Hana®

Orthopedic Surgery Table

Owner's Manual

Available Translations:

- English (en-US)
- Spanish (es-ES)
- French (fr-FR)
- German (de-DE)
- Italian (it-IT)
- Portuguese (pt-BR)
- Danish (da-DK)
- Japanese (ja-JP)
- Chinese (zh-CN)
- Romanian (ro-RO)
- Swedish (sv-SE)
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- Finnish (fi-FI)
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- Multilingual (ml)

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1 Important Notices

WARNING: To ensure safe operation of the equipment, please READ THESE INSTRUCTIONS COMPLETELY and keep this manual readily available for future reference.

Carefully observe and comply with all warnings, cautions, and instructions placed on the equipment or described in this manual.

NOTE: *This device is intended for use by trained personnel only. To schedule an in-service, please contact your local Mizuho OSI sales representative, or call **1-800-777-4674** inside the USA or **+1-510-429-1500** outside the USA.*

NOTE: *The application techniques outlined in these instructions are the manufacturer's suggested techniques. The final disposition of each patient's care as related to the use of this equipment rests with the attending surgeon.*

The following symbols are used in this manual and on the equipment:

Table 1: Symbols and their Meanings

Symbol	Meaning
EC REP 5.1.2 Authorized representative in the European Community [1]	This symbol indicates an authorized representative in the European Community.
CH REP CH-REP Symbol [6]	This symbol indicates the authorized representative in Switzerland.
CE CE marking [7]	This symbol indicates the product is in conformity with European Community harmonization legislation.
UK CA UKCA marking [8]	This symbol indicates the product is in conformity with the requirements of the relevant Great Britain (UK) legislation.
MD 5.7.7 Medical Device [1]	This symbol indicates a medical device.

Table 1: Symbols and their Meanings ***(Continued)***

Symbol	Meaning
 5840 Type B applied part [4]	This symbol indicates this equipment is an applied part TYPE B in accordance with IEC 60601-1 and is generally suitable for applications involving external or internal contact with the patient, excluding the heart. The patient circuit is connected to protective earth and this equipment should be connected only to hospital grade AC outlets with a protective earth ground.
 3082 Manufacturer [2]	This symbol indicates the Manufacturer of the device.
 2497 Date of manufacture [2]	This symbol indicates the date of manufacture.
NOTE:	This symbol indicates a comment or instruction of importance.
 0434B Caution [2]	This CAUTION symbol indicates a potentially hazardous situation, which if not avoided could result in minor or moderate injury.
 W001 General warning sign [3]	This WARNING symbol indicates a potentially hazardous situation, which if not avoided could result in serious injury or death.
 WEEE symbol [5]	This symbol indicates proper disposal instructions. See Section 1.2 for more information.
 2493 Catalog number [2]	This symbol indicates a product number.
 2498 Serial number [2]	This symbol indicates a serial number.
	This symbol indicates contents or quantity.
 1641 Consult instructions for use [2]	This symbol indicates that you need to consult instructions for use.

Table 1: Symbols and their Meanings *(Continued)*

Symbol	Meaning
 M002 Refer to instruction manual/ booklet [3]	This symbol indicates that you need to read the manual before use.
 5019 Protective earth; protective ground [4]	This symbol indicates an external ground stud that is required for use when the AC power cable is not connected to a protective earth ground hospital grade AC outlet in your operating room or facility.
 5021 Equipotentiality [4]	This symbol indicates an external ground stud that is required to be connected to earth ground (via equipotential connector/busbar) when the AC power cable is not connected to a protective earth ground hospital grade AC outlet in your operating room or facility.
	This symbol indicates a potential Pinch Point hazard.
 5638 Emergency stop [4]	This symbol indicates the Emergency Stop.
	This symbol indicates the Red Zone. Use a Traction Hook Extender as needed to keep the Traction Brake Cover from entering this zone. See Section 6.5 for more information.
	This symbol indicates rotation in two directions.
	This symbol indicates rotation in one direction.
 5032 Alternating current [4]	This symbol indicates Alternating Current (AC) Power. See Section 3.2.2 for more information.
 5031 Direct current [4]	This symbol indicates Direct Current (DC) Power.
	This symbol indicates a Circuit Breaker.
	This symbol identifies the Battery Charge LED. When lit, the battery requires immediate charging. See Section 3.2.2 and Section 11.6 for more information.

Table 1: Symbols and their Meanings *(Continued)*

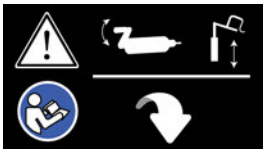
Symbol	Meaning
	This symbol identifies the Battery OK LED. When lit, the battery is charged and ready for use. See Section 3.2.2 for more information.
 5001A Battery, general [4]	This symbol indicates Battery Power.
	This symbol indicates Power Connected.
 5569 Locking, general [4]	This symbol indicates Lock.
 5570 Unlocking, general [4]	This symbol indicates Unlock.
	This symbol indicates rotate counterclockwise to unlock and rotate clockwise to lock.
	This symbol indicates Foot Rotation Lock. Rotate counterclockwise to unlock and rotate clockwise to lock.
	This symbol indicates the Foot Pedal for the Femur Lift Assembly.
	This symbol indicates the location of the Emergency Crank Handle for manual operation of the Femur Lift Assembly. See Section 6.9.5 for more information.
	This symbol indicates the table weight limit.
SM ■ LG □ XL □	This symbol indicates Small Size.
SM □ LG ■ XL □	This symbol indicates Large Size (regular).

Table 1: Symbols and their Meanings ***(Continued)***

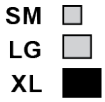
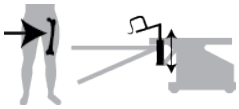
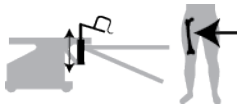
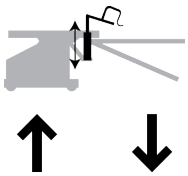
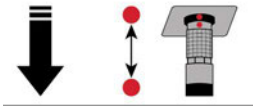
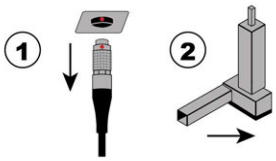
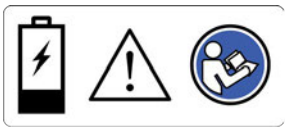
Symbol	Meaning
	This symbol indicates Extra Large Size.
	This symbol indicates the Left Traction Boot.
	This symbol indicates the Right Traction Boot.
	This symbol indicates the Left Femur Lift.
	This symbol indicates the Right Femur Lift.
	This symbol indicates the Left Femur Lift.
	This symbol indicates the Right Femur Lift.
	This symbol indicates the Foot Pedal moves the Femur Lift up and down. See Section 6.9 for more information.
	This symbol indicates Gross Traction knob. See Section 6.1.2 for more information.
	This symbol indicates the proper method for connecting the Femur Lift cable. Align the red dots on the receptacle and the plug, then insert the plug. See Section 6.9.2 for more information.
	This symbol indicates the proper method for disconnecting the Femur Lift. First disconnect the plug from the receptacle, then remove the Femur Lift. See Section 6.9.3 for more information.

Table 1: Symbols and their Meanings ***(Continued)***

Symbol	Meaning
	This symbol indicates that, upon uncrating, the Hana® Table must be charged for three (3) hours before use. If running on DC power, the table must be fully charged and a protective earth ground attached to the table's external ground plug must be used.
	This symbol indicates Hand Pendant connection port. See Section 3.2 for more information.
	This symbol indicates that the table shall not be used as a gurney to transport patients.
1. Standard symbol from "ANSI/AAMI/ISO 15223-1 Medical devices -- Symbols to be used with information to be supplied by the manufacturer -- Part 1: General requirements." 2. Standard symbol from "ISO 7000 Graphical symbols for use on equipment." 3. Standard symbol from "ISO 7010 Graphical symbols -- Safety colours and safety signs -- Registered safety signs." 4. Standard symbol from "IEC 60417 Graphical Symbols for use with Equipment." 5. Symbol from "Directive 2012/19/EU." 6. Symbol from "Medical Devices Ordinance of 1 July 2020; SR 812.213." 7. Symbol from Regulation (EC) No 765/2008. 8. Symbol from "The Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019, Schedule 33."	

WARNING: Proper preoperative and intra-operative procedures must be followed to prevent venous stasis and pooling, pressure sore development, neuropathy, improper electro-surgical tissue grounding, hypertension and hypothermia.

WARNING: Medical electrical equipment needs special precautions regarding Electro-magnetic Compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in this manual (see Section 15).

WARNING: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

WARNING: The use of accessories, transducers, and cables other than those specified or provided by Mizuho OSI could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Hana® table, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

WARNING: This symbol  **indicates an external ground stud that is required for use when the AC power cable is not connected to a protective earth ground hospital grade AC outlet in your operating room or facility. To protect the patient, hospital staff and the table from possible electrical hazards, an external ground wire connection is required between the external ground stud and protective earth ground when the table is in use under battery power or not connected to a protective earth ground.**

WARNING: Use of the Hana® Table with patients weighing more than 450 lbs (204 kg) could result in damage to the table, possible injury to the patient, or harm to the healthcare workers.

WARNING: Before and after each use, inspect the table, components, and accessories for possible damage, excessive wear, or non-functioning parts. Carefully inspect all critical accessible areas, joints, and all moving parts for possible damage or non-function. Damaged or defective parts should not be used or processed. Contact Mizuho OSI Service for repair or replacement (see Section 14).

WARNING: The Hana® Table should not be operated in an oxygen-rich environment, or in the presence of flammable anesthetics, volatile substances, or other explosive gases, liquids, or atmospheres.

WARNING: If high-frequency surgical equipment, cardiac defibrillators, or cardiac defibrillator monitors are to be used with the Hana® Table, refer to the instructions for use provided by the manufacturer of those devices.

WARNING: The Hana® Table should not be transported with a patient on it. The table can tip over and cause injury to the patient.

 **WARNING: Always verify that the Spar Lock Handle is in the locked position before transferring a patient to the Hana® Table or securing a patient to the Hana® Lift-Assisted Spars. Failure to lock the Spar Lock Handle can cause the Lift-Assisted Spar to drop when not held in place, which could result in damage to the table, possible injury to the patient, or harm to the healthcare professionals.**

 **WARNING: Use of components not manufactured by Mizuho OSI may result in harm to the patient, the table top, the device, or the healthcare professional.**

 **WARNING: Tipping Hazard – Exercise caution when transporting device over uneven surfaces.**

 **WARNING: The Hana® Table should not be used for patient transport.**

 **WARNING: The Hana® Table is to be used by personnel that receive training from either Mizuho OSI or from someone qualified by the medical facility to provide this training. Failure to comply with this requirement may result in damage to the device, possible injury to the patient, or harm to the healthcare professionals.**

 **WARNING: Do not perform any service or maintenance work on the device while it is in use with a patient. Servicing the device while in use may cause injury to the patient.**

 **CAUTION: When using the Hana® Left and Right Radiolucent Lift-Assisted Spars, always install disposable Leg Spar Ball Joint Protectors. Failure to do so may damage the ball joints on the Spars and will void the warranty on the Spars. (See Section 7.3 for ordering information.)**

 **CAUTION: When using the Traction Boots, ensure that the proper size is selected for the patient's foot. Using an improperly sized boot and/or excessive over-tightening of the buckle can cause the boot straps to fail. (See Section 6.4 for sizing information.)**

 **CAUTION: If the integrity of the AC power source is in doubt, the equipment shall be operated from its internal electrical power source (battery).**

 **CAUTION: As outlined in the AORN Recommended Practices for Positioning a Patient in the Perioperative Setting, following the positioning of the patient, an assessment of the patient's alignment, tissue perfusion, and skin integrity should be completed. All contact points of the patient with the table pads should be monitored during the procedure.**

CAUTION: No modification of the Hana® Table or its components is allowed. Any modification to the equipment may result in damage to the table, possible injury to the patient, or harm to the healthcare workers.

WARNING: Use of components not manufactured or recommended by Mizuho OSI may result in harm to the patient, the device, or the healthcare professionals.

NOTE: *The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigating measures, such as relocating or re-orienting the equipment.*

NOTE: *(European Union) Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.*

1.1 Trademarks and Patents

GentleTouch®, Orange Aid®, NervPro®, Knee Flexion System®, Hana®, Hana SSXT®, and ProFx® are registered trademarks of Mizuho OSI.

Halftrack™ and Contourethane™ are trademarks of Mizuho OSI.

ProneView® is a registered trademark of Dupaco, Inc.

Tempur-Pedic® and TEMPUR® are registered trademarks of Tempur-Pedic North America, Inc.

Velcro® is a registered trademark of Velcro Industries.

Product protected by:

- US Patent Numbers: US7824353 B2, US9119610 B2, US11622829 B2, US11690749 B2
- Australian Patent Numbers: AU2005282927, AU2006280003
- Canadian Patent Number: CA 2578462
- European Patent Number: EP 1799161
- Japanese Patent Numbers: JP 4864893 B, JP 5186369 B
- Korean Patent Numbers: KR 10-1247544, KR 10-1336214
- Chinese Patent Number: CN10129982B

Other Patents Pending

1.2 Disposal of Electrical Components



In accordance with the European Union Waste Electrical and Electronic Equipment (WEEE) Directive, all electrical components, batteries, and carbon composite components must be disposed of in accordance with local regulations or returned to Mizuho OSI for proper disposal. Please contact Mizuho OSI Service at **1-800-777-4674** inside the USA or **+1-510-429-1500** outside the USA for further information regarding this requirement.

2 Introduction

2.1 General Description

The Mizuho OSI Hana® Orthopedic Surgery Table is designed to safely hold in proper position a patient undergoing orthopedic surgical procedures including the Anterior Approach Total Hip Arthroplasty, Hip Arthroscopy, IM Nailing of the Femur or Tibia, and Hip Pinning.

It is a stand-alone, single-pedestal, AC-powered or internal battery powered table designed to position a patient in a supine or lateral position during surgical procedures. The Hana® Table is equipped with two Radiolucent Lift-Assisted Spars (left and right) that allow for traction, abduction, adduction, and raising or lowering of the leg. The lift-assist feature supports the weight of the leg spars, making them easier to manipulate during surgery.

The table has a 2" (5 cm) Mizuho OSI Tempur-Pedic® pad. The material used in the manufacture of the pads has viscoelastic properties and is a temperature sensitive material, becoming softer where the patient's body is making the most contact with the surface and remaining firm in areas where less body contact is being made. Peak pressures are reduced over the entire surface area. The pad is radiolucent and is not made with natural rubber latex. The benefits of using Mizuho OSI Tempur-Pedic® pads are improved pressure redistribution, reduced shear forces, and enhanced patient comfort.

The Hana® Table has three primary electrically powered functions: Height (up/down), Lateral Tilt (left/right), and Trendelenburg/Reverse Trendelenburg. Electromechanical actuator motors perform these motions that are controlled by means of a Hand Pendant or onboard Auxiliary Control Panel with functions clearly labeled. The table is also equipped with powered left and right Femur Lifts that are controlled by a Foot Pedal providing the surgeon the ability to raise and lower the Femoral Hook during the Anterior Approach Total Hip Arthroplasty.

Four (4) independent, manual Caster Floor Locks stabilize the table in the operating location.



Figure 1: Mizuho OSI Hana® Orthopedic Surgery Table, Right-Side View

2.2 Intended Use

The Mizuho OSI Hana® Orthopedic Surgery Table is intended for and suitable for use in the hospital operating room, sub-acute surgical environments, and hospital trauma centers. The Mizuho OSI Hana® Orthopedic Surgery Table is designed for adult and pediatric patients with body weight up to 450 lbs (204 kg), needing hip or knee orthopedic surgical procedure as prescribed by a trained physician.

This device is intended for and designed to provide patient comfort and enhanced patient positioning for surgery.

Due to the design of the tabletop, the operating table is suitable for Hip and Knee Orthopedic surgical disciplines, as described in Section 8.

Movements are initiated manually; they are executed manually or electro-mechanically. Side rails are provided for securing accessories in accordance with the manufacturer's specifications.

The radiolucent tabletop and leg spars of the Hana® Table permit intra-operative use of X-ray equipment.

2.3 User Profile

The System is suitable for use by health care professionals including, but not limited to, surgeons, radiologists, anesthesiologists, circulating nurses, surgical technicians, biomedical technicians, and radiology technicians.

2.4 Training Requirements

Before using the Hana® Table, the user must read the NW0508 Hana® Orthopedic Surgery Table Owner's Manual.

It is required that personnel using this device and related accessories receive training by either Mizuho OSI or by someone qualified by the medical facility to provide this training.

NOTE: *To schedule an in-service, please contact your domestic Mizuho OSI sales representative or call Mizuho OSI Service at 1-800-777-4674 within the USA or +1-510-429-1500 outside the USA.*



WARNING: Failure to ensure proper training prior to use of this device may cause harm to the patient, healthcare professional, or the device.

2.5 Conditions of Use

The Hana® Orthopedic Surgery Table may be used several times throughout the day and night in medical facilities; e.g. hospitals, and outpatient surgery/imaging centers. The Hana® Orthopedic Surgery Table will be used in an operating room or other treatment room, and may be rolled between rooms.

2.6 Product Lifetime

The product design life is ten (10) years. At the time of delivery, your product fulfills existing regulations and standards. However, despite proper use, routine inspection, prescribed service, maintenance, and repairs, the product is subject to aging and wear. The product's functionality depends on many factors, including but not limited to the frequency of use, maintenance and servicing, and how it's used. Therefore, Mizuho OSI recommends that the table undergo authorized preventative maintenance and repair throughout its lifetime. Contact Mizuho OSI Service for product end-of-life disposal instructions (see Section 14). For product warranty information, see Section 14.5.

NOTE: *Expected end-of-life for Tempur-Pedic® Medical Pads is three (3) years or sooner, based on use and care.*

NOTE: *For optimum performance, ensure that Preventive Maintenance is performed regularly, damaged and worn out parts are replaced, and batteries are replaced as necessary.*

2.7 Specifications

The Hana® Orthopedic Surgery Table has the following specifications:

- The table is designed to hold a maximum patient load of 450 pounds (204 kg) in a procedural position at any point within its physical range.
- The table has a height range of 30 to 50 inches (76 cm – 127 cm).
- The width of the tabletop is 21.5 inches (55 cm) and narrows to 10 inches (25 cm) toward the Foot-End and 5 inches (13 cm) at the Perineal Post.
- The length of the tabletop is ~ 47.75 inches (~ 121.3 cm). The overall length with leg spars attached is ~ 112 inches (~ 284.5 cm).
- The lateral tilt range is ±12 degrees and the Trendelenburg/Reverse Trendelenburg range is ±12 degrees.
- The Lift-Assisted Spars rotate on a spherical joint and are capable of positioning the patient's leg in up to 20 degrees of adduction, 45 degrees of abduction, raising the leg to 28 degrees above level and lowering the leg to 35 degrees below level. The Spars have a built-in lift-assist feature that supports the weight of the Spar from the bottom of travel to 10 degrees above horizontal, making them easier to manipulate during surgery. The Spar can be lifted up an additional 18 degrees above horizontal without lift assistance.
- The tabletop has a radiolucent equivalency of less than 1 millimeter of aluminum.
- The input power requirement is 100V, 4A, 50/60Hz; 120V, 4A, 60Hz; or 220-230V, 2.5A, 50/60Hz; as indicated on the manufacturer's label.
- The table may also be operated under battery power. The expected working life of a fully charged battery is approximately 12 hours at a 10% duty cycle.
- The table is IPX4 rated per IEC 60529.
- The Foot Pedal is rated IP68.
- Operating Environment is 68 °F (20 °C), relative humidity 50%, atmospheric pressure 75-105 kPa.
- Class 1 Equipment; Type B per IEC 60601-1.
- The table is not suitable for use with flammable anesthetic gas mixtures.

2.8 Shipping and Storage

The Hana® Orthopedic Surgery Table must be shipped using the appropriate shipping crate. During shipment the table is to be kept in an environment with the following limits:

- Ambient temperature –4 to +122 °F (–20 to 50 °C)
- Relative humidity from 10% to 100%, including condensation
- Atmospheric pressure from 50 to 110 kPa

When not in use, the Hana® Table and all components and accessories should be stored with care to prevent damage. They should be stored in a clean, dry environment with temperature between 32 °F (0 °C) and 120 °F (49 °C). Keep stored instruments on carts or shelving in a storage area free of dust, insects, chemical vapors, and extreme changes in temperature and humidity. The table cover provided serves as a dust cover and should be utilized.

Always store the Lift-Assisted Spars with the Spar Lock Handle in the locked position to ensure the Spar maintains a level position for future installation. If not locked, the proximal end of the spar will gradually raise until maximum angle is reached, making it more difficult to install the Spar on the table in the future.

To ensure the battery is always fully charged and ready for use, the table should be stored with the Power Cord inserted on the Breaker/Power Panel and attached to an appropriate, Hospital-grade AC Outlet (100V, 120V, or 220-230V) and the Power Switch turned On.

2.9 Glossary of Terms

Table 2: Term Definitions

Term	Description
Foot-End of Table	The end of the table where the leg spar is controlled.
Head-End of the Table	The end of the table where the Power Cord, On/Off Power Switch, and Auxiliary Control Panel are located; also referred to as the pedestal end.
Hospital Grade AC Outlet	Specially designated outlets (receptacles) that include additional grounding reliability, assembly integrity, strength and durability. In the US, Hospital Grade is indicated by a green colored dot on the face of the outlet.
Left Side of the Table	The side to the patient's left in the supine position. This corresponds to the Hand Pendant or Control Pad button labeled .
Lower the Table	Lowering the height of the tabletop. This corresponds to the Hand Pendant or Control Pad button labeled .
Pedestal	Main column structure that supports the tabletop.
Raise the Table	Raising the height of the tabletop. This corresponds to the Hand Pendant or Control Pad button labeled .
Return to Level, or Level the Table	Returning the tabletop to a state of level regardless of its position. This corresponds to the Hand Pendant or Control Pad button labeled . Holding this button longer than approximately three seconds will also lower the tabletop to its lowest position after the tabletop is leveled.
Reverse Trendelenburg	Raising the height of the Head-End of the tabletop. This corresponds to the Hand Pendant or Control Pad button labeled .
Right Side of the Table	The side to the patient's right in the supine position. This corresponds to the Hand Pendant or Control Pad button labeled .
Trendelenburg	Lowering the height of the Head-End of the tabletop. This corresponds to the Hand Pendant or Control Pad button labeled .

3 Basic Operation

3.1 Table Orientation

The Hana® Orthopedic Surgery Table is described as having a Head-End and a Foot-End. The Control Panel, On/Off Power Switch, and the Power Cord Receptacle are located at the Head-End of the table.



Figure 2: Right Side View of Hana® Table with Patient in Supine Position

3.2 Motion Control Box

The Motion Control Box is located at the Head-End of the table. It includes the Control Panel, Breaker/ Power Panel, and receptacle for the Hana® Hand Pendant (Figure 3).

The Breaker/Power Panel contains the On/Off Power Switch, Power Cord Receptacle, and Component Circuit Breakers.

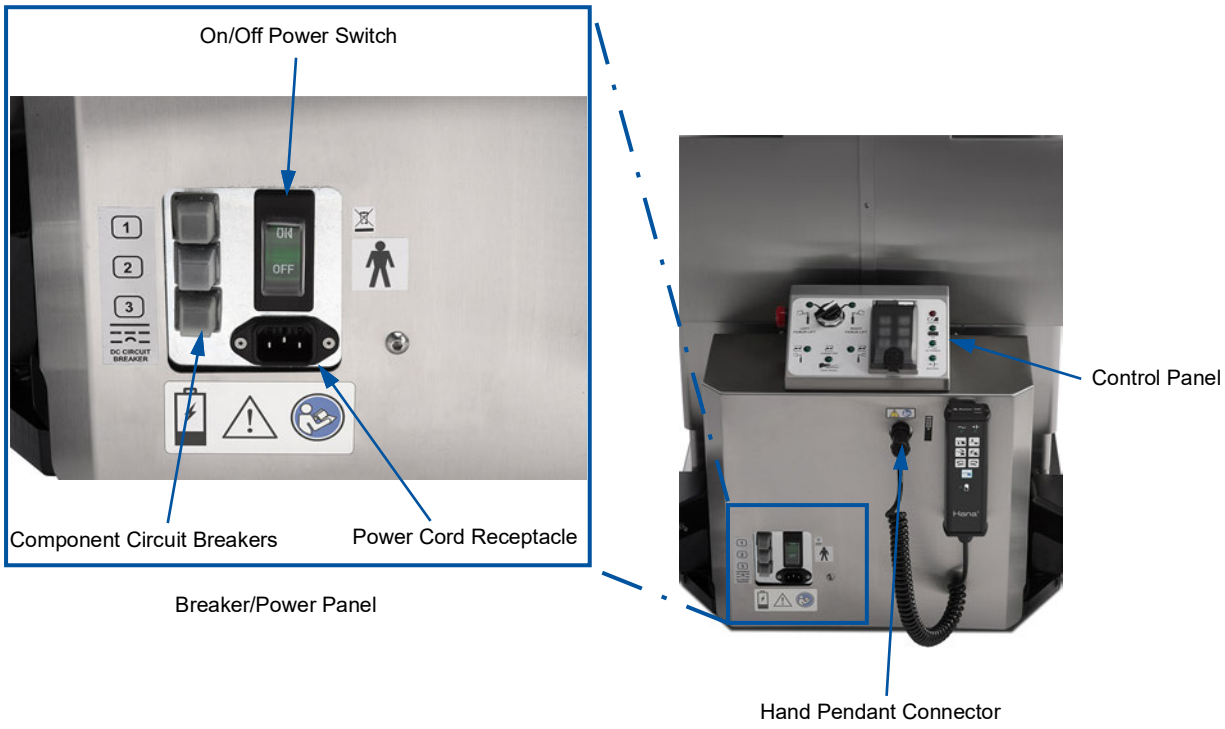


Figure 3: Head-End Motion Control Box

3.2.1 Breaker/Power Panel

This panel contains the On/Off Power Switch, the Component Circuit Breakers, and the Power Cord Receptacle.

Plug the Power Cord into the Power Cord Receptacle on the Motion Control Box located at the Head-End of the table and into a properly grounded receptacle. Turn on the On/Off Power Switch. The green light in the Power Switch illuminates, indicating that AC power is applied to the table. This switch functions as a combination On/Off Power Switch, Circuit Breaker, and pilot light.

NOTE: *A startup self-diagnostic routine is initiated each time the table is plugged in and turned on. Wait 20 seconds before operating controls on the table after powering the table on.*

NOTE: *Refer to the manufacturer's label on the underside of the tabletop for input voltage requirements (Figure 10).*

3.2.2 Control Panel

The Control Panel is located on the top of the Motion Control Box. It contains the Femur Lift Controls, the Control Pad, and the Power Indicators.



Figure 4: Control Panel

3.2.2.1 Femur Lift Controls

The Femur Lift Controls consist of a selection switch and three status indicators. Use the Selection Switch to choose whether the Foot Pedal will operate the Left or the Right Femur Lift. The LED indicators below the Selection Switch will illuminate when the Left Femur Lift, Right Femur Lift, and/or Foot Pedal are properly connected.

Table 3: Femur Lift Controls

Label	Description
 Select Left Femur Lift	Turn the Selection Switch to the Left Femur Lift to allow the Foot Pedal to operate the Left Femur Lift.
 Select Right Femur Lift	Turn the Selection Switch to the Right Femur Lift to allow the Foot Pedal to operate the Right Femur Lift.
 Left Femur Lift Connected LED	When this LED is illuminated, the Left Femur Lift is properly connected.
 Right Femur Lift Connected LED	When this LED is illuminated, the Right Femur Lift is properly connected.
 Foot Pedal Connected LED	When this LED is illuminated, the Foot Pedal is properly connected.

3.2.2.2 Control Pad

The Control Pad and the Hana® Hand Pendant control the table's up/down movement, lateral tilt, and Trendelenburg/Reverse Trendelenburg.

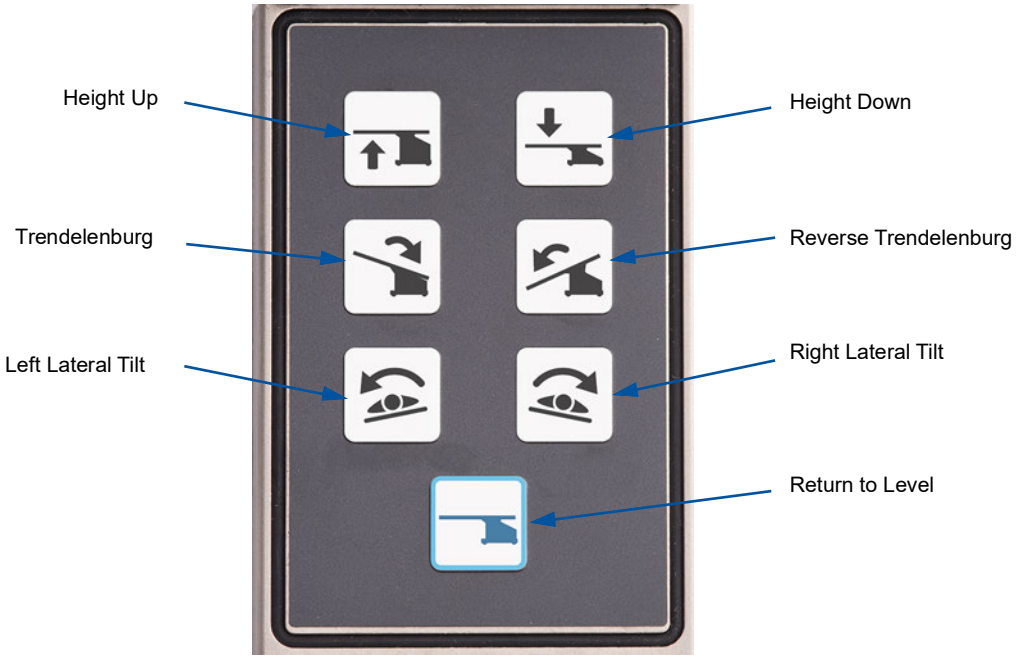


Figure 5: Control Pad

For a detailed description of the functions on the Control Pad and the Hand Pendant, see Section 3.3.

3.2.2.3 Power Indicators

These LED indicators notify the user of the following conditions when illuminated (Figure 4):

Table 4: Power LED Indicators

Symbol	Description
Battery Charge LED	When this LED is illuminated, battery power is low or no battery is installed. See Section 11.6 for information on charging the battery.
Battery OK LED	When this LED is illuminated, the battery has sufficient power to operate the table.
AC Power LED	When this LED is illuminated, the table is running on AC power (100V, 120V, or 220-230V) from the wall receptacle.
Battery Power LED	When this LED is illuminated, the table is running on internal battery power.

3.3 Hana® Hand Pendant/Control Pad Operation

The Hana® Table is controlled using either the Hana® Hand Pendant or the Control Pad on the Control Panel. The Hana® Hand Pendant is plugged into the receptacle on the Motion Control Box (Figure 3). When installing the Hand Pendant, turn the Power Switch off, then plug in the Hand Pendant connector and rotate the locking collar clockwise until the collar is hand tight. To operate any of the desired functions, turn the Power Switch on and wait for 20 seconds for the table to power up and run its self-diagnostics.

To operate any of the desired functions, press and hold the appropriate button on the Hana® Hand Pendant or Control Pad until the desired position is achieved. See Figure 6 and the tables that follow for more information on the Hand Pendant functions and Indicator Lights.

CAUTION: Ensure that the leg spars have sufficient clearance before adjusting table position.



Figure 6: Hana® Hand Pendant

Table 5: Hana® Hand Pendant/Control Pad Functions

Function	Description
 Height Up	Press and hold the **Height Up** button to raise the height of the tabletop until the desired height is achieved.
 Height Down	Press and hold the **Height Down** button to lower the height of the tabletop until the desired height is achieved.
 Trendelenburg	Press and hold the **Trendelenburg** button to lower the height of the Head-End of the tabletop below the height of the Foot-End of the tabletop until the desired position is achieved.
 Reverse Trendelenburg	Press and hold the **Reverse Trendelenburg** button to raise the height of the Head-End of the tabletop above the height of the Foot-End of the tabletop until the desired position is achieved.
 Left Lateral Tilt	Press and hold the **Left Lateral Tilt** button to tilt the tabletop to the left until the desired position is achieved.
 Right Lateral Tilt	Press and hold the **Right Lateral Tilt** button to tilt the tabletop to the right until the desired position is achieved.
 Return to Level	Press and hold the **Return to Level** button to return the tabletop to a level position. The tabletop will move in the following sequence: **1.** The tabletop will level side to side (lateral). **2.** The tabletop will level front to back (Trendelenburg). **3.** The tabletop will re-level side to side (lateral). **4.** After a delay of three seconds, the tabletop will move to its lowest height. To achieve this final position, the **Return to Level** button must be held continuously until table motion stops. **NOTE:** *The controller considers the table to be level if it is within ±2° of 0° level. If the **Return to Level** button is pressed while the tabletop is within this range, it will not move. If the table must be adjusted to a position closer to 0°, press the appropriate button on the Hana® Hand Pendant until the desired position is achieved.*

Table 6: Hana® Hand Pendant Indicator Lights

Indicator Light	Description
AC Power	This LED illuminates when the table is operating on AC power.
Battery Power	This LED illuminates when the table is operating on battery power.
Battery Status	When this LED illuminates green, the battery is charged and the table is ready to use. When this LED illuminates red, the battery must be charged. See Section 11.6 for more information.

NOTE: *For information on indicator lights present on the Control Panel, see Section 3.2.2.3.*

3.4 Emergency Stop Button

To immediately interrupt power to the Hana® Table, press the Emergency Stop button. To reset the system, turn the Emergency Stop button in the direction of the arrows until it returns to its original position (Figure 7).

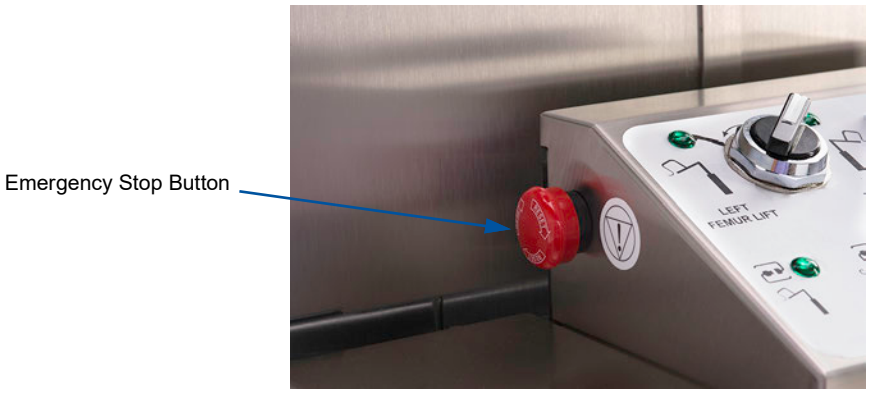


Figure 7: Emergency Stop Button

3.5 Casters

Prior to transferring a patient onto the table and at all times when the table is in use, ensure that all four (4) independent, manual casters are in the locked position. To engage the lock, step on the foot pad lever and press to the floor. To unlock, slide foot under the foot pad lever and lift to disengage the lock. The casters may also be unlocked by pressing the foot pad plate marked with the unlock symbol (Figure 8 and Figure 9).

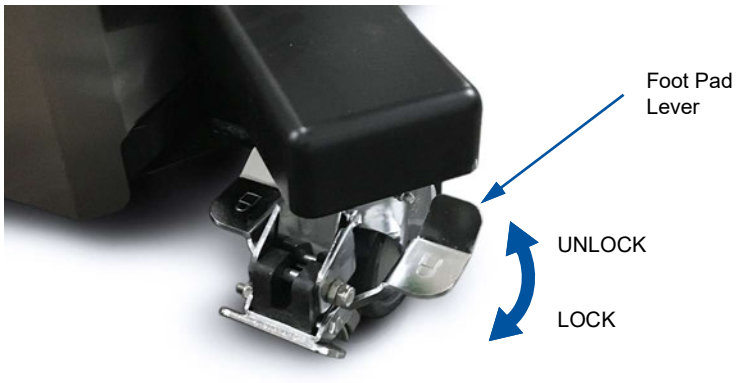


Figure 8: Caster in the Unlocked Position

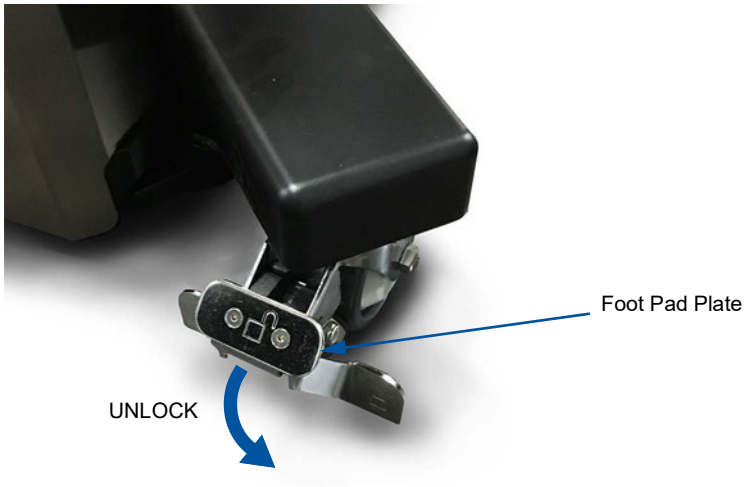


Figure 9: Caster in the Locked Position

NOTE: *The casters and locks installed on your Hana® Table may look different than those depicted above but they will operate in the same manner as described.*

3.6 Moving the Table

CAUTION: The casters are designed to roll smoothly on level surfaces. If it is necessary to negotiate a high threshold or other uneven surface, a slightly higher speed and/or more people may be required. Take care to control the table's motion.

After all four (4) casters are unlocked the table can be rolled for relocation. It is best that the table be rolled with the Foot-End pointed in the direction of travel, the table lowered to its minimum height, and without the Lift-Assisted Spars attached to the table. The Hana® Table is heavy and a minimum of two people should move it, one at the Head-End, and one at the Foot-End. Care should be taken to control the table when rolling.

WARNING: If the table is allowed to roll too fast, it may be difficult to stop or turn. Impact of the tabletop with a stationary object may cause serious damage to the tabletop. If an impact occurs, the table must be visually inspected for visible damage, and a Function Check must be performed (see Section 5). If damage is discovered or the table does not pass the Function Check, contact Mizuho OSI Service (see Section 14).

WARNING: The Hana® Table should not be used for patient transport.

3.7 Model Number and Serial Number

The manufacturer's label is located here:



Figure 10: Manufacturer's Label on Underside of Tabletop

This label includes the REF model number, SN serial number, and address and contact information for the manufacturer, Mizuho OSI.

It also includes the input power requirement for the Hana® Table Models 6875, 6875I, and 6875J:

- 6875J: 100V, 50/60Hz, 4A
- 6875: 120V, 60Hz, 4A
- 6875I: 220-230V, 50/60Hz, 2.5A

NOTE: *Additional product information may also be found on the manufacturer's label.*

4 Inspection

4.1 Acceptance

Upon receipt of your Hana® Orthopedic Surgery Table, remove it from the shipping crate by following the provided instructions. Remove any protective wrapping or packaging. Visually inspect all surfaces for freight damage. Check each caster for proper rolling operation.

NOTE: *Any freight damage must be reported to the freight carrier immediately upon delivery. It is the responsibility of the recipient to make freight damage claims.*

- Read the manufacturer's label found on the underside of the tabletop to confirm the serial number and the input power requirements.
- Plug the Power Cord into an appropriate AC receptacle and into the Power Cord Receptacle (located on table-base panel). Power on the table to charge the batteries for at least three (3) hours.
- Place the table in an area with at least four (4) feet of clearance on all sides.
- Perform a Function Check, as described in Section 5.

4.2 General Inspection

Before use, inspect the device for possible damage, excessive wear, or non-functioning parts. Visually inspect all accessible areas, electrical cords, and all movable parts for possible damage that may adversely affect the proper operation of the Hana® Orthopedic Surgery Table. Damaged or defective products should not be used or processed. Contact Mizuho OSI Service for repair or replacement of parts (see Section 10).

4.3 Pre-Procedure/Post-Procedure

- Inspect and test the table as described in Section 5.
- Inspect pad material for wear or damage.
- Thoroughly clean the table as described in Section 10. Pay special attention to the cleanliness of the controls as excessive soil can affect function.
- Inspect the Power Cord for cuts in the insulation or damage to the connector.
- On a smooth surface with the Caster Locks engaged, push the table. The table should not move.

4.4 Preventative Maintenance

A Preventative Maintenance (PM) check on this product is required at least once every year (Section 10.3).

To obtain the PM checklist, call Mizuho OSI Service (see Section 14). PM checks may only be performed by trained service personnel.

5 Function Check

Perform all steps in this procedure before using the table. For a complete definition of terms used in this procedure, please refer to Section 2.9.

1. Turn the Power Switch off. Plug the Hand Pendant connector into the Hand Pendant Receptacle on the Motion Control Box.
2. If the table is to be used under battery power, turn the Power Switch on and wait for 20 seconds for the table to power up and run its self diagnostics. The **Battery OK** light on the Control Panel should illuminate.

 **WARNING:**  **This symbol indicates an external ground stud that is required for use when the AC power cable is not connected to a protective earth ground hospital grade AC outlet in your operating room or facility. To protect the patient, hospital staff, and the table from possible electrical hazards, an external ground wire connection is required between the external ground stud and protective earth ground.**

3. Perform a battery operation check. Observe either the **Battery OK** indicator light on the Control Panel or the **Battery Status** indicator light on the Hana® Hand Pendant. A green light indicates the table is operating on battery power.
   - If the green **Battery OK** or **Battery Status** light is on, the table is ready to operate normally.
   - If the red **Battery Charge** light on the Control Panel or the red **Battery Status** light on the Hana® Hand Pendant is on, the battery must be charged prior to using the table. To charge the battery, make sure the Power Cord is plugged into a live receptacle and then turn on the Power Switch. This switch will illuminate indicating that appropriate power is applied to the table. The table must remain plugged in and switched on for a minimum of three (3) hours to ensure a battery charge sufficient to operate the table.
   - If the red **Battery Charge** or **Battery Status** light remains on after three (3) hours, continue to charge battery for up to 18 hours.
   - If the green **Battery OK** or **Battery Status** light does not illuminate after 18 hours, refer to Section 11.6.

   NOTE: *The table may be used with AC power even if the **Battery Status** light is red, indicating batteries need charging.*

4. If the table is to be used under line power, plug the Power Cord into an appropriate hospital grade AC outlet and turn on the Power Switch. Note that the Power Switch illuminates indicating the AC power is on. The **AC Power** lights on both the Control Panel and the Hana® Hand Pendant should illuminate.
5. Perform a Hana® Hand Pendant check:
   a. Press and hold the **Height Up** button. Verify that the tabletop moves up.
   b. Press and hold the **Height Down** button. Verify that the tabletop moves down.

c. Press and hold the **Reverse Trendelenburg** button. Verify that the Foot-End of the tabletop becomes lower than the Head-End.

d. Press and hold the **Trendelenburg** button. Verify that the Head-End of the tabletop becomes lower than the Foot-End.

e. Press and hold **Left Lateral Tilt** button. Verify that the tabletop tilts to the left.

f. Press and hold **Right Lateral Tilt** button. Verify that the tabletop tilts to the right.

g. Move the tabletop out of level in both Lateral Tilt and Trendelenburg by five (5) degrees and raise the table at least two (2) inches from its lowest position. Press and hold the **Return to Level** button. Verify that the tabletop first levels from side to side and front to back, and then after a 3-second delay the tabletop moves down to its lowest position.

6. Perform a Control Panel check. Repeat steps 5a through 5g using the Control Pad buttons.

7. Perform a Femur Lift Control and Foot Pedal check:

a. With Femur Lift Assembly connected to electricity, the corresponding light on the Control Panel should illuminate indicating a good connection. See Section 6.9 for proper installation of Femur Lift and Foot Pedal.

b. With Left and Right Femur Lift Assemblies and Foot Pedal connected and connectivity indicator lights green, position the Selection Switch located on the Control Panel (Figure 4) to either the Left Femur Lift or Right Femur Lift. Test the Femur Lift Foot Pedal function for operation of the indicated Femur Lift. Repeat for the opposite side.

6 Standard Component Installation and Adjustment

NOTE: *Only Mizuho OSI supplied accessories have been tested and approved for use with the Hana® Orthopedic Surgery Table. Other manufacturers' products have not been tested for proper performance when used with the table, and therefore are not endorsed for use by Mizuho OSI.*

Instructions are provided for setting up and adjusting the following components of the Hana® Orthopedic Surgery Table:

- Hana® Radiolucent Lift-Assisted Spars, Left and Right
- Patient Safety Strap
- Pelvic Pad and Perineal Post
- Traction Boots
- Traction Hook Extender
- Well Leg Support Assembly
- Hana® Arm Boards
- Jack Mount Assembly
- Femur Lift(s), Coiled Hook Motor Cable(s), and Femur Lift Foot Pedal
- Femoral Hook Support and Femoral Hook(s)

6.1 Hana® Radiolucent Lift-Assisted Spars

The Hana® Orthopedic Surgery Table is equipped with two Hana® Radiolucent Lift-Assisted Spars (left and right) that allow for traction, abduction, adduction, and raising or lowering of the leg. When attaching the Lift-Assisted Spars, ensure that the left Spar is installed on the left side of the table and the right Spar is installed on the right side of the table. The Gross Traction Knob should be positioned laterally.

6.1.1 Installing and Removing Lift-Assisted Spars

Perform the following tasks before installing or removing the Lift-Assisted Spars:

- Lock the Casters.
- Raise the height of the table to improve access to the spar mount.
- Ensure that the Spar Locking Knob is in the unlocked position by turning the knob counter-clockwise.
- Ensure the Spar Lock Handle is in the locked position.

NOTE: *Two people are required for Lift-Assisted Spar installation and removal. One person supports the distal (foot) end of the leg spar by holding the Loop Handle, while another person supports the proximal (head) end of the leg spar.*

To install the Hana® Radiolucent Lift-Assisted Spars:

1. Ensure that the Spar is held firmly at both distal and proximal ends.
2. Insert the proximal end of the left or right Lift-Assisted Spar into the appropriate Spar Mount (Figure 11).

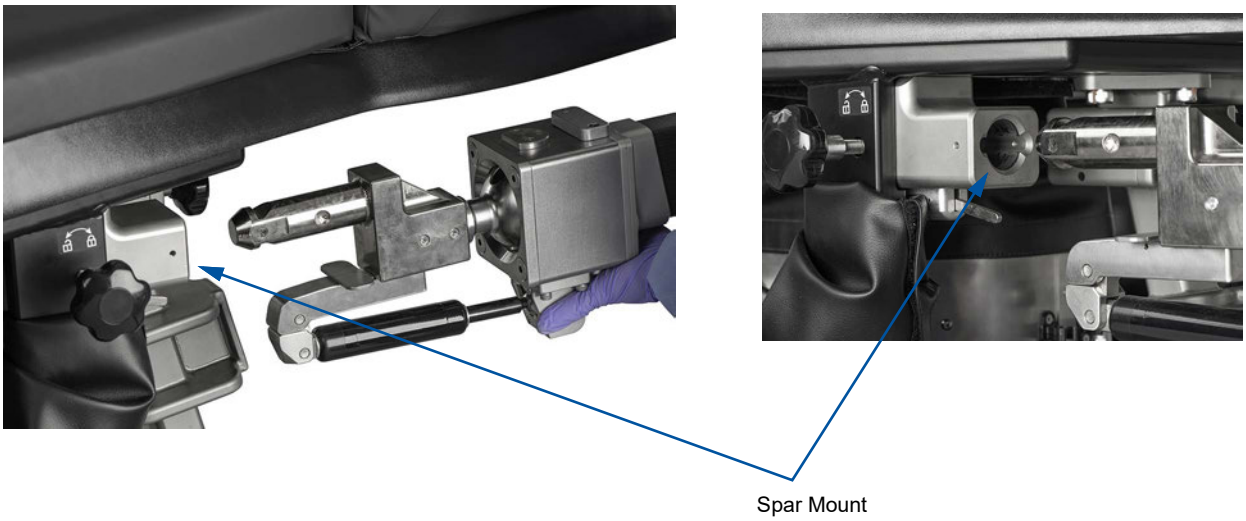


Figure 11: Mounting the Lift-Assisted Spar

3. Slide the proximal end of the Spar forward until it is fully engaged. A click should be heard when the Spar post is inserted past the safety latch.
4. Lock in place by turning the Spar Locking Knob clockwise until tight. Move the Spar up and down slightly while tightening the knob to ensure a tighter lock (Figure 12).



Figure 12: Locking and Unlocking the Lift-Assisted Spar

5. While continuing to support the distal (foot) end of the Spar by holding the Loop Handle, move the Spar Lock Handle to the unlocked position.
6. Reposition the Lift-Assisted Spar as needed and then return the Spar Lock Handle to the locked position.

WARNING: Always verify that the Spar Lock Handle is in the locked position before transferring a patient to the Hana® Table or securing a patient to the Hana® Lift-Assisted Spars. Failure to lock the Spar Lock Handle can cause the Lift-Assisted Spar to drop when not held in place, which could result in damage to the table, possible injury to the patient, or harm to the healthcare professionals.

7. Before transferring the patient to the table, install the approved Mizuho OSI Leg Spar Ball Joint Protectors (Figure 13).

CAUTION: Failure to use the disposable Leg Spar Ball Joint Protectors may damage the ball joints on the spars and will void the warranty on the spars. (See Section 7.3 for ordering information.)



Figure 13: Leg Spar Ball Joint Protectors Installed

To remove the Hana® Radiolucent Lift-Assisted Spar from the table:

1. Ensure that the Spar is held firmly at both distal and proximal ends.
2. Turn the Spar Locking Knob counterclockwise to unlock the Spar (Figure 12).
3. Lift the Spar Safety Latch to lift the Safety Latch on the table and release the Spar, allowing it to be removed (Figure 14).



Figure 14: Lifting the Spar Safety Latch

4. Slide the Spar out of the Spar Mount.

NOTE: *If there is any difficulty removing the Lift-Assisted Spar, ensure that the Spar Lock Handle is in the locked position.*

6.1.2 Adjusting the Lift-Assisted Spars

Each Lift-Assisted Spar is designed to support the patient's foot in the Traction Boot or with skeletal traction devices and allows for traction, abduction, adduction, and raising or lowering of the leg. It also provides an attachment point for the optional Knee Flexion System®. When the patient's leg is in the desired position, the Lift-Assisted Spar can be locked to maintain that position. A dial is provided to gauge the degree of internal and external rotation and should be zeroed out and locked in place utilizing the thumb screw when the foot is in the neutral position. Gross and fine traction are also controlled near the Foot-End of the Spar (Figure 15).

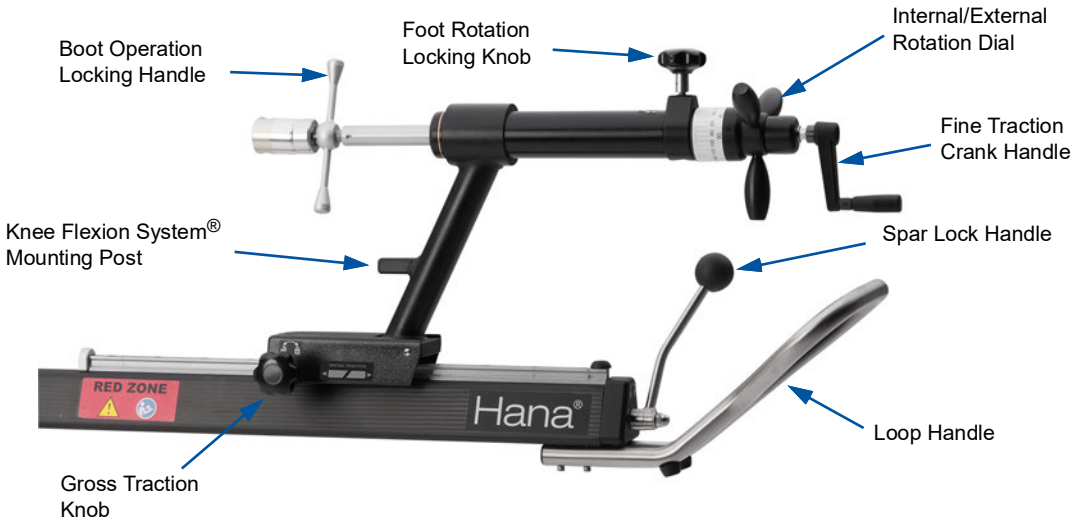


Figure 15: Hana® Radiolucent Lift-Assisted Spar Controls

The Traction Assembly in the Lift-Assisted Spars can be adjusted as follows:

- To adjust rotation of the Traction Assembly, turn the Foot Rotation Locking Knob counterclockwise to unlock, and then turn the Internal/External Rotation Dial to the desired position. When properly positioned, turn the Foot Rotation Locking Knob clockwise to lock in place (Figure 16).



Figure 16: Lift-Assisted Spar Traction Assembly Rotation Adjustment

- To make gross traction adjustments, turn the Gross Traction Knob at the base of the Traction Assembly counterclockwise to unlock, and then slide the entire assembly to the desired position. When properly positioned, turn the Gross Traction Knob clockwise to lock in place (Figure 17).



Figure 17: Lift-Assisted Spar Gross Traction Adjustment

- To make fine traction adjustments, turn the Fine Traction Crank Handle at the end of the Lift-Assisted Spar to move the Traction Assembly to the desired position. Rotate the Crank Handle clockwise to add traction. Rotate the Crank Handle counterclockwise to remove traction (Figure 18).



Figure 18: Lift-Assisted Spar Fine Traction Adjustment

During initial patient setup, the gross traction should be adjusted for the patient's height to allow operative traction to be applied and released using the Crank Handle for fine traction adjustments.

NOTE: *To allow the surgeon to pull adequate traction on the patient's legs during surgery, the Hana® Table is recommended for use on patients with a maximum inseam that does not exceed 43 inches, or 1.09 meters (Figure 19).*



Figure 19: Maximum Patient Inseam for Hana® Table

There are approximately 15 inches (38 cm) of adjustment in the fine traction screw. During initial patient setup, position this screw near the center of its travel.

To unlock the spar for abduction, adduction, or height adjustment, hold the Lift-Assisted Spar with one hand by the Loop Handle and move the Spar Lock Handle (knobbed lever) from the locked to the unlocked position (Figure 20). When you have positioned the leg where needed, lock the Spar by rotating the Spar Lock Handle clockwise to the locked position. If the Spar will not hold position, rotate the Spar Lock Handle further toward the locked position. The Spar should be held securely by the Loop Handle at all times when it is not locked.

WARNING: Adjusting Lift-Assisted Spar position can affect traction. Release the Gross Traction Knob while adjusting the Spar position.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5.*

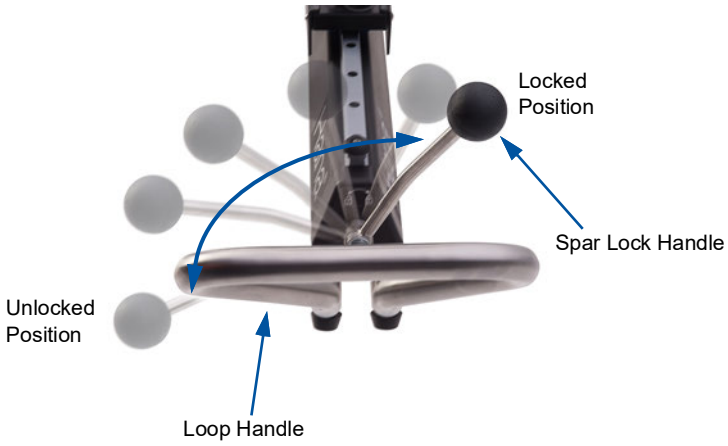


Figure 20: Spar Lock Handle and Loop Handle on Lift-Assisted Spar

WARNING: Failure to lock the Spar Lock Handle can cause the Spar to drop when not held in place, which could result in damage to the table, possible injury to the patient, or harm to the healthcare professionals.

WARNING: Lift-Assisted Spars can be damaged if allowed to contact the floor during table operation. Clear the area of any obstructions or obstacles during table movement.



Figure 21: Hana® Orthopedic Surgery Table with Lift-Assisted Spars Attached and Set Up for Anterior Approach Total Hip Replacement

6.2 Patient Safety Strap

The Patient Safety Strap is designed to secure the patient to the Hana® Table.

CAUTION: The Patient Safety Strap is intended to secure the patient to the surgical table. It should not be removed unless the patient is being transferred off the table.

To install the Patient Safety Strap:

1. Slide the Patient Safety Strap around the Foot-End of the Hana® Table (Figure 22).



Figure 22: Patient Safety Strap Positioned on Hana® Table

2. Once the patient is transferred to the table, buckle the Patient Safety Strap around the patient at waist level and pull strap through the buckle until patient is secured firmly to the Hana® Table (Figure 23).



Figure 23: Patient Secured to Table with Patient Safety Strap

CAUTION: The Patient Safety Strap is intended to secure the patient to the surgical table. It should not obstruct or constrict the patient's airway during use.

6.3 Pelvic Pad and Perineal Post

The Pelvic Pad and Perineal Post are used when the patient will be in the supine position on the Hana® Table. The Pelvic Pad supports the patient's pelvis and the Perineal Post provides counter-traction as needed.

NOTE: *The optional Hana Distraction Pad may be used instead of or in addition to the Perineal Post in certain circumstances. See Section 9.13 for more information.*

To attach the Pelvic Pad and Perineal Post:

1. Prior to transferring the patient to the table, place the Pelvic Pad next to the distal end of the Main Table Pad, and secure with Velcro®. Align the hole in the pad with the Perineal Post attachment hole on the table (Figure 24).



Figure 24: Pelvic Pad Aligned with Perineal Post Attachment Hole

2. Immediately after transferring the patient to the table, insert the Perineal Post through the hole in the pad and into the attachment hole on the table.
3. Move the patient to establish firm contact with the Perineal Post and then secure patient with the Patient Safety Strap and the associated Perineal Post.

WARNING: After transferring the patient to the table, assign at least one attendant to support the patient until safely secured to the table with the Patient Safety Strap and the associated Perineal Post.

To remove the Pelvic Pad and Perineal Post:

1. After removing anything securing the patient's arms and legs to the table, remove the Patient Safety Strap and the Perineal Post.
2. Upon removal of the Perineal Post, immediately transfer the patient from the table to the stretcher.

WARNING: When the patient is no longer secured to the table, assign at least one attendant to support the patient until safely transferred to the stretcher.

3. Once the patient has been safely removed from the table, the Pelvic Pad may be removed.

6.4 Traction Boots

Skin traction may be facilitated by securing Traction Boots to the Traction Unit of the Lift-Assisted Spar.

To secure the Traction Boot to the Spar:

1. While the patient is still on the stretcher, slide the Traction Boot onto the patient's foot and secure with buckles.
2. After transferring the patient to the table, insert the post on the Boot Plate Assembly into the Traction Mount on the Spar (Figure 25) and secure with the thumbscrew.



Figure 25: Traction Boot Secured to Spar

Use the Spar to make traction and rotation adjustments. See Section 6.1.2 for more information.

Traction Boots are provided in two sizes: small and large. Extra-large Traction Boots are also available as an optional accessory. See Section 9 for more information.

Refer to the following size chart to select the appropriate Traction Boot. Adjust the amount of padding as needed for the size of the patient's foot.

Men's Shoe Size Comparison Chart																
	Small Traction Boot					Large Traction Boot						Extra-Large Traction Boot				
UK	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12
US	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	13	14
EU	37½	38	38½	39	40	40½	41	42	42½	43	44	44½	45	46	46½	47
JP	23.5	24	24.5	25	25.5	26	26.5	27	27.5	28	28.5	29	29.5	30	31	32

CAUTION: When using the Traction Boots, ensure that the proper size is selected for the patient's foot. Using an improperly sized boot and/or excessive over-tightening of the buckle can cause the boot straps to fail.

6.5 Traction Hook Extender

If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. The Traction Hook Extender secures to the Traction Mount on the Spar. The Traction Boot attaches to the hook at the end of the Traction Hook Extender, as shown in Figure 26.

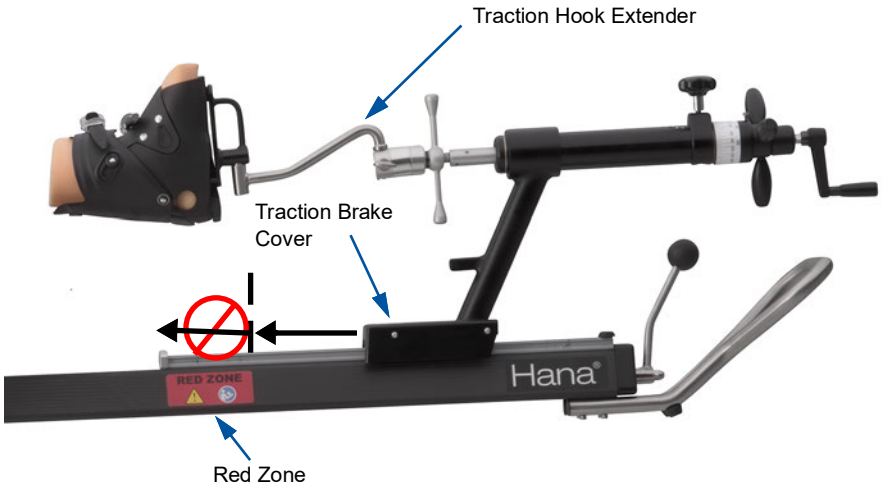


Figure 26: Using a Traction Hook Extender for Patients Short in Stature

6.6 Well Leg Support Assembly

The Well Leg Support Assembly is an option available for supporting the non-operative leg when the patient is in the supine position (Figure 27).

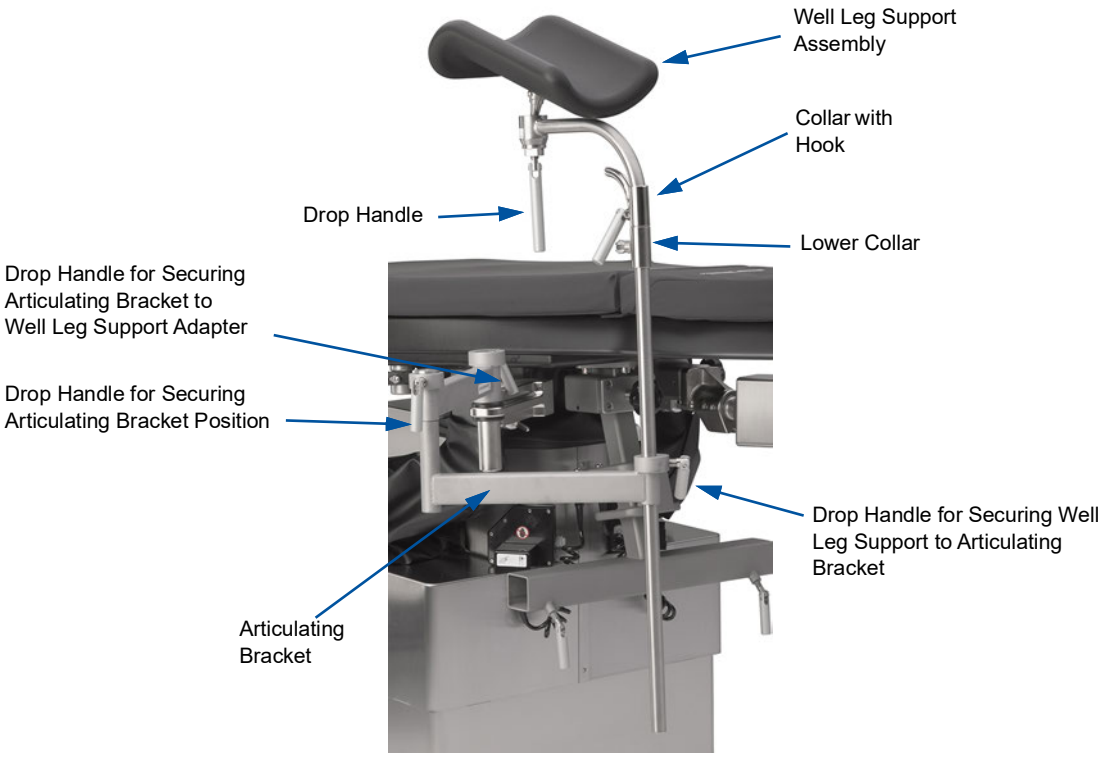


Figure 27: Well Leg Support Assembly

To attach and adjust the Well Leg Support Assembly:

1. Insert the proximal end of the Well Leg Support Adapter into the appropriate Spar Mount (Figure 28).



Figure 28: Installing Well Leg Support Adapter into Spar Mount

2. Slide the proximal end of the Well Leg Support Adapter forward until it is fully engaged. A click should be heard when the adapter is inserted past the safety latch.
3. Lock in place by turning the Spar Locking Knob clockwise until tight (Figure 29).

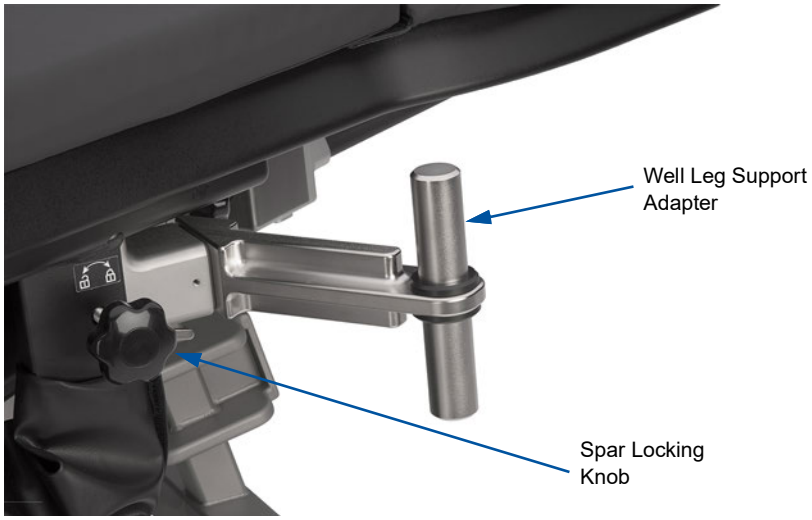


Figure 29: Well Leg Support Adapter Locked in Place

4. Slide the Articulating Bracket onto the post at the distal end of the Well Leg Support Adapter (Figure 30) and secure by rotating the drop handle clockwise (Figure 27).



Figure 30: Securing the Articulating Bracket in Place

5. Rotate the lower arm of the Articulating Bracket to the desired angle. Secure in place by rotating the drop handle at the joint of the upper and lower arms of the Articulating Bracket clockwise (Figure 27).
6. Attach the Well Leg Support Assembly to the lower arm of the Articulating Bracket and secure in place by rotating the T-handle on the Articulating Bracket clockwise (Figure 27).

The Well Leg Support Assembly provides the following adjustment options (Figure 27):

- **Adjust the Well Leg Support Pad angle**: Rotate the drop handle under the Leg Pad counterclockwise to loosen the ball joint under the Leg Pad, adjust the angle of the Well Leg Support Pad, and then rotate the drop handle clockwise to lock in place.
- **Adjust the hook orientation**: Rotate the drop handle on the collar with the hook counter-clockwise to loosen, adjust the height and orientation of the hook and collar, and then rotate the drop handle clockwise to lock in place. The hook provides a second anchor for wraps used to secure the patient's leg.
- **Adjust the lower collar position**: Rotate the drop handle on the lower collar counter-clockwise to loosen, adjust the height of the collar, and then rotate the drop handle clockwise to lock in place. This acts as a secondary height positioner for the Well Leg Support Assembly.

6.7 Hana® Arm Boards

The Hana® Arm Boards attach to the Swing Bars on the left and right side of the Hana® Table (Figure 31). They can be used to support the patient's arms when in the supine position. If the patient is in the lateral decubitus position, use one Hana® Arm Board in conjunction with the optional Cross Arm Support.



Figure 31: Close-up of Hana® Arm Board Installed on Table

To install the Hana® Arm Boards:

1. Rotate the drop handle at the distal end of the Swing Bar counterclockwise to unlock, and move the Swing Bar out from under the table top (Figure 32).



Figure 32: Moving the Swing Bar

2. Rotate the smaller of the two drop handles on the Holding Clamp counterclockwise to loosen the Holding Clamp.
3. Insert the post of the Hana® Arm Board into the slot on the Holding Clamp (Figure 33).



Figure 33: Inserting Hana® Arm Board into Holding Clamp

4. When the Hana® Arm Board is at the appropriate height, rotate the larger of the two drop handles on the Holding Clamp clockwise to secure the Hana® Arm Board in place.
5. Slide the Holding Clamp along the Swing Bar to adjust the horizontal position of the Hana® Arm Board in relation to the table. Once properly positioned, rotate the smaller of the two drop handles on the Holding Clamp clockwise to secure the clamp's position.
6. Adjust the angle of the Hana® Arm Board in relation to the table by moving the Swing Bar. Once properly positioned, rotate the drop handle at the distal end of the Swing Bar clockwise to lock in place.



Figure 34: Range of Motion of Swing Bar

6.8 Jack Mount Assembly

The Jack Mount Assembly supports the Femur Lift(s) and/or the optional Hana® Patient Transfer Board. It is designed to be removed and reinstalled as needed, depending on the type of surgical procedures being performed. Removing the Jack Mount allows for C-arm access during Hip Arthroscopy and certain fracture procedures. If C-arm access is not required, or your C-arm can be positioned with the Jack Mount in place, the Jack Mount may remain on the table.

The Jack Mount is located directly underneath the Foot-End of the table top between the Spar Mounts.

WARNING: Before use, inspect the device for possible damage, excessive wear, or non-functioning parts. Visually inspect all accessible areas for possible damage that may adversely affect the proper operation of the Hana® Orthopedic Surgery Table. Damaged or defective products should not be used or processed. Contact Mizuho OSI Service (see Section 14) for repair or replacement.

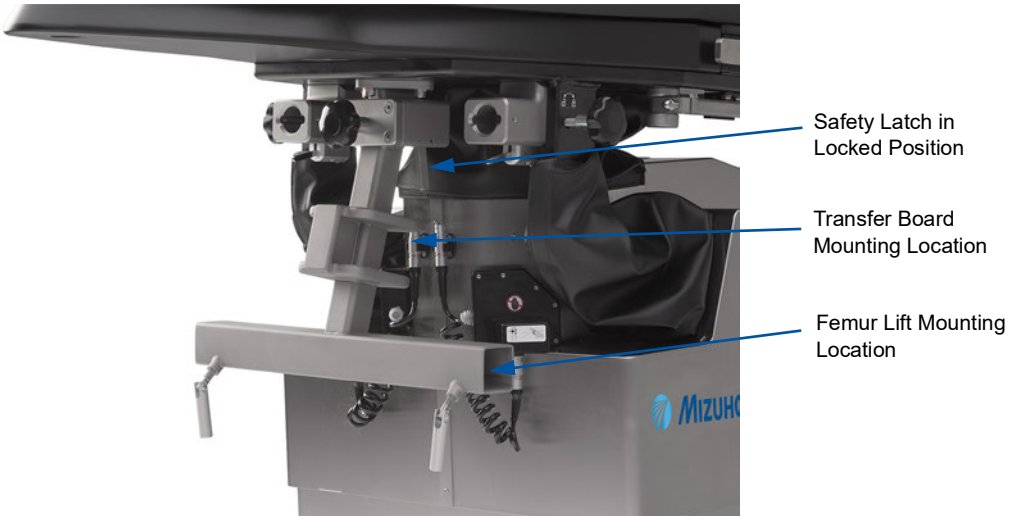


Figure 35: Jack Mount Assembly Attached, with Spars and Femur Lift Assembly Removed

6.8.1 Installing the Jack Mount Assembly

To install the Jack Mount Assembly:

1. Slide the Jack Mount Assembly into the Mounting Slide on the underside of the tabletop (Figure 36). The safety latch will fall into the locked position. The assembly will move in and out but should be unable to be removed from the slide without first lifting the safety latch.

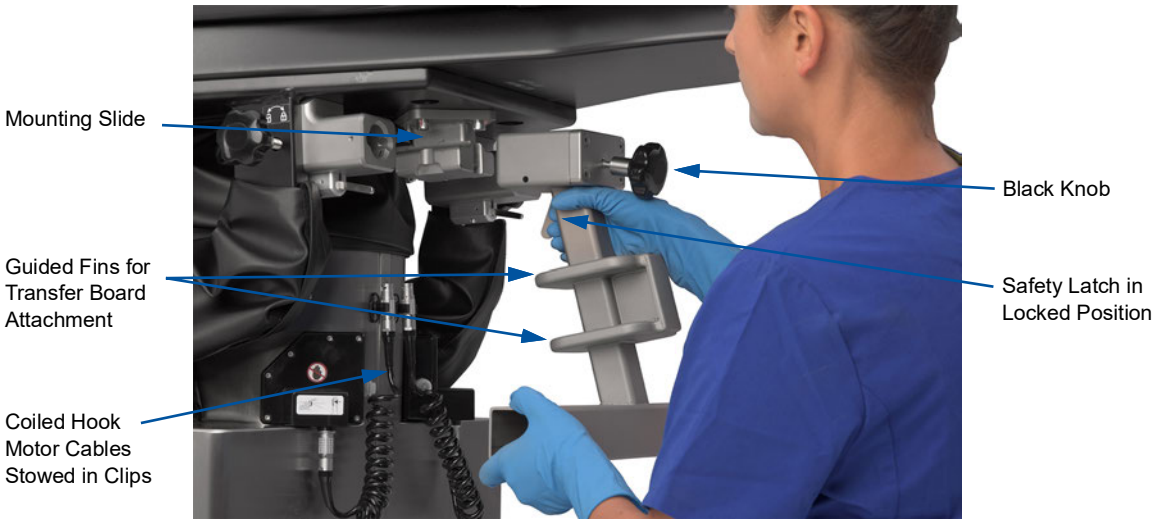


Figure 36: Jack Mount Assembly (Safety Latch Locked)

2. Tighten the black knob to secure the Jack Mount assembly to the table (Figure 36).
3. When the black knob is firmly tight, there should be minimal movement of the Jack Mount Assembly (less than ¼" at the Jack Mount location).

Before every use, visually inspect the safety latch lever and verify that it is fully engaged and hanging down (Figure 36). Make sure that the black knob is fully tightened and that the Jack Mount is secured to the table.

6.8.2 Removing the Jack Mount Assembly

1. If the Femur Lifts are attached to the Jack Mount Assembly, unplug the Coiled Hook Motor cables from the Femur Lifts and secure in the clips behind the Jack Mount Assembly. See Section 6.9 for more information.
2. Remove the Femur Lifts. See Section 6.9 for more information.
3. If the optional Hana® Patient Transfer Board is attached to the Jack Mount Assembly, remove it. See Section 9.3.2 for more information.
4. To remove the Jack Mount Assembly, loosen the black knob to fully disengage the threads (Figure 36).
5. Lift the safety latch to the unlocked position (Figure 37) and pull forward on the Jack Mount Assembly.

   The Jack Mount Assembly should slide off freely without excessive force.

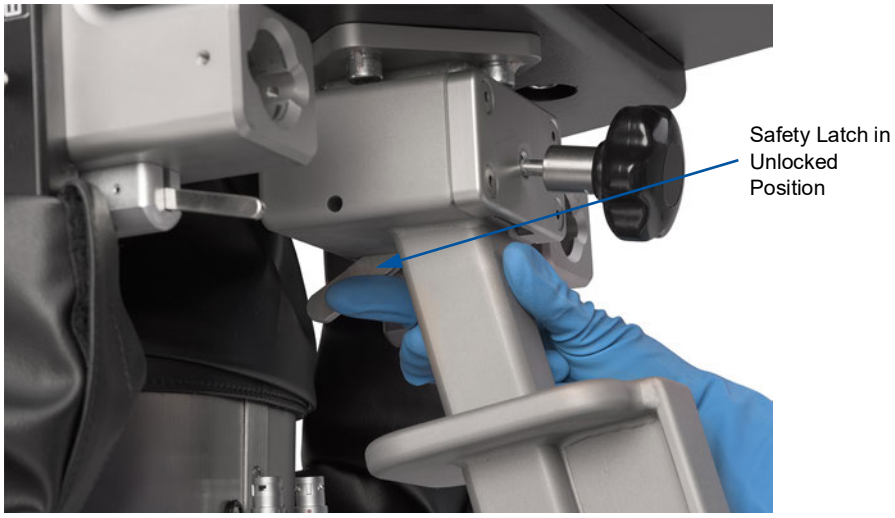


Figure 37: Jack Mount Assembly (Safety Latch Unlocked)

WARNING: Do not attempt to install or remove the Jack Mount Assembly from the Hana® Table while the Femur Lifts are still attached to the Jack Mount.

6.9 Femur Lift Assembly

The Hana® Orthopedic Surgery Table uses a motorized Femur Lift Assembly to support and adjust the height of the Femoral Hooks for Anterior Approach Total Hip Arthroplasty (AATHA). The Femur Lift Assembly is made up of the following:

- Femur Lifts (Left and Right)
- Coiled Hook Motor Cables
- Femur Lift Extension
- Femur Lift Foot Pedal

The Femur Lift Assembly attaches to two Femur Lift Expansion Junction Boxes (left and right), which are located underneath the table top at the Foot-End. If the Circuit Breaker trips on either of the boxes (Figure 38), the corresponding Femur Lift is powered off.

WARNING: If the Circuit Breaker trips on the Left/Right Expansion Junction Box during surgery, the Femur Lift Emergency Crank Handle should be used to move the Femur Lift. Resetting the Circuit Breaker and reusing the Foot Switch to operate Femur Lifts during surgery is not recommended. The table should be properly checked by a trained technician prior to reusing the Foot Switch and Femur Lifts.

NOTE: *For more information on manual operation of the Femur Lift using the Emergency Crank Handle, see Section 6.9.5.*

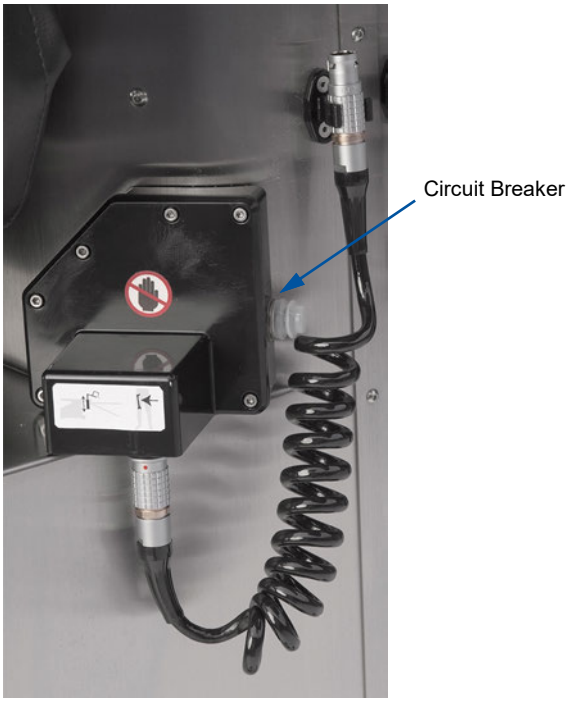


Figure 38: Expansion Junction Box



Figure 39: Expansion Junction Box (Location)

6.9.1 Connecting the Coiled Hook Motor Cable to the Expansion Junction Box



Figure 40: Coiled Hook Motor Cables

CAUTION: Before use, inspect the Coiled Hook Motor Cables for possible damage, excessive stretch, or damaged electrical quick-disconnect plugs. Carefully inspect all electrical quick disconnect receptacles and Circuit Breakers for possible damage or non-function. Damaged or defective products should not be used or processed. Contact Mizuho OSI Service for repair or replacement (Section 14).

To connect the Coiled Hook Motor Cables to the Expansion Junction Box (Figure 41):

1. Locate the red dot on the Expansion Junction Box's electrical quick-disconnect receptacle.
2. Orient the Coiled Hook Motor Cable's plug so that the red dot on the plug aligns with the red dot on the Expansion Junction Box receptacle.
3. Push the Coiled Hook Motor Cable's plug into the Expansion Junction Box's receptacle until it clicks.
4. Repeat this procedure for the Expansion Junction Box on the other side.

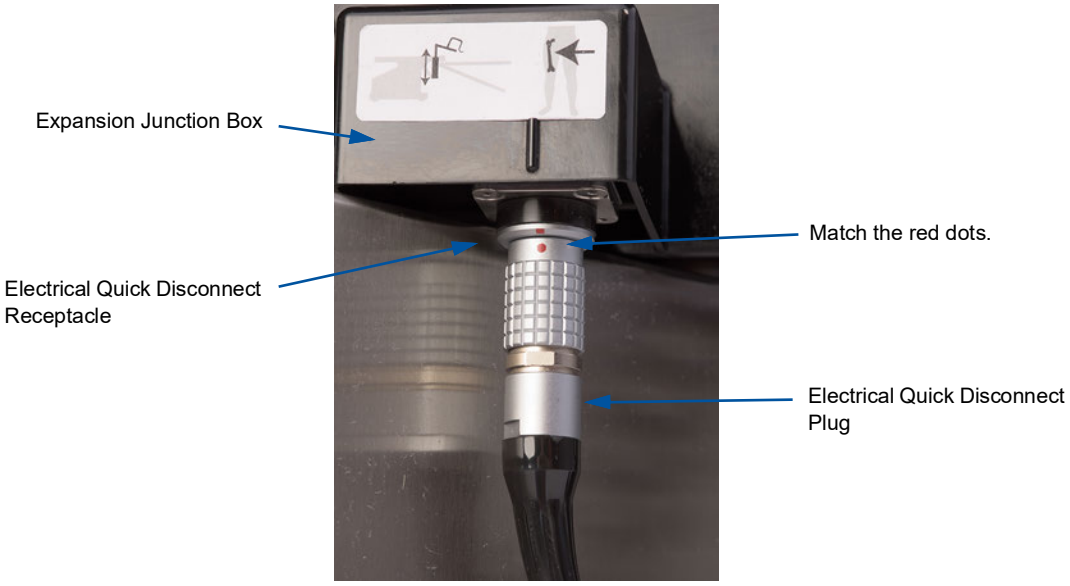


Figure 41: Connecting the Coiled Hook Motor Cable to the Expansion Junction Box

6.9.2 Connecting the Coiled Hook Motor Cable to the Femur Lift

To connect the Coiled Hook Motor Cable to the Femur Lift:

1. Place the Femur Lift on a flat surface with the red dot of the electrical quick-disconnect receptacle visible.
2. Orient the Coiled Hook Motor Cable's plug so that the red dot on the plug aligns with the red dot on the Femur Lift receptacle (Figure 42).
3. Push the Coiled Hook Motor cable's plug into the Femur Lift receptacle until it clicks.



Figure 42: Connecting Coiled Hook Motor Cable to Femur Lift

4. Mount the Femur Lift into the Jack Mount Assembly and tighten the Femur Lift Lock (Figure 43).

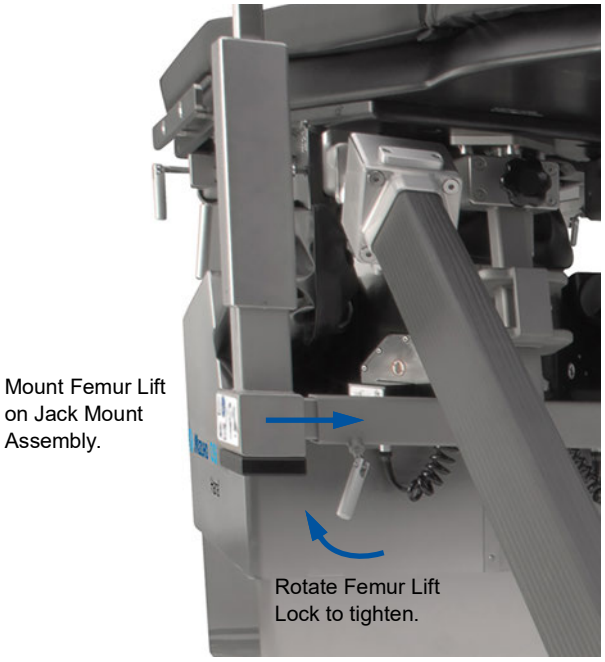


Figure 43: Femur Lift Mounted on Jack Mount Assembly

5. Repeat this procedure for the Femur Lift on the other side.

6.9.3 Disconnecting the Coiled Hook Motor Cable and Removing the Femur Lift

1. Hold the grooved part of the electrical quick-disconnect plug, and pull down to remove the plug from the Femur Lift receptacle (Figure 42).
2. Stow the electrical quick-disconnect plug of the Coiled Hook Motor Cable into the clip behind the Jack Mount Assembly (Figure 44).

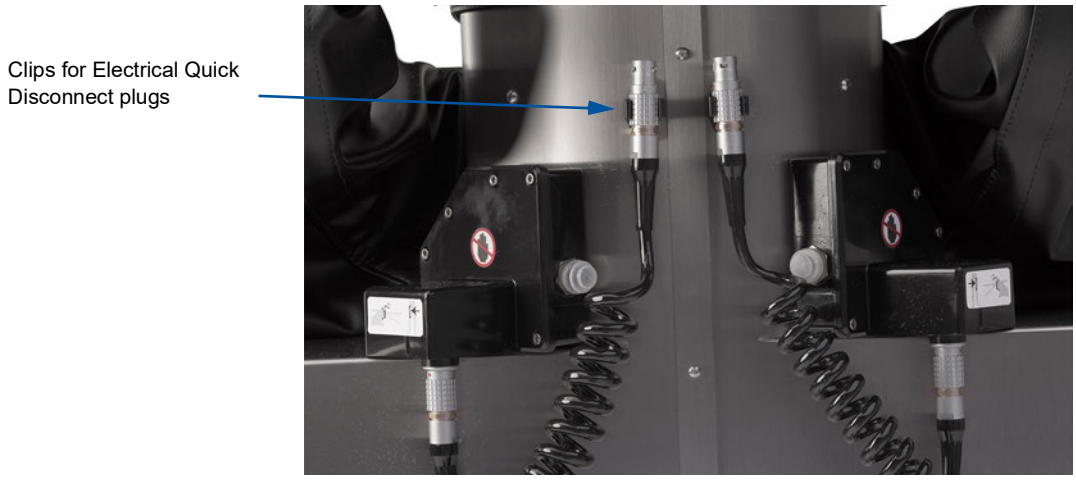


Figure 44: Clips for Electrical Quick-Disconnect Plugs

3. Unlock the Femur Lift Lock and remove the Femur Lift from the Jack Mount Assembly.
4. Repeat this procedure for the Femur Lift on the other side.

If a complete removal of the Coiled Hook Motor Cable from the table is desired, repeat step 1 for the other side of the electrical quick-disconnect plug on the Expansion Junction Box. Remove the Coiled Hook Motor Cable from the clip.

CAUTION: Do not attempt to remove the Femur Lift if the Coiled Hook Motor Cable is connected to it. This can cause damage to the Coiled Hook Motor Cable and the electrical quick-disconnect connectors. Always unplug the Femur Lift first.

6.9.4 Attaching the Femur Lift Foot Pedal

A single Foot Pedal operates both left and right Femur Lifts (Figure 45). Rotate the Femur Lift Control on the Control Panel to the desired setting to switch operation from one Femur Lift to the other (Figure 4).

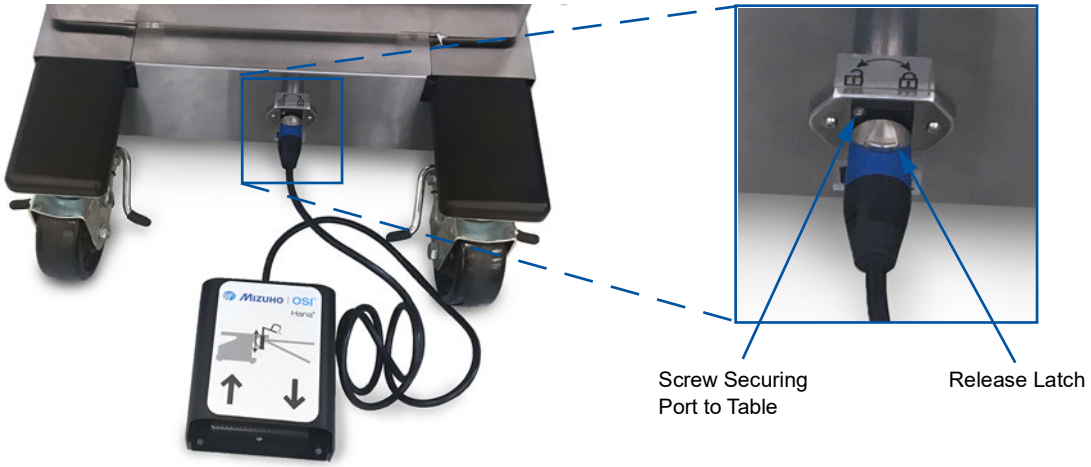


Figure 45: Foot Pedal Connected to Foot Pedal Port

To connect the Foot Pedal to the port at the Foot-End of the table base:

1. Align the Foot Pedal Release Latch with the upper screw of the port, at approximately the 11:00 position (Figure 46).



Figure 46: Foot Pedal Plug Aligned for Insertion

2. Insert the Foot Pedal Plug into the port and rotate clockwise slightly until the Release Latch clicks into place at the 12:00 position (Figure 47).



Figure 47: Rotate Clockwise to Lock in Place

Prior to surgical setup, perform the following steps to ensure that the Foot Pedal and Femur Lift function correctly.

1. Verify that the Foot Pedal Connected LED is illuminated on the Control Panel (Figure 4).
2. On the Control Panel (Figure 4), rotate the Selection Switch to select either the left or right Femur Lift.

3. Verify that the corresponding LED illuminates, indicating that the Femur Lift is properly connected.
4. Press the Foot Pedal on the left side and observe the Femur Lift rise to its highest position. Then press the Foot Pedal on the right side and observe the Femur Lift lower to its lowest position.
5. Complete this process for both right and left Femur Lifts.

To remove the Foot Pedal from the table:

1. Pull back on the Release Latch on the Foot Pedal plug (Figure 48).



Figure 48: Pulling Back on the Release Latch

2. While holding the Release Latch open, rotate the plug counterclockwise to the 11:00 position and remove it from the Foot Pedal Port (Figure 49).



Figure 49: Rotating and Removing the Foot Pedal from the Port

6.9.5 Manual Operation of the Femur Lift

If power to the Left/Right Expansion Junction Box is lost during surgery, the Femur Lift may be operated manually using the Femur Lift Emergency Crank Handle. The Femur Lift Emergency Crank Handle is stored underneath the Head-End of the tabletop (Figure 50).



Figure 50: Femur Lift Emergency Crank Handle Storage Location

The Femur Lift Emergency Crank Handle is attached to the rear of the Femur Lift Assembly. To operate the Femur Lift manually, insert the Emergency Crank Handle into the opening and rotate the handle to move the Femur Lift up and down (Figure 51).



Figure 51: Emergency Crank Handle Inserted in the Femur Lift

6.10 Femoral Hook Support and Femoral Hook

The Femoral Hook and Femoral Hook Support are designed for use with only the Mizuho OSI ProFx® Orthopedic Surgery Table, the Mizuho OSI Hana® Orthopedic Surgery Table, or the Mizuho OSI Hana SSXT® Specialty Surgery Table Extension. They provide support for the femur during Anterior Approach Total Hip Arthroplasty. The Femoral Hooks are imprinted with L and R to designate left and right.



Left and Right Femoral Hooks

Left and Right Classic Femoral Hooks

Figure 52: Left and Right Femoral Hooks

Mizuho OSI's Femoral Hooks and Femoral Hook Support are supplied non-sterile. These surgical instruments require special handling to prevent damage. Misuse can cause excessive stress or strain resulting in damage that can adversely affect their intended use. Before each use, you must do the following:

- Clean and sterilize the instrument(s) according to your hospital's washing, decontamination, and sterilization procedure.
- Inspect the Femoral Hook(s) and Femoral Hook Support for damage, wear, and functionality (check for nicks, burrs, or bent parts).

Proper cleaning, handling, and sterilization will ensure that the Femoral Hook(s) and Femoral Hook Support perform as intended. See Section 10 for more information on proper cleaning and sterilization.

Damaged or non-functioning instruments should not be used or processed. Contact your local Mizuho OSI sales representative or Mizuho OSI Service for repair or replacement.

WARNING: Use of damaged instruments may increase the risk of tissue trauma, infection, and length of operative procedures.

To install the Femoral Hook and Femoral Hook Support:

1. Once the patient has been properly positioned and secured to the table, insert the sterilized Femoral Hook Support in the operative-side Femur Lift.

CAUTION: Do not use excessive force when mounting the Femoral Hook Support on the Femur Lift. Use of excessive force (e.g., hammering with a mallet) may compromise the integrity of the Femoral Hook Support.

2. Insert the sterilized left or right Femoral Hook in one of the notches on the Femoral Hook Support. Select the notch based on the size and position of the patient that will allow the Femoral Hook to support the femur on the operative side during the procedure (Figure 53).



Figure 53: Femur Lift in Place for Use with the Femoral Hook Support and Femoral Hook

3. Use the Femur Lift Foot Pedal to raise or lower the height of the Femur Lift as needed. Press the left side of the Foot Pedal to raise the Femur Lift. Press the right side of the Foot Pedal to lower the Femur Lift. (See Section 6.9 for more information.)

7 Hana® Table Components

7.1 Standard Components

Table 7: Standard Components

Component	Description
Hana® Table Base  **REF 6875-326 110V (6875)** **REF 6875-326I 220-230V (6875I)** **REF 6875-326J 100V (6875J)**	The Hana® Table Base consists of the base of the table, the Motion Control Box, and tabletop. It also includes the Hana® Hand Pendant, Jack Mount Assembly, Main Table Pad, and Pelvic Pad. There are three versions of the Hana® Table Base to accommodate different regional voltage requirements.
REF 6807-4 Hana® Hand Pendant (replacement part) 	The Hana® Hand Pendant controls the Hana® Table functions, including table top height, Trendelenburg/Reverse Trendelenburg angle, and lateral tilt angle. It also provides AC power and battery status information.

Table 7: Standard Components *(Continued)*

Component	Description
REF 6875-7120 Hana® Main Table Pad (replacement part) 	The 2-inch (5 cm) Hana® Main Table Pad is of TEMPUR® construction. Velcro® secures the pad to the tabletop. Align the Velcro® on the bottom of the pad with the Velcro® on the tabletop when installing.
REF 6875-7129 Hana® Pelvic Pad (replacement part) 	The 2-inch (5 cm) Hana® Pelvic Pad is of TEMPUR® construction. It attaches to the Foot-End of the table top and supports the patient's pelvis when positioned supine on the Hana® Table.
REF 6850-413 Adult Perineal Post 	The Adult Perineal Post provides counter-traction, while the urethane foam pad helps relieve pressure on the perineal area. The Adult Perineal Post is 9 inches long (22.8 cm) and has a 2.75-inch (7 cm) diameter with pad. Disposable blue foam perineal post covers are available (see Section 7.2).
REF 5840-44 Patient Safety Strap 	The Patient Safety Strap secures the patient in place when positioned on the table. The 90-inch (229 cm) strap slides around the Foot-End of the table.

Table 7: Standard Components *(Continued)*

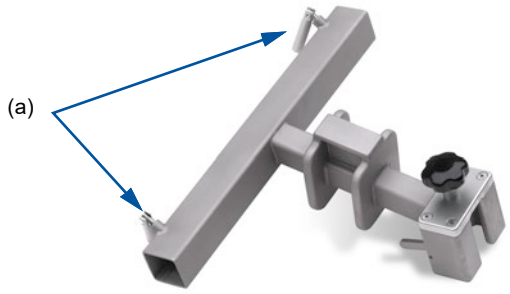
Component	Description
REF 6875-2730 Jack Mount Assembly (replacement part)  **(a) REF 914-516 Drop Handle**	The Jack Mount Assembly attaches to underside of the tabletop, and supports the left and right Femur Lifts and the optional Hana® Patient Transfer Board. It may be easily removed when not in use to improve C-arm access.
REF 6875-292 Hana® Arm Board (2)  **(a) REF 6850-7600 Arm Board Pad (2)**	The Hana® Arm Boards provide support for the patient's arms when positioned supine on the Hana® Table. When the patient is positioned laterally on the Hana® Table, one Hana® Arm Board may be used in conjunction with the optional Cross Arm Support to support patient's arms. The Hana® Arm Board comes with a one-inch (2.5 cm) Tempur-Pedic® Medical Pad. A variety of disposable foam padding options for the Hana® Arm Boards are available (see Section 7.2).

Table 7: Standard Components *(Continued)*

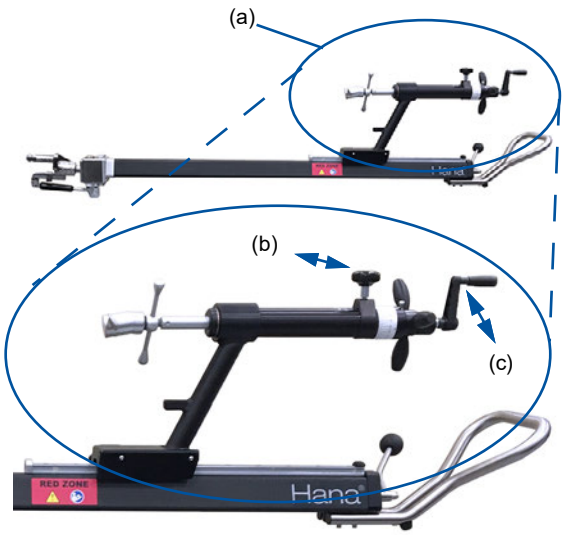
Component	Description
Hana® Radiolucent Lift-Assisted Spars (Left and Right)  **REF 6875-3900 Left** **REF 6875-3700 Right** **(a) REF 6875-2370 Traction Unit Assembly** **(b) REF 6875-378 Foot Rotation Locking Knob** **(c) REF 6850-313 Fine Traction Crank Handle**	The Left and Right Hana® Radiolucent Lift-Assisted Spars attach to the Foot-End of the table and support the patient's legs while in supine or lateral decubitus positions. The lift-assist feature supports the weight of the spars, making them easier to manipulate during surgery. The Lift-Assisted Spars allow for traction, abduction, adduction, and raising or lowering of the leg.
Traction Boots (Pair)  **REF 6850-486 Large Pair** **REF 6850-485 Small Pair** **REF FE00386 Boot Liners, Large Pair** **REF FE00384 Boot Liners, Small Pair**	The Traction Boots secure the patient's feet to the Lift-Assisted Spars for procedures requiring skin traction. One (1) small pair and one (1) large pair come standard with the Hana® Table. An optional Extra-Large size is also available (see Section 9). The standard black boot liners can be replaced. In addition, disposable boot liners are available (see Section 7.2).

Table 7: Standard Components *(Continued)*

Component	Description
REF 6875-399 Traction Hook Extender (2) 	The Traction Hook Extender connects the Traction Boot to the Traction Mount of the Spar for patients who are short in stature.
REF 6875-200 Well Leg Support Adapter 	The Well Leg Support Adapter attaches to the table, and allows mounting of the Articulating Bracket and Well Leg Support Assembly, which can be used to support the patient's non-operative leg while in the supine position.
REF 6300-92 Articulating Bracket 	The Articulating Bracket attaches to the Well Leg Support Adapter and provides the point of attachment for the Well Leg Support Assembly. The bracket is adjustable, enhancing positioning options for the Well Leg Support Assembly.

Table 7: Standard Components *(Continued)*

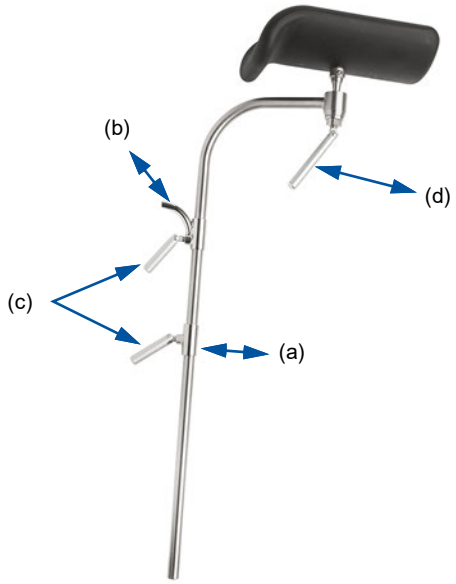
Component	Description
REF 5855-838 Well Leg Support Assembly  **(a) REF 5855-423 Collar Assembly** **(b) REF 5855-424 Collar with Hook** **(c) REF 914-416 Drop Handle Assembly** **(d) REF 5300-52 Drop Handle Assembly**	The Well Leg Support Assembly attaches to the table through the use of the Well Leg Support Adapter and Articulating Bracket. It can be used to support the patient's non-operative leg while in the supine position.
Femur Lift Assembly (Left and Right)  **REF 6875-600 Right** **REF 6875-601 Left**	The Femur Lift Assemblies raise and lower the operative side Femoral Hook and Femoral Hook Support for use during Anterior Approach Total Hip Arthroplasty. The Femur Lift Assemblies may also be used to support the optional Lateral Perineal Post, used during IM Tibial Nailing (see Section 9.5).

Table 7: Standard Components *(Continued)*

Component	Description
REF 6875-264 Femur Lift Extension (2) 	The Femur Lift Extension attaches to either the left or right Femur Lift. It provides the attachment point for the Femoral Hook Support.
REF 6875-602 Femur Lift Emergency Crank Handle 	The Femur Lift Emergency Crank Handle attaches to the rear of the Femur Lift Assembly. It provides a manual method for raising and lowering the Femur Lift if there is a loss of power.
REF 6875-5005 Hana® Femur Lift Foot Pedal 	The Femur Lift Foot Pedal operates both left and right Femur Lifts. It plugs into the port at the Foot-End of the table base.
REF 6850-110 Femoral Hook Support (2) 	The Femoral Hook Support mounts on the Femur Lift Extension. It provides eight notches for insertion of the Femoral Hook. This allows flexibility in positioning to accommodate the size of the patient.
Femoral Hooks, Left and Right  **REF 6850-918 Right** **REF 6850-919 Left**	Two (2) Femoral Hooks come standard with the Hana® Table: one left and one right. The Femoral Hook is used during Anterior Approach Total Hip Arthroplasty. It inserts into one of the eight notches on the Femoral Hook Support. The choice of Femoral Hook or Classic Femoral Hook is at the discretion of the surgeon and surgical team.

Table 7: Standard Components *(Continued)*

Component	Description
Classic Femoral Hooks, Left and Right  **REF 6850-140 Classic Left** **REF 6850-144 Classic Right**	Two (2) Classic Femoral Hooks come standard with the Hana® Table: one left and one right. The Femoral Hook is used during Anterior Approach Total Hip Arthroplasty. It inserts into one of the eight notches on the Femoral Hook Support. The choice of Femoral Hook or Classic Femoral Hook is at the discretion of the surgeon and surgical team.
REF 6875-20 Hana® Table Cover 	The Hana® Table Cover serves as a dust cover when the table is in storage.
Hana® Patient Care Kit 	The Patient Care Kits are single-use padding and covers intended to prevent cross-contamination and protect the equipment. Three (3) Patient Care Kits are included with the Hana® Table. See Section 7.3 for reordering information.

7.2 Disposable Components

To place an order for disposable components, contact Mizuho OSI Sales Operations at 1-800-777-4674 within the USA or +1-510-429-1500 outside the USA. At the prompt, select Option 1.

WARNING: Disposable components are single use only. Discard after use. Re-use of any disposable component may result in cross-contamination.

Refer to the following table when ordering any disposable components for the Hana® Orthopedic Surgery Table:

Table 8: Disposable Components

REF **5855-18 Soft Traction Boot Liners, Small** (24 per case) REF **5855-17 Soft Traction Boot Liners, Large** (24 per case) 	REF **5937DZ Disposable Boot Liners** (12 per case) – good for all sizes of Traction Boots 	REF **6855-13 Perineal Post Cover, Blue Foam** (12 per case) 
REF **5929DZ Perineal Post Cover, 6-inch** (12 per case) 	REF **6855DPC-50 Hana® Disposa-Pull Perineal Post Cover** (50 per case) 	REF **6856LSET-50 Ortho Lateral 3-Piece Cover Set** (50 per case) 
REF **6856BS-50 Safety Strap with Contourethane™ Foam** (12 per case) 	REF **5823-10 Foam Arm Cradles** (6 pairs per case) 	REF **5932 NervPro® System, Ulnar Protective Pads** (6 per case) 

Table 8: Disposable Components

REF **1901-12 Convoluted Foam Pads** (12 pairs per case) 	REF **370 Convoluted Foam Padding** 6" x 24" x 2" (15.2 x 61 x 5 cm) 	REF **1902-20 Supine/Lateral Head Rest** (20 per case) 
REF **1921 9" (22.8 cm) Headrest Donut** REF **1922 7" (17.8 cm) Headrest Donut** 	REF **6855FP-100 Disposable Foot Pedal Cover** (100 per case) 	REF **6856-22 Leg Spar Ball Joint Protectors** (12 per case) 
REF **5858 Patient Isolation Drape** (12 per case) **NOTE:** *This product is not currently CE marked.*		

7.3 Hana® Patient Care Kits

Each individual Hana® Patient Care Kit includes the following:

- Supine/Lateral Headrest
- Leg Spar Ball Joint Protector (2)
- Adjustable Arm Board Pad (2)
- 27-inch (68.5 cm) Arm Board Strap
- Perineal Post Cover
- Disposable Boot Liner

WARNING: Patient Care Kits are single-use-only. Discard after use. Re-use of any component in the Patient Care Kit may result in cross-contamination.

The components should be used as described in the Patient Care Kit Instructions for Use, which are included in each packaged kit. The Hana® Orthopedic Surgery Table ships with three (3) individual Hana® Patient Care Kits. A case of six (6) individual kits is provided when ordering REF 6851.

NOTE: *Remove the Patient Care Kit components from the packaging and visually inspect the components.*

NOTE: *Additional Patient Care Kit configurations are available. See Section 9.14 for more information*

8 Surgical Procedure Setups

CAUTION: Inspect all components and accessories for signs of wear or damage before installing on the table.

CAUTION: When applying safety straps, monitor patient contact points for pressure points that could cause circulatory or other impairment.

WARNING: Always verify that the Spar Lock Handle is in the locked position before transferring a patient to the Hana® Table or securing a patient to the Hana® Lift-Assisted Spars. Failure to lock the Spar Lock Handle can cause the Lift-Assisted Spar to drop when not held in place, which could result in damage to the table, possible injury to the patient, or harm to the healthcare professionals.

Instructions provided are for suggested setups. Final determination of patient positioning and setup is at the discretion of the surgeon and surgical team.

NOTE: *For the following setups, use Patient Care Kit components as described in Instructions for Use included in each Kit. A variety of additional soft goods are also available for use in all setups to ensure optimal patient comfort. For more information, see Section 7.2, Section 7.3, and Section 9.14. Final determination of products used is at the discretion of the surgeon and surgical team.*

NOTE: *The following setup instructions make use of many standard components and optional accessories. For more detailed information on installing and adjusting standard components, see Section 6. For more detailed information on installing and adjusting optional accessories, see Section 9.*

NOTE: *Setups for supine procedures using bilateral skin traction can also use the optional Hana® Distraction Pad in place of or in addition to the Perineal Post. See Section 9.13 for more information.*

8.1 IM Femoral Nailing: Unilateral Skeletal Traction

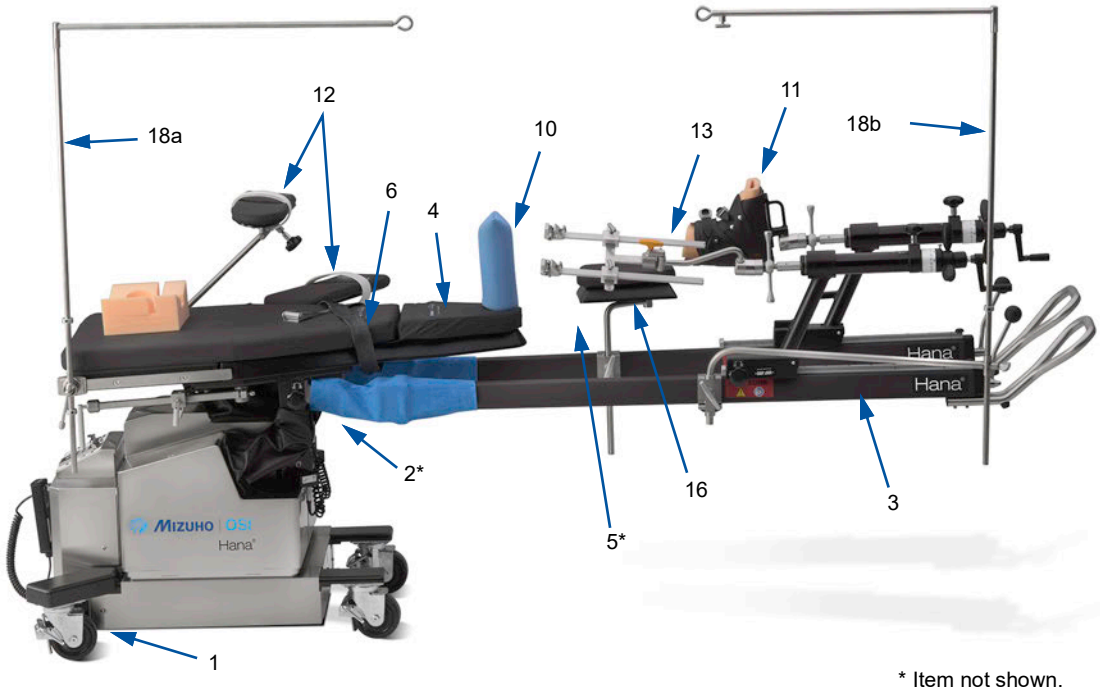


Figure 54: Table Setup for Right IM Femoral Nailing, Supine, with Skeletal Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach both the left and right Hana® Radiolucent Lift-Assisted Spars to the table and lock in place.
4. Place the Pelvic Pad on the table.
5. Attach the optional Hana® Patient Transfer Board.
6. Slide the Patient Safety Strap into place.
7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Put the appropriate size Traction Boot (small, large, or optional extra-large) on the patient's non-operative foot while the patient is on the stretcher.
9. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position and secure with the Patient Safety Strap.

10. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.
11. Ensure that the Lift-Assisted Spar on the non-operative side is locked, and attach the Traction Boot on the non-operative leg to the Traction Mount on that Spar.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

12. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
13. Attach the Traction Device Hook to the Traction Mount on the Spar. If desired, the optional 90 Degree Pin and Wire Holder or Kirschner Bow Holder may be used instead. They require attaching a ProFx® Traction Boot Adapter Assembly to the Traction Mount. Position the patient's operative leg.

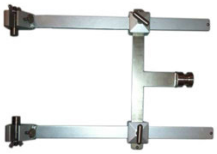
NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

14. Ensure that the Lift-Assisted Spar on the operative side is locked, and secure the patient's operative foot directly to that Spar.
15. Remove the optional Patient Transfer Board by sliding it out from underneath the fully positioned patient.
16. If desired, attach the optional Lower Leg Support to the non-operative Spar using an Accessory Clamp and lock it into place.
17. Trial position the C-arm unit on the non-operative side.
18. If desired install the optional Head-End and Foot-End Drape Rod Assemblies, and suspend the Patient Isolation Drapes.



Figure 55: Patient Positioned for Right IM Femoral Nailing, Supine, with Skeletal Traction (Foot Secured to Spar)

Components for Femur Nailing, Supine with Skeletal Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Hana® Patient Transfer Board *(Optional)* 	Patient Safety Strap 	Traction Boot (Left or Right), Large or Small 

Components for Femur Nailing, Supine with Skeletal Traction *(Continued)*		
Perineal Post 	Traction Hook Extender (1 or 2) 	Hana® Arm Board with Pad (1 or 2) 
Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 	Traction Device Hook *(Optional)* 
90 Degree Pin and Wire Holder *(Optional)* 	Kirschner Bow Holder *(Optional)* 	ProFx® Traction Boot Adapter Assembly *(Optional)* 
Lower Leg Support *(Optional)* 	Accessory Clamp *(Optional)* 	Head-End Drape Rod Assembly *(Optional)* 
Foot-End Drape Rod Assembly *(Optional)* 		

8.2 IM Femoral Nailing: Unilateral Skeletal Traction (with Traction Foot Plate Assembly)

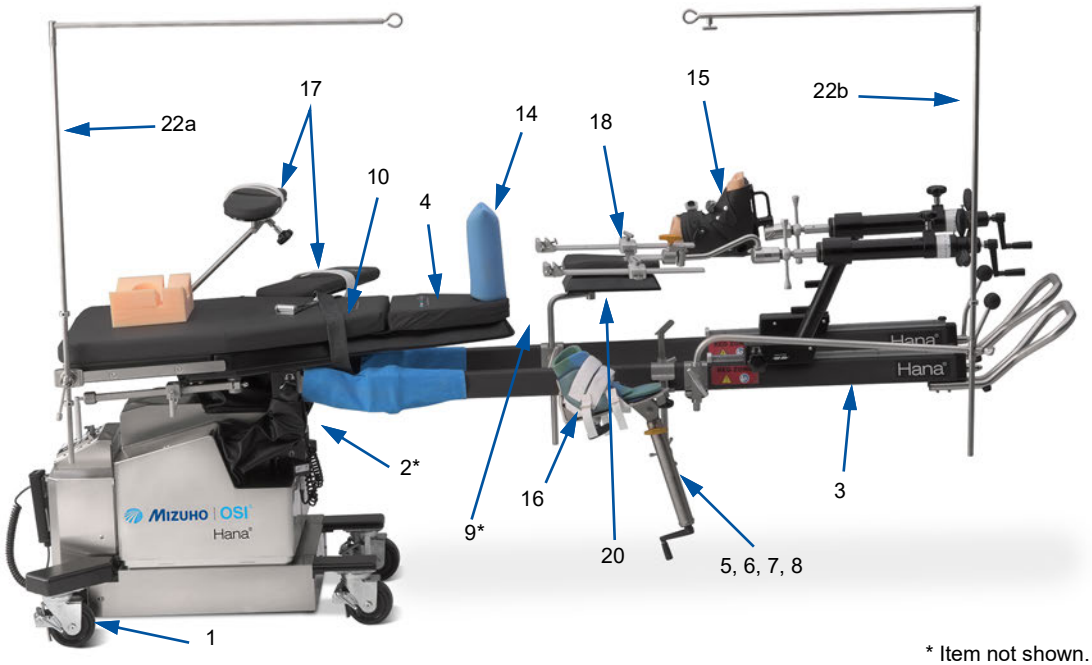


Figure 56: Table Setup for Right IM Femoral Nailing, Supine, with Skeletal Traction (with Traction Foot Plate Assembly)

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach both the left and right Hana® Radiolucent Lift-Assisted Spars to the table and lock in place.
4. Place the Pelvic Pad on the table.
5. Attach an Accessory Clamp to the operative-side Spar near the Foot-End with the receiver on the non-operative side of the table.
6. Insert the optional Tibia Traction Upright into the Accessory Clamp from the bottom with the Traction Unit Receiver facing the operative side of the table.
7. Attach the optional Traction Unit to the Tibia Traction Upright.
8. Attach the optional Traction Foot Plate Assembly to the Traction Unit.

NOTE: *If desired, the operative foot can be secured to the Traction Unit in a Traction Boot instead of using the Traction Foot Plate Assembly. In this instance, attach a Tibial Traction Boot Adapter to the Traction Unit.*

9. Attach the optional Hana® Patient Transfer Board.
10. Slide the Patient Safety Strap into place.
11. Adjust the table to the appropriate height for patient transfer from the stretcher.
12. Put the appropriate size Traction Boot (small, large, or optional extra-large) on the patient's non-operative foot while the patient is on the stretcher.

NOTE: *If using a Traction Boot instead of the Traction Foot Plate Assembly, put a second Traction Boot on the patient's operative foot.*

13. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position and secure with the Patient Safety Strap.
14. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.
15. Ensure that the Lift-Assisted Spar on the non-operative side is locked, and attach the Traction Boot on the non-operative leg to the Traction Mount on the non-operative Spar.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

16. Ensure that the Lift-Assisted Spar on the operative side is locked, and secure the operative foot to the Traction Foot Plate Assembly.

NOTE: *If using a Traction Boot on the operative foot instead, attach the Traction Boot to the Tibial Traction Boot Adapter mounted on the Traction Unit.*

17. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
18. Attach the Traction Device Hook to the Traction Mount on the Spar. If desired, the optional 90 Degree Pin and Wire Holder or Kirschner Bow Holder may be used instead. They require attaching a ProFx® Traction Boot Adapter Assembly to the Traction Mount. Position the patient's operative leg.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

19. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
20. If desired, attach the optional Lower Leg Support to the non-operative Spar using an Accessory Clamp and lock it into place.
21. Trial position the C-arm unit on the non-operative side.
22. If desired install the optional Head-End and Foot-End Drape Rod Assemblies, and suspend the Patient Isolation Drapes.

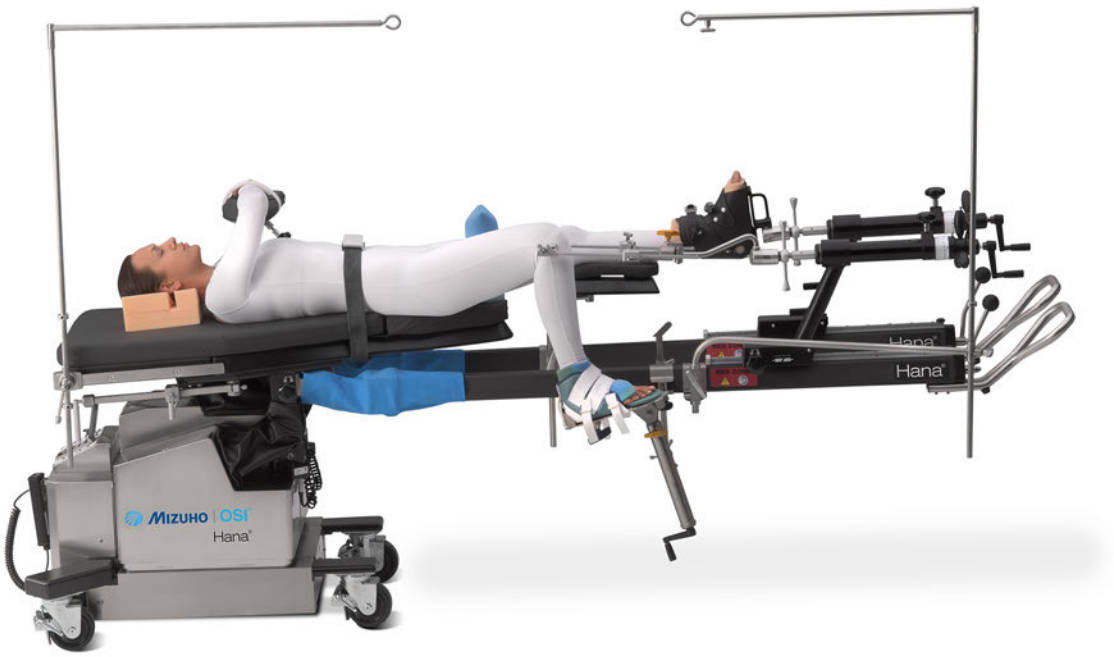


Figure 57: Patient Positioned for Right IM Femoral Nailing, Supine, with Skeletal Traction (Foot Secured to Optional Traction Foot Plate Assembly)

Components for Femur Nailing, Supine with Skeletal Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Accessory Clamp *(Optional)* 	Tibial Traction Upright *(Optional)* 	Traction Unit *(Optional)* 
Traction Foot Plate Assembly *(Optional)* 	Tibial Traction Boot Adapter *(Optional)* 	Hana® Patient Transfer Board *(Optional)* 

Components for Femur Nailing, Supine with Skeletal Traction *(Continued)*		
Patient Safety Strap 	Traction Boot (Left or Right), Large or Small 	Perineal Post 
Traction Hook Extender (1 or 2) 	Hana® Arm Board with Pad (2) 	Cross Arm Support *(Optional)* 
Clark Socket *(Optional)* 	Traction Device Hook *(Optional)* 	90 Degree Pin and Wire Holder *(Optional)* 
Kirschner Bow Holder *(Optional)* 	ProFx® Traction Boot Adapter Assembly *(Optional)* 	Lower Leg Support *(Optional)* 
Head-End Drape Rod Assembly *(Optional)* 	Foot-End Drape Rod Assembly *(Optional)* 	

8.3 IM Femoral Nailing: Unilateral Skin Traction

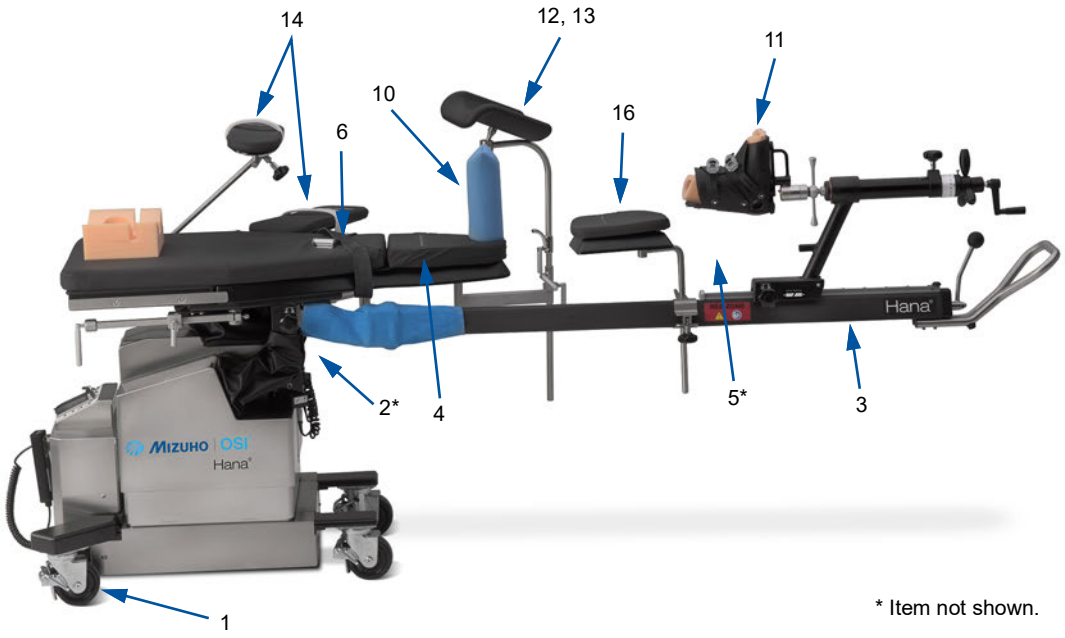


Figure 58: Table Setup for Right IM Femoral Nailing, Supine, with Unilateral Skin Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach the appropriate left or right Hana® Radiolucent Lift-Assisted Spar to the table on the operative side and lock in place.
4. Place the Pelvic Pad on the table.
5. Attach the optional Hana® Patient Transfer Board.
6. Slide the Patient Safety Strap into place.
7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Put the appropriate size Traction Boot (small, large, or optional extra-large) on the patient's operative foot while the patient is on the stretcher.
9. Ensure that the Lift-Assisted Spar is locked, and transfer the patient to the table in the supine position and secure with the Patient Safety Strap.
10. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.

11. Ensure that the Lift-Assisted Spar is locked, and attach the Traction Boot to the Traction Mount on the Spar.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

12. Attach the Well Leg Support Adapter to the Spar Mount on the non-operative side of the table and lock into position.
13. Attach the Well Leg Support Assembly to the Well Leg Support Adapter using the Articulating Bracket and secure the patient's non-operative leg.
14. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
15. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
16. If desired, attach the optional Lower Leg Support to the Spar using an Accessory Clamp and lock it into place. Pad and secure the patient's operative leg.
17. Trial-position the C-arm unit on the non-operative side.
18. If desired, install the optional Head-End and Foot-End Drape Rod Assemblies and suspend the Patient Isolation Drapes.



Figure 59: Patient Positioned for Right IM Femoral Nailing, Supine, with Unilateral Skin Traction

Components for Femur Nailing Supine with Skin Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Hana® Patient Transfer Board *(Optional)* 	Patient Safety Strap 	Traction Boot (Left or Right), Large or Small 
Perineal Post 	Traction Hook Extender 	Well Leg Support Adapter 
Articulating Bracket 	Well Leg Support Assembly 	Hana® Arm Board with Pad (1 or 2) 
Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 	Lower Leg Support *(Optional)* 
Accessory Clamp *(Optional)* 	Head-End Drape Rod Assembly *(Optional)* 	Foot-End Drape Rod Assembly *(Optional)* 

8.4 IM Femoral Nailing: Lateral Decubitus Position with Bilateral Skin Traction

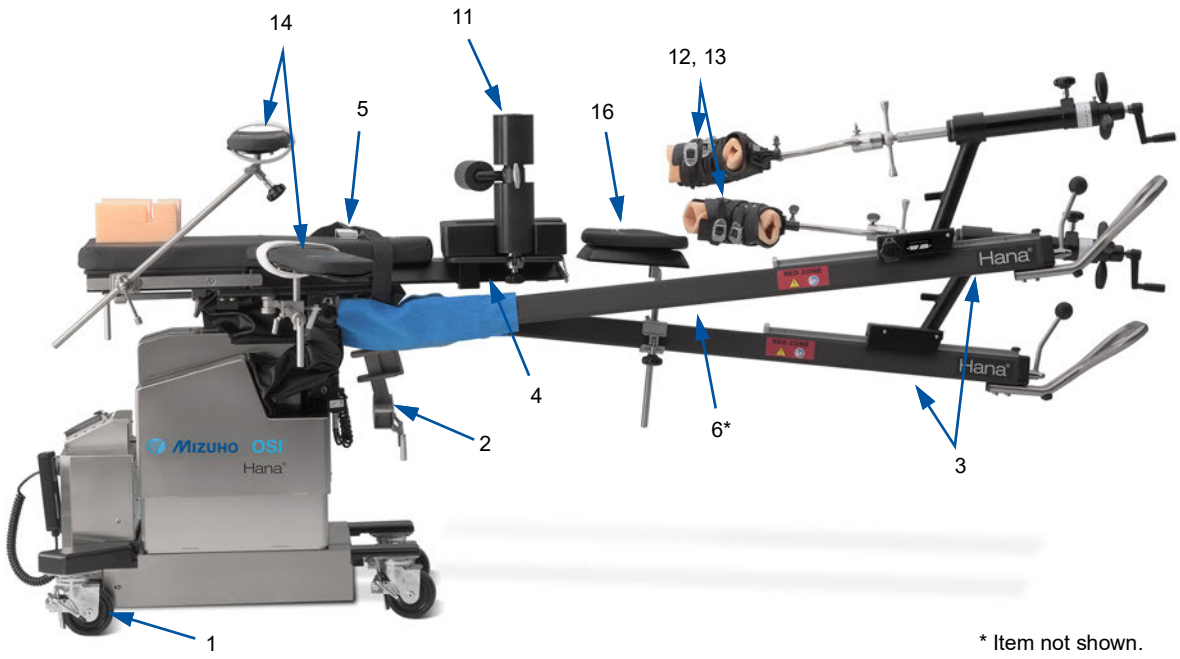


Figure 60: Table Setup for IM Femoral Nailing, Lateral Decubitus Position with Bilateral Skin Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach both the left and right Hana® Radiolucent Lift-Assisted Spars to the table and lock in place.
4. Attach the optional Lateral Board Assembly (without Lateral Perineal Post) to the table top by sliding it into position and inserting the plug into the standard Perineal Post hole on the table top.
5. Slide the Patient Safety Strap into place.
6. Attach the optional Hana® Patient Transfer Board.
7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Put the appropriate size Traction Boots (small, large, or optional extra-large) on the patient's feet and secure while the patient is on the stretcher.

9. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position.
10. Reposition patient into the lateral decubitus position. At this time, an attendant should be assigned to support the patient until patient is safely positioned and secured.
11. Install the optional Lateral Perineal Post. Slide the patient toward the Foot-End of the table until firmly positioned against the Perineal Post and secure with the Patient Safety Strap.
12. Ensure that the Lift-Assisted Spar on the operative side is locked, and attach the Traction Boot on the patient's non-operative side to the Traction Mount on the operative side Spar.
13. Ensure that the Lift-Assisted Spar on the non-operative side is locked, and attach the Traction Boot on the patient's operative side to the Traction Mount on the non-operative side Spar.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

14. Install a Hana® Arm Board with pad and optional Cross Arm Support using a Clark Socket to the non-operative side of the table and secure the patient's arms.
15. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
16. Attach the optional Lower Leg Support to the lower Lift-Assisted Spar using an Accessory Clamp. Pad and secure the patient's non-operative leg.
17. If desired, install the optional Head-End and Foot-End Drape Rod Assemblies, and suspend the Patient Isolation Drapes.



Figure 61: Patient Positioned for IM Femoral Nailing, Lateral Decubitus Position with Bilateral Skin Traction

Components for IM Femur Nailing, Lateral Decubitus Position with Bilateral Skin Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Lateral Perineal Post and Board Assembly *(Optional)* 
Patient Safety Strap 	Hana® Patient Transfer Board *(Optional)* 	Traction Boot (Pair), Large or Small 
Traction Hook Extender 	Hana® Arm Board with Pad 	Cross Arm Support *(Optional)* 
Clark Socket *(Optional)* 	Lower Leg Support *(Optional)* 	Accessory Clamp *(Optional)* 
Head-End Drape Rod Assembly *(Optional)* 	Foot-End Drape Rod Assembly *(Optional)* 	

8.5 IM Tibial Nailing: Supine with Unilateral Skin Traction

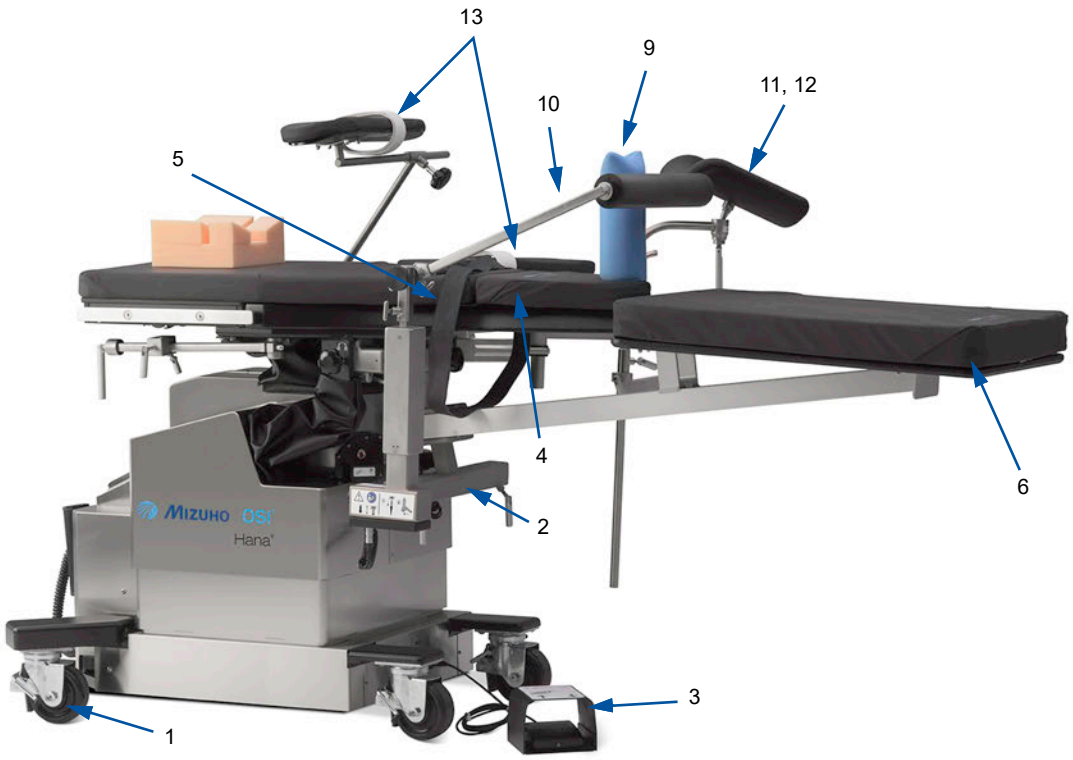


Figure 62: Table Setup for Right IM Tibial Nailing, Supine Position with Unilateral Skin Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. Ensure that the Jack Mount Assembly is installed. Attach the appropriate Femur Lift Assembly (right or left) to the operative side of the table.
3. Plug the Femur Lift Foot Pedal into the front of the base of the table. Ensure that the Femur Lift Assembly is in its lowest position.
4. Place the Pelvic Pad on the table.
5. Slide the Patient Safety Strap in place.
6. Attach the optional Hana® Patient Transfer Board.
7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Transfer the patient to the table in the supine position and secure with the Patient Safety Strap.
9. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.

10. Attach the optional Lateral Perineal Post to the Femur Lift Assembly using the Mount Bracket for the Lateral Perineal Post and position the patient's leg over the Lateral Perineal Post.

WARNING: It is important that the Lateral Perineal Post be placed against the distal femur, two to three inches proximal to the popliteal fossa. Placement of the post into the fossa may result in a potential neurological or circulatory injury.

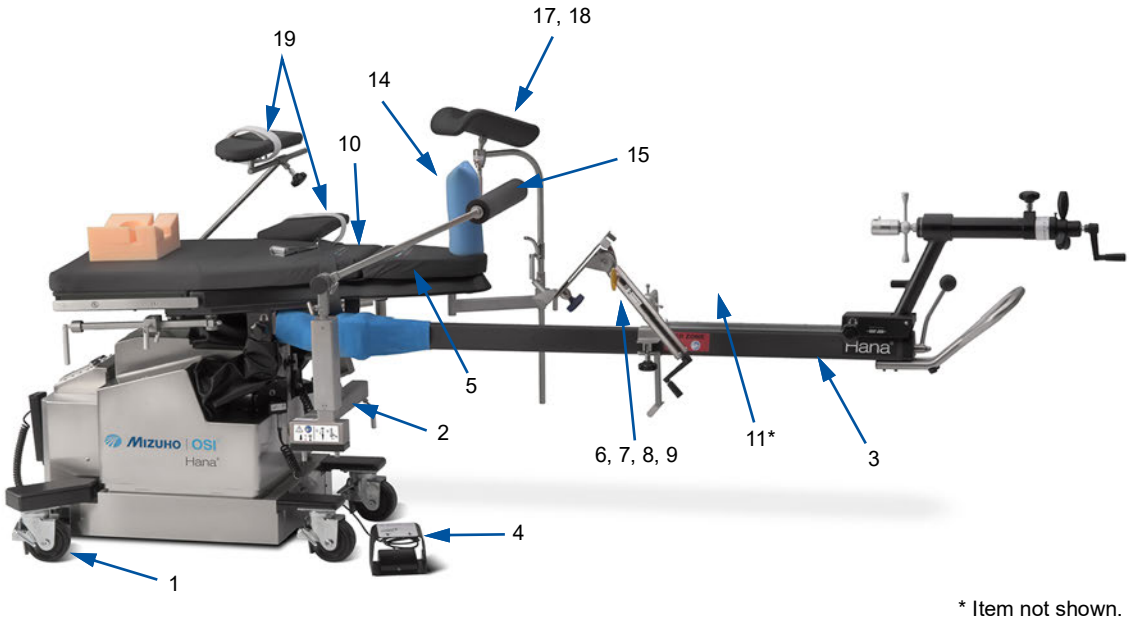
11. Attach the Well Leg Support Adapter to the Spar Mount on the non-operative side of the table and lock into position.
12. Attach the Well Leg Support Assembly to the Well Leg Support Adapter using the Articulating Bracket and secure the patient's non-operative leg.
13. Install a Hana® Arm Board with pad to both left and right sides of the table and position patient's arms out to the side, or attach one Hana® Arm Board with Pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table, and secure the patient's arms.
14. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
15. Trial position the C-arm unit.



Figure 63: Patient Positioned for Right IM Tibia Nailing, Supine Position with Unilateral Skin Traction

Components for IM Tibia Nailing, in Supine Position with Unilateral Skin Traction		
Jack Mount Assembly 	Femur Lift Assembly (Left or Right) 	Femur Lift Foot Pedal 
Pelvic Pad 	Patient Safety Strap 	Hana® Patient Transfer Board *(Optional)* 
Perineal Post 	Lateral Perineal Post *(Optional)* 	Lateral Perineal Post Adapter *(Optional)* 
Well Leg Support Adapter 	Well Leg Support Assembly 	Articulating Bracket 
Hana® Arm Board with Pad (1 or 2) 	Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 

8.6 Retrograde IM Femoral Nailing: Supine with Unilateral Skin Traction



* Item not shown.

Figure 64: Table Setup for Retrograde IM Femoral Nailing, Supine Position with Unilateral Skin Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. Ensure that the Jack Mount Assembly is installed. Attach the appropriate Femur Lift Assembly (right or left) to the operative side of the table.
3. Attach the appropriate left or right Hana® Radiolucent Lift-Assisted Spar on the operative side of the table and lock in place.
4. Plug the Femur Lift Foot Pedal into the front of the base of the table. Ensure that the Femur Lift Assembly is in its lowest position.
5. Place the Pelvic Pad on the table.
6. Attach an Accessory Clamp to the operative side Spar near the Foot-End with the receiver on the non-operative side of the table.
7. Insert the Tibial Traction Unit Upright into the Accessory Clamp from the bottom with the Traction Unit Receiver facing the operative side of the table.
8. Attach the Traction Unit to the Tibial Traction Upright.
9. Attach the Traction Foot Plate Assembly to the Traction Unit.
10. Slide the Patient Safety Strap in place.

11. Attach the optional Hana® Patient Transfer Board.
12. Adjust the table to the appropriate height for patient transfer from the stretcher.
13. Ensure that the Lift-Assisted Spar is locked, and transfer the patient to the table in the supine position and secure with the Patient Safety Strap.
14. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.
15. Attach the optional Lateral Perineal Post to the Femur Lift Assembly using the Mount Bracket for the Lateral Perineal Post and position the patient's leg over the Lateral Perineal Post.

WARNING: It is important that the Lateral Perineal Post be placed against the distal femur, two to three inches proximal to the popliteal fossa. Placement of the post into the fossa may result in a potential neurological or circulatory injury.

16. Ensure that the Lift-Assisted Spar is locked, and secure the patient's operative foot to the Traction Foot Plate Assembly.

NOTE: *Before making any height adjustments to the Lateral Perineal Post using the Femur Lift Assembly, be sure to remove the operative foot from the Traction Foot Plate Assembly. Once height adjustments have been made, re-secure the foot to the Traction Foot Plate Assembly.*

17. Attach the Well Leg Support Adapter to the Spar Mount on the non-operative side of the table and lock into position.
18. Attach the Well Leg Support Assembly to the Well Leg Support Adapter using the Articulating Bracket and secure the patient's non-operative leg.
19. Install a Hana® Arm Board with pad to both left and right sides of the table and position patient's arms out to the side, or attach one Hana® Arm Board with Pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table, and secure the patient's arms.
20. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
21. Trial position the C-arm unit.



Figure 65: Patient Positioned for Retrograde IM Femoral Nailing, Supine Position with Unilateral Skin Traction

Components for Retrograde IM Femoral Nailing, Supine with Unilateral Skin Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left or Right 	Femur Lift Assembly (Left or Right) 
Femur Lift Foot Pedal 	Pelvic Pad 	Accessory Clamp *(Optional)* 
Tibial Traction Upright *(Optional)* 	Traction Unit *(Optional)* 	Traction Foot Plate Assembly *(Optional)* 

Components for Retrograde IM Femoral Nailing, Supine with Unilateral Skin Traction *(Continued)*		
Patient Safety Strap 	Hana® Patient Transfer Board *(Optional)* 	Perineal Post 
Lateral Perineal Post *(Optional)* 	Lateral Perineal Post Adapter *(Optional)* 	Well Leg Support Adapter 
Well Leg Support Assembly 	Articulating Bracket 	Hana® Arm Board with Pad (1 or 2) 
Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 	

8.7 Hip Pinning: Supine With Unilateral Skin Traction

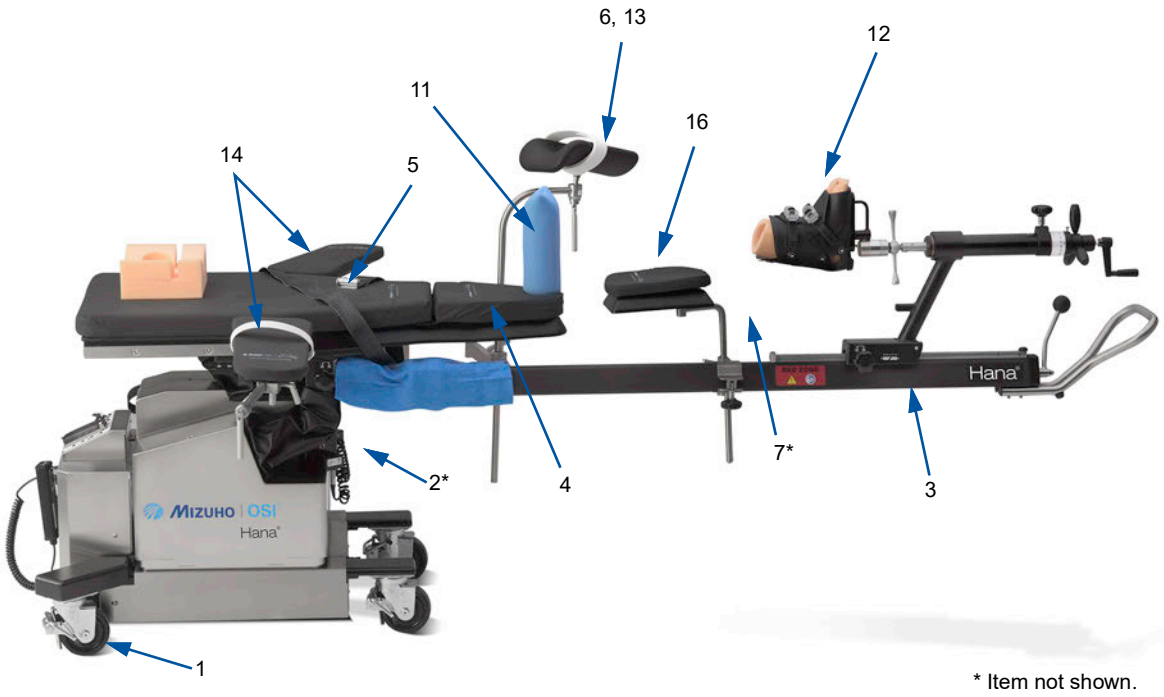


Figure 66: Table Setup for Right Hip Pinning, Supine Position with Unilateral Skin Traction

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach the Hana® Radiolucent Lift-Assisted Spar (left or right) to the operative side of the table and lock in place.
4. Place the Pelvic Pad on the table.
5. Slide the Patient Safety Strap in place.
6. Attach the Well Leg Support Adapter into the Spar Mount on the non-operative side of the table and lock into position.
7. Attach the optional Hana® Patient Transfer Board.
8. Adjust the table to the appropriate height for patient transfer from the stretcher.
9. Put the appropriate size Traction Boot (small, large, or optional extra-large) on the patient's operative foot while the patient is on the stretcher.
10. Ensure that the Lift-Assisted Spar is locked, and transfer the patient to the table in the supine position.

11. Insert the padded Perineal Post, move the patient to establish firm contact with the Perineal Post, and then secure the patient with the Patient Safety Strap.
12. Ensure that the Lift-Assisted Spar is locked, and place the Traction Boot on the patient's operative foot into the traction mount on the Spar.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

13. Attach the Well Leg Support Assembly to the Well Leg Support Adapter using the Articulating Bracket, and secure the patient's non-operative leg.
14. Install a Hana® Arm Board with pad to both right and left sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
15. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
16. If desired, attach the optional Lower Leg Support to the Spar using an Accessory Clamp and lock it into place. Pad and secure the patient's operative leg.
17. If desired, install the optional Head-End and Foot-End Drape Rod Assemblies, and suspend the Patient Isolation Drapes.

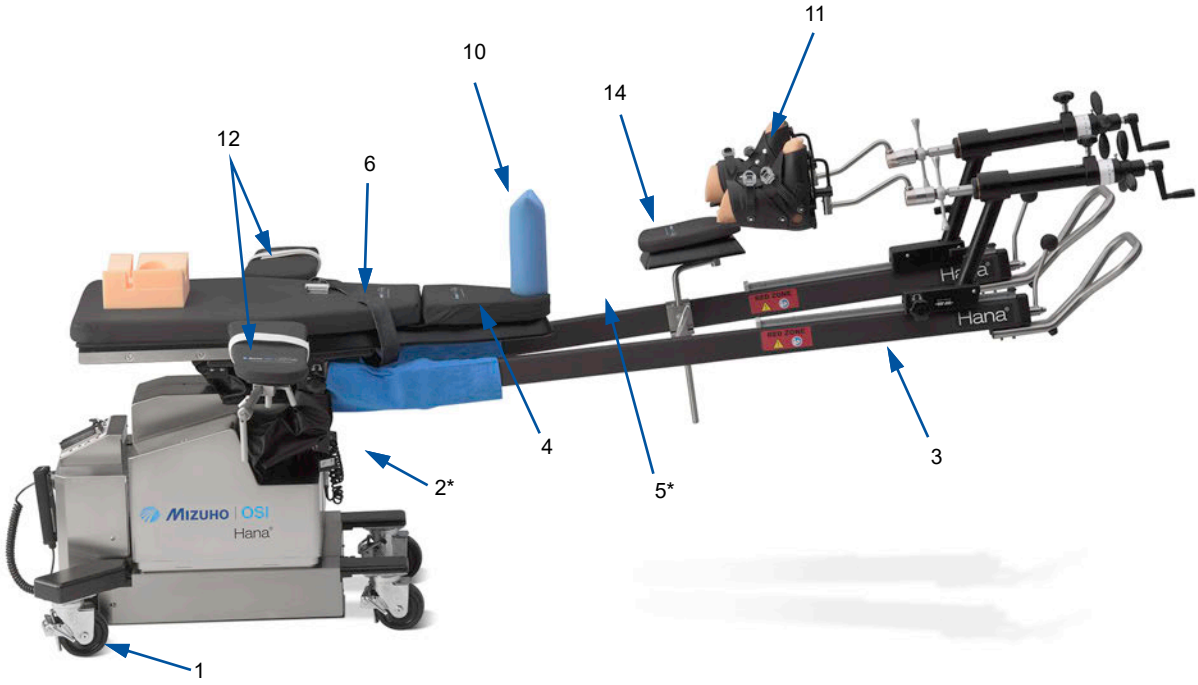


Figure 67: Patient Positioned for Right Hip Pinning, Supine Position with Unilateral Skin Traction

Components for Hip Pinning, Supine Position with Unilateral Skin Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left or Right 	Pelvic Pad 
Patient Safety Strap 	Well Leg Support Adapter 	Hana® Patient Transfer Board *(Optional)* 
Traction Boot (Left or Right), Large or Small 	Perineal Post 	Traction Hook Extender 
Well Leg Support Assembly 	Articulating Bracket 	Hana® Arm Board with Pad (1 or 2) 
Cross Arm Support *(Optional)* 	Clark Socket 	Lower Leg Support *(Optional)* 

Components for Hip Pinning, Supine Position with Unilateral Skin Traction *(Continued)*		
Accessory Clamp *(Optional)*	Head-End Drape Rod Assembly *(Optional)*	Foot-End Drape Rod Assembly *(Optional)*
		

8.8 Hip Pinning: Supine With Bilateral Skin Traction



* Item not shown.

Figure 68: Table Setup for Hip Pinning with Bilateral Skin Traction, Supine Position

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

NOTE: *The Hana® Distraction Pad may be used instead of or in conjunction with the Perineal Post for this setup. Refer to the Instructions for Use provided with the Pad for details on proper use and handling.*

1. Ensure all four (4) Casters are in the locked position.

2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Attach both left and right Hana® Radiolucent Lift-Assisted Spars to the table and lock in place.
4. Place the Pelvic Pad on the table.
5. Attach the optional Hana® Patient Transfer Board.
6. Slide the Patient Safety Strap in place.
7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Put the appropriate size Traction Boots (small, large, or optional extra-large) on the patient's feet while the patient is on the stretcher.
9. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position.
10. Insert the padded Perineal Post, move the patient to establish firm contact with the Perineal Post, and then secure with the Patient Safety Strap.
11. Ensure that both Lift-Assisted Spars are locked, and attach the Traction Boots to the Traction Mounts on the Spars and lock in place.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

12. Install a Hana® Arm Board with pad to both right and left sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
13. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
14. If desired, attach the optional Lower Leg Support to the operative or non-operative Spar using an Accessory Clamp and lock in place.
15. Trial position the C-Arm.
16. If desired, install the optional Head-End and Foot-End Drape Rod Assemblies, and suspend the Patient Isolation Drapes.



Figure 69: Patient Positioned for Hip Pinning, Supine, with Bilateral Skin Traction

Components for Hip Pinning, Supine, with Bilateral Skin Traction		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Hana® Patient Transfer Board *(Optional)* 	Patient Safety Strap 	Traction Boot (Pair), Large or Small 
Perineal Post 	Traction Hook Extender 	Hana® Arm Board with Pad (1 or 2) 
Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 	Lower Leg Support *(Optional)* 
Accessory Clamp *(Optional)* 	Head-End Drape Rod Assembly *(Optional)* 	Foot-End Drape Rod Assembly *(Optional)* 

8.9 Anterior Approach Total Hip Arthroplasty

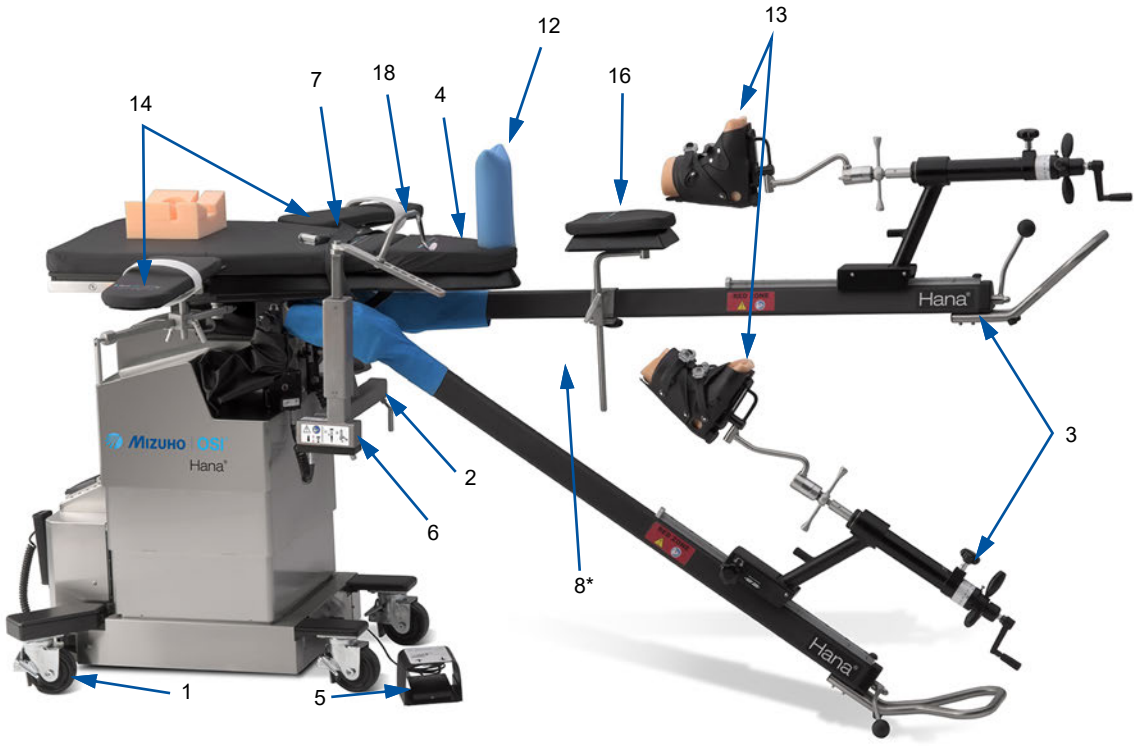


Figure 70: Table Setup for Anterior Approach Right Total Hip Arthroplasty

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

NOTE: *Femoral Hook Support Assembly and appropriate Femoral Hook need to be sterilized before use during the surgery (see Section 10.2.2 and Section 10.2.1). These items attach to the top of the appropriate Femur Lift Assembly.*

NOTE: *The Hana® Distraction Pad may be used instead of or in conjunction with the Perineal Post for this setup. Refer to the Instructions for Use provided with the Pad for details on proper use and handling.*

1. Ensure all four (4) Casters are in the locked position.
2. Ensure that the Jack Mount Assembly is installed.
3. Ensure that both the left and right Hana® Radiolucent Lift-Assisted Spars are attached to the table and locked in place.
4. Place the Pelvic Pad on the table.

5. Plug the Femur Lift Foot Pedal into the front of the base of the table.
6. Insert the appropriate Femur Lift Assembly (left or right) on the operative side of the table and attach the Coiled Hook Motor Cable. Using the Foot Pedal, adjust the Femur Lift Assembly to its lowest position.
7. Slide the Patient Safety Strap in place.
8. Attach the optional Hana® Patient Transfer Board.
9. Adjust the table to the appropriate height for patient transfer from the stretcher.
10. Put the appropriate size Traction Boots (large, small, or optional extra-large) on the patient's feet while the patient is on the stretcher.
11. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position.
12. Insert the padded Perineal Post. Move the patient to establish firm contact with the Perineal Post and secure with the Patient Safety Strap.
13. Ensure that both Lift-Assisted Spars are locked, and attach the Traction Boots to the appropriate Traction Mount on the Spars.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

14. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
15. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
16. If desired, attach the optional Lower Leg Support to the non-operative Spar using an Accessory Clamp and lock in place. Secure the patient's non-operative leg.
17. Trial position the C-arm unit on the non-operative side of table.
18. Attach sterilized Femoral Hook Support and Femoral Hook during surgical procedure.



Figure 71: Patient Positioned for Anterior Approach Right Total Hip Replacement

Components for Anterior Approach Total Hip Replacement		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Femur Lift Foot Pedal 	Femur Lift Assembly 	Patient Safety Strap 
Hana® Patient Transfer Board *(Optional)* 	Traction Boot (Pair), Large or Small 	Perineal Post 
Traction Hook Extender (2) 	Hana® Arm Board with Pad (2) 	Cross Arm Support *(Optional)* 
Clark Socket *(Optional)* 	Lower Leg Support *(Optional)* 	Accessory Clamp *(Optional)* 
Femoral Hook Support 	Femoral Hooks 	

8.10 Hip Arthroscopy

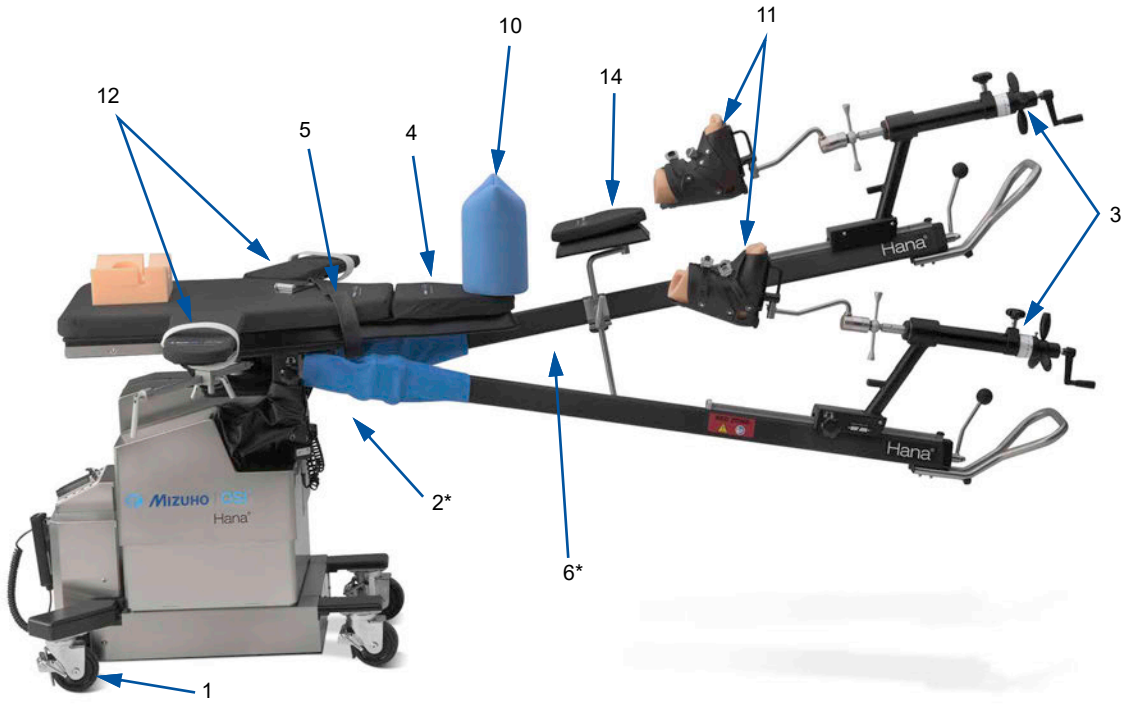


Figure 72: Table Setup for Hip Arthroscopy

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

NOTE: *The Hana® Distraction Pad may be used instead of or in conjunction with the Perineal Post for this setup. Refer to the Instructions for Use provided with the Pad for details on proper use and handling.*

1. Ensure all four (4) Casters are in the locked position.
2. If the optional Hana® Patient Transfer Board is to be used, ensure that the Jack Mount Assembly is installed.
3. Ensure that both the left and right Hana® Radiolucent Lift-Assisted Spars are attached to the table and locked in place.

NOTE: *Optionally, the non-operative leg may be supported using the Well Leg Support Assembly instead of the Hana® Radiolucent Lift-Assisted Spar.*

4. Place the Pelvic Pad on the table.
5. Slide the Patient Safety Strap in place.
6. Attach the optional Hana® Patient Transfer Board.

7. Adjust the table to the appropriate height for patient transfer from the stretcher.
8. Put the appropriate size Traction Boots (large, small, or optional extra-large) on the patient's feet while the patient is on the stretcher.

NOTE: *If the Well Leg Support Assembly is being used, do not put a Traction Boot on the non-operative foot.*

9. Ensure that both Lift-Assisted Spars are locked, and transfer the patient to the table in the supine position.
10. Insert the Large Diameter Perineal Post. Move the patient to establish firm contact with the Perineal Post and secure with the Patient Safety Strap.
11. Ensure that both Lift-Assisted Spars are locked, and attach the Traction Boots to the appropriate Traction Mount on the Spars.

NOTE: *If the patient is short in stature and the Traction Brake Cover enters the Red Zone, the installation and use of the Traction Hook Extender is required. See Section 6.5 for more information.*

12. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side, or attach one Hana® Arm Board with pad and the optional Cross Arm Support using a Clark Socket to the non-operative side of the table. Secure the patient's arms.
13. Remove the optional Hana® Patient Transfer Board by sliding it out from underneath the fully positioned patient.
14. If desired, attach the optional Lower Leg Support to the non-operative LIft-Assisted Spar using an Accessory Clamp and lock in place. Secure the patient's non-operative leg.
15. Trial position the C-arm unit on the non-operative side of the table.



Figure 73: Patient Positioned for Hip Arthroscopy

Components for Hip Arthroscopy		
Jack Mount Assembly 	Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 
Patient Safety Strap 	Hana® Patient Transfer Board *(Optional)* 	Traction Boot (Pair), Large or Small 
Large Diameter Perineal Post 	Traction Hook Extender (2) 	Hana® Arm Board with Pad (2) 
Cross Arm Support *(Optional)* 	Clark Socket *(Optional)* 	Lower Leg Support *(Optional)* 
Accessory Clamp *(Optional)* 		

8.11 Total Knee Arthroplasty (with Well Leg Support Assembly)

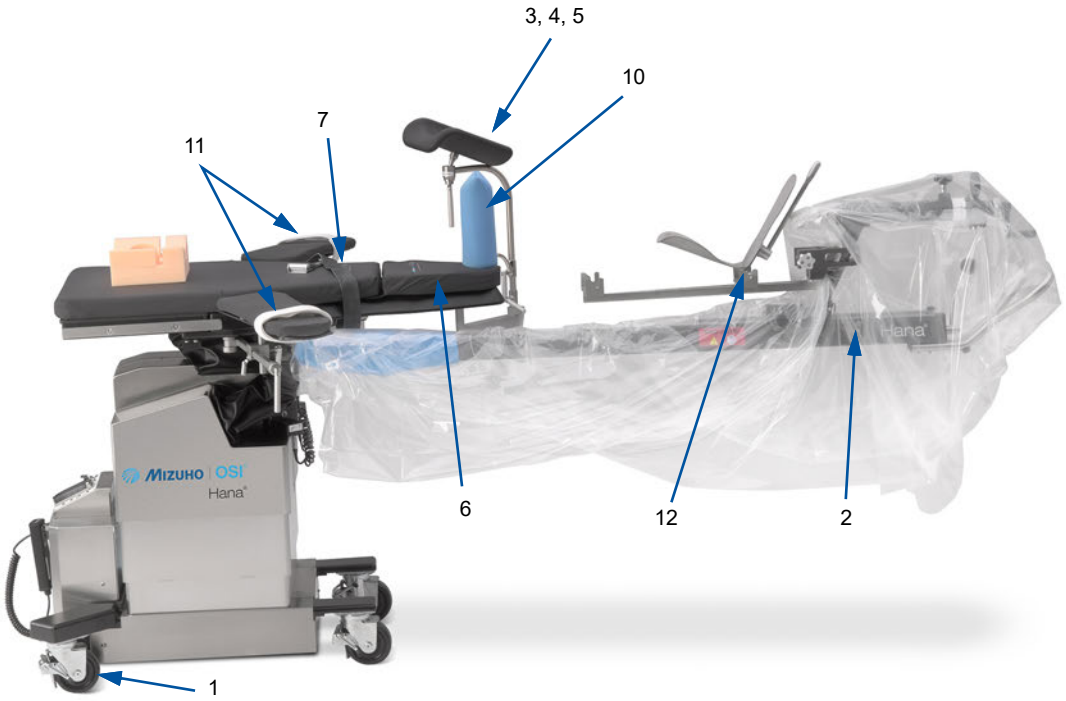


Figure 74: Table Setup for Total Knee Arthroplasty (with Well Leg Support Assembly)

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

NOTE: *The optional Knee Flexion System® must be sterilized before use in surgery (see Section 10.2.3).*

1. Ensure all four (4) Casters are in the locked position.
2. If not already in place, attach the appropriate left or right Hana® Radiolucent Lift-Assisted Spar to the operative side of the table and lock in place.
3. Attach the Well Leg Support Adapter to the non-operative side of the table and lock in place.
4. Attach the Articulating Bracket to the Well Leg Support Adapter and tighten securely.
5. Insert the Well Leg Support Assembly into the Articulating Bracket and tighten securely.
6. Place the Pelvic Pad on the table. If extra support is desired, slide the optional Lateral Board Assembly (without Lateral Perineal Post) on the table instead.
7. Slide the Patient Safety Strap in place.
8. Adjust the table to the appropriate height for patient transfer from the stretcher.
9. Ensure that the Lift-Assisted Spar is locked, and transfer the patient to the table in the supine position, place the non-operative leg in the Well Leg Support Assembly, and then secure the patient with Patient Safety Strap.

10. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.
11. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side. Secure the patient's arms.
12. Drape the operative side Hana® Radiolucent Lift-Assisted Spar and attach the sterilized optional Knee Flexion System® to the Spar.
13. Ensure that the Lift-Assisted Spar is locked, place the operative foot on the Foot Plate of the Knee Flexion System® and secure according to surgeon protocol.



Figure 75: Patient Positioned for Total Knee Arthroplasty (with Well Leg Support Assembly)

Components for Total Knee Arthroplasty, with Well Leg Support Assembly		
Hana® Radiolucent Lift-Assisted Spar, Left or Right 	Well Leg Support Adapter 	Articulating Bracket 
Well Leg Support Assembly 	Pelvic Pad 	Lateral Board (*Optional*) 
Patient Safety Strap 	Perineal Post 	Hana® Arm Board with Pad (2) 
Hana® Knee Flexion System® (*Optional*) 		

8.12 Total Knee Arthroplasty (with Left and Right Lift-Assisted Spars)

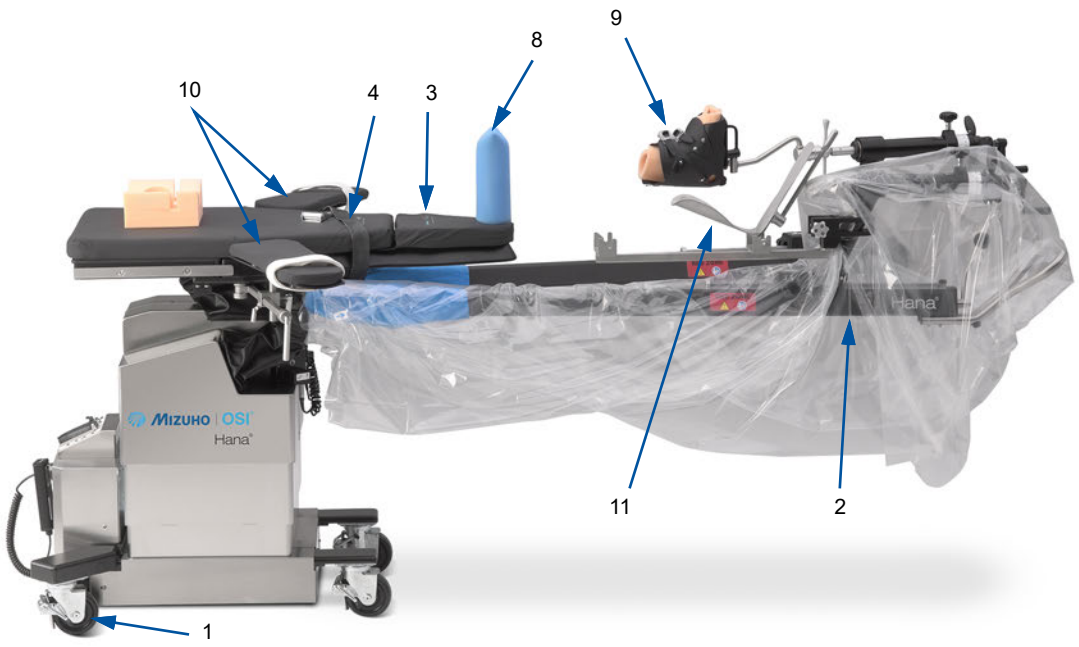


Figure 76: Table Setup for Total Knee Arthroplasty (with Left and Right Lift-Assisted Spars)

NOTE: *Each number in the setup image identifies the component(s) described in the corresponding step in the following setup instructions.*

NOTE: *The optional Knee Flexion System® must be sterilized before use in surgery (see Section 10.2.3).*

1. Ensure all four (4) Casters are in the locked position.
2. Attach both the left and right Hana® Radiolucent Lift-Assisted Spars to the table and lock in place.
3. Place the Pelvic Pad on the table. If extra support is desired, slide the optional Lateral Board Assembly (without Lateral Perineal Post) on the table instead.
4. Slide the Patient Safety Strap in place.
5. Adjust the table to the appropriate height for patient transfer from the stretcher.
6. Put the appropriate size Traction Boot (small, large, or optional extra-large) on the patient's non-operative foot while the patient is on the stretcher.
7. Ensure that both Lift-Assisted Spars are locked, transfer the patient to the table in the supine position and secure the patient with the Patient Safety Strap.
8. Insert the padded Perineal Post into the table. Move the patient to establish firm contact with the Perineal Post and adjust the Patient Safety Strap as appropriate.

9. Ensure that the non-operative Lift-Assisted Spar is locked, and attach the Traction Boot on the non-operative leg to the Traction Mount on the non-operative Spar.
10. Install a Hana® Arm Board with pad to both left and right sides of the table and position the patient's arms out to the side. Secure the patient's arms.
11. Drape the operative Lift-Assisted Spar and attach the sterilized optional Knee Flexion System® to the operative Spar.
12. Ensure that the operative Lift-Assisted Spar is locked, place the operative foot on the Foot Plate of the Knee Flexion System® and secure according to surgeon protocol.



Figure 77: Patient Positioned for Total Knee Arthroplasty (with Left and Right Lift-Assisted Spars)

Components for Total Knee Arthroplasty, with Left and Right Lift-Assisted Spars		
Hana® Radiolucent Lift-Assisted Spar, Left and Right 	Pelvic Pad 	Lateral Board (*Optional*) 
Patient Safety Strap 	Traction Boot (Left or Right), Large or Small 	Perineal Post 
Hana® Arm Board with Pad (2) 	Hana® Knee Flexion System® (*Optional*) 	

8.13 Removing Patient from Table (Post-Procedure)



Figure 78: Patient Secured to Table

The following sequence is suggested for safely transferring the patient from the table at the conclusion of the procedure.

NOTE: *The components in use may vary depending on which procedure was performed.*

WARNING: Keep the Patient Safety Strap secured until the team is positioned for transferring the patient from the table to the gurney.

1. Remove the drapes.
2. Remove Femur Lift, Femoral Hook Support, and Femoral Hook (if used).
3. Optional: Attach the Hana® Patient Transfer Board (see Section 9.3.1).

NOTE: *With a patient on the table using two Lift-Assisted Spars, the Spars may first need to be abducted 10° to 20° each so that the Hana® Patient Transfer Board can be inserted between the Spars and the patient's legs.*

NOTE: *If Well Leg Support is used, move it as needed to allow room for Hana Patient Transfer Board installation.*

4. Adjust the table to the appropriate height for patient transfer to the gurney.

WARNING: When the patient is no longer secured to the table, assign at least one attendant to support the patient until safely transferred to the gurney.

5. Remove the Arm Straps and tuck the patient's arms along the torso.
6. Remove the Arm Board on the side towards the gurney.
7. Remove the Traction Boots (if used) from the mounts.
8. If using the Patient Transfer Board, rest patient's legs on the Transfer Board.
9. If not using the Patient Transfer Board, assign one attendant to support the patient's legs until ready to transfer the patient to the gurney.
10. If the patient is snug against a Perineal Post, loosen the Patient Safety Strap as needed and slide the torso superior along the table to relax any tension.
11. Remove the Perineal Post (if used).
12. Remove the Patient Safety Strap.
13. Transfer the patient to the gurney.
14. Once patient is on the gurney, remove the Traction Boots (if used) from the patient.

9 Optional Accessories

9.1 Hana® Table Optional Fracture Kit Components

The Hana® Table Fracture Kit, REF 6875-2761, includes the following components used for various Orthopedic fracture surgical setups:

Table 9: Optional Fracture Kit Components

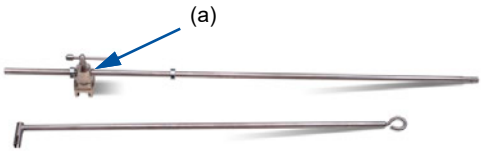
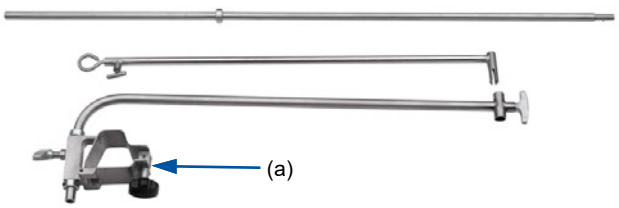
Component	Description
REF 6875-2740 Hana® Patient Transfer Board with Pad 	The Hana® Patient Transfer Board attaches to the Foot-End of the table and provides additional support for the patient's legs during patient transfer. Once the patient is completely secured as described in the appropriate setup instructions, the Hana® Patient Transfer Board is removed. The Hana® Patient Transfer Board comes with a 3-inch (7.6 cm) Tempur-Pedic® Medical Pad. This optional accessory may also be ordered separately.
REF 6875-747 Head-End Drape Rod Assembly  **(a) Modified Clark Socket**	If Patient Isolation Drapes are to be used, they can be supported on both Head-End and Foot-End Drape Rod Assemblies. The Head-End Drape Rod Assembly includes a Modified Clark Socket to facilitate attachment to the side rail at the Head-End of the table.
REF 6875-750 Foot-End Drape Rod Assembly  **(a) Attachment Clamp Assembly**	If Patient Isolation Drapes are to be used, they can be supported on both Head-End and Foot-End Drape Rod Assemblies. The Foot-End Drape Rod Assembly includes an Attachment Clamp Assembly to facilitate attachment to the Lift-Assisted Spar at the Foot-End of the table.

Table 9: Optional Fracture Kit Components *(Continued)*

Component	Description
REF **6850-180 Mount Bracket for Lateral Perineal Post** 	This Mount Bracket attaches and secures to the Femur Lift Assembly, and allows mounting of the Lateral Perineal Post (also included in this kit), which can be used in IM Femoral and Tibial Nailing surgical procedures.
REF **6850-400 Lateral Perineal Post** 	The Lateral Perineal Post attaches to the Femur Lift Assembly through the use of the Mount Bracket for Lateral Perineal Post (also included in this kit). It can be used to provide counter-traction in IM Femoral and Tibial Nailing surgical procedures. The Perineal Post is 15 inches long (38.1 cm) and has a 2.75-inch (7 cm) diameter with pad.
REF **6850-114 Traction Device Hook** 	The Traction Device Hook attaches to the Traction Mount on the Spar and may be used in procedures requiring skeletal traction.

9.2 Hana® Table Recommended Optional Accessories

Table 10: Recommended Optional Accessories

Accessory	Description
REF **6875-2740 Hana® Patient Transfer Board** 	The Hana® Patient Transfer Board attaches to the Foot-End of the table and provides additional support for the patient's legs during patient transfer. Once the patient is completely secured as described in the appropriate setup instructions, the Hana® Patient Transfer Board is removed. The Hana® Patient Transfer Board comes with a 3-inch (7.6 cm) Tempur-Pedic® Medical Pad. This optional accessory is also available as part of the Hana® Table Fracture Kit. See Section 9.1 for more information on the kit.
REF **3369 Large Diameter Perineal Post** 	The Large Diameter Perineal Post provides counter-traction, while the urethane foam pad helps relieve pressure on the perineal area. It may be used in place of the Adult Perineal Post that comes standard with the table, if desired. The Perineal Post is 9 inches long (22.8 cm) and has a 6-inch (15.2 cm) diameter with pad. Disposable 6-inch perineal post covers are available (see Section 7.2).
REF **6850-420 3-inch Extended Perineal Post** 	The 3-inch Extended Perineal Post provides counter-traction, while the urethane foam pad helps relieve pressure on the perineal area. It may be used in place of the Adult Perineal Post that comes standard with the table, if desired. The Extended Perineal Post is 14 inches long (35.5 cm) and has a 3-inch (7.6 cm) diameter with pad.

Table 10: Recommended Optional Accessories *(Continued)*

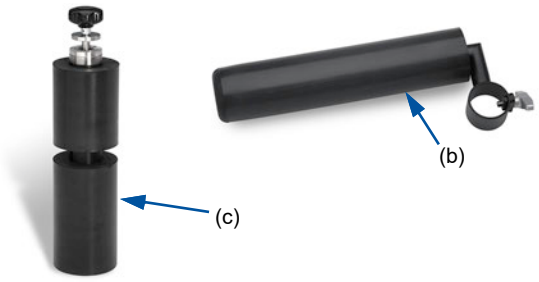
Accessory	Description
REF 3368 3-inch Shortened Perineal Post 	The 3-inch Shortened Perineal Post provides counter-traction while the urethane foam pad helps relieve pressure on the perineal area. It may be used in place of the Adult Perineal Post that comes standard with the table, if desired. The Shortened Perineal Post is 6 inches long (15.2 cm) and has a 2.75-inch (7 cm) diameter with pad.
REF 6875-250 Lateral Perineal Post and Board   **(a) REF 5855-309 Lateral Pad Assembly** **(b) REF 5855-137 Lateral Perineal Post Assembly** **(c) REF 5855-242 Ilium Post Assembly**	The Lateral Perineal Post provides counter-traction when the patient is in the lateral decubitus position. The padded board supports the patient's pelvis when in the lateral decubitus position on the Hana® Table.
REF 5857 Cross Arm Support with Pad 	The Cross Arm Support may be mounted onto the Hana® Table using a Clark Socket to support the patient's arm over his or her chest. This accessory comes with a one-inch (2.5 cm) Tempur-Pedic® Medical Pad.

Table 10: Recommended Optional Accessories *(Continued)*

Accessory	Description
REF **5393 Clark Socket** 	The Clark Socket attaches to the side rail of the Hana® Table to facilitate attachment of additional accessories, including the Cross Arm Support.
REF **6300-93 90 Degree Pin and Wire Holder, Ovation** 	The 90 Degree Pin and Wire Holder attaches to the Traction Mount on the Spar with the ProFx® Traction Boot Adapter Assembly and may be used in procedures requiring skeletal traction.
REF **5862 Kirschner Bow Holder** 	The Kirschner Bow Holder attaches to the Traction Mount on the Spar with the ProFx® Traction Boot Adapter Assembly and may be used in procedures requiring skeletal traction.
REF **6850-27 ProFx® Traction Boot Adapter Assembly** 	The ProFx® Traction Boot Adapter Assembly attaches to the Traction Mount on the Spar to facilitate attachment of the Kirschner Bow Holder and 90 Degree Pin and Wire Holder for procedures requiring skeletal traction.
REF **5855-411 Tibia Traction Upright** 	The Tibia Traction Upright attaches to the Hana® Radiolucent Lift-Assisted Spar near the Foot-End and supports the Traction Unit. It can be used during IM Femoral Nailing procedures.
REF **5855-345 Traction Unit** 	The Traction Unit attaches to the Tibia Traction Upright and provides fine traction adjustment. The Traction Foot Plate Assembly can be attached directly to the Traction Unit. The Traction Boot can be attached to the Traction Unit with the Tibial Traction Boot Adapter.

Table 10: Recommended Optional Accessories *(Continued)*

Accessory	Description
REF 5855-440 Traction Foot Plate Assembly 	The Traction Foot Plate Assembly can be used to secure the patient's foot to the Traction Unit.
REF 6850-487 Traction Boot, Extra-Large Pair  **REF FE00388 Boot Liners, Extra-Large Pair**	The Traction Boots secure the patient's feet to the Lift-Assisted Spars for procedures requiring skin traction. The optional Extra-Large size is available for use on patients when the standard sizes do not fit. The standard black boot liners can be replaced. In addition, disposable boot liners are available (see Section 7.2).
REF 6850-25 Tibial Traction Boot Adapter 	The Tibial Traction Boot Adapter attaches to the Traction Unit to facilitate attachment of the Traction Boot.
REF 6850-170 Lower Leg Support 	The Lower Leg Support attaches to the Hana® Radiolucent Lift-Assisted Spar with an Accessory Clamp. It can be used to provide additional support for the patient's operative leg. This accessory comes with a one-inch (2.5 cm) Tempur-Pedic® Medical Pad.

Table 10: Recommended Optional Accessories *(Continued)*

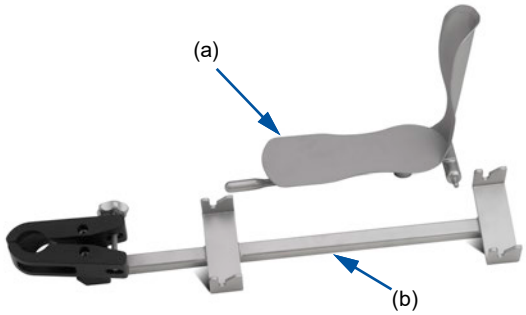
Accessory	Description
REF **5855-61 Accessory Clamp** 	The Accessory Clamp attaches to the Hana® Radiolucent Lift-Assisted Spar, allowing various accessories to be mounted.
REF **6875-230 Hana® Knee Flexion System®**  **(a)** REF **6875-209 Knee Flexion Footplate Assembly** **(b)** REF **6875-208 Knee Flexion Base Assembly**	The Hana® Knee Flexion System® is designed to mount on the operative Lift-Assisted Spar to support and position the leg as needed during Total Knee Arthroplasty (TKA). It allows for full flexion/ extension of the leg and knee, as well as internal/ external rotation of the foot.
REF **6875-500 Hana® Equipment Cart** 	The Hana® Equipment Cart may be used to store Hana® Table components and accessories when not in use.

Table 10: Recommended Optional Accessories *(Continued)*

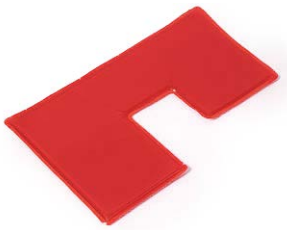
Accessory	Description
REF 6950 Tempur-Pedic® Medical Positioning Pad Set, 6-piece  **(a) REF 6950-01 Tempur-Pedic® Medical Knee Block A** **(b) REF 6950-02 Tempur-Pedic® Medical Knee Block B** **(c) REF 6950-03 Tempur-Pedic® Medical Basic Roll** **(d) REF 6950-04 Tempur-Pedic® Medical Spinal Wedge** **(e) REF 6950-05 Tempur-Pedic® Medical Cradle Block** **(f) REF 6950-06 Tempur-Pedic® Medical Rectangular Pad**	This 6-piece pad set includes two knee blocks, a basic roll, a spinal wedge, a cradle block and a rectangular pad to assist with patient positioning.
REF 10706 Orange Aid® Universal Traction Boot Liner 	This reusable Traction Boot liner may be used with all sizes of Traction Boots available with the Hana® Table. The liner helps cushion the patient's foot when inside the Traction Boot.
REF 10704 Orange Aid® Universal Perineal Post Pad 	This reusable 11" x 9" x 3/8" (27.9 x 22.9 x 0.95 cm) pad helps prevent potential pressure complications when used with standard and optional perineal posts available for the Hana® Table. The pad is not compatible with the optional Large Diameter Perineal Post.
REF 6855DP-5 Hana® Distraction Pad (5 per case) 	The Hana® Distraction Pad is designed to provide a safe Post-free method of supine patient positioning for patients undergoing anterior approach hip arthroplasty, hip arthroscopy, or bilateral skin traction surgical procedures on the Hana® Orthopedic Surgery Table. This product is single use only. **NOTE:** *This product is not currently CE marked.*

Table 10: Recommended Optional Accessories *(Continued)*

Accessory	Description
REF **901 Halftrack™ Roller Board** 	This optional Roller Board may be used to facilitate patient transfer from gurney to surgery table.
REF **6855SDK-6 Hana® Sterile Drape Kit (case of 6)**	The Hana® Sterile Drape Kit is specifically designed for use on the Hana® Table during Anterior Approach Total Hip Arthroplasty. It contains two clear rectangular drapes, and two U-drapes designed to accommodate the Femur Lift and Femoral Hook components of the Hana® Table. **NOTE:** *This product is not currently CE marked.*
REF **5858 Patient Isolation Drape (case of 12)**	Patient Isolation Drapes are available for use, if desired. These disposable accessories are single-use-only. See Section 7.2 for reorder information. **NOTE:** *This product is not currently CE marked.*

9.3 Hana® Patient Transfer Board Assembly

The Hana® Patient Transfer Board is designed to work with the Jack Mount Assembly to provide a large surface to aid in transferring a patient to and from the Hana® Table.

CAUTION: The Hana® Patient Transfer Board is not intended to work as a surgical platform. It should be removed prior to surgery to avoid interference with operation of the Lift-Assisted Spars and other equipment used during the surgery.

The Hana® Patient Transfer Board may be installed and removed under the following conditions:

- With the Lift-Assisted Spars either on the table or off the table
- With one Lift-Assisted Spar and Well Leg Support Assembly installed
- With or without the Femur Lift Assembly installed
- With the Lateral Board and Lateral Perineal Post installed
- With or without a patient on the table in any of the above setup situations

NOTE: *With a patient on the table using two Lift-Assisted Spars, the Spars may need to be abducted 10° to 20° each so that the Hana® Patient Transfer Board can be removed from between the Spars and the patient's legs.*



Figure 79: Patient on the Table and Hana® Patient Transfer Board Ready for Removal

9.3.1 Installing the Hana® Patient Transfer Board on the Table

To install the optional Hana® Patient Transfer Board:

1. Make sure the Jack Mount Assembly is securely attached to the table (see Section 6.8).
2. Remove the 3-inch (7.6-cm) Tempur-Pedic® pad from the Hana® Patient Transfer Board.
3. Hold the Hana® Patient Transfer Board by the hard plastic top and guide the long arms into the guide fins on the Jack Mount Assembly.

   The Hana® Patient Transfer Board will stop when the small bolt on the bottom of the long arms contacts the front of the guide fin. When fully installed, there should be a slight gap between the Hana® Patient Transfer Board and the table top.



Figure 80: Hana® Patient Transfer Board Ready to Install

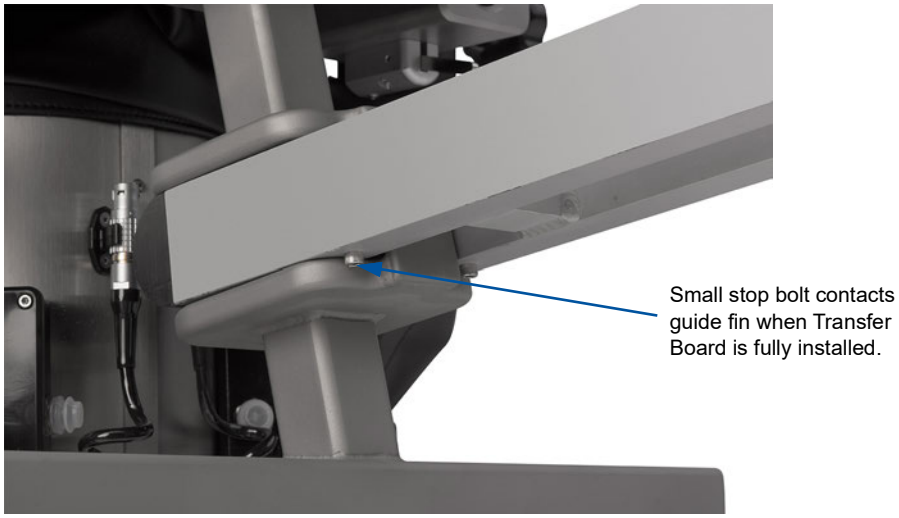


Figure 81: Stop Bolt on Hana® Patient Transfer Board in Contact with Guide Fin

NOTE: *A second person may assist with proximal positioning of the Hana® Patient Transfer Board, as needed.*

4. Replace the 3-inch (7.6-cm) Tempur-Pedic® pad onto the Hana® Patient Transfer Board.

NOTE: *The pads may be slightly out of alignment when the Hana® Patient Transfer Board is installed.*



Figure 82: Hana® Patient Transfer Board Installed

9.3.2 Removing the Hana® Patient Transfer Board from the Table

To remove the Hana® Patient Transfer Board:

1. Remove the 3-inch (7.6-cm) Tempur-Pedic® pad from the Hana® Patient Transfer Board.
2. Grasp the Hana® Patient Transfer Board by the hard plastic top and pull distally and slightly upward.



Figure 83: Removing the Hana® Patient Transfer Board

9.4 Lateral Perineal Post and Board Assembly

The optional Lateral Perineal Post and Board Assembly are used when the patient will be in the lateral decubitus position on the Hana® Table. The Lateral Board supports the patient's pelvis and the Lateral Perineal Post provides counter-traction as needed.

To attach the optional Lateral Perineal Post and Board Assembly:

1. Align the board holders on the Lateral Board around the left and right edges of the Foot-End of the table top.
2. Slide the Lateral Board toward the Head-End of the table until it abuts the main table pad (Figure 84). Ensure that the notch at the distal end of the pad aligns with the Perineal Post attachment hole.



Figure 84: Sliding Lateral Board in Place

3. Place the Lateral Board plug into the Perineal Post attachment hole on the table (Figure 85). This secures the Lateral Board in place at the distal end.



Figure 85: Lateral Board with Plug Inserted

4. Immediately after transferring the patient to the table and repositioning from the supine to the lateral decubitus position, slide the Lateral Perineal Post in place on the side notch of the Lateral Board on the patient's anterior side.

WARNING: After transferring the patient to the table, assign at least one attendant to support the patient until positioned laterally and safely secured to the table with the Patient Safety Strap and the Lateral Perineal Post.

5. Move the patient to establish firm contact with the Lateral Perineal Post and then secure patient with the Patient Safety Strap and the Lateral Perineal Post.

To remove the optional Lateral Perineal Post and Lateral Board Assembly:

1. After removing anything securing the patient's arms and legs to the table, remove the Patient Safety Strap and the Lateral Perineal Post.
2. Upon removal of the Lateral Perineal Post, immediately transfer the patient from the table to the stretcher.

WARNING: When the patient is no longer secured to the table, assign at least one attendant to support the patient until safely transferred to the stretcher.

3. Once the patient has been safely removed from the table, the Lateral Board Assembly may be removed. Remove the lateral board plug from the Perineal Post attachment hole and slide the Assembly off the table top.

9.5 Optional Lateral Perineal Post

The Lateral Perineal Post that is included in the Hana® Table Fracture Kit can be used during IM Tibial Nailing or Retrograde IM Femoral Nailing procedures. Since it is attached to the Femur Lift Assembly, it can be raised or lowered as needed during setup.

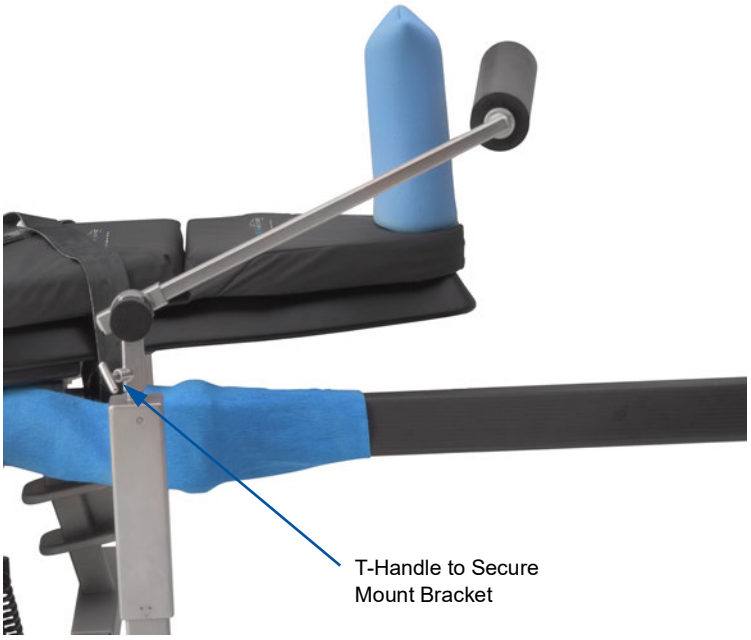


Figure 86: Lateral Perineal Post Installed on Femur Lift Assembly

To install the Lateral Perineal Post:

1. Ensure the Femur Lift Assembly is properly set up and powered, as described in Section 6.9.
2. Attach the Mount Bracket for the Lateral Perineal Post to the top of the Femur Lift Assembly. Rotate the lower T-Handle on the Mount Bracket to secure it to the Femur Lift Assembly (Figure 86).
3. Attach the Lateral Perineal Post to the Mount Bracket. Rotate the upper T-Handle on the Mount Bracket to secure the Lateral Perineal Post (Figure 87).
4. To adjust the angle of the Lateral Perineal Post:



Figure 87: Adjusting the Lateral Perineal Post

a. Rotate the Lock Knob on the Mount Bracket counterclockwise to loosen the two halves of the Mount Bracket (Figure 88).

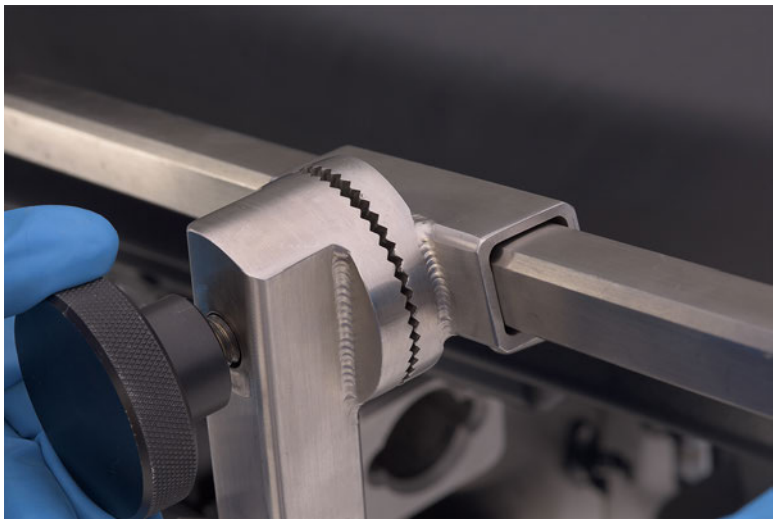


Figure 88: Lock Knob on Mount Bracket

b. Adjust the angle of the Lateral Perineal Post, as needed.

c. Rotate the Lock Knob on the Mount Bracket clockwise to secure in the new position.

WARNING: It is important that the Lateral Perineal Post be placed against the distal femur, two to three inches proximal to the popliteal fossa. Placement of the post into the fossa may result in a potential neurological or circulatory injury.

9.6 Cross Arm Support

To install the Cross Arm Support:

1. Mount a Clark Socket on the side rail of the Hana® Table.
2. Place the Cross Arm Support upright in the Clark Socket. Turn the Clar k Socket handle clockwise to secure the Cross Arm Support upright (Figure 89).



Figure 89: Cross Arm Support Mounted to Table with a Clark Socket

3. Insert the Cross Arm Support into the Cross Arm Support upright, and secure by turning the black knob clockwise.
4. Position the Cross Arm Support over, but not in contact with, the patient's chest.
5. Pad and secure the patient's arm to the Cross Arm Support.

9.7 Lower Leg Support



Figure 90: Lower Leg Support Assembly Secured to Spar

To attach the Lower Leg Support Assembly:

1. Slide the Accessory Clamp on the appropriate Hana® Radiolucent Lift-Assisted Spar with the black knob facing down and the receiver on the non-operative side of the table.
2. Rotate the black knob clockwise to secure the clamp in place.
3. Insert the Lower Leg Support Assembly in the Accessory Clamp.
4. Rotate the T-Handle on the clamp clockwise to secure the Leg Support Assembly in place.

9.8 Tibial Traction Assembly

The Tibial Traction Assembly can be used to support the operative leg during procedures requiring skeletal traction. This configuration of optional accessories can provide proximal and distal traction at the same time, if desired.



Foot Plate attached to Tibial Traction Assembly

Traction Boot attached to Tibial Traction Assembly

Figure 91: Tibial Traction Assembly Attached to Spar



Figure 92: Tibial Traction Assembly Attached to Spar and Using Secondary Skeletal Traction (90 Degree Pin and Wire Holder)

To attach the Tibial Traction Assembly:

1. Slide the Accessory Clamp on the operative Hana® Radiolucent Lift-Assisted Spar with the black knob facing down and the receiver facing the non-operative side of the table.
2. Rotate the black knob clockwise to secure the clamp in place.
3. Insert the Tibial Traction Upright in the Accessory Clamp from the bottom with the Traction Unit Receiver facing the operative side of the table. Rotate the T-Handle on the Accessory Clamp clockwise to secure the Tibial Traction Upright in place.
4. Attach the Traction Unit to the Tibia Traction Upright.
5. If using the Traction Boot:
   a. Attach the Tibial Traction Boot Adapter to the Traction Unit.
   b. Rotate the Gold Handle on the Traction Unit clockwise to secure the adapter.
   c. Once the patient has been transferred and secured to the table, attach the Traction Boot to the Tibial Traction Boot Adapter.
6. If using the Traction Foot Plate Assembly:
   a. Attach the Traction Foot Plate Assembly to the Traction Unit
   b. Rotate the Gold Handle on the Traction Unit clockwise to secure the Foot Plate.
7. If pulling secondary skeletal traction to the distal tibia:
   a. Attach the 90 Degree Pin and Wire Holder to the Traction Unit.
   b. Rotate the Gold Handle on the Traction Unit clockwise to secure the Holder.

NOTE: *The Kirschner Bow Holder may also be used.*

9.9 Hana® Knee Flexion System® For Total Knee Arthroplasty

The Hana® Knee Flexion System® is designed for use only in combination with the Mizuho OSI Hana® Orthopedic Surgery Table. It mounts on the operative Lift-Assisted Spar to support and position the patient's leg as needed during Total Knee Arthroplasty (TKA). It allows for full flexion/extension of the leg and knee as well as internal/external rotation of the foot.

This device is intended to be used above the drapes in the sterile field.

Mizuho OSI's Knee Flexion System® is supplied non-sterile. This surgical instrument requires special handling to prevent damage. Do not apply excessive stress or strain at the joints; misuse will result in damage. Before each use, you must do the following:

- Clean and sterilize the instrument according to your hospital's washing, decontamination, and sterilization procedure.
- Inspect the Knee Flexion System® for damage, wear, and functionality (check for nicks, burrs, or bent parts).

Proper cleaning, handling, and sterilization will ensure that the Knee Flexion System® performs as intended. See Section 10 for more information on proper cleaning and sterilization.

Damaged or non-functioning instruments should not be used or processed. Contact your local Mizuho OSI sales representative or Mizuho OSI Service for repair or replacement.

WARNING: Use of damaged instruments may increase the risk of tissue trauma, infection, and length of operative procedures.

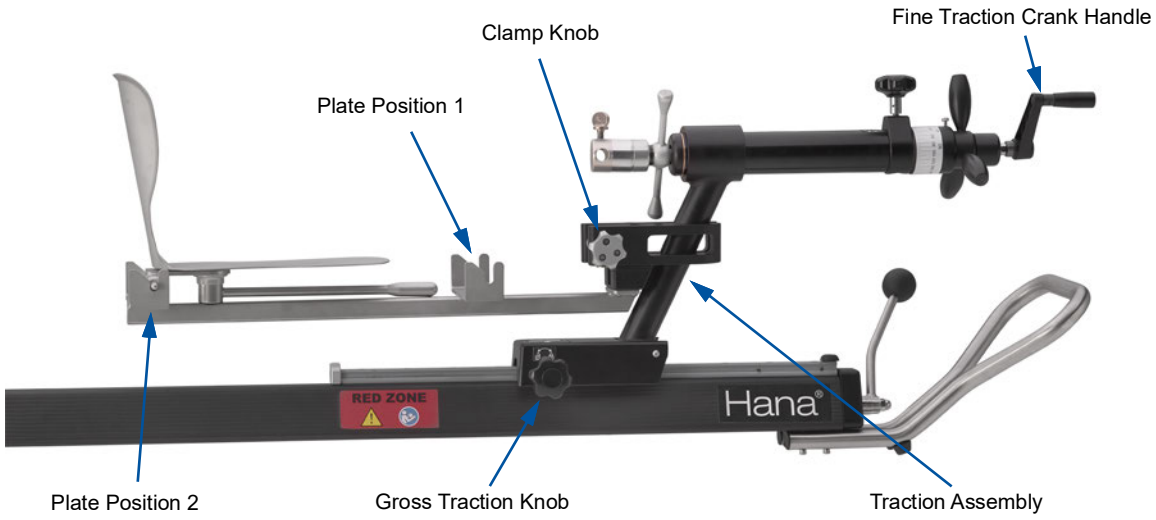


Figure 93: Hana® Knee Flexion System® Attachment Detail, Lift-Assisted Spar not Draped

To attach the Hana® Knee Flexion System® to the Lift-Assisted Spar (Figure 93):

1. Make sure the Traction Assembly on the Spar is secured in place before attaching the Hana® Knee Flexion System®. Rotate the Gross Traction Knob clockwise to secure, if needed.
2. Adjust fine traction for the operative-side Spar fully towards the Foot-End of the Spar by rotating the Fine Traction Crank Handle clockwise until it stops.
3. Drape the operative side Spar. Clear sterile drapes are recommended to provide improved intraoperative visibility and accessibility.
4. Maintaining sterile technique, rotate the Clamp Knob counterclockwise to loosen the Attachment Brackets on the Knee Flexion System®.
5. Mount the Knee Flexion System® on the Traction Assembly and rotate the Clamp Knob clockwise to tighten the Attachment Brackets (Figure 94).



Figure 94: Hana® Knee Flexion System® Attached to Traction Assembly

6. Place the Foot Plate on the Foot Plate Holder (Figure 95). The Foot Plate may be attached at Plate Position 1 or 2, depending on amount of knee flexion desired.

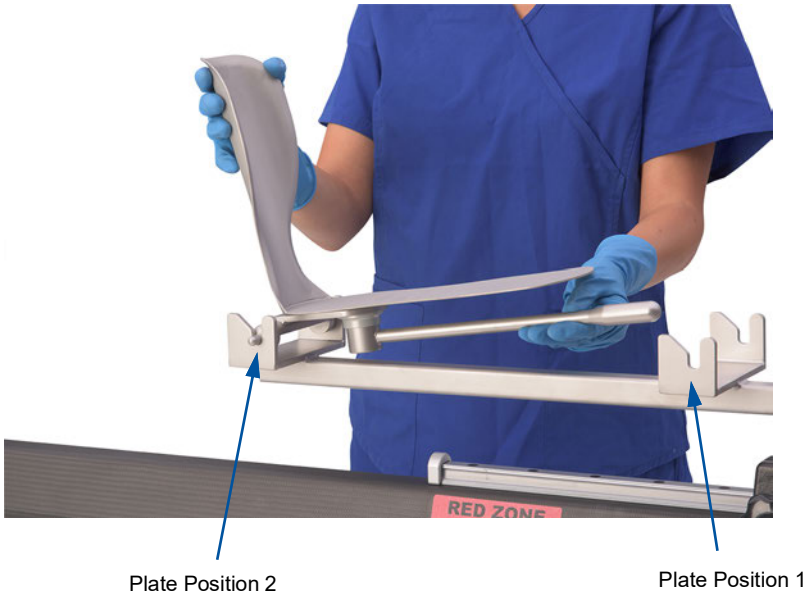


Figure 95: Foot Plate Placed on the Foot Plate Holder



Figure 96: Hana® Orthopedic Surgery Table Set Up for Right TKA, Lift-Assisted Spar Draped

To adjust internal/external rotation of the foot:

1. Rotate the Clocking Adjustment Handle counterclockwise to release the Foot Plate (Figure 97).

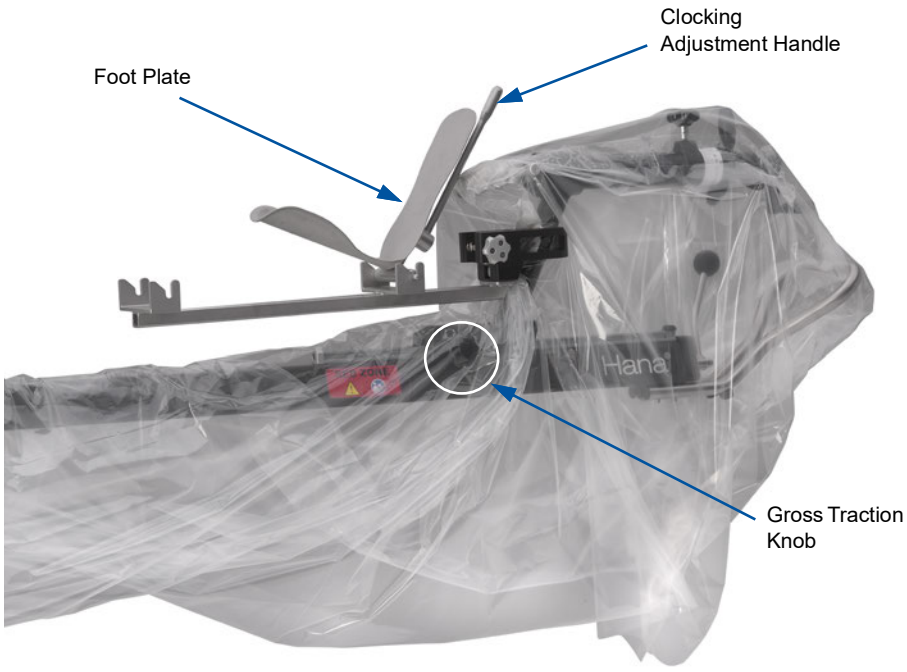


Figure 97: Hana® Knee Flexion System® Foot Plate and Clocking Adjustment Handle

2. Adjust the position of the Foot Plate to achieve the desired internal/external rotation.
3. Rotate the Clocking Adjustment Handle clockwise to secure the Foot Plate in position.

The Hana® Knee Flexion System® allows for full flexion/extension of the leg and knee. To obtain flexion of 120° or more, attach the Foot Plate to Plate Position 2, as shown in Figure 98. To obtain flexion of 90° or less, attach the Foot Plate to Plate Position 1 or to Plate Position 2, as shown in Figure 99. To further reduce flexion, attach the Foot Plate to Plate Position 1 and use the Gross Traction Knob to move the traction assembly of the Spar. In this way, the operative leg can be fully extended (Figure 100).



Figure 98: Table Set Up for Total Knee Arthroplasty with Knee Flexion System® Foot Plate in Position 2, Knee at 120°+ Flexion



Figure 99: Table Setup for Total Knee Arthroplasty with Knee Flexion System® Foot Plate in Position 2, Knee at 90° Flexion



Figure 100: Table Setup for Total Knee Arthroplasty with Knee Flexion System® Foot Plate in Position 1, Knee at Full Extension by Adjusting Gross Traction

9.10 Drape Rod Assemblies

If Patient Isolation Drapes are used, attach the Drape Rod Assemblies at the Head-End and Foot-End of the Hana® Table (Figure 101).



Figure 101: Head-End and Foot-End Drape Rod Assemblies Attached to Table

9.10.1 Head-End Drape Rod Assembly

To attach the Head-End Drape Rod Assembly:

1. Slide the Modified Clark Socket on the table side rail at the Head-End of the Hana® Table (Figure 102).



Figure 102: Attaching Modified Clark Socket to Side Rail

2. Insert the Drape Hanger Upright into the Modified Clark Socket and rotate the T-Handle on the Clark Socket clockwise to secure the Upright in place (Figure 103).



Figure 103: Securing Drape Hanger Upright into Modified Clark Socket

3. Attach the Head-End Drape Hanger Top Rail to the top of the Drape Hanger Upright and position over the table as shown in Figure 101.

9.10.2 Foot-End Drape Rod Assembly

To attach the Foot-End Drape Rod Assembly:

1. Mount the Attachment Clamp Assembly to the operative side Lift-Assisted Spar with the black knob facing down and the receiver on the operative side of the table (Figure 104).



Figure 104: Attaching Attachment Clamp Assembly to Spar

2. Rotate the black knob clockwise to secure the clamp in place.
3. Insert the Drape Hanger Upright into the Attachment Clamp Assembly and rotate the T-Handle on the Clamp to secure the Upright in place.



Figure 105: Drape Hanger Upright Secured to Attachment Clamp Assembly

4. Attach the Foot-End Drape Hanger Top Rail to the top of the Drape Hanger Upright and position over the table as shown in Figure 101.

9.11 Equipment Cart

The optional Hana® Equipment Cart may be used to store the Hana® Table components and accessories when not in use. The Equipment Cart Cover provided with the Cart serves as a dust cover and should be used while the products are in storage.



Figure 106: Equipment Cart, Front and Back (Empty)



Figure 107: Equipment Cart, Front and Back (Loaded)

9.12 Hana® Sterile Drape Kit

The Hana® Sterile Drape Kit for Anterior Approach to Total Hip Arthroplasty (AATHA) provides a sterile field with integrated component covers to match the unique geometry of the Hana® Table. The sterile drape kit contains two clear rectangle drapes (REF 48360), two U-drapes (REF 48359 and REF 6855AUD-1) and is designed to accommodate the Femur Lift and Femoral Hook components of the Hana® Table. The drapes are not side-specific, accommodating the surgeon's preference for the operative site. The two U-drapes allow the surgeon to have an optimal surgical window for AATHA or revision surgery. The clear lower U-drape allows for the surgeon to have a clean visualization of all the Hana® leg spar controls, such as the Gross Traction Knob, Fine Traction Crank Handle, Internal and External Leg Rotation Dial, Spar Lock Handle, and the Loop Handle. The clear lower drape provides an unobstructed view of the patient's legs and feet in the Traction Boot.

NOTE: *Refer to the Instructions for Use provided with the Hana® Sterile Drape Kit for details on proper use and handling.*



Figure 108: Hana® Table Fully Draped with the Hana® Sterile Drape Kit



Figure 109: Proper Draping of the Femur Lift

The Hana® Sterile Drape Kit may be purchased in cases of 6 (REF 6855SDK-6).

NOTE: *This product is not currently CE marked.*

9.13 Hana® Distraction Pad

The Hana® Distraction Pad (Figure 110) is designed to provide a safe Post-free method of supine patient positioning for patients undergoing anterior approach hip arthroplasty, hip arthroscopy, or bilateral skin traction surgical procedures on the Hana® Orthopedic Surgery Table, Hana® SC Surgery Center Table, ProFx® Pelvic Reconstruction Orthopedic Fracture Table, or Hana SSXT® Specialty Surgery Table Extension. The Hana® Distraction Pad is a friction-based pad system that adheres to both the table and the patient's skin. The pad must be in direct contact with the patient's skin when applying traction. It can also be used to facilitate the transfer of a patient from a transport gurney or anesthesia induction platform to the surgery table.

NOTE: *Refer to the Instructions for Use provided with the Hana® Distraction Pad for details on proper use and handling.*



Figure 110: Patient Positioned for Anterior Approach Right Total Hip Replacement (Using Hana® Distraction Pad instead of Perineal Post)

The Hana® Distraction Pad with Safety Strap may be purchased in cases of 5 (REF 6855DP-5). The single-use Safety Strap may also be purchased separately in cases of 10 (REF 6855DPS-10). It is also available in several Patient Care Kit configurations (see Section 9.13).

NOTE: *This product is not currently CE marked.*

9.14 Optional Patient Care Kits

In addition to the Patient Care Kit configuration that comes standard with the Hana table, there are several optional patient care kit configurations available. Table 11 provides information on kit configurations that contain the Hana® Distraction Pad. Table 12 provides information on kit configurations available for various supine traction and lateral procedures.

Table 11: Patient Care Kits Containing the Hana® Distraction Pad

Kit Number and Description	**REF 6855DPAA-5 Kit for Anterior Approach to Total Hip Arthroplasty**	**REF 6855DPHA-5 Kit for Hip Arthroscopy**	**REF 6855DPB-5 Kit for Basic Traction**
Case Quantity	5 per case	5 per case	5 per case
Distraction Pad with Safety Strap (Single Use)	•	•	•
Leg Spar Ball Joint Protectors	•	•	•
Adjustable Arm Board Pads	•	•	•
Arm Board Strap, 27”	•	•	•
Universal Disposable Boot Liners	•	•	
Supine/Lateral Headrest	•	•	
Foot Pedal Cover	•		

NOTE: *The Hana® Distraction Pad is not currently CE marked.*

Table 12: Patient Care Kits for Supine Traction and Lateral Procedures

Kit Number and Description	REF 6855D-6 Hana Complete for AATHA	REF 6855 Hana Procedures using Reusable Boot Liners	REF 6854NH-6 Hana without Headrest	REF 6854AA-6 Hana without Headrest or Boot Liners	REF 6855L-6 Hana Lateral Procedures
Case Quantity	6 per case	6 per case	6 per case	6 per case	6 per case
Leg Spar Ball Joint Protectors	•	•	•	•	•
Adjustable Arm Board Pads	•	•	•	•	•
Arm Board Strap, 27"	•	•	•	•	•
Universal Disposable Boot Liners	•		•		•
Supine/Lateral Headrest	•	•			•
Foot Pedal Cover	•				
3" Perineal Post Cover	•	•	•	•	
Lower Leg Support Cover	•				
Ortho Lateral Board Protective Cover					•
Ortho Lateral Perineal Post Cover					•
Ortho Lateral Ilium Post Cover					•
Safety Strap (Single-Use)	•				•

10 Cleaning, Disinfection, Sterilization, and Maintenance

10.1 Clean and Disinfect the Table Exterior and Tempur-Pedic® Pads

10.1.1 Clean the Table Exterior

The exterior surface should be regularly wiped clean with a mild detergent solution and wiped dry with a soft lint-free cloth. This includes the table pad and tabletop.

Care should be taken to avoid exposing the table to excessive moisture. Flooding, fogging, or steam cleaning is not recommended.

CAUTION: Never pour any liquid directly onto the table. Never subject the Hana® Table to an equipment washing machine.

Blood or other fluids, etc., if allowed to remain on the table for a long period of time, will require special cleaning to remove.

NOTE: *Use of iodophors will cause staining.*

To remove staining or discoloration of plated or stainless steel surfaces, clean with a good commercial cleaning compound labeled for stainless steel and then buff the surface by hand.

To disinfect exterior surfaces, use a quaternary ammonium compound according to manufacturer's directions for use. Wipe dry with a soft lint-free cloth.

NOTE: *Failure to thoroughly dry the surface after cleaning and disinfecting may result in rust.*

NOTE: *When cleaning the Lift-Assisted Spars, ensure that the track is completely dry before moving the Traction Assembly.*

10.1.2 Clean the Mizuho OSI Tempur-Pedic® Medical Pads

NOTE: *The Mizuho OSI Tempur-Pedic® Medical Pads should always be stored in a flat position. The pads can become stiff in cold temperatures and can crack and break if in a rolled position. It is important that you allow the pads to warm to room temperature before attempting to use or handle.*

When handling a Tempur-Pedic® Medical Pad, always grasp the entire thickness of the pad.

CAUTION: DO NOT lift, slide, or carry Mizuho OSI Tempur-Pedic® Medical Pads by grabbing the fabric cover. The cover may tear or rip.

The pads are intended to be cleaned in place. They do not need to be rotated or removed.

Clean with standard hospital disinfectants labeled for use on table pads. Always dilute and rinse per manufacturer's label instructions. Wipe dry with a lint-free cloth. DO NOT soak or autoclave the pads. Clean the pad on the tabletop, wipe dry with a lint free cloth, and then reposition the pad to lie flat on the tabletop.

NOTE: *The use of bleach or highly concentrated chemicals may discolor the cover and will void the warranty on the pad.*

When cleaning the bottom of the pad on the tabletop, lift one end of the pad, and fold it over onto the other end. Clean the pad on the tabletop, wipe dry with a lint-free cloth, and then reposition the pad to lie flat on the tabletop.

10.2 Clean, Disinfect, and Sterilize the Femoral Hooks, Femoral Hook Support, and Hana® Knee Flexion System®

10.2.1 Clean, Disinfect, and Sterilize the Femoral Hooks

Refer to the following instructions for cleaning, disinfecting, and sterilizing the Femoral Hooks (REF 6850-140, 6850-144, 6850-918, 6850-919).

WARNING: Before and after each use, inspect the components for possible damage, excessive wear, or non-functioning parts. Always wear protective apparel when handling soiled instruments to avoid exposure to blood-borne pathogens.

WARNING: DO NOT USE a wire brush or steel wool for cleaning.

WARNING: Ensure components are cool before applying to the patient.

Limitations on Processing:

The components are designed for a life of ten (10) years of normal use or approximately 10,000 cleaning/sterilization cycles when used as instructed. Do not reprocess or use components when damaged or beyond their product life.

Initial Treatment at the Point of Use:

Wipe with a clean lint-free cloth or rinse using clean tap water immediately after patient use.

Preparation before Cleaning:

1. Pre-treat components for at least 1 minute.

   Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.

2. Rinse thoroughly with clean tap water after pretreatment.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.

Cleaning: Automated

Automated cleaning using an ISO 15883 compliant automatic washer is the recommended cleaning method, but manual cleaning or ultrasonic cleaning can be performed if automated cleaning is not available.

Automatic washer equipment shall be compliant with ISO 15883 series.

1. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
2. Follow the manufacturer's operating instructions.

Cleaning: Manual

If automated cleaning is not available, manual cleaning can be done by hand or ultrasonically.

By hand

1. Soak the components in lukewarm clean tap water with a neutral pH detergent/enzymatic solution for 10 minutes.

   Follow the selected cleaning solution manufacturer's instructions for use.

2. After soaking, use a soft nylon brush or soft sponge to scrub manually until no soil remains.

WARNING: DO NOT use a wire brush or steel wool for cleaning.

3. Repeat until there is no visible sign of soil on the components.
4. Rinse thoroughly with clean tap water to remove the cleaning solution.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.

NOTE: *Rinsing with distilled, reverse osmosis (RO), or deionized (DI) water is preferred but not required.*

Ultrasonic

1. Follow the manufacturer's operating instructions.
2. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
3. Rinse the component under clean running tap water for at least 15 seconds.
4. Dry the component with a clean, lint-free cloth.

If all visible debris has been removed, the device may be disinfected in an automatic washer cycle as described below.

Disinfection:

Disinfect the components using an ISO 15883 compliant washer/disinfector.

Perform thermal disinfection achieving an $A_0 \geq 600$ by maintaining a temperature of 90° C (194° F) for 1 minute.

Drying:

Use a clean, lint-free cloth to dry.

Maintenance, Inspection, and Testing:

Visually inspect components for damage or wear before reprocessing and use.

- Inspect components for breakage or deformation.
- Inspect the component's surface for nicks, cracks, dents, pits, scratches, scoring, or discoloration.

WARNING: Do not reprocess or use damaged or worn components. Replace components that are worn or damaged.

Packaging:

Wrap components individually after cleaning and prior to sterilization.

- Use two layers of Spunbond Meltblown Spunbond (SMS).
- Use simultaneous envelope folding techniques.

NOTE: *SMS polypropylene wrap may also be referred to as Central Supply Room or Central Sterile Reprocessing (CSR) wrap.*

Storage:

Store in a clean, dry, and climate-controlled environment.

Transport components in a closed, protective container between reprocessing steps.

Sterilization:

These components must be sterilized before use. They are validated for Gravity Steam or Pre-Vacuum Steam Sterilization. Flash or chemical sterilization is not recommended. Adhere to the sterilization methods, cycles, and durations listed below:

Table 13: Recommended Sterilization Parameters for Femoral Hooks

Sterilization Method	Exposure Time at 121 °C (250 °F)	Exposure Time at 132 °C (270 °F)	Exposure Time at 134 °C (275 °F)	Minimum Drying Time	Minimum Wire Rack Cool-Down Times
Gravity Steam	30 minutes			90 minutes	30 minutes
		15 minutes		60 minutes	30 minutes
			10 minutes	90 minutes	30 minutes

Table 13: Recommended Sterilization Parameters for Femoral Hooks *(Continued)*

Sterilization Method	Exposure Time at 121 °C (250 °F)	Exposure Time at 132 °C (270 °F)	Exposure Time at 134 °C (275 °F)	Minimum Drying Time	Minimum Wire Rack Cool-Down Times
Pre-Vacuum Steam		4 minutes		90 minutes	30 minutes
			3 minutes	60 minutes	30 minutes

10.2.2 Clean, Disinfect, and Sterilize the Femoral Hook Support

Refer to the following instructions for cleaning, disinfecting, and sterilizing the Femoral Hook Support (REF 6850-110).

WARNING: Before and after each use, inspect the components for possible damage, excessive wear, or non-functioning parts. Always wear protective apparel when handling soiled instruments to avoid exposure to blood-borne pathogens.

WARNING: DO NOT USE a wire brush or steel wool for cleaning.

WARNING: Ensure components are cool before applying to the patient.

CAUTION: Do not disassemble components prior to cleaning, disinfection, and sterilization.

Limitations on Processing:

The components are designed for a life of ten (10) years of normal use or approximately 10,000 cleaning/sterilization cycles when used as instructed. Do not reprocess or use components when damaged or beyond their product life.

Initial Treatment at the Point of Use:

Wipe with a clean lint-free cloth or rinse using clean tap water immediately after patient use.

Preparation before Cleaning:

1. Pre-treat components for at least 1 minute.

   Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.

2. Rinse thoroughly with clean tap water after pretreatment.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.

3. Articulate the rotation bolt and flush between the surfaces to ensure there is no impacted material.

Cleaning: Automated

Automated cleaning using an ISO 15883 compliant automatic washer is the recommended cleaning method, but manual cleaning or ultrasonic cleaning can be performed if automated cleaning is not available.

Automatic washer equipment shall be compliant with ISO 15883 series.

1. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
2. Follow the manufacturer's operating instructions.

Cleaning: Manual

If automated cleaning is not available, manual cleaning can be done by hand or ultrasonically.

By hand

1. Soak the components in lukewarm clean tap water with a neutral pH detergent/enzymatic solution for 10 minutes.

   Follow the selected cleaning solution manufacturer's instructions for use.
2. After soaking, use a soft nylon brush or soft sponge to scrub manually until no soil remains.

WARNING: DO NOT use a wire brush or steel wool for cleaning.

3. Repeat until there is no visible sign of soil on the components.
4. Rinse thoroughly with clean tap water to remove the cleaning solution.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.

NOTE: *Rinsing with distilled, reverse osmosis (RO), or deionized (DI) water is preferred but not required.*

Ultrasonic

1. Follow the manufacturer's operating instructions.
2. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
3. Rinse the component under clean running tap water for at least 15 seconds.
4. Dry the component with a clean, lint-free cloth.

If all visible debris has been removed, the device may be disinfected in an automatic washer cycle as described below.

Disinfection:

Disinfect the components using an ISO 15883 compliant washer/disinfector.

Perform thermal disinfection achieving an A0 ≥ 600 by maintaining a temperature of 90° C (194° F) for 1 minute.

Drying:

Use a clean, lint-free cloth to dry.

Maintenance, Inspection, and Testing:

Visually inspect components for damage or wear before reprocessing and use.

- Inspect components for breakage or deformation.
- Inspect the component's surface for nicks, cracks, dents, pits, scratches, scoring, or discoloration.

WARNING: Do not reprocess or use damaged or worn components. Replace components that are worn or damaged.

Packaging:

Wrap components individually after cleaning and prior to sterilization.

- Use two layers of Spunbond Meltblown Spunbond (SMS).
- Use simultaneous envelope folding techniques.

NOTE: *SMS polypropylene wrap may also be referred to as Central Supply Room or Central Sterile Reprocessing (CSR) wrap.*

Storage:

Store in a clean, dry, and climate-controlled environment.

Transport components in a closed, protective container between reprocessing steps.

Sterilization:

These components must be sterilized before use. They are validated for Gravity Steam or Pre-Vacuum Steam Sterilization. Flash or chemical sterilization is not recommended. Adhere to the sterilization methods, cycles, and durations listed below:

Table 14: Recommended Sterilization Parameters for Femoral Hook Support

Sterilization Method	Exposure Time at 121 °C (250 °F)	Exposure Time at 132 °C (270 °F)	Exposure Time at 134 °C (275 °F)	Minimum Drying Time	Minimum Wire Rack Cool-Down Times
Gravity Steam	30 minutes			90 minutes	90 minutes
		15 minutes		90 minutes	60 minutes
			10 minutes	90 minutes	90 minutes
Pre-Vacuum Steam		4 minutes		90 minutes	30 minutes
			3 minutes	90 minutes	30 minutes

10.2.3 Clean, Disinfect, and Sterilize the Hana® Knee Flexion System® Components

Refer to the following instructions for cleaning, disinfecting, and sterilizing the components of the Hana® Knee Flexion System®:

- Knee Flexion Footplate Assembly (REF 6875-209)
- Knee Flexion Base Assembly (REF 6875-208)

WARNING: Before and after each use, inspect the components for possible damage, excessive wear, or non-functioning parts. Always wear protective apparel when handling soiled instruments to avoid exposure to blood-borne pathogens.

WARNING: DO NOT USE a wire brush or steel wool for cleaning.

WARNING: Ensure components are cool before applying to the patient.

CAUTION: Do not disassemble components prior to cleaning, disinfection, and sterilization.

Limitations on Processing:

The components are designed for a life of ten (10) years of normal use or approximately 10,000 cleaning/sterilization cycles when used as instructed. Do not reprocess or use components when damaged or beyond their product life.

Initial Treatment at the Point of Use:

1. Remove and discard all disposable items from the Knee Flexion Footplate Assembly.
2. Wipe with a clean lint-free cloth or rinse using clean tap water immediately after patient use.

Preparation before Cleaning:

1. Pre-treat components for at least 1 minute.

   Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
2. Rinse thoroughly with clean tap water after pretreatment.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.
3. Articulate and flush between movable surfaces to ensure there is no impacted material.

Cleaning: Automated

Automated cleaning using an ISO 15883 compliant automatic washer is the recommended cleaning method, but manual cleaning or ultrasonic cleaning can be performed if automated cleaning is not available.

Automatic washer equipment shall be compliant with ISO 15883 series.

1. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
2. Follow the manufacturer's operating instructions.

Cleaning: Manual

If automated cleaning is not available, manual cleaning can be done by hand or ultrasonically.

By hand

1. Soak the components in lukewarm clean tap water with a neutral pH detergent/enzymatic solution for 10 minutes.

   Follow the selected cleaning solution manufacturer's instructions for use.

2. After soaking, use a soft nylon brush or soft sponge to scrub manually until no soil remains.

WARNING: DO NOT use a wire brush or steel wool for cleaning.

3. Repeat until there is no visible sign of soil on the components.
4. Rinse thoroughly with clean tap water to remove the cleaning solution.

   Ensure that the components are at least triple-rinsed with clean tap water or rinsed under clean running tap water for at least 15 seconds.

NOTE: *Rinsing with distilled, reverse osmosis (RO), or deionized (DI) water is preferred but not required.*

Ultrasonic

1. Follow the manufacturer's operating instructions.
2. Use a "neutral" or "mild" pH medical grade enzymatic detergent and follow the selected cleaning solution manufacturer's instructions for use.
3. Rinse the component under clean running tap water for at least 15 seconds.
4. Dry the component with a clean, lint-free cloth.

If all visible debris has been removed, the device may be disinfected in an automatic washer cycle as described below.

Disinfection:

Disinfect the components using an ISO 15883 compliant washer/disinfector.

Perform thermal disinfection achieving an A0 ≥ 600 by maintaining a temperature of 90° C (194° F) for 1 minute.

Drying:

Use a clean, lint-free cloth to dry.

Maintenance, Inspection, and Testing:

Visually inspect components for damage or wear before reprocessing and use.

- Inspect components for breakage or deformation.
- Inspect the component's surface for nicks, cracks, dents, pits, scratches, scoring, or discoloration.

WARNING: Do not reprocess or use damaged or worn components. Replace components that are worn or damaged.

Packaging:

Wrap the Knee Flexion Footplate and Knee Flexion Base assemblies separately after cleaning and prior to sterilization.

- Use two layers of Spunbond Meltblown Spunbond (SMS).
- Use simultaneous envelope folding techniques.

NOTE: *SMS polypropylene wrap may also be referred to as Central Supply Room or Central Sterile Reprocessing (CSR) wrap.*

Storage:

Store in a clean, dry, and climate-controlled environment.

Transport components in a closed, protective container between reprocessing steps.

Sterilization:

These components must be sterilized before use. They are validated for Gravity Steam or Pre-Vacuum Steam Sterilization. Flash or chemical sterilization is not recommended. Adhere to the sterilization methods, cycles, and durations listed below:

Table 15: Recommended Sterilization Parameters for Knee Flexion Footplate and Base

Sterilization Method	Exposure Time at 121 °C (250 °F)	Exposure Time at 132 °C (270 °F)	Exposure Time at 134 °C (275 °F)	Minimum Drying Time	Minimum Wire Rack Cool-Down Times
Gravity Steam	30 minutes			90 minutes	30 minutes
		15 minutes		90 minutes	30 minutes
			10 minutes	90 minutes	30 minutes
Pre-Vacuum Steam		4 minutes		90 minutes	30 minutes
			3 minutes	90 minutes	30 minutes

10.2.4 Additional Information

Standard References:

- *ANSI/AAMI ST108 - Water for the processing of medical devices*
- *AAMI TIR30 - A compendium of processes, materials, test methods, and acceptance criteria for cleaning reusable medical devices*
- *AAMI TIR12 - Designing, testing, and labeling medical devices intended for processing by health care facilities: A guide for device manufacturers, Guidance for Industry and FDA Staff - Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling*
- *AAMI ST98 - Cleaning validation of health care products - Requirements for development and validation of a cleaning process for medical devices*
- *ISO 17664-1 - Processing of health care products - Information to be provided by the medical device manufacturer for the processing of medical devices. - Part 1: Critical and semi-critical medical devices*

- *ANSI/AAMI/ISO 17665-1 - Sterilization of health care products - Moist heat - Part 1 Requirements for the development, validation and routine control of a sterilization process for medical devices*
- *ANSI/AAMI/ISO TIR17665-2 - Sterilization of health care products - Moist heat - Part 2: Guidance on the application of ANSI/AAMI/ISO 17665-1*
- *ANSI/AAMI/ISO 14937 - Sterilization of health care products - General requirements for characterization of a sterilizing agent and the development, validation and routine control of a sterilization process for medical devices*

The instructions provided above have been validated by Mizuho OSI as being capable of preparing these components for reuse. It remains the responsibility of the processor to ensure that the processing, as actually performed using equipment, materials and personnel in the processing facility, achieves the desired result. This requires verification and/or validation and routine monitoring of the process.

10.3 Maintenance

CAUTION: Whenever servicing the table, personnel are required to wear personal protective equipment (work jackets, leather gloves, and safety glasses) whenever moving or removing parts and components, or replacing sheet metal covers.

Cleaning the table surfaces and table pad after each use will ensure many years of trouble-free service.

All components are lubricated for life at the factory and no other lubrication for the table is required.

Preventative Maintenance:

Contact Mizuho OSI Service for a complete preventative maintenance checklist.

For detailed repair information or to order replacement parts, call, or contact via the web Mizuho OSI Service:

1-800-777-4674, Option 2 (calls within the USA)

Or

+1-510-429-1500, Option 2 (calls outside the USA)

+1-510-429-8500 (Fax, Domestic and International)

service@mizuhosi.com

www.mizuhosi.com

Mizuho OSI Service is available from 5 am to 5 pm Pacific Time, Monday through Friday.

Please leave a message at the extension after normal business hours.

11 Electrical System

11.1 Description

The electrical system provides control of all table functions and includes the following:

- Power Cord
- On/Off Circuit Breaker Power Switch
- Component Circuit Breakers
- Linear Actuators
- Battery System
- Hana® Hand Pendant
- Motion Control Module
- Electric Motors

Electric motor driven lead screw-type actuators	Manipulate the Height, Lateral Roll and Trendelenburg functions, which are controlled by the Hana® Hand Pendant.
Input power requirement for the Hana® Table	As indicated on the manufacturer's label: 6875J: 100V, 50/60Hz, 4A 6875: 120V, 60Hz, 4A 6875I: 220-230V, 50/60Hz, 2.5A

The input power requirement is 100V, 50/60Hz, 4A; 120V, 60Hz, 4A; or 220-230V, 50/60Hz, 2.5A; and 10%/6 minute duty cycle, as indicated on the manufacturer's label. Refer to the Hana® Table Electrical Interconnect Diagram in Section 13.2 for details on the electrical system.

The primary components of the electrical control system are contained in the Motion Control Box at the Head-End of the table.

11.2 Power Cord

The table is equipped with a detachable Power Cord. The Power Cord is connected to the table at the Power Cord Receptacle located below the On/Off Power Switch on the Motion Control Box.

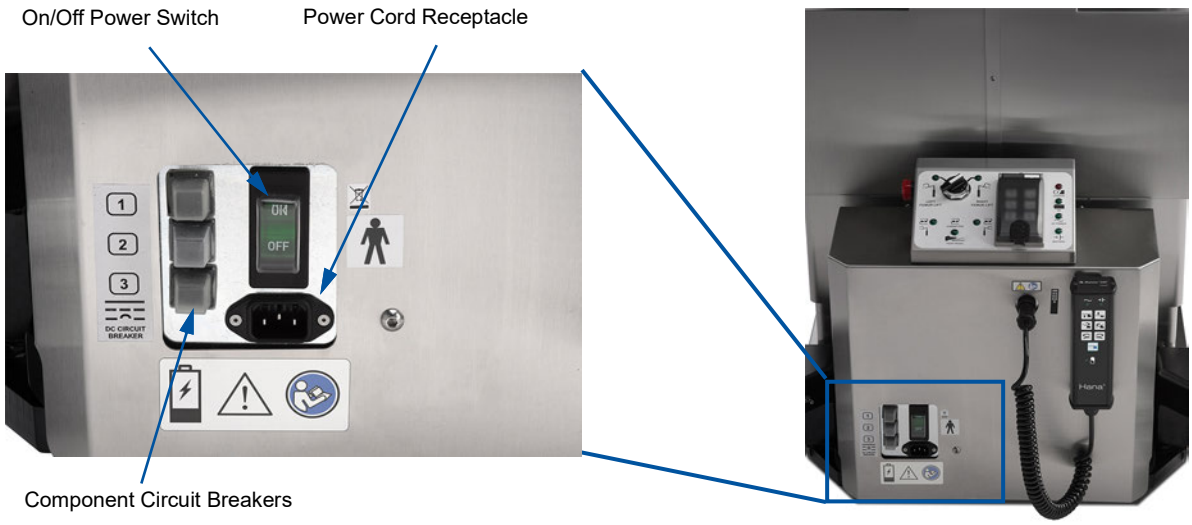


Figure 111: Head-End Motion Control Box

WARNING: Use only Mizuho OSI supplied Power Cords.

NOTE: *Country-specific Power Cords are available. Please contact your Mizuho OSI representative for proper selection.*

11.3 On/Off Circuit Breaker Power Switch

An illuminated On/Off Power Switch and Circuit Breaker is located on the Head-End of the table. When illuminated, it indicates that the table is plugged into a live electrical AC outlet and the power is on.

NOTE: *When the Power Switch is toggled On and the table is operating under battery power, this switch will not illuminate.*

This switch also serves as a Circuit Breaker. In the event of an overload condition, this switch will trip off. To reset, push to the Off position and then to the On position.

NOTE: *Determine the source of the overload prior to resetting this switch.*

11.4 Component Circuit Breakers

The electrical system includes individual component 24-V DC Circuit Breakers located at the Head-End of the table. If a short circuit occurs in the low voltage circuit, the breaker will trip as indicated by a button protruding from the access hole. To reset, press the button in and release.

CAUTION: Determine the source of the overload prior to resetting this switch. If unable to determine and fix the source of the failure, contact Mizuho OSI Service for additional support.

11.5 Linear Actuators

There are four linear actuators in the Base:

- Two of the actuators are 24V motion system actuators, located in the left and right Tilt/ Trendelenburg motor assembly.
- The other two actuators are 24V motion system actuators, located in the height up/down motor assembly.

11.6 Battery System

The Hana® Table is equipped with a battery system that provides power to all functions, and consists of two batteries (REF NV0801). Due to the relatively low power consumption of the Hana® Table, it can be used on battery power for up to 12 hours at 10% duty cycle.

CAUTION: Whenever servicing the table, personnel are required to wear personal protective equipment (work jackets, leather gloves and safety glasses) whenever moving or removing parts and/or components, or replacing sheet metal covers.

WARNING:  **This symbol indicates an external ground stud that is required for use when the AC power cable is not connected to a protective earth ground hospital-grade AC outlet in your operating room or facility. To protect the patient, hospital staff, and the table from possible electrical hazards, an external ground wire connection is required between the external ground stud and protective earth ground.**

Battery charge status is shown via LEDs on the Power Indicator section of the Control Panel (Figure 4) and the Hana® Hand Pendant (Figure 6).

- If the Battery Status LED on the Hand Pendant or the Battery OK LED on the Control Panel is illuminated green, the battery is charged and ready for use.
- If the Battery Status LED on the Hand Pendant or the Battery Charge LED on the Control Panel is illuminated red, the battery must be recharged.

If a recharge is required, the batteries must be charged for a minimum of 3 hours. Fully discharged batteries will require 18 hours for a complete charge. To charge the batteries, simply plug the Power Cord into an appropriate hospital grade AC outlet and turn the Power Switch on. It is important to plug in the table as soon as possible after the Battery Status or Battery Charge LED is illuminated red.

If the battery fails to hold a charge, it should be replaced. Replace only with an identical type and size battery.

Replace both batteries at the same time.

At a minimum, the batteries should be replaced once every five (5) years.

Whenever the battery cover is opened, check the battery for signs of corrosion. The battery terminals should be clean and free from corrosion, oil, grease, dirt, or other contaminants.

Battery ordering number: REF NV0801.

NOTE: *Failure to use an approved Mizuho OSI battery voids the warranty and can cause harm to the table.*

CAUTION: Battery life can be shortened if the table remains unplugged and turned on for an extended period of time with the red battery charge light illuminated. While in storage, it is recommended that the table be plugged in and the Power Switch turned on so that the batteries remain charged. If this is not possible, the batteries must be charged for at least three hours per week under normal use conditions. This can be accomplished when using the table under AC power since the system batteries are automatically charged while the table is plugged in and turned on.

11.7 Hand Pendant and Table Controller Software

The Hana® Table is controlled using either the Hana® Hand Pendant or the Control Pad on the Control Panel.. Refer to the following table for software version information.

Table 16: Software Version Information

Description	Version
Table Controller Software	1.08
Hand Pendant Software	1.03

12 Troubleshooting

NOTE: *The Power Switch must be turned off before disconnecting or connecting the Hana® Hand Pendant.*

Table 17: Troubleshooting Procedures

Problem	Solution
Table is "dead"; no functions are operational	**1.** Verify that the Power Cord is plugged into an appropriate AC receptacle and into the Power Cord receptacle (located at the base of the Motion Control Box). **2.** Verify that the Power Switch is on and illuminated. If the Power Switch is not illuminated, the table may still operate on internal battery power. (The Hana® Hand Pendant control buttons and light will be illuminated.) **3.** Verify that the Circuit Breaker (that is part of the Power Switch located at the base of the Motion Control Box) is not tripped (indicating table power overload). To reset the Circuit Breaker, toggle the Power Switch off, and then on. **4.** Verify the Component Circuit Breakers (located at the base of the Motion Control Box) are not tripped (indicating component power-overload condition). If the three Component Circuit Breakers are tripped, the buttons will be protruding from the Circuit Breaker access holes. To reset the Component Circuit Breakers, press the buttons. Find the source of the overload prior to resetting. **5.** If the problem persists, call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)

Table 17: Troubleshooting Procedures ***(Continued)***

Problem	Solution
The tabletop does not move when Height (Up/Down), Lateral Tilt (Right/Left), or Trendelenburg/Reverse Trendelenburg buttons are pressed	**1.** Verify that the Power Cord is plugged into an appropriate AC receptacle and into the Power Cord receptacle (located at the base of the Motion Control Box). **2.** Verify that the Power Switch is on and illuminated. If the Power Switch is not illuminated, the table may still operate on internal battery power. (The Hana® Hand Pendant control buttons and light will be illuminated.) **3.** Verify that the Hana® Hand Pendant is properly connected to the Hand Pendant Receptacle. Ensure that the Hand Pendant control buttons illuminate green. **4.** Press and hold the corresponding Hana® Hand Pendant button (Height Up/Down, Trendelenburg/Reverse Trendelenburg or Left/Right Lateral Tilt). Observe tabletop movement. If the tabletop does not move when any button is pressed, try using the Control Pad buttons on the Motion Control Box. If the tabletop moves, the Hana® Hand Pendant is damaged and needs to be replaced. **5.** If the table is on battery power, verify that the battery is adequately charged and the green battery light illuminates. **6.** If the problem persists, call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)
The Return to Level function is not operational	**1.** Verify the Power Cord is plugged into an appropriate AC receptacle and into the Power Cord receptacle (located on table-base panel). **2.** Press and hold the Return to Level button on the Hana® Hand Pendant. Observe tabletop movement. **3.** Disorient the tabletop by doing the following: • Raise the height approximately 2 inches. • Tilt the tabletop laterally approximately 5 degrees. • Activate Trendelenburg approximately 5 degrees. **4.** Press and hold the Return to Level button on the Hana® Hand Pendant. Verify that the tabletop levels from side to side first, then levels from front to back, and then, after a three-second delay, moves down to its lowest position. **5.** If the problem persists, call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)
Battery status LED illuminates red	**1.** The battery system requires charging. Charge batteries for a minimum of three (3) hours; plug Power Cord into appropriate hospital-grade AC outlet. **NOTE:** *Power Switch must be toggled to On.* **2.** If the problem persists, call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)

Table 17: Troubleshooting Procedures ***(Continued)***

Problem	Solution
Lift-Assisted Spar is loose (not securely attached to the table)	**1.** Verify whether the Spar Lock Handle is stripped. **2.** If the Spar Lock Handle is stripped, it needs to be replaced. Call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)
Lift-Assisted Spar is not holding vertical position (drifting downward)	**1.** Verify that the Spar Lock Handle is rotated clockwise to the locked position. **2.** Verify that the Lift-Assisted Spar is securely attached (fully seated and locked) to the table. **3.** With wear, the Spar Lock Handle may require adjustment to allow adequate movement to the lock position to hold the Spar. Adjust the Spar Lock Handle lock position as needed. **4.** If the problem persists, call Mizuho OSI Service. 1-800-777-4676, Option 2 (within the USA) +1-510-429-1500, Option 2 (outside the USA)

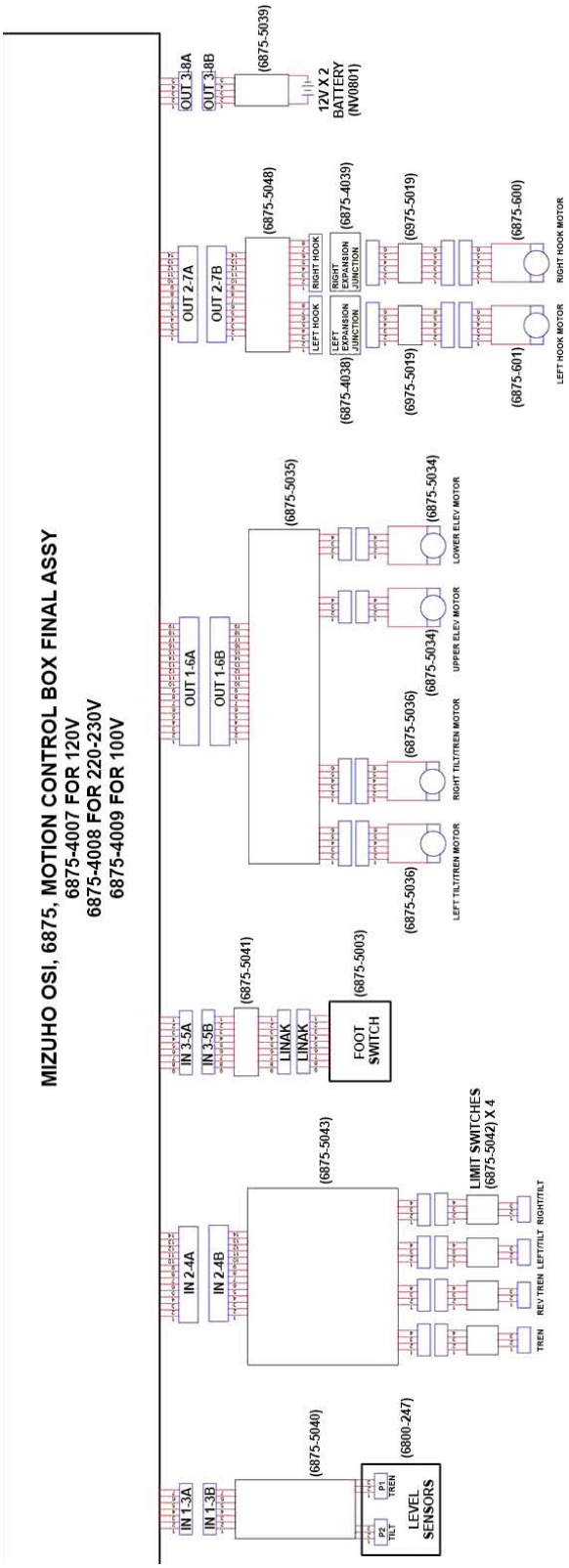
13 Technical Drawings and Parts List

13.1 Replacement / Spare Parts List

Description	Part Number
Swing Bar, Left (Arm Board Support)	REF 6875-700
Swing Bar, Right (Arm Board Support)	REF 6875-701
Hana® Arm Board	REF 6875-292
Arm Board Contoured Pad (Left and Right)	REF 6850-7600
Drop Handle, Small (on Swing Bars and Jack Mount Assembly)	REF 914-424
Drop Handle (on Swing Bars)	REF 914-516
Batteries (2 Required)	REF NV0801
Caster (4 Required)	REF ND0458
Caster Washer (16 Required)	REF AE040081AC
Caster Screw (16 Required)	REF AABB075AAC
Gimbal Kit	REF 6875-9250
Top Cover, Left	REF 6875-85F
Top Cover, Right	REF 6875-85F
Column Cover, Base	REF 6875-79F
Column Cover, Mid-Low	REF 6875-80F
Column Cover, Mid-High	REF 6875-81F
Column Cover Spacer, Teflon (16 Required)	REF 6875-87
Column Cover Spacer, Brass (4 Required)	REF 6875-88
Column Cover Shim (40 Required)	REF 6875-214
Column Cover Rivet (2 per Spacer)	REF AC012037
Femur Lift Assembly, Right	REF 6875-600
Femur Lift Assembly, Left	REF 6875-601
Femur Lift Emergency Crank Handle	REF 6875-602

Description	Part Number
Coiled Hook Motor Cable	REF 6875-5019
Upgrade Kit, Foot Switch	REF 6875-5005F
Foot Pedal	REF 6875-5005
Kit, Foot Pedal Connector, Table Base	REF 6875-5049F
Hana® Hand Pendant	REF 6807-4
Motion Control Box, 120V (for 6875)	REF 6875-4007F
Motion Control Box, 220-230V (for 6875I)	REF 6875-4008F
Motion Control Box, 100V (for 6875J)	REF 6875-4009F
On/Off Power Switch (Circuit Breaker, 115V)	REF NV0946
On/Off Power Switch (Circuit Breaker, 220V)	REF NV0613
AC Power Receptacle	REF NV0585
Control Panel Push Button Assembly	REF 6875-4013
Leg Spar Mount Detent Housing (2 Required)	REF 6875-310
Spar Pressure Arm (2 per Spar)	REF 6850-267
Spar Locking Knob (2 Required)	REF 6875-325
Traction Unit Assembly (2 Required)	REF 6875-2370
Foot Rotation Locking Knob (on Traction Unit)	REF 6875-378
Fine Traction Crank Handle (on Traction Unit)	REF 6850-313
Rotation Brake Pad	REF 6875-376
Gross Traction Brake Assembly, Left	REF 6875-9001
Gross Traction Brake Assembly, Right	REF 6875-9002
Gross Traction Bearing Carriage (1 per Spar)	REF NA0210F
Fine Traction Repair Kit	REF 6850-2230
Power Cord, 120V **NOTE:** *Country specific Power Cords are available. Please contact your Mizuho OSI representative for proper selection.*	REF NV0956
Table Lift Motor (2 Required)	REF 6875-5034
Hana® Main Table Pad	REF 6875-7120
Pelvic Pad	REF 6875-7129
Hana® Table Cover	REF 6875-20
Tilt/Trendelenburg Motor (2 Required)	REF 6875-5036
Limit Switch (4 Required)	REF 6875-5042

13.2 Interconnect Diagram, 100V, 120V, 220-230V Models



14 Technical Support

14.1 Contact for Parts and Service

For detailed repair information or to order replacement parts, call Mizuho OSI Service at **1-800-777-4674** for calls inside the USA or **+1-510-429-1500** for calls outside the USA. At the prompt, select Option 2.

A Service line is available from 5 AM to 5 PM Pacific Time, Monday through Friday. Please leave a message after business hours.

Please state slowly your name, phone number, your facility name and city, affected equipment model number, and serial number.

An e-mail message may be left anytime at **service@mizuhosi.com** or through the Web Support Form on the web site: **www.mizuhosi.com**.

14.2 Order Replacement Parts

If unable to identify a part please call, fax, or e-mail Mizuho OSI Service before placing an order. Once the part number is obtained, follow the instructions below to order the replacement part.

If part is known, please telephone, fax, or e-mail part number and description to Mizuho OSI Service for price and availability.

To place a Replacement Parts (RP) order, please telephone, fax, or e-mail Mizuho OSI Service with the part number, description, price, customer number, and method of shipment with the purchase order. Indicate that the order is for Replacement Parts (RP).

14.3 Return Damaged Parts

Identify the part or part number to be returned.

Telephone, fax, or e-mail Mizuho OSI Service with the part number and description of the part for return to obtain a Return Goods Authorization (RGA) number.

Complete the Certificate of Decontamination provided by Mizuho OSI Service.

Return the part with RGA number clearly marked on the outside of the package, and include the Certificate of Decontamination with the shipment.

Complete the Certificate of Decontamination provided by Mizuho OSI Service.

14.4 Send a Part for Repair

If unable to identify part, please call, fax, or e-mail Mizuho OSI Service for assistance.

If the part number is known, please call, fax, or e-mail Mizuho OSI Service with the part number and description of the problem to obtain a Repair Authorization (RA) number.

Clean/disinfect parts prior to shipping and complete the Certificate of Decontamination provided by Mizuho OSI Service.

Ship the part with the RA number clearly marked on the outside of the package, and include the Certificate of Decontamination with the shipment.

The part will be evaluated and the customer will be contacted with the cost of repair, if not covered under table warranty.

After customer approval of repair cost, the part will be repaired and returned to the customer.

14.5 Warranty

Mizuho OSI products come with a one (1) year warranty against manufacturer defect. All expenses for parts and labor for product service calls are covered free of charge for the warranty period, except those products that are misused, altered, or damaged. All Tempur-Pedic® Medical Pads come with a two (2) year warranty against manufacturer defect. Defective merchandise will be credited or replaced.

15 Appendix

15.1 Electromagnetic Emissions



WARNING: Medical electrical equipment needs special precautions regarding Electromagnetic Compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in this manual.



WARNING: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



WARNING: The use of accessories, transducers, and cables other than those specified or provided by Mizuho OSI could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.



WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Hana® table, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

NOTE: *The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigating measures, such as relocating or re-orienting the equipment.*

Guidance and Manufacturer's Declaration — Emissions		
The Hana® Table is intended for use in the electromagnetic environment specified below. The customer or the user of the Hana® Table should ensure that it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment — Guidance**
RF emissions CISPR 11	Group 1	The Hana® Table uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The Hana® Table is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonics EN 61000-3-2	Class A	
Flicker EN 61000-3-3	Complies	

15.2 Electromagnetic Immunity

Guidance and Manufacturer's Declaration — Immunity			
The Hana® Table is intended for use in the electromagnetic environment specified below. The customer or the user of the Hana® Table should ensure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment — Guidance**
Electrostatic Discharge (ESD) IEC 61000-4-2	±8 kV Contact ±15 kV Air	±8 kV Contact ±15 kV Air	Floors should be wood, concrete or ceramic tile. If floors are synthetic, the relative humidity should be at least 30%.
Electrical Fast Transient (EFT) IEC 61000-4-4	±2 kV Mains ±1 kV I/O	±2 kV Mains ±1 kV I/O	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV Differential ± 2 kV Common	± 1 kV Differential ± 2 kV Common	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips/Dropout IEC 61000-4-11	>95% Dip for 0.5 Cycle >95% Dip for 1 Cycle 30% Dip for 25/30 Cycles >95% Dip for 250/300 Cycles	>95% Dip for 0.5 Cycle >95% Dip for 1 Cycle 30% Dip for 25/30 Cycles >95% Dip for 250/300 Cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Hana® Table requires continued operation during power mains interruptions, it is recommended that the Hana® Table be powered from an uninterruptible power supply or battery.
Power frequency 50/60 Hz Magnetic Field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical commercial or hospital environment.

Guidance and Manufacturer's Declaration — Immunity			
The Hana® Table is intended for use in the electromagnetic environment specified below. The customer or the user of the Hana® Table should ensure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment — Guidance**
Conducted RF IEC 61000-4-6	3 V 0.15 MHz to 80 MHz 6 V in ISM between 0.15 MHz and 80 MHz 80% AM at 1 kHz	3 V 0.15 MHz to 80 MHz 6 V in ISM between 0.15 MHz and 80 MHz 80% AM at 1 kHz	**PROFESSIONAL HEALTHCARE FACILITY ENVIRONMENT**
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz	3 V/m 80 MHz to 2.7 GHz 80% AM at 1 kHz	**PROFESSIONAL HEALTHCARE FACILITY ENVIRONMENT**

Guidance and Manufacturer's Declaration — Immunity

The Hana® Table is intended for use in the electromagnetic environment specified below. The customer or the user of the Hana® Table should ensure that it is used in such an environment.

Test Frequency	Band [1]	Service [1]	Modulation [2]	Maximum Power	Distance	Immunity Test Level
MHz	MHz			W	Meters	(V/m)
385	380 – 390	TETRA 400	Pulse modulation [2] 18 Hz	1.8	0.3	27
450	430 – 470	GMRS 460, FRS 460	FM [3] ±5 kHz deviation 1 kHz sine	2	0.3	28
710 745 780	704 – 787	LTE Band 13, 17	Pulse modulation [2] 217 Hz	0.2	0.3	9
810 870 930	800 – 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation [2] 18 Hz	2	0.3	28
1720 1845 1970	1700 – 1900	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation [2] 217 Hz	2	0.3	28
2450	2400 – 2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation [2] 217 Hz	2	0.3	28
5240 5500 5785	5100 – 5800	WLAN, 802.11 a/n	Pulse modulation [2] 217 Hz	0.2	0.3	9

NOTE: If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the Hana® Table may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

[1] For some services, only the uplink frequencies are included.

[2] The carrier shall be modulated using a 50% duty cycle square wave signal.

[3] As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.