

Technical note on chain clamps

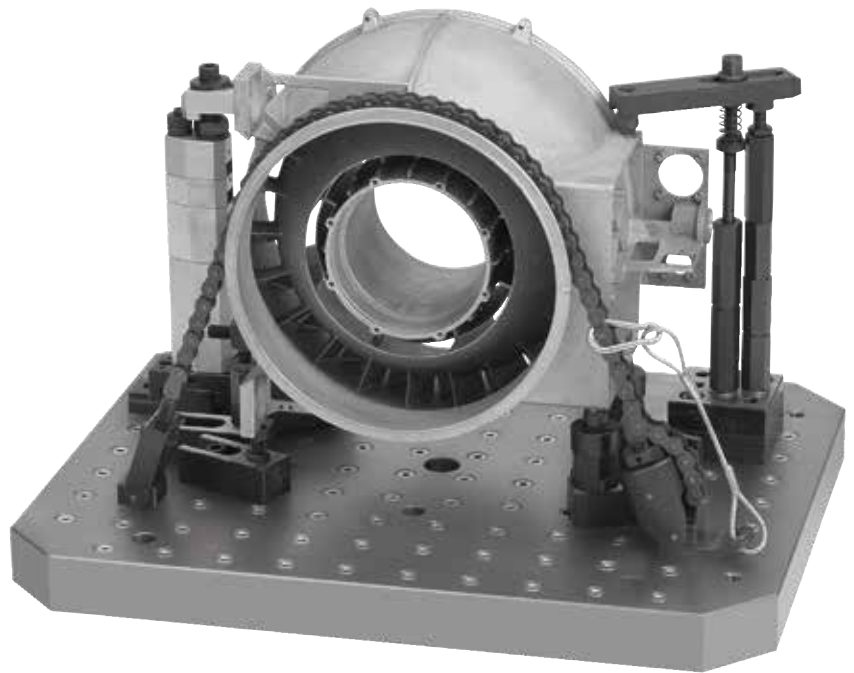


Chain clamps are used mainly in machine and plant construction and enable the secure clamping and fixation of workpieces with irregular contours and shapes. Chain clamps enable workpieces to be effectively clamped. Specially made fixtures with special equipment for clamping complex workpieces are not required. The uniform force distribution from the chain means that workpieces can be clamped relatively distortion-free. Chain clamps are fastened to machine tables or clamping plates using the fastening screws and T-slot keys.

Features:

- Even pressure distribution
- Plastic elements to protect the workpiece
- Large adjustment range
- No need for special solution clamping fixtures
- High clamping force

Application examples:



Mounting:

1. Mount the clamping hook and clamping bracket as close as possible to the workpiece on the machine table or clamping plate.

2. Chain clamp set K1650.15

The clamping hook and clamping bracket can be fastened to a machine table or clamping plate using DIN 508 T-slot nuts (K0377) and DIN 912 / DIN EN ISO 4762 cap screws (K0869) (see Table 1).

Chain clamp set K1650.40

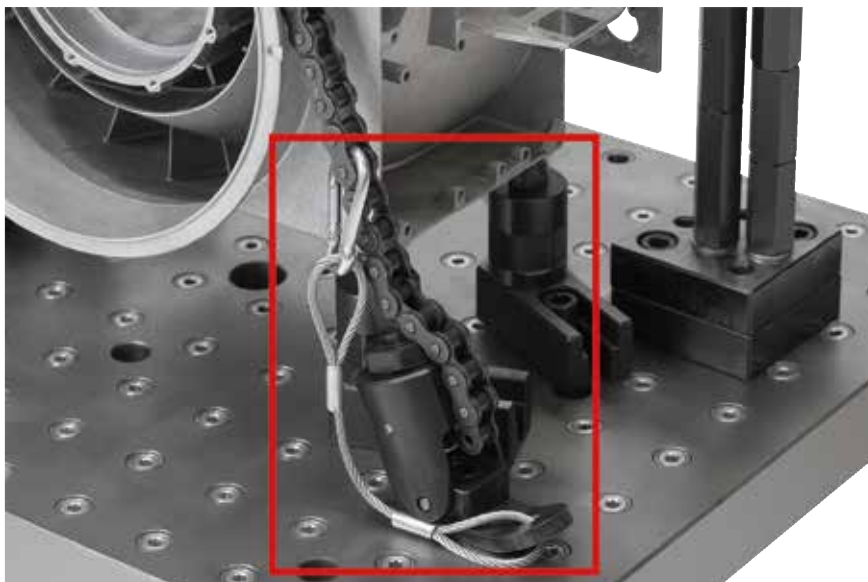
The clamping hook and clamping bracket can be fastened to a machine table or clamping plate using DIN 508 T-slot nuts (K0377) and DIN 912 / DIN EN ISO 4762 cap screws (K0869) (see Table 1).

3. Tighten the knurled nut on the clamping bracket until the tension rod is fully extended.



4. The length of the chain can be adjusted to the workpiece by removing or adding chain links. One end must then be fastened to the tension rod.

5. The free end is hooked onto the clamping hook and must then be secured using the securing set for clamping chains.

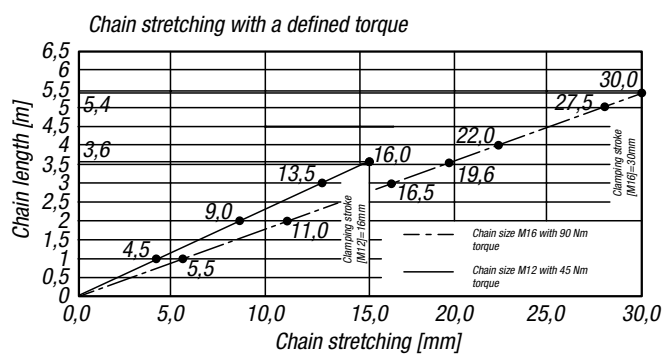


6. The knurled nut on the clamping bracket is now turned until the chain exerts a light pressure on the workpiece.

7. The actual clamping process is carried out by tightening the nut on the clamping hook.

Table 1

Order No.	Nut	Screw	max. torque Nm	Clamping force max. kN	Weight g
K1650.15	K0377	K0869	45	15	2628
K1650.40	K0377	K0869	90	40	7640



Steel turnbuckles for chain clamp sets

A turnbuckle is used to pre-tension the chain clamp. The turnbuckle is mounted between two chain links and is tightened or loosened by turning the hex. head screw. The chain is pre-tensioned and any play is removed by the shortening of the chain length.

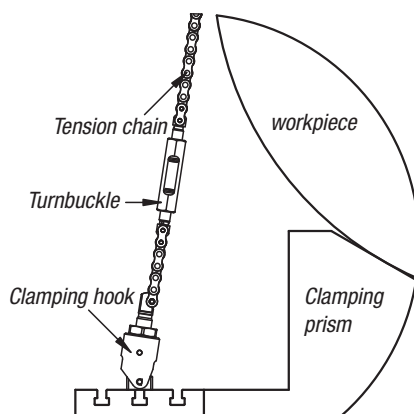
The use of a turnbuckle is always recommended for chains 3 m or more in length.

Advantages:

- Optimal pre-tension
- With long chains, the turnbuckles counteract the chain elongation

Table 2

Order No.	L	Clamping force max. kN
K1656.15052	52	15
K1656.40066	66	40



Steel roller chains for chain clamp sets

In addition to the chains provided in the set, KIPP also offers other chain lengths suitable for chain clamp sets K1650.15 and K1650.40. These additional chain lengths make it possible to adapt flexibly to the widest variety of workpiece diameters and shapes.

Advantages:

- The chain length of the chain clamp can be flexibly adjusted and lengthened
- Minimum chain stretching through pre-tension
- Resistance to dirt and temperature influences

Table 3

Order No.	L	Clamping force max. kN
K1655.150125	126	15
K1655.150250	253	15
K1655.150500	507	15
K1655.151000	1015	15
K1655.400125	148	40
K1655.400250	250	40
K1655.400500	504	40
K1655.401000	1012	40

120° prisms, steel, for chain clamp sets

The flexible positioning of the prisms on the machine table enables optimal use of the chain clamp set for clamping. These are fastened to the machine table using the DIN 508 T-slot nuts K0377. If necessary, the prisms can also be aligned exactly on the machine table using a slot key.

Table 4 shows a number of ways that workpieces with a certain diameter can be mounted, and the corresponding chain lengths which are required.

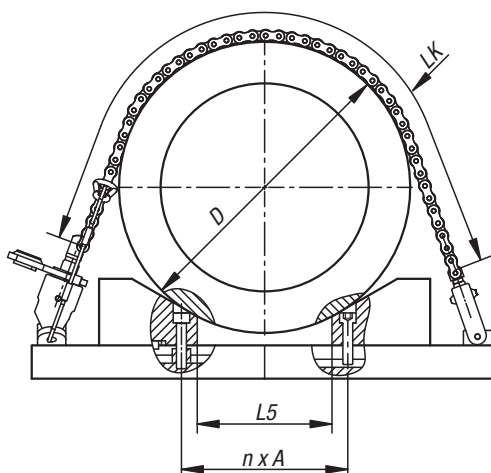
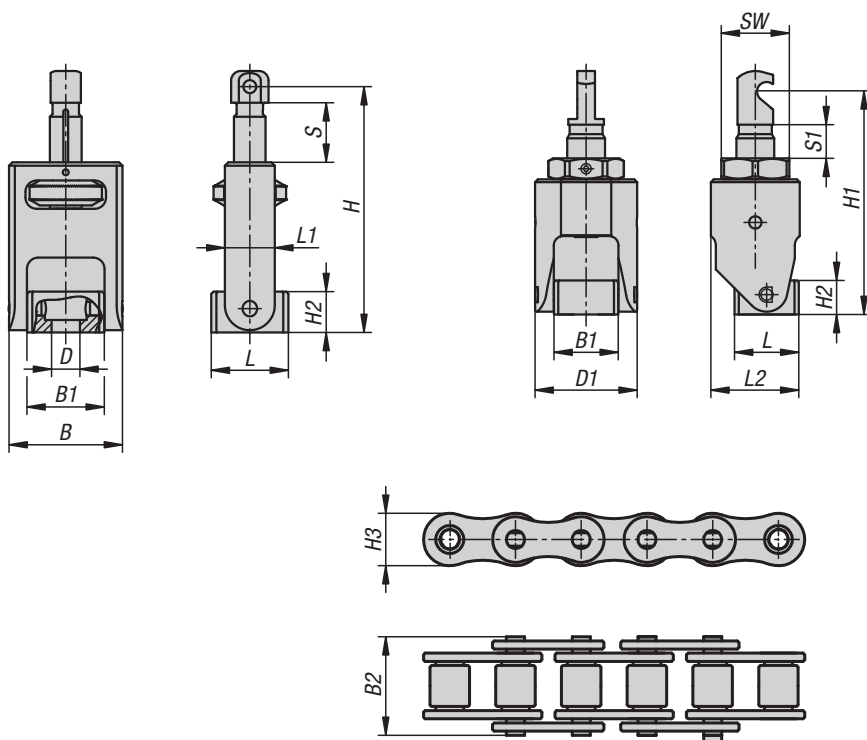
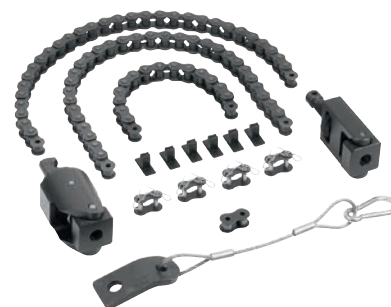


Table 4

Order No.	n x A	Ø D [mm]	Chain length LK [mm] (x) = Number of links	L5
K1662.11847080	1 x 40 = 40	190 - 280	413 (26) - 635 (40)	2
	2 x 40 = 80	250 - 360	413 (26) - 635 (40)	42
	3 x 40 = 120	270 - 440	603 (38) - 1048 (66)	82
	4 x 40 = 160	300 - 520	635 (40) - 1238 (78)	122
	5 x 40 = 200	350 - 600	762 (48) - 1429 (90)	162
	6 x 40 = 240	430 - 680	953 (60) 1619 (102)	202
	7 x 40 = 280	510 - 760	1143 (72) - 1810 (114)	242
	8 x 40 = 320	620 - 840	1397 (88) - 2000 (126)	282
	9 x 40 = 360	760 - 920	1778 (112) - 2191 (138)	322
	10 x 40 = 400	920 - 1000	2191 (138) - 2413 (152)	362
K1662.14847100	1 x 50 = 50	250 - 370	559 (22) - 864 (34)	2
	2 x 50 = 100	320 - 470	711 (28) - 1118 (44)	52
	3 x 50 = 150	320 - 570	711 (28) - 1372 (54)	102
	4 x 50 = 200	320 - 670	711 (28) - 1575 (62)	152
	5 x 50 = 250	430 - 770	965 (38) - 1829 (72)	202
	6 x 50 = 300	530 - 870	1168 (46) - 2083 (82)	252
	7 x 50 = 350	630 - 970	1422 (56) - 2337 (92)	302
	8 x 50 = 400	760 - 1070	1727 (68) - 2591 (102)	352
	9 x 50 = 450	960 - 1170	2235 (88) - 1794 (110)	402
	10 x 50 = 500	1160 - 1270	2743 (108) - 3048 (120)	452

Chain clamp sets, steel



Material:

Clamping hook, steel.
Clamping bracket, steel.
Roller chain, steel.

Version:

Steel parts, tempered.

Sample order:

K1650.15

Note:

Chain clamps are used mainly in machine and plant construction.
Chain clamps enable cylindrical, complicated and large to very large workpieces to be clamped securely and effectively in the quickest and easiest way.

Suitable for cylindrical workpieces, valve bodies, pistons etc.

The workpiece surface can be protected by attaching the plastic elements.

Application:

The knurled nut on the clamping bracket can be used to preset the chain length and the clamping force. The required torque is set on the clamping hook.

Supplied with:

- Chain clamp set K1650.15:
- Clamping hook.
 - Clamping bracket.
 - 4x roller chains (2x 492 mm, 1x 238 mm, 1x 15.9 mm).
 - 4x connecting links with cotter pins to connect.
 - 6x snap-on plastic elements.
 - Securing set for clamping chains.

Chain clamp set K1650.40:

- Clamping hook.
- Clamping bracket.
- 4x roller chains (1x 991 mm, 1x 483 mm, 1x 229 mm, 1x 25.4 mm).
- 4x connecting links with cotter pins to connect.
- 6x snap-on plastic elements.
- Securing set for clamping chains.

KIPP Chain clamp sets, steel

Order No.	B	B1	B2	D	D1	H max.	H min.	H1 max.	H1 min.	H2	H3	Travel S	L	L1	L2	S1	SW	Max. torque Nm	Clamping force max. kN
K1650.15	50	34	20	M12	54	108	83	118	100	18	15	25	34	21	46,5	18	36	45	15
K1650.40	64	44	33	M16	70	146	110	153	122	25	21	36	37	29	61,5	31	46	90	40

Chain clamp sets, steel

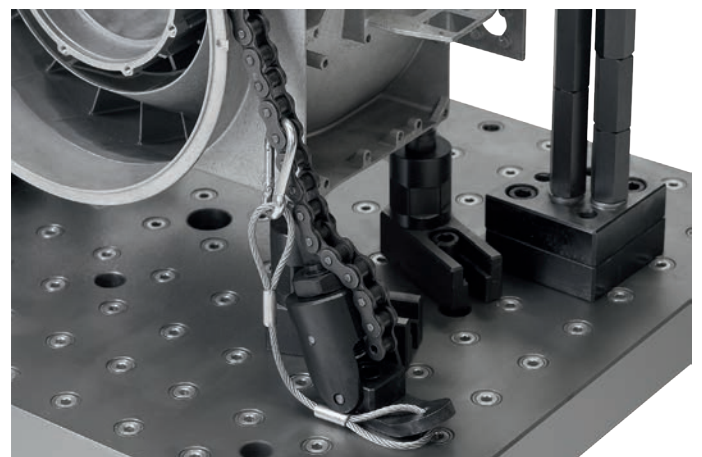
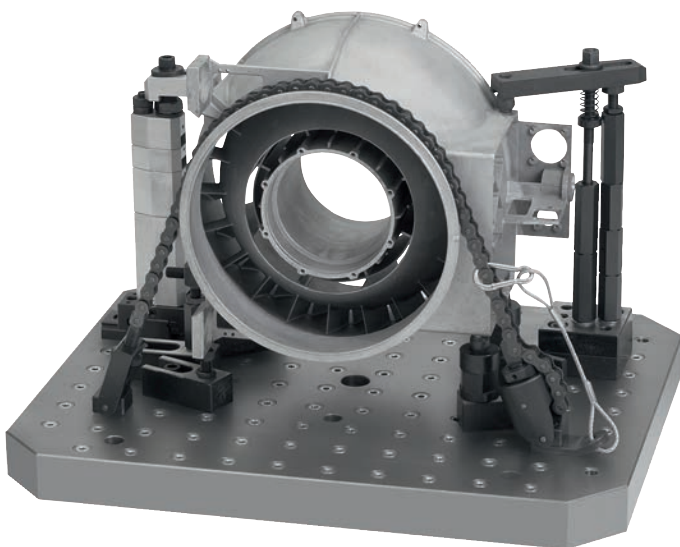


Accessories:

Steel roller chains for chain clamp sets K1655.
 Steel turnbuckles for chain clamp sets K1656.
 Steel prisms for chain clamp sets K1662.
 Nuts for T-slots DIN 508 enhanced, K0377.
 Cap screws DIN EN ISO 4762, K0869.

Attention:

- The opening angle of the chain should not exceed 30°.
- Do not exceed max. permitted tightening torques.



Roller chains, steel, for chain clamp sets



Material:

Steel.

Sample order:

K1655.150250

Note:

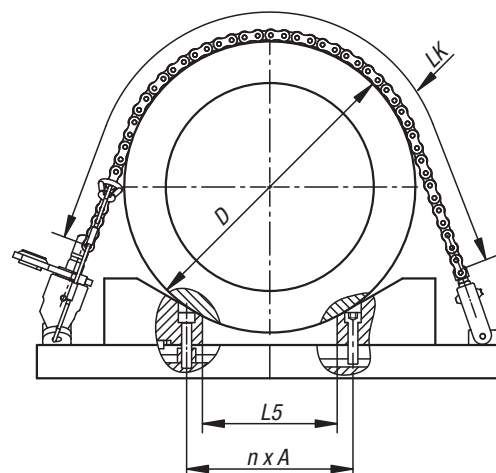
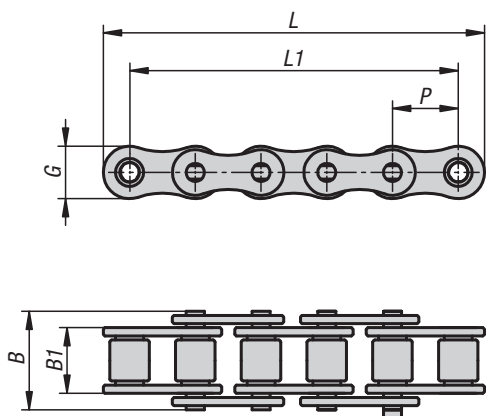
Roller chains for chain clamp sets can be used with chain clamp sets (K1650) for clamping round, irregular, and large to very large workpieces. Roller chains can be shortened and joined together with other roller chains as desired.

Supplied with:

1x roller chain

Accessories:

Steel turnbuckles for chain clamp sets K1656.



KIPP Roller chains, steel, for chain clamp sets

Order No.	B	B1	G	L	L1	P	Clamping force max. kN
K1655.150125	20	13	15	126	111	15,875	15
K1655.150250	20	13	15	253	238	15,875	15
K1655.150500	20	13	15	507	492	15,875	15
K1655.151000	20	13	15	1015	1000	15,875	15
K1655.400125	33	25	21	148	127	25,4	40
K1655.400250	33	25	21	250	229	25,4	40
K1655.400500	33	25	21	504	483	25,4	40
K1655.401000	33	25	21	1012	991	25,4	40