



# ***INSTRUCTIONS FOR USE***

## **Rultract, Inc.**

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

## **Important**

**The Rultract<sup>®</sup> Skyhook Retractor is to be used according to the instructions for use. All personnel who handle Rultract<sup>®</sup> device must read these instructions prior to use of the instrument.**

## **DEVICE DESCRIPTION**

The Rultract<sup>®</sup> Skyhook Retractor is a manual surgical instrument system intended for use in surgery under sterile conditions. The Rultract<sup>®</sup> Skyhook Retractor System is designed as an omni-positioning retractor instrument to elevate, position, and stabilize surgical sites and tissue, and provide optimal surgical exposure and stability. The wide selection of base (table) arms and clamps, cross-member components, and propriety Rultract Skyhook Retractor assembly, make the Rultract product line suitable for any surgical specialty and application.

## **INTENDED USE**

The Rultract<sup>®</sup> Skyhook Retractor assembly is a manual surgical instrument intended for use in surgery to facilitate access to surgical sites under sterile conditions by the direction of the surgeon.

## **CONTRAINDICATIONS**

There are no known contraindications to Rultract<sup>®</sup> Skyhook Retractors.



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## **PRECAUTIONS INDEX**

**CAUTION:** Check and tighten all fasteners on the Ratchet/Rake Assembly. Failure to do so may result in components to loosen or disassemble during use (see p. 05).

**CAUTION:** Do not remove retaining Roll Pins \*(4100P-18) and \*\*\*(4100P-16), (see p. 05).

**CAUTION:** Hand tighten Lock Knob and Spool Cap Nut securely (see p. 03).

**CAUTION:** Lock Knob **MUST** be inserted in a detent for secure placement of accessories (see p. 08, 20, 21 & 22).

**CAUTION:** All Lock Knobs on Tube Assembly **MUST** be aligned with a detent and securely tightened in closed position (see p. 23).

**CAUTION:** Improper placement of clamp on table rail over rail mounting bolt will cause misalignment of jaws and prevent secure attachment to table (see p. 12).

**CAUTION:** Disassemble unit prior to cleaning. The spool cap nut must be removed to separate the spool, spool cap, crank handle assembly and gearbox assembly (see page 33 & 34). ***It is not necessary to remove fasteners or roll pins for proper cleaning and sterilization.*** Further disassembly may void warranty (see p. 31).

**CAUTION:** Always allow rake plate to hang freely when winding Cable. The weight of Rake Plate allows for proper alignment of Cable on Spool. Failure to allow the Rake Plate to hang freely may cause the Cable to kink during winding. Leave approximately one to two inches of Cable exposed to prevent flexing of Cable on Cable Guide at insertion site (see p. 30).

**CAUTION:** Always insert spool cap pin into the groove of the gearbox. Failure to do so may result in disassembly or damage to the unit (see p. 26, 30 & 33).

**CAUTION:** Always stabilize the single rake by hand to elevate and expose operative site. Failure to do so may result in rake slipping (see p. 07).

**CAUTION:** The Dull Tip Sternal Rake Plate is available as an accessory. The exact physiology of the sternum cannot be determined until the chest is opened. Therefore, the requesting institution assumes responsibility of having a Sharp Tip Sternal Rake Plate Assembly available at all times (see p. 06).

## **WARNINGS INDEX**

**WARNING:** Cables worn or damaged through mishandling must be replaced with a new **Rultract® Cable**. Do not attempt to repair, cut, alter or modify the Cable in any way. **Cutting and reattaching the Cable will cause it to weaken and fray. This will result in failure during use** (see p. 25 & 30).

**WARNING:** Always wear eye protection when removing cable (see p. 27).

**WARNING:** Removal of retaining screw(s) \*(4110-P12) will cause device to come apart. This will result in failure during use (see p. 09, 12 & 32).

## **REPAIR SERVICE**

**Rultract, Inc. is the ONLY authorized service center in the U.S.A.**

When your Rultract® instrument needs repair or service, contact Rultract Inc. or Rultract® distributor for the location of an authorized service center. All instruments must be decontaminated before being returned for service. Repair charges will apply to instruments repaired outside the warranty. **Recommended Factory Service Every 12-18 Months.**

## **REPLACEMENT**

**Rultract recommends replacement of your Rultract Retractor after seven years, depending on usage, when properly maintained.**

### **WARNING:**

**Any modification or alteration to a Rultract® product by user will void all warranties and release Rultract® from any liability.**

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# Rultract® Skyhook Retractor Parts List

Part #	Part Description	Part #	Part Description
4100-IMR-6	Ratchet/Rake Assembly with Snap Clip	4100-52	Sternal Rake Plate Assembly, Sharp Tip
4100-IMR-41	Ratchet Assembly with Snap Clip	4100-53	Crank Handle Assembly with Shaft
4100-01	Rake Plate	4100-52D	Sternal Rake Plate Assembly, Dull Tip
4100-02	Rake Clamp	4100-54	Ratchet Cover Plate Assembly
4100-341	Snap Clip	4100-59-07	Coupler Assembly
4100-03A	Cable Set Screw	4100-59-07B	Coupler Bar
4100-04	Ratchet Shaft	4100-59-08	Coupler Assembly
4100-06A	Take Up Spool	4100-59-08B	Coupler Bar
4100-07B	Gearbox	4100-59-11	Coupler Assembly
4100-08	One Piece Post	4100-59-11B	Coupler Bar
4100-08R	One Piece Post with Rotating Square Bar	4100-59-03	Coupler Tube Assembly
4100-09	Ratchet Cover Plate	4100-60	Minimally Invasive Rake Set
4100-10B	Lock Knob	4100-60A	Minimally Invasive Rake
4100-11	Crank Arm	4100-60B	Minimally Invasive Rake
4100-12	Sternal Rake, Sharp Tip	4100-60C	Minimally Invasive Rake
4100-12D	Sternal Rake, Dull Tip	4100-60D	Minimally Invasive Rake
4100-12R	Sternal Ring Rake, Sharp Tip	4100-60AS	Pediatric Rake
4100-12RD	Sternal Ring Rake, Dull Tip	4100-60P-01	Pediatric Rake
4100-13	Ratchet Shaft Bushing	4100-60P-02	Pediatric Rake
4100-15	Spool Cap Nut	4100-60P-03	Pediatric Rake
4100-15A	Spool Cap	4100-60P-04	Pediatric Rake
4100-16	Ratchet Gear	4100-60P-05	Pediatric Rake
4100-17	Crank Handle Sleeve	4100-60P-06	Pediatric Rake
4100-18	Crank Handle Screw	4100-70	Xiphoid Rake
4100-19	Cable Access Plate	4100-71	Xiphoid Rake
4100-20	Cable Replacement	4100-72	Xiphoid Rake
4100-20P	Cable Replacement Pack	4100-73	Xiphoid Rake
4100-21	Cam	4100-74	Xiphoid Rake
4100-22	Pawl Spring	4100-75	Xiphoid Rake
4100-23	Pawl, Right Hand	4100P-05	Ratchet Cover Plate Screw
4100-24	Pawl, Left Hand	4100P-08	Screw
4100-25	Ratchet Lever	4100P-11	Cable Access Plate Screw
4100-27	Gear Kit	4100P-12	Large Allen Wrench
4100-28C	Square Tip Double Bend Bottom Post	4100P-13	Small Allen Wrench
4100-28CS	Spline Tip Double Bend Bottom Post	4100P-16	Roll Pin
4100-32A	Square Top Post, Standard Length	4100P-18	Roll Pin
4100-32AL	Square Top Post, Extended Length	4100P-25	Spring
4100-32ALS	Spline Top Post, Extended Length	4100P-26	Spring
4100-32AS	Spline Top Post, Standard Length	4110	Round Base Combination Clamp
4100-32AST	Spline Tilting Top Post	4110-03A	Cross Handle Assembly
4100-32AT	Square Tilting Top Post	4110-04A	Wing Handle Assembly
4100-32C	Square Tip Bottom Post with Collar (Round Base)	4110-17	Lower Jaw Assembly
4100-32CS	Spline Tip Bottom Post with Collar (Square Base)	4110-18-03	Round Base Upper Jaw Assembly
4100-32ST-06A	Knob Assembly	4110-18-03S	Square Base Upper Jaw Assembly
4100-32ST-10	Spline Tilting Post Sleeve Assembly	4110-24SP	Upper Jaw Assembly
4100-32ST-11	Spline Off Set Post Assembly	4110-24SQ	Upper Jaw Assembly
4100-32ST-12	Tilting Square Bar Assembly	4110-25	Lower Jaw Assembly
4100-32T-10	Square Tilting Post Sleeve Assembly	4110P-05	Spring
4100-32T-11	Square Off Set Post Assembly	4110P-06	Roll Pin
4100-33	Rake Clamp Screw	4110P-11	Roll Pin
4100-33P	Rake Clamp Screw Pack	4110P-12	Handle Retaining Screw
4100-39R	Riser Extender Bar with Cross Square	4110P-13	Screw
4100-39S	Extender Bar with Cross Square	4110S	Square Base Combination Clamp
4100-39TS	Rotating Extender Bar with Cross Square	4150	Square Tip, Double Bend Post/Clamp, Scrub Applied
4100-39TS-07A	Knob Assembly	4150S	Spline Tip, Double Bend Post/Clamp, Scrub Applied
4100-39TS-10	Rotating Extender Bar Adapter Assembly	4160	Square Tip, Double Bend Post/Clamp, Circulator Applied
4100-39TS-11	Rotating Extender Bar Square Assembly	4160-06	Lower Jaw Assembly
4100-40A	Square Short Top Post	4160-07SP	Upper Jaw Assembly
4100-40AS	Spline Short Top Post	4160-07SQ	Upper Jaw Assembly
4100-40B	Right Angle Extender Bar with Lateral Guide	4160-09A	Handle Assembly
4100-50	Gearbox Assembly	4160S	Spline Tip, Double Bend Post/Clamp, Circulator Applied
4100-51	Spool Cap Assembly		