Chainslider

User manual

1. Intended use.

The Chainslider is designed to guide cable looms along a lifting chain. Every Chainslider can ~~only~~ hold 15 kg maximum. Since a cable loom can easily weigh up to 100 kg, Chainsliders are not intended to suspend complete cables or cable looms.

2. Working.

In the lower position of the hook the cable or loom is hanging aside of the chain, nicely parallel, and connected by chainsliders to the chain. The loom is strung up near the hoist, preferably with use of a synthetic sling and a prusik knot, to avoid squeezing of the cables.

When moving upward the bottom most slider is picked up by the hook or a chain stopper, forcing a bend in the last part of the loom. This part of the loom will form a loop, due to the fact that the bottom is lifted to the top by the connected chainslider. When the first chainslider hits the second, the second is picked up moving up, and a second loop in the loom will be formed. This process continues until all chainsliders are used and the chain is in upmost position. Note: the only part of the cable loom that is moving is the part that is picked up by chainsliders: the part above that is only kept in place by chainsliders, while the chain runs through these chainsliders.

When moving down the top part of the cable loom will hold the top chainslider in position, and the sliders below will continue with the chain downward. The upper loop is slowly coming straight, and when it's completely straight it will hold the next slider in position. The chain starts running through this slider; the loop below it will straighten and will eventually hold the chainslider below. This process continues until the hook is in it's lowest position.

3. Safety warnings

Upper and lower hoist limits

When the lower limit of the chain hoist is too low, it's possible to lower the truss beyond the loom length. This can results in the truss hanging in the cable, and not in the chain hoist. Cables can break and a sudden drop of the truss can lead to an overload situation; electrical short circuiting and the chain and truss becoming under voltaic tension. Both can lead to severe injuries or even death.

When the upper limit of the chain hoist is too high, the Chainsliders will be squeezed between the hook or the chain stop and the body of the hoist. The Chainsliders will break up into pieces and the hoist body might be damaged.

Chainslider orientation & chain twists

When chainsliders are not aligned in the same direction, the chainsliders can force the chain to rotate, or the loops can be curled around the chain. The former can lead to extra inner tension in the chain links and jamming of the chain against the motor housing; the latter to breaking of the slider or failure of the connection between slider and loom:

DANGER: When mounting Chainsliders, make sure no chain twists between the chainsliders will be formed.

Removing the chain hook

Do not remove the chain hook to mount the Chainsliders, it's dangerous and is only allowed to well trained and competent personnel: *if you do, you must re-examine the hoist!*

4. Assembly

Loop size - from the lower to the upper chainslider, the loop size should be made smaller; i.e. the distance between the chainsliders should be made smaller. This is to make sure the loops will fold against each other nicely, and loops won't pick up other loops when unfolding.

Depending on the thickness and amount of cables in the loom, the loop average size of the loops / average distance between Toursliders should be 1,2 m. At the lower end longer, and higher up shorter: each next loop should minimally be 10 cm shorter.

Chain stop - In order to have the loops hanging above your truss, instead of lying on your truss, you should apply a chain stop. This should be done just above half the distance of the first loop distance, measured from the top side of the truss, or measured from the chain hook in case you have enough head room between truss and hoist.

Mounting Chainsliders

1. Prepare your hoist: hanging in motor-up position, with enough chain length hanging down to be able to mount the chain stop and all sliders.
2. first mount the chain stop (minimum 0,5 x the first loop length from the truss or hook)
3. unpack and disassemble as many Chainsliders as necessary;
4. mount the Chainsliders on the hoist chain by fixing the Allen screws and safety nuts: ***do not tighten to hard***: it will only make the plastic slider brittle; the two parts of a Chainslider are interchangeable and can be mounted in in both vertical directions;
5. attach the cable connector, e.g. a 0,5 tons bow shackle or quick link; ***tighten firmly in order to prevent loosening!***
6. establish the flight path of the chain hook, hoist body height and number of Chainsliders you want to use;
7. find the right Chainslider position in table 1;
8. on a long flat surface: gather all cables forming the cable loom, use e.g. PVC tape to join the cables, nicely parallel;
9. mark all Chainslider positions from bottom to top with use of a measuring tape;
10. connect the loom with a suitable connection method, e.g. thick tie-rap of piece of string to the corresponding chainsliders, or - in case you're preparing a loom for a tour - only prepare the connection with e.g. carabiners.

5. Spare parts

Bolts: **M5** x 25 Allen key bolt

Nuts: **M5** nylock safety nut

Shackle: **Not Included**

6. Table 1: examples for configuring Chainsliders

Headroom hook and hoist body (m)	6	8	10	12
nr.		position above hook (m)		
chain stop at	0	0,73	0,82	0,83	0,80
Chainslider nr	1	1,98	2,25	2,28	2,24
Chainslider nr	2	3,13	3,58	3,63	3,60
Chainslider nr	3	4,18	4,82	4,88	4,88
Chainslider nr	4	5,13	5,95	6,03	6,08
Chainslider nr	5	no slider	6,98	7,08	7,20
Chainslider nr	6	no slider	no slider	8,03	8,24
Chainslider nr	7	no slider	no slider	8,88	9,20
Chainslider nr	8	no slider	no slider	no slider	10,08
Chainslider nr	9	no slider	no slider	no slider	10,88