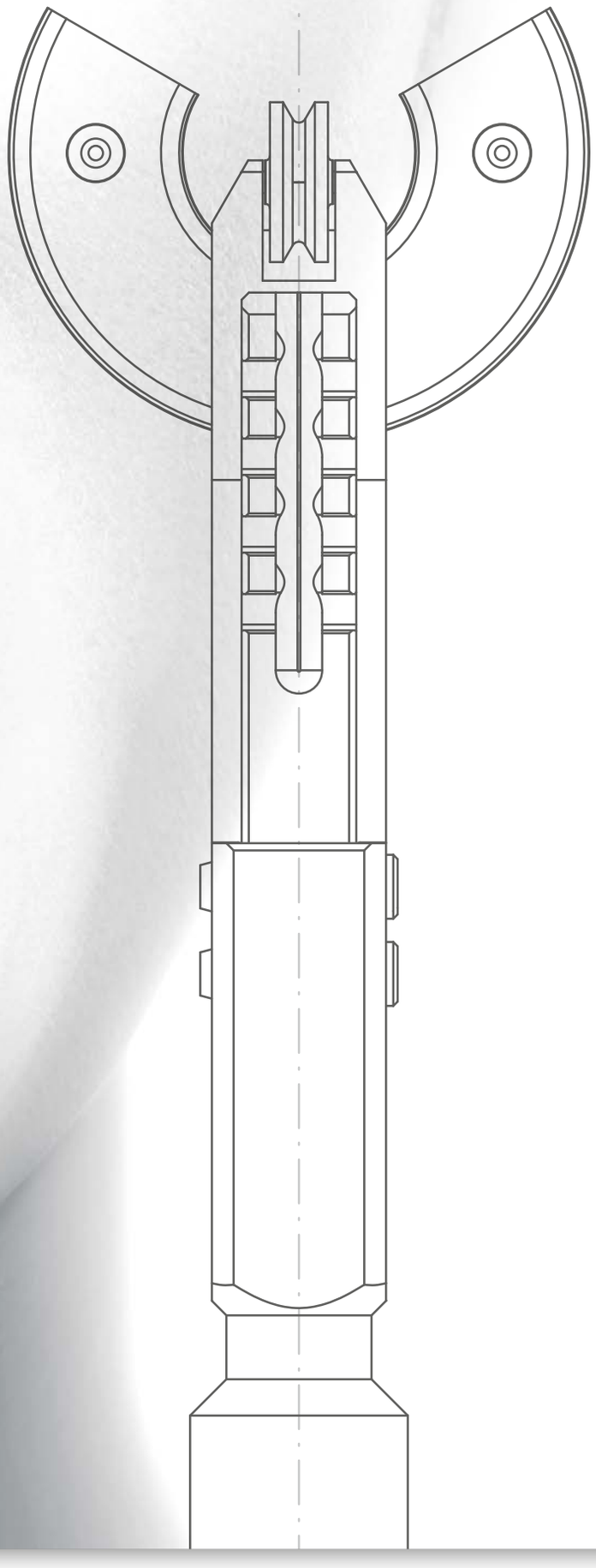
ZEPF dental newsticker

Benex® II Extraction System

acc. to Dr. med., med. dent. Benno Syfrig. Patented



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Picture 1
Longitudinal extraction with Benex® II step by step:
Pivot tooth extracted due to root fracture

Picture 2
Longitudinal extraction with Benex® II step by step:
Axial removal

Picture 3
Longitudinal extraction with Benex® II step by step:
Soft and hard tissues preserved

Picture 4
Longitudinal extraction with Benex® II step by step:
Soft tissue,
12 weeks after extraction

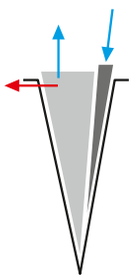
Picture 5
Longitudinal extraction with Benex® II step by step:
Alveolar ridge,
12 weeks after extraction

Extraction System

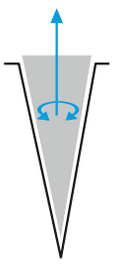
Benex® II

Pat.No. CH 696 458

acc. to Dr. med., med. dent. Benno Syfrig



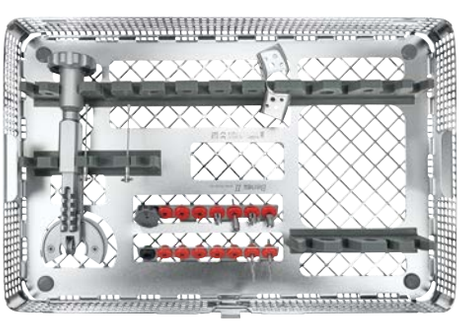
Polygon of forces, conventional:
Pressure on the alveolar wall by forceps or root elevator



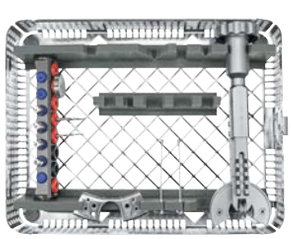
Polygon of forces with Benex® II:
Purely axial traction

In modern dental treatment, implantology following extraction is increasingly favoured. Consistent with the principle of minimal invasion, conserving soft and hard tissue structures is a must. Starting with extraction. The modified Benex® II guarantees a gentle and simple extraction of roots in the whole mouth. It is nearly impossible to harm the soft tissue and the surrounding bone. Due to the longitudinal extraction, Benex® II is an optimal basis for direct implantation. It is also a valuable help for retarded implantation after the extraction with the Benex® II system. Studies made after the use of Benex® II prove that the reossification of the extraction alveole is advancing optimally. This is a great advantage for the retarded implantation.

The new Benex® II is now available in a washtray complying with the RKI guidelines. That way, the requirements of optimal cleanability and sterilization were taken into account. You will find further information, application examples and the Benex® user forum at: **www.benex-dent.com**



12.302.00 Benex® II Extraction System



12.303.00 Benex® II Basic Kit

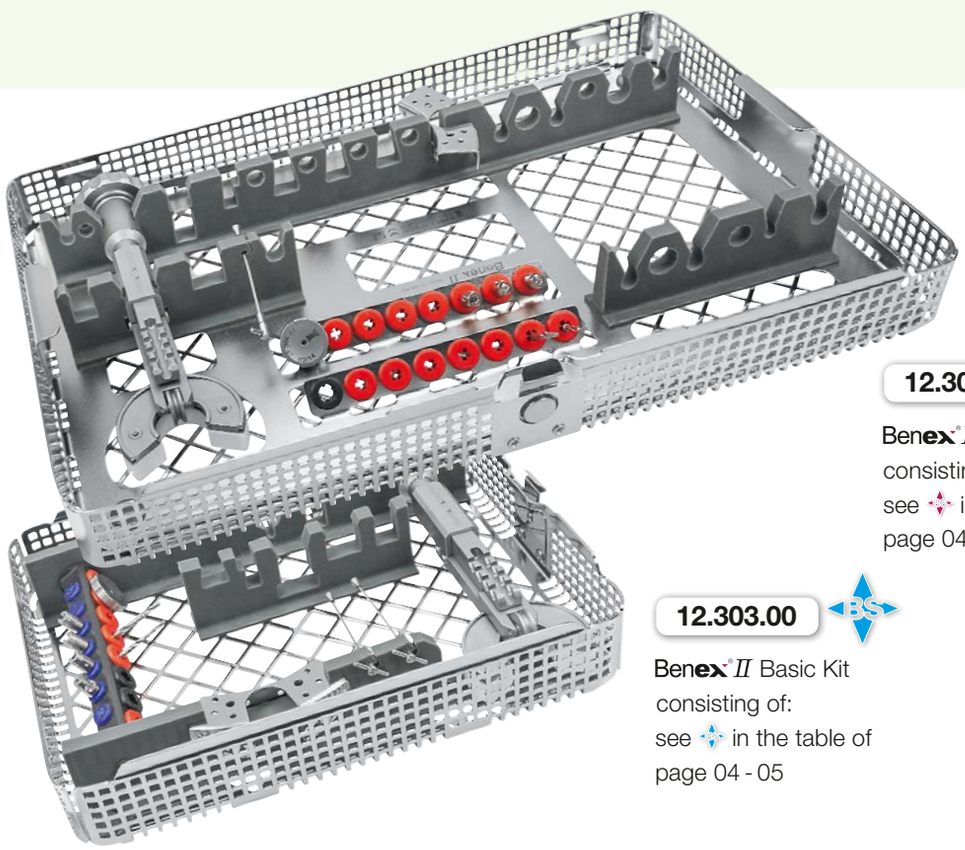
Alveolar Ridge Preservation with Benex® II

What does it mean?

Alveolar Ridge Preservation means the treatment of the dental alveole after extraction. 3 months after the Benex® extraction you find a considerably better ridge relation than with conventional gentle extractions.
The Benex® finds its successful application in both, private practices and universities. The Benex® has achieved an excellent status worldwide as basis for a subsequently successful implantation.
The new support for the dismounted Benex® System in a washtray guarantees an optimal cleanability of Benex® in a washing machine or in an ultrasonic bath. All components can be fixed safely in the support.

Upon cleaning, the system can be sterilized in assembled condition.

In addition to the Benex® components, an optional periotome, an Xtool and an optional Benex® Pole Extractor can be placed in the support.



12.302.00 BS

Benex® II Extraction System
consisting of:
see in the table of
page 04 - 05

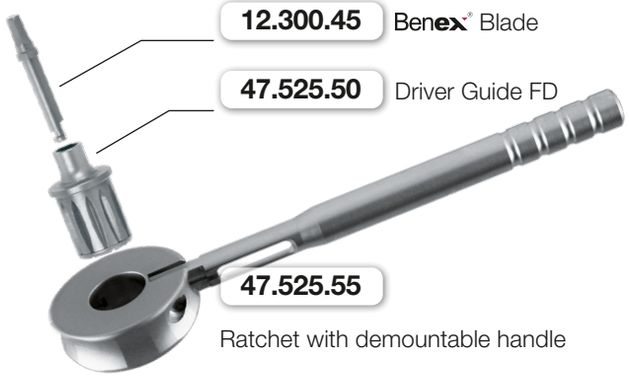
12.303.00 BS

Benex® II Basic Kit
consisting of:
see in the table of
page 04 - 05

Optional Instrumentary

VIDEO
APPLICATION

12.300.11
Benex® Pole Extractor



12.300.45 Benex® Blade

47.525.50 Driver Guide FD

47.525.55
Ratchet with demountable handle

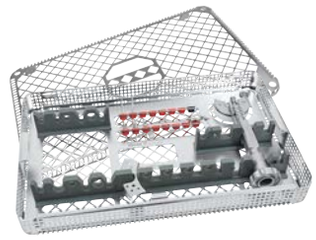
Illustration	Article Description	Order Quantity
	**12.302.00** Benex® II Extraction System consisting of: Benex® II Extractor, 2 Pullropes 48 mm , Driver Guide, Screw short 1.6 mm + 2.1 mm, Screw long 1.6 mm + 2.1 mm, 1 Drill ea. for 1.6 mm, 2.1 mm Screws, Quadrant Support, 85.195.00 Washtray with Lid, 12.302.01 Tray / Rack for Benex® II	1 piece
	**12.302.01** Benex® II Tray / Rack	1 piece
	**85.195.00** Washtray 1/1 with Lid and Press Button Lock	1 piece
	**12.303.00** Benex® II Basic Kit consisting of: Extractor, Pullrope 48 mm, Driver Guide, Screw short 1.6 mm + 2.1 mm, Screw long 1.6 mm + 2.1 mm, 1 Drill ea. for 1.6 mm + 2.1 mm Screws, Quadrant Support, 85.194.00 Washtray with Lid	1 piece
	**85.194.10** Washtray 1/2 with Lid and Press Button Lock	1 piece
	**12.300.08** Benex® II Extractor incl. Support Disc	1 piece
	**12.300.15** Replacement Support Disc, 8 mm (PTFE), optional	1 piece
	**12.300.16** Support Disc, diagonally right, optional	1 piece
	**12.300.17** Support Disc, diagonally left, optional	1 piece
	**12.300.20** Pullrope, 48 mm	2 pieces

Illustration	Article Description	Order Quantity
	**12.300.30** Diamond coated Drill for Screws Ø 1.6 mm 12.300.60 and 12.300.70	2 pieces (1)
	12.300.35 Diamond coated Drill for Screws Ø 2.1 mm 12.300.65 and 12.300.75	2 pieces (1)
	**12.300.47** Driver Guide, short	1 piece
	**12.300.60** Screw, Ø 1.6 mm, 10 mm, S = Short	2 pieces (1)
	12.300.65 Screw, Ø 2.1 mm, 10 mm, SF = Short & Fat	2 pieces (1)
	**12.300.70** Screw, Ø 1.6 mm, 16 mm, L = Long	2 pieces (1)
	12.300.75 Screw, Ø 2.1 mm, 16 mm, LF = Long & Fat	2 pieces (1)
	**12.300.80** Quadrant Support for Benex® to bridgeover bigger gaps and for the universal molding	1 piece
	**12.300.11** Benex® Pole Extractor, optional	1 piece
	**47.525.55** Ratchet with demountable handle, optional	1 piece
	**47.525.51** Driver Guide FD, optional	1 piece
	**12.300.45** Benex® Blade for Driver Guide FD, optional	1 piece

Benex®
Pat.No. CH 696 458

Application of the Extraction System

1. Anaesthesia. Cutting periodontal fibres (Sharpey fibres) in the sulcus by using the Periotome or the **HELMUT ZEPF** Xtod.

2. Strong, large roots must be loosened / luxated by axial movements within 30 sec., using a slim elevator / twister (Xtod from **HELMUT ZEPF**). Without using transversal movements. In case of multi-rooted teeth, the roots are divided and extracted separately.

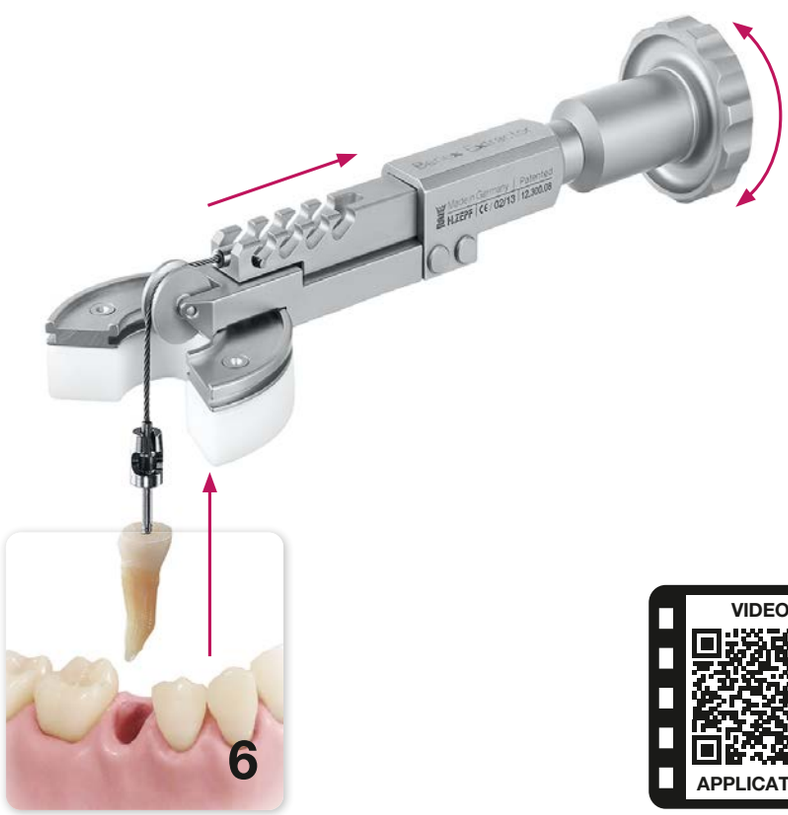
3. Drilling with the diamond coated twist drill should be in the axis and center of the root fragment. It should be approx. 7 mm in the hard tissue, deeper drilling will not be necessary. Drilling is performed with water-cooling. In order to remove drilling chips more easily, an inward and outward movement is recommended for deep drilling.

Recommended rpm:
500 - 700 rpm
REF **12.300.30 max. 3000 rpm**
REF **12.300.35 max. 2200 rpm**

4. According to circumstances, the short or long extraction screw with screwing support REF **12.300.47** is inserted.

5. The extractor is positioned on the adjacent crowns: The opening of the round, revolvable segment plate is adjusted in vestibular direction ensuring a good view of the extraction screw. After the pullrope has been hooked into the extraction screw, it is guided over the reverse roller and fixed to the hook of the extraction slide. Under slight traction – so that the rope does not hang out – the instrument is placed on the adjacent teeth by turning the hand screw.
During positioning it is important to see that both the screw and the rope do have the same axial direction.

6. Once the extractor is positioned properly, the extraction is carried out by turning the hand screw. In case of strong, long roots the periodontal fibres have to be pre-stretched during 30 seconds by applying a sub-maximum traction.



VIDEO
APPLICATION

Extrusion as a logical consequence of extraction

A very easy method for crown lengthening with the Benex®-Extractor

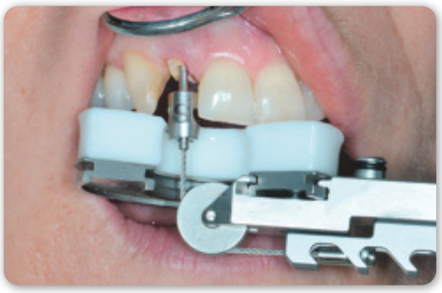
Teeth with a subcrestal root defect (caused by caries or by traumatic injuries) present a lack of biological width and are often not judged to be worth saving, i.e. they are classified as “hopeless” and are extracted.

Periodontical surgical and orthodontic procedures are applied for the pre-prosthetic restoration of the biological width. This is an absolute precondition for a dental restoration in case of a profound root defect. In the front tooth area, periodontal surgical methods are usually inapplicable and orthodontic procedures are time-consuming and cause high labor costs.

The oral surgeon and implantologist Dr. Benno Syfrig from Lucerne shows how a crown lengthening can be performed easily and economically with the Benex® System. Thus, he was able so far to create a pre-prosthetically convenient biological width in more than 50 teeth classified as “hopeless”.

He has standardized the procedure of Benex® extrusion as follows:

1. Root treatment, unless already existing
2. Root canal preparation with the RelyX fiber post (up to size Red)
3. Benex® drilling, Benex® screw fixation, Benex® extrusion (picture 1)
4. Fixation of extruded root with wedges (picture 2)
5. Definite preparation of root post (picture 3)
6. Provisional plastic crown, splinting on neighboring teeth (picture 4)
7. Removal of splint three weeks after extrusion
8. Definite crown restoration three months after extrusion (picture 5)



Picture 1:
After the preparation of root posts: Benex screw was inserted and the extractor was positioned.

Picture 2
The extruded root is fixed with wooden wedges and then the Benex screw is removed.

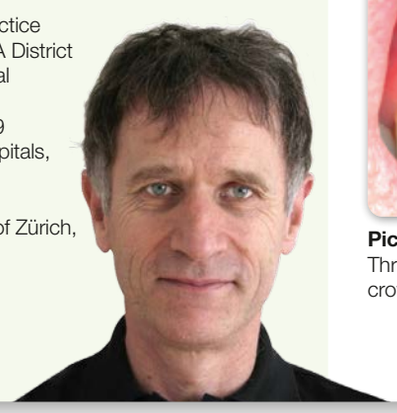
Picture 3
The canal pin is cemented.

Picture 4
A crown temporary is prepared with synthetic material and fixed with the help of the neighboring teeth.

Picture 5
Three months after extrusion, the final crown restoration is performed.

Curriculum Vitae: Benno Syfrig

- Since 1992 Oral-Surgical Referral Practice with Dr. Bernd Bloch
- Development and scientific evaluation of a new, minimally invasive surgical method for implantation in the maxillary sinus area: Publication in 2010, Deutscher Ärzte-Verlag | zzi | Z Zahnärztl Impl | 2010; 26 (1)
- Development and patenting of an instrument for a tissue-conserving tooth root extraction (Benex Extractor)
- Adviser activity as specialist dental practitioner since 15 years
- Since 1998 Management of the ITI (International Team for Implantology) User Meeting of Central Switzerland
- Regular Live Demo Surgeries of Implantation for Dentists and specialists from dental industry
- 1989 - 1992 Dental Assistant in a Private Practice
- 1982 - 1989 Regular substitution of the SUVA District Medical Officer, approx. 1 working year in total
- 1986 - 1989 Studies of Dental Medicine, University of Basel, State examination in 1989
- 1979 - 1986 Assistant Doctor in different hospitals, with focus on surgery
- 1981 Doctoral Thesis: The Splenome
- 1973 - 1979 Studies of Medicine, University of Zürich, State examination in 1979



The Pole Extractor

The patented supplement to the *Benex® II* Extraction System

For roots with a strong decline to the occlusion level and / or inappropriate access for the positioning of the *Benex® II* Extractor.

For poorly anchored root / tooth fragments:

- in apical root fractures after conventional extraction
- in deep loss of attachment
- in small periodontal root surface
- in deflected tooth germs

Examples of use:

- palatal roots of the molars in the upper jaw (buccomesial decline)
- distal roots of the molars in the lower jaw (mesial decline)
- horizontally deflected canines in the upper jaw
- apical root fragments after conventional extraction
- loosened roots in the case of deep loss of attachment
- roots with small periodontal surface
- deflected root germs (mesiodens et al.)

For detailed information, examples of use and the Benex® User Forum, please refer to:
www.benex-dent.com

VIDEO APPLICATION

12.300.11

Benex® Pole Extractor
scale 1:1

HELMUT ZEPF MEDIZINTECHNIK GMBH

HELMUT ZEPF MEDIZINTECHNIK GMBH · FACTORY FOR DENTAL & SURGICAL INSTRUMENTS
Obere Hauptstr. 16-22 · 78606 Seitingen-Oberflacht, Germany
Tel.: +49 (0) 74 64 / 98 88 -0 · Fax: +49 (0) 74 64 / 98 88 -88 · **zepf-dental.com**

MADE IN GERMANY