

# Breakthrough in Pediatric Dentistry

**DIRECT SYSTEM**  
PEDIATRIC CROWN



edelweiss  
DENTISTRY

beautiful innovation you can trust

# Bio-Esthetics and Function in One Appointment

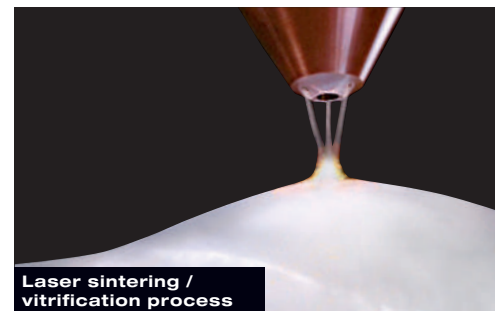
**edelweiss dentistry** is a “think tank” driven by inspiration and technical know-how that conceptualizes and produces innovative systematic solutions that are developed together with partners within the dental industry and marketed via an exclusive dental distribution network. edelweiss VENEER, OCCLUSIONVD, PEDIATRIC CROWN and the POST & CORE system are state of the art for modern and minimally invasive esthetic dentistry.

For the first time in the history of dentistry, it is now possible to work with prefabricated veneers made from Nano-Hybrid Composite using modern laser technology. Never before has it been feasible to directly create the natural shape and youthful luminance of a tooth, so easily and perfectly in a single appointment. Its versatile application together with its time and cost saving procedure makes edelweiss VENEER, OCCLUSIONVD, PEDIATRIC CROWN and the POST & CORE SYSTEM a sound investment in the future with the best interest of the patient in mind. Convince yourself.



**Stephan Lampl**  
CEO, Founder & Inventor  
of edelweiss dentistry

**Claudio Novelli**  
Clinical and  
Scientific Director



**Laser sintering /  
vitrification process**

# The Technical Concept

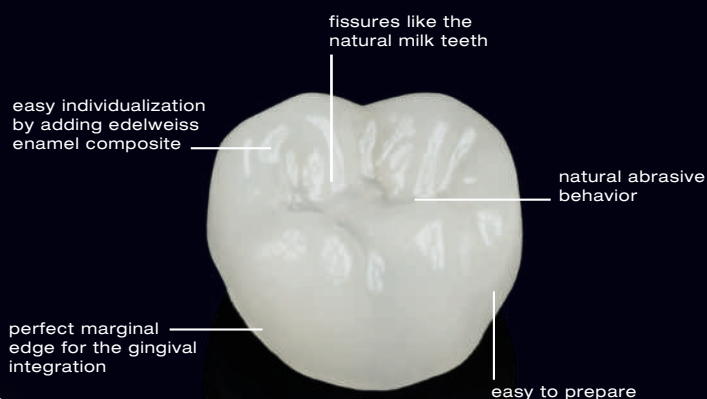
## edelweiss PEDIATRIC CROWNS

In dentistry, treatment of carious milk teeth is a special challenge. Not only is the psychological aspect different to that of adult patients, but also there are anatomical and morphological differences. The small size of the deciduous tooth, close proximity of the pulp to the tooth surface, relatively thin enamel and lack of surface area for bonding all require special attention. Primary anterior teeth can be especially challenging due to their esthetic requirements.

Several options are available for full coverage restorations for the primary dentition, with each approach having some disadvantages of their own e.g. stainless steel crowns with or without ceramic facing and zirconia crowns, but none of these seem to meet the demands of the child patient. The stainless steel crowns are unesthetic and may contain nickel a common allergen in dentistry. On the other hand, zirconia crowns which are more esthetic but require a more aggressive reduction of the milk tooth. Thus, borne out of this necessity for an ideal pediatric crown, edelweiss dentistry makes use of its existing technology that has already been proven for several years in the adult patient to now present the edelweiss PEDIATRIC CROWN.

All the great features of edelweiss VENEERS, OCCLUSIONVDS and POST&CORES i.e. biocompatibility, biofunctionality and bioesthetics are now incorporated into the edelweiss PEDIATRIC CROWN. Thus, within the dental market, none of the existing pediatric crowns contain as many positive features as is in edelweiss PEDIATRIC CROWN.

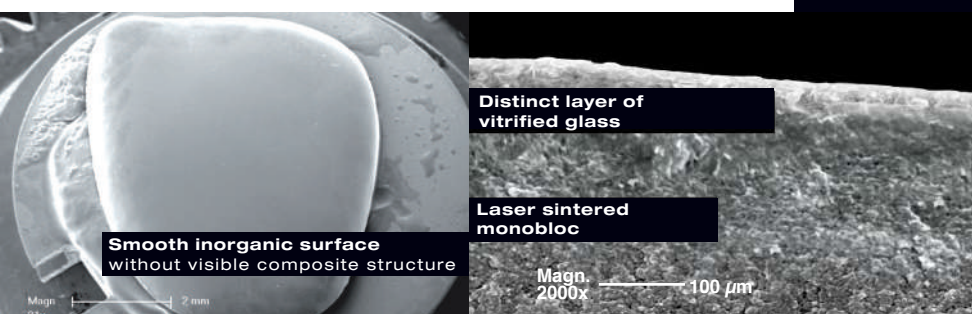
## DIRECT SYSTEM PEDIATRIC CROWN



## INNOVATION

The edelweiss PEDIATRIC CROWNS are manufactured from densely filled nano-hybrid composite through a unique modern laser sintering and vitrification process patented to edelweiss dentistry. The laser-sintered end product is an highly filled inorganic material with compressive strength similar to enamel and modulus of elasticity similar to dentin. Abrasion is similar to natural teeth, hence the edelweiss PEDIATRIC CROWNS do not damage the antagonistic teeth. The unique vitrification process makes the edelweiss PEDIATRIC CROWN highly esthetic with optical properties similar to that of enamel. The incorporation of zinc oxide nanoparticles makes this product uniquely antibacterial and therefore, highly plaque-resistant.

The mesial and distal margins of the edelweiss PEDIATRIC CROWN follow the natural gingival-line of the milk teeth minimizing excessive tooth reduction. These pre-fabricated, bio-esthetical morphology permits a quick and safe treatment with maximum esthetic results. In a single appointment with the edelweiss PEDIATRIC CROWN, the treatment is minimally-invasive with a perfect occlusion.



Technical Data	PEDIATRIC CROWN
Flexural Strength	200 MPa
Compressive Strength	550 MPa
Flexural Modulus	20 GPa
Surface Hardness	95 HV

(Source: University of Geneva / internal data edelweiss dentistry)

# Composition



**Introduction by**  
**Jessica J. Sidharta**  
D.M.D. C.D.T.

## edelweiss PEDIATRIC CROWNS

*"The treatment of carious milk teeth needs more attention, ability and concentration on the part of the dentist. Up until now, stainless steel crowns were for me the single and easiest way of getting a functional restoration with minimal costs.*

*But most kids and their parents were very disappointed with the dark looks and poor esthetics. Even after explaining to parents about the function in these cases they were not satisfied. Parents wanted both esthetics and function in a single crown. For me the edelweiss PEDIATRIC CROWNS are the perfect way to administer a perfectly naturally esthetic crown with minimal invasive procedures where I am in total control of the final outcome. The edelweiss PEDIATRIC CROWN has all the qualities on an ideal pediatric crown that I need".*

**«Easy and safe treatment  
for a healthy smile in children»**

## ADVANTAGES

- Morphology designed to protect the pulpal-horns of milk teeth
- Biocompatible & Bifunctional
- Antibacterial and plaque resistant
- Highly esthetic
- Minimally-invasive preparations or no preparation needed
- Excellent bond to tooth structure
- Cuts like natural tooth
- Easy to adjust in the mouth
- Can be used in partially or fully erupted primary teeth.
- Natural abrasion, no damage to opposing crowns
- Can be easily repaired
- Easy handling by the practitioner
- Less time needed to place crowns
- Cost effective
- Prefabricated for all types of milk teeth in three different sizes



**PEDIATRIC CROWN thickness: Ø 0.5 mm**

# Artificial Nature

## MORPHOLOGY

In comparison with their permanent counterparts, the enamel of primary teeth is relatively thin and has a consistent depth. The dentin thickness between the pulp chambers and the enamel is limited mainly because the pulp horns are high and the pulp chambers are large. The primary molars have a markedly constricted neck when compared to the permanent molars. The roots of the primary teeth are longer and more slender in relation to the crown size. The roots of the primary molars flare out more than do those of the permanent teeth to accommodate for the eruption of the permanent teeth through physiological resorption of the roots.

The crown-morphology has wider approximal-contacts. Taking these factors into account, edelweiss has developed the edelweiss PEDIATRIC CROWN to meet the needs of both function and esthetics by mimicking natural tooth form and function. The crowns have cuspal contours in accordance to the primary teeth pulp horns. Additionally, the edelweiss PEDIATRIC CROWN requires minimal or no tooth preparation minimizing the chances for pulpal exposure. The mesial and distal margins of the edelweiss crowns follow the natural gingival-line allowing for optimal esthetics.

The edelweiss crowns can be individually adjusted to match the patients individual morphology. The mesial-distal contours can be adjusted by simply adding more edelweiss COMPOSITE to attain a perfect contact to the neighbouring teeth.

## DIRECT SYSTEM PEDIATRIC CROWN



DENTISTRY

## INDICATIONS

- Anterior and posterior restorations
- Discoloration of primary teeth
- Morphological deformations
- Congenitally malformed primary incisors
- Primary teeth affected by localized or generalized developmental defects
- Poor enamel quality
- Increasing carious activity
- Following pulp therapy procedures
- Restoration of teeth after pulpectomy or pulpotomy procedures
- Fractured primary teeth following trauma
- As an abutment for a space maintainer or denture
- Severe bruxism
- Nickel-intolerance

## CONTRAINDICATIONS

- Physiological root-resorption progressed, Milk tooth with higher mobility
- Patient non-cooperation or non-compliance
- Allergy to any of the ingredients

# Pre-Treatment



## **PRE-TREATMENT OF MILK TEETH FOR edelweiss PEDIATRIC CROWNS**

- Caries removal with minimally-invasive preparation of milk teeth: following the natural enamel-dentin-line for preventing an iatrogenic exposure of the pulpal chamber.
- It is possible to optimize the wide approximal contacts. All previous caries removed with appropriate instruments. Manual excavators are often used for caries removal.
- It is highly recommended to taper the enamel margin, because the surface of milk teeth is 30-100  $\mu\text{m}$  without prisms. Tapering is important for better adhesion with edelweiss PEDIATRIC CROWNS and a proper dentin-tooth interface.
- Etching of the enamel of milk teeth requires 30 seconds and dentin 7 seconds with 37% Phosphoric acid because of the higher permeability. This is followed by thorough rinsing.

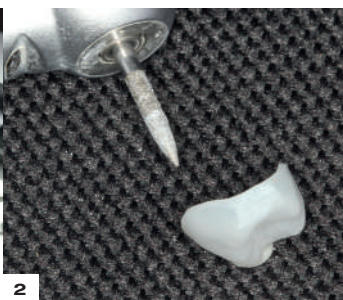


# Step by Step

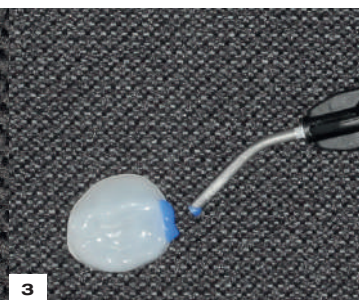
## **DIRECT SYSTEM** PEDIATRIC CROWN



**1**  
edelweiss PEDIATRIC CROWN for any clinical situation



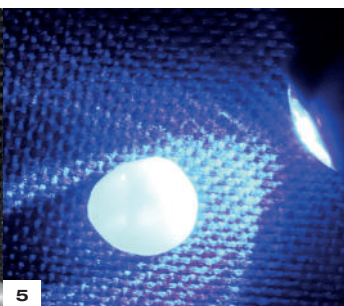
**2**  
For increasing the approximal area, roughen the surface of the PEDIATRIC CROWN with a diamond bur



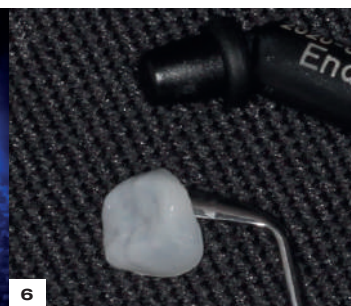
**3**  
Cleaning the smear-layer with 37% phosphoric acid, rinse off and dry.



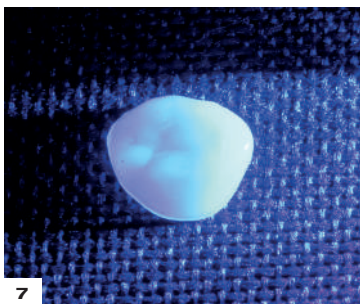
**4**  
Bonding with edelweiss Direct Veneer Bond. This bond is compatible for all edelweiss products



**5**  
Light-curing of the Direct Veneer Bond for 20 sec. (VALO lamp)



**6**  
Building up the approximal area with edelweiss direct composite. This is the same composite used for cementing the PEDIATRIC CROWNS intraorally



**7**  
Light-curing of the composite build-up for 30 sec.



**8**  
Polishing with special polishers, begin with green, after this use grey for high gloss

# Step by Step



**YESTERDAY**

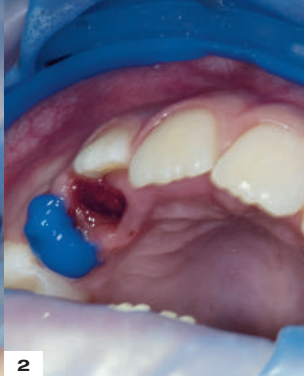
**TODAY**



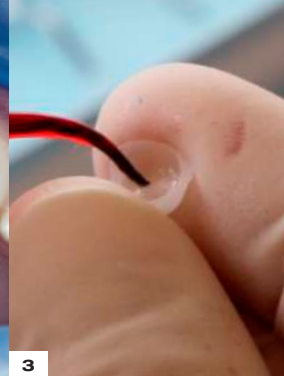
# DIRECT SYSTEM PEDIATRIC CROWN



**1**  
Retraction cord following  
previous caries removal



**2**  
Enamel etching 30  
sec., dentin 7 sec.  
Rinse thoroughly.



**3**  
Bonding the inside of  
the PEDIATRIC CROWN  
with VENEER BOND,  
light cure for 20 sec.



**4**  
edelweiss COMPOSITE  
placed on the inside  
of edelweiss  
PEDIATRIC CROWN



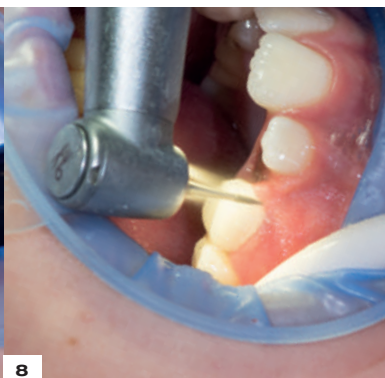
**5**  
Application of edelweiss  
PEDIATRIC CROWN



**6**  
Position of edelweiss  
PEDIATRIC CROWN,  
excess composite removed



**7**  
30 sec. light-curing



**8**  
Finishing



**9**  
Polishing

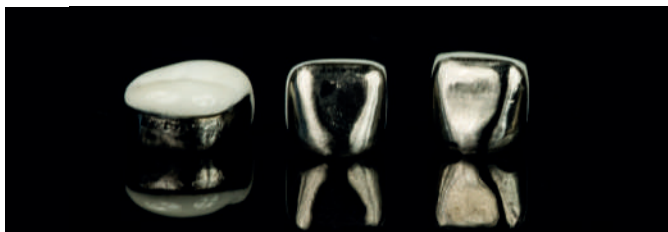


## DENTAL TREATMENT OF CHILDREN

In the past, general treatment of carious milk teeth was done with stainless steel crowns. Nowadays, the material and the esthetics are far more critical. With edelweiss PEDIATRIC CROWNS the treatment is safe, functional and esthetic. The PEDIATRIC CROWNS from edelweiss dentistry are bio-inert and biofunctional. The morphology perfectly mimics the natural tooth form and function.

Even adults refuse to have stainless steel crowns in their mouth, why should we still be treating our children with these crowns.

### YESTERDAY



### TODAY



An ideal dental restorative material for primary molars should be biocompatible, tooth colored, adhere to tooth structure with no subsequent marginal leakage, have sufficient physical properties so as not to degrade in the mouth, have "on-command" hardening after applied to tooth structure and handle easily for the practitioner.

#### Edelweiss PEDIATRIC CROWNS:

- Mimic natural form and function
- Bioesthetical morphology
- Quick, easy and safe treatment
- Optimal esthetic results
- Mesial and distal margins follow the natural gingival-line
- Antibacterial, high plaque-resistance
- Biocompatible natural abrasion behaviour
- No damage to primary antagonists
- Time saving, minimal or no preparation required
- Non/minimal-invasive, protects tooth structure
- Repairable
- Individualisation

# Patient Feedback

## **DIRECT SYSTEM** PEDIATRIC CROWN

### **How did you hear about edelweiss PEDIATRIC CROWN?**

There were booklets about edelweiss dentistry in the pedodontist's office. My favourite aspect was primarily the biocompatibility, because I wanted only the safest and most beautiful therapy available for my children.

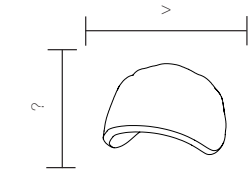
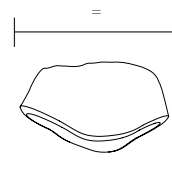
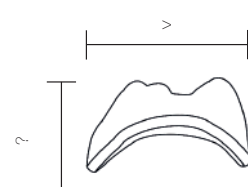
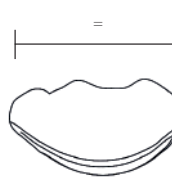
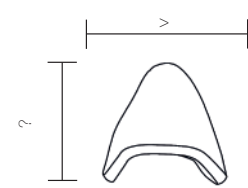
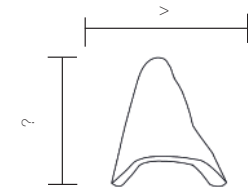
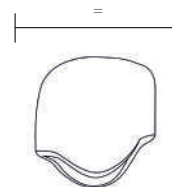
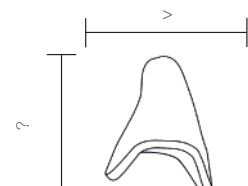
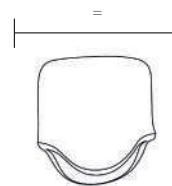
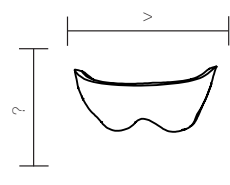
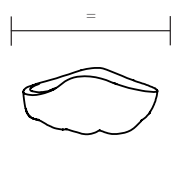
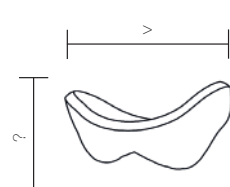
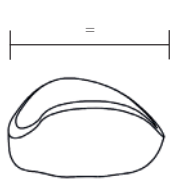
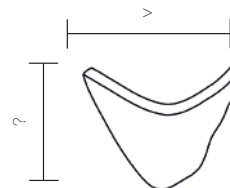
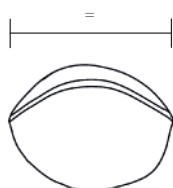
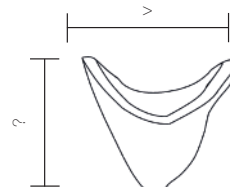
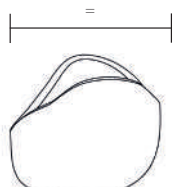
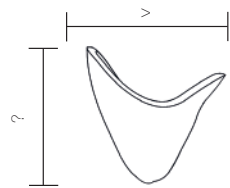
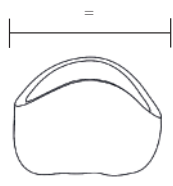
The pedodontist explained the advantages and disadvantages of different restorations and materials. When I saw the metallic crowns for children, I was shocked by the material and the non-esthetic appearance of them.

I would never choose such a metallic crown for a treatment in my mouth, which is why I would never accept this crown in the mouth of my child.

That is why it was only logical to choose edelweiss PEDIATRIC CROWN with all its benefits.



# Technical Aspects & Sizes



Size S - Upper	mesial - distal A	vestibular - oral B	incisal - cervical C
E & F / 51 & 61	5,4	4,5	4,1
D & G / 52 & 62	4,4	4,6	3,9
C & H / 53 & 63	6,0	5,7	4,4
B & I / 54 & 64	6,2	7,5	3,8
A & J / 55 & 65	8,1	8,4	4,1

Size M - Upper	mesial - distal A	vestibular - oral B	incisal - cervical C
E & F / 51 & 61	6,1	4,8	4,7
D & G / 52 & 62	4,9	5,0	4,4
C & H / 53 & 63	6,7	6,3	5,0
B & I / 54 & 64	7,0	8,1	4,3
A & J / 55 & 65	9,0	9,3	4,5

Size L - Upper	mesial - distal A	vestibular - oral B	incisal - cervical C
E & F / 51 & 61	6,6	5,5	5,0
D & G / 52 & 62	5,4	5,6	4,8
C & H / 53 & 63	7,4	7,0	5,5
B & I / 54 & 64	7,6	9,2	4,8
A & J / 55 & 65	9,9	10,1	5,0

Size S - Lower	mesial - distal A	vestibular - oral B	incisal - cervical C
P & O / 81 & 71	3,7	3,2	3,9
Q & N / 82 & 72	4,0	3,8	4,3
R & M / 83 & 73	5,4	5,1	5,0
S & L / 84 & 74	7,6	6,2	4,3
T & K / 85 & 75	8,6	8,0	4,1

Size M - Lower	mesial - distal A	vestibular - oral B	incisal - cervical C
P & O / 81 & 71	4,2	3,5	4,5
Q & N / 82 & 72	4,6	4,3	4,8
R & M / 83 & 73	6,7	6,3	5,0
S & L / 84 & 74	7,0	8,1	4,3
T & K / 85 & 75	9,0	9,3	4,5

Size L - Lower	mesial - distal A	vestibular - oral B	incisal - cervical C
P & O / 81 & 71	4,6	3,9	4,9
Q & N / 82 & 72	5,0	4,7	5,3
R & M / 83 & 73	6,6	6,2	6,0
S & L / 84 & 74	9,3	7,6	5,3
T & K / 85 & 75	10,5	9,7	5,2

# Toolbox & Refills

## DIRECT SYSTEM PEDIATRIC CROWN



**REF 17270 edelweiss PEDIATRIC CROWN TOOLBOX**

### PEDIATRIC CROWN SET REFILLS

REF 17211	PEDIATRIC CROWN 71/O Size S	low
REF 17231	PEDIATRIC CROWN 71/O Size M	low
REF 17251	PEDIATRIC CROWN 71/O Size L	low
REF 17212	PEDIATRIC CROWN 72/N Size S	low
REF 17232	PEDIATRIC CROWN 72/N Size M	low
REF 17252	PEDIATRIC CROWN 72/N Size L	low
REF 17213	PEDIATRIC CROWN 73/M Size S	low
REF 17233	PEDIATRIC CROWN 73/M Size M	low
REF 17253	PEDIATRIC CROWN 73/M Size L	low
REF 17214	PEDIATRIC CROWN 74/L Size S	low
REF 17234	PEDIATRIC CROWN 74/L Size M	low
REF 17254	PEDIATRIC CROWN 74/L Size L	low
REF 17215	PEDIATRIC CROWN 75/K Size S	low
REF 17235	PEDIATRIC CROWN 75/K Size M	low
REF 17255	PEDIATRIC CROWN 75/K Size L	low
REF 17216	PEDIATRIC CROWN 81/P Size S	low
REF 17236	PEDIATRIC CROWN 81/P Size M	low
REF 17256	PEDIATRIC CROWN 81/P Size L	low
REF 17217	PEDIATRIC CROWN 82/Q Size S	low
REF 17237	PEDIATRIC CROWN 82/Q Size M	low
REF 17257	PEDIATRIC CROWN 82/Q Size L	low
REF 17218	PEDIATRIC CROWN 83/R Size S	low
REF 17238	PEDIATRIC CROWN 83/R Size M	low
REF 17258	PEDIATRIC CROWN 83/R Size L	low
REF 17229	PEDIATRIC CROWN 84/S Size S	low
REF 17239	PEDIATRIC CROWN 84/S Size M	low
REF 17259	PEDIATRIC CROWN 84/S Size L	low
REF 17220	PEDIATRIC CROWN 85/T Size S	low
REF 17240	PEDIATRIC CROWN 85/T Size M	low
REF 17260	PEDIATRIC CROWN 85/T Size L	low

### ACCESSORIES

REF 17023	POST space drill 1.0 mm
REF 17024	POST space drill 1.4 mm
REF 17025	POST prep diamond
REF 10621	FLOW Application Tips (5 pcs.)
REF 817005	Instruction for use

### NANO-HYBRID COMPOSITE DENTIN SHADES

REF 10201	Dentin A0	20 x 0.3 g Tip
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### NANO-HYBRID COMPOSITE FLOW

REF 13770	Enamel Flowable	1.5 g Syringe
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### BONDING

REF 10521	VENEER Bond	5 ml Bottle
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REF 17201	PEDIATRIC CROWN 51/E Size S	up
REF 17221	PEDIATRIC CROWN 51/E Size M	up
REF 17241	PEDIATRIC CROWN 51/E Size L	up
REF 17202	PEDIATRIC CROWN 52/D Size S	up
REF 17222	PEDIATRIC CROWN 52/D Size M	up
REF 17242	PEDIATRIC CROWN 52/D Size L	up
REF 17203	PEDIATRIC CROWN 53/C Size S	up
REF 17223	PEDIATRIC CROWN 53/C Size M	up
REF 17243	PEDIATRIC CROWN 53/C Size L	up
REF 17204	PEDIATRIC CROWN 54/B Size S	up
REF 17224	PEDIATRIC CROWN 54/B Size M	up
REF 17244	PEDIATRIC CROWN 54/B Size L	up
REF 17205	PEDIATRIC CROWN 55/A Size S	up
REF 17225	PEDIATRIC CROWN 55/A Size M	up
REF 17245	PEDIATRIC CROWN 55/A Size L	up
REF 17206	PEDIATRIC CROWN 61/F Size S	up
REF 17226	PEDIATRIC CROWN 61/F Size M	up
REF 17246	PEDIATRIC CROWN 61/F Size L	up
REF 17207	PEDIATRIC CROWN 62/G Size S	up
REF 17227	PEDIATRIC CROWN 62/G Size M	up
REF 17247	PEDIATRIC CROWN 62/G Size L	up
REF 17208	PEDIATRIC CROWN 63/H Size S	up
REF 17228	PEDIATRIC CROWN 63/H Size M	up
REF 17248	PEDIATRIC CROWN 63/H Size L	up
REF 17209	PEDIATRIC CROWN 64/I Size S	up
REF 17229	PEDIATRIC CROWN 64/I Size M	up
REF 17249	PEDIATRIC CROWN 64/I Size L	up
REF 17210	PEDIATRIC CROWN 65/J Size S	up
REF 17230	PEDIATRIC CROWN 65/J Size M	up
REF 17250	PEDIATRIC CROWN 65/J Size L	up

# Case Studies

## **CASES BY DR. KUNAL GUPTA, PEDIATRIC DENTIST**

Children's Dental Center, Gurugram India

**YESTERDAY**



**TODAY**



**YESTERDAY**



**TODAY**





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