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Tornier Perform[®] Anatomic Augmented 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

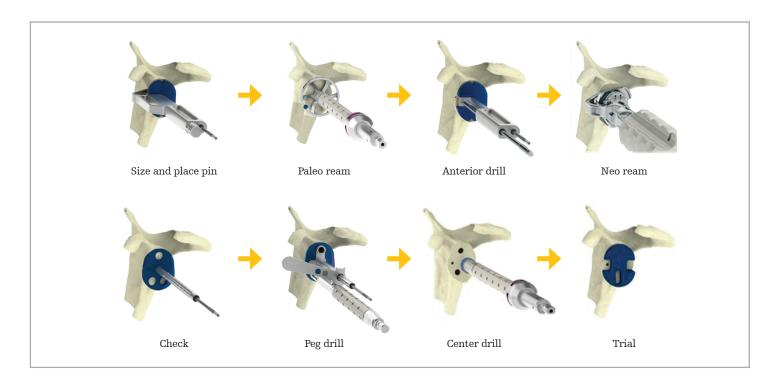
Anatomic Augmented Glenoid

Table of contents

Operative technique overview	4
Indications/contraindications	5
System compatibility	6
Pre-operative planning	7
Common technique Tornier Perform Anatomic Augmented Glenoid	7
• Exposure	7
Tornier Perform Anatomic Augmented Glenoid surgical steps	8-16
Sizing the glenoid and pin placement	8
Resurfacing the glenoid (paleo reaming)	9
• Anti-rotation drill	11
Assembly of the angled neo reamer	12
Resurfacing the glenoid (neo reaming)	15
Checking the reamed surface	16
Tornier Perform Anatomic Augmented Glenoid – Cortiloc preparation	17-18
Preparing the peripheral pegs (Cortiloc)	17
Drilling the central hole (Cortiloc)	17
• Trialing	18
Final implantation	18
Positioning the Cortiloc Glenoid Component	18
Components	19-23
• Common tray – upper level	19
• Common tray – lower level	20
• Cortiloc Tray – upper level	21
• Cortiloc Tray – lower level	22
• Express Tray – upper level	23
• Express Tray – lower level	24
• Contile Clandid	0.5

Operative technique overview

Cortiloc operative technique

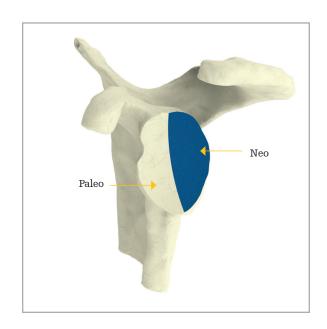


Tornier Perform Anatomic Augmented Glenoid

The Tornier Perform Anatomic Augmented Glenoid System is an extension of the Tornier Perform Anatomic Glenoid System developed to address posterior glenoid deficiencies.

The Tornier Perform Anatomic Augmented Glenoid System has been developed to preserve subchondral bone that has been demonstrated to be a critical factor in long term survivorship. The cannulated instrumentation provides for simple axial preparation that is intended to mirror both the paleo (anterior) and neo (posterior) surface of the glenoid.

The Tornier Perform Anatomic Augmented Glenoid System features four sizes (small, medium, large and extra large) with a 40mm backside radius of curvature. Three augmented angles are available to choose from (15°, 25° and 35°) in both lefts and rights.



Indications and contraindications

Indications

Prosthetic replacement with this device (Tornier Perform Anatomic Augmented Glenoid Component and Humeral Component) may be indicated to relieve severe pain or significant disability caused by:

- Degenerative pathologies: osteoarthritis, rheumatoid polyarthritis, post-traumatic arthritis
- · Primary and secondary necrosis of the humeral head
- Displaced 4-part upper humeral fracture
- Humeral head fracture
- Other pathologies where arthrodesis or resectional arthroplasty of the humeral head are not acceptable
- Revisions when other treatments or devices have failed

The Aequalis Monobloc Stem is for cemented use.

The Aequalis Press-Fit is for uncemented use.

Tornier Perform Anatomic Augmented Glenoids are intended for cemented use only.

Contraindications

- Systemic infection
- Fever and/or local inflammation
- Rapid joint destruction or bone resorption apparent on roentgenograms
- Elevation of sedimentation rate unexplained by other disease, elevation of WBC count
- Distant foci of infection from genitourinary, pulmonary, skin and other sites, dental focus infection that may cause haematogenous spread to the implant site
- Use of this implant is contraindicated in the presence of significant injury to the upper brachial plexus
- Poor quality and/or insufficient quantity of glenoid bone stock (pre- or intraoperative glenoid fracture...)
- Nonfunctional deltoid or external rotator muscles
- Important and non-reparable rupture of the rotator cuff
- Neuromuscular disease (e.g. joint neuropathy)
- Known allergy to one of the materials
- Patient pregnancy

System compatibility

System compatibility mismatch charts

The Tornier Perform Anatomic Augmented Glenoid has been designed to be compatible with the Tornier Simpliciti, Aequalis, Affiniti and Tornier Flex Shoulder System humeral head systems in certain combinations. For more information on the cleared combinations refer to the mismatch charts listed below. (All models are not cleared in all countries; please contact your Stryker representative for information about the availability.)

Tornier Perform Anatomic Augmented Glenoid with Aequalis, Tornier Simpliciti Shoulder System/Tornier Flex Shoulder System Heads – mismatch chart

Recommended combinations heads/glenoids, diametrical mismatch in mm, *the cleared range for this combination is 1mm to 24.8mm

Size	Heads	37x13.5	39x14	4lxl5	43x16	46x17	48x18	50x16	50x19	52x19	52x23	54x23	54x27
Glenoid	Diameter of curvature	39	41.2	43	45	48	50	55	52	54.6	52.4	54.7	54
Small	55.4	16.4	14.2	12.4	10.4	7.4	5.4	0.4	3.4	0.8	3	0.7	1.4
Medium	59.6	20.6	18.4	16.6	14.6	11.6	9.6	4.6	7.6	5	7.2	4.9	5.6
Large	63.6	24.6	22.4	20.6	18.6	15.6	13.6	8.6	11.6	9	11.2	8.9	9.6
XL	67.8	28.8	26.6	24.8	22.8	19.8	17.8	12.8	15.8	13.2	15.4	13.1	13.8

Tornier Perform Anatomic Augmented Glenoid with Affiniti/Tornier Simpliciti Shoulder System Heads – mismatch chart

Recommended combinations heads/glenoids, diametrical mismatch in mm, *the cleared range for this combination is 1mm to 24.8mm

Size	Heads	40	44	48	52	56
Glenoid	Diameter of curvature	40	44	48	52	56
Small	55.4	15.4	11.4	7.4	3.4	-0.6
Medium	59.6	19.6	15.6	11.6	7.6	3.6
Large	63.6	23.6	19.6	15.6	11.6	7.6
XL	67.8	27.8	23.8	19.8	15.8	11.8

Tornier Perform Anatomic Augmented Glenoid with Ascend Heads – mismatch chart

Recommended combinations heads/glenoids, diametrical mismatch in mm, *the cleared range for this combination is 1mm to 24.8mm

Size	Heads	38	40	42	44	46	48	50	52	54
Glenoid	Diameter of curvature	39.2	41.4	43.4	45.4	47.6	49.6	51.6	53.8	55.8
Small	55.4	16.2	14	12	10	7.8	5.8	3.8	1.6	-0.4
Medium	59.6	20.4	18.2	16.2	14.2	12	10	8	5.8	3.8
Large	63.6	24.4	22.2	20.2	18.2	16	14	12	9.8	7.8
XL	67.8	28.6	26.4	24.4	22.4	20.2	18.2	16.2	14	12

Tornier Perform Anatomic Augmented Glenoid with Tornier Flex Shoulder System STB Heads - mismatch chart

Recommended combinations heads/glenoids, diametrical mismatch in mm, *the cleared range for this combination is 1mm to 24.8mm

				0					,			0								
Size		Heads	39x13	39x15	42x14	42x16	42x18	45x15	45x17	45x19	48x16	48x18	48x20	51x17	51x20	51x23	54x18	54x21	54x24	56x24
Glen	noid	Diameter of curvature	42.3	40.4	45.5	43.6	42.5	48.8	46.8	45.6	52	50	48.8	55.3	52.5	51.3	58.5	55.7	54.4	56
Sma	111	55.4	13.1	15	9.9	11.8	12.9	6.6	8.6	9.8	3.4	5.4	6.6	0.1	2.9	4.1	-3.1	-0.3	1	-0.6
Med	lium	59.6	17.3	19.2	14.1	16	17.1	10.8	12.8	14	7.6	9.6	10.8	4.3	7.1	8.3	1.1	3.9	5.2	3.6
Larg	ge	63.6	21.3	23.2	18.1	20	21.1	14.8	16.8	18	11.6	13.6	14.8	8.3	11.1	12.3	5.1	7.9	9.2	7.6
XL		67.8	25.5	27.4	22.3	24.2	25.3	19	21	22.2	15.8	17.8	19	12.5	15.3	16.5	9.3	12.1	13.4	11.8

Cleared mismatch range	Non-cleared mismatch range

Operative technique

Preoperative planning

A careful analysis of X-rays and axial CT scan views are recommended before surgery to evaluate the following parameters: osteophytes, articular curvature, anterior and, more importantly, posterior wear of the glenoid, as well as the location, orientation and depth of the glenoid vault.

Exposure

With the arm abducted and internally rotated, a posterior glenoid retractor is placed on the posterior glenoid border as the proximal humerus is dislocated posteriorly and inferiorly. An angled retractor placed above the glenoid and an angled Kolbel retractor placed in the subscapular fossa are used to complete the exposure. | Figure 1

If preoperatively the humerus rests in a fixed posteriorly subluxed position, then the posterior capsule may be stretched out sufficiently so that a posterior capsular release for exposure may not be necessary.

If, after releasing the entire anterior capsule down to the 6 o'clock on the glenoid face the shoulder is still tight, then additional capsule is released around the posterior inferior corner and up the posterior side until the humerus can be adequately retracted for exposure (labrum and posterior capsule). | Figure 2

The glenoid retractor then is moved upward if more of the posterior release needs to be completed. $\c|$ Figure 3

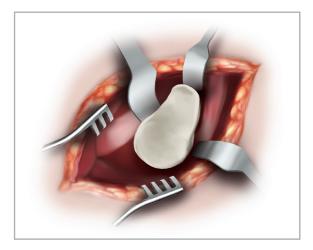


Figure 1

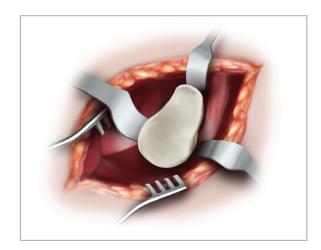


Figure 2

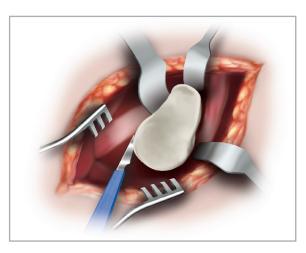


Figure 3

Operative technique

Technical considerations

The Tornier Perform Anatomic Augmented Glenoid leverages the 40mm curvature Tornier Perform Anatomic Glenoid Reamers for the paleo preparation as well as the Tornier Perform Anatomic Glenoid Cortiloc enlarging central hole drill bit. To allow for seamless interoperative flexibility between Tornier Perform Anatomic Glenoid and Tornier Perform Anatomic Augmented Glenoid, it is critical to leverage the cannulated approach with the longer 2.5mm x 220mm guide pin.

To improve operative efficiency, the Tornier Perform Anatomic Augmented Glenoid Instrumentation has been color coded by size.

Small Medium Large X-Large

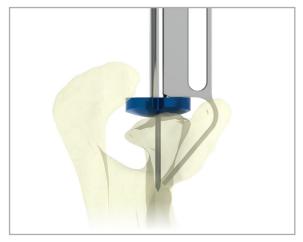


Figure 4

Confirming the glenoid size

To determine the size of the glenoid, attach the sizer handle to the sizer and place the sizer on the face of the glenoid. Select the size that provides the best coverage without overhang. Due to posterior wear, the anterior glenoid may provide the best guidance. The augment depth will be evaluated in a subsequent step after paleo preparation.

Pin placement

While there are alternative approaches to pin placement, the Tornier Perform Anatomic Augmented Glenoid System offers the fossa referencing guide to aid in pin placement. It is important to note this guide is not intended to rest against the anterior lip of the glenoid (known as the levine angle) for pin placement, but instead is intended to align the center of the glenoid profile with the subscapularis fossa (known as Freidman's line). | Figure 4

To assemble the guide, place the fossa referencing guide onto the shaft of the sizer handle. Then slide the fossa locking rod through the handle and guide, and turn to tighten the threads. | Figure 5

Place the assembly onto the face of the glenoid, align the tip of the fossa referencing guide with the subscapularis fossa and center the sizer on the face of the glenoid. Once aligned drive the 2.5mm x 220mm guide pin through the sizer handle until bi-cortical fixation is achieved. | **Figure 6**

With the pin in place, unthread the fossa locking rod and remove the fossa reference guide. Slide the sizer and sizer handle off of the pin and out of the joint.

Note: If the 2.5mm x 220mm guide pin bends or appears to be bent in any step of the procedure, it must be removed and replaced by a new 2.5mm x 220mm guide pin.

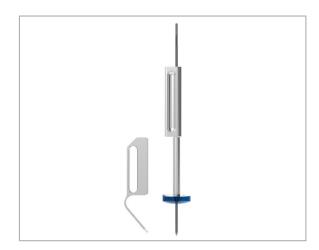


Figure 5



Figure 6

Resurfacing the glenoid (paleo reaming)

Introduction

Recent studies suggest that maintaining axial alignment when reaming bi-concave is particularly challenging due to the lack of clear landmarks. Maintaining axial alignment to the guide pin when preparing the paleo and neo glenoid is critically important to Tornier Perform Anatomic Augmented Glenoid Implant seating and long-term outcomes.

While guide pins are effective at keeping the reamer centered within the glenoid, they often allow for a few degrees of variation without providing tactical feedback.

The Marksman driver has been developed to provide visual feedback when the driver is used off axis from the pin, it's use is more fully described in subsequent steps.

Figure 7

Reamer assembly

Low profile approach

If exposure is difficult, a special slot in the internal ring of the Tornier Perform Anatomic Glenoid Reamer will allow the reamer to easily be slid down 2.5mm x 220mm guide pin and past the humerus before the driver is attached to the Tornier Perform Anatomic Glenoid Reamer.

| Figure 7

To begin, identify which section of the Tornier Perform Anatomic Glenoid Reamer includes the slot and place this section over the 2.5mm x 220mm guide pin. This will allow the Tornier Perform Anatomic Glenoid Reamer to be easily maneuvered past the humerus and retractors. Once the Tornier Perform Anatomic Glenoid Reamer has been introduced into the join space, slide the central portion of the Tornier Perform Anatomic Glenoid Reamer onto the pin. | Figure 8

Next, place the cannulated Marksman quick connect driver over the 2.5mm x 220mm guide pin. Align the flats on the tip of the drive with those on the Tornier Perform Anatomic Glenoid Reamer and apply pressure to attach the driver to the Tornier Perform Anatomic Glenoid Reamer. | Figure 9



Figure 8



Figure 9

Resurfacing the glenoid (paleo reaming) continued

Standard approach

If exposure is sufficient to place the Tornier Perform Anatomic Reamer down the pin without interference, select the reamer that corresponds to the size in the previous steps and attach it to the Marksman quick connect driver.

Marksman axial alignment

Designed to deliver exceptional accuracy, the Marksman provides visual feedback as soon as the reamer handle moves off axis in addition to an audible clicking sound if the reamer handle moves more than one degree off axis. | Figure 10A

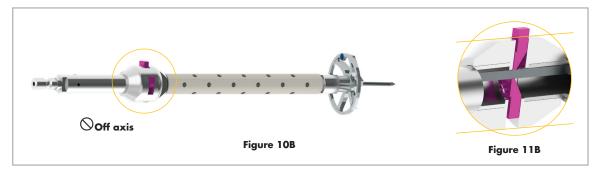
The visual feedback is delivered via the X indicator on the reamer handle which is designed to float inside the driver shaft staying true to the pin. This allows the X indicator to peek out from the reamer handle anytime the handle deviates from the pin. | Figure 10B

To realign the reamer handle with the guide pin, move the handle in the direction that the X indicator is peeking out. For example, if the X indicator is seen on the left hand side of the handle, move the handle to the left. Keeping the X indicator hidden within the reamer driver will ensure true axial preparation. | Figures 11A and 11B

Note: When initiating reaming do not focus on the X indicator until the reaming begins to smooth out.

Note: It is important to note the Marksman feature is intended to only guide reaming and to still be mindful of the amount of bone being removed in addition to alignment.





Resurfacing the glenoid - paleo preparation

It is important to ensure the reamer is spinning prior to contacting the paleo glenoid surface. | Figure 12 This will help to reduce the risk of possible glenoid fracture.

Note: It is recommended to irrigate with saline solution while reaming and drilling to prevent heat buildup which can lead to necrosis of the surrounding bone.

The goal of reaming is to obtain a bony surface that matches the backside of the glenoid component while removing as little bone as possible. Reaming is complete when the anterior surface is smooth and extends pass the midpoint of the guide pin. | Figure 13 This can be evaluated by utilizing the sizer from the previous steps.

Note: It is not advisable to ream down to cancellous bone.

Note: Overaggressive reaming should be avoided to prevent possible glenoid fracture and future risk of component loosening.

Once paleo reaming is complete, remove the assembly by sliding the Tornier Perform Anatomic Glenoid Reamer off the guide pin.

Anti-rotation pin drill

Once anterior reaming is complete, a small anti-rotation hole is to be drilled to help align the neo reamer and define the location of the posterior augment.

To prepare this hole, assemble the sizer handle and sizer. Orient the assembly so that the metal guide is anterior and place the sizer over the pin and onto the face of the glenoid. | Figure 14

Rotate the sizer so that the "V" notches align with the ridge of the anterior surface and the posterior defect (previously referred to as the midpoint). It is important to ensure the anterior half has full seating. If not, additional reaming may be required on the anterior surface.

Ensuring the sizer is sitting flush on the reamed surfacepass the 2.5mm drill bit through the anterior hole of the sizer handle. Drill until the proximal collar rests on the sizer handle. | Figures 15A and 15B Once this is complete remove the 2.5mm anti-rotation drill bit, sizer and sizer handle.

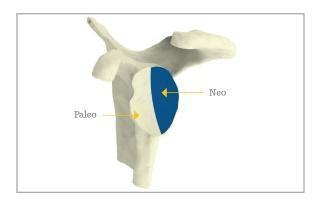


Figure 12

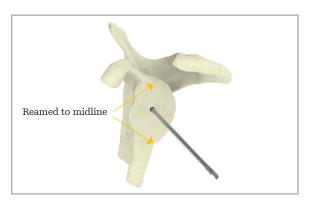


Figure 13



Figure 14

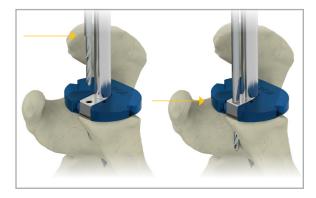


Figure 15A

Figure 15B

Assembly of the angled neo reamer

No.	Description	No.	Description
1	Neo reamer drive end	4	Neo reamer depth stop
2	Neo reamer handle	5	Neo reamer angle indicator
3	Neo reamer sleeve/slide assy	6	Neo reamer cannulated drive shaft

Step 1

Connect the reamer sleeve and the reamer slide of the neo reamer making sure the nob on the reamer slide fits into the cut out section of the reamer sleeve. Once this connection is made, you will pull back on the trigger of the reamer slide until it is attached to reamer sleeve and the knob of the reamer slide is through the reamer sleeve. | Figures 16A and 16B

Note: This part of the instrument comes pre-assembled in instrument case.



Position the pin of the reamer handle into the "U" shaped slot of the reamer sleeve. Fully retract the reamer slide and pivot the reamer handle until it snaps onto the reamer sleeve. | Figure 17

Step 3

Retract the reamer slide and place the angle indicator into the slot of the reamer sleeve. Set the angle to 15° . | Figure 18

Step 4

The drive shaft is now placed through the top of the angle indicator and down the reamer sleeve. Make sure before progressing to the next step of assembly that the cannulated shaft is flush at the entry point of the angle indicator. Once fully seated, pivot the angle indicator past the 15° position to a neutral position. This will lock the device for the next step.

| Figures 19A and 19B



Figure 16A



Figure 16B

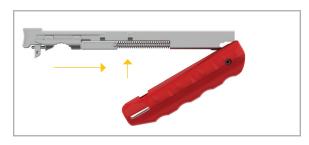


Figure 17

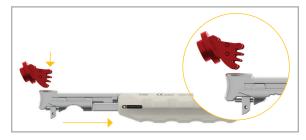


Figure 18



Figure 19A

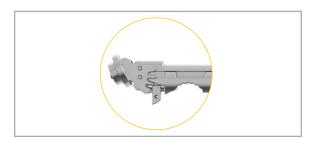


Figure 19B

Tornier Perform Anatomic Augmented Glenoid | Operative technique

Step 5

Thread the drive end onto the reamer shaft ensuring a tight connection. | Figures 20A and 20B

Note: After the steps pictured in figure 20A-20B are complete, ensure the construct (reamer shaft) spins freely in the 15, 25, and 35 positions. Also ensure the angle indicator moves to all positions.



With the angle indicator back in the lock position, thread the reamer head onto the reamer sleeve. Much like the drive end in step five, make sure this connection is tight. | Figure 21

Step 7

With the angle indicator out of the lock position, fully retract the slide and attach the depth stop to the sleeve as shown below.

Once these steps are complete, the instrument is assembled properly and can be used for surgery. | Figures 22A, 22B, and 22C

Note: If the depth stop will not seat properly, ensure the reamer head is fully threaded and not sitting proud.

Note: Always engage the reamer initially at the 15° position.



Figure 20A



Figure 20B

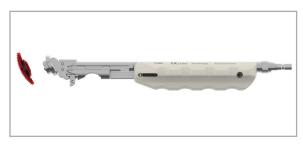


Figure 21

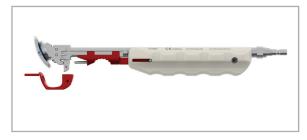


Figure 22A

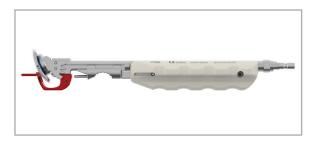


Figure 22B

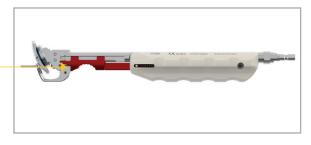


Figure 22C

Resurfacing the glenoid (neo reaming)

The neo reamer assembly has been designed to seamlessly articulate to 15° , 25° and 35° positions from the central axis. This allows for precise preparation for each augment thickness. By articulating on this axis, subchondral bone can be preserved. As a general rule, the neo reamer first contacts bone closest to the guide pin and then progresses posterior. Prior to reaming, ensure the reamer is set to the 15° position.

To begin posterior reaming, slide the neo reamer over the guide pin and place the pin on the depth stop into the anti-rotation hole to ensure appropriate alignment.

Note: It is critical to maintain alignment with the guide pin while neo reaming. Use a firm grip to counteract the forces created while reaming. It is best to not apply significant force to the reamer, but rather to let the reamer cut with minimal pressure.

Note: Overaggressive reaming should be avoided to prevent possible glenoid fracture and future risk of component loosening.

Note: It is imperative that the reamer <u>not</u> be run on reverse as this will unthread the reamer, potentially causing the reamer to lock against the depth stop.

Note: To support instrument performance, lubricant may be used. The lubricant used shall be selected specifically for medical use.

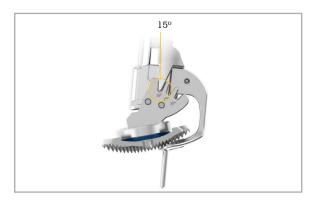


Figure 23A



Figure 23B

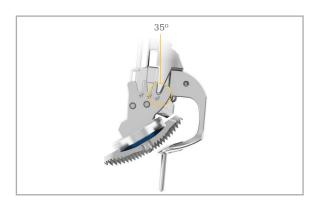


Figure 23C



Figure 24

Tornier Perform Anatomic Augmented Glenoid | Operative technique

Ream the glenoid at the at the 15° angle | Figure 23A until the posterior defect has been completely reamed and the depth stop is flush against the anterior glenoid. If at this point, the posterior glenoid is not completely reamed adjust the reamer to 25° and ream until the depth stop once again is flush against the anterior glenoid. | Figure 23B Again, if the posterior glenoid is not completely reamed adjust the reamer to 35° and ream until the depth stop once again is flush against the anterior glenoid. | Figure 23C This step will determine the augment thickness of the final implant. | Figure 24

Figure 25

Checking the reamed surface

With the neo surface prepared the corresponding checker can be used to evaluate if proper reaming has been achieved. To do this, thread the checker handle onto the checker and slide it down the guide pin. Align the anti-rotation hole in the checker with the previously drilled anti-rotation hole on the face of glenoid and assess checker seating.

| Figure 25 If there are gaps between the face of the glenoid and the checker, refer to the chart below for additional recommendations. Some may prefer to use the checker without the checker handle to assess any A/P rocking of the component.

Gap	Recommendations
Consistent anterior gap	Ream more neo glenoid at same angle (neo is under prepared)
Consistent posterior gap	Ream more neo reamer at next angle, if possible (augment thickness is not sufficient)
Asymmetric posterior gap (s/i)	Ream more neo glenoid ensuring proper alignment (possible rotation while reaming)

Note: If the checker seats perfectly, but the anterior hole on the checker does not line up with the anterior anti-rotation hole it is advisable to re-drill the 2.5mm anti-rotation hole through the checker. If the anti-rotation hole is re-drilled to a new location, this new hole should be used for the remainder of the procedure.

Preparing the peripheral pegs (Cortiloc)

To prepare the Cortiloc Peripheral Holes, begin by selecting the S/M or L/XL fasttrack peripheral drill guides.

Slide the drill guide over the checker handle. Make sure to align the holes of the drill guide with the holes of the checker. Additionally, align the anti-rotation peg with the checker and previously drilled hole to provide rotational stability.

Note: Once reamed surface is prepared and the anti-rotation hole in the drill guide does not align, but preparation is to the desired effect, it is recommended to continue with this alignment.

With the drill guide in place, attach the Cortiloc Quick Release Drill Bit to the quick release driver. Use the saddle of the guide to maintain alignment and drill the superior hole until the collar of the quick release drill bit contacts the guide. | Figure 26

Once the quick release drill bit is fully seated, stop the driver from spinning and slide the driver off the drill bit leaving it in place as a stabilization peg. Connect a second drill bit to the driver and drill the anterior hole. Connect an additional drill bit and drill the posterior hole.

Once all the peripheral peg holes are drilled, all instruments can be removed by grasping the end of the checker handle and sliding the instruments off the guide pin. | Figure 27

Drilling the central hole (Cortiloc)

Begin by selecting the corresponding Tornier Perform Anatomic Augmented Glenoid S/M or L/XL Cannulated Central Drill Bit. Next, attach the drill bit to the Marksmen driver and place the assembly over the pin. Drill until the collar is flush against the glenoid surface.

| Figure 28

Remove the guide pin before proceeding to the next step.

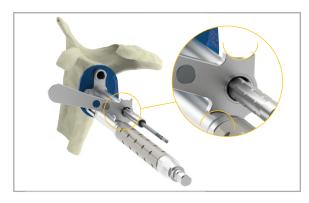


Figure 26



Figure 27



Figure 28

Trialing

Once the holes have been prepared, select the corresponding Cortiloc Glenoid Trial. Align the pegs of the trial with the corresponding holes and insert the trial. The trial can be inserted into the glenoid using the Tornier Perform Anatomic Augmented Glenoid Trial Grasper and can be fully seated with the Tornier Perform Anatomic Glenoid Impactor. | Figure 29

Two windows, anterior and posterior, allow visualization of the bone to trial interface. If the trial has acceptable backside support, remove the trial with the Tornier Perform Anatomic Glenoid Trial Grasper.

Positioning the Cortiloc Glenoid Component

It is recommended to carefully clean and dry the glenoid surface and peg holes prior to cementing.

Once the glenoid is clean and dry, introduce the bone cement, and insert the final implant. Fully seat the final implant using the Tornier Perform Anatomic Glenoid Impactor. It is recommended to maintain pressure on the face of the glenoid with the impactor while the cement hardens.* | Figures 30 and 31

Note: The pegs should not be altered in any manner prior to implantation.

Note: Once a specific size (S/M or L/XL) has been prepped, it is not advisable to upsize or downsize the implant.



Figure 29

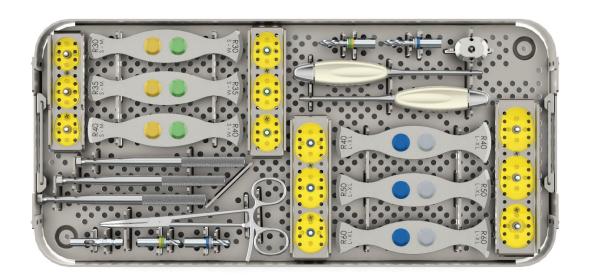


Figure 30



Figure 31

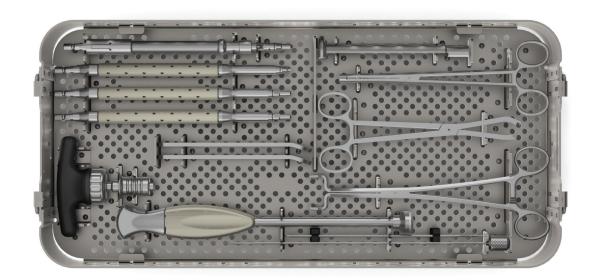
^{*}Long-term results of cancellous compaction technique for glenoid replacement in total shoulder arthroplasty for primary osteoarthritis. O. Verborgt, G. Walch, V. Belloti, and G. Gazielly



Tornier Perform Anatomic Glenoid - Cortiloc Instrumentation - upper level YKAD210A/B

Reference	Description	Reference	Description
MWE011	S30 sizer	MWE153	Cannulated central hole drill bit – 6mm small/medium
MWE012	S35 sizer	MWE154	Central holed drill bit – 6mm small/medium
MWE013	S40 sizer	MWE155	Cannulated central hole drill bit – 6mm large/extra large
MWE014	M30 sizer	MWE156	Central holed drill bit – 6mm large/extra large
MWE015	M35 sizer	MWE160	S30 reamer
MWE016	M40 sizer	MWE161	S35 reamer
MWE017	L40 sizer	MWE162*	S40 reamer
MWE018	L50 sizer	MWE163	M30 reamer
MWE019	L60 sizer	MWE164	M35 reamer
MWE020	Xl40 sizer	MWE165*	M40 reamer
MWE021	Xl50 sizer	MWE166*	L40 reamer
MWE022	Xl60 sizer	MWE167	L50 reamer
MWE031	Radius gauge – small/medium 30mm	MWE168	L60 reamer
MWE032	Radius gauge – small/medium 35mm	MWE169*	XL40 reamer
MWE033	Radius gauge – small/medium 40mm	MWE170	XL50 reamer
MWE034	Radius gauge – large/extra large 40mm	MWE171	XL60 reamer
MWE035	Radius gauge – large/extra large 50mm	MWE110	Sizer clamp
MWE040	Central hole drill guide – 6mm	_	
MWE111	Pin guide 0°		
MWE112	Pin guide 5°	_	
MWE113	Pin guide 10°		
MWE042	Drill guide handle	_	
MWB253	Pin driver		

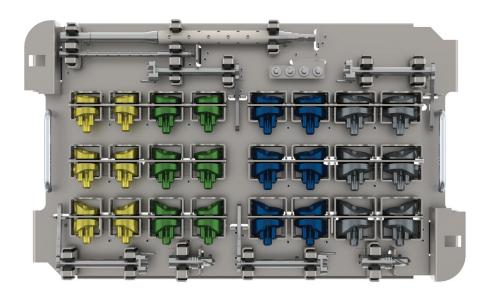
^{*}Instruments that are used from Tornier Perform Anatomic Glenoid Common Instrumentation in the Tornier Perform Anatomic Augmented Glenoid System.



Tornier Perform Anatomic Glenoid – Cortiloc Instrumentation – lower level YKAD210A/B

Reference	Description
MWE044	Stabilization peg remover
MWE046*	Glenoid impactor
MWD552	12mm wrench
MWE150	Articulated driver
MWE151	Cannulated reamer driver
MWE152	Cannulated drill/reamer driver w/ tip
MWE080 or MWE180	T-handle – SZH
MWB236	Cleaning rod
MWE114*	Glenoid grasper
MWA652*	Trial grasper
MWE157	Alignment pin
MWE158	Ouick release handle

^{*}Instruments that are used from Tornier Perform Anatomic Glenoid Common Instrumentation in the Tornier Perform Anatomic Augmented Glenoid System.



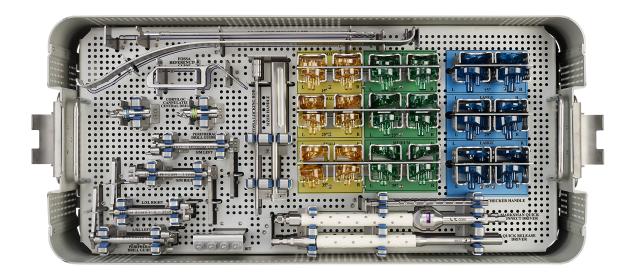
Tornier Perform Anatomic Augmented Glenoid - Cortiloc Instrumentation - upper level YKAD271S

Reference	Description	Reference	Description
MWH632	Small Cortiloc/Pegged checker RA15	MWH691S	Small Cortiloc glenoid trial RA15
MWH633	Small Cortiloc/Pegged checker LA15	MWH692S	Small Cortiloc glenoid trial LA15
MWH634	Small Cortiloc/Pegged checker RA25	MWH693S	Small Cortiloc glenoid trial RA25
MWH635	Small Cortiloc/Pegged checker LA25	MWH694S	Small Cortiloc glenoid trial LA25
MWH636	Small Cortiloc/Pegged checker RA35	MWH695S	Small Cortiloc glenoid trial RA35
MWH637	Small Cortiloc/Pegged checker LA35	MWH696S	Small Cortiloc glenoid trial LA35
MWH638	Medium Cortiloc/Pegged checker RA15	MWH697S	Medium Cortiloc glenoid trial RA15
MWH639	Medium Cortiloc/Pegged checker LA15	MWH698S	Medium Cortiloc glenoid trial LA15
MWH640	Medium Cortiloc/Pegged checker RA25	MWH699S	Medium Cortiloc glenoid trial RA25
MWH641	Medium Cortiloc/Pegged checker LA25	MWH700S	Medium Cortiloc glenoid trial LA25
MWH642	Medium Cortiloc/Pegged checker RA35	MWH701S	Medium Cortiloc glenoid trial RA35
MWH643	Medium Cortiloc/Pegged checker LA35	MWH702S	Medium Cortiloc glenoid trial LA35
MWH644	Large Cortiloc/Pegged checker RA15	MWH703S	Large Cortiloc glenoid trial RA15
MWH645	Large Cortiloc/Pegged checker LA15	MWH704S	Large Cortiloc glenoid trial LA15
MWH646	Large Cortiloc/Pegged checker RA25	MWH705S	Large Cortiloc glenoid trial RA25
MWH647	Large Cortiloc/Pegged checker LA25	MWH706S	Large Cortiloc glenoid trial LA25
MWH648	Large Cortiloc/Pegged checker RA35	MWH707S	Large Cortiloc glenoid trial RA35
MWH649	Large Cortiloc/Pegged checker LA35	MWH708S	Large Cortiloc glenoid trial LA35
MWH650	Extra large Cortiloc/Pegged checker RA15	MWH709S	Extra large Cortiloc glenoid trial RA15
MWH651	Extra large Cortiloc/Pegged checker LA15	MWH710S	Extra large Cortiloc glenoid trial LA15
MWH652	Extra large Cortiloc/Pegged checker RA25	MWH711S	Extra large Cortiloc glenoid trial RA25
MWH653	Extra large Cortiloc/Pegged checker LA25	MWH712S	Extra large Cortiloc glenoid trial LA25
MWH654	Extra large Cortiloc/Pegged checker RA35	MWH713S	Extra large Cortiloc glenoid trial RA35
MWH655	Extra large Cortiloc/Pegged checker LA35	MWH714S	Extra large Cortiloc glenoid trial LA35
MWH682	Cortiloc Fasttrack peripheral drill guide L/XL left	MWH680S	Cortiloc Fasttrack peripheral drill guide S/M left
MWH683	Cortiloc Fasttrack peripheral drill guide L/XL right	MWH681S	Cortiloc Fasttrack peripheral drill guide S/M right
MWH685	Cortiloc/Pegged quick release drill bit	MWH686	Quick release driver
MWE0202	Cortiloc cannulated central drill bit – small/medium	MWE203	Cortiloc cannulated central drill bit – large/extra large



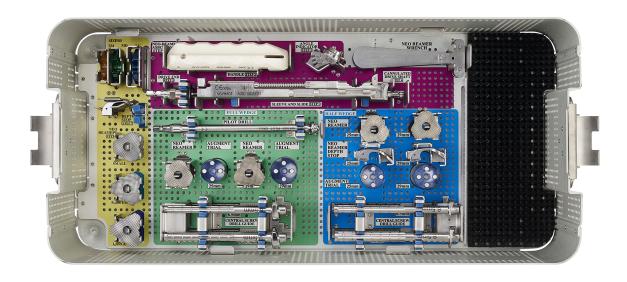
Tornier Perform Anatomic Augmented Glenoid – Cortiloc Instrumentation – lower level YKAD271S

Reference	Description
MWH600	Neo reamer assembly
MWH601	Neo reamer sleeve
MWH602	Neo reamer cannulated drive shaft
MWH603	Neo reamer angle indicator
MWH604	Neo reamer Marksman drive end
MWH605	Neo reamer handle
MWH606	Neo reamer slide
MWH607	Neo reamer wrench
MWH608	Neo reamer datum foot
MWH610	Small neo reamer
MWH611	Medium neo reamer
MWH612	Large neo reamer
MWH613	Extra large neo reamer
MWH620	Marksman quick connect driver
MWH622	Fossa locking rod
MWH623	Posterior retractor
MWH624S	Small sizer
MWH625S	Medium sizer
MWH626S	Large sizer
MWH627S	Extra large sizer
MWH628S	Sizer handle
MWH629S	Fossa referencing guide
MWH630	Checker handle
MWH631	2.5mm anti-rotation drill bit



Tornier Perform Anatomic Augmented Glenoid - Express tray - upper level YKAD10518

Reference	Description	Reference	Description
MWH631	2.5mm anti-rotation drill bit	MWH643	Medium Cortiloc/Pegged checker LA35
MWH623	Posterior retractor	MWH644	Large Cortiloc/Pegged checker RA15
MWH629S	Fossa referencing guide	MWH645	Large Cortiloc/Pegged checker LA15
MWE202	Cortiloc cannulated central drill bit – small/medium	MWH646	Large Cortiloc/Pegged checker RA25
MWE203	Cortiloc cannulated central drill bit – large/extra large	MWH647	Large Cortiloc/Pegged checker la25
MWH680S	Cortiloc fasttrast peripheral drill guide S/M left	MWH648	Large Cortiloc/Pegged checker RA35
MWH681S	Cortiloc fasttrast peripheral drill guide S/M right	MWH649	Large Cortiloc/Pegged checker LA35
MWH682S	Cortiloc fasttrack peripheral drill guide L/Xl left	MWH691S	Small Cortiloc glenoid trial RA15
MWH683S	Cortiloc fasttrack peripheral drill guide L/XL right	MWH692S	Small Cortiloc glenoid trial LA15
MWH685	Cortiloc/pegged quick release drill bit	MWH693S	Small Cortiloc glenoid trial RA25
MWH622	Fossa locking rod	MWH694S	Small Cortiloc glenoid trial LA25
MWH628S	Sizer handle	MWH695S	Small Cortiloc glenoid trial RA35
MWH620	Marksman quick connect driver	MWH696S	Small Cortiloc glenoid trial LA35
MWH686	Quick release driver	MWH697S	Medium Cortiloc glenoid trial RA15
MWH630	Checker handle	MWH698S	Medium Cortiloc glenoid trial LA15
MWH632	Small Cortiloc/Pegged checker RA15	MWH699S	Medium Cortiloc glenoid trial RA25
MWH633	Small Cortiloc/Pegged checker LA15	MWH700S	Medium Cortiloc glenoid trial LA25
MWH634	Small Cortiloc/Pegged checker RA25	MWH701S	Medium Cortiloc glenoid trial RA35
MWH635	Small Cortiloc/Pegged checker LA25	MWH702S	Medium Cortiloc glenoid trial LA35
MWH636	Small Cortiloc/Pegged checker RA35	MWH703S	Large Cortiloc glenoid trial RA15
MWH637	Small Cortiloc/Pegged checker LA35	MWH704S	Large Cortiloc glenoid trial LA15
MWH638	Medium Cortiloc/Pegged checker RA15	MWH705S	Large Cortiloc glenoid trial RA25
MWH639	Medium Cortiloc/Pegged checker LA15	MWH706S	Large Cortiloc glenoid trial LA25
MWH640	Medium Cortiloc/Pegged checker RA25	MWH707S	Large Cortiloc glenoid trial RA35
MWH641	Medium Cortiloc/Pegged checker LA25	MWH708S	Large Cortiloc glenoid trial LA35
MWH642	Medium Cortiloc/Pegged checker RA35		



Tornier Perform Anatomic Augmented Glenoid - Express tray - lower level YKAD10518

Reference	Description	Reference	Description
MWH624S	Small sizer	MWJ170	Neo reamer, 25mm full-wedge
MWH625S	Medium sizer	MWJ171	Neo reamer, 29mm full-wedge
MWH626S	Large sizer	MWJ147	Augment full-wedge trial, 25mm
MWH608	Neo reamer datum foot	MWJ148	Augment full-wedge trial, 29mm
MWH610	Small neo reamer	MWJ153	Central screw drill guide full-wedge, 6.5mm
MWH611	Medium neo reamer	MWJ154	Central screw drill guide full-wedge, 9.5mm
MWH612	Large neo reamer	MWJ172	Neo reamer, 25mm half-wedge
MWH605	Neo reamer handle	MWJ173	Neo reamer, 29mm half-wedge
MWH603	Neo reamer angle indicator	MWJ145	Augment half-wedge trial, 25mm
MWH607	Neo reamer wrench	MWJ146	Augment half-wedge trial, 29mm
MWH604	Neo reamer drive end	MWJ151	Central screw drill guide half-wedge, 6.5mm
MWH601	Neo reamer sleeve	MWJ152	Central screw drill guide half-wedge, 9.5mm
MWH606	Neo reamer slide	MWJ168	Neo reamer depth stop half-wedge, 25mm
MWH602	Neo reamer cannulated drive shaft	MWJ169	Neo reamer depth stop half-wedge, 29mm
MWJ129	Full-wedge pilot drill, 8mm		

Reference	Description
DWK403RA15S	Small right 15° Cortiloc Glenoid
DWK403LA15S	Small left 15° Cortiloc Glenoid
DWK403RA25S	Small right 25° Cortiloc Glenoid
DWK403LA25S	Small left 25° Cortiloc Glenoid
DWK403RA35S	Small right 35° Cortiloc Glenoid
DWK403LA35S	Small left 35° Cortiloc Glenoid
DWK404RA15S	Medium right 15° Cortiloc Glenoid
DWK404LA15S	Medium left 15° Cortiloc Glenoid
DWK404RA25S	Medium right 25° Cortiloc Glenoid
DWK404LA25S	Medium left 25° Cortiloc Glenoid
DWK404RA35S	Medium right 35° Cortiloc Glenoid
DWK404LA35S	Medium left 35° Cortiloc Glenoid
DWK405RA15S	Large right 15° Cortiloc Glenoid
DWK405LA15S	Large left 15° Cortiloc Glenoid
DWK405RA25S	Large right 25° Cortiloc Glenoid
DWK405LA25S	Large left 25° Cortiloc Glenoid
DWK405RA35S	Large right 35° Cortiloc Glenoid
DWK405LA35S	Large left 35° Cortiloc Glenoid
DWK406RA15S	X-Large right 15° Cortiloc Glenoid
DWK406LA15S	X-Large left 15° Cortiloc Glenoid
DWK406RA25S	X-Large right 25° Cortiloc Glenoid
DWK406LA25S	X-Large left 25° Cortiloc Glenoid
DWK406RA35S	X-Large right 35° Cortiloc Glenoid
DWK406LA35S	X-Large left 35° Cortiloc Glenoid
DWD017	2.5mm x 220mm guide pin



Notes

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