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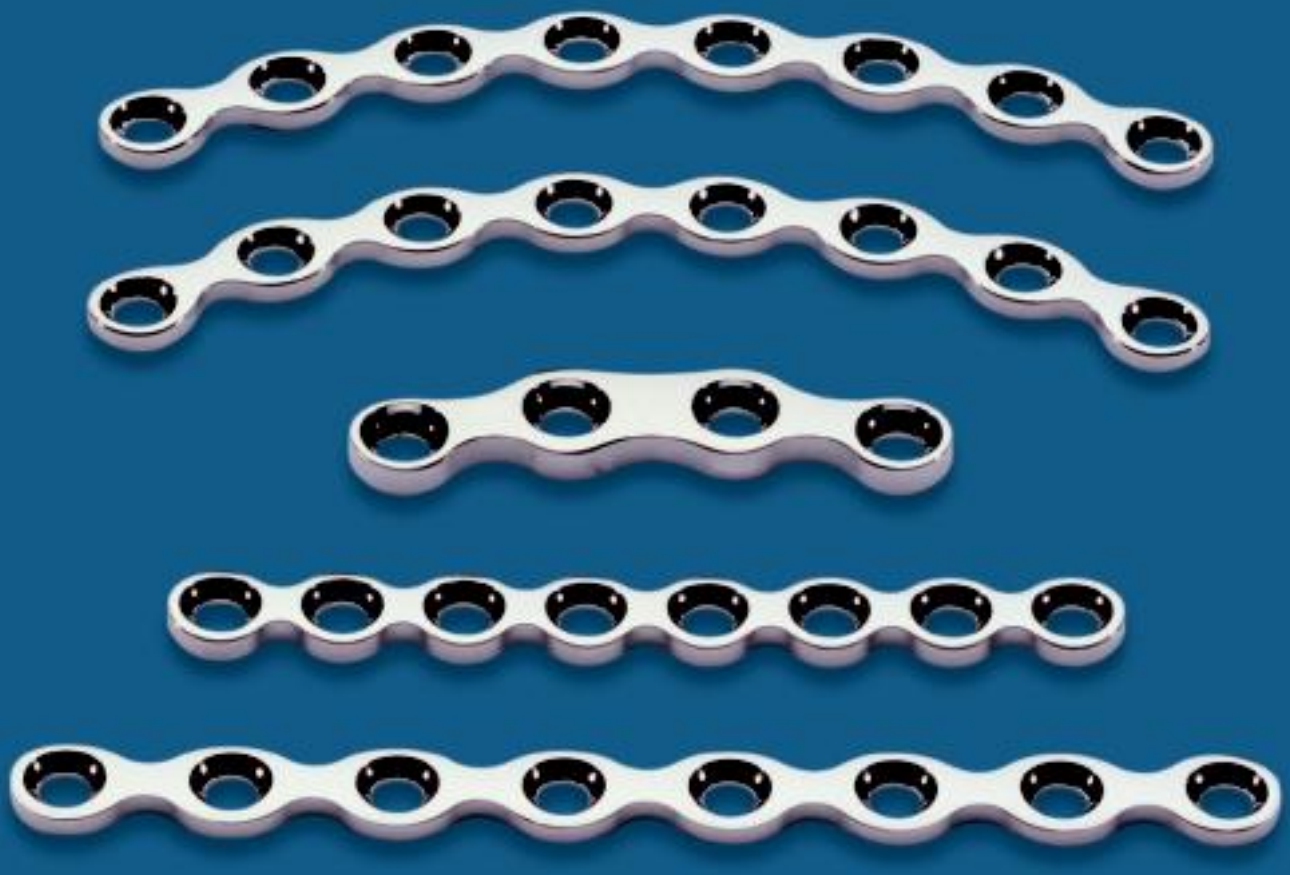
Osteosynthesis

SPS

Matta Pelvic System

- Features and Benefits
- Indications
- Operative Technique
- Ordering Information



Rationale

The Matta Pelvic Set is designed to address all fractures of the acetabulum and pelvis. The extremely complex anatomy of the pelvic bone, particularly the acetabular region requires perfect anatomical reduction if good functional and durable results are to be achieved.

The shape, material properties, plate malleability and hole spacing of the plates take into account the current demands from clinical physicians for sufficient fatigue strength, optimised transfer of loading forces, a standardised operative technique with broad applicability.

All implants are made in Stainless Steel (316 LVM).

Implant Rationale

The Matta Pelvic Set consists of five different plate designs. The plates are differentiated by design, stiffness or function.

MPS Plates

Straight and curved pelvic and acetabular plates with a hole spacing of 16mm are available. Curved plates are designed to match either the male (R108) or the female (R88) pelvic brim respectively. These plates are rather stiff and are preferred for the pelvic brim and when a more rigid implant is necessary.

MPS Flex Plate

These plates have reduced hole spacing (12mm) and are made of annealed stainless steel, resulting in less stiffness. They are therefore easily contoured and preferred when a stiff implant is not required e.g. posterior wall fractures, ilium fixation etc.

MPS Symphysis Plate

With 3.2mm thickness and increased width through the midsection together with a anatomically curved radius of 75mm, this plate normally obviates the need for axial contouring. This plate is available in either a four or six hole option.

Screws

All the Matta Pelvic System screws have a hexagonal head with a spherical underside and conform fully to the requirements set by ASTM F138 & F139/ISO 5832- standards. Screw fixation of the pelvis often requires the use of extra-long screws. In addition to the standard screw range the system includes 3.5mm cortical screws up to 110mm, 4.5mm cortical screws up to 120mm and 6.5mm cancellous screws up to 130mm.

All the cortical screws within the range are self-tapping. Three cutting flutes on the tip of each screw allows cleaner cutting and help to reduce “compacting” of the bone chips at the tip of the screw. Due to specially designed cutting grooves, they also offer an enhanced insertion torque.

Depending on the screw selection, the screw heads can be almost completely countersunk into the specifically designed plate holes.

Material Composition

ASTM F138 & F139/ISO 5832-1 material standards provide rigid specifications, which define the chemical composition, microstructural characteristics and mechanical properties of implant quality Stainless Steel. These standards ensure that Stainless Steel 316LVM even if provided by different suppliers, is consistent and compatible. The material used for all plates and screws in this system complies with these standards.

Introduction

Clinical Design Surgeon

The System is designed with the kind collaboration of the following Clinician: Joel M. Matta, M.D. Good Samaritan Hospital, Los Angeles, California with thanks to the late Prof. Emile Letournel.

In 1983 the Osteo company of Selzach, Switzerland produced the first commercially available acetabular and pelvic fixation set at the request of, and under the guidance of Prof. Letournel.

In 1996 Osteo was purchased by Stryker Corporation and later the name Stryker Trauma was adopted. Prof. Letournel initially chaired the first course, Fractures of the Acetabulum and Pelvis in Paris in 1984 and at his invitation I joined the faculty. Today Stryker Trauma continues to sponsor this course under the chairmanship of myself and others.

Letournel thereby established the now well accepted acetabular and pelvic fracture treatment principles of perfect reduction and stable fixation and also brought to acceptance the importance of specialised instrumentation and implants to achieve this end.

In 1998 I was asked to be a consultant for Stryker Trauma for their educational program and for revising and updating the acetabular and pelvic set. My past involvement with the Paris courses as a faculty member and later chairman as well as my preference for the Letournel designed Osteo plates made accepting this offer logical.

As per Letournel‘s original specifications the curved plates are available in two radii: 108mm to match the curvature of the male pelvic brim and 88mm to match the female.

The main complaint that was heard regarding the plates was that they were too stiff and the holes were too far apart. The curved plates are now slightly less stiff and the hole interval is reduced to 16mm from 18mm. A new plate called the MPS Flex plate has also been added with a 12mm hole spacing and flexibility similar to a recon plate. Both plates are 2.5mm thick and the stiffness is controlled by hardening or annealing. The thin profile limits soft tissue intrusion and also facilitates improved screw angulation.

Though the flexible MPS Flex plate has shown to be adequate for many fixations it is my opinion that a number of surgeons choose it too frequently and to the detriment of fixation. It may seem convenient that when this plate is applied incompletely contoured, tightening the screws completes the contouring. What this means in effect is that the bone is controlling the contour of the plate rather than the plate controlling the contour of the fractured bone.

I prefer the standard curved and straight plates for the majority of fixations including posterior wall fractures. I reserve use of the MPS Flex plate for fractures that require the closer hole spacing or extreme contouring.

The current set includes the clamps and reduction aids that I consider most valuable. This brochure and our education courses will help the surgeon learn their application. In many ways the instruments and their use is more important than the plates that are chosen just as reduction is usually a more important problem than fixation. An important reduction instrument that is not included is the orthopedic extension table. The most effective table to date is the Tasserit table previously called the Judet table.

It is inevitable that surgeons that use this set will wish at times for a slightly different plate that is not in the box or a clamp of another design. Surgeons who address these fractures frequently (as I do) will probably keep an additional box of items that are occasionally useful. To make a set however that is affordable and widely useful the contents must be carefully chosen. It is expected that the set will evolve as surgeons contribute their comments.

Judet and Letournel concluded early on the most important factor in a successful operation was a perfect pre operative understanding of the X-rays and fracture pattern. The same is true today. The surgeons knowledge, skill and dedication remain the primary determinants of the patient`s outcome and the design of this set seeks to facilitate this.

Joel M. Matta, M.D.

Introduction

Cases and Trays

The Matta Pelvic System consists of four different cases available in plastic or metal* with a variety of dedicated, removable inserts. The two plate racks, the screw rack and the tray inserts for the basic instruments offer optimum modularity for storage and sterilisation. The pre-formed inserts for the basic instruments allow for easy access to the instruments which are arranged in a logical order.

***reduction case only available in plastic**

Drills and Taps

Contained within the basic instrument set are all the relevant drill bits and taps corresponding to each screw diameter. Titanium oxide coating on the drill bits and taps for the 3.5mm screws enhances not only the cutting efficiency but the longevity and improved visual identity of each instrument. While all of the cortical screws in the set are self-tapping the inclusion of the taps offers clinicians the option of pre-tapping in dense cortical bone.

Plates and Screws

In addition to the extra long 3.5mm and 4.5mm self-tapping cortical screw range, the Matta Pelvic Set includes a selected range of partially threaded 6.5mm cancellous screws. These can offer the option to perform a strong independent interfragmentary Lag-Screws fixation without the need for an additional screw set. The “all in one” implant case contains a wide range of pelvic and acetabular plates together with a dedicated Symphysis plate.

Features and Benefits

The Pelvic System design is based on input from Dr. Joel M. Matta, M.D. Los Angeles, theatre and sterilisation staff, data from literature and both practical and biomechanical testing results of the system.

Features	Benefits
Stainless Steel cold worked and annealed plates available	• Excellent plate malleability for optimum adaptation to the pelvic surfaces
Straight and curved plate options	• Increased indication coverage all in one set
Rounded plate ends	• Reduced potential for soft tissue irritation
Dedicated Symphysis Pubis plate	• Strong with anatomical fit
3.5/4.5mm screw hole option	• Flexibility of 3.5mm or 4.5mm screws
Low screw head profile in plate hole	• Reduced potential for soft tissue irritation
Self-tapping cortical screws	• Quick, simple and more efficient
Increased screw angulation with 3.5mm screws	• Optimised for posterior wall fixation
4 options of Reduction pins	• Flexibility of choice of ø5mm or ø6mm and 150mm or 180mm length
Equal hole spacing on plate	• Great operative flexibility for screw and plate placement
Advanced plate bender	• Easy and smooth three dimensional bending of plates
Bending Templates	• Allows plate bending away from the operative field
Spiked Disk	• Can be used in combination with reduction forceps and ball spike for increased bone contact
Elastosil® or Canevasit Handles	• Surgeon choice
Screwdriver Holding Sleeve	• Efficiency in pick up insertion/ removal via “No-touch” technique
Reduction Instruments	• Specialist forceps and optimised clamp design, small unique reduction forceps for 3.5mm screws
Specific Nerve Retractors	• 2 sizes available for optimal soft tissue retraction
Modular case design	• Maximum flexibility for sterilisation method in either outer base or in sterilisation container
Dedicated basic instrument case	• All instruments for 3 screw sizes in one set

Indications

The Matta Pelvic System is indicated for fractures of the:

- Pelvic Ring
- Acetabulum
- Sacrum
- Ilium
- Sacroiliac joint dislocations
- Symphysis Pubis disruption
- Revision surgery of pseudoarthroses, non-unions and mal-unions
- Osteotomies
- Pelvic arthrodeses
- Total hip revision surgery

Contraindications

The physician's education, training and professional judgement must be relied upon to choose the most appropriate device and treatment. Conditions presenting an increased risk of failure include:

Any active or suspected latent infection or marked local inflammation in or about the affected area.

Compromised vascularity that would inhibit adequate blood supply to the fracture or the operative site.

Bone stock compromised by disease, infection or prior implantation that can not provide adequate support and /or fixation of the devices.

Material sensitivity, documented or suspected.

Obesity. An overweight or obese patient can produce loads on the implant that can lead to failure of the fixation of the device or to failure of the device itself.

Patients having inadequate tissue coverage over the operative site.

Implant utilization that would interfere with anatomical structures or physiological performance.

Any mental or neuromuscular disorder which would create an unacceptable risk of fixation failure or complications in postoperative care.

Other medical or surgical conditions which would preclude the potential benefit of surgery.

MPS Straight Plate

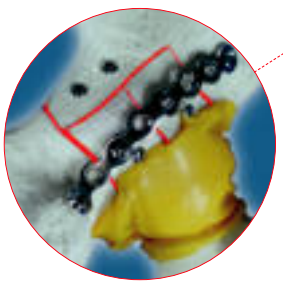
Pelvic Ring, internal and external aspect of the Ilium, Posterior Wall.

MPS Curved R88 Plate

Pelvic Ring (female), Iliac Crest, Posterior Wall.

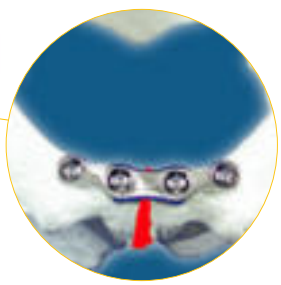
MPS Curved R108 Plate

Pelvic Ring (male), Iliac Crest, Posterior Wall.



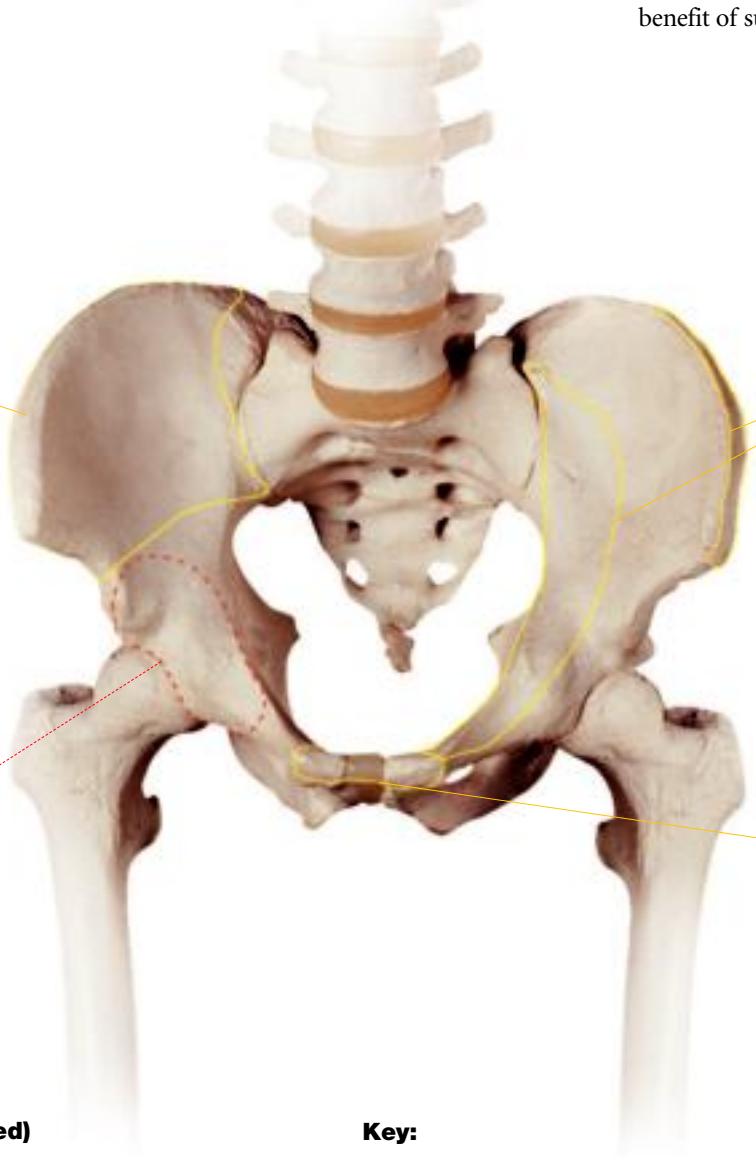
MPS Flex Plate (annealed)

Posterior Wall, Ilium and Iliac Crest.



MPS Symphysis Plate, R75

Symphysis Pubis.



Key:

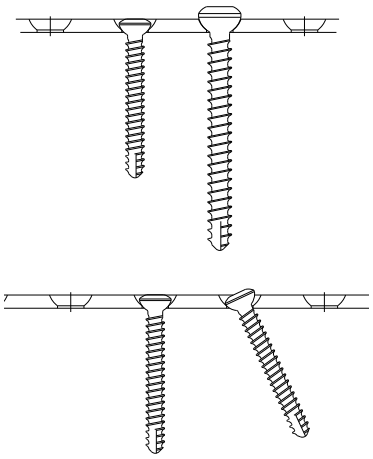
Internal aspect

External aspect

Screw Fixation

The 3.5mm self-tapping cortical screws are the recommended screws for plate fixation and are best adapted to the pelvic bone. 4.5mm cortical screws are often too large and their voluminous heads create a slight prominence above the plates, which may lead to soft tissue irritation in certain applications.

Therefore, these screws should only be used exceptionally to fix a plate, i.e. when a smaller screw does not get sufficient purchase.



Furthermore, the plate holes are designed to accept introduction of 3.5mm screws inserted at extreme angles, up to 35 degrees in all directions. This capability is essential as it must be possible to avoid penetrating the hip joint or to be able to drive a screw obliquely in the area of the iliac bone, avoiding a previously inserted isolated screw.

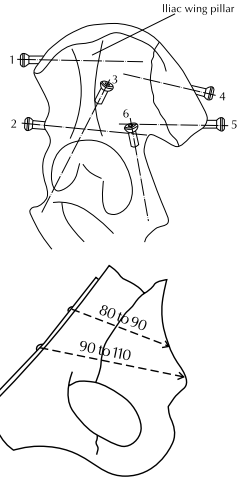
Possible Lag-Screws using 4.5mm cortical or 6.5mm cancellous screws:

a) From the crest of the anterior border (screw 1) in the thickness of the iliac wing. It is always possible to insert a screw from the antero-inferior iliac spine, passing 1 or 2 cm above the acetabulum (length 100 –120mm) (screw 2).

b) Along the axis of the anterior column (screw 3).This screw is very useful to secure a transverse fracture or an anterior column, through an extended ilio–femoral approach. The screw should start from the posterior aspect of the iliac wing pillar approx. 3-4cm above the acetabulum.

c) In the thickness of the iliac wing, but from posterior to anterior, starting from the posterior part of the iliac wing or the posterior–superior iliac spine to reduce a sacroiliac joint fracture dislocation (screws 4 and 5).

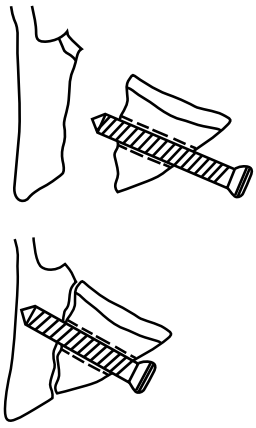
d) Along the axis of the posterior column (screw 6).



For all these Lag-Screws, it is essential to drill intermittently, step by step, and change the direction of the drill if you feel penetration of a cortex. Remain in the correct axis and advance the drill as far as possible.

Independent interfragmentary Compression

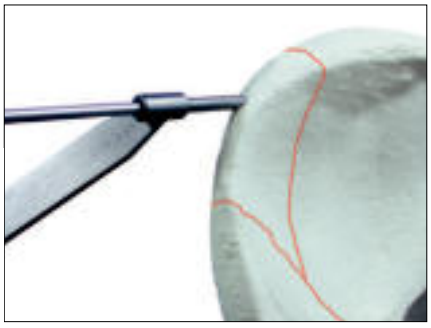
Often independent (isolated) interfragmentary Lag-Screws are used in conjunction with pelvic and acetabular fixation.

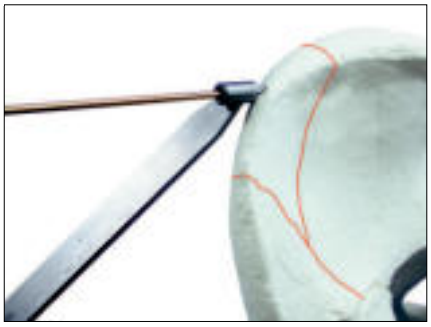


The screw thread takes no purchase in the near fragment because the screw has a shaft with no thread and /or the drill hole in the near fragment is equal to the outside diameter of the screw. The cortex in the near fragment has to be overdrilled therefore to create a “gliding” hole. Overdrilling the cortex in this manner allows the screw thread to take purchase in the bone of the opposite fragment.

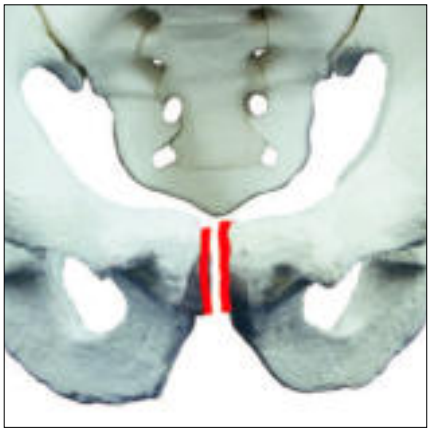
Drill Guides

Use the Double Drill Guide REF 702417 and the 4.5mm Drill (Double Drill Guide REF 702418 and Drill 3.5mm for screws 3.5mm) to overdrill the near cortex. Insert the opposite side of the relevant drill guide into the pre-drilled hole for precise axial alignment and use the corresponding drill for the corehole of the screw. This procedure will prevent the loss of reduction and fixation during screw insertion.





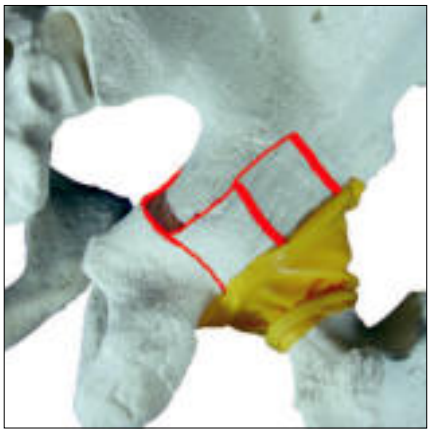
Operative Technique



Symphysis Pubis Disruption

Fixation of a pure disruption of the Symphysis Pubis using a dedicated MPS Symphysis 4 hole plate.

Two screws of 40mm to 45mm into each pubic bone provide a solid support.

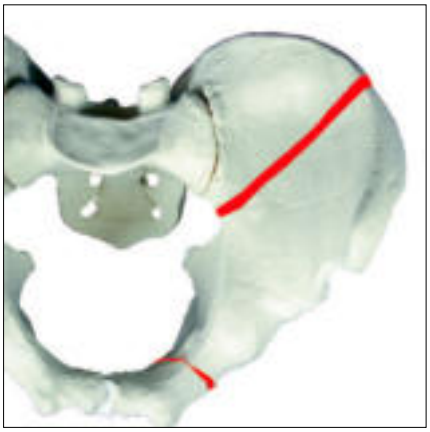


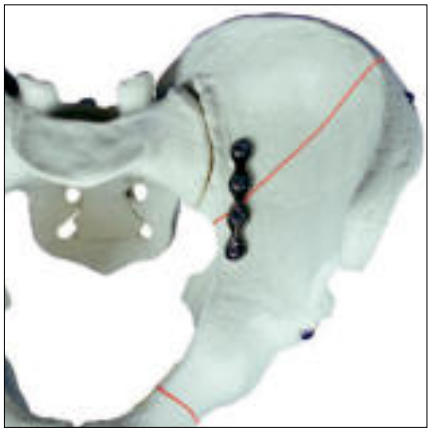
Transverse Plus Posterior Wall Fracture

Operated through the Kocher-Langenbeck approach.

- Two 3.5mm independent Lag-Screws maintain the transverse fracture.
- Two independent screws maintain the posterior wall fragments.
- One MPS Flex 8 hole plate (annealed) or a MPS Curved 6 hole plate spans the posterior fragments and fixes the transverse fracture at the same time.

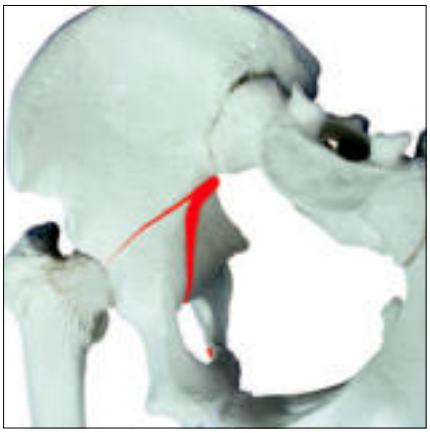
Operative Technique





Ilium Fracture

- One 6.5mm partially threaded cancellous screw inserted from the anterior-inferior iliac spine, passing 1cm to 2cm above the acetabulum.
- One 3.5mm independent Lag-Screw in the iliac crest starting from the anterior branch.
- One MPS Straight 4 hole plate screwed over the fracture line in the area of the pelvic brim.

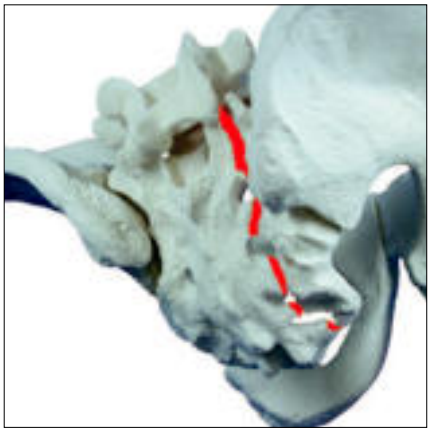


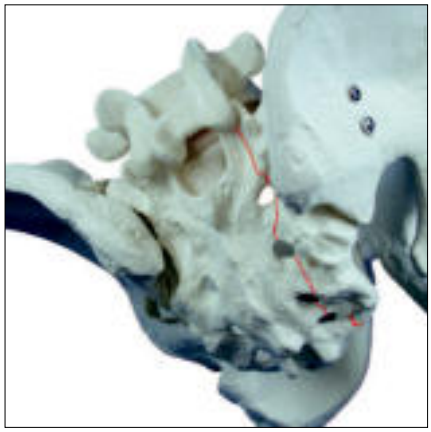
Anterior Column Fracture

Fixation of a fracture of the anterior column by ilio-inguinal approach.

- An independent Lag-Screw first maintains the reduction, then a MPS Curved 10 hole plate was shaped to adapt itself optimally to the pelvic brim going from the pubic spine to the vicinity of the sacroiliac joint, a minimum of two screws beyond the fracture line. The central screws are parallel to the quadrilateral surface.

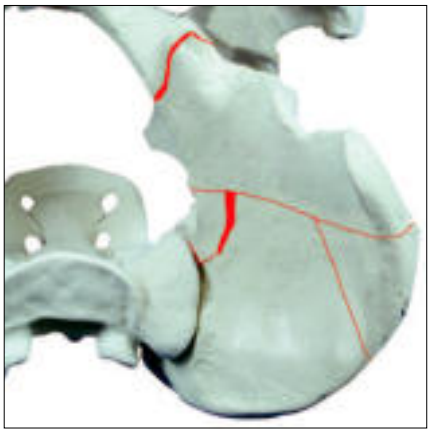
Operative Technique

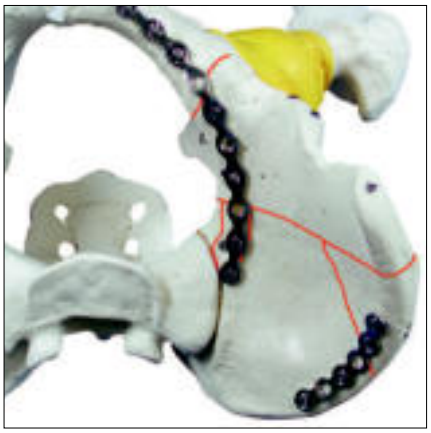




Sacrum Fracture

- Longitudinal posterior approach.
- Fixation of a sacrum fracture by placing two 6.5mm cancellous screws (preferably 16mm thread) through the lateral iliac wing and advancing these screws into the S1 vertebral body.





Both Column Fracture

Both column fracture operated through the ilio-inguinal approach.

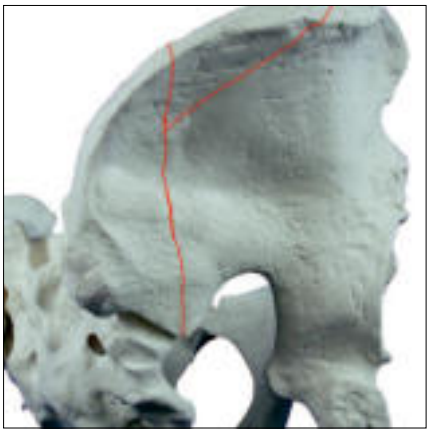
- One independent Lag-Screw fixes the reduction of a separated posterior fragment of the pelvic brim, just in front of the sacroiliac joint.
- One MPS Flex 6 hole plate (annealed) placed on the upper aspect of the wing over the posterior fracture line.
- One long MPS Curved 10 hole plate along the pelvic brim (R108mm or 88mm depending upon the case) fixes the anterior column.
- Two 3.5mm independent Lag-Screws running from the upper aspect of the true pelvis fix the reduction of the posterior column.
- Two 3.5mm independent Lag-Screws in the iliac crest fix the reduction of the wing fracture lines.

Operative Technique

Pure Posterior Wall Fracture

Typical fixation of a fracture of the posterior wall.

- Two 3.5mm independent Lag-Screws initially fix the fragments with the desired anatomical reduction.
- One MPS Curved R108 6 hole plate or alternatively a MPS Flex 8 hole plate (annealed) spans the fragments along its axis (Neutralisation plate).



Posterior Vertical Ilium Fracture

Anterior component of a Malgaine fracture.

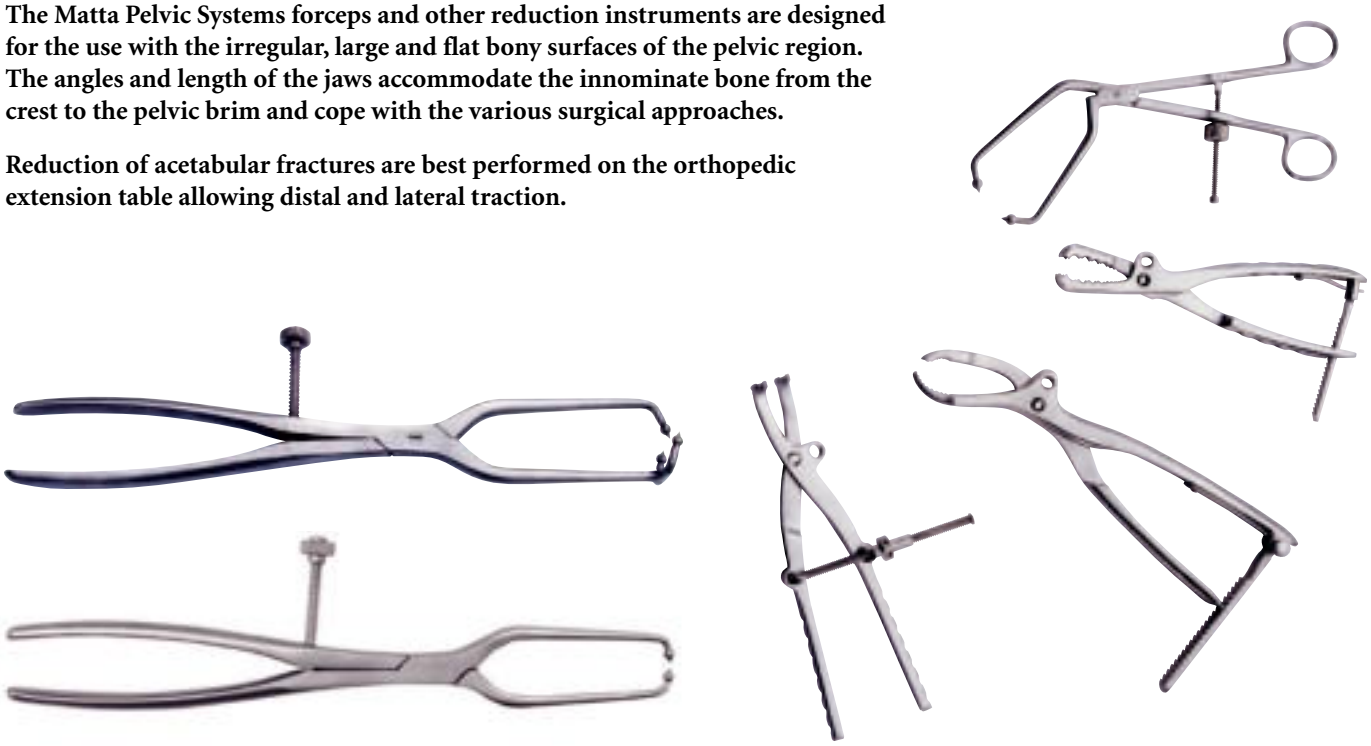
- Two 3.5mm independent Lag-Screws in the crest fix the reduction of the wing fragment.
- One 6.5mm independent cancellous Lag–Screw starting from the posterior part of the iliac wing fixes the reduction of the separated anterior fragment.
- One MPS Flex 6 hole plate (annealed) screwed onto the external aspect of the iliac wing.

Instruments

Reduction Forceps

The Matta Pelvic Systems forceps and other reduction instruments are designed for the use with the irregular, large and flat bony surfaces of the pelvic region. The angles and length of the jaws accommodate the innominate bone from the crest to the pelvic brim and cope with the various surgical approaches.

Reduction of acetabular fractures are best performed on the orthopedic extension table allowing distal and lateral traction.

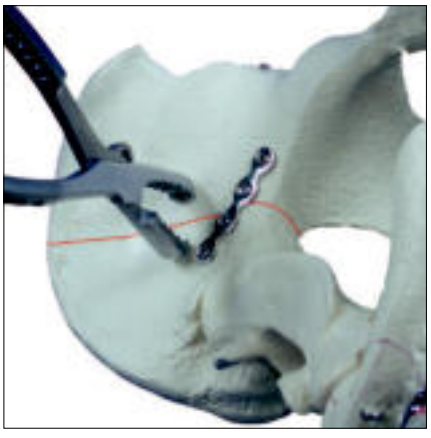


Reduction Forceps with Points

These forceps can be applied directly to the bone`s surface or be used with shallow drill holes.

Faraboef Forceps

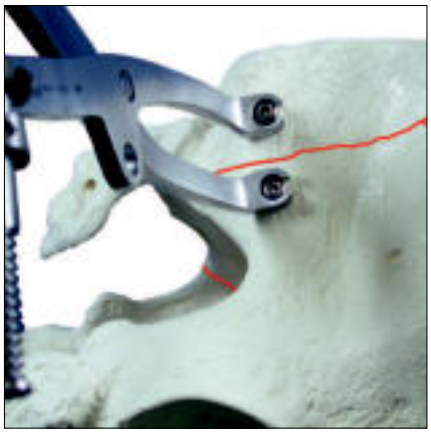
The versatile Faraboef clamps can be used to grasp and manipulate the iliac wing or as reduction forceps with provisional screws of either 3.5mm or 4.5mm diameter.



Instruments

Repositioning Forceps, Type Matta

The two oblique forceps type Matta are designed such that the handles angle away from the critical soft tissue structures and out of line of sight. The sharp points provide a secure hold on the pelvic surfaces while the balls prevent penetration of bone with a thin cortex.

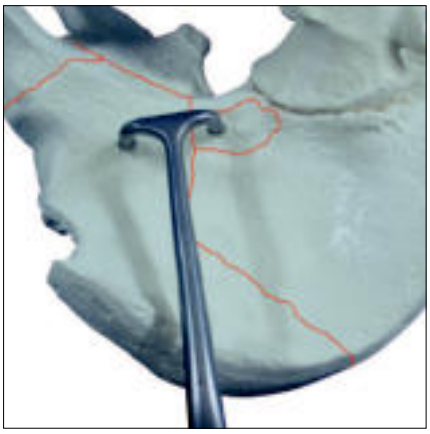


Reduction Forceps

These two forceps have been designed to be used with either 3.5mm or 4.5mm screws (3.5mm version available in left or right option). The screws inserted on opposite side of the fracture allow considerable reduction forces and manipulation in all three planes.

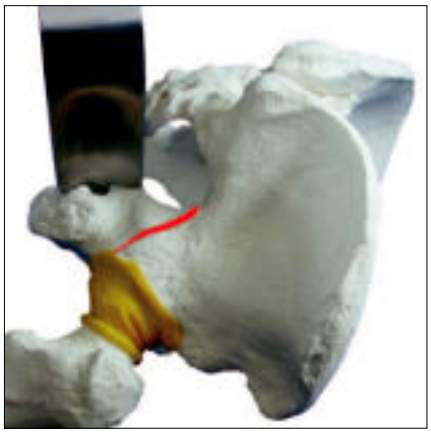
Asymmetrical Verbrugge Forceps

Sometimes for easier reduction, only one screw is inserted on which one jaw of the Verbrugge forceps is applied. The other jaw then takes direct hold on another part of the bony surface. Example: The angle of the greater sciatic notch.



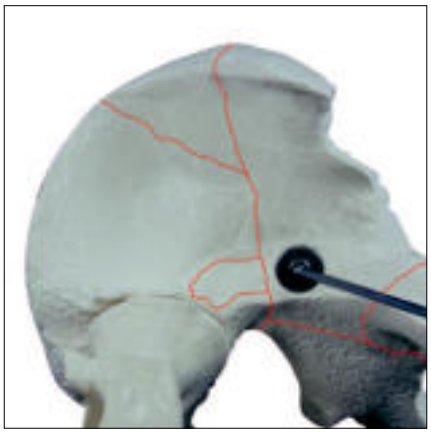
Reduction Forceps, 2x1 Jaws

This long forceps with three pointed ball tips allow reduction of perpendicular fractures. The long handles provide increased leverage for difficult reductions. These forceps are also available in a 1x1 Jaws version.



Sciatic Nerve Retractor

Two sizes available for optimal soft tissue retraction.



Straight Ball Spike

This reduction instrument is used as a pusher with pointed ball tip to reduce bone fragments. To distribute the reduction forces over a increased area, the Spiked Disc can be clipped onto the ball tip.

Ordering Information – Plates

MPS Curved R108 Plate

Stainless Steel REF	Plate Length mm	Holes	Titanium REF
425604	**58.5**	**4 ✔**	**N/A**
425605	**74.5**	**5 ✔**	**N/A**
425606	**90.5**	**6 ✔**	**N/A**
425607	106.5	7	N/A
425608	**122.5**	**8 ✔**	**N/A**
425609	138.5	9	N/A
425610	**154.5**	**10 ✔**	**N/A**
425611	170.5	11	N/A
425612	**186.5**	**12 ✔**	**N/A**
425613	202.5	13	N/A
425614	**218.5**	**14 ✔**	**N/A**
425615	234.5	15	N/A
425616	**250.5**	**16 ✔**	**N/A**
425618	282.5	18	N/A
425620	314.5	20	N/A

MPS Straight Plate

Stainless Steel REF	Plate Length mm	Holes	Titanium REF
425702	26.5	2	N/A
425703	**42.5**	**3 ✔**	**N/A**
425704	**58.5**	**4 ✔**	**N/A**
425705	74.5	5	N/A
425706	**90.5**	**6 ✔**	**N/A**
425707	106.5	7	N/A
425708	**122.5**	**8 ✔**	**N/A**
425709	138.5	9	N/A
425710	**154.5**	**10 ✔**	**N/A**
425711	170.5	11	N/A
425712	**186.5**	**12 ✔**	**N/A**
425713	202.5	13	N/A
425714	**218.5**	**14 ✔**	**N/A**
425715	234.5	15	N/A
425716	**250.5**	**16 ✔**	**N/A**
425718	282.5	18	N/A
425720	314.5	20	N/A

MPS Curved R88 Plate

Stainless Steel REF	Plate Length mm	Holes	Titanium REF
425654	**58.5**	**4 ✔**	**N/A**
425655	**74.5**	**5 ✔**	**N/A**
425656	**90.5**	**6 ✔**	**N/A**
425657	106.5	7	N/A
425658	**122.5**	**8 ✔**	**N/A**
425659	138.5	9	N/A
425660	**154.5**	**10 ✔**	**N/A**
425661	170.5	11	N/A
425662	**186.5**	**12 ✔**	**N/A**
425663	202.5	13	N/A
425664	**218.5**	**14 ✔**	**N/A**
425665	234.5	15	N/A
425666	**250.5**	**16 ✔**	**N/A**
425668	282.5	18	N/A
425670	314.5	20	N/A

MPS Flex Plate (annealed)

Stainless Steel REF	Plate Length mm	Holes	Titanium REF
425754	**46.5**	**4 ✔**	**N/A**
425755	58.5	5	N/A
425756	**70.5**	**6 ✔**	**N/A**
425757	82.5	7	N/A
425758	**94.5**	**8 ✔**	**N/A**
425759	106.5	9	N/A
425760	**118.5**	**10 ✔**	**N/A**
425761	130.5	11	N/A
425762	**142.5**	**12 ✔**	**N/A**
425763	154.5	13	N/A
425764	**166.5**	**14 ✔**	**N/A**
425765	178.5	15	N/A
425766	**190.5**	**16 ✔**	**N/A**
425767	202.5	17	N/A
425768	**214.5**	**18 ✔**	**N/A**
425770	238.5	20	N/A
425772	262.5	22	N/A

MPS Symphysis Plate, R75

Stainless Steel REF	Plate Length mm	Holes	Titanium REF
425794	**58.5**	**4 ✔**	**N/A**
425796	**90.5**	**6 ✔**	**N/A**

✔ Recommended set item

Ordering Information – Screws

3.5mm Cortical Screw, Self Tapping

Stainless Steel REF	Screw Length mm	Titanium REF
338610	10	N/A
338612	**12 ✔**	**N/A**
338614	**14 ✔**	**N/A**
338616	**16 ✔**	**N/A**
338618	**18 ✔**	**N/A**
338620	**20 ✔**	**N/A**
338622	**22 ✔**	**N/A**
338624	**24 ✔**	**N/A**
338626	**26 ✔**	**N/A**
338628	**28 ✔**	**N/A**
338630	**30 ✔**	**N/A**
338632	**32 ✔**	**N/A**
338634	**34 ✔**	**N/A**
338636	**36 ✔**	**N/A**
338638	**38 ✔**	**N/A**
338640	**40 ✔**	**N/A**
338642	42	N/A
338644	44	N/A
338645	**45 ✔**	**N/A**
338646	46	N/A
338648	48	N/A
338650	**50 ✔**	**N/A**
338655	**55 ✔**	**N/A**
338660	**60 ✔**	**N/A**
338665	**65 ✔**	**N/A**
338670	**70 ✔**	**N/A**
338675	**75 ✔**	**N/A**
338680	**80 ✔**	**N/A**
338685	**85 ✔**	**N/A**
338690	**90 ✔**	**N/A**
338695	**95 ✔**	**N/A**
338700	**100 ✔**	**N/A**
338705	**105 ✔**	**N/A**
338710	**110 ✔**	**N/A**
338715	115	N/A
338720	120	N/A

6.5mm Cancellous Screw, 16mm Thread

Stainless Steel REF	Screw Length mm	Titanium REF
341030	30	N/A
341035	35	N/A
341040	40	N/A
341045	45	N/A
341050	**50 ✔**	**N/A**
341055	**55 ✔**	**N/A**
341060	**60 ✔**	**N/A**
341065	**65 ✔**	**N/A**
341070	**70 ✔**	**N/A**
341075	**75 ✔**	**N/A**
341080	**80 ✔**	**N/A**
341085	**85 ✔**	**N/A**
341090	**90 ✔**	**N/A**
341095	**95 ✔**	**N/A**
341100	**100 ✔**	**N/A**
341105	**105 ✔**	**N/A**
341110	**110 ✔**	**N/A**
341115	**115 ✔**	**N/A**
341120	**120 ✔**	**N/A**
341125	**125 ✔**	**N/A**
341130	**130 ✔**	**N/A**
341135	135	N/A
341140	140	N/A
341145	145	N/A
341150	150	N/A

Washer

Stainless Steel REF	Diameter mm	Thickness mm	Titanium REF
390016	**13.0 ✔**	**1.5**	**N/A**
390019	**9.0 ✔**	**1.0**	**N/A**

For full range of standard non-self tapping screws please refer to the Stryker® Trauma Product Catalogue.

4.5mm Cortical Screw, Self Tapping

Stainless Steel REF	Screw Length mm	Titanium REF
340614	**14 ✔**	**N/A**
340616	**16 ✔**	**N/A**
340618	**18 ✔**	**N/A**
340620	**20 ✔**	**N/A**
340622	**22 ✔**	**N/A**
340624	**24 ✔**	**N/A**
340626	**26 ✔**	**N/A**
340628	**28 ✔**	**N/A**
340630	**30 ✔**	**N/A**
340632	**32 ✔**	**N/A**
340634	**34 ✔**	**N/A**
340636	**36 ✔**	**N/A**
340638	**38 ✔**	**N/A**
340640	**40 ✔**	**N/A**
340642	**42 ✔**	**N/A**
340644	**44 ✔**	**N/A**
340646	**46 ✔**	**N/A**
340648	**48 ✔**	**N/A**
340650	**50 ✔**	**N/A**
340652	**52 ✔**	**N/A**
340654	**54 ✔**	**N/A**
340655	55	N/A
340656	**56 ✔**	**N/A**
340658	**58 ✔**	**N/A**
340660	**60 ✔**	**N/A**
340662	62	N/A
340664	64	N/A
340665	**65 ✔**	**N/A**
340666	66	N/A
340668	68	N/A
340670	**70 ✔**	**N/A**
340672	72	N/A
340675	**75 ✔**	**N/A**
340676	76	N/A
340680	**80 ✔**	**N/A**
340685	**85 ✔**	**N/A**
340690	**90 ✔**	**N/A**
340695	**95 ✔**	**N/A**
340700	**100 ✔**	**N/A**
340705	**105 ✔**	**N/A**
340710	**110 ✔**	**N/A**
340715	**115 ✔**	**N/A**
340720	**120 ✔**	**N/A**
340725	125	N/A
340730	130	N/A
340735	135	N/A
340740	140	N/A
340745	145	N/A
340750	150	N/A

6.5mm Cancellous Screw, 32mm Thread

Stainless Steel REF	Screw Length mm	Titanium REF
342045	45	N/A
342050	**50 ✔**	**N/A**
342055	**55 ✔**	**N/A**
342060	**60 ✔**	**N/A**
342065	**65 ✔**	**N/A**
342070	**70 ✔**	**N/A**
342075	**75 ✔**	**N/A**
342080	**80 ✔**	**N/A**
342085	**85 ✔**	**N/A**
342090	**90 ✔**	**N/A**
342095	**95 ✔**	**N/A**
342100	**100 ✔**	**N/A**
342105	**105 ✔**	**N/A**
342110	**110 ✔**	**N/A**
342115	**115 ✔**	**N/A**
342120	**120 ✔**	**N/A**
342125	**125 ✔**	**N/A**
342130	**130 ✔**	**N/A**
342135	135	N/A
342140	140	N/A
342145	145	N/A
342150	150	N/A

✔ Recommended set item

Ordering Information – Instruments

Reference	Description
700351 ✔	Calibrated Drill Bit ø2.5mm x 180mm, AO Fitting
700355 ✔	Calibrated Drill Bit ø2.5mm x 230mm, AO Fitting
700353 ✔	Drill Bit ø3.5mm x 180mm, AO Fitting
700356 ✔	Calibrated Drill Bit ø3.2mm x 180mm, AO Fitting
700357 ✔	Calibrated Drill Bit ø3.2mm x 230mm, AO Fitting
700354 ✔	Drill Bit ø4.5mm x 180mm, AO Fitting
702804 ✔	Tap ø3.5mm x 180mm, AO Fitting
702806 ✔	Tap ø4.5mm x 180mm, AO Fitting
702807 ✔	Tap ø6.5mm x 180mm, AO Fitting
702811 ✔	Countersink ø6.0mm x 100mm, AO Fitting
702812 ✔	Countersink ø8.0mm x 100mm, AO Fitting
702842 ✔	Screwdriver Hex 2.5mm, L280mm
702843 ✔	Screwdriver Hex 3.5mm, L300mm
702851 ✔	Screwdriver Hex 2.5mm, L165mm, AO Fitting
702853 ✔	Screwdriver Hex 3.5mm, L165mm, AO Fitting
702861 ✔	Screwdriver Holding Sleeve for Screws ø3.5mm
702862 ✔	Screwdriver Holding Sleeve for Screws ø4.5/6.5mm
702417 ✔	Double Drill Guide ø3.2/4.5mm
702418 ✔	Double Drill Guide ø2.5/3.5mm
702876 ✔	Depth Gauge 0-110mm, for Screws ø2.7/3.5/4.0mm, Titanium
702877 ✔	Depth Gauge 0-150mm, for Screws ø4.5/6.5mm,Titanium
702911 ✔	Straight Ball Spike
702912 ✔	Straight Ball Spike, AO Fitting
702923 ✔	Spiked Disk
702427 ✔	T-handle small, AO Quick Coupling
702428 ✔	Small Teardrop-Handle, AO Quick Coupling
702429 ✔	Large Teardrop-Handle, AO Quick Coupling
702915 ✔	Small Sciatic Nerve Retractor
702916 ✔	Large Sciatic Nerve Retractor
390083 ✔	Reduction Pin ø5.0mm L150mm, AO Fitting
390084 ✔	Reduction Pin ø5.0mm L180mm, AO Fitting
900106 ✔	Screw Forceps

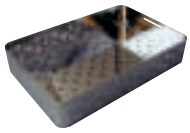
Reference	Description
710312 ✔	Template MPS Flex plate, 8 H
710313 ✔	Template MPS Flex plate, 18 H
710315 ✔	Template MPS Straight plate, 8 H
710316 ✔	Template MPS Straight plate, 18 H
710318 ✔	Template MPS Curved R108 plate, 8 H
710319 ✔	Template MPS Curved R108 plate, 18 H
710321 ✔	Template MPS Curved R88 plate, 8 H
710322 ✔	Template MPS Curved R88 plate, 18 H
702902 ✔	Bending Iron for Pelvic plates
702903 ✔	Bending Plier
702921 ✔	Small Repositioning Forceps, type Matta
702922 ✔	Large Repositioning Forceps, type Matta
702924 ✔	Repositioning Forceps for Screws ø4.5mm
702925 ✔	Repositioning Forceps for Screws ø3.5mm, Right
702947 ✔	Repositioning Forceps for Screws ø3.5mm, Left
702926 ✔	Small Reduction Forceps with Points L130mm
702927 ✔	Large Reduction Forceps with Points L200mm
702928 ✔	Faraboef Forceps L190mm
702929 ✔	Faraboef Forceps L250mm
702930 ✔	Repositioning Forceps, 2x1 Jaws
702948 ✔	Repositioning Forceps, 1x1 Jaws
702932 ✔	Repositioning Forceps with Serrated Jaws L140mm
700641 ✔	Modified Verbrugge Forceps
700647 ✔	Curved Chisel

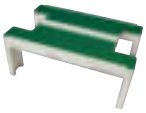
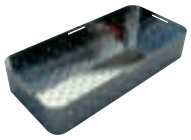
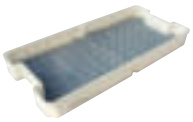
Optional Instruments

390086	Reduction Pin ø6.0mm x 150mm, AO Fitting
390087	Reduction Pin ø6.0mm x 180mm, AO Fitting
700367	Large T-Handle, AO Quick Coupling
702845	Screwdriver Hex. 2.5mm, L280, with Canevasit Handle
702846	Screwdriver Hex. 3.5mm, L300, with Canevasit Handle
702847	Straight Ball Spike L300mm, with Canevasit Handle
702848	Canevasit Handle Small, AO Coupling
702849	Canevasit Handle Large, AO Coupling
710311	Template MPS Flex plate, 5 H
710314	Template MPS Straight plate, 5 H
710317	Template MPS Curved R108 plate, 5 H
710320	Template MPS Curved R88 plate, 5 H

✔ Recommended set item

Ordering Information – Cases and Trays

	REF	Description
	**901557 ✔** **901557 ✔**	**Plastic Base (Implant Case Plates)** **Plastic Base (Implant Case Screws)**
	901591 901591	Metal Base Optional (Implant Case Plates) Metal Base Optional (Implant Case Screws)
	**901681 ✔**	**Plastic Lid (Implant Case Plates)**
	**901682 ✔**	**Tray Insert (Implant Case Plates)**
	**901683 ✔**	**Rack with Lid # 1** **(Implant Case Plates)**
	**901684 ✔**	**Rack with Lid # 2** **(Implant Case Plates)**
	**901685 ✔**	**Plastic Lid (Implant Case Screws)**

	REF	Description
	**901686 ✔**	**Screw Rack with Lids** **(Implant Case Screws)**
	**901618 ✔**	**Plastic Base (Basic Instruments)**
	901619	Metal Base Optional (Basic Instruments)
	**901687 ✔**	**Plastic Lid (Basic Instruments)**
	**901688 ✔**	**Upper Tray Insert** **(Basic Instruments)**
	**901689 ✔**	**Lower Tray Insert** **(Basic Instruments)**
	**901690 ✔**	**Plastic Base** **(Reduction Instruments)**
	**901691 ✔**	**Plastic Lid** **(Reduction Instruments)**

✔ Recommended set item

Additional Information

Plate Bending

It is necessary to correctly shape the plate in such a way as to perfectly apply it to the reduced contour of the pelvis or the acetabulum.

The fitting of the plate on the bony surface should be as perfect as possible so the insertion of screws will not cause the fragments to change position (Figure 1).

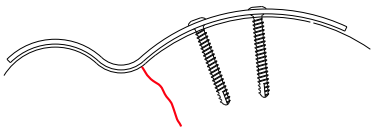


Figure 1 – Correct

Correct

Precise fitting of the plate. No danger of displacement of the fragments during screw insertion.

During plating and screw insertion, it is always the bone which is drawn towards the plate, not the plate towards the bone (Figure 2).

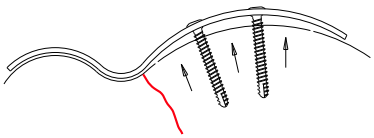


Figure 2 – Incorrect

Incorrect

When tightening the screws, the fragment will be drawn towards the plate.

In certain instances it is desirable to contour the plate to a slight mismatch with the bone. Subsequent insertion and tightening of the screws causes the plate to manipulate the bone, therefore aiding to obtain or maintain the reduction.

For a plate to apply perfectly on a bone, it must be possible to shape it in all directions:

- bend it along it's main axis (Figure 3a, 3b)
- bend it along it's main axis (twist), to give it an helicoidal shape (Figure 4a, 4b)
- bend it "on the flat" to adapt to the curves of the iliac crest or the upper aspect of the pelvic brim, or to make it possible to span a fragment of the posterior wall or posterosuperior wall along it's major axis (Figure 5a, 5b).

This type of bending should always be performed first since it is very difficult to bend the plate in this fashion after a main axis bend or twist has been made.

Figure 3a

Figure 4a

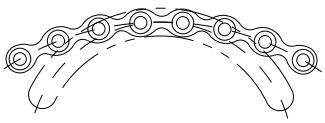


Figure 5a

Figure 3b

Figure 4b

Figure 5b

It's an important fact that the plate must be bent, as far as possible, in the spaces between the holes, so as to alter them as little as possible (Figure 6). It is a well known fact that rectangular plates do not bend in a regular fashion but rather at the level of their holes (Figure 7). Thus Sherman type plates with equal hole spacing and narrowing between the holes, are best adapted to such shaping and allow for a perfect adaptation to the pelvic contours.

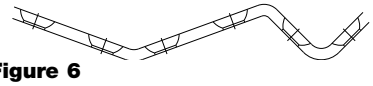


Figure 6

Figure 7

Additional Information

Other Stryker Plating Systems

Small Fragment Set

This system offers Clinicians multiple options for the most common treatments of small bone fractures.

A wide selection of plates, each featuring K-wire holes – for improved primary stabilisation; rounded plate ends – to facilitate the option of subcutaneous plate insertion; uniform hole spacing with bi-directional holes offering increased screw angulation; as well as the unique outer plate contouring are all features of the implant set.

A comprehensive screw range is enhanced not only by a new self-cutting design but by the inclusion of a small range of 2.7mm screws for independent interfragmentary screw fixation obviating the need for an additional screw set.

A full range of instrumentation is complimented by the unique range of reduction clamps and forceps. These non-standardised instruments offer the Clinician new possibilities in their approach to small bone fracture reduction and fixation.

Featuring:

Modular Case design
2.7mm cortical screws – self tapping
3.5mm cortical screws – self tapping
4.0mm cancellous screws – Partial thread
4.0mm cancellous screws – Full thread
Drill, Taps, Countersink – AO couplings
3 diameters of K-wires
Modular and Fixed Angle Drill Guides
Compression plate
Reconstruction plate
1/3rd Tubular plate
Cloverleaf plate
T-plate
Oblique T-plate
Calcaneal plate
Elastosil® Handles
Combined Hook and Ball Spike
Combined Periosteal and Freer Elevator
Hohmann Retractors
Bending Irons and Templates
Optional Bending Plier
Forceps

Basic Fragment Set

This System offers Clinicians multiple options for the most common treatments of long-bone fractures.

A new selection of seven plates, each featuring K-wire and reduction holes – for improved primary stabilisation; rounded plate ends – to facilitate the option of subcutaneous plate insertion; uniform hole spacing with bi-directional holes offering increased screw angulation; as well as the unique outer plate contouring are all features of the implant set.

A comprehensive screw range is enhanced by a self-cutting design. A full range of instrumentation is complemented by the unique range of reduction clamps and forceps. These non-standardised instruments offer the Clinician new possibilities in their approach to large-bone fracture reduction and fixation.

Featuring:

Modular Case design
4.5mm cortical screws – self tapping
6.5mm cancellous screws – 16mm thread
6.5mm cancellous screws – 32mm thread
6.5mm cancellous screws – Full thread
Drill, Taps, Countersink – AO couplings
2 Diameters of K-wires
Modular and Fixed Angle Drill Guides
Compression plate – Broad
Compression plate – Narrow
T-plate
T-Buttress plate
L-Buttress plate
Reconstruction plate
Elastosil® Handles on all fixed handle instruments
Combined Hook and Ball Spike
Combined Periosteal and Freer Elevator
Hohmann Retractors
Bending Irons and Templates
Optional Table Plate Bender Plier
Forceps

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