OsseoSpeed™ TX Profile

Clinical procedures & Product catalog

ASTRA TECH DENTAL

Get inspired

Adapting with nature

OsseoSpeed™ TX Profile – anatomically designed implants for sloped ridges

Imagine being able to achieve 360° bone preservation around the implant, even in cases with sloped ridges. Now you can.

With OsseoSpeed™ TX Profile – a uniquely shaped, patented implant, specifically designed for sloped ridge situations – you no longer have to choose between buccal and lingual marginal bone preservation and esthetics, you can have it all – 360° around the implant.

Contents

This manual is designed for dental professionals who have experience with dental implant treatment and as a complement to the surgical and restorative manuals for the Astra Tech Implant System™. It highlights and emphasizes the special considerations needed when planning and performing treatment with OsseoSpeed™ TX Profile implants.

Introduction

The applications of osseointegration and dental implant therapy have developed over the last 30 years. Today we can provide predictable and reliable treatment results when replacing missing teeth with dental implants. Research and development have improved implant design and surface properties and effective and secure treatment protocols have been established. For over twenty-five years, we at Astra Tech, have been committed to developing implant features that work in harmony with nature. Long-term documentation on the Astra Tech Implant System™ proves our success, not only in implant survival, but also in predictable peri-implant marginal bone stability.

However, how well the implant adapts to the profile of the alveolar ridge, is an area that has been overlooked. With today's implant design, an optimal bone/implant relation is only possible when the peri-implant bone is at the same level around the implant neck.

Compromised implant placement with a sloped alveolar ridge

An implant placed in level with the buccal bone margin leaves the lingual/palatal and proximal bone coronal to the implant without biomechanical support. We can foresee remodeling and loss of bone and soft tissue height, resulting in less than optimal esthetic results.

An implant placed in level with the palatal/lingual bone margin leaves the implant protruding out of the bone on the buccal side. This can result in discoloration of the buccal soft tissue margin or, in a worst-case scenario, a soft tissue dehiscence, causing compromised esthetics.

Neither of these alternatives are optimal.

OsseoSpeed™ TX Profile

The optimal solution in a sloped ridge situation is to have a sloped implant that is designed to be in harmony with the ridge profile, preserves the marginal bone and supports the soft tissue all around the implant.

The Astra Tech Implant System™, with the Astra Tech BioManagement Complex™, is documented to provide marginal bone level maintenance. The OsseoSpeed TX Profile is a result of a small modification to the OsseoSpeed TX implant design that makes a big difference for providing long-term esthetic results in sloped ridge situations.

Implant overview

OsseoSpeed™ TX Profile implants are based on the documented key features and benefits of the Astra Tech BioManagement Complex™; OsseoSpeed™, MicroThread™, Conical Seal Design™ and Connective Contour™.

Intended use

The intended use for OsseoSpeed™ TX Profile is the same as for OsseoSpeed™ TX. In addition, the OsseoSpeed™ TX Profile is specially designed to be used in situations with a sloped ridge profile in:

- healed alveolar ridges
- extraction sockets (immediate installation)

OsseoSpeed™ TX Profile	4.5	5.0	5.0 S
			
Indications	In all positions in the jaws. Single tooth to full arch.	In all positions in the jaws. Single tooth to full arch.	In all positions in the jaws. Especially indicated for wide ridges and large edentulous spaces. Single tooth to full arch.

OsseoSpeed™ TX Profile assortment

Corresponding components specifically designed for use with OsseoSpeed™ TX Profile implants are presented in this manual/product catalog. Do not interchange components designed for the OsseoSpeed™ TX Profile and OsseoSpeed™ TX.

OsseoSpeed™ TX Profile products and packaging are not color-coded and therefore, labels are white.

This manual only addresses the additional information needed to work with the OsseoSpeed™ TX Profile and optimize the final outcome when using this implant.

For all other instructions and/or a full description of the Astra Tech Implant System™ – implant placement, restorative procedures and all instruments and components needed – please refer to the Surgical procedure manual, Cement-retained restorations manual and the Product catalog.

If you are not familiar with Atlantis™ patient-specific abutments, please contact your laboratory and/or your Astra Tech representative. For more information visit www.atlantisabutment.com.

Clinical consideration

To take full advantage of all the benefits of the OsseoSpeed™ TX Profile, please note the important steps in the treatment process, including pre-operative procedures and implant positioning.

Pre-operative procedures

Transparent Radiographic Implant Guides for OsseoSpeed™ TX Profile that present the implants in different magnifications, are available for preoperative planning. A sagital tomographic radiograph showing an appropriate view of the ridge profile could be useful for planning the optimal implant position and direction. Computer guided implant treatment software, such as Facilitate™, can also be helpful in ensuring accurate planning for optimal implant position.

Implant positioning

Only one position of the implant slope is optimal i.e. correct vertical and rotational position in relation to the buccal bone. Therefore, careful drilling and implant placement procedures, particularly for the OsseoSpeed™ TX Profile 4.5 and 5.0 (conical) implants are required. Over-torquing may jeopardize marginal bone integrity due to unfavorable stress generation. Place the implant in line with the buccal bone level to provide support of the marginal bone around the implant. It is important to note that a full 360° turn is equal to a 0.6 mm change in vertical position.

Surgical overview

OsseoSpeed™ TX Profile – surgical handling

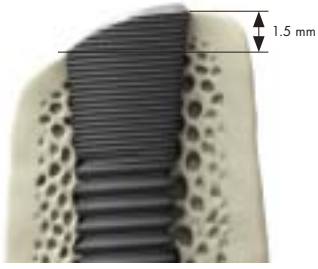
The same handling procedure as for the OsseoSpeed™ TX implants applies. However, steps such as preparation and measuring of the osteotomy and the implant placement require more specific protocols.

From a mechanical strength point of view, it is recommended to always place as wide an implant as possible. This is particularly important in the posterior regions of the jaws where loading forces are high and considerable bending moments could be generated.

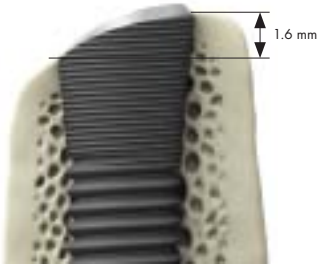
Implant slope variance

As a result of the sloped neck design, the height of the lingual/palatal side as compared to the buccal side of the implant has a variance of 1.5 – 1.7 mm depending on the implant diameter, as illustrated below:

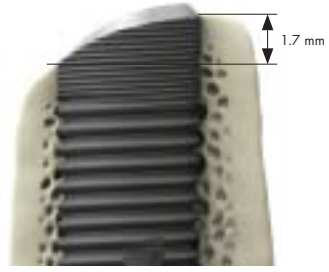
Ø 4.5



Ø 5.0



Ø 5.0 S

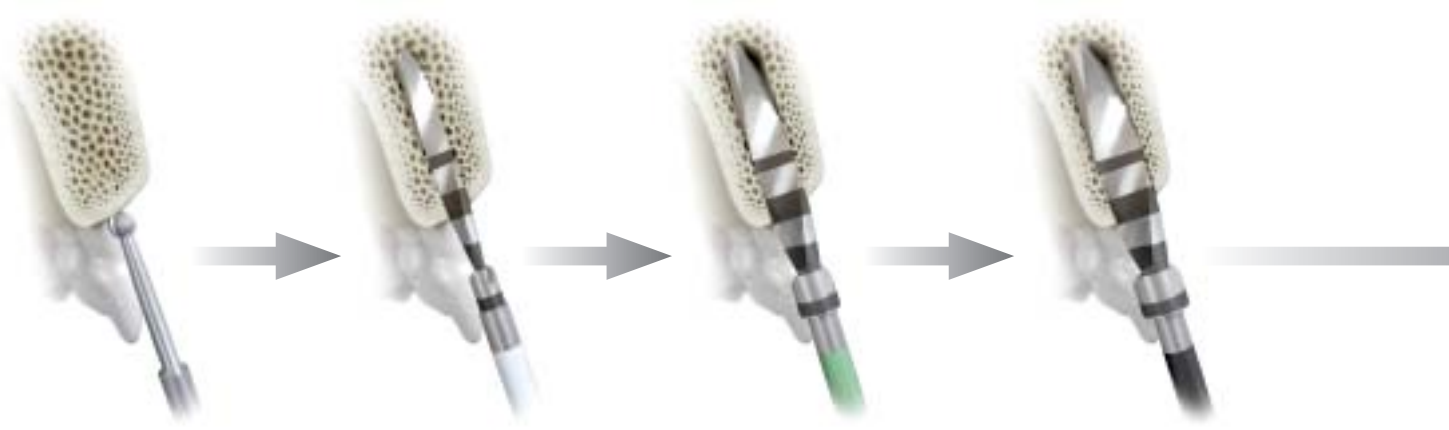


Drill depth requirements

In relation to the buccal wall of the prepared site, the required drill depth should be **no more than 1.5 mm shorter** than the implant length (i.e.: for a 13 mm implant, a drill depth minimum of 11.5 mm on the buccal wall is necessary.)

Note: A full 360° turn of the implant is equal to a 0.6 mm change in vertical position.

Step-by-step drilling procedure for OsseoSpeed™ TX Profile 5.0, 13 mm – standard drilling protocol*



Guide Drill **Twist Drill Ø 2.0** **Twist Drill Ø 3.2** **Twist Drill Ø 3.7**

- The starting point should be approximately 3 mm buccally to the most coronal point of the ridge.

*For soft and dense bone drilling protocols, see Surgical procedures manual.

Conical Drill Ø 3.7/5.0

- For standard drilling protocol, drill to the beginning of the depth indication line.

Implant Depth Gauge palatal

- Place the Depth Gauge against the palatal and the buccal walls of the osteotomy to verify the drilling depth.

Implant Depth Gauge buccal

- Make sure there is enough depth provided for the entire implant. For the 5.0,13 mm implant, the buccal depth should be at least 11.5 mm.
- If the depth is less than 11.5 mm, additional drilling with a twist drill is required, and may be followed by the conical drill depending on the clinical situation.
- If the depth for the 5.0,13 mm implant, is more than 11.5 mm, make sure to stop the implant installation at or slightly apical to the buccal margin.

Step-by-step implant placement procedure for OsseoSpeed™ TX Profile Ø 5.0 mm, 13 mm

Pick-up

- Attach the Implant Driver Profile to the Contra Angle.
- Align the buccal side of the implant (most apical point of the slope) with the marking on the Implant Driver Profile. Make sure that the driver is properly seated.
- Pick up the implant from the inner container.

Installation

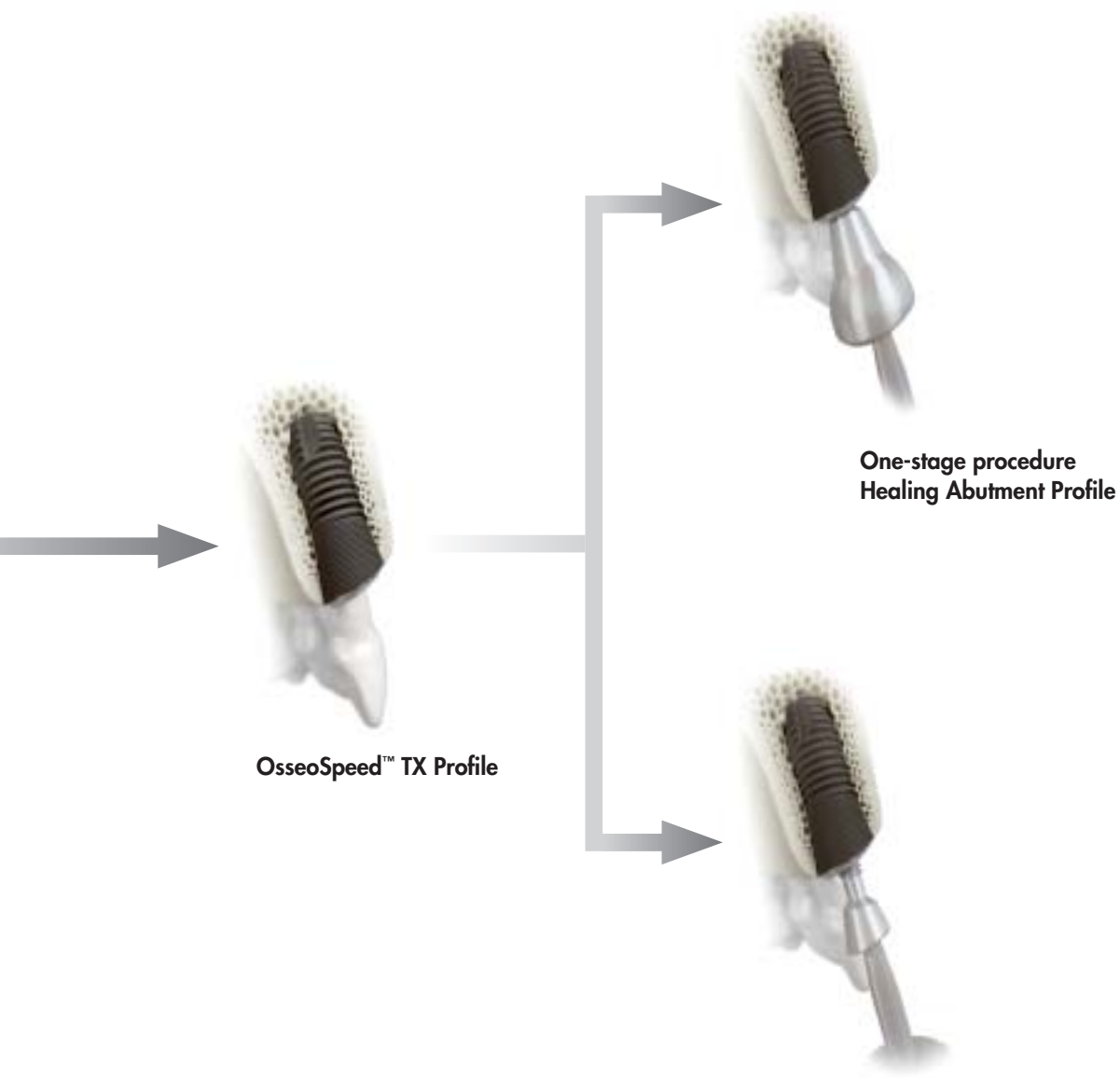
- Install the implant with a contra angle at low speed (25 rpm) under profuse irrigation.
- Set the maximum torque to 35 Ncm. Let the implant work its way into the osteotomy and avoid applying unnecessary pressure.
- Keep in mind the position of the buccal side of the implant before removing the driver.

Positioning

- The Ratchet Wrench, in combination with the Driver Handle, may be used for the final manual seating of the implant.
- Position the marking on the driver buccally to facilitate optimal placement of the implant.
- The driver must be properly seated to be used for measuring purposes.
- It is important to realize that a full 360° turn is equal to a 0.6 mm change in vertical position.
- Release the Implant Driver Profile by lifting it gently from the implant.

Optional

- The Implant Transfer Profile and the Implant Pick-up Profile are designed to seat the implant in one position only so they can be used to confirm the most apical point of the slope.



OsseoSpeed™ TX Profile

One-stage procedure
Healing Abutment Profile

Two-stage procedure
Cover Screw Profile

- Healing Abutment Profile and Cover Screw Profile have timed threading to ensure correct alignment with the implant slope.
- Use light finger force (5–10 Ncm) to seat the healing abutment or cover screw with a Hex Screwdriver.
- When placing the healing abutment or cover screw, be sure not to use a torque that might create further rotation of the implant.

Step-by-step implant-level impression procedure for OsseoSpeed™ TX Profile

Implant Pick-up Profile

Implant Transfer Profile

- **Implant Pick-up Profile** is marked with a channel to identify the most apical point of the slope.
- **Implant Transfer Profile** has a flat side to identify the most apical point of the slope.

Open-tray technique

Closed-tray technique

Implant impression

- Use the Implant Pick-up Profile (open-tray technique) or Implant Transfer Profile (closed-tray technique) for implant-level impressions.
- The Implant Pick-up Profile and Implant Transfer Profile will only seat in one unique position in the implant.
- It is important that the clinician communicates the information about the placed OsseoSpeed™ TX Profile implant to the dental technician for correct implant replica and appropriate abutment.

Implant Replica Profile

Working model

- For the working model use the Implant Replica Profile.
- The Implant Pick-up Profile and Implant Transfer Profile will only seat in one unique position in the replica.

Prosthetic restoration

- Specific abutments are used for OsseoSpeed™ TX Profile such as Temporary Abutment Profile, Atlantis™ abutment and TiDesign™ Profile.

Cement-retained restorations

The same handling procedures apply as for the OsseoSpeed™ TX implants. The following cement-retained restorative options are available for OsseoSpeed™ TX Profile.

Abutments designed for implant-level impression	Indications and intended use	Features and benefits
Atlantis™ abutment – titanium **Atlantis™ abutment** – GoldHue™ **Atlantis™ abutment** – zirconia*, four shades 	• Single, partial and fully edentulous situations • All positions in the mouth **Note:** Use of zirconia abutments should be carefully evaluated when placed in situations with unfavorable loading conditions.	• Patient-specific abutment designed from the final tooth shape
TiDesign™ Profile Titanium 	• Single, partial and fully edentulous situations • All positions in the mouth	• Pre-designed and for easy adjustment • Straight and angled versions available
Abutment for Temporization	**Indications and intended use**	**Features and benefits**
Temporary Abutment Profile Titanium 	• Single, partial and fully edentulous situations • All positions in the mouth • Cement- and screw-retained temporary restorations	• Ideal for long-term temporization

* For the available options, please refer to the most current Atlantis™ Implant compatibility chart.

Laboratory Abutment Screw

To ensure that an uncompromised screw is used in the clinical situation, use the Laboratory Abutment Screw for laboratory procedures.

Implant impression

Use the Implant Pick-up Profile (open-tray technique) or Implant Transfer Profile (closed-tray technique) for implant-level impressions. For the working model use the Implant Replica Profile.

Recommended tightening torque

Type of product		Torque – Ncm
Cover Screw Profile		Manual*
Healing Abutment Profile		Manual*
Temporary Abutment Profile		15
Atlantis™ abutment for OsseoSpeed™ TX Profile TiDesign™ Profile		25

*Only light finger force (5–10 Ncm) using a manual screwdriver.

Product catalog OsseoSpeed™ TX Profile

Components for the OsseoSpeed™ TX Profile assortment is presented in this manual/Product catalog. Do not interchange components designed for the OsseoSpeed™ TX Profile and OsseoSpeed™ TX. Products and packaging for OsseoSpeed TX Profile are not color-coded and therefore, labels are white.

If you need drills and other instruments, please refer to the Product catalog for Astra Tech Implant System™. If you are not familiar with Atlantis™ patient-specific abutments, please contact your laboratory and/or your Astra Tech representative.
For more information visit www.atlantisabutment.com.

Product overview OsseoSpeed™ TX Profile

Implants

OsseoSpeed™ TX Profile 4.5

9 mm 25029
11 mm 25030
13 mm 25031
15 mm 25032
17 mm 25033

OsseoSpeed™ TX Profile 5.0

9 mm 25034
11 mm 25035
13 mm 25036
15 mm 25037
17 mm 25038

OsseoSpeed™ TX Profile 5.0 S

9 mm 25039
11 mm 25040
13 mm 25041
15 mm 25042
17 mm 25043

Cover screws

Cover Screw Profile

0 mm 25044

Healing abutments

Healing Abutment Profile

Ø 6.0 2 mm 25045
Ø 6.0 4 mm 25046

Cement-retained

Temporary abutments

Temporary Abutment Profile

Ø 5.3 1.5 mm 25052

Abutments

TiDesign™ Profile

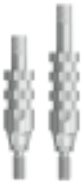
Ø 5.5 1.8 mm 25053
Ø 5.5 3.0 mm 25054
Ø 6.5 1.8 mm 25055
Ø 6.5 3.0 mm 25056
Ø 6.2 15° 2.7 mm 25057

Atlantis™ abutments*

Patient-specific abutments

Implant impressions

Implant Pick-up Profile



Short 25048
Long 25049

Implant Transfer Profile

Short 25050
Long 25051

Guide pins

Implant Guide Pin 4.5/5.0

Short 24966
Long 24967

Replicas

Implant Replica Profile

25047

Lab abutment screws

Lab Abutment Screw Design 4.5/5.0

24858

*For the available options, please refer to the most current Atlantis™ Implant compatibility chart.

OsseoSpeed™ TX Profile 4.5

Titanium, Sterile

OsseoSpeed™, with a TiO_2-blasted fluoride-modified surface.
MicroThread™ neck.
Conical Seal Design™ connection.
Internal hexagon.
Ø 4.5/3.5 mm
Internal thread M2

Length mm	9	11	13	15	17
REF	25029	25030	25031	25032	25033

OsseoSpeed™ TX Profile 5.0

Titanium, Sterile

OsseoSpeed™, with a TiO_2-blasted fluoride-modified surface.
MicroThread™ neck.
Conical Seal Design™ connection.
Internal hexagon.
Ø 5.0/4.0 mm
Internal thread M2

Length mm	9	11	13	15	17
REF	25034	25035	25036	25037	25038

OsseoSpeed™ TX Profile 5.0 S

Titanium, Sterile

OsseoSpeed™, with a TiO_2-blasted fluoride-modified surface.
MicroThread™ neck.
Conical Seal Design™ connection.
Internal hexagon.
Ø 5.0 mm
Internal thread M2

Length mm	9	11	13	15	17
REF	25039	25040	25041	25042	25043

Radiographic Implant Guides Profile

REF 25062

Implant Driver Profile

Used to engage and place implants.

Short drivers are ideal for the posterior region.

Short, 24 mm
REF 25059

Long, 32 mm
REF 25058

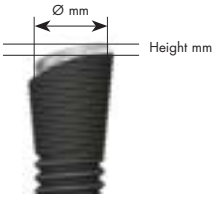
Cover Screw Profile

Titanium, Sterile

Used to cover the implant connection during healing.

Ø mm	3.8
Height mm	0
REF	25044

MEASUREMENTS



SHORT FACTS

The Cover Screw Profile has timed threading to ensure correct alignment with the implant slope. Recommended torque – Manual. Only light finger force (5–10 Ncm) using a manual screwdriver.

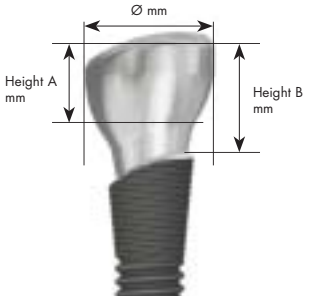
Healing Abutment Profile

Titanium, Sterile

Ø mm	6.0	6.0
Height A mm	2	4
Height B mm	3.5	5.5
REF	25045	25046

Marked with a "P" to identify Profile abutment. Marked with digits to identify diameter (Ø) and height.

MEASUREMENTS



SHORT FACTS

The Healing Abutment Profile has timed threading to ensure correct alignment with the implant slope. Recommended torque – Manual. Only light finger force (5–10 Ncm) using a manual screwdriver.

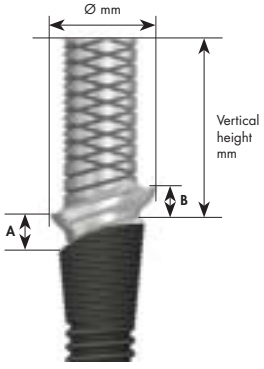
Temporary Abutment Profile

Titanium

Includes Abutment Screw Design 4.5/5.0 – M2, REF 24209 (Titanium)

Ø mm	5.3
Height bucc A mm	1.5
ling B mm	1.5
Vert. height mm	9
REF	25052

MEASUREMENTS

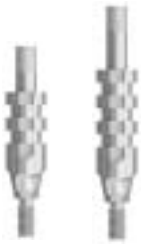


SHORT FACTS

Recommended torque for temporization – 15 Ncm

Implant Pick-up Profile

Titanium



SHORT FACTS

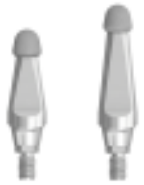
Marked with a channel to identify the most apical point of the slope.

Two piece component:
sleeve and guide pin.

	Short	Long
Length mm	22	27
REF	25048	25049

Implant Transfer Profile

Titanium



Internal thread.
Two piece component:
sleeve and pin.

Product	Short	Long
Length mm	18	21
REF	25050	25051

SHORT FACTS

The flat side identifies the most apical point of the slope.

Implant Replica Profile

Titanium

Length mm	15.5
REF	25047

Implant Guide Pin 4.5/5.0

Titanium

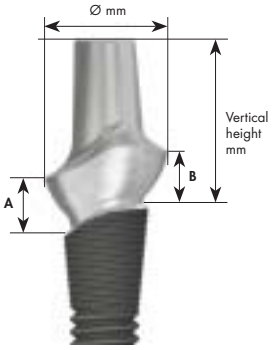
	Short	Long
Length mm	22	27
REF	24966	24967

Lab Abutment Screw Design

Titanium

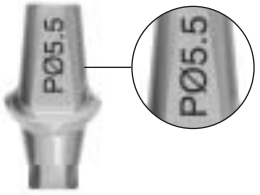
REF	24858
QTY	6 x M2

MEASUREMENTS



SHORT FACTS

Pre-designed for quick and easy adjustment.
Recommended torque – 25 Ncm



Marked with "P" to identify Profile abutment.

Marked with digits to identify diameter (Ø).

TiDesign™ Profile 4.5/5.0

Titanium

Includes Abutment Screw Design 4.5/5.0 – M2, REF 24209 (Titanium)

Angulation					15°
Ø mm	5.5	5.5	6.5	6.5	6.2
Height bucc A mm	1.8	3	1.8	3	2.7
ling B mm	1.8	3	1.8	3	2.7
Vert. height mm	7	8	7	8	8.5
REF	25053	25054	25055	25056	25057

Atlantis™ abutments

If you are not familiar with Atlantis™ patient-specific abutments, please contact your laboratory and/or your Astra Tech representative.
For more information visit www.atlantisabutment.com.

Order by reference number

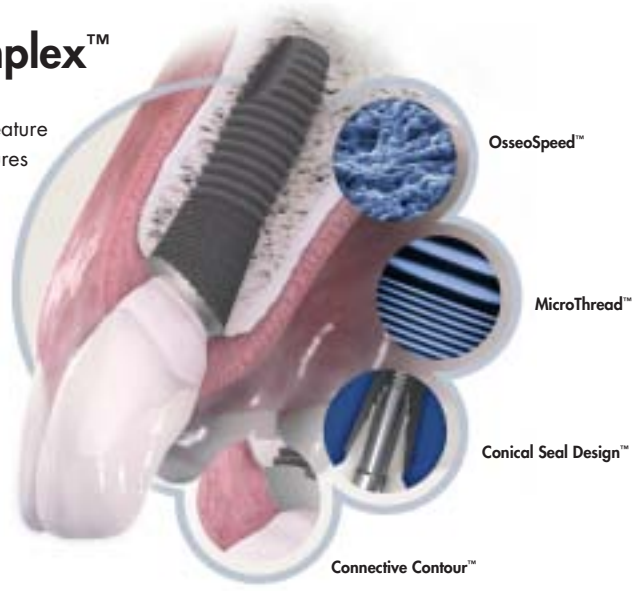
Alphabetical order

If you are not familiar with Atlantis™ patient-specific abutments, please contact your laboratory and/or your Astra Tech representative.
For more information visit www.atlantisabutment.com.

Astra Tech BioManagement Complex™

A successful implant system cannot be determined by one single feature alone. Just as in nature, there must be several interdependent features working together. The following combination of key features is unique to the Astra Tech Implant System™:

- **OsseoSpeed™** — more bone more rapidly
- **MicroThread™** — biomechanical bone stimulation
- **Conical Seal Design™** — a strong and stable fit
- **Connective Contour™** — increased soft tissue contact zone and volume



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