

Coremus™ Damaged Screw Removal System

Guidance for use



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Before and after...

Before and after each use ensure that:

- All Tungsten Carbide drill bits, extractor shafts, extractor shaft tubes, relief cutters, screwdriver handles, power adaptor, fluted nut and spanner are examined for damage
- The fluted nut runs freely on all extractor shafts
- The extractor shaft tubes slide freely over all extractor shafts
- The spanner fits onto the fluted nut
- The quick release mechanism on the screwdriver handles engage and lock onto all the extractor shafts and relief cutters
- The quick release mechanism on the power adaptor engages and locks onto all the extractor shafts and relief cutters

Cleaning: Before and after each use:

- Clean all external and external threaded parts agitate with a soft brush if necessary.
- Check that all drill bits are clean and free of bone debris.
- Check that all quick release mechanisms are clean and free from bone debris.
- Check that the internal and external surfaces, including extraction teeth, of the extractor shafts and relief cutters are clean and free of bone debris, agitate with a soft brush if necessary.

Do not use wire wool or abrasive materials

Important information before use.

- Tungsten carbide drill bits are very brittle and easily broken if used incorrectly
- Ensure that the drill bit maintains alignment with the long axis of the screw to be drilled
- The drill must be rotating prior to entering the damaged hex hole in the screw head and continue until the head rings off, failure to do so could result in snagging and breaking the drill bit
- Maintain a cool environment by irrigation
- Make preparation for the protection of surrounding tissue from metal debris
- Ensure that all metal particles are removed after drilling

Coremus Extractor System - Container 1 Damaged Screw Removal

Container 1:

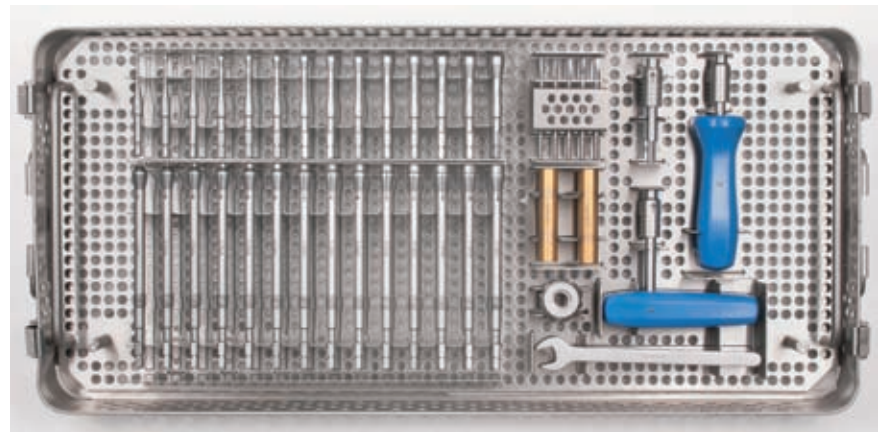
CES-DSR-SYS Coremus Extractor System Damaged Screw Removal



Container 1:

Tray 1 (CES-T-07)

For list of tray contents please see page 10.



Coremus Extractor System - Container 2 Universal Screwdriver System

Container 2:

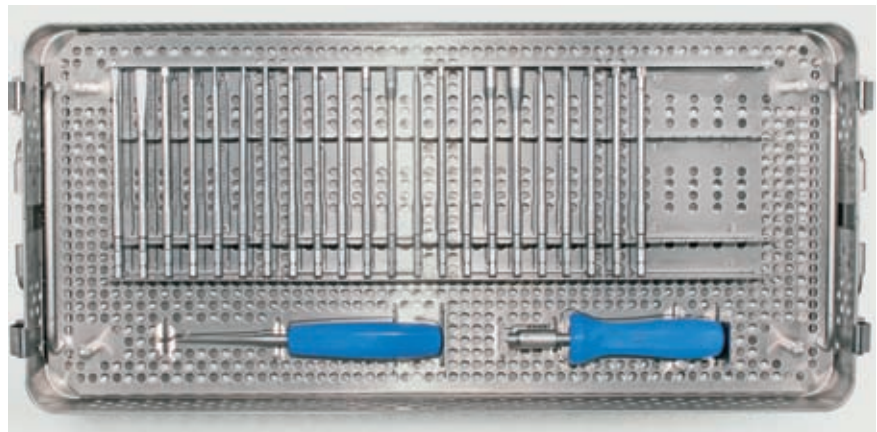
CES-DRV-SYS Coremus Extractor System - Universal Screwdriver System



Container 2:

Tray 1 (CES-T-09)

Consisting of 23 driver shafts. For list of tray contents please see page 11.



Guidance for the removal of damaged internal hex head screws

- 1 Identify the head diameter of the screw to be removed.



- 2 Select the corresponding Screw Extractor Shaft (CES-SE-01/14).



- 3 Slide the Screw Extractor Compression Tube (CES-SE-12) over the Screw Extractor Shaft.



- 4 Followed by the Fluted Nut (CES-SE-13). Ensure that the Fluted Nut is assembled so that the Screw Extractor Compression Tube sits in the recess of the Fluted Nut.



- 5 Attach the above assembly to the Straight or Offset "T" handle (CES-1-03/04).



- 6 Place the Screw Extractor Shaft (CES-SE-01/14) fully over the head of the exposed screw, in line with the direction of the screw.



- 7 Proceed to wind down the Fluted Nut (CES-SE-13) in a clockwise direction until a firm grip is achieved. This procedure should only require hand tightening but a Spanner (CES-SH-05) may also be used. PIC 9385

- 8 Proceed to unscrew the damaged screw in an anti-clockwise direction.

Guidance for the removal of damaged internal hex head screws when situated in a bone plate

- 1 Identify the head diameter of the screw to be removed.
- 2 Select the Solid Carbide Drill (CES-D-03/07) that corresponds to the core diameter of the screw shaft to be removed and connect to the Power Adaptor (CES-1-08).



- 3 Using a power drill, drill into the hex head of the screw to be removed until the head rings off.
- 4 Remove the remaining screws in the plate by the above method if necessary.
- 5 Remove the bone plate.



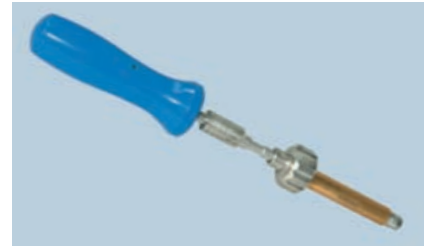
- 6 Once the bone plate is removed the screw thread stubs are exposed.



- 7 Select the corresponding Screw Extractor Shaft (CES-SE-01/14) and slide the Screw Extractor Compression Tube (CES-SE-12) over the Screw Extractor Shaft, followed by the Fluted Nut (CES-SE-13).



Ensure that the Fluted Nut (CES-SE-13) is assembled so that the Screw Extractor Compression Tube sits in the recess of the Fluted Nut.



- 8 Attach the above assembly to the Straight or Offset "T" handle (CES-1-03/04).



- 9 Place the Screw Extractor Shaft (CES-SE-01/14) fully over the threaded screw stub, in line with the direction of the screw, and proceed to wind down the Fluted Nut (CES-SE-13) in a clockwise direction until a firm grip is achieved. This procedure should only require hand tightening but a Spanner (CES-SH-05) may also be used.
- 10 Proceed to unscrew the threaded screw stub in an anti-clockwise direction.

Guidance for the removal of screws buried into bone

- 1 Identify the head diameter of the screw to be removed.
- 2 Select the corresponding Relief Cutter (CES-RC-01/14) and attach to the Straight or Offset "T" handle (CES-1-03/04) or alternatively to the Power Adaptor (CES-1-08).



- 3 Place the Relief Cutter (CES-RC-01/14) over the head of the buried screw in line with the direction of the screw, and proceed to core down through the bone over the head. It is important to rotate the Relief Cutter in a clockwise and anti-clockwise direction while applying a little pressure. Ensure that the teeth of the Relief Cutter are cleaned at regular intervals during this procedure or they will not cut and will create heat.

- 4 Once the Relief Cutter fails to cut any deeper it has reached its pre-determined depth.



- 5 Select the corresponding Screw Extractor Shaft (CES-SE-01/14) and slide the Screw Extractor Compression Tube (CES-SE-12) over the Screw Extractor Shaft.



- 6 Followed by the Fluted Nut (CES-SE-13). Ensure that the Fluted Nut is assembled so that the Screw Extractor Compression Tube sits in the recess of the Fluted Nut.



- 7 Attach the above assembly to the Straight or Offset "T" handle (CES-1-03/04).



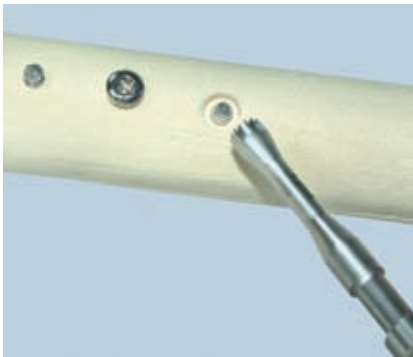
- 8 Place the Screw Extractor Shaft (CES-SE-01/14) fully into the space created by the Relief Cutter around the screw head in line with the direction of the screw. PIC 9384
- 9 Proceed to wind down the Fluted Nut (CES-SE-13) in a clockwise direction until a firm grip is achieved. This procedure should only require hand tightening but a Spanner (CES-SH-05) may also be used.
- 10 Proceed to unscrew the damaged screw in an anti-clockwise direction.

Guidance for the removal of headless screws buried into bone

- 1 Identify the diameter of threaded screw stub to be removed.



- 2 Select the corresponding Relief Cutter (CES-RC-01/14) and attach to the Straight or Offset "T" handle (CES-1-03/04 or alternatively to the Power Adaptor (CES-1-08).



- 3 Place the Relief Cutter (CES-RC-01/14) over the threaded screw stub in line with the direction of the screw, and proceed to core down through the bone over threaded screw stub. It is important to rotate the Relief Cutter in a clockwise and anti-clockwise direction while applying a little pressure. Ensure that the teeth of the Relief Cutter are cleaned at regular intervals during this procedure or they will not cut and will create heat.

- 4 Once the Relief Cutter fails to cut any deeper it has reached its pre-determined depth.



- 5 Select the corresponding Screw Extractor Shaft (CES-SE-01/14) and slide the Screw Extractor Compression Tube (CES-SE-12) over the Screw Extractor Shaft, followed by the Fluted Nut (CES-SE-13).



Ensure that the Fluted Nut is assembled so that the Screw Extractor Compression Tube sits in the recess of the Fluted Nut.

- 6 Attach the above assembly to the Straight or Offset "T" handle (CES-1-03/04).



- 7 Place the Screw Extractor Shaft (CES-SE-01/14) fully into the space created by the Relief Cutter around the threaded screw stub in line with the direction of the screw.
- 8 Proceed to wind down the Fluted Nut (CES-SE-13) in a clockwise direction until a firm grip is achieved. This procedure should only require hand tightening but a Spanner (CES-SH-05) may also be used.
- 9 Proceed to unscrew the damaged screw in an anti-clockwise direction.

CES-DSR-SYS Coremus Extractor System

Damaged Screw Removal - Complete Set On 1 Tray In 1 Case

No.	Description	Quantity
CES-C-05	Coremus Extractor System - Damaged Screw - Case - Lid - 600mm x 280mm	1
CES-C-06	Coremus Extractor System - Damaged Screw - Case - Base - 600mm x 280mm x 65mm	1
CES-T-07	Coremus Extractor System - Damaged Screw - Tray	1
CES-T-08	Coremus Extractor System - Damaged Screw - Drill Retaining Bracket	1
CES-RC-01	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 1.5mm	1
CES-RC-02	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 2.0mm	1
CES-RC-03	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 2.5mm	1
CES-RC-04	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 3.0mm	1
CES-RC-05	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 3.5mm	1
CES-RC-06	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 4.0mm	1
CES-RC-07	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 4.5mm	1
CES-RC-08	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 5.0mm	1
CES-RC-09	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 5.5mm	1
CES-RC-10	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 6.0mm	1
CES-RC-11	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 6.5mm	1
CES-RC-12	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 7.0mm	1
CES-RC-13	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 7.5mm	1
CES-RC-14	Coremus Extractor System - Relief Cutter With Coremus QC Fitting - 8.0mm	1
CES-SE-01	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 1.5mm	1
CES-SE-02	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 2.0mm	1
CES-SE-03	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 2.5mm	1
CES-SE-04	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 3.0mm	1
CES-SE-05	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 3.5mm	1
CES-SE-06	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 4.0mm	1
CES-SE-07	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 4.5mm	1
CES-SE-08	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 5.0mm	1
CES-SE-09	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 5.5mm	1
CES-SE-10	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 6.0mm	1
CES-SE-11	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 6.5mm	1
CES-SE-12	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 7.0mm	1
CES-SE-13	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 7.5mm	1
CES-SE-14	Coremus Extractor System - Screw Extractor Shaft With Coremus QC Fitting - 8.0mm	1
CES-SE-15	Coremus Extractor System - Screw Extractor - Tube	2
CES-SE-16	Coremus Extractor System - Screw Extractor - Fluted Nut	1
CES-D-03	Coremus Extractor System - Drill - Solid Carbide - 2.5mm x 75mm	1
CES-D-04	Coremus Extractor System - Drill - Solid Carbide - 3.0mm x 75mm	1
CES-D-05	Coremus Extractor System - Drill - Solid Carbide - 3.5mm x 75mm	1
CES-D-06	Coremus Extractor System - Drill - Solid Carbide - 4.0mm x 75mm	1
CES-D-07	Coremus Extractor System - Drill - Solid Carbide - 4.5mm x 75mm	1
CES-I-03	Coremus Extractor System - Screwdriver Handle - Straight	1
CES-I-04	Coremus Extractor System - Screwdriver Handle - Offset T	1
CES-I-08	Coremus Extractor System - Power Adaptor - Coremus QC Fitting To Jacobs	1
CES-SH-05	Coremus Extractor System - Sliding Hammer - Spanner	1

CES-DRV-SYS Coremus Extractor System

Universal Screwdriver System - Complete Set On 1 Tray In 1 Case

No.	Description	Quantity
CES-C-07	Coremus Extractor System - Screwdrivers - Case - Lid - 600mm x 280mm	1
CES-C-08	Coremus Extractor System - Screwdrivers - Case - Base - 600mm x 280mm x 65mm	1
CES-T-09	Coremus Extractor System - Screwdrivers - Tray	1
CES-DS-01	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Flat Tip - 5.0mm	1
CES-DS-02	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Flat Tip - 8.0mm	1
CES-DS-03	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Cruciform Tip - 5.0mm	1
CES-DS-04	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Philips - No.2	1
CES-DS-05	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 2.5mm	1
CES-DS-06	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 3.0mm	1
CES-DS-07	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 3.5mm	1
CES-DS-08	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 4.0mm	1
CES-DS-09	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 4.5mm	1
CES-DS-10	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 5.0mm	1
CES-DS-11	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 6.0mm	1
CES-DS-12	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 8.0mm	1
CES-DS-13	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 5/32"	1
CES-DS-14	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex - 3/16"	1
CES-DS-15	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex Socket - 4.0mm	1
CES-DS-16	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex Socket - 6.0mm	1
CES-DS-17	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Hex Socket - 8.0mm	1
CES-DS-18	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Torx - T20	1
CES-DS-19	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Torx - T25	1
CES-DS-20	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Torx - T30	1
CES-DS-21	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Torx - T40	1
CES-DS-23	Coremus Extractor System - Driver Shaft With Coremus QC Fitting - Torx - T15	1
CES-I-01	Coremus Extractor System - Bone Pick	1
CES-I-03	Coremus Extractor System - Screwdriver Handle - Straight	1

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refer to general situations and
therefore individual surgeon
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conformity valuation process