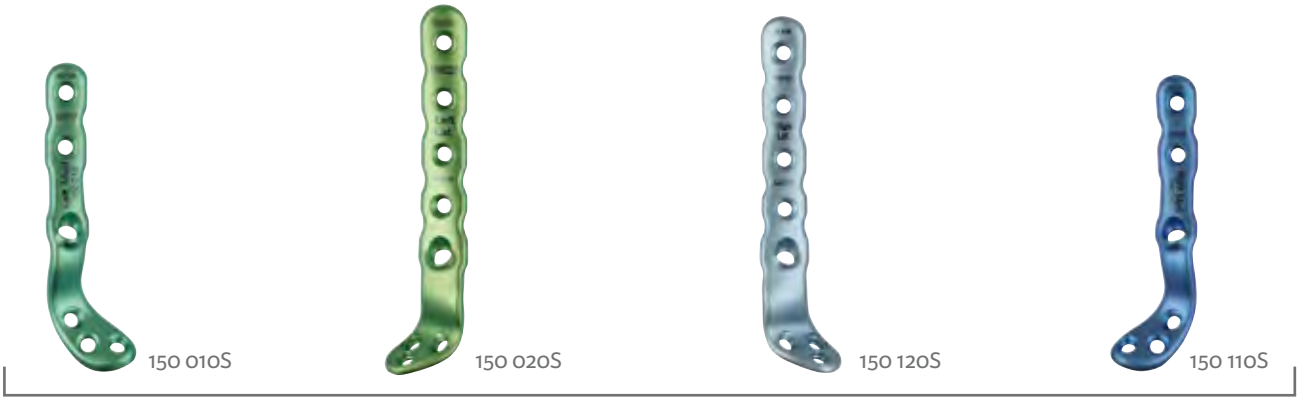
SURGICAL TECHNIQUE

# Arthrodesis Plate

Ankle Arthrodesis Double Plating System




## Benefits

### Versatile and Adaptive System

### Easy, Reliable and Reproducible Surgery

### Ankle Fusion

## Indications of the IMD System (Osteotomy and Arthrodesis Plates)

Arthrodesis, osteotomies and fractures of ankle joint, distal tibia and fibula. The IMD Plates have to be fixed with the SURFIX® fixed angle Locking System screws and washers diam. 3.5 mm. Anterior plates for ankle arthrodesis have to be fixed with the IMD cortical screws diam. 4 mm too.

## Possible Uses for Osteotomy Plates

### Internal Fixation after Osteotomies of Distal Tibia and/or Fibula for Correction of:

- Varus/valgus (frontal plane) misalignment.
- Retrocurvatum/antecurvatum (sagittal plane) misalignment.
- Malrotation deformity.

### Internal Fixation of Distal Tibia and Fibula for Treatment of:

- Fractures.
- Nonunions/pseudarthroses.

**IMD as the manufacturer of this device, does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and using the appropriate techniques for implanting the device in each patient.**

**Note**
In case of gross deformity or bone defects, reconstruction with allograft or an autograft from iliac crest or other anatomic regions may be necessary. Excessive length of the fibula causing lateral impingement may make shortening necessary. This can be easily done through the same anterior approach.

## Surgical Technique Arthrodesis

### 1 Patient Positioning

- The patient is in a supine position on a radiolucent operating table.
- The ipsilateral pelvis should be underplayed by cushions to control external rotation of the leg, so that the patellar is directed upward to allow easier operation.
- Tourniquet at the thigh.

### 2 2-1 Exposure Skin Incision

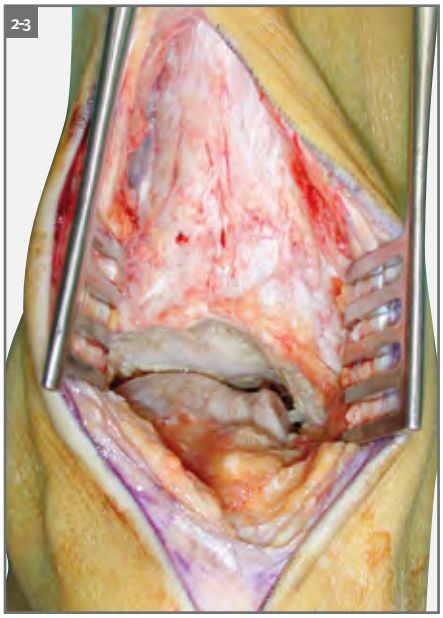
- 10 to 12 cm anterior longitudinal incision is performed directly laterally to the tibialis anterior tendon.

### 2-2 Dissection is Performed as Following:

- Division of the subcutaneous tissues to the extensor retinaculum paying attention to the medial branches of the superficial peroneal nerve and the veins.
- Longitudinal dissection of the extensor retinaculum along the lateral border of anterior tibial tendon.

### 2-3 Exposure of Tibia and Talus

- Expose the distal tibia beneath the anterior tibial tendon which is held medially by a small blunt retractor, and expose sub-periostal distal tibia using 2 small Hohmann retractors.
- Arthrotomy of the ankle joint and removal of scared capsule, and loose bodies.
- Exposure of the neck of the talus.
- One or two Hintermann® rectractors can be inserted to open the tibiotalar joint and to facilitate the following cleaning work.

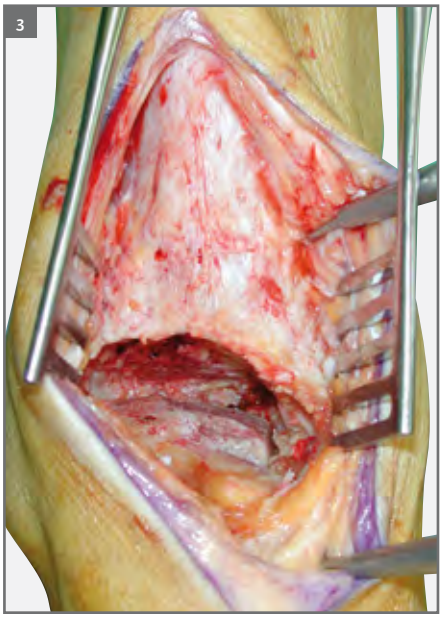

2-3

**115 225**
K-wire dia. 2.5 mm
L. 200 mm

## Note

Preservation of the convexity of the talar dome and concavity of the distal tibia may increase obtained stability after internal fixation, particularly against rotational forces. In any case, anterior and posterior rims of distal tibia should be preserved to get high contact stress at the anterior and posterior aspects of arthrodesis which will increase intrinsic stability of the arthrodesis. The lateral gutter does not need to be cleaned. In very sclerotic cases or talus necrosis, opening the tourniquet during operation may help evaluation of the vitality of the bone. Using a sharp curved chisel allows easier removal of the cartilage and preserves anatomic shape of the bones.

3



3

### Preparation of the Joint

Using a hintermann® distractor may help exposing the tibiotalar joint.

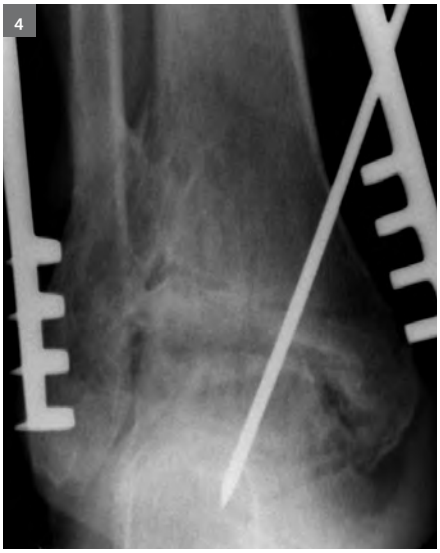
- Remaining cartilage is removed from the talar dome, the tibial plafond and the medial gutter using chisel and curettes, paying attention to preserve the anatomic configuration of surfaces.
- After debridment to the subchondral bone, a 2.5mm drill or a burr is used to break sclerotic bone areas.
- In the case of bone defect (e.g. after failed total ankle arthroplasty), an autologous bone graft or allograft is inserted to fill the defect while the foot is strictly held in neutral position. The use of one or two Hintermann® spreaders may be helpful to obtain desired distraction of the tibiotalar joint.
- Cysts are cleaned and filled with cancellous bone graft or bone matrix.

**115 225**
K-wire dia. 2.5 mm
L. 200 mm

## 4 Temporary Fixation of the Bones

Crucial for success of the surgery is the obtained position before internal fixation. Optimal position in all planes must be achieved. The use of X-rays or fluoroscopy is highly recommended to check the correct positioning of the bones, plates and screws.

- The positionning of the tibio talar joint will be determined through the help of the anatomical trial plates. Their purpose will allow to check the allocate space for the definite implant.
- Once desired reduction is obtained, a 2.5mm K-wire (115 225) is inserted through the joint, from distal tibia into the talus.
- It is adviced to place the k-wire in the centre of the tibia and in the sagittal plane in order not to interfere with the plates position later on.
- This K-wire will temporarily maintain the position of the talus against the tibia while positioning and fixating the lateral plate.


4

## 5 Positioning and Fixation of the Plates

First the lateral plate is positioned and fixed to the talus. Rigid fixation is achieved by 3.5 mm diam. Surfix® fixed angle locking screws. Direction of each screw is given by the precontoured holes. Once the plate is rigidly fixed against the lateral aspect of talar head, angular stability is achieved by insertion of the lock-screws. The k-wire is removed.

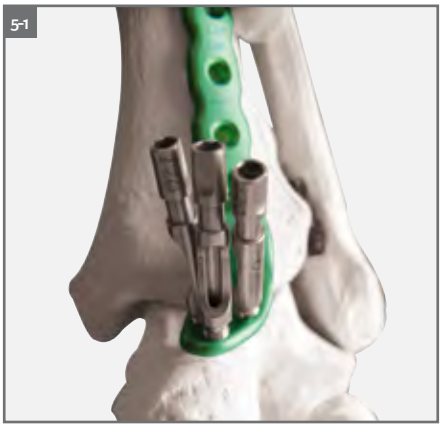
Thereafter, the compression forceps is fixed to the first or second proximal hole of the plate and the tibia with a monocortical screw, respectively. By applying compression the talus is moved against the tibia. Once desired compression is achieved, the plate is fixed to the tibia by using either 3.5 mm diam. Surfix® fixed angle or 3.5 mm diam. Surfix® variable angle locking screws; thereby, the talus is pushed medially against the medial malleolus.

5-1

## Antero-Lateral Plate

The antero-lateral plate (150 120S or 150 020S depending on the operated side) is fixed first.

- Residual osteophytes hampering the plate positioning have to be removed before positioning properly the plate onto the bone.
- The use of the wedges to be screwed into the tibial holes of the plate (159 103, 159 106, 159 109) can be useful to act as a spacer between the tibia and the plate while positioning correctly the distal part of the plate onto the talus.




**Note**
The second most proximal threaded hole of the plate can also be used if the skin incision does not allow to have enough space to further position the compression forceps onto the tibia.

5-1a

## Talar Fixation

The distal part of the lateral plate is fixed with 3 Surfix® fixed angle locking screws to the lateral aspect of the talar neck. In the case of posterior position of the tibia, the provided wedges of various thicknesses (159 103, 159 106, 159 109) can be screwed to the tibial holes of the plate to get it fixed to the talar head with desired distance to the tibia. Thereafter, the wedges can be removed and the tibia will then be pulled anteriorwards against the plate.

1. Drill Screw Holes.
Drilling guides (219 635) are fixed to the plate on the 3 most distal threaded holes using the screwdriver (219 845). (fig.5-1).

2. Surfix® Fixed Angle Locking Screw Insertion.
Report to the part 4-5 (p. 11).

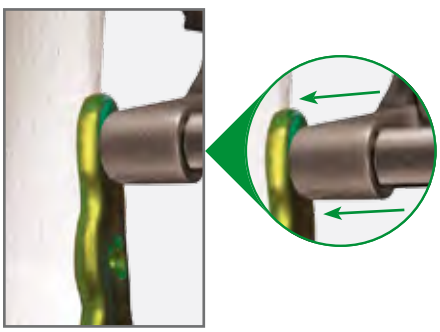
5-1b

## Compression of the Joint

Compression of the talus against the tibia and the medial malleolus is achieved with the compression forceps (219 960) attached to the plate with the compression guide (159 635) and to the tibia diaphysis with the compression screw (159 7xx).

1. Insert the compression guide (159 635) through the specific hole of the compression forceps (219 960) and screw this guide in the most proximal threaded hole of the plate.

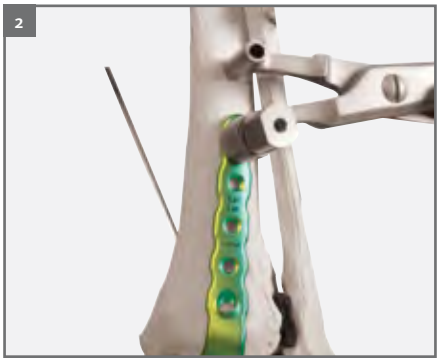
**Caution**
Ensure compression guide is fully threaded and seated properly into the plate prior to applying compression.



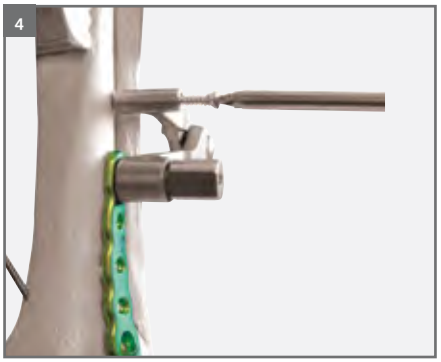



2. Position the most proximal extremity of the compression forceps on the tibia diaphysis respecting the alignment with the tibial axis of the plate. The distance between the 2 extremities of the compression forceps should be around 2 cm to allow a sufficient compression.

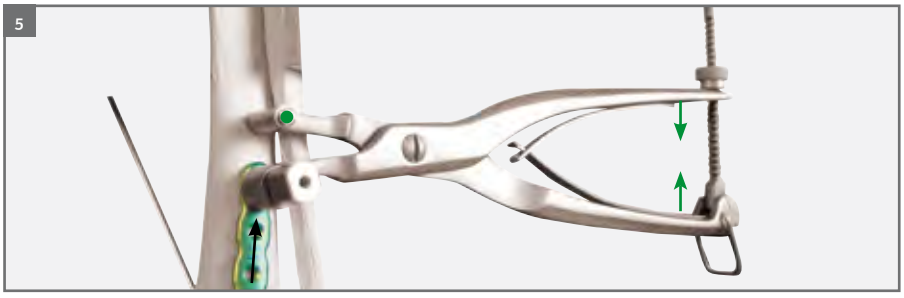



3. Prepare the compression screw insertion (159 740 / 159 755 / 159 760) using the 3 mm drill (219 545) through the hole of the proximal extremity of the compression forceps.


4. Insert the compression screw (159 740 / 159 755 / 159 760) into the tibia through the hole of the proximal extremity of the compression forceps (219 960) using the screwdriver (219 845 / 219 445). The compression forceps is fixed, in an open position, to the plate and the tibia.




5. Compression is applied with the compression forceps as shown on the figure.



5-1C

## Tibial Fixation

Keeping the compression forceps in place to maintain the compression, the tibial part of the lateral plate is fixed with 4 bicortical Surfix® fixed angle or Surfix® variable angle locking screws to the lateral aspect of the tibial diaphysis. The choice of the use of Surfix® fixed angle or Surfix® variable angle locking screws depends on the need for angulation of the orientation of the screws. If the use of Surfix® variable angle locking screws is needed, using the same number of Surfix® fixed angle and Surfix® variable angle locking screws is recommended. It is also recommended to use a Surfix® fixed angle locking screw into the most proximal threaded hole.
For the Surfix® fixed angle locking screw insertion, report to the Part «Talar Fixation» (p.19).

**Note**
If the angle is less than 75° or more than 105°, the drilling guide will not fit into the hole.

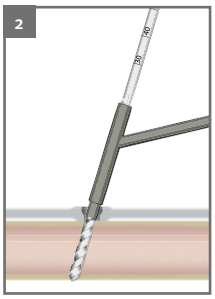
5-1C

## Insertion of Surfix® Variable Angle Screw

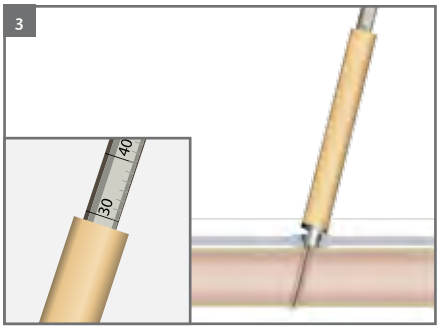
1. Drill Screw Holes
The drilling guide (219 035) specifically designed for the variable angle screws is inserted into the chosen threaded hole to obtain a variation of the angle (+/- 15°) between the plate and the position of a Surfix® fixed angle screw (90°).

**Caution**
Steps 1 to 6 should be completed for each screw before starting preparation of the subsequent screw(s). If not, the axes of the screw and the prepared hole may be misaligned.

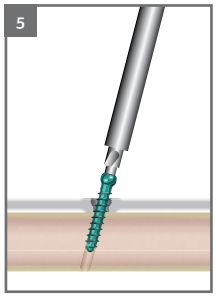
2. Screw Insertion
Prepare holes with the 2.7 mm drill (219 535) through the drilling guide (219 635). The screw length can be read from the calibrated scale on the drill.The depth is read from the top side of the drilling guide.




3. Alternately, measure the necessary screw length using the depth gauge (219 335).

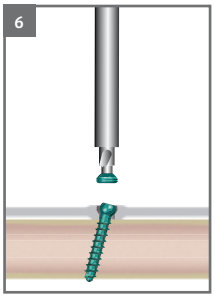


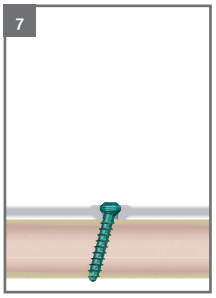

4. Chamfer the drill hole with the screwdriver (219 835). Ensure that the threaded hole is not damaged when performing the chamfering.


5. Insert the screw with the screwdriver (219 835 - 219 435) into the prepared hole until the plate is at the desired position relative to the bone. The screw should be fully seated in the plate. Clean the threaded hole before and after introducing the screw.

6. Assemble the lock-screw to the hexalobular screwdriver (219 135). The lock-screw should be inserted after each screw, and before preparation and insertion of the subsequent screw. This prevents potential damage to thread.
Note that this spherical shaped lock-screw has to be inserted perpendicularly to the plate in order to be screwed properly.



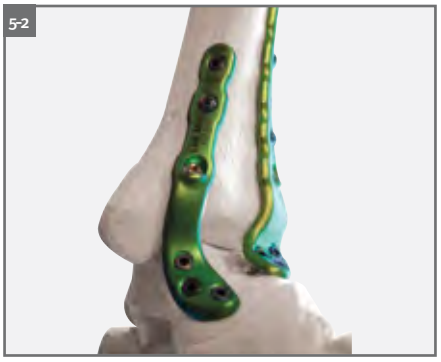




7. Locking: Fully seat the lock-screw with the screwdriver. The lock-screw should close in a curved manner the hole of the plate onto the screw head.

5-2

## Antero-Medial Plate

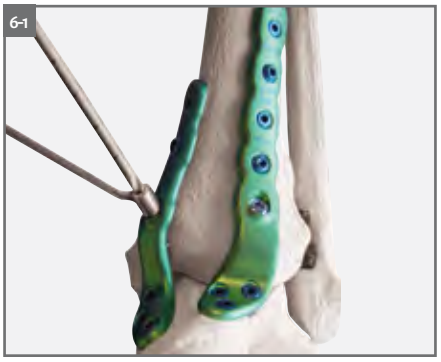
The antero-medial plate (150 010S or 150 110S depending on the operated side) is fixed secondly. Positioning and fixation of this plate is performed exactly in the same way as it has been done with the antero-lateral plate (repeat step 5-1, p.21). Except compression step (compression already performed on the lateral plate).



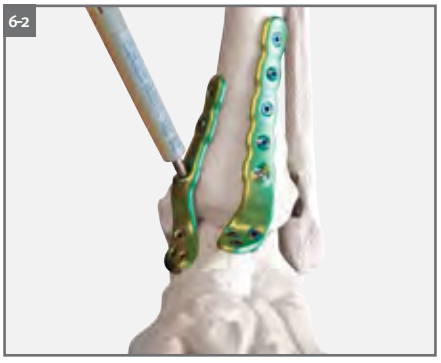

6

## Locking of the Joint

Additional 4mm cortical screws (150 2xxS) crossing and compressing the tibio-talar joint are placed through the tibia to the dorsal part of the talus. This allows a further stabilization of the joint with a more posterior fixation, and also fixation of the bone graft in the cases it has been needed with a transarticular fixation .




1. Drill the Screw Holes
The drilling guide (159 130) is inserted into the most distal tibial hole (non threaded). The orientation of the guide should allow the drill to go from the tibia to the posterior aspect of the talus.
Prepare the insertion of the screw using the 3mm drill (219 545) through the drilling guide. The drill should not be inserted too deeply in order to avoid the 2nd cortical aspect of the talus , which is part of the sub-talar joint. Use of X-Ray or fluoroscopy is recommended to check the good positioning of the drill.



2. Screw insertion
Insert the screw into the prepared hole using the screwdriver (219 445 / 219 845).

## 7 Closure and End of the Procedure


- Final check by fluoroscopy.
- The longitudinal incision of the extensor retinaculum is closed by continuous absorbable 0 suture.
- The skin is closed with interrupted non-absorbable 3-0 sutures.
- A drain is not used routinely.
- A thick compressive dressing is applied and the foot placed in a reusable prefab splint.
- The tourniquet is deflated.

## 8 Postoperative Care

- At the second postoperative day, the compressive dressings and prefabricated splint are replaced by a removable cast. This allows the use of an inflatable footpump in case of substantial postoperative swelling.
- After subsidence of the swelling (mostly between day 6 and 14 days postop), a below-knee walking cast is applied and left in place until the eighth postoperative week included.
- Removal of the stitches should not be done before the 14th postoperative day.
- Once the walking cast is applied properly, weight-bearing is allowed as tolerated; usually full weightbearing is achieved after 10 to 14 days postoperatively.
- At eight weeks, the cast is removed and standard radiographs are made. If bony fusion is considered not to be sufficient, a removable walking cast is applied for another 4 to 6 weeks. If the fusion is considered to be sufficient, the patient is allowed for free ambulation on custom shoes.
- Low molecular heparin or oral anticoagulants should be given, as long as the walking cast is in place or free full weight bearing is not granted.

## Instructions for use

In accordance with the directive 93/42/EEC relative to medical devices, this product must be handled and/or implanted by WELL-TRAINED and QUALIFIED PERSONS, AWARE OF THESE DIRECTIONS FOR USE.

### Description

Newdeal's osteosynthesis systems are designed for the fixation of fractures, fusions and osteotomies, more especially for foot, ankle and hand surgery.
Newdeal®'s products are made from Titanium alloy Ti-6Al-4V (ISO 5832-3 / ASTM F136).

### Indications

For fixation of bone fractures or for bone reconstruction.
Examples include:
Arthrodesis, osteotomies and fractures of ankle joint, distal tibia and fibula.

The Newdeal® TIBIAXYS Plates have to be fixed with the Newdeal® SURFIX Locking System screws and washers diam. 3.5 mm.
Anterior plates for ankle arthrodesis have to be fixed with the TIBIAXYS cortical screws dia.4 mm too.o.

### Contraindications

The implant should not be used in a patient who has currently, or who has a history of:
- Local or systemic acute or chronic inflammation;
- Active infection or inflammation;
- Suspected or documented metal allergy or intolerance.

Warnings
Serious post-operative complications may occur from use of the implant in a patient who:
- Lacks good general physical condition;
- Has severe osteoporosis;
- Demonstrates physiologic or anatomic anomalies;
- Has immunological responses, sensitization, or hypersensitivity to foreign materials;
- Systemic or metabolic disorders.

### Precautions for use

Physician must determine if implant is appropriate for patients who have any of the following conditions:
- Drug and/or alcohol and/or smoke addiction and/or abuse;
- Infectious disease;
- Malignancy;
- Local bone tumors;
- Compromised wound healing;
- Obesity;
- Demonstrated psychological instability, displayed a lack of understanding, inappropriate motivation, or attitude;
- Unwillingness to accept the possibility of multiple surgeries for revision or replacement;
- Lacks an understanding that a metallic implant is not as strong as normal healthy bone and will bend, loosen, or fracture if excessive demand is placed on it;
- Lacks an understanding that their preoperative capacity may not be fully recovered even after successful implantation;

Knowledge of surgical techniques, proper reduction, selection and placement of implants, and post-operative patient management are considerations essential to a successful outcome.
Criteria for patient selection are the responsibility of the surgeon. Information contained within this document should be taken into consideration during the selection process. Recognition of the appropriate indications and contraindications and the selection of the proper surgical procedures and techniques determined to be best for the patient are the responsibility of the surgeon. Each surgeon must evaluate the appropriateness of the procedure and instruments used during the procedure based on his or her own training and experience.
The surgeon should discuss with the patient prior to surgery possible risks, precautions, warnings, consequences, complications, and adverse reactions associated with the surgical procedure and implantation of the device.
Each patient must be evaluated by the surgeon to determine the specific risk/benefit relationship in light of the patient's condition and the surgeon's practice, training, experience, and knowledge of the related medical literature.
Complications with the use of osteosynthesis systems have been reported in the medical literature. Any patient undergoing a surgical procedure is subject to intra-operative and post-operative complications.
Each patient's tolerance to surgery, medication, and implantation of a foreign object may be different.
Possible risks, adverse reactions, and complications associated with surgery and the use of osteosynthesis systems should be discussed with and understood by the patient prior to surgery. The implant is made from metallic alloys; therefore, it is subject to possible reactions and complications, including those listed herein. The patient should not be led to unrealistic expectations as to the performance or results that the surgery and implant can provide. The patient should be informed that the life expectancy of the device is unpredictable once implanted, and that successful results cannot be guaranteed.
IT IS THE RESPONSIBILITY OF THE SURGEON TO PROVIDE THE PATIENT WITH INFORMATION PRIOR TO SURGERY.
Complications may include but are not limited to:
- Pain, discomfort, or abnormal sensations due to presence of the implant;
- Bending, loosening, and/or breakage, which could make removal impracticable or difficult;
- Risk of additional injury from post-operative trauma;
- Migration of the implant position or implant material resulting in injury;
- Bone loss due to stress shielding;

Side effects may include but are not limited to:
- Infections;
- Hematoma;
- Allergy;
- Thrombosis;
- Bone non-union or delayed union.

Adverse effects may necessitate re-operation, revision or removal surgery, arthrodesis of the involved joint, and /or amputation of the limb.
Implant removal should be followed by adequate postoperative management to avoid fracture or re-fracture.
Interference risks during medical imaging:
MRI/SCANNER: ask the patient to systematically mention that he/she was implanted with a metallic device.

### Packaging - sterility

This product is sold either sterile or non sterile.
The sterilization method is specified on the packaging.
Components sterilized by radiation are exposed to a minimum of 25 kGy of gamma irradiation.
If the product is not labeled « STERILE», it must be sterilized prior to use, in compliance with current regulations.
If the product has been removed from packaging but not used, it may be re-sterilized.
Check packaging and labeling integrity before use. The sterility is guaranteed as long as the packaging has not been damaged or opened and before the expiration date.
Do not use any implant for which the packaging has been opened or damaged outside the operating theatre.
Inner packaging should be handled under sterile conditions (persons/instruments).

### Use of the products

The surgeon must use the instrumentation recommended in accordance with the operative technique available from the manufacturer. The medical device must be used in compliance with the use of the profession and the standard of art. Do not attempt a surgical procedure with faulty, damaged or suspect instruments or implants. Inspect all components preoperatively to assure utility. Alternate fixation methods should be available intraoperatively.
Opening of the instruments set must be done according to aseptic condition.
When handling the implants, avoid any contact with other material or tools which may damage the implant surface. Under no circumstances should the implant be modified.
The multi-component devices (such as plates-screws systems) should only associate the appropriated Newdeal® products and should never be used in conjunction with components of any other manufacturers, as these products may not be compatible. The company accepts no responsibility for such use.
Specific cautions for plates
The plates should never been excessively bent, nor reverse bent.

### Re-use of the implants

Orthopedic implants already implanted must never be re-used. The company accepts no responsibility for such re-use.

### Re-sterilization of non-implanted implants and sterilization of non-sterile products

Unless supplied sterile and clearly labeled as such, all implants and instruments must be steam autoclaved prior to use in surgery. Re-sterilization is only allowed for non-implanted products. Remove delivery packaging in compliance with current regulations to sterilize non-sterile products. Newdeal's osteosynthesis implants are recommended to be sterilized by the steam autoclaving procedure regularly used in the hospital. The implants can be sterilized several times in the same conditions.
The following two methods have been validated by the manufacturer:

Newdeal Stainless Steel sterilization trays

Cycle Type: Gravity Displacement
5 pulses
[Maximum 900 mbar; Minimum 200 mbar]
Minimum Temperature: 134°C (273° F)
Exposure Time: 18 minutes
20 minute vacuum drying

Cycle Type: Pre-Vacuum
3 pulses
[Maximum 26.0 psig (2.8 bar); Minimum 10 inHg (339 mbar)]
Minimum Temperature: 132°C (270° F)
Exposure time: 4 minutes
2-3 minute purge
20 minute vacuum drying

These sterilization parameters assume that all instruments have been properly decontaminated prior to sterilization. The parameters are validated to sterilize specific configurations as noted in the tray markings. If other products are added to the tray or to the sterilizer, the recommended parameters may not be valid and new cycle parameters may need to be validated by the user. The autoclave must be properly installed, maintained and calibrated.

Other sterilization method and cycles may also be used. However, individuals or hospitals not using the recommended method are advised to validate the alternative method using appropriate laboratory techniques. EtO sterilization or cold sterilization techniques are not recommended.

### Information related to postoperative care

- The patient should be advised that a second more minor procedure for the removal of the implants is usually necessary
- While the surgeon must make the final decision regarding implant removal, wherever possible and practical for the individual patient, fixation devices should be removed once their service as an aid to healing is accomplished. In the absence of a bursa or pain, removal of the implant in elderly or debilitated patients is not suggested.
- Postoperative instructions to patients and appropriate nursing care are critical. Early weight bearing substantially increases implant loading and increases the risk of loosening, bending, or breaking the device. Patients who are obese or non-compliant, as well as patients who could be predisposed to delayed or non-union must have auxiliary support.
- Even after full healing, the patient should be cautioned that re-fracture is more likely with the implant in place and soon after its removal, rather than later, when the voids in the bone left by implant removal have been filled in completely.
- Patients should be cautioned against unassisted activity that requires walking or lifting.
- Postoperative care and physical therapy should be structured to prevent loading of the operative extremity until stability is evident.
- The patient should be encouraged to report to his/her surgeon any unusual changes of the operated extremity. If evidence suggests loosening of the implant (particular pain and progressive changes in the radiographs) an intensified schedule of check-ups is advised and new warning and instructions to the patient may be appropriate regarding further activity restrictions.
- The patient should be encouraged to receive prompt medical attention for any infection that could occur, whether at the operated-member level or elsewhere in the body.

### Storage

Store in dry place.

### Product information disclosure Liability

Newdeal, an Integra LifeSciences Company, has exercised reasonable care in the selection of materials and the manufacture of these products and warrant that the products are free from manufacturing defects. Newdeal excludes all other warranties, whether expressed or implied, including but not limited to, any implied warranties of merchantability or fitness for a particular purpose. Newdeal® shall not be liable for any incidental or consequential loss, damage, or expense, directly or indirectly arising from use of this product. Newdeal neither assumes nor authorizes any person to assume for it any other or additional liability or responsibility in connection with these products. Newdeal intends that this device should be used only by physicians having received proper training in orthopedic surgery technique for use of the device.

### WARNING

This device is not approved for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

### INFORMATION

Should any information regarding the products or their uses be required, please contact your representative or distributor or directly contact the manufacturer.

# References

## Cortical Screw Diam. 4.0 mm + Diam. 6.0mm Head

| Reference | Length |
|---|---|
| 150 240S | 40 mm |
| 150 242S | 42 mm |
| 150 246S | 46 mm |
| 150 250S | 50 mm |
| 150 255S | 55 mm |
| 150 260S | 60 mm |
| 150 265S | 65 mm |
| 150 270S | 70 mm |
| 150 275S | 75 mm |
| 150 280S | 80 mm |
| 150 285S | 85 mm |
| 150 290S | 90 mm |
| 150 200S | 100 mm |

## Surfix® Fixed Angle Screw Diam. 3.5 mm + Lock Screw

| Reference | Length |
|---|---|
| 285 310S | 10 mm |
| 285 312S | 12 mm |
| 285 314S | 14 mm |
| 285 316S | 16 mm |
| 285 318S | 18 mm |
| 285 320S | 20 mm |
| 285 322S | 22 mm |
| 285 324S | 24 mm |
| 285 326S | 26 mm |
| 285 328S | 28 mm |
| 285 330S | 30 mm |
| 285 332S | 32 mm |
| 285 334S | 34 mm |
| 285 336S | 36 mm |
| 285 338S | 38 mm |
| 285 340S | 40 mm |
| 285 344S | 44 mm |
| 285 348S | 48 mm |
| 285 350S | 50 mm |

## Surfix® Variable Angle Screw Diam. 3.5 mm + Lock Screw

| Reference | Length |
|---|---|
| 295 310S | 10 mm |
| 295 312S | 12 mm |
| 295 314S | 14 mm |
| 295 316S | 16 mm |
| 295 318S | 18 mm |
| 295 320S | 20 mm |
| 295 322S | 22 mm |
| 295 324S | 24 mm |
| 295 326S | 26 mm |
| 295 328S | 28 mm |
| 295 330S | 30 mm |
| 295 332S | 32 mm |
| 295 334S | 34 mm |
| 295 336S | 36 mm |
| 295 338S | 38 mm |
| 295 340S | 40 mm |
| 295 344S | 44 mm |
| 295 348S | 48 mm |
| 295 350S | 50 mm |

150 010S

150 020S

150 120S

150 110S

## Ankle Arthrodesis Plates

| Reference | Description |
|---|---|
| 150 010S | Left medial anterior plate |
| 150 020S | Left lateral anterior plate |
| 150 110S | Right medial anterior plate |
| 150 120S | Right lateral anterior plate |

## Container: 159 970

| Reference | Description |
|---|---|
| 159 010 | Left medial anterior trial plate |
| 159 020 | Left lateral anterior trial plate |
| 159 110 | Right medial anterior trial plate |
| 159 120 | Right lateral anterior trial plate |

## Container: 159 970

| Reference | Description |
|---|---|
| 159 071 | Base |
| 309 942 | Lid |

## Instruments

| # | Reference | Description |
|---|---|---|
| 1 | 115 116 | K-wire - diam. 1.6 mm - L. 150 mm |
| 2 | 115 225 | K-wire - diam 2.5 mm - L. 200 mm |
| 3 | 159 103 | Wedge thickness 3 mm |
| 4 | 159 106 | Wedge thickness 6 mm |
| 5 | 159 109 | Wedge thickness 9 mm |
| 6 | 159 130 | Drilling guide - diam. 3.0 mm |
| 7 | 159 400 | Length gauge - diam. 4.0 mm screws |
| 8 | 159 635 | Compression guide |
| 9 | 159 740 | Screw for compression forceps diam. 4 mm - L. 40 mm |
| 10 | 159 755 | Screw for compression forceps diam. 4 mm - L. 55 mm |
| 11 | 159 760 | Screw for compression forceps diam. 4 mm - L. 60 mm |
| 12 | 219 035 | Drilling guide - variable angle screw |
| 13 | 219 135 | Screwdriver hexalobular t10 |
| 14 | 219 335 | Length gauge diam. 3.5 mm screws |
| 15 | 219 435 | Screwdriver AO - diam. 2.0 mm - L. 76 mm - HEX |
| 16 | 219 445 | Screwdriver AO - diam. 2.5 mm - L. 76 mm - HEX |
| 17 | 219 535 | Drill AO - diam. 2.7 mm - L. 125 mm |
| 18 | 219 545 | Drill AO - diam. 3.0 mm - L. 190 mm |
| 19 | 219 635 | Drilling guide - diam. 2.7 mm |
| 20 | 219 835 | Screwdriver - diam. 2.0 mm - L. 180 mm - HEX |
| 21 | 219 845 | Screwdriver diam. 2.5 - L. 191 mm - HEX |
| 22 | 219 960 | Compression forceps - L. 260 mm |