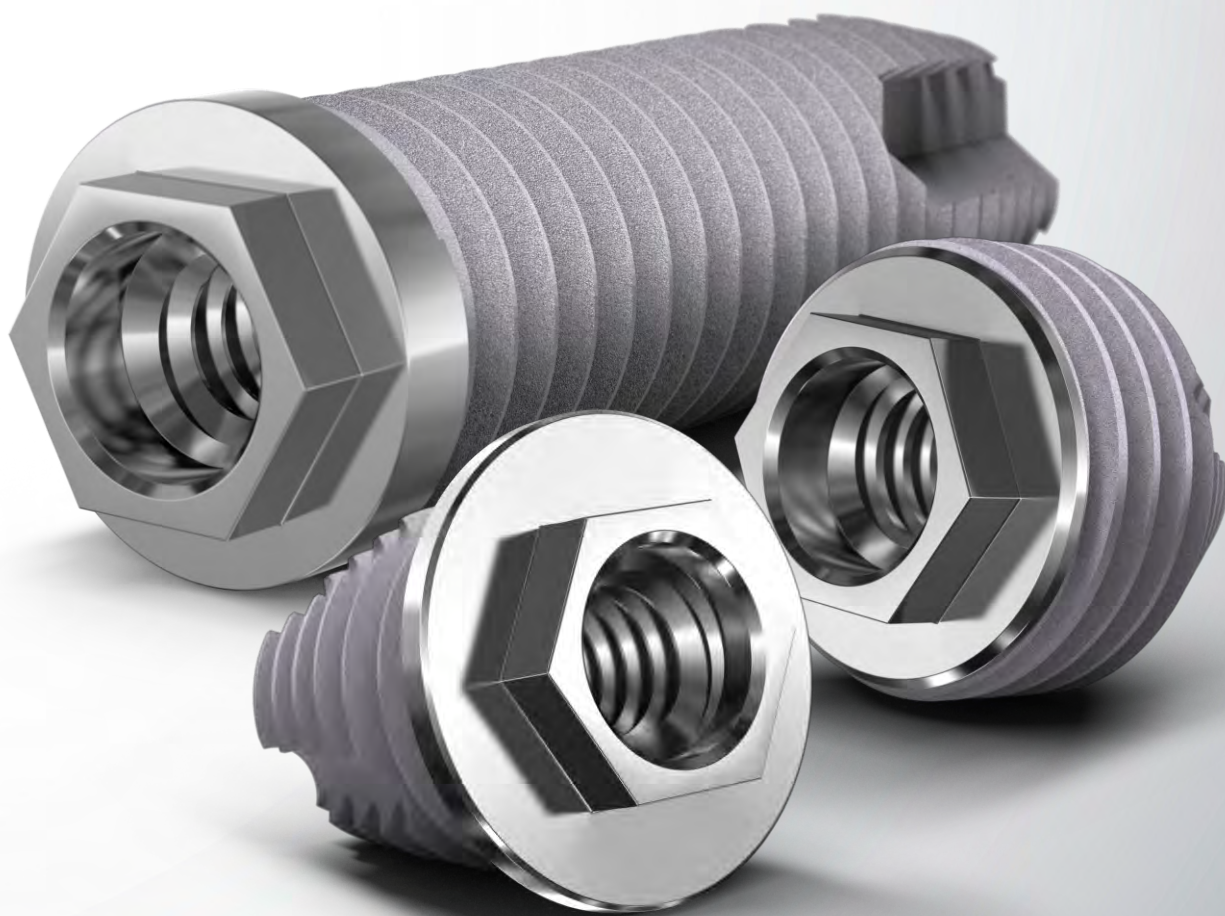




**PROSTHETIC REHABILITATION**  
**SOUTHERNIMPLANTS**



# OSSEOINTEGRATED FIXTURES F

Traumatic accidents, oncology resections or congenital defects can leave patients with small sections of bone and connecting soft tissue missing that can have a drastic psychological effect. Failing surgical reconstruction, prosthetics retained by osseointegrated implants are a realistic option to provide a highly satisfactory functional and cosmetic result. When an adhesive or suction is inadequate, an osseointegrated implant presents a solution for the secure retention of the prosthesis, thus preventing the embarrassing and inconvenient detachment of a prosthesis.

## IMPLANT FEATURES

Southern Implants works with leading rehabilitation centres around the world, developing new protocols and innovative products. The varieties of implants and specialized accessories in this range provide a solution for a multitude of rehabilitation scenarios. All implants have the following common features, based on over 25 years of experience in osseointegrating implants:



### Hex

The implants have an external hex connection interface to transmit torque and prevent rotation of adjoining components. It is compatible with the original Brånemark implants. It allows for a high degree of angulation on the implants' prosthetic platform and does not compromise the strength of the implant body, as with some internal connections.

### Material

All implants are made from grade 4 commercially pure titanium (ASTM F67) with proven biocompatibility. For narrow implants, special cold worked grade 4 titanium with an ultimate tensile strength of up to 920 MPa is used.

### Threads

The implant threads provide primary stability for osseointegration to take place.

### Surface

With 15 years of clinical data, the moderately rough Southern Implant alumina-blasted and chemically conditioned surface has shown consistently excellent results in both early osseointegration and longevity.

### Flutes

The flutes provide the implants with a self-tapping quality.



# OR PROSTHETIC REHABILITATION

## IMPLANT RANGE

The following varieties of implants are available to optimally utilize available bone:

1. Ultra-short and short implants – excellent for anchorage in thin craniofacial bones
2. Ultra-narrow implants – for placement in thin facial bones
3. Cylindrical bodied implants – ideal for placement in the medullary canal of extremities
4. Angulated implants – maximize use of available bone while facilitating prosthetic access
5. Zygomatic and Oncology implants – suitable for the unique needs of utilizing the zygoma

## Ultra short and short implants

The ultra-short IE and IET implants are 3-6mm long, allowing placement in craniofacial bone down to 3mm in thickness. The flange on the IE and the steep taper on the IET limit the risk of perforation through thin craniofacial bones. Figure 1 shows the use of four IE implants with standard abutments to attach a prosthetic ear. 6mm implants are available ranging from Ø4.0 to Ø6.0mm to maximize the osseointegration interface.



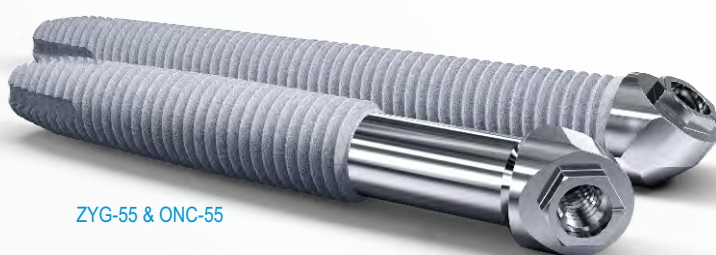
## Cylindrical bodied implants

Implants with a cylindrical body profile provide maximum engagement with the cortical walls when placed in the medullary canal of phalanges. These implants are available in a wide range to suit the range of sizes of remnant phalanges. A large Ø6.0mm implant is shown in Figure 2 for the restoration of a thumb amputated at the MCP joint



## Zygomatic and Oncology implants

Zygomatic bones are an excellent source for prosthetic support, providing a generous amount of bone for placement. The extra-long Zygomatic and Oncology implants enable this bone to be utilized whilst bringing the restorative surface closer to the prosthesis. The 55° angle provides the correct emergence angle in dental restorations, and provides some flexibility in the restorative plane for complex multi-implant mid-facial reconstructions. Figure 3 shows a mid-facial reconstruction case in which all implants have angled platforms.

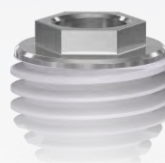


## Ultra-narrow implants

The MSC-IP has a Ø3.0mm body, meaning it can be placed in the thinner facial bones, increasing the restorative options available to the team.



IE4



IET4



MSC-IP

## Angulated implants

The angulated Co-Axis implant range has implant platforms angled at 12°, 24° and 36° to the body axis. These prove immensely useful to maximize the use of available bone (eg. in the complex shaped facial bones) and fulfil the need for angled emergence (eg. for attachment of prosthetic fingers).



IB



MSC-IBT24d

## ABUTMENT RANGE

A wide range of prosthetic components are available for these implants to assist in the efficiency and quality of the prosthetic restoration for a variety of cases. The available abutments with associated attachment parts are presented as follows:

1. Ball abutments for non-parallel implants – commonly used for eye and nose prostheses
2. Standard abutments for parallel implants – the gold standard for ear prostheses
3. Compact conical abutments – versatile for any multiple implant prosthetic restoration
4. Supporting abutments – provide rigid support for extremities

### Ball abutments



A plastic clip is incorporated into the prosthesis to provide retention onto these abutments. The abutments are titanium nitride coated for increased wear resistance. This system allows a degree of non-parallelism in the implants, making it particularly useful for prosthetic eyes and noses.

### Standard abutments



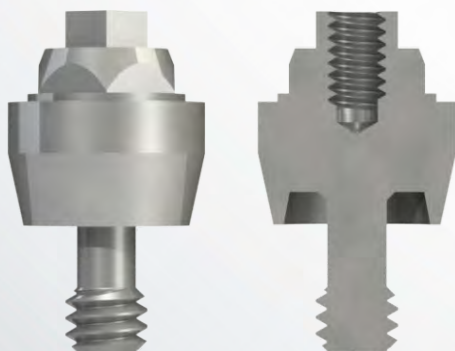
A bar-type framework is constructed, linking multiple standard abutments, onto which the prosthesis is clipped. Simple and easy to use, standard abutments make good percutaneous posts for ear and facial prostheses.

### Compact conical abutments

The compact conical abutment can be used in multiple-implant prosthetic rehabilitations.

Features include:

1. One part component, therefore economical and easy to place
2. Grade 5 titanium for biocompatibility and strength
3. Can withstand moderate lateral loads due to high angle at the prosthetic interface
4. Compact, thus allows vertical space for prosthesis
5. Tapered collar moulds ideal emergence angle in the mouth, and encourages epithelial growth down to implant-abutment interface when used outside of the mouth, forming a seal against bacteria and infection
6. A wide range of collar heights is available ( $L = 1, 2, 3, 4, 5.5$ )

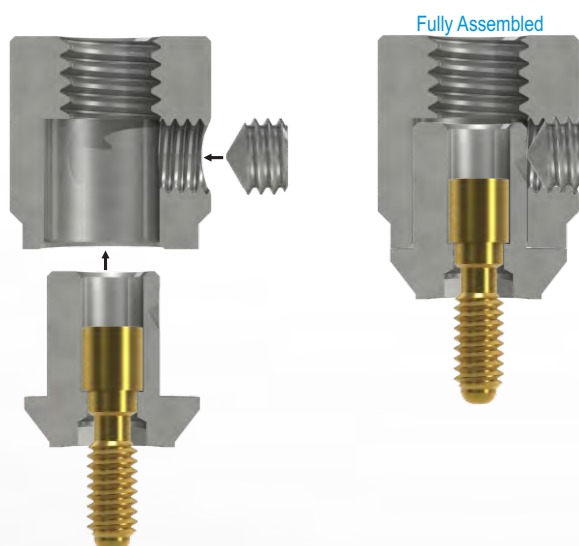


### Supporting abutments

These are designed primarily as an interface for prosthetic extremities.

The grub screw ensures a tight mate at the abutment interface and allows for removal when the prosthesis is not required.

This facilitates good cleaning and exposes the abutment screw, which may need to be tightened or removed if complications arise. An attached titanium rod (not shown) provides rigid support for long digital prostheses.



## Acknowledgements

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