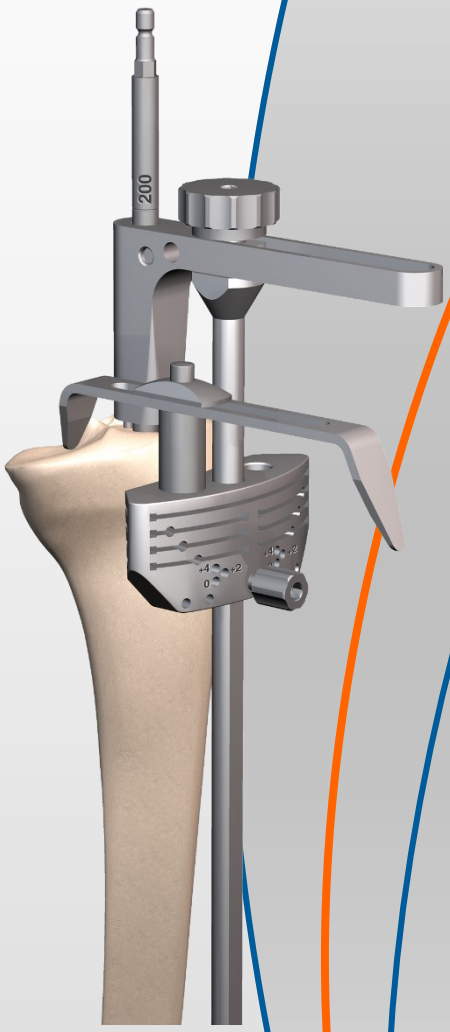
ANATOMIC®

Primary Total Knee System



Tibial Revision

Conventional Instrumentation

AMPLITUDE®

OVERVIEW OF INSTRUMENTATION

This surgical technique describes the use of the conventional instrumentation for primary TKA.

The steps below replace the sections on the tibial systems, the tibial cut, the tibial preparation and the tibial trials in the ANATOMIC® Surgical Technique documents TO.G.GB.013 and TO.G.GB.014 and on the tibial cut, the tibial preparation and the tibial trials in the ANATOMIC® TO.G.GB.027, TO.G.GB.028, TO.G.GB.016 and TO.G.GB.017.

TIBIAL COMPONENTS

TIBIAL BASEPLATE:

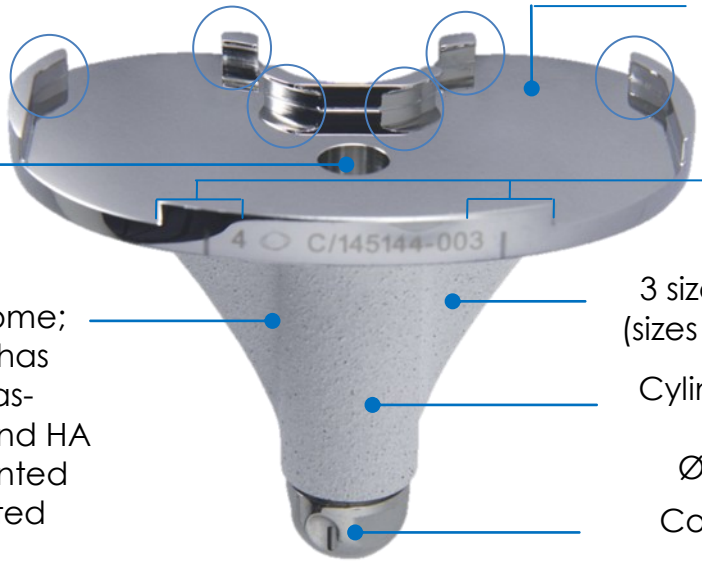
Posterior anatomical shape cut-out

6 posterior tabs hook onto insert

Mirror-polished contact surface with fixed insert

Extraction hole

Area for connecting the insert



Made of cobalt-chrome; cementless version has dual coating of plas-masprayed titanium and HA (80 µm each); cemented version is microblasted

3 sizes of delta wings (sizes 0-1-2, 3-4-5, 6-7-8)

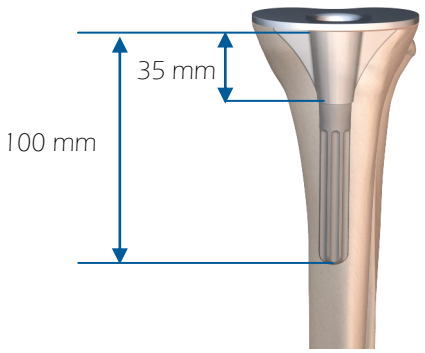
Cylinder-shaped tibial keel is the same for all sizes Ø15 mm, length 35 mm

Compatible long stem:
- Ø10 to 16 mm
- Lengths 75 to 150 mm

Possibility of using (e.g. in cases of uni revision, or TKA, or after osteotomy):

- Tibial extension stems:
  - Ø 10 to 16 mm
  - Length 75 to 150 mm

- ANATOMIC® Tibial half-blocks:
  - Thickness 5 mm
  - Thickness 10 mm
  - Thickness 15 mm



Example with 100 mm long extension stem

Lengths	Diameters			
75	10	12	14	
100	10	12	14	16
150	10	12	14	16

PLANIFICATION

Using X rays and templates, it is possible to determine:

- The tibial slope,
- The heigth of medial and lateral tibial resections,
- The assessment of the baseplate size,
- The choice of a tibial half-wedfe if required,
- The choice of an extension tibial stem, if required (diameters 10/12/14/16 mm, lengths 75/100/150 mm),
- The assessment of the insert thickness.

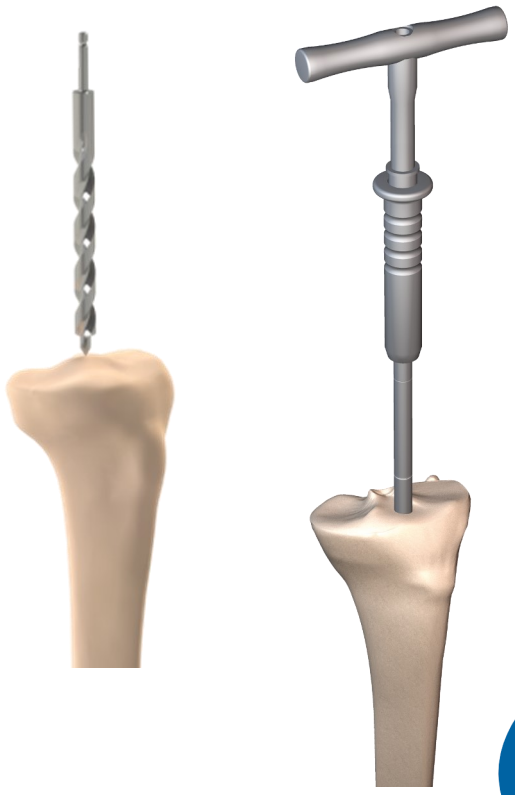
Note: The provided templates have a 1:1 scale.
Make sure the template scale matches the X-ray scale.

REMINDER

This surgical technique describes how to use the instrumentation properly.

The surgeon is fully responsible for choosing the surgical approach and technique

INTRAMEDULLARY TIBIAL SYSTEM

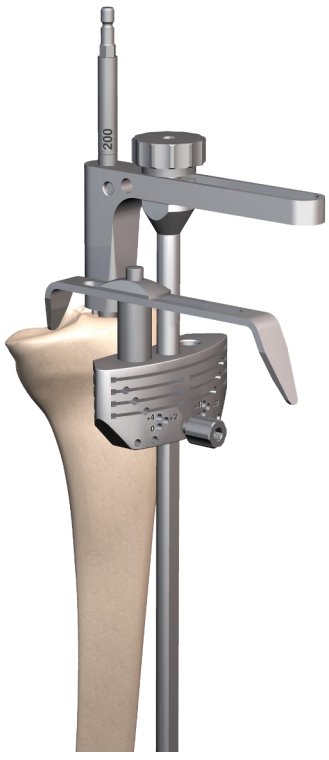


1. **Landmarks:**
   - Make a hole in the intramedullary canal with the Intramedullary 10 mm Drill Bit.
   - Gradually ream the intramedullary canal using Reamers mounted on the T wrench.
   - The graduated Reamers are used to estimate the most appropriate extension stem length.
   - Use progressively larger Reamers (10/12/14/16 mm) until contact is made with the bone cortex.

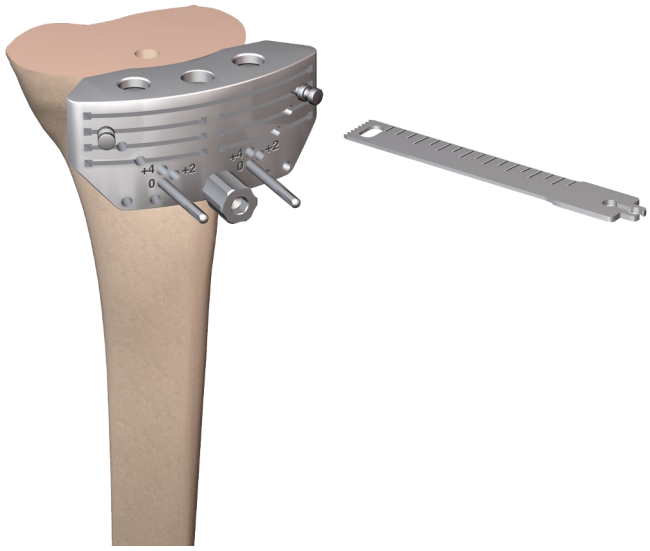
NOTA

If combined aiming is preferred, assemble the Malleolar Clamp with the Extramedullary Aiming Column and attach it around the ankle. Set the rotation of the extramedullary alignment guide and its position in the sagittal plane before locking it into place with the H5 Screwdriver

2. **Tibial instrumentation positioning:**
   - Assemble the Tibial Slide Bar and Revision Tibial Resection Guide onto the Bracket.
   - Put the entire unit onto the Reamer or IM Rod left in the tibia.
   - Set the resection height with the Stylus as follows:
     - On the healthy side: Stylus positioned at 10 mm (10 mm cut relative to this reference).
     - On the worn side: Stylus positioned at 0 mm (exit level of saw blade).
     - For other resection heights, use the 2 mm markings on the Tibial Slide Bar.
   - Determine if a tibial half-wedge is needed (Resection Gauge place in the half-slots labelled 5/10/15).



TIBIAL CUT



- Use a motorised handpiece and the Universal or AO Quick-Release Adaptor for pin to drive 2 Headless Pins into the 0 landmarks on the Revision Tibial Resection Guide.
- Loosen the screw on the Tibial Bracket with the H5 Screwdriver.
- Use the Slap Hammer to remove the intramedullary (and extramedullary) alignment rod.
- Set the Resection Guide against the bone.
- Stabilize the Resection Guide with 3 Headed Pins; the pin holes can be predrilled with a 3.2 mm Drill Bit.
- Remove the Headed Pins with the Pin Extractor.
- Slide the Resection Guide off the pins, but make sure the pins stay in place in case recutting is required; if so, the +2 and +4 marks will be used.
- Make the cut, then assess the gaps and ligament tension with the knee flexed and extended.

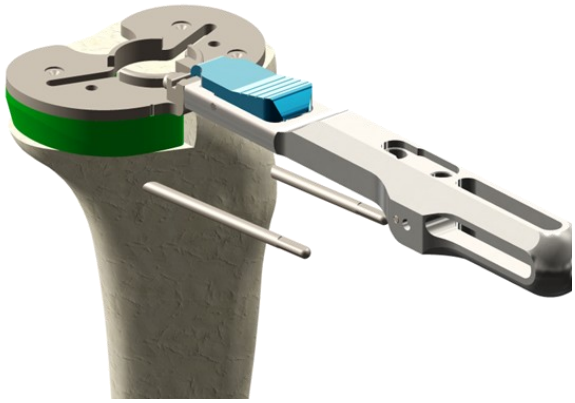
NOTA

Headless Pins have to be positioned closed to the main resection slot. In case of a resection for a half-wedges, choose the holes just below for the Headless Pins

NOTA

Use a medium saw blade (AMPLITUDE®) to make the tibial cuts and those of the tibial half-wedges (slots at 5/10/15 mm) if needed

TIBIAL PREPARATION



1. Positioning of Trial Baseplate:

NOTA

Remove the two pins that were left in the tibia (after the tibial cut is completed)

- Reposition the Reamer selected during the tibial resection onto the T Wrench.
- Select the Trial Baseplate that provides the best bone coverage (if needed, a Trial Tibial Half-Wedge of the same size of the Baseplate can be use). Check the alignement of the reamer that must be centered in the hole for the keel preparation.
- Secure the unit with 2 Headed Pins; the appropriate pin length (30, 50 or 70 mm) depends on the thickness of any Tibial Half-Wedge that is used.
- Remove the Reamer.

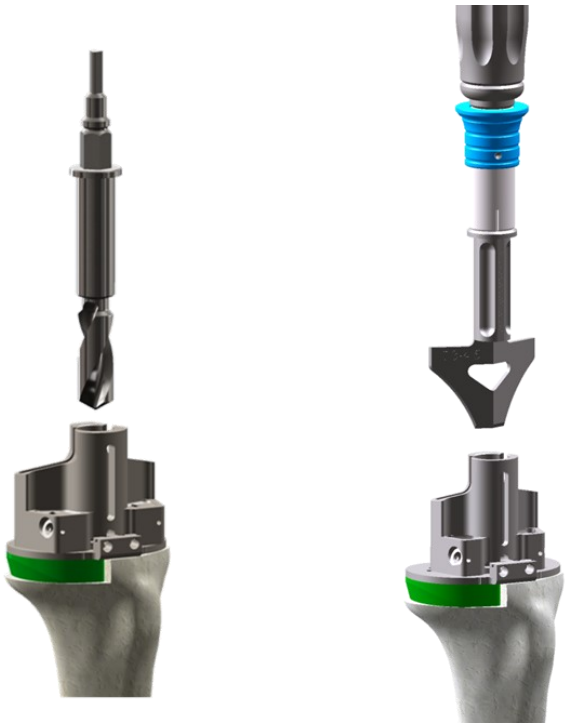
NOTA

A Tibial Straight Bushing can be used:

see page 10

2. Tibial preparation:

- Place the Guide for Tibial Fin Punch onto the Trial Baseplate and verify that the sizes are compatible.
- With the power tool, drive the Reamer for Tibial Keel into the guide until it stops.
- Prepare the fins by pushing the appropriately sized Tibial Fin Punch (assembled with the Universal Handle) until it stops.



TRIALS AND PLACEMENT OF IMPLANTS

1. **Trials:**
   - Screw the Trial Extension Stem into the Delta Wing - Tibial Trial (with the size corresponding to the Baseplate)
   - Impact the assembly (Delta Wing + Trial Extension Stem) across the Trial Baseplate until the stop.
   - Screw the Tightening Screw - Delta Wing with the H5 Screwdriver.
   - Check that the assembly corresponds to the resections and size.

2. **Placement of tibial implants:**
   - Screw the Extension Stem to the Baseplate using the Wrench for Tibial Stem.
   - Carefully lavage the implantation site to clean it out.
   - Prepare the bone cement and apply it to the tibial cut surface or under the Tibial Baseplate.
   - If using a Tibial Half-Block, apply a thin layer of cement between the Half-Block and Tibial Baseplate.
   - Impact the final components into the tibia using the Baseplate Impactor and make sure the Half-Block is perfectly positioned relative to the Tibial Baseplate and tibial cut.
   - Remove any excess cement.

OPTION: TIBIAL STRAIGHT BUSHING

Following the Preparation of the wings :

- Assemble the Tibial Straight Bushing onto the Reamer (the last reamer that was used to prepare the cana).
- Insert both instruments into the Guide for Tibial Fin Punch until The Tibial Straight Bushing is fully engaged in the Guide.
- Ream the canal according to the desired length.
- Remove the Guide for Tibial Fin Punch, the Tibial Straight Bushing and the Tibial Trial Baseplate.
- Read on the Reamer the final length of the stem.

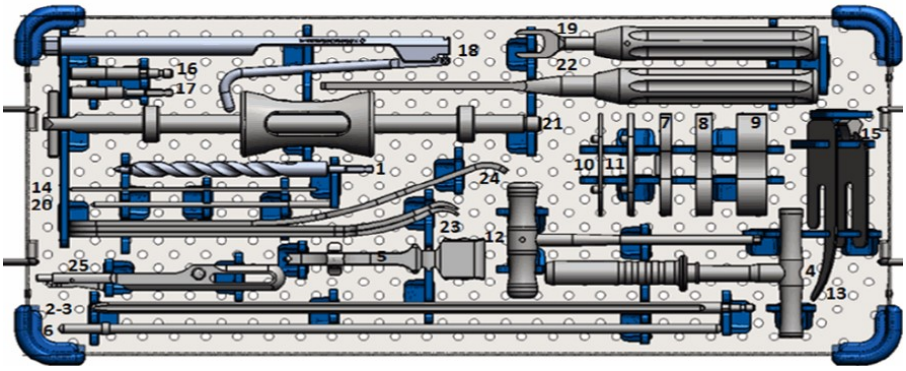
INSTRUMENTATION

The following trays are required for an ANATOMIC® tibial revision:

- ANATOMIC® Common Set
- ANATOMIC® Tibial Resection Set
- ANATOMIC® Tibial Trials Set
- ANATOMIC® Tibial Revision Set

INSTRUMENTATION

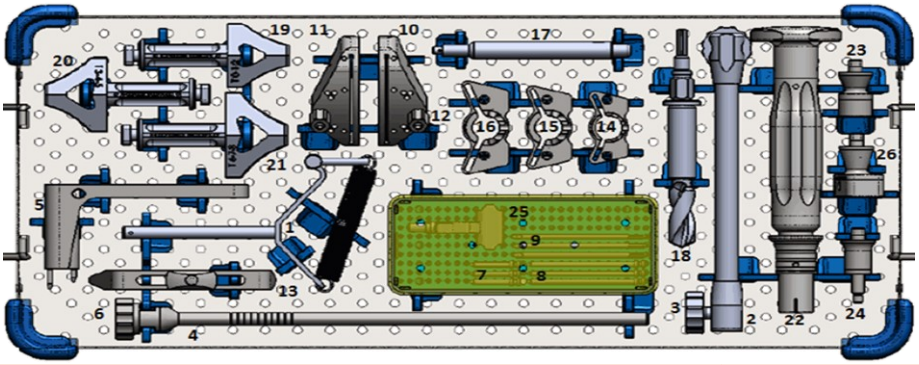
ANATOMIC®: COMMON SET 2-0299980



Item	Name	Product No.	Qty
1	Intramedullary 10 mm Drill Bit	2-0200100	1
2	Intra-medullary Rod length 250 mm	2-0200200	1
3	Intra-medullary Rod length 400 mm	2-0200300	1
4	T Wrench	2-0200400	1
5	Universal Handle	2-0216400	1
6	Extramedullary Alignment Rod	2-0200600	2
7	Spacer thickness 7 mm	2-0200707	1
8	Spacer thickness 10 mm	2-0200710	1
9	Spacer thickness 18 mm	2-0200718	1
10	Spacer thickness 2 mm for spacer	2-0207002	1
11	Spacer thickness 4 mm for spacer	2-0207004	1
12	H5 Screwdriver	2-0200800	1
13	Resection Gauge	2-0204500	1
14	Ø2 Headless Pin	2-0103000	2
15	Alignment Gauge	2-0206300	1
16	Universal Quick Release Adaptor for pin	2-0201100	1
17	AO Quick Release Adaptor for pin	2-0201200	1
18	Pin Extractor	2-0201500	1
19	Wrench for Tibial Stem	2-0205500	1
20	Drill Bit D3.2 length 145 mm	2-0102400	1
21	Slap Hammer	2-0206900	1
22	Flat Rasp	2-0206800	1
23	Hohmann Retractor 240 mm 18 mm	2-0207100	2
24	Hohmann Retractor 265 mm 24 mm	2-0207200	1
25	Tibial Baseplate Handle	2-0223500	1

INSTRUMENTATION

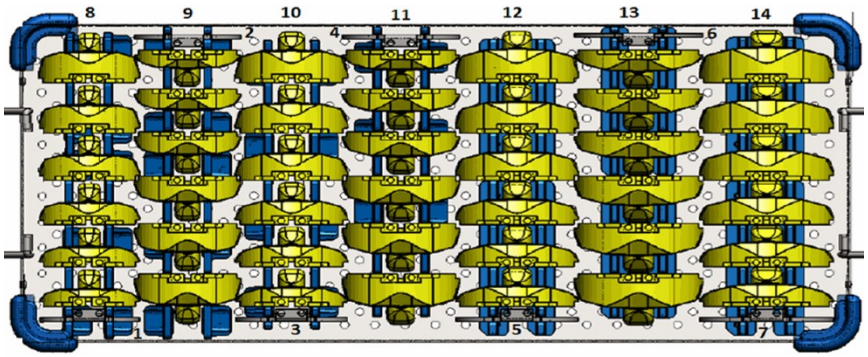
ANATOMIC®: TIBIAL RESECTION SET 2-0299979



Item	Name	Product No.	Qty
1	Malleolar Clamp	2-0201600	1
2	Extramedullary Aiming Column	2-0201700	1
3	Wheel for Extramedullary Aiming Column	2-0201800	2
4	Tibial Slide Bar	2-0201900	1
5	Tibial Bracket	2-0202000	1
6	Wheel for Tibial Bracket	2-0202100	1
7	Headed Pin length 30 mm	2-0201301	6
8	Headed Pin length 70 mm	2-0201302	3
9	Headless Pin length 80 mm	2-0201400	6
10	Tibial Resection Guide - Right	2-0202200	1
11	Tibial Resection Guide - Left	2-0202300	1
12	Wheel for Resection Guide	2-0203800	2
13	Tibial Stylus	2-0202400	1
14	Guide for Tibial Fin Punch Size 0-1-2	2-0230801	1
15	Guide for Tibial Fin Punch Size 3-4-5	2-0230802	1
16	Guide for Tibial Fin Punch Size 6-7-8	2-0230803	1
17	Removable Hand Holds	2-0226500	2
18	Reamer for Tibial Keel	2-0231600	1
19	Tibial Fin Punch Size 0-1-2	2-0230901	1
20	Tibial Fin Punch Size 3-4-5	2-0230902	1
21	Tibial Fin Punch Size 6-7-8	2-0230903	1
22	Universal Handle	2-0232100	1
23	Tibial Impactor	2-0231900	1
24	Tibial Baseplate Extractor	2-0231800	1
25	Reference Body Support for Tibial Baseplate Handle	2-0223600	1
26	Baseplate Impactor	2-0233400	1

INSTRUMENTATION

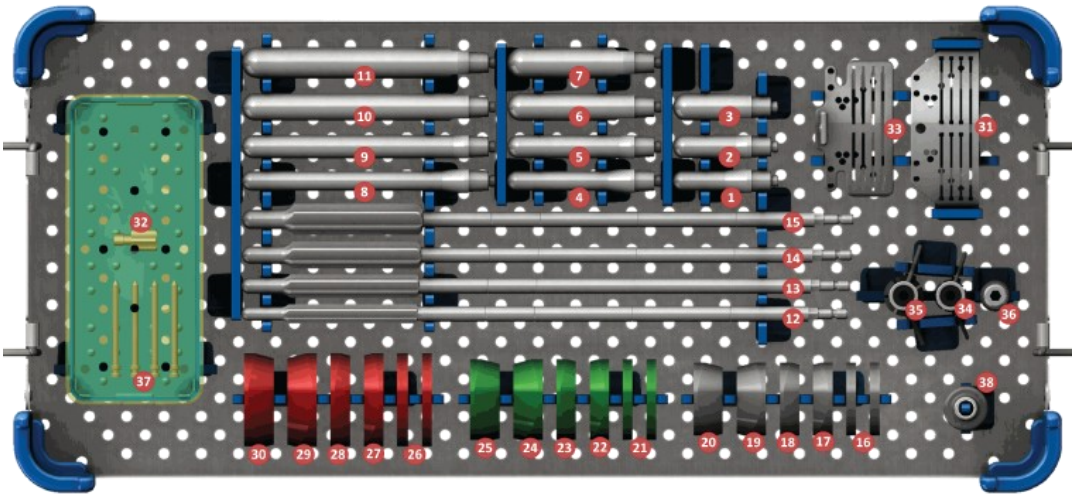
ANATOMIC®: TIBIAL TRIALS SET 2-0299980



Item	Name	Product No.	Qty
1	Trial Baseplate Posterior Stabilized Size 1	2-0231001	1
2	Trial Baseplate Posterior Stabilized Size 2	2-0231002	1
3	Trial Baseplate Posterior Stabilized Size 3	2-0231003	1
4	Trial Baseplate Posterior Stabilized Size 4	2-0231004	1
5	Trial Baseplate Posterior Stabilized Size 5	2-0231005	1
6	Trial Baseplate Posterior Stabilized Size 6	2-0231006	1
7	Trial Baseplate Posterior Stabilized Size 7	2-0231007	1
8	Trial Insert PS Size 1 Thickness 10, 12, 14, 16 & 20mm	2-0230610 to 2-0230615	1
9	Trial Insert PS Size 2 Thickness 10, 12, 14, 16 & 20mm	2-0230620 to 2-0230625	1
10	Trial Insert PS Size 3 Thickness 10, 12, 14, 16 & 20mm	2-0230630 to 2-0230635	1
11	Trial Insert PS Size 4 Thickness 10, 12, 14, 16 & 20mm	2-0230640 to 2-0230645	1
12	Trial Insert PS Size 5 Thickness 10, 12, 14, 16 & 20mm	2-0230650 to 2-0230655	1
13	Trial Insert PS Size 6 Thickness 10, 12, 14, 16 & 20mm	2-0230660 to 2-0230665	1
14	Trial Insert PS Size 7 Thickness 10, 12, 14, 16 & 20mm	2-0230670 to 2-0230675	1

INSTRUMENTATION

ANATOMIC®: Tibial Revision Set 2-0299990



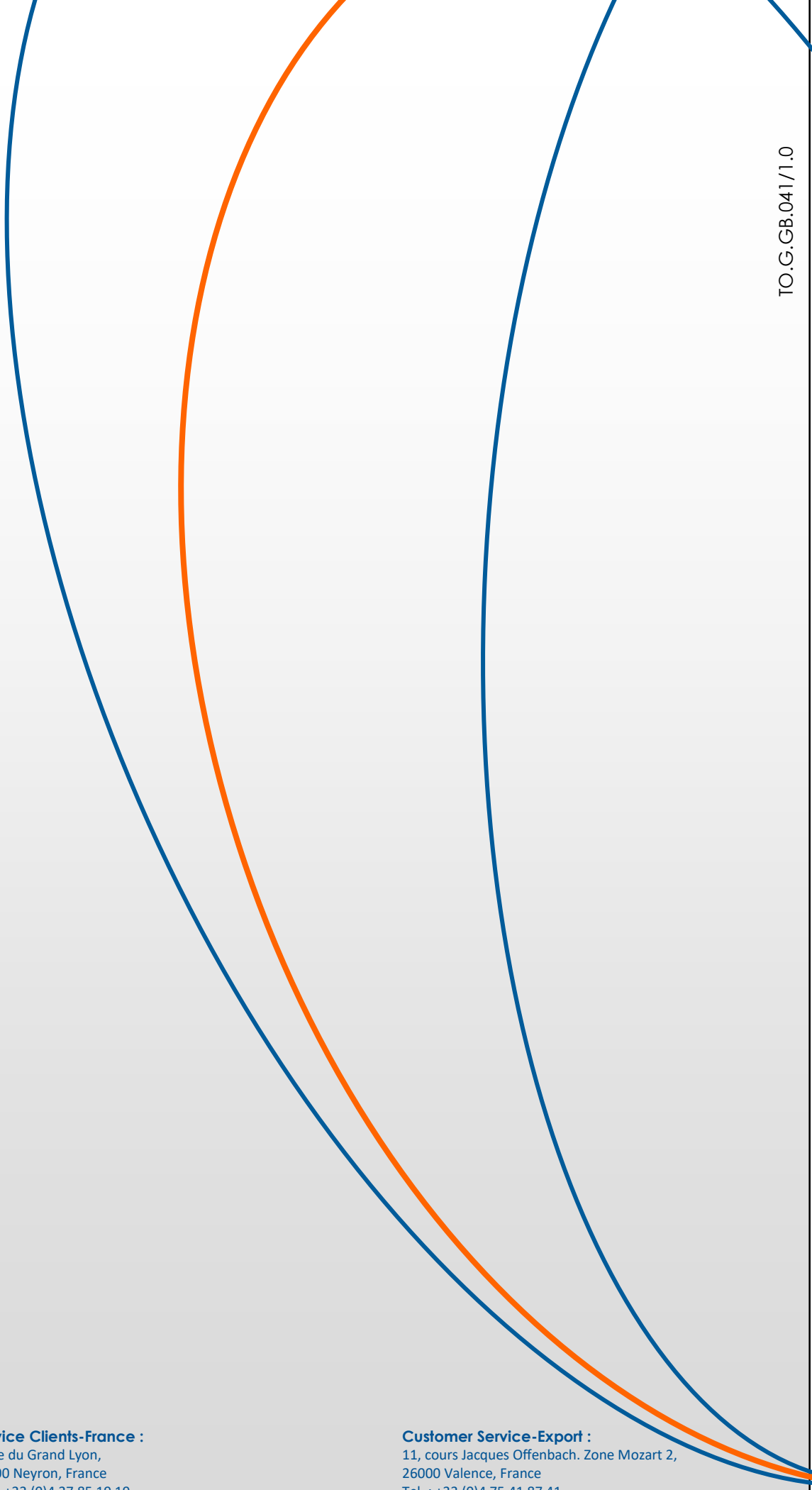
Item	Name	Product No.	Qty
1	Trial Extension Stem - Ø 10 length 75	2-0209021	1
2	Trial Extension Stem - Ø 12 length 75	2-0209022	1
3	Trial Extension Stem - Ø 14 length 75	2-0209023	1
4	Trial Extension Stem - Ø 10 length 100	2-0209013	1
5	Trial Extension Stem - Ø 12 length 100	2-0209001	1
6	Trial Extension Stem - Ø 14 length 100	2-0209004	1
7	Trial Extension Stem - Ø 16 length 100	2-0209007	1
8	Trial Extension Stem - Ø 10 length 150	2-0209014	1
9	Trial Extension Stem - Ø 12 length 150	2-0209002	1
10	Trial Extension Stem - Ø 14 length 150	2-0209005	1
11	Trial Extension Stem - Ø 16 length 150	2-0209008	1
12	Reamer diam. 10	2-0210510	1
13	Reamer diam. 12	2-0210512	1
14	Reamer diam. 14	2-0210514	1
15	Reamer diam. 16	2-0210516	1
16	ANATOMIC Trial Tibial Half-Block - Size 0/1/2 Thickness 5 mm	2-0255810	2
17	ANATOMIC Trial Tibial Half-Block - Size 0/1/2 Thickness 10mm RM/LL	2-0255820	1
18	ANATOMIC Trial Tibial Half-Block - Size 0/1/2 Thickness 10mm RL/LM	2-0255840	1
19	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 15mm RM/LL	2-0255833	1
20	ANATOMIC Trial Tibial Half-Block - Size 0/1/2 Thickness 15mm RL/LM	2-0255850	1

INSTRUMENTATION

Rep	Désignation	Référence	Qté
21	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 5 mm	2-0255813	2
22	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 10 mm RM/LL	2-0255823	1
23	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 15 mm RM/LL	2-0255843	1
24	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 10 mm RL/LM	2-0255833	1
25	ANATOMIC Trial Tibial Half-Block - Size 3/4/5 Thickness 15 mm RL/LM	2-0255853	1
26	ANATOMIC Trial Tibial Half-Block - Size 6/7/8 Thickness 5 mm	2-0255816	2
27	ANATOMIC Trial Tibial Half-Block - Size 6/7/8 Thickness 10 mm RM/LL	2-0255826	1
28	ANATOMIC Trial Tibial Half-Block - Size 6/7/8 Thickness 15 mm RM/LL	2-0255846	1
29	ANATOMIC Trial Tibial Half-Block - Size 6/7/8 Thickness 10 mm RL/LM	2-0255836	1
30	ANATOMIC Trial Tibial Half-Block - Size 6/7/8 Thickness 15 mm RL/LM	2-0255856	1
31	Revision Tibial Resection Guide	2-0210600	1
32	Wheel for Resection Guide	2-0203800	1
33	4T Tibial Resection Guide - Revision	2-0253300	1
34	Delta Wing - Tibial Trial S. 0/1/2	2-0253401	1
35	Delta Wing - Tibial Trial S. 3/4/5/6/7/8	2-0253402	1
36	Tightening Screw - Delta Wing	2-0253400	1
37	Headed Pin length 50 mm	2-0201303	4
38	Tibial Straight Bushing	2-0255900	1

NOTES

NOTES



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