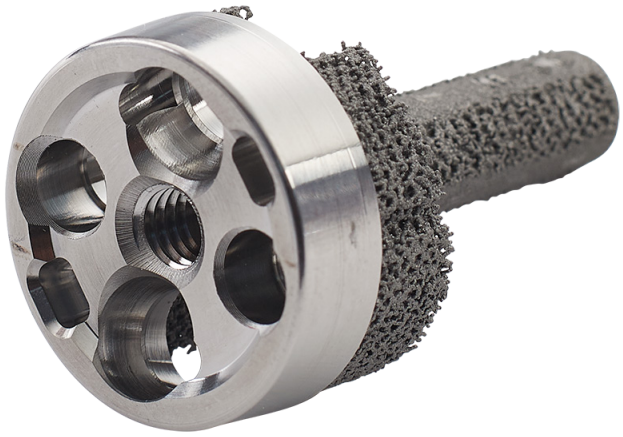
stryker

Tornier Perform®

Patient-Matched

Primary Reversed Glenoid



Operative technique

This publication sets forth detailed recommended procedures for using Stryker devices and instruments. It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

Important

- The patient should be advised that the device cannot and does not replicate a normal healthy bone, that the device can break or become damaged as a result of strenuous activity or trauma and that the device has a finite expected service life.
- Removal or revision of the device may be required sometime in the future.
- Cleaning and sterilization information is provided in the applicable instructions for use.
- Non-sterile devices, including implants and instruments, must be cleaned and sterilized prior to use, in accordance with validated methods.
- Devices that are able to be disassembled should be disassembled prior to point-of-use processing. Additionally, devices with movable components that do not facilitate disassembly should be manually articulated during the point-of-use processing step in order to evacuate additional soils.
- Please remember that the compatibility of different product systems has not been tested unless specified otherwise in the product labeling.
- Consult Instructions for Use (https://ifu.stryker.com) for a complete list of potential adverse effects and adverse events, contraindications, warnings and precautions.
- The surgeon must advise patients of surgical risks, and make them aware of adverse effects and alternative treatments.
- An implant whose packaging is open or damaged or whose expiration date has passed must not be used. Every precaution must be taken to ensure sterility when opening the packaging of the implant and during implantation.

Tornier Perform
Patient-Matched Primary Reversed Glenoid

Contents

Overview

The Tornier Perform Patient-Matched Primary Reversed Glenoid (Perform Patient-Matched Glenoid) is designed to replace the shoulder joint in order to relieve pain and to improve mobility in relation to the preoperative state of health. Blueprint 3D Planning Software is utilized to visualize the native glenoid anatomy in 3-dimensional space and perform a virtual implantation. Blueprint allows the surgeon to virtually position and execute the plan of the Perform Patient-Matched Glenoid. When planning is complete, an order is generated for the Perform Patient-Matched Glenoid and patient-specific instrumentation (PSI).

The Perform Patient-Matched Glenoid is available in a centered (15 mm, 25 mm, 35 mm post length) or offset (25 mm and 35 mm post length) press-fit post design. The patient-matched augmentation utilizes Adaptis technology and is contoured to the face of the native glenoid based on the preoperative plan.

The Perform Patient-Matched Glenoid must be used in association with a Tornier humeral component:*

- Humeral implants Aequalis Reversed,
- Or humeral implants Tornier Flex Shoulder System, Aequalis Flex Revive, and Tornier Perform Humeral System – Stem in reverse configuration

The Tornier shoulder prostheses are designed for replacement of the shoulder joint to reduce pain and improve shoulder mobility for patients with a variety of disabling conditions.

*Not all glenoid and humeral components are available in all geographies.

Indications and contraindications

Indications

The Tornier Perform Patient-Matched Primary Reversed Glenoid is indicated for use as a replacement of shoulder joints for patients with a functional deltoid muscle and with massive and non-repairable rotator cuff-tear with pain disabled by:

- Rheumatoid arthritis
- Non-inflammatory degenerative joint disease (i.e., osteoarthritis and avascular necrosis)
- Correction of functional deformity
- Fractures of the humeral head
- Traumatic arthritis
- Revision of glenohumeral joint if sufficient native glenoid bone remains

All components are single use.

The Patient-Matched Glenoid implant is anchored to the bone with screws and is for non-cemented fixation.

Note:
A CT Scan is used to create the Tornier Perform Patient-Matched Primary Reversed Glenoid implant.

Contraindications

Absolute contraindications for shoulder arthroplasty:

- Poor quality and insufficient quantity of glenoid bone stock
- Pre or per-operative glenoid fracture
- Acromion fracture
- Non-functional deltoid
- Active local or systemic infection, sepsis and osteomyelitis
- Elevation of sedimentation rate unexplained by other disease, elevation of wbc count, or marked shift in wbc differential count
- Use of this implant is contraindicated in the presence of significant injury to the upper brachial plexus
- Paralysis of the axillary nerve
- Neuromuscular disease (e.g., joint neuropathy)
- Known allergy to one of the materials
- Patient pregnancy

Relative contraindications for shoulder arthroplasty:

- Uncooperative patient or patient with neurologic disorders who are not capable of following directions
- Osteoporosis
- Metabolic disorders which may impair bone formation
- Osteomalacia
- Distant foci of infection from genitourinary, pulmonary, skin, and other sites, dental focus infection which may cause hematogenous spread to the implant site. The foci of infection should be treated prior to, during and after implantation.
- Rapid joint destruction, marked bone loss or bone resorption apparent on roentgenogram

Ordering

Pre-operative planning

Following the acquisition of a compatible CT (refer to the Blueprint scan protocol), launch the Blueprint 3D Planning Software, and plan a new case by loading the CT scan (in DICOM format) through the Blueprint cloud.

Blueprint 3D planning provides pre-operative glenoid measurements in order to identify glenoid wear patterns, humeral head subluxation and migration, and evaluation of bone stock. Select and place the glenoid component in order to get an appropriate position within the three displayed views of the scapula. Select the Perform Patient-Matched Glenoid via the 'implant' menu.

Positioning is defined by adjusting the following parameters:

- Version
- Inclination
- Position (antero-posterior, supero-inferior, implant rotation)
- Medialization or lateralization

Once the reverse baseplate orientation and position has been completed, click 'compute augment'. The patient-matched augment will be visualized in green within the Blueprint 3D Planning Software.

Note:
The following conditions must be respected when planning a Perform Patient-Matched Glenoid within the Blueprint 3D Planning Software:

- **Minimum post engagement in the glenoid vault of 10 mm**
- **Baseplate orientation results in no glenoid reaming**
- **Baseplate orientation results in the eccentric boss being contained within the patient-matched augment (+3 mm offset glenoid only)**
- **Computed patient-matched augment is within the maximum allowable design parameters**

If any of the above conditions are not respected, warnings will be noted in the Blueprint 3D Planning Software.

Following the visualization of the patient-matched augmentation, review the planned peripheral screw trajectories. Each peripheral screw is color coded within the Blueprint 3D Planning Software. Note the orientation of the peripheral screws in relation to the glenoid rim, as placement of peripheral screws near the glenoid rim may increase the potential risk of glenoid fracture. If modifications to the glenoid orientation are necessary, reposition the glenoid, and click 'compute augment' to recalculate the patient-matched augment.

Ordering

PSI guide creation and order review

When the reversed glenoid implant position is finalized, select the green 'finalize plan' button in the lower right hand corner of the user interface (Figure 1).

Figure 1

To complete the guide design, choose four different points on the edge of the glenoid (Figure 2). These points will establish the position of the feet of the PSI guide. One point needs to be on the posterior part of the glenoid fossa and three points on the anterior part of the glenoid fossa. The rotational alignment hole will be located within the anterior-superior quadrant. Orientation of the rotational alignment hole may change slightly depending upon the rotation of the reversed glenoid.

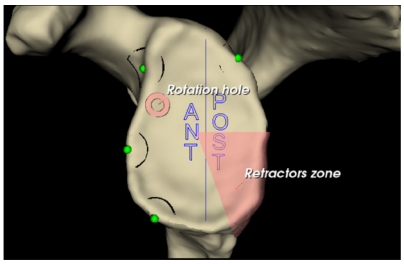


Figure 2

Note:
Select the points on the edge of the glenoid to avoid position of retractors within desired surgical approach.

A 3D PSI guide will be generated automatically based on the planning previously performed and the four selected points (Figure 3). Following successful guide generation, click 'confirm guide'.

Within the 'review Blueprint order' screen, identify the surgical facility and planned surgery date. Following the selection of 'save as final plan and order PM parts,' the software will generate a planning report including a summary of parameters and specifications for the Perform Patient-Matched Glenoid and PSI guide.

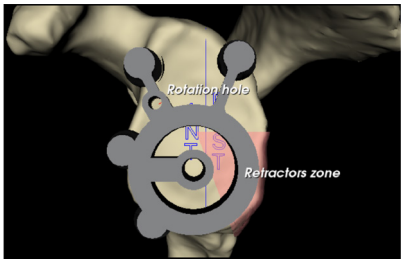


Figure 3

Note:
When attempting to order a Perform Patient-Matched Glenoid and PSI guide, the computer must be connected to the Internet.

All planned cases and Perform Patient-Matched Glenoid and PSI guide cases can be reviewed and managed via the surgeon portal (https://oms.tornierblueprint.com).

Operative technique

Glenoid exposure and cartilage removal

Exposure of the glenoid is one of the more technically difficult aspects of shoulder arthroplasty. The size of the patient, soft tissue contractures, bony morphology, and the sequelae of previous surgeries are some of the potential challenges for adequate exposure. A thorough understanding of the neuroanatomy and techniques for protecting the axillary nerve, in particular, are routinely used to achieve successful exposure.

In brief, a standard deltopectoral approach is typically used with retraction of the deltoid laterally and pectoralis and conjoined tendon medially. A superior approach may also be utilized. Humeral exposure is performed per surgeon preference with appropriate subscapularis techniques and humeral head resection. The proximal humerus is then retracted posteriorly and access to the glenoid is gained. Residual labral tissue is completely excised, clearing the glenoid rim to allow for accurate registration of the PSI guide. The biceps tendon is released, and the capsule is released from the anterior, inferior, and posterior glenoid. Utilize the glenoid scraper to remove any remaining articular cartilage from the native glenoid (Figure 4).

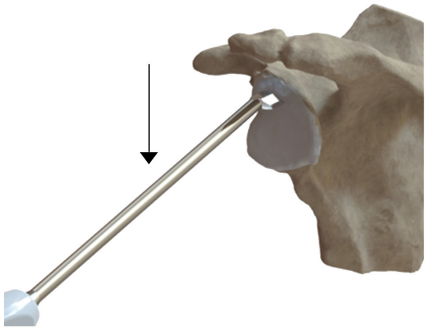


Figure 4

Note:
Prior to proceeding to PSI guide assembly, visually confirm that the residual labrum and any remaining articular cartilage has been removed to allow for proper registration of the PSI guide.

Special attention is given for protection of the axillary nerve inferiorly. Appropriate glenoid retractors are then inserted and additional exposure techniques can then be used as needed. Please reference the Approach shoulder arthroplasty program for additional details.

Operative technique

PSI guide assembly

The case identification (anonymous patient specific tracking information) is etched on the PSI guide (Figure 5).

Insert the pin guide into the central hole on the PSI guide and give a quarter turn to secure the assembly (Figure 6).

Note:
The pin guide features a morse taper style press-fit design which fits in the central hole on the PSI guide.

Figure 5

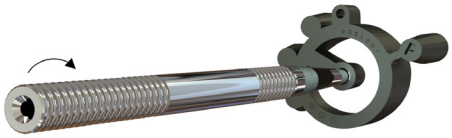


Figure 6

Operative technique

Registration of the PSI guide

The PSI guide matches the patient's native glenoid. The PSI guide includes peripheral feet that register on the glenoid rim, as well as a central augment ring that contours to the face of the native glenoid based on the preoperative plan. Osteophytes must be kept in order to ensure an accurate registration of the guide. It is essential that the glenoid be clear of any soft tissues such as cartilage and labrum prior to registration of the PSI guide on the patient's native glenoid.

Figure 7

The surgeon may use the PSI guide with the glenoid bone model to compare the fit to the glenoid (Figure 7).

The feet of the PSI guide match the landmarks chosen previously by the surgeon during the final guide generation process. Careful review of the patient-matched augment should be completed with a freer. If gaps are noted between the patient-matched augment and the native glenoid, additional soft-tissue or cartilage removal should be completed in order to obtain a full registration with the glenoid.

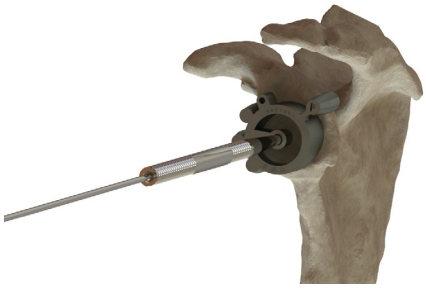


Figure 8

Once the PSI guide has been registered with the native glenoid, slide a 2.5 mm pin into the pin guide and drill the 2.5 mm pin into the glenoid (Figure 8).

Note:
Drilling the 2.5 mm sterile pin into the pin guide will stabilize the PSI guide prior to drilling the rotational alignment pin.

Insert a 2.5 mm pin into the rotational alignment hole and drill to a depth of 5 mm. Following the placement of the 2.5 mm pin into the rotational alignment hole, the PSI guide can be removed (Figure 9).

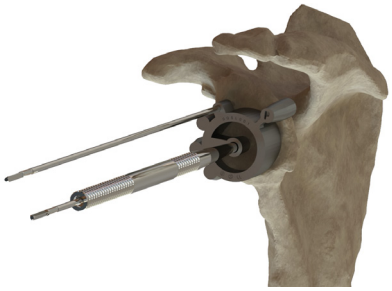


Figure 9

Operative technique

Drilling for reversed glenoid post

Drilling of the glenoid post is performed under power using the baseplate post drill (7.8 mm), leveraging the central pin placed with the PSI guide. Near the cutting edge of the baseplate post drill, each post length (15 mm, 25 mm, and 35 mm) are identified with a laser etch (Figure 10). Reference the manufactured post length of the Perform Patient-Matched Glenoid to define drilling depth. Drill until the laser etch (for the identified implant post length) is flush with the glenoid face.

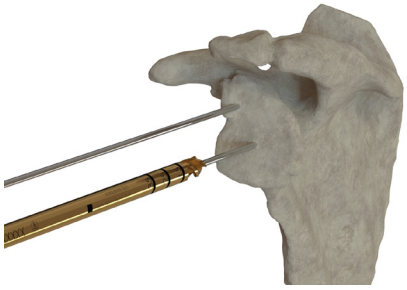


Figure 10

Note:
The baseplate post drill (7.8 mm) has a titanium nitride coating, which results in a gold appearance.

If clinically needed, the glenoid post press-fit can be reduced by utilizing either the baseplate chamfer drill or baseplate post drill (8.6 mm). Both the baseplate chamfer drill and baseplate post drill (8.6 mm) are compatible with the central pin placed with the PSI guide for drilling.

Following completion of the glenoid post preparation, remove the central pin placed with the PSI guide.

Bone type	Post drill recommendations		
	15 mm post	25 mm post	35 mm post
Normal or soft bone (examples: rheumatoid arthritis, massive rotator cuff tear)	1 7.8 mm	1 7.8 mm	1 7.8 mm 2 Chamfer ⚠
Hard bone (examples: sclerotic bone, osteoarthritis, E3 glenoid)	1 7.8 mm 2 Chamfer ⚠	1 7.8 mm 2 Chamfer ⚠	1 7.8 mm 2 8.6 mm ⚠
⚠ Sequential drilling as clinically needed			

Note:
Press-fit for each baseplate post drill

- **Baseplate post drill (7.8 mm): 0.8 mm diametric press-fit**
- **Baseplate post drill (8.6 mm): no press-fit if drilled to corresponding manufactured post length**
- **Baseplate chamfer drill: no press-fit for initial 10 mm of post engagement**

Operative technique

Baseplate insertion

Loosen the inner shaft of the baseplate inserter. Ensure that the inner shaft of the baseplate inserter is backed out to the point where it moves freely within the outer sleeve yet is still contained. Slide the alignment guide onto the baseplate inserter (Figure 11).

Figure 11

While lining up the pegs on the baseplate inserter with the peg holes in the Perform Patient-Matched Glenoid, snap the baseplate inserter into the glenoid (Figure 12).

On the Perform Patient-Matched Glenoid, identify the orientation of the rotational alignment mark within the porous structure, adjust the alignment guide so the sight is in line with the rotational alignment mark in the porous structure (Figure 13).

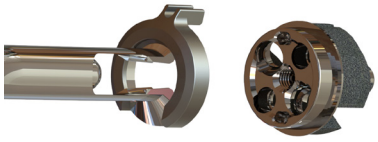


Figure 12

Screw the inner shaft down the sleeve to capture the Perform Patient-Matched Glenoid and alignment guide into the baseplate inserter. Care should be taken to ensure that the two pegs on the inserter seat properly into their respective holes on the baseplate (Figure 14) as well as the sight on the alignment guide remains in line with the rotational alignment mark in the porous structure.

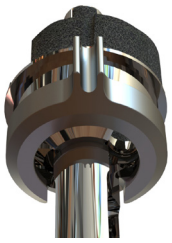


Figure 13

Figure 14

Operative technique

Prior to implantation, fit the Perform Patient-Matched Glenoid with the glenoid bone model. Orient the sight on the alignment guide with the rotational alignment mark in the glenoid bone model (Figure 15). Once rotational alignment has been confirmed, visually inspect the peripheral seating of the patient-matched augmentation with the glenoid bone model to confirm conformity.

Note:
Prior to implantation of the Perform Patient-Matched Glenoid, ensure the central pin placed with the PSI guide has been removed.

Figure 15

Referencing the previously identified rotational alignment from the glenoid bone model, place the tip of the Perform Patient-Matched Glenoid post into the prepared baseplate post hole, orienting the sight of the alignment guide with the previously drilled 2.5 mm rotational alignment pin in the native glenoid (Figure 16). Once rotational alignment is confirmed, gently impact the baseplate into the glenoid with a mallet until it is fully seated against the surface. Once the patient-matched glenoid is seated flush on the glenoid surface, the baseplate inserter can be detached from the baseplate and the 2.5 mm rotational alignment pin can be removed.

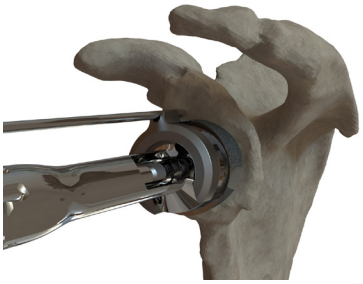


Figure 16

Note:
The Perform Patient-Matched Glenoid should be completely seated onto the native glenoid. Any gaps between the Perform Patient-Matched Glenoid and the native glenoid should be avoided.

Operative technique

Peripheral screw drilling and insertion

Once the baseplate is implanted, the four peripheral holes are prepared using the 3.2 mm diameter drill bit and the peripheral screw drill guide (Figure 17).

The centered post glenoid contains two fixed angle compression and two multidirectional locking screws. The direction of the drill axis is chosen by free orientation of the drill guide.

The offset post glenoid contains two fixed angle compression and two fixed angle locking screws.

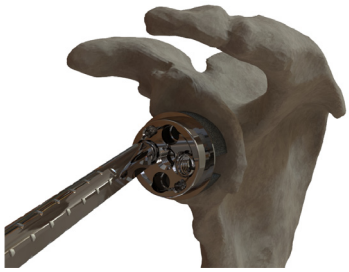


Figure 17

Perform Patient-Matched Glenoid peripheral screw angulation

Baseplate	Locking screws	Compression screws
	Divergence	Divergence
Centered post	0 – 25°	3°
Offset post	0°	3°

The 3.2 mm diameter drill bit is passed through the guide and the hole is drilled bicortically. It is desirable to have the superior screw in the base of the coracoid and the inferior screw in the pillar of the scapula, where the best bone fixation of the screws can be achieved.

For the centered post glenoid, it is important to avoid angling the drill guide and drill too close to the post in order to avoid any damage to the post and compromising fixation. The screw length can be read directly form the end of the peripheral screw drill guide (Figure 18).

Figure 18

Operative technique

Measure the depth of the drilled peripheral screw hole using the peripheral screw depth gauge (Figure 19). The length of the peripheral screw is matched with the number that appears on the depth gauge. If the measurement falls below a number choose the screw length below the line.

The peripheral screws act as both locking and compression screws and therefore may go in the fixed angle or multidirectional prepared holes. After measuring each hole, attach the peripheral screwdriver bit onto the ratcheting screwdriver handle (the baseplate inserter screwdriver can also be used at this step). The peripheral screws are inserted into the drilled holes and hand tightened (Figure 20).

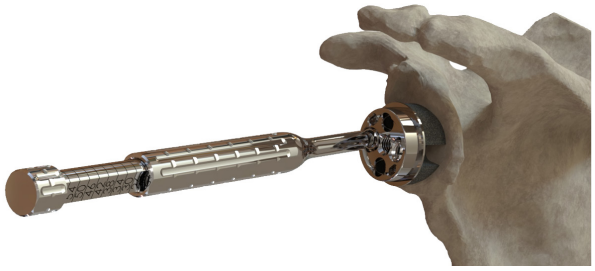


Figure 19

Note:
Due to the variability in the patient-matched porous augmentation, the below minimum peripheral screw lengths should be used based upon the maximum augment thickness. The maximum augment thickness is identified within the approved Blueprint Planning Report.

Maximum augment thickness (mm)	Minimum peripheral screw length (mm)
Less than 5 mm	26 mm
Between 5 mm–10 mm	30 mm
Greater than 10 mm	34 mm

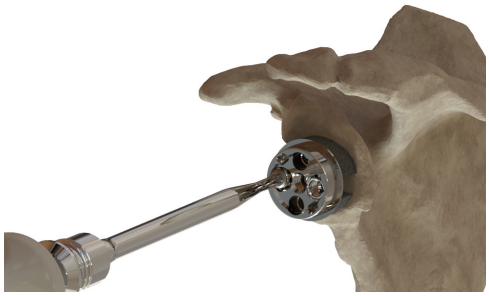


Figure 20

The baseplate implantation is finalized once all screws are seated (Figure 21).

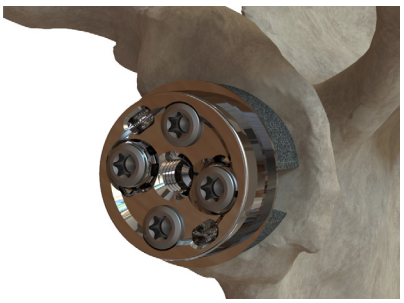


Figure 21

Operative technique

Peripheral reaming

The peripheral reamer associated with the corresponding diameter of the intended glenosphere is attached to a T-handle. Do not use these reamers under power.

Reaming with the peripheral reamers must be kept perpendicular to the face of the baseplate (Figure 22). The pilot tip on the reamer is carefully inserted into the central hole of the baseplate in alignment with the center axis of the baseplate. Manual reaming is performed using a back and forth sweeping motion (Figure 23). Reaming should be controlled, being careful not to ream too aggressively and cause glenoid fracture.

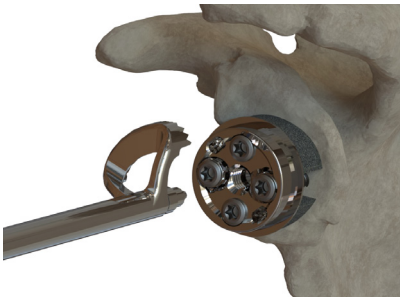


Figure 22

Glenosphere trialing

Glenosphere trials are available for trialing of the Perform Patient-Matched Glenoid with the humeral components. Place the desired size glenosphere onto the baseplate and tighten the screw with the baseplate inserter screwdriver (Figure 24).

Glenospheres are available in 36 mm, 39 mm, and 42 mm diameters, in the following configurations:

a) Centered glenospheres (standard)

b) Inferior offset eccentric glenosphere (+2 for the 36 mm; +3 for the 39 mm, and +4 for the 42 mm)

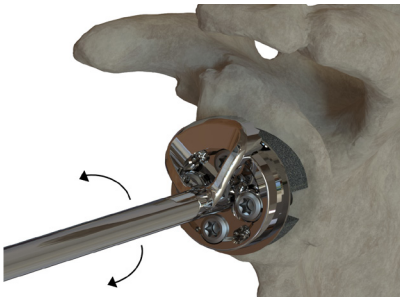


Figure 23

Note:
The Tornier Perform Reversed glenosphere and Perform Patient-Matched Glenoid configuration chart can be referenced on page 19.

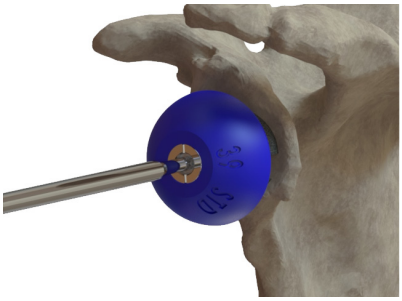


Figure 24

Operative technique

Final implantation

Once the desired sphere is chosen, the final implantation can be performed. Prior to positioning the definitive glenosphere, it is important to remove any soft tissue between the baseplate and the glenosphere.

Attach the peripheral screwdriver bit to the ratcheting screwdriver handle. Insert the T20 driver tip and engage the locking screw captured in the glenosphere, turn it counterclockwise until it stops.

Assemble the glenosphere impactor tip onto the impactor handle from the humeral instrument set.

Sphere insertion – screwdriver bit and ratcheting screwdriver handle

Using the ratcheting screwdriver handle and peripheral screwdriver bit, engage the locking screw captured in the glenosphere. Place the glenosphere onto the baseplate using the screwdriver (Figure 25), engaging the morse taper. Do not impact the ratcheting screwdriver handle and peripheral screwdriver bit.

Figure 25

Sphere insertion – cannulated glenosphere inserter*

On the handle of the cannulated glenosphere inserter, depress and lock the thumb slide to extend the glenosphere tip. Engage the glenosphere tip of the cannulated glenosphere inserter into the captured screw opening on the glenosphere (Figure 26A). Pass the nitinol guide wire through the cannulated glenosphere inserter, extending the nitinol guide wire out the backside of the glenosphere (Figure 26B). Once the nitinol guide wire has passed out the backside of the glenosphere, the glenosphere is locked onto the cannulated glenosphere inserter. Unlock the thumb slide on the cannulated glenosphere inserter (Figure 26C).

Note:
To ensure that the articulating surface is not damaged during assembly, avoid contact between the glenosphere inserter tip and the glenosphere articulating surface.

Figure 26A, Figure 26B, Figure 26C

*Cannulated glenospheres and instrumentation not available in all geographies.

Operative technique

Engage the nitinol guide wire into the central feature in the baseplate. Slide the glenosphere down the nitinol guide wire towards the baseplate, engaging the morse taper (Figure 27). Remove the nitinol guide wire and lightly strike the impaction surface of the cannulated glenosphere inserter to initiate engagement of the morse taper. Move the thumb slide towards the impaction surface of the cannulated glenosphere inserter to disengage the glenosphere tip.

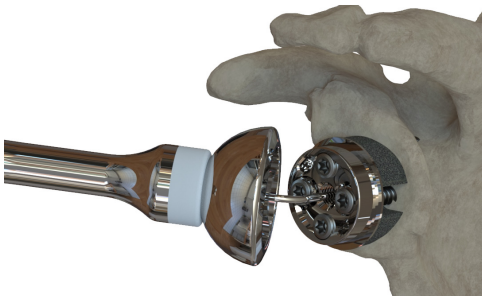


Figure 27

Sphere impaction

The glenosphere is then impacted onto the morse taper of the glenoid baseplate with the glenosphere impactor assembly (Figure 28). There will be a minimum of a 2 mm gap between the glenoid face and the glenosphere; the circumferential clearance may vary based on the patient-matched augment thickness.

The fixation of the assembly is visually checked to ensure that no soft tissue is present between the baseplate and the glenosphere. Once impacted, secure the assembly by tightening the glenosphere locking screw clockwise with the ratcheting screwdriver handle and peripheral screwdriver bit. Increased resistance will be felt when engaging the spring lock washer in the glenosphere. Continue tightening until the glenosphere central locking screw is fully seated using hand pressure only.

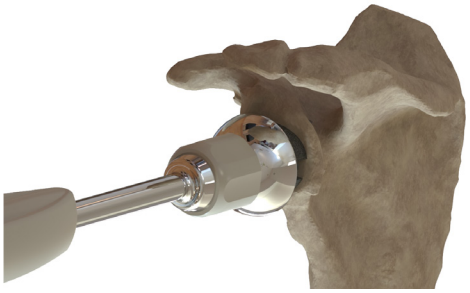


Figure 28

Transitioning to an off-the-shelf reversed glenoid

In the rare event that the Perform Patient-Matched Glenoid cannot be utilized (i.e. contamination), utilize the below techniques as a transition to an off-the-shelf reversed glenoid.

Reversed glenoid post drill completed

Open the sterile disposable transition guide pin, load the transition guide pin into the cannulated reamer handle (Figure 29). Place the bullet-tip end into the previously drilled baseplate post. Confirm the bullet-tip of the transition guide pin is fully seated into the previously drilled baseplate post (Figure 30). If unable to fully seat the bullet-tip of the transition guide pin, utilize the chamfer drill or the baseplate post drill (8.6 mm) to a depth of 15 mm to enlarge the previously drilled baseplate post. Using the bullet-tip of the transition guide pin as a cannulated guide, complete the remaining glenoid bone preparation and final implantation procedural steps, referencing the Tornier Perform Reversed or Tornier Perform Reversed Augmented glenoid surgical techniques.

Figure 29

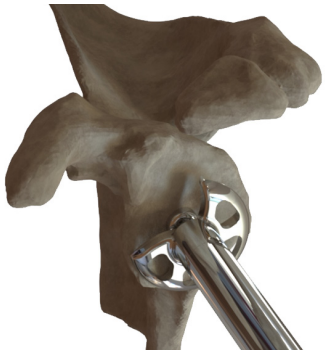


Figure 30

Native glenoid

Reference the Tornier Perform Reversed or Tornier Perform Reversed Augmented glenoid surgical techniques for the glenoid bone preparation and final implant procedural steps.

Reversed glenoid revision

Glenosphere and peripheral screw removal

Please refer to the following steps if removal of the implants is necessary.

After exposing the glenosphere, attach the peripheral screwdriver bit to the ratcheting screwdriver handle. Insert the screwdriver bit into the screw on the glenosphere and turn counterclockwise (Figure 31). Unscrew the locking screw until it backs out completely to ensure that it is not engaged to the baseplate. When doing this, it is suggested to apply slight downward pressure on the locking screw and continue to unscrew until you feel the locking screw clicking. This ensures that the screw is fully backed out of the baseplate.

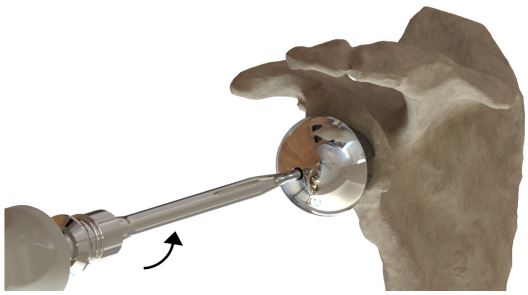


Figure 31

To remove the glenosphere from the baseplate, make sure the glenosphere extractor has the inner shaft backed out completely. Insert the tip of the extractor into the central screw hole on the glenosphere at a slight angle to ensure ease of insertion (Figure 32). Once the tip of the extractor has been inserted into the hole of the glenosphere, angle the extractor so that it becomes axially aligned with the implants. Staying parallel with the glenosphere central screw, begin to thread down the inner shaft of the glenosphere extractor by turning the knob in a clockwise motion. The glenosphere will then be released from the baseplate (Figure 33).

Figure 32

Note:
Do not use impaction force with the glenosphere extractor.

If the glenosphere does not remove on the first attempt, remove the extractor, check to ensure that the locking screw is fully backed out of the baseplate.

To remove the peripheral screws from the baseplate, attach the peripheral screwdriver bit to the ratcheting screwdriver handle. Remove each screw one at a time.

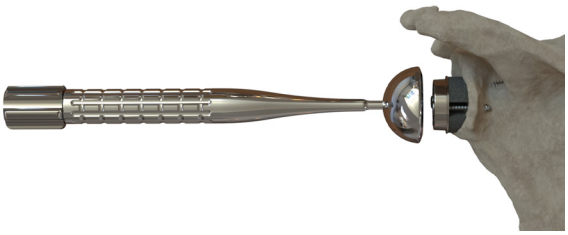


Figure 33

Reversed glenoid revision

Reversed glenoid loosening and removal

To loosen the baseplate from the glenoid, attach a disposable 1.5" or 3" flat osteotome to the osteotome handle. These instruments are included within the Aequalis shoulder extraction instrumentation. Lightly impact the flat osteotome through the peripheral screw holes within the baseplate, breaking the bond between the native glenoid and the press-fit post (Figure 34). If the glenoid is still well fixed, lightly impact the flat osteotome around the periphery of the glenoid to break the bond between the native glenoid and the patient-matched augmentation.

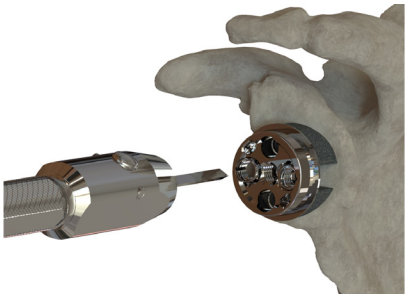


Figure 34

Centered post glenoid

For the centered post glenoid, attach the baseplate revision tool to a T-handle. Insert the two pegs on the baseplate revision tool into the opposing peripheral screw holes and turn with hand force only. Turn using a gentle oscillating motion to loosen the baseplate from the glenoid (Figure 35).

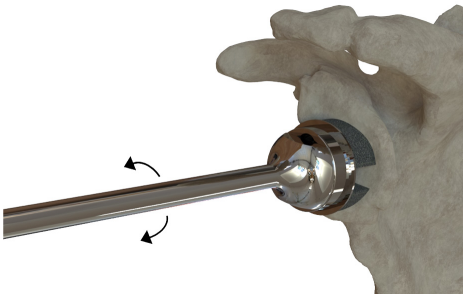


Figure 35

Once the baseplate is loosened from the native glenoid, place the baseplate inserter into the baseplate, lining up the pegs on the baseplate inserter with the peg holes on the baseplate. Screw the inner shaft of the baseplate inserter down to capture the baseplate into the inserter. Care should be taken to ensure that the two pegs on the inserter handle set properly into their respective holes on the implanted baseplate. Slide a narrow osteotome through the hole in the handle of the inner shaft of the baseplate inserter. Lightly strike the narrow osteotome with a mallet to extract the loosened baseplate from the native glenoid (Figure 36).

Offset post glenoid

For the offset post glenoid, attach the baseplate inserter into the baseplate, lining up the pegs of the baseplate inserter with the peg holes on the baseplate. Screw the inner shaft of the baseplate inserter down to capture the baseplate into the inserter. Care should be taken to ensure that the two pegs on the inserter handle set properly into their respective holes on the implanted baseplate. Turn the baseplate inserter using a gentle oscillating motion to loosen the baseplate from the glenoid.

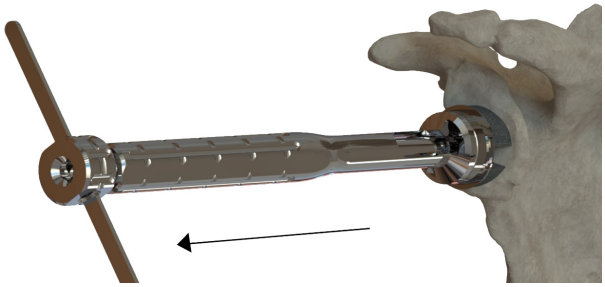


Figure 36

Once the baseplate is loosened from the native glenoid, slide a narrow osteotome through the hole in the handle of the inner shaft of the baseplate inserter. Lightly strike the narrow osteotome with a mallet to extract the loosened baseplate from the native glenoid (Figure 36).

Appendix

The Perform Patient-Matched Glenoid has been designed to be compatible with the Tornier Perform Reversed glenospheres. With the addition of porous titanium on the backside of the baseplate, certain combinations may have the potential to create an impingement with the humeral insert. For more information on the cleared combinations, refer to the configuration chart below. The boxes highlighted in purple indicate that there should be no impingement of the polyethylene insert on the humeral side with the porous titanium on the baseplate.

Tornier Perform Reversed glenosphere and Tornier Perform Patient-Matched Glenoid configuration chart

For the identified humeral systems, all stem sizes are compatible in the below glenosphere and baseplate combinations.

Tornier Flex Shoulder System
Aequalis Flex Revive
Tornier Perform Humeral System

Glenosphere		Baseplate			
		Centered post		Offset post	
		25 mm	29 mm	25 mm	29 mm
Standard	36 mm				
	39 mm				
	42 mm				
Eccentric	36 mm +2 ECC				
	39 mm +3 ECC				
	42 mm +4 ECC				
Lateralized	33 mm +3 LAT				
	36 mm +3 LAT				
	39 mm +3 LAT				
	42 mm +3 LAT				

Cleared combination

Not cleared combination

For the below humeral system, all stem sizes are compatible in the below glenosphere and baseplate combinations.

Aequalis Reversed Humeral Stems

Glenosphere		Baseplate			
		Centered post		Offset post	
		25 mm	29 mm	25 mm	29 mm
Standard	36 mm				
	39 mm				
	42 mm				
Eccentric	36 mm +2 ECC				
	39 mm +3 ECC				
	42 mm +4 ECC				
Lateralized	33 mm +3 LAT				
	36 mm +3 LAT				
	39 mm +3 LAT				
	42 mm +3 LAT				

Cleared combination

Not cleared combination

Implants and Blueprint instrumentation

Perform Patient-Matched Glenoids

Reference	Description
DWJ601	Centered, 25 mm diameter, 15 mm post
DWJ602	Centered, 29 mm diameter, 15 mm post
DWJ603	Centered, 25 mm diameter, 25 mm post
DWJ604	Centered, 29 mm diameter, 25 mm post
DWJ605	+3 mm offset, 25 mm diameter, 25 mm post
DWJ606	+3 mm offset, 29 mm diameter, 25 mm post
DWJ607	Centered, 25 mm diameter, 35 mm post
DWJ608	Centered, 29 mm diameter, 35 mm post
DWJ609	+3 mm offset, 25 mm diameter, 35 mm post
DWJ610	+3 mm offset, 29 mm diameter, 35 mm post

Blueprint guides and bone model

Reference	Description
MWJ005	Blueprint primary reversed glenoid guide, centered, 25 mm diameter
MWJ006	Blueprint primary reversed glenoid guide, centered, 29 mm diameter
MWJ007	Blueprint primary reversed glenoid guide, +3 mm offset, 25 mm diameter
MWJ008	Blueprint primary reversed glenoid guide, +3 mm offset, 29 mm diameter
MWJ015	Blueprint primary reversed bone model

Implants and Blueprint instrumentation

Peripheral screws (non-sterile)

Reference	Description
DWJ314	Peripheral screw 5.0 mm, 14 mm – non-sterile
DWJ318	Peripheral screw 5.0 mm, 18 mm – non-sterile
DWJ322	Peripheral screw 5.0 mm, 22 mm – non-sterile
DWJ326	Peripheral screw 5.0 mm, 26 mm – non-sterile
DWJ330	Peripheral screw 5.0 mm, 30 mm – non-sterile
DWJ334	Peripheral screw 5.0 mm, 34 mm – non-sterile
DWJ338	Peripheral screw 5.0 mm, 38 mm – non-sterile
DWJ342	Peripheral screw 5.0 mm, 42 mm – non-sterile
DWJ346	Peripheral screw 5.0 mm, 46 mm – non-sterile
DWJ350	Peripheral screw 5.0 mm, 50 mm – non-sterile
DWJ354	Peripheral screw 5.0 mm, 54 mm – non-sterile

Glenospheres (CoCr)

Reference	Description
DWJ012	Standard glenosphere, 36 mm
DWJ013	Standard glenosphere, 39 mm
DWJ014	Standard glenosphere, 42 mm
DWJ033	Eccentric glenosphere (+3 mm inferior offset), 39 mm
DWJ034	Eccentric glenosphere (+4 mm inferior offset), 42 mm
DWJ1017301*	Cannulated standard glenosphere, 36 mm
DWJ1017302*	Cannulated standard glenosphere, 39 mm
DWJ1017303*	Cannulated standard glenosphere, 42 mm
DWJ1017702*	Cannulated eccentric glenosphere (+3 mm inferior offset), 39 mm
DWJ1017703*	Cannulated eccentric glenosphere (+4 mm inferior offset), 42 mm

Standard **Eccentric**

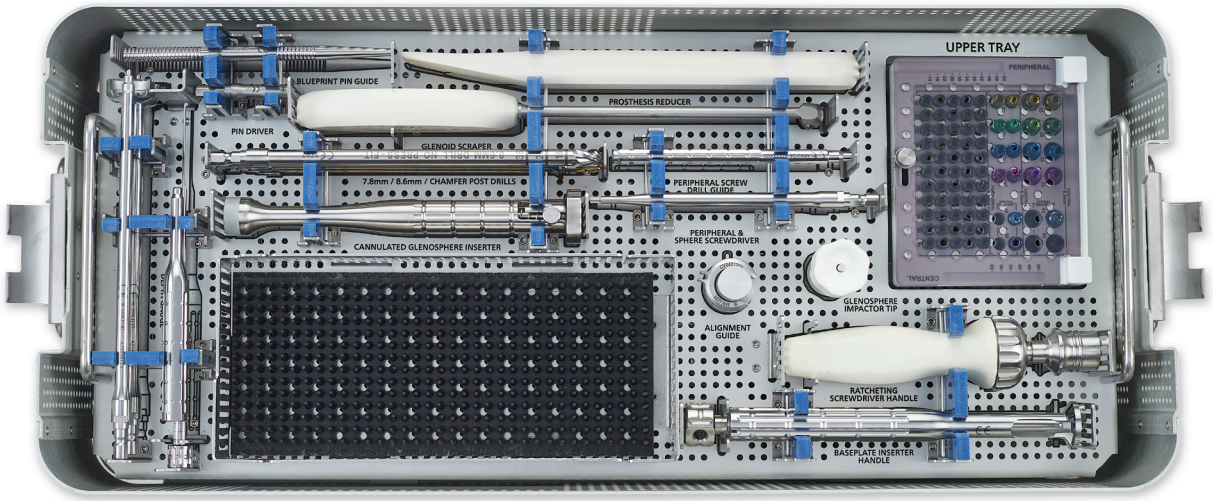
Standard **Eccentric**

Glenospheres (Ti)

Reference	Description
DWJ1017201*	Cannulated Ti standard glenosphere, 36 mm
DWJ1017202*	Cannulated Ti standard glenosphere, 39 mm
DWJ1017203*	Cannulated Ti standard glenosphere, 42 mm

*Not available in all geographies.

Instrumentation

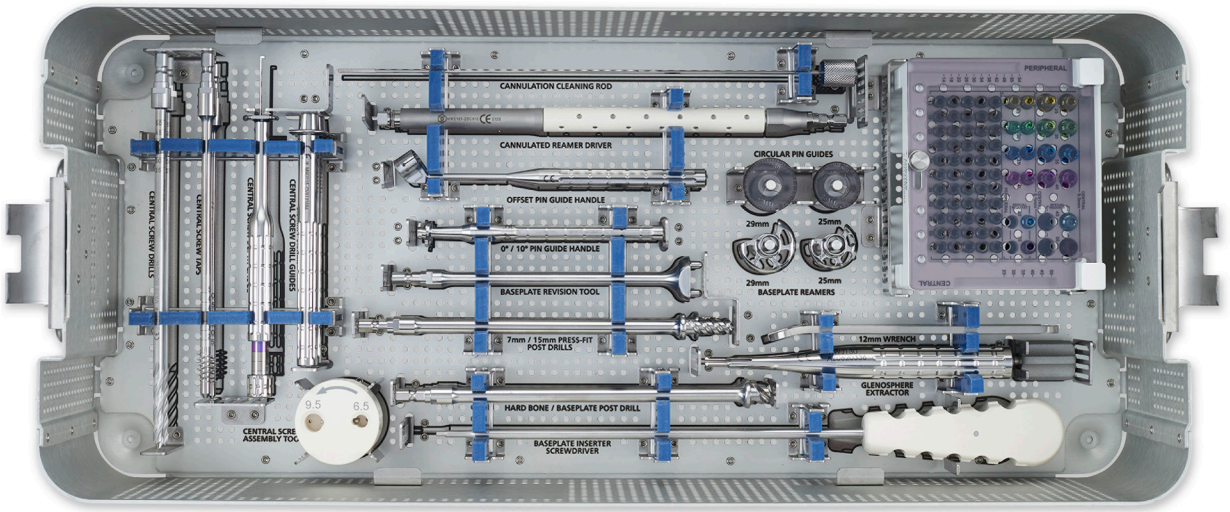


Tornier Perform Glenoid System – reversed core instrument top tray (YKAD301)

Reference	Description
MWJ200	Glenoid scraper
MWJ201	Baseplate post drill, 7.8 mm
MWJ202	Baseplate post drill, 8.6 mm
MWJ203	Baseplate post chamfer drill
MWJ020	Blueprint reusable pin guide
MWJ118	Baseplate inserter handle
MWJ124	Peripheral screw drill guide
MWJ125	Peripheral screw depth gauge
MWJ205	Baseplate inserter alignment guide
MWJ100	Prosthesis reducer slim
MWB253	Pin driver
MWJ127	Peripheral and sphere screwdriver bit, T20
MWJ128	Ratcheting screwdriver handle
MWJ119	Peripheral reamer, 33–36 mm
MWJ120	Peripheral reamer, 39–42 mm
MWD425	Glenosphere impactor tip
MWJ10462*	Cannulated Glenosphere Inserter

*Not available in all geographies.

Instrumentation

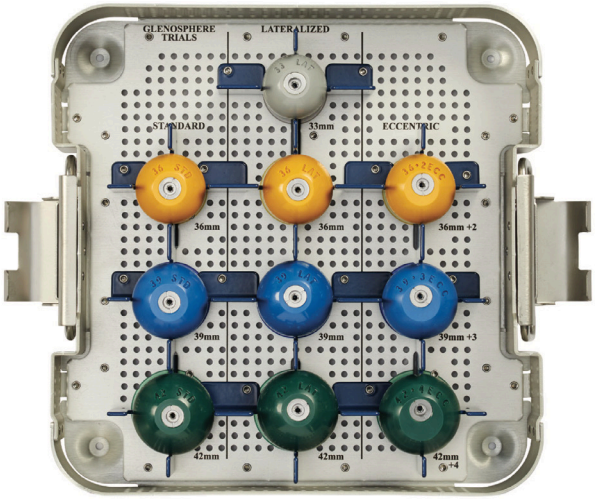


Tornier Perform Glenoid System – reversed core instrument base case (YKAD301)

Reference	Description
MWJ163	Central screw assembly tool
MWJ114	Central screw drill guide, 6.5 mm
MWJ115	Central screw drill guide, 9.5 mm
MWJ116	Central screw depth gauge
MWJ121	Central screw tap, 6.5 mm
MWJ122	Central screw tap, 9.5 mm
MWJ111	Central screw drill, 6.5 mm
MWJ112	Central screw drill, 9.5 mm

Reference	Description
MWJ162	Press-fit post drill, 15 mm
MWJ190	Short post drill, 7 mm
MWJ192	Post hard bone drill
MWJ113	Baseplate post drill, 10 mm
MWD552	12 mm wrench
MWJ165	Baseplate revision tool
MWJ101	Circular pin guide, 25 mm
MWJ102	Circular pin guide, 29 mm
MWJ107	Pin guide handle, 0°
MWJ108	Pin guide handle, 10°
MWE151	Cannulated reamer driver
MWJ109	Half moon baseplate reamer, 25 mm
MWJ110	Half moon baseplate reamer, 29 mm
MWB236	Cannulated cleaning rod
MWJ117	Offset pin guide handle
MWJ180	Screw caddy
MWJ130	Glenosphere extractor
MWJ123	Baseplate inserter screwdriver, T20

Instrumentation



Tornier Perform Reversed – glenosphere trials tray (YKAD262)

Reference	Description
MWJ132	Standard glenosphere trial, 36 mm
MWJ133	Standard glenosphere trial, 39 mm
MWJ134	Standard glenosphere trial, 42 mm
MWJ135	Lateralized glenosphere trial (+3 mm), 33 mm
MWJ136	Lateralized glenosphere trial (+3 mm), 36 mm
MWJ137	Lateralized glenosphere trial (+3 mm), 39 mm
MWJ138	Lateralized glenosphere trial (+3 mm), 42 mm
MWJ139	Eccentric glenosphere trial (+2 mm inferior offset), 36 mm
MWJ140	Eccentric glenosphere trial (+3 mm inferior offset), 39 mm
MWJ141	Eccentric glenosphere trial (+4 mm inferior offset), 42 mm

Sterile instrumentation

Reference	Description
MWJ126	Peripheral screw drill bit, 3.2 mm
DWD017	Sterile single use pin – ø2.5 X 220 mm
MWJ204	Transition guide pin, 8.5 mm
MWJ10461	Nitinol guide wire

Notes

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Content ID: AP-014439B 21-Feb-2022

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