

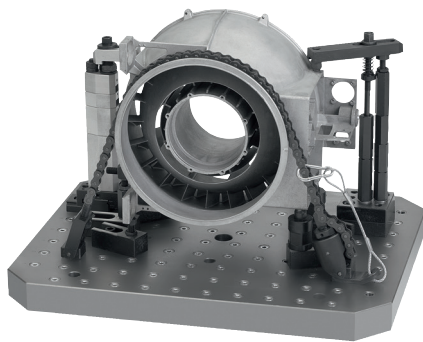
Technical note on chain clamps

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:

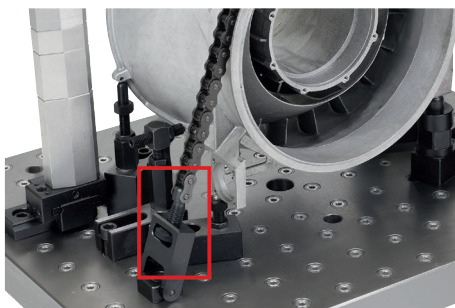
- Even pressure distribution
- Plastic elements to protect the workpiece
- Large adjustment range
- No need for special solution clamping fixtures
- High clamping force

Application examples:



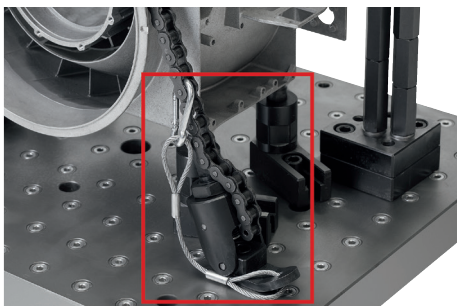
Mounting:

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 04211-15 and Chain clamp set 04211-40
The clamping hook and clamping bracket can be fastened to a machine table or clamping plate using DIN 508 T-slot nuts (07060) and DIN 912 / DIN EN ISO 4762 cap screws (07160) (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. The clamping hook can be tightened using the ring spanner supplied with a torque spanner adapter.

Order No.	Nut	Screw	max. torque Nm	Clamping force max. kN	weight kg
04211-15	07060	07160	45	15	2,6
04211-40	07060	07160	90	40	7,6
04211-75	07060	07160	190	75	21,16
04211-120	07060	07160	300	120	29.1

Table 1

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.

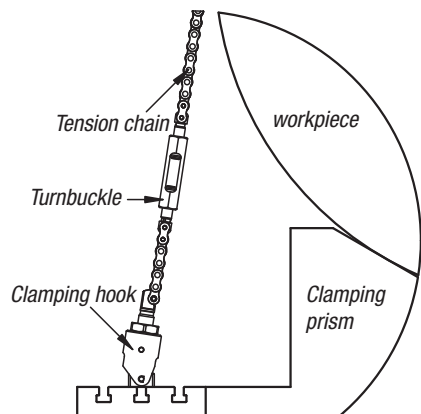
The use of a turnbuckle is always recommended for chains 3 m or more in length.

Advantages:

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

Order No.	L [mm]	Clamping force max. kN
04211-06-15052	52	15
04211-06-40066	66	40
04211-06-75092	92	75
04211-06-120092	92	120

Table 2



Steel roller chains for chain clamp sets

In addition to the chains provided in the set, norelem also offers other chain lengths suitable for chain tensioner 04211. 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

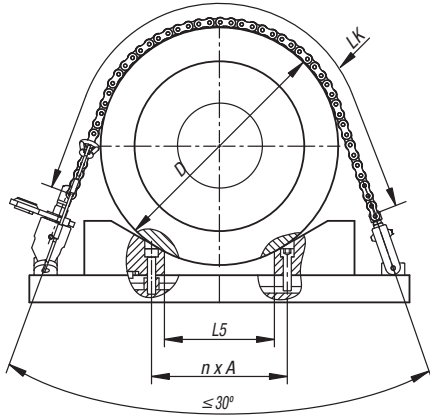
Order No.	L1 [mm]	Clamping force max. kN
04211-03-150125	111	15
04211-03-150250	238	15
04211-03-150500	492	15
04211-03-151000	1000	15
04211-03-400125	127	40
04211-03-400250	229	40
04211-03-400500	483	40
04211-03-401000	991	40
04211-03-751000	984	75
04211-03-751500	1492	75
04211-03-752000	2000	75
04211-03-1201000	1028	120
04211-03-1201500	1485	120
04211-03-1202000	2019	120

Table 3

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 07060. 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.



Order No.	n x A	Ø D [mm]	Chain length LK [mm] (x) = Number of links	L5 [mm]
04211-09-11847080	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
04211-09-14847100	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
04211-09-36007825022	3 x 135 = 405	1200-1550	2889 (91) - 3842 (121)	315
	5 x 135 = 675	1550-2100	3683 (116) - 5175 (163)	585
	7 x 135 = 945	2100-2500	5017 (158) - 6096 (192)	855
04211-09-36007825026	3 x 135 = 405	1200-1550	2324 (61) - 3848 (101)	315
	5 x 135 = 675	1550-2100	3657 (96) - 5143 (135)	585
	7 x 135 = 945	2100-2500	5029 (132) - 6096 (160)	855

Table 4