

Ready-for-Surgery™

Surgical Technique Guide

Large Headless and Cannulated Screws

FlowerCube™ sterile-packaged orthopedic implants and instruments provide precise solutions for common foot and ankle procedures.



Contents

Ready-for-Surgery Overview 3

System Overview 4

 1. Intended Use and Contraindications..... 4

 2. System Features 4

Surgical Technique..... 6

 3. Fracture/Osteotomy Reduction..... 6

 4. Guide Wire Insertion 6

 5. Screw Measurement..... 7

 6. Pilot Hole Preparation..... 8

 7. Screw Insertion 9

Product Information..... 9

 8. Technical Specifications 9

 9. Sterile Implants 10

 10. Sterile Instruments 11

NEW Ready-for-Surgery Cube Reconfiguration..... 12

Building a More Efficient Case

Conventus Flower Orthopedics pioneered the single-use, sterile-packaged Ready-for-Surgery Cube system. The FlowerCube has been proven to produce equivalent outcomes while generating cost savings and surgical efficiencies when compared to traditional orthopedic implant and instrument sets.

- Innovative system that is pre-packaged and ready for use
- Contains single-use, sterile-packaged implants and instruments required for specific surgical indications
- Eliminates pre-op handling and post-op reprocessing



FlowerCube Surgical Efficiency Study Results*



Faster Case Time

Time savings of nearly 20 minutes per case with the FlowerCube compared to procedures using traditional implants



Joint Union

84.51% of study patients experienced union of the joints by 8 weeks post-surgery and 98.59% by 12 weeks post-surgery



Third-Party Reimbursement Savings

Over \$1,300 savings in third-party reimbursement costs for procedures performed at an ASC compared to those done in an outpatient hospital setting



Opportunity Savings

Sterilization, reprocessing, and packaging of surgical trays would add \$45 per instrument tray

1. Intended Use and Contraindications

Indications for Use

The Large Headless Compression Screw and Cannulated Screw Set is intended to be used for the fixation of bone fractures, fusion of joints, or bone reconstruction.

Contraindications

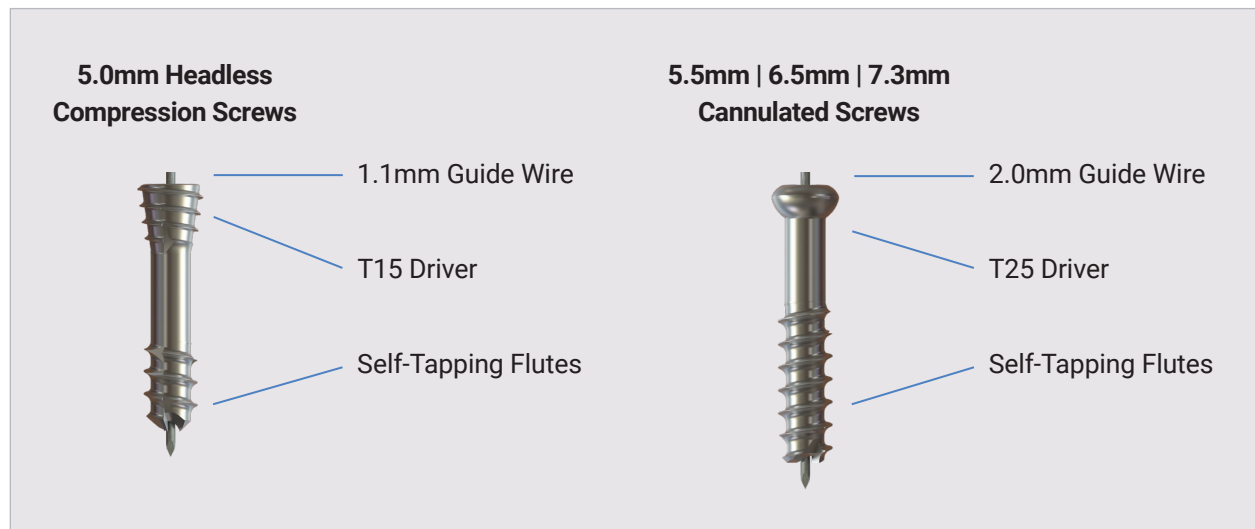
Do not use the Large Headless Compression Screw and Cannulated Screw Set in cases of:

- Inadequate bone quantity and/or bone quality
- Foreign body sensitivity to implant material
- Acute localized infections
- Patients with limited blood supply
- Patients with unstable physical and/or mental health conditions

2. System Features

The Large Cannulated Screw System contains:

- 5.0mm Headless Compression Screws (30mm – 70mm length)
- 5.5mm Partially Threaded Cannulated Screws (30mm – 70mm length)
- 6.5mm Headless Compression Screws (40mm – 100mm length)
- 6.5mm Partially Threaded Cannulated Screws (40mm – 120mm length)
- 6.5mm Fully Threaded Cannulated Screws (40mm – 80mm length)
- 7.3mm Partially Threaded Cannulated Screws (50mm – 120mm length)



2. System Features (cont.)

Headless Compression Screw Design

- Made of strong, light-weight titanium (Ti6Al4V).
- Screw head has tapered design to facilitate fragment compression.
- Screw head sits flush in bone for decreased soft tissue irritation.
- Pitch differential between the leading and trailing thread maximizes and maintains compression.
- Screw threads are self-tapping to facilitate smooth insertion into dense cortical bone.

Partially Threaded Cannulated Screw Design

- Made of strong, light-weight titanium (Ti6Al4V).
- Low-profile head design to minimize soft tissue irritation.
- Partial thread design allows for maximum compression across fracture or osteotomy.
- Self-tapping flutes ease insertion into cortical bone.

Sterile-Packaged Instrumentation—Always “Ready-for-Surgery”

- Robust 1.1mm (5.0mm Headless Compression Screws) and 2.0mm Cobalt Chrome (CoCr) (5.5mm, 6.5mm, 7.3mm) smooth trocar-tipped guide wires are designed to stabilize to bone fragments and accurately guide cannulated screws.
- Precision single-use instrumentation reduces surgical steps and improves efficiency.
- Easy-to-use universal instruments are designed to work with all large cannulated screw families.

Reference Chart

Current Cannulated Drill Bits			New Cannulated Drill Bits		
Product #	Diameter	Length	Product #	Diameter	Length
CDB 017	1.7mm	75mm	CDB 217	1.7mm	110mm
CDB 020	2.0mm	85mm	CDB 220	2.0mm	120mm
CDB 024	2.4mm	105mm	CDB 224	2.4mm	120mm
CDB 026	2.6mm	105mm	CDB 226	2.6mm	130mm
CDB 030	3.0mm	105mm	CDB 230	3.0mm	150mm
CDB 035	3.5mm	125mm	CDB 235	3.5mm	125mm
CDB 040	4.0mm	120mm	CDB 240	4.0mm	140mm
CDB 045	4.5mm	105mm	CDB 245	4.5mm	150mm
CDB 050	5.0mm	165mm	CDB 250	5.0mm	200mm
CDB 065	6.5mm	105mm	CDB 265	6.5mm	200mm

3. Fracture/Osteotomy Reduction

Using standard reduction techniques, reposition or reposition bone into appropriate anatomical alignment and reduce bone fragments.

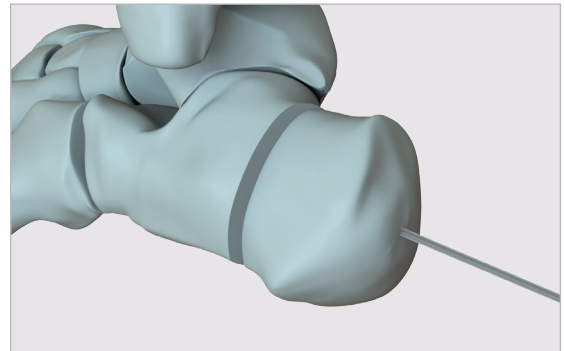
4. Guide Wire Insertion

Sterile Instruments

GWK 300	Guide Wire Kit – For 5.5mm, 6.5mm, 7.3mm Cannulated Screws
EWK 201	E-Kit, Advanced – For 5.0mm Headless Screws

Optional Sterile Instruments

GWK 125	Guide Wires, 1.25mm x 160mm
GWK 120	Guide Wires, 2.0mm x 160mm



After the fragments are in the desired position, insert either a 1.1mm Smooth Guide Wire for a 5.0mm Headless Compression Screw **or** a 2.0mm Smooth Guide Wire for 5.5mm, 6.5mm, or 7.3mm Screws to maintain bony alignment. It is recommended that all wires are fully inserted to reach the far cortex. Confirm position of the guide wire visually and on AP, oblique, and lateral x-rays.

Note: Additional guide wires may be used to provisionally secure bone fragments and provide stability during drilling and screw insertion.

If a screw length of 100mm or longer is desired, it is recommended to use the 2.0mm Extra-Long Guide Wires (GWK 122). This wire is laser-etched at 160mm so the screw length can be obtained using the cannulated depth gauge.

Extra sterile-packaged Smooth Guide Wires are available in the following kits:

GWK 125	1.25mm Guide Wires
GWK 120	2.0mm Guide Wires
GWK 122	2.0mm Extra-Long Guide Wires

5. Screw Measurement

Sterile Instruments

EWK 201	E-Kit, Advanced – For 5.0mm Headless Compression Screws
GWK 300	Guide Wire Kit – For 5.5mm, 6.5mm, 7.3mm Cannulated Screws

Precaution

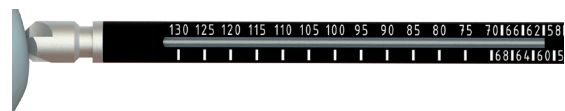
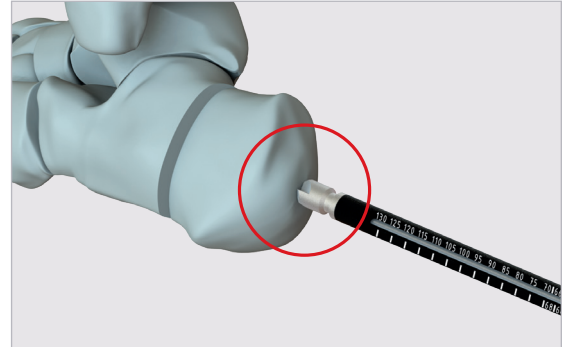
Countersinking might be necessary before measuring for the required screw length. Countersinking for Partially Threaded Headed Cannulated Screws is recommended. Countersinking is not necessary for Headless Compression Screws.

Tip

The cannulated depth gauge is a 2-in-1 instrument that can also be used as a countersink.

If countersinking is desired, place the sharp end of the cannulated depth gauge over the guide wire and firmly place against the bone. Manually oscillate the cannulated depth gauge until the appropriate depth has been achieved.

Read the required screw length from the end of the guide wire.



6. Pilot Hole Preparation

Sterile Instruments

For 5.0mm Headless Compression Screws

CDB 035	Cannulated Drill Bit, 3.5mm (Pilot Hole)
CDB 050	Cannulated Drill Bit, 5.0mm (Near Cortex)

For 5.5mm Cannulated Screws

CDB 040	Cannulated Drill Bit, 4.0mm (Pilot Hole)
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For 6.5mm Headless Compression Screws

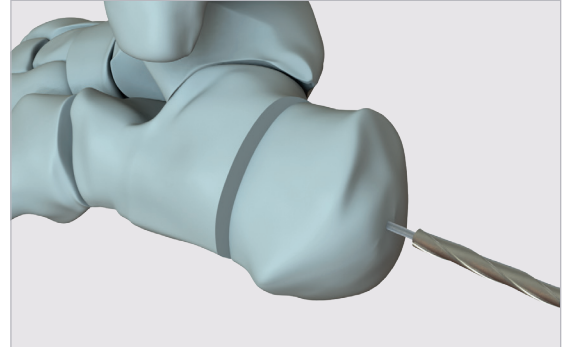
CDB 050	Cannulated Drill Bit, 5.0mm (Pilot Hole)
CDB 065	Cannulated Drill Bit, 6.5mm (Near Cortex)

For 6.5mm Cannulated Screws

CDB 050	Cannulated Drill Bit, 5.0mm (Pilot Hole)
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For 7.3mm Cannulated Screws

CDB 050	Cannulated Drill Bit, 5.0mm (Pilot Hole)
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To drill for the 5.0mm, 5.5mm, 6.5mm, and 7.3mm Cannulated Screws, reference the above sizing chart for the appropriately sized cannulated drill bits for both Pilot Hole and Near Cortex. Place the Cannulated Drill Bit directly over the guide wire and drill to the appropriate length.

Note: The CDB 2XX series drill bits are identical to the CDB 0XX series drill bits, except they are longer. Please refer to the chart on Page 5.

Precaution for Headless Compression Screws

When drilling in dense bone, it is recommended to drill the near cortex using the appropriate size Cannulated Drill Bit using the reference chart above. This allows the head of the screw to engage with the near cortex when inserting the screw.

Note: Both the Headless Compression Screws and Partially Threaded Cannulated Screws are self-tapping.

7. Screw Insertion

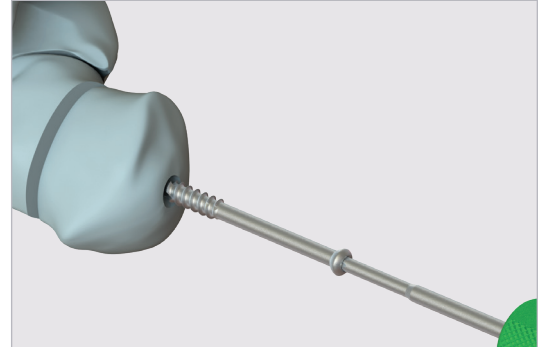
Sterile Instruments

GWK 300	Guide Wire Kit – For 5.5mm, 6.5mm, 7.3mm Cannulated Screws and Headless Compression Screws
EWK 201	E-Kit, Advanced – For 5.0mm Headless Compression Screws

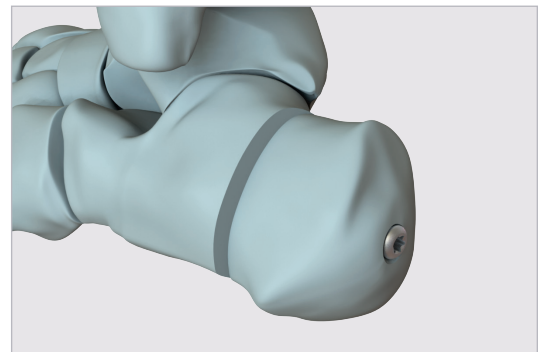
To compress the bone fragments, insert the insert the Headless Compression Screw, Partially Threaded Cannulated Screw, or Fully Threaded Cannulated Screw over the guide wire by hand, using either a T15 cannulated screwdriver for 5.0mm Headless Compression Screws or a T25 cannulated screwdriver for 5.5mm, 6.5mm, or 7.3mm Cannulated and Headless Compression Screws.

Precaution

Do not over-tighten screws as this could result in fracture or loss of bone reduction.



Partially Threaded Cannulated Screw Insertion



Product Information

8. Technical Specifications

Cannulated Screws			
Thread Diameter	Head Diameter	Shaft Diameter	Thread Length
5.5mm	8.0mm	4.0mm	16mm
6.5mm	8.0mm	4.8mm	18mm
7.3mm	8.0mm	4.8mm	18mm

Headless Compression Screws			
Thread Diameter	Head Diameter	Shaft Diameter	Thread Length
5.0mm	6.2mm	3.5mm	16mm
6.5mm	7.9mm	4.8mm	16mm

For screws shorter than 48mm in length, the thread length is 1/3 of the total length of screw.

9. Sterile Implants



5.0mm Headless Compression Screws	
Product #	Product Description
HCS 530	5.0mm x 30mm
HCS 532	5.0mm x 32mm
HCS 534	5.0mm x 34mm
HCS 536	5.0mm x 36mm
HCS 538	5.0mm x 38mm
HCS 540	5.0mm x 40mm
HCS 542	5.0mm x 42mm
HCS 544	5.0mm x 44mm
HCS 546	5.0mm x 46mm
HCS 548	5.0mm x 48mm
HCS 550	5.0mm x 50mm
HCS 555	5.0mm x 55mm
HCS 560	5.0mm x 60mm
HCS 565	5.0mm x 65mm
HCS 570	5.0mm x 70mm



6.5mm Headless Compression Screws	
Product #	Product Description
HCS 740	6.5mm x 40mm
HCS 745	6.5mm x 45mm
HCS 750	6.5mm x 50mm
HCS 755	6.5mm x 55mm
HCS 760	6.5mm x 60mm
HCS 765	6.5mm x 65mm
HCS 770	6.5mm x 70mm
HCS 775	6.5mm x 75mm
HCS 780	6.5mm x 80mm
HCS 785	6.5mm x 85mm
HCS 790	6.5mm x 90mm
HCS 791	6.5mm x 95mm
HCS 792	6.5mm x 100mm



5.5mm Cannulated Screws Partially Threaded	
Product #	Product Description
CSP 630	5.5mm x 30mm
CSP 635	5.5mm x 35mm
CSP 640	5.5mm x 40mm
CSP 645	5.5mm x 45mm
CSP 650	5.5mm x 50mm
CSP 655	5.5mm x 55mm
CSP 660	5.5mm x 60mm
CSP 665	5.5mm x 65mm
CSP 670	5.5mm x 70mm



6.5mm Cannulated Screws Partially Threaded	
Product #	Product Description
CSP 740	6.5mm x 40mm
CSP 745	6.5mm x 45mm
CSP 750	6.5mm x 50mm
CSP 755	6.5mm x 55mm
CSP 760	6.5mm x 60mm
CSP 765	6.5mm x 65mm
CSP 770	6.5mm x 70mm
CSP 775	6.5mm x 75mm
CSP 780	6.5mm x 80mm
CSP 785	6.5mm x 85mm
CSP 790	6.5mm x 90mm
CSP 795	6.5mm x 95mm
CSP 796	6.5mm x 100mm
CSP 797	6.5mm x 110mm
CSP 798	6.5mm x 120mm

9. Sterile Implants (cont.)



6.5mm Cannulated Screws Fully Threaded	
Product #	Product Description
CSF 740	6.5mm x 40mm
CSF 745	6.5mm x 45mm
CSF 750	6.5mm x 50mm
CSF 755	6.5mm x 55mm
CSF 760	6.5mm x 60mm
CSF 765	6.5mm x 65mm
CSF 770	6.5mm x 70mm
CSF 775	6.5mm x 75mm
CSF 780	6.5mm x 80mm



7.3mm Cannulated Screws Partially Threaded	
Product #	Product Description
CSP 850	7.3mm x 50mm
CSP 855	7.3mm x 55mm
CSP 860	7.3mm x 60mm
CSP 865	7.3mm x 65mm
CSP 870	7.3mm x 70mm
CSP 875	7.3mm x 75mm
CSP 880	7.3mm x 80mm
CSP 885	7.3mm x 85mm
CSP 890	7.3mm x 90mm
CSP 895	7.3mm x 95mm
CSP 896	7.3mm x 100mm
CSP 897	7.3mm x 110mm
CSP 898	7.3mm x 120mm

10. Sterile Instruments

Product #	Product Description
GWK 300	Guide Wire Kit for 5.5mm, 6.5mm, 7.3mm Cannulated Screws
EWK 201	E-Kit, Advanced for 5.0mm Headless Screws
GWK 125	Guide Wires, 1.25mm x 160mm
GWK 120	Guide Wires, 2.0mm x 160mm
GWK 122	Guide Wires, 2.0mm x 220mm
CDB 035	Cannulated Drill Bit, 3.5mm
CDB 040	Cannulated Drill Bit, 4.0mm
CDB 050	Cannulated Drill Bit, 5.0mm
CDB 065	Cannulated Drill Bit, 6.5mm



The next generation of sterile-packaged orthopedic implants and instruments are now reconfigured for mix-and-match efficiency.

Conventus Flower Orthopedics pioneered the single-use sterile-packaged Ready-for-Surgery Cube System.

The Large Cannulated Screws have been reconfigured in order to address more orthopedic surgical procedures.

Key Features

- Extremity-focused solutions
- New, more streamlined configurations
- Procedure-specific configurations
- Redundant instruments in system

Key Benefits*

- Easier and more efficient to use
- Practical for use in multiple cases
- Multiple implant solutions per procedure cube
- Minimal logistical management = time savings = cost savings



The right procedure. The right implants. The right solution.

FlowerCube sterile-packaged procedure solutions eliminate the need for hospital sterile processing, minimize infection risks to patients, and provide turnkey solutions for last-minute trauma and add-on cases.

*Data on file at Conventus Flower Orthopedics
IRB approved, prospective, multi-center clinical trial

- Evaluating arthrodesis of first MPJ
- 71 patients at both hospital and ASC locations
- Primary outcome measure: Fusion rate 12 weeks post surgery
- Secondary outcome measure: Cost and time efficiency

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