PremEco® Line

ACRYLIC POURING SYSTEM

Quality
made in Germany

MERZ DENTAL

PremEco® Line

With the PremEco® Line acrylic pouring system, the wax-up can be quickly and cleanly processed into acrylic. Individual and natural looking dentures made easily with these simple processing steps.

time-saving productive economical effecitve

PremEco® Line set-up wax

Temperature-resistant modelling wax for all work processes in the field of prosthetics with high softening termperature and a natural shade for the wax try-in.

PremEco® Line alginate isolating solution

Separating solution suitable for heat and cold curing polymers.

PremEco® Line precision gel

Highly precise special duplicating gel on a hydrocolloid agar-agar base for denture casting and the fabrication of model cast frames, easy processing in conventional pouring devices.

PremEco® Line casting flask

Robust, distortion-free pouring flask used with the acrylic pouring technique to produce partial and full acrylic prosthetics, model cast prosthetics and cover denture prosthetics, as well as for all types of bite splints.

PremEco® Line pouring acrylic

Especially developed prosthetic PMMA acrylic for the pouring method for rational processing of partial and complete acrylic prosthetics. The excellent pouring property is especially tailored for the silicone and gel investment in conjunction with the PremEco® Line casting flask and the PremEco® Line Prosthetic Color System for individual and natural shade characterisation. Colour-stable and mucous membrane-compatible with proven biocompatibility.

PremEco® Line Prosthetic Color System

High-quality and particularly long-lasting shade characterisation of acrylic prosthetics and saddles come from within and is thus superior to add-on stains. Based on cold-curing PMMA the prosthetic colour system is especially suited for layering colours. Durability and colour stability are of benefit in addition to the simple processing. For shade customisation of artificially replicated gingiva, standard and intensive shades are provided that offer a natural appearance and can be mixed together as required.

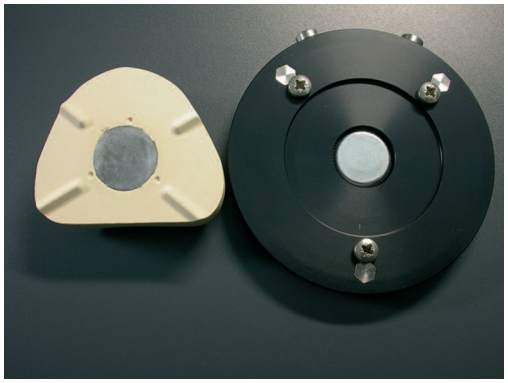
The modern PremEco® Line pouring system offers the following economic and technical benefits:

- uncomplicated, clearly laid out system
- easy, time-saving handling
- low procurement and operating costs
- aesthetic characterisation options
- consistent quality
- reusable materials

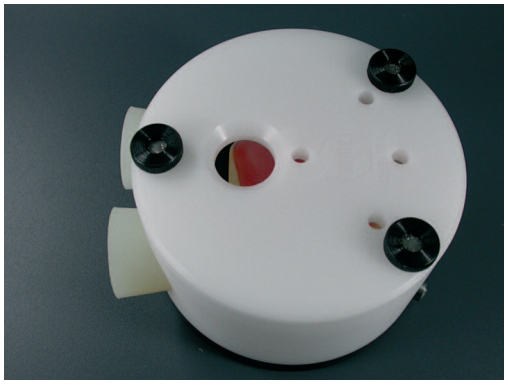
TIME-COST COMPARISON OF THE DENTURE PROCESSING SYSTEM

	PremEco® Line	min	Conventional cold-press method	min
1. Investment	Soaking the model	10	Soaking the model	15
	Anchor the model by using the magnet		Placing the model in the plaster-filled bottom	
	Close the flask	1	section of the flask	10
	Filling with duplication material		Setting of the plaster	20
	Cooling of the duplicating gel	45	Isolation, investing the denture	10
			Setting of the plaster	20
2. Boiling out, isolating, preparing the teeth	Opening of the flask		Preheat the flask in water	5
	Boiling out of the model	4	Opening of the flask	
	Cleaning, abrading and repositioning of the teeth	7	Boiling out the wax from the top and bottom section of the flask	3
	Soaking the model	10	Isolating of the counterpart and the model,	
	Isolating, placing casting channels, abrading the teeth	5	abrading the teeth	6
3. Adding the acrylic, polymerisation	Repositioning of the model, measure quantity of acrylic, mix and fill	5	Acrylic setting	4
			Add acrylic	3
			Press	6
	Polymerisation at 45° C under 2-2.5 bar (pressure)	30	Polymerisation time	30
4. After polymerisation	The denture can be removed immediately after polymerisation (the model maintained)	3	Denture is removed (risk of breaking the denture and model)	8
Time comparison	Productive time	25	Minutes	50
Time comparison	Unproductive time	95	Minutes	90
Time comparison	**Total time**	**120**	**Minutes**	**140**

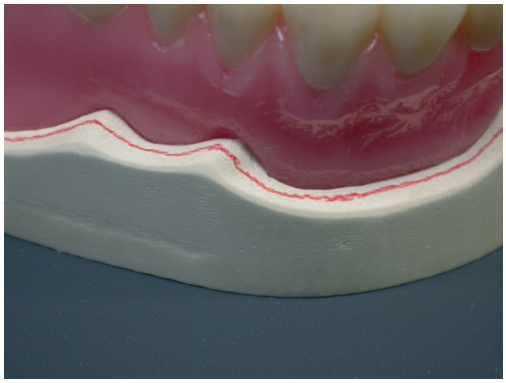
PremEco® Line casting flask made of monomer-resistant material with accessories



Base plate with removable magnet

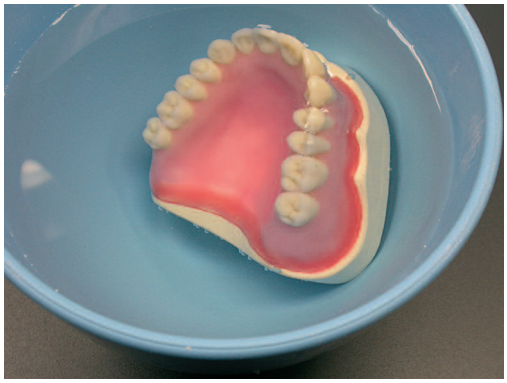


Lid with knurled-head screws for quick opening and closing

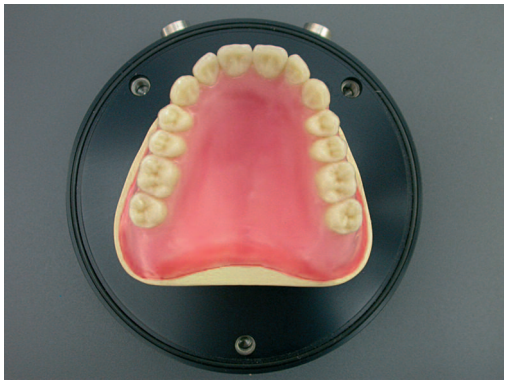


Place a circular marker up to half of the functional ridge.

Extend the wax modelation up to the marker on the plaster model. This excess will be required as a contraction reservoir for the pouring acrylic. The uncovered functional ridge is used as a stop when repositioning the model.



Soak the model for at least 10 minutes in clear, cold water; and dry the model.



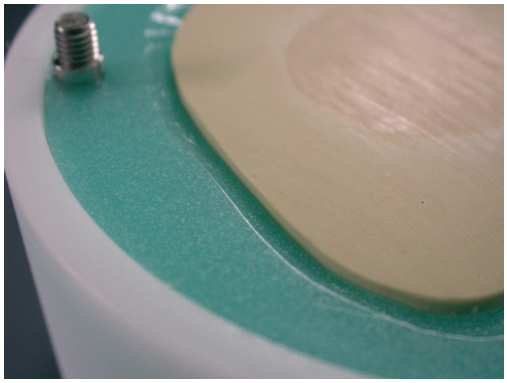
Position the wax-up centred on the aluminium base. The anterior teeth point towards the supports.
A magnet in the flask base holds the model securely in place with metal disks. Models without metal disks can be anchored with a little putty silicone or vaseline.

Align the model with the funnels when placing over the flask body. The screw sleeves lock the body precisely in the bottom of the flask base plate.

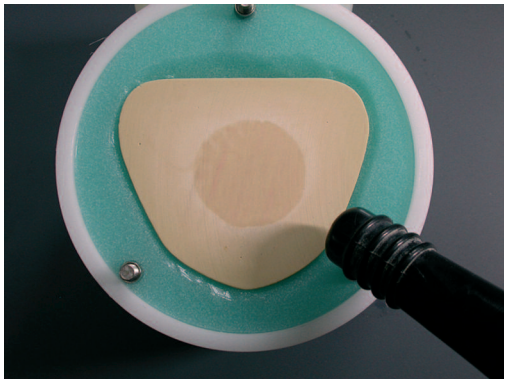
Cut the gel and melt in a suitable clean unit at 95 °C. The gel machine should have a ventilation hole in the device lid to release the excess pressure inside the device generated during melting. When ready for the pouring process the temperature should be 47-49 °C. When using a mircrowave the temperature of 95 °C is reached when the gel builds up a layer of foam in the container.

Allow the gel to flow in an even, thin stream. Stop the filling process as soon as the gel emerges from the holes in the lid.

Place the flask up to its midline in cold water for 45 minutes (ice cubes), in order to achieve a controlled setting towards the modellation (funnel formation at the filling opening). During setting prevent the action of vibration such as by a compactor, for example.



Remove the funnel stoppers. Loosen the screws completely and remove the flask base. Cut the gel along the model edge at 45° angle for easier removal from the mould later.



Remove the model with the wax-up without tipping it using compressed air or an instrument.

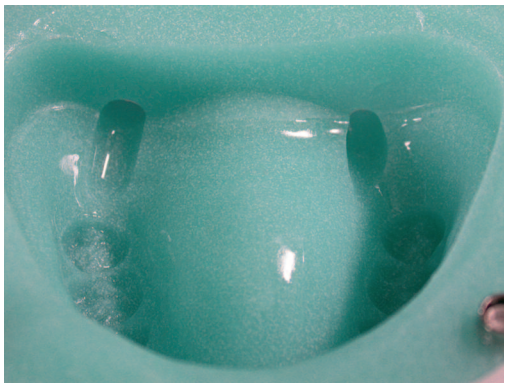
To remove the teeth as wax-free as possible the wax-up is softened for 2 minutes in warm water at about 50 °C. The entire wax-up can be removed easily and practically without residues. Avoid long boiling off and unnecessary heating of the models. Steaming off the models is sufficient.

Clean the teeth in a tooth sieve using boiling clear water and steam off. Turn the tooth sieve and repeat the process until there are no longer any residues.

Soak the model in clear, cold water again for 10 minutes.

Pour the alginate isolating solution directly from the bottle onto the model and incorporate it using a soft-bristle brush continuously for about 30 seconds. Rinse off excess isolation using running water. Then carefully blow off the surface in order to remove puddling.

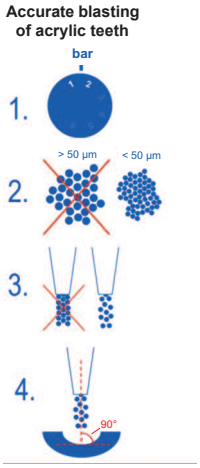
Create channels using PremEco® Line canal cutter. In order to prevent air pockets, place the entry points of the channels dorsally.

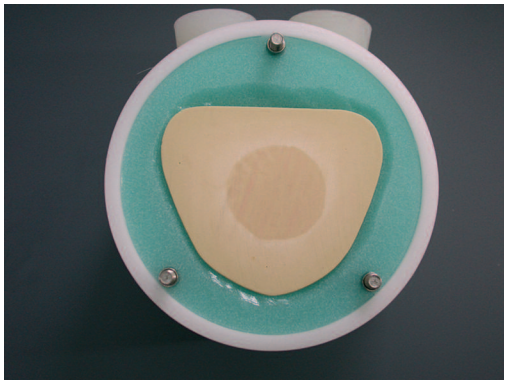


Work without interruption when using the gel casting method. Otherwise, due to the high water content of the gel, the gel mould may shrink. Surface moisture on the gel is normal. The surface can be dried with a cosmetic towel, in order to obtain an optimum acrylic surface. The moisture in the tooth sockets should be collected using a cotton swab, in order to ensure secure fixation of the teeth. If work is interrupted, the mould should be kept in a closed container with moist tissues.

Place retention lines across with a large fissure bur. Slightly roughen the basal surfaces using an abrasive paper or the sand blaster. Retention holes are not recommended.

Tip:
If the teeth are blasted with Al_2O_3, a silicon sleeve can be prepared before duplicating. Place the teeth to be blasted in the sleeve; so that only those tooth areas are blasted which come into contact with the base acrylic.
Using tweezers, return the teeth to the dried gel mould. If facettes, veneers or teeth do not have sufficient hold in the mould, the hold can be increased by using a small amount of superglue.

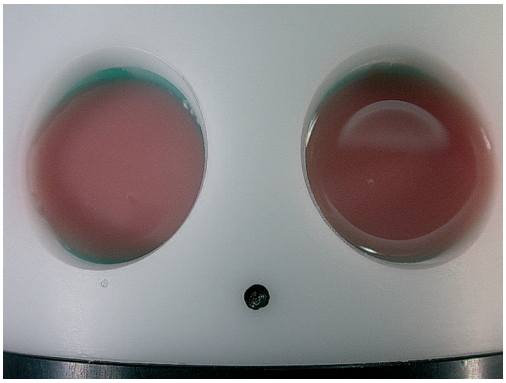




Reposition the isolated model in the gel mould and put on the black flask base plate and use screws to close.
Tip:
Models with metal discs can undergo a torsional movement when placing on the base plate using the magnet. A lateral bite offset is the result. The magnet is used only if required for duplicating and is otherwise removed.
Screw the flask parts "manually tight", the pins of the base plate provide the flask with secure positioning.

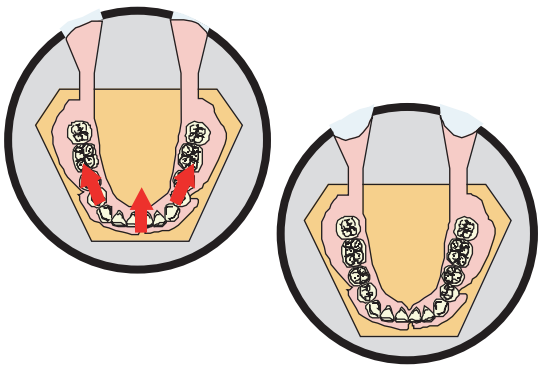
Monomer should be stored in a cool place and should be worked at a consistent temperature, in order to ensure long flowability. The exact mixing ratio is obtained by using the measuring pots. The powder must not be compacted by tapping.

Place the monomer in a mixing pot and stir while adding polymer. The polymer must be thoroughly stirred for 30 seconds.



Allow the acrylic to flow continuously into one funnel until acrylic starts to emerge from the other funnel. Carefully tilt the flask in all directions, in order for any existing air bubbles to rise to the surface.

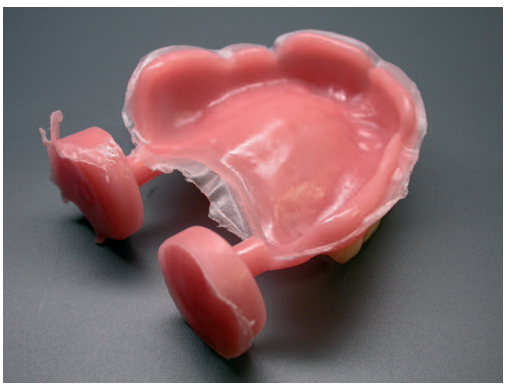
The acrylic should be of a kneadable consistency before the flask is placed into the pressure pot. The acrylic is able to absorb pressure and is compressed in this state. For easier removal, it is recommended that no acrylic comes in contact with the flask. Place the flask in the pressure pot and fill to just below the funnel with warm water (45 °C). Prevent warm water from running into the funnel.



In order to provide controlled polymerisation from "bottom to top", cold tap water must be added to the funnel. The polymerisation time is 30 minutes at min. 2 to max. 2.5 bar at a water temperature of 45 °C.

Removal is easy and uncomplicated, very little post-processing is required.

The gel is reversible and can be melted up to 10 times. Keep it in a closed container until the next time, in order to ensure the moisture content of the gel.



The result seen from basal: a clean transfer of the modellation.

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Merz Dental
is certified according to EN ISO 13485 and thus offers the security and advantages of a future-oriented quality management system.

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