



**In Dedication to the Oral and Maxillo Facial Profession**

# The Smile Distractor



CE  
0120

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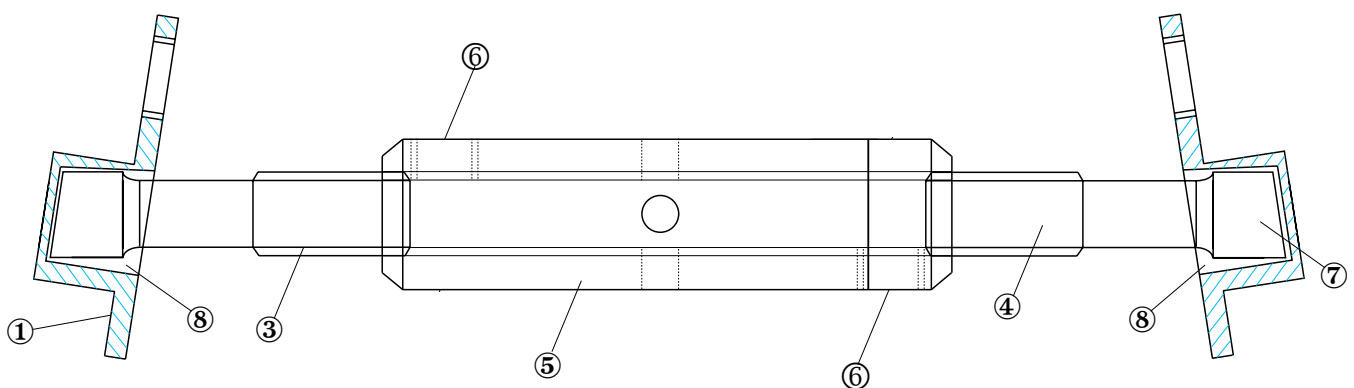
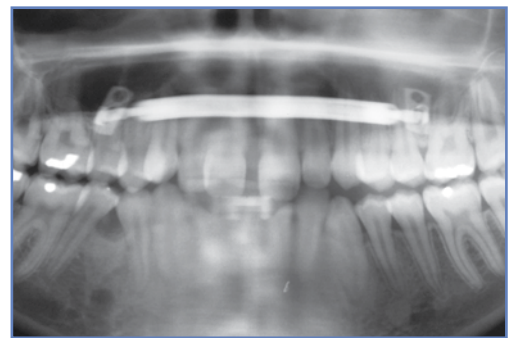
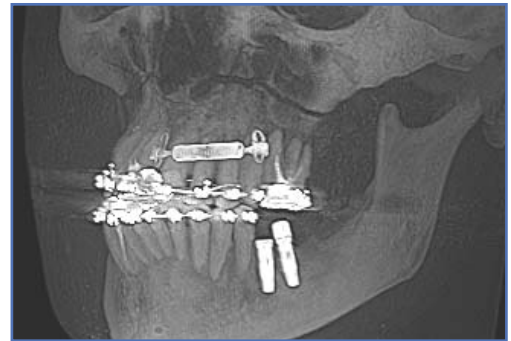
# TITAMED® Smile Distractor - D Series

## INTRODUCTION

Skeletal expansion is undoubtedly the best treatment option for maxillary hypoplasia and/or severe max. crowding. The advantages are obvious and multiple. Indeed, there is no segmental tilting, there is no evidence of any orthodontic/orthopedic relapse and dental/ periodontal damage is excluded.

Distraction osteogenesis on the other hand is a reliable and recognized technique for generating callus. It readily ossifies and is resistant to any substantial relapse.

It is evident that devices come on the market to implement the science of distraction osteogenesis to the maxillary constriction. Not an easy task, but years of research made the Smile Distractor ready for you. The device is **affordable, reliable and safe**. The distractor is easy to apply and to remove by the surgeon, easy to activate twice a day by the patient and easy to be monitored by a professional. As least as important, there is an **excellent patient compliance, referring to oral comfort and oral hygiene**.



**Smile Distractor. patent pending.**

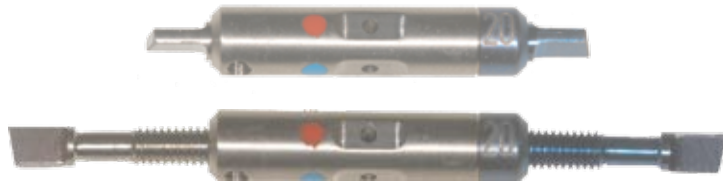
- ① abutment plates
- ③④⑤ distraction module
- ⑥ screw wired hole
- ⑦ male wing
- ⑧ female sleeve in abutment plate



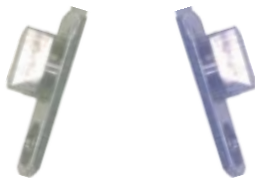
# TITAMED® Smile Distractor - D Series

The system and its specific instruments are organized in the TITAMED® inox container (IT.3003).

## SMILE DISTRACTOR WITH 2 ABUTMENT PLATES. Ø 4.4mm.



scale 2/1



scale 2/1

Cat. No.	Length of cylinder (mm)	Total length unexpanded (mm)	Total length expansion (mm)
DS.008	8	15	6
DS.010	10	17	8
DS.012	12	19	10
DS.014	14	21	12
DS.016	16	23	14
DS.018	18	25	16
DS.020	20	27	18

1 smile distractor and 2 abutment plates / pkg

**OSTEOSYNTHESIS SCREWS. Ø 2.0mm,** conical, selftapping, hexagonal head with lock-drive. For eventual extra fixation of the abutment plate.



scale 3/1

Cat. No.	Length under head (mm)
DSSC05	5
DSSC06	6

order quantity 4/pkg

## BLOCKING SCREW. Ø 2.0mm



Cat. No.

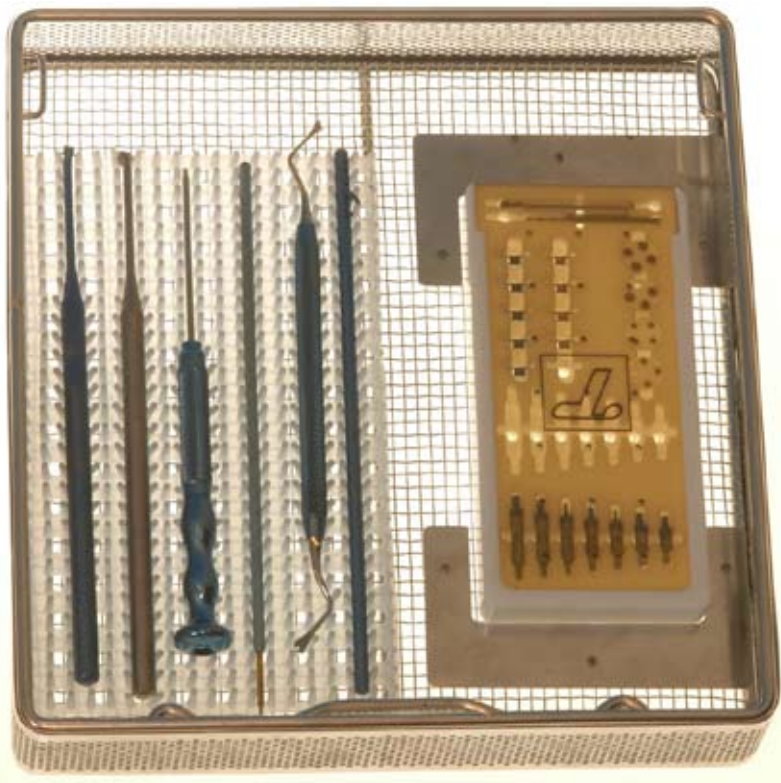
D.002

order quantity 4/pkg



# TITAMED® Smile Distractor - D Series

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**IT.3003** Inox Container of Smile Distractor (24x24cm)

└ **IT.3013** Teflon Organizer for Smile Distractor

└ **IT.1012** Drill 1,4mm

└ **IT.1011** Drill with round tip



**IT.0315** Osteosynthesis Screwdriver, Titanium, 18cm



**IT.0311** Distractor Form Stamp Right, Titanium, 19cm

**IT.0312** Distractor Form Stamp Left, Titanium, 19cm



**IT.0314** Distractor Key Instrument, Titanium, 18cm



**IT.0313** Distractor Holder, Titanium, 19cm



**IT.0128** Distractor Blocking Screwdriver, Titanium, 19cm



**IT.0333** Patient Key, Shilliday Key

## SOME ADDITIONAL EXPLANATION FOR YOUR “SMILE DISTRACTOR”

At the end of your operation a small blocking screw is inserted by the surgeon. This makes your distractor passive.

A new consultation is scheduled a week later. Your physician will remove the blocking screw. This makes the distractor ready for the activation.

There are four colors on the body of the distractor, one for every quarter of a turn. **The distractor is activated twice a day, a quarter of a turn, what is the equivalent of 0,5 mm a day.**

Insert the pin of the blue key in the hole in the middle of the distractor. Push the key slightly downwards and backwards. This makes the key hinging at the end of the white

joint. Your surgeon will explain this the first time for you with a mirror.

By turning twice a day, we open the palate  $\pm 0,5$  mm. So, After 10 days, we can expect an opening of 5 mm between the two front teeth, equal to a transversal bony distraction of 5 mm.

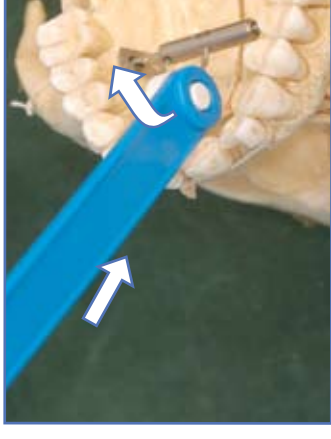
Usually the distraction period takes 1 to 3 weeks, depending on the amount of widening needed.

The opening between your two central incisions reflects this widening. Once the widening of the palate is achieved, the fixing screw is placed again by the physician. This makes the distractor passive again.

The distractor should be kept firm and immobile in the mouth for 3 to 5 months. Sometimes the distractor becomes loose during the healing process. Then a visit to your physician is necessary to retighten or remove the distractor.

Clean your distractor daily with a child toothbrush.

Later on the plates on both sides of your palate are to be removed surgically under local anaesthesia. Those two plates were the housing of your distraction device.



*Place the key in the pin-hole and push backwards and downwards to hinge the key on the white joint.*



*Turn a quarter until the next pin-hole is present. Do so twice a day.*



*Before the widening.*



*Smile distractor in use.*



*Six months after the widening.*

## ACTIVATION

**Note:** the activation instrument is a key from American Orthodontics-Orthotrends and is named a shilliday key. This key is child-friendly, gives no room for error in use and is familiar to any orthodontist.

# TITAMED® Smile Distractor® - Surgical Procedure

Developed by Dr. Defrancq Joel DDS MD Maxillofacial Surgeon, Eeuwfeestkliniek, Antwerp, Belgium

The sequence of surgery in our departement:

1. Placement of abutment plates (usually between 15-16 and 25-26)
2. Corticotomies (lateral - midline + posterior disjunction)
3. Distractor placement and activation



## The incision

A vertical palatal incision, between premolar and molar, has shown to be the ideal location. This incision is made, 1 cm downwards as indicated on the picture. The flap is delivered backwards starting from the cervix of the teeth.



## The bur hole

After the flap preparation a shallow cup hole is drilled in the palatal cortex with a 3.5mm round bur (**IT.1011**), 2-3 mm deep, 5-7mm downwards from the cervix teeth.



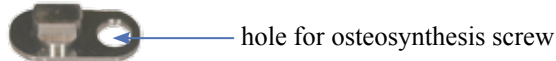
## The form stamp

The form stamp (**IT.0311 right side and IT.0312 left side**) is pushed manually and vertically in the cup hole. Slight hammer taps can be helpful in adults.



## The abutment placement

The abutment plate is placed in the same vertical direction as the form stamp, with the screw hole away from the teeth. The blue plate is intended for the left side of the patient. Normally there is no need for screws fixation. Only in exceptionally cases the osteosynthesis screws (**DSSC05 or DSSC06**) are indicated.



## The measurement

The inter-abutment distance is measured with an iron wire or caliper, of which one side is placed in the abutment sleeve. The length of the distractor should be as appropriate as possible in order to optimize the expansion possibilities. This is more critical as the palate gets narrower.

## The blue mark ALWAYS to the left!

The cylinder of the Smile Distractor shows a blue mark on one side. This mark should be on the left side.



# TITAMED® Smile Distractor® - Surgical Procedure



## The distractor positioning

One side of the Smile Distractor is inserted in his abutment sleeve (blue side is left!).



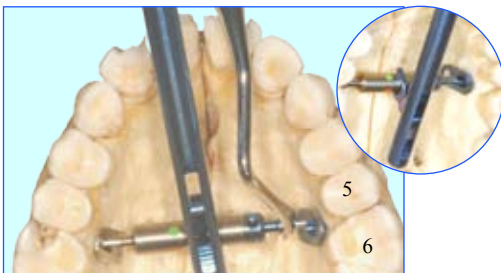
Then the distractor holder (IT.0313) is positioned over the opposite wing sustaining slight opposite pressure.



IT.0313



The distractor holder (IT.0313) can slightly be turned so that the male wing stays put, in front of the female abutment sleeve.



## The Activation

Place the key instrument (IT.0314) over the middle part of the distractor body and start to activate from the front to the back.



IT.0314



## The blocking screw

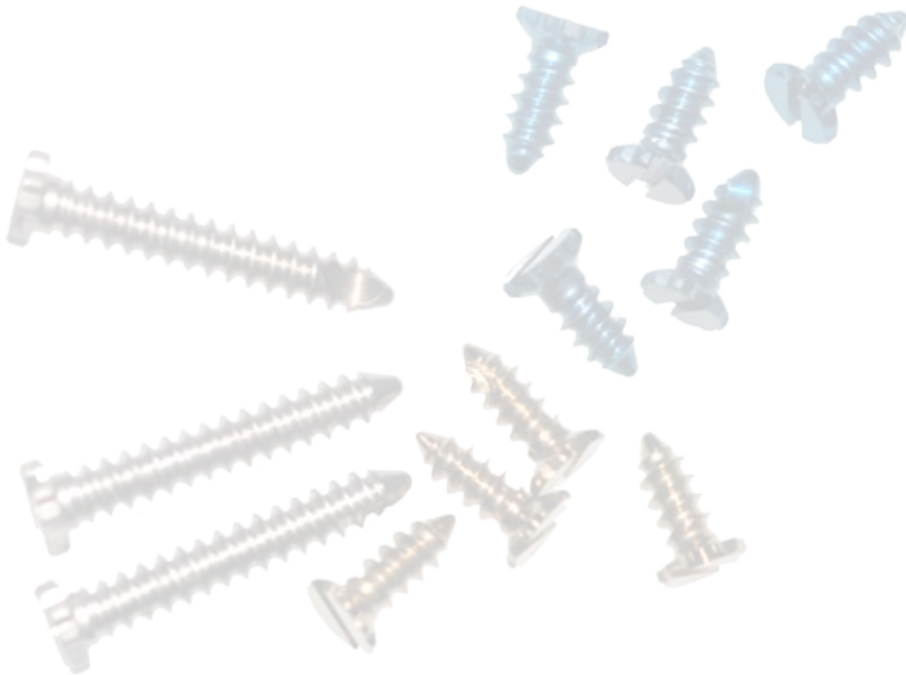
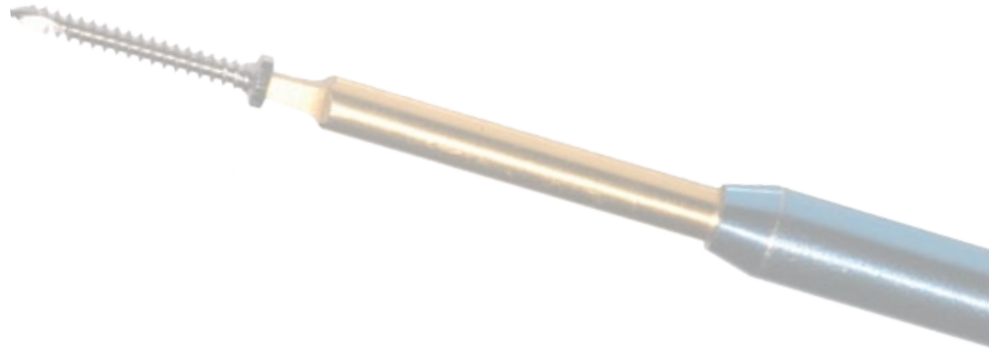
A blocking screw (D.002) must be inserted in one of the two available treated holes, with the screwdriver (IT.0128). Place the blocking screw perpendicular over the cylinder, with a clear view of the screw hole. Turn gently with slight but continuous pressure. Once engaged turn tightly. One week after the surgery the activation of the Smile Distractor should be started by removing the blocking screw.



IT.0128

- ✓ *The sequence of the Smile Distractor:*
  1. *Surgery, the blocking screw is tightly engaged.*
  2. *After one week the blocking screw is removed. The activation is started (1-3 weeks; two quarters of a turn a day, each time a new color appears).*
  3. *After distraction put the blocking screw back real firm (3-6 months)*
- ✓ *Patient information can be downloaded from our website [www.titamed.be](http://www.titamed.be) in Dutch, English, French and German.*
- ✓ *The Smile Distractor must be fixed with an iron wire or a vicryl stich to a tooth for safety reasons.*





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