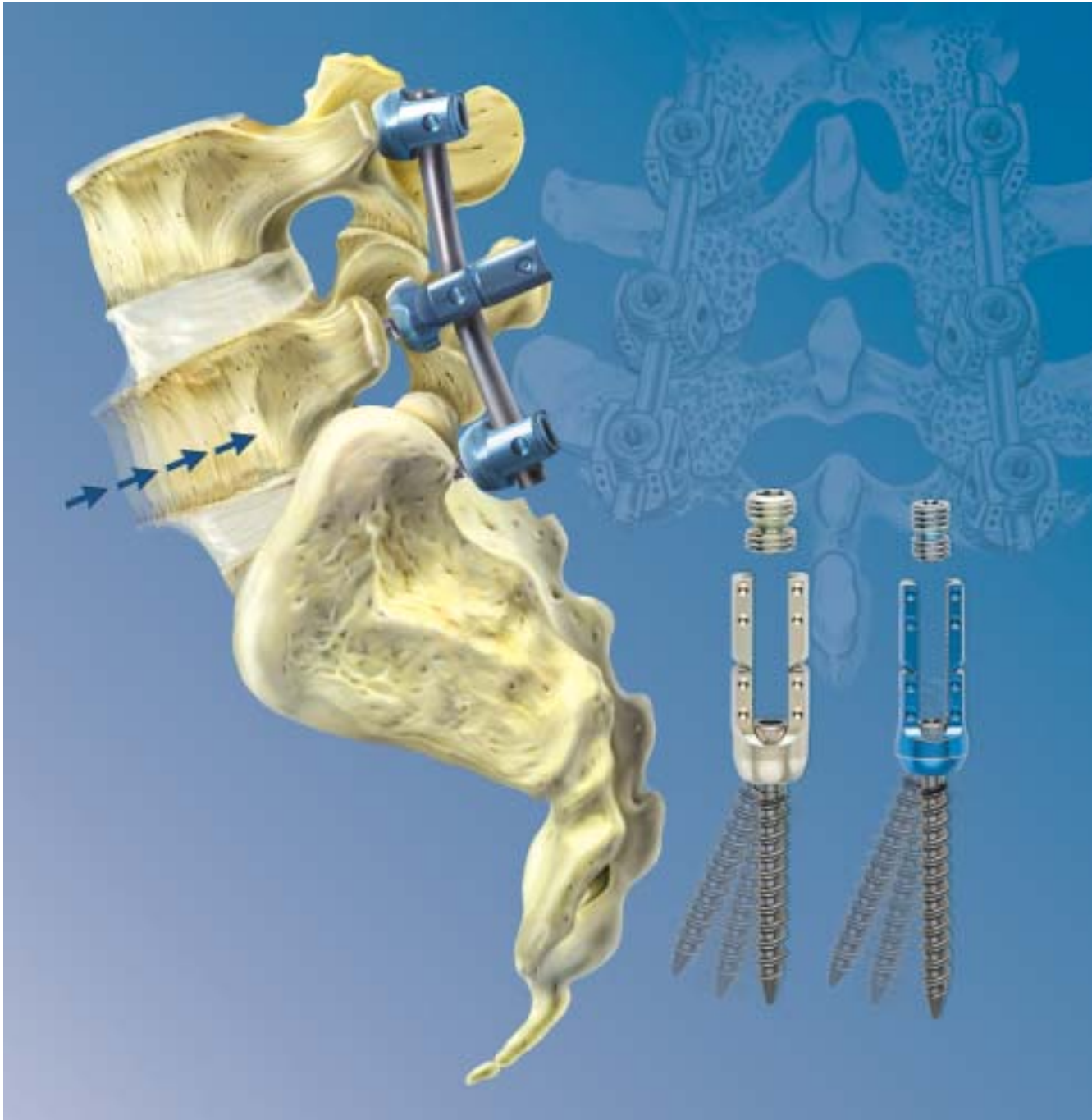




Medtronic

SOFAMOR DANEK

CD HORIZON[®] REDUCTION MULTI AXIAL SCREW Spinal System Technical Guide



CD HORIZON®
**REDUCTION
 MULTI AXIAL SCREW**
 Spinal System

The following describes reduction of a spondylolisthesis at L5-S1 using CD HORIZON Reduction Multi Axial Screws.

Step 1 CONSTRUCT ASSEMBLY

With the pedicles prepared, insert standard multi axial screws at L4 and S1, and reduction multi axial screws at L5 (Figure 1). Reduction screws may be used at all levels to facilitate seating the rod.

Position the rod ensuring that the desired final lordosis or contour has been created in the rod bend. The rod should sit fully in the saddle of the L4 and S1 screws, while remaining high in the saddle of the L5 screws.

Insert the set screws in the L4 and S1 implants and provisionally tighten them to secure the rod using the appropriate set screw driver (Figure 2).



Figure 1

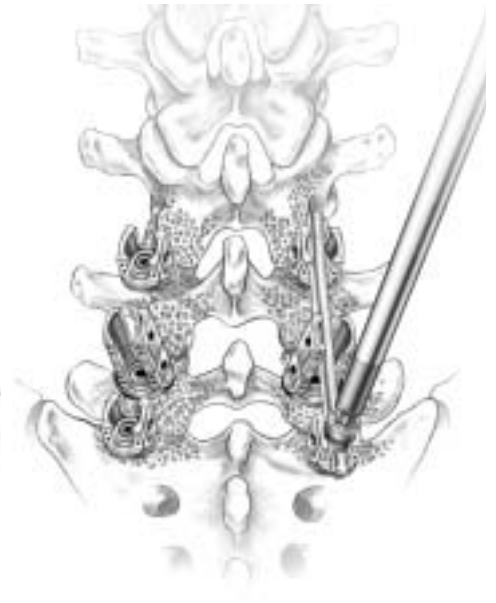
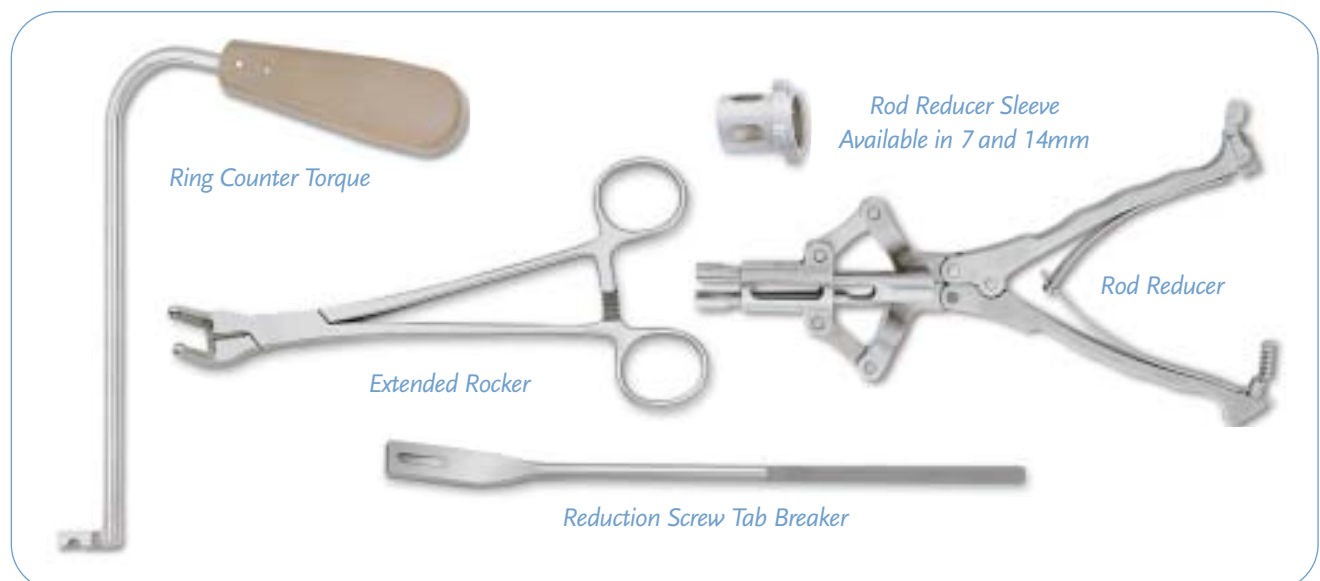


Figure 2



Step **2** SPONDYLOLISTHESIS REDUCTION

Method 1:

Reduce with Set Screw

Insert the reduction set screw into the reduction implant head, place the ring counter torque over the implant head and maintain throughout the reduction procedure. Advance the set screw in the bone screw. This will pull the implant to the rod, translating the vertebral body of L5 posteriorly and, therefore, reducing the spondylolisthesis (Figure 3).

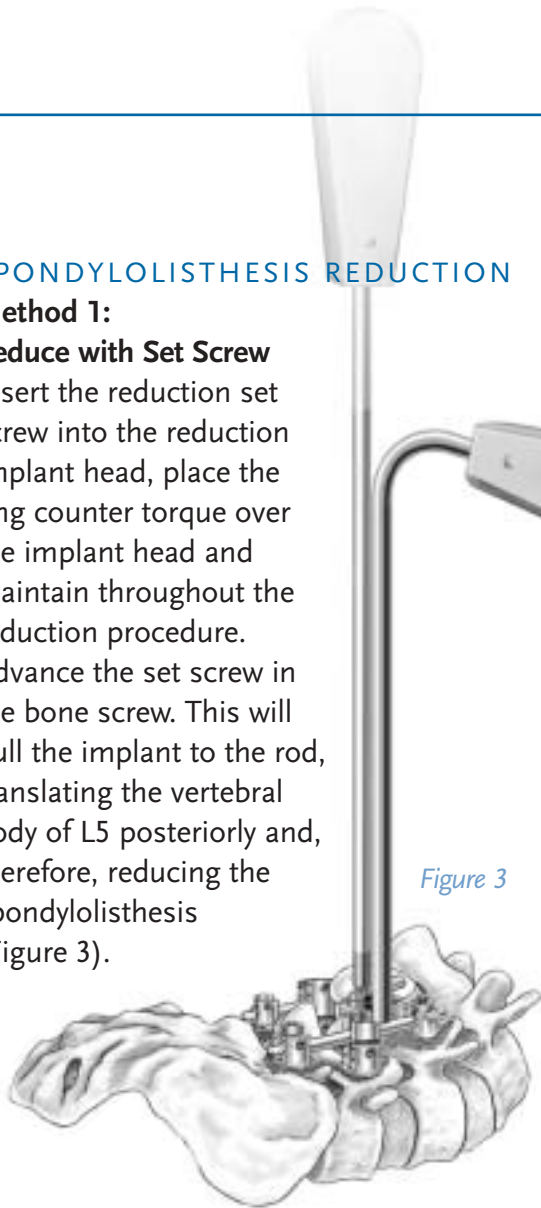


Figure 3

Method 2:

Reduce with Extended Rocker

The extended rocker can be used to seat the rod and provide incremental reduction. Grasp the extended head of the implant and rock down applying pressure to the rod (Figure 4).

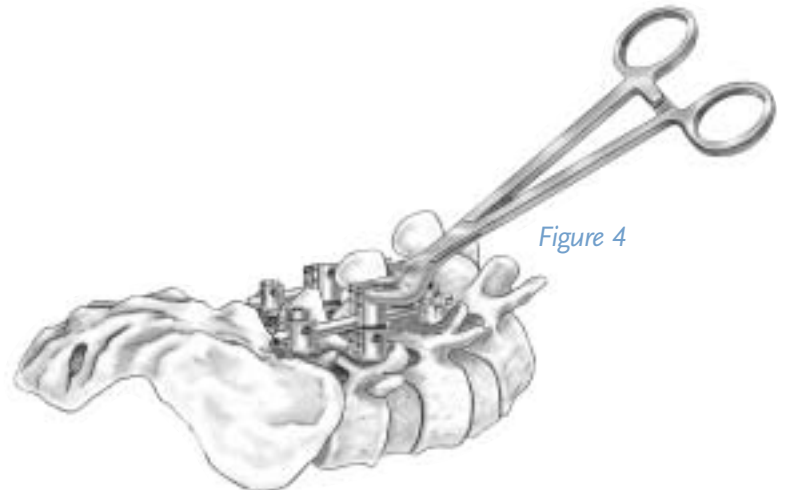


Figure 4

Method 3:

Reduce with Rod Reducer

The rod reducer can also be used in conjunction with the rod reducer sleeves to reduce the rod into the extended head. The 7 and 14mm rod reducer sleeves provide the ability to incrementally reduce the rod into the implant (Figures 5a and 5b).

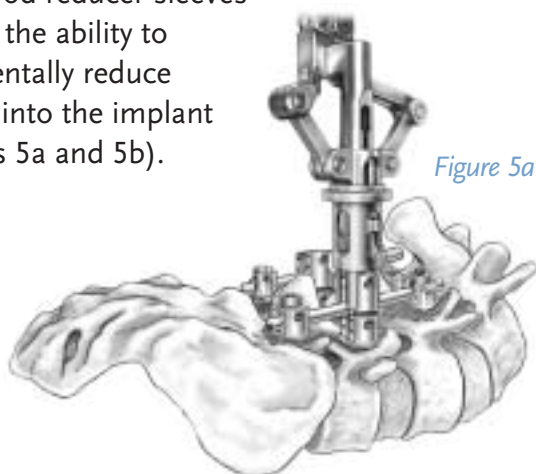


Figure 5a

When the rod is fully seated in the bottom of the implant head, the reduction is complete. Bilateral reduction may be attained by simultaneously driving the set screws at L5 on both sides.

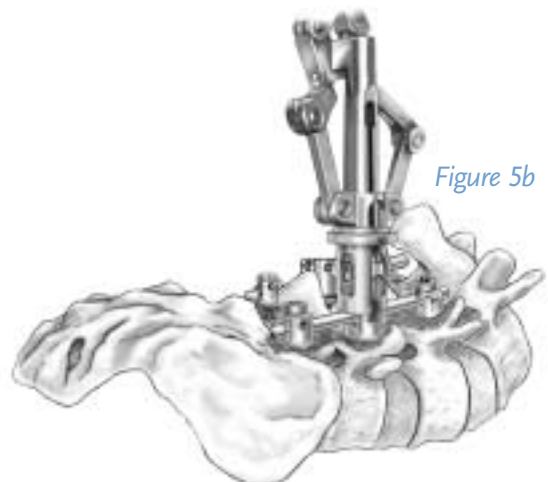


Figure 5b

Step 3 FINAL TIGHTENING

Once the rod is completely reduced and all the set screws fully advanced and provisionally tightened, the set screws in the standard multi axial screws at L4 and S1 may be broken off.

To break off the extended portion of the reduction multi axial screws, slide the tab breaker over each extended tab of the implant head and apply pressure to the tab breaker away from the rod.

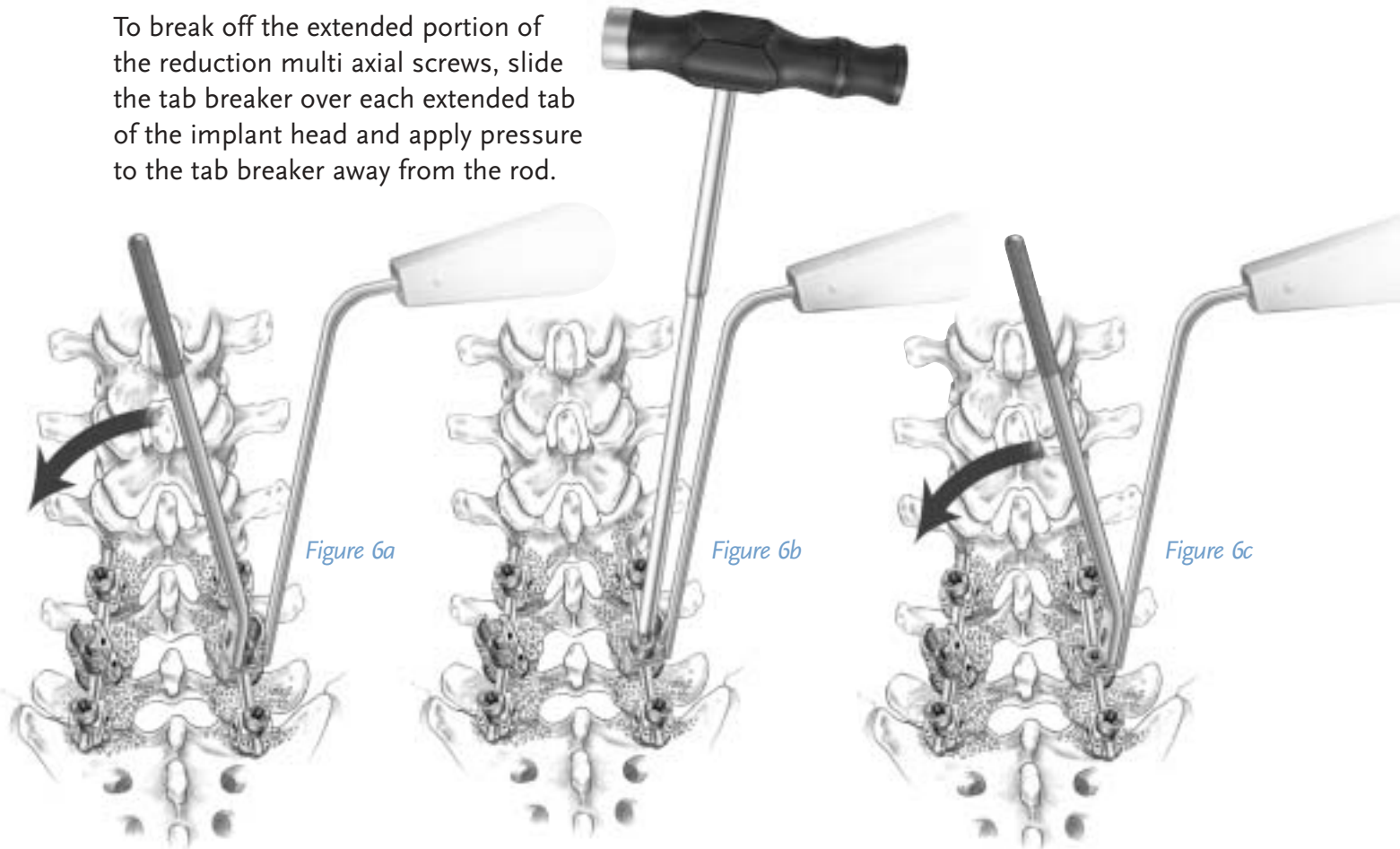


Figure 6a

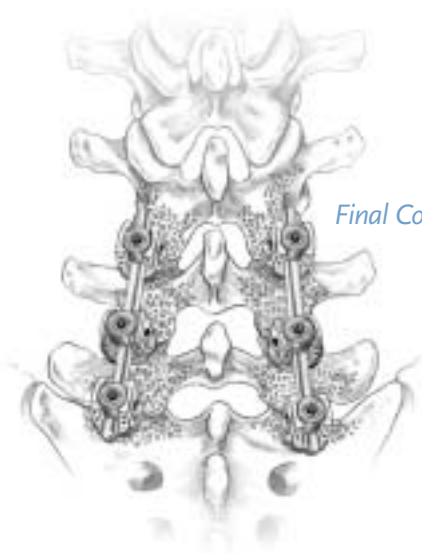
Figure 6b

Figure 6c

The ring counter-torque should be maintained over the implant head during this step. After this is completed, the reduction set screw may be broken off using the final set screw driver with the standard counter torque in place.

If the soft tissue prevents the lateral tab from being broken off laterally, first break off the medial tab medially (Figure 6a), then break off the set screw using the ring counter torque (Figure 6b), then break off the lateral tab medially (Figure 6c).

If the tabs do not bend and break off easily, ensure that the set screw is fully advanced. If the set screw is not fully advanced, its threads will offer resistance and prevent the tabs from being broken off.



Final Construct

REDUCTION MULTI AXIAL SCREW IMPLANTS & SET SCREWS

M10 SS	M10 Ti	M8 SS	M8 Ti	DESCRIPTION
9682530	9692530	8682530	8692530	5.5mm x 30mm
9682535	9692535	8682535	8692535	5.5mm x 35mm
9682540	9692540	8682540	8692540	5.5mm x 40mm
9682545	9692545	8682545	8692545	5.5mm x 45mm
9682550	9692550	8682550	8692550	5.5mm x 50mm
9682630	9692630	8682630	8692630	6.5mm x 30mm
9682635	9692635	8682635	8692635	6.5mm x 35mm
9682640	9692640	8682640	8692640	6.5mm x 40mm
9682645	9692645	8682645	8692645	6.5mm x 45mm
9682650	9692650	8682650	8692650	6.5mm x 50mm
9682655	9692655	8682655	8692655	6.5mm x 55mm
9682730	9692730	8682730	8692730	7.5mm x 30mm
9682735	9692735	8682735	8692735	7.5mm x 35mm
9682740	9692740	8682740	8692740	7.5mm x 40mm
9682745	9692745	8682745	8692745	7.5mm x 45mm
9682750	9692750	8682750	8692750	7.5mm x 50mm
9682755	9692755	8682755	8692755	7.5mm x 55mm
9680853	9690853	8680853	8690853	Reduction Set Screw

INSTRUMENTS

M10 SS	M10 Ti	M8 SS	M8 Ti	DESCRIPTION
9682050	9682050	8682050 815-518	8682050 815-518	Reduction Multi Axial Screw Driver TORX 25 Set Screw Driver (M8)
84687E	84687E			Provisional Set Screw Driver (M10)
9682048	9682048	8682048	8682048	Tab Breaker
9682049	9682049	8682049	8682049	Ring Counter Torque
8150500	8150500	8150500	8150500	Extended Rocker
9680957	9680957	858-957	858-957	Rod Reducer
9682907	9682907	8682907	8682907	7mm Rod Reducer Sleeve
9682914	9682914	8682914	8682914	14mm Rod Reducer Sleeve

CASES & TRAYS

M10 SS	M10 Ti	M8 SS	M8 Ti	DESCRIPTION
185-064	185-064	185-064	185-064	Outer Base Lid
9682001	9692001	8682001	8692001	Outer Base
8682002	8692002	8682002	8692002	Instrument Tray
9682006	9692006	8682006	8692006	Implant Base
9682007	9692007	8682008	8692008	Implant Base Lid
9682003	9692003	8682003	8692003	5.5mm Screw Module
9682004	9692004	8682004	8692004	6.5/7.5mm Screw Module
9682005	9692005	8682005	8692005	Set Screw Module

For product availability, and/or more information on any MEDTRONIC SOFAMOR DANEK USA, INC. products,
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