





# MULTI HOLE PRESS FIT CUP UNCEMENTED

#### Press Fit Cup

Essentially for all forms of arthrosis. It is used in cases of advanced wear of the hip joint caused by degenerative, post-traumatic or rheumatoid arthritis fractures in avascular necrosis of the femoral head. It is also used in disorders remaining after early operations such as osteosynthesis, joint reconstructions, arthrodesis, hemiarthroplastic or total hip renewals.

The press-fit cup is an acetabular implant that provides cementless fixation. There are 3 holes on the superolateral side of the titanium cup. The screws have a spherical head and are always in good harmony with their sockets, even if their starting angles are different. This provides protection against wear and ensures the screw is stable.

It is manufactured from a titanium alloy certified according to ISO 5832-3 due to its elasticity coefficient being very close to living bone tissue, high fatigue strength and excellent biocompatibility.

#### Press Fit Cup Linear

Due to the presence of PE-UHMW Linear inside the pressfit cup, the possibility of wear is low. This situation is due to the precise processing of the inner surface. This precision of production reduces micro movements and wear caused by direct contact between PE-UHMW and the inner surface of the metal container.

It is produced from PE-UHMW cross-linked material in accordance with ISO 5834-2 standards due to its high purity rate, biological compatibility, mechanical working performance and friction properties.

Note: Read the instructions for use carefully and if you have any questions regarding product compatibility, please contact your TIPSAN representative.

This document is intended as a guide for surgeons, but there are multiple techniques for its application and, as with any surgical procedure, the surgeon must be thoroughly trained and ensure that the procedure is appropriate for the patient.



#### Starex Screw

If the titanium cup needs to be fixed with screws due to bone quality, special bone screws with spherical heads and cancellous teeth are used for fixation. The screw is always in good contact with the insertion site, even if the insertion angle is different. This prevents corrosion caused by friction and ensures the screw is stable.

Made of ISO 5832-3 certified titanium alloy

PRESS FIT CUP - MULTI HOLE Ti+HA COATED (Ti6Al4Veli)



Outer Diameter	Titanium + HA Coated
Ø42	10232282042
Ø44	10232282044
Ø46	10232282046
Ø48	10232282048
Ø50	10232282050
Ø52	10232282052
Ø54	10232282054
Ø56	10232282056
Ø58	10232282058
Ø60	10232282060
Ø62	10232282062
Ø64	10232282064
Ø66	10232282066
Ø68	10232282068
Ø70	10232282070



# LINER FOR PRESSFIT CUP MULTI HOLE (PE-UHMW CROSSLINKED)



Inner Diameter	Liner Size	PE 0°	PE 10°
28 mm	Ø42-44-46	10232287044	10232287144
28 mm	Ø48	10232287048	10232287148
28 mm	Ø50	10232287050	10232287150
28 mm	Ø52-54-56	10232287054	10232287154
28 mm	Ø58-60	10232287058	10232287158
28 mm	Ø62-64	10232287062	10232287162

Inner Diameter	Liner Size	PE 0°	PE 10°
32 mm	Ø48	10232327048	10232327148
32 mm	Ø50	10232327050	10232327150
32 mm	Ø52-54-56	10232327054	10232327154
32 mm	Ø58-60	10232327058	10232327158
32 mm	Ø62-64	10232327062	10232327162

Inner Diameter	Liner Size	PE 0°	PE 10°
36 mm	Ø50	10232367050	10232367150
36 mm	Ø52-54-56	10232367054	10232367154
36 mm	Ø58-60	10232367058	10232367158
36 mm	Ø62-64	10232367062	10232367162
36 mm	Ø66	10232367066	10232367166
36 mm	Ø68	10232367068	10232367168
36 mm	Ø70	10232367070	10232367170

INSERT FOR PRESS FIT CUP (Ceramic)



Inner Diameter	Liner Size	Ceramik 0°
Ø28	Ø42-48	10232119048
Ø28	Ø50-52	10232119052
Ø28	Ø54-56	10232119056
Ø28	Ø58-60	10232119060
Ø28	Ø62-64	10232119064
Ø28	Ø66-68	10232119068
Ø28	Ø70-72	10232119072

STAREX FIXATION SCREW (Ti6Al4Veli)



	15 mm	10802382001
	20 mm	10802382002
	25 mm	10802382003
	30 mm	10802382004
	35 mm	10802382005
Ø6,5 mm	40 mm	10802382006
	45 mm	10802382007
	50 mm	10802382008
	55 mm	10802382009
	60 mm	10802382010
	65 mm	10802382011



# MODULAR HEAD FOR TOTAL HIP PROSTHESIS (CoCrMo)



Outer Diameter	Size	СоСтМо
Ø28	SHORT	10236013001
Ø28	MEDIUM	10236013002
Ø28	LONG	10236013003
Ø28	XLONG	10236013004
Ø28	XXLONG	10236013005

Outer Diameter	Size	СоСтМо
Ø32	SHORT	10236043003
Ø32	MEDIUM	10236043004
Ø32	LONG	10236043005
Ø32	XLONG	10236043006
Ø32	XXLONG	10236043007

Outer Diameter	Size	СоСтМо
Ø36	SHORT	10236033001
Ø36	MEDIUM	10236033002
Ø36	LONG	10236033003
Ø36	XLONG	10236033004
Ø36	XXLONG	10236033005

## MODULAR HEAD FOR TOTAL HIP PROSTHESIS (Ceramic)

ZTA (Zirconia Toughened Alumina) ceramic Compliant with ISO 6474-2 (2019) standard

Values below are the results of current technics. It may change as HTI Group optimizes its processes day by day.

12/14		
Outer Diameter	Size	Ceramic
Ø22	SHORT	10223019001
Ø22	MEDIUM	10223019002
Ø22	LONG	10223019003
Ø22	X-LONG	10223019007
Ø22	XX-LONG	10223019008

	12/14	
Outer Diameter	Size	Ceramic
Ø28	SHORT	10236019001
Ø28	MEDIUM	10236019002
Ø28	LONG	10236019003
Ø28	X-LONG	10236019007
Ø28	XX-LONG	10236019008

	12/14		
Outer Diameter	Size	Ceramic	
Ø32	SHORT	10236049001	
Ø32	MEDIUM	10236049002	
Ø32	LONG	10236049003	
Ø32	X-LONG	10236049007	
Ø32	XX-LONG	10236049008	

12/14						
Outer Diameter	Size	Ceramic				
Ø36	SHORT	10236039001				
Ø36	MEDIUM	10236039002				
Ø36	LONG	10236039003				
Ø36	X-LONG	10236039007				
Ø36	XX-LONG	10236039008				

### LINER (PE-UHMW CROSSLINKED) FOR MULTI HOLE PRESS FIT CUP MULTI HOLE MATCHING CHART

Liner	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
Ø28				•	•	•													
Ø32							•	•	•	•	•	•	•	•	•				
Ø36								•	•	•	•	•	•	•	•	•	•	•	•





#### Carving

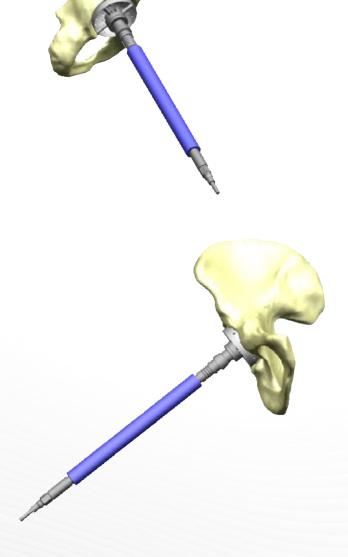
After femoral neck arthrotomy and osteotomy, remove osteophytes to expose and prepare the acetabular space.



Acetabular Reamer - Mount the Acetabular Reamer with a drill. Hold it steady with the help of the drill motor or T Handle and apply pressure in the same direction. The ideal reaming axis should be 40°/45° inclined and 15°/20° anteverted. (Anteversion is recommended for posterior approach)

The reaming process of the acetabulum begins with the smallest reamer and is enlarged with 2 mm increments until a smooth, spherical and hard tissue is obtained.

In order to prevent the carving process from being oval, be careful not to change the axis of the reamer during the final carving. Otherwise, the resulting situation may affect or prevent the initial placement.





#### **Application of Test Vessel**

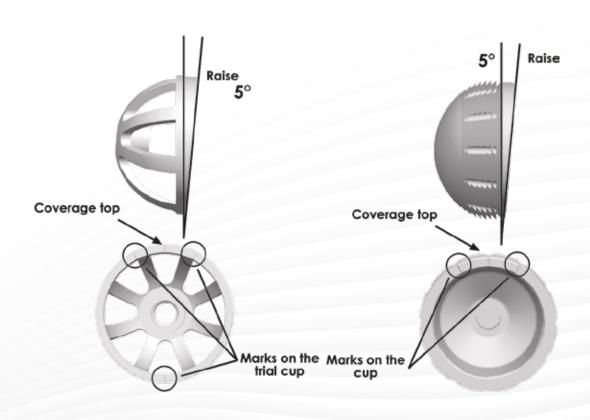
As a general rule, the correct diameter should be 4-6 mm larger than the diameter of the femoral head. Try to preserve as much bone as possible in the anterior and posterior areas. The pieces removed by the reaming process can be used to fill the space between the implant and the acetabulum.

Mount the Press Fit Cup, which has the same diameter as the last reamer used, on the Press Fit Cup Adjustable Holder. Place the test cup in the reamed space to determine depth and orientation.



- Test cups:
- Smooth in structure and the same size as the reamer to prevent damage to the socket.
- Slightly smaller than the implant when compared to the implant in order to maximize the press-fit effect on the real implant.
- It has a hollow structure to allow us to see the base of the acetabular socket.

The implant and test cup both have a 5° elevation. Markings on the acetabular cup or test cup help you determine the highest point (see image).



To ensure that the acetabular cup is positioned correctly, you must mark the part of the acetabulum that reaches the highest point of the cup. You can use the positioner as an aid to positioning.

If you have doubts about the fixation or placement of the test cup, especially when the bone quality is low, choose the cup one size larger by making or not making an additional reaming.



#### Impaction of the Acetabular Cup

The acetabular cup may be inserted after satisfactory test fit. The acetabular cup size determined will be the same as the last reamer size used.

The positioner can be used to assist in positioning the acetabular shell. The positioner is mounted on the handle of the press-fit cup holder. The two rods of the positioner are inclined at 45° and 20° to the press-fit cup holder.

Remove the press-fit cup holder.

Mount the test insert with the impactor holder.

Position the assembly on the acetabular cup.

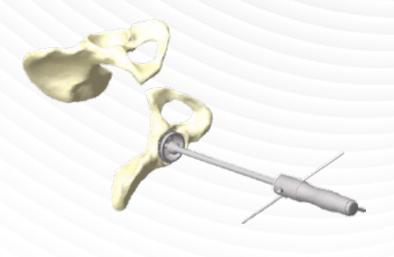
Hit the acetabular cup with a hammer until it is completely seated and fixed. Remember that the acetabular cup will not be screwed into the acetabulum, it will be press-fit.

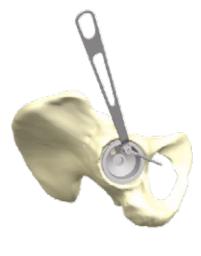
#### Fixation of the screw

If additional screw fixation is required, the holes are drilled at the level of the sacro-iliac joint using the Drill Guide, drill and Flexible Drive Schft.

The depth of the holes is determined with the Screw Depth Gauge to determine the correct screw length. Following this, the initial insertion depth for cancellous screws (approximately 10 mm) is predrilled using the Screw Tap on the Universal Joint Tap Handle. The screw can then be easily inserted into the soft cancellous layer.

Where a high rotational force is required for insertion, it is recommended to either switch to a smaller screw or to re-drill the gap in the bone using a steel screw to the determined depth. After this, remove the steel screw and replace it with a titanium screw.









#### Press Fit Cup - Multi Hole Cup Nailing

The last used Acetabular Reamer size will be the same as the size of the Press Fit Cup to be applied. The Tipsan Press Fit Cup determined with the Press Fit Cup Adjustable Holder is mounted. The Direction Indicator and its arm are mounted and the Direction Indicator is passed through the handle side of the Press Fit Cup Adjustable Holder. The Direction Indicator's arms show 45° and 20° angles on the Press Fit Cup Adjustable Holder. In the appropriate position, the Press Fit Cup is hammered into the acetabular socket.

Remove the Press Fit Cup Adjustable Holder.



If additional screw fixation is required; the plugs to be used on the Press Fit Cup are removed so that the holes are at the level of the sacro-iliac joint. Drill is attached to the Flexible Shaft. Drilling is performed on the hole of the removed plug using the Drill Guide. The depth of the holes is determined with the Screw Depth Measuring Device to determine the correct screw length: Teb is mounted on the Flexible Teb Holder and the initial entry depth for the Starex screws (approximately 10 mm) is pre-drilled. After this, the screw can be easily inserted into the soft cancellous layer. With the help of the Flexible Screwdriver and Screw Holder (Starex), the Starex screw is sent to the acetabulum bone.

Make sure that the screw is completely seated in the slot inside the Press Fit Cup. If there is a protrusion left, Linear will not provide locking.

Mount the Driver Handle with Test Linear. Position it in the Press Fit Cup and drive it until it is completely seated and fixed. Remove the Driver Handle.

Please note that the Test Internal Piece will not be screwed on and will be press fit.

The system control should be performed after positioning the Test Sphere with the test or real stem. Place the hip in place to check the stability of the joint and the leg length. The system control should be performed with the test sphere, not the real sphere. XL and XXL spheres are necked. This will reduce the angle of movement and create a risk of crushing for the insert.





The Test Sphere and Test Insert are removed.

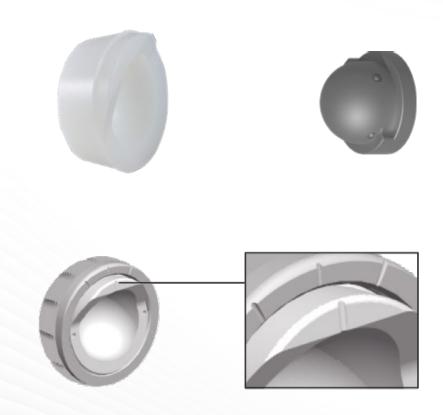


#### Placing the Insert

Clean the inner surface of the Press Fit Kab. Mount the Ball Driver to the Driver Handle. Sit on the Linear of the specified size and hammer this mount into the Press Fit Kab in the appropriate position. The raised edge of the Linear is to prevent dislocations, especially in certain sitting positions, without loading. This edge is normally placed in the craniodorsal position. For example; the right hip is recommended at approximately 10 o'clock and the left hip is recommended at approximately 2 o'clock.

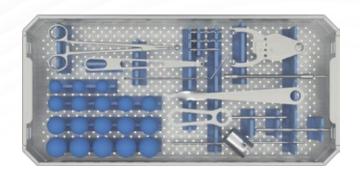


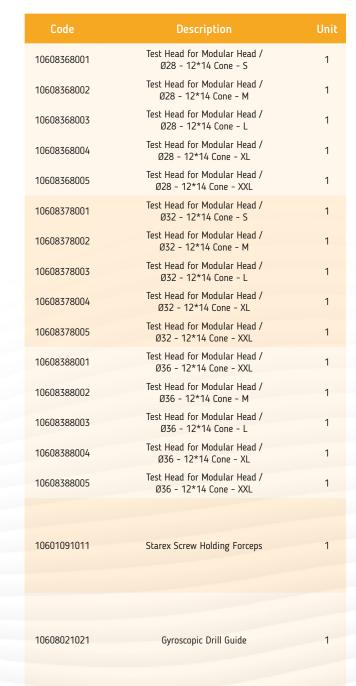
The line on the linear is placed in line with the line on the Press Fit Kab.



Instrumentation Set

#### TRAY 1







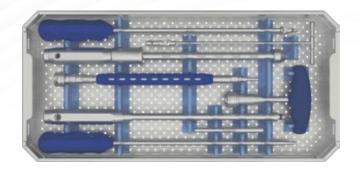




Code	Description	Unit
10608021011	Gauge For Femoral Head	1
10608031021	Depth Gauge	1
10602180009	Positioning Guide	1
10601361101	Flexible Schaft	1
10602101005	Hohmann Retractor	1
10602041002	Bone Hook Blunt	1
10809071145	Drıll / CrNi - Ø3,2 X 45	2
10606001101	Tap / 6,5	1
10602180008	Bar For Positioning Guide	1



#### TRAY 2

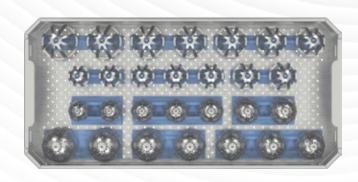




Code	Description	Unit
10601361110	Universal Joint T Handle	1
10601350022	Press Fit Cup Handle	1
10610021101	Acetabular Reamer Schaft	1
10604010010	Hexagonal Screw Driver Long	1
10604010012	Flexible Screwdriver	1
10601361261	Press Fit Cup Impactor Handle For Trial Cup And Liner	1
10601361262	Press Fit Cup Impactor Handle Bar	1
10610040001	T- Handle	1



#### TRAY 3





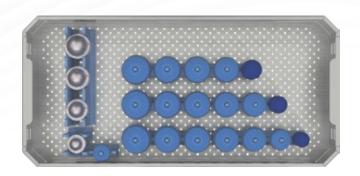


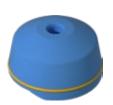


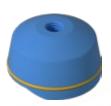
Code	Description	Unit
10610021003	Acetabular Reamer / Ø42	1
10610021004	Acetabular Reamer / Ø44	1
10610021005	Acetabular Reamer / Ø46	1
10610021006	Acetabular Reamer / Ø48	1
10610021007	Acetabular Reamer / Ø50	1
10610021008	Acetabular Reamer / Ø52	1
10610021009	Acetabular Reamer / Ø54	1
10610021010	Acetabular Reamer / Ø56	1
10610021011	Acetabular Reamer / Ø58	1
10610021012	Acetabular Reamer / Ø60	1
10610021013	Acetabular Reamer / Ø62	1
10610021014	Acetabular Reamer / Ø64	1
10608230042	Trial Cup For Press Fit Cup / 42	1
10608230044	Trial Cup For Press Fit Cup / 44	1
10608230046	Trial Cup For Press Fit Cup / 46	1
10608230048	Trial Cup For Press Fit Cup / 48	1
10608230050	Trial Cup For Press Fit Cup / 50	1
10608230052	Trial Cup For Press Fit Cup / 52	1
10608230054	Trial Cup For Press Fit Cup / 54	1
10608230056	Trial Cup For Press Fit Cup / 56	1
10608230058	Trial Cup For Press Fit Cup / 58	1
10608230060	Trial Cup For Press Fit Cup / 60	1
10608230062	Trial Cup For Press Fit Cup / 62	1
10608230064	Trial Cup For Press Fit Cup / 64	1

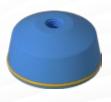
# PRESS FIT CUP UNCEMENTED Instrumentation Set

#### TRAY 4













Code	Description	Unit
10608272146	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø42-44-46	1
10608272148	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø48	1
10608272150	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø50	1
10608272156	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø52-54-56	1
10608272160	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø58-60	1
10608272168	Trial Liner for Press Fit Cup Multi Hole / Ø28 - 10° - Ø62-64-66-68	1
10608272348	Trial Liner for Press Fit Cup Multi Hole / Ø32 - 10° - Ø48	1
10608272350	Trial Liner for Press Fit Cup Multi Hole / Ø32 - 10° - Ø50	1
10608272356	Trial Liner for Press Fit Cup Multi Hole / Ø32 - 10° - Ø52-54-56	1
10608272360	Trial Liner for Press Fit Cup Multi Hole / Ø32 - 10° - Ø58-60	1
10608272368	Trial Liner for Press Fit Cup Multi Hole / Ø32 - 10° - Ø62-64-66-68	1
10608272650	Trial Liner for Press Fit Cup Multi Hole / Ø36 - 0° - Ø50	1
10608272656	Trial Liner for Press Fit Cup Multi Hole / Ø36 - 0° - Ø52-54-56	1
10608272660	Trial Liner for Press Fit Cup Multi Hole / Ø36 - 0° - Ø58-60	1
10608272668	Trial Liner for Press Fit Cup Multi Hole / Ø36 - 0° - Ø62-64-66-68	1
10601361250	Press Fit Cup Impactor For Ceramic Liner / Ø28 - 0°	1
10601361251	Press Fit Cup Impactor For Ceramic Liner / Ø32 - 0°	1
10601361252	Press Fit Cup Impactor For Ceramic Liner / Ø36 - 0°	1
10601361710	Press Fit Cup Impactor with Ball For PE Liner / Ø28 - 10°	1
10601361810	Press Fit Cup Impactor with Ball For PE Liner / Ø32 - 10°	1
10601361910	Press Fit Cup Impactor with Ball For PE Liner / Ø36 - 10°	1



# the key in orthopaedic sciences



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