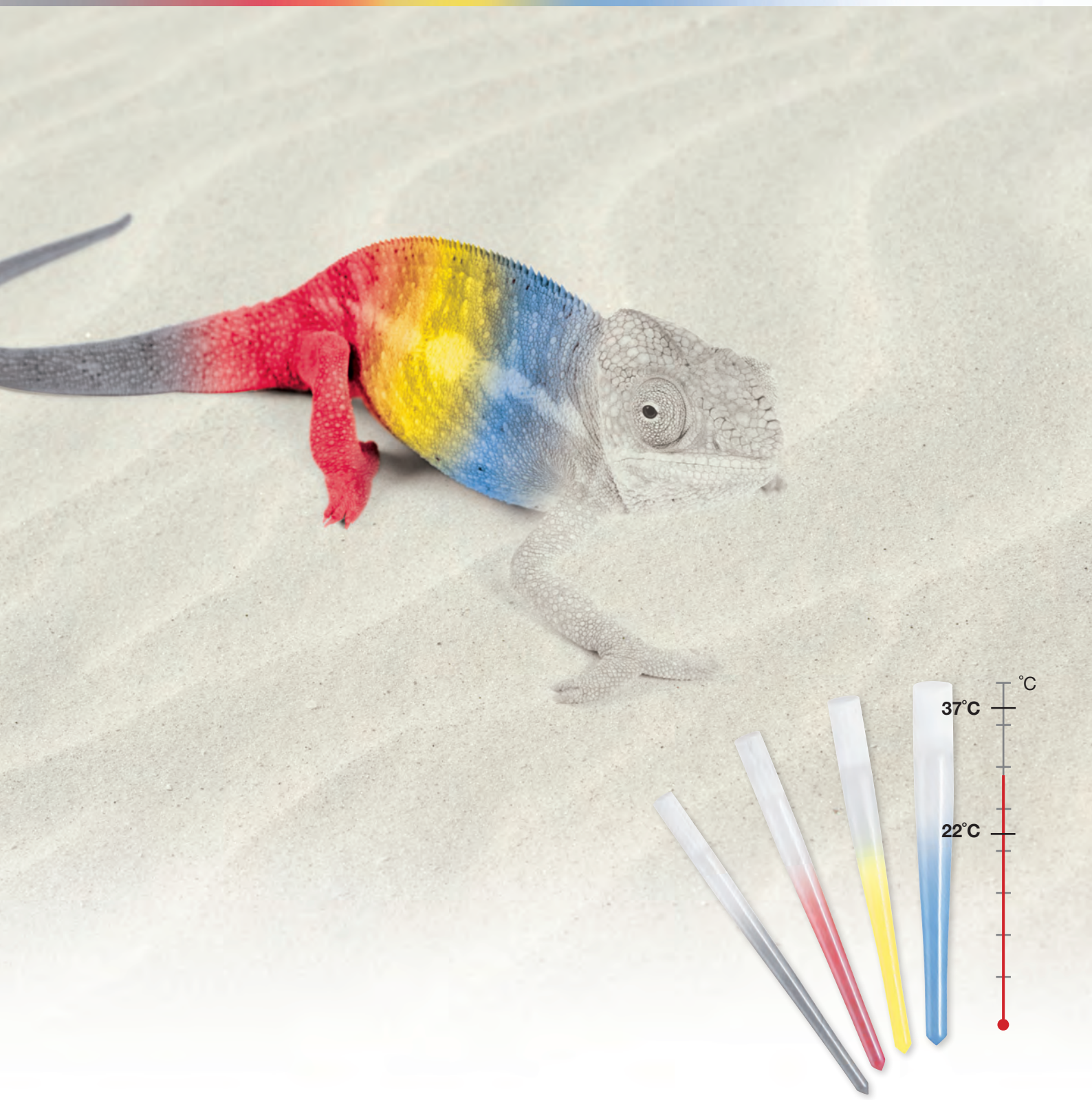
The DT Post Evolution

New root post!



DT LIGHT®

DT LIGHT®SL

DT ILLUSION™SL XRO®

DT Posts – The Innovative Post System

DT Post quartz fibre posts look back on over 10 years of success characterised by innovations, with thousands of satisfied users and many millions of restorations.

> **Can a well-established system be improved?**
> **Yes,** with a clear focus on improving durability and user-friendliness and therefore confidence during treatment.

DT LIGHT®

DT LIGHT® posts have made their mark in dental practice with their excellent translucency and a long period of clinical testing.

Proven Features of DT Posts

- ✓ Root-friendly: elasticity modulus similar to dentine
- ✓ Aesthetic: high translucency
- ✓ Minimally invasive: Double Taper design
- ✓ Clinical control: radiopaque
- ✓ Durable and resistant

DT LIGHT®SL

DT LIGHT®SL offers all the advantages of DT LIGHT® posts – and in addition it provides the innovative Safety Lock® coating for greater convenience and safety.

Safety Lock® Coating

- ✓ One step less during treatment
- ✓ Reliable bonding with the composite cement
- ✓ Long-term bonding adhesion
- ✓ Compatible with all adhesive systems

Tried, Tested and Recommended

REALITY Five Star Award
REALITY'S CHOICES
2004-2008

THE DENTAL ADVISOR
Editors' Choice
2004-2010

Outstanding product 2002

More Than 90 Studies Prove DT Posts Are First Class

Scientists from all over the world have tested DT Posts. Not only does the material quality speak for itself, with its pre-tensioned, monodirectional fibres, homogeneous and inclusion-free structure as well as high fibre density – clinical studies have also proven its long-term durability.

Awards Over Many Years

DT LIGHT® quartz fibre posts have been receiving awards for many years: thanks to their high product quality, strength, post design, high radiopacity and aesthetics. DT ILLUSION™XRO® has also been awarded Editors' Choice with 5 out of 5 possible points by The Dental Advisor: 89% of the panellists rated the root post better than or equal to other fibre posts.

DT ILLUSION™SL XRO®

NEW!

DT ILLUSION™XRO®SL is a unique development among root posts. It offers even more safety for patients and practitioners:

Thermally Reactive Colour Pigments in Epoxy Resin Matrix

- ✓ Invisible in the tooth – but clearly visible during treatment
- ✓ Easy post size identification at all times, without any risk of confusion
- ✓ Both during placement and retreatment: the colour post stands out from dentine and is even easy to recognise without dental loupes.

New Patented Quartz Fibre – XRO®

- ✓ e**X**tra **R**adi**O**paque: outstanding radiopacity
- ✓ Improved flexural strength for highest fracture resistance and durability

Plus all the proven features of DT Posts!

The New DT ILLUSION™XRO®SL

The Quartz Fibre Post with Colour-On-Demand

Invisible in the tooth – but clearly visible during treatment:
Due to thermally reactive pigments, DT ILLUSION™XRO®SL quartz fibre posts are easily distinguishable from dentine when you need it – coloured at room temperature (22°C) making it conveniently visible for placement and retreatment, but translucent at body temperature (37°C) for an aesthetically perfect tooth.

Easier Placement and Retreatment Thanks to Clear Distinction from Dentine

Colour pigments enable posts to be distinguished from dentine when required – even without magnification.

Placement

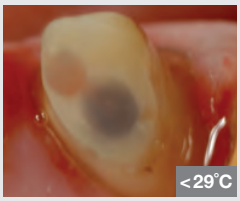
Visible during placement due to cooling

Translucent at body temperature for perfect aesthetics

Source: Dr. Cheleux, University of Toulouse, France

Retreatment

At body temperature, posts are barely visible



After cooling, posts and post sizes are clearly visible

Source: Prof. M. Ferrari, University of Siena, Italy

Cool air or water causes the translucent quartz fibre post to appear coloured. Thus it is possible to distinguish the post from dentine, and as a result, the post is clearly visible at any time during the drilling out procedure.

Easy Identification of Post Size

- Simple selection of matching colour-coded drill
- No risk of mixing up sizes since it is possible to check the post colour at any time
- No removal of ring markings

Perfect Aesthetics at All Times

At 29°C, the transition point is far below body temperature. Integrated in the tooth, cold ambient temperatures do not trigger any transition back to colour; the post remains permanently translucent in the tooth – perfect aesthetics are guaranteed at all times.

Transmitted light image of a fibre post restored tooth (left) with perfect aesthetics

Source: Prof. D. Edelhoff, University of Munich, Germany

New XRO® Fibre for Strongest Radiopacity

A patented quartz fibre with a highly improved radiopacity (360% - 730% Al) enables clear radiographical identification of a DT ILLUSION™XRO®SL quartz fibre post. The root post can be clearly identified from dentine and root filling on a radiograph.

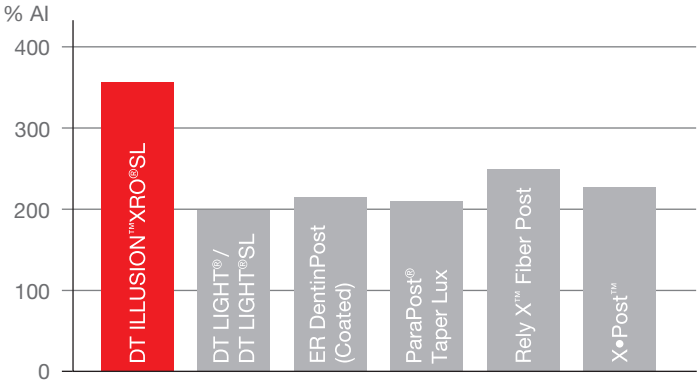
eXtra RadiOpaque

- ✓ Improved control after placement
- ✓ Optimal post detection

Highly radiopaque DT ILLUSION™XRO®SL root posts

Source: internal data from VDW

Outstanding Radiopacity Amongst Competitors



DT ILLUSION™XRO®SL are at least 50% more radiopaque than other root posts examined

Source: RTD laboratory test, St. Egrève, France

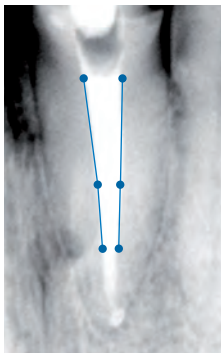
"When removing fibre posts, tooth substance is often unnecessarily removed or a via falsa may be created as it is difficult to see posts in the composite core. Their temperature-reactive colour coding makes DT ILLUSION™XRO®SL quartz fibre posts visible, thus making it easy to differentiate them from dentine. Posts can be drilled out more precisely, preventing unnecessary weakening of the root and reducing the risk of perforation. The improved radiograph contrast facilitates endodontic control and planning."

Dr. C. Zirkel, Specialist in Endodontics, Cologne, Germany

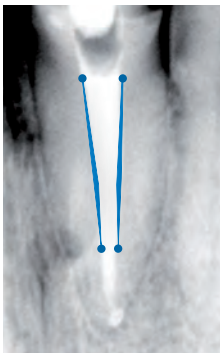
DT: Double Taper Design

Minimally Invasive Adaptation to the Root Canal

Double Taper means dentine-protective post space preparation, where in the endodontically treated tooth as much dentine as possible is preserved and the best possible stability is provided. A good adaptation to the canal shape provided by modern preparation systems is of prime importance.



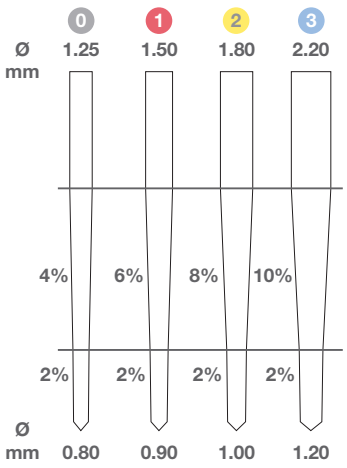
Typical root canal progression after preparation with modern systems: double conicity



Unnecessary dentine removal (root weakening) with a single-tapered post

Source: Prof. Boudrias / Prof. Sakkal, developers of the Double Taper shape, University of Montreal, Canada

- Cylindrical: retention and strength for the build-up
- Greater taper: optimal adaptation to root canals prepared with NiTi instruments
- Smaller taper: substance preservation



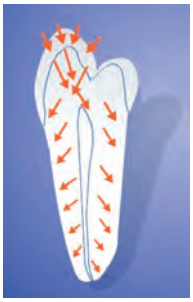
Elasticity Modulus Similar to Dentine

Virtually No Root Fractures

Metal and ceramic posts are very stiff in comparison with dentine. Their low elasticity means that chewing stresses are directly applied to the tooth root which increases the risk of root fractures.

DT Post quartz fibre posts, however, possess an elasticity modulus similar to that of dentine. The stresses are more easily absorbed and are better distributed across the root.

Stress Distribution



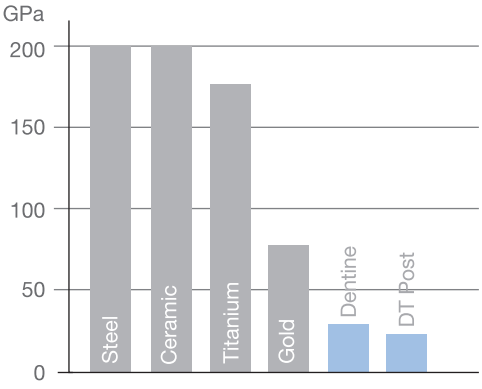
Healthy tooth

Reconstruction with low elasticity modulus

Reconstruction with high elasticity modulus

Source: Dr. B. Duret, Grenoble, France

Elasticity Modulus



Source: RTD, St. Egrève, France

Safety Lock® Coating

Shorter Procedure and Long-Term Adhesion

The Safety Lock® coating replaces the manual pre-treatment of the post with primer or silane and enables secure, long-term bonding with the composite cement.

Shorter and Easier Procedure

No need to prime or silanise the post.

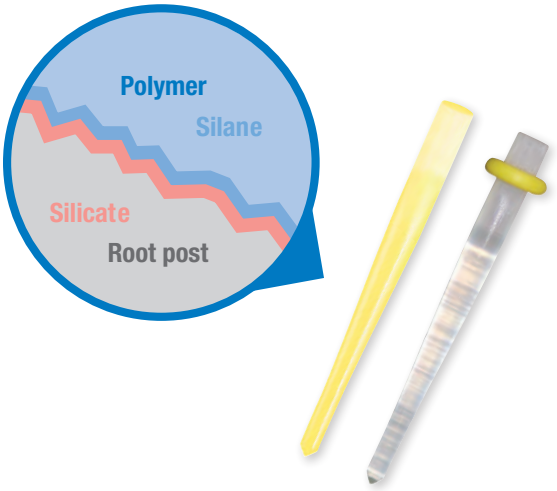
Reliable Bonding

Industrial coating means less risk of failures in treatment. A patented protective layer ensures that the coating is not deactivated.

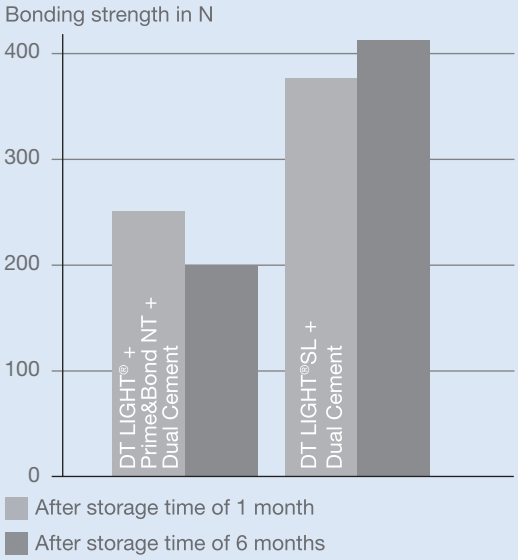
Long-Term Adhesion

The Safety Lock® coating ensures an optimal bonding between post and composite cement – also long-term.

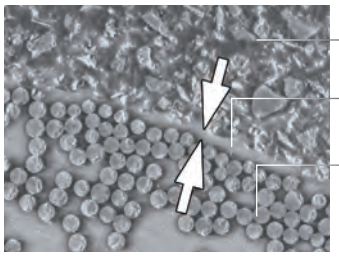
Suitable for all Adhesive Systems and Composite Cements*



Better long-term bonding values for posts with Safety Lock® coating in comparison with manually primed and bonded posts.



Source: Prof. R. Marx, RWTH Aachen, Germany



SEM of the post to cement interface. Safety Lock® coating as a binding partner for the composite cement

Source: Prof. D. Edelhoff, University of Munich, Germany

*DT ILLUSION™XRO®SL quartz fibre posts can be bonded with all of the customary dual or self-curing adhesive procedures and all dual or self-curing composite cements on a BisGMA or UDMA basis.

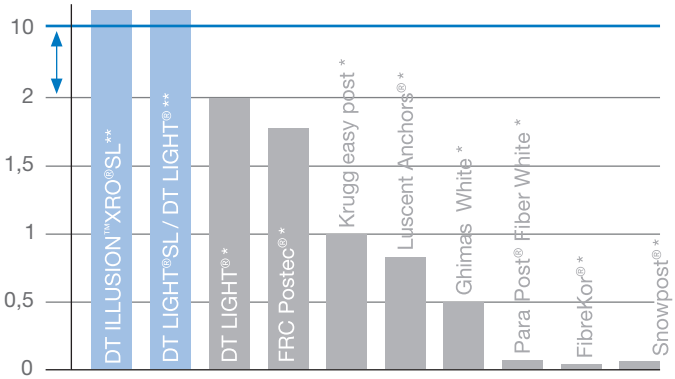
High Flexural Strength

Durable and Resistant

The success of a long-term restoration depends on its performance: over a period of many years it must be able to withstand masticatory loads and also occasional extreme stresses.

Long-Term Resilient

Chewing simulation in millions of cycles



DT Posts withstand 10 million and more stress cycles.
This corresponds to a calculated life time of approx. 20 years.

Sources:

* Test with 2 million cycles: Grandini et al. Fatigue resistance and structural characteristics of fiber posts: three-point bending test and SEM evaluation. Dental Materials 2005, 21: 75-82.
** Test with 10 million cycles under equivalent conditions as (*): Laboratory RTD; St. Egrève, France

Now improved!

Extremely Durable

Thanks to the newly developed XRO® fibre, there is a higher flexural strength of 1,800 MPa (DT LIGHT® and DT LIGHT®SL 1,600 MPa) and thus even lower risk of breakage for DT ILLUSION™XRO®SL.

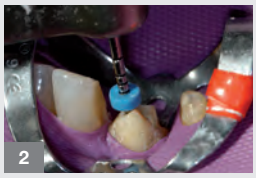
In-Vivo Studies Confirm Positive Long-Term Results

Prof. M. Ferrari,
University of Siena, Italy

"Various long-term clinical studies show outstanding results for DT Post quartz fibre posts: during a 6-year observation period, 91% of cases showed successful outcomes. Less than 1% of the posts (out of more than 1,000 DT Posts) fractured. In those cases new posts could be placed. No root fractures were observed."

Clinical Case: Prof. M. Ferrari

Tooth 13 after opening



Remove gutta-percha and prepare post space

Check seat of post

Etch canal and coronal dentine

Apply adhesive

Apply composite cement

Insert post

Light-cure and then prepare core build-up

Result at cold ambient temperature (< 29°C)

Result at body temperature (37°C)

Source: Prof. M. Ferrari, University of Siena, Italy

Product Range

DT LIGHT®

DT LIGHT®SL

DT ILLUSION™SL XRO®

BasicKit Basic equipment with illustrated instructions 12 posts: 3 per size: #0 / #1 / #2 / #3 4 DT Finishing Drills: 1 per size: #0 (Universal Drill) / #1 / #2 / #3			
	V04 0931 000 500	V04 1930 000 000	V04 1940 000 000
Refill Blister 6 posts of one size in blister: individually packed for convenience			
#0	V04 0931 000 000	V04 1931 000 000	V04 1941 000 000
#1	V04 0931 000 001	V04 1931 000 001	V04 1941 000 001
#2	V04 0931 000 002	V04 1931 000 002	V04 1941 000 002
#3	V04 0931 000 003	V04 1931 000 003	V04 1941 000 003

Accessories

DT Finishing Drills Drills for removing the root canal filling (Universal Drill #0) and for post fitting in the root canal, 2 pieces	
#0	V04 0935 000
#1	V04 0935 001
#2	V04 0935 002
#3	V04 0935 003

DT Post Removal Kit Removal Kit for the fast, safe removal of DT Posts with no unnecessary dentine removal
V04 0938 001
Composibrush Endo brush for applying bonding material to the root canal, 50 pieces
V04 0936 000

VW000279 Rev. 0/13.01.11 Information status: September 2010

You can find more information on DT Post products at: www.vdw-dental.com

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Patent information:
XRO: EP 2181074 and WO 200930859
ILLUSION: EP 1 776 933 and US 7 726 971