

PediLoc[®]

Locking Cannulated Blade Plate System

SURGICAL TECHNIQUE
Varus Technique Only

*Comprehensive System
for treating pediatric hip
deformity, fixed knee
flexion deformity,
and trauma*





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The OrthoPediatics Locking Cannulated Blade Plate System is intended for fixation of long bone fractures and osteotomies in all pediatric subgroups (except neonates) and in small stature adults. Specific indications include: intertrochanteric derotation and varus osteotomies, femoral neck and pertrochanteric fractures, intertrochanteric valgus osteotomies, proximal and distal tibial osteotomies and humeral fractures and osteotomies.

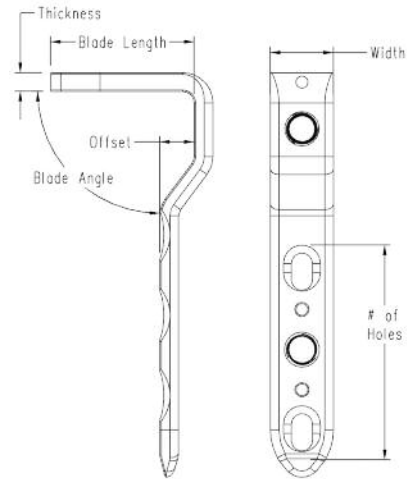
The instruments and implants are cannulated enabling the surgeon to maintain control of bony fragments throughout the entire procedure.

The OrthoPediatics Locking Cannulated Blade Plate System includes instruments and implants used to perform varus and valgus osteotomies.

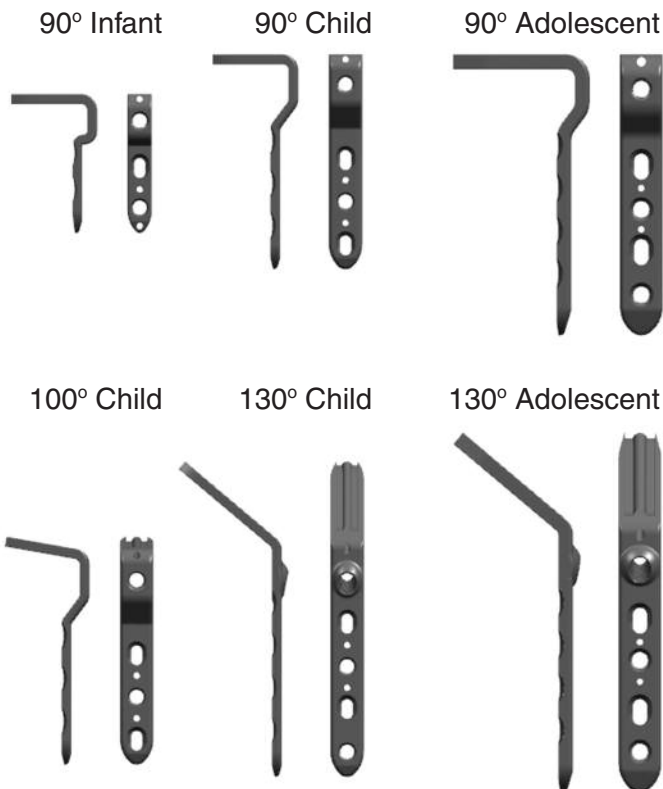
Indications include derotational and angular osteotomies and other proximal femoral reconstruction procedures.

The OrthoPediatics Locking Cannulated Blade Plate System is offered in three different size ranges: infant, child and adolescent. The infant & child plates utilize the 3.5mm instrument trays. The adolescent plates utilize the 4.5mm instrument trays. Each size specific instrument can be identified within the set as Blue for 3.5mm and Green for 4.5mm, in addition to normal etching.

All plates offer the ability to insert a locking or a non-locking screw into the femoral neck and dynamically compress the fracture and osteotomy sites within the shaft creating a stable construct.

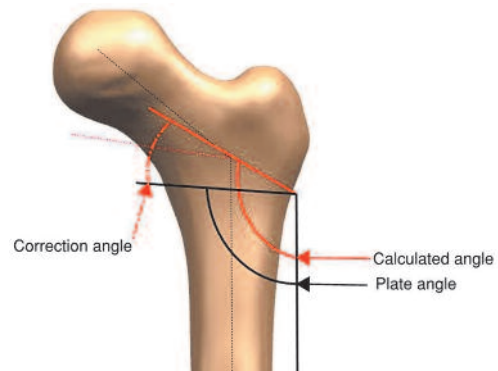
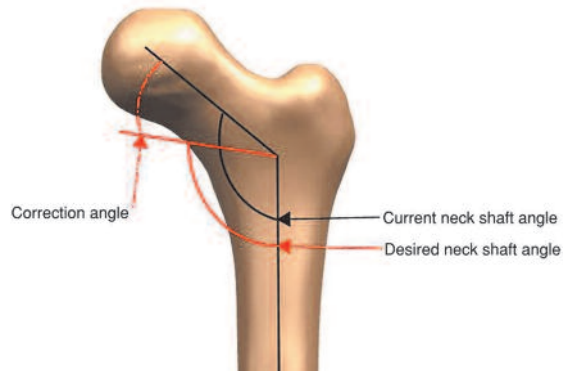


- All infant plates are 8mm wide and 3.25mm thick
- All child plates are 11mm wide and 3.25mm thick
- All adolescent plates are 14mm wide and 4.85mm thick



Calculated Angle (for guide wire placement)

- To determine the correction angle, identify current neck shaft angle and desired neck shaft angle.
- Subtract current from desired for appropriate correction angle.
- Utilizing the appropriate plate angle (90° and 100°), add correction angle to plate angle obtaining the calculated angle.
- The calculated angle will be used to insert the initial guide wire using the adjustable angle wire guide.



1
Set Adjustable Angled Wire Guide at Calculated Angle and Insert Initial Guide Wire

Instrument

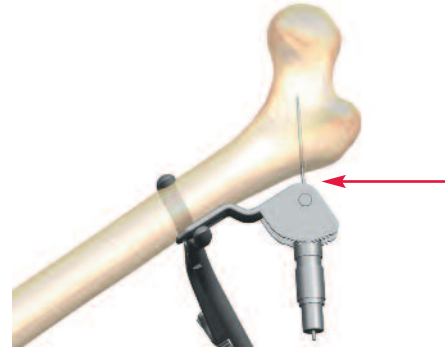
- 3.5 Adjustable Angle Wire Guide01-1200-0012
- 4.5 2.4 Adjustable Angle Guide01-1200-0013
- 3.5 2.0mm X 150mm Guide Wire.....01-0907-0022
- 4.5 2.4mm Guide Wire01-1200-0050

Pull on non-knurled collar to disengage locking mechanism to adjust for calculated angle. Place the adjustable angled wire guide onto bone utilizing small/large bone clamp or 2.0mm X 150mm guide wires to hold in place.



Insert a guide wire through adjustable angled wire guide.

- 1 *Note: Proper initial guide wire placement is dependent on correction and patient anatomy.*
- 2 *Note: Use fluoroscopy to ensure proper placement of wire.*
- 3 *Note: Adjustable angled wire guide may not contact bone at location designated by arrow in adjacent image.*
- 4 *Note: Guide wire may bottom out on back of adjustable angled wire guide.*



2
Chisel Placement

Instrument

3.5	1/2lb Mallet.....	01-1200-0077
4.5	Solid Hammer	01-1000-001
3.5	3.5 Chisel Guide	01-1200-0002
4.5	4.5 Chisel Guide	01-1200-0003
3.5	Infant Chisel	01-1200-0006
3.5	Child Chisel.....	01-1200-0007
4.5	Adolescent Chisel	01-1200-0008

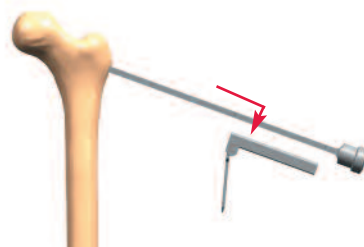
Place chisel & chisel guide over the guide wire. Handle of chisel guide can be utilized to control and align for flexion and extension.

- 1 *Note: Osteotomy site will be located using the osteotomy guide under step "performing osteotomy". It is recommended to initially check the osteotomy site location prior to chiseling.*
- 2 *Note: A 2.5mm drill may be used to prepare the lateral cortex to ensure easier insertion of the chisel.*

Impact the chisel using either a mallet or slap hammer to the appropriate depth.

- 3 *Note: Use fluoroscopy to ensure proper insertion depth of chisel.*
- 4 *Note: The insertion depth of the chisel can be read on either the top or sides of the chisel. This number pertains to the size of the implant.*

The chisel guide is designed to be removed while leaving the chisel intact with the bone. To remove the chisel guide, slide down the chisel and remove.



1 Cut to remove bone wedge of desired angular correction (calculated angle)

Instrument

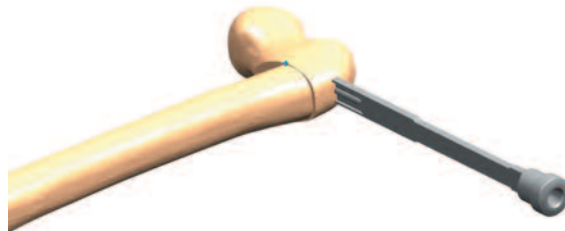
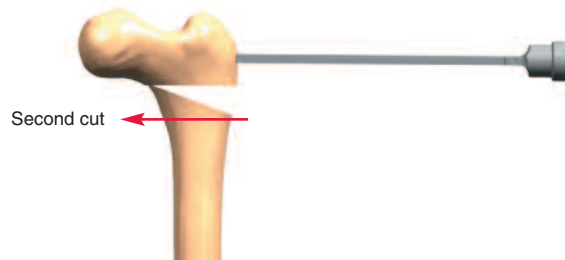
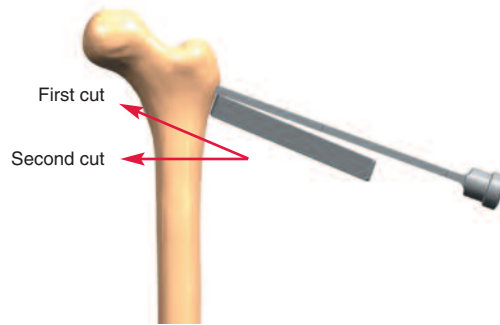
3.5 Infant/Child Osteotomy Gauge01-1200-0075

4.5 Adolescent Osteotomy Gauge 01-1200-0060

The osteotomy location is determined by lining up the underside of the chisel with the osteotomy gauge. The bottom of the gauge determines the osteotomy site.

Utilizing chisel to control proximal fragment, rotate fragment and make second cut transverse at desired plate angle to shaft of bone.

1 Note: Utilize fluoroscopy and triangular positioning plates to assist in angular placement of second cut.



1 Preload desired plate with the threaded inserter

Instrument

3.5 Threaded Inserter, Infant/Child01-1200-0009

4.5 Threaded Inserter, Adolescent01-1200-0011



Insert plate/threaded inserter construct over initial guide wire.

1 *Note: Caution needs to be made to not puncture gloves while sliding the plate over the wire.*



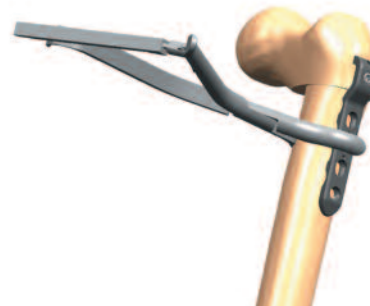
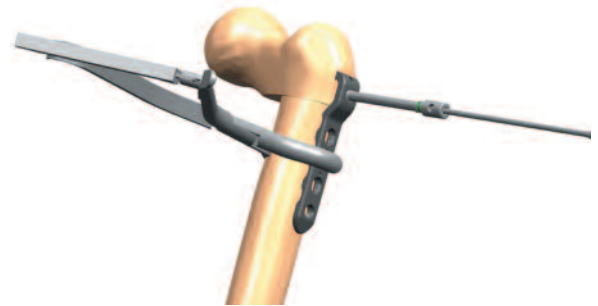
2
Insert locking screw for proximal fragment fixation

Instrument

- 3.5 Infant Bone Clamp01-1200-0074
 - 3.5 Child Bone Clamp.....01-1200-0057
 - 4.5 Adolescent Bone Clamp01-1200-0058
 - 3.5 2.5mm Calibrated Drill Bit.....01-1050-0032
 - 4.5 3.2mm Calibrated Drill Bit.....01-1200-0041
 - 3.5 2.5mm Threaded Drill Guide01-1200-0067
 - 4.5 3.2mm Threaded Drill Guide01-1200-0042
 - 3.5 T15 Hexalobe Driver01-1200-0068
 - 4.5 T20 Hexalobe Driver01-1200-0065
-

Remove the guide wire and insert threaded drill guide into proximal locking hole of plate. Using the appropriate calibrated drill, drill to the desired depth.

Remove the threaded drill guide from implant. Insert locking screw.



1 Locate dynamic compression slot and drill for cortical screw

Instruments

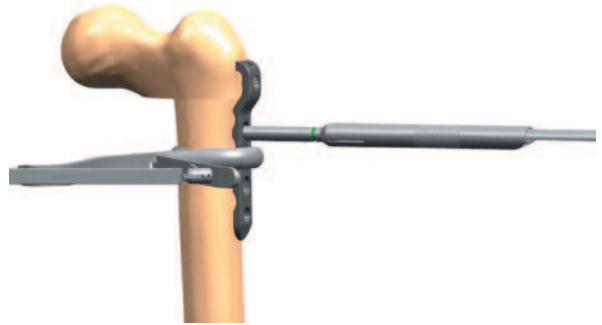
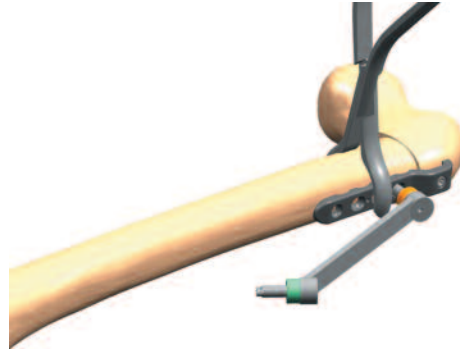
- 3.5 2.5mm Neutral & Load Drill Guide ...01-1200-0054
- 4.5 3.2mm Neutral & Load Drill Guide ...01-1200-0055
- 3.5 2.5mm Drill Bit..... 01-1050-0002
- 4.5 3.2mm Drill Bit.....01-1200-0051

Locate dynamic compression slot; utilize **System Overview** section of this **Procedural Steps** if needed. Insert gold side of neutral & load drill guide in to plate.

- 1 *Note: Internal guide piece of neutral & load end drill guide can rotate. Arrow should face toward osteotomy location.*

Insert drill bit into gold side of neutral & load drill guide and drill both cortices.

- 2 *Note: If drill bit is too short, utilize size appropriate calibrated drill bit. Do not use calibrations lines for measuring.*
- 3 *Note: As an option, user can tap both cortices utilizing the cortical taps and mini t-handle AO, QC.*



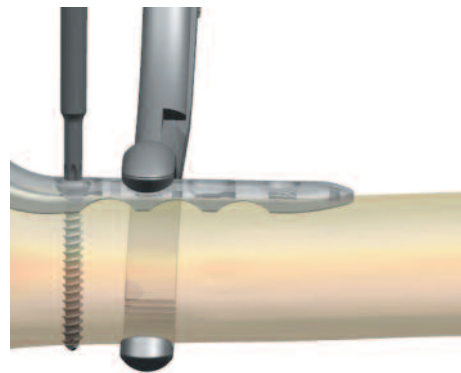
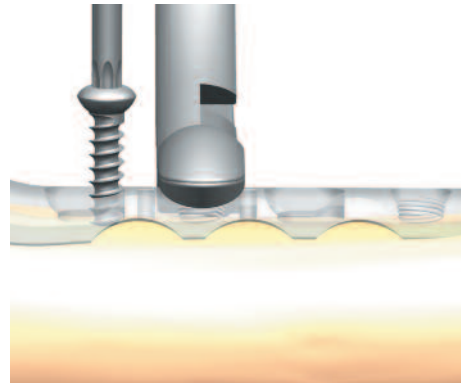
2 Measure and insert appropriate size cortical screw

Instruments

Mini Inline Ratchet	.01-1030-001
3.5 3.5mm Depth Gauge	.01-1200-0072
4.5 4.5mm Depth Gauge	.01-1200-0073
3.5 T15 Hexalobe Driver	.01-1200-0068
4.5 T20 Hexalobe Driver	.01-1200-0065

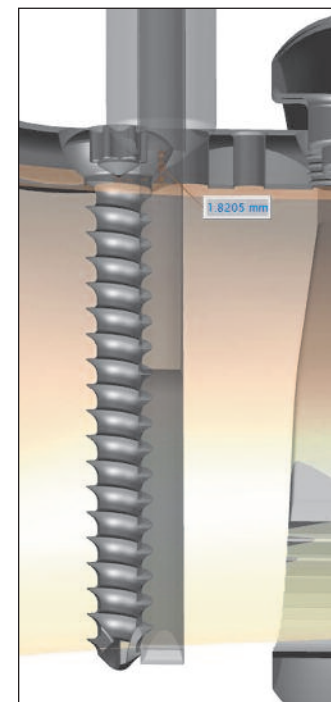
Insert tip of depth gauge and hook far side cortex. Obtain measurement for cortical screw.

1 Note: Nose of depth gauge will not fit through plate and depth gauge nose may contain a snap feature that could become loose during this process.



Affix hexalobe driver to mini inline ratchet confirming engagement position is in forward or neutral. Identify appropriate length cortical screw and insert.

2 Note: Due to depth gauge not fitting through plate and utilizing dynamic compression the cortical screw may protrude ~1.0 to 1.8mm farther than expected.



1 Locate locking hole and drill for locking screw

Instruments

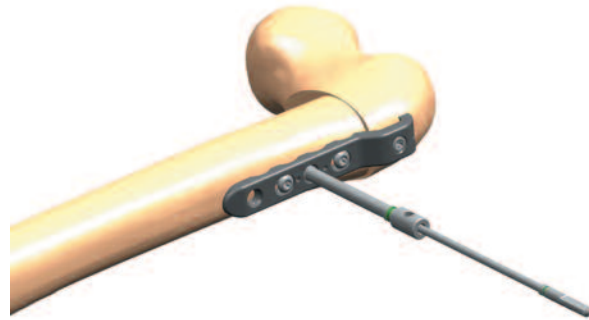
- 3.5 2.5mm Threaded Drill Guide01-1200-0067
- 4.5 3.2mm Threaded Drill Guide01-1200-0042
- 3.5 2.5mm Calibrated Drill Bit01-1050-0032
- 4.5 3.2mm Calibrated Drill Bit01-1200-0041

Locate locking hole; utilize **System Overview** section of this **Procedural Steps** if needed. Insert threaded drill guide into plate ensuring not to cross thread device.

Insert calibrated drill bit into threaded drill guide and drill near cortex. Continue until user feels far cortex. Drill just past the far cortex.

Read measurement from calibrated drill bit off of back of threaded drill guide.

1 *Note: As an option, user can tap both cortices utilizing the cortical taps and mini t-handle AO, QC.*



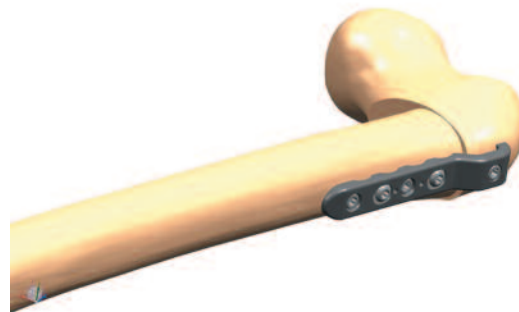
2 Insert appropriate size locking screw

Instruments

- Mini Inline Ratchet01-1030-001
- 3.5 T15 Hexalobe Driver01-1200-0068
- 4.5 T20 Hexalobe Driver01-1200-0065

Identify appropriate size screw identified in previous step. Affix the mini inline ratchet confirming forward or neutral engagement to the hexalobe driver. Insert locking screw.

1 *Note: Distal locking screws are recommended as last distal fixation method, so appropriate compression can be gained within the dynamic compression slots*



Infant Plates

Angle	Offset	Blade Length	Hole	Part Number
90°	5	25	2	00-1200-2000
90°	5	30	2	00-1200-2001
90°	5	35	2	00-1200-2002

Child Plates

Angle	Offset	Blade Length	Hole	Part Number
90°	6	25	3	00-1200-3500
90°	6	30	3	00-1200-3501
90°	6	35	3	00-1200-3502
90°	6	40	3	00-1200-3503
90°	6	45	3	00-1200-3504
90°	6	50	3	00-1200-3505
90°	10	25	3	00-1200-3506
90°	10	30	3	00-1200-3507
90°	10	35	3	00-1200-3508
90°	10	40	3	00-1200-3509
90°	10	45	3	00-1200-3510
90°	10	50	3	00-1200-3511
100°	6	25	3	00-1200-4000
100°	6	30	3	00-1200-4001
100°	6	35	3	00-1200-4002
100°	6	40	3	00-1200-4003
100°	6	45	3	00-1200-4004
100°	6	50	3	00-1200-4005
130°	0	40	4	00-1200-5000
130°	0	45	4	00-1200-5001
130°	0	50	4	00-1200-5002
130°	0	55	4	00-1200-5003
130°	0	60	4	00-1200-5004

Adolescent Plates

Angle	Offset	Blade Length	Hole	Part Number
90°	6	40	4	00-1200-4500
90°	6	45	4	00-1200-4501
90°	6	50	4	00-1200-4502
90°	6	55	4	00-1200-4503
90°	6	60	4	00-1200-4504
90°	6	65	4	00-1200-4505
90°	6	70	4	00-1200-4506
90°	14	40	4	00-1200-4514
90°	14	45	4	00-1200-4515
90°	14	50	4	00-1200-4516
90°	14	55	4	00-1200-4517
90°	14	60	4	00-1200-4518
90°	14	65	4	00-1200-4519
90°	14	70	4	00-1200-4520
130°	0	45	4	00-1200-7000
130°	0	50	4	00-1200-7001
130°	0	55	4	00-1200-7002
130°	0	60	4	00-1200-7003
130°	0	65	4	00-1200-7004
130°	0	70	4	00-1200-7005
130°	0	75	4	00-1200-7006
130°	0	80	4	00-1200-7007

3.5mm Screws

Self Tapping Cortical Screw
with T15 Hexalobe

Size	Part Number
10	00-0903-2510
12	00-0903-2512
14	00-0903-2514
16	00-0903-2516
18	00-0903-2518
20	00-0903-2520
22	00-0903-2522
24	00-0903-2524
26	00-0903-2526
28	00-0903-2528
30	00-0903-2530

Locking Cortical Screw
with T15 Hexalobe

Size	Part Number
10	00-0903-2610
12	00-0903-2612
14	00-0903-2614
16	00-0903-2616
18	00-0903-2618
20	00-0903-2620
22	00-0903-2622
24	00-0903-2624
26	00-0903-2626
28	00-0903-2628
30	00-0903-2630
35	00-0903-2635
40	00-0903-2640
45	00-0903-2645
50	00-0903-2650
55	00-0903-2655
60	00-0903-2660

4.5mm Screws

Self Tapping Cortical Screw
with T20 Hexalobe

Size	Part Number
10	00-0907-4510
12	00-0907-4512
14	00-0907-4514
16	00-0907-4516
18	00-0907-4518
20	00-0907-4520
22	00-0907-4522
24	00-0907-4524
26	00-0907-4526
28	00-0907-4528
30	00-0907-4530
32	00-0907-4532
34	00-0907-4534
36	00-0907-4536
38	00-0907-4538
40	00-0907-4540

Locking Cortical Screw
with T20 Hexalobe

Size	Part Number
10	00-0907-4610
12	00-0907-4612
14	00-0907-4614
16	00-0907-4616
18	00-0907-4618
20	00-0907-4620
22	00-0907-4622
24	00-0907-4624
26	00-0907-4626
28	00-0907-4628
30	00-0907-4630
32	00-0907-4632
34	00-0907-4634
36	00-0907-4636
38	00-0907-4638
40	00-0907-4640
45	00-0907-4645
50	00-0907-4650
55	00-0907-4655
60	00-0907-4660
65	00-0907-4665
70	00-0907-4670
75	00-0907-4675
80	00-0907-4680

Positioning Guides

Adjustable Angled Wire Guide	01-1200-0012
2.4 Adjustable Angle Guide	01-1200-0013
Triangular Positioning Plate 90-40-50°	01-1200-0069
Triangular Positioning Plate 80-70-30°	01-1200-0070
Triangular Positioning Plate 100-60-20°	01-1200-0071

Guides

2.5/3.5 Double Drill Guide	01-1050-0009
3.5 Chisel Guide	01-1200-0002
4.5 Chisel Guide	01-1200-0003
3.2mm Threaded Drill Guide	01-1200-0042
2.5mm Neutral & Load Drill Guide	01-1200-0054
3.2mm Neutral & Load Drill Guide	01-1200-0055
3.2/4.5 Double Drill Guide	01-1200-0056
2.5mm Threaded Drill Guide	01-1200-0067

Drills/Wires/Taps

2.0mm X 150mm Guide Wire	01-0907-0022
2.5mm Drill Bit	01-1050-0002
3.5mm Cortical Tap	01-1050-0006
2.5mm Calibrated Drill Bit	01-1050-0032
3.2mm Calibrated Drill Bit	01-1200-0041
2.4mm Guide Wire	01-1200-0050
3.2mm Drill Bit	01-1200-0051
4.5mm Cortical Tap	01-1200-0052

Handles / Inserters

Mini T-Handle, AO QC	01-1010-001
Mini Inline Ratchet	01-1030-001
Threaded Inserter, Infant/Child	01-1200-0009
Threaded Inserter, Adolescent	01-1200-0011

Clamps

Extractor Clamp	01-1200-0028
Small Bone Clamp	01-1200-0057
Large Bone Clamp	01-1200-0058
Infant Bone Clamp	01-1200-0074

Impact Devices

Solid Hammer	01-1000-016
Slap Hammer, Large	01-1200-0025
Tuning Fork Extractor	01-1200-0026
Slap Hammer, Small	01-1200-0076
1/2lb Mallet.....	01-1200-0077

Direct Measuring Devices

Chisel, Infant	01-1200-0006
Chisel, Child.....	01-1200-0007
Chisel, Adolescent	01-1200-0008
Osteotomy Gauge, Adolescent	01-1200-0060
3.5mm Depth Gauge.....	01-1200-0072
4.5mm Depth Gauge.....	01-1200-0073
Osteotomy Gauge, Infant/Child.....	01-1200-0075

Drivers

T20 Hexalobe Driver	01-1200-0065
T15 Hexalobe Driver	01-1200-0068

Miscellaneous

1.75 mm Cleaning Brush	01-1010-003
1.6 mm Cleaning Stylet.....	01-1010-004
Extractor Clamp Wrench	01-1200-0047
Bending Iron-Right	01-1200-0062
Bending Iron-Left	01-1200-0064

CAUTION: Federal law restricts this device to sale by or on the order of a Physician.

CAUTION: Devices are supplied Non-Sterile. Clean and sterilize before use according to instructions.

CAUTION: Implant components are single-use. Do not reuse.

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

NOTE: *This technique has been provided by one of our medical advisors only as guidance and it is not intended to limit the methods used by trained and experienced surgeons.*

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