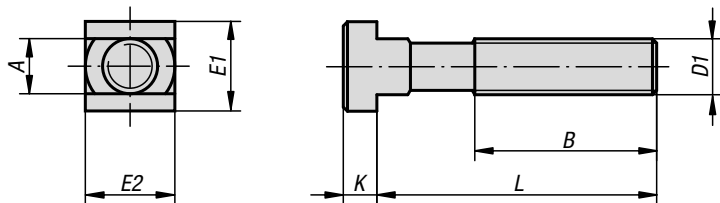


KIPP Nuts for T-slots, rhombic form

Order No.	Slot width	B	B1	D	H	H1
K0379.105	6	10	5,6	M5	8	4
K0379.106	8	13	7,6	M6	10	6
K0379.108	10	15	9,7	M8	12	6
K0379.110	12	18	11,7	M10	14	7
K0379.210	14	22	13,5	M10	16	8
K0379.310	18	28	17,5	M10	20	10
K0379.112	14	22	13,7	M12	16	8
K0379.114	16	25	15,7	M14	18	9
K0379.116	18	28	17,7	M16	20	10
K0379.216	20	32	19,7	M16	24	12
K0379.316	22	35	21,5	M16	28	14
K0379.416	28	44	27,5	M16	36	18
K0379.118	20	32	19,7	M18	24	12
K0379.120	22	35	21,7	M20	28	14
K0379.124	28	44	27,7	M24	36	18
K0379.130	36	54	35,6	M30	44	22
K0379.136	42	65	41,5	M36	52	26

T-slot bolts

DIN 787



KIPP T-slot bolts DIN 787

Order No.	Slot width	D1	L	A	B	E1/E2	K
K0698.0625	6	M6	25	5,7	15	10	4
K0698.0640	6	M6	40	5,7	28	10	4
K0698.0663	6	M6	63	5,7	40	10	4
K0698.0832	8	M8	32	7,7	22	13	6
K0698.0850	8	M8	50	7,7	35	13	6
K0698.0880	8	M8	80	7,7	50	13	6
K0698.1040	10	M10	40	9,7	30	15	6
K0698.1063	10	M10	63	9,7	45	15	6
K0698.10100	10	M10	100	9,7	60	15	6
K0698.1250	12	M12	50	11,7	35	18	7
K0698.1263	12	M12	63	11,7	40	18	7
K0698.1280	12	M12	80	11,7	55	18	7
K0698.12100	12	M12	100	11,7	65	18	7
K0698.12125	12	M12	125	11,7	75	18	7
K0698.12160	12	M12	160	11,7	100	18	7
K0698.12200	12	M12	200	11,7	120	18	7
K0698.1450	14	M12	50	13,7	35	22	8
K0698.1463	14	M12	63	13,7	45	22	8
K0698.1480	14	M12	80	13,7	55	22	8
K0698.14100	14	M12	100	13,7	65	22	8
K0698.14125	14	M12	125	13,7	75	22	8
K0698.14160	14	M12	160	13,7	100	22	8
K0698.14200	14	M12	200	13,7	120	22	8
K0698.16631	16	M14	63	15,7	45	25	9
K0698.16801	16	M14	80	15,7	55	25	9
K0698.161001	16	M14	100	15,7	65	25	9
K0698.161251	16	M14	125	15,7	75	25	9
K0698.161601	16	M14	160	15,7	100	25	9
K0698.162501	16	M14	250	15,7	150	25	9
K0698.1663	16	M16	63	15,7	45	25	9
K0698.1680	16	M16	80	15,7	55	25	9
K0698.16100	16	M16	100	15,7	65	25	9
K0698.16125	16	M16	125	15,7	85	25	9
K0698.16160	16	M16	160	15,7	100	25	9
K0698.16200	16	M16	200	15,7	125	25	9
K0698.16250	16	M16	250	15,7	150	25	9
K0698.1863	18	M16	63	17,7	45	28	10

Material:

Carbon steel.

Version:

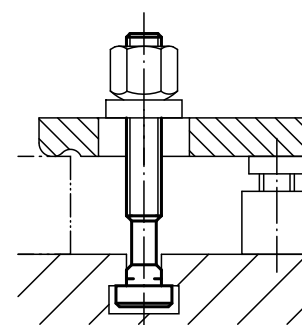
Forged and milled, rolled thread.

M6-M12 tempered to 10.9, black.

M14-M36 tempered to 8.8, black.

Sample order:

K0698.1263



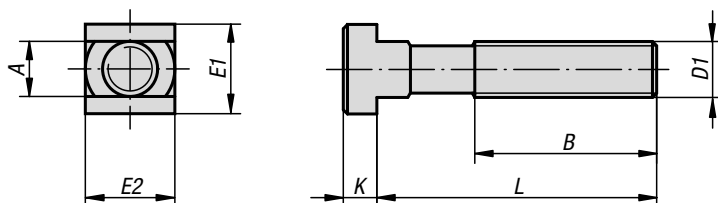
T-slot bolts

DIN 787

Order No.	Slot width	D1	L	A	B	E1/E2	K
K0698.1880	18	M16	80	17,7	55	28	10
K0698.18100	18	M16	100	17,7	65	28	10
K0698.18125	18	M16	125	17,7	85	28	10
K0698.18160	18	M16	160	17,7	100	28	10
K0698.18200	18	M16	200	17,7	125	28	10
K0698.18250	18	M16	250	17,7	150	28	10
K0698.2080	20	M20	80	19,7	55	32	12
K0698.20100	20	M20	100	19,7	65	32	12
K0698.20125	20	M20	125	19,7	85	32	12
K0698.20160	20	M20	160	19,7	110	32	12
K0698.20200	20	M20	200	19,7	125	32	12
K0698.20250	20	M20	250	19,7	150	32	12
K0698.20315	20	M20	315	19,7	190	32	12
K0698.2280	22	M20	80	21,7	55	35	14
K0698.22100	22	M20	100	21,7	65	35	14
K0698.22125	22	M20	125	21,7	85	35	14
K0698.22160	22	M20	160	21,7	110	35	14
K0698.22200	22	M20	200	21,7	125	35	14
K0698.22250	22	M20	250	21,7	150	35	14
K0698.22315	22	M20	315	21,7	190	35	14
K0698.24100	24	M24	100	23,7	70	40	16
K0698.24125	24	M24	125	23,7	85	40	16
K0698.24160	24	M24	160	23,7	110	40	16
K0698.24200	24	M24	200	23,7	125	40	16
K0698.24250	24	M24	250	23,7	150	40	16
K0698.24315	24	M24	315	23,7	190	40	16
K0698.24400	24	M24	400	23,7	240	40	16
K0698.28100	28	M24	100	27,7	70	44	18
K0698.28125	28	M24	125	27,7	85	44	18
K0698.28160	28	M24	160	27,7	110	44	18
K0698.28200	28	M24	200	27,7	125	44	18
K0698.28250	28	M24	250	27,7	150	44	18
K0698.28315	28	M24	315	27,7	190	44	18
K0698.28400	28	M24	400	27,7	240	44	18
K0698.36125	36	M30	125	35,6	80	54	22
K0698.36160	36	M30	160	35,6	110	54	22
K0698.36200	36	M30	200	35,6	135	54	22
K0698.36250	36	M30	250	35,6	150	54	22
K0698.36315	36	M30	315	35,6	200	54	22
K0698.36500	36	M30	500	35,6	300	54	22
K0698.42160	42	M36	160	41,6	100	65	26
K0698.42250	42	M36	250	41,6	175	65	26
K0698.42400	42	M36	400	41,6	250	65	26

T-slot bolts

DIN 787, 12.9



KIPP T-slot bolts DIN 787, 12.9

Order No.	Slot width	D1	L	A	B	E1/E2	K
K0699.11250	12	M12	50	11,7	35	18	7
K0699.11280	12	M12	80	11,7	55	18	7
K0699.112100	12	M12	100	11,7	65	18	7
K0699.112125	12	M12	125	11,7	75	18	7
K0699.112160	12	M12	160	11,7	100	18	7
K0699.112200	12	M12	200	11,7	120	18	7
K0699.11450	14	M12	50	13,7	35	22	8
K0699.11480	14	M12	80	13,7	55	22	8
K0699.114100	14	M12	100	13,7	65	22	8
K0699.114125	14	M12	125	13,7	75	22	8
K0699.114160	14	M12	160	13,7	100	22	8
K0699.114200	14	M12	200	13,7	120	22	8
K0699.11663	16	M16	63	15,7	45	25	9
K0699.116100	16	M16	100	15,7	65	25	9
K0699.116125	16	M16	125	15,7	85	25	9
K0699.116160	16	M16	160	15,7	100	25	9
K0699.116250	16	M16	250	15,7	150	25	9
K0699.11863	18	M16	63	17,7	45	28	10
K0699.118100	18	M16	100	17,7	65	28	10
K0699.118125	18	M16	125	17,7	85	28	10
K0699.118160	18	M16	160	17,7	100	28	10
K0699.118250	18	M16	250	17,7	150	28	10
K0699.12080	20	M20	80	19,7	55	32	12
K0699.120125	20	M20	125	19,7	85	32	12
K0699.120200	20	M20	200	19,7	125	32	12
K0699.120315	20	M20	315	19,7	190	32	12
K0699.12280	22	M20	80	21,7	55	35	14
K0699.122125	22	M20	125	21,7	85	35	14
K0699.122200	22	M20	200	21,7	125	35	14
K0699.122315	22	M20	315	21,7	190	35	14
K0699.124100	24	M24	100	23,7	70	40	16
K0699.124160	24	M24	160	23,7	110	40	16
K0699.124250	24	M24	250	23,7	150	40	16
K0699.124400	24	M24	400	23,7	240	40	16
K0699.128100	28	M24	100	27,7	70	44	18
K0699.128160	28	M24	160	27,7	110	44	18
K0699.128250	28	M24	250	27,7	150	44	18
K0699.128400	28	M24	400	27,7	240	44	18

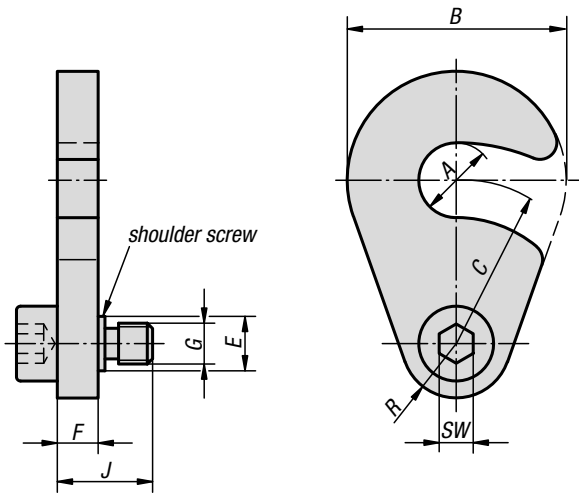
Material:
Carbon steel.

Version:
Forged and milled, rolled thread, tempered to 12.9, black.

Sample order:
K0699.112125

C-washers

captive, with shoulder screw



Material:
Captive C-washer mild steel.
Shoulder screw Q&T steel.

Version:
Captive C-washer case-hardened and black oxidised.
Shoulder screw tempered and black oxidised.

Sample order:
K0872.90010

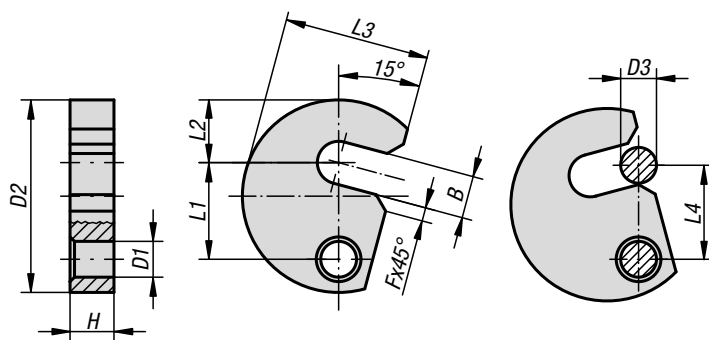
KIPP C-washers, captive, with shoulder screw

Order No.	B	C	D	E	F	G	SW	J
K0872.90010	32	24	8	8	6	M6	5	14
K0872.90012	40	27	10	10	8	M8	6	19
K0872.90016	50	33	10	10	8	M8	6	19

K0703

C-washers captive

DIN 6371



Material:
Carbon steel 1.0760.

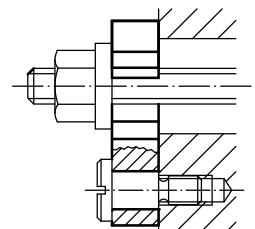
Version:
Nitrided and black oxidised.

Sample order:
K0703.12

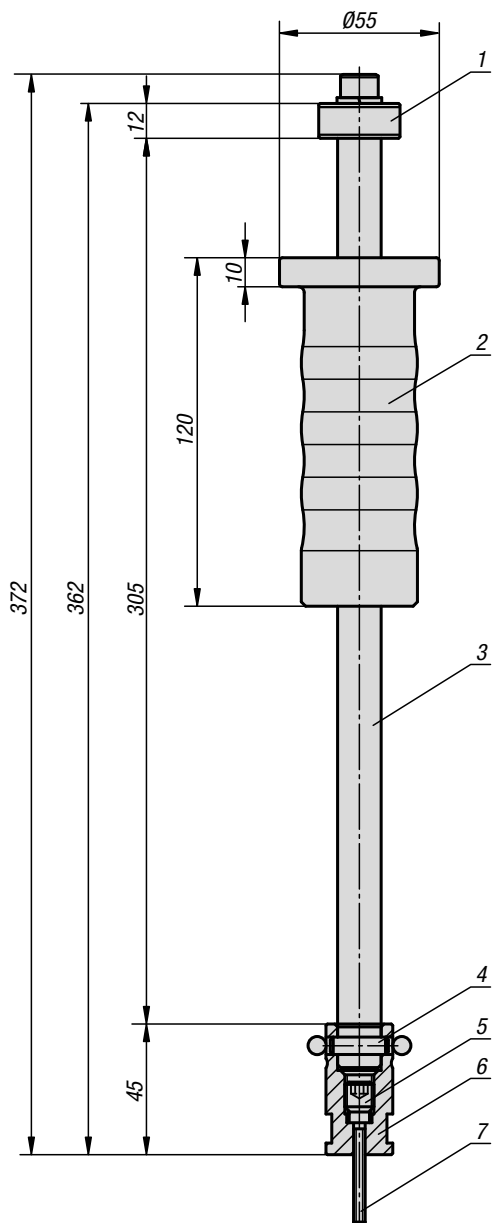
Note:
K0703.14 is not standard. Suitable shoulder screws see K0704.

KIPP C-washers captive DIN 6371

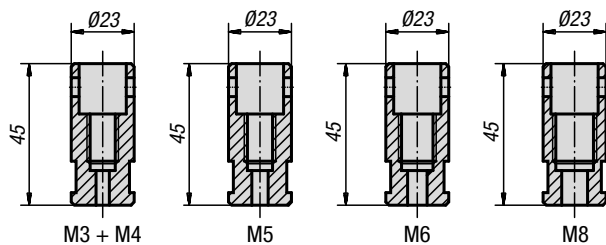
Order No.	B	D1	D2	D3	F	H	L1	L2	L3	L4
K0703.06	7,5	9	38	6	3	9,8	19,6	11	29	19
K0703.08	9,5	9	43	8	3	9,8	21,6	14	32,5	21
K0703.10	11,5	9	48	10	3	9,8	23,6	17	36,5	23
K0703.12	13,5	11	61	12	3	11,8	29,6	22	45	29
K0703.14	15,5	11	65	14	3	11,8	31,6	23	49	31
K0703.16	17,5	11	68	16	3	11,8	33,6	25	50	33
K0703.20	21,5	11	74	20	4	11,8	36,6	28	55	36



Dowel pin puller



⑧

**Material:**

Hammer head carbon steel.
Shaft, stop and guide sleeves tool steel.

Version:

Slide hammer tempered and chromed.
Shaft, stop and guide sleeve hardened and chromed.

Sample order:

K0873.40

Note:

These extractors are used to remove locating pins and centring pins (K0817, K0818, K0350, K0351) with M3 - M8 tapped holes.

Accessories:

Storage case for guide sleeves.

Drawing reference:

- 1) stop
- 2) slide hammer
- 3) shaft
- 4) cross pin
- 5) lock screw
- 6) guide sleeve
- 7) cap screw
- 8) 1 set guide sleeves

KIPP Dowel pin puller

Order No.

Dimensions

K0873.40

see drawing