



CHARFIX *system*

DYNAMIC HIP STABILIZER (DSB)
DYNAMIC CONDYLAR STABILIZER (DSK)

- *IMPLANTS*
- *INSTRUMENT SET 40.3621.500*
- *SURGICAL TECHNIQUE*



SYMBOLS DESCRIPTION



Caution - pay attention to a special procedure.



Perform the activity under X-Ray control.



Information about the next stages of a procedure.



Proceed to the next stage.



Return to the specified stage and repeat the activity.

www.chm.eu

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*The manufacturer reserves the right to introduce design changes.
Updated INSTRUCTIONS FOR USE are available at the following website: ifu.chm.eu*

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I. IMPLANTS

Dynamic hip plate

Dynamic hip plate, as a part of ChM Dynamic Hip Stabilizer, is used to stabilize the femoral head. The plate is manufactured in a variety of sizes.

Basic parameters defining the dynamic hip plate:

- Neck angle - " α "
 - 130°
 - 135° - recommended
 - 140°
 - 145°
 - 150°
- barrel length - "A"
 - 25 mm
 - 38 mm
- L plate length and related number of fixation holes

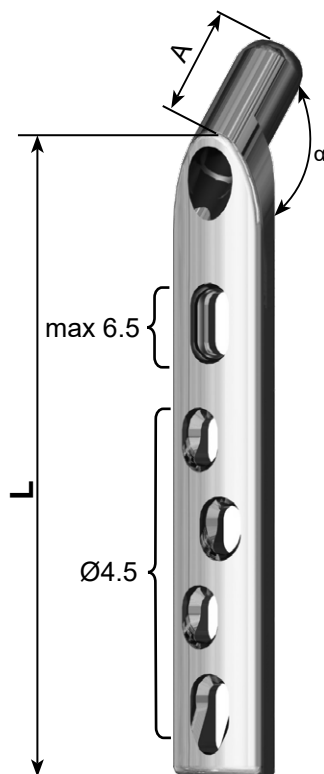
Detailed specification of all dynamic hip plates is presented in the following table.

Cannulated

Steel
1.1541.025 - 070
Titanium
3.1541.025 - 070



Steel
1.1443.012 - 060
Titanium
3.1443.012 - 060



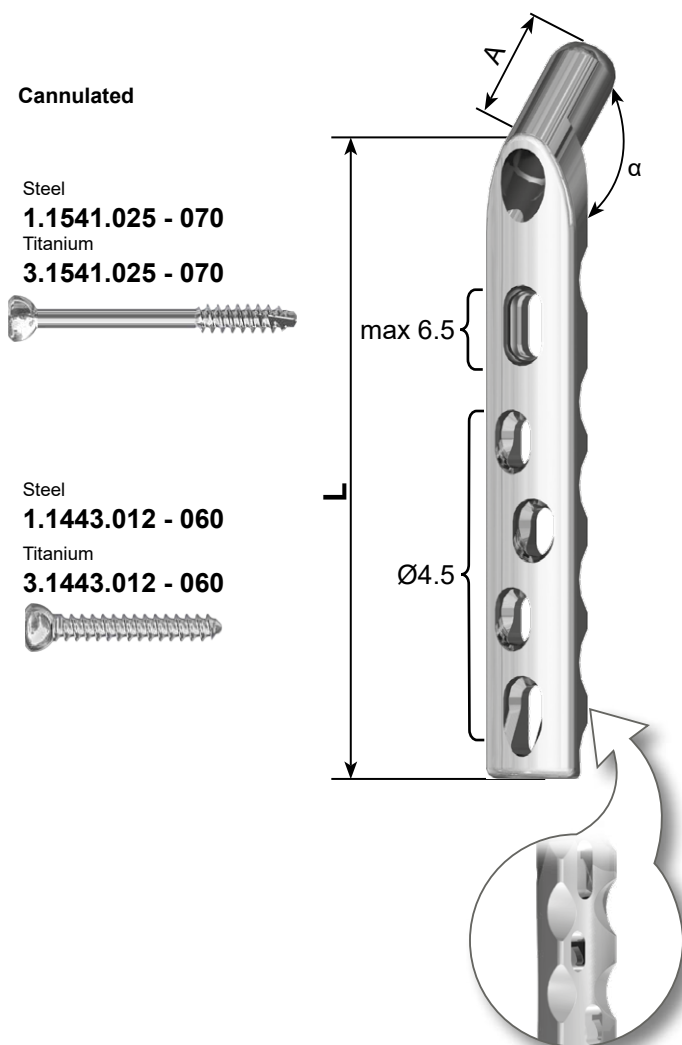
Recommended

α (°)	Holes	L [mm]	A=38 mm		A=25 mm	
			Catalogue no.		Catalogue no.	
			Steel	Titanium	Steel	Titanium
130	2	68	1.3509.068	3.3509.068	1.3510.068	3.3510.068
	3	84	1.3509.084	3.3509.084	1.3510.084	3.3510.084
	4	100	1.3509.100	3.3509.100	1.3510.100	3.3510.100
	5	116	1.3509.116	3.3509.116	1.3510.116	3.3510.116
	6	132	1.3509.132	3.3509.132	1.3510.132	3.3510.132
	7	148	1.3509.148	3.3509.148	1.3510.148	3.3510.148
	8	164	1.3509.164	3.3509.164	1.3510.164	3.3510.164
	9	180	1.3509.180	3.3509.180	1.3510.180	3.3510.180
	10	196	1.3509.196	3.3509.196	1.3510.196	3.3510.196
	11	212	1.3509.212	3.3509.212	1.3510.212	3.3510.212
	12	228	1.3509.228	3.3509.228	1.3510.228	3.3510.228
	13	244	1.3509.244	3.3509.244	1.3510.244	3.3510.244
	14	260	1.3509.260	3.3509.260	1.3510.260	3.3510.260
	16	292	1.3509.292	3.3509.292	1.3510.292	3.3510.292
	18	324	1.3509.324	3.3509.324	1.3510.324	3.3510.324
	20	356	1.3509.356	3.3509.356	1.3510.356	3.3510.356
135	2	68	1.3501.068	3.3501.068	1.3505.068	3.3505.068
	3	84	1.3501.084	3.3501.084	1.3505.084	3.3505.084
	4	100	1.3501.100	3.3501.100	1.3505.100	3.3505.100
	5	116	1.3501.116	3.3501.116	1.3505.116	3.3505.116
	6	132	1.3501.132	3.3501.132	1.3505.132	3.3505.132
	7	148	1.3501.148	3.3501.148	1.3505.148	3.3505.148
	8	164	1.3501.164	3.3501.164	1.3505.164	3.3505.164
	9	180	1.3501.180	3.3501.180	1.3505.180	3.3505.180
	10	196	1.3501.196	3.3501.196	1.3505.196	3.3505.196
	11	212	1.3501.212	3.3501.212	1.3505.212	3.3505.212
	12	228	1.3501.228	3.3501.228	1.3505.228	3.3505.228
	13	244	1.3501.244	3.3501.244	1.3505.244	3.3505.244
	14	260	1.3501.260	3.3501.260	1.3505.260	3.3505.260
	16	292	1.3501.292	3.3501.292	1.3505.292	3.3505.292
	18	324	1.3501.324	3.3501.324	1.3505.324	3.3505.324
	20	356	1.3501.356	3.3501.356	1.3505.356	3.3505.356
140	2	68	1.3502.068	3.3502.068	1.3506.068	3.3506.068
	3	84	1.3502.084	3.3502.084	1.3506.084	3.3506.084
	4	100	1.3502.100	3.3502.100	1.3506.100	3.3506.100
	5	116	1.3502.116	3.3502.116	1.3506.116	3.3506.116
	6	132	1.3502.132	3.3502.132	1.3506.132	3.3506.132
	7	148	1.3502.148	3.3502.148	1.3506.148	3.3506.148
	8	164	1.3502.164	3.3502.164	1.3506.164	3.3506.164
	9	180	1.3502.180	3.3502.180	1.3506.180	3.3506.180
	10	196	1.3502.196	3.3502.196	1.3506.196	3.3506.196
	11	212	1.3502.212	3.3502.212	1.3506.212	3.3506.212
	12	228	1.3502.228	3.3502.228	1.3506.228	3.3506.228
	13	244	1.3502.244	3.3502.244	1.3506.244	3.3506.244
	14	260	1.3502.260	3.3502.260	1.3506.260	3.3506.260
	16	292	1.3502.292	3.3502.292	1.3506.292	3.3506.292
	18	324	1.3502.324	3.3502.324	1.3506.324	3.3506.324
	20	356	1.3502.356	3.3502.356	1.3506.356	3.3506.356
145	2	68	1.3503.068	3.3503.068	1.3507.068	3.3507.068
	3	84	1.3503.084	3.3503.084	1.3507.084	3.3507.084
	4	100	1.3503.100	3.3503.100	1.3507.100	3.3507.100
	5	116	1.3503.116	3.3503.116	1.3507.116	3.3507.116
	6	132	1.3503.132	3.3503.132	1.3507.132	3.3507.132
	7	148	1.3503.148	3.3503.148	1.3507.148	3.3507.148
	8	164	1.3503.164	3.3503.164	1.3507.164	3.3507.164
	9	180	1.3503.180	3.3503.180	1.3507.180	3.3507.180
	10	196	1.3503.196	3.3503.196	1.3507.196	3.3507.196
	11	212	1.3503.212	3.3503.212	1.3507.212	3.3507.212
	12	228	1.3503.228	3.3503.228	1.3507.228	3.3507.228
	13	244	1.3503.244	3.3503.244	1.3507.244	3.3507.244
	14	260	1.3503.260	3.3503.260	1.3507.260	3.3507.260
	16	292	1.3503.292	3.3503.292	1.3507.292	3.3507.292
	18	324	1.3503.324	3.3503.324	1.3507.324	3.3507.324
	20	356	1.3503.356	3.3503.356	1.3507.356	3.3507.356
150	2	68	1.3504.068	3.3504.068	1.3508.068	3.3508.068
	3	84	1.3504.084	3.3504.084	1.3508.084	3.3508.084
	4	100	1.3504.100	3.3504.100	1.3508.100	3.3508.100
	5	116	1.3504.116	3.3504.116	1.3508.116	3.3508.116
	6	132	1.3504.132	3.3504.132	1.3508.132	3.3508.132
	7	148	1.3504.148	3.3504.148	1.3508.148	3.3508.148
	8	164	1.3504.164	3.3504.164	1.3508.164	3.3508.164
	9	180	1.3504.180	3.3504.180	1.3508.180	3.3508.180
	10	196	1.3504.196	3.3504.196	1.3508.196	3.3508.196
	11	212	1.3504.212	3.3504.212	1.3508.212	3.3508.212
	12	228	1.3504.228	3.3504.228	1.3508.228	3.3508.228
	13	244	1.3504.244	3.3504.244	1.3508.244	3.3508.244
	14	260	1.3504.260	3.3504.260	1.3508.260	3.3508.260
	16	292	1.3504.292	3.3504.292	1.3508.292	3.3508.292
	18	324	1.3504.324	3.3504.324	1.3508.324	3.3508.324
	20	356	1.3504.356	3.3504.356	1.3508.356	3.3508.356

Dynamic hip limited contact plate

Detailed specification of all dynamic hip limited contact plates is presented in the following table.

Cannulated



(° α)	Holes	L [mm]	A=38 mm		A=25 mm	
			Catalogue no.		Catalogue no.	
			Steel	Titanium	Steel	Titanium
130	2	68	1.3529.068	3.3529.068	1.3530.068	3.3530.068
	3	84	1.3529.084	3.3529.084	1.3530.084	3.3530.084
	4	100	1.3529.100	3.3529.100	1.3530.100	3.3530.100
	5	116	1.3529.116	3.3529.116	1.3530.116	3.3530.116
	6	132	1.3529.132	3.3529.132	1.3530.132	3.3530.132
	7	148	1.3529.148	3.3529.148	1.3530.148	3.3530.148
	8	164	1.3529.164	3.3529.164	1.3530.164	3.3530.164
	9	180	1.3529.180	3.3529.180	1.3530.180	3.3530.180
	10	196	1.3529.196	3.3529.196	1.3530.196	3.3530.196
	11	212	1.3529.212	3.3529.212	1.3530.212	3.3530.212
	12	228	1.3529.228	3.3529.228	1.3530.228	3.3530.228
	13	244	1.3529.244	3.3529.244	1.3530.244	3.3530.244
	14	260	1.3529.260	3.3529.260	1.3530.260	3.3530.260
	16	292	1.3529.292	3.3529.292	1.3530.292	3.3530.292
	18	324	1.3529.324	3.3529.324	1.3530.324	3.3530.324
	20	356	1.3529.356	3.3529.356	1.3530.356	3.3530.356
135	2	68	1.3521.068	3.3521.068	1.3525.068	3.3525.068
	3	84	1.3521.084	3.3521.084	1.3525.084	3.3525.084
	4	100	1.3521.100	3.3521.100	1.3525.100	3.3525.100
	5	116	1.3521.116	3.3521.116	1.3525.116	3.3525.116
	6	132	1.3521.132	3.3521.132	1.3525.132	3.3525.132
	7	148	1.3521.148	3.3521.148	1.3525.148	3.3525.148
	8	164	1.3521.164	3.3521.164	1.3525.164	3.3525.164
	9	180	1.3521.180	3.3521.180	1.3525.180	3.3525.180
	10	196	1.3521.196	3.3521.196	1.3525.196	3.3525.196
	11	212	1.3521.212	3.3521.212	1.3525.212	3.3525.212
	12	228	1.3521.228	3.3521.228	1.3525.228	3.3525.228
	13	244	1.3521.244	3.3521.244	1.3525.244	3.3525.244
	14	260	1.3521.260	3.3521.260	1.3525.260	3.3525.260
	16	292	1.3521.292	3.3521.292	1.3525.292	3.3525.292
	18	324	1.3521.324	3.3521.324	1.3525.324	3.3525.324
	20	356	1.3521.356	3.3521.356	1.3525.356	3.3525.356
140	2	68	1.3522.068	3.3522.068	1.3526.068	3.3526.068
	3	84	1.3522.084	3.3522.084	1.3526.084	3.3526.084
	4	100	1.3522.100	3.3522.100	1.3526.100	3.3526.100
	5	116	1.3522.116	3.3522.116	1.3526.116	3.3526.116
	6	132	1.3522.132	3.3522.132	1.3526.132	3.3526.132
	7	148	1.3522.148	3.3522.148	1.3526.148	3.3526.148
	8	164	1.3522.164	3.3522.164	1.3526.164	3.3526.164
	9	180	1.3522.180	3.3522.180	1.3526.180	3.3526.180
	10	196	1.3522.196	3.3522.196	1.3526.196	3.3526.196
	11	212	1.3522.212	3.3522.212	1.3526.212	3.3526.212
	12	228	1.3522.228	3.3522.228	1.3526.228	3.3526.228
	13	244	1.3522.244	3.3522.244	1.3526.244	3.3526.244
	14	260	1.3522.260	3.3522.260	1.3526.260	3.3526.260
	16	292	1.3522.292	3.3522.292	1.3526.292	3.3526.292
	18	324	1.3522.324	3.3522.324	1.3526.324	3.3526.324
	20	356	1.3522.356	3.3522.356	1.3526.356	3.3526.356
145	2	68	1.3523.068	3.3523.068	1.3527.068	3.3527.068
	3	84	1.3523.084	3.3523.084	1.3527.084	3.3527.084
	4	100	1.3523.100	3.3523.100	1.3527.100	3.3527.100
	5	116	1.3523.116	3.3523.116	1.3527.116	3.3527.116
	6	132	1.3523.132	3.3523.132	1.3527.132	3.3527.132
	7	148	1.3523.148	3.3523.148	1.3527.148	3.3527.148
	8	164	1.3523.164	3.3523.164	1.3527.164	3.3527.164
	9	180	1.3523.180	3.3523.180	1.3527.180	3.3527.180
	10	196	1.3523.196	3.3523.196	1.3527.196	3.3527.196
	11	212	1.3523.212	3.3523.212	1.3527.212	3.3527.212
	12	228	1.3523.228	3.3523.228	1.3527.228	3.3527.228
	13	244	1.3523.244	3.3523.244	1.3527.244	3.3527.244
	14	260	1.3523.260	3.3523.260	1.3527.260	3.3527.260
	16	292	1.3523.292	3.3523.292	1.3527.292	3.3527.292
	18	324	1.3523.324	3.3523.324	1.3527.324	3.3527.324
	20	356	1.3523.356	3.3523.356	1.3527.356	3.3527.356
150	2	68	1.3524.068	3.3524.068	1.3528.068	3.3528.068
	3	84	1.3524.084	3.3524.084	1.3528.084	3.3528.084
	4	100	1.3524.100	3.3524.100	1.3528.100	3.3528.100
	5	116	1.3524.116	3.3524.116	1.3528.116	3.3528.116
	6	132	1.3524.132	3.3524.132	1.3528.132	3.3528.132
	7	148	1.3524.148	3.3524.148	1.3528.148	3.3528.148
	8	164	1.3524.164	3.3524.164	1.3528.164	3.3528.164
	9	180	1.3524.180	3.3524.180	1.3528.180	3.3528.180
	10	196	1.3524.196	3.3524.196	1.3528.196	3.3528.196
	11	212	1.3524.212	3.3524.212	1.3528.212	3.3528.212
	12	228	1.3524.228	3.3524.228	1.3528.228	3.3528.228
	13	244	1.3524.244	3.3524.244	1.3528.244	3.3528.244
	14	260	1.3524.260	3.3524.260	1.3528.260	3.3528.260
	16	292	1.3524.292	3.3524.292	1.3528.292	3.3528.292
	18	324	1.3524.324	3.3524.324	1.3528.324	3.3528.324
	20	356	1.3524.356	3.3524.356	1.3528.356	3.3528.356

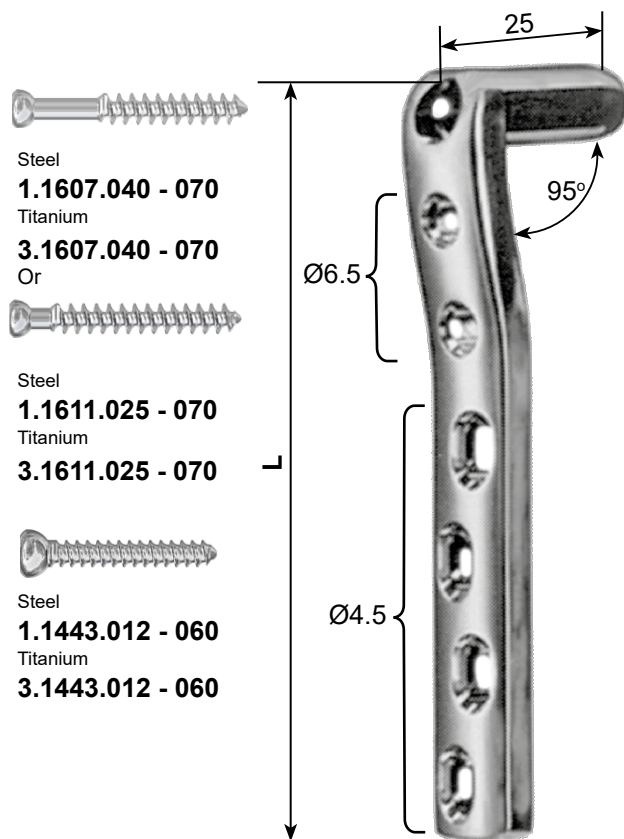
Recommended

Dynamic condylar plate

Dynamic condylar plate, as a part of ChM Dynamic Condylar Stabilizer, is used to stabilize bone fragments in the area of the femoral condyles. The plate is manufactured in several sizes.

Basic parameters defining the dynamic condylar plate:

- Neck angle of 95°
- barrel length of 25 mm
- L plate length and related number of fixation holes



Steel
1.1607.040 - 070

Titanium
3.1607.040 - 070

Or

Steel
1.1611.025 - 070

Titanium
3.1611.025 - 070

Steel
1.1443.012 - 060

Titanium
3.1443.012 - 060

		Catalogue no.	
Holes	L [mm]	Steel	Titanium
4	86	1.3511.086	3.3511.086
5	102	1.3511.102	3.3511.102
6	118	1.3511.118	3.3511.118
7	134	1.3511.134	3.3511.134
8	150	1.3511.150	3.3511.150
9	166	1.3511.166	3.3511.166
10	182	1.3511.182	3.3511.182
11	198	1.3511.198	3.3511.198
12	214	1.3511.214	3.3511.214
13	230	1.3511.230	3.3511.230
14	246	1.3511.246	3.3511.246
16	278	1.3511.278	3.3511.278
18	310	1.3511.310	3.3511.310
20	342	1.3511.342	3.3511.342

Dynamic condylar limited contact plate

Steel
1.1607.040 - 070

Titanium
3.1607.040 - 070



Or

Steel
1.1611.025 - 070

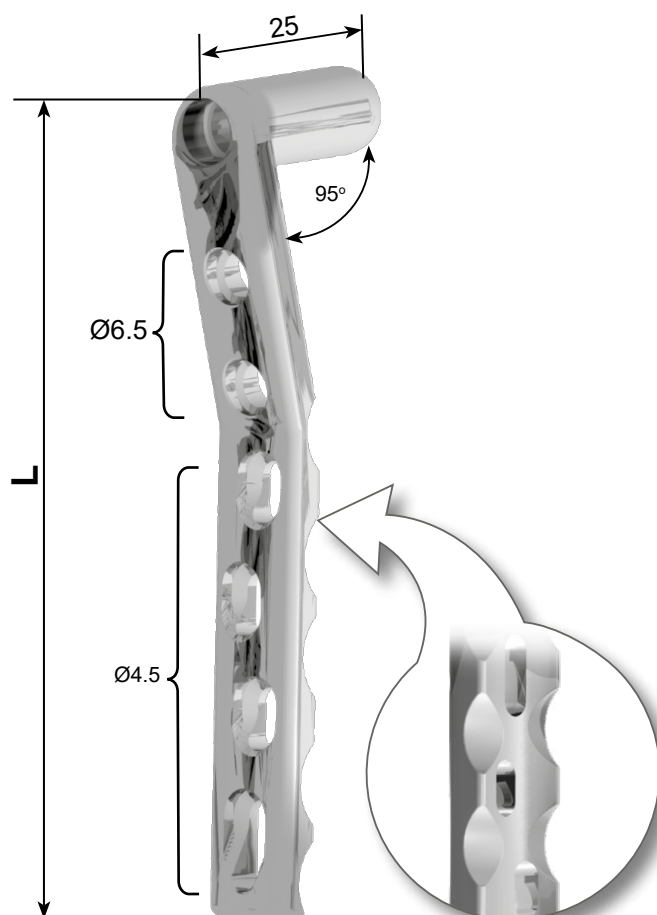
Titanium
3.1611.025 - 070



Steel
1.1443.012 - 060

Titanium
3.1443.012 - 060

		Catalogue no.	
Holes	L [mm]	Steel	Titanium
4	86	1.3512.086	3.3512.086
5	102	1.3512.102	3.3512.102
6	118	1.3512.118	3.3512.118
7	134	1.3512.134	3.3512.134
8	150	1.3512.150	3.3512.150
9	166	1.3512.166	3.3512.166
10	182	1.3512.182	3.3512.182
11	198	1.3512.198	3.3512.198
12	214	1.3512.214	3.3512.214
13	230	1.3512.230	3.3512.230
14	246	1.3512.246	3.3512.246
16	278	1.3512.278	3.3512.278
18	310	1.3512.310	3.3512.310
20	342	1.3512.342	3.3512.342



Screws

Compatible screws are required to fix the femoral fragments with the use of ChM Dynamic Hip and Condylar Stabilizer.

Detailed specification of all compatible screws is presented in the following tables.

Join cancellous screw 16



Compression screw

Steel
1.1941.001
Titanium
3.1941.001

Join screw 12.5



* L [mm]	Catalogue no.	
	Steel	Titanium
55	1.1941.055	3.1941.055
60	1.1941.060	3.1941.060
65	1.1941.065	3.1941.065
70	1.1941.070	3.1941.070
75	1.1941.075	3.1941.075
80	1.1941.080	3.1941.080
85	1.1941.085	3.1941.085
90	1.1941.090	3.1941.090
95	1.1941.095	3.1941.095
100	1.1941.100	3.1941.100
105	1.1941.105	3.1941.105
110	1.1941.110	3.1941.110
115	1.1941.115	3.1941.115
120	1.1941.120	3.1941.120
125	1.1941.125	3.1941.125
130	1.1941.130	3.1941.130
135	1.1941.135	3.1941.135
140	1.1941.140	3.1941.140
145	1.1941.145	3.1941.145
150	1.1941.150	3.1941.150

L ₁ [mm]	* L [mm]	Catalogue no.		L ₁ [mm]	* L [mm]	Catalogue no.	
		Steel	Titanium			Steel	Titanium
18	55	1.1942.055	3.1942.055	27	55	1.1943.055	3.1943.055
	60	1.1942.060	3.1942.060		60	1.1943.060	3.1943.060
	65	1.1942.065	3.1942.065		65	1.1943.065	3.1943.065
	70	1.1942.070	3.1942.070		70	1.1943.070	3.1943.070
	75	1.1942.075	3.1942.075		75	1.1943.075	3.1943.075
	80	1.1942.080	3.1942.080		80	1.1943.080	3.1943.080
	85	1.1942.085	3.1942.085		85	1.1943.085	3.1943.085
	90	1.1942.090	3.1942.090		90	1.1943.090	3.1943.090
	95	1.1942.095	3.1942.095		95	1.1943.095	3.1943.095
	100	1.1942.100	3.1942.100		100	1.1943.100	3.1943.100
	105	1.1942.105	3.1942.105		105	1.1943.105	3.1943.105
	110	1.1942.110	3.1942.110		110	1.1943.110	3.1943.110
	115	1.1942.115	3.1942.115		115	1.1943.115	3.1943.115
	120	1.1942.120	3.1942.120		120	1.1943.120	3.1943.120
	125	1.1942.125	3.1942.125		125	1.1943.125	3.1943.125
	130	1.1942.130	3.1942.130		130	1.1943.130	3.1943.130
	135	1.1942.135	3.1942.135		135	1.1943.135	3.1943.135
	140	1.1942.140	3.1942.140		140	1.1943.140	3.1943.140
	145	1.1942.145	3.1942.145		145	1.1943.145	3.1943.145
	150	1.1942.150	3.1942.150		150	1.1943.150	3.1943.150

* Any other lengths available on request

		Catalogue no.	
		Steel	Titanium
	Cannulated self-tapping screw 5.0	1.1541.025 - 070	3.1541.025 - 070
	Cortical self-tapping screw 4.5	1.1443.012 - 060	3.1443.012 - 060
	Cancellous self-tapping screw 6.5	1.1607.040 - 070	3.1607.040 - 070
		1.1611.025 - 070	3.1611.025 - 070



Join conical screw 12.5

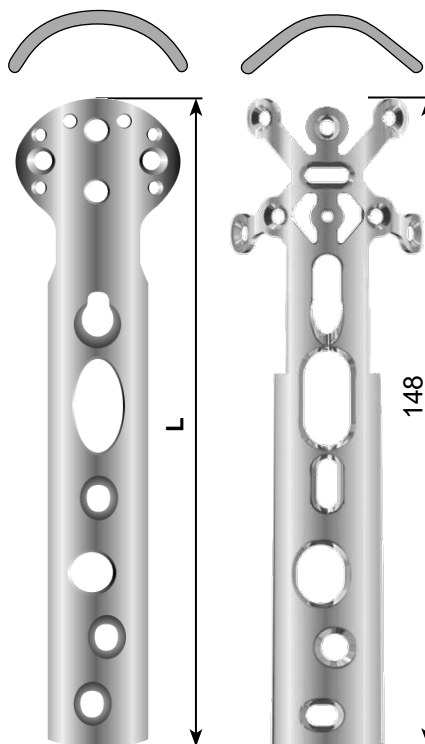
L ₁ [mm]	* L [mm]	Catalogue no.		L ₁ [mm]	* L [mm]	Catalogue no.	
		Steel	Titanium			Steel	Titanium
18	55	1.1944.055	3.1944.055	27	55	1.1945.055	3.1945.055
	60	1.1944.060	3.1944.060		60	1.1945.060	3.1945.060
	65	1.1944.065	3.1944.065		65	1.1945.065	3.1945.065
	70	1.1944.070	3.1944.070		70	1.1945.070	3.1945.070
	75	1.1944.075	3.1944.075		75	1.1945.075	3.1945.075
	80	1.1944.080	3.1944.080		80	1.1945.080	3.1945.080
	85	1.1944.085	3.1944.085		85	1.1945.085	3.1945.085
	90	1.1944.090	3.1944.090		90	1.1945.090	3.1945.090
	95	1.1944.095	3.1944.095		95	1.1945.095	3.1945.095
	100	1.1944.100	3.1944.100		100	1.1945.100	3.1945.100
	105	1.1944.105	3.1944.105		105	1.1945.105	3.1945.105
	110	1.1944.110	3.1944.110		110	1.1945.110	3.1945.110
	115	1.1944.115	3.1944.115		115	1.1945.115	3.1945.115
	120	1.1944.120	3.1944.120		120	1.1945.120	3.1945.120
	125	1.1944.125	3.1944.125		125	1.1945.125	3.1945.125
	130	1.1944.130	3.1944.130		130	1.1945.130	3.1945.130
	135	1.1944.135	3.1944.135		135	1.1945.135	3.1945.135
	140	1.1944.140	3.1944.140		140	1.1945.140	3.1945.140
	145	1.1944.145	3.1944.145		145	1.1945.145	3.1945.145
	150	1.1944.150	3.1944.150		150	1.1945.150	3.1945.150

* Any other lengths available on request

Trochanteric plates

Steel
1.1284.014÷050
Titanium
3.1284.014÷050

Steel
1.1288.018÷050
Titanium
3.1288.018÷050



Steel
1.1284.014÷050
Titanium
3.1284.014÷050

Steel
1.1288.018÷050
Titanium
3.1288.018÷050

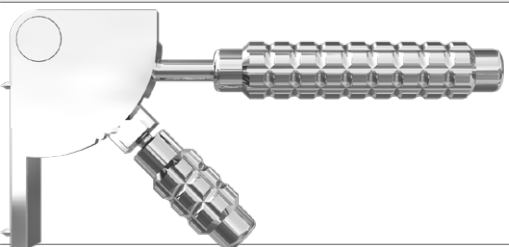
L [mm]	Catalogue no.	
	Steel	Titanium
138	1.3098.138	3.3098.138
147	1.3098.147	3.3098.147

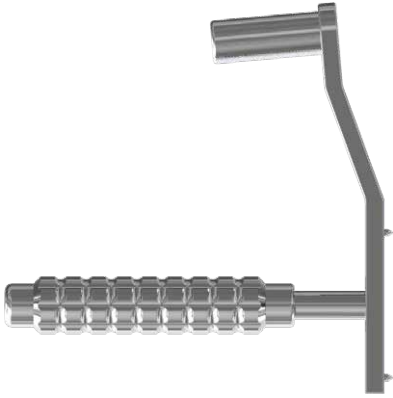
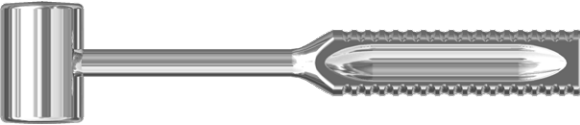
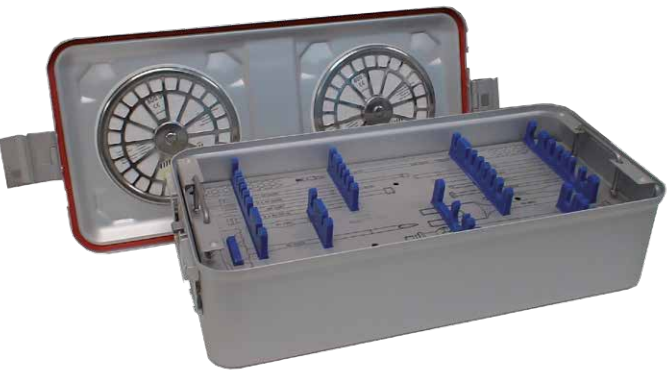
Steel
1.3098.001
Titanium
3.3098.001

II. INSTRUMENT SET

For the fixation of femoral bone fragments and removal of implants when the treatment period is complete, the instrument set **[40.3621.500]** is used. The instruments included in the set are arranged on a stand and covered with a lid, which facilitates their storage and transportation to the operating theater. The set includes the following instruments:

40.3621.500

Instrument set for DSB/DSK [40.3621.500]		Name	Catalogue no.	Pcs
1		Femoral targeter	40.3622.000	1
2		Guide pin DSB/DSK 2.5/230	40.3623.000	5
3		Measure	40.3624.000	1
4		Drill 8.0	40.3625.000	1
5		Set for tapping	40.3626.000	1
6		Cannulated wrench	40.3627.000	1
7		Mallet for dynamic plate	40.3628.000	1
8		Screw for joining screw removal	40.3629.000	1
9		Countersink 25.0	40.3630.001	1
10		Countersink 38.0	40.3630.002	1
11		Drill guide DSB/DSK 3.2/6.5	40.3655.000	1
12		Drill guide 3.2	40.3703.000	1

Instrument set for DSB/DSK [40.3621.500]		Name	Catalogue no.	Pcs
13		Condylar targeter	40.3705.000	1
14		Condylar countersink	40.3706.000	1
15		Hammer 240g, 30mm/180mm	40.0286.000	1
16		Hexagonal screwdriver S3.5	40.0320.000	1
17		Drill 3.2/180	40.0614.000	1
18		Drill 4.5/180	40.0615.000	1
19		Kirschner wire 1.1/170	40.1871.000	1
20		Hole depth measure	40.2665.000	1
21		Stand for instrument set DSB/DSK	40.3707.500	1

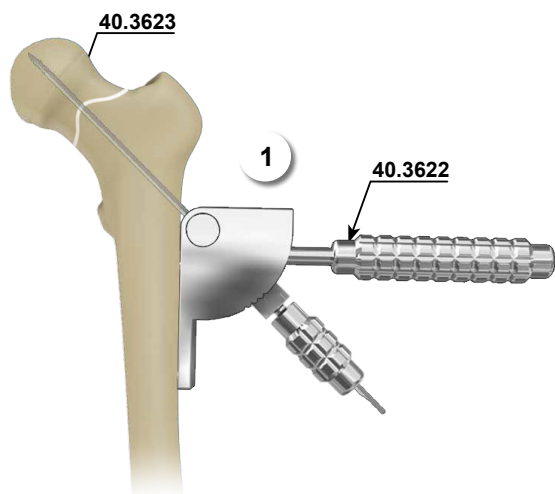
III. DYNAMIC HIP STABILIZER - SURGICAL TECHNIQUE



The following description covers the most important stages of the implantation of the Dynamic Hip/Condylar Stabilizer; however, it is not a detailed instruction of conduct. The surgeon decides about choosing the operating procedure and its application in each individual case.



CAUTION! Before the surgery, reduce the fracture, stabilize it with Kirschner wires, and measure the neck angle.



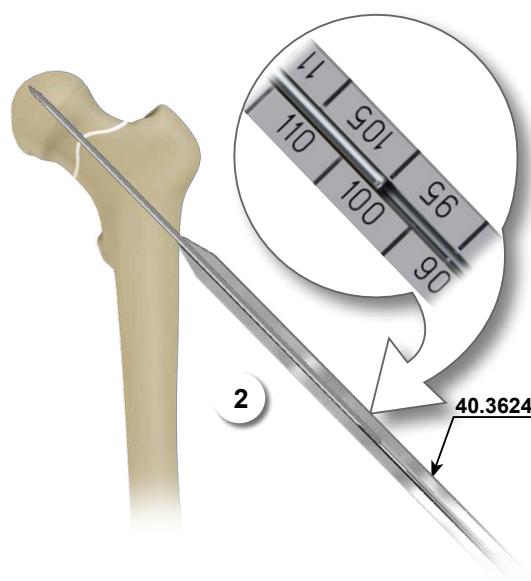
- 1 Having performed the incision of soft tissues and prepared the surgical approach, set the femoral targeter [40.3622] at a specific angle (*in line with the axis of the femoral neck*). Use a drive to insert the guide pin DSB/DSK 2.5/230 [40.3623] into the hole of the targeter. The pin should be inserted until its tip penetrates the cortex layer of the femoral head.

Remove the targeter.

Leave the guide pin in place.



Only guide pins 230 mm long should be used.



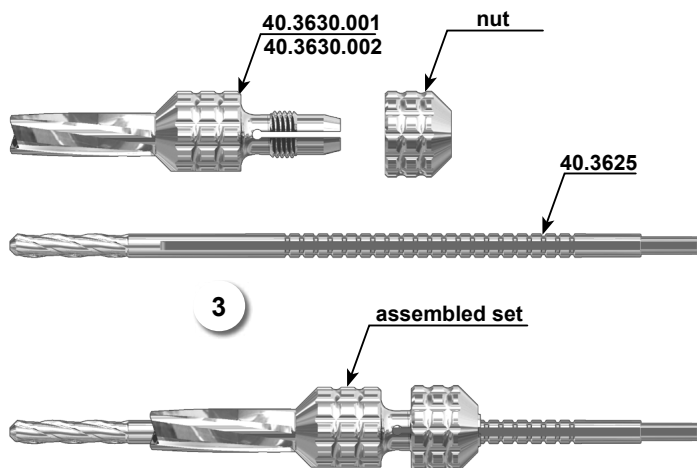
- 2 Insert the measure [40.3624] on the pin embedded in the bone until it rests on the cortical bone. Read the value indicated on the measure by the end of the pin. Prepare a suitable joint screw. The screw should be about 10 mm shorter than the value read.

Remove the measure.

Leave the guide pin in place.



If compression is planned, the length of the joint screw should be reduced by the amount of that compression.

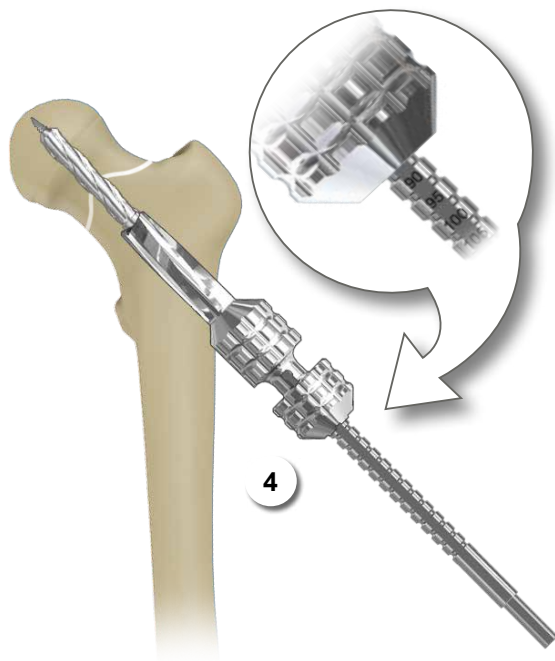


- 3 Prepare a combined instrument. Depending on the selected size of the dynamic hip plate, insert the countersink 25 [40.3630.001] or 38 [40.3630.002] on the drill 8.0 [40.3625].



Insert the drill with the grip side into the hole in the countersink.

Before drilling, set the desired drilling depth. The value visible on the drill scale after inserting the countersink should correspond to the length of the selected screw (e.g. $100 - 10 = 90$). Tighten the countersink locking nut.

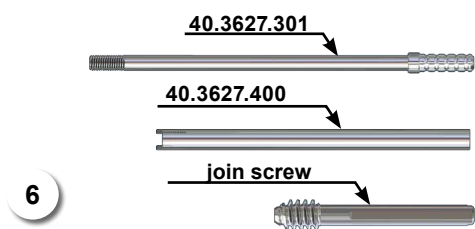
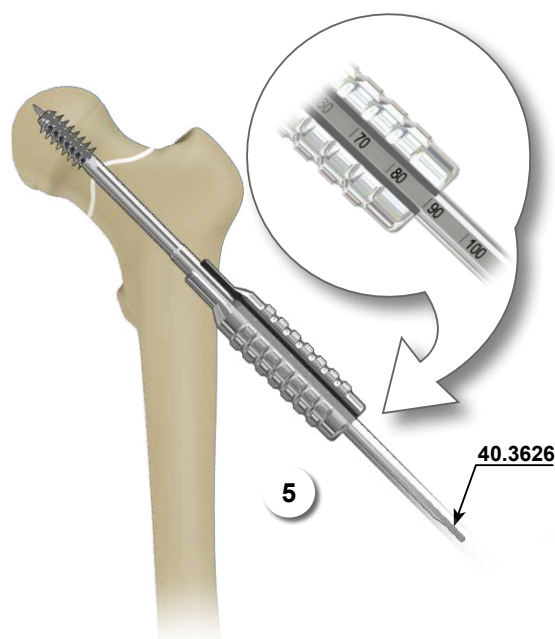


- 4 Use the drive and combined instrument to make a hole in the bone. Continue drilling until the countersink starts immersing into the cortex.

Remove the combined instrument from the hole. Make sure the guide pin stays in place.

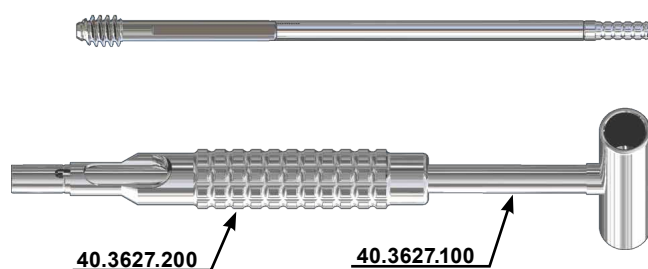
- 5 Use the set for tapping [40.3626] (insert the centering small sleeve [40.3626.200] on the tap [40.3626.100]) to thread the hole for the join screw, to the appropriate depth (the end of the centering small sleeve should indicate the length of the join screw).

Remove the tapping set from the hole. Make sure the guide pin stays in place.

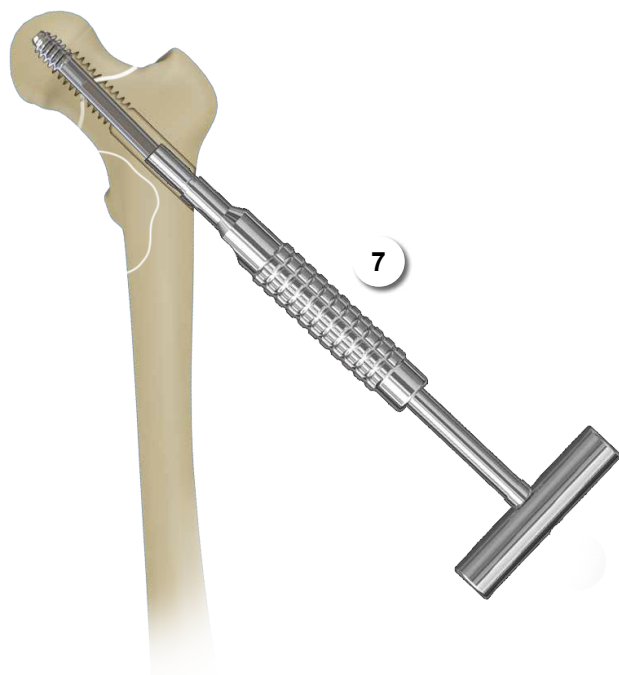


- 6 Prepare the set for join screw insertion:

- insert the centering big sleeve [40.3627.200] on the sleeve of the cannulated wrench [40.3627.100],
- insert the extension screw M4 [40.3627.301] into the guide sleeve [40.3627.400] and then the previously selected join screw.



Insert the set into the sleeve of the cannulated wrench, ensuring that the flattening on the screw fits into the appropriate flattening in the wrench. The end of the screw should now be visible in the control hole in the wrench sleeve.



- 7 Use the set for join screw insertion to implant the join screw into the prepared hole in the femur. Stop insertion when the mark „0” on the sleeve of the cannulated wrench reaches the centering sleeve. The final position of the handle of the wrench should be aligned with the axis of the femur. This will ensure the correct position of the join screw and facilitate insertion of the dynamic hip plate. The position of the end of the join screw can be observed through the cutout in the centering sleeve and the hole in the wrench.

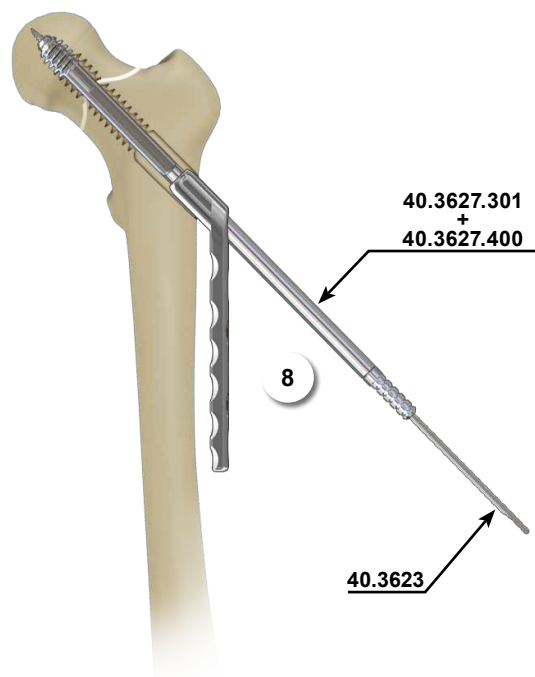
Remove the cannulated wrench.



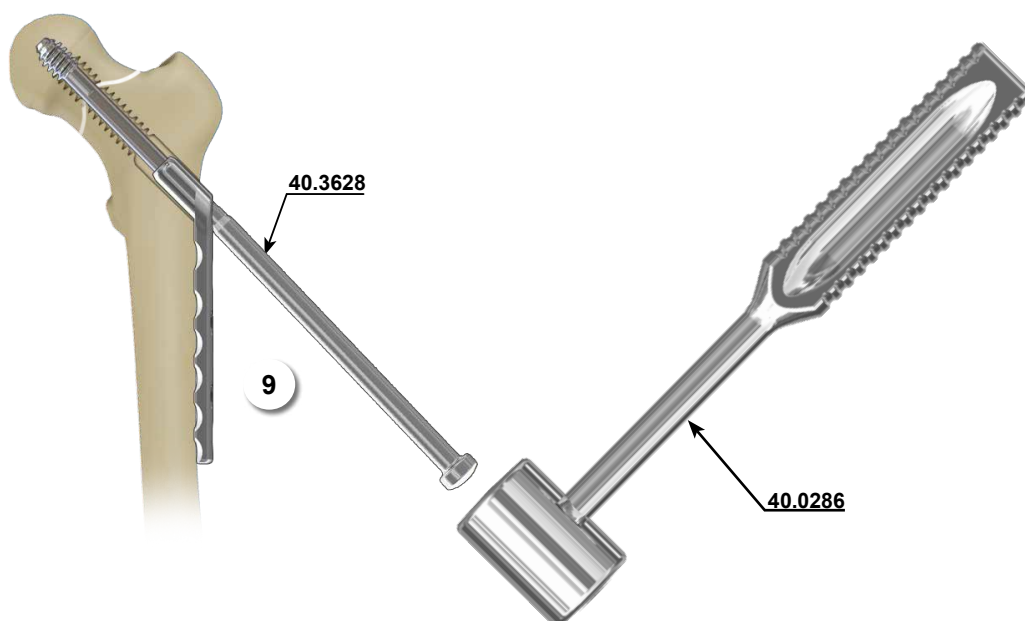
The scale marked on the wrench can be used to determine the insertion depth of the screw when using compression.

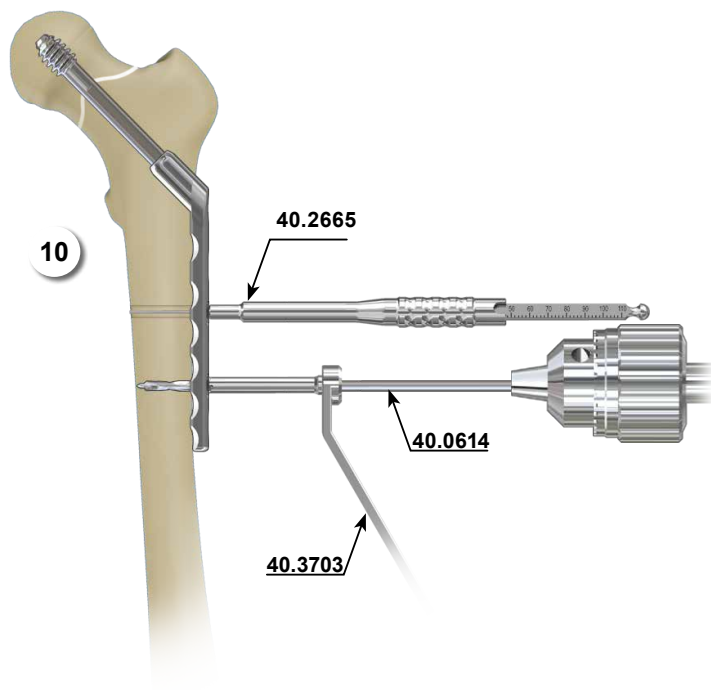
- 8 Slide the selected dynamic hip plate onto the join screw through the guide sleeve embedded in the bone. Unscrew the extension screw and remove it together with the guide sleeve.

Remove the guide pin.



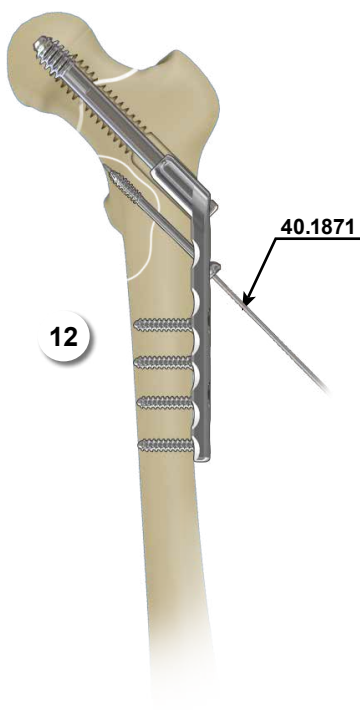
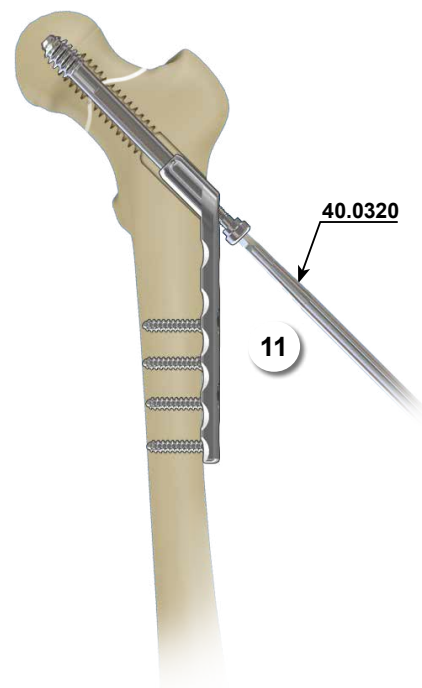
- 9 Insert the mallet for dynamic plate [40.3628] into the hole of the dynamic hip plate and, using the hammer 240g, 30mm/180mm [40.0286], push the plate against the bone surface.





- 10** Mark on the skin the points for the locking screws insertion. Perform the soft tissue incisions through these points. Insert the drill 3.2/180 [40.0614] into the drill guide 3.2 [40.3703] and drill the holes for bone screws. Use the hole depth measure [40.2665] to determine the length of the screws. Use hexagonal screwdriver S3.5 [40.0320] to insert cortical screws, fixing the dynamic hip plate to the femoral shaft.

- 11** For compression, use the screwdriver [40.0320] to insert the compression screw into the hole in the barrel of the plate.



- 12** For stabilization of the medial bone fragments, a cannulated screw should be used. Insert the Kirschner wire 1.1x170 [40.1871] into the appropriate hole in the plate and then the cannulated screw 5.0.

Remove the Kirschner wire.

Dynamic hip plate removal

- 13** Insert the screw for joining screw removal **[40.3629]** into the sleeve of the cannulated wrench **[40.3627.100]** and then insert the end of the screw into the threaded hole in the join screw until it stops. Remove the join screw. Remove all bone screws.

Should difficulties related to the removal of the screw occur, use a trepan drill to remove the bone tissue that hinders the screw removal, first (*anti-clockwise rotation*).



IV. DYNAMIC CONDYLAR STABILIZER - SURGICAL TECHNIQUE



Before the surgery, reduce the fracture and stabilize it with Kirschner wires.

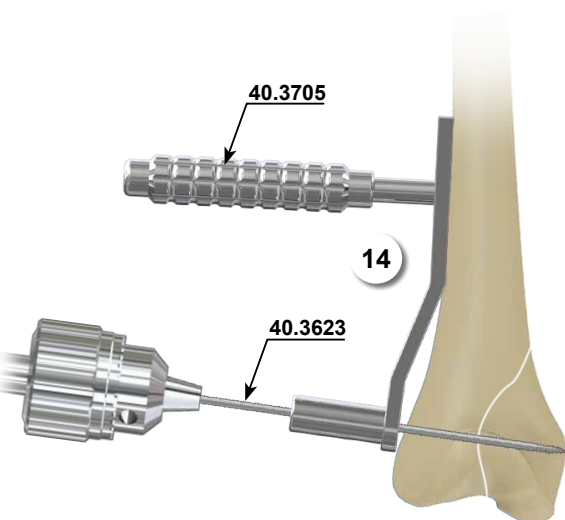
- 14** Having performed the incision of soft tissues and prepared the surgical approach, set the condylar targeter **[40.3705]** in the appropriate place of the femur, and insert the guide pin DSB/DSK 2.5/230 **[40.3623]** using the electric drive.

Insert the pin until its tip penetrates the cortex layer on the medial condyle.

Remove the targeter.



Only guide pins 230mm long should be used!

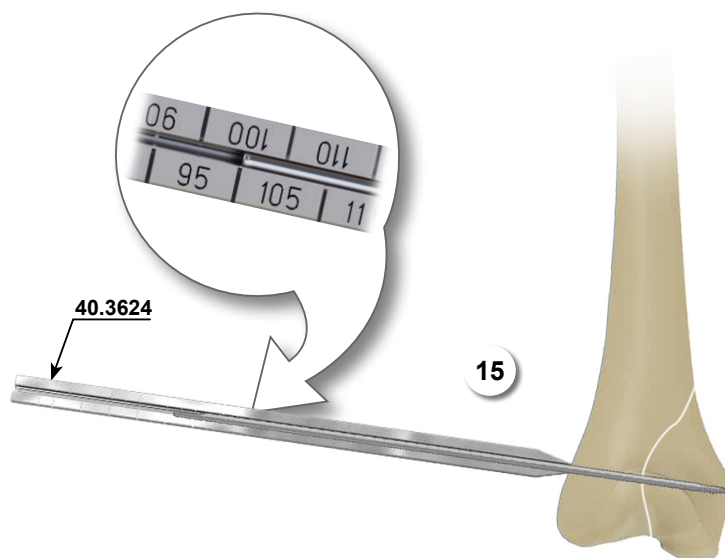


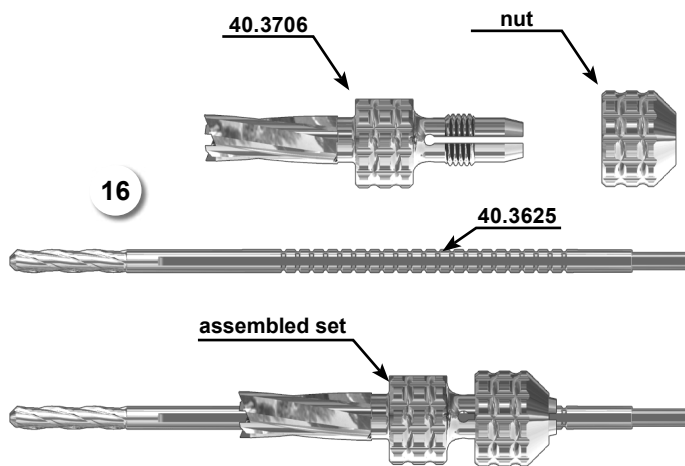
- 15** Insert the measure **[40.3624]** on the pin embedded in the bone until it rests on the cortical bone. Read the value indicated on the measure by the end of the pin. Prepare a suitable joint screw. The screw should be about 10 mm shorter than the value read.

Remove the measure.
Leave the guide pin in place.



If compression is planned, the length of the joint screw should be reduced by the amount of that compression.





- 16** Prepare a combined instrument. Depending on the selected size of the dynamic condylar plate, insert the condylar countersink [40.3706] on the drill 8.0 [40.3625].

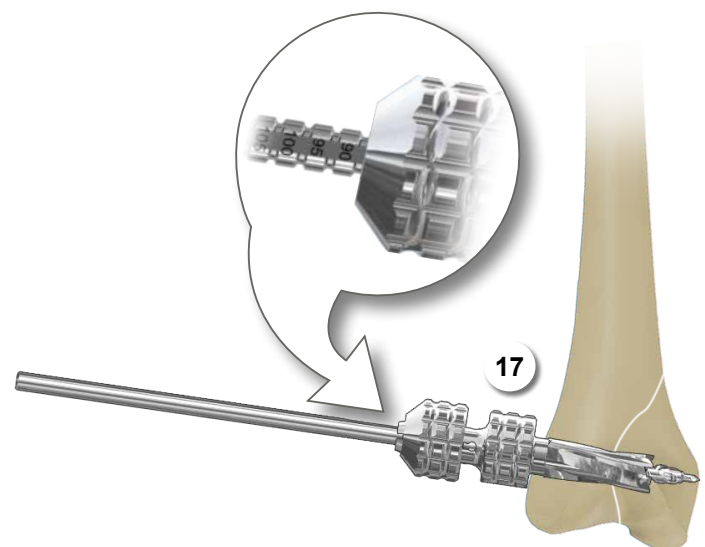


Insert the drill with the grip side into the hole in the countersink.

Before drilling, set the desired drilling depth. The value visible on the drill scale after inserting the countersink should correspond to the length of the selected screw (e.g. $100-10 = 90$). Tighten the countersink locking nut.

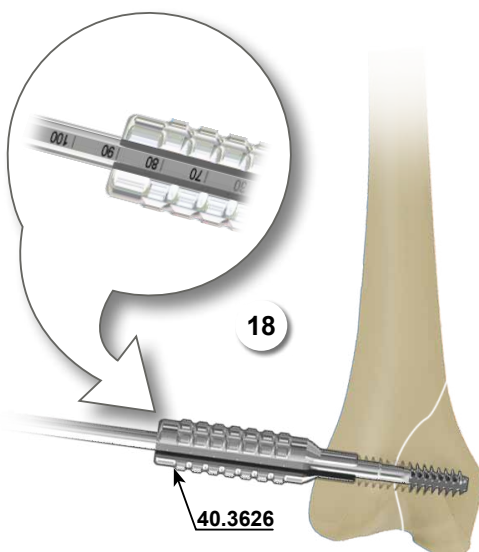
- 17** Use the drive and combined instrument to make a hole in the bone. Continue drilling until the countersink starts immersing into the cortex.

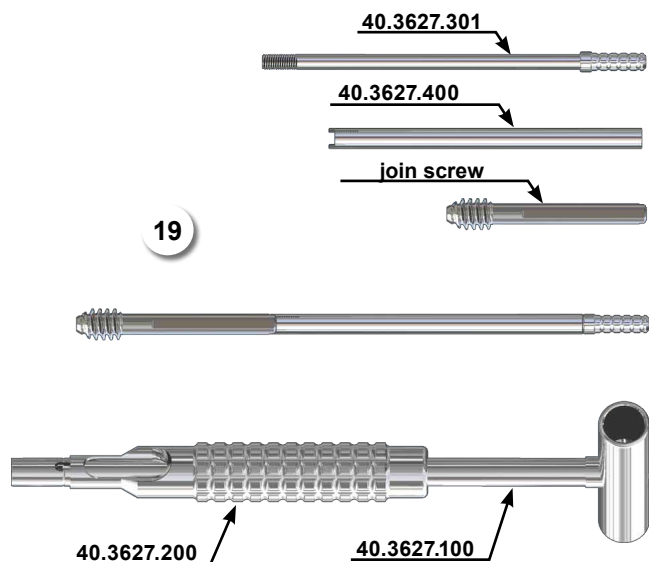
Remove the combined instrument from the hole. Make sure the guide pin stays in place.



- 18** Use the set for tapping [40.3626] (insert the centering small sleeve [40.3626.200] on the tap [40.3626.100]) to thread the hole for the join screw, to the appropriate depth (the end of the centering small sleeve should indicate the length of the join screw).

Remove the tapping set from the hole. Make sure the guide pin stays in place.





19 Prepare the set for join screw insertion:

- insert the centering big sleeve [40.3627.200] on the sleeve of the cannulated wrench [40.3627.100],
- insert the extension screw M4 [40.3627.301] into the guide sleeve [40.3627.400] and then the previously selected join screw.

Insert the set into the sleeve of the cannulated wrench, ensuring that the flattening on the screw fits into the appropriate flattening in the wrench. The end of the screw should now be visible in the control hole in the wrench sleeve.

- 20** Use the set for join screw insertion to implant the join screw into the prepared hole in the femur. Stop insertion when the mark „0” on the sleeve of the cannulated wrench reaches the centering sleeve. The final position of the handle of the wrench should be aligned with the axis of the femur. This will ensure the correct position of the join screw and facilitate insertion of the dynamic condylar plate. The position of the end of the join screw can be observed through the cutout in the centering sleeve and the hole in the wrench.

Remove the cannulated wrench.

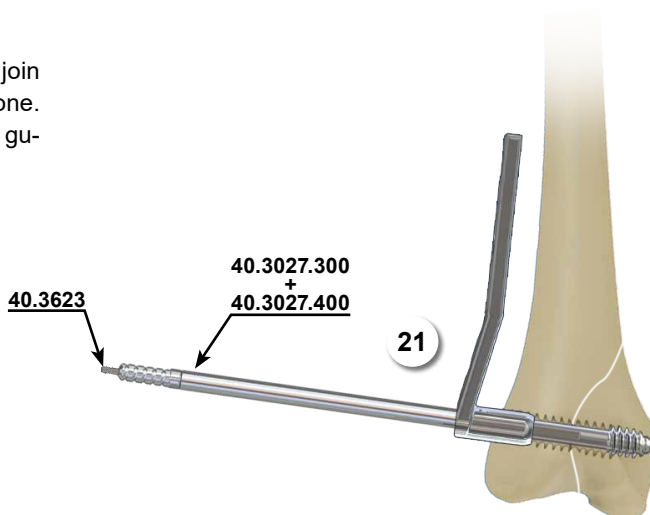


The scale marked on the wrench can be used to determine the insertion depth of the screw when using compression.

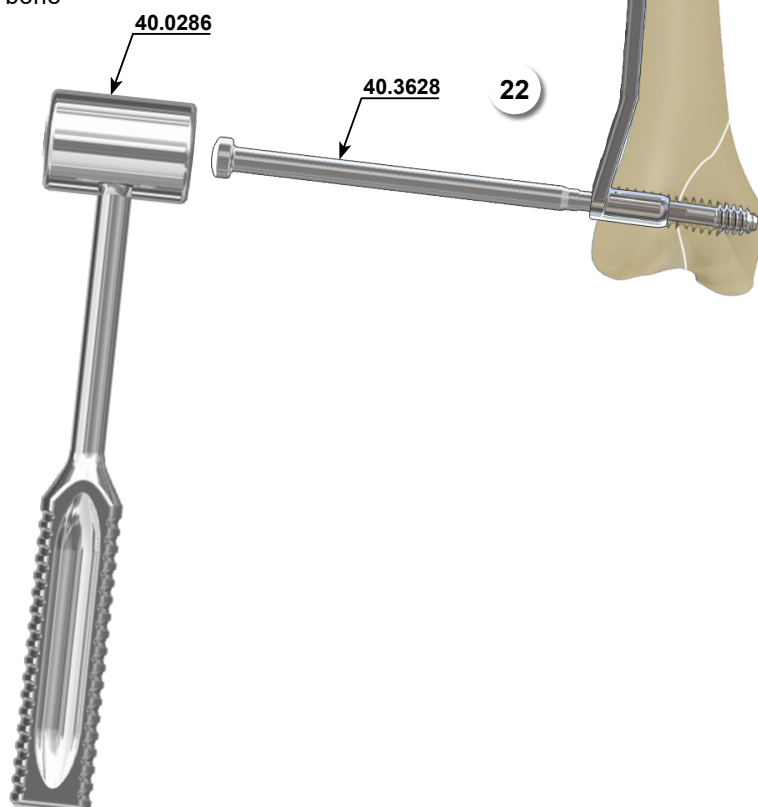


- 21** Slide the selected dynamic condylar plate onto the join screw through the guide sleeve embedded in the bone. Unscrew the extension screw and remove it together with the guide sleeve.

Remove the guide pin.



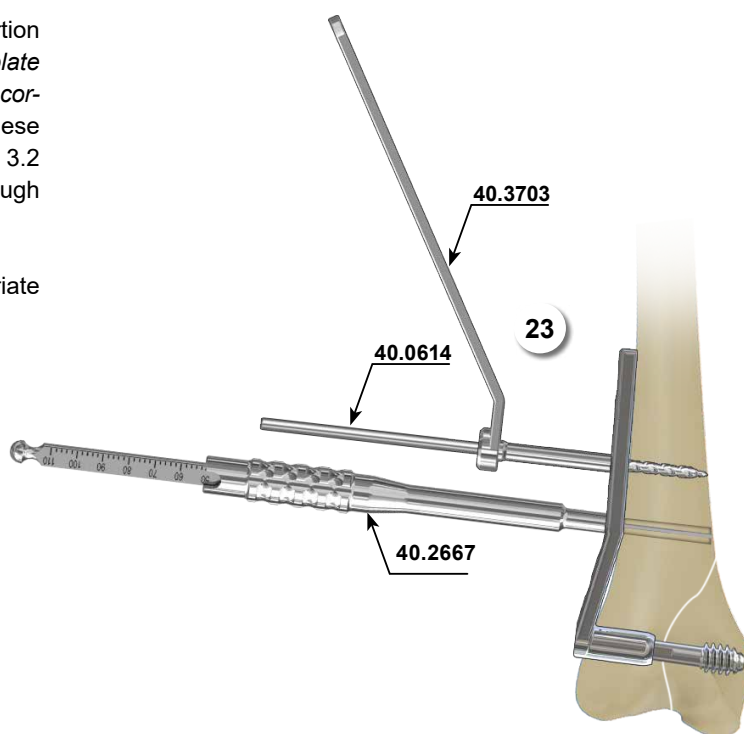
- 22** Insert the mallet for dynamic plate **[40.3628]** into the hole of the dynamic condylar plate and, using the hammer 240g, 30mm/180mm **[40.0286]**, push the plate against the bone surface.

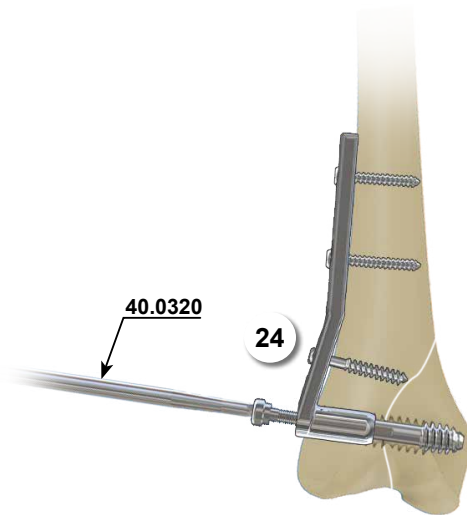


- 23** Mark on the skin the points for the locking screws insertion (*two holes located closer to the neck of the condylar plate are intended for cancellous screws 6.5, the remaining ones for cortical screws 4.5*). Perform the soft tissue incisions through these points. Insert the drill 3.2/180 **[40.0614]** into the drill guide 3.2 **[40.3703]** and drill the holes for cancellous bone screws through two proximal holes in the plate.

For cancellous screws, widen the drilled hole to an appropriate depth with a drill 4.5/180 **[40.0615]**.

Use the hole depth measure **[40.2665]** to determine the length of the screws. Use hexagonal screwdriver S3.5 **[40.0320]** to insert both cancellous and cortical screws, fixing the dynamic condylar plate to the femur.



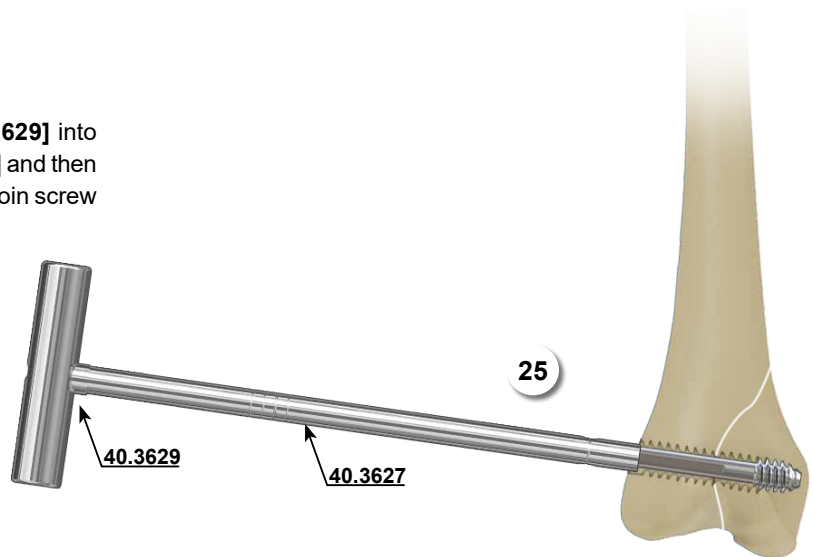


- 24** For compression, use the screwdriver **[40.0320]** to insert the compression screw into the hole in the barrel of the plate.

Dynamic condylar plate removal

- 25** Insert the screw for joining screw removal **[40.3629]** into the sleeve of the cannulated wrench **[40.3627.100]** and then insert the end of the screw into the threaded hole in the join screw until it stops. Remove the join screw. Remove all bone screws.

Should difficulties related to the removal of the screw occur, use a trepan drill to remove the bone tissue that hinders the screw removal, first (*anti-clockwise rotation*).



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