DENTAL PLUS

INSTRUCTION MANUAL

INJECTION MOLDING SYSTEM

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HIGH-TECH IN DENTAL TECHNOLOGY

The plastic technology has spawned numerous new developments in recent years.
Therefore, high performance resins start to have a growing importance in the world of dentistry.

Economic factors and the awareness of the patient in relation to the mixing of metals in the mouth support this change and the use of modern plastics/resins. Most commonly so called PMMA-resins are used in dentistry and dental technology. This PMMA-resin is a hydrocarbon compound which exists in very different quality levels.
Our expertise lies in the way we manufacture these materials.
The quality and manufacturing technology developed by **DentalPlus** is pioneering.

There are two principal types of production:

1. The **Chemoplastic**; known in the dental market as powder liquid method (hot- or cold-curing polymers). Likewise, composites are subject to the chemical process and its problems.

2. The **Thermoplastic;** in this method, a granulate is plasticized by heat and is injected under high pressure into a form.

Thermoplastic produced molds such as blanks or prothetic supplies are characterized by an extremely high homogeneity.

Due to the high surface density, these plastics are much more fracture and plaque resistant.

E-Modul : Chemoplast at about 1.800 – 2.400 MPa
E-Modul : Thermoplast at about 3.000 – 3.600 MPa

Due to this high stability it is possible to produce plastic crowns and bridges for permanent use (> 6 years).

In contrast to **chemoplastics**, which have a higher residual monomer content and can cause allergic or adverse health reactions, **thermoplastics** have due to the manufacturing process a substantially higher biocompatibility.

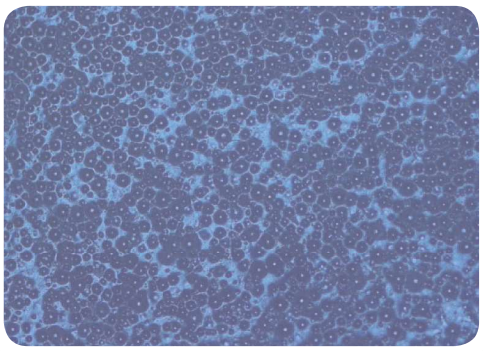
In just one step, plastic crowns, dentures, partial dentures, or combination work can be produced, which are color stable and highly shatter-proof.

Because of the higher quality, the dental technicians can be provided with completely new possibilities for patient care.

Thermoplastic (high homogeneity)

E-Modul 3.000 - 3.600 MPa

- **high fracture stability**
- **plaque resistant**
- **dimensionally stable (> 6 years)**



Chemoplastic (inhomogeneous structure)

E-Modul 1.800 - 2.400 MPa

- **low fracture stability**
- **susceptible to plaque**
- **fast aging due to higher water absorption**

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MEANING OF SYMBOLS

Always note! Tips from a pro.

Temper cuvette!

= after each injection process boil the cuvette for 15-20min. and let it slowly cool down at room temperature!

Inject the cuvette hot (40-50°C).

Description of plasters:

1. Poly-Granite	category 3:	for full denture and complete embedding.
2. Poly-Granite Plus	category 4:	for the master model, for the splinting technique, or for delicate stump situations.
3. Expant-Granite	category 4:	essential for the materials **Flexistrong Plus®** and **Flexiplast Plus®**, as these materials have a higher shrinking.

IMPORTANT BASICS OF THE INJECTION MOLDING TECHNIQUE

To provide you with a successful start for this innovative technique, please read the following instructions carefully.

1. Always check pre-heating times, pressure-adjustments and processing temperature.

2. Strictly follow the cross-sections of the feed channels and their placement.
   (Always use a 5 mm round wax wire).

3. Always use one spray channel.

   When using two spray channels occurs:

   a) a predetermined breaking point (impact seam), as thermoplastics form a kind of skin on the front, similar to flowing lava.

   b) air pockets, because the material gets injected too fast into the object.

4. The right size of the cartridges (16g, 20g, 24g, 30g, 32g) can easily be determined by weighing the dental cast. The molecular weight of plastics and wax is very similar.
   A 20-24g wax model needs a 30g cartridge, including enough extra material.

   When using **Flexistrong Plus®** use a factor of 1.4, because it has a higher molecular weight.

5. To achieve the best possible fit, we recommend to boil all injections after the injection process for 10-15 minutes with the cuvette still closed.
   For this, the cuvette is immediately put into boiling water or boiling-out units.
   Then, let the cuvette cool down slowly at room temperature. Thus, a subsequent warping of the rail or prosthesis will be prevented when finishing and polishing.
   So-called tempering!

6. All uncontrolled heating (ultrasonic device over 70°C, excessive evaporation) must be avoided. You are working with a thermoplastic, which can change by itself through heat. Therefore, during polishing do not use high speeds.

7. The bond of the prefabricated teeth with the base is warranted by:

   a) a mechanical retention

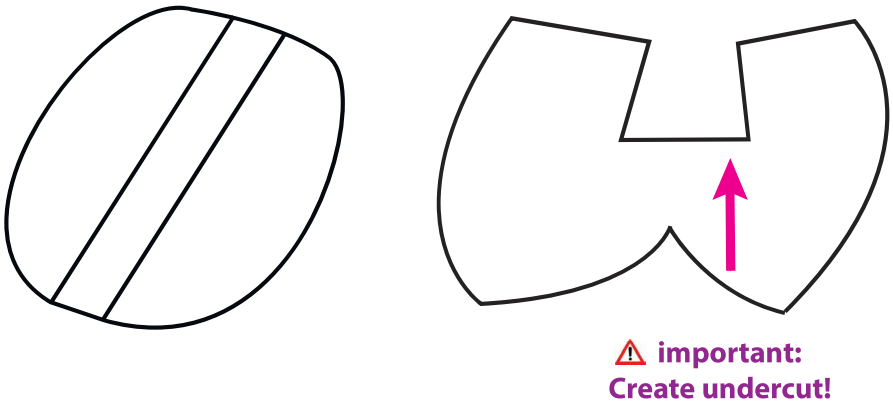
   b) the proper chemical bonder.

   We distinguish two types of retentions.

RETENTIONS

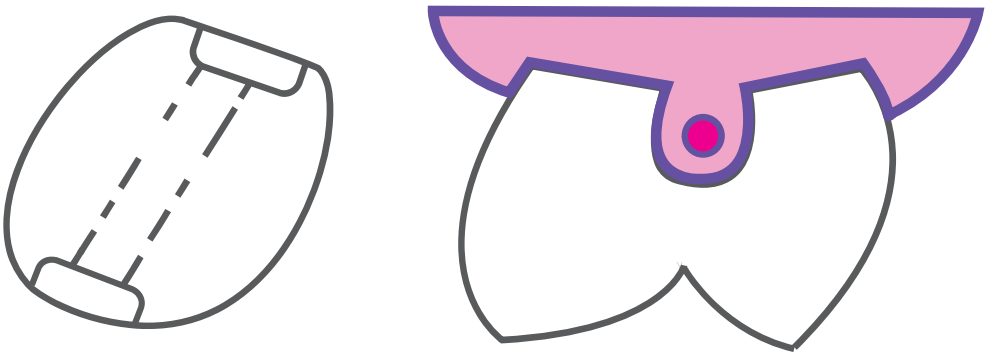
1. High-performance polymer **Polyan Plus®** and **Dentalos Plus®**

   Basal roughening of the lower base of the tooth with a stone or diamond and attaching a retention suture of proximal-distal to mesial with a suitable milling tool (round bur or separating disc).



2. **Flexistrong Plus®** and all nylon plastics

   Basal roughening of the surface (diamand drill or sandblasting with special fused alumina). Attaching a drill channel with a round bur or a twist drill and additional removal of tooth structure in the approximal region of the tooth.



Thereby, the tooth is automatically moved into the base and held there.

The proximal bulge has the effect of a pearl necklace, which has a knot after each pearl, so that if one pearl gets lost the others are still mounted.

TIPS FROM A PRO

Retentions

We recommend to attach the retentions before setting up the teeth.
Thus, during the injection process the teeth, which are fixed occlusal in the plaster bed can stay in the cuvette.
This has the advantage, that the teeth do not brake out of the mould after the wax extraction and do not need to be fixed with super glue afterwards.
This saves a lot of time, patience and eliminates a possible outcome of error.

Chemical bond

For all of our thermoplastics, we have specially developed primers.
Please apply them approx. 3-4 min. before the injection process, but not light-curing (as it is described in the instruction manual of 'visio.link', company bredent).

Closing cuvettes

Only close the cuvettes, once the whole preheating time is up (beep).
If the cuvette is closed ahead of time, condensed water forms inside (very quickly with warm cuvettes). The condensed water evaporates during the injection process explosively and leads to small air bubbles in the structure of the material.

Using the right plasters

Too short setting times of the counters (**<2h**) leads to raised bites.

Total denture/master model:	Poly-Granite	(Class 3)
Splints/main model:	Poly-Granite Plus	(Class 4)
Duplicate models:	For works out of **Flexistrong Plus®** double the master model and pour it out with Expant-Granite 0.7% (expansion plaster). The plaster forms its needed expansion only after 24h.	

The necessary plasters will be mentioned in each chapter of the following manufacturing possibilities. For the counter we use Poly-Granite.
This is a more high-grade class-3-plaster, which has a very fast setting behaviour and is very thixotropic. This plaster sits perfectly and only flows, when using a vibrator, is very stable and is very good for outbedding. When using class-4-plasters it can happen that the object cracks, when lifting the injection molded parts of the model or when devasting with a deflasking chisel.

Over-moulding of metal frameworks

When over-moulding metal frameworks, ensure that there is sufficient distance available between model and construction (0.7-1 mm).
Otherwise, it creates crackle-cracks.

The cuvette should have a temperature of miminum 40-50°C during the injection process.
Same as for delicate crown, bridge constructions and splints as well.

Crown- and bridge abutment stumps should always have safety pins.

Finishing and polishing

Always use machining milling tools.
We developed special milling tools for all thermoplastics, which allow quickest possible finishing and polishing. For further information, please contact us.
It saves unnecessary working time.

No overmoulding of gingival masks.

PROCESSING PARAMETERS PLASTERS:

Poly-Granite 20kg
special plaster for injection molding technology

Technical data:

Mixing ratio:	100g : 30 ml
Setting expansion (2h):	ca. 0.17 %
Hardness after 24h (DIN 1168):	ca. 100 N/mm2
Mixing time:	Vacuum: 30 sec.
	Manual: 60 sec.

Poly-Granite Plus 20kg
special plaster for injection molding technology

Technical data:

Mixing ratio:	100g : 26 ml
Setting expansion (2h):	ca. 0.10 %
Hardness after 24h (DIN 1168):	ca. 250 N/mm2
Mixing time:	Vacuum: 30 sec.
	Manual: 60 sec.

Expant-Granite 5kg
special plaster for injection molding technology

Technical data:

Mixing ratio:	100g : 23 ml
Setting expansion (2h):	ca. 0.5 %
Setting expansion (24h):	ca. 0.7 %
Hardness after 24h (DIN 1168):	ca. 220 N/mm2
Mixing time:	Vacuum: 30 sec.
	Manual: 60 sec.

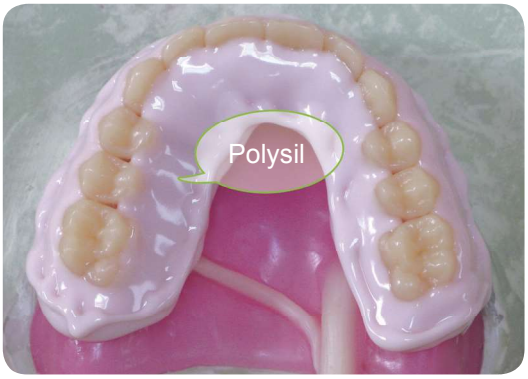
Polyan Plus®

Indication: Total- or partial denture

Instructions for Polyan Plus®

1. Maxilla

1. Apply the 5 mm wax wire parallel to the tuber. It ends fan-shaped in region 5/6. The 2,5 mm wax wire is placed arc-shaped across the palatine bone.



2. Polysil is applied around the basing arch on the dry wax-up. Incisal edge/occlusal surface remains free. (Fixing the teeth in the counter.)

3. Polysil, if used correctly, forms automatically an overlap, which provides a good anchorage in the counter. Apply thin.

4. Retentions in the teeth are recommended to ensure a secure hold of the dental prosthesis. For a chemical bonding of the teeth with the base we recommend the primer visio.link from the company bredent.

2. Mandibula

1. Apply the 5 mm wax wire parallel to the contouring/dental cast. It stops regio 5/6 fan-shaped. Apply Polysil around the dry wax try-in.
   Incisal edges/occlusal surfaces stay clear.

2. With **thin prothesis** the wax wire should be **extended** lingual/palatinal.

- Always fit only one entrance channel. Too big or too many wax wires increase the risk of air pockets or shock seams within the molecular structure (predetermined breaking point).
- Using ceramic teeth, apply the silicone very thin and move it up to the incisal edge.
- With devasting - do <u>not</u> use a hammer, otherwise there is a danger of cracks of the anterior teeth.
  We recommend a deflasking chisel.
- Useful tricks are taught in our training courses.
- Temper cuvette.

Recommended plasters:

Model	→ Poly-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

DentalPlus/Polyapress	
CO_2-Bottle	9,5 bar
Booster	9,0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

Telescopic technology for Polyan Plus®

Injecting onto primary-zirconium telescope:

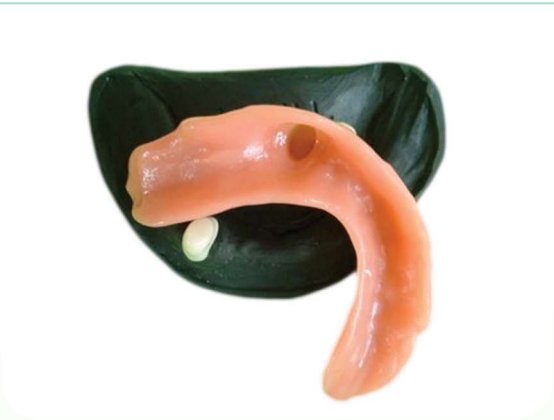
1. Plastic stumps out of cold-cured polymer pink or Pikuplast (Company bredent).
   ⚠ Don't use Patern Resin! Stump deforms during injection.
   💡 Use metal pin.

2. Model with zirconium copings, onto which one injects directly.

3. Denture with internal zirconium copings, which are lifted carefully with a pointy graver.

(see graphic p.14 for further details.)

4. Denture with very smooth outer telescope-sliding surfaces.



5. Case study basal.

6. Case study occlusal.

For the production of plastic stumps on the master model, please do **not** use Palavit G/Patern Resin, as it can bend during the pressing process due to heat.

We recommend to use usual cold-curing resins in pink or transparent.

We recommend for safety to produce a second mastermodel through duplication, including the above described plastic stumps.

Denture parts, which have formed around the undercuts of the zirconium primary copings will be exposed with a sharp round bur (see graphic p.14).

Inject cuvette hot (40-50°C).

Temper cuvette.

Recommended plasters:

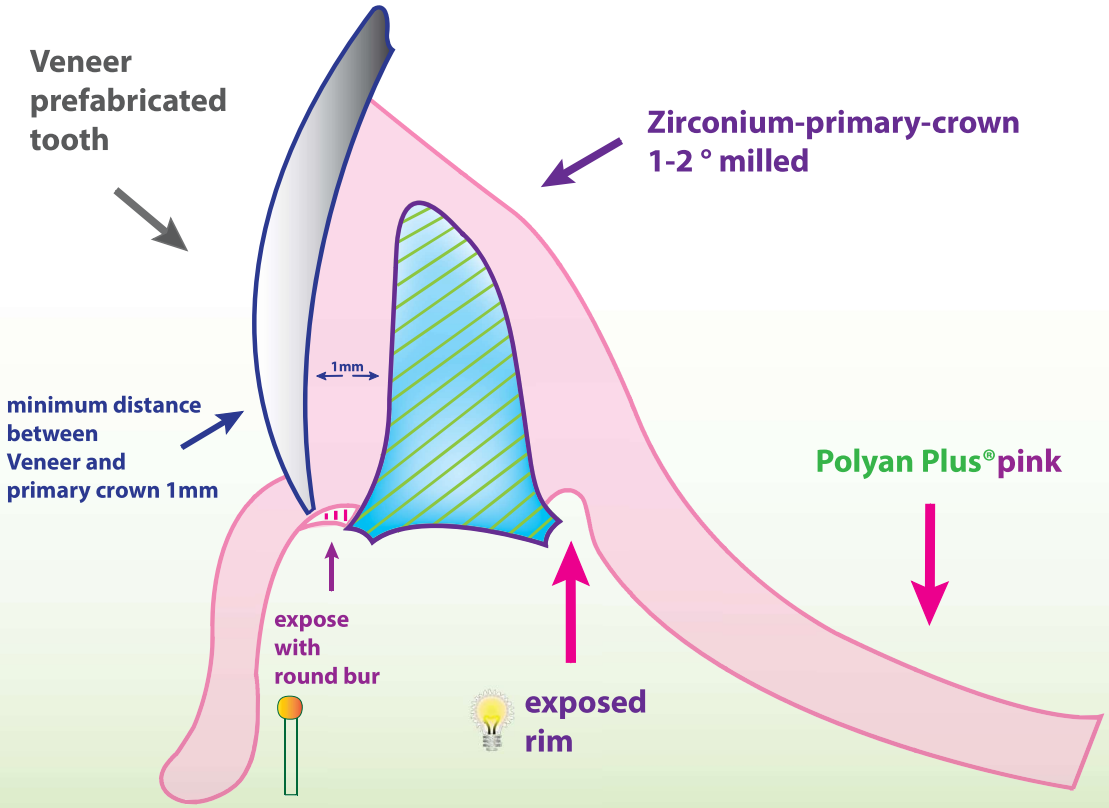
Model	→ Poly-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus®:

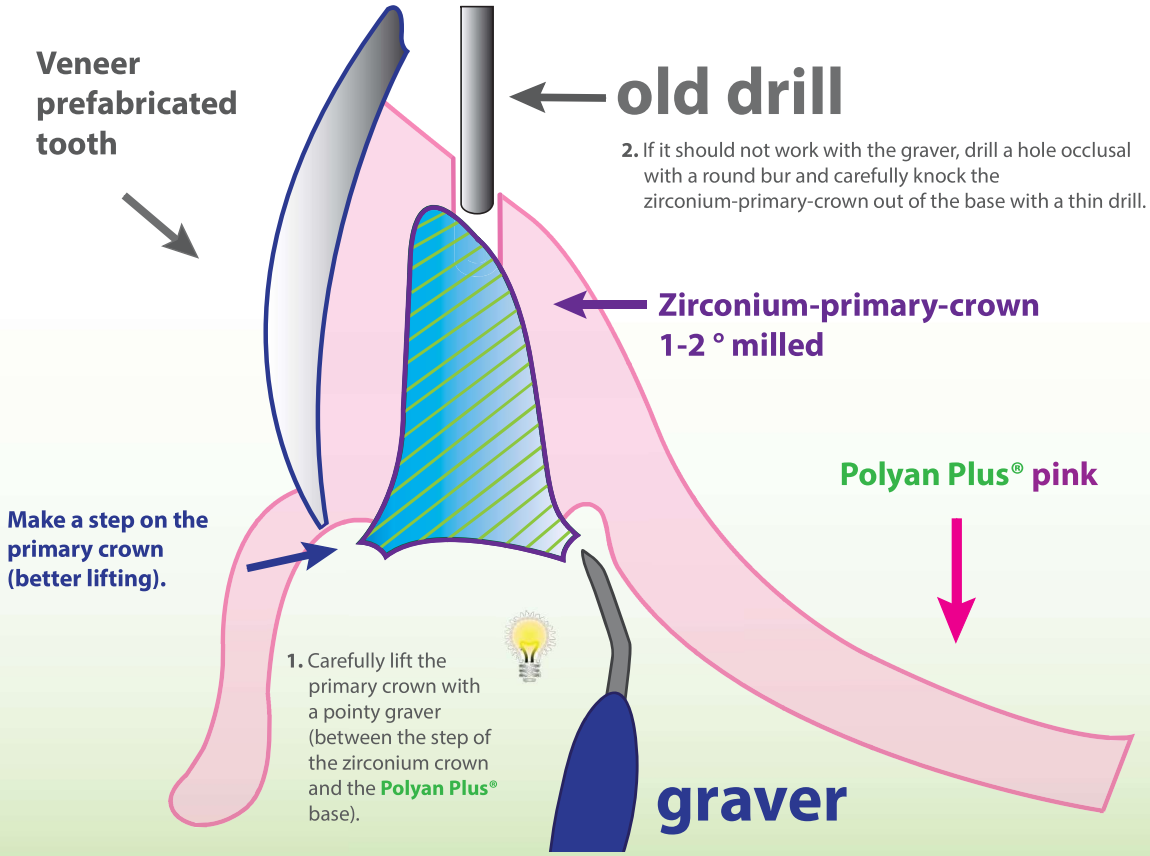
DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

Uncovering of the zirconium-primary-crown with a round bur after injection:



Uncovering of the zirconium-primary-crown with a graver:



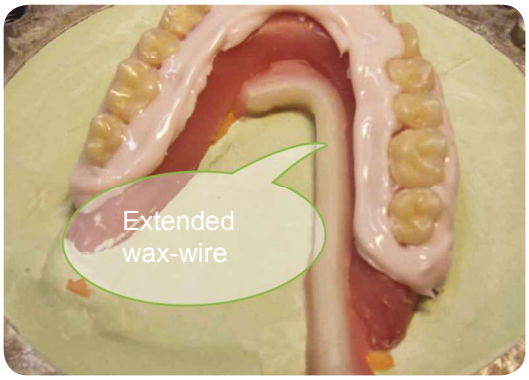
Instructions for Polyan Plus®

1. Preparation of Polyan Plus® dentures

with tertiary-substructure on the model

1. The opaquerized tertiary framework is fixed onto the already isolated model. Block out undercuts with articulation plaster. Design the retentions as smooth as possible, do not use retention perls!
   → it slows down flow velocity!

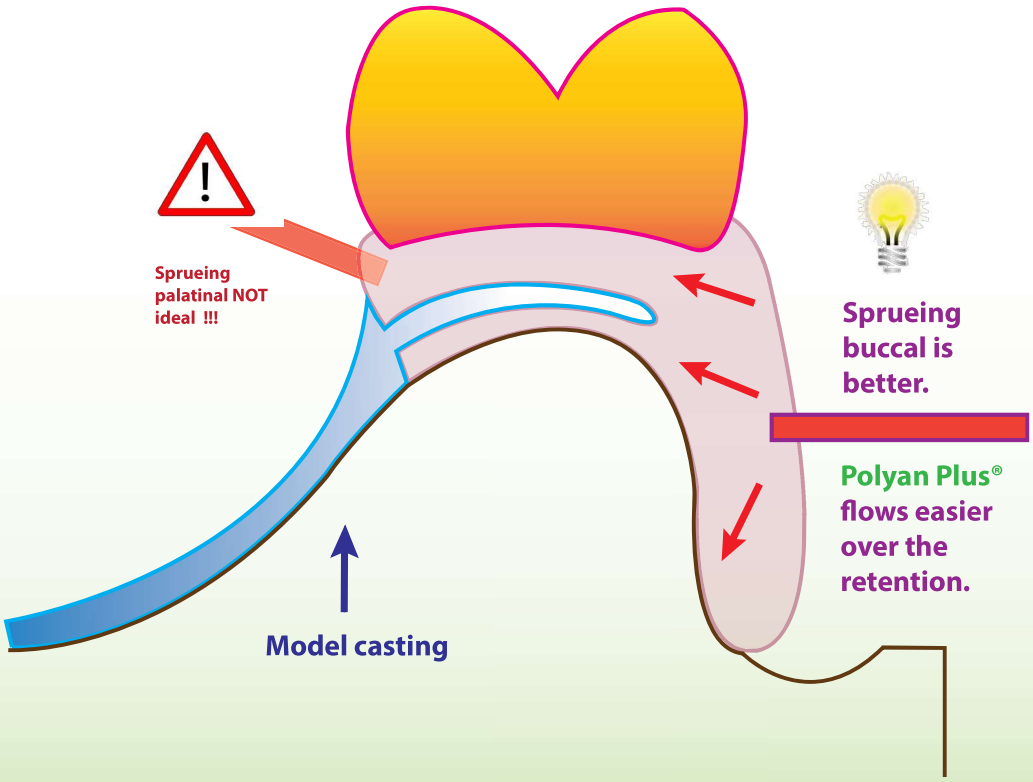
2. Blocked out undercuts need to get isolated again. The minimum distance between the metal frame and the plaster model needs to be 0.7-1 mm.
   → otherwise crackle cracks!
   → and no flow around!



3. With lingual free worn dentures with tertiary frame, please extend the 5 mm wax wire, so that the entire construction can be filled.

4. Recommened pink opaquer from the company ‘bredent’.

Sprueing buccal:



- With maxillary case apply the supply channel buccal.
  → better filling of the base.
- Always when coating metal parts, inject the cuvette hot.
- Apply opaquer to the metal framework before positioning.
- Inject cuvette hot (40-50°C).

Recommended plasters:

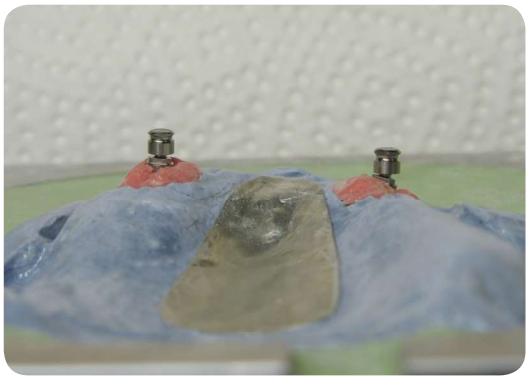
Model	→ Poly-Granite/Poly-Granite Plus
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

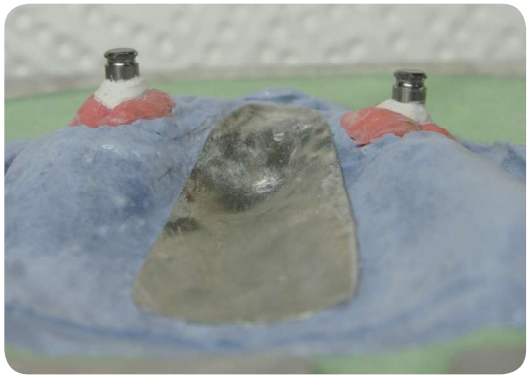
DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

2. Indication: Bar and ball anchors

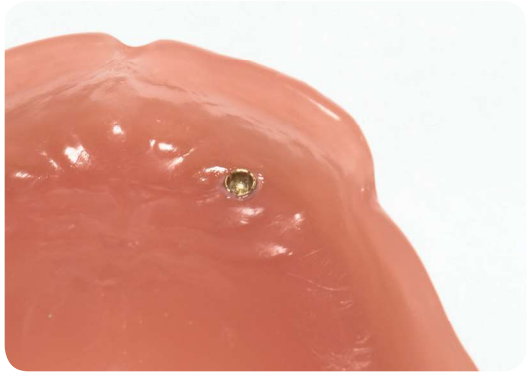


1. Situation with ball anchor.



2. Ball anchor blocked out with articulation plaster.

3. Blocked out with articulation plaster. Do not use a gingival mask, as it can move during the injection process.



4. Finished prothesis.

When using ball anchors or bar constructions, preferably do not use a gingival mask.
This could potentially lead to uncontrolled shifting of the structural element (it gets compressed).

Fix the construction element with enough articulation plaster.

Temper cuvette.

Recommended plasters:

Model	→ Poly-Granite/Poly-Granite Plus
Overbedding	→ Poly-Granite
Fixation	→ Articulation plaster

Injection molding parameters for Polyan Plus® :

DentalPlus/Polyapress	
CO_2-Bottle	9,5 bar
Booster	9,0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

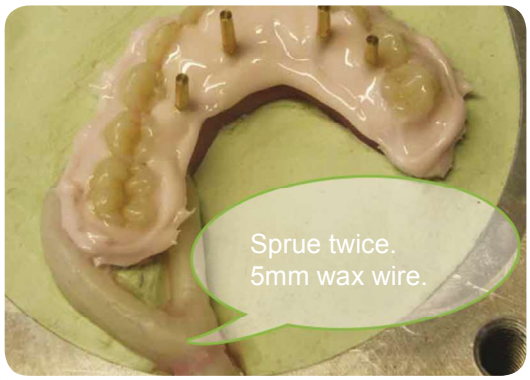
3. Preparation of Polyan Plus® dentures

with tertiary framework injected without model

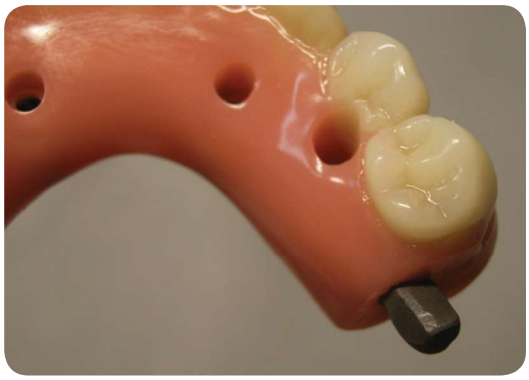
1. The laboratory implants are screwed into the abutment.

2. Thus, the prosthesis is placed in the plaster bed.

3. The Dowelpins are placed into the screw channels, parallel to the cuvette-insertion direction and waxed evenly.
This is essential, as otherwise the base material is pressed into the screw channel.



4. With metal substructures it is adviced to sprue several times from one side:
   - one channel lingual
   - one channel buccal



5. Due to the high fracture strength of the high-performance-PMMA the metal construction can be designed very delicately.

6. Optimal metal framework design in ■ and size (cross-section geometry).

→ Twisting in the base no more possible.

- Apply and cure light-curing opaquer to the metal framework before the mounting. (It is no longer needed to lift off of the framework before the injection process, which saves time.)
- Design the metal framework preferably square (cross-section geometry).
  → prevents twisting in the base.
- Align metal pins parallel to the cuvette-insertion-direction.
- Inject cuvette hot (40-50°C).

Recommended plasters:

Model	→ Poly-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

DentalPlus/Polyapress

CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

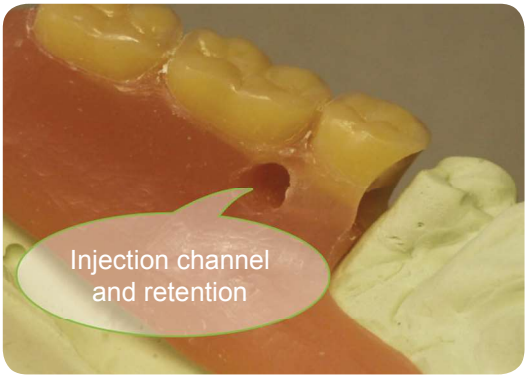
bredent/Thermopress 400

Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

4. Injecting flexible retaining elements onto one Polyan Plus® - Base

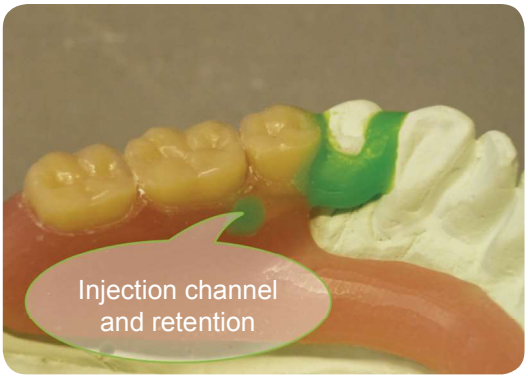
for example Flexistrong Plus® or Flexiplast Plus®

1. First, the denture is injected with **Polyan Plus®** without any retaining elements and is worked on till the denture sits without tension on the model.

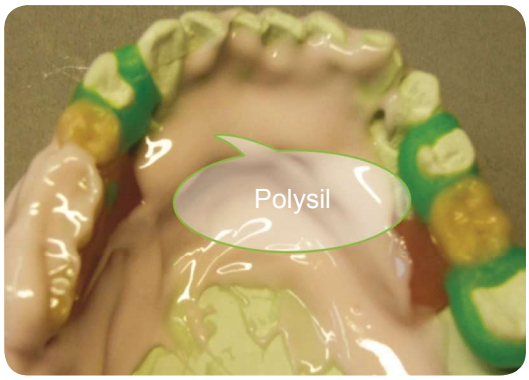


2. Then, the denture is extremely grinded in the area of the retaining elements and one entrance channel, which also serves as a retention, is build in.

3. On the model with adapted denture, the retaining elements are modelled onto.



4. The friction element can be modelled as clamp or telescope. Cast out of Expant-Granite.



5. Before embedding, the existing denture should be covered with Polysil. Like this, the master model is preserved in form and function.

6. Examples of einer Anstiftung of sprues.
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7. Supply of the front clamp is provided through a drilling in the plastic tooth.

8. After wax extraction, let sprues and modellation dry out.

9. Divested denture with sprues.

10. Finished denture out of a **Polyan Plus®** - **Flexistrong Plus®** - combination.

11. Completed work.

12. Example retension crown.

The **Polyan Plus®**- Base, no matter if Transversalband or lower jaw construction, are injected onto a poly-granite-plaster-cast. In the second work cycle the friction elements out of **Flexistrong Plus®** or **Flexiplast Plus®** are injected onto an expant-granite-cast.
To do this, it is necessary to press the **Polyan Plus®** - Base onto the expansion model until it has an exact fit.

Inject cuvette hot (40-50°C).

Temper cuvette.

Recommended plasters:

Model **Polyan Plus ®**- Base	→ Poly-Granite
Model friction elements	→ Expant-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

Injection molding parameters for Flexistrong Plus®:

DentalPlus/Polyapress	
CO_2 Bottle	7.5 bar
Booster	6.5 bar
Preheating time	15 min.
Temperature	210°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	100
Temperature	220°C
Speed	Level 6
Preheating time	15 min.
Pressing time	60 sec.

5. Monoreductor with flexible retaining elements

1. **Polyan Plus®** - Base.

2. Hollow form for the retaining elements.

3. Model after the injection process.

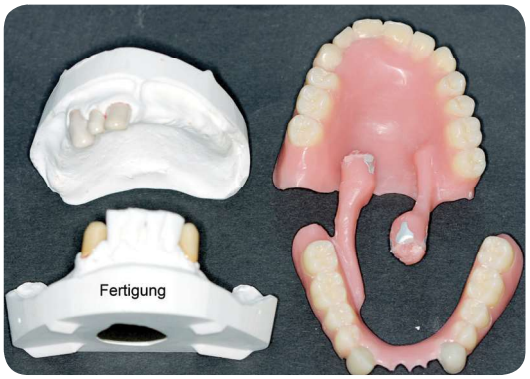
4. Completed case study.
With monoroducters take care, that the clamps are closed and form a retention crown.

6. Telescopic denture

Secondary parts **Flexistrong Plus®**
Base **Polyan Plus®**

1. Secondary part **Flexistrong Plus®** monolithic.

2. **Polyan Plus®** in the second step injected onto the secondary part.



3. Injected works after deflasking.

4. Primary-zirconium-parts inside finished denture.

5. Secondary part is not veneered.
   Made solely out of **Flexistrong Plus®**.
   High safety.
   No chipping of the veneered parts.

6. Gradually coloured zirconium-primary-crowns take over the layering effect (viewed from labial or vestibular).

Primary-crown out of gradually coloured zirconium.
This guarantees a very nice layering effect of the monolitic secondary part.

Attach short thick retentions at the secondary part; support basal on the plaster cast.
Long retensions deform due to the high injection temperature of the
Polyan Plus®- Base.

Temper cuvette.

Recommended plasters:

Model **Polyan Plus®** - Base	→ Poly-Granite
Model friction elements	→ Expant-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

	DentalPlus/Polyapress	bredent/Thermopress 400
CO_2-Bottle	9.5 bar	
Booster	9.0 bar	
Preheating time	15 min.	15 min.
Temperature	260°C	265°C
Pressing time	60 sec.	60 sec.
Power level		145
Speed		Level 8

Injection molding parameters for Flexistrong Plus®:

	DentalPlus/Polyapress	bredent/Thermopress 400
CO_2-Bottle	7.5 bar	
Booster	6.5 bar	
Preheating time	15 min.	15 min.
Temperature	210°C	220°C
Pressing time	60 sec.	60 sec.
Power level		100
Speed		Level 6

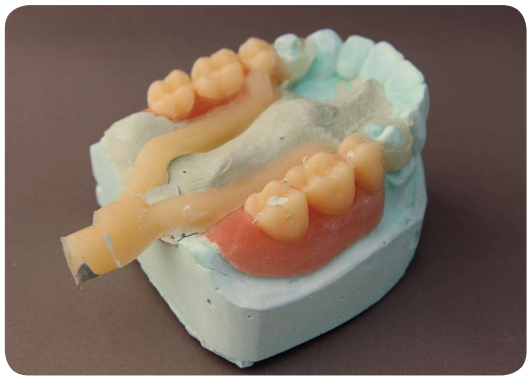
Bridge out of Dentalos Plus®
Denture out of Polyan Plus® with
Retention crowns out of Flexistrong Plus® :

1. Case study for fixed anterior bridge with end retention-crown.

2. Bridge construction out of Dentalos Plus® with end, open retention crowns.

3. Transversal part out of **Polyan Plus®** .

4. Retension-crown-modellation out of wax.



5. Situation after the injection process.

6. Completed work.

7. Merging of the friction elements.

8. Perfekt fit of primary and secondary part and optimal aesthetics.

Splint technique with Polyan Plus®

1. The 5 mm wax wire is directly fixed on the splint/denture to allow the liquid to drain off completely.

2. With the production of splints the model needs to be out of super-hard stone.
Otherwise, delicate corners of the incisal edges break off during the injection process.

3. Possible types of construction e.g. Table-Tops with transversal bracket.

4. Case study.

5. High quality visible.

The master models are to be produced out of super-hard stone (Poly-Granite Plus), otherwise the incisal edges can break off during the injection process.

For a best possible fitting, we recommend to measure the master model; accordingly to block it out with wax and to create a model with Expand-Granite through a duplication, onto which the actual injection process should be made.
In this case, you do not need the maximum expansion of 0,7% (after 24 hours).
It is important to cure the model sufficiently (approximately 2 hours).

The thickness of the modelation of the splint should not be under 1 mm.

Inject cuvette hot (40-50°C).

Temper cuvette.

Recommended plasters:

Model	→ Poly-Granite
Dublicate model	→ Expant-Granite (>2h) 0.5 % Expansion

Injection molding parameters for Polyan Plus®:

DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

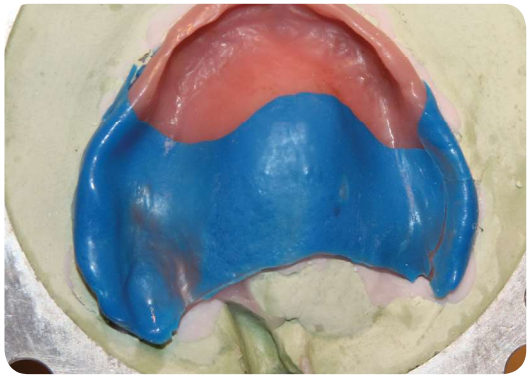
Rebasing or extention of Polyan Plus® - dentures

1. Creation of model directly in the same cuvette
   → Saves time!

2. Remove surplus silicone with scalpel.

3. Attaching the 5-mm-injection channel.

4. Coat the whole prothesis with silicone (Polysil) and then fill the counter.



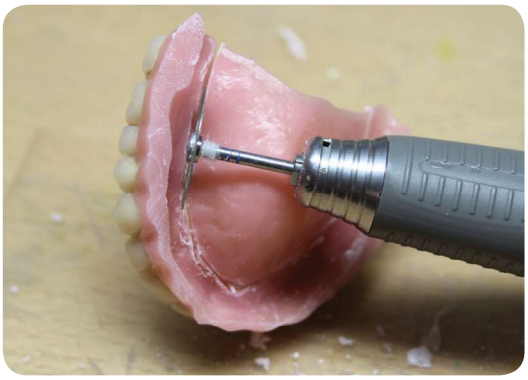
5. After seperating the cuvette-parts remove the silicone from the base and lift the counter of the prothesis. Wax extraction not nessecary!

6. Counter without prothesis-base.

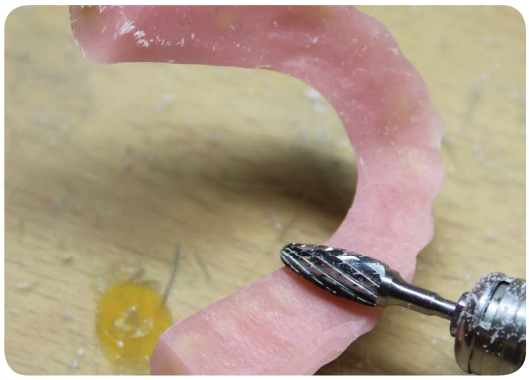
7. Heat the model with boiling water and isolate the hot plaster cast.

8. Remove fold with cutting disc.

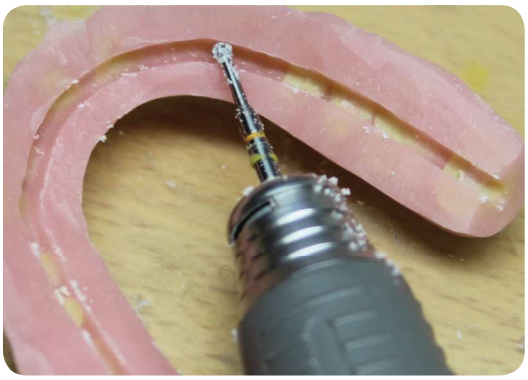
9. Do not use high speed to prevent clogging of diamond disc.



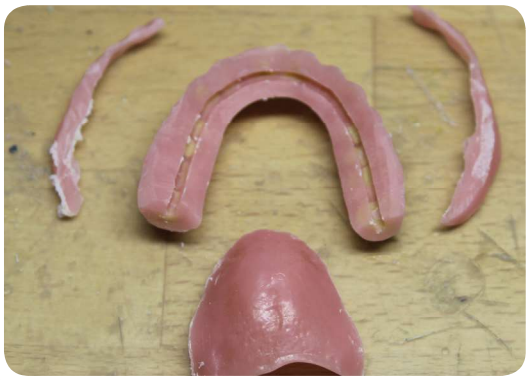
10. Remove palatinum or lingual surface as well.



11. Reduce the rest of the prothesis approximately 1-2 mm from basal.



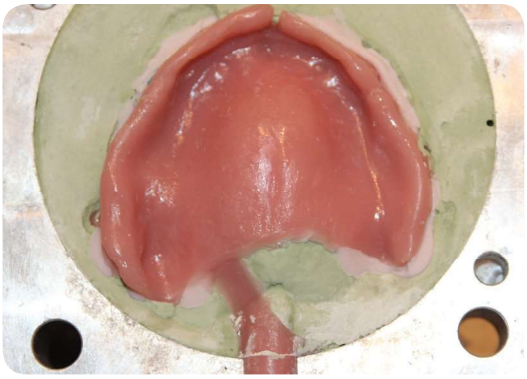
12. Add a mechanical retention to the body of the prothesis.



13. Separate parts of the base.

14. Remove reduced base part in silicone-counter.

15. Activate the prothesis 2 min. before the injection process with Vitacoll® chemically (approximately 30 sec.).



16. Prothesis after the injection process.

17. Prothesis after injection process.

18. Prothesis after liffting it off.

19. Prothesis after completion.

20. Perfect bond of the old and new base parts.

Create the model directly inside the cuvette.
→ Saves time!

Heat the plaster model with hot water before isolating it to get a smooth surface, as the cuvette does not need to be warmed up before taking it apart, like with a newly-made prothesis. Expenditure of time approximately 1.5 hours.

Do without tempering if rebasing, as usually it is timewise not possible.

Recommended plasters:

Model	→ Poly-Granite
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus ®and Dentalos Plus ®:

DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Level 8
Preheating time	15 min.
Pressing time	60 sec.

General informations for the reparability of Polyan Plus® and Dentalos Plus®

- Generally, **Polyan Plus®** and **Dentalos Plus®** are high-performance PMMAs, therefore a bonding with conventional PMMA is principally possible.

- **Polyan Plus®** and **Dentalos Plus®** can be relined or repaired at any time with conventional cold-cured polymer or an appropiate composite.

- The same applies for reparations of fractures or the rebasing of existing dentures.

- You can also reline a normal PMMA prothesis with **Polyan Plus®** and thus create a much better base for the patient.

- When injecting **Polyan Plus®** and **Dentalos Plus®** not only a chemical bond of the surfaces occurs during the injection process, but also a chemical-thermal one.

- When injecting common PMMA apply a thin layer of the connector ‘visio.link’ of the company ‘bredent’.

  Note: Do not light-cure, as mentioned in the manual, otherwise a separation layer is created.

  Due to the high temparature during the injection process ‘visio.link’ also cures without light source.

Completion of MOG-Prothesis with Polyan Plus®

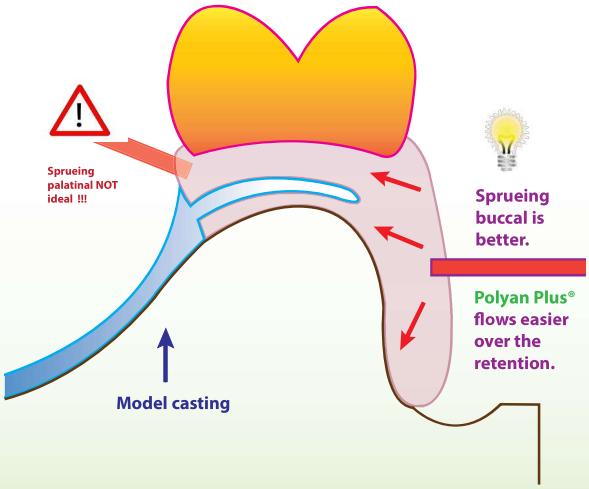
1. The denture plate should be fixed on the model in a way, that a subsequently seperation of the cuvette halves is possible.

2. Manufactured teeth with base part in the counter.

3. With sprueing every saddle needs to have its own supply channel.

4. With long retention parts of the model casting a double sprueing is advised.

5. Example of application.



- Apply opaquer already before placing the dentures in the mouth, as the basal surfaces of the retentions might not be accessible after embedding.
- Make the retention parts as short as possible.
  The less metal, the less danger of crackle-cracks.
- Sprue upper jaw-transversal-parts or full panels buccal.
  Like this, the material flows in one direction over <u>and</u> under the retention.
- Between metal retention and basal surface should be a minimum distance of 0.7 mm, otherwise there will be a formation of crackle-cracks in the basal part.
- Temper cuvette.

Recommended plasters:

Model	→ Poly-Granite or Poly-Granite Plus
Overbedding	→ Poly-Granite

Injection molding parameters for Polyan Plus® :

DentalPlus/Polyapress	
CO_2-Bottle	9.5 bar
Booster	9.0 bar
Preheating time	15 min.
Temperature	260°C
Pressing time	60 sec.

bredent/Thermopress 400	
Power level	145
Temperature	265°C
Speed	Stufe 8
Preheating time	15 min.
Pressing time	60 sec.

NOTES

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