

## Model-making with etched models for Scale N implies:

- True to scale
- Lots of detail
- Individuality

## Etch model: KT102 3 long conveyors with pillars in different heights

Level of difficulty: Level 2 from 5

## Congratulations

to your new *etchIT*-Model!

With this assembling manual we want to provide you with important suggestions building your new model

KT102 — 3 long conveyors with pillars in different heights

Follow these instructions and you will get your individually gem on your model railway!

If you are satisfied with this model – we guess you will – then visit our website from time to time

[www.etchIT.de](http://www.etchIT.de)

the amount of available models is permanently growing.

Now we wish you a lot of success and a lot of fun while assembling this detailed model from *etchIT*.

## General information

The basic material of this model kit is nickel silver sheet metal. This material is robust even in thin sheets and it is stainless. You can glue this metal or you can solder it. The soldering method adds extra stability and should be the preferred method to fit nickel silver parts together.

More information about soldering are to be found in this manual some pages downwards.

Please find all the actually available assembling manuals (most of them in german language) on the following web address (put as ONE line into the address line of your web browser):

<http://www.easy01.de/etchIT-store/assets/own/manuals.htm>

## Folding edges

As mentioned, nickel silver is very tough and so all edges which to be fold are pre-etched on one side of the sheet metal. Most of the time this etched edge is the INNER edge.

There are commercial tools on the market that may help you while bending nickel silver or brass sheet metal. These tools are highly helpfull except for bending very long edges. And these tools are a bit expensive.

So the following paragraphs show you how you can build your own tool(s) for bending edges exactly.

Take...

- ...an old carbide metal saw blade
- ...chip a 5 to 7 cm long piece of that saw blade on both sides (you can't saw! It is too hard. A parting-off grinder maybe usable). **Please always watch your personal safety and use safety goggles and/or other safety material to protect your eyes, hands and body.**

- ... put the two pieces together with a rivet through the holes of the pieces or with a fitting screw and nut.

- ... and you have finally made your first bending tool

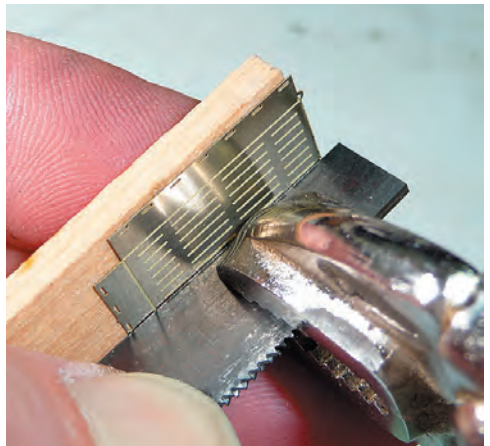
The folding is to be made on the straight side of the coupled sawblade pieces. The metal sheet which should be folded is right between the two saw blades and the pre-etched edge is visible in full width (see picture below).

To avoid that the two saw blade pieces will drift apart clamp the pieces with the inside sitting metal sheet into a machine vise or use gripping pliers as shown in

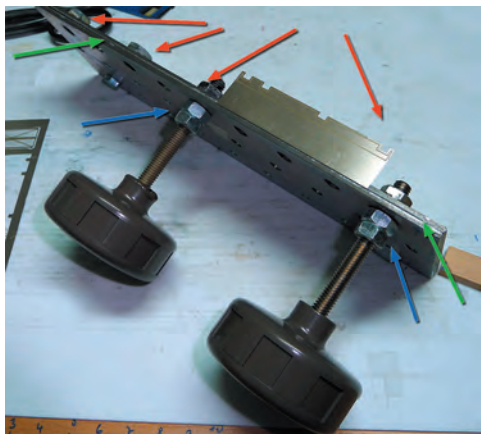
the picture below:



Now you bend the metal along the pre-etched edge with an appropriate piece of hardwood :



There is another bending tool we want to introduce to you. This one always is used when long edges have to be fold (until 170 mm!). Maybe its not a candidate for a design award but it is very useful:



This tool uses 2 perforated plates (timber connectors) from the Do-It-Yourself-center sized  $200 \times 60 \times 2$  mm. Both plates are connected with two screws and nuts on one of the long sides of the plates. Please watch that the two plates diverge a bit — into this gap we will put the edge for bending .

Now you solder on one side of a plate 4 pcs. of M6 nuts (fix them temporarily with M6-screws); shown in the picture at the red arrows.

Two pcs. of threaded rods will get two additional hex nuts thightened together (blue arrows). On the ends of the rods toggles are mounted so you can press the two plates together onto the metal sheet in between.

Please press the plates together and watch the upper small sides of the plates. If they do not fit together exactly please grind this ledge until it is flat and plain.

In the following context of this assembly manual we assume that you are able to bend even small and long edges perfectly without deformate the metal sheet in any way — the perfect fit of a metal model is the appeal no plastic modelkit ever can accomplish.

**And now: Have fun and success while building your new modelkit from *etchIT!***

## Assembly of KT102 — 3 long conveyors with pillars of different heights

If your model railway or diorama contains scenes of industrial estates you may use these 3 long conveyors of model kit KT102 to realize several transporting jobs. Each conveyor would be 23 meters long in real life.

### Scope of delivery



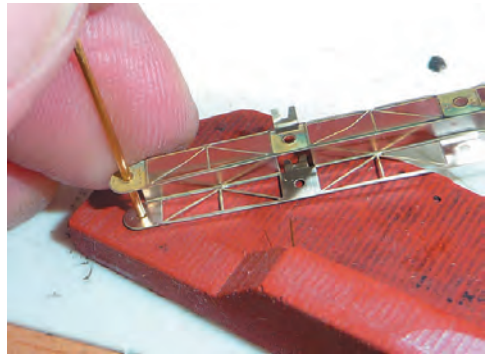
### Frames

Building these long conveyors is relatively easy. But all bendings are quite long and have to be made very exactly — so better use a good tool for bending, e.g. the selfmade bending tool described before, made out of two thick metal plates normally used to connect heavy wooden parts.

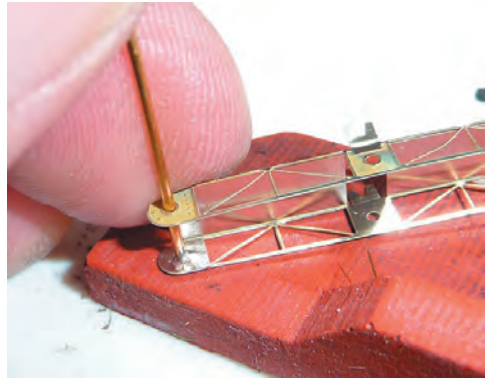


Because of the length of the frames we have to stabilize the bended frames with crosswise soldered struts.

First put the round material into the holes flush at one side — shown here on a heat resistant silicon underlay:



The flush end is soldered inside the frame:



Cut now the round material at the other side and solder also inside.



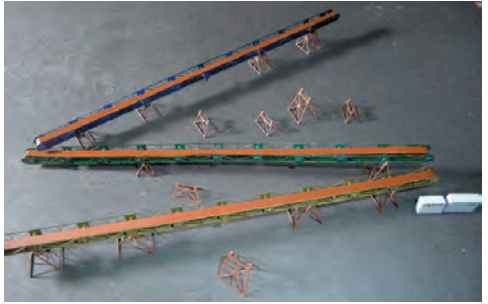
When all those struts were mounted the process the ends outside the frame with a grinding wheel.

## Belts

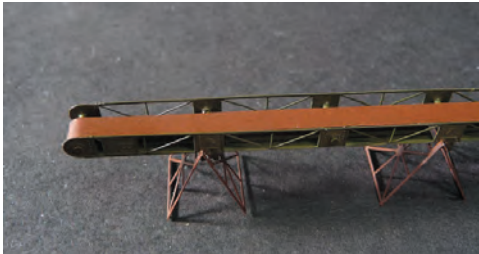
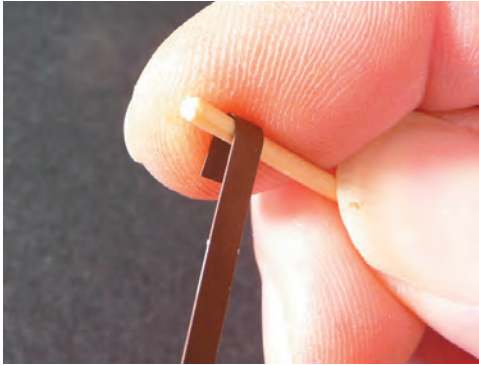
*For Information:*

*The conveyor belts shown in the following pictures are plain at the upper side. Of course the final belts on the kit you bought show the typical structure of a conveyor belt.*

Now bend one end of the belt as shown, then put it onto the struts, then also bend the other end fitting to the last strut — ready.

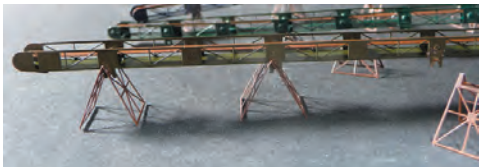


The last thing to do is to fold the two switch boxes and the conveyors are ready for practical use.



## Pillars and switch boxes

On the nickelsilver sheet there a lot of pillars in different heights. Just fold them and use them as needed at your industrial plant. The pillars can be fixed by soldering or glueing, as you like.



The following side shows two more pictures of those conveyors.

Have fun while assembling!



