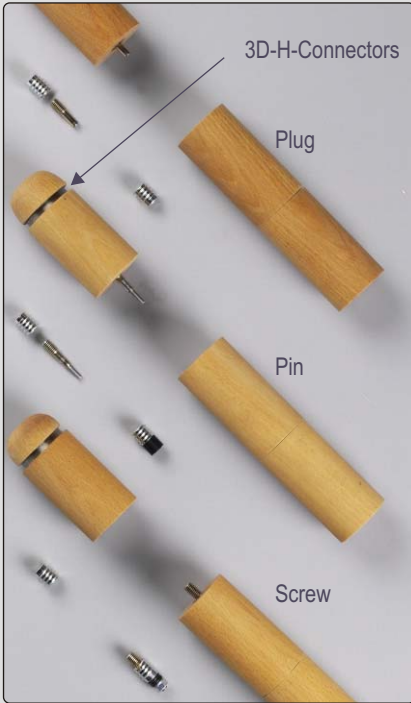
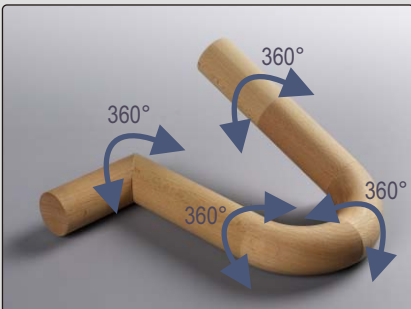


# Assembly Instructions



**For an exact fit of the elements an additional turn is possible!**



**3D-H-Connectors**  
**3D-H-Screw**  
**3D-H-Pin and Plug**



# 3D-H-Screw

- Drill jig for radian** = R 1 plus
- Drill jig for bevels** = S 1 plus
- Silver coloured sleeve** = B (drilled)
- Gold coloured sleeve** = E (connected)
- Gold coloured sleeve** = G (already screwed together with element)

## Production:

- ▶ Hand rail element cut to exact size incl. bevel- and angle cuts
- ▶ drilling jig put into position S 1 plus - R 1 plus, incl. 2 sleeves

## 1. 3D-H-Screw

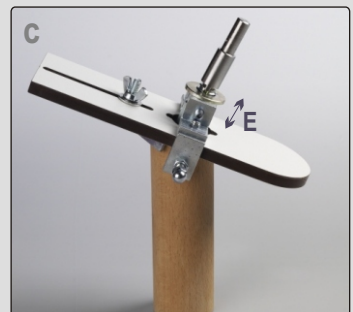
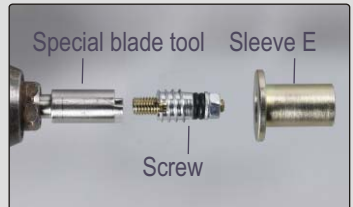
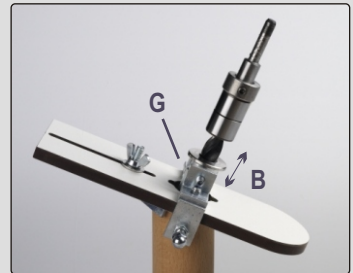
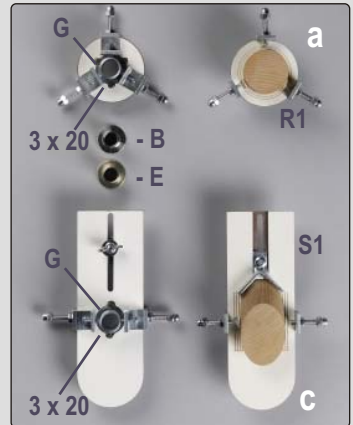
S 1 plus for ellipses

The width measurement has to be determined, according to the milling lines of the drill jig. The drilling has to be in the centre position of the width measurement. An adjustable angle combined with a butterfly nut is needed for adjustment of the length. In this connection the centre does not have to be touched. There has to be enough material in order to tighten the screws and for drilling.

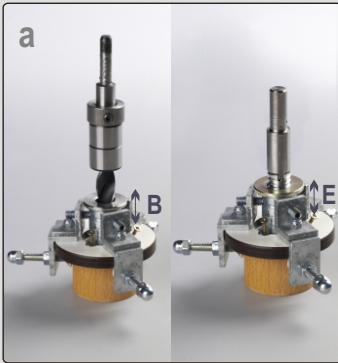
R 1 plus for angle cuts

The centre rings of the handrail has to be exactly determined to ensure that the drilling is carried out in the centre.

- ▶ The basic sleeve is already screwed together in the model shown. Drill holes are given on the edge of the cutting surfaces for correct tightening of the screws (3x 20- screws)



# 3D-H-Pin and Plug



The sleeves B and E are inserted into the basic sleeve (as explained above)

- ▶ **Sleeve B:** with drill of diameter 12.5 13 mm you have to drill 22 mm deep (see fig. a)
- ▶ **Sleeve E:** the twistable sleeve conducts and combines the two couplers together. The couplers with two key slots are, with the aid of the special blade tool, conducted through sleeve E, and screwed together (see fig. b)

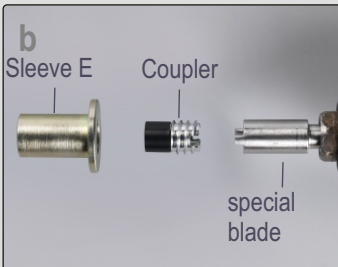
Drill the counterpiece the same manner and screw together with coupler with hexagon nut support assembly. Use sleeve E!

Following that, the handrail elements are screwed together and turned to the O-point. For an exact fitting of the elements, an extra turn is possible.

## Pin connection



## Pin connection



## 2. 3D-H-Pin

For the couplers with synthetic component a scale drilling (tapered angle) is necessary. First use a drill with  $\varnothing$  13 mm and drill 16 mm deep, afterwards a drill of  $\varnothing$  6 mm is needed and you have to drill 10 mm deep.

The couplers are screwed together without the grub screw. The grub screw with tapered angle is joined together flush in the coupler with hexagon nut support assembly.

Before the elements are pressed together, the glue is smeared between the elements. And then the elements have to be stuck together to pinpoint (with rubber hammer). Now the elements are braced and set with one turn. Should the combination turned too far, it is possible to unscrew again and restart.

# 3D-H-Connectors

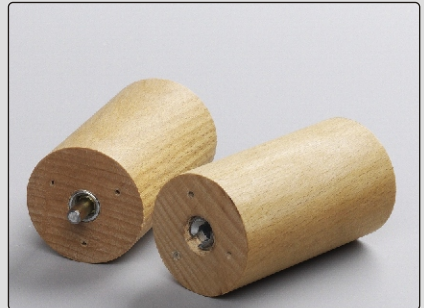
Screw the couplers without the grub screw. The grub screw with the tapered angle in the coupler is joined together flush, with the hexagon nut support assembly.

The tapered angle has to be shortened up to the next bigger size diameter. The connection is glued together as already explained.

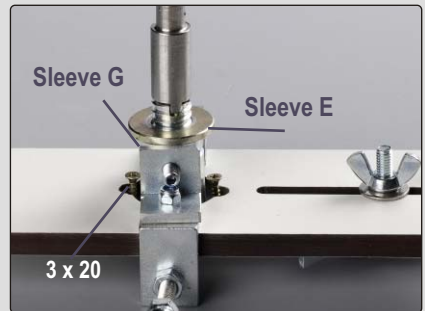
## 3D-H-Connectors



The polished steel shaded groove ring serves as a decorative form element.



Plug connector



3D-H-Drill jig

