双羊®

INTELLIGENT TIBIA INTRAMEDULLARY NAIL

智能型胫骨髓内钉

江苏双羊医疗器械有限公司

Jiangsu Shuangyang
Medical Instrument Co., Ltd.

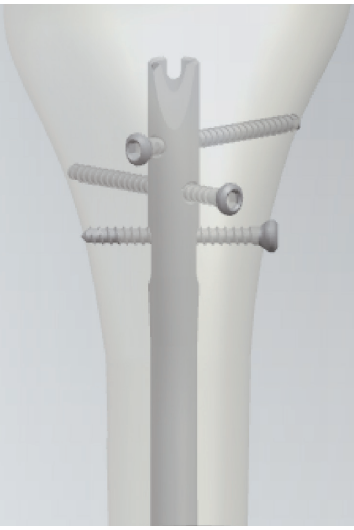
www.jsshuangyang.com

卓追創不 至誠為以
越求新斷 立信本人

产品特点 Product features

◎ 空心髓内钉，近端 10° 弯曲 , 远端 3° 弯曲，便于更好进钉
◎ 近端前侧切削处理，减少对髌韧带的刺激
◎ 四个平面都有锁定孔，提供多种锁定方式
◎ 远端特色梅花孔，方便器械插入

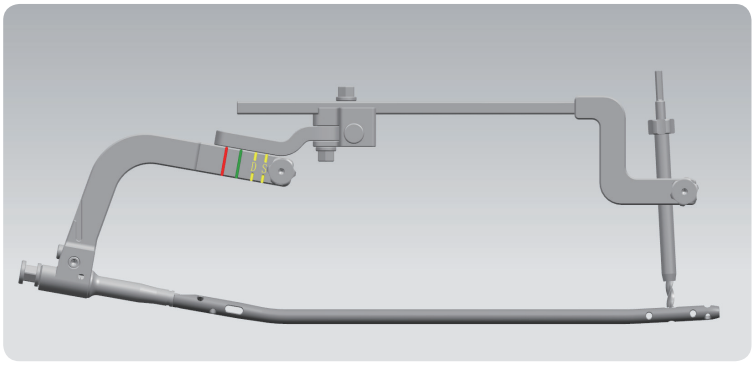
◎ Cannulated intramedullary nail adopts the design of 10° angle of proximal abduction and 3° angle of distal abduction to help approach nail more smoothly.
◎ Proximal anterior cutting treatment, reduces stimulation of tibia ligaments
◎ Lock holes on all four planes, providing a variety of locking methods
◎ Distal special torx hole, easy to insert instrument.

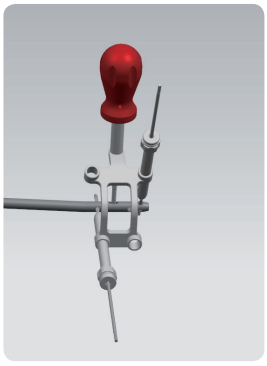


器械特点 Instrument features

◎ 机械化的远端连接，无需使用 X 光而不妨碍连接的准确性
◎ 近端瞄准臂用不同颜色标记不同的孔，无需额外装置即可完成近端上钉
◎ 远端定位器无需 X 光配合即可达到远端瞄准
◎ 导套螺纹设计防止术中脱落

◎ Mechanized distal connection eliminates the need for X-rays without compromising the accuracy of the connection.
◎ The proximal aiming arm marks different holes in different colors, and the proximal stitching can be completed without additional device.
◎ The distal locator can achieve distal sight without X-ray cooperation.
◎ Guide sleeve thread design prevents intraoperative shedding.





主钉 Main nail

订货编码 Item No.	直径 (mm) Diameter	长度 (mm) Length
14.19.02.06080245	Φ8	245
14.19.02.06080260		260
14.19.02.06080275		275
14.19.02.06080290		290
14.19.02.06080305		305
14.19.02.06080320		320
14.19.02.06080335		335
14.19.02.06080425		425
14.19.02.06090245	Φ9	245
14.19.02.06090260		260
14.19.02.06090275		275
14.19.02.06090290		290
14.19.02.06090305		305
14.19.02.06090320		320
14.19.02.06090335		335
14.19.02.06090425		425
14.19.02.06100245	Φ10	245
14.19.02.06100260		260
14.19.02.06100275		275
14.19.02.06100290		290
14.19.02.06100305		305
14.19.02.06100320		320
14.19.02.06100335		335
14.19.02.06100425		425

锁钉 Locking screw

订货编码 Item No.	直径 (mm) Diameter	长度 (mm) Length
14.22.01.02040025	Φ4.0	25
14.22.01.02040030		30
14.22.01.02040035		35
14.22.01.02040040		40
14.22.01.02040045		45
14.22.01.02040050		50
14.22.01.02040055		55
14.22.01.02040060		60
14.22.01.02040065		65
14.22.01.02040070		70
14.22.01.02040075		75
14.22.01.02040080		80
14.22.01.02040085		85
14.22.01.02040090		90
14.22.01.02040095		95
14.22.01.02040100		100

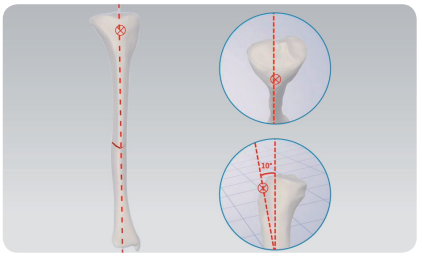
封帽 Cap

订货编码 Item No.	直径 (mm) Diameter	长度 (mm) Length
14.24.02.01085010	Φ8.5	10mm
14.24.02.01085015		15mm
14.24.02.01085020		20mm

操作步骤 Operation manual

01 确定进钉点

Determine the entry point

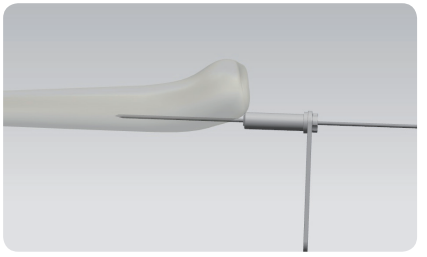


在胫骨粗隆上方做一切口。

Make an incision above the tibial tuberosity.

02 插入导针

Insert guide needle

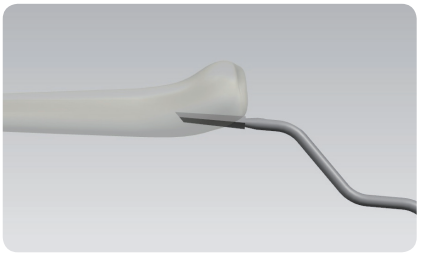


沿开口用导钻导套植入 Φ3.2 骨导引针。

Insert Ø3.2 bone guide needle with the drill guide sleeve along the opening.

03 近端开口

Proximal opening

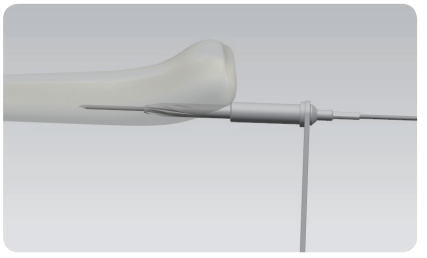


用开口锥打开髓腔。

Open medullary cavity by one opening cone.

04 近端扩髓

Proximal reaming

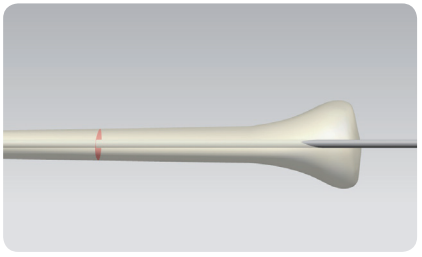


使用 Φ11.5 骨科钻头沿骨导引针打开近端髓腔。

Use one Ø11.5 Orthopedic drill bit to open the proximal medullary cavity along the bone guide needle.

05 复位

Reduction

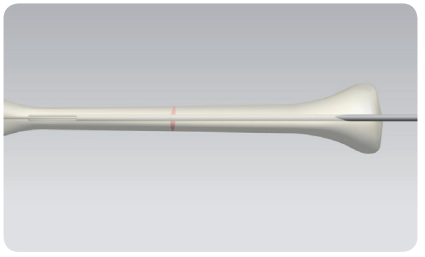


沿开口处插入骨科复位器对骨折端复位。

Insert orthopedic reduction device along the opening to do the reduction of fracture end.

06 插入骨探针

Insert guide needle

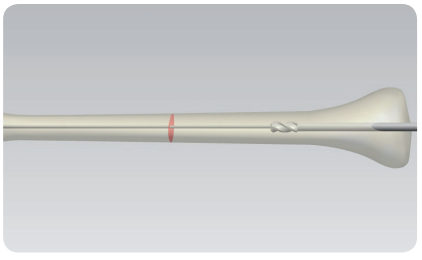


沿骨科复位器插入骨探针至髓腔远端底部。

Insert bone probe along the orthopedic reduction device to the distal end of medullary cavity.

07 扩髓

Reaming

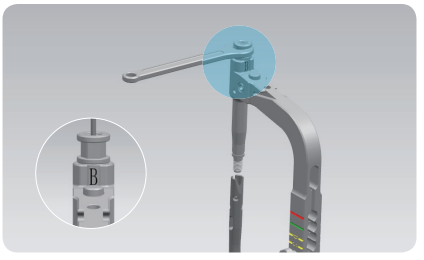


取出骨科复位器，软扩沿骨探针扩髓，若遇阻滞，可改用硬扩手动扩髓。

Remove orthopedic reduction device, ream bone along the bone probe with soft expansion. If blocked, hard expansion can be used to ream the bone manually.

08 组装髓内钉

Install Intramedullary nail

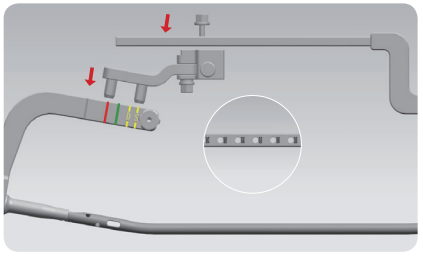


压紧按钮旋转瞄准臂至 B 位后松开，将髓内钉用吊紧螺栓连接到瞄准臂上，开口扳手锁紧。

Press button to rotate the aiming arm to position B and release, Connect the Intramedullary nail to the aiming arm with the lifting bolt, lock by the open wrench.

09 远端安装

Distal install

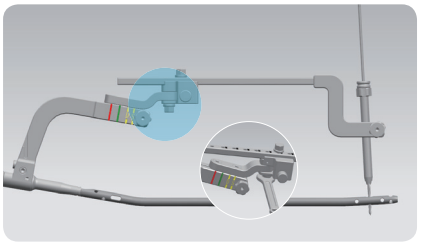


将远端调节座安装到瞄准臂上，刻度杆选择相应孔位，通过螺栓锁紧。

Install the distal adjustment seat to the aiming arm, select the corresponding hole position on the scale lever, and tighten by bolt.

10 远端调节

Distal adjustment



将导套导向杆插入远端瞄准块，锁紧远端螺栓，转动调节螺母，使得 Φ3.4 钻头顺畅通过远端梅花孔，锁紧下方螺栓。

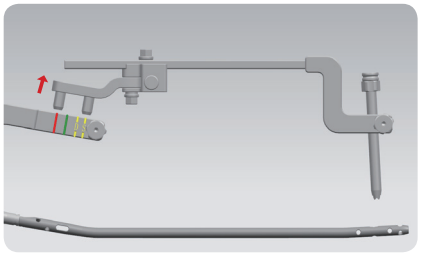
Insert the sleeve guide rod into the distal aiming block, lock the distal bolt, and turn the adjusting nut to pass the Ø3.4 drill bit through the distal torx hole smoothly, lock the lower bolt.

注意：下方螺栓锁紧后再次确认 Φ3.4 钻头能顺利通过远端梅花孔 。

Note: Reconfirm the Ø3.4 drill bit can pass through the distal torx hole smoothly after locking the lower bolt.

11 远端移除

Distal removal



松开瞄准臂上螺栓，整体移除远端连接杆。

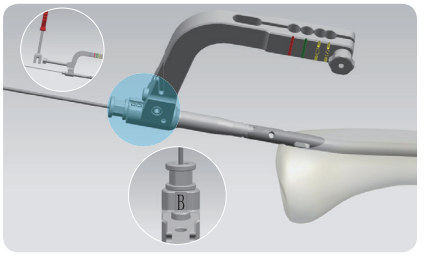
Loosen the bolt on the aiming arm and remove the distal connecting rod as a whole.

注意：远端连接杆上所有螺栓均保持锁紧状态，不得松动。

Note: All bolts on the distal connecting rod remain locked and must not be loose.

12 植入髓内钉

Implant intramedullary nail



沿骨探针将髓内钉旋转插入髓腔，若插入受阻，可连接打击器用骨锤轻轻敲击，植入完成后移除骨探针。

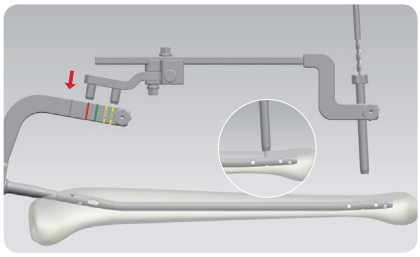
Rotate and insert intramedullary nail along the bone probe into the medullary cavity. If the insertion is blocked, connect intramedullary nail with the hammer and knock gently. Remove the bone probe after the implantation.

注意：髓内钉植入完成之后确保瞄准臂仍然处于 B 位。

Note: make sure the aiming arm is still in position B after implanting intramedullary nail.

13 钻远端定位孔

Drill the distal positioning hole

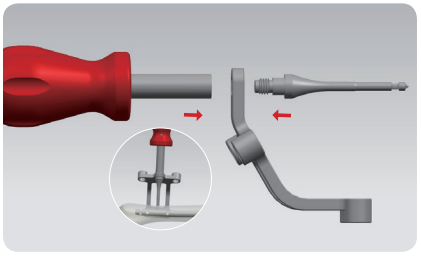


将调节好的远端连接杆再次安装到瞄准臂上，Φ6.5 平头钻通过导套钻孔至髓内钉处停止，移除远端连接杆。

Mount the adjusted distal connecting rod on the aiming arm again, drill the Ø6.5 flat head drill through the guide sleeve to stop at the intramedullary nail. Remove the distal connecting rod.

14 插入远端定位器

Insert distal locator



组装远端定位器－定位杆、导向器，插入到髓内钉上的梅花孔内。

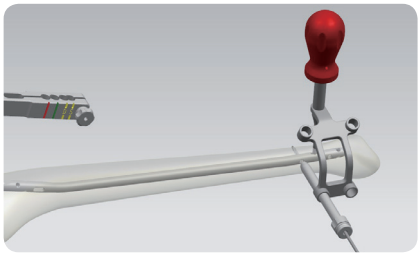
Assemble the distal locater - the positionbar and the guide, Insert it into the torx hole on the intramedullary nail.

注意：定位器必须插入到髓内钉底部，否则无法准确定位。

Note: The locater must be inserted to the end of the intramedullary nail. Otherwise can not locate well.

15 远端钻孔

Distal drilling

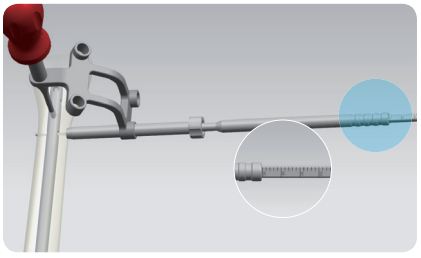


将导套、导向杆插入远端定位器孔内，Φ3.4 钻头钻孔。

Insert guide sleeve and guide rod into the distal locater, drill by one Ø3.4 drill bit.

16 远端测深

Distal depth measurement

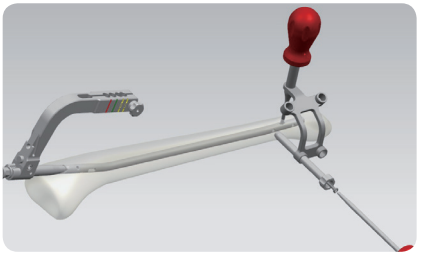


取出导向杆，测深器通过导套钩住对侧皮质骨，读取刻度杆上读数。

Remove the guide rod, hook the depth gauge to the opposite side cortex bone with a guide sleeve, and read the number on the scale rod.

17 植入远端锁钉 I

Implant distal locking screw I

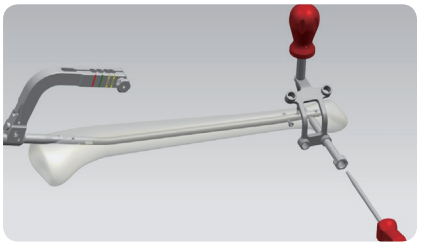


选取合适锁钉，用 SW3.5 改锥通过导套完成上钉。

Select the appropriate locking screw, use SW3.5 screwdriver to fix the screw through the guide sleeve.

18 植入远端锁钉 II

Implant distal locking screw II

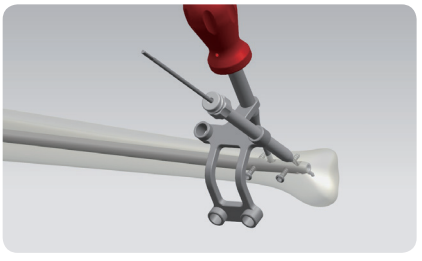


植入第一枚螺钉后用同样的方法钻孔、测深，植入第二枚螺钉。

After fixing the first screw, drill and measure the depth in the same way to fix the second screw.

19 植入远端锁钉 III

Implant distal locking screw III

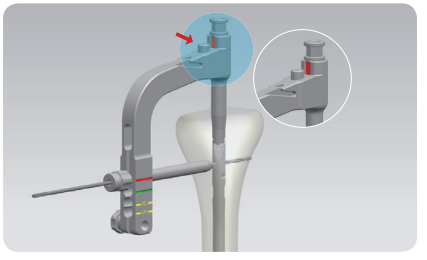


若骨折在远端关节周围，可将锁钉植入其中一个 V 型孔中，钻孔、测深方法同上，完成后取下远端定位器。

If the fracture is around the distal joint, the locking screw can be implanted into one of the V-holes. In same drill and depth measurement method. Remove the locator then.

20 近端锁定 I

Proximal locking screw I

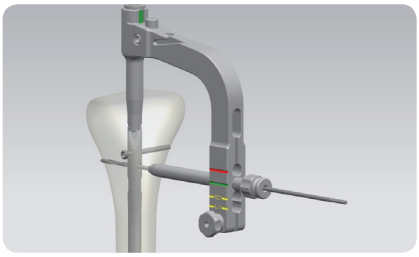


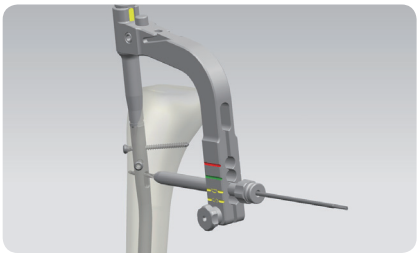
压紧按钮，旋转瞄准臂至红色标记位后松开，将导套导向杆插入瞄准臂相应红色孔位内，锁紧螺栓，钻孔、测深、上钉方法同远端。

Press button, rotate the aiming arm to the red mark position and release. Insert the sleeve guide rod into the corresponding red hole position of the aiming arm, lock the bolt, then drill and measure the depth in the same method to fix the screw.

21 近端锁定 II

Proximal locking screw II



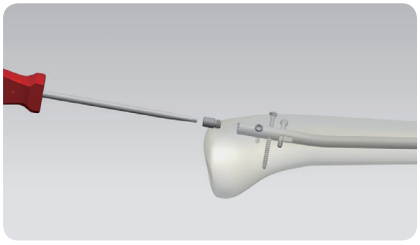


同样方法旋转瞄准臂，将螺钉植入绿色标记孔内；若有需要，可继续旋转瞄准臂至黄色位，植入动 / 静态螺钉。

Rotate the aiming arm in the same way and insert the screw into the green marked hole; if necessary, continue to rotate the aiming arm to the yellow position and insert the dynamic/static screw.

22 植入封帽

Implant cap



移除瞄准臂，植入封帽。

Remove aiming arm and implant cap.

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