

For Fixation of Various Bones and Bone Fragments

Depuy Synthes Cannulated Compression Headless Screws (CCHS)

2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.5, 6.5, 7.5 mm

Surgical Technique



DePuy Synthes

PART OF THE *Johnson & Johnson* FAMILY OF COMPANIES

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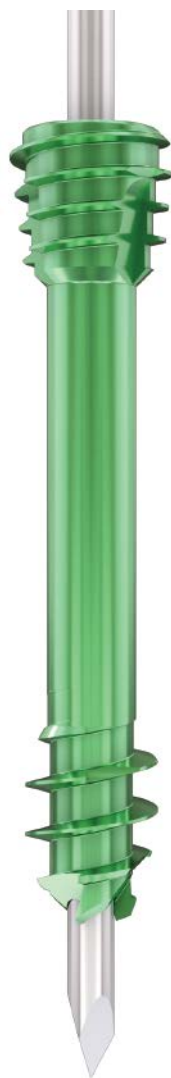
Introduction

Cannulated Compression Headless Screws (CCHS)

The Cannulated Compression Headless Screw (CCHS) System is designed for fixation of bones in various anatomical regions.

Features and Benefits

- Titanium alloy (Ti-6Al-4V ELI)
- Self-drilling/self-tapping, headless design
- Comprehensive portfolio: 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.5, 6.5, 7.5 mm
- Cannulated to allow for precise insertion using a guide wire
- Differential thread pitch designed to provide interfragmentary compression
- Short and long thread lengths for treating a wide range of anatomical regions
- Sterile and non-sterile packaging options
- Color-coded instrumentation
- Modular sets for flexibility



StarDrive™ Recess



Head with cutting flutes
Facilitates countersinking of screwhead



Reverse-cutting flutes
Facilitate screw removal



Self-drilling and self-tapping flutes

CCHS Implant Size and Length Overview

	2.0 	2.5 	3.0 	3.5 	4.0 	4.5 	5.5 	6.5 	7.5 
Guide Wire (Ø/L)	0.8/L 100 mm	1.1/L 150 mm		1.4/L 150 mm		1.6/L 220 mm		2.8/L 220 mm	
Drill Bit Ø	1.6 mm	2.0 mm		2.7 mm		3.0 mm		5.0 mm	
Countersink	For 2.0 mm Screws	For 2.5/3.0 mm Screws		For 3.5/4.0 mm Screws		For 4.5/5.5 mm Screws		For 6.5/7.5 mm Screws	
Drill Guide Ø	0.8/1.6 mm	1.1/2.0 mm		1.4/2.7 mm		1.6/3.0 mm		2.8/5.0 mm	
Direct Measuring Device	For 2.0 mm Screws	For 2.5/3.0/3.5/4.0 mm Screws				For 4.5/5.5/6.5/7.5 mm Screws			
Screwdriver	T6 Cannulated	T8 Cannulated		T15 Cannulated				T30 Cannulated	
Handle	Small Handle with Jewelers Cap (Standard AO)			Large Ratcheting Handle (Standard AO)				Large Ratcheting Handle (Large QC)	
Drive Adapter	N/A							Large Quick Coupling	

Diameter	Color	Short Thread	Long Thread
2.0 mm		10–30 mm (2 mm increments)	20–30 mm (2 mm increments)
2.5 mm		10–40 mm (2 mm increments)	20–40 mm (2 mm increments)
3.0 mm		10–40 mm (2 mm increments)	20–40 mm (2 mm increments)
3.5 mm		14–50 mm (2 mm increments)	24–50 mm (2 mm increments)
4.0 mm		14–60 mm (2 mm increments)	24–60 mm (2 mm increments)
4.5 mm		20–50 mm (2 mm increments) 55–110 mm (5 mm increments)	30–50 mm (2 mm increments) 55–110 mm (5 mm increments)
5.5 mm		20–50 mm (2 mm increments) 55–110 mm (5 mm increments)	30–50 mm (2 mm increments) 55–110 mm (5 mm increments)
6.5 mm		30–130 mm (5 mm increments)	45–130 mm (5 mm increments)
7.5 mm		30–140 mm (5 mm increments)	45–140 mm (5 mm increments)

Sterile Tube Packaging

The sterile packed Cannulated Compression Headless Screws are available in ready-to-use sterile tubes. For usage instructions on how to open the sterile tube packaging, refer to Sterile Tube Usage Guide (DSUS 116132-190607).

Sterilization

Certain DePuy Synthes Cannulated Compression Headless Screw implants are provided sterile. All sterile implants will be clearly marked “STERILE”. The sterile implant is gamma radiation sterilized. The package should be inspected prior to use to ensure the sterile barrier has not been compromised. Do not re-sterilize. Where specified, do not use the device after expiration date.

Certain DePuy Synthes Screws and instruments are provided non-sterile and should be stored in the original packaging until cleaned and sterilized.

Consult the DePuy Synthes CCHS system eIFU at cchs.info and e-ifu.com for cleaning and sterilization instructions.

Indications and Contraindications

Indications

The DePuy Synthes Cannulated Compression Headless Screws are indicated for use in bone reconstruction, osteotomy, arthrodesis, joint fusion, fracture repair, and fracture fixation of bones appropriate for the size of the device. Screws are intended for single use only.

Contraindications

The implant should not be used in a patient who has current, or who has a history of:

- Local or systemic acute or chronic inflammation;
- Active infection or inflammation;
- Suspected or documented metal allergy or intolerance

Consult the Cannulated Compression Headless Screw eIFU at cchs.info and e-ifu.com for more information.

Caution: Federal Law (USA) restricts this device to sale by or on the order of a physician.

Warnings and Potential Risks

The CCHS implants are designed for single patient use only and must never be reused. As with all other orthopedic implants, the components should never be re-implanted under any circumstances.

The CCHS implants can become loose or break if subjected to increased loading. Factors such as the patient's weight, activity level, and adherence to weight-bearing or load-bearing instructions can affect the implant's longevity. Damage to the weight-bearing bone structures caused by infection can give rise to loosening of the components and/or fracture of the bone.

Serious postoperative complications may occur from the implant in a patient who: lacks good general physical conditions; has severe osteoporosis; demonstrates physiological or anatomical anomalies; has immunological responses, sensitization, or hypersensitivity to foreign materials; has systemic or metabolic disorders.

These warnings do not include all adverse effects which could occur with surgery but are important considerations specific to metallic devices. The risks associated with orthopedic surgery, general surgery, and the use of general anesthesia should be explained to the patient prior to surgery. See the PRECAUTIONS section for additional warnings.

Precautions

Under no circumstances should damaged components or surgically excised components be used. Implants that have already been in contact with body fluids or body tissues must not be re-sterilized.

The CCHS System should never be used with dissimilar materials. Preoperative assessment of the suitability of the patient's anatomy for accepting implants is made on the basis of X-rays, CT scans, and other radiological studies.

Only patients that meet the criteria described in the **Indications and Contraindications** section should be selected. Correct selection of the implant is extremely important. The morbidity as well as patient weight, height, occupation, and/or degree of physical activity should be considered.










Proper implant handling before and during the operation is crucial. Handle the implant components properly. Ensure packaging integrity. Do not allow the implants surfaces to be damaged.

Adequately instruct the patient. The physician should inform the patient about orthopedic implant advantages and disadvantages, postoperative limitations, weight/load bearing stresses which could affect bone healing, implant limitations, and the fact that premature physical activity and full weight/load-bearing stresses have been implicated in premature loosening, damage, and/or fracture of orthopedic prostheses.

Important: The guide wires included in the Cannulated Compression Headless Screw System are not intended as implants. The guide wires are only intended for use as instruments to facilitate screw insertion.

1. Preparation and Insertion of Guide Wire

Table 1 – Guide Wire and Drill Guide Sizes

Screw Diameter	Guide Wires		Double Drill Guide	
Ø 2.0 mm 	03.333.000	0.8 mm Guide Wire/100 mm Length	03.333.400	1.6 mm/0.8 mm Double Drill Guide
Ø 2.5 mm  Ø 3.0 mm 	03.333.001	1.1 mm Guide Wire/150 mm Length	03.333.401	2.0 mm/1.1 mm Double Drill Guide
Ø 3.5 mm  Ø 4.0 mm 	03.333.002	1.4 mm Guide Wire/150 mm Length	03.333.402	2.7 mm/1.4 mm Double Drill Guide
Ø 4.5 mm  Ø 5.5 mm 	03.333.003	1.6 mm Guide Wire/220 mm Length	03.333.403	3.0 mm/1.6 mm Double Drill Guide
Ø 6.5 mm  Ø 7.5 mm 	03.333.004	2.8 mm Guide Wire/220 mm Length	03.333.404	5.0 mm/2.8 mm Double Drill Guide

Select the correct guide wire and drill guide for the chosen screw diameter. (Table 1)

Make a stab incision and dissect a clean approach to the desired region of the bone where the compression screw will be inserted.

Properly reduce the bones intended to be repaired by the CCHS screw.

Align the guide wire end of the drill guide in the direction of screw insertion. Feed the guide wire through the drill guide and advance it into the bone to the desired depth and position. (Figure 1)

Fluoroscopy should be used to ensure correct guide wire position, alignment, and depth.

If using the Tissue Protector, the Guide Wire Sleeve is inserted into the Tissue Protector to guide the guide wire. The Guide Wire Sleeve has press-fit tabs for sleeve retention during use. See [4.5/5.5/6.5/7.5 Instruments Section](#) for additional instructions.

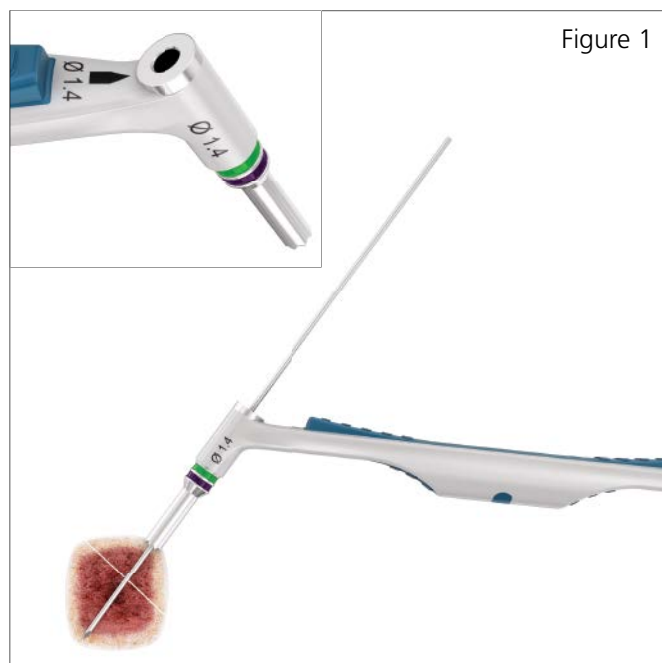


Figure 1

Note: The drill guide drill end and guide wire end are distinguished by the diameter size callout, along with symbols.

2. Screw Length Determination

Table 2 – Guide Wire and Direct Measuring Device (DMD) Sizes

Screw Diameter	Guide Wires		Direct Measuring Device (DMD)	
Ø 2.0 mm ●	03.333.000	0.8 mm Guide Wire/100 mm Length	03.333.500	Direct Measuring Device for 2.0 mm Screws
Ø 2.5 mm ● Ø 3.0 mm ●	03.333.001	1.1 mm Guide Wire/150 mm Length	03.333.501	Direct Measuring Device for 2.5/3.0/3.5/4.0 mm Screws
Ø 3.5 mm ● Ø 4.0 mm ●	03.333.002	1.4 mm Guide Wire/150 mm Length		
Ø 4.5 mm ● Ø 5.5 mm ●	03.333.003	1.6 mm Guide Wire/220 mm Length	03.333.502	Direct Measuring Device for 4.5/5.5/6.5/7.5 mm Screws
Ø 6.5 mm ● Ø 7.5 mm ●	03.333.004	2.8 mm Guide Wire/220 mm Length		

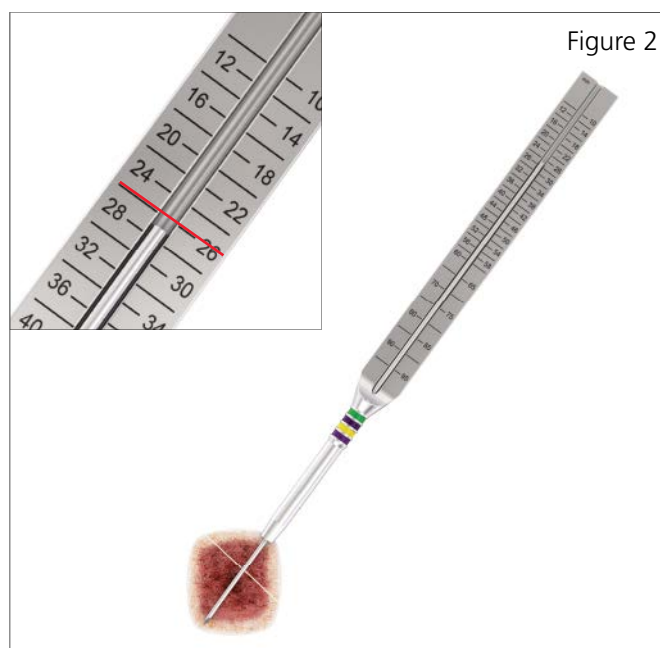
Select the correct direct measuring device for the chosen screw diameter. (Table 2)

Slide the narrow end of the direct measuring device over the guide wire and place it flush against the bone.

Record the measurement at the end of the guide wire to determine the depth of the guide wire in the bone. This depth should be used to determine the length of the corresponding screw (Figure 2).

Notes:

- **Selection of a shorter length screw may be appropriate if screw is being countersunk below the bone surface or a large fracture gap needs to be closed.**
- **The DMD can be directly inserted through the Tissue Protector, without the Tissue Protector Guide Wire Sleeve, to measure the guide wire depth. See [4.5/5.5/6.5/7.5 Instruments Section](#) for additional instructions.**



3. Predrilling (Optional)

Table 3 – Guide Wire and Drill Guide Sizes

Screw Diameter	Guide Wires		Cannulated Drill Bit	
Ø 2.0 mm ●	03.333.000	0.8 mm Guide Wire/100 mm Length	03.333.100	Cannulated Drill Bit Ø 1.6 mm, for Quick Coupling
Ø 2.5 mm ● Ø 3.0 mm ●	03.333.001	1.1 mm Guide Wire/150 mm Length	03.333.101	Cannulated Drill Bit Ø 2.0 mm, for Quick Coupling
Ø 3.5 mm ● Ø 4.0 mm ●	03.333.002	1.4 mm Guide Wire/150 mm Length	03.333.102	Cannulated Drill Bit Ø 2.7 mm, for Quick Coupling
Ø 4.5 mm ● Ø 5.5 mm ●	03.333.003	1.6 mm Guide Wire/220 mm Length	03.333.103	Cannulated Drill Bit Ø 3.0 mm, for Quick Coupling
Ø 6.5 mm ● Ø 7.5 mm ●	03.333.004	2.8 mm Guide Wire/220 mm Length	03.333.104	Cannulated Drill Bit Ø 5.0 mm, for Large Quick Coupling

Select the correct drill size for the chosen screw diameter. (Table 3)

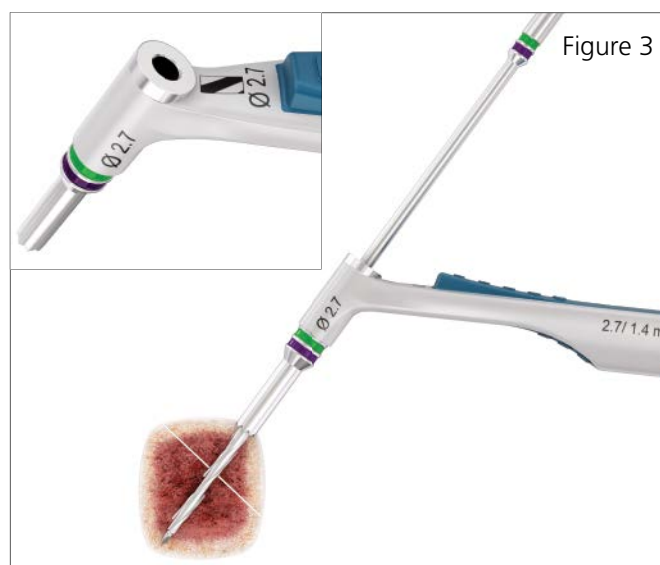
Align the drill end of the drill guide over the guide wire. Feed the drill through the drill guide and over the wire, and drill to the desired depth.

Drill over the guide wire to the desired depth. (Figure 3)

Fluoroscopy should be used to ensure correct drill alignment and depth. Back the drill out of the bone once the desired depth has been reached without removing the guide wire.

Notes:

- **Drilling is optional due to the self-drilling, self-tapping features of the screws. Drilling makes it easier to insert the screw into dense bone.**
- **Do not drill beyond the tip of the guide wire.**



Note: The drill guide drill end and guide wire end are distinguished by the diameter size callout, along with symbols.

4. Countersink (Optional)

Table 4 – Guide Wire and Countersink Sizes

Screw Diameter	Guide Wires		Countersink	
Ø 2.0 mm ●	03.333.000	0.8 mm Guide Wire/100 mm Length	03.333.200	Countersink for Ø 2.0 mm Screw, for Quick Coupling
Ø 2.5 mm ● Ø 3.0 mm ●	03.333.001	1.1 mm Guide Wire/150 mm Length	03.333.201	Countersink for Ø 2.5 mm and 3.0 mm Screw, for Quick Coupling
Ø 3.5 mm ● Ø 4.0 mm ●	03.333.002	1.4 mm Guide Wire/150 mm Length	03.333.202	Countersink for Ø 3.5 mm and 4.0 mm Screw, for Quick Coupling
Ø 4.5 mm ● Ø 5.5 mm ●	03.333.003	1.6 mm Guide Wire/220 mm Length	03.333.203	Countersink for Ø 4.5 mm and 5.5 mm Screw, for Quick Coupling
Ø 6.5 mm ● Ø 7.5 mm ●	03.333.004	2.8 mm Guide Wire/220 mm Length	03.333.204	Countersink for Ø 6.5 mm and 7.5 mm Screw, for Large Quick Coupling

Select the correct countersink for the chosen screw diameter. (Table 4)

Pass the countersink over the guide wire.

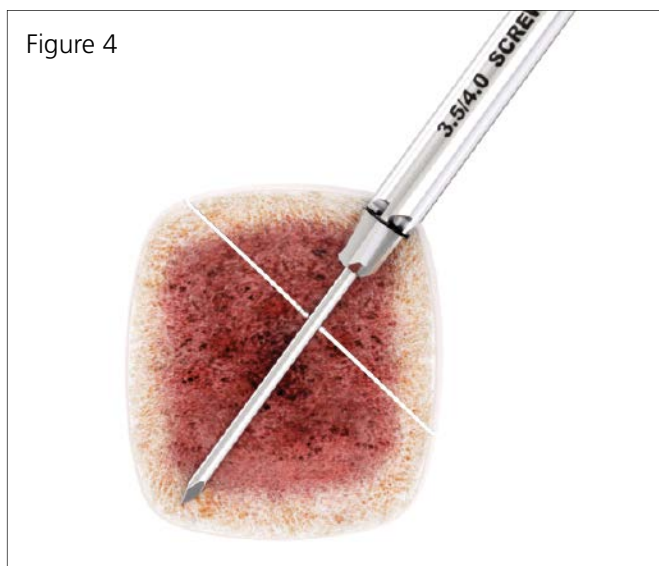
Advance the countersink tip into the bone by applying pressure and repeatedly rotating the countersink construct clockwise to the desired depth.

The black line on the countersink represents the height of the screw head. (Figure 4)

Notes:










- Countersinking is optional due to the self-drilling, self-tapping flutes on the head of the screws and can be performed through the tissue protector. See [4.5/5.5/6.5/7.5 Instruments Section](#) for additional instructions.

Figure 4



5. Screw Insertion

Table 5 – Guide Wire, Driver, and Handle Sizes

Screw Diameter	Guide Wires		Cannulated Driver		Handle	
Ø 2.0 mm 	03.333.000	0.8 mm Guide Wire/ 100 mm Length	03.333.300	T6 Screwdriver Shaft/ Self-Retain/Cann	03.333.600	Small Screwdriver Handle/ Cann/Quick Coupling/ with Jeweler Cap
Ø 2.5 mm  Ø 3.0 mm 	03.333.001	1.1 mm Guide Wire/ 150 mm Length	03.333.302	T8 Screwdriver Shaft/ Self-Retain/Cann		
Ø 3.5 mm  Ø 4.0 mm 	03.333.002	1.4 mm Guide Wire/ 150 mm Length	03.333.304	T15 Screwdriver Shaft/Self-Retain/ Cann	03.333.601	Large Ratcheting Screwdriver Handle/Cann/ Quick Coupling
Ø 4.5 mm  Ø 5.5 mm 	03.333.003	1.6 mm Guide Wire/ 220 mm Length				
Ø 6.5 mm  Ø 7.5 mm 	03.333.004	2.8 mm Guide Wire/ 220 mm Length	03.333.305	T30 Screwdriver Shaft/Self-Retain/ Cann	03.333.602	Large Ratcheting Screwdriver Handle/Cann/ Large Quick Coupling

Select the correct cannulated driver and handle with appropriate coupling for the chosen screw diameter. (Table 5)

Pass the screw over the guide wire. Using the driver, advance the screw into position. (Figure 5A)

Compression is applied by rotating the driver clockwise until all distal threads have passed into the distal fragment. Compression cannot be achieved if the screw threads bridge the fracture gap.

Fluoroscopy should be used to ensure correct positioning of the screw.

Advance the screw to the desired depth (Figure 5B). The screw has a headless design that is intended to sit below the surface of the bone to minimize impingement or soft tissue irritation.

Remove the guide wire.

Notes:

- A 1/4 turn counterclockwise will aid in removal of screws from the caddy.
- If screw insertion is performed using power, it is recommended that final seating be completed by hand.

Figure 5A

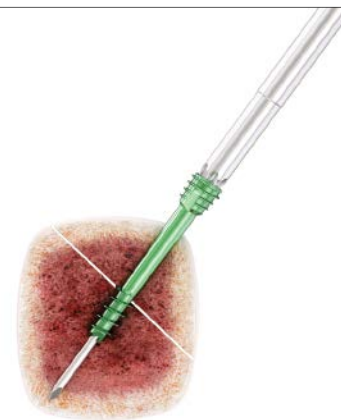
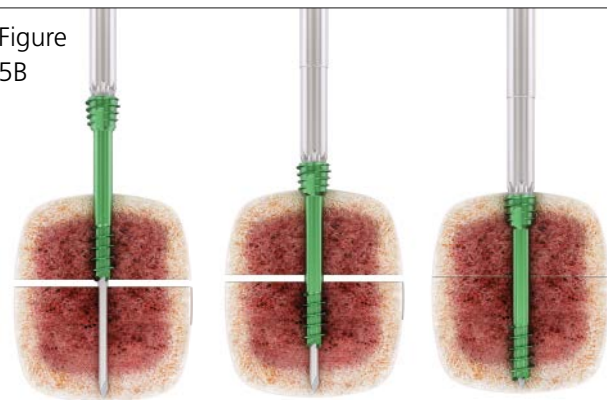











Figure 5B



Screw Removal

Table 6

Screw Diameter	Guide Wires		Cannulated Driver		Handle	
Ø 2.0 mm 	03.333.000	0.8 mm Guide Wire/ 100 mm Length	03.333.300	T6 Screwdriver Shaft/ Self-Retain/Cann	03.333.600	Small Screwdriver Handle/ Cann/Quick Coupling/ with Jeweler Cap
			03.333.301	T6 Screwdriver Shaft/ Self-Retain/Solid		
Ø 2.5 mm  Ø 3.0 mm 	03.333.001	1.1 mm Guide Wire/ 150 mm Length	03.333.302	T8 Screwdriver Shaft/ Self-Retain/Cann		
			03.333.303	T8 Screwdriver Shaft/ Self-Retain/Solid		
Ø 3.5 mm  Ø 4.0 mm 	03.333.002	1.4 mm Guide Wire/ 150 mm Length	03.333.304	T15 Screwdriver Shaft/Self-Retain/ Cann	03.333.601	Large Ratcheting Screwdriver Handle/Cann/ Quick Coupling
Ø 4.5 mm  Ø 5.5 mm 	03.333.003	1.6 mm Guide Wire/ 220 mm Length				
Ø 6.5 mm  Ø 7.5 mm 	03.333.004	2.8 mm Guide Wire/ 220 mm Length	03.333.305	T30 Screwdriver Shaft/Self-Retain/ Cann	03.333.602	Large Ratcheting Screwdriver Handle/ Cann/Large Quick Coupling

The screw may be removed by using the drivers indicated in Table 6.

Clear any tissue overgrowth from the screw head recess. Insert the driver and turn counterclockwise.

If alignment is difficult, a guide wire may be inserted through the screw cannula to facilitate driver alignment. In this case the cannulated driver must be used.

Note: In case of difficult removal circumstances, a Screw Extraction Set (036.000.917) is available with corresponding instructions.

4.5/5.5/6.5/7.5 Instruments

Large Quick Coupling

Note: The Large Quick Coupling Male Coupling contains a feature compatible with a Jacob's Chuck. (Figure 6A)

Figure 6A



Tissue Protectors

The 4.5/5.5/6.5/7.5 sets contain a tissue protector and corresponding guide wire sleeve. The guide wire sleeve fits inside the large sleeve of the tissue protector. (Figure 6B) The guide wire sleeve has press-fit tabs for sleeve retention during use. Once the guide wire is inserted through the guide wire sleeve, the sleeve should be removed from the tissue protector. (Figure 6C) All subsequent steps can be performed through the sleeve of the tissue protector (measuring guide wire length, drilling, countersinking, and screw insertion.)

Figure 6B



Figure 6C

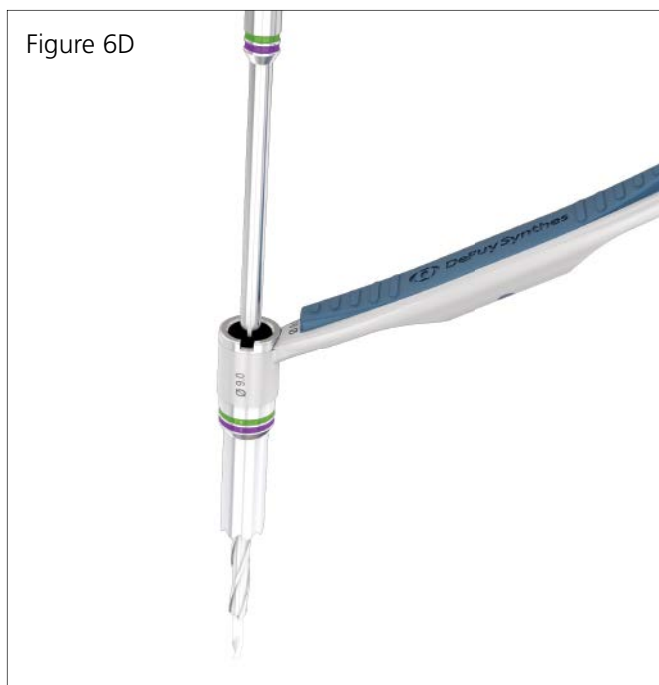


Drills through Tissue Protectors

Notes:

- Prior to drilling, leave the guide wire in place and remove the tissue protector guide wire sleeve. (Figure 6D)
- For the 5.0 mm drill (03.333.104), to achieve a drill depth of 105 mm or longer, the Jacob's chuck must be utilized when drilling through the tissue protector.
- The 5.0 drill can drill up to 134 mm through the tissue protector.

Figure 6D



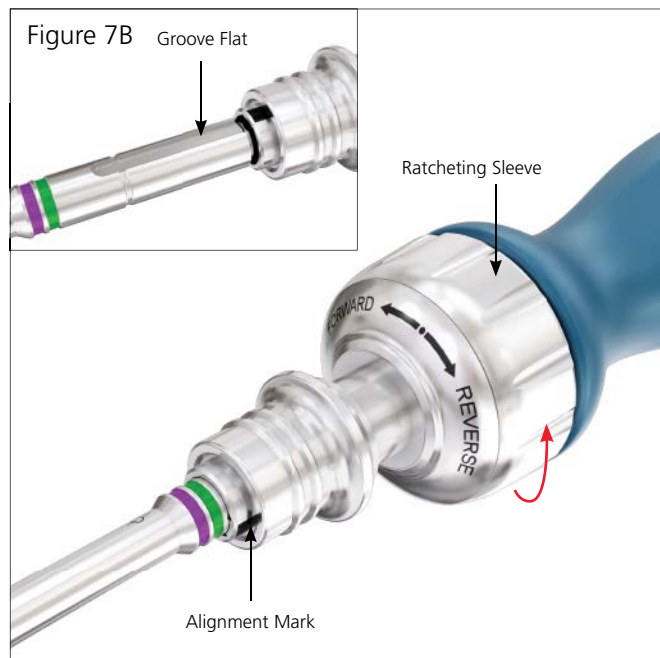
Countersinks

Note: When countersinking through the tissue protector, the laser etch band in relationship with the top of the tissue protector indicates the height of the screw head. (Figure 7A)



Handles

Note: The Large Quick Connect Handle has a laser mark for alignment to the groove flat on the instrument. (Figure 7B)



Adapter (338.49)

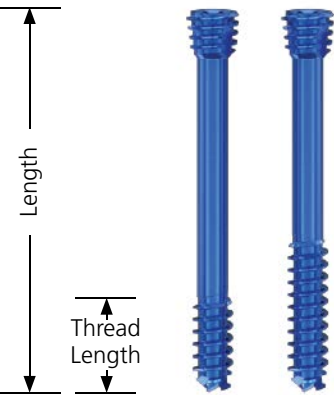
Note: The Large Quick Coupling is a solid instrument and only compatible for use with screws 70 mm in length or longer. (Figure 8)

Figure 8



Implants

Screw – Ø 2.0 mm

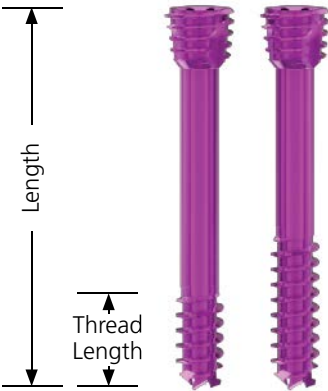


Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
10	04.333.010	4		
12	04.333.012	4		
14	04.333.014	4		
16	04.333.016	4		
18	04.333.018	5		
20	04.333.020	5	04.334.020	8
22	04.333.022	6	04.334.022	9
24	04.333.024	6	04.334.024	10
26	04.333.026	7	04.334.026	10
28	04.333.028	7	04.334.028	11
30	04.333.030	8	04.334.030	12

Thread Length
Short Thread: approx. 25% Total Length or 4 mm
Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes. Add suffix “TS” to Part Number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 2.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
10	04.333.110	4		
12	04.333.112	4		
14	04.333.114	4		
16	04.333.116	4		
18	04.333.118	5		
20	04.333.120	5	04.334.120	8
22	04.333.122	6	04.334.122	9
24	04.333.124	6	04.334.124	10
26	04.333.126	7	04.334.126	10
28	04.333.128	7	04.334.128	11
30	04.333.130	8	04.334.130	12
32	04.333.132	8	04.334.132	13
34	04.333.134	9	04.334.134	14
36	04.333.136	9	04.334.136	14
38	04.333.138	10	04.334.138	15
40	04.333.140	10	04.334.140	16

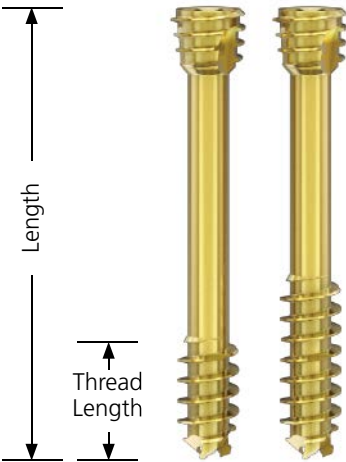
Thread Length

Short Thread: approx. 25% Total Length or 4 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 3.0 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
10	04.333.210	4		
12	04.333.212	4		
14	04.333.214	4		
16	04.333.216	4		
18	04.333.218	5		
20	04.333.220	5	04.334.220	8
22	04.333.222	6	04.334.222	9
24	04.333.224	6	04.334.224	10
26	04.333.226	7	04.334.226	10
28	04.333.228	7	04.334.228	11
30	04.333.230	8	04.334.230	12
32	04.333.232	8	04.334.232	13
34	04.333.234	9	04.334.234	14
36	04.333.236	9	04.334.236	14
38	04.333.238	10	04.334.238	15
40	04.333.240	10	04.334.240	16

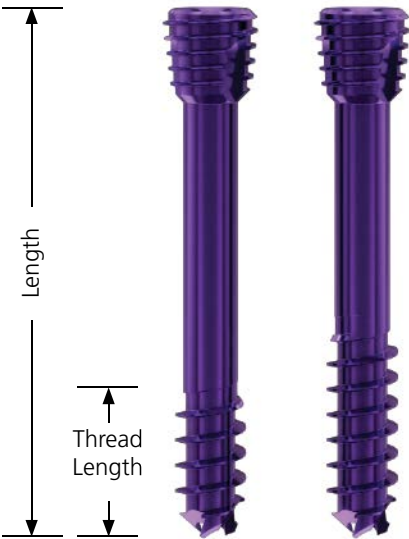
Thread Length

Short Thread: approx. 25% Total Length or 4 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 3.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
14	04.333.314	4		
16	04.333.316	4		
18	04.333.318	5		
20	04.333.320	5		
22	04.333.322	6		
24	04.333.324	6	04.334.324	10
26	04.333.326	7	04.334.326	10
28	04.333.328	7	04.334.328	11
30	04.333.330	8	04.334.330	12
32	04.333.332	8	04.334.332	13
34	04.333.334	9	04.334.334	14
36	04.333.336	9	04.334.336	14
38	04.333.338	10	04.334.338	15
40	04.333.340	10	04.334.340	16
42	04.333.342	11	04.334.342	17
44	04.333.344	11	04.334.344	18
46	04.333.346	12	04.334.346	18
48	04.333.348	12	04.334.348	19
50	04.333.350	13	04.334.350	20

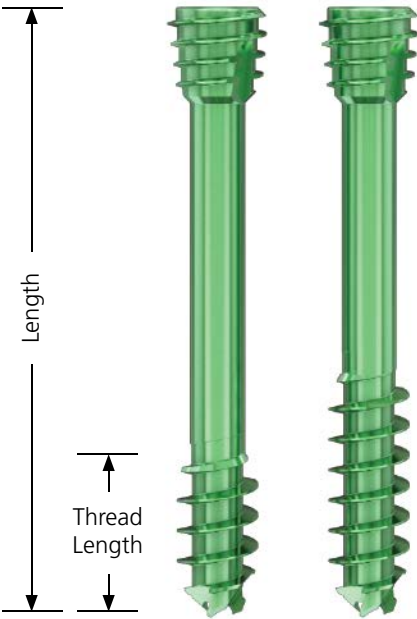
Thread Length

Short Thread: approx. 25% Total Length or 4 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 4.0 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
14	04.333.414	5		
16	04.333.416	5		
18	04.333.418	5		
20	04.333.420	5		
22	04.333.422	6		
24	04.333.424	6	04.334.424	10
26	04.333.426	7	04.334.426	10
28	04.333.428	7	04.334.428	11
30	04.333.430	8	04.334.430	12
32	04.333.432	8	04.334.432	13
34	04.333.434	9	04.334.434	14
36	04.333.436	9	04.334.436	14
38	04.333.438	10	04.334.438	15
40	04.333.440	10	04.334.440	16
42	04.333.442	11	04.334.442	17
44	04.333.444	11	04.334.444	18
46	04.333.446	12	04.334.446	18
48	04.333.448	12	04.334.448	19
50	04.333.450	13	04.334.450	20
52	04.333.452	13	04.334.452	21
54	04.333.454	14	04.334.454	22
56	04.333.456	14	04.334.456	22
58	04.333.458	15	04.334.458	23
60	04.333.460	15	04.334.460	24

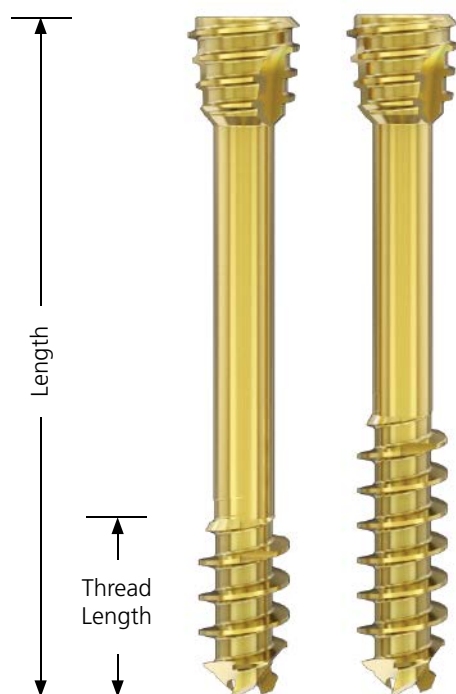
Thread Length

Short Thread: approx. 25% Total Length or 5 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 4.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
20	04.333.520	8		
22	04.333.522	8		
24	04.333.524	8		
26	04.333.526	8		
28	04.333.528	8		
30	04.333.530	8	04.334.530	12
32	04.333.532	8	04.334.532	13
34	04.333.534	9	04.334.534	14
36	04.333.536	9	04.334.536	14
38	04.333.538	10	04.334.538	15
40	04.333.540	10	04.334.540	16
42	04.333.542	11	04.334.542	17
44	04.333.544	11	04.334.544	18
46	04.333.546	12	04.334.546	18
48	04.333.548	12	04.334.548	19
50	04.333.550	13	04.334.550	20
55	04.333.555	14	04.334.555	22
60	04.333.560	15	04.334.560	24
65	04.333.565	16	04.334.565	26
70	04.333.570	18	04.334.570	28
75	04.333.575	19	04.334.575	30
80	04.333.580	20	04.334.580	32
85	04.333.585	21	04.334.585	34
90	04.333.590	23	04.334.590	36
95	04.333.595	24	04.334.595	38
100	04.333.500	25	04.334.500	40
105	04.333.501	26	04.334.501	42
110	04.333.502	28	04.334.502	44

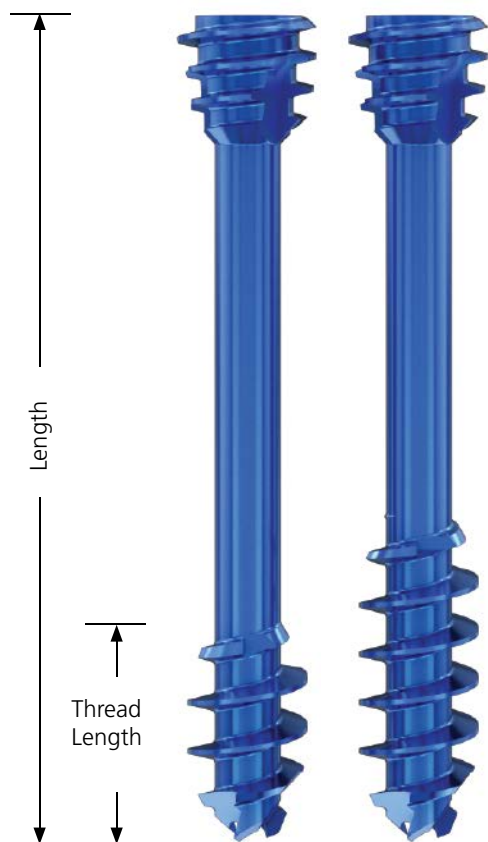
Thread Length

Short Thread: approx. 25% Total Length or 8 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes.
Add suffix "TS" to part number. Sterile part availability might be different depending on the country or region.

Screw – Ø 5.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
20	04.333.620	8		
22	04.333.622	8		
24	04.333.624	8		
26	04.333.626	8		
28	04.333.628	8		
30	04.333.630	8	04.334.630	12
32	04.333.632	8	04.334.632	13
34	04.333.634	9	04.334.634	14
36	04.333.636	9	04.334.636	14
38	04.333.638	10	04.334.638	15
40	04.333.640	10	04.334.640	16
42	04.333.642	11	04.334.642	17
44	04.333.644	11	04.334.644	18
46	04.333.646	12	04.334.646	18
48	04.333.648	12	04.334.648	19
50	04.333.650	13	04.334.650	20
55	04.333.655	14	04.334.655	22
60	04.333.660	15	04.334.660	24
65	04.333.665	16	04.334.665	26
70	04.333.670	18	04.334.670	28
75	04.333.675	19	04.334.675	30
80	04.333.680	20	04.334.680	32
85	04.333.685	21	04.334.685	34
90	04.333.690	23	04.334.690	36
95	04.333.695	24	04.334.695	38
100	04.333.600	25	04.334.600	40
105	04.333.601	26	04.334.601	42
110	04.333.602	28	04.334.602	44

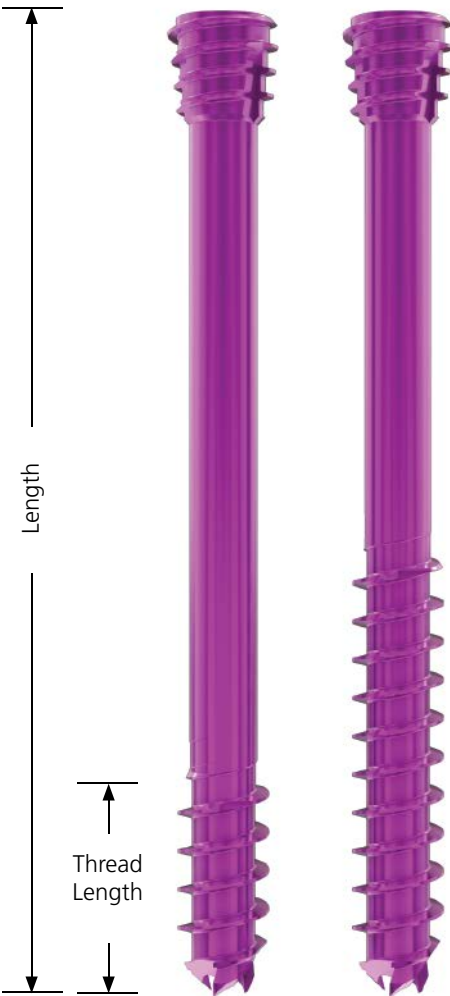
Thread Length

Short Thread: approx. 25% Total Length or 8 mm

Long Thread: approx. 40% Total Length

All implants are also available packed in sterile tubes.
Add suffix "TS" to part number. Sterile part availability might be different depending on the country or region.

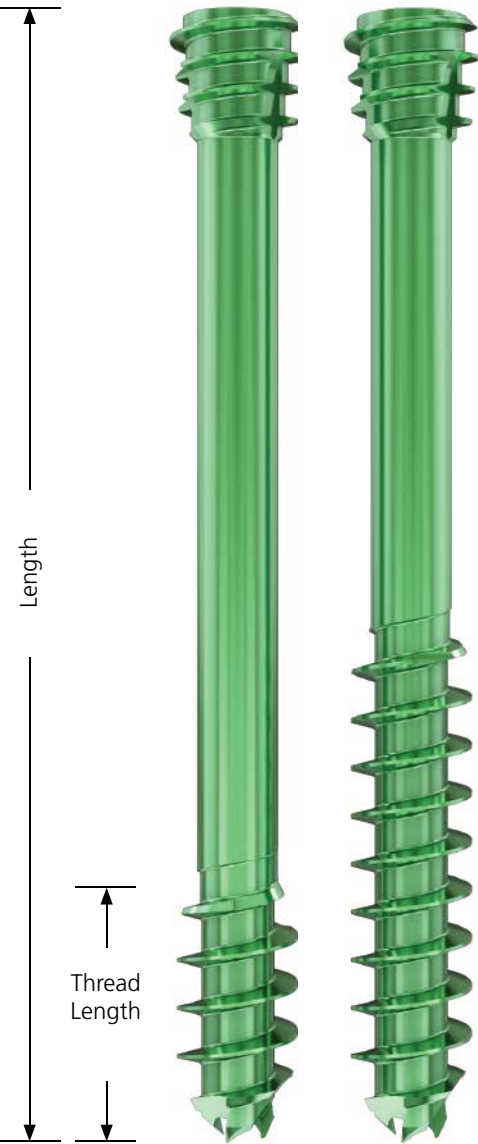
Screw – Ø 6.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
30	04.333.730	16		
35	04.333.735	16		
40	04.333.740	16		
45	04.333.745	16	04.334.745	32
50	04.333.750	16	04.334.750	32
55	04.333.755	16	04.334.755	32
60	04.333.760	16	04.334.760	32
65	04.333.765	16	04.334.765	32
70	04.333.770	16	04.334.770	32
75	04.333.775	16	04.334.775	32
80	04.333.780	16	04.334.780	32
85	04.333.785	16	04.334.785	32
90	04.333.790	16	04.334.790	32
95	04.333.795	16	04.334.795	32
100	04.333.700	16	04.334.700	32
105	04.333.701	16	04.334.701	32
110	04.333.702	16	04.334.702	32
115	04.333.703	16	04.334.703	32
120	04.333.704	16	04.334.704	32
125	04.333.705	16	04.334.705	32
130	04.333.706	16	04.334.706	32

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Screw – Ø 7.5 mm



Length (mm)	Short Thread Part Number	Thread Length (mm)	Long Thread Part Number	Thread Length (mm)
30	04.333.830	16		
35	04.333.835	16		
40	04.333.840	16		
45	04.333.845	16	04.334.845	32
50	04.333.850	16	04.334.850	32
55	04.333.855	16	04.334.855	32
60	04.333.860	16	04.334.860	32
65	04.333.865	16	04.334.865	32
70	04.333.870	16	04.334.870	32
75	04.333.875	16	04.334.875	32
80	04.333.880	16	04.334.880	32
85	04.333.885	16	04.334.885	32
90	04.333.890	16	04.334.890	32
95	04.333.895	16	04.334.895	32
100	04.333.800	16	04.334.800	32
105	04.333.801	16	04.334.801	32
110	04.333.802	16	04.334.802	32
115	04.333.803	16	04.334.803	32
120	04.333.804	16	04.334.804	32
125	04.333.805	16	04.334.805	32
130	04.333.806	16	04.334.806	32
135	04.333.807	16	04.334.807	32
140	04.333.808	16	04.334.808	32

All implants are also available packed in sterile tubes. Add suffix “TS” to part number.
Sterile part availability might be different depending on the country or region.

Instruments

Instruments for 2.0 mm Screws ●

03.333.000 Guide Wire Ø 0.8 mm, Length 100 mm,
03.333.000S* Trocar Tip



03.333.500 Direct Measuring Device,
for 100 mm Wire



03.333.400 Double Drill Guide, for Ø 1.6 mm Drill
Bit and Ø 0.8 mm Guide Wire



03.333.100 Cannulated Drill Bit Ø 1.6 mm,
03.333.100S* for Quick Coupling, 95 mm



03.333.200 Cannulated Countersink for Ø 2.0 mm
03.333.200S* Cannulated Headless Screw, for
Quick Coupling



03.333.300 T6 Cannulated Stardrive Screwdriver
Shaft/Self-Retaining



03.333.600 Cannulated Screwdriver Handle with
Jewelers Cap/Quick Coupling



*Part numbers with a trailing 'S' designate the sterile part number.
Sterile part availability might be different depending on the country or region.

Optional Instruments for 2.0 mm Screws

03.333.301 T6 Stardrive Screwdriver Shaft/Self-Retain



319.97 Screw Forceps, Self-Holding,
Length 85 mm



319.289 1.0 mm Cleaning Brush



319.293 0.8 mm Cleaning Stylet



319.39 Sharp Hook, Length 155 mm



Instruments for 2.5/3.0 mm Screws

03.333.001 Guide Wire Ø 1.1 mm, Length 150 mm,
03.333.001S* Trocar Tip



03.333.501 Direct Measuring Device,
for 150 mm wire



03.333.401 Double Drill Guide, for Ø 2.0 mm Drill
Bit and Ø 1.1 mm Guide Wire



03.333.101 Cannulated Drill Bit Ø 2.0 mm,
03.333.101S* for Quick Coupling, 145 mm



03.333.201 Cannulated Countersink for Ø 2.5 mm
03.333.201S* and 3.5 mm Cannulated Headless Screw,
for Quick Coupling



03.333.302 T8 Cannulated Stardrive Screwdriver
Shaft/Self-Retaining



03.333.600 Cannulated Screwdriver Handle with
Jewelers Cap/Quick Coupling



*Part numbers with a trailing 'S' designate the sterile part number.
Sterile part availability might be different depending on the country or region.

Optional Instruments for 2.5/3.0 mm Screws

03.333.303 T8 Stardrive Screwdriver Shaft/Self-Retain



319.97 Screw Forceps, Self-Holding, Length 85 mm



319.291 1.25 mm Cleaning Brush



319.292 1.1 mm Cleaning Stylet



319.39 Sharp Hook, Length 155 mm



Instruments for 3.5/4.0 mm Screws

03.333.002 Guide Wire Ø 1.4 mm, Length 150 mm,
03.333.002S* Trocar Tip



03.333.501 Direct Measuring Device,
for 150 mm wire



03.333.402 Double Drill Guide, for Ø 2.7 mm Drill
Bit and Ø 1.4 mm Guide Wire



03.333.102 Cannulated Drill Bit Ø 2.7 mm,
03.333.102S* for Quick Coupling, 145 mm



03.333.202 Cannulated Countersink for Ø 3.5 mm
03.333.202S* and 4.0 mm Cannulated Headless Screw,
for Quick Coupling



03.333.304 T15 Cannulated Stardrive Screwdriver
Shaft/Self-Retaining







03.333.601 Cannulated Screwdriver Handle with
Ratchet Quick Coupling



*Part numbers with a trailing 'S' designate the sterile part number.
Sterile part availability might be different depending on the country or region.

Optional Instruments for 3.5/4.0 mm Screws



319.97	Screw Forceps, Self-Holding, Length 85 mm	
319.25	1.35 mm Cleaning Brush	
319.292	1.1 mm Cleaning Stylet	
319.39	Sharp Hook, Length 155 mm	

Instruments for 4.5/5.5 mm Screws

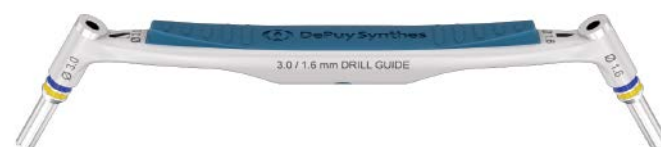
03.333.003 Guide Wire Ø 1.6 mm, Length 220 mm,
03.333.003S* Trocar Tip



03.333.502 Direct Measuring Device, for 220 mm



03.333.403 Double Drill Guide, for Ø 3.0 mm Drill
Bit and Ø 1.6 mm Guide Wire



03.333.103 Cannulated Drill Bit Ø 3.0 mm,
03.333.103S* for Quick Coupling, 215 mm



03.333.203 Cannulated Countersink for Ø 4.5 mm
03.333.203S* and 5.5 mm Cannulated Headless Screw,
for Quick Coupling



03.333.304 T15 Cannulated Stardrive Screwdriver
Shaft/Self-Retaining



03.333.601 Cannulated Screwdriver Handle with
Ratchet Quick Coupling



*Part numbers with a trailing 'S' designate the sterile part number.
Sterile part availability might be different depending on the country or region.

Instruments for 4.5/5.5 mm Screws ● ●

03.333.700 9.5 mm/7.5 mm Tissue Protector



03.333.701 7.5 mm/1.6 mm Guide Wire Sleeve



Optional Instruments for 4.5/5.5 mm Screws ● ●

319.97 Screw Forceps, Self-Holding,
Length 85 mm



319.26 1.75 mm Cleaning Brush



319.35 1.6 mm Cleaning Stylet



319.39 Sharp Hook, Length 155 mm



Instruments for 6.5/7.5 mm Screws

03.333.004 Guide Wire Ø 2.8 mm, Length 220 mm,
03.333.004S* Fluted Tip



03.333.502 Direct Measuring Device, for 220 mm



03.333.404 Double Drill Guide, for Ø 5.0 mm Drill
Bit and Ø 2.8 mm Guide Wire



03.333.104 Cannulated Drill Bit Ø 5.0 mm,
03.333.104S* for Large Quick Coupling, 215 mm



03.333.204 Cannulated Countersink for Ø 6.5 mm
03.333.204S* and 7.5 mm Cannulated Headless Screw,
for Large Quick Coupling



03.333.305 T30 Cannulated Stardrive Screwdriver
Shaft/Self-Retaining



03.333.602 Cannulated Screwdriver Handle with
Ratchet Large Quick Coupling



*Part numbers with a trailing 'S' designate the sterile part number.
Sterile part availability might be different depending on the country or region.

Instruments for 6.5/7.5 mm Screws

03.333.702 11.0 mm/9.0 mm Tissue Protector



03.333.703 9.0 mm/2.8 mm Guide Wire Sleeve



338.49 Large Quick Coupling



Optional Instruments for 6.5/7.5 mm Screws

319.97 Screw Forceps, Self-Holding,
Length 85 mm



319.26 1.75 mm Cleaning Brush



319.35 1.6 mm Cleaning Stylet



319.39 Sharp Hook, Length 155 mm



Set List

Instrument and Implant Set – Flex Small, Lower Extremity (01.333.001)

Instruments for 2.0 CCHS/QIS
Instruments for 2.5/3.0 CCHS
Instruments for 3.5/4.0 CCHS
Implants for 2.0 CCHS/QIS
Implants for 2.5/3.0 CCHS
Implants for 3.5/4.0 CCHS
Instrument Tray for 2.0 CCHS/QIS
Instrument Tray for 2.5/3.0 CCHS
Instrument Tray for 3.5/4.0 CCHS
Screw Rack for 2.0 CCHS/QIS
Screw Rack for 2.5/3.0 CCHS
Screw Rack for 3.5/4.0 CCHS

Implant Set – Small Upgrade (01.333.002)

Additional Implant Sizes for 2.0/2.5/3.0/3.5/4.0 Screws

Instrument and Implant Set – Flex Small, Upper Extremity (01.333.101)

Instruments for 2.0 CCHS/without QIS
Instruments for 2.5/3.0 CCHS
Instruments for 3.5/4.0 CCHS
Implants for 2.0 CCHS/without QIS
Implants for 2.5/3.0 CCHS
*Additional 63 screws
Implants for 3.5/4.0 CCHS
Instrument Tray for 2.0 CCHS/QIS
Instrument Tray for 2.5/3.0 CCHS
Instrument Tray for 3.5/4.0 CCHS
Screw Rack for 2.0 CCHS/QIS
Screw Rack for 2.5/3.0 CCHS
Screw Rack for 3.5/4.0 CCHS

Instrument and Implant Set – Flex Large (01.333.003)

Instruments for 4.5/5.5 CCHS
Instruments for 6.5/7.5 CCHS
Implants for 4.5/5.5 CCHS
Implants for 6.5/7.5 CCHS
Instrument Tray for 4.5/5.5 CCHS
Instrument Tray for 6.5/7.5 CCHS
Screw Rack for 4.5 CCHS
Screw Rack for 6.5 CCHS
Screw Rack for 5.5/7.5 CCHS

Implant Set – Large Upgrade (01.333.004)

Additional Implant Sizes for 4.5/5.5/6.5/7.5 Screws

*Graphic Case set configurations available in separate brochure.

MRI Information

Warning: The CCHS implants have not been evaluated for safety and compatibility in the MR environment. It has not been tested for heating, migration, or image artifact in the MR environment. The safety of CCHS implants in the MR environment is unknown. Scanning a patient who has this device may result in patient injury.

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