

# 3.5 MM INTRAPELVIC ACETABULAR PLATE

INTRAPELVIC ACETABULAR SYSTEM

## Surgical Technique



This description alone does not provide sufficient background for direct use of DePuy Synthes products. Instruction by an experienced surgeon is highly recommended.

Please refer to the IFU for product information including but not limited to indications, contraindications, warnings, precautions and adverse effects.

For detailed cleaning and sterilization instructions, please refer to <http://www.jnjmedtech.com/en-US/service-details/cleaning-sterilization-guidelines/depu-synthes> or the product specific sterilization instructions, if provided in the instruction for use.

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 Image Intensifier Control

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# The AO Principles of Fracture Management

## Mission

The AO's mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

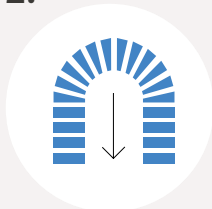
### AO Principles<sup>1,2</sup>

1.



Fracture reduction and fixation to restore anatomical relationships.

2.



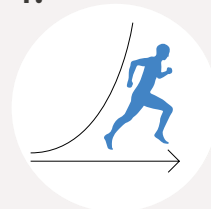
Fracture fixation providing absolute or relative stability, as required by the “personality” of the fracture, the patient, and the injury.

3.



Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling.

4.



Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.

1. Müller ME, Allgöwer M, Schneider R, Willenegger H. Manual of Internal Fixation. 3rd ed. Berlin, Heidelberg New York: Springer 1991.

2. Buckley RE, Maran CG, Apivatthakakul T. Principles of Fracture management 3rd ed. Vol 1<sup>st</sup> Principles, Vol. 2: Specific fractures. Thieme; 2017.



# Indications and Contraindications

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## Indications and Contraindications

### Indications

The DePuy Synthes 3.5 mm Intrapelvic Acetabular Plates are indicated for fractures of the acetabulum in adults and adolescents (greater than 12 through 21 years of age) where all growth plates within the acetabulum are fused.

### Contraindications

Not intended for patients with active growth plates.

# Planning and Preparation

## Approach

The system has been developed with a focus on the anterior intrapelvic approach (AIP). In some cases, the addition of the lateral window of the ilioinguinal approach will be required to facilitate reduction and fixation of the fracture.

### Required Instrument Sets

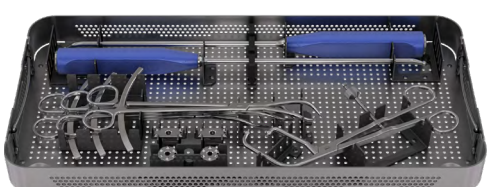
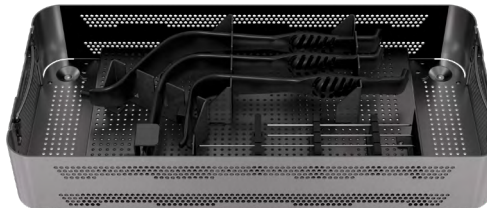
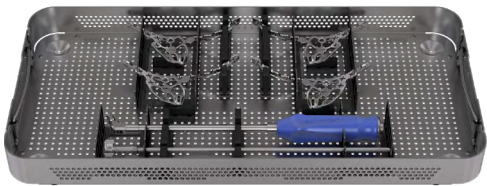
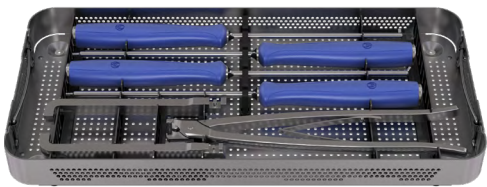
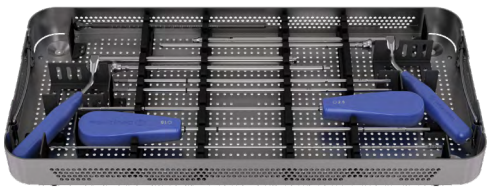
01.164.000	Acetabulum Set for 3.5 mm Cortex Screw Insertion Instruments
01.164.001	Acetabulum Set for Bending Instruments
01.164.002	Acetabulum Set for Plate Insertion and Plate Sizing
01.164.003	Acetabulum Set for Retractor Instruments
01.164.004	Acetabulum Set for Reduction Instruments

### ▲ WARNING

Patients with known hypersensitivities or allergies to implant materials may lead to adverse tissue reaction and compromise tissue healing. It is at the physician’s discretion to evaluate the patient’s overall clinical condition and select the appropriate implant for the individual patient.

### ▲ WARNING

Instruments and screws may have sharp edges or moving joints that may pinch or tear user’s glove or skin.



# Surgical Technique

## 1. Retractor Positioning

Retract soft tissue using appropriate retractors. The naming of the retractor indicates the bony structure each retractor is intended to expose. Take care to avoid excessive or prolonged tension and pressure on nearby soft tissue and neurovascular structures during retraction.

### ■ Note

Do not strike retractors.

### Instruments

03.164.008	Radiolucent Pelvic Retractor, for superior pubic ramus
03.164.029	Ø 2.5 mm Temporary Fixation Wire, length 220 mm
03.164.030	Ø 2.5 mm Temporary Fixation Wire, length 150 mm

### Instruments

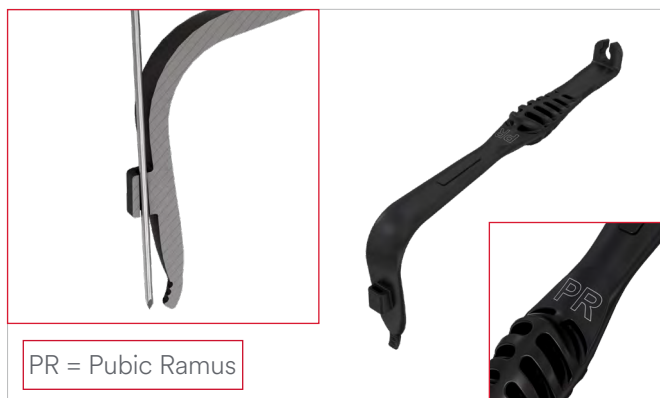
03.164.009	Radiolucent Pelvic Retractor, for iliac fossa
03.164.029	Ø 2.5 mm Temporary Fixation Wire, length 220 mm

Once the position of the retractor is established it may be fixed with a 2.5 mm temporary fixation wire provided in the retractor tray.

### ■ Note

Use of wires other than those provided in the retractor tray may result in damage to the wires or the retractors.

The first etched band on the 2.5 mm temporary fixation wire (03.164.029) represents the approximate point at which the trocar tip is entering bone. Each band after the first represents 10 mm of bone penetration depth.



To prevent damaging the carbon fiber reinforced plastic retractors, do not start to drive the temporary fixation wire until it is advanced through the retractor and close to bone.

### ■ Note

Place the retractor and temporary fixation wire in a manner that will not interfere with trial/plate placement.

Avoid placement of the retractors in locations that will put important neurovascular structures and bladder at risk with prolonged retraction.

The Radiolucent Pelvic Retractor for iliac fossa can optionally be equipped with a light strip.

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**Instruments**

03.164.010	Radiolucent Pelvic Retractor, for quadrilateral surface
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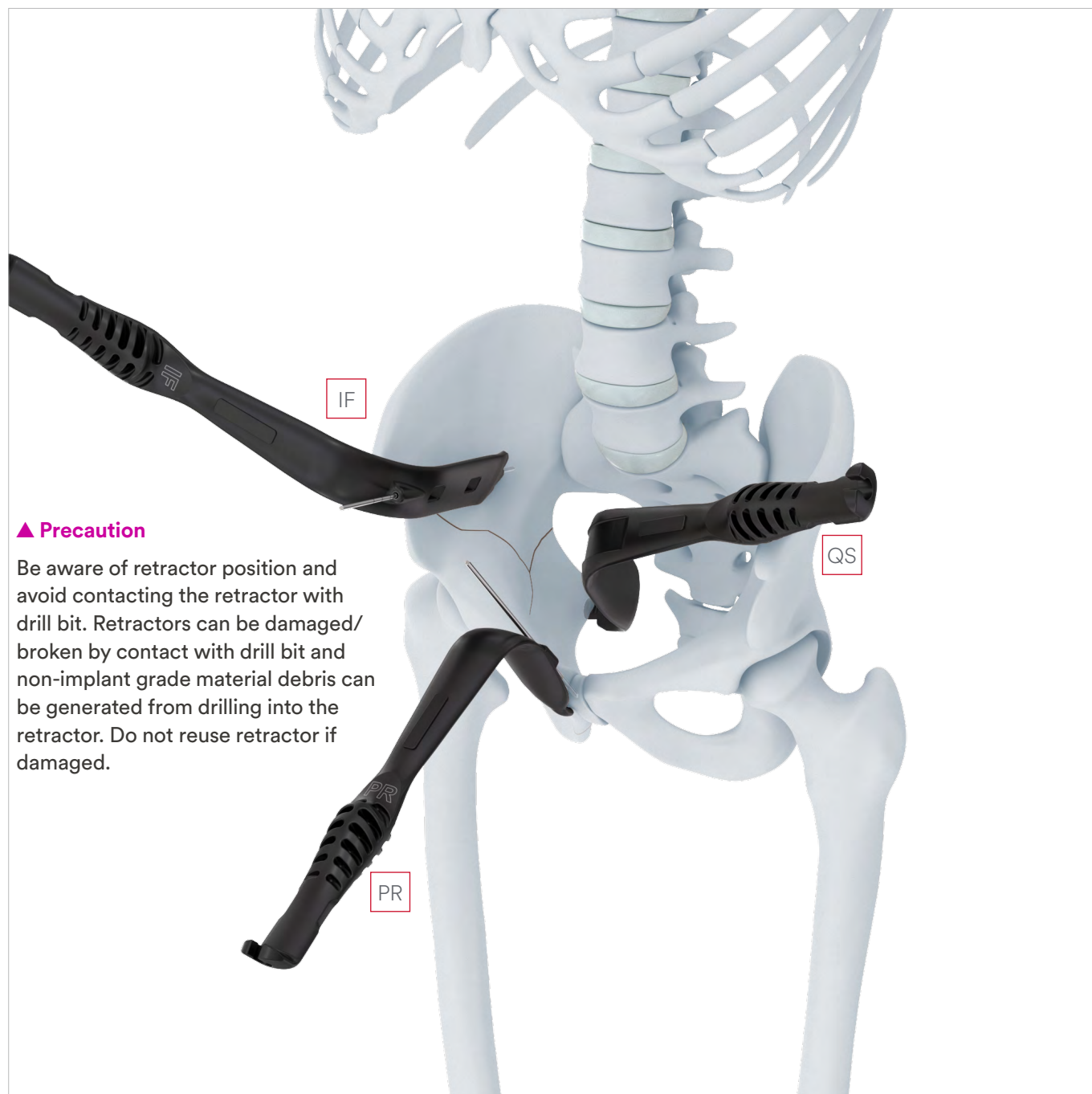
Can optionally be equipped with a light strip.

QS = Quadrilateral Surface

Channel for light strip



The retractors may be used in additional anatomic areas as the surgeon sees fit.



## Optional Light Strip attachment

### Instruments

2598-07-900	TSS Retractor Light Strip
2598-07-910	TSS ACMI Light Cable
2598-07-920	TSS Wolf Light Cable
2598-07-930	TSS Storz Light Cable
2598-07-940	TSS Olympus Light Cable

The retractors and TSS Retractor Light Strip should be clean and dry before adhering to each other.

Additional adhesive strips should be applied by wrapping them around the retractor to provide additional fixation. Two adhesive strips are recommended, with one positioned distally and one proximally as shown.



The TSS Retractor Light Strip may be used in different positions than shown in the picture as the surgeon sees fit.

For detailed information about the light strip attachment and connection to a light source please consult the application technique brochure and/or the IFU.



## 2. Fracture reduction

- 1 Achieve reduction of the respective fracture with appropriate reduction instruments. Use image intensification control and direct visualization to verify reduction.

### Note

Take care during fracture reduction to avoid over-compression of the reduction forceps to avoid iatrogenic injury to the bone or soft tissue.

### Note

Place the reduction forceps and K-wires in a manner that will not interfere with the trial/plate placement.

### Note

For reduction using screws, see "Independent Screw Placement" section within step 7.

### Instruments

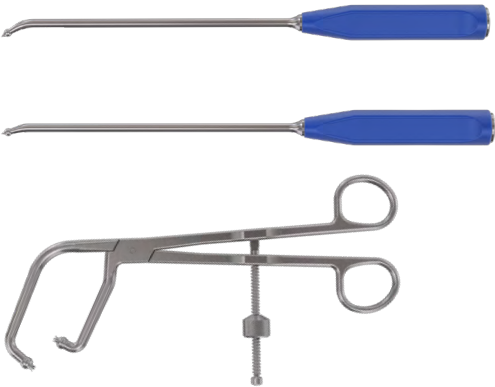
03.164.014	Reduction Forceps, large, with Points, ratchet lock, asymmetric, left
03.164.015	Reduction Forceps, large, with Points, ratchet lock, asymmetric, right
03.164.016	Reduction Forceps, large, with Points, ratchet lock, straight tines

The pointed reduction forceps tips fit into a 2.5 mm drilled hole for additional purchase (if needed).



**Instruments**

03.164.011	Ball Spike, angled, 30°, with pointed ball tips Ø 6.5 mm
03.164.012	Ball Spike, angled, 15°, with pointed ball tips Ø 6.5 mm
03.164.013	Pelvic Reduction Forceps, angled, with multi-spiked ball tips Ø 6.5 mm



If necessary, spiked disks can be used with 03.164.011, 03.164.012, 03.164.013. In poor quality bone, they can aid in distributing the applied forces over a larger surface area. Be aware that tips of ball spiked instruments protrude past surface of disks and are sharp.

**Optional Instruments**

03.100.120	Spiked Round Disk
03.100.121	Spiked Rectangular Disk



**Note**

Disks feature holes for suture attachment to ease retrieval if disengaged from ball spiked instruments.

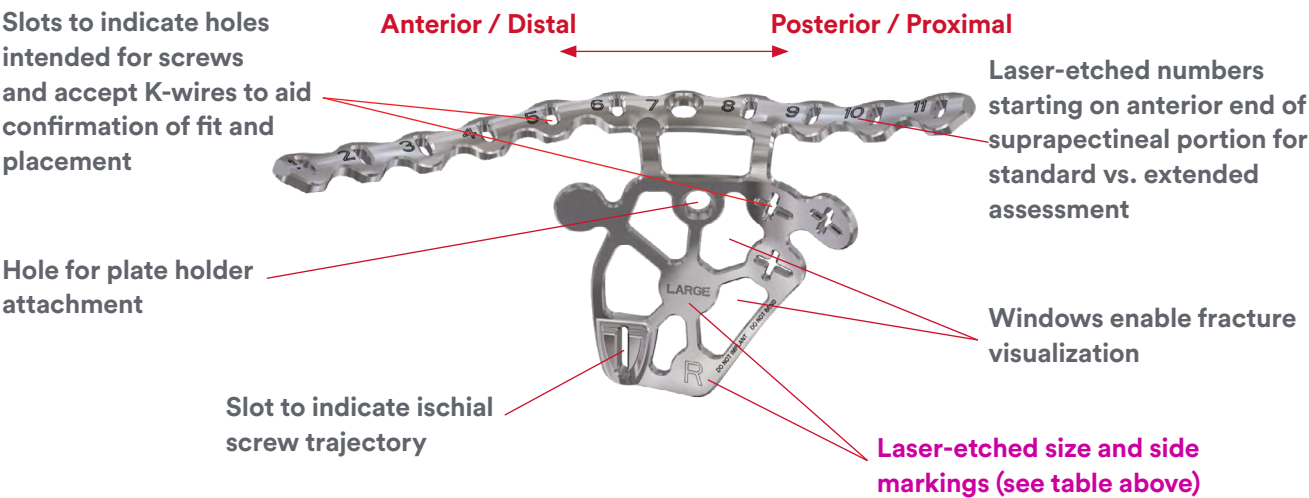


### 3. Implant Trialing

Instruments		Length	Size Marking	Side Marking
03.164.000	Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, large, right, standard	Standard	LARGE	R
03.164.002	Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, large, left, standard	Standard	LARGE	L
03.164.004	Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, small, right, standard	Standard	SMALL	R
03.164.006	Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, small, left, standard	Standard	SMALL	L

Sizing Trials come in the same anatomic shape and footprint as the implants.

**All Sizing Trials are standard length** and can be used to assess the extended length plate as well. The extended length plates offer an additional screw hole option proximal to position 11 on the suprapectineal portion.



#### ■ Notes

Sizing Trials are not intended to be bent or implanted.

Slots accept K-wires up to 2.0 mm with perpendicular insertion. Smaller diameter wires may be required for oblique insertion angles.

## Sizing Trial/Plate insertion with Plate holder

### Instruments

03.164.017 Plate Holder, angled

Insert plate holder shaft screw into plate holder body. Turn knob clockwise to retain plate holder shaft screw inside the plate holder body. Snap plate holder into trial/plate attachment hole and turn knob clockwise to tighten plate holder onto trial/plate. Provisional tightening of the knob permits rotational freedom about the connection point.

### ▲ Precautions

Take care to avoid nearby neurovascular structures during Sizing Trial/Plate insertion and removal, especially the external iliac artery and vein, the neurovascular obturator bundle and bladder.

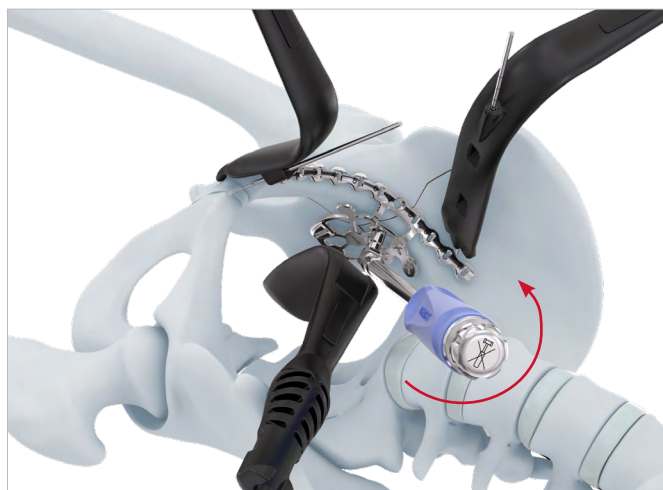
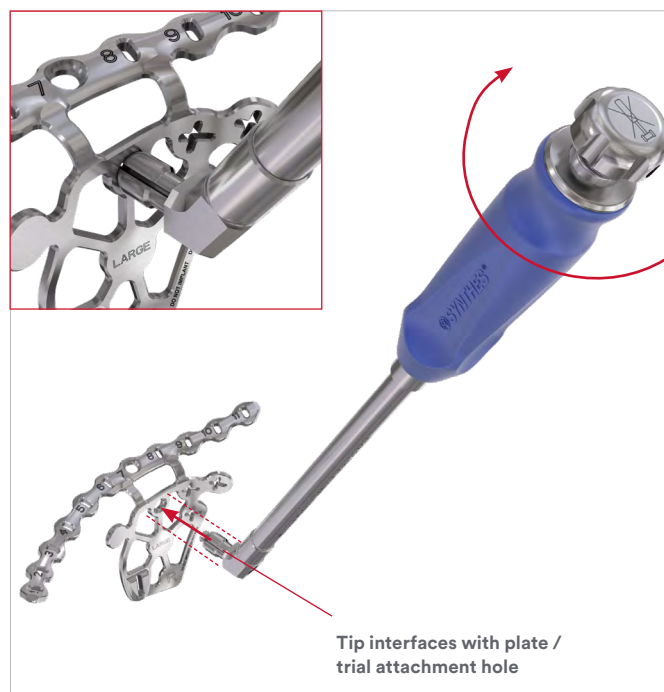
Take care to avoid catching a glove between the plate holder tip and trial/plate attachment hole when snapping the plate holder into the hole.

Take care to avoid excessive force during trial insertion and removal to avoid premature trial/plate detachment, displacement of the reduced fracture, or damage to trial or plate holder.

Turn knob counterclockwise to release plate holder from trial/plate.

To remove the plate holder shaft screw from the plate holder body (e.g. for cleaning) pull back on the knob and turn counterclockwise until it is disengaged.

Confirm intended trial placement considering fracture pattern and intended screw locations using intraoperative imaging before finalizing plate selection. Considering these factors, placing the sizing trial/plate as posterior as possible may aid screw anchorage in targeting high density bone stock.



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Sizing Trials closely mimic the as-manufactured shape of the corresponding plates to facilitate correct plate selection and to indicate portions of the plate that may require ex- or in-situ contouring; full fracture reduction is recommended prior to use of trial.

■ **Note**

Take care to assess contact between the lower quadrilateral surface portion of the trial and bone to determine whether plate contouring will be required to achieve adequate plate-bone contact in this location to avoid deflection of the ischial screw and missing the bone in the ischium (see “Ischial Screw insertion (Optional)” section).

Once the desired position of the trial is established it may be temporarily secured with a K-wire for plate selection evaluation.

- Use image intensification control and direct visualization to verify fracture coverage, potential screw anchorage locations, and predict potential plate contouring needs.

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## 4. Implant Selection

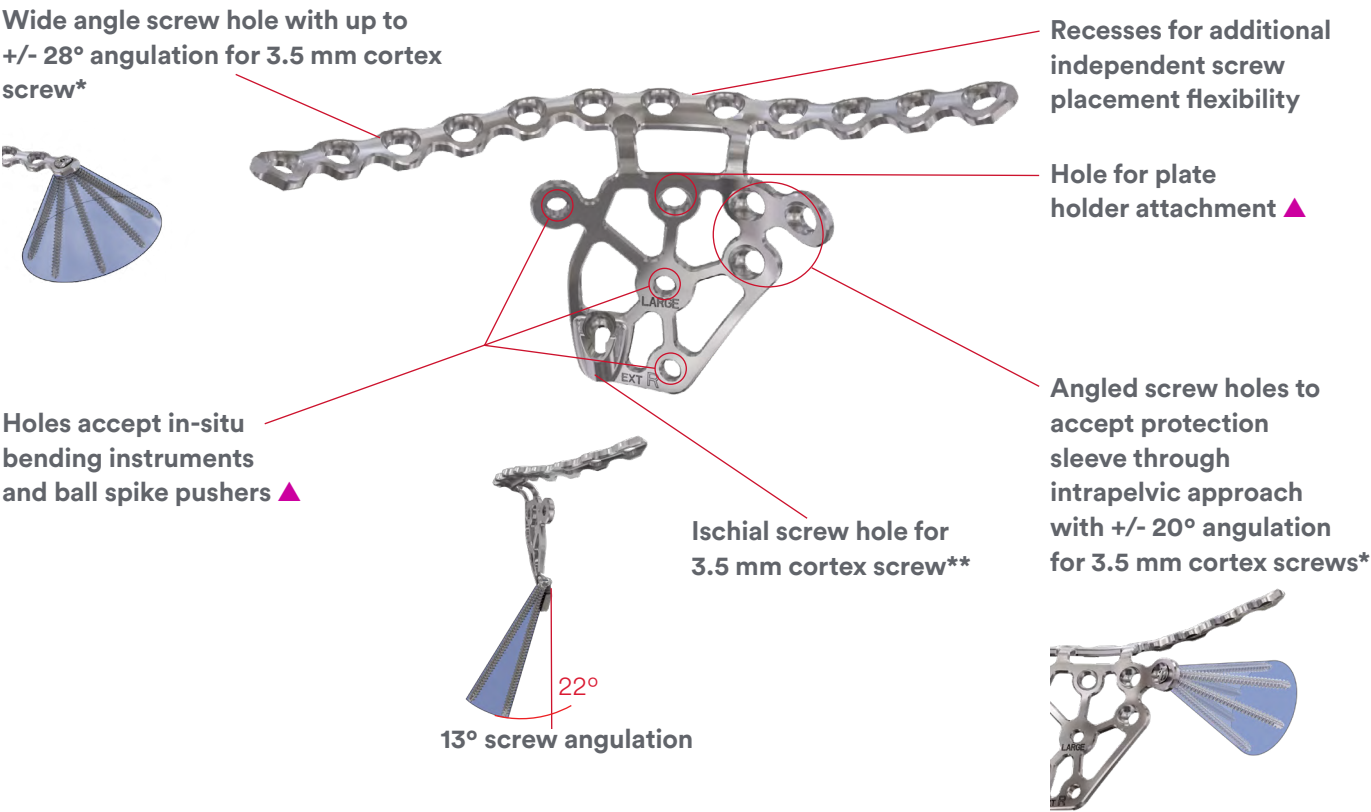
Select a Stainless Steel implant of the desired side and size:

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### Implants

02.164.000S	3.5 mm Intrapelvic Acetabular Plate, large, right, standard, sterile
02.164.001S	3.5 mm Intrapelvic Acetabular Plate, large, right, extended, sterile
02.164.002S	3.5 mm Intrapelvic Acetabular Plate, large, left, standard, sterile
02.164.003S	3.5 mm Intrapelvic Acetabular Plate, large, left, extended, sterile
02.164.004S	3.5 mm Intrapelvic Acetabular Plate, small, right, standard, sterile
02.164.005S	3.5 mm Intrapelvic Acetabular Plate, small, right, extended, sterile
02.164.006S	3.5 mm Intrapelvic Acetabular Plate, small, left, standard, sterile
02.164.007S	3.5 mm Intrapelvic Acetabular Plate, small, left, extended, sterile

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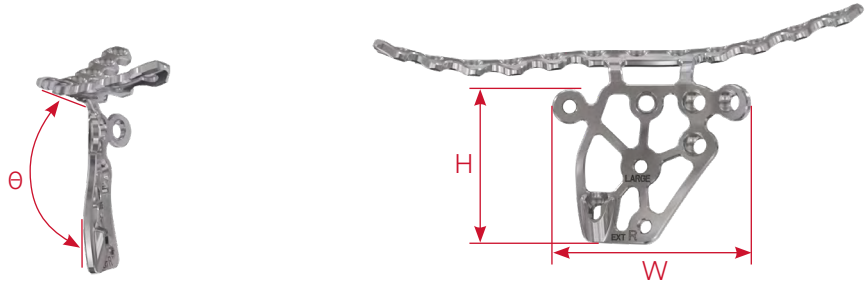
\*The system is optimized for usage in combination with 3.5 mm cortex screws. However, 4.5 mm cortical screws may also be used (except ischial screw hole) with limited angulations.

\*\* Does not accept 4.5 mm cortical screws.

▲ Precaution

Holes designed specifically for in-situ bending and plate holder attachment are not intended for screw placement.

				# Brim Holes	
QS Size	W [mm]	H [mm]	θ [°]	STD	EXT
Large	58.2	47.3	110	11	12
Small	59.2	44.2	104	11	12



## 5. Plate contouring

### Instruments

329.08	Bending Iron for Reconstruction Plates 3.5 mm and 4.5 mm
03.100.090	In-situ Bending Pliers

In order to achieve accurate fixation, the plates should be contoured to the bone surface. Poorly contoured plates can lead to fracture displacement when the screws are fully tightened through the plate.

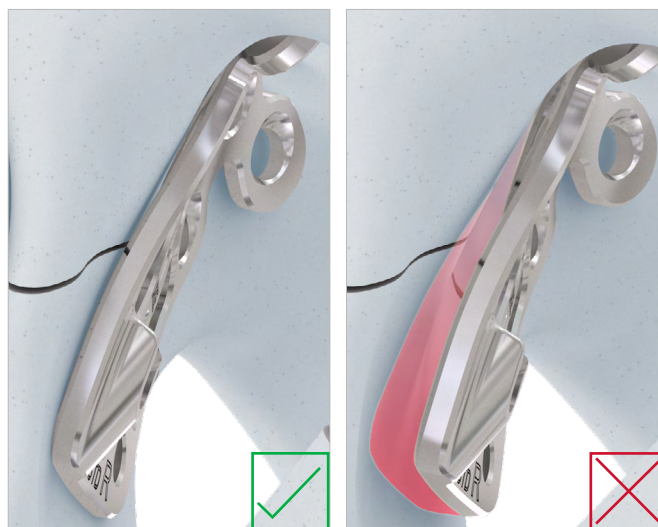
Plates are pre-contoured to minimize the amount of contouring required intraoperatively. Ex-situ and in-situ bending can be performed to ensure the plate fits the specific anatomy. Only use designated bending instruments for plate contouring.

Ensure that the lower quadrilateral surface (QS) portion of the plate contacts bone to avoid deflection of the ischial screw and missing the bone in the ischium (see "Ischial Screw Insertion (Optional)" section).

Do not apply excessive force to bending instruments.

### ▲ Precautions

- Reverse bending, or use of the incorrect instrumentation for bending, may weaken the plate and lead to premature plate failure (e.g. breakage). Do not bend the plate beyond what is required to match the anatomy.
- Excessive bending at the level of the screw holes may prevent proper engagement of the slotted protection sleeve and seating of screw heads.
- Bending at the hole for plate holder attachment may prevent proper engagement of the plate holder.
- Plates are not intended to be cut. Doing so could compromise the strength of the plate and screw construct.
- Take care to avoid nearby neurovascular structures during sizing trial/plate insertion and removal, especially the external iliac artery and vein, the obturator neurovascular bundle and bladder.



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**Ex-situ bending or twisting the plate**

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**Instruments**

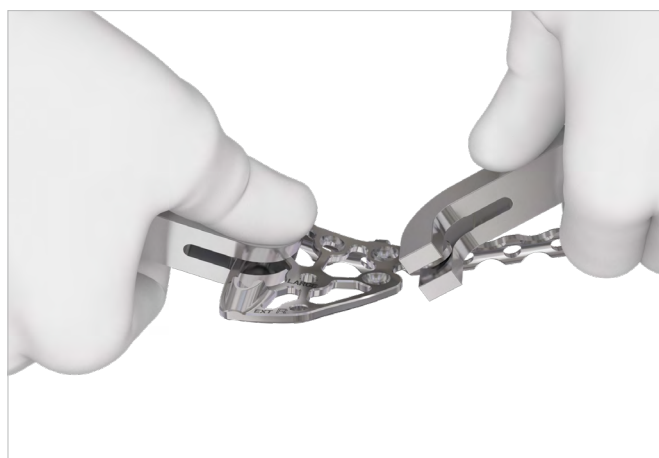
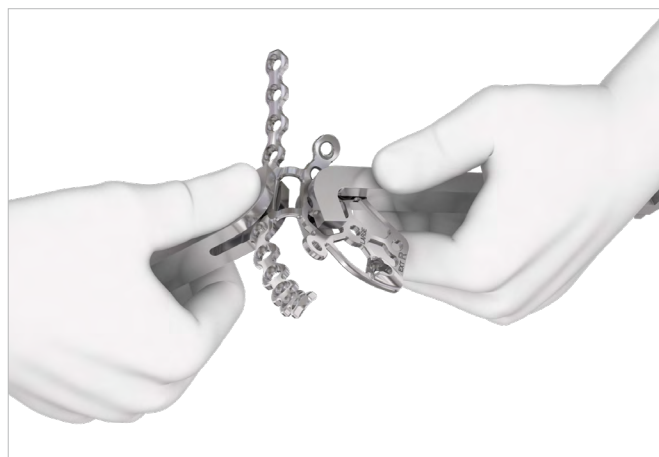
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329.08	Bending Iron for Reconstruction Plates 3.5 and 4.5
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To ex-situ bend or twist the plate, use two bending irons and place the slotted tip of each iron at the desired plate location and use the handles to contour the plate.

To increase or decrease the suprapectineal (SP) to QS plate angle ( $\theta$ , see page 15), use two bending irons, and place them as close as possible to the connecting arms. Place the slotted tip of one iron along the SP portion of the plate and the other bending iron on the QS portion of the plate.



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### Ex-situ and in-situ bending or correction of the bending radius

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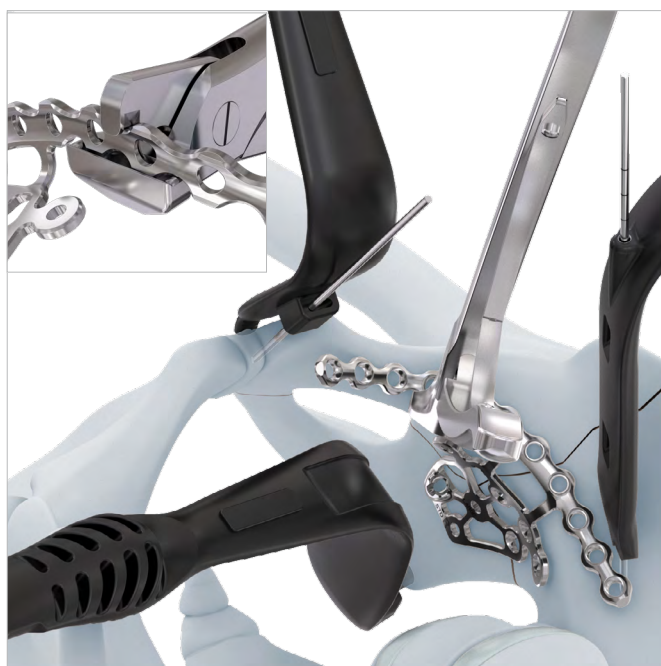
#### Instruments

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03.100.090	In-situ Bending Pliers
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Grasp the stabilized plate with the in-situ bending pliers. The nose and counter-bearing mouth of the pliers must sit in the notches of the plate. Squeeze the handles to bend the plates as required.





## Bend or twist plate

### Instruments

03.100.091	In-situ Bending and Twisting Handle, straight
03.100.092	In-situ Bending and Twisting Handle, 90°
03.100.093	In-situ Bending and Twisting Handle, 120°

Using two straight in-situ bending and twisting handles, place the tip of each handle in the desired plate hole and use the handles to contour the plate. One handle is used for holding the plate in place while the second handle is used to bend or twist the plate to the appropriate contour.

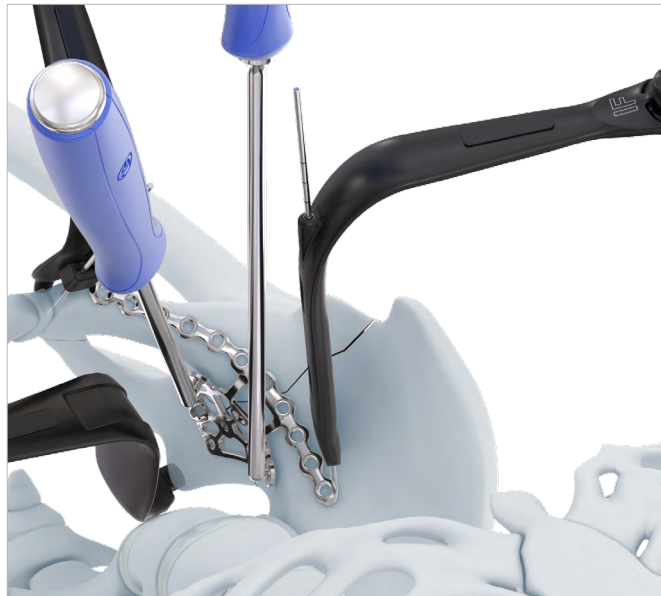
### Note

For a detailed handling description of the in-situ bending instruments, refer to the corresponding surgical technique.

### Alternative Instruments

03.164.011	Ball Spike, angled, 30°, with pointed ball tips Ø 6.5 mm
03.164.012	Ball Spike, angled, 15°, with pointed ball tips Ø 6.5 mm

Alternatively, or in addition to the in-situ bending instruments, the ball spike pushers can be used for in-situ contouring.



## 6. Provisional Plate Fixation

Maintain fracture reduction using K-wires, interfragmentary screw fixation or reduction forceps. Position the plate ensuring appropriate placement according to the fracture pattern and patient anatomy. The plate holder may be used to facilitate plate insertion.

The plate holder is not intended to be used for plate contouring.

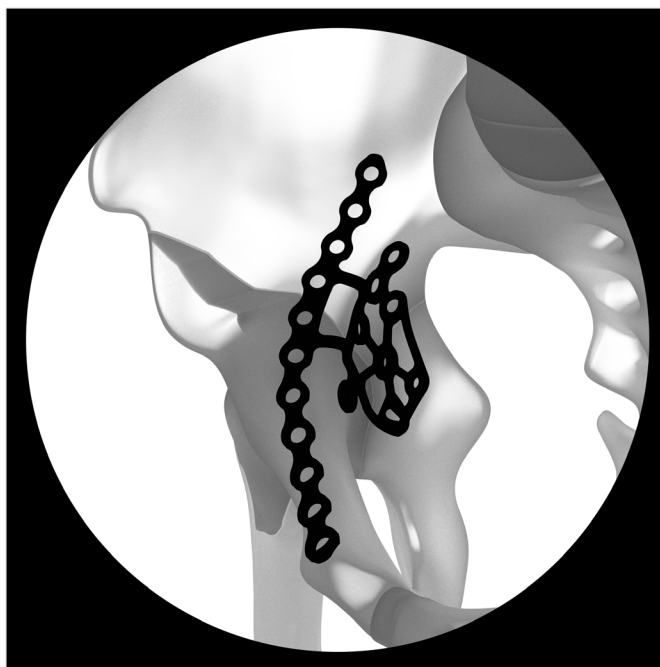
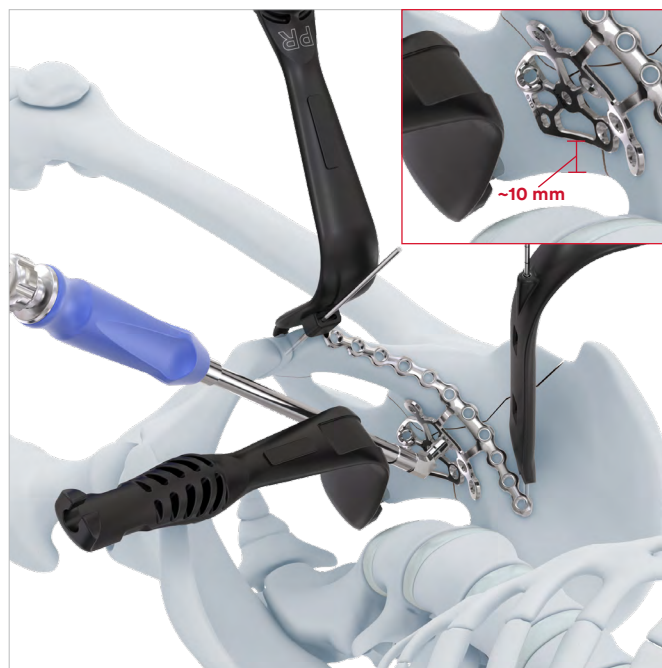
Provisionally stabilize the plate with a wire up to 2.5 mm if necessary or hold the plate with the plate holder in place.

As a reference for proper plate placement, the anterior border of the greater sciatic notch can be used. An approximate distance of 10 mm between the anterior border of the greater sciatic notch and the plate can be used as a guidance.

Verify proper reduction after achieving provisional fixation.

### Instruments

03.164.017 Plate Holder, angled



- It is recommended to confirm plate placement considering fracture pattern and intended screw locations using intraoperative imaging before applying provisional fixation. Considering these factors, placing the plate as posterior as possible may aid screw anchorage in targeting high density bone stock.

### ▲ Precautions

Take care to avoid nearby neurovascular structures during plate insertion and removal, especially the external iliac artery and vein, the neurovascular obturator bundle and bladder.

## 7. Screw insertion

### Instruments

03.164.018 Protection Sleeve for Screws 3.5 mm, with spherical head, slotted



03.164.022 2.5 mm Drill Sleeve, for Protection Sleeves 03.164.018 & 03.164.019



03.164.020 2.5 mm Drill Bit, Quick Coupling, length 400 mm, Calibration up to 120 mm



03.164.028 Depth Gauge for Protection Sleeve, measuring range up to 120 mm



03.164.024 Screwdriver Shaft, hexagonal 2.5 mm, self-holding, length 300 mm, for Quick Coupling



03.164.026 Screwdriver, hexagonal 2.5 mm, self-holding, length 365 mm



### Alternative Instruments

03.164.025 Screwdriver Shaft Stardrive 3.5, T15 length 300 mm, for Quick Coupling



03.164.027 Screwdriver Stardrive 3.5, T15, length 365 mm



### ■ Notes

Choice of instruments depends on selection of 3.5 mm cortex screws (Hex or StarDrive™ Recess).

For screws longer than 120 mm use the 3.5 mm Low Profile Pelvic System Instrument Set (01.100.013).

The 3.5 mm Low Profile Cortex Screws (Hex and Star Drive) are not designed for self-retention, but can be driven with their respective screwdrivers.

Ensure sufficient tissue retraction to avoid excessive bending forces, which could cause damage to insertion instruments.

Depending on fracture pattern, different screw insertion sequences may be used. One possible way is to insert a screw into the sciatic buttress first (any screw hole from I to K). This screw secures the plate to the bone, maintaining plate position. Not fully tightening the first screw can help with final adjustments of the plate position before fully securing the plate to the bone.

Next, a screw is placed through the plate into the superior pubic ramus (D-F) followed by the pubic body (A-C) to secure the anterior column.

Finally the infrapectineal portion of the plate (L-O) is fixed to the posterior column.

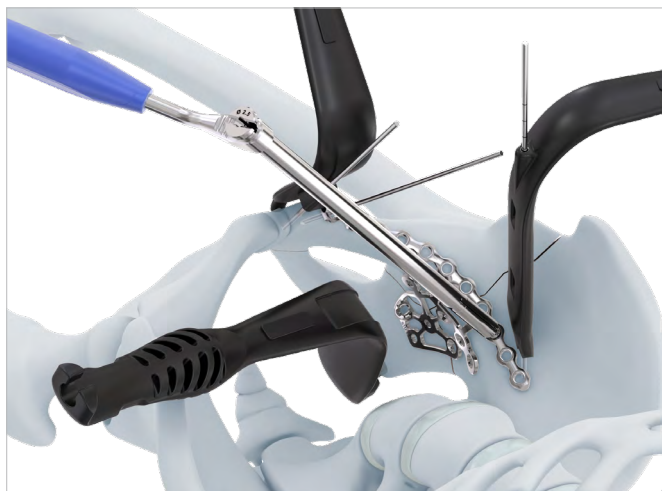
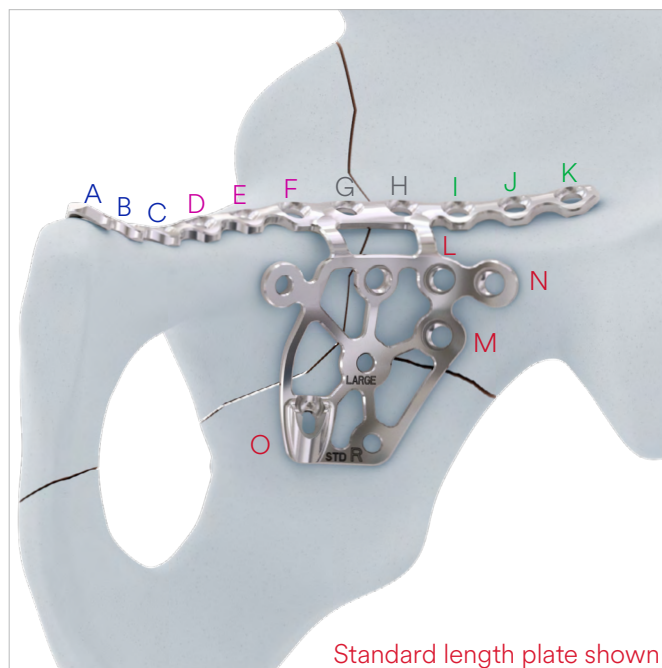
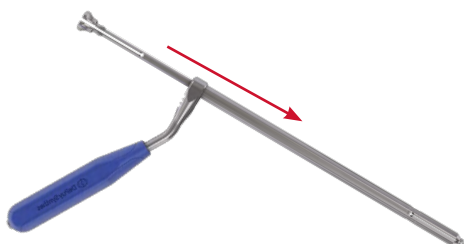
#### ■ Notes

Always carefully apply the plate in such a way that when the first screw is placed into a hole on one of the surfaces, the plate does not come away from the other surface.

Screw hole preparation and insertion for quadrilateral surface screws (L, M, N and O) are facilitated from the side contralateral to the fracture.

At least two screws should be inserted through the plate into each major fragment of the fracture.

a)  
Insert the 2.5 mm drill sleeve into the slotted protection sleeve with spherical head and place it into the desired hole of the plate.



b)  
Predrill with the calibrated 2.5 mm drill bit.

▲ **Precaution**

Do not drill without the drill sleeve to prevent damage to drill bit.

▲ **Precaution**

Be aware of retractor position and avoid contacting the retractor with drill bit. If necessary, reposition the retractor to avoid contact with the drill bit. The radiolucent retractor material is less dense than a metallic retractor, and therefore may feel similar to bone if inadvertently drilled into. Retractors can be damaged/broken by contact with drill bit and non-implant grade material debris can be generated from drilling into the retractor. Do not reuse retractor if damaged.

■ **Note**

Be sure to consider screw trajectory to avoid collision with other screws, K-wires, retractors or other hardware.

c)  
Read screw length from the calibration mark on the drill bit closest to the end of the drill sleeve or remove drill bit and drill sleeve and use depth gauge through the protection sleeve to read screw length from the calibration mark on the depth gauge closest to the protection sleeve, while maintaining drilled hole trajectory.

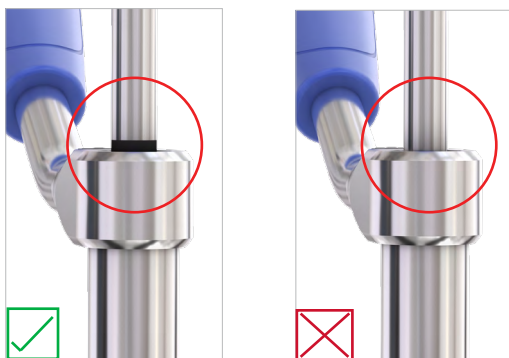
d)  
Firmly attach the self-tapping 3.5 mm screw to the screwdriver and insert it into the protection sleeve.





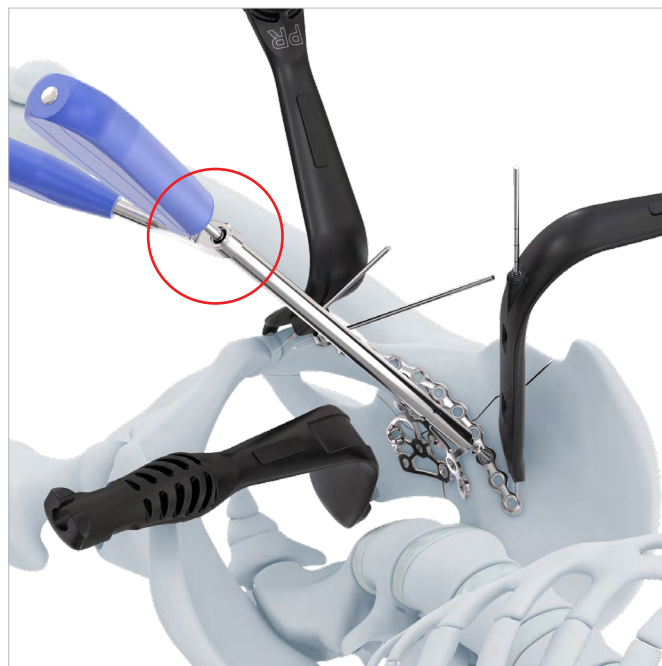
e)

Use the screwdriver to insert the screw into the bone. Insert the screw until the black band on the screwdriver reaches the top of the protection sleeve. The black band should remain visible.



#### Note

Do not fully insert the screw. Otherwise, the tip of the protection sleeve can become trapped in the plate hole by the head of the screw.



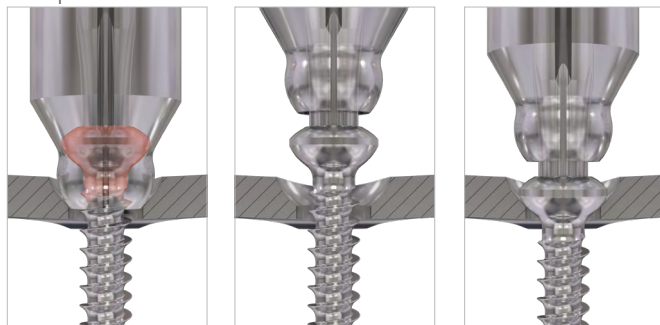
f)

Using the screwdriver as counterpressure, pull back the protection sleeve until the head of the screw is visible.

Black band on  
screwdriver hits  
top of sleeve

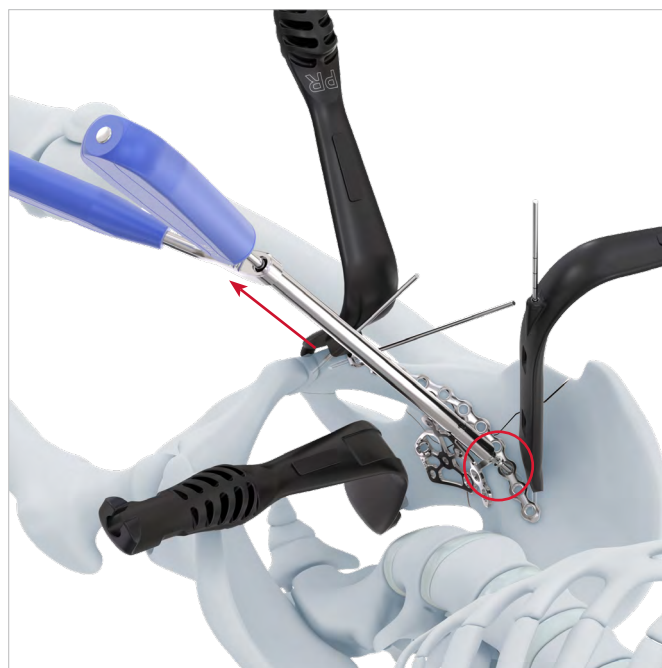
Retract sleeve

Seat screw  
in plate



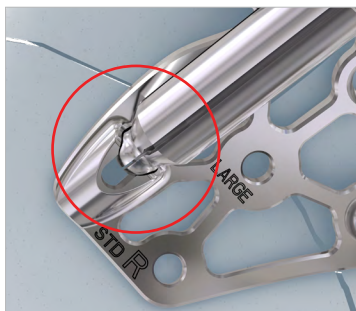
g)

Complete screw insertion.



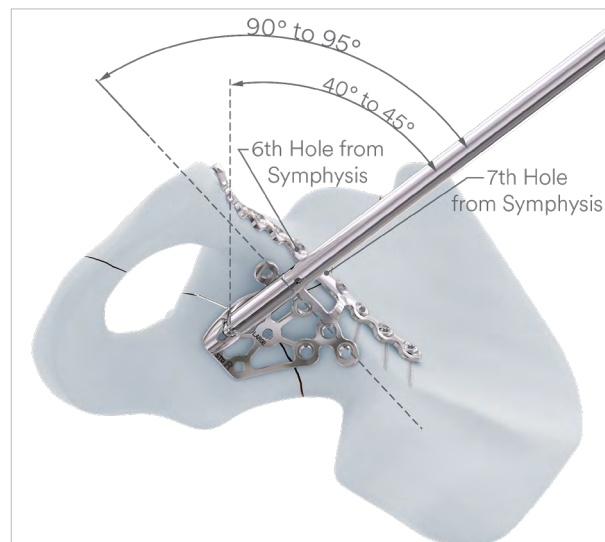
### Ischial Screw insertion (Optional)

Make sure the protection sleeve sits firmly in the socket. Follow steps as described under a – g.



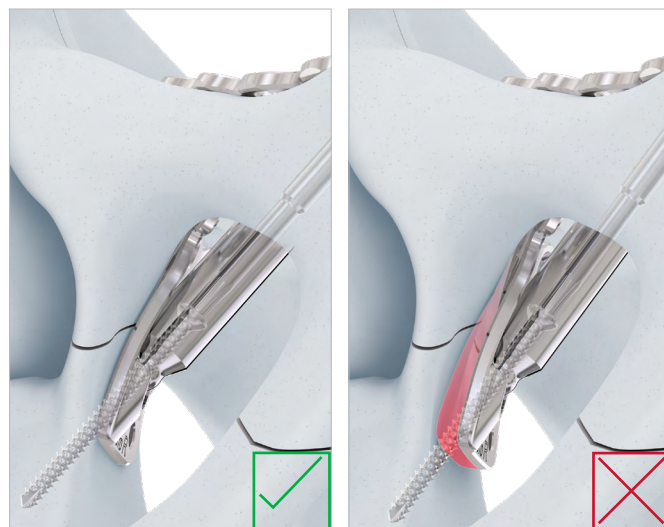
#### ■ Note

When inserting the ischial screw, it is recommended to confirm engagement of the drill tip/screw tip in bone and the insertion trajectory using intraoperative imaging.



#### ▲ Precaution

- Use intraoperative imaging to confirm that drill bits and screws do not violate the hip joint.



#### ■ Note

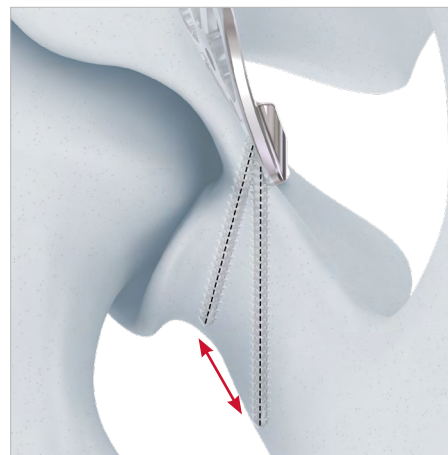
If the ischial screw strips in bone, the tip of a Hohmann retractor (399.27) may be inserted in the slot to engage the bone threads to facilitate removal (see page 28).

#### ■ Note

The ischial screw hole only accepts 3.5 mm cortex screws.

#### ▲ Precaution

Inspect retractors for damage following drilling. Damage may include holes from inadvertently drilling through the tip area of the retractor. Irrigate and apply suction for removal of debris generated. Do not reuse retractor if damaged.



## Independent Screw placement

### Instruments

03.164.019 Protection sleeve for Screws 3.5 mm, with teeth



03.164.022 2.5 mm Drill Sleeve, for Protection Sleeves 03.164.018 & 03.164.019



03.164.023 3.5 mm Drill Sleeve, for Protection Sleeves 03.164.018 & 03.164.019



03.164.020 2.5 mm Drill Bit, Quick Coupling, length 400 mm, Calibration up to 120 mm



03.164.021 3.5 mm Drill Bit, Quick Coupling, length 380 mm



03.164.028 Depth Gauge for Protection Sleeve, measuring range up to 120 mm



03.164.024 Screwdriver Shaft, hexagonal 2.5 mm, self-holding, length 300 mm, for Quick Coupling



03.164.026 Screwdriver, hexagonal 2.5 mm, self-holding, length 365 mm



### Alternative Instruments

03.164.025 Screwdriver Shaft Stardrive 3.5, T15 length 300 mm, for Quick Coupling



03.164.027 Screwdriver Stardrive 3.5, T15, length 365 mm



### Note

For screws longer than 120 mm use the 3.5 mm Low Profile Pelvic System Instrument Set (01.100.013).



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### Independent Screw Insertion

If an independent screw is required, follow chapter 7 “screw insertion” steps a – d, but use the Protection Sleeve for Screws 3.5 mm, with teeth instead.

If a gliding hole is required, use 3.5 mm Drill Sleeve and drill the required hole with the 3.5 mm drill bit before inserting the screw. Attach the self-tapping 3.5 mm screw to the screwdriver and insert it into the protection sleeve. Complete screw insertion by tightening the screw to the bone.



# Implant Removal

## Implant Removal

Loosen all screws and remove them from the bone. When all screws have been removed, the plate can be removed. For details regarding implant removal refer to the surgical technique “Screw Removal Set”.

### ■ Note

If the ischial screw strips in bone, the tip of a Hohmann retractor (399.27) may be inserted in the slot to engage the bone threads to facilitate removal.

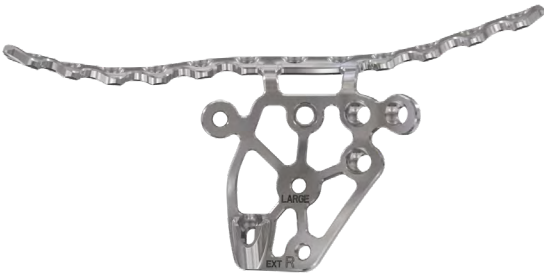


# Implants

## Plates

### Implants (Stainless Steel)

02.164.000S	3.5 mm Intrapelvic Acetabular Plate, large, right, standard, sterile
02.164.001S	3.5 mm Intrapelvic Acetabular Plate, large, right, extended, sterile
02.164.002S	3.5 mm Intrapelvic Acetabular Plate, large, left, standard, sterile
02.164.003S	3.5 mm Intrapelvic Acetabular Plate, large, left, extended, sterile
02.164.004S	3.5 mm Intrapelvic Acetabular Plate, small, right, standard, sterile
02.164.005S	3.5 mm Intrapelvic Acetabular Plate, small, right, extended, sterile
02.164.006S	3.5 mm Intrapelvic Acetabular Plate, small, left, standard, sterile
02.164.007S	3.5 mm Intrapelvic Acetabular Plate, small, left, extended, sterile



## Stainless Steel Screws

204.640 – 204.750	3.5 mm Pelvic Cortex Screw Self-Tapping, length 40 – 150 mm
204.810 – 204.910	3.5 mm Cortex Screw Self-Tapping, length 10 – 110 mm
02.200.010 – 02.200.150	3.5 mm Stardrive Cortex Screw Self-Tapping, length 10 – 150 mm



### ■ Note

For screws longer than 120 mm use the 3.5 mm Low Profile Pelvic System Instrument Set (01.100.013).

## Additionally Available Screws (optional)

02.206.010 – 02.206.110*	3.5 mm Cortex Screw, Low Profile Head Self-Tapping, Hex Drive, length 10 – 110 mm
02.206.210 – 02.206.310*	3.5 mm Cortex Screw, Low Profile Head Self-Tapping, Star Drive, length 10 – 110 mm
214.814 – 214.945	4.5 mm Cortex Screw Self-Tapping, length 14 – 145 mm**



### ■ Note

For 4.5 mm Cortex Screws use additional Set 01.100.005 (4.5 mm Cortex Screws and Instrument Set, with self tapping screws).

### ■ Note

The 3.5 mm Low Profile Cortex Screws (Hex and Star Drive) are not designed for self-retention, but can be driven with their respective screwdrivers.

\*Available nonsterile and sterile-packed. Add "S" to product number for sterile product.

\*\* The system is optimized for usage in combination with 3.5 mm cortex screws. However, 4.5 mm cortical screws may also be used (except for ischial screw hole) with limited angulations. The ischial screw hole only accepts 3.5 mm cortical screws.

# Instruments

03.164.008 Radiolucent Pelvic Retractor,  
for superior pubic ramus



03.164.009 Radiolucent Pelvic Retractor,  
for iliac fossa



03.164.010 Radiolucent Pelvic Retractor,  
for quadrilateral surface



03.164.013 Pelvic Reduction Forceps, angled,  
with multi-spiked ball tips Ø 6.5 mm



03.164.014 Reduction Forceps, large, with Points,  
ratchet lock, asymmetric, left



03.164.015 Reduction Forceps, large, with Points,  
ratchet lock, asymmetric, right



03.164.016 Reduction Forceps, large, with Points,  
ratchet lock, straight tines



03.164.011 Ball Spike, angled, 30°, with pointed ball tips Ø 6.5 mm



03.164.012 Ball Spike, angled, 15°, with pointed ball tips Ø 6.5 mm



03.164.000 Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, large, right, standard



03.164.002 Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, large, left, standard









03.164.004 Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, small, right, standard



03.164.006 Sizing Trial for 3.5 mm Intrapelvic Acetabular Plate, small, left, standard



03.164.017	Plate Holder, angled	
329.08	Bending Iron for 3.5 mm and 4.5 mm Reconstruction Plates	
03.100.090	In-situ Bending Pliers	
03.100.091	In-situ Bending and Twisting Handle, straight	
03.100.092	In-situ Bending and Twisting Handle, 90°	
03.100.093	In-situ Bending and Twisting Handle, 120°	
03.164.030	2.5 mm Temporary Fixation Wire, length 150 mm	
03.164.029	2.5 mm Temporary Fixation Wire, length 220 mm	

03.164.018 Protection Sleeve for Screws 3.5 mm,  
with spherical head, slotted



03.164.019 Protection sleeve for Screws 3.5 mm,  
with teeth



03.164.022 2.5 mm Drill Sleeve, for Protection  
Sleeves 03.164.018 & 03.164.019



03.164.023 3.5 mm Drill Sleeve, for Protection  
Sleeves 03.164.018 & 03.164.019



03.164.020 2.5 mm Drill Bit, Quick Coupling,  
length 400 mm, Calibration up to  
120 mm  
Measuring range: 0 - 120 mm  
Degree of Accuracy:  
+/- 1 mm from 10 - 50 mm  
+/- 2 mm from 50 - 120 mm



03.164.021 3.5 mm Drill Bit, Quick Coupling,  
length 380 mm



03.164.025 Screwdriver Shaft Stardrive 3.5, T15,  
length 300 mm, for Quick Coupling



03.164.024 Screwdriver Shaft, hexagonal 2.5 mm,  
self-holding, length 300 mm,  
for Quick Coupling





03.164.027 Screwdriver Stardrive 3.5, T15, length 365 mm



03.164.026 Screwdriver, hexagonal 2.5 mm, self-holding, length 365 mm



03.164.028 Depth Gauge for Protection Sleeve, measuring range up to 120 mm  
Measuring range: 0 - 120 mm  
Degree of Accuracy:  
+/- 1 mm from 10 - 50 mm  
+/- 2 mm from 50 - 120 mm



### Additionally Available (optional)

03.100.120 Spiked Round Disk

03.100.121 Spiked Rectangular Disk



03.100.027 Round Disk



03.100.028 Rectangular Disk



2598-07-900 TSS Retractor Light Strip

2598-07-910 TSS ACMI Light Cable

2598-07-920 TSS Wolf Light Cable

2598-07-930 TSS Storz Light Cable

2598-07-940 Olympus Light Cable

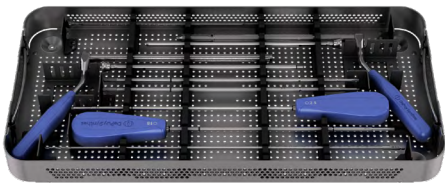


# Set Lists

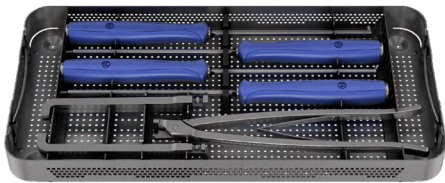
01.164.005      Acetabulum Instrument Set, full content



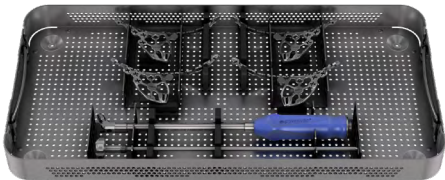
01.164.000      Acetabulum Set for 3.5mm Cortex  
Screw Insertion Instruments



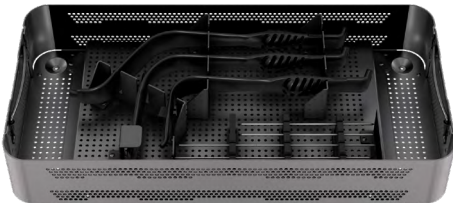
01.164.001      Acetabulum Set for Bending Instruments



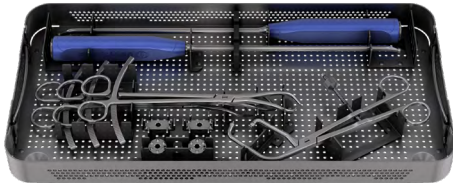
01.164.002      Acetabulum Set for Plate insertion and  
Plate sizing



01.164.003      Acetabulum Set for Retractor  
Instruments



01.164.004      Acetabulum set for Reduction  
Instruments



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**Optional Sets**

01.100.002	3.5 mm Low Profile Pelvic System Implant Set
01.100.003	3.5 mm Low Profile Pelvic System Reduction Instrument set
01.100.004	3.5 mm Low Profile Pelvic Retractor Set
01.100.013	3.5 mm Low Profile Pelvic Instrument Set
01.100.005	4.5 mm Cortex Screws and Instrument Set, with self-tapping screws
105.907	Collinear Reduction Clamp Set

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**Screws**

01.100.132*	3.5 mm Low Profile Pelvic System StarDrive Screw Tray without Locking Screws
01.100.112*	3.5 mm Low Profile Pelvic System Screw Tray with Locking Screws
01.100.002	3.5 mm Low Profile System Implant Set

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**■ \*Note**

These implant trays do not include graphic cases or lids, which must be ordered separately. Each tray occupies one level in a graphic case:

- 690.911 Single Level Graphic Case Base
- 690.429 Lid for 3.5 mm Low Profile Pelvic System

# MRI Information

## MR Safety Information



Non-clinical testing has demonstrated the DePuy Synthes 3.5 mm Intrapelvic Acetabular System Implants are MR Conditional. If information about a specific parameter is not included, there are no conditions associated with that parameter.

**▲ Precaution:** It is recommended that the device be kept as far away from the coil wall as possible.

A person with the 3.5 mm Intrapelvic Acetabular implants may be safely scanned under the following conditions.

Failure to follow these conditions may result in injury.

Device Name	3.5 mm Intrapelvic Acetabular Plate
Static Magnetic Field Strength (B0)	1.5T or 3.0T
Maximum Spatial Field Gradient	30 T/m (3,000 gauss/cm)
RF Excitation	Circularly Polarized (CP)
RF Transmit Coil Type	There are no Transmit Coil restrictions
Operating Mode	Normal Operating Mode
Maximum Whole-Body SAR	2 W/kg (Normal Operating Mode)
Scan Duration	2 W/kg whole-body average SAR for 60 minutes of continuous RF (a sequence or back-to-back series/scan without breaks)
MR Image Artifact	The presence of this implant may produce an Image Artifact.

Under the scan conditions defined above, the DePuy Synthes 3.5 mm Intrapelvic Acetabular System is expected to produce a maximum temperature rise of less than 3 °C in 1.5 T and 3.0 T for 15 minutes of continuous scanning.



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Please also refer to the package insert(s) or other labeling associated with the devices identified in this surgical technique for additional information.

Intended Use, Indications and Contraindications can be found in the corresponding system Instructions for Use.

CAUTION: Federal Law restricts these devices to sale by or on the order of a physician.

Some devices listed in this surgical technique may not have been licensed in accordance with Canadian law and may not be for sale in Canada. Please contact your sales consultant for items approved for sale in Canada.

Not all products may currently be available in all markets.



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