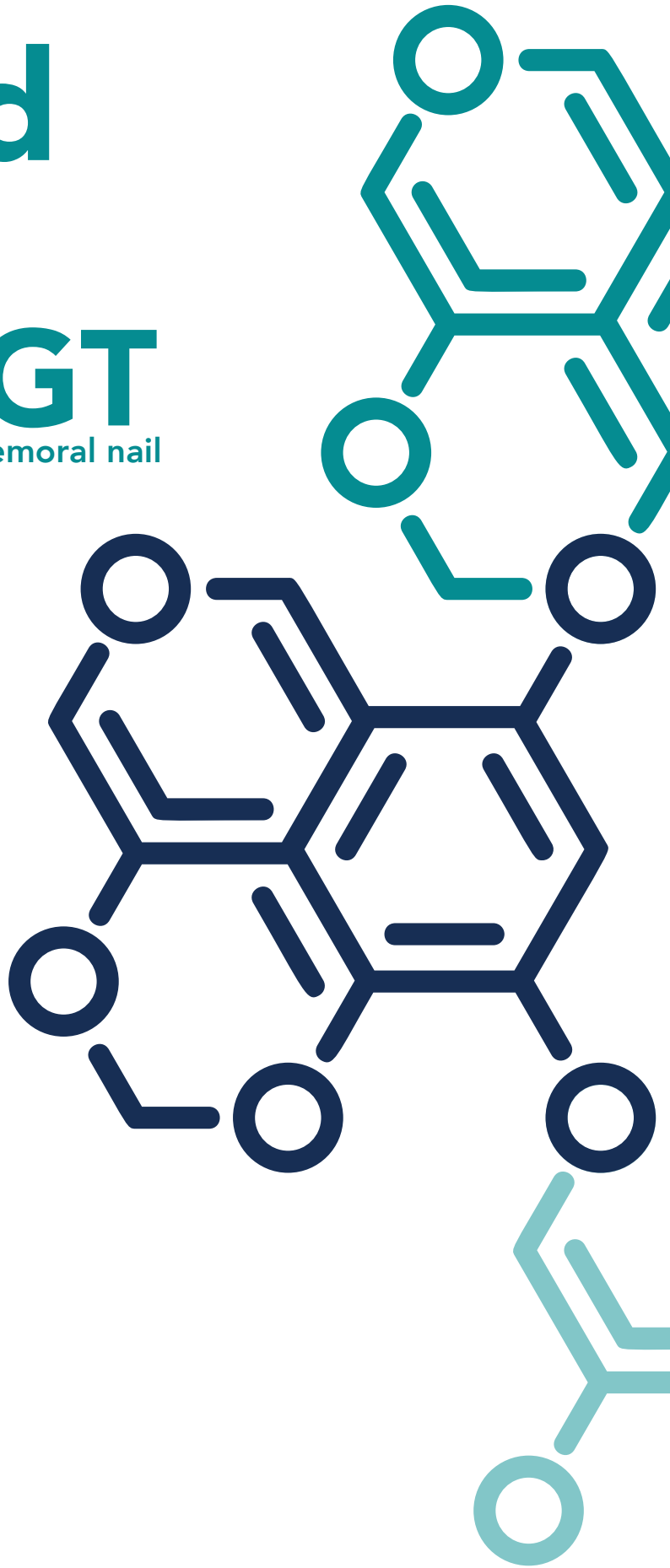


**LSMMed**

# SuperNail **GT** femoral nail

Product description  
& surgical technique





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**LSM-Med Srl** is a manufacturer of implants and as such does not perform medical procedures.

This documentation concerning surgical techniques, which provides surgeons with general guidelines for implanting the SuperNail GT, was developed with the advice of a team of surgical experts. All decisions as to the type of surgery and most suitable technique are necessarily the responsibility of the health care professional. Surgeons must make their own decisions as to the adequacy of each planned implant technique based on their training, experience and the clinical condition of the patient.

**INDICATIONS**

Pertrochanteric, intertrochanteric, subtrochanteric fractures even associated with diaphyseal femoral fractures, revision procedures.

**NOTE.** See page 5 for specific indications of use.



Please read the instructions for use enclosed in the product packaging.

**CONTRAINDICATIONS**

These devices must not be used in case of:

1. insufficient quantity or quality of bone;
2. acute or chronic, local and/or systemic infections;
3. serious muscular, neurological or vascular diseases involving the limb in question;
4. advanced osteoporosis;
5. bone malformations;
6. manifest allergy to the device material;
7. physiologically or psychologically impaired patients;
8. skeletally immature patients.

**RISK FACTORS**

The following risk factors may result in poor results with SuperNail GT:

1. overweight;
2. strenuous physical activities (active sports, heavy physical work) in the early post-operative time;
3. incorrect implant positioning;
4. medical disabilities which can lead to an unnatural loading of the joint;
5. muscle deficiencies;
6. multiple joint disabilities;
7. refusal to modify postoperative physical activities;
8. patient's history of infections or falls;
9. systemic diseases and metabolic disorders;
10. local or disseminated neoplastic disease;
11. drug therapies that adversely affect bone quality, healing, or resistance to infection
12. drug use or alcoholism;
13. marked osteoporosis or osteomalacia;
14. patient's resistance generally weakened (HIV, tumor, infections);
15. severe deformity leading to impaired anchorage or improper positioning of implants.

**⚠️ ALLOWED/PROHIBITED COMBINATIONS**

**For the implant of the femoral nail SuperNail GT Standard and SuperNail GT Long, only the combination of the components belonging to the system and the use shown in the present document are allowed.**

**All other configuration and assembly of the components not shown in the present document must be considered improper.**

**MATERIALS**

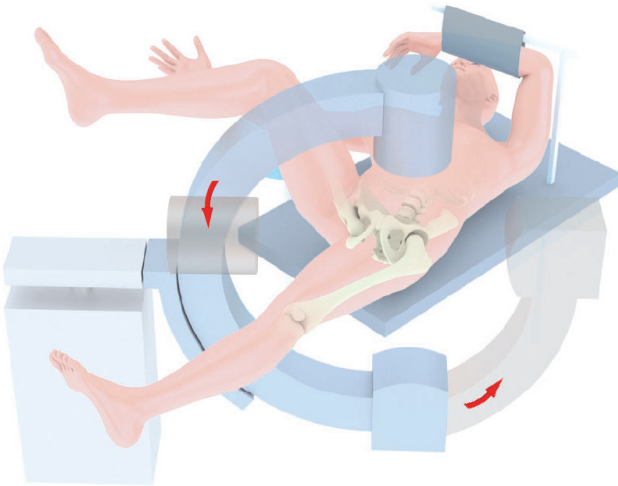
Nails, cephalic screws, blocking screws, distal screws and plugs are manufactured in Titanium alloy Ti6Al4V in conformity with ISO 5832-3.

## TECHNICAL FEATURES

- The use of titanium alloy makes the nail very elastic and allows MRI control;
- The fluted end distal extremity makes easy the insertion into the medullary canal and allows a progressive reduction of mechanical strength at diaphyseal level;
- With the axial load, the nail allows a dynamic compression of the fracture by the lateral sliding of the cephalic screw and makes the healing easier;
- The nail holder is manufactured in radiolucent material to allow an excellent radiographic vision;
- In proximity of the cephalic screw, the nail is provided with an hole dedicated to an anti-rotation wire to be applied in case of basicervical fractures to avoid any rotation of the femoral head during insertion phase of the cephalic screw;
- Two range of sizes:

### SuperNail GT

Standard	180 mm	for pertrochanteric, intertrochanteric and subtrochanteric fractures
	205 mm	
Long	from 280 mm to 440 mm	for pertrochanteric fractures associated with diaphyseal fractures, subtrochanteric long fractures, revision procedures

**PATIENT POSITIONING**

The patient is positioned supine or in lateral decubitus, on the fracture table. Abduct the unaffected limb and place it on a leg holder. The image intensifier must be positioned in order to guarantee an optimal A/P and M/L view of the proximal and distal femur.

Patient's upper body must be flexed 10°-15° to the opposite site of the affected limb to facilitate the access to the medullary canal through the great trochanter. The reduction of the fracture is made with a close technique and maintaining the limb straight and in traction.

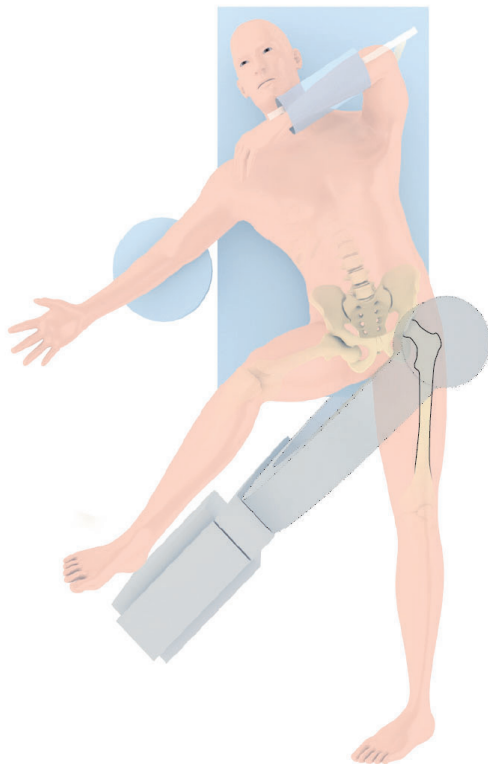




Figure 1

### ASSEMBLY

Choose the appropriate centering device HSJ 0009 or HSJ 0010 according to the cervical diaphyseal angle of the cephalic screw (125° or 130°) previously determined (Fig. 1).

Assemble the centering device HSJ 0009 or HSJ 0010 with the nail holder HSJ 0006 by tightening the appropriate knob, and then assemble the SuperNail GT Standard to the nail holder HSJ 0006 using the serrating bolt HSJ 0007 (Fig. 2).

Use the assembly screwdriver HSN 0327 (Fig.2 and Fig.3) to lock the connections of the nail and the centering device to the nail holder.

### ⚠ WARNING

Centering devices HSJ 0009 and HSJ 0010 are suitable only with the SuperNail GT Standard with lengths 180 mm and 205 mm. Don't use them with Supernail GT long.



Figure 2

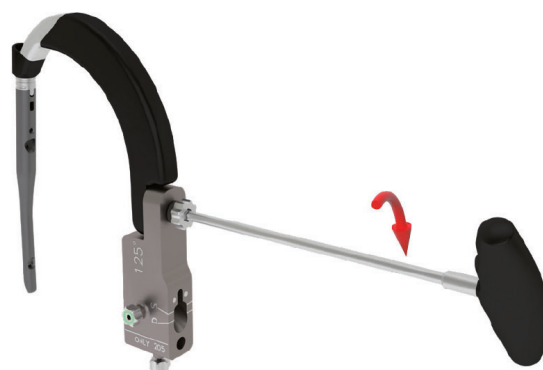


Figure 3



Figure 4



Figure 5



Figure 6

**ACCESS**

Identify the upper extremity of the great trochanter through a longitudinal access. The ideal access to the medullary canal is located approximately at 1/3 frontally and 2/3 from the posterior (Fig. 4).

Perforate the cortical bone in correspondence to the entry point using the cannulated awl HSJ 0001 previously assembled with the plugging device HSJ 0001-1 (Fig.5). Sink until the medullary canal is open.

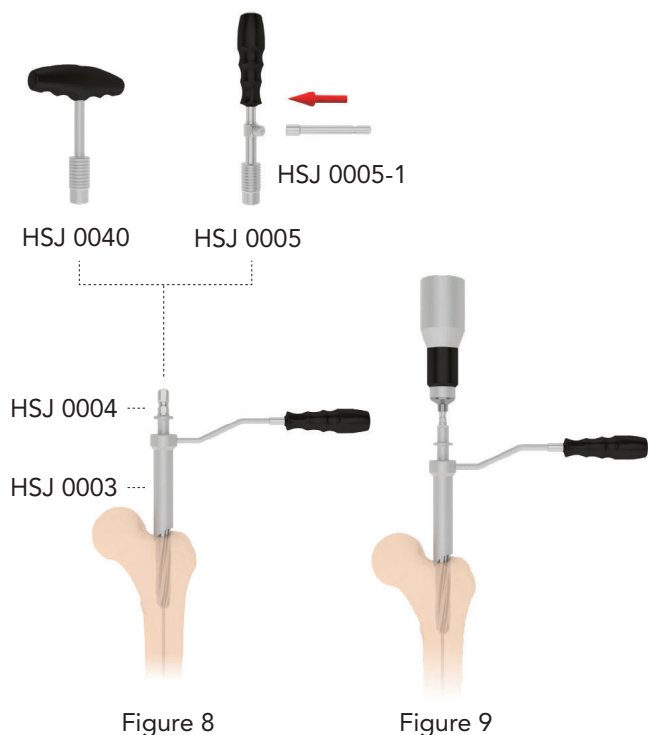
Extract the plugging device HSJ 0001-1 (Fig. 6) and introduce the guide wire  $\varnothing$  3 mm x L 800 mm with smooth tip HSJ 0002 or guide wire  $\varnothing$  3 mm x L 1000 mm with smooth tip HSJ 0002-100 into the cannulated awl HSJ 0001 by using the self-locking chuck HSN 0256 (Fig. 7).

It is recommended to carry out a radiographic inspection in the A/P and M/L views.

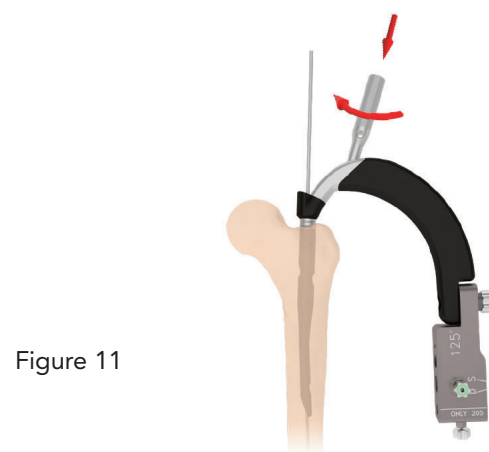
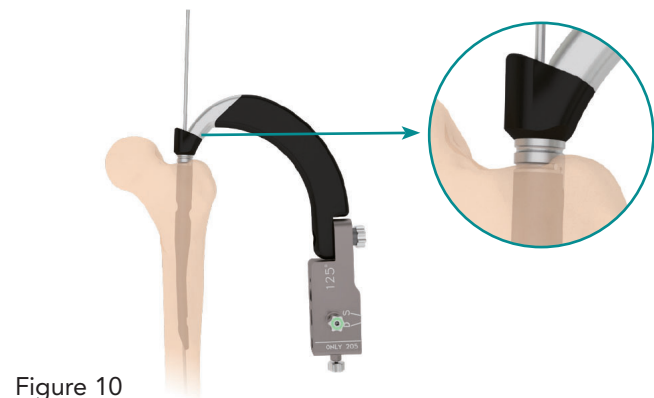


Figure 7





The initial reamer is provided with a stopper that permits the sinking till the correct depth.



### PROXIMAL CANAL PREPARATION

Remove the self-locking chuck HSN 0256 and the cannulated awl HSJ 0001. Position the protector for soft tissues HSJ 0003 sliding it over the guide wire HSJ 0002 or HSJ 0002-100 up to the contact with the bone cortex.

To prepare the canal for the proximal slot of the SuperNail GT Standard it is possible to proceed manually or by power-tool.

- Manual reaming: assemble the initial reamer HSJ 0004 with the quick connection straight handle HSJ 0005 and the lever HSJ 0005-1 or, as an alternative, with the quick connection T handle HSJ 0040. Insert the reamer along the guide wire and proceed with the manual reaming (Fig. 8);

- Reaming with powertool: assemble the initial reamer HSJ 0004 with the powertool. Insert the reamer along the guide wire and proceed with reaming (Fig.9).

### **WARNING**

In case of low quality of the bone, the use of powertool is not recommended.

### NAIL INSERTION

Slide the SuperNail GT Standard over the guide wire HSJ 0002 or HSJ 0002-100, at least up to the first circumferential groove on the nail holder but not deeper than the second groove (Fig. 10). In case of difficulties, the sinking can be made easier by screwing the connection device HSN 0401 to the nail holder and gently tapping it with the hammer (Fig. 11). Remove the guide wire HSJ 0002 or HSJ 0002-100.

### **WARNING**

Do not hammer on the nail holder.

**NOTE.** In case of persistent difficulties, even if using the connection device HSN 0401, it is advisable to remove the implant and prepare carefully the seat by a further reaming.

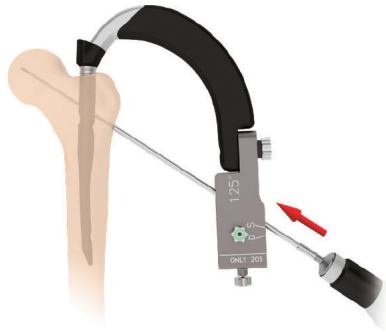


Figure 12

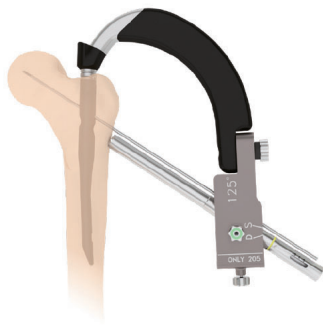



Figure 13

 The external sleeve for cephalic screw is marked with a yellow ring.

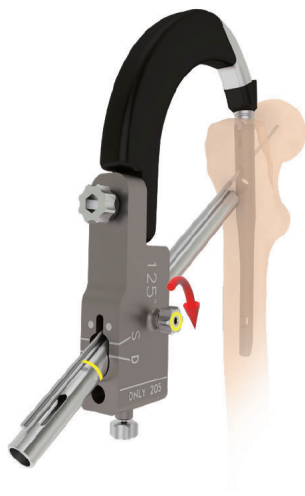



Figure 14

 The knob for the blocking of the external sleeve for cephalic screw is marked with a yellow ring.

### OPTIONAL ANTI-ROTATION WIRE APPLICATION

If necessary, in order to avoid rotation of femoral neck and head during the phase of reaming and insertion of the cephalic screw, insert the anti-rotation wire HSJ 0012 through the sleeve HSJ 0011 and completely sink it up to the subchondral bone (Fig. 12).

It is advisable to carry out a radiographic inspection in the 2 views A/P and M/L.

### **WARNING**

Do not use the anti-rotation wire HSJ 0012 as lever for fracture reduction. Do not bend or modify the anti-rotation wire, it must be maintained straight.

Remove the sleeve HSJ 0011 leaving the anti-rotation wire into the obtained position.

### CEPHALIC ENTRY POINT PREPARATION

Insert the external sleeve for cephalic screw HSJ 0013 through the centering device and sink it up to the cortical contact (Fig. 13).

Lock the sleeve by tightening the dedicated knob (Fig. 14).

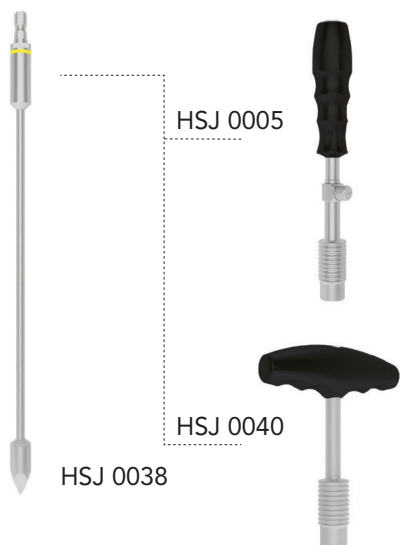


Figure 15

The cephalic trocar is marked with a yellow ring.

Assemble the cephalic trocar HSJ 0038 with the quick connection straight handle HSJ 0005 or as an alternative with the quick connection T handle HSJ 0040 (Fig. 15).

Introduce the cephalic trocar HSJ 0038 through the external sleeve for cephalic screw HSJ 0013 and proceed preparing the entry point for the cephalic guide wire HSJ 0015. Remove the cephalic trocar.

### POSITIONING OF GUIDE WIRE FOR CEPHALIC SCREW

Insert the internal sleeve for cephalic guide wire HSJ 0014 through the external sleeve for cephalic screw HSJ 0013 until it is automatically locked (Fig. 16).

Insert the cephalic guide wire HSJ 0015 up to the subchondral bone (Fig. 17). Check with X-rays the positioning of the guide wire: in A/P view it must be central or positioned in the inferior quadrant (recommended), in M/L view in the center of the neck.

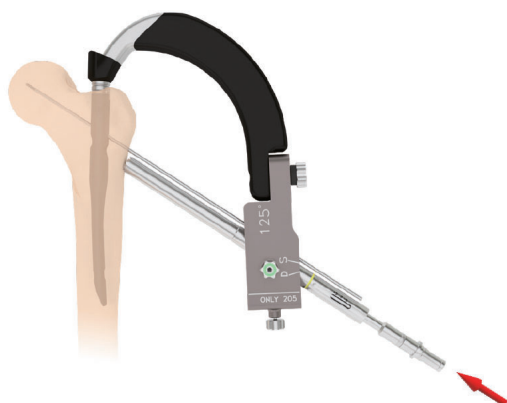


Figure 16

The internal sleeve for cephalic guide wire is marked with a yellow ring.

### **WARNING**

Do not use the cephalic guide wire HSJ 0015 as lever for fracture reduction. Do not bend or modify the cephalic guide wire, it must be maintained straight.

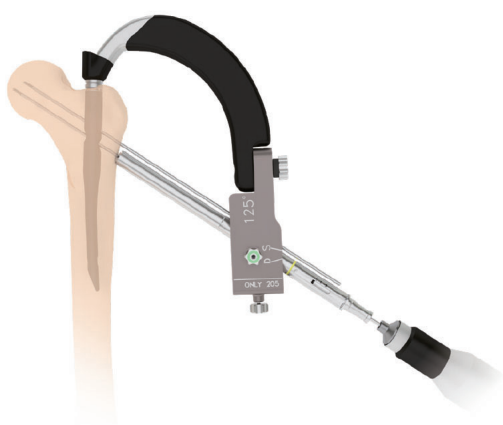


Figure 17

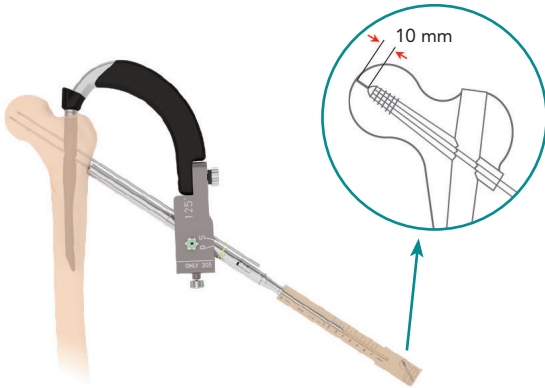


Figure 18

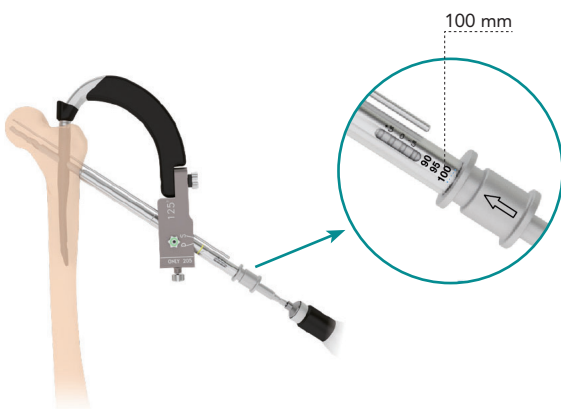


Figure 19



Figure 20

### CEPHALIC SCREW LENGTH MEASUREMENT

For an exact measuring, check that the cephalic sleeve HSJ 0013 is in contact with the cortical bone and that the internal sleeve for cephalic guide wire HSJ 0014 is properly locked to the cephalic sleeve. Determine the cephalic screw length by using the measuring device HSJ 0016 placing it under and in contact with the cephalic guide wire HSJ 0015.

**NOTE.** The size marked on the measuring device corresponds to the length of the guide wire HSJ 0015 from its apex to the lateral cortex. If the cephalic guide wire HSJ 0015 has been correctly inserted up to the subchondral bone, the length of the cephalic screw is obtained removing 10 mm from the size measured on the graduated scale of the measuring device (e.g. 110 mm on the measuring device corresponds to a cephalic screw with length 100 mm) (Fig. 18).

### CEPHALIC SCREW INSERTION

Remove the internal sleeve for cephalic guide wire HSJ 0014 and prepare the cephalic reamer HSJ 0017 by setting the stopper on the basis of the length previously determined; it is recommended to orientate the arrow on the stopper to the patient's direction (Fig. 19). Insert the cephalic reamer HSJ 0017 over the cephalic guide wire into the external sleeve for cephalic screw HSJ 0013.

Prepare the slot for the cephalic screw by reaming until the stopper of the cephalic reamer HSJ 0017 is in contact with the outer edge of the external sleeve for cephalic screw HSJ 0013.

### **WARNING**

Do not use the cephalic reamer HSJ 0017 as lever for fracture reduction.

Assemble the cephalic screw to the cephalic screwdriver HSJ 0029 by screwing the specific knob. Tighten with the assembly screwdriver HSN 0327 (Fig. 20).

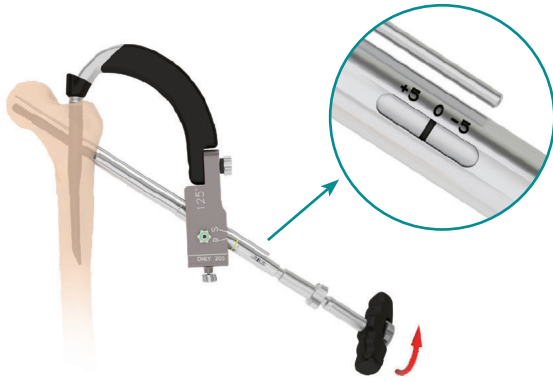


Figure 21

Insert the cephalic screw over the guide wire into the external sleeve for cephalic screw HSJ 0013 by turning the cephalic screwdriver HSJ 0029 until the laser mark, engraved on the screwdriver, is positioned on value "0" (Fig. 21).

### REMOVAL OF THE ANTI-ROTATION WIRE

If the anti-rotation wire HSJ 0012 is used (see optional phase on page 10), remove it by using the self-locking chuck HSN 0256 (Fig. 22). Slide the self-locking chuck over the anti-rotation wire and lock it, thus remove the wire by gently bending it.

**⚠ WARNING**

Do not excessive bend the anti-rotation wire HSJ 0012 to avoid permanent deformation.

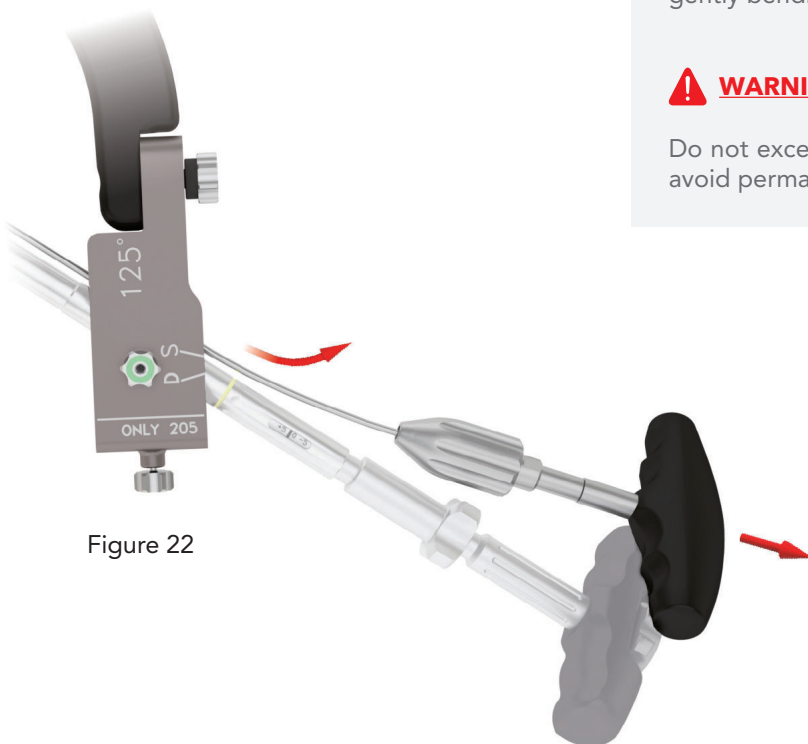


Figure 22

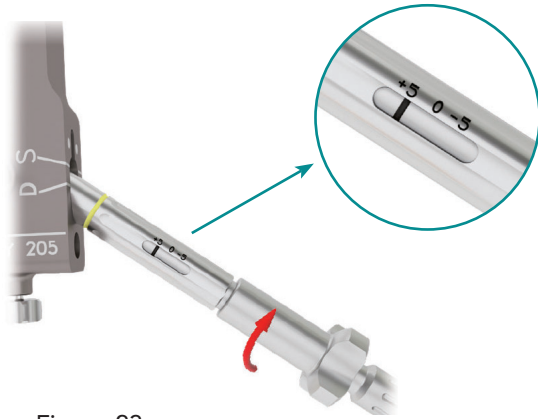


Figure 23

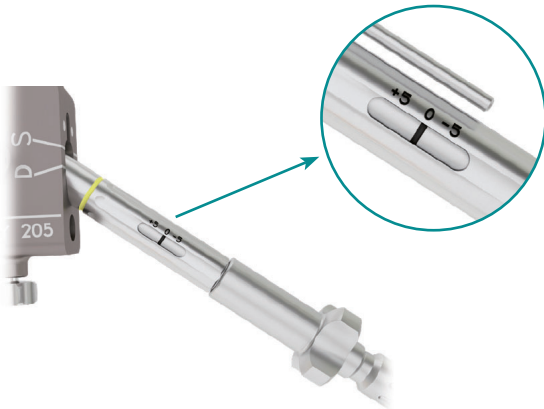


Figure 24

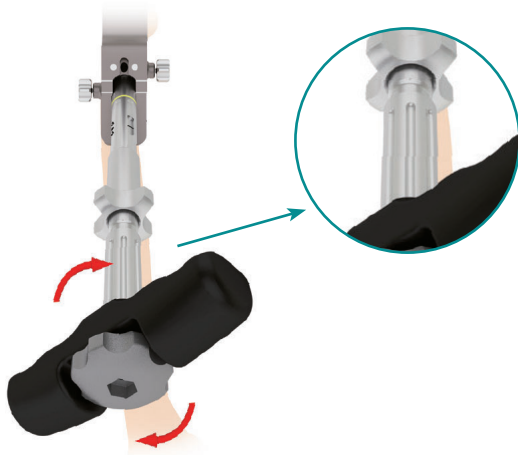


Figure 25

For diastase up to 5 mm it is possible to obtain a fracture compression by advancing the cephalic screw of 5 mm by turning clockwise the cephalic screwdriver HSJ 0029 until the laser mark on the screwdriver is on value "+5" (Fig. 23), then screw clockwise the return screw to bring back the laser mark on value "0"(Fig. 24).

For diastase of more than 5 mm, it is advisable to use the screw size lower than what measured with the measuring device.

Perform a first compression of 5 mm as above described, carry out a radiographic inspection and perform a second compression if necessary.

To ensure the blocking screw is able to fit into one of the 8 longitudinal grooves on the cephalic screw shaft (see page 15), the screw alignment indicators on the cephalic screwdriver shaft will help to correctly position the screwdriver and, as a consequence, the cephalic screw (Fig. 25).

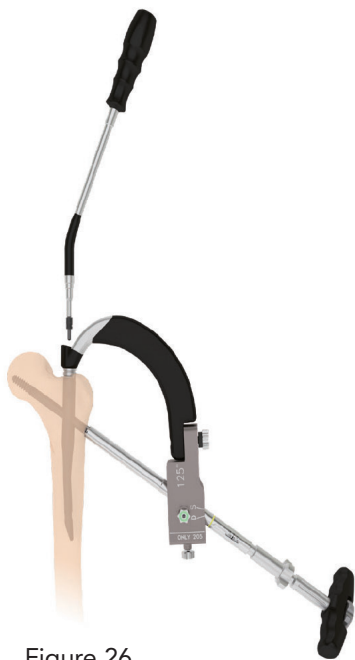


Figure 26

### BLOCKING SCREW INSERTION

Using the flexible screwdriver HSJ 0033, insert and lock the blocking screw HSN B830 until the screw is fully locked and no longer rotates (Fig. 26). To verify the blocking screw is engaged with one of the grooves on the cephalic screw shaft, check that it is not possible to turn the cephalic screwdriver. In order to allow a controlled lateral sliding of the cephalic screw, it is recommended to unscrew of a quarter of turn to ease fracture consolidation.

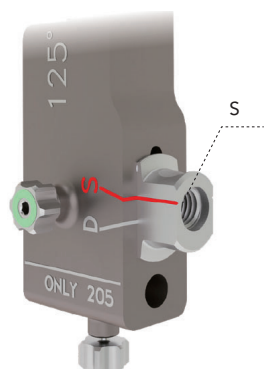


Figure 27

### DISTAL LOCKING PREPARATION

Remove the cephalic screwdriver HSJ 0029, the external sleeve for cephalic screw HSJ 0013, and the guide wire HSJ 0015 then insert the bush for distal fixation HSJ 0025 into the centering device HSJ 0009 or HSJ 0010.

Bush positioning allows to obtain a static or a dynamic stabilization by positioning the laser mark on "S" for a static stabilization, (Fig. 27) or on "D" for a dynamic one (Fig. 28). Lock the bush by tightening the dedicated knob (Fig. 29).

The dynamic selection allows an implant dinamization of 3 mm.

Insert and screw the distal sleeve for standard nail HSJ 0026 into the centering device through the bush.

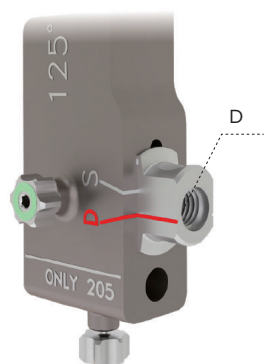


Figure 28

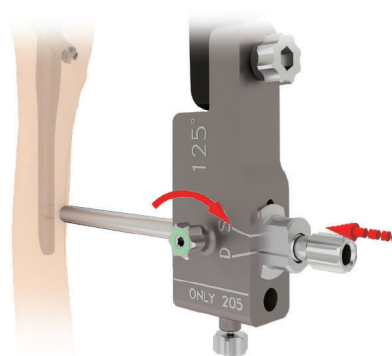


Figure 29

The distal sleeve for standard nail and relating knobs on the centering device are marked with a green ring.

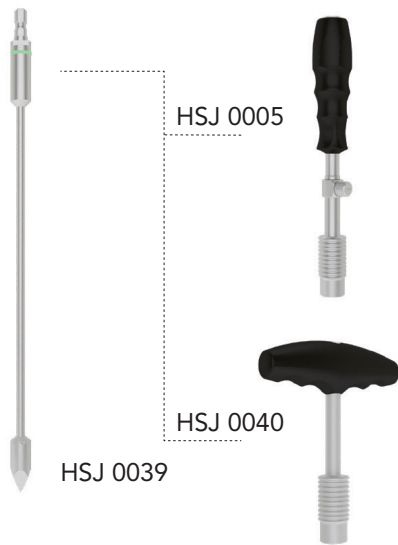


Figure 30

The distal trocar is marked with a green ring.

**DISTAL ENTRY POINT PREPARATION**

Assemble the distal trocar HSJ 0039 with the quick connection straight handle HSJ 0005 or, as an alternative, with the quick connection T handle HSJ 0040 (Fig. 30).

Prepare the entry point for the drill bit HSJ 0028 by introducing the distal trocar HSJ 0039 through the distal sleeve for standard nail HSJ 0026.

Insert the internal sleeve for drill bit  $\varnothing$  3.5 mm HSJ 0027 through the distal sleeve for standard nail HSJ 0026 up to the contact with the cortical bone (Fig.31).

Drill both cortices by using the drill bit  $\varnothing$  3.5 mm HSJ 0028 (Fig. 32).

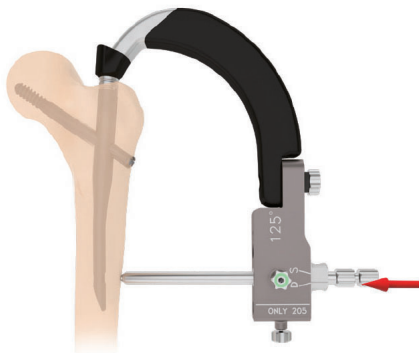


Figure 31

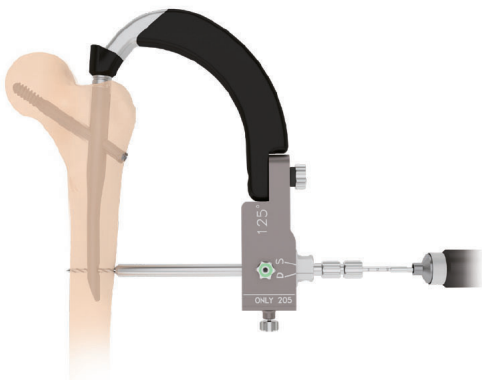


Figure 32



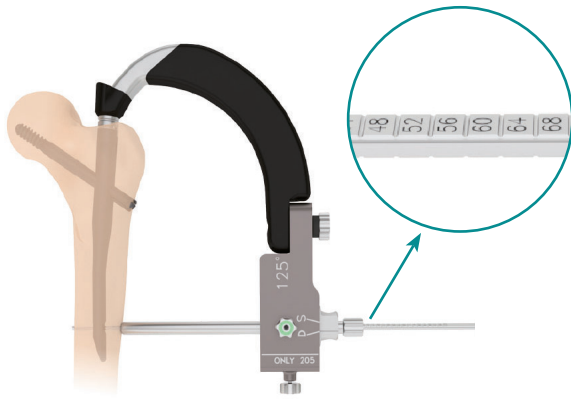


Figure 33

### DISTAL SCREW LENGTH MEASUREMENT

Remove the drill bit  $\varnothing$  3.5 mm HSJ 0028 and the internal sleeve for drill bit  $\varnothing$  3.5 mm HSJ 0027. Insert the measuring device for distal screws HSJ 0037 into the distal sleeve for standard nail HSJ 0026, up to the second cortex. Lock the hooked tip of the measuring device on the external surface of the second cortical bone. The length of the screw is visible on the graduated scale engraved on the measuring device (Fig. 33).

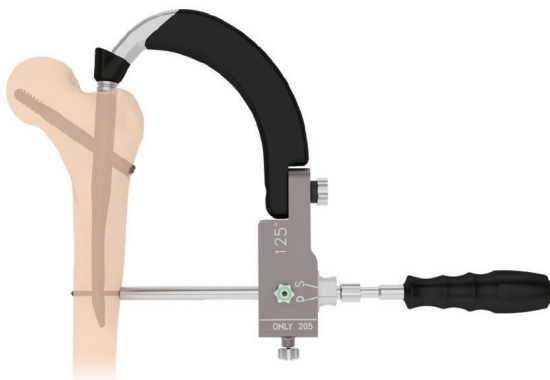
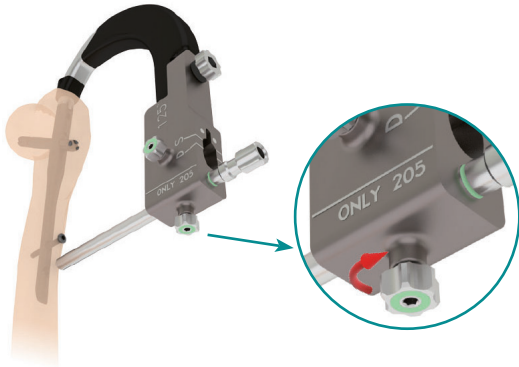


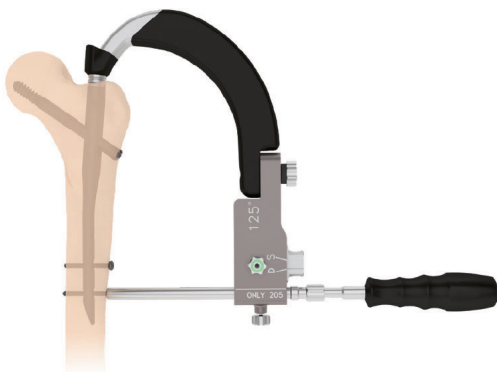
Figure 34

### DISTAL SCREW POSITIONING

Insert the  $\varnothing$  4.5 mm distal screw through the distal sleeve for standard nail HSJ 0026, by using the screwdriver 3.5 mm for distal screws HSJ 0030 (Fig.34). Remove the distal sleeve for standard nail HSJ 0026 and the bush for distal fixation HSJ 0025.



**Figure 35**  
The distal sleeve for standard nail is marked with a green ring.



**Figure 36**



**Figure 37**

### NAIL 205 mm INSERTION

In case of SuperNail GT Standard L. 205 mm implant, proceed exactly as shown for the Standard Nail L 180 mm surgical technique from page 6 to page 17.

For the distal locking a second screw  $\varnothing$  4.5 mm is required.

Insert the distal sleeve for standard nail HSJ 0026 through the lowest distal hole on the centering device (Fig.35) and locking it with the appropriate knob.

To complete the distal locking with the second screw proceed as shown in the "Standard nail surgical technique" on pages 16 and 17 (Fig. 36).

### **⚠ WARNING**

If the second screw is implanted, the system is not dynamic.

### NAIL CLOSING WITH LOCKING PLUG

Disassemble the nail holder HSJ 0006 using the assembly screwdriver HSN 0327.

Introduce the locking plug with the flexible screwdriver HSJ 0033 (Fig. 37).



Figure 38

Figure 39

Figure 40

### ASSEMBLY

Choose the appropriate centering device for long nail HSN 0550-125 or HSN 0550-130 according to the predetermined cervical diaphyseal angle of the cephalic screw (125° or 130°).

Assemble the centering device for long nail HSN 0550-125 or HSN 0550-130 with the nail holder HSJ 0006 and then assemble the SuperNail GT Long to the nail holder HSJ 0006 using the serrating bolt HSJ 0007 (Fig. 38). To lock the connections of the nail and the centering device to the nail holder, use the assembly screwdriver HSN 0327 (Fig. 39-40).

### ACCESS

To prepare the entry point, proceed as shown in the chapter "Access" in the "Standard nail surgical technique" section on page 8.

### CANAL PREPARATION

To prepare the canal for the proximal slot of SuperNail GT Long, proceed as shown in the chapter "Proximal canal preparation" in the "Standard nail surgical technique" section on page 9.

**NOTE.** If needed, it's possible to prepare the diaphyseal canal using a flexible reamer (not included in the SuperNail GT instrument sets). Ream up to  $\varnothing$  11 mm along all the length of the nail and  $\varnothing$  16 mm for the proximal part only.

### **WARNING**

If a flexible reamer supplied by **LSM-Med Srl** is used, it is recommended the use a guide wire  $\varnothing$  3 mm x L 800 mm with olive tip HSN 0235 or L 1000 mm HSN 0236 (Fig. 41), in order to preserve the sovracondilar area. In fact, the olive tip acts as safety stop when the reamer sinks.

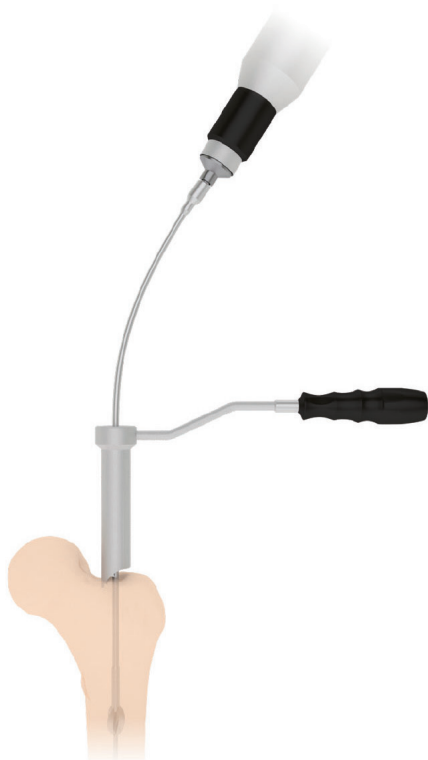


Figure 41

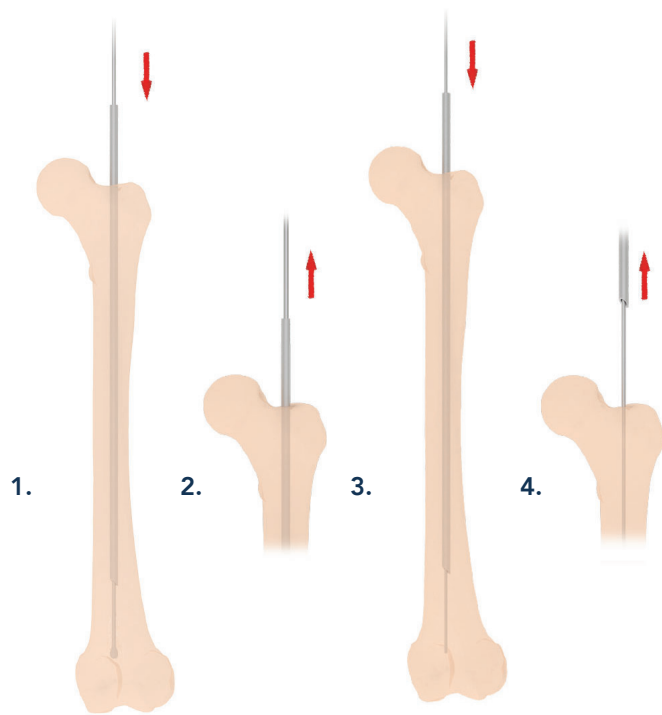


Figure 42

### GUIDE WIRE EXCHANGE

**⚠ WARNING**

If a guide wire with olive tip HSN 0235 or HSN 0236 has been used, it is necessary to replace it with a guide wire with smooth tip HSJ 0002 or HSJ 0002-100 (Fig. 42) before proceeding with nail insertion. For the wire exchange proceed as it follows:

1. insert the guide wires exchange tube HSJ 0034 along the guide wire with olive tip;
2. remove the guide wire with olive tip HSN 0235 or HSN 0236;
3. sink the guide wire with smooth tip HSJ 0002 or HSJ 0002-100 in the guide wires exchange tube HSJ 0034;
4. remove the guide wires exchange tube HSJ 0034.

### NAIL LENGTH DETERMINATION

Sink completely the measuring device for long nail HSJ 0041 along the guide wire and through the protector for soft tissues HSJ 0003.

A ring engraved on the guide wire permits to determinate the SuperNail GT Long length on the measuring device (Fig. 43).

**NOTE.** This operation can be done before or after the guide wire exchange (see previous step).

**⚠ WARNING**

For length determination use only the guide wires provided by **LSM-Med Srl** (listed in "Guide wire" section on page 26).

Do not use the guide wires as lever for fracture reduction. Do not bend or modify the guide wires, they must be maintained in straight condition.

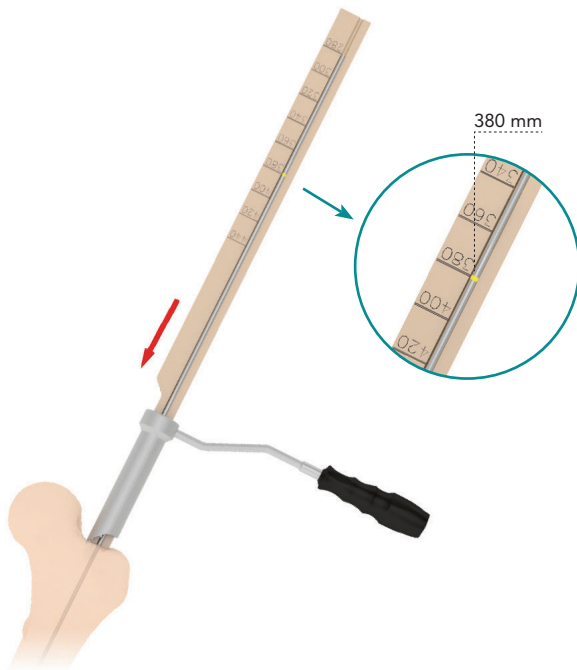


Figure 43

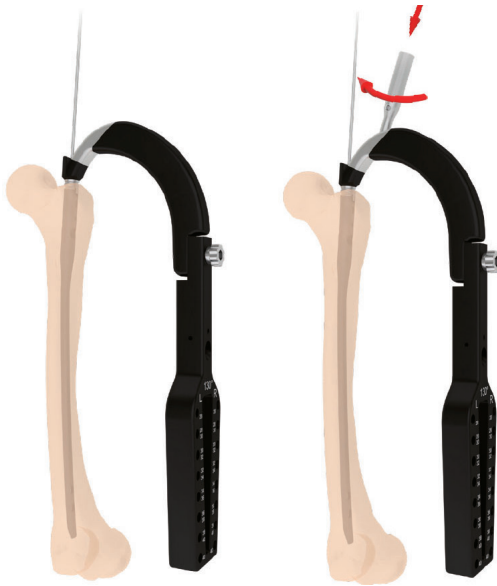


Figure 44

### NAIL INSERTION

For the Nail Insertion proceed as shown in the chapter "Nail Insertion" in the "Standard nail surgical technique" section on page 9 (Fig. 44).

### OPTIONAL ANTI-ROTATION WIRE APPLICATION

If the anti-rotation wire HSJ 0012 application is required, proceed as shown in the chapter "Standard nail optional anti-rotation wire application" in the "Standard nail surgical technique" section on page 10.

### CEPHALIC SCREW INSERTION

Follow the steps from page 10 to page 14 in the "standard nail surgical technique" section (Fig. 45).

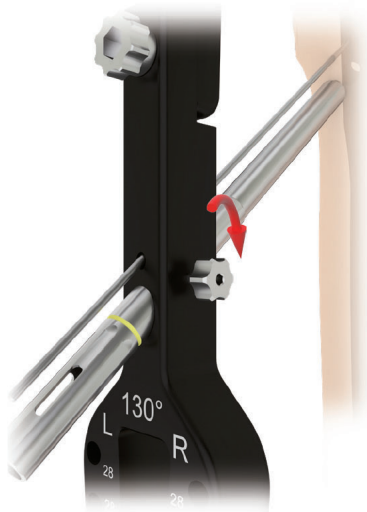


Figure 45

### REMOVAL OF THE ANTI-ROTATION WIRE

If the anti-rotation wire HSJ 0012 has been inserted, remove it proceeding as shown in the chapter "Removal of the anti-rotation wire" in the "Standard nail surgical technique" on page 13.

### BLOCKING SCREW INSERTION

Follow the steps on page 15 in the chapter "Blocking screw insertion" in the "Standard nail surgical technique".

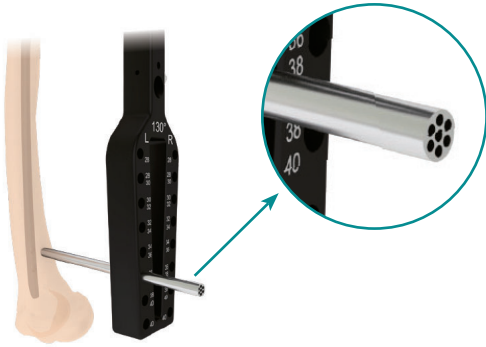
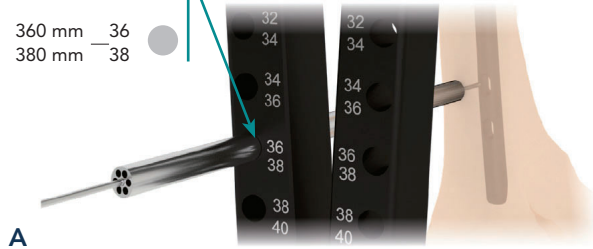


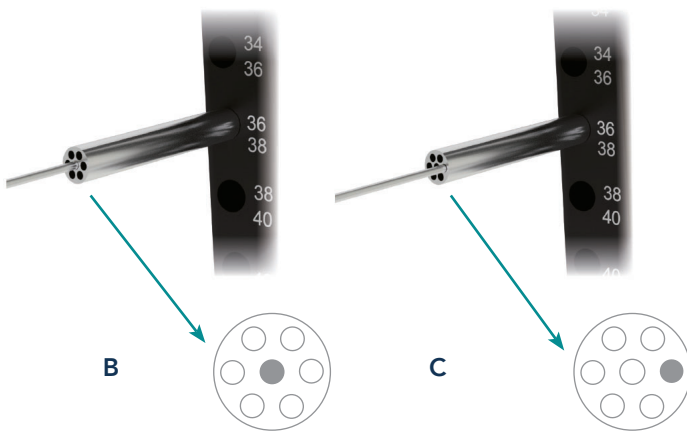
Figure 46

Reference holes for nail lengths.

- 320 mm — 32
- 340 mm — 34
- 340 mm — 34
- 360 mm — 36
- 360 mm — 36
- 380 mm — 38



A



B

C

Figure 47

**DISTAL LOCKING**

Insert the multihole guide HSN 0232 into the centering device for long nail HSN 0550-125 or HSN 0550-130, starting from the proximal hole which refers to the size of the implanted nail (Fig. 46).

Introduce the positioning pin  $\varnothing$  2 mm HSN 0420 into the multihole guide HSN 0232 starting from the central hole (Fig. 47-A and Fig. 47-B).

Using the image intensifier, check if the positioning pin passes through the distal hole of the nail. In case of failed centering, switch the positioning pin HSN 0420 into one of the perimetric holes of the multihole guide HSN 0232 (2 mm by 2 mm) and repeat this operation until the centering is obtained (Fig. 47-C).

Leaving the positioning pin HSN 0420 into the obtained position, remove the multihole guide HSN 0232 and introduce the external sleeve for long nail HSJ 0036 (Fig. 48). Introduce the cannulated tip  $\varnothing$  3.5 mm HSJ 0032 on the positioning pin HSN 0420 and proceed by drilling both cortices (Fig. 49).



Figure 48

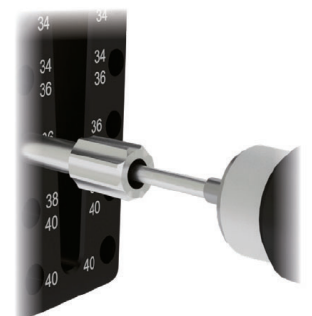


Figure 49

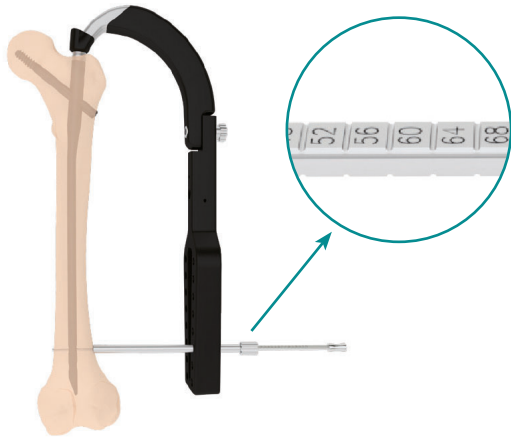


Figure 50

### DISTAL SCREW LENGTH MEASUREMENT

Remove the positioning pin  $\varnothing$  2 mm HSN 0420 and insert the measuring device for distal screws HSJ 0037 into the external sleeve for long nail HSJ 0036, across the bone and through the second cortex. Lock the hooked tip of the measuring device on the external surface of the bone.

The length of the screw is visible on the graduated scale engraved on the measuring device (Fig. 50).



Figure 51

### DISTAL SCREW INSERTION

Insert the  $\varnothing$  4.5 mm distal screw by using the screwdriver 3.5 mm for distal screws HSJ 0030 (Fig. 51), passing through the external sleeve for long nail HSJ 0036.

To lock the second distal screw repeat all the steps as shown for the first screw from page 22 to 23.

### NAIL CLOSING WITH LOCKING PLUG

For the SuperNail GT Long closing, proceed as shown in the chapter "Nail closing with locking plug" in the "Standard nail surgical technique" section on page 18.



Figure 52



Figure 53

**NAIL REMOVAL**

If present, remove the plug and the blocking screw by using the flexible screwdriver HSJ 0033.

Remove the cephalic screw by using the cephalic screwdriver HSJ 0029.

Position and thread the extraction connection HSJ 0024 into the nail proximal hole (Fig. 52).

Screw the extraction device HSN 0400 on the extraction connection HSJ 0024.

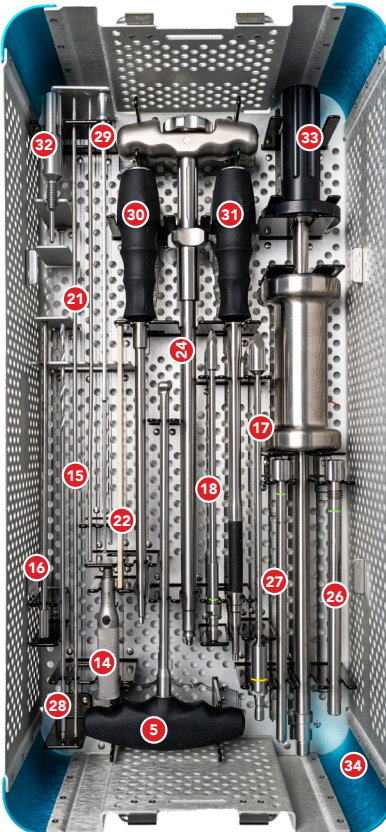
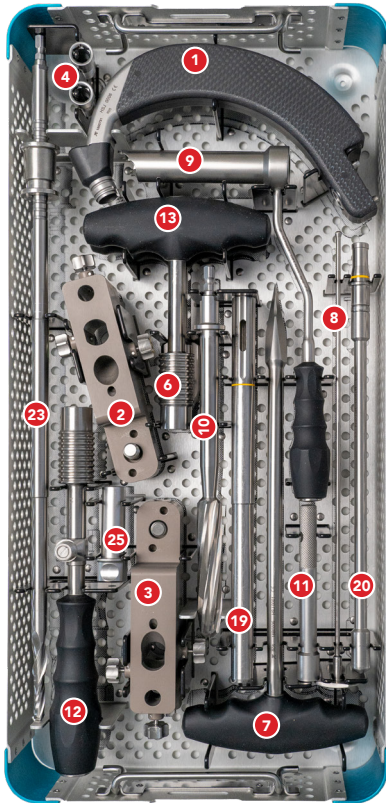
Remove the distal screws by using the screwdriver 3.5 mm for distal screw HSJ 0030.

Proceed with removal of the nail (Fig. 53).

**⚠ WARNING**

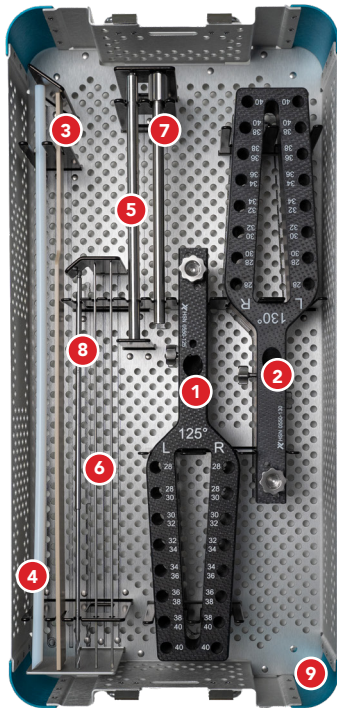
Do not remove the distal locking screws before assembly the extraction device.





**HSJ 0200 SuperNail GT standard instrument set**

Ref.	Code	Description	Qty.
1	HSJ 0006	Nail holder	1
2	HSJ 0009	Centering device 125°	1
3	HSJ 0010	Centering device 130°	1
4	HSJ 0007	Serrating bolt	2
5	HSN 0327	Assembly screwdriver	1
6	HSN 0256	Self-locking chuck	1
7	HSJ 0001	Cannulated awl	1
8	HSJ 0001-1	Plugging device	1
9	HSJ 0003	Protector for soft tissues	1
10	HSJ 0004	Initial reamer	1
11	HSJ 0005-1	Lever for straight handle	1
12	HSJ 0005	Quick connection straight handle	1
13	HSJ 0040	Quick connection t handle	1
14	HSN 0401	Connection device	1
15	HSJ 0012	Anti-rotation wire ø 3 mm	1
16	HSJ 0011	Sleeve for anti-rotation wire	1
17	HSJ 0038	Cephalic trocar	1
18	HSJ 0039	Distal trocar	1
19	HSJ 0013	External sleeve for cephalic screw	1
20	HSJ 0014	Internal sleeve for cephalic guide wire	1
21	HSJ 0015	Cephalic guide wire ø 3.2 mm	1
22	HSJ 0016	Measuring device for cephalic screw	1
23	HSJ 0017	Cephalic reamer	1
24	HSJ 0029	Cephalic screwdriver	1
25	HSJ 0025	Bush for distal fixation	1
26	HSJ 0026	Distal sleeve for standard nail	1
27	HSJ 0027	Internal sleeve for drill bit ø 3.5 mm	1
28	HSJ 0028	Drill bit ø 3.5 mm	1
29	HSJ 0037	Measuring device for distal screws	1
30	HSJ 0030	Screwdriver 3.5 mm for distal screws	1
31	HSJ 0033	Flexible screwdriver	1
32	HSJ 0024	Extraction connection	1
33	HSN 0400	Extraction device	1
34	HSJ 0100	Instrument tray for SuperNail GT standard	1



**HSJ 0300 SuperNail GT long instrument set**

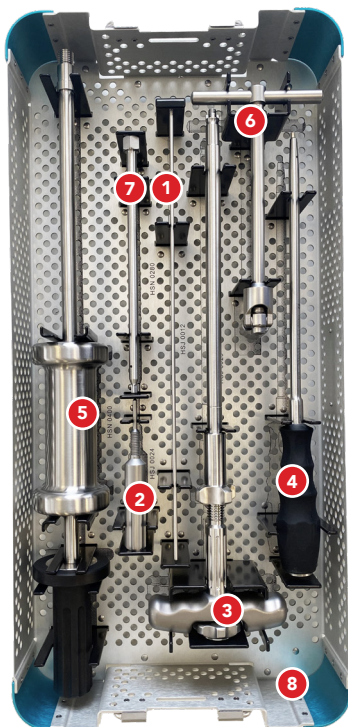
Ref.	Code	Description	Qty.
1	HSN 0550-125	Centering device for long nail 125°	1
2	HSN 0550-130	Centering device for long nail 130°	1
3	HSJ 0041	Measuring device for long nail	1
4	HSJ 0034	Guide wires exchange tube	1
5	HSN 0232	Multihole guide	1
6	HSN 0420	Positioning pin $\varnothing$ 2 mm for multihole guide	2
7	HSJ 0036	External sleeve for long nail	1
8	HSJ 0032	Cannulated tip $\varnothing$ 3.5 mm	1
9	HSN 1600	Instrument tray for SuperNail GT Long	1



A05-C05  
Smooth tip



B05 - D05  
Olive tip



**GUIDE WIRES**

Ref.	Code	Description	Qty.
A05	HSJ 0002	Guide wire $\varnothing$ 3 mm x L 800 mm Smooth tip	1
B05	HSN 0235	Guide wire $\varnothing$ 3 mm x L 800 mm Olive tip	1
C05	HSJ 0002-100	Guide wire $\varnothing$ 3 mm x L 1000 mm Smooth tip	1
D05	HSN 0236	Guide wire $\varnothing$ 3 mm x L 1000 mm Olive tip	1

**HSJ 0400 extraction instrument set**

Ref.	Code	Description	Qty.
1	HSJ 0012	Anti-rotation wire $\varnothing$ 3 mm	1
2	HSJ 0024	Extraction connection	1
3	HSJ 0029	Cephalic screwdriver	1
4	HSJ 0030	Screwdriver 3,5 mm for distal screws	1
5	HSN 0215	Cardanic key	1
6	HSN 0280	Screwdriver for blocking screw	1
7	HSN 0400	Extraction device	1
8	HSJ 0120	Tray	1



Extraction set for non-users



### SuperNail GT STANDARD

	Code	Length (mm)	Cephalic Angle
<b>Ti6Al4V</b>	HSJ 125-10	180	125°
	HSJ 125-20	205	125°
	HSJ 130-10	180	130°
	HSJ 130-20	205	130°

Sterile single packaging.



### SuperNail GT LONG

	Right	Left	Length (mm)	Cephalic Angle
<b>Ti6Al4V</b>	HSJ 125-28R	HSJ 125-28L	280	125°
	HSJ 125-30R	HSJ 125-30L	300	125°
	HSJ 125-32R	HSJ 125-32L	320	125°
	HSJ 125-34R	HSJ 125-34L	340	125°
	HSJ 125-36R	HSJ 125-36L	360	125°
	HSJ 125-38R	HSJ 125-38L	380	125°
	HSJ 125-40R	HSJ 125-40L	400	125°
	HSJ 125-42R	HSJ 125-42L	420	125° ■
	HSJ 125-44R	HSJ 125-44L	440	125° ■
	HSJ 130-28R	HSJ 130-28L	280	130°
	HSJ 130-30R	HSJ 130-30L	300	130°
	HSJ 130-32R	HSJ 130-32L	320	130°
	HSJ 130-34R	HSJ 130-34L	340	130°
	HSJ 130-36R	HSJ 130-36L	360	130°
	HSJ 130-38R	HSJ 130-38L	380	130°
	HSJ 130-40R	HSJ 130-40L	400	130°
	HSJ 130-42R	HSJ 130-42L	420	130° ■
	HSJ 130-44R	HSJ 130-44L	440	130° ■

Sterile single packaging.

■ Upon Request.



### CEPHALIC SCREW

	Code	Length (mm)	Diameter Ø (mm)
<b>Ti6Al4V</b>	HSJ C270	70	10.5
	HSJ C275	75	10.5
	HSJ C280	80	10.5
	HSJ C285	85	10.5
	HSJ C290	90	10.5
	HSJ C295	95	10.5
	HSJ C300	100	10.5
	HSJ C305	105	10.5
	HSJ C310	110	10.5
	HSJ C315	115	10.5
	HSJ C320	120	10.5

Sterile single packaging.



### BLOCKING SCREW

	Code	Length (mm)	Diameter Ø (mm)
<b>Ti6Al4V</b>	HSN B830	25	8

Sterile single packaging.



### DISTAL SCREW

	Code	Length (mm)	Diameter Ø (mm)
<b>Ti6AL4V</b>	HMV 108-024ST	24	4.5
	HMV 108-028ST	28	4.5
	HMV 108-032ST	32	4.5
	HMV 108-036ST	36	4.5
	HMV 108-040ST	40	4.5
	HMV 108-044ST	44	4.5
	HMV 108-048ST	48	4.5
	HMV 108-052ST	52	4.5
	HMV 108-056ST	56	4.5
	HMV 108-060ST	60	4.5
	HMV 108-064ST	64	4.5
	HMV 108-068ST	68	4.5
	HMV 108-072ST	72	4.5
	HMV 108-076ST	76	4.5
	HMV 108-080ST	80	4.5
	HMV 108-084ST	84	4.5
	HMV 108-088ST	88	4.5
	HMV 108-092ST	92	4.5
	HMV 108-096ST	96	4.5
	HMV 108-100ST	100	4.5

Sterile single packaging.



### LOCKING PLUG

	Code	OFFSET (mm)
<b>Ti6AL4V</b>	HSN T001	+0
	HSN T003	+5
	HSN T002	+15

Sterile single packaging.

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