ParaPost® System

A complete range of posts for direct and indirect indications

COLTENE

Story

The Post Experts

In 1962, Coltene/Whaledent introduced ParaPost, the first standardized post system. ParaPost became a huge international success and today is the most widely used post in dentistry. Since its introduction, Coltene/Whaledent has been continuously improving the design and manufacture of post systems.

The ParaPost system offers a versatile range of fiber posts, metal posts and prefabricated casting post components for any clinical situation. Years of clinical data and studies attest to the safety, effectiveness and versatility of the ParaPost System.

- Global market leader in post systems
- Proven clinical success with > 500 studies
- More than 50 years of expertise
- One-office-visit and laboratory techniques
- Endo meets resto – complete system with core-build-ups and cements

55
years of confidence

ParaPost® – The System At A Glance

	Direct One-Office-Visit Technique		
	Taper Lux	**Fiber Lux**	**Fiber White**
Indication	Ideal for narrow canals and metal-free, high aesthetic restorations	Ideal for metal-free and high aesthetic restorations	Ideal for metal-free and aesthetic restorations, masks discolored roots
Material	Translucent Fiber-Resinmatrix	Translucent Fiber-Resinmatrix	Opaque Fiber-Resinmatrix
Post Design	Cylindro-conical	Cylindrical	Cylindrical
Head Design	Three head design with antirotation surfaces	Two head design with antirotation surfaces	Two head design with antirotation surfaces
Fixing Type	Adhesive – light and chemical curing	Adhesive – light and chemical curing	Adhesive – chemical curing
Retention Type	Passive – retention ledges	Passive – retention ledges	Passive – retention ledges
Aesthetics	○○○○○	○○○○○	○○○○
Stability	○○○○	○○○○	○○○○
Radiopacity	○○○○	○○○○	○○○○
Length Adjustment	At head	At head and post tail	At head and post tail
Light transmitting	Yes	Yes	No
Sizes	4	6	5
Drills	ParaPost Taper Lux Drills		

○|✕ insufficient ○○|✕✕ sufficient ○○○|✕✕✕ satisfactory ○○○○|✕✕✕✕ good ○○○○○|✕✕✕✕✕ excellent

Direct One-Office-Visit Technique			Indirect Casting Technique
XP (Post)	**XH (Head)**	**XT (Thread)**	**XP Casting Technique**
Ideal for the treatment of slim or multi-rooted teeth	Ideal for easy core build-up application	Ideal where very high mechanical grip is required	Ideal for a very sturdy, one-piece cast post/core and choice of alloy
Titanium Alloy Ti6AL4V or stainless steel	Titanium Alloy Ti6AL4V	Titanium Alloy Ti6AL4V	Individual alloy
Cylindrical	Cylindrical	Cylindrical	Cylindrical
Angular, flat head and slightly bent	Rounded, undercut double head design	Rounded, undercut double head design	Tailor-made
Cementation	Cementation	Screwing and Cementation	Cementation
Passive – X-Shape retention pattern incl. cement venting	Passive – X-Shape retention pattern incl. cement venting	Active – Thread and X-Shape retention pattern incl. cement venting	Passive – X-Shape retention pattern incl. cement venting
×××	×××	×××	×××
××××	××××	××××	×××××
×××××	×××××	×××××	×××××
At head and post tail	At head and post tail	At head and post tail	Tailor-made
No	No	No	No
7	7	6	7
7 Para Post Drills, 2-fluted			
6 Para Post XT Drills, 3-fluted, without size 7 (1.75 mm) green			

ParaPost® Fiber Posts

Taper Lux®

› Cylindro-conical post for narrow canals where protection of sound tooth structure is absolutely key

› 4% tapered design provides a good apical fit with greater taper file technique

› Translucent, light-transmitting for fast on-command cementation

› Three head design for easy post length adjustment

› Rounded undercut head shape for optimal core retention

› Four sizes

Fiber Lux®

› Cylindrical post design ideal for universal post application

› Translucent, light-transmitting for fast on-command cementation

› Rounded, undercut double head design for optimal core retention

› Easy post length adjustment on head or apical end

› Six sizes

Fiber White®

› Cylindrical post design ideal for universal post application

› Opaque fiber resin for masking discolored roots

› Rounded, undercut double head design for optimal core retention

› Easy post length adjustment on head or apical end

› Five sizes

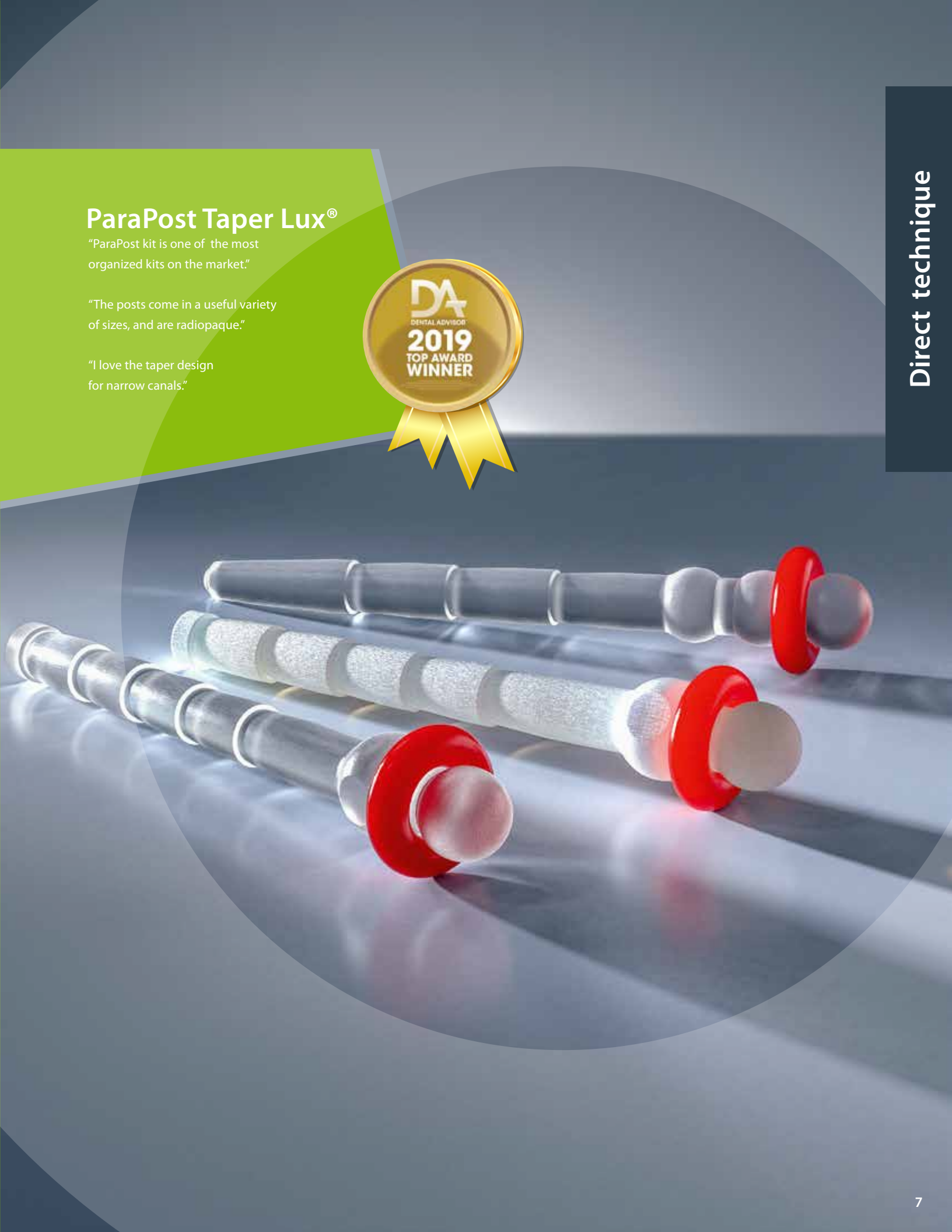
Ø.070" 1.75 mm · Ø.060" 1.50 mm · Ø.055" 1.40 mm · Ø.050" 1.25 mm · Ø.045" 1.14 mm · Ø.040" 1.00 mm · Ø.036" 0.90 mm

ParaPost Taper Lux®

"ParaPost kit is one of the most organized kits on the market."

"The posts come in a useful variety of sizes, and are radiopaque."

"I love the taper design for narrow canals."



ParaPost® – Fiber Posts Benefits

Metal-Free Aesthetics

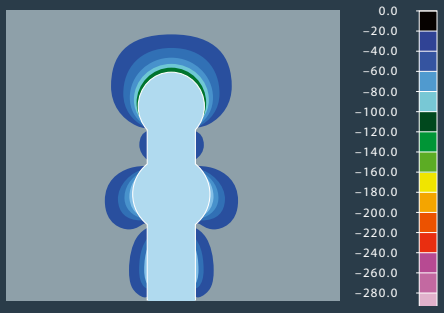
- All ParaPost Fiber Posts are ideal for highly aesthetic, metal-free restorations within their individual characteristics
- Fiber Posts are made of translucent or opaque fiber resin materials that reflect the natural hues of the tooth and eliminates shadows through all-ceramic crowns or composite restorations at the gingival/crown interface.
- Its elasticity performance rivals that of dentin – less risk of fracture of the root since loading is more evenly distributed
- Less brittle than ceramic root posts

Superior Head Design

- Rounded, undercut multi-head designs minimizes stress in the core material due to polymerization shrinkage
- Multi-head designs for easy post length adjustment
- Multi undercuts help to increase mechanical retention of the core material
- Antirotation surfaces stabilize the adapted core build-up

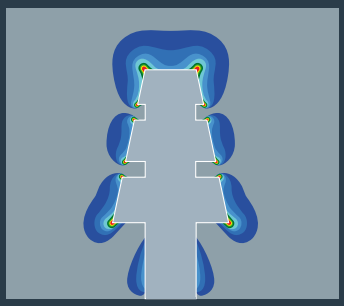
Using computer analysis and imaging*, areas of stress concentrations can be predicted. Red indicates areas of greatest stress.

ParaPost® Fiber Lux®/Fiber White®



The rounded head design of the Fiber Lux and Fiber White reduce stresses in the core material and thereby prevent micro-fractures

Other Posts



Posts that have heads with sharp edges or angles create stress points in the core material that can lead to micro-fractures

Fast On-Command Cementation

- The translucent, light – transmitting fiber resin material of ParaPost Taper Lux and Fiber Lux allows the use of light-curing cements and core material.
- Greater control over cement set time
- Free choice between dual-or self curing resin cements

*** Finite Element Analysis by SAS Ingenieurbüro AG, Switzerland**

Superior Strength

- High percentage of unidirectional fiber clusters gives excellent strength characteristics, without compromising flexibility
- Retention ledges increase mechanical retention
- Cylindrical post design evenly distributes functional forces and eliminates the wedging effect of tapered posts

Uniformly unidirectional fiber clusters strengthen the post structure without compromising flexibility.

1. Remarkable Strength

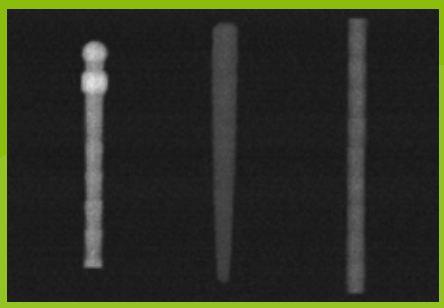
Fiber Lux – 400 × enlargement

2. Superior Strength

A scanning electron microscope image shows a cross-section of a Fiber Lux post

Excellent Radiopacity

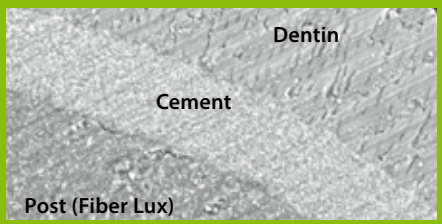
Radiograph of Fiber Lux, and two other fiber posts



The radiopacity of ParaPost Fiber Lux and Taper Lux allows the posts to be seen clearly on a radiograph.

Outstanding Monobloc Restoration

ParaPost Fiber Posts are made for the use of resin based cement and core build-up materials (e.g. ParaCore) to provide an optimal "monoblock" between the dentin-post-crown, resulting in one cohesive restoration with outstanding durability and strength



Extraordinary Bonding

Fiber Lux – 140 × enlargement

Fiber Lux undergoes a chemical bond with self- and dual-curing cements and all core materials with a composite base. This ensures a homogeneous restoration.

ParaPost® Fiber Post – Clinical Application

Preoperative clinical situation of right lateral incisor #12 after root canal treatment with provisional sealing

Removal of provisional sealing

Removing Gutta Percha

Extending the post preparation with a ParaPost bur

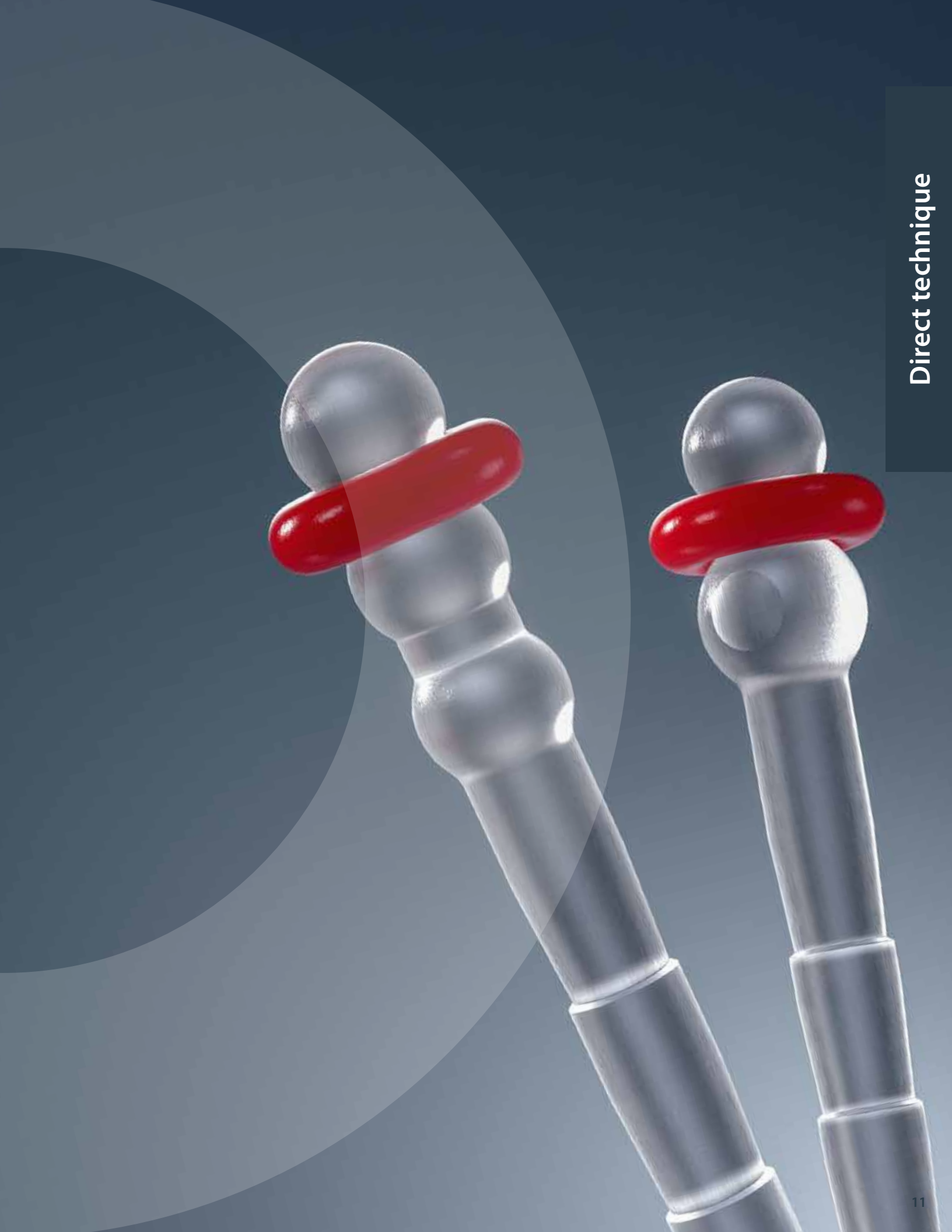
Trial seating of ParaPost Fiber White to check length and fit

Applying One Coat 7 Universal into rootcanal and tooth surface for 20 sec. Afterwards removal of excess bond with a gentle flow of air and a paper point

Freehand core build-up using ParaCore automix

The finished core – ready for the impression

Situation 3 days postop



ParaPost® X-System Metal Posts

XP™ Post

› Cylindrical post with flat head is ideal for the treatment of slim or of multi-rooted teeth

› X-Shape retention pattern including cement venting for superior mechanical grip

› Available in Titanium alloy (Ti6AL4V) and stainless steel

› Seven sizes, all compatible with ParaPost Drills

XH™ Head

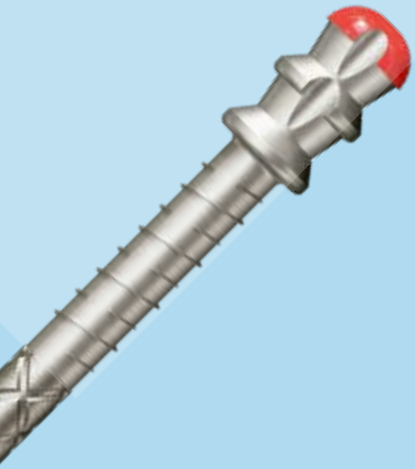
› Cylindrical post for easy core build-up application

› Rounded, undercut double head design for optimal core retention

› Flat shoulder stop provides security against over-insertion and apical stress

› X-Shape retention pattern including cement venting for superior mechanical grip

› Seven sizes, all compatible with ParaPost Drills



XT™ Thread

› Threaded post with X-Shape retention pattern – cylindrical – where very high mechanical grip is required

› Patented, low-profile threads cut through dentin with minimal insertional stress

› Threads are located only in the coronal area where root canal walls are thicker

› Rounded, undercut double head design for optimal core retention

› Flat shoulder stop provides security against over-insertion and apical stress

› Six sizes, all compatible with ParaPost Drills

Sizes

- Ø.070" 1.75 mm
- Ø.060" 1.50 mm
- Ø.055" 1.40 mm
- Ø.050" 1.25 mm
- Ø.045" 1.14 mm
- Ø.040" 1.00 mm
- Ø.036" 0.90 mm

ParaPost® X-System Metal – Benefits

Complete Endodontic Post System For All Indications

› State-of-the-art universal endodontic post system for all direct and casting techniques
› Standardized system with up to seven sizes
› Non-end cutting, depth-calibrated drills for precise canal preparation
› Two- or three-fluted drills available

Patented, X-Shape Retention Pattern Provides

› Resistance to rotation
› Superior tensile retention
› Excellent cement venting
› Parallel sides distribute functional stress equally along the entire length of the post

Special Manufacturing Technique Provides

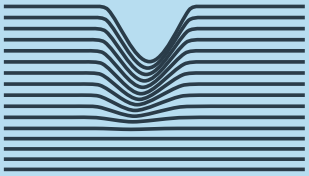
› Increased resistance to oblique forces
› Chamfered for ease of insertion during cementation

What Makes ParaPost®X™ Posts So Resistant To Oblique Forces?

It's the combination of a unique manufacturing technique and retention pattern

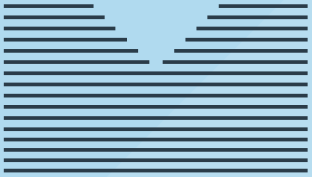
X-Shape Manufacturing

Retention pattern is made by a special cold-forming process which produces an uninterrupted fibrous grain structure in the alloy, increasing the post resistance to oblique forces.



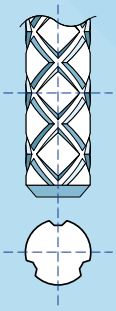
Traditional Manufacturing

Traditional machined retention patterns produce an interrupted grain structure in the alloy, reducing the post resistance to oblique forces.



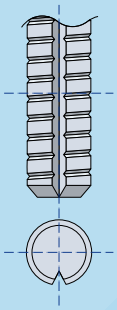
X-Shape Retention Pattern

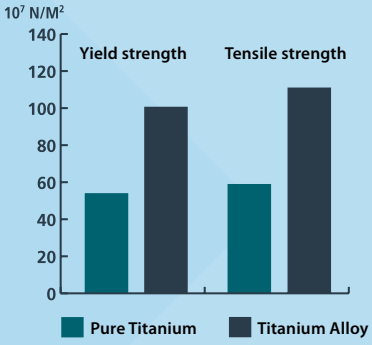
The retention pattern has a larger cross-sectional area at any point along the entire post length, providing greater resistance to oblique forces.



Traditional Retention Pattern

Traditional circular retention patterns have a smaller cross-sectional area at each groove, which concentrates oblique forces toward the inner areas, reducing the post resistance to oblique forces.

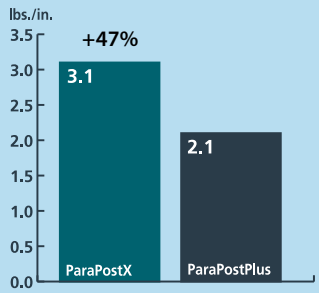




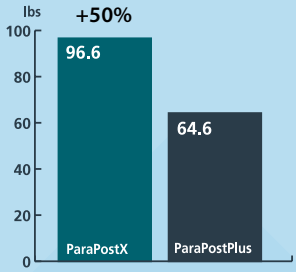
Titanium Alloy

ParaPost X Posts are made from Ti6AL4V titanium alloy which is twice as strong as pure titanium. Ti6AL4V is used for high stress-bearing implant parts (ie., hip joints, dental abutment retaining screws).

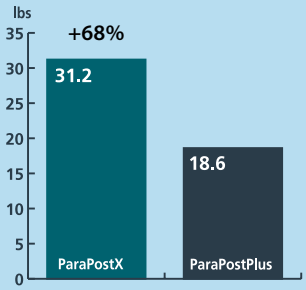
Resistance to Rotation[1]



Tensile Retention[1]



Resistance to Oblique Forces[1]



[1] Source: Lucius Pitkin Inc., Consulting, Engineers, Testing Laboratories

ParaPost® X-System – Casting Technique

XP™ Impression Post

› Cylindrical, rigid polymer post for precise and time saving impression taking

› Impression of entire length of post space without undercuts

› Seven sizes ●●●●●●●, all compatible with ParaPost Drills

XP™ Burnout Post

› Cylindrical, rigid polymer post for precise casting of a one piece cast post/core

› Provides an X-Shape retention pattern for superior mechanical grip and cement venting

› Easy replication of the entire length of the post space

› Stabilizes the wax core build-up during removal

› Individual choice of alloy

› Seven sizes ●●●●●●●, all compatible with ParaPost Drills

XP™ Temporary Post

› Cylindrical, plain titanium post for secure retention of temporary crown

› Preserves the diameter of the canal preparation

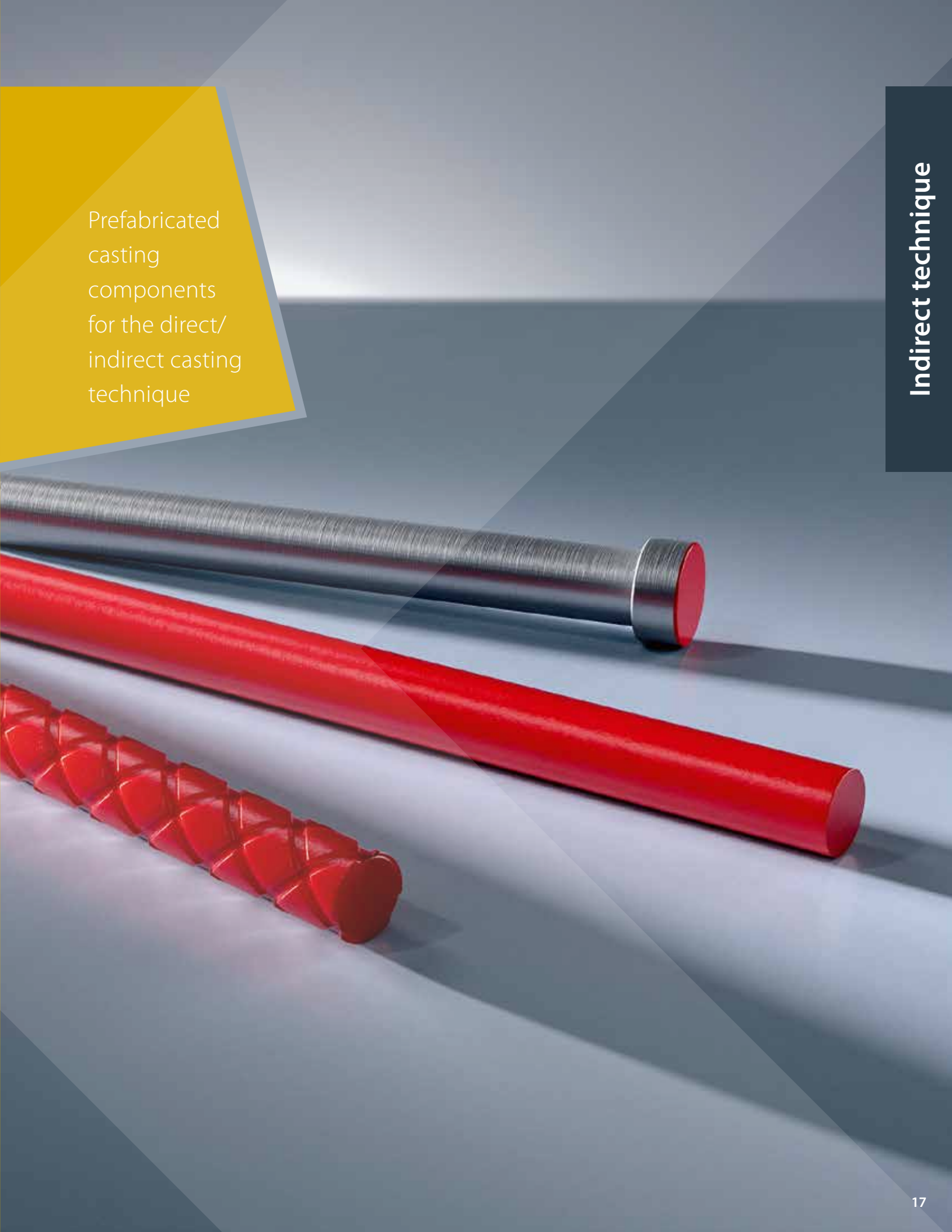
› Friction grip for snug placement, eliminating the need for temporary cement in the canal

› Avoids time consuming removal of temporary cement from post space

› Seven sizes ●●●●●●●, all compatible with ParaPost Drills

● Ø.070" 1.75 mm ● Ø.060" 1.50 mm ● Ø.055" 1.40 mm ● Ø.050" 1.25 mm ● Ø.045" 1.14 mm ● Ø.040" 1.00 mm ● Ø.036" 0.90 mm

Prefabricated casting components for the direct/ indirect casting technique



ParaPost® X-System – Casting Technique – Benefits

› Passive cemented, cylindrical, prefabricated casting components for the direct/indirect casting technique. Ideal for clinical situations requiring the additional strength of a precise, one-piece cast post/core and choice of alloy.

› Provides an X-Shape retention pattern for superior mechanical grip and cement venting. Parallel-sided castings evenly distribute functional stress while eliminating the wedging effect of tapered cast posts.

› All system components are color-coded to the drills

› Chamfered for easy insertion.

ParaPost® Drills

Starter Drill

› Cutting drill to define drill depth
› Two-fluted, very good cutting efficiency
› Laser marks at 7, 9 and 11 mm for drilling depth determination
› For fiber post removal

ParaPost® X-System Drills

› Cylindrical, Standard drills
› Two-fluted, very good cutting efficiency
› Laser marks at 7, 9 and 11 mm for drilling depth determination
› Seven sizes

ParaPost® XT™ Drills

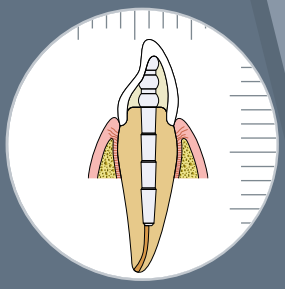
› Cylindrical, Premium drills
› Three-fluted, reduced vibration and higher durability
› Laser marks at 7, 9 and 11 mm for drilling depth determination
› Six sizes

ParaPost Taper Lux® Drills

› Cylindro-conical, drills only compatible for ParaPost Taper Lux Posts
› Two-fluted, very good cutting efficiency
› Laser marks at 7, 9 and 11 mm for drilling depth determination
› Four sizes

Hints And Tips For A Successful Post Preparation

Crown / Root / Post Proportions



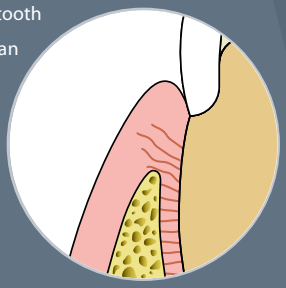
1. Selected Post diameter shall not be larger than ⅓ of root diameter
2. Post length in the root should be as long as the height of the crown
3. Post length should be at least ½ of root length
4. ⅓ of post length should be located in the coronal area and ⅔ in the root
5. Apical stop shall be at a least 4 mm

Ferrule Effect

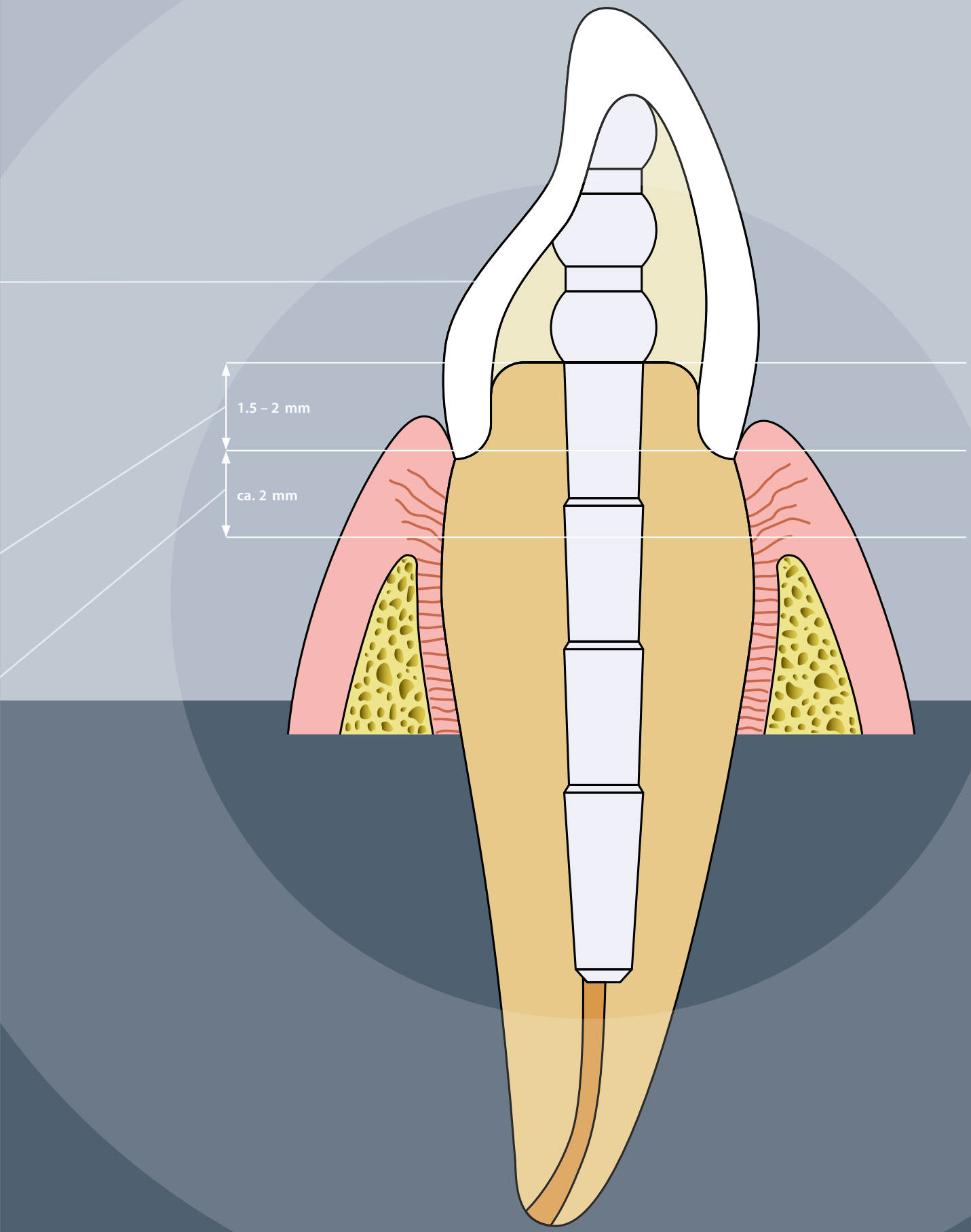
Preserving sound coronal and radicular tooth structure to create a ferrule effect is crucial for the optimal biomechanical behavior of restored teeth. 1.5- to 2 mm of ferrule has a positive effect on fracture resistance. Residual dentinal walls are expected to be at least 1 mm thick. An incomplete ferrule is considered to be a better option than a complete lack of ferrule. In teeth with no coronal structure orthodontic extrusion should be considered rather than surgical crown lengthening.

Biologic Width

The biologic width is the distance from the depth of the gingival sulcus to the crest of the bone (average 2.04 mm*). Biologic width is inviolable to protect periodontal health, which is one of the keys for tooth and dental restoration longevity. This distance can be corrected with crown lengthening: surgical osteotomy, gingivectomy or orthodontic extrusion.



** Schmidt JC, Sahrmann P, Weiger R, Schmidlin PR, Walter C. Biologic width dimensions – a systematic review. J Clin Periodontol 2013; doi: 10.1111/jcpe.12078.*


1.5 – 2 mm
ca. 2 mm

One System – Core Build-Up And Cementation

ParaCore®

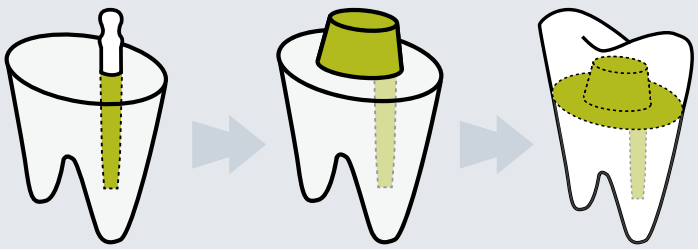
Dual-cured, glass-reinforced composite for post cementing, core build-ups and crown & bridge cementation.

3 Indications – 1 Material
3 Colors – 2 Timings – 1 Material

ParaCore simplifies the post and core restorative technique with its ability to be used as a 3-in-1 material for post cementation, core build-ups and crown & bridge cementation.
ParaCore can also be used to cement inlays and onlays.
Using one material for cementation and core build-ups provides an optimal "monoblock bond interface" between the dentin-post-crown, resulting in one cohesive restoration with outstanding durability and strength.

For more information download the brochure at www.coltene.com

Indications



Post cementing | Core build-up | Cementing of restoration

SoloCem®

Secure cementing does not depend on the number of working steps. Self-adhesive SoloCem achieves reliable values – with no additional bonding.

This is the result of monomers contained and the composite-like formulation. The convenient automix syringe and the ready-to-use mixing tips offer a simple and time-saving application of SoloCem. Easy to use and time-saving high bonding strengths without additional adhesive; low shrinkage; antibacterial zinc oxide; high radiopacity.

For more information download the brochure at www.coltene.com

Easy and fast application

SoloCem saves you time without having to forego reliable bonding. MDP and 4-MET(A) monomers ensure good bonding values on a range of different materials without requiring a separate adhesive. This simplified form of application reduces the risk of potential error sources which could affect the bond and thus the quality of the entire restoration.

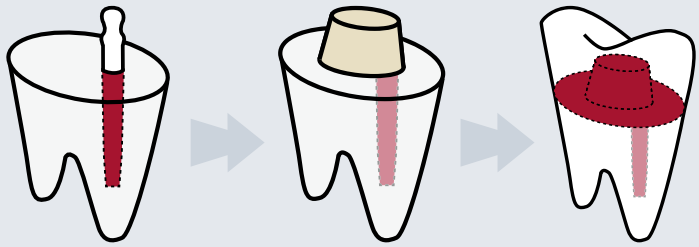
- Self-adhesive properties
- Fluorescent
- Automix syringe and ready-to-use mixing tips
- Intraoral processing time of approx. 60 seconds
- Easy removal of excess material (after light curing for 3 s)

Indications

The easy handling of SoloCem offers advantages in a number of indications. You can count on the self-adhesive properties of SoloCem for the permanent cementation of:

- Crowns (ceramic, metal, composite)
- Bridges (ceramic, metal, composite)
- Inlays (ceramic, metal, composite)
- Onlays (ceramic, metal, composite)
- All types of endodontic posts
- Implant abutments (zirconium oxide and titanium)

Indications



Post cementing

For core build-up use a resin based core build-up material

Cementing of restoration

Order Information

Kits

		Fiber, Metal-free					
		ParaPost Taper Lux		ParaPost Fiber Lux		ParaPost Fiber White	
REF		PF180		PF170		PF160	
Size	Ø in mm	Posts	Drills	Posts	Drills	Posts	Drills
3	0.90	–	–	2 pcs	1 pc	–	–
4	1.00	–	–	3 pcs	1 pc	–	–
4.5	1.14	5 pcs	1 pc	3 pcs	1 pc	3 pcs	1 pc
5	1.25	5 pcs	1 pc	3 pcs	1 pc	3 pcs	1 pc
5.5	1.40	3 pcs	1 pc	2 pcs	1 pc	2 pcs	1 pc
6	1.50	2 pcs	1 pc	2 pcs	1 pc	2 pcs	1 pc
7	1.75	–	–	–	–	–	–

		Titanium Alloy					
		ParaPost XP		ParaPost XH		ParaPost XT	
REF		Titanium Alloy: **P780T** Stainless Steel: **P780**		**P880**		**P680T**	
Size	Ø in mm	Posts	Drills	Posts	Drills	Posts	Drills
3	0.90	4 pcs	1 pc	4 pcs	1 pc	3 pcs	1 pc
4	1.00	5 pcs	1 pc	5 pcs	1 pc	5 pcs	1 pc
4.5	1.14	5 pcs	1 pc	5 pcs	1 pc	5 pcs	1 pc
5	1.25	5 pcs	1 pc	5 pcs	1 pc	5 pcs	1 pc
5.5	1.40	2 pcs	1 pc	2 pcs	1 pc	4 pcs	1 pc
6	1.50	2 pcs	1 pc	2 pcs	1 pc	3 pcs	1 pc
7	1.75	2 pcs	1 pc	2 pcs	1 pc	–	–

		Casting			
		ParaPost XP (US only)			
REF		P781			
Size	Ø in mm	Impression Posts	Burnout Posts	Temporary Posts	Drills
3	0.90	3 pcs	3 pcs	3 pcs	1 pc
4	1.00	4 pcs	4 pcs	4 pcs	1 pc
4.5	1.14	4 pcs	4 pcs	4 pcs	1 pc
5	1.25	4 pcs	4 pcs	4 pcs	1 pc
5.5	1.40	4 pcs	4 pcs	4 pcs	1 pc
6	1.50	3 pcs	3 pcs	3 pcs	1 pc
7	1.75	3 pcs	3 pcs	3 pcs	1 pc

PF180

PF170

PF160

P780T

P880

P680T

P781

Order Information

Refills

		Fiber, Metal-free Posts		
		ParaPost Taper Lux	ParaPost Fiber Lux	ParaPost Fiber White
Size	Ø in mm	5 pcs	5 pcs	5 pcs
3	0.90	–	PF1713	PF1613
4	1.00	–	PF1714	–
4.5	1.14	PF18145	PF17145	PF16145
5	1.25	PF1815	PF1715	PF1615
5.5	1.40	PF18155	PF17155	PF16155
6	1.50	PF1816	PF1716	PF1616
7	1.75	–	–	–

		Stainless Steel		Titanium Alloy Posts			
		ParaPost XP			ParaPost XH	ParaPost XT	
Size	Ø in mm	25 pcs	10 pcs	10 pcs	10 pcs	30 pcs	10 pcs
3	0.90	P7443B	P7443	P7843	P883	P6830B	P6830
4	1.00	P7444B	P7444	P7844	P884	P6840B	P6840
4.5	1.14	P74445B	P74445	P78445	P8845	P6845B	P6845
5	1.25	P7445B	P7445	P7845	P885	P6850B	P6850
5.5	1.40	–	P74455	P78455	P8855	P6855B	P6855
6	1.50	–	P7446	P7846	P886	–	P6860
7	1.75	–	P7447	P7847	P887	–	–

		Casting Posts (US only)			
		ParaPost XP Impression	ParaPost XP Temporary	ParaPost XP Burnout	
Size	Ø in mm	20 pcs	20 pcs	25 pcs	10 pcs
3	0.90	P7433	P7463	P7513B	P7513
4	1.00	P7434	P7464	P7514B	P7514
4.5	1.14	P74345	P74645	P75145B	P75145
5	1.25	P7435	P7465	P7515B	P7515
5.5	1.40	P74355	P74655	P75155B	P75155
6	1.50	P7436	P7466	P7516B	P7516
7	1.75	P7437	P7467	–	P7517

Starter Drill

○✕ Drills		
	Quantity	REF
Starter Drill	1 pc	TEDC1

Drills

		○✕ Drills	○✕ Drills	○ Drills
		ParaPost (all systems – two fluted)	**ParaPost XT** (all systems – three fluted)	**ParaPost Taper Lux** (only Taper Lux)
Size	Ø in mm	3 pcs	3 pcs	3 pcs
● 3	0.90	**P423**	**P6230**	–
● 4	1.00	**P424**	**P6240**	–
● 4.5	1.14	**P4245**	**P6245**	**P8245**
● 5	1.25	**P425**	**P6250**	**P825**
● 5.5	1.40	**P4255**	**P6255**	**P8255**
● 6	1.50	**P426**	**P6260**	**P826**
● 7	1.75	**P427**	–	–
One Drill each size (except 7)		6 pcs	6 pcs	4 pcs
Kit		**P42A**	**P682A**	**P82A**

Starter Drill

ParaPost

ParaPost XT

ParaPost Taper Lux

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