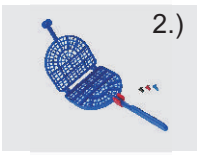
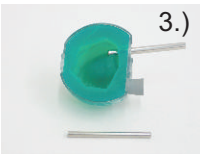
The **mega-Cast-System** is a reliable and efficient means for fabricating dimensionally accurate dentures at an affordable price.

Technical complexity and equipment are reduced to a minimum,
still esthetic and accurate dentures are the result.

This manual will show you the way to success, step by step.
You will find out how easy it is to produce inexpensive, but still high quality dentures.
For this purpose we're using our methyl-methacrylate based autopolymer
megaCRYL N / megaPRESS NV.

Required Components:





1.) **mega-CAST** Flask

2.) **Tooth sieve**

3.) **Canal Cutter**

4.) **megafeel Extrahart** Duplicating Gel

5.) **megasol** Alginate based Isolation

6.) **megabond** Bonder

7.) **megaCRYL N** / **mega-PRESS NV** denture base acrylic, autopolymer

Preparation of the model:

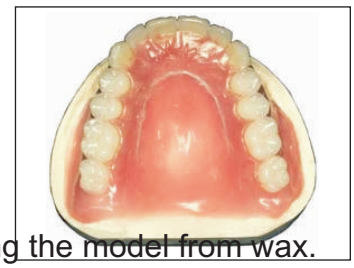
1. Trim the base walls straight upwards and try to avoid notches to assure both an easier removal from, and a smooth replacement into the duplicating gel.

2. Leave an overlapping (approx. 3-5 mm) wide, wax-free border to ensure an exact fit inside the duplicating gel after boiling.

3. A precise wax modellation is necessary to achieve custom-fit dentures.

4. The perfect detail reproduction of **megaCRYL N / mega-PRESS NV** makes further treatment of the surfaces and gingival borders unnecessary.

Preparation of the model:



1. Trim the base walls straight upwards
   and try to avoid notches to assure both an easier removal from,
   and a smooth replacement into the duplicating gel.

2. Leave an overlapping (approx. 3-5 mm) wide, wax-free border
   to ensure an exact fit inside the duplicating gel after exact cleaning the model from wax.

3. A precise wax modellation is necessary to achieve custom-fit dentures.

4. The perfect detail reproduction of **megaCRYL N** / **mega-PRESS NV**
   makes further treatment of the surfaces and gingival borders unnecessary.

Important:

The casting procedure depends on the desired use of the flask:

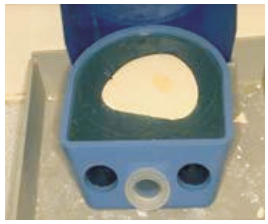
1.) you have one central filling opening and two vent ducts on each side or

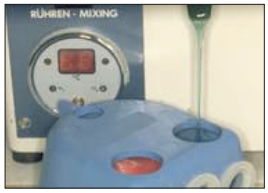
2.) one filling opening on one side and the vent duct on the other side

Position the plaster model including the wax modellation on the base plate of the flak.
Ensure that the model is positioned with the vent duct facing
the highest point of the mould when standing upright
and thereby obviate air pockets!
When producing partial dentures it is necessary to attach
connecting canals between the saddles prior to duplication.

Preparation of the flask:

The three sealing plugs are also meant to form appropriate
casting openings in the duplicating material and therefore have
to be placed in the according holes of the flask cover.
Water the plaster model thoroughly and place it on the base plate with
the distal side facing the rubber plugs. Secure the model
by waxing it to the base plate.
Make sure that the casting canals face the rubber plugs.
Close the flask with the enclosed brackets.





Duplicating:

Fill the closed flask with **megafeel–Extrahart** from the top
with a fine stream. Careful and accurate duplicating is necessary
in order to achieve optimal results. **megafeel-Extrahart** is
especially designed for the casting technique and works best at 48°C.
The plaster models should be watered for up to 30 minutes
in 35°C warm water until any enclosed air has left the plaster.

Gelation:

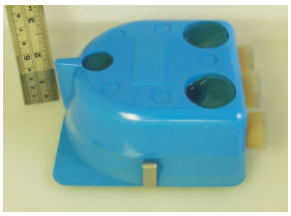
After duplicating the gel should rest for about 20min.
to avoid tension inside the duplication negative.
Because of an outward progressive gelation a firm fit of the gel is achieved.

The **mega-CAST Flask** consists of two types of material.

1. The metal base plate with cooling holes
   that lead the gelation effect towards the model when cooling down.

2. The plastic cover that acts as an outwards isolation.

Cooling-down:



When cooling down, at first the lower half of the flask is positioned
in cold water for about ten minutes. Then the entire flask
is placed under water for another 30 minutes. (mind water level).
This prevents increases of vertical occlusion.

After extraction of the model from the duplicating gel
cut the casting canal and the vent duct with the 7-9 mm canal cutter.

Important:

Always consider the models dimensions so
that when the model is repositioned the canals don't get blocked.
Especially when making the lower denture you should always place
wax canals from the models border to the aperture of the casting canals.

Preparation of the casting procedure:

1.) First remove the teeth from the wax modellation
   and place them in the tooth sieve before boiling.
   Then remove the wax plate from the plaster and boil out the plaster.
2.) Reposition the teeth in the duplicating gel.
   (you may first dry the cast and teeth with compressed air)
3.) Apply retentions to the teeth, use megabond as solvent.
4.) Isolate the model with megasol and allow drying.
   When the isolation is dried water shortly to avoid ascending air,
   dry the model and place it inside the duplicating gel.
5.) Close the flask and position upright. Mark the casting canal.

Casting megaCRYL N / mega-PRESS NV:

Assure that the flask is closed properly. Mix the powder and the liquid according to the materials instruction manual. (10g of powder and 5 - 7 ml of liquid).
Pour the material through the marked opening into the flask.
Make sure the material flows with a very fine stream
in order to prevent the canal from blocking.

swelling time 30 seconds
pouring phase 2-3 minutes
(material and room temperature of 23°C)

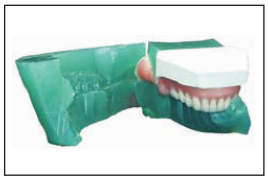
As soon as the flask is filled halfway you should tilt the flask slightly
so that locked in air pockets can escape. When the flask is filled completely
let it rest for 2 minutes until a fine film appears on the surface of the acrylic.

Polymerization:

Place the flask upright inside the pressure polymerization unit
and cure the material at a temperature of 44 - 55°C
under a pressure of 2-3 bars for 30 minutes.
Make sure that the flask is almost completely under the water surface.
Only the top edge should be above the surface.
The duplicating gel should not get in contact with water.

Finishing:

After the polymerization remove the denture from the flask
and cut off the feed channels with a cutting wheel or a milling cutter.
Further trim the dentures edges and polish the device as usual.



We recommend water storage of the denture and a finish with **mega-fresh**.