ALLOCLASSIC® HIP SYSTEM

Surgical Technique

Classic proven design with superior clinical results.

zimmer

Confidence in your hands™

ALLOCLASSIC HIP SYSTEM

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ALLOCLASSIC® HIP SYSTEM

The Alloclassic stem was introduced to the global market in 1986, after seven years of extensive research and development. Since its introduction, the Alloclassic has established high standards for total hip arthroplasty with an unchanged design, excellent clinical results, and a technically simple application.

Proven Classic

The long-term clinical success of the Alloclassic can be attributed to a unique combination of design features. A tapered stem geometry and a grit-blasted surface provide proven initial and secondary fixation. In addition, the Alloclassic's rectangular cross-section has unparalleled rotational stability while the broaching technique allows for minimal disturbance to the endosteal blood supply and maximum bone conservation.

Excellent Long-Term Clinical Results

The Alloclassic Hip is regarded by surgeons world-wide as the standard for total hip arthroplasty with over 16 years of excellent clinical results.

Broad Product Indications

The versatile Alloclassic can be used in trauma cases, primary hip arthroplasty and revision hip arthroplasty in all bone types, from low- to high-demand patients.

Compatibility

The Alloclassic's 12/14 taper is compatible with multiple Zimmer acetabular options, including unipolar and bipolar heads, ceramic heads, Metasul® metal-on-metal and Durasul® highly crosslinked polyethylene in head diameters up to 44 mm.

Biologic Fixation

The Alloclassic's grit-blasted titanium niobium alloy with a 4-8 micron surface roughness provides a proven surface for reliable biologic fixation for long-term fixation of the implant.

MIS Compatibility

The Alloclassic's tapered design and non-reaming technique allow for minimal disturbance to the endosteal bloody supply and maximum bone conservation, and make it the perfect choice for Minimally Invasive Surgery. The Alloclassic hip has been successfully used in MIS hip arthroplasty for over 16 years.

Extensive Sizing

Fourteen anatomical sizes allow for an optimal patient fit.

Preoperative Planning

The primary objectives of preoperative planning are to:

1. Determine preoperative leg length discrepancy.
2. Assess acetabular component size and placement.
3. Determine femoral component size, position and fit.
4. Assess the necessary femoral offset.

In addition, preoperative planning will assist in the identification of bone abnormalities and potential problems before surgery that might require special instrumentation.

Positioning for X-rays

For the A/P X-ray of the pelvis, the femurs should be internally rotated 15° to show an accurate view of the femoral neck length, metaphysis and diaphysis. A direct lateral X-ray may also be beneficial in determining implant sizing. The Alloclassic Hip System templates incorporate 18 percent magnification.

Templating the Femur

To estimate the leg length discrepancy on the X-ray a line should be drawn through the bottom of the ischium (Fig. 1). The distance should then be measured from the lesser trochanter to the drawn reference line. The measured difference between each measured side is the radiographic leg length discrepancy. As an alternate reference point, the tip of the greater trochanter to the drawn reference line may be measured.

Fig. 1

Templating the Femur

Select the femoral template size that will best fit the proximal and distal femur and equalize the leg length. The tapered geometry of the Alloclassic should fill the canal from the medial to the lateral cortical wall (Fig. 2). The femoral template should be in line with the long axis of the femur, in the neutral position. Draw the neck resection line at the point where the selected stem provides the desired amount of leg length. The proximal tip of the prosthesis and the tip of the greater trochanter are suitable reference points for determining the height of the final implant.

Fig. 2

Preoperative A/P View

Postoperative A/P View

Postoperative Lateral View

Femoral Preparation

Osteotomy of the Femoral Neck

The osteotomy of the femoral neck is 1-2 cm above the lesser trochanter at an angle of 40-45° to the neutral axis of the femur or parallel to the intertrochanteric line. This may vary due to differences in the proximal femoral anatomy and should be based on preoperative planning (Fig. 3-4).

The femoral head is then removed (Fig. 5).

The leg is then externally rotated to neutral in full extension to provide the best exposure for preparation of the acetabulum.

Fig. 3

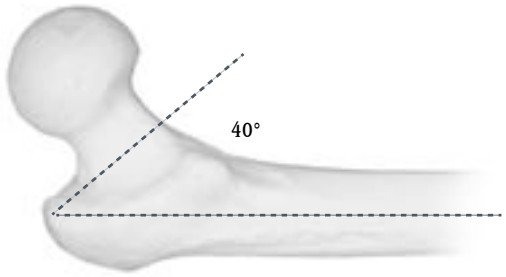


Fig. 4

Fig. 5

Instruments Used

Box Chisel [01.00129.650]

Preparation of the Femoral Canal

After the acetabular component has been placed, the leg is then repositioned for optimal access to the femoral canal. With the knee bent at 90°, the leg is internally rotated. The cut surface of the femoral neck is now easily accessible for femoral preparation, for a posterior approach.

With the antero-lateral approach, the leg is adducted and externally rotated to allow for access to the cut surface of the femoral neck.

A rectangular box chisel is used to cut a slot in the proximal neck and trochanteric region.

The chisel should be as lateral as possible against the transition to the greater trochanter to create a slot to accommodate the prosthesis in a neutral position (Fig. 6-7).

Fig. 6

Part # 01.00129.650

Fig. 7

Preparation of the Femoral Canal

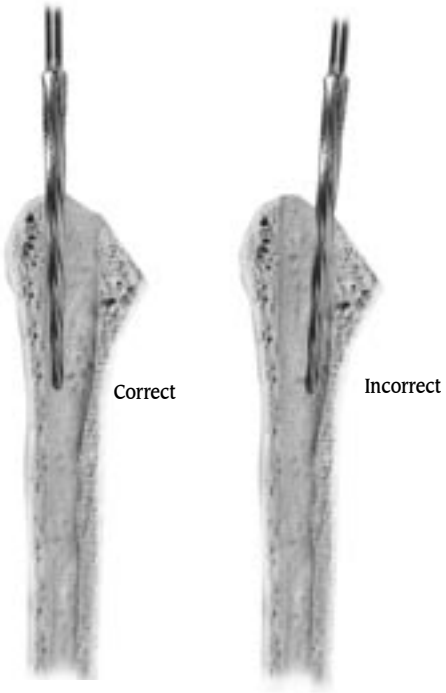
The slot may be extended laterally by notching the cortex of the trochanter using a rongeur or small rasp (Fig. 8 and 9).

Next, the canal finder should be used to further open the medullary canal. Caution should be used to ensure that a neutral opening to the canal is established and varus positioning is avoided (Fig. 10).

Fig. 8

Fig. 9

Fig. 10



Instruments Used

Adaptor with Lever [6835]

Preparation of the Femoral Canal

Prepare the femoral canal by first using rasp size 1, and progress to the next larger size rasp. Only in cases of very small femora should one start with the special sizes 01 and 0. To ensure proper rasp height and subsequent implant height, calibration marks are located on the connector piece, which reference the height of the final implant (Fig. 11).

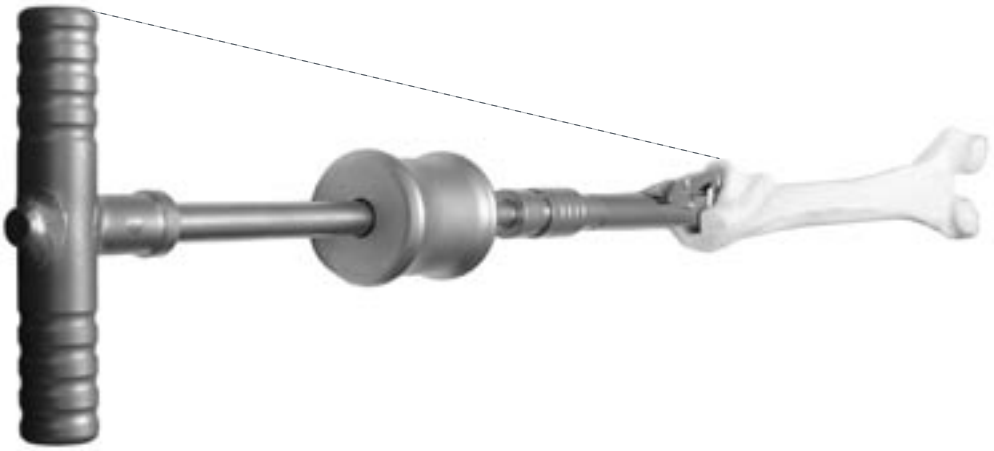
The proximal tip of the Alloclassic will rest just below the tip of the greater trochanter when the implant is finally seated.

The shaft of the slaphammer is aligned along the femoral axis, while the impactor handle may be used to reference the anteversion of the rasp and final hip implant (Fig. 12).

Fig. 11

Part # 6835

Fig. 12



Preparation of the Femoral Canal

The insertion of the first rasp will determine the anteversion of the subsequent rasps and the final implant, so precise orientation is necessary for exact stem positioning (Fig. 13).

Once again, the lateral trochanter area should be periodically rasped to avoid varus implantation. Each rasp should be impacted to the level of the osteotomy and the angled proximal surface of the rasp.

The first contact with the cortex usually occurs at the distal end of the rasp. Progress will become more difficult with each progressive impaction and the pitch of the impactor will change from low to high once cortical bone is engaged. The next larger size rasp is usually the final size as preoperatively templated. The final rasp should be seated to the resection line and there should be no visible movement of the broach when the slaphammer is rotated.

The final implant size will directly correspond to the final rasp size.

Fig. 13

Instruments Used

Tapered Bolt [01.00209.014]

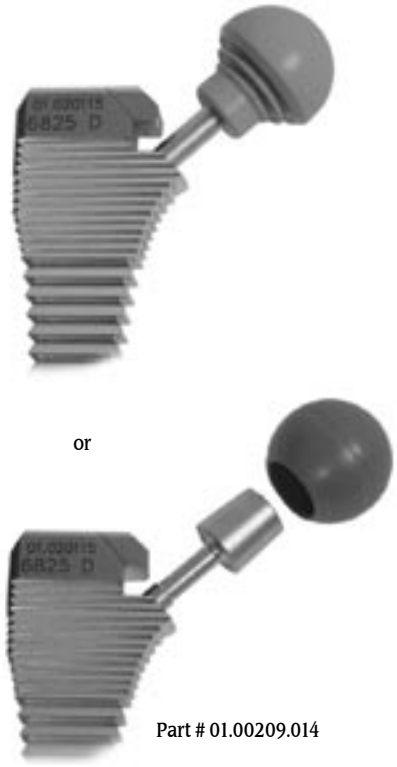
Trial Reduction

Trial reduction of the Alloclassic may be accomplished with either the rasp or the trial prosthesis. The two methods are slightly different, so they are each described below. The recommended method for trialing the Alloclassic is with the trial prosthesis because this best replicates the final implant range of motion and stem positioning.

Trialing directly off of the rasp is first accomplished by removing the rasp handle and leaving the rasp in the femoral canal. Either a trial rasp ball head or a trial rasp taper is then inserted into the rasp hole (Fig. 14). If the trial rasp taper is selected, any of the standard 12/14 trial ball heads may then be used in conjunction with a trial rasp taper. A special trial rasp taper is available for the smallest rasps, sizes 01 and 0 (Part #6842).

Once the appropriate trial head is selected, the hip is reduced. Leg length and offset are checked. This procedure is repeated as necessary using different length trial heads until optimal offset and leg length are established. A trial reduction should not allow significant push-pull or "shuck" of the joint in full extension. Range of motion is checked to avoid bony impingement and instability.

Fig. 14



or

Part # 01.00209.014

Trial Option

Trialing with the trial prosthesis is first accomplished by removing the final rasp. A trial prosthesis matching the size of last rasp is inserted and driven in with the impactor instrument on the proximal tip of the trial prosthesis (Fig. 15). Once the trial is firmly seated, the trial ball head size as templated is connected to the trial taper (Fig. 16). The hip is then reduced. Next, leg length and offset are checked. This procedure is repeated as necessary using different length trial heads until optimal offset and leg length are established. A trial reduction should not allow significant push-pull or "shuck" of the joint in full extension. Range of motion is checked to avoid bony impingement and instability. The trial prosthesis is removed with the slaphammer and extractor hook, which is inserted into the proximal tip of the trial prosthesis (Fig. 17).

Fig. 15

Fig. 16

Fig. 17

Stem Implantation

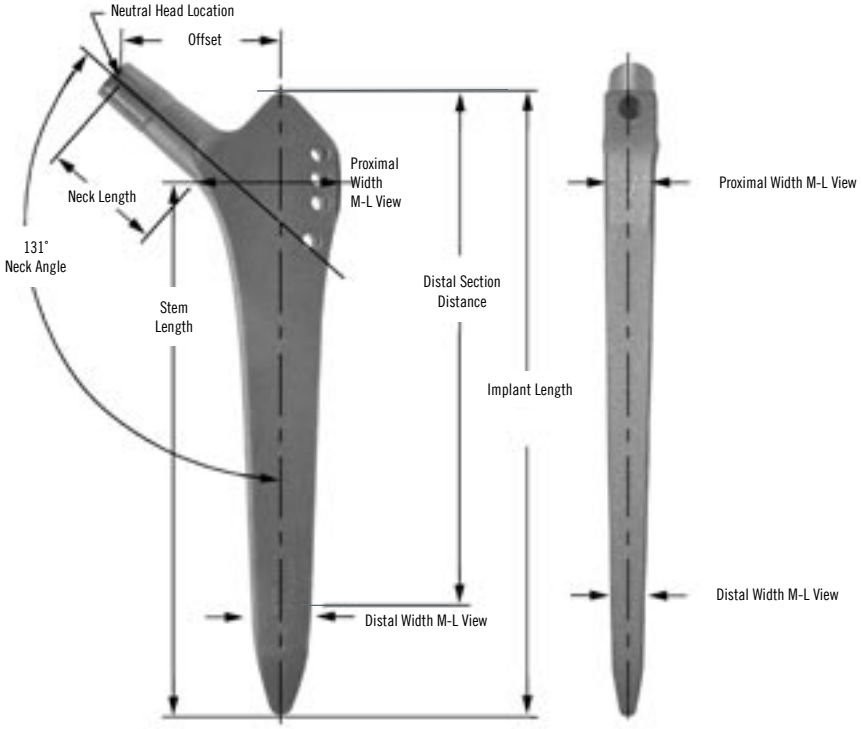
The stem is inserted and impacted using the impactor in contact with the proximal tip of the prosthesis (Fig. 18).

The taper protector is removed from the taper and a trial head may be applied at this time for a final trial head reduction. Once the final range of motion and shuck tests are complete, the taper is carefully cleaned. The selected cobalt chrome or ceramic 12/14 taper femoral head is mounted with a light rotational movement, and rotated further with axial force until it is firmly seated.The ball head is seated with several taps with the ball head impactor instrument (Fig. 19).

Fig. 18

Fig. 19

Implant Specifications and Dimensions



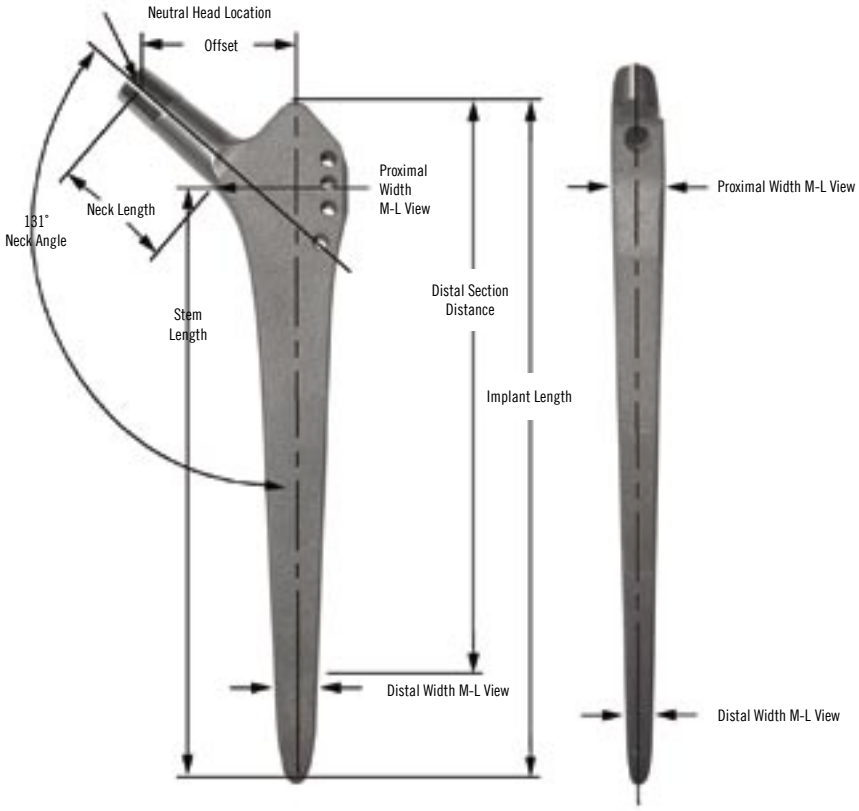
Size	Implant Length (mm)	Stem Length (mm)	Neck Length (mm)	Offset (mm)	Neck Angle	Proximal Width (mm)		Distal Width (mm)		Distal Section Distance (mm)
						A-P View	M-L View	A-P View	M-L View	
01	130	110	24	33	131°	31	9	7	6	119
0	134	113	25	34	131°	32	10	8	6	122
1	138	117	26	35	131°	32	10	9	7	125
2	143	121	26	36	131°	33	11	10	7	127
3	147	125	27	37	131°	34	11	10	7	130
4	151	129	28	38	131°	36	11	11	8	133
5	156	133	29	40	131°	37	12	12	8	136
6	161	137	30	41	131°	38	12	13	8	139
7	166	142	31	42	131°	40	12	14	9	142
8	172	147	32	44	131°	41	13	16	9	145
9	178	152	34	46	131°	42	14	17	10	148
10	184	157	35	47	131°	44	14	18	10	151
11	190	163	36	49	131°	46	15	20	11	155
12	197	168	37	50	131°	48	16	22	12	159

Implant Characteristics

The Alloclassic hip is the most widely used primary cementless hip in the world. Over 25,000 are implanted each year with over 350,000 Alloclassics implanted since the 1986 market introduction.

- Straight, collarless, tapered wedge design
- Rectangular cross section
- Grit blasted PROTASUL™-100 (Ti-6Al-7Nb)
- Surface Roughness R_a= 251µin. or (6.38µm.)
- Standard 12/14 taper

Implant Specifications and Dimensions



Size	Implant Length (mm)	Stem Length (mm)	Neck Length (mm)	Offset (mm)	Neck Angle	Proximal Width (mm)		Distal Width (mm)		Distal Section Distance (mm)
						A-P View	M-L View	A-P View	M-L View	
3	178	156	31	40	131°	34	11	10	7	130
4	183	160	32	41	131°	36	11	11	7	133
5	188	165	33	43	131°	37	12	12	8	136
6	193	169	34	44	131°	38	12	13	8	139
7	199	174	35	45	131°	40	12	14	9	142
8	204	179	36	47	131°	41	13	16	9	145
9	210	184	38	48	131°	42	14	17	10	148
10	215	189	39	50	131°	44	14	18	10	151
11	221	194	40	52	131°	46	15	20	11	155

Implant Characteristics

The Alloclassic SLL revision hip has 20% more distal length and is 4 mm longer in the neck than the Alloclassic SL primary hip.

- Straight, collarless, tapered wedge design
- Rectangular cross section
- Grit blasted PROTASUL^{TM}-100 (Ti-6Al-7Nb)
- Surface Roughness R_a= 251µin. or (6.38µm.)
- Standard 12/14 taper

Ordering Information

ALLOCLASSIC HIP IMPLANTS

Catalog No.	Description
2839	Alloclassic SL Hip - Size 01
2840	Alloclassic SL Hip - Size 0
2841	Alloclassic SL - Size 1
2842	Alloclassic SL - Size 2
2843	Alloclassic SL - Size 3
2844	Alloclassic SL - Size 4
2845	Alloclassic SL - Size 5
2846	Alloclassic SL - Size 6
2847	Alloclassic SL - Size 7
2848	Alloclassic SL - Size 8
2849	Alloclassic SL - Size 9
2850	Alloclassic SL - Size 10
2851	Alloclassic SL - Size 11
2852	Alloclassic SL - Size 12

ALLOCLASSIC SL HIP INSTRUMENT CASE 1

Catalog No.	Description
01.00129.600	Instrument Case
01.00129.601	Insert for Instrument Case
01.00029.031	Instrument for Case Cover
8095	Striking Platform/Handle, Alloclassic
6842	Tapered Bolt (sizes 01 & 0), Alloclassic
01.00209.014	Tapered Bolt (sizes 1-12), Alloclassic
5112	Extractor Hook
5671	Gliding Hammer
5672	Impactor
01.00129.650	Chisel
6835	Adapter with Lever
6815	Detachable Rasp - Size 01
6820	Detachable Rasp - Size 0
6821	Detachable Rasp - Size 1
6822	Detachable Rasp - Size 2
6823	Detachable Rasp - Size 3
6824	Detachable Rasp - Size 4
6825	Detachable Rasp - Size 5
6826	Detachable Rasp - Size 6
6827	Detachable Rasp - Size 7
6828	Detachable Rasp - Size 8
6829	Detachable Rasp - Size 9
6830	Detachable Rasp - Size 10
6831	Detachable Rasp - Size 11
6832	Detachable Rasp - Size 12
9666-22-000	Head Trial - Size 22mm/Neutral (12/14 Taper)
9666-22-350	Head Trial - Size 22mm/+3.5mm (12/14 Taper)
9666-22-800	Head Trial - Size 22mm/+8mm (12/14 Taper)
9666-26-000	Head Trial - Size 28mm/Neutral (12/14 Taper)
9666-28-004	Head Trial - Size 28mm/-4mm (12/14 Taper)
9666-28-400	Head Trial - Size 28mm/+4mm (12/14 Taper)
9666-28-800	Head Trial - Size 28mm/+8mm (12/14 Taper)
9666-32-000	Head Trial - Size 32mm/Neutral (12/14 Taper)
9666-32-004	Head Trial - Size 32mm/-4mm (12/14 Taper)
9666-32-400	Head Trial - Size 32mm/+4mm (12/14 Taper)
9666-32-800	Head Trial - Size 32mm/+8mm (12/14 Taper)
6852	Head Trial for Detachable Rasp - 28 - Small
6853	Head Trial for Detachable Rasp - 28 - Med
6854	Head Trial for Detachable Rasp - 28 - Large
01.00129-284	Head Trial for Detachable Rasp - 28 - XL
6856	Head Trial for Detachable Rasp - 32 - Small
6857	Head Trial for Detachable Rasp - 32 - Med
6858	Head Trial for Detachable Rasp - 32 - Large
01.000129.324	Head Trial for Detachable Rasp - 32 - XL

ALLOCLASSIC SL HIP INSTRUMENT CASE 2

Catalog No.	Description
01.00129.500	Instrument Case (Alloclassic Trials)
01.00029.031	Instrument Case Cover
6862	Alloclassic SL Trial Stem, Size 01
6863	Alloclassic SL Trial Stem, Size 0
6864	Alloclassic SL Trial Stem, Size 1
6865	Alloclassic SL Trial Stem, Size 2
6866	Alloclassic SL Trial Stem, Size 3
6867	Alloclassic SL Trial Stem, Size 4
6868	Alloclassic SL Trial Stem, Size 5
6869	Alloclassic SL Trial Stem, Size 6
6870	Alloclassic SL Trial Stem, Size 7
6871	Alloclassic SL Trial Stem, Size 8
6872	Alloclassic SL Trial Stem, Size 9
6873	Alloclassic SL Trial Stem, Size 10
6874	Alloclassic SL Trial Stem, Size 11
6875	Alloclassic SL Trial Stem, Size 12

ALLOCLASSIC SLL HIP IMPLANTS

Catalog No.	Description
2883	Alloclassic SLL Revision Hip, Size 3
2884	Alloclassic SLL Revision Hip, Size 4
2885	Alloclassic SLL Revision Hip, Size 5
2886	Alloclassic SLL Revision Hip, Size 6
2887	Alloclassic SLL Revision Hip, Size 7
2888	Alloclassic SLL Revision Hip, Size 8
2889	Alloclassic SLL Revision Hip, Size 9
2890	Alloclassic SLL Revision Hip, Size 10
2891	Alloclassic SLL Revision Hip, Size 11

ALLOCLASSIC SLL HIP INSTRUMENT CASE 1

Catalog No.	Description
8095	Striking Platform/Handle, Alloclassic
01.00209.014	Tapered Bolt (sizes 1-12), Alloclassic
5112	Extractor Hook
5671	Gliding Hammer
5672	Impactor
01.00129.650	Chisel
6835	Adapter with Lever
8023	Detachable Rasp/Revision - Size 3
8024	Detachable Rasp/Revision - Size 4
8025	Detachable Rasp/Revision - Size 5
8026	Detachable Rasp/Revision - Size 6
8027	Detachable Rasp/Revision - Size 7
8028	Detachable Rasp/Revision - Size 8
8029	Detachable Rasp/Revision - Size 9
8030	Detachable Rasp/Revision - Size 10
8031	Detachable Rasp/Revision - Size 11
9666-22-000	Head Trial - Size 22mm/Neutral (12/14 Taper)
9666-22-350	Head Trial - Size 22mm/+3.5mm (12/14 Taper)
9666-22-800	Head Trial - Size 22mm/+8mm (12/14 Taper)
9666-26-000	Head Trial - Size 28mm/Neutral (12/14 Taper)
9666-28-004	Head Trial - Size 28mm/-4mm (12/14 Taper)
9666-28-400	Head Trial - Size 28mm/+4mm (12/14 Taper)
9666-28-800	Head Trial - Size 28mm/+8mm (12/14 Taper)
9666-32-000	Head Trial - Size 32mm/Neutral (12/14 Taper)
9666-32-004	Head Trial - Size 32mm/-4mm (12/14 Taper)
9666-32-400	Head Trial - Size 32mm/+4mm (12/14 Taper)
9666-32-800	Head Trial - Size 32mm/+8mm (12/14 Taper)
6852	Head Trial for Detachable Rasp - 28 - Small
6853	Head Trial for Detachable Rasp - 28 - Med
6854	Head Trial for Detachable Rasp - 28 - Large
01.00129-284	Head Trial for Detachable Rasp - 28 - XL
6856	Head Trial for Detachable Rasp - 32 - Small
6857	Head Trial for Detachable Rasp - 32 - Med
6858	Head Trial for Detachable Rasp - 32 - Large
01.00129.324	Head Trial for Detachable Rasp - 32 - XL

ALLOCLASSIC TEMPLATES

Catalog No.	Description
06.01045.000	Templates, Alloclassic SL Hip 18%
06.01084.000	Templates, Alloclassic SLL Hip 18%

Please refer to package inserts for complete product information, including contraindications, warnings, precautions, and adverse effects.

Contact your Zimmer Representative or visit us at www.zimmer.com.

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Confidence in your hands™