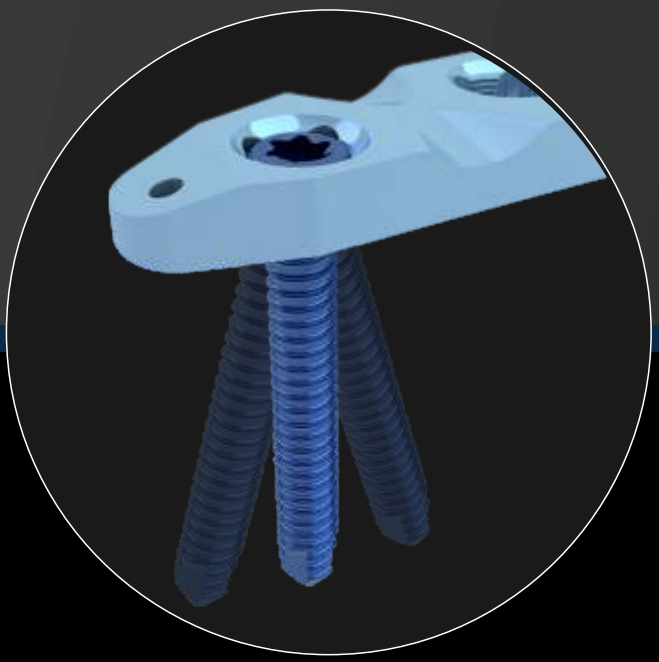
VERSALOCK PERIPROSTHETIC FEMUR PLATES SYSTEM

SURGICAL IMPLANTATION TECHNIQUE



GMREIS

Qualidade para Vida

Calidad para Vida Quality for Life الجودة للحياة

GENERAL INFORMATION

- Single-use product, do not reuse, even if it is in perfect condition;
- Product non-sterile;
- Sterilize before use, according to recommended sterilization method; and
- Prohibited reprocessing.

INDICATIONS FOR USE

The Versalock Periprosthetic Femur Plates System – GMReis is indicated for temporary internal fixation and stabilization of fractures and osteomomies of the femur, including:

- Periprosthetic fractures;
- Comminuted fractures;
- Supracondylar fractures;
- Trochanteric fractures;
- Fractures in normal and osteopenic bone; and
- Non-unions and Malunions.

CONTRAINDICATIONS

Patients with some of the clinical condition described below should not be submitted to procedures in which implants of the Versalock Periprosthetic Femur Plates System are used.

- Active infection or history of recent infection of bone tissue or local soft tissues;
- Osteometabolic diseases that cause weakness or reduction of bone mass;
- Insufficient bone mass or of poor quality;
- Inadequate vascularization at the implant placement local that could compromise the adequate blood supply in the implantation site;
- Mental illnesses;
- Drug abuse and alcoholism;
- Fever;
- Pregnancy;
- Allergy and/or sensitivity to metal, and
- Patients without conditions to follow the medical advice and the health team at any time of their treatment;

The modelling of Versalock Periprosthetic Femur Plates System is not recommended.

APPLICATIONS:

The success of the treatment is directly related to the appropriate surgical technique applied by the surgeon and the correct choice of implants, following their characteristics: model, shape, type, dimensions, etc.
The size and anatomy of the bone structures are the main factors in the definition of the implants to be used.
The recommendations in the Table below should be followed:

DESCRIPTION	SPECIFIC SITE TREATED
Versalock Proximal Femur Periprosthetic Plate - Left/Right	Proximal Femur Periprosthetic Fracture
Versalock Distal Femur Periprosthetic Plate - Left/Right	Distal Femur Periprosthetic Fracture
MIS Versalock Condylar Femur Plate - Left/Right	
Versalock Trochanteric Periprosthetic Plate - Left/Right	Used in association with the Versalock Proximal Femur Periprosthetic Plate to fix the great trochanter

CRITERIA FOR SIZE SELECTION, SHAPE AND DESIGN ASSOCIATED WITH THE BONE CONSOLIDATION SUCCESS:

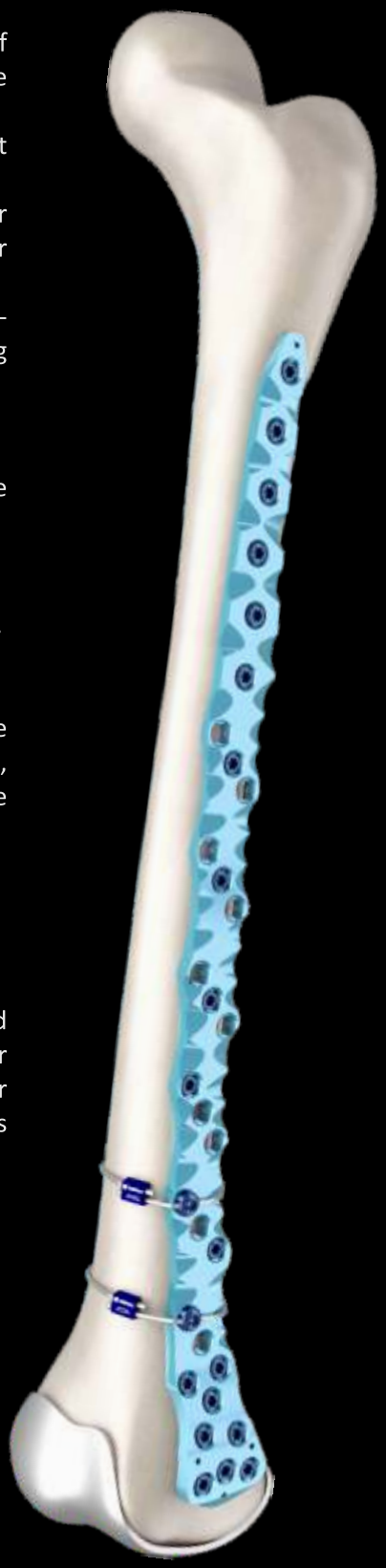
It is the responsibility of the surgeon in charge of the procedure, the size selection of the implantable component most appropriate for the use, which must be done based on radiological studies pre-operative and the indication of the correct use. The right selection of the implant is extremely important and should take into account the biomechanical aspects, the size and shape of the bone structure to be treated, which corresponds to the size and the model of the implant selected.

SIDE EFFECTS OR UNDESIRABLE SIDE EFFECTS:

The implantable components of the Versalock Periprosthetic Femur Plates System are manufactured with raw materials of recognized biomedical uses. The chemical, metallographic and mechanical requirements of the material standards are used as a criterion to ensure the purity of the product and its biomechanical performance, characterizing it as appropriate to be implanted in the human body. It should be noted, however, that no material for surgical implant is shown to be completely free of adverse reactions in the human body, and that an acceptable level of biological response can be expected when the material is used in appropriate applications. Thus, the product may generate some undesirable side effects due to the biomaterial:

- Sensitivity to metal or allergic reaction to foreign body;
- Pain, discomfort and abnormal sensations due to incorrect use and indication of the implant. It is recommended that the surgeon evaluate the patient possible sensitivity to the use of the biomaterial to be used before implantation;
- Other undesirable side effects related to the surgical procedure and product placement:
    - Consolidation delay or pseudoarthrosis, which may lead to loosening or rupture of the implant when consolidation does not occur 90 days after surgery;
    - Rupture or loosening of the implants for not following the post-operative guidelines for rehabilitation and/or overload during physiotherapy and/or incorrect implant positioning;
    - Shortening of the limb due to fracture compression or bone resorption;
    - Decreased bone density;
    - Pain, discomfort and abnormal sensations due to the presence of the implant;
    - Nerve injuries due to surgical trauma;
    - Bone necrosis; and
    - Vascular changes and among others inherent to the surgical procedure.

NOTE 1: Other interventions may be needed to repair the secondary effects.
NOTE 2: Smokers with metabolic disorders have greater difficulties in achieving the bone consolidation, consequently there is a greater chance to occur deformation, rupture or loosening of the implants and does not reach the bone and suffer more progressive degeneracy.



MRI SAFETY INFORMATION:

The Versalock Periprosthetic Femur Plates System has not been evaluated for safety and compatibility in the MR environment. It has not been tested for heating, migration, or image artifact in the MR environment. The safety of Versalock Periprosthetic Femur Plates System in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

SURGICAL TECHNIQUE:

INDICATION OF TRAINING
Only properly trained, empowered in procedures of osteosyntheses may use the product.

NOTE 1: The surgeon should be aware of all recommendations described in the product "Use Instructions" and other information on the label.

1. SURGICAL PLAN AND SURGICAL ACCESS:

The surgical plan shall be performed by clinical evaluation and radiological images. The selection of implants shall be made according to their morphology, dimensions, indications and contraindications.
Place the patient on the operating table in the position best suitable to the procedure and access the implantation region.
Perform the preparation required in the region for deployment of the plate and screws (i.e. fracture reduction, osteotomy or preparation of the bone surfaces in case of arthrodesis, or treatment of pseudoarthrosis).

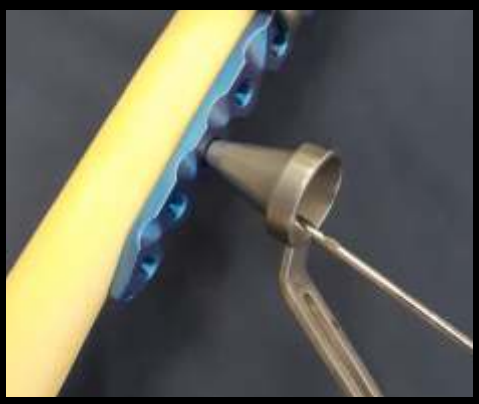


Fig.01: Poliaxial side of Double Drill Guide drill a hole with +/- 15°.

2. INSTRUCTIONS FOR THE CORRECT USE OF THE PRODUCT:

1. Perform a preoperative radiological and clinical evaluation to select the most appropriate product.
2. Perform the surgical planning.
3. Position the patient and perform the ideal access.
4. Make the implant selection.
5. Reduce the fracture and place the plate; keep it fixed with reduction assist clamps.
6. Attach the corresponding guide to the plate and pass the corresponding drill bit (figs. 01 - 02).

GUIDE	DRILL	SCREW DIAMETER	PLATE
Double Drill Guide Ø4.3 mm (C:327-110)	Drill Ø4.3 mm L: 300 mm (C:327-117)	Ø5.0 mm	Versalock Proximal and Distal Periprosthetic Plate

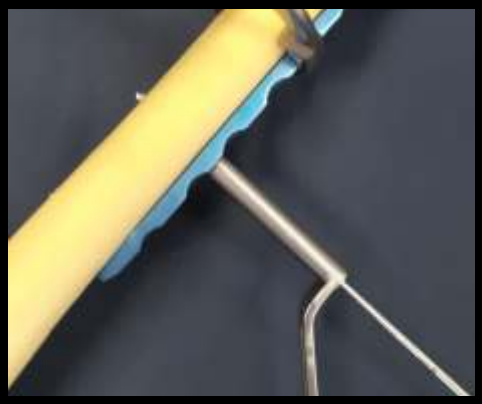


Fig.02: 0° side of Double Drill Guide drill.

7. Remove the drill guide and measure the screw length with the depth gauge (fig. 03).

DEPTH GAUGE	SCREW DIAMETER	PLATE
Depth Gauge 110 mm (C:169-43)	Ø5.0 mm	Versalock Proximal and Distal Periprosthetic Plate

Fig.03: Deep Gauge used to mensure screw lenght.

8. Fix the screw using the corresponding wrench (fig.04).

TORQUE LIMITER	WRENCH	SCREW DIAMETER	PLATE
Torque Limiter Screwdriver 6Nm (C: 900-265)	Hexalobular Screwdriver T25 (C: 327-500)	Ø5.0 mm	Versalock Proximal and Distal Periprosthetic Plate

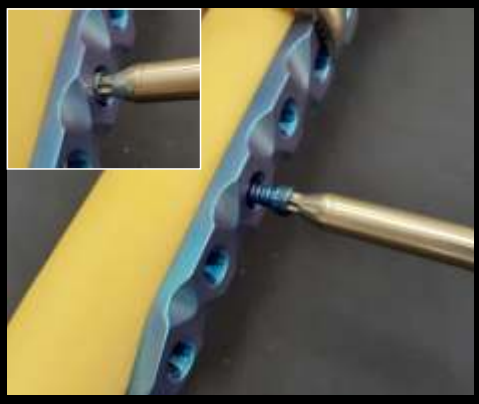


Fig.04: Inserting Ø5.0 mm locking screw with the screwdriver and 6Nm torque limiter handle.

9. When using the Versalock Proximal Femur Periprosthetic Plate, the Trochanteric Plate can be used in conjunction. Attach the trochanteric plate to the proximal femur plate using screws that are connected using the screwdriver Ø5.0mm (fig. 05).

   With the correspondent guide and drill, fix the screws, a variable angle guide can also be used allowing angulation of up to 15 ° for each side (fig. 06).

GUIDE	DRILL	SCREW DIAMETER	PLATE
Drill Guide Ø2.5 mm (C:307-100)	Drill Ø2.5 mm L: 200 mm (C:169-155)	Ø3.5 mm	Versalock Trochanteric Periprosthetic Plate

   Remove the drill guide and measure the screw length with the depth gauge (fig. 07).

DEPTH GAUGE	SCREW DIAMETER	PLATE
Depth Gauge 60 mm (C:169-154)	Ø3.5 mm	Versalock Torchanteric Periprosthetic Plate

   Fix the screw using the corresponding wrench (fig. 08).

TORQUE LIMITER	WRENCH	SCREW DIAMETER	PLATE
Torque Limiter Screwdriver 1.3Nm (C: 900-265)	Hexalobular Screwdriver T15 (C: 307-110)	Ø3.5 mm	Versalock Trochanteric Periprosthetic Plate

- Ø3.5 mm Versalock Variable Angle Locking Screws holes.
- Trochanteric Plate Fastening Screws holes.
- Smooth holes to access the Ø5.0 Versalock Variable Angle Locking Screws holes of the Proximal Femur Periprosthetic Plate.
- Free area to access the k-wire holes of the Proximal Femur Preriprosthetic Plate for temporary fixation.

Fig.05: Coupling of the Trochanteric Plate with the Proximal Femur Periprosthetic Plate.

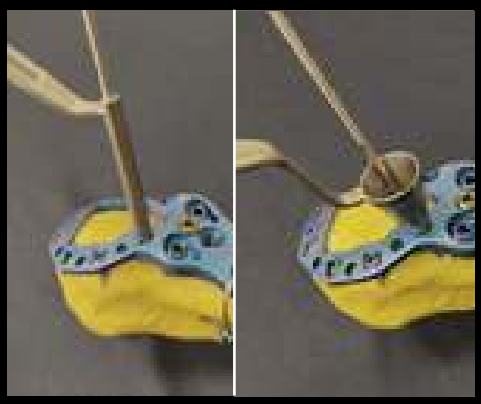


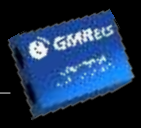
Fig.06: Drill Guide Ø2.5 mm used to perform a screw hole 0° (left) or polyaxial +/-15° (right).

Fig. 07: Deep Gauge used to mensure screw lenght.

Fig. 08: Inserting Ø3.5 mm locking screw with the screwdriver and 1.3Nm torque limiter handle.

11. If using the Gama Cable:
    place the Connector Screw for Gama Cable in the planned holes of Periprosthetic Plate and pass the Gama Cable through their holes (fig 09) and peform the cerclage of the bone with the cable.

    Both two segments of the cable must be mounted through the Gama Cable Lock holes, which will be used for the final locking of the cerclage.



    For Gama Cable tensioning, assembly the Cable Dowel in the cable extremity, perform manual provisory tension, and fix it with the lock upwards (fig. 10).

    Pass the locked extremity of the Gama Cable through the Cable Tensioner, and assembly it with the Cable Dowel (fig. 11).

    Push the second lock upwards of the Cable Tensioner to fix it (fig. 11 - 1), and unlock the first upwards of the Cable Dowel (fig. 11 - 2).

    Rotate the tensioner device to provide the ideal tension of the cerclage with the Gama Cable (fig. 11 - 3).

    With the Gama Cable tensioned lock the Gama Cable Locking using the Cable Crimping Pliers (fig. 12).

    Remove the tension of the Cable Tensioner, and uncouple the Cable Tensioner and the Cable Dowel.

    Cut the excess cable with the Wire Cutter (fig. 13).

12. Remove the reduction clamps;

13. Perform the radiological evaluation to check the positioning of the plate and screws;

14. Perform the closure of surgical incisions in its various planes, the placement of special dressings and the protection of the operated segment with splints, plasters or other type of orthosis.

The time during which this care should be maintained depends on the specific characteristics of each procedure and should be carefully outlined by the surgeon responsible. By the same way, postoperative care and rehabilitation will depend on numerous variables that cannot be outlined in this document and that are the absolute responsibility of the multidisciplinary team that cares for the patient.

Fig. 09: Fixation of the Gama Cable in the Versalock Periprosthetic Plate with the Connector Screw.

Fig. 10: Assembly of the Gama Cable through the Cable Dowerl and lock it.

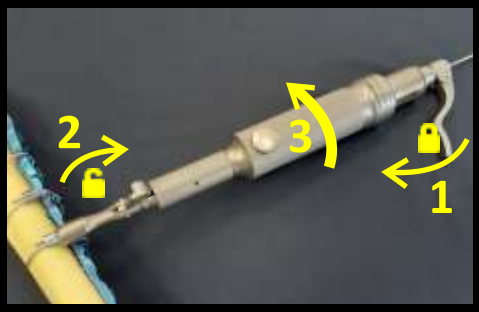
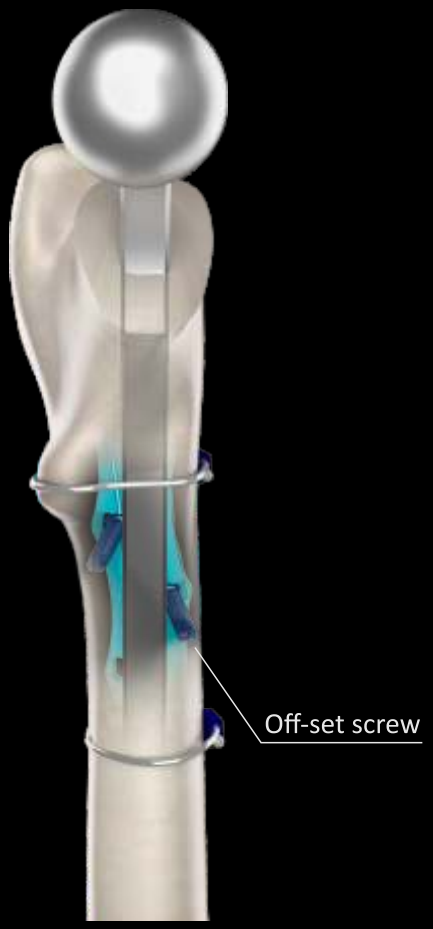


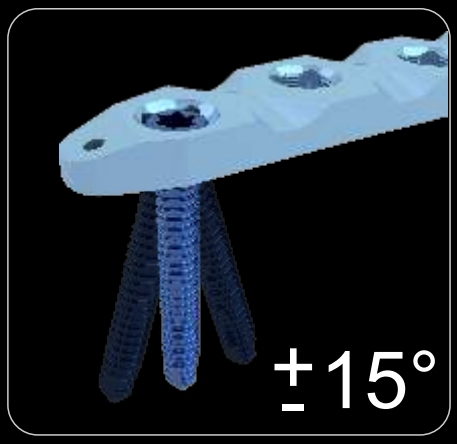
Fig. 11: Coupling the Cable Tensioner with the Cable Dowel. Lock the cable in the Cable Tensioner (1), unlock the cable of the Cable Dowel (2) and rotate de Cable Tensioner to perform cerclage tension (3).

Figs. 12-13: Cable Crimping Pliers and Wire Cutter used to finish de cerclage procedure.



The DIAGONAL THREE HOLES offer more screw placement options: off-set holes allow screws placement around the prosthesis, and the central hole allows implantation of bicortical screw or monocortical periprosthetic screw.

Note: Do not insert screws in all of diagonal three holes because it creates a bone stress riser.



The Versalock technology allows screw placement up to 15° for each side with safe and effective coupling and lock with plate holes. The locking construct provides improved stability specially in osteoporotic bones.

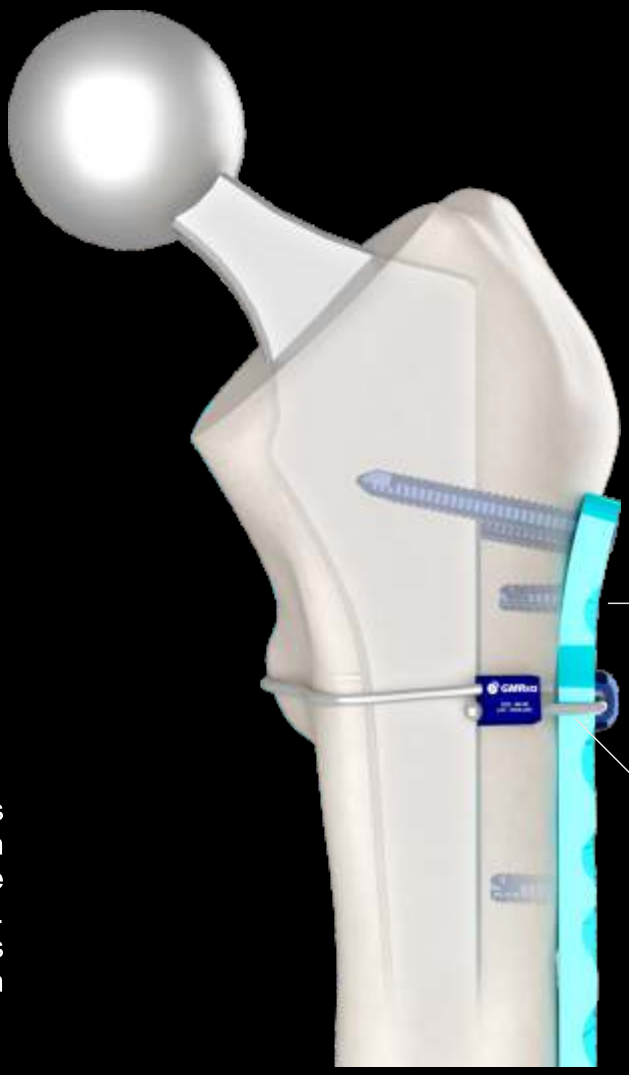


PLATE	COMPATIBLE SCREWS	
	CODE	DESCRIPTION
Versalock Proximal and Distal Femur Periprosthetic Plates	327-50-XXX	Versalock Variable Angle Screw Ø5.0 mm x XXX: 20-110 mm
	327-51-XXX	Versalock Variable Angle Cannulated Screw Ø5.0 mm x XXX: 20-110 mm
	327-52-XX	Versalock Variable Angle Periprosthetic Screw Ø5.0 mm x XX: 10-18 mm
	327-XX	Versalock Spacer Screw XX: 1-3 mm
	327-PC	Versalock Connector Screw for Gama Cable
Versalock Trochanteric Periprosthetic Plate	282-20-02	Trochanteric Plate Fastening Screw
	307-35-XX	Versalock Variable Angle Locking Screw Ø3.5 mm x XX: 12-90 mm
MIS Versalock Condylar Femur Plate	169-18-XXX	Cortical Screw Ø4.5 mm x XXX: 14-110 mm
	327-50-XXX	Versalock Variable Angle Screw Ø5.0 mm x XXX: 20-110 mm
	327-51-XXX	Versalock Variable Angle Cannulated Screw Ø5.0 mm x XXX: 20-110 mm
	327-52-XX	Versalock Variable Angle Periprosthetic Screw Ø5.0 mm x XX: 10-18 mm
	327-XX	Versalock Spacer Screw XX: 1-3 mm
	327-PC	Versalock Connector Screw for Gama Cable

WARNING REGARDING THE PRODUCT CONDITION WHICH RESTRICT THE USE:

The product should not present any visual abnormality in its surface, as risks, failures, dirt or other. The implantable components that exhibit abnormalities in their surface should be destroyed and disposed of according to the procedure of "Destruction and disposal".

CAUTION ASSOCIATED IN CASE OF FALL OF SOME COMPONENT:

In case of fall of any component or suffer any kind of damage, it should be destroyed and disposed of according to the Procedure of Disposal.ut additional cost. Ask for free by e-mail: sac@gmreis.com.br.

REMOVING AND HANDLING OF IMPLANTS REMOVED FROM PATIENTS FOR ANALYSIS:

The implant must not be removed, except in the case of surgical revision. If the implant should be removed and need to be subjected to analysis, it must be in accordance with NBR ISO 12891-1 "Removal and analysis of surgical implantation - Part 1 - Removal and Handling".
These instructions must be followed:

- It is recommended that the implants, and in applicable cases, samples of tissue, are removed in a way that causes minimal damage in both tissue and implant;
- It is especially important that functional surfaces, such as surfaces of joints of prostheses and surfaces of fractured implants be protected.
- It is also extremely important to list the parties of the fractured implant and other removed components, leaving clear positioning in the deployment place.

The most important part of the implant removal is the prevention of damage that may lead to a scientific examination useless. For an appropriate scientific examination, the implant must be preserved as close as possible of the state, which existed at the time of the patient removal. Consequently, it is important that there be taken care during handling, storage and transport of the implants removed in order to ensure that no damage occurs or changes on the surfaces that will be analyzed.

The same care should be taken with the instruments, which eventually fail during its use.

The implants removed must go through process of cleaning and disinfection, under the responsibility of the health service. Subsequently, must be packaged separately in plastic bags or plastic containers/glass and labelled. The packaging should be designed to minimize the possibility of breakage, damage to surface and possible contamination of the implant by the environment. The labelling of products, which will be forwarded for analysis, should ensure their accurate identification, being that the ISO 12891-1 recommends the use of labels non-removable (that tear in the case of attempted removal).

It is extremely important, for an accurate evaluation failure cause of the product that the X-rays pre, post-operative and the verification of the implant failure are sent together with the material sent for analysis.

CUSTOMER COMPLAINT:

If the medical product presents a risk specific unpredictable, being outside of its specifications or being generated any dissatisfaction, notify directly the GMReis Customer Service (SAC). The product should be sent cleaned and packed in plastic bag, properly identified and with the description of non-compliance to the following address: G. M. dos Reis Indústria e Comércio Ltda - Pierre Simon de Laplace Avenue, no. 600 Lote 3 - Quadra F – Quarteirão 9677 - TECHNOPARK – CEP: 13069-320 – Campinas – SP – BRAZIL or directly notify at Telephone Number:(0xx19)3765-9900/ E-mail: sac@gmreis.com.br .

USER WARNING:

These Instructions for Use are available in format that is not printed, through the electronic address of the manufacturer: http://www.gmreis.com.br/produtos/IFU, and can be checked in the search field by trade name, described on the label of the product packaging. The Instructions for use provided will always be in accordance with the current latest version. If there is interest from the user, the Instructions for Use may be available in printed format, without additional cost. Ask for free by e-mail: sac@gmreis.com.br.

PLATES	
CODE	DESCRIPTION
282-09-D	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 21H - RIGHT
282-09-E	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 21H - LEFT
282-10-D	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 18H - RIGHT
282-10-E	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 18H - LEFT
282-11-D	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 15H - RIGHT
282-11-E	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 15H - LEFT
282-12-D	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 12H - RIGHT
282-12-E	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 12H - LEFT
282-13-D	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 09H - RIGHT
282-13-E	VERSALOCK PROXIMAL FEMUR PERIPROSTHETIC PLATE 09H - LEFT
282-14-D	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 21H - RIGHT
282-14-E	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 21H - LEFT
282-15-D	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 18H - RIGHT
282-15-E	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 18H - LEFT
282-16-D	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 15H - RIGHT
282-16-E	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 15H - LEFT
282-17-D	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 12H - RIGHT
282-17-E	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 12H - LEFT
282-18-D	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 09H - RIGHT
282-18-E	VERSALOCK DISTAL FEMUR PERIPROSTHETIC PLATE 09H - LEFT
282-20-01-D	VERSALOCK TROCHANTERIC PERIPROSTHETIC PLATE RIGHT WIDE
282-20-01-E	VERSALOCK TROCHANTERIC PERIPROSTHETIC PLATE LEFT WIDE
282-21-01-D	VERSALOCK TROCHANTERIC PERIPROSTHETIC PLATE RIGHT NARROW
282-21-01-E	VERSALOCK TROCHANTERIC PERIPROSTHETIC PLATE LEFT NARROW
307-05-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 05H - RIGHT
307-05-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 05H - LEFT
307-07-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 07H - RIGHT
307-07-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 07H - LEFT
307-09-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 09H - RIGHT
307-09-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 09H - LEFT
307-11-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 11H - RIGHT
307-11-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 11H - LEFT
307-13-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 13H - RIGHT
307-13-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 13H - LEFT
307-15-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 15H - RIGHT
307-15-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 15H - LEFT
307-17-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 17H - RIGHT
307-17-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 17H - LEFT
307-19-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 19H - RIGHT
307-19-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 19H - LEFT
307-21-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 21H - RIGHT
307-21-D	MIS VERSALOCK CONDYLAR FEMUR PLATE 21H - LEFT

SCREWS			
CODE	DESCRIPTION	CODE	DESCRIPTION
169-18-14	CORTICAL SCREW 4.5 X 14 MM	169-18-90	CORTICAL SCREW 4.5 X 90 MM
169-18-16	CORTICAL SCREW 4.5 X 16 MM	169-18-95	CORTICAL SCREW 4.5 X 95 MM
169-18-18	CORTICAL SCREW 4.5 X 18 MM	169-18-100	CORTICAL SCREW 4.5 X 100 MM
169-18-20	CORTICAL SCREW 4.5 X 20 MM	169-18-105	CORTICAL SCREW 4.5 X 105 MM
169-18-22	CORTICAL SCREW 4.5 X 22 MM	169-18-110	CORTICAL SCREW 4.5 X 110 MM
169-18-24	CORTICAL SCREW 4.5 X 24 MM	200-35-10	CORTICAL SCREW 3.5 X 10 MM
169-18-26	CORTICAL SCREW 4.5 X 26 MM	200-35-12	CORTICAL SCREW 3.5 X 12 MM
169-18-28	CORTICAL SCREW 4.5 X 28 MM	200-35-14	CORTICAL SCREW 3.5 X 14 MM
169-18-30	CORTICAL SCREW 4.5 X 30 MM	200-35-16	CORTICAL SCREW 3.5 X 16 MM
169-18-32	CORTICAL SCREW 4.5 X 32 MM	200-35-18	CORTICAL SCREW 3.5 X 18 MM
169-18-34	CORTICAL SCREW 4.5 X 34 MM	200-35-20	CORTICAL SCREW 3.5 X 20 MM
169-18-36	CORTICAL SCREW 4.5 X 36 MM	200-35-22	CORTICAL SCREW 3.5 X 22 MM
169-18-38	CORTICAL SCREW 4.5 X 38 MM	200-35-24	CORTICAL SCREW 3.5 X 24 MM
169-18-40	CORTICAL SCREW 4.5 X 40 MM	200-35-26	CORTICAL SCREW 3.5 X 26 MM
169-18-42	CORTICAL SCREW 4.5 X 42 MM	200-35-28	CORTICAL SCREW 3.5 X 28 MM
169-18-44	CORTICAL SCREW 4.5 X 44 MM	200-35-30	CORTICAL SCREW 3.5 X 30 MM
169-18-46	CORTICAL SCREW 4.5 X 46 MM	200-35-32	CORTICAL SCREW 3.5 X 32 MM
169-18-48	CORTICAL SCREW 4.5 X 48 MM	200-35-34	CORTICAL SCREW 3.5 X 34 MM
169-18-50	CORTICAL SCREW 4.5 X 50 MM	200-35-36	CORTICAL SCREW 3.5 X 36 MM
169-18-52	CORTICAL SCREW 4.5 X 52 MM	200-35-38	CORTICAL SCREW 3.5 X 38 MM
169-18-54	CORTICAL SCREW 4.5 X 54 MM	200-35-40	CORTICAL SCREW 3.5 X 40 MM
169-18-56	CORTICAL SCREW 4.5 X 56 MM	200-35-42	CORTICAL SCREW 3.5 X 42 MM
169-18-58	CORTICAL SCREW 4.5 X 58 MM	200-35-44	CORTICAL SCREW 3.5 X 44 MM
169-18-60	CORTICAL SCREW 4.5 X 60 MM	200-35-46	CORTICAL SCREW 3.5 X 46 MM
169-18-62	CORTICAL SCREW 4.5 X 62 MM	200-35-48	CORTICAL SCREW 3.5 X 48 MM
169-18-64	CORTICAL SCREW 4.5 X 64 MM	200-35-50	CORTICAL SCREW 3.5 X 50 MM
169-18-66	CORTICAL SCREW 4.5 X 66 MM	200-35-52	CORTICAL SCREW 3.5 X 52 MM
169-18-68	CORTICAL SCREW 4.5 X 68 MM	200-35-54	CORTICAL SCREW 3.5 X 54 MM
169-18-70	CORTICAL SCREW 4.5 X 70 MM	200-35-56	CORTICAL SCREW 3.5 X 56 MM
169-18-72	CORTICAL SCREW 4.5 X 72 MM	200-35-58	CORTICAL SCREW 3.5 X 58 MM
169-18-76	CORTICAL SCREW 4.5 X 76 MM	200-35-60	CORTICAL SCREW 3.5 X 60 MM
169-18-80	CORTICAL SCREW 4.5 X 80 MM	200-35-70	CORTICAL SCREW 3.5 X 70 MM
169-18-85	CORTICAL SCREW 4.5 X 85 MM	200-35-80	CORTICAL SCREW 3.5 X 80 MM

SCREWS	
CODE	DESCRIPTION
282-20-02	TROCHANTERIC PLATE FASTENING SCREW
307-35-12	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 12.0 MM
307-35-14	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 14.0 MM
307-35-16	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 16.0 MM
307-35-18	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 18.0 MM
307-35-20	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 20.0 MM
307-35-22	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 22.0 MM
307-35-24	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 24.0 MM
307-35-26	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 26.0 MM
307-35-28	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 28.0 MM
307-35-30	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 30.0 MM
307-35-32	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 32.0 MM
307-35-34	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 34.0 MM
307-35-36	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 36.0 MM
307-35-38	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 38.0 MM
307-35-40	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 40.0 MM
307-35-42	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 42.0 MM
307-35-44	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 44.0 MM
307-35-46	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 46.0 MM
307-35-48	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 48.0 MM
307-35-50	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 50.0 MM
307-35-52	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 52.0 MM
307-35-54	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 54.0 MM
307-35-56	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 56.0 MM
307-35-58	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 58.0 MM
307-35-60	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 60.0 MM
307-35-65	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 65.0 MM
307-35-70	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 70.0 MM
307-35-75	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 75.0 MM
307-35-80	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 80.0 MM
307-35-85	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 85.0 MM
307-35-90	VERSALOCK VARIABLE ANGLE LOCKING SCREW T15 Ø3.5 X 90.0 MM
327-50-14	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 14.0 MM TI
327-50-16	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 16.0 MM TI
327-50-18	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 18.0 MM TI
327-50-20	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 20.0 MM TI
327-50-22	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 22.0 MM TI
327-50-24	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 24.0 MM TI
327-50-26	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 26.0 MM TI
327-50-28	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 28.0 MM TI
327-50-30	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 30.0 MM TI
327-50-32	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 32.0 MM TI
327-50-34	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 34.0 MM TI
327-50-36	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 36.0 MM TI
327-50-38	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 38.0 MM TI

SCREWS	
CODE	DESCRIPTION
327-50-40	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 40.0 MM TI
327-50-42	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 42.0 MM TI
327-50-44	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 44.0 MM TI
327-50-46	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 46.0 MM TI
327-50-48	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 48.0 MM TI
327-50-50	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 50.0 MM TI
327-50-55	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 55.0 MM TI
327-50-60	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 60.0 MM TI
327-50-65	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 65.0 MM TI
327-50-70	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 70.0 MM TI
327-50-75	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 75.0 MM TI
327-50-80	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 80.0 MM TI
327-50-85	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 85.0 MM TI
327-50-90	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 90.0 MM TI
327-50-95	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 95.0 MM TI
327-50-100	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 100.0 MM TI
327-50-105	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 105.0 MM TI
327-50-110	VERSALOCK VARIABLE ANGLE SCREW T25 Ø5.0 X 110.0 MM TI
327-51-20	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 20.0 MM
327-51-25	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 25.0 MM
327-51-30	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 30.0 MM
327-51-35	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 35.0 MM
327-51-40	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 40.0 MM
327-51-45	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 45.0 MM
327-51-50	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 50.0 MM
327-51-55	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 55.0 MM
327-51-60	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 60.0 MM
327-51-65	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 65.0 MM
327-51-70	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 70.0 MM
327-51-75	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 75.0 MM
327-51-80	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 80.0 MM
327-51-85	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 85.0 MM
327-51-90	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 90.0 MM
327-51-95	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 95.0 MM
327-51-100	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 100.0 MM
327-51-105	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 105.0 MM
327-51-110	VERSALOCK VARIABLE ANGLE CANNULATED SCREW T25 Ø5.0 X 110.0 MM
327-52-10	VERSALOCK VARIABLE ANGLE PERIPROSTHETIC SCREW T25 Ø5.0 X 10.0 MM TI
327-52-12	VERSALOCK VARIABLE ANGLE PERIPROSTHETIC SCREW T25 Ø5.0 X 12.0 MM TI
327-52-14	VERSALOCK VARIABLE ANGLE PERIPROSTHETIC SCREW T25 Ø5.0 X 14.0 MM TI
327-52-16	VERSALOCK VARIABLE ANGLE PERIPROSTHETIC SCREW T25 Ø5.0 X 16.0 MM TI
327-52-18	VERSALOCK VARIABLE ANGLE PERIPROSTHETIC SCREW T25 Ø5.0 X 18.0 MM TI
327-53	VERSALOCK SPACER SCREW 1.0 MM TORXDRIVE T25 Ø5.0 MM TI
327-54	VERSALOCK SPACER SCREW 2.0 MM TORXDRIVE T25 Ø5.0 MM TI
327-55	VERSALOCK SPACER SCREW 3.0 MM TORXDRIVE T25 Ø5.0 MM TI

CERCLAGE CABLE AND RELATED DEVICE	
CODE	DESCRIPTION
282-30	GAMA CABLE - Ø1.8 MM
282-25	GAMA CABLE LOCK - Ø1.8 MM
327-PC	VERSALOCK CONNECTOR SCREW Ø5.0 MM FOR GAMA CABLE Ø1.8 MM

INSTRUMENTS LIST	
CODE	DESCRIPTION
159-04-02	KIRSCHNER WIRE Ø2 MM L: 250 MM
169-151	SMALL HEXAGONAL SCREWDRIVER 2.5 MM
169-152	HEXAGONAL SCREWDRIVER 3.5 MM
169-154	DEPTH GAUGE 60 MM
169-43	DEPTH GAUGE 110 MM
169-155	DRILL Ø2.5 MM L: 200 MM
172-19A	WIRE CUTTER
223-314	TORQUE LIMITER SCREWDRIVER 1.3 Nm
900-265	TORQUE LIMITER SCREWDRIVER 6 Nm
282-100	CABLE CRIMPING PLIERS
282-500	WIRE TENSIONER
282-115	CABLE DOWEL
327-500	HEXALOBULAR SCREWDRIVER T25
307-100	DRILL GUIDE Ø2.5 MM
307-110	HEXALOBULAR SCREWDRIVER TIP T15 X 135 MM
327-110	DOUBLE DRILL GUIDE Ø4.3 MM
327-117	DRILL Ø4.3 MM L: 300 MM

GMREIS

Qualidade para Vida

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VERSALOCK PERIPROSTHETIC FEMUR PLATES SYSTEM

SURGICAL IMPLANTATION TECHNIQUE

2021 JANUARY - REV. 01