

VariLoc

Straight Locking Compression Plate System

Surgical Technique



KANGHUI
A Medtronic Company

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Warning

This description alone does not provide sufficient background for direct use of products. Instructions by an experienced surgeon in handling these products is highly recommended. Processing, Reprocessing, Care and Maintenance For general guidelines, function control and dismantling of multi-part instruments, as well as processing guidelines for implants, please contact your local sales representative..

INDICATIONS

Variloc Straight Locking Compression Plate System is indicated for fixation of fractures, osteotomies and malunions as well as non-unions of bone shaft in adults.

BEND THE PLATE

Using the Bending Iron, for **3.5mm LCP (201160)** contour the plate in fine increments until a desired fit is achieved.

Note: Do not repeatedly bend the plates back and forth as this may weaken the plate.

Instruments:



POSITION PLATE

- The Plate may be temporarily held in place with standard plate holding forceps or the push-pull reduction device.
- **Note:** The middle of the plate should be positioned over the fracture site if compression of the fracture fragments is desired.

INSERT SCREWS

Option A: Using Cortex Screws:

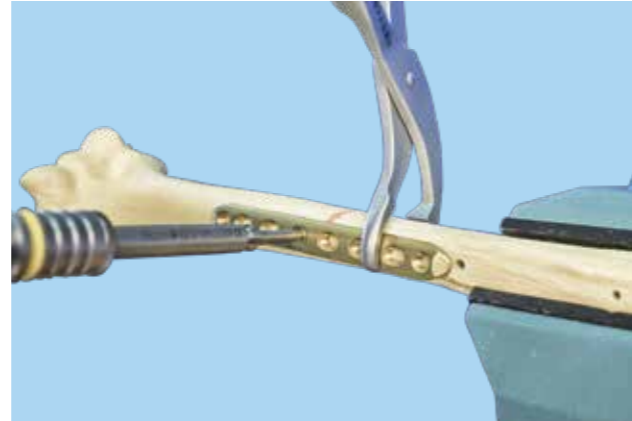
The locking screw is not a lag screw. Use cortex screws when requiring a precise anatomical reduction or interfragmentary compression. Before inserting the locking screws, perform anatomical reduction and fix the fracture with lag screws.

- Use the **2.5mm Drill Bit (292230 or 010010 for quick coupling)** with the **Double Drill Guide 2.5/3.5 (201120)** to drill the bone through both cortices.
- Determine the required length of the cortex screw using the **Depth Gauge (201200)**.

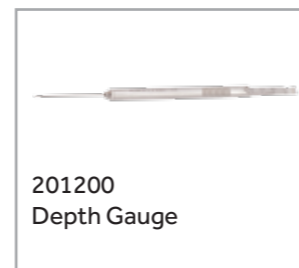


INSERT SCREWS

- Insert the appropriate 3.5mm cortex screw using the T15 screwdriver attached to the T-handle. **The Cortex Screw Holding Sleeve 3.5mm (292320)** (yellow in correspondence to the color of cortex screws) can be used to assist picking up the screw from the screw case.



Instruments for 3.5mm cortex screw:



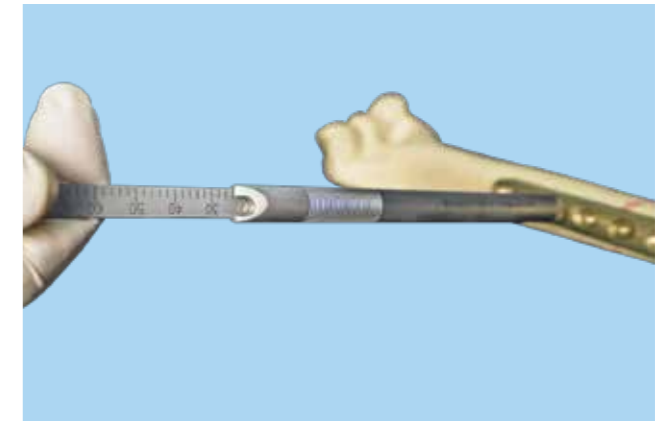
INSERT SCREWS

Option B: Using Locking Screws

- Insert the **2.7mm Drill Sleeve (292240)** (green in correspondence to the color of standard locking screws) into the locking hole until fully seated
- Drill with **2.7mm Drill Bit with Stop (292220 or 292580 for quick coupling)**.

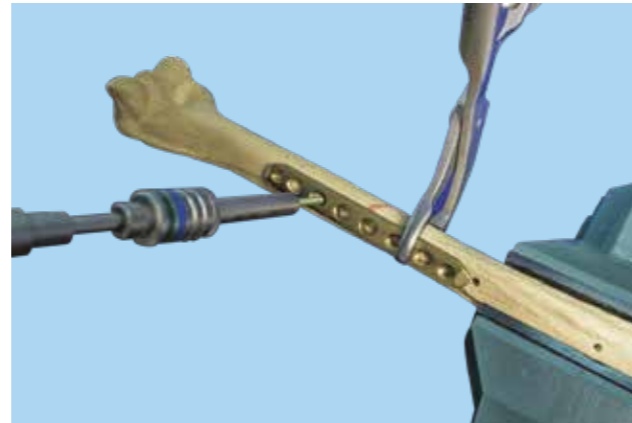


- Remove the Drill Sleeve and determine the screw length using the **Depth Gauge (201200)**.



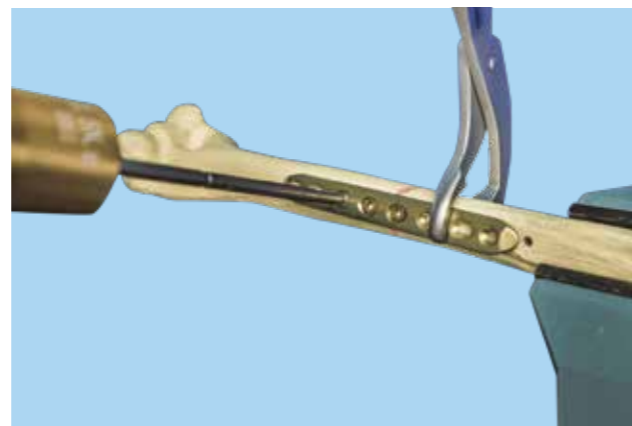
INSERT SCREWS

- Choose the appropriate screw with desired length using the **Locking Screw Holding Sleeve 3.5mm (292310)** (applicable to all the 2 different types of locking screws, green and blue in correspondence to the colors of standard locking screws and cannulated locking screws) together with the **Torx Screwdriver with Quick Coupling, T15 (292290)** attached to the **T-handle with Quick Coupling (291290)** or power tool.

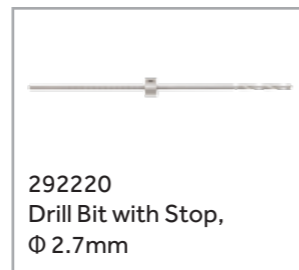
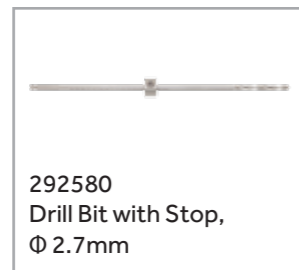


- Insert the screw until the screw head is close to the locking hole.

- Tighten the locking screw with the **Torque-limiting Screwdriver, T15(292280)**.



Instruments for 3.5mm locking screw :



INSERT SCREWS

- Repeat the steps described above for all required screw fixation.



CONFIRM REDUCTION AND FIXATION

- Confirm fracture reduction and fixation under fluoroscopy in different views.



WOUND CLOSURE

- Close the wound in a routine fashion

IMPLANT REMOVAL

- To remove locking screws, unlock all screws from the plate and then begin to remove the screws completely. This avoids rotation of the plate when removing the last locking screw.

IMPLANTS

Straight Locking Compression Plate 3.5, thickness 2.0



Specification	
Thickness (mm)	2
Width (mm)	9.5
Hole Space (mm)	13
Screws	3.5 cortex screw 3.5 locking screw
Material	PT

Code	Model No.	Size	Length (mm)
24267004	SDXG11	4H	60
24267005	SDXG11	5H	73
24267006	SDXG11	6H	86
24267007	SDXG11	7H	99
24267008	SDXG11	8H	112
24267010	SDXG11	10H	138
24267012	SDXG11	12H	164

* Old code 242660XXX is available for order before registration has done.

Straight Locking Compression Plate 3.5, thickness 3.2



Specification	
Thickness (mm)	3.2
Width (mm)	10.5
Hole Space (mm)	13
Screws	3.5 cortex screw 3.5 locking screw
Material	PT

Code	Model No.	Size	Length (mm)
24299004	SDDG40	4H	60
24299005	SDDG40	5H	73
24299006	SDDG40	6H	86
24299007	SDDG40	7H	99
24299008	SDDG40	8H	112
24299009	SDDG40	9H	125
24299010	SDDG40	10H	138
24299011	SDDG40	11H	151
24299012	SDDG40	12H	164
24299014	SDDG40	14H	190
24299016	SDDG40	16H	216

* The old code 242660XX is available for order until new code registration done

IMPLANTS

Straight Locking Compression Plate 3.5, thickness 3.8



Specification	
Thickness (mm)	3.8
Width (mm)	12
Hole Space (mm)	13
Screws	3.5 cortex screw 3.5 locking screw
Material	PT

Code	Model No.	Size	Length (mm)
24268004	SDXG37	4H	51
24268005	SDXG37	5H	64
24268006	SDXG37	6H	77
24268007	SDXG37	7H	90
24268008	SDXG37	8H	103
24268009	SDXG37	9H	116
24268010	SDXG37	10H	129
24268011	SDXG37	11H	142
24268012	SDXG37	12H	155
24268014	SDXG37	14H	181
24268016	SDXG37	16H	207

Straight Locking Compression Plate 3.5, thickness 4.0



Specification	
Thickness (mm)	4
Width (mm)	14
Hole Space (mm)	13
Screws	3.5 cortex screw 3.5 locking screw
Material	PT

Code	Model No.	Size	Length (mm)
24274004	SDXG37	4H	51
24274005	SDXG37	5H	64
24274006	SDXG37	6H	77
24274007	SDXG37	7H	90
24274008	SDXG37	8H	103
24274009	SDXG37	9H	116
24274010	SDXG37	10H	129
24274011	SDXG37	11H	142
24274012	SDXG37	12H	155
24274014	SDXG37	14H	181
24274016	SDXG37	16H	207

IMPLANTS

Straight Locking Compression Plate 4.5/5.0



Specification	
Thickness (mm)	5.8
Width (mm)	15.5
Hole Space (mm)	18
Screws	4.5 cortex screw 5.0 locking screw
Material	PT

Code	Model No.	Size	Length (mm)
24265006	SDDG39	6H	107
24265007	SDDG39	7H	125
24265008	SDDG39	8H	143
24265009	SDDG39	9H	161
24265010	SDDG39	10H	179
24265011	SDDG39	11H	197
24265012	SDDG39	12H	215
24265013	SDDG39	13H	233
24265014	SDDG39	14H	251
24265015	SDDG39	15H	269
24265016	SDDG39	16H	287
24265017	SDDG39	17H	305
24265018	SDDG39	18H	323

IMPLANTS

Cortex Screw, Fully Threaded, Self-tapping, 3.5



Specification	
Thread dia.	Φ3.5 mm
Shaft dia.	Φ2.7 mm
Drill bit	Φ2.5 mm
Material	TA

Code	Model No.	Size
30387010	HAQ06	Φ3.5x10
30387012	HAQ06	Φ3.5x12
30387014	HAQ06	Φ3.5x14
30387016	HAQ06	Φ3.5x16
30387018	HAQ06	Φ3.5x18
30387020	HAQ06	Φ3.5x20
30387022	HAQ06	Φ3.5x22
30387024	HAQ06	Φ3.5x24
30387026	HAQ06	Φ3.5x26
30387028	HAQ06	Φ3.5x28

Code	Model No.	Size
30387030	HAQ06	Φ3.5x30
30387032	HAQ06	Φ3.5x32
30387034	HAQ06	Φ3.5x34
30387036	HAQ06	Φ3.5x36
30387038	HAQ06	Φ3.5x38
30387040	HAQ06	Φ3.5x40
30387045	HAQ06	Φ3.5x45
30387050	HAQ06	Φ3.5x50
30387055	HAQ06	Φ3.5x55
30387060	HAQ06	Φ3.5x60

Locking Screw, Self-tapping, 3.5



Specification	
Thread dia.	Φ3.5 mm
Shaft dia.	Φ2.7 mm
Drill bit	Φ2.7 mm
Material	TA

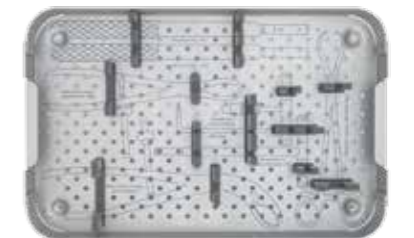
Code	Model No.	Size
34254010	SDLD03	Φ3.5x10
34254012	SDLD03	Φ3.5x12
34254014	SDLD03	Φ3.5x14
34254015	SDLD03	Φ3.5x15
34254016	SDLD03	Φ3.5x16
34254018	SDLD03	Φ3.5x18
34254020	SDLD03	Φ3.5x20
34254022	SDLD03	Φ3.5x22
34254024	SDLD03	Φ3.5x24
34254025	SDLD03	Φ3.5x25
34254026	SDLD03	Φ3.5x26
34254028	SDLD03	Φ3.5x28
34254030	SDLD03	Φ3.5x30
34254032	SDLD03	Φ3.5x32
34254034	SDLD03	Φ3.5x34
34254035	SDLD03	Φ3.5x35

Code	Model No.	Size
34254036	SDLD03	Φ3.5x36
34254038	SDLD03	Φ3.5x38
34254040	SDLD03	Φ3.5x40
34254042	SDLD03	Φ3.5x42
34254044	SDLD03	Φ3.5x44
34254045	SDLD03	Φ3.5x45
34254046	SDLD03	Φ3.5x46
34254048	SDLD03	Φ3.5x48
34254050	SDLD03	Φ3.5x50
34254055	SDLD03	Φ3.5x55
34254060	SDLD03	Φ3.5x60
34254065	SDLD03	Φ3.5x65
34254070	SDLD03	Φ3.5x70
34254075	SDLD03	Φ3.5x75
34254080	SDLD03	Φ3.5x80

INSTRUMENTS

VariLoc 2.7/3.5mm Plate System Instruments Set

Code	Product Description	Qty.
292000	VariLoc 2.7/3.5mm Plate System	1
292010	VariLoc 2.7/3.5mm Plate System-empty	1
292050	VariLoc 2.7/3.5mm Screw Case	1
286130	Drill Bit, Φ 2.0mm	2
292110	Drill Bit, Φ 2.0mm	2
286260	Drill Bit, Φ 2.7mm	2
295130	Drill Sleeve for Drill Bit Φ 2.0mm	2
286240	Double Drill Guide 2.0/2.7	1
286280	Tap, ø2.7mm	1
288150	Torque-limiting Screwdriver,T8	1
288130	Torx Screwdriver, with Quick Coupling, T8	1
288140	Screwdriver for Screw Removal, T8	1
288160	Locking Screw Holding Sleeve	1
288170	Cortex Screw Holding Sleeve	1
286200	Depth Gauge	1
292580	Drill Bit with Stop, Φ 2.7mm	2
292220	Drill Bit with Stop, Φ 2.7mm	2
292240	Drill Sleeve for Drill Bit Φ 2.7mm	3
010010	Drill Bit, Φ 2.5mm	1
292230	Drill Bit, Φ 2.5mm	1
010030	Drill Bit, Φ 3.5mm	1
201120	Double Drill Guide 2.5/3.5	1
020010	Tap, ø3.5mm	1
292280	Torque-limiting Screwdriver, T15	1
292290	Torx Screwdriver, with Quick Coupling,T15	1
292300	Screwdriver for Screw Removal, T15	1
292310	Locking Screw Holding Sleeve, Φ 3.5mm	1
292320	Cortex Screw Holding Sleeve, Φ 3.5mm	1
020020	Tap, ø4.0mm	1



INSTRUMENTS

VariLoc 2.7/3.5mm Plate System Instruments Set

Code	Product Description	Qty.
292450	Hex Screwdriver	1
201200	Depth Gauge	1
10736220	K-Wire with thread, Φ 1.2mm	3
10703210	K-Wire, Φ 1.2mm	3
221180	Allen Key	1
291290	T-handle with Quick Coupling	1
201170	Bone Holding Forceps, self-centering	2
201180	Reduction Forceps, serrated jaws	1
201190	Reduction Forceps with Points	1
01214	Bending Iron, for 2.7mm LCP	2
201160	Bending Iron, for 3.5mm LCP	2
206270	Bending Iron, for Recon LCP	2
10702200	K-Wire, Φ 1.0mm	3
291200	K-Wire with thread, Φ 1.0mm	3
292360	Guide Sleeve for K-Wire, Φ 1.0mm	1
292370	Depth Gauge for K-Wire, Φ 1.0mm	1
292390	Drill Guide ϕ 3.5	2
292610	Cannulated Drill Bit, Φ 3.0/3.5mm	2
292680	Cannulated Drill Bit, Φ 3.0/3.5mm	2
292410	Cannulated Torx Screwdriver, with Quick Coupling, T15	1
292140	Drill Guide,for 2.7 VA Screw	1
292250	Drill Guide,for 3.5 VA Screw	1

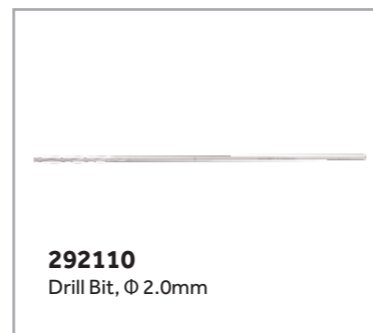
VariLoc 2.7/3.5mm Plate System Instruments



292050
VariLoc 2.7/3.5mm Screw Case



286130
Drill Bit, Φ 2.0mm



292110
Drill Bit, Φ 2.0mm

INSTRUMENTS

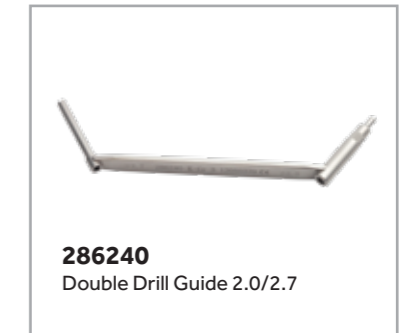
VariLoc 2.7/3.5mm Plate System Instruments



286260
Drill Bit, Φ 2.7mm



295130
Drill Sleeve for Drill Bit Φ 2.0mm



286240
Double Drill Guide 2.0/2.7



286280
Tap, ϕ 2.7mm



288150
Torque-limiting Screwdriver,T8



288130
Torx Screwdriver,
with Quick Coupling, T8



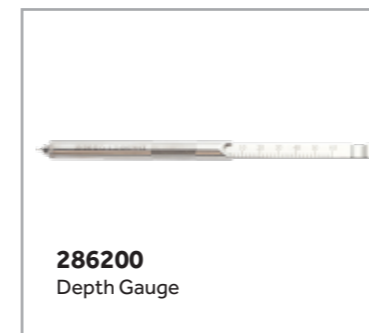
288140
Screwdriver for Screw Removal, T8



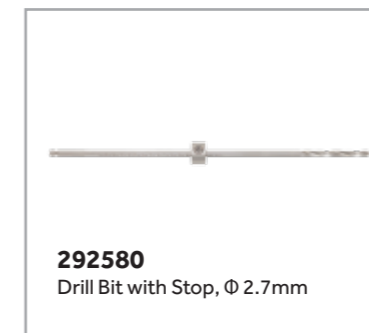
288160
Locking Screw Holding Sleeve



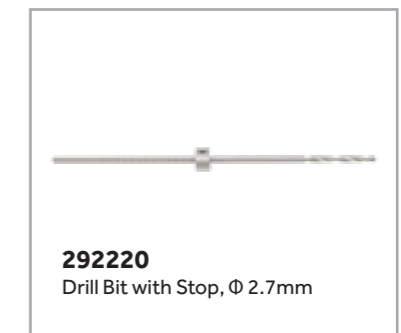
288170
Cortex Screw Holding Sleeve



286200
Depth Gauge



292580
Drill Bit with Stop, Φ 2.7mm



292220
Drill Bit with Stop, Φ 2.7mm

INSTRUMENTS

VariLoc 2.7/3.5mm Plate System Instruments



INSTRUMENTS

VariLoc 2.7/3.5mm Plate System Instruments



INSTRUMENTS

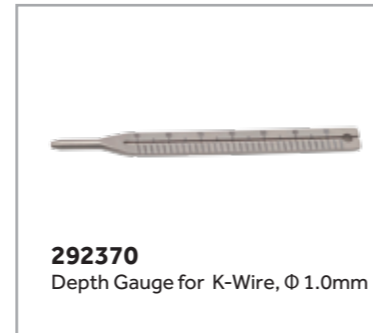
VariLoc 2.7/3.5mm Plate System Instruments



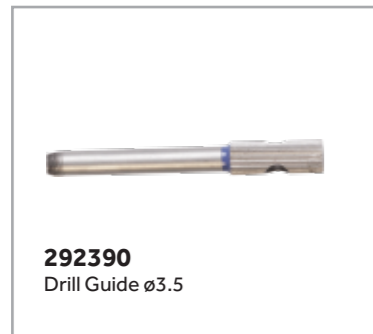
291200
K-Wire with thread, Ø 1.0mm



292360
Guide Sleeve for K-Wire, Ø 1.0mm



292370
Depth Gauge for K-Wire, Ø 1.0mm



292390
Drill Guide ø3.5



292610
Cannulated Drill Bit, Ø3.0/3.5mm



292680
Cannulated Drill Bit, Ø3.0/3.5mm



292410
Cannulated Torx Screwdriver,
with Quick Coupling, T15



292140
Drill Guide, for 2.7 VA Screw



292250
Drill Guide, for 3.5 VA Screw



10702200
K-Wire, 1.0mm

INSTRUMENTS

VariLoc Locking Compression Plates Removal Kit Instruments Set

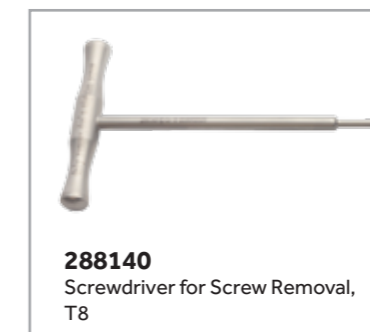
Code	Product Description	Qty.
294000	VariLoc LCP Removal Kit	1
294010	VariLoc LCP Removal Kit-empty case	1
288120	Easyout for Screw ø2.7	1
292330	Easyout for Screw ø3.5	1
291360	Easyout for Screw ø5.0	1
291530	Easyout for Screw ø7.0	1
221190	Drill Bit for Screw Head Removal, ø2.5	1
226190	Drill Bit for Screw Head Removal, ø3.5	1
292670	Trephine, ø3.5	1
291350	Trephine, ø5.0	1
291290	T-handle with Quick Coupling	1
288140	Screwdriver for Screw Removal, T8	1
292300	Screwdriver for Screw Removal, T15	1
291170	Screwdriver for Screw Removal, T25	1
291490	Screwdriver for Screw Removal, ø7.0	1
292450	Hex Screwdriver SW2.5	1
291320	Hex Screwdriver SW3.5	1



VariLoc Locking Compression Plates Removal Kit Instruments



291290
T-handle with Quick Coupling



288140
Screwdriver for Screw Removal,
T8



291170
Screwdriver for Screw Removal,
T25

INSTRUMENTS

VariLoc Locking Compression Plates Removal Kit Instruments

