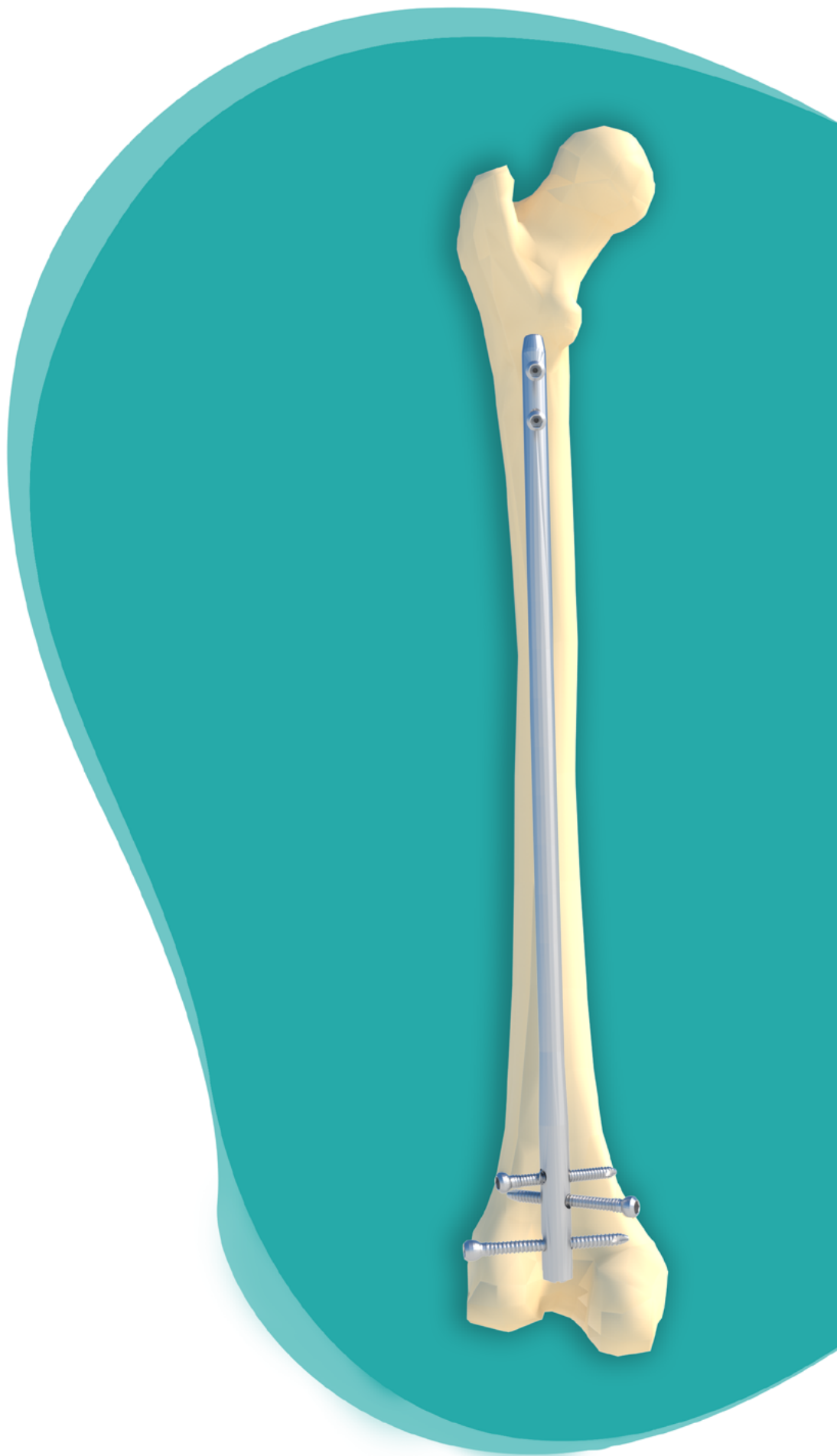




金属髓内固定系统
Metal Intramedullary Fixation System

股骨髁上倒置髓内钉

Femoral Supracondylar Inverted Intramedullary Nail



Fule® 富乐

专注骨科事业

Why choose Fule?

Our strengths

- The company is a national high-tech enterprise that integrates research and development, production, and sales of medical devices, with a fully intelligent processing equipment production line.
- The establishment of the Academician Expert Studio helps to enhance the R&D capabilities of Fule and further deepen the cooperation between industry, academia, and research; Approved postdoctoral research workstation.
- The hardware facilities are complete, the R&D team is excellent, and we work closely with clinical experts, obtaining more than 100 domestic and foreign patents.
- Based on the agent cooperation model, establish a nationwide sales and service network, supply products to nearly a thousand tertiary hospitals nationwide, and export to more than 20 overseas countries.

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Beijing Fule Science & Technology Development Company

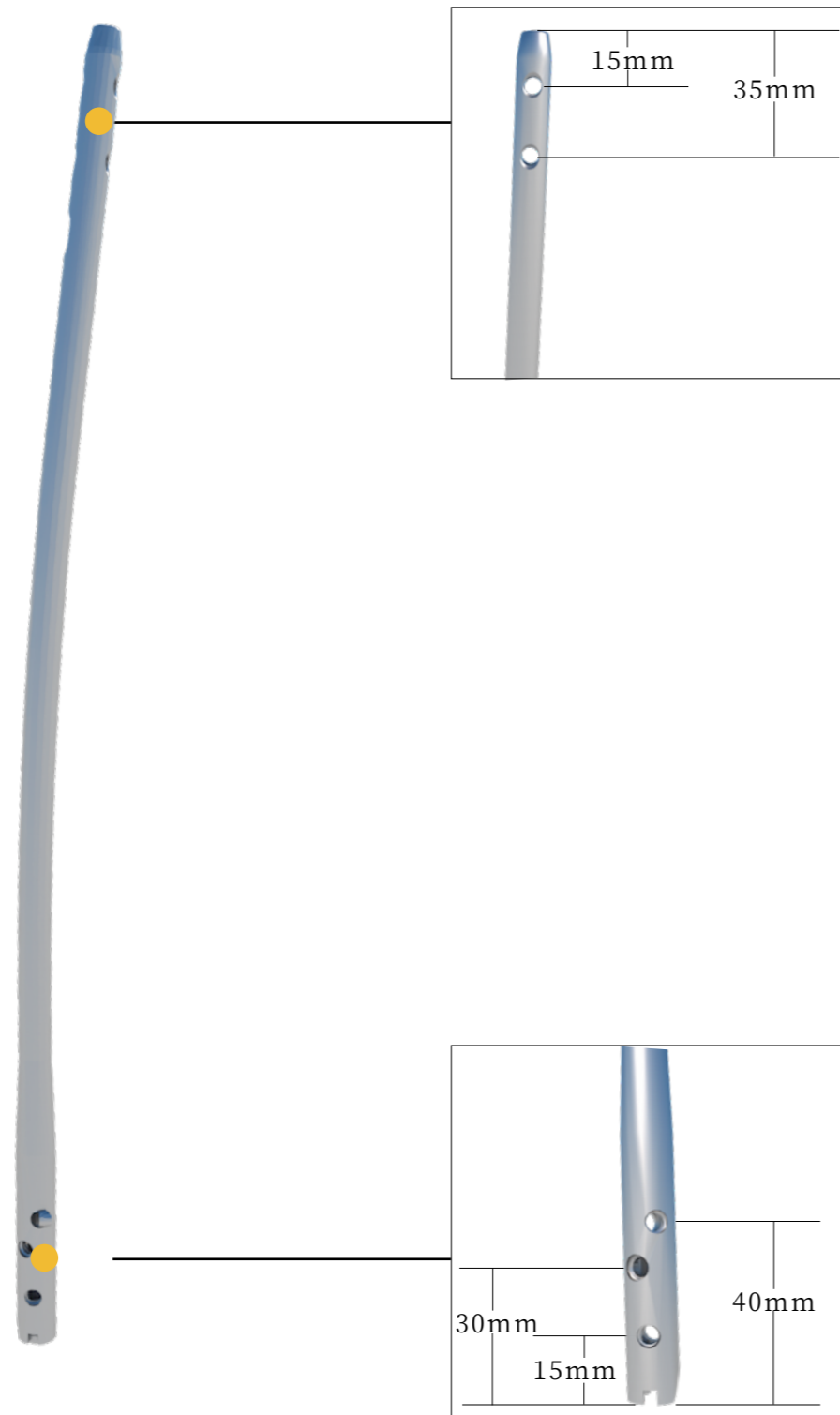
Zipcode: 101204

Sale Office Tel: 010-60999861/2 Fax: 010-60999863/8741

Tel: 010-60999866/32/75/17 E-mail address: YXSC@fulekeji.com

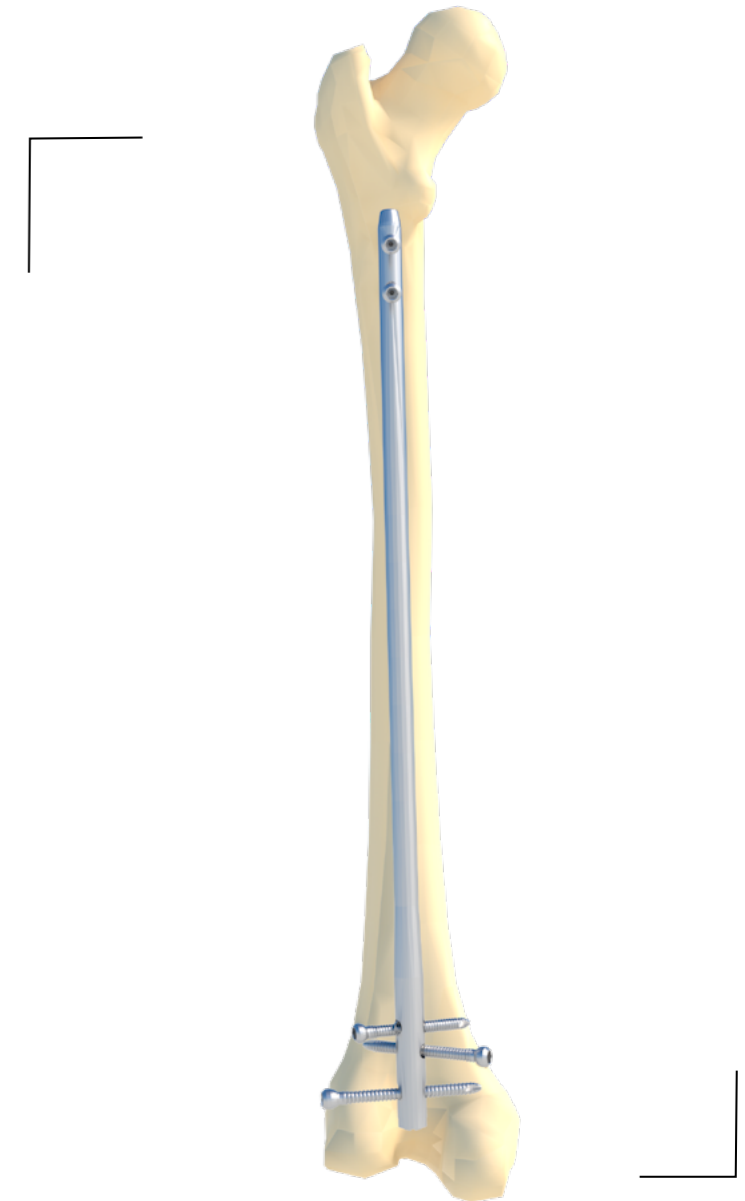
Address: 50 Mafang Industrial Park West District, Pinggu District, Beijing

Product advantages



Indications

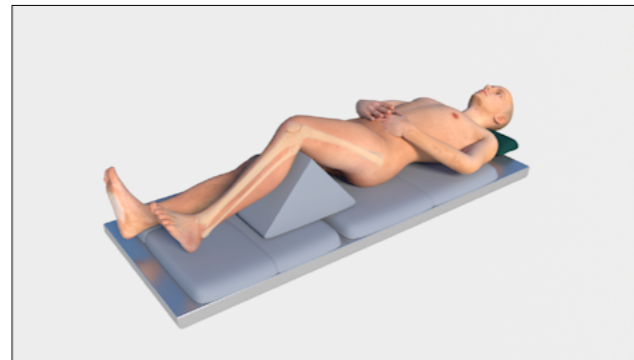
- Stable and unstable fractures of the distal femoral metaphysis
- Femoral shaft fracture
- Intraarticular fracture
- Periprosthetic fracture
- Non healing of fractures
- Delayed healing of fractures
- Preventive intramedullary nail fixation for potential pathological fractures



Surgical procedure

【Step1】 Patient Position

The patient lies supine on a transparent surgical bed. Bend the affected limb approximately 45 degrees and place the back side on a support pad to assist in reduction. Compare the length and rotation with the healthy side.



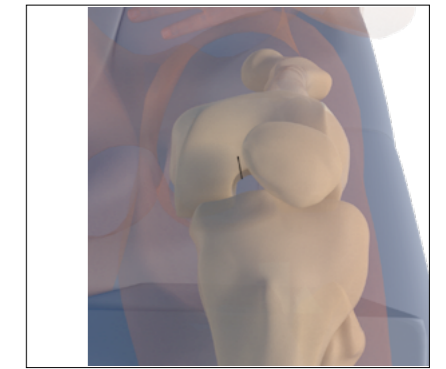
Rotate the C-arm machine to confirm that suitable full femur anteroposterior and lateral fluoroscopy can be obtained. The C-arm machine should be able to easily visualize the femoral trochanter area.

The fracture block within the joint should be fixed with screws before insertion into the intramedullary nail. Attention should be paid to placing the screw in front or behind the distal femur to avoid interfering with the channel of the intramedullary nail.

Surgical procedure

【Step2】 Surgical approach

Make a 3-4cm incision in the center, then cut the opening and closing capsule along the medial side of the patella to expose the intercondylar fossa. Gently pull the patellar ligament outward.



The insertion point is located inside the intercondylar fossa and anterior lateral to the attachment point of the posterior cruciate ligament.

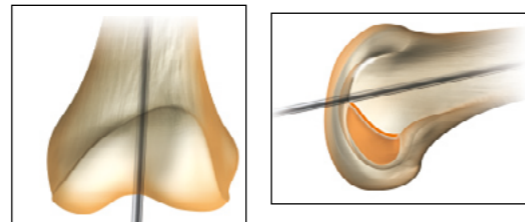
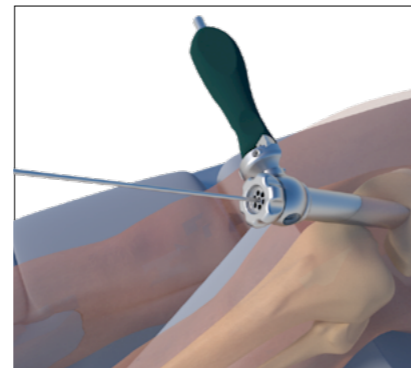


Surgical procedure

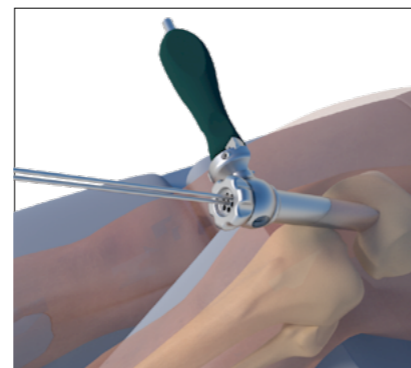
【Step3】 Opening

Drill a threaded guide needle into the distal femoral metaphysis approximately 6-8cm. The entrance channel device now serves as a soft tissue protector.

The guide needle should align with the femoral axis in the upright position and be in front of the Blumensaat line in the lateral position.



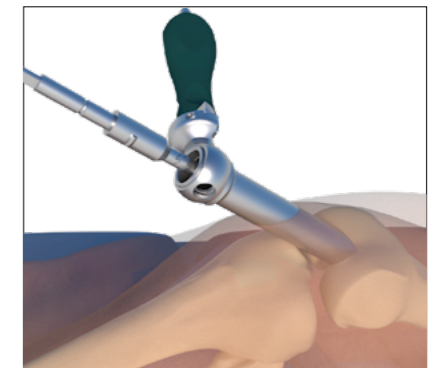
If the position of the guide pin is not good, rotate the honeycomb locator inside the entrance skin protective sleeve to the appropriate position and implant another threaded guide pin.



Surgical procedure

【Step4】 Intramedullary nail entrance

After confirming the position of the guide needle, remove the locator from the protective sleeve and use a proximal reamer to drill 6-8cm along the guide needle. After examining the position through fluoroscopy, remove the reamer and thread guide.

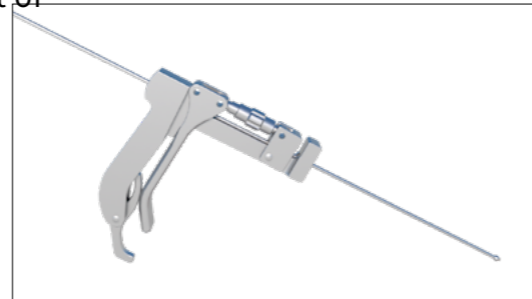


Surgical procedure

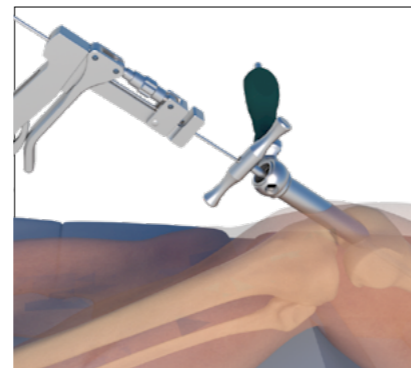
【Step5】 Reduction of the fracture

Insert the tail of the ball head guide rod from the front of the needle holder and gently tighten the trigger.

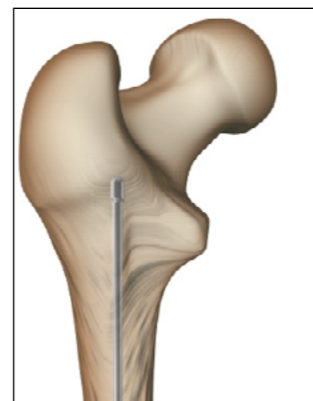
Connect the intramedullary reduction rod and its connector, and complete the assembly by connecting the reduction rod to the T-shaped handle.



Insert the intramedullary reduction rod into the medullary cavity and use the curved tip to guide the ball head guide rod through the fracture end to the proximal femur area.



The guide rod must be located at the center of the medullary cavity in both the positive and lateral positions.



Surgical procedure

【Step6】 Implant specification measurement

The guide rod reaches the required depth, release the gripper, and remove the reduction rod from the tibial medullary cavity. During the removal process, use a needle stopper to slide along the end of the T-shaped handle to maintain the position of the guide rod in the medullary cavity.

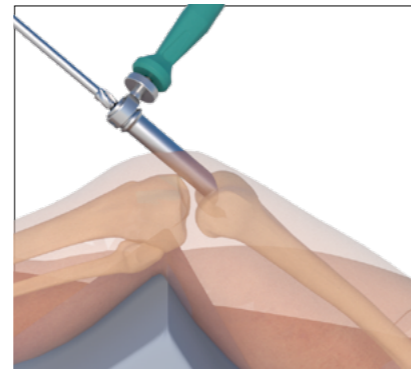


After removing the intramedullary reduction rod, confirm again that the guide rod is in the appropriate position at the proximal end of the femur, and measure the required diameter and length of the intramedullary nail with a measuring ruler.

Surgical procedure

【Step7】 Medullary expansion

Determine the size of intramedullary nails through measurement. Use a pulp expanding head and a pulp expanding soft drill rod to start expanding the medullary cavity until it is 1-1.5mm larger than the predicted intramedullary nail size.

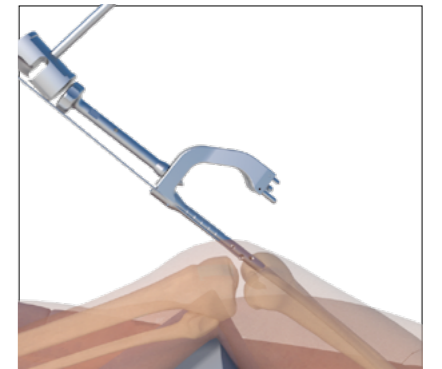


During the process of extracting the soft drill, a guide wire stopper can be used to insert the tail of the soft drill rod, ensuring that the guide wire is in its original position during the process of expanding the pulp. During the entire process of medullary expansion, confirmation of the position of the guide rod within the proximal femur should be maintained.

Surgical procedure

【Step8】 Implantation of intramedullary nails

After preparing the nail path, select the appropriate intramedullary nail to prepare for nail implantation. Insert the assembled guide device into the intramedullary nail along the guide needle, and gently tap with a sliding hammer to insert the intramedullary nail into the designated depth through the guide needle.



Surgical procedure

【Step9】 Implantation of interlocking screws

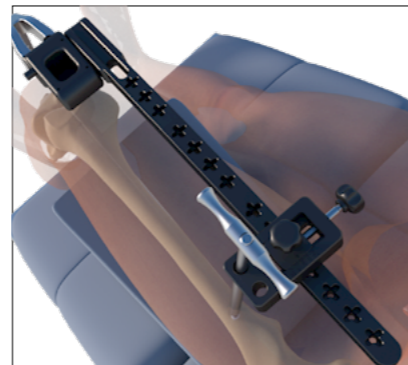
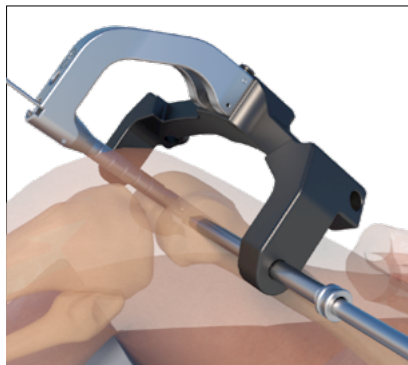
Remote lock

Install the remote aiming frame and insert the drilling sleeve into the guide groove at the desired position on the aiming frame until it reaches the bone surface. Use a long guide drill to drill through both cortical areas. Measure the length of the locking pin by reading the depth gauge. After connecting the appropriate length screw to the hex wrench, insert the interlocking screw through a drilling socket and tighten the screw.

Measure the length of the locking pin by reading the depth gauge. After connecting the appropriate length screw to the hex wrench, insert the interlocking screw through a drilling socket and tighten the screw.

Proximal locking

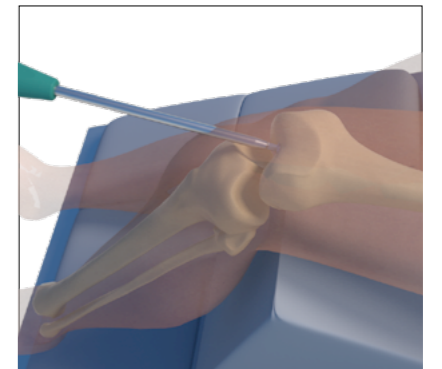
Install the proximal aiming frame and adjust the locking hole position of the aiming frame based on the reduction of the fracture. Drill a long guide drill and penetrate both sides of the cortex. Measure the length of the screw using a depth gauge. Use an assembled hex wrench to insert a suitable length of interlocking screw and tighten the screw.



Surgical procedure

【Step10】 Implant locking head

Remove the aiming frame, insert a wrench into the locking head, and tighten it.



Product information

SRF Intramedullary nail



Specifications	Diameter	Length	Code	Specifications	Diameter	Length	Code
Φ9×160 Φ5.4	Φ9	160	20700971	Φ10×160 Φ5.4	Φ10	160	20700929
Φ9×180 Φ5.4	Φ9	180	20700972	Φ10×180 Φ5.4	Φ10	180	20700930
Φ9×200 Φ5.4	Φ9	200	20700973	Φ10×200 Φ5.4	Φ10	200	20700931
Φ9×220 Φ5.4	Φ9	220	20700974	Φ10×220 Φ5.4	Φ10	220	20700932
Φ9×240 Φ5.4	Φ9	240	20700975	Φ10×240 Φ5.4	Φ10	240	20700933
Φ9×260 Φ5.4	Φ9	260	20700976	Φ10×260 Φ5.4	Φ10	260	20700934
Φ9×280 Φ5.4	Φ9	280	20700977	Φ10×280 Φ5.4	Φ10	280	20700935
Φ9×300 Φ5.4	Φ9	300	20700978	Φ10×300 Φ5.4	Φ10	300	20700936
Φ9×320 Φ5.4	Φ9	320	20700979	Φ10×320 Φ5.4	Φ10	320	20700937
Φ9×340 Φ5.4	Φ9	340	20700980	Φ10×340 Φ5.4	Φ10	340	20700938
Φ9×360 Φ5.4	Φ9	360	20700981	Φ10×360 Φ5.4	Φ10	360	20700939
Φ9×380 Φ5.4	Φ9	380	20700982	Φ10×380 Φ5.4	Φ10	380	20700940
Φ9×400 Φ5.4	Φ9	400	20700983	Φ10×400 Φ5.4	Φ10	400	20700941
Φ9×420 Φ5.4	Φ9	420	20700984	Φ10×420 Φ5.4	Φ10	420	20700942
Specifications	Diameter	Length	Code	Specifications	Diameter	Length	Code
Φ11×160 Φ5.4	Φ11	160	20700943	Φ12×160 Φ5.4	Φ12	160	20700957
Φ11×180 Φ5.4	Φ11	180	20700944	Φ12×180 Φ5.4	Φ12	180	20700958
Φ11×200 Φ5.4	Φ11	200	20700945	Φ12×200 Φ5.4	Φ12	200	20700959
Φ11×220 Φ5.4	Φ11	220	20700946	Φ12×220 Φ5.4	Φ12	220	20700960
Φ11×240 Φ5.4	Φ11	240	20700947	Φ12×240 Φ5.4	Φ12	240	20700961
Φ11×260 Φ5.4	Φ11	260	20700948	Φ12×260 Φ5.4	Φ12	260	20700962
Φ11×280 Φ5.4	Φ11	280	20700949	Φ12×280 Φ5.4	Φ12	280	20700963
Φ11×300 Φ5.4	Φ11	300	20700950	Φ12×300 Φ5.4	Φ12	300	20700964
Φ11×320 Φ5.4	Φ11	320	20700951	Φ12×320 Φ5.4	Φ12	320	20700965
Φ11×340 Φ5.4	Φ11	340	20700952	Φ12×340 Φ5.4	Φ12	340	20700966
Φ11×360 Φ5.4	Φ11	360	20700953	Φ12×360 Φ5.4	Φ12	360	20700967
Φ11×380 Φ5.4	Φ11	380	20700954	Φ12×380 Φ5.4	Φ12	380	20700968
Φ11×400 Φ5.4	Φ11	400	20700955	Φ12×400 Φ5.4	Φ12	400	20700969
Φ11×420 Φ5.4	Φ11	420	20700956	Φ12×420 Φ5.4	Φ12	420	20700970

Product information

Interlocking screw



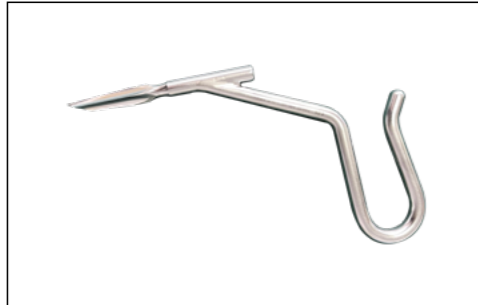
Specifications	Diameter	Length	Code	Specifications	Diameter	Length	Code
Φ5.0×26 Φ4.2 E Z N	Φ5.0	26	20700475	Φ5.0×58 Φ4.2 E Z N	Φ5.0	58	20700491
Φ5.0×28 Φ4.2 E Z N	Φ5.0	28	20700476	Φ5.0×60 Φ4.2 E Z N	Φ5.0	60	20700492
Φ5.0×30 Φ4.2 E Z N	Φ5.0	30	20700477	Φ5.0×62 Φ4.2 E Z N	Φ5.0	62	20700493
Φ5.0×32 Φ4.2 E Z N	Φ5.0	32	20700478	Φ5.0×64 Φ4.2 E Z N	Φ5.0	64	20700494
Φ5.0×34 Φ4.2 E Z N	Φ5.0	34	20700479	Φ5.0×66 Φ4.2 E Z N	Φ5.0	66	20700495
Φ5.0×36 Φ4.2 E Z N	Φ5.0	36	20700480	Φ5.0×68 Φ4.2 E Z N	Φ5.0	68	20700496
Φ5.0×38 Φ4.2 E Z N	Φ5.0	38	20700481	Φ5.0×70 Φ4.2 E Z N	Φ5.0	70	20700497
Φ5.0×40 Φ4.2 E Z N	Φ5.0	40	20700482	Φ5.0×72 Φ4.2 E Z N	Φ5.0	72	20700498
Φ5.0×42 Φ4.2 E Z N	Φ5.0	42	20700483	Φ5.0×74 Φ4.2 E Z N	Φ5.0	74	20700499
Φ5.0×44 Φ4.2 E Z N	Φ5.0	44	20700484	Φ5.0×76 Φ4.2 E Z N	Φ5.0	76	20700500
Φ5.0×46 Φ4.2 E Z N	Φ5.0	46	20700485	Φ5.0×78 Φ4.2 E Z N	Φ5.0	78	20700501
Φ5.0×48 Φ4.2 E Z N	Φ5.0	48	20700486	Φ5.0×80 Φ4.2 E Z N	Φ5.0	80	20700502
Φ5.0×50 Φ4.2 E Z N	Φ5.0	50	20700487	Φ5.0×85 Φ4.2 E Z N	Φ5.0	85	20700503
Φ5.0×52 Φ4.2 E Z N	Φ5.0	52	20700488	Φ5.0×90 Φ4.2 E Z N	Φ5.0	90	20700504
Φ5.0×54 Φ4.2 E Z N	Φ5.0	54	20700489	Φ5.0×95 Φ4.2 E Z N	Φ5.0	95	20700505
Φ5.0×56 Φ4.2 E Z N	Φ5.0	56	20700490	Φ5.0×100 Φ4.2 E Z N	Φ5.0	100	20700506

Locking head XVI

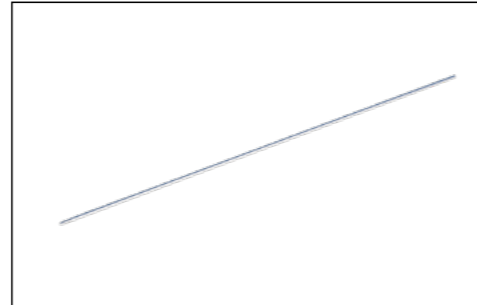


Specifications	Code	Specifications	Code
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5 Φ6.7×16.5	20700754	15 Φ6.7×26.5	20700756

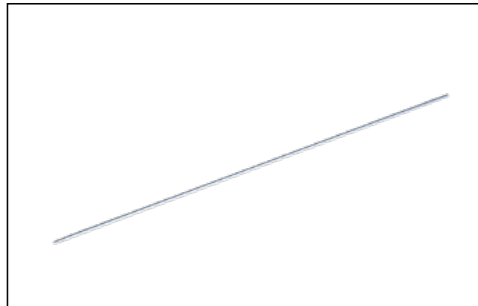
Tool information



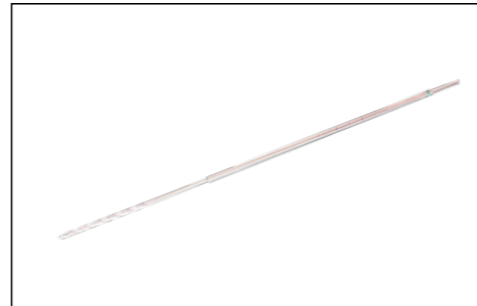
● 414-320
Open cone



● 2070128
Bone positioning needle (threaded)



● 425-040
Bone positioning needle (threaded)



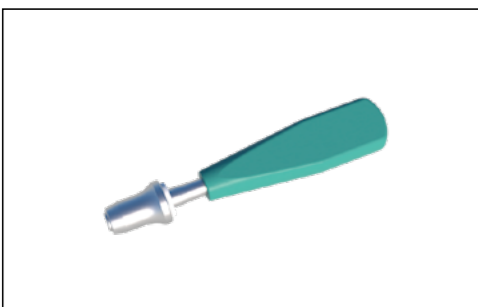
● 425-080
Orthopedic drill bits



● 425-090
Orthopedic locator (limit I)



● 425-100
Orthopedic wrench (hexagonal II)



● 425-191
Quick fit handle (straight type)

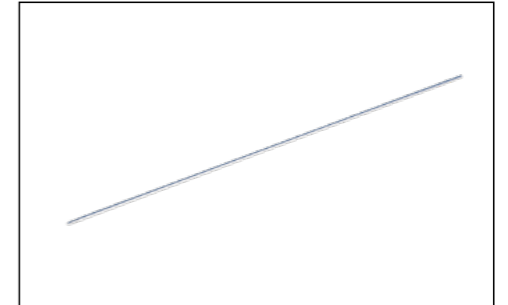


● 425-210
Quick fit handle (T-shaped)

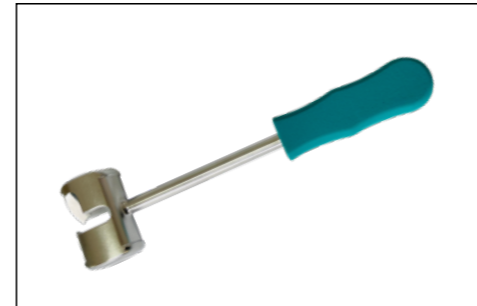
Tool information



● 425-350
Puller (needle guide I)



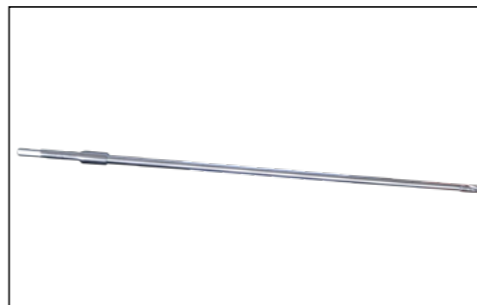
● 2070128
Bone positioning needle (threaded)



● 425-361
Bone Hammer (I)



● 414-470
Orthopedic wrench (open end)



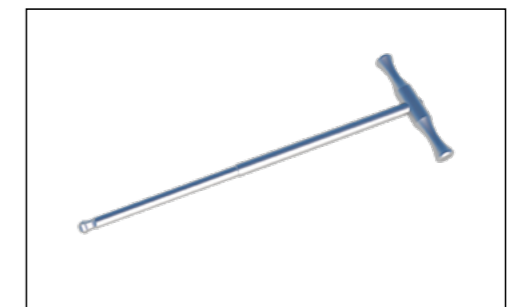
● 425-090
Flexible pulp expander (bidirectional II)



● 425-517
Marrow cavity reamer (II)

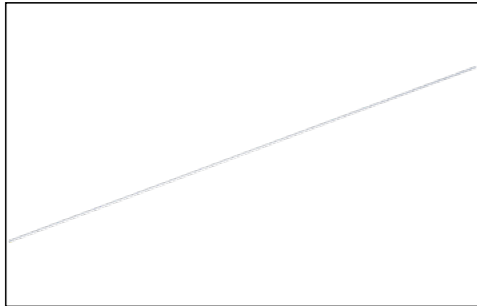


● 2070134
Medullary cavity reamer box

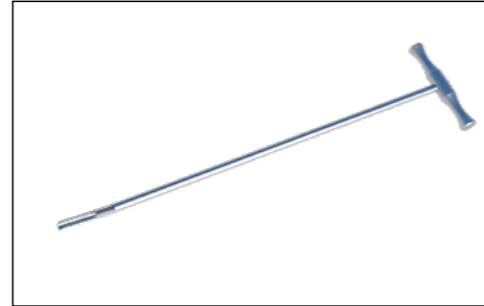


● 414-790
Orthopedic wrench (hexagonal universal joint)

Tool information



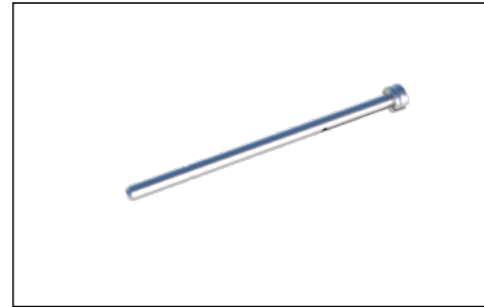
● 425-010
Bone guide needle (ball head)



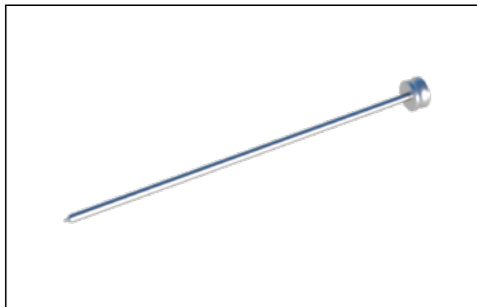
● 425-530
Bone pry



● 2070199
Sheath (I)



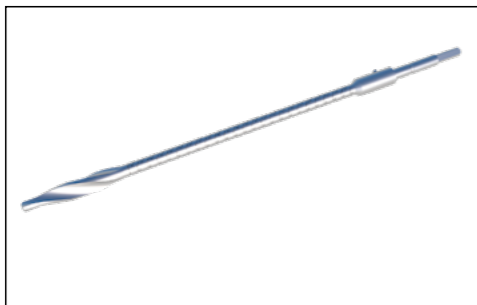
● 2070200
Sheath (II)



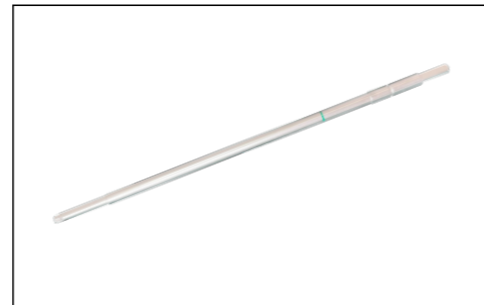
● 2070201
Bone cone



● 432-130
Guide drill (handle)

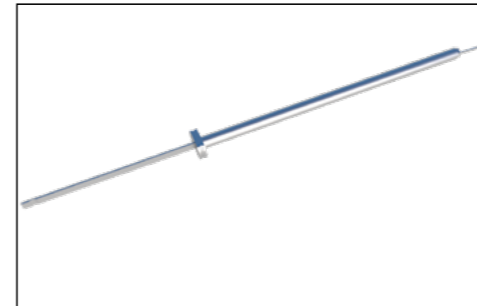


● 432-140
Orthopedic drill bit (soft drill)

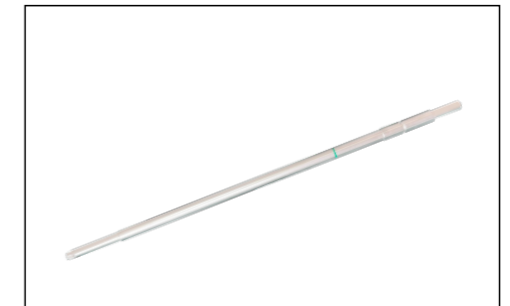


● 432-330
Orthopedic wrench (hexagonal universal quick change)

Tool information



● 2070063
Sounder (III)



● 2070058
Orthopedic wrench (hexagonal quick change)



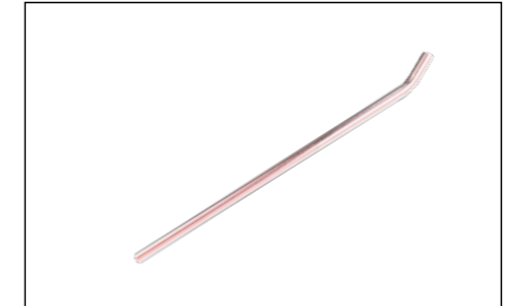
● 2070206
Orthopedic wrench (handle locking I)



● 2070082
Driver (I)



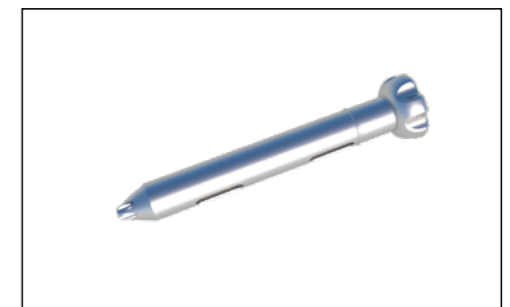
● 2070083
Nail extractor (I)



● 425-610
Orthopedic wrench (rod type)

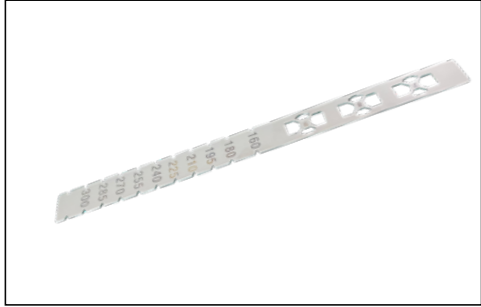


● 432-110
Guide Drill (II)

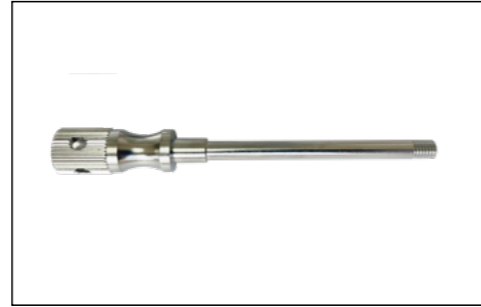


● 432-120
Orthopedic drilling sight (porous II)

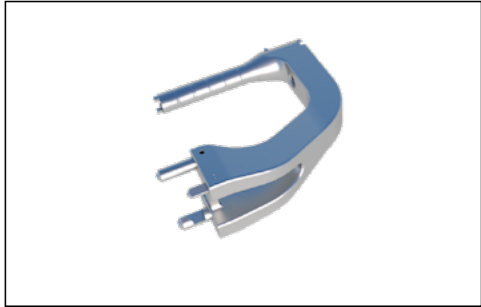
Tool information



● 2070077
Template (II)



● 2070059
Quick connecting rod (handle)



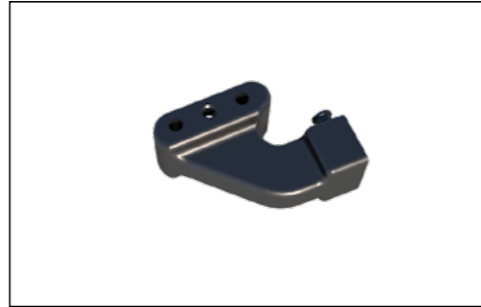
● 2070060
Orthopedic positioning frame (handle III)



● 2070061
Orthopedic positioning frame (proximal cancellous bone)



● 2070208
Orthopedic positioning frame (distal guide rod II)



● 2070207
Orthopedic positioning frame (connecting guide block)

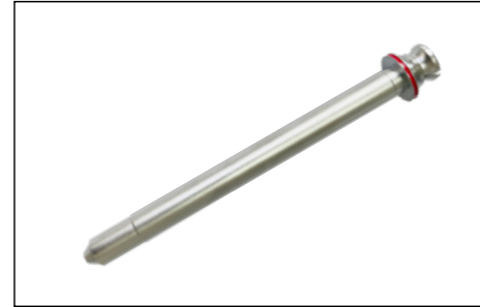


● 2070209
Orthopedic positioning frame (connecting guide block)



● 2070210
Quick connecting rod (short rod)

Tool information



● 2070154
Sheath (I)