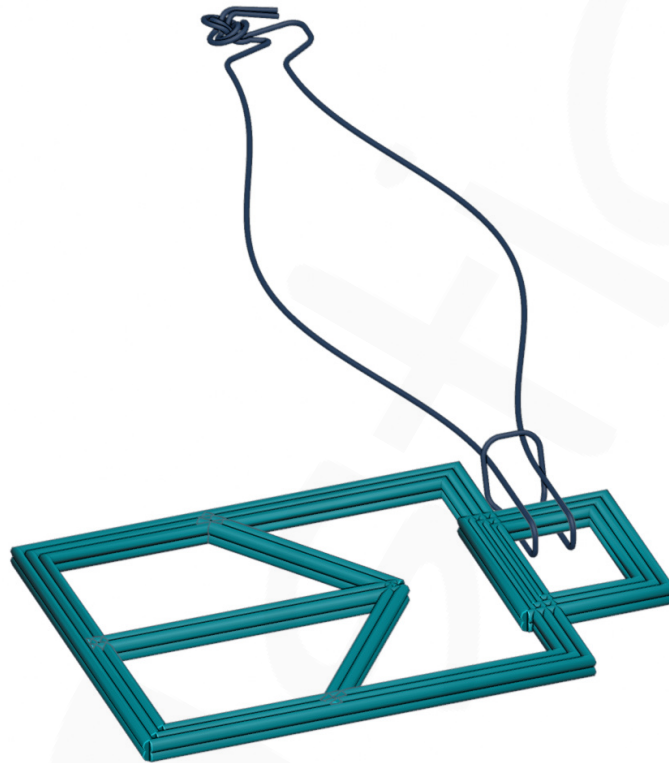


MAKE • DISCOVER • COLLECT

'This Is Mine' Tag

Beginners aged 8 and up under adult supervision, teenagers and adults. • 3D pen 12–22 min; total 22–38 min — estimate



A flat 6 × 4 cm tag with your own symbol, an integral eyelet and thread. At home or in a workshop; one person makes one tag in the chosen variant.

✓ Your outcome

Give an object your own symbol and learn how to connect an outline to a detail.

Construction illustration. The instructions show the successive stages. Full-size (1:1) templates are supplied on a separate sheet.

What you need

Additional items are needed. Prepare the complete list below before starting.

Workstation

- | | | |
|--------------------------|--|-------------------|
| ☐ | 3D pen for PLA with a safe stand
The device and power supply in accordance with its instructions. | 1 set |
| ☐ | Flexible transparent mat for a 3D pen
Resistant to the device's operating conditions; allows the pattern beneath to be traced and the mat to be flexed during removal. A rigid plate does not support the method shown. | 1 pc. |
| ☐ | Pattern printout
PL or EN; print at 100%, without fitting to the page. Plain paper lies under the mat. | 1 A4 sheet |
| ☐ | Ruler
For checking the 20 mm segment on the printout. | 1 pc. |

Project accessories

- | | | |
|--------------------------|---|------------------------|
| ☐ | Thread for hanging
Soft thread approximately 0,6 mm thick; one 30 cm length prepared in advance, without a needle. | 1 length, 30 cm |
|--------------------------|---|------------------------|

Filament — amounts include extra

- | | | |
|--------------------------|--|------------------------|
| ☐ | PLA 1.75 mm — colour shown in the illustration | 1.7 m · ≈ 5.1 g |
|--------------------------|--|------------------------|

Total filament: 1.7 m · approximately 5.1 g

The quantities include extra filament. Grams indicate estimated net filament mass, excluding packaging.

Before you start

Read the device instructions first

Follow the age, supervision, material and settings permitted by the instructions for the specific pen. Adult assistance does not override the device restrictions.

Hot nozzle and PLA

Do not touch the nozzle or fresh filament. Place the pen on its stand. Cool down and finish work in accordance with the device instructions.

One tag

Print W01 on A4 at 100% scale. Prepare a 30 cm length of thread before the session. Choose one pattern; you do not make all three.

Removal

The flexible mat bends while the supported, cooled frame remains flat.

- 1 Prepare the W01 printout, 30 cm of soft thread and a stable workstation with a flexible transparent mat.
- 2 Check the pen instructions: age, supervision, material, filament diameter and settings. The consumption estimate applies to 1,75 mm filament.
- 3 Choose the arrow or H; the instruction illustrations show the arrow. A custom symbol requires a separate assessment of its joins.

Sum of the card ranges without overlap. Printout and thread cutting before the session; tool startup in C01. Cooling, repair and a slower pace may extend the total. The estimate is not a deadline for stopping work.



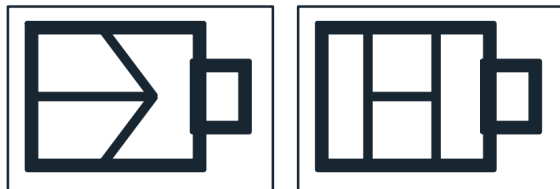
How to read the instructions

The large image shows the completed stage. Small views show the action and current parts. ×N means repeat the whole action N times, cooling and checking each time. Illustrations are not at 1:1 scale.

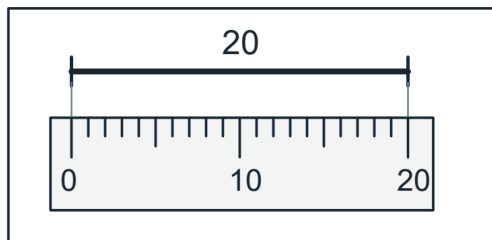
STAGE 01 / 05 • Session Jedna zawieszka

Choose your symbol

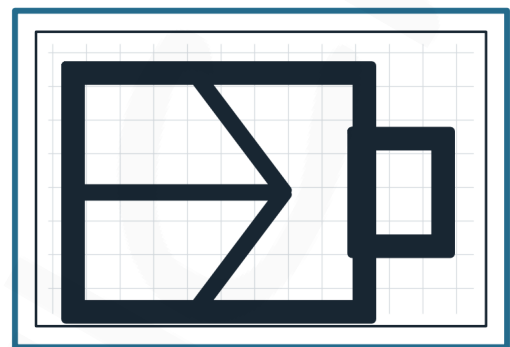
1



2



3



4



1 · 2 · 3 · 4

1. Choose the arrow, the initial H or a simple custom symbol. 2. Use the ruler to check the 20 mm segment. 3. Place the chosen pattern under the flexible transparent mat on a flat table; prepare the pen in accordance with its instructions. 4. Layers from top to bottom: transparent mat, printed paper, table.

Before S03, there are no PLA parts here. The diagram is not a 1:1 pattern.



Check

The pattern is visible through the mat, the scale measures 20 mm, and the symbol has at least three planned joins to the frame.

If it does not work

If the scale is wrong, print again at 100%. If the symbol is too difficult, choose a ready-made pattern; preparation does not require changing the construction.

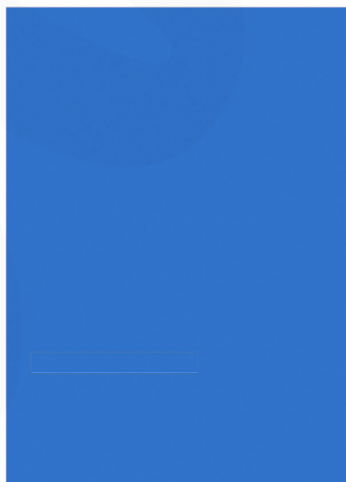
Diagram: 1 — choose one W01 print; the example marks the arrow. 2 — on the printout, the ends of the 20 mm segment align with the ruler marks at 0 and 20. 3 — the print is visible under the transparent mat. 4 — from top to bottom: mat, printed paper, table; before S03, there is no PLA here. The diagram is not a 1:1 pattern.

Choose your symbol — construction details

S02 · aid layout; print and layers in the card diagram

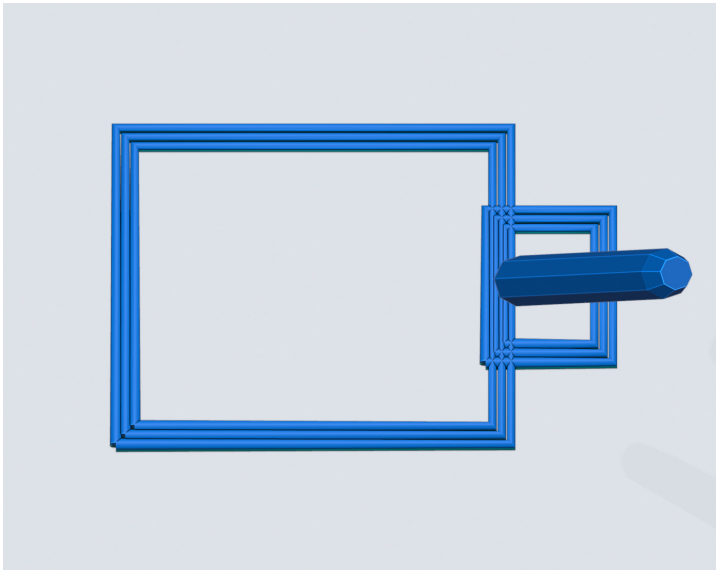


S01 · aid layout; print and layers in the card diagram

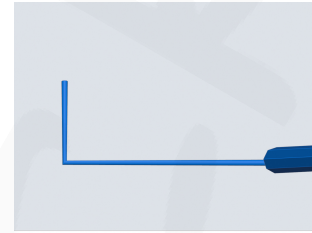


STAGE 02 / 05 • Session Jedna zawieszka

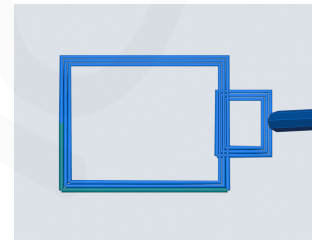
Build the frame and eyelet



Reinforcement · arrow



Outline · arrow



Integral eyelet · arrow

NOW Frame with an integral eyelet · 3D pen and stand

Blue / dark emphasis: the part used in this action. Arrows: visual guides. Illustration not to scale.

PARTS FOR THIS STAGE

1 × Frame with an integral eyelet · PLA | template follow the written method

W01: choose one outline. Lay three adjacent strands with overlap, joining the shared base of the eyelet and frame. On the mat, repeat the same paths as a second layer; leave the hole open. Finished cross-section [mm]: 3.6 × 2.5. Number of passes: 3 sąsiednie tory × 2 warstwy. Support: A01 on a flat worktop.

Cooling: without lifting until completely cool. Tip access: from above; fingers outside the path of the hot nozzle.

On W01, make three adjacent overlapping strands for the outline and integral eyelet. Repeat them as a second layer. Keep the entire piece supported by the mat; leave the hole open. Example: arrow.



Check

The outline is closed, the eyelet is part of the frame and its centre is open; there are no gaps at the base.

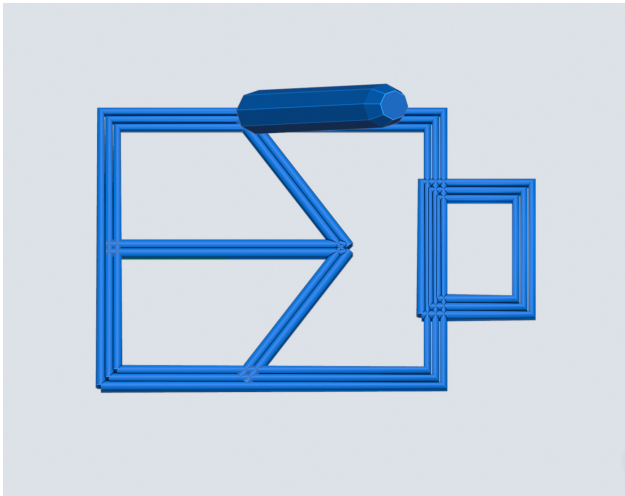
If it does not work

Bridge a visible gap with fresh PLA on the mat and let it cool again. If the eyelet is blocked, do not pierce it with the hot nozzle or a needle; remake the frame using the pattern.

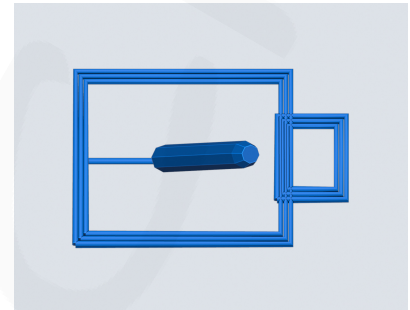
Sequence of images: S03 — outline on the mat; S04 — eyelet with a shared base; S05 — second layer. The instruction describes the working direction; the pen position shows where the action takes place.

STAGE 03 / 05 • Session Jedna zawieszka

Connect the symbol to the outline



Complete symbol · arrow



First join · arrow

NOW Frame with an integral eyelet · Chosen symbol · 3D pen and stand

Blue / dark emphasis: the part used in this action. Arrows: visual guides. Illustration not to scale.

PARTS FOR THIS STAGE

1 × Chosen symbol · PLA | template follow the written method

Choose the arrow or H from W01. Make the symbol with two adjacent strands in two layers. The ‘Join the symbol to the outline’ stage specifies the sequence of sections, cooling, and locations of the wide overlaps. Do not make the symbol separately: connect it directly to the cool frame and the previously completed sections.

Finished cross-section [mm]: 2.5 × 2.5. Number of passes: 2 sąsiednie pasma × 2 warstwy. Support: A01 and the cool P01 outline. Cooling: the entire piece cools flat. Tip access: from above.

Choose the arrow or H in W01. Arrow: run the shaft from the left side of the frame to the inner vertex. After it has cooled, make the upper arm from the upper side of the frame to the end of the shaft; let it cool, then add the lower arm from the lower side of the frame in the same way.

H: make the left and then the right vertical from the upper to the lower side of the frame. After they have cooled, join the verticals with a crossbar from left to right. Make each section with two adjacent strands; repeat the sequence in the second layer.

Overlap the starts and ends onto the cool frame or a previously completed section of the symbol. The overlap spans both strands; merely touching the ends together is not sufficient. Place the pen on its stand. Wait until the PLA is completely cool in accordance with the device instructions.



Check

Arrow: three wide connections to the frame and a fused vertex. H: four connections to the frame and a crossbar joined to both verticals.

If it does not work

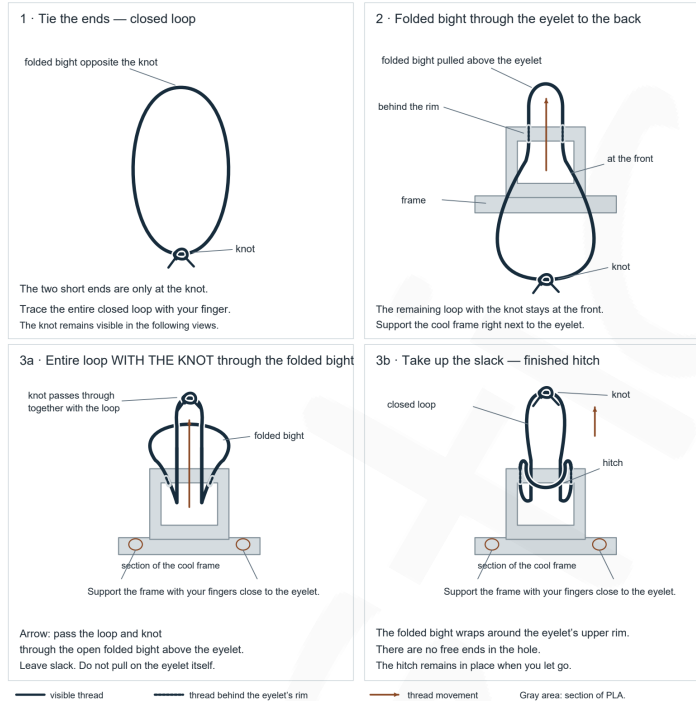
On the mat, add fresh PLA across the visible gap and let it cool. Do not attach separately moulded letters. If a custom symbol is not recognizable, return to a simple pattern variant.

S06: start of the shaft from the left side of the frame. S07: complete symbol. Run the lines according to W01.

Thread the loop

Thread: closed loop and hitch on the eyelet

Entire loop in each view • technique diagram, not to scale • thread length: 30 cm



1 — zamknięta pętla; 2 — złożenie za oczkiem; 3a — pętla z węzłem przez złożenie; 3b — zaczep po wybraniu luzu. Cały obwód nitki pozostaje widoczny; kreskowanie oznacza fragmenty za brzegiem oczka.

1. Tie together both ends of the 30 cm thread to form a closed loop. 2. Pass the folded bight opposite the knot from the front through the eyelet to the back and pull it above the eyelet's upper rim. 3a. Pass the entire remaining loop together with the knot through the protruding folded bight. 3b.

Gently take up the slack so that the hitch wraps around the eyelet's upper rim. During 2–3b, support the cool frame with your fingers right next to the eyelet. Do not use a needle or force.

✓ Check

Trace the thread's entire closed loop. The knot and the two short ends are on the loop, outside the hole; the part with the knot has also passed through the folded bight. The hitch wraps around the eyelet's upper rim and remains in place when you let go.

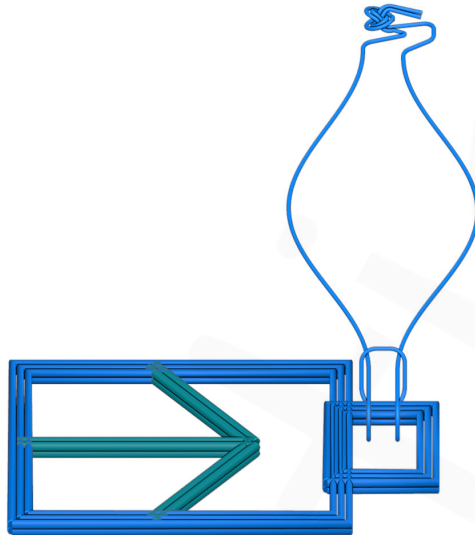
If it does not work

If the thread is twisted or misses the eyelet, loosen it and thread it again. Do not force open a hole that is too small; report a making or pattern problem. An adult may help with tying.

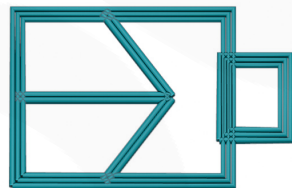
The diagram shows the entire loop in four different views: 1 — tied loop; 2 — folded bight behind the eyelet; 3a — the loop with the knot passing through the folded bight; 3b — the hitch after taking up the slack. Hatching indicates a section behind the eyelet's rim; a solid line indicates visible thread. The technique diagram is neither a projection of the model nor a scale pattern.

Thread the loop — construction details

Loop hitch · arrow

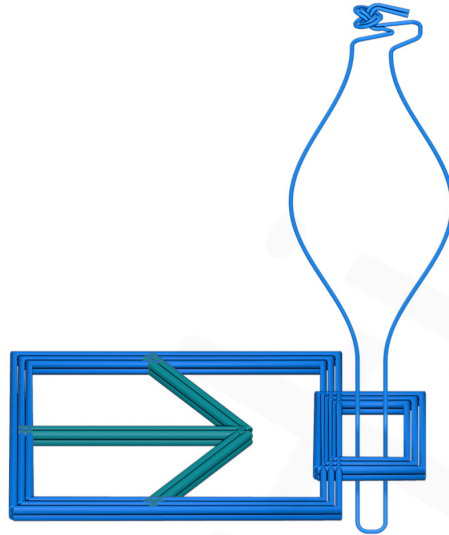


Closed loop · arrow



Thread the loop — construction details

Fold through the eyelet · arrow



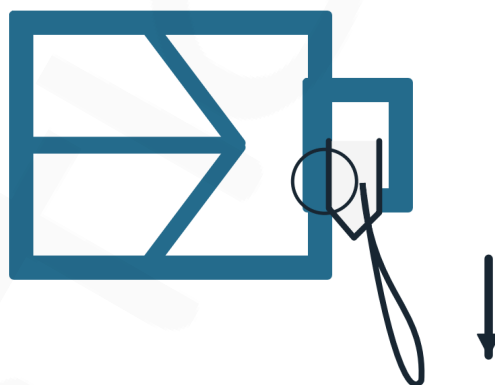
STAGE 05 / 05 • Session Jedna zawieszka

Check your symbol

①



②



1 · 2

1. Show the pendant to another person and ask them to identify the symbol; compare it with the selected pattern yourself. 2. Support the frame right next to the eyelet, hold the thread with your other hand, and tension it lightly only enough to remove the slack. Let go and inspect the connections. Do not put the thread around your neck.



Check

The symbol is recognizable; the eyelet and symbol did not detach, no gap, crack or clear stress whitening appeared at a join, and the thread did not slip out.

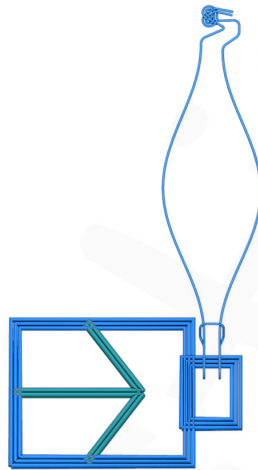
If it does not work

If a join cracks, shows stress whitening or separates, stop the test and do not use the tag. After repairing it on the mat, return to cooling and the same light test. Correct an unrecognizable result by simplifying the symbol, not by adding tiny lettering.

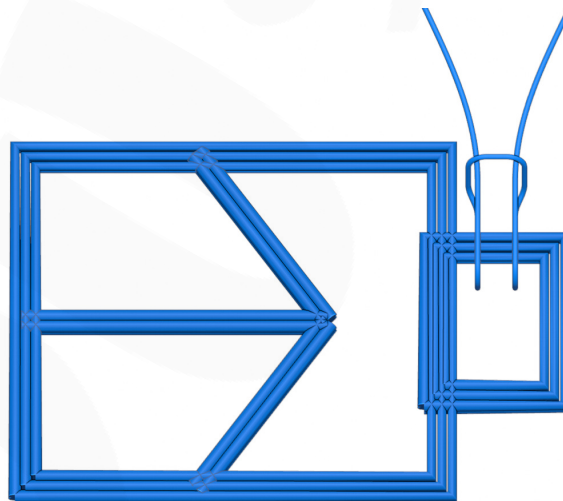
Diagram: 1 — compare the symbol with the chosen pattern. 2 — support it near the eyelet and remove only the slack from the thread, then release it. The tag is intended for a backpack or pencil case; do not put the thread around the neck.

Check your symbol — construction details

Light eyelet test · arrow



Recognizable symbol · arrow



Finished — check the outcome



Check

The symbol can be identified.



Check

The symbol has at least three broad, continuous joins to the outline.



Check

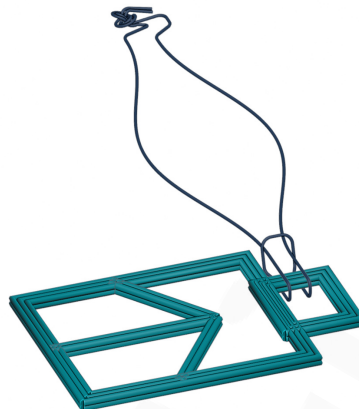
The thread passes through the open eyelet, and gentle tension does not produce a gap, crack or stress whitening.

Storage

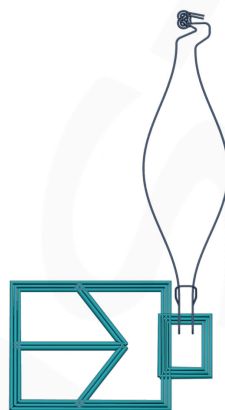
Store the model in a cool place away from sunlight and heat. Repair it on a suitable 3D-pen work surface using the same material as the part.

View from different sides

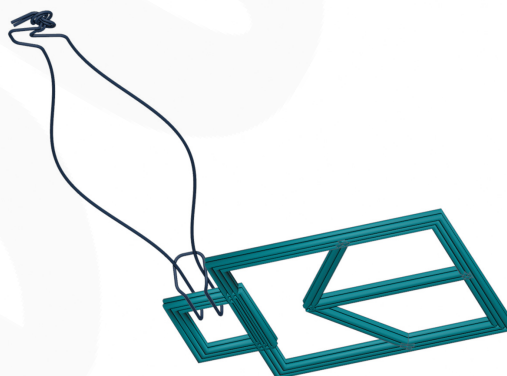
View 1



View 2



View 3



View 4

'This Is Mine' Tag

View 5

