



DEWIMED®  
SMART INNOVATION



Orthodontic Skeletal Anchorage Screw

O.S.A.S.

### Mini Screws:

The future of orthodontic anchorage implants is the mini titanium screw. In contrast to traditional treatment there is **no need for anchorage teeth** anymore, so teeth movement can be realized even if there are teeth missing.

Thanks to mini screws extra oral equipment becomes unnecessary. They allow effective working without being dependent on cooperation of individual patients. Minimal size, as well as the complication-free use of mini screws opens an innovative clinical therapy spectrum. **This means biomechanically creative solutions, a shorter treatment period and exact and effective tooth movements become a common way of working for orthodontics.**

### DEWIMED O.S.A.S. System:

Every O.S.A.S. Screw is made of titanium (Ti6Al4V) which is the globally successful, safe and experienced material with particularly high biocompatibility. The extremely **stable and highly flexible O.S.A.S. Screws** have a diameter of 1.6 mm (core diameter 1.1 mm) and vary in the lengths between 5 and 10 mm. All screws do have a self drilling and self tapping pin to assure an easy and safe insertion into the bone.

The direct implant fixation allows an immediate transmission of forces to the implant. In general, the implants are loaded immediately after insertion. In contrast to conventional implants micro screws are **not completely osseointegrated**. Temporary limited application time for orthodontic purposes with its incomplete integration is not clinically detrimental- it makes the later implant removal even easier.

Each orthodontic treatment is individual, so mini screws have to be individual as well. Five different types of heads enable the perfect solution for each orthodontic condition. Bone structure, insertion area and gingival condition are deciding your choice of screw.

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**Dr. Martin Baxmann**  
Germany

### **...easy insertion**

Using DEWIMED mini implants since several years I can highly recommend them. Highlights for me are clearly the very easy insertion and the very good stability which led to a loss rate of nearly 0%! Also, as an experienced user of fixed lingual appliances, I am happy about the brandnew screw, especially designed for anchorage in lingual orthodontics and for palatally anchored distalization appliances. This mini implant is another milestone of the DEWIMED O.S.A.S. System.



**Dr. Eduardo Morzán**  
Peru

### **...fracture is virtually reduced to zero**

Working with DEWIMED mini implants since 2008 has allowed me to significantly improve my orthodontic practice through creating simple, efficient and predictable clinical protocols of highly complex dental movements. These protocols include intrusion, retraction, open bite closure, etc. and are characterized by the manipulation of the line of action of the resultant force in relation to the center of resistance of the active unit in order to create statically determined force systems. Manipulating forces in relation to the center of resistance is the key for clinical success.

Clinical handling of DEWIMED O.S.A.S. mini implants is simple. There is a short learning curve to achieve mastery in insertion. After inserting more than 700 DEWIMED O.S.A.S. screws on my patients, I can assure that fracture is virtually reduced to zero when manipulation is precise. After all, I have not fractured any mini implant yet.



**Dr. Ricardo Medellín**  
México

### **...clinical stability**

After having used since 2009 different types of DEWIMED mini implants and resolved various types of malocclusions with them, I can recommend them widely for clinical stability, tolerance by patients and easy insertion.



**Dr. Masaki Itagaki**  
Japan

### **...maximum anchorage**

The failure rate of mini implants in orthodontic anchorage is still high, and it bothers many doctors; especially, cortical bone in labial aspect of the maxillary is thin and soft so that the failure rate is higher.

As a solution of this problem, single mini implant is inserted in the palatal side of the maxillary, or multiple mini implants are used with plate.

However, if there is the sufficient space in the second molar for retraction, and the cortical bone is hard enough, O.S.A.S. screws enable to retract the maxillary and mandibular teeth in order to deal with the optimal insertion angle and position without extraction of premolar with dedicated instruments.

O.S.A.S. screws provide the conventional way to screw between the two roots of a tooth as maximum anchorage as well as the en-masse movement of dentition.



**Prof. Dr. Júlio de Araújo Gurgel**  
Brasil

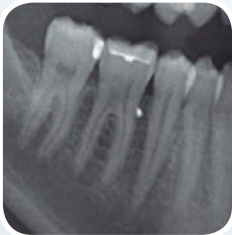
### **...low profile head**

DEWIMED mini implant is a great product!! Easy insertion and low profile head became them useful for placement in multiple jaws areas. Using the DEWIMED system since 2007, I have never done prior cortical bone perforation, even in posterior mandibular area. The polishes threads offer easy insertion and removal resulting in considerably shorter side chair time.

## Four steps to a perfect anchorage!

Self-drilling and self-tapping t screw to facilitate the setting, the O.S.A.S. Screw head offers ideal conditions for the surrounding gingiva.

1. X-ray



2. Position



3. Screw



4. Immediately use



Original Size



## Clinical cases

Distalisation of canine tooth



Mesialisation of molar



Intrusion of incisors



## Clinical Cases

A 18 years old, male patient has Protrusion of the upper and lower lips. With help of DEWIMED SLOT Screw on the labial sides of the maxilla and the mandible and an implantation on the palatal side of the maxilla the tooth could be moved in the wished position. The orthodontic treatment was done within 23 months.

### Initial



### after Extraction of 3rd Molar, after 6 months



### after 18 months



### after 23 months

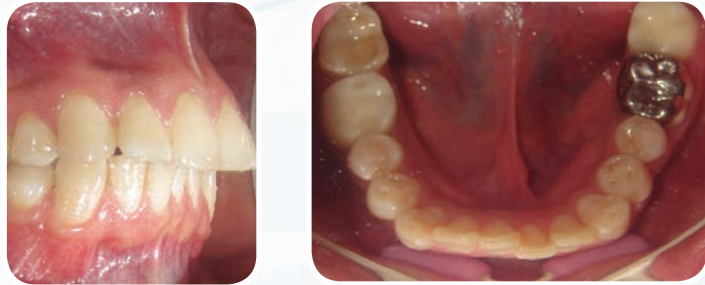


## Clinical Cases

Class II 26 years old male patient (Fig. 1)

Unfortunately at the beginning of its orthodontic treatment the extraction of mandibular right first molar was required by his condition (Fig. 2).

**Figure 1:**



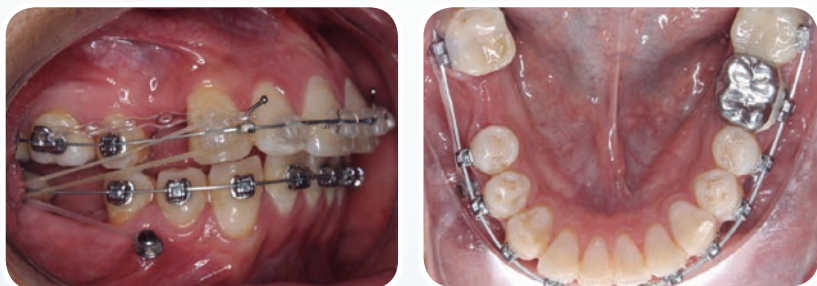
**Figure 2:**



At a patient having this bone characteristics is not easy to mesialize the second molar and take the third as option for restore posterior occlusion with traditional orthodontics. So it was necessary to place a Mini Implant (DEWIMED M.O.S.A.S. 8 mm) to support the mesialization additionally to its elastic class II (Fig.3).

After 11 months of treatment the space was closed and the sagittal relationship preserved as the presence of the third molar which now serves as second molar (Fig. 4).

**Figure 3: beginning**



**Figure 4: after 11 months**

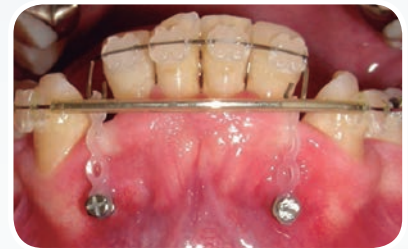


## Clinical Cases

A 31 years old male patient needed lower incisor intrusion. Two mini implants (DEWIMED, 6 mm) were inserted distal to both lateral incisors to create a statically determined force system. 40g of force was vertically applied to each lateral incisor. In order to avoid vestibular inclination during intrusion a 0,018 x 0,025" stainless steel full arch wire was used. Periodontal health and teeth vitality were not compromised during intrusion. The complete treatment was finished after 4 months.



**beginning**



**after 7 days**



**after 3 months**

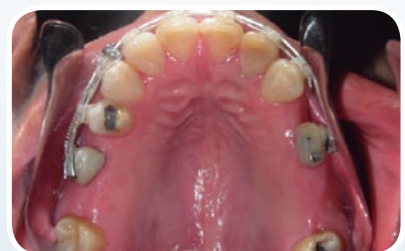


**after 4 months**

A 23 years old female patient with multiple missing posterior teeth needed anterior teeth retraction. 4 mini implants (DEWIMED, MOSAS 6mm and SLOT 6mm) were vertically inserted on the edentulous alveolar ridge. Mini implants' heads were joined each other using composite resin to create "dental crowns" which let us bond an adhesive 0,022 x 0,025" tube. Crowns worked as bone anchorage for retraction mechanics.



**beginning**



**beginning**



**beginning**



**after 4 months**

## Clinical Cases

A 11 years old female patient needed unilateral Brodie bite correction. Intrusion and palatal inclination of the upper left first molar and second bicuspid was planned to harmonize the transverse discrepancy. Two mini implants (DEWIMED, MOSAS, 6 mm) were inserted 2 mm away from the midpalatal raphe between first and second bicuspids. The heads of the mini implants were joined to an acrylic button to create a bone anchorage unit. Two hooks were strategically placed into the acrylic and two lingual buttons were bonded on the palatal surfaces of the first molar and second bicuspid. 50 g of force was individually applied to each tooth. Full fixed appliances were used to correct lower first molar lingual inclination and malocclusion.



**beginning**



**beginning**



**beginning**

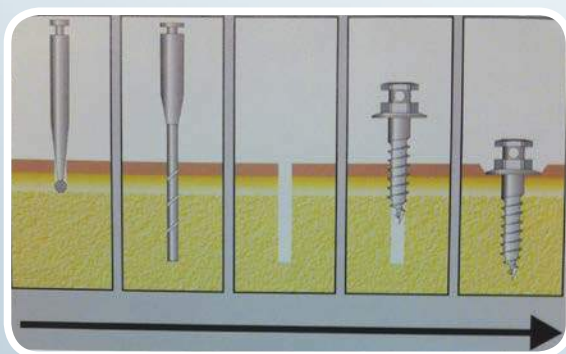


**after 4 months**

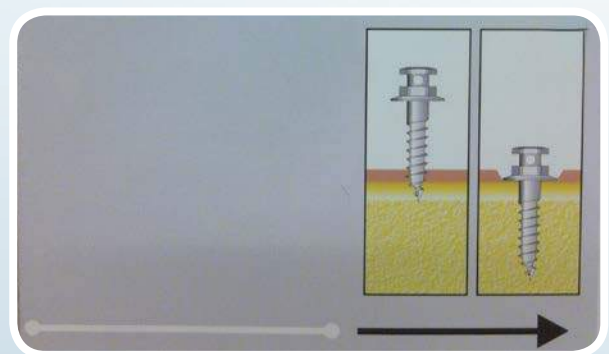
## Ideal requirements for cortical anchorage and advantages:

- Biocompatibility
- Small dimensions
- Ease of placement and use
- Primary stability
- Immediate loading
- Adequate resistance to orthodontic forces
- Use with known orthodontic mechanical systems
- Independent of patient cooperation
- Clinically equal or better results compared to conventional anchorage variants
- Easy to remove
- Low costs
- Meets aesthetic demands

Self-drilling screw systems, such as the O.S.A.S. system, do not require any preparation of the bone. The thread works through the gingiva and cortex without pre-drilling because of its self-tapping tip. Punching the gingiva to prepare a passage is not necessary either with the O.S.A.S. system. In most situations, infiltration anaesthesia can be omitted and the screw can be inserted with surface anaesthesia.



Other systems

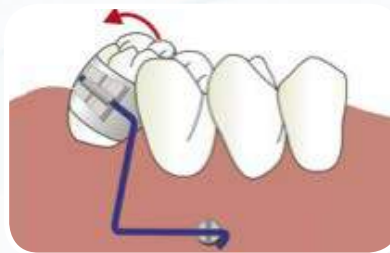


O.S.A.S. System

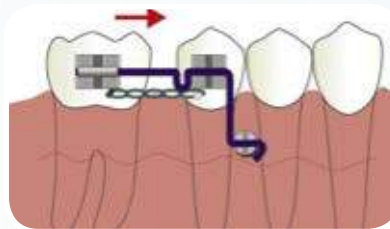
## Direct or Indirect anchorage

In principle, a direct or indirect strategy can be chosen. The direct variant is often easier technically and tooth movements are carried out directly supported by the stationary anchorage. Indirect anchorage means that a dental anchorage segment is formed that is stabilised through the screw, so that active tooth movements take place.

### Direct anchorage



Indirect anchorage; the tooth to be moved is anchored to a tooth that is connected to the Mini screw.



All of the familiar coupling elements used in orthodontics (round wires, rectangular wires, springs and elastic chains) can be used. Each orthodontist can maintain his treatment strategy and use the advantages of cortical anchorage.

Removal after successful treatment is unproblematic. As the fixation of the non-osseointegrating Mini Screws is reduced after a few months as intended, the screws can be removed easily with a screwdriver, usually without anaesthetic. The screwdriver fixes the screw by locking so that the screw cannot slip off into the pharynx. As the dimensions of the screw are a mechanical minimum, they leave no trace after removal and guarantee rapid mucosa-covered healing of the intraoral penetration site.



### Healing period of 4 days after removal

### Material:

DEWIMEDs' Mini Screws are made of a **titanium-based biocompatible alloy**. Compared to pure titanium the alloy provides better mechanical parameters in the categories of strength, elastic behaviour, resistance to wear and surface qualities. The elastic limit is about twice as high so that partial structures such as the thread pitch can be filigree.

### Production:

DEWIMED O.S.A.S. Screws are made of one piece titanium alloy and appear to be more stable mechanically due to their homogeneous material structure. The joint-free one-piece technology guarantees particular mechanical stability and protects against material defects. Screw bodies composed of joined parts involve a risk of fracture on incorrect loading in the form of a break point. O.S.A.S. System is **produced 100% in Germany** according to German precise way of working.

### Program:

In the area of the functional screw head, a large number of variants are also available with sometimes substantial differences in structure. **For each treatment we can recommend the adequate screw head**. The screws diameter generally is 1,6mm for all screws. One type is also available in 1,3mm diameter for optimal treatment in anterior parts of jaw.

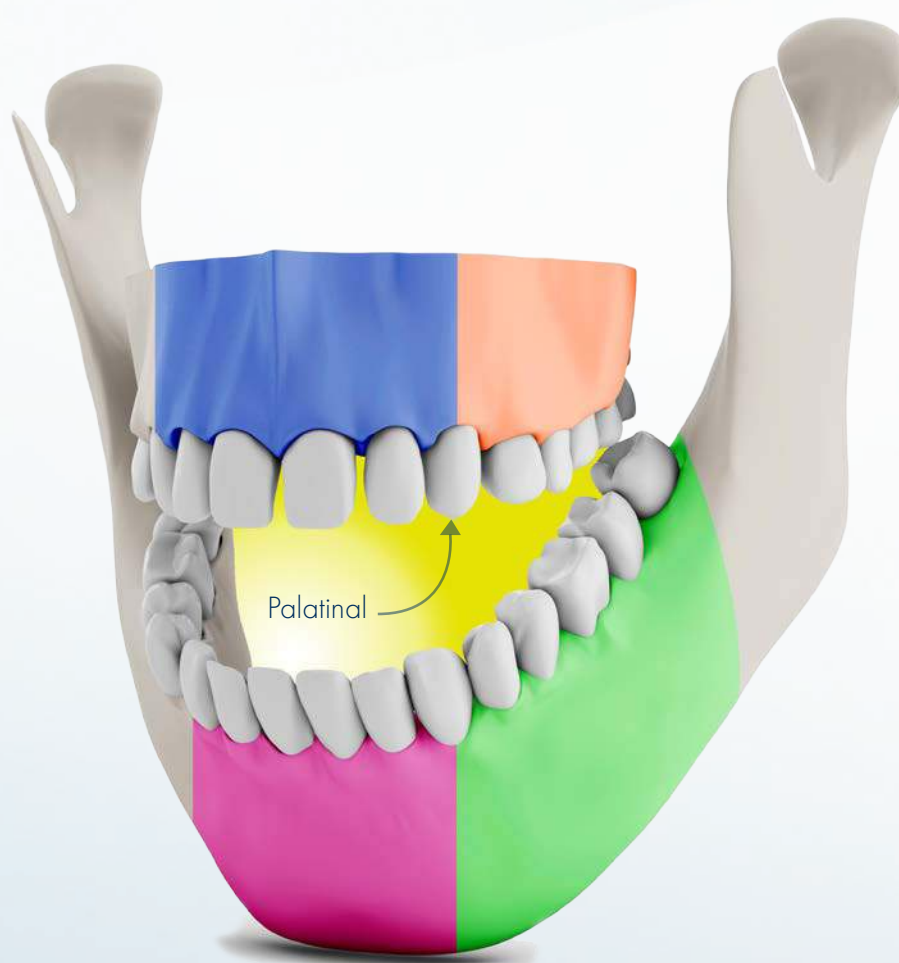
All instruments are compatible with the complete screw program so using the screw driver and one tip enables to work with the complete range of screws.

### Use:

The screw may be loaded functionally without a healing period. Immediate loading has a beneficial effect on contact with the surrounding bone and promotes the quality of the anchorage. Self-drilling and tapping to facilitate placement, the **shape of the head inhibits the overgrowth of the gingival**. With only a few screws, strategically placed it will have creative solutions of orthodontic and orthopaedic. The thread has a centring tip, which is very easy to insert. The cylindrical thread shaft ensures optimal hold in bone and tolerates greater loading than the conical construction.

## Recommended position of the O.S.A.S. screws

- Screws with lengths of 7 – 9 mm
- Screws with lengths of 5 – 7 mm
- Screws with lengths of 8 – 10 mm
- Screws with lengths of 5 – 8 mm
- Screws with lengths of 9 – 12 mm



## O.S.A.S. SLOT Screw

### Hexagonal Head

- Round edges
- Open head for easy insertion

### Perforation of Ø 0,8 mm

- Suitable for all current wires
- Safe location of the wire

### Shaft of 1 mm

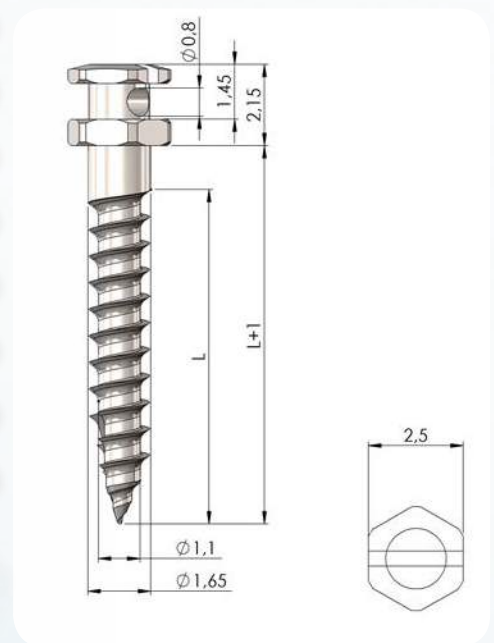
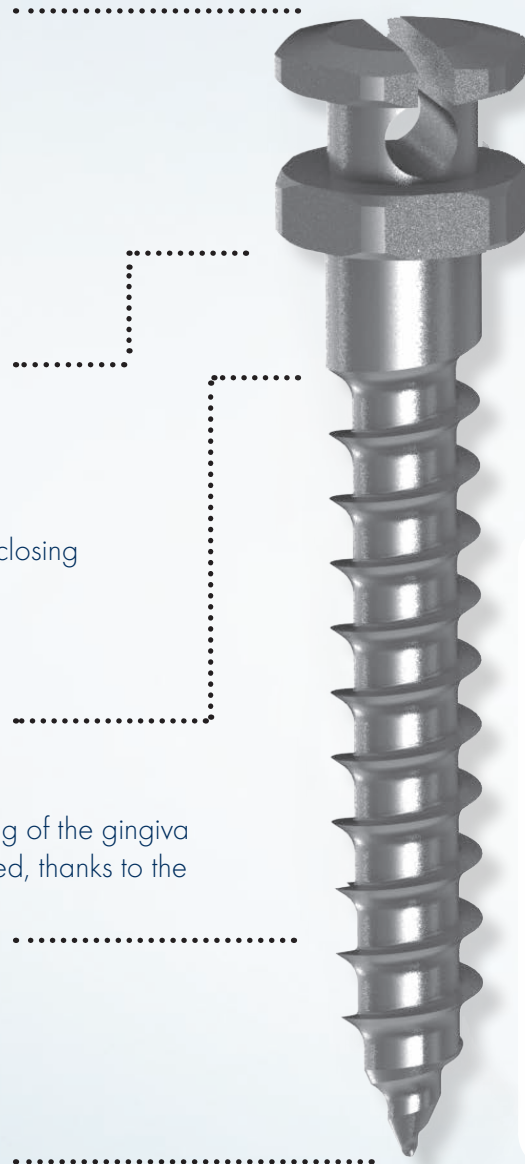
- Without any thread for perfect closing
- For optimal gingiva adaption

### Cylindrical form of threat

- Provides easy entering
- Special thread avoids squeezing of the gingiva
- loss of screw completely avoided, thanks to the extraordinary shape

### Tip

- Selfcutting and self-drilling tip
- No pilot holes necessary



Length	O.S.A.S. SLOT Screw Ø 1,6 mm	Packing Unit
5 mm	25-16105	5 screws
6 mm	25-16106	5 screws
7 mm	25-16107	5 screws
8 mm	25-16108	5 screws
9 mm	25-16109	5 screws

## O.S.A.S. CROSS HEAD Screw

### Hexagonal Head

- Round edges
- Closed head to fix the wire
- Safety anchorage of the wire

### Perforation of $\varnothing 0,8$ mm

- Suitable for all current wires
- Safe location of the wire

### Shaft of 1 mm

- For optimal gingiva adaption

### Cylindrical form of thread

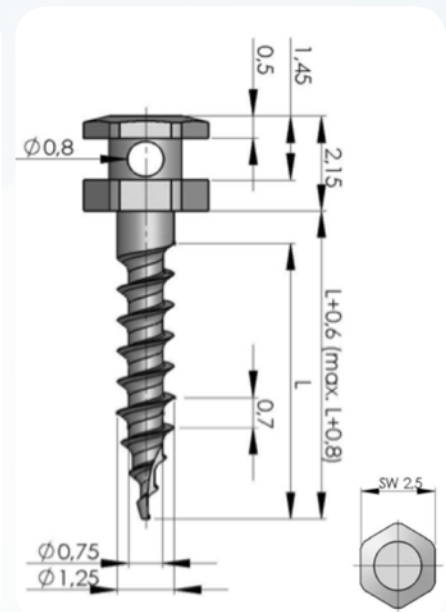
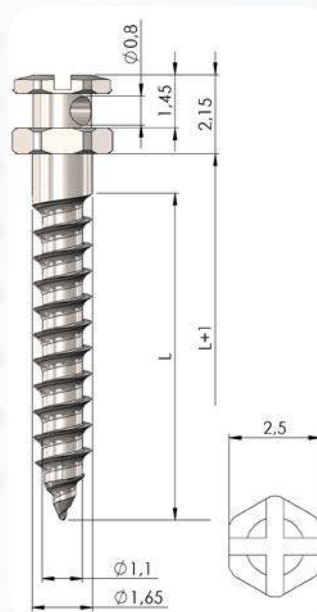
- Provides easy entering
- Special thread avoids squeezing of the gingiva
- loss of screw completely avoided, thanks to the extraordinary shape

### Tip

- Selfcutting and self-drilling tip
- No pilot holes necessary



### O.S.A.S. MINI Screw diameter of $\varnothing 1,3$ mm



Length	O.S.A.S. CROSS HEAD Screw $\varnothing 1,6$ mm	O.S.A.S. MINI Screw $\varnothing 1,3$ mm	Packing Unit
5 mm	25-16115	25-16235	5 screws
6 mm	25-16116	25-16236	5 screws
7 mm	25-16117	25-16237	5 screws
8 mm	25-16118	25-16238	5 screws
9 mm	25-16119		5 screws

## O.S.A.S. CROSS HOLE Screw

### Hexagonal Head

- Round edges
- Closed head to fix the wire
- Safety anchorage of the wire

### 2 Perforations of Ø 0,8 mm

- Suitable for all current wires
- Safe location of the wire
- Always perfect position thanks to two perforations

### Shaft of 1 mm

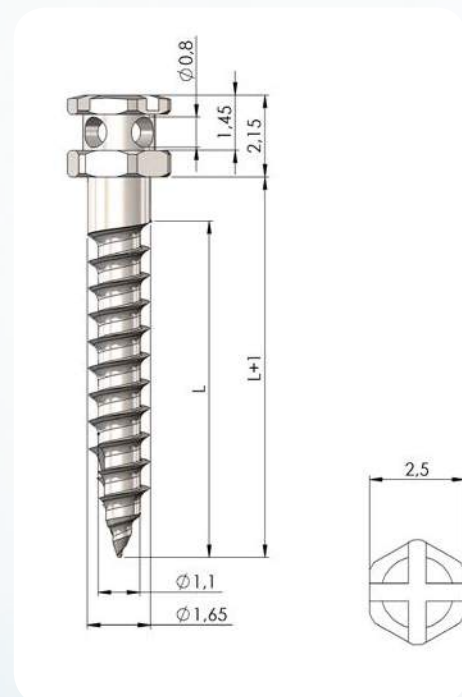
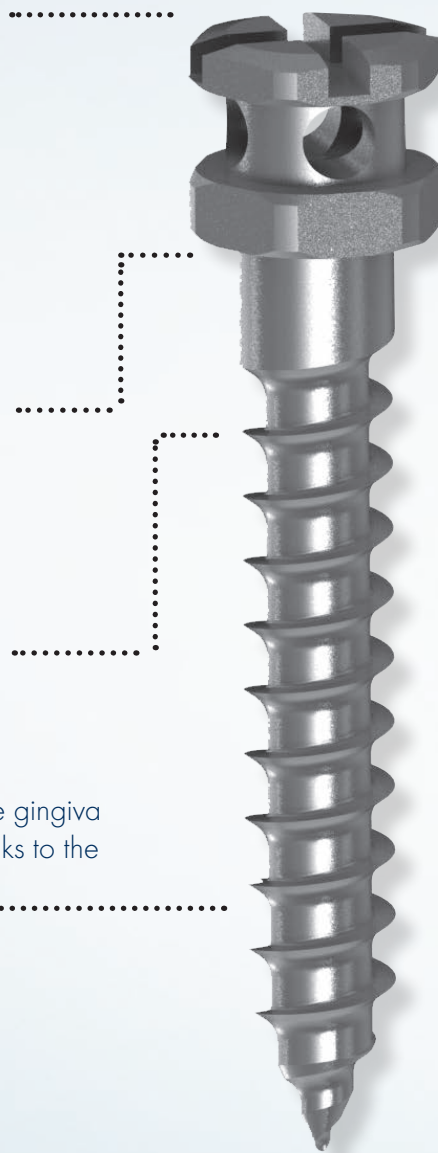
- For optimal gingiva adaption

### Cylindrical form of threat

- Provides easy entering
- Special thread avoids squeezing of the gingiva
- loss of screw completely avoided, thanks to the extraordinary shape

### Tip

- Selfcutting and self-drilling tip
- No pilot holes necessary



Length	O.S.A.S. CROSS HOLE Screw Ø 1,6 mm	Packing Unit
5 mm	25-16125	5 screws
6 mm	25-16126	5 screws
7 mm	25-16127	5 screws
8 mm	25-16128	5 screws
9 mm	25-16129	5 screws

## M.O.S.A.S. Screw

### Hexagonal Head

- Round edges
- Closed head to fix the wire

### Perforation of Ø 0,8 mm

- Suitable for all current wires
- Safe location of the wire

### Additional plate

- To avoid rank growth of the gingiva over the screw
- Comfortable for the patient

### Shaft of 2mm

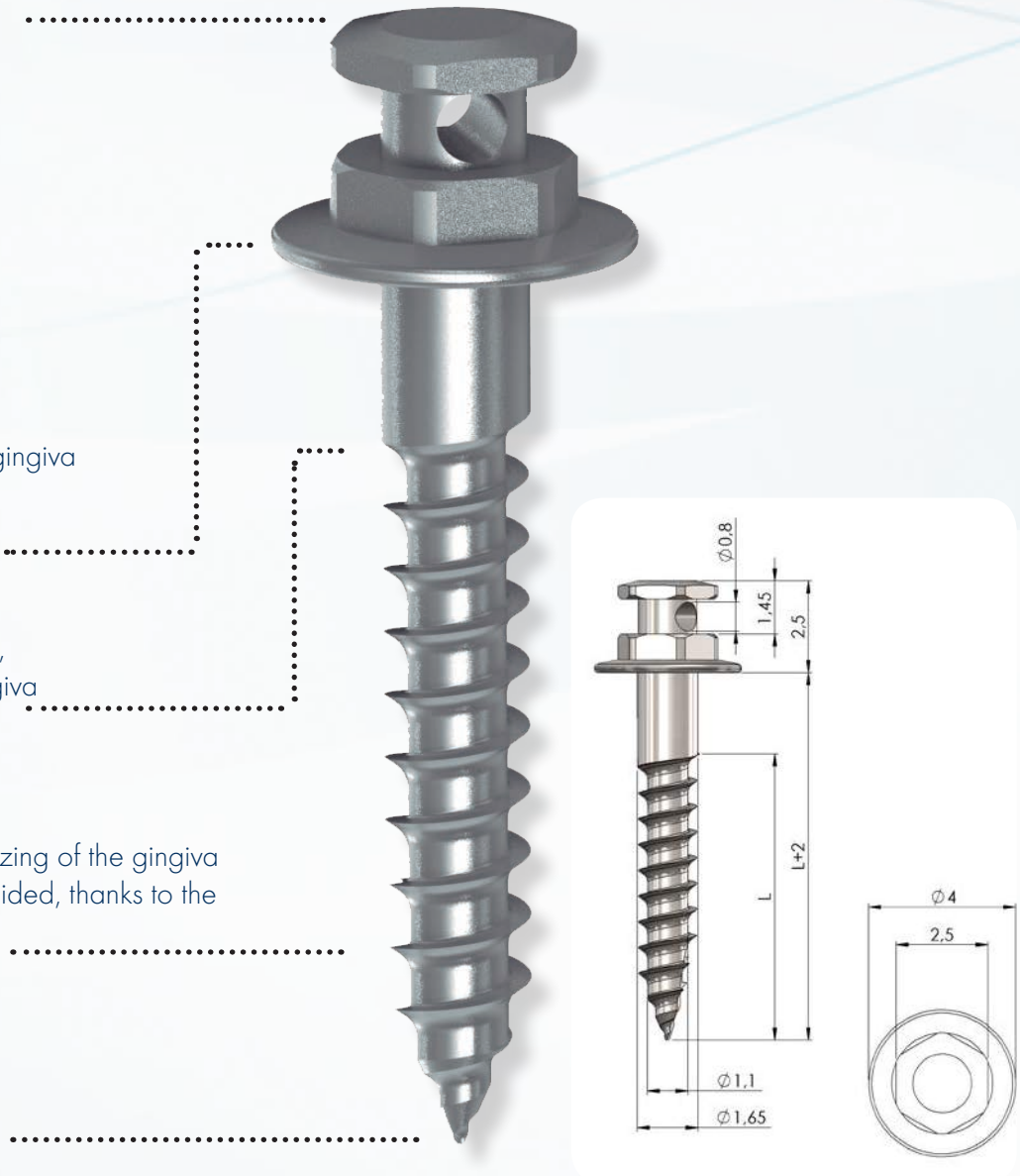
- For optimal gingiva adaption, especially for unattached gingiva

### Cylindrical form of threat

- Provides easy entering
- Special thread avoids squeezing of the gingiva
- loss of screw completely avoided, thanks to the extraordinary shape

### Tip

- Selfcutting and self-drilling tip
- No pilot holes necessary



Length	M.O.S.A.S. Screw Ø 1,6 mm	Packing Unit
6 mm	<b>25M-16206</b>	5screws
7 mm	<b>25M-16207</b>	5 screws
8 mm	<b>25M-16208</b>	5 screws
10 mm	<b>SA-0912-04</b>	1 screw Pre-Drill recommended
12 mm	<b>SA-0912-05</b>	1 screw Pre-Drill recommended

## D.O.S. Screw

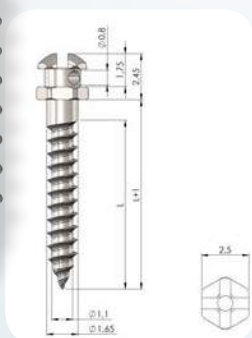
### CROSS HEAD

### CROSS HOLE

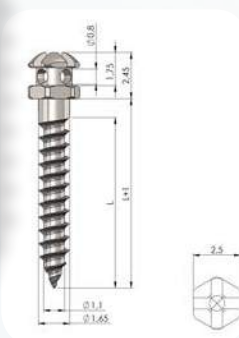
### PLATE

The same characteristics as the O.S.A.S. / M.O.S.A.S. screws

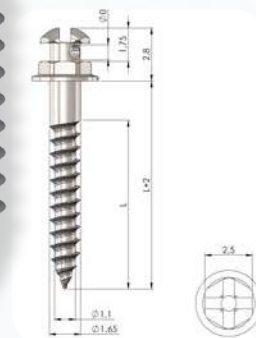
Further development: round and elevated head for an additional possibility to fix a wire or rubber chain to use a second vector



D.O.S. Cross Head

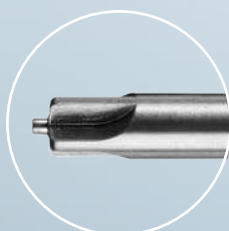


D.O.S. Cross Hole



D.O.S. Plate

Length	D.O.S. Cross Head Ø 1,6 mm	D.O.S. Cross Hole Ø 1,6 mm	D.O.S. Plate Ø 1,6 mm	Packing Unit
5 mm	25-16135	25-16145	25-16155	5 screws
6 mm	25-16136	25-16146	25-16156	5 screws
7 mm	25-16137	25-16147	25-16157	5 screws
8 mm	25-16138	25-16148	25-16158	5 screws
9 mm	25-16139	25-16149	25-16159	5 screws



special fine tip available for better view to the working area  
strong connection from tip to screw



## Baxmann Lingual O.S.A.S.

### available shortly

#### Bracket Head

- Built in well-known DEWIMED shape and quality
- perfect condition to fix abudments in a safe way

#### Conically shaped neck

- Allows optimal adaptation of the significantly thicker palatal soft tissue when compared to the buccal area

#### Additional micro thread

- Encreases the primary stability and reduces the risk of premature loss

#### Length of the screw

- Specifically designed for the best possible fit within anatomical region of the palate
- special thread allows easy instertion and security of stability

#### Self cutting thread

- Built in well-known DEWIMED shape and quality
- optimal construction of the tip for smooth insertion into the tissue



## Instruments

All instruments can be used for all variations of screws  
 All instruments are available individually

### Handles



Universal Screwdriver 2 in 1

10-0014



Short handle, Screwdriver

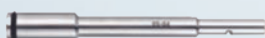
10-0003

### Blades



O.S.A.S. Driver Tip, 70mm

10-0005



O.S.A.S. Driver Tip, 40mm

10-0004



O.S.A.S. Driver Tip, 10mm

10-0006



D.O.S. Driver Tip, 40mm

10-0040

The blades lock into the screwdriver through an easy snap mechanism.

The blades hold the screw securely and keep it in a stable position by hexagonal mounting with spherical attenuation, which matches the outline of the screw head. Because it is held firmly, insertion is successful even in places that are difficult of access.

## Blades for Angle Handpieces



O.S.A.S Butter fly driver tip

SA-0701-07



Blade for Angle Handpiece, 5 mm

10-0007



Blade for Angle Handpiece, 10 mm

10-0008



D.O.S. Driver Tip for contra handle, 10 mm

10-0042

### Accessories

#### Ratchet and accessories for optimal adaption for the lingual position of the screw



Ratchet screwdriver, handle

10-0012



Blade for Ratchet, 10 mm

10-0009



Blade for Ratchet, 30 mm

10-0010

Repair Kit for for Screwdriver tip  
40 balls, 20 O-rings

10-0100

## Racks

- Storage of screws and instrument
- Additional support to check the length of screws



### O.S.A.S. Rack MICRO

DEWIMED Code: **10-0029** (without screws)

- storage possibility for 6 screws



### O.S.A.S. Sterilization Rack MINI

DEWIMED Code: **10-0020** (without instruments)

- For short screwdriver, short blade for screwdriver and blade for angle handpiece
- storage possibility for 5 screws of each length (20 screws)



### O.S.A.S. Sterilization Rack MIDI

DEWIMED Code: **10-0025** (without instruments)

- For standard or universal screwdriver , short screwdriver, short blade for screwdriver, blade for angle handpiece and long blade for screwdriver (40mm or 70mm), storage below the screwdriver
- storage possibility for 60 screws



### O.S.A.S. Sterilization Rack ALL-IN-ONE

DEWIMED Code: **10-0022** (without instruments)

- For universal screwdriver, short screwhandle, short blade for screwdriver, blade for angle handpiece and long blade for screwdriver (40mm or 70mm), storage below the screwdriver
- storage of 5 X-Ray pins
- storage possibility for 4 screws of each length and M.O.S.A.S. Screws (24 screws)



### O.S.A.S. Sterilization Rack MAXI

DEWIMED Code: **10-0000** (without instruments)

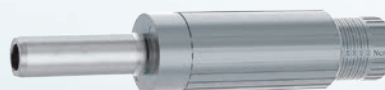
- All DEWIMED Instruments and Blades could be stored in the O.S.A.S. Maxi Rack
- storage possibility for 50 screws

## Manually turned handpiece with / without torque

Manually turned handpiece mod. to Pauls,  
**with adjustable torque from 0 - 50 Ncm**



The manually turned handpiece is connected to your existing angled motor handpiece (blue 1:1) which allows it to be used like an angled screwdriver.



**10-0018**

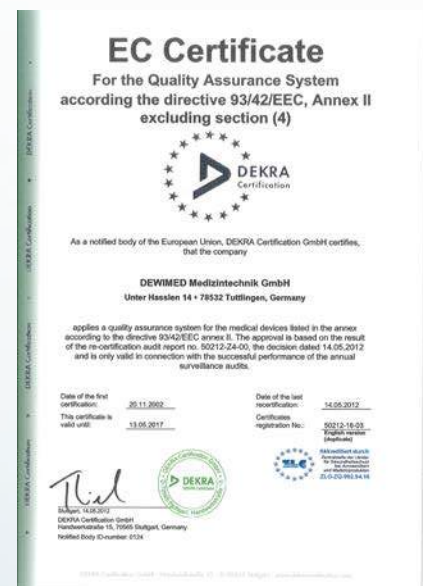
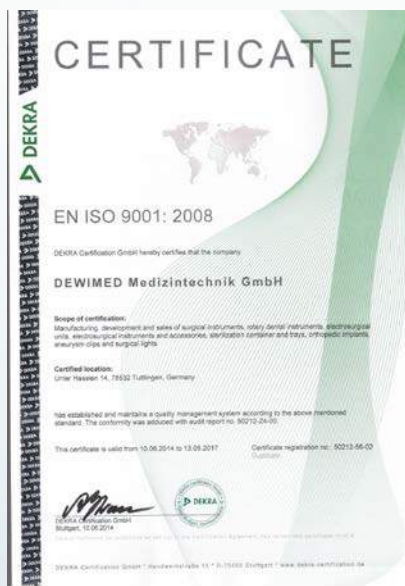
Manually turned handpiece mod. to Pauls,  
with adjustable torque from 0 - 50 Ncm



**10-0017**

The manually turned handpiece for angled screwdriver with lightsource

## Notes / Notas



Authorized Distributor:



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