



**PROXIMAL FEMORAL NAILING
WITH ANTIROTATION SCREW**

IMPLANTS AND OPERATING MANUAL



medimetal®
Medical Products Manufacturing and Trading Ltd.

Before starting use the product



Before each use, carefully check the operability of implants and surgical instruments, and ensure they are free of any damage. If you notice any cracks, fractures, deformations, discoloration or any damages that indicate improper storage, imperfect sterilization or prior incorrect treatment, do not use the device. Always carry out the assembly, fitting and operation test of the implants and instruments to be used for the implantation. The product may only be used if the fittings are perfect, the dimensions are accurate, the clamping components work properly and the angles are correctly set.

Requirements regarding the user

The instruments and implants may only be used by qualified surgeons who are familiar with the surgical practice, with the relevant medical literature and are sufficiently experienced in the use of implants and instruments. The operating surgeon is responsible for identifying the correct indication, selecting the implants and conducting the surgical procedure in conformity with the relevant medical practice.

Contraindications

Use of the implant is not recommended if the medical condition of the patient does not allow successful acceptance of the device, or if the recovery of the patient is hindered by causes such as reduced blood circulation, bone system of poor quality or quantity, existing infection, rehabilitation excluded due to the mental condition of the patient etc.

General warnings

Before the surgical procedure, the patient should be informed about the possible disadvantages of implant use. When selecting the implant, the type of the bone fracture as well as the weight and activity level of the patient should always be taken into consideration. Since the solidity of the implant is limited, overloading due to overweight should be avoided. The biomechanical loading of the implant should be as minimal as possible.

The process of recovery should be monitored during the use of the implant. In the event of repeated loading or prolonged bone recovery, the implants may be deformed or dislocated, which should be prevented by timely interventions. Strong and/or repeated deformation of the implant should be avoided. The implants are only for single use, re-implantation is prohibited.

The appropriate type and correct size of the implants must be identified according to the characteristics of the particular case. Before the surgical procedure, the user manuals supplied with the other required devices, e.g. implants, should be carefully studied.

Applied materials

The applied materials are high-quality and high-tensile, nonmagnetic, stainless steel and titanium alloy materials specially developed for implants. Combined use with other materials or products supplied by other manufacturers may lead to harmful processes for which Medimetal Ltd. will not accept any responsibility.

Protection, packaging and preparation for use

The implants are packaged in clean condition, free of any production-related contaminations. Before use, such storage conditions must be ensured that will preserve the integrity of the packaging. The implants should be stored in a clean, dry place, protected from exposure to extreme temperatures and chemicals.

Sterilization

Before use, unpack and sterilize the implant in accordance with the relevant instructions. Do not touch the implant with bare hands. The surgical instruments should be sterilized together with the instrument tray. The instructions provided by the manufacturer of the sterilization equipment must always be followed.

Interactions with medicinal products

It is not known whether the implants interact with medicinal products.



Implants for proximal femoral nailing



System of implants:

Proximal femoral nail, short:

solid or cannulated, distal diameter 9 - 12 mm, proximal diameter 17,6 mm, with CCD angle 130° or 135°, length from 180 to 240 mm, steel or titanium alloy

Dynamic screw:

Thread diameter 9,5 mm, core diameter 6,0 mm, pitch 3,0 mm, steel or titanium alloy

Antirotation screw:

Thread diameter 6,5 mm, core diameter 3,4 mm, length from 55 mm to 130 mm, steel or titanium alloy

Locking screw: diameter 4,9 mm, length from 20 mm to 100 mm, steel or titanium alloy

End cup: steel (cat. nr. 12400-17016) or titanium alloy (cat. nr. 32400-17016)



Proximal femoral nail, long left, right:

cannulated, distal diameter 9 - 12 mm, proximal diameter 15,6 mm, with CCD angle 130° or 135°, left or right, length from 320 to 420 mm, steel or titanium alloy

Dynamic screw:

Thread diameter 9,5 mm, core diameter 6,0 mm, pitch 3,0 mm, steel or titanium alloy

Antirotation screw:

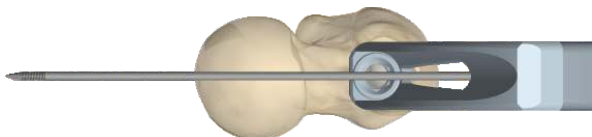
Thread diameter 6,5 mm, core diameter 3,4 mm, length from 55 mm to 130 mm, steel or titanium alloy

Locking screw: diameter 4,9 mm, length from 20 mm to 100 mm, steel or titanium alloy

End cup: steel (cat.nr. 12400-17016) or titanium alloy (cat. nr. 32400-17016)



Grooved design at the 240 mm long nail for the prevention of cortical bone erosion



Aiming assistance for increased implantation accuracy



Dismountable part for easy cleaning

Implants for proximal femoral nailing

Proximal femoral nail with antirotation screw, short

Proximal diameter: 17,6 mm
 Material: steel or titanium alloy
 Dynamic screw: from 12710-95075 to 12710-95145 (steel)
 from 32710-95075 to 32710-95145 (titanium alloy)
 Antirotation screw: from 12210-65055 to 12210-65130 (steel)
 from 32210-65055 to 32210-65130 (titanium alloy)
 Locking screw: from 12200-49020 to 12200-49100 (steel)
 from 32200-49020 to 32200-49100 (titanium alloy)
 Cap screw: 12400-17016 (steel), 32400-17016 (titanium alloy)

Ø (mm)	L (mm)	α (°)	Catalogue number			
			cannulated		solid	
			steel	titanium alloy	steel	titanium alloy
9	180	130	14653-18130	34653-18130	14652-18130	34652-18130
9	200	130	14653-20130	34653-20130	14652-20130	34652-20130
9	220	130	14653-22130	34653-22130	14652-22130	34652-22130
9	240	130	14653-24130	34653-24130	14652-24130	34652-24130
9	180	135	14653-18135	34653-18135	14652-18135	34652-18135
9	200	135	14653-20135	34653-20135	14652-20135	34652-20135
9	220	135	14653-22135	34653-22135	14652-22135	34652-22135
9	240	135	14653-24135	34653-24135	14652-24135	34652-24135
10	180	130	14655-18130	34655-18130	14654-18130	34654-18130
10	200	130	14655-20130	34655-20130	14654-20130	34654-20130
10	220	130	14655-22130	34655-22130	14654-22130	34654-22130
10	240	130	14655-24130	34655-24130	14654-24130	34654-24130
10	180	135	14655-18135	34655-18135	14654-18135	34654-18135
10	200	135	14655-20135	34655-20135	14654-20135	34654-20135
10	220	135	14655-22135	34655-22135	14654-22135	34654-22135
10	240	135	14655-24135	34655-24135	14654-24135	34654-24135
11	180	130	14651-18130	34651-18130	14650-18130	34650-18130
11	200	130	14651-20130	34651-20130	14650-20130	34650-20130
11	220	130	14651-22130	34651-22130	14650-22130	34650-22130
11	240	130	14651-24130	34651-24130	14650-24130	34650-24130
11	180	135	14651-18135	34651-18135	14650-18135	34650-18135
11	200	135	14651-20135	34651-20135	14650-20135	34650-20135
11	220	135	14651-22135	34651-22135	14650-22135	34650-22135
11	240	135	14651-24135	34651-24135	14650-24135	34650-24135
12	180	130	14657-18130	34657-18130	14656-18130	34656-18130
12	200	130	14657-20130	34657-20130	14656-20130	34656-20130
12	220	130	14657-22130	34657-22130	14656-22130	34656-22130
12	240	130	14657-24130	34657-24130	14656-24130	34656-24130
12	180	135	14657-18135	34657-18135	14656-18135	34656-18135
12	200	135	14657-20135	34657-20135	14656-20135	34656-20135
12	220	135	14657-22135	34657-22135	14656-22135	34656-22135
12	240	135	14657-24135	34657-24135	14656-24135	34656-24135

End cup screw for short and long proximal femoral nail

Cat. nr.	
steel	titanium alloy
12400-17016	32400-17016



PROXIMAL FEMORAL NAILING



Implants for proximal femoral nailing



Proximal femoral nail with antirotation screw, cannulated, long, left, right

Ø (mm)	L (mm)	α (°)	Catalogue number			
			cannulated, left		cannulated, right	
			steel	titanium alloy	steel	titanium alloy
9	320	130	14661-32130	34661-32130	14671-32130	34671-32130
9	340	130	14661-34130	34661-34130	14671-34130	34671-34130
9	360	130	14661-36130	34661-36130	14671-36130	34671-36130
9	380	130	14661-38130	34661-38130	14671-38130	34671-38130
9	400	130	14661-40130	34661-40130	14671-40130	34671-40130
9	420	130	14661-42130	34661-42130	14671-42130	34671-42130
9	320	135	14661-32135	34661-32135	14671-32135	34671-32135
9	340	135	14661-34135	34661-34135	14671-34135	34671-34135
9	360	135	14661-36135	34661-36135	14671-36135	34671-36135
9	380	135	14661-38135	34661-38135	14671-38135	34671-38135
9	400	135	14661-40135	34661-40135	14671-40135	34671-40135
9	420	135	14661-42135	34661-42135	14671-42135	34671-42135
10	320	130	14660-32130	34660-32130	14670-32130	34670-32130
10	340	130	14660-34130	34660-34130	14670-34130	34670-34130
10	360	130	14660-36130	34660-36130	14670-36130	34670-36130
10	380	130	14660-38130	34660-38130	14670-38130	34670-38130
10	400	130	14660-40130	34660-40130	14670-40130	34670-40130
10	420	130	14660-42130	34660-42130	14670-42130	34670-42130
10	320	135	14660-32135	34660-32135	14670-32135	34670-32135
10	340	135	14660-34135	34660-34135	14670-34135	34670-34135
10	360	135	14660-36135	34660-36135	14670-36135	34670-36135
10	380	135	14660-38135	34660-38135	14670-38135	34670-38135
10	400	135	14660-40135	34660-40135	14670-40135	34670-40135
10	420	135	14660-42135	34660-42135	14670-42135	34670-42135
11	320	130	14662-32130	34662-32130	14672-32130	34672-32130
11	340	130	14662-34130	34662-34130	14672-34130	34672-34130
11	360	130	14662-36130	34662-36130	14672-36130	34672-36130
11	380	130	14662-38130	34662-38130	14672-38130	34672-38130
11	400	130	14662-40130	34662-40130	14672-40130	34672-40130
11	420	130	14662-42130	34662-42130	14672-42130	34672-42130
11	320	135	14662-32135	34662-32135	14672-32135	34672-32135
11	340	135	14662-34135	34662-34135	14672-34135	34672-34135
11	360	135	14662-36135	34662-36135	14672-36135	34672-36135
11	380	135	14662-38135	34662-38135	14672-38135	34672-38135
11	400	135	14662-40135	34662-40135	14672-40135	34672-40135
11	420	135	14662-42135	34662-42135	14672-42135	34672-42135
12	320	130	14663-32130	34663-32130	14673-32130	34673-32130
12	340	130	14663-34130	34663-34130	14673-34130	34673-34130
12	360	130	14663-36130	34663-36130	14673-36130	34673-36130
12	380	130	14663-38130	34663-38130	14673-38130	34673-38130
12	400	130	14663-40130	34663-40130	14673-40130	34673-40130
12	420	130	14663-42130	34663-42130	14673-42130	34673-42130
12	320	135	14663-32135	34663-32135	14673-32135	34673-32135
12	340	135	14663-34135	34663-34135	14673-34135	34673-34135
12	360	135	14663-36135	34663-36135	14673-36135	34673-36135
12	380	135	14663-38135	34663-38135	14673-38135	34673-38135
12	400	135	14663-40135	34663-40135	14673-40135	34673-40135
12	420	135	14663-42135	34663-42135	14673-42135	34673-42135

Implants for proximal femoral nailing

Dynamic screw for proximal femoral nail

Thread diameter: 9,5 mm
Core diameter: 6,0 mm
Pitch: 3,0 mm

L (mm)	Catalogue number	
	steel	titanium alloy
75	12710-95075	32710-95075
80	12710-95080	32710-95080
85	12710-95085	32710-95085
90	12710-95090	32710-95090
95	12710-95095	32710-95095
100	12710-95100	32710-95100
105	12710-95105	32710-95105

L (mm)	Catalogue number	
	steel	titanium alloy
110	12710-95110	32710-95110
115	12710-95115	32710-95115
120	12710-95120	32710-95120
125	12710-95125	32710-95125
130	12710-95130	32710-95130
135	12710-95135	32710-95135
140	12710-95140	32710-95140

Antirotation screw for proximal femoral nail

Thread diameter: 6,5 mm
Core diameter: 3,4 mm
Pitch: 2,75 mm
Hex width: 3,5 mm

L (mm)	Catalogue number	
	steel	titanium alloy
55	12210-65055	32210-65055
60	12210-65060	32210-65060
65	12210-65065	32210-65065
70	12210-65070	32210-65070
75	12210-65075	32210-65075
80	12210-65080	32210-65080
85	12210-65085	32210-65085
90	12210-65090	32210-65090

L (mm)	Catalogue number	
	steel	titanium alloy
95	12210-65095	32210-65095
100	12210-65100	32210-65100
105	12210-65105	32210-65105
110	12210-65110	32210-65110
115	12210-65115	32210-65115
120	12210-65120	32210-65120
125	12210-65125	32210-65125
130	12210-65130	32210-65130

Locking screw for short and long proximal femoral nail

Thread diameter: 4,9 mm
Core diameter: 4,2 mm
Pitch: 2,75 mm
Head diameter: 8,0 mm
Hex width: 3,5 mm

L (mm)	Cat. nr.		L (mm)	Cat. nr.		L (mm)	Cat. nr.	
	steel	titanium alloy		steel	titanium alloy		steel	titanium alloy
20	12200-49020	32200-49020	42	12200-49042	32200-49042	64	12200-49064	32200-49064
22	12200-49022	32200-49022	44	12200-49044	32200-49044	65	12200-49065	32200-49065
24	12200-49024	32200-49024	45	12200-49045	32200-49045	66	12200-49066	32200-49066
25	12200-49025	32200-49025	46	12200-49046	32200-49046	68	12200-49068	32200-49068
26	12200-49026	32200-49026	48	12200-49048	32200-49048	70	12200-49070	32200-49070
28	12200-49028	32200-49028	50	12200-49050	32200-49050	72	12200-49072	32200-49072
30	12200-49030	32200-49030	52	12200-49052	32200-49052	75	12200-49075	32200-49075
32	12200-49032	32200-49032	54	12200-49054	32200-49054	76	12200-49076	32200-49076
34	12200-49034	32200-49034	55	12200-49055	32200-49055	78	12200-49078	32200-49078
35	12200-49035	32200-49035	56	12200-49056	32200-49056	80	12200-49080	32200-49080
36	12200-49036	32200-49036	58	12200-49058	32200-49058	85	12200-49085	32200-49085
38	12200-49038	32200-49038	60	12200-49060	32200-49060	90	12200-49090	32200-49090
40	12200-49040	32200-49040	62	12200-49062	32200-49062	100	12200-49100	32200-49100



Surgical instruments for proximal femoral nailing

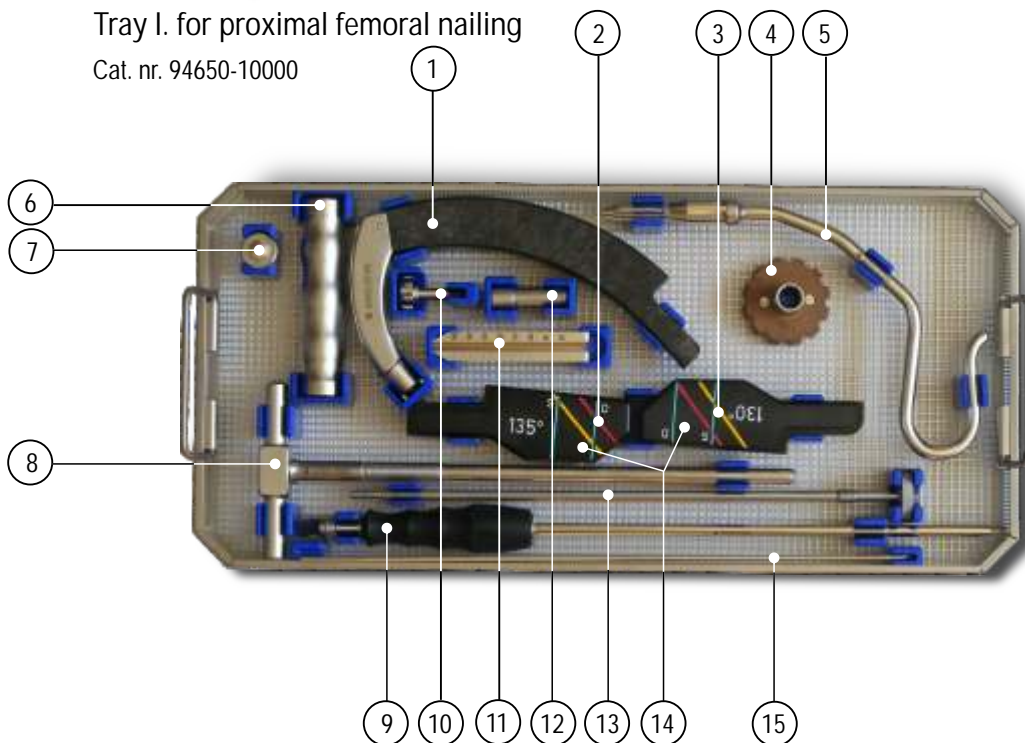
Surgical set

Two trays for proximal femoral nailing instrument set,
complete with instruments: cat. nr. 94650-00000



Tray I. for proximal femoral nailing

Cat. nr. 94650-10000

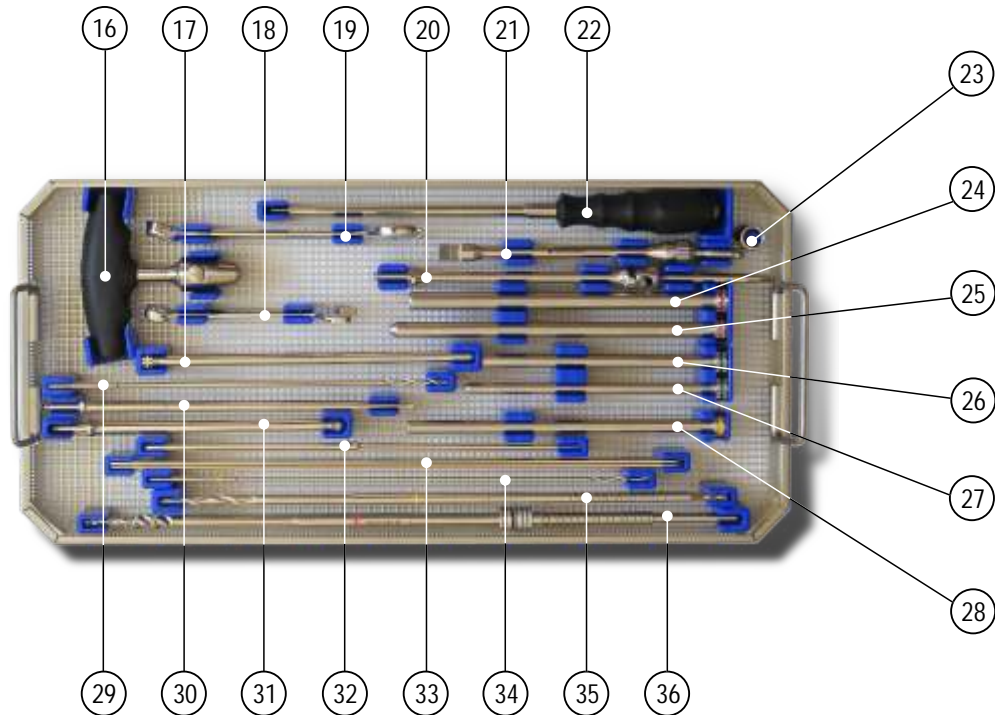


Pos.	Cat. no.	Description	pcs
1.	94500-00100	Proximal targeting arm, radiolucent	1
2.	94650-00301	Aiming arm attachment, 135°	1
3.	94650-00201	Aiming arm attachment, 130°	1
4.	94500-00800	Compressing device	1
5.	94500-00900	Hollow reamer	1
6.	94500-01100	Slide hammer	1
7.	94500-02501	Hammer guide head	1
8.	94500-00600	T wrench	1
9.	94500-01000	Hammer guide shaft	1
10.	94500-00400	Aiming arm fixing screw	1
11.	94500-01700	Gauge for dynamic screw	1
12.	94500-00500	Nail adapter screw	1
13.	94650-00700	Threaded stem for dynamic screw	1
14.	94500-00203	Aiming arm clamp screw	2
15.	15000-35400	Kirschner wire, 3,5 × 400 mm	1

Surgical instruments for proximal femoral nailing

Tray II. for proximal femoral nailing

Cat. nr. 94650-20000



Pos.	Cat. no.	Description	pcs
16.	99000-00006	Universal chuck with T handle	1
17.	94650-01700	Drill sleeve for antirotation screw, (yellow)	1
18.	99000-00011	Wrench, 12 mm	1
19.	99000-00009	Wrench, 17 mm	1
20.	94500-02300	Cardan screw driver with quick coupling	1
21.	94500-02400	Cardan rod for removal device	1
22.	94500-02100	Hexagonal screwdriver, 3,5 mm	1
23.	94500-01004	Fixation sleeve for removal device	1
24.	94650-01200	Soft tissue protector for dynamic screw, (red)	1
25.	94650-01300	Drill sleeve for guide wire, (red)	1
26.	94500-01800	Soft tissue protector for locking screw, (green)	1
27.	94500-01900	Drill sleeve for distal locking drill (green)	1
28.	94650-01600	Soft tissue protector for antirotation screw, (yellow)	1
29.	99010-40310	Spiral drill, 4 × 310 mm, (green)	1
30.	94500-02600	Screw driver with quick coupling, 3,5 mm	1
31.	94500-02200	Hexagonal screwdriver shaft, 10 mm	1
32.	94500-02000	Depth gauge for locking screw	1
33.	15020-30400	Threaded Kirschner wire, 3 × 400 mm	4
34.	99010-32350	Spiral drill, 3,2 × 350 mm, (red+yellow)	1
35.	94650-01500	Stepped drill for antirotation screw, (yellow)	1
36.	94650-01400	Reamer for dynamic screw, (red)	1
37.	94500-02700	Lengthening-piece for removal device (not showed)	1



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