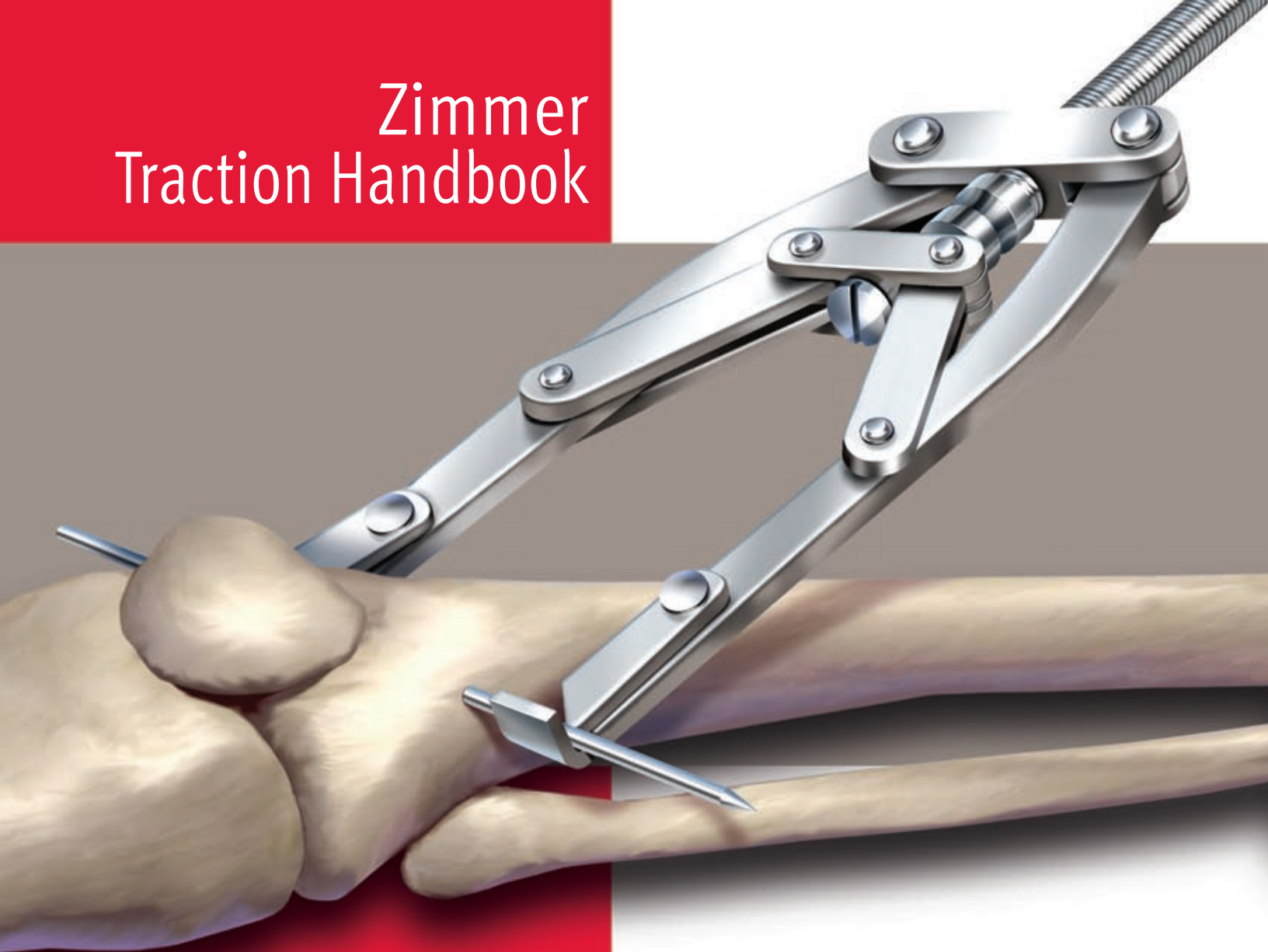


Zimmer Traction Handbook



A Complete Reference Guide to the Basics of Traction



The Traction Handbook

Acknowledgments:

We would like to acknowledge grateful appreciation to those who contributed their time and expertise in the development of the ninth edition of *The Zimmer Traction Handbook*:

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Preface

The principal aim of this book is to present a thorough yet easily understandable explanation of basic traction systems. Through its numerous illustrations and simplified language, this book makes it possible for the trained orderly or orthopaedic technician to bring to the patient's bedside all the necessary components for applying several basic types of traction. Moreover, it serves as a source of continuing education, and as a reference for experienced orthopaedic personnel.

It is not the intention of this book to present a detailed discussion on nursing care for the traction patient. To do so within the confines of this book would risk over-simplification of the many important physical as well as psychological problems often associated with this type of patient. Moreover, much literature is readily available on such subjects. At the end of this book, a special bibliography listing various nursing care publications is offered for those seeking additional information, or a more comprehensive understanding of these problems.

One important note: as you read through this book, keep in mind that the attending physician combines a highly specialized education with years of experience and thorough knowledge of each patient's medical history. It is the physician who prescribes all traction setups as well as any changes. His/Her instructions should be followed explicitly.

Finally, this Traction Handbook is only part of a long-standing Zimmer commitment to provide extensive educational programs for hospital personnel entrusted with the care of orthopaedic patients. Zimmer also has an extensive educational video series which covers the basics of traction including nursing care. This video series is available through your Zimmer representative. He or she is available to assist in replacing damaged or missing parts and to offer helpful suggestions on improving traction setups.

For additional traction information or literature, contact Zimmer Customer Service: **800-348-2759**

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Traction and Balanced Suspension

Purpose

The purpose of any traction setup is one or more of the following:

1. To prevent or reduce muscle spasm.
2. To immobilize a joint or part of the body.
3. To reduce a fracture or dislocation.
4. To treat joint pathology(s).

It is important for the nurse/technician to know the patient's diagnosis so that an evaluation of the purpose and effectiveness of the apparatus can be made and, therefore, maintain the traction in such a way that its purpose is accomplished. To achieve these purposes, the traction setup must:

1. Align the distal fragment to the proximal fragment.
2. Remain constant.
3. Allow for adequate exercise and diversion.
4. Allow for optimum nursing care.

Traction and suspension setups are arrangements of bars, pulleys, ropes, and weights which exert a pulling force on a part or parts of the body, or serve to suspend or "float" a part of the body—most frequently a limb. The terms traction and/or suspension are often confused and, therefore, used incorrectly or interchangeably. Many traction setups also include suspension; therefore, it is important for the nurse/technician to carefully study a particular setup to determine whether it is a traction, a suspension, or a combination of the two.

Anatomical Considerations

Traction is the application of a pulling force to a part of the body. But to fully understand this definition, a few basic anatomical facts about the human body must be considered.

The skeletal system, which supports the body, is composed of over 200 bones and is held in place by ligaments and muscles. These skeletal muscles act as "movers" of bones. A muscle group usually originates on one bone and terminates (inserts) on another. Skeletal muscles have a tendon at each end which attaches like a strip of adhesive tape to the bone. When the brain signals a muscle to shorten (contract), the tendons at each end are pulled toward the center (belly) of the muscle. This exerts a force on the bones at each end of the muscle, and the bony part with the least resistance moves. Skeletal muscles have tone, which could be described as a state of readiness. Tone is continually producing a certain amount of pull on the tendons.

Figure 1 illustrates a broken femur. Notice the muscle groups have pulled the broken parts out of alignment. Proper traction and suspension will help restore position. The pull of the muscle group is overcome by a new force (traction) created with weights and pulleys. Weights provide a constant (isotonic) force; pulleys help establish and maintain constant direction. The forces thus applied must remain constant in amount and direction until the fracture fragments unite.

Figure 2 illustrates the same femur after traction has been applied to realign (approximate) the broken parts.

During an extensive period of healing, the limb must be supported to assist in maintaining fragment alignment, but the patient should still be able to move about as much as possible until union is achieved. This is why a second system of weights and pulleys called "balanced suspension" is often used. Balanced suspension permits the limb to "float" over the bed, and facilitates bed pan use and changing of bed linen with minimal disturbance of the fracture.

With the traction arrangements, countertraction is a consideration. Countertraction, which is the resistance of the body to move in the direction of the forces exerted by a traction device, is a factor which is built into each setup by utilizing the patient's body weight. When necessary, the countertraction of the patient's body weight may be increased by elevation of the foot of the bed or using blanket rolls, sand bags, etc.



Figure 1

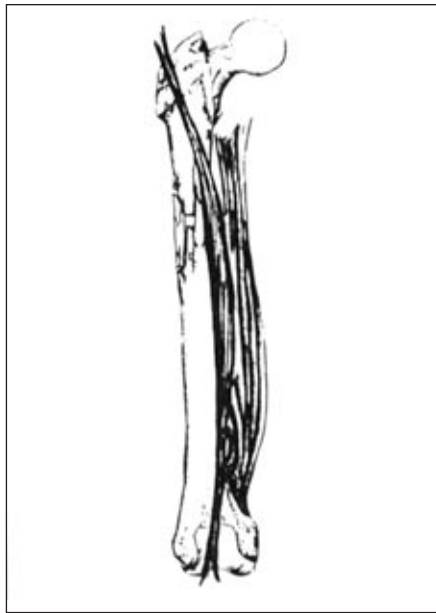


Figure 2

Types of Traction

THREE BASIC TYPES:

1. Manual Traction
2. Skin Traction
3. Skeletal Traction

Each has its own special function in the management of fractures depending on physician preference, the type of fracture and, in some cases, the patient himself.

Manual Traction

In manual traction, the hands are used to exert a pulling force on the bone which is to be realigned. Generally, this type of traction is reserved only for very stable fractures or dislocations prior to splinting or immobilization in a cast. It also may be used prior to the application of skin or skeletal traction or surgical reduction.

Skin Traction

In skin traction, strips of tape, mole-skin, or some other type of commercial skin traction strips such as *Skin-Trac* Traction Strips are applied directly to the skin. Traction boots for leg traction and pelvic belts for spinal disorders also can be classified under this category.

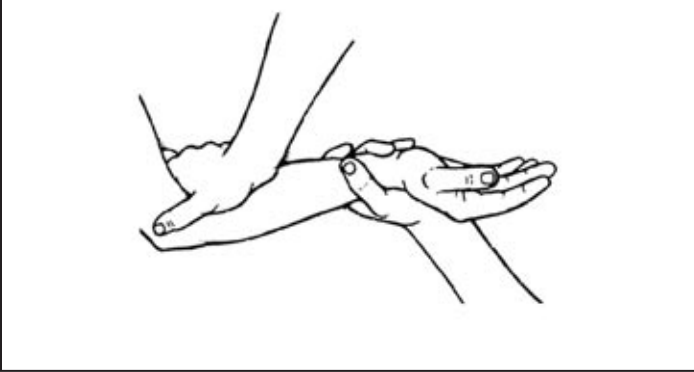
The prime indication for skin traction is the treatment of children's fractures and adult fractures or dislocations that require only a moderate amount of pulling force for a relatively short period. Certain types of children's fractures heal in a comparatively short time and do not require extremely heavy tractive forces to maintain bone alignment. Hence, the child's skin is more able to tolerate this type of traction than the adult's.

For adults, skin traction is often used as a temporary measure prior to more definitive treatment such as open reduction or skeletal traction. Because of the possibility of severe skin irritation, skin traction should not be used on fractures which require more than 5 to 7lbs. (2.7 to 3.2kg) of longitudinal force. It is also not recommended for continuous traction which is expected to exceed three to four weeks. Finally, skin traction is not recommended when controlling limb rotation is of major importance.

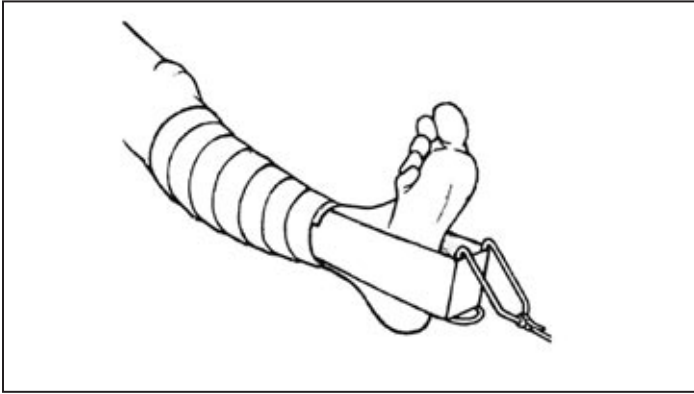
Skeletal Traction

Skeletal traction applies the tractive force directly to the bone using pins, wires, screws and, in the case of cervical traction, using tongs or halos applied directly to the skull. Skeletal traction allows the use of up to 20 or 30lbs. (9 or 14kg) of force for as long as three to four months, if necessary. Moreover, it not only exerts a longitudinal pull, but also controls rotation.

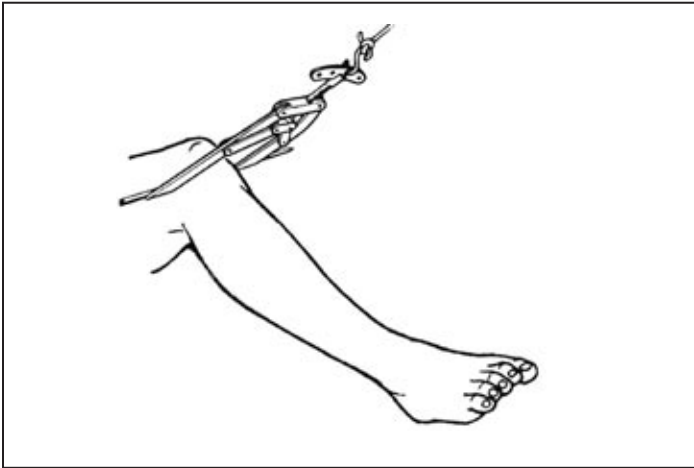
Skeletal traction is particularly advantageous for unstable or fragmented fractures and those in which muscle forces must be overcome to maintain fracture alignment, e.g., fractures of the femoral shaft.



Manual Traction



Skin Traction



Skeletal Traction

For serious cervical spine fractures or injuries, Crutchfield or Vinke cervical tongs are inserted directly into the skull and attached to the traction system. This stabilizes the vertebrae and reduces the chances of spinal cord damage or further injury.

For some fractures of the pelvis, a special pelvic traction screw is inserted into the ilium and connected to the traction system at the appropriate angle for maintaining fracture alignment.

For long bone fractures, skeletal traction requires the use of Steinmann Pins or Kirschner Wires. The basic difference between the two is their diameter. Steinmann Pins have a larger diameter, generally from 5/64in. to 3/16in. (2.0mm to 4.8mm). Kirschner Wires generally range from .028in. to 0.62in. (.7mm to 15mm) in diameter. Both pins also come in a variety of lengths and point styles. These choices are generally based on physician preference, the density of bone through which the pin or wire is to be inserted, and the forces to be applied.

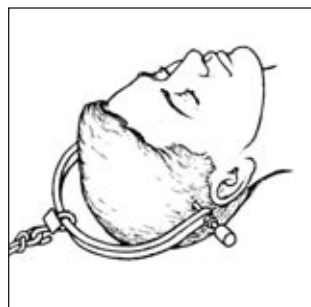
Once inserted, the Steinmann Pin or Kirschner Wire is connected to its respective holder. The holder is then connected to the traction force. It must be emphasized that Steinmann Pins are not compatible with the Kirschner Wire Tractor and vice versa. The Kirschner Wire Tractor and the Steinmann Pin Holder are designed for use only with their respective pins.

In addition to the previous classifications, traction also can be divided into two other categories based on the direction of force.

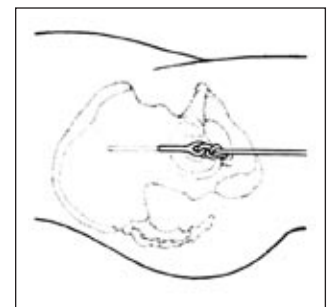
The first of these, Straight-Line Traction, is best exemplified by Buck's Traction. Here the traction is affixed to the limb at one point and then, using one or more pulleys, is attached to the weight. This causes the force to be applied in only one direction. Any change in the amount of applied force is the result of loss through friction caused by bedclothes, turning of pulleys, etc.

Generally, any loss is negligible, and therefore, for each pound of weight applied, 1 pound of force is delivered.

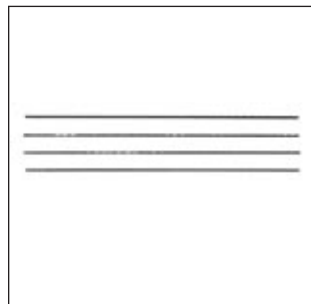
The second of these categories is the block and tackle or suspension type of traction. This is shown in the Russell's Traction illustration. In this type of traction the traction system is attached to the patient in two or more places and also to one or more other stationary points on the traction frame. Each time the traction force is attached from the patient to the frame and back to the patient, directional lines of pull, or vectors of force, are being applied.



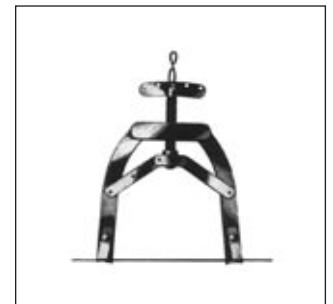
Cervical Tongs



Pelvic Traction Screw



Kirschner Wires



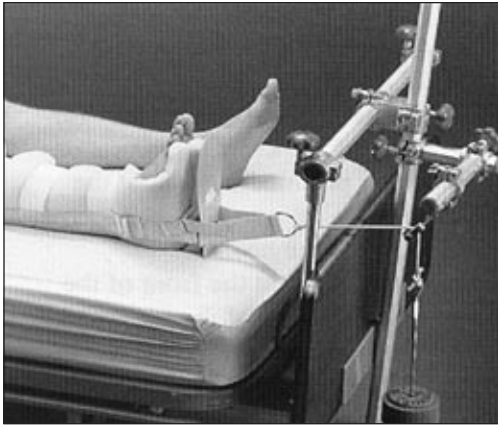
Kirschner Wire Tractor



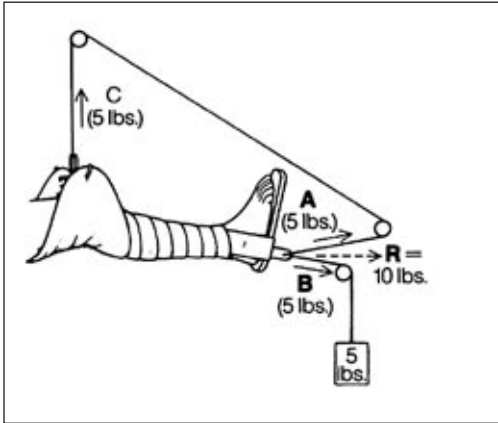
Steinmann Pins



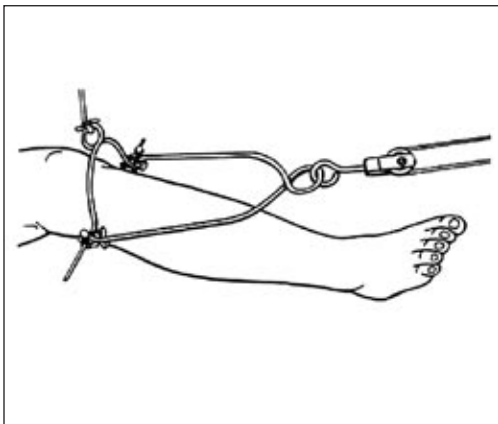
Steinmann Pin Holder



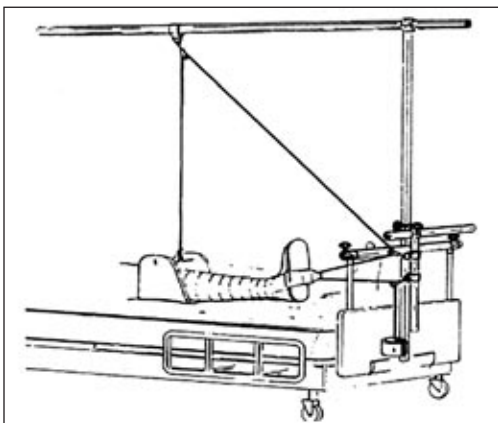
Buck's Traction



Vectors of Force Principle



Hamilton-Russell's Traction



Russell's Traction (Suspension Type)

With the vectors of force principle, it is important to remember that the actual horizontal pulling force on the extremity is double the amount of applied weight.

For example, the vectors of force illustration shows two pulling forces (A & B) on the footplate. Each has a pulling force of five pounds. These two forces combine to produce what is known as the resultant force (R), or as in this case, 10 pounds. The vertical pull on the knee sling (C) remains at 5 pounds and serves only to suspend the knee off the bed.

A variation to Russell's Traction is Hamilton-Russell's Traction. This setup accomplishes the same goal as Russell's Traction, except it uses skeletal methods.

A Steinmann Pin is inserted through the proximal tibia. Two Böhler Steinmann Pin Holders are then applied as shown in the illustration. One pin holder (with a pulley) applies the traction force, while the second holder provides lift to the knee.

The traction rope is tied to the vertical pin holder, extended up through a pulley on the overhead bar, then through a pulley at the foot of the bed. The rope is then brought back through the pulley on the second pin holder, through another pulley at the foot of the bed, and then attached to the weight system.

As with regular Russell's Traction, the vectors of force principle is applied. The horizontal traction force is twice the amount of weight applied, while the lift is equal to the actual weight.

GENERAL TIPS AND PRECAUTIONS

Before you begin applying traction, remember:

1. Skin traction cannot be applied over an open wound.
2. Skin traction may be contraindicated in patients with abrasions, lacerations or superficial infections in the immediate area. This also includes patients with varicose veins or circulatory disturbances. It also may be unsafe for diabetics or patients with very thin skin. When possible, be sure there has been a thorough admission history taken on the patient. This is especially important in cases where the doctor has not yet had the opportunity to do a complete examination.
3. Check with patient for possible adhesive allergies.
4. Do not reuse traction cord. It does become worn and may eventually break. It also can become contaminated by bacteria.

After the above procedures have been completed:

1. Before threading traction cord, lubricate all pulleys with silicone spray or a small amount of mineral oil.

CAUTION: Never lubricate pulleys when traction is completely set up unless the attending physician is present to readjust the amount of weight. Lubrication changes the friction which in turn, alters the balancing forces.

2. To help prevent pressure sores, a concentrated effort should be directed at avoiding pressure in the following locations:

Upper Extremities

- a. Bony prominences about the elbow.
- b. Anterior soft tissues of the elbow joint.
- c. Bony prominences about the wrist.
- d. Volar (palm side) surface at the wrist.

Lower Extremities

- a. Peroneal nerves at the neck of the fibula.
- b. Hamstring tendons at the back of the knee.
- c. Bony prominences about the ankle.
- d. Back of the heels.
- e. Soft tissues at the front of the ankle and top of the foot.
- f. Greater trochanters (outer area of upper thighs).

Trunk

- a. Prominences of the spine.
- b. Borders of the scapulae (shoulder blades).
- c. Crest of the ilium (upper edges of pelvic blades).
- d. Sacral areas (tail bone).

Pressure on the elbow joints, wrists, knees, and heels may be minimized by a generous wrapping of wide sheet wadding in order to distribute the weight of a limb over a wide area. Elevation of the ankle may be necessary to lift the tip of the heel away from the bed. Preventing a pressure sore is easier than curing one.

3. Weights

- a. Never add or remove weights without specific orders from the attending physician.
- b. Never allow weights to touch the floor, drag on bed parts or touch other weight systems. These conditions can reduce the applied force and cause the traction apparatus not to perform as intended. Keep all weights hanging free.
- c. Do not allow traction weights to hang over any part of the patient. Traction cord does occasionally slip or break so it is important not to allow the traction weight to strike and injure the patient. If necessary, on some older types of apparatus, add an extra bar and pulley to get the weight in a free hanging position away from the patient.

d. Although the photos in this handbook show the traction weights off the foot of the bed, some hospitals and physicians may require them to come off at the head of the bed. Both methods are acceptable, however, the reasoning behind each differs.

From Foot End:

- a. Weights are out of patient's reach.
- b. They are readily visible for inspection.
- c. With shock blocks under the head of the bed, weights hang freely with less equipment.

From Head of Bed:

- a. Weights are away from visitor's reach.
- b. They are less subject to bumping by attending personnel.
- c. Less equipment is required if shock blocks are under foot of bed.

4. Never apply pillows, sandbags, ice bags, hot water bottles, surgical dressings, cotton, sponge rubber, towels, felt, or any other type of pad to a patient in traction unless specifically ordered by the attending physician.

5. A routine should be established and followed to check each traction setup in detail. In addition, all nursing personnel coming into the patient's room should, out of habit, make a quick visual inspection of the equipment. This inspection should begin with the weights and follow along each rope to the patient to be sure that:

- a. Weights are hanging free.
- b. Ropes are in the pulleys, foot-plates and spreader blocks.
- c. Knots are free from pulleys.
- d. Bed linens, etc., are not interfering with the traction forces.

6. If the patient must be moved while in traction, the attending physician or authorized healthcare provider who set up the traction must be present. Failure to readjust traction to the same precise configuration after transport can result in misalignment with serious consequences.

7. All traction equipment must be cleaned with some type of a liquid sterilizing solution (ex. 10% bleach solution etc.) after each patient use.

RELATIONSHIP TO NURSING CARE

A great deal of the nursing care (and a good deal of equipment maintenance) related to the patient in any traction application is based upon certain fundamental principles. It is, therefore, imperative that the nurse/technician be constantly alert for the following:

1. **POSITION**
The patient should be in the supine position (on his/her back). Proper position includes keeping the entire body in good alignment. Also, either a solid bottom bed or bed boards must be used for all orthopaedic patients.
2. **COUNTERTRACTION**
For any traction to be effective, there must be countertraction. If the force of pull of the traction is greater than the countertraction supplied by the body weight, the patient will slide towards the traction force, or his traction splint may impinge on the traction pulley. Should this happen, additional countertraction may be obtained by tilting the bed away from the traction force. Traction and countertraction represent forces in balance; for this reason the patient should not have his back raised more than 20 degrees, or be allowed to sit up.
3. **FRICTION**
Any type of friction will reduce the efficiency of traction and hinder the pull. Implications for nursing care include checking to see that:
 - a. The spreader or footplate is not touching the end of the bed.
 - b. The weights are positioned at a reasonable level from the floor; a considerable distance below the pulley; hanging free of the bed; and away from the patient.
 - c. All knots are clear of the pulleys.
 - d. There is no impingement on the traction cord from bed clothes or any other apparatus.
- e. The patient's heels are not digging into the mattress. If any of these conditions are not being met, immediate corrective action is indicated.
4. **CONTINUOUS**
In general, for traction to be effective, it should be continuous. NEVER remove it without a doctor's order. Furthermore, check frequently to make sure tapes are not slipping, that pulleys are working properly and that the components of the traction apparatus are correctly and tightly assembled.
5. **LINE OF PULL**
Once established correctly, the line of pull should be maintained.
6. **PROTECTION OF THE CARDIOVASCULAR SYSTEM**
Immobilized patients are at risk for venous thrombosis and/or pulmonary embolus. The nursing goals are to monitor orthostatic tolerance and prevent venous stasis. Interventions to prevent venous stasis include:
 - a. Instructing the patient in hourly ankle rotation, flexion and extension exercises.
 - b. Avoiding or minimizing positioning that causes external pressure on venous walls such as knee gatching or crossing legs.
 - c. Using, on physician order, anti-embolism stockings or pneumatic sleeves.
7. **MAINTENANCE OF NEUROVASCULAR STATUS**
Neurovascular compromise may be avoided by using the following interventions: regularly assessing neurovascular status with particular attention to traction apparatus and pressure areas; changing the patient's position within the limitations of the traction every two to four hours; reporting any signs and symptoms of neurovascular compromise to the attending physician.

8. SKIN CARE

Static positioning in traction can cause pressure that impairs capillary flow to the skin, resulting in tissue necrosis and pressure sores. Skin integrity can be maintained by:

- Assessing skin integrity over bony prominences and any areas of the body which are covered by or attached to traction apparatus.
- Massaging potential pressure areas every two to four hours.
- Using pressure relief devices or pressure relief beds. If skin breakdown occurs, massage should be discontinued to prevent further tissue damage. The adhesive straps used in skin traction heighten the risks to the skin and should be selected, applied, and monitored very carefully.

9. MAINTENANCE OF THE MUSCULOSKELETAL SYSTEM

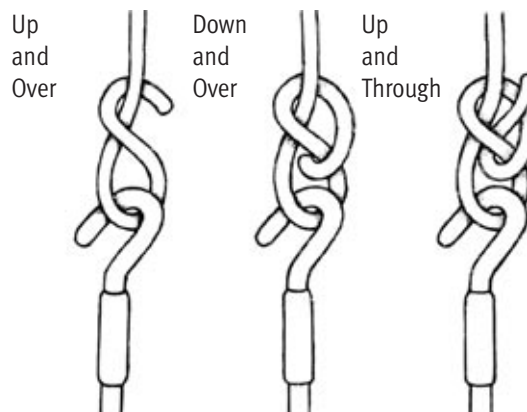
Immobility decreases muscle strength, impairs skeletal strength, and limits joint mobility. These problems can be minimized by:

- Having the patient perform regular isometric and/or isotonic exercises of uninvolved extremities and the involved extremities as prescribed by a physician.
- Periodically positioning the patient in the fully extended position.
- Allowing the patient to perform as many daily activities as possible.

If the patient will use crutches after the traction is discontinued, he/she should strengthen his/her quadriceps by:

- Pulling his/her toes toward his/her nose while pushing his/her knee into the bed.
- Sitting up in bed and pushing his/her palms against the bed to raise his/her buttocks off the bed.

Directions for setting up the upper and lower extremity exercises appear on page 44-47.



HOW TO TIE A TRACTION KNOT

To save time, follow this simple phrase: up and over, down and over, up and through. Practice a few times with a traction cord and this illustration.

Once you have tied the traction cord, allow about 4in. (10cm) at the end. This extra length of cord allows you to adjust the knot later without replacing the cord. Secure all knot ends tightly with adhesive tape.

10. NEVER IGNORE A PATIENT'S COMPLAINT

This rule should be followed above everything else. Check it out.

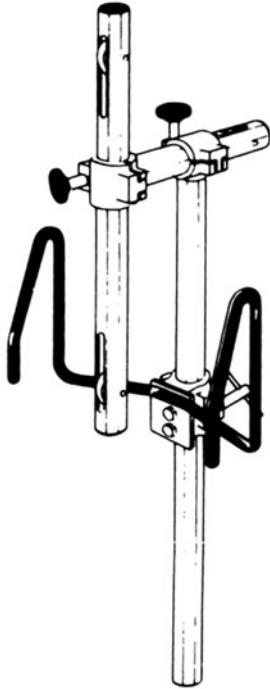
11. TRACTION SYSTEMS CAN VARY

While it is essential for those caring for traction patients to know the correct application of traction, the nurse in charge must remember that doctors may vary their traction methods for specific reasons. The nurse should, therefore, inform all floor personnel concerning any modifications to a particular traction setup instituted by a physician.

Sometimes it may be helpful to take a photo of the setup. This will show nursing personnel on all shifts how the traction setup should be maintained.

Basic Traction Frame Types

Every traction system begins with a basic traction frame. Essentially, the basic frame is the foundation around which the complete system is built. For a listing of traction frames for specific bed models, see page 82.



Zimcode Buck's Extension

For cervical and pelvic traction.

- Adjusts vertically and horizontally.
- Components color coded to simplify setup.
- Vinyl coated arms protect bed.

Prod. No.	Components	Dimensions	Qty.
00-0619-000-00	Complete System		
00-0640-006-00	Single Clamp Bar	27in. (69cm)	1
00-0619-001-00	Swivel Clamp Bar w/Pulley	9in. (23cm)	1
00-0619-002-00	Double Pulley Bar	18in. (46cm)	1
00-0619-003-00	Panel Clamp-Buck's		1



Child's Crib

- Used for fractures of the femur in children under two years old or weighing less than 30lbs. (14kg).
- Provides stabilization of the hip joint where use of cast is not indicated.
- Bilateral traction helps prevent rotation and facilitates stabilization of the patient.

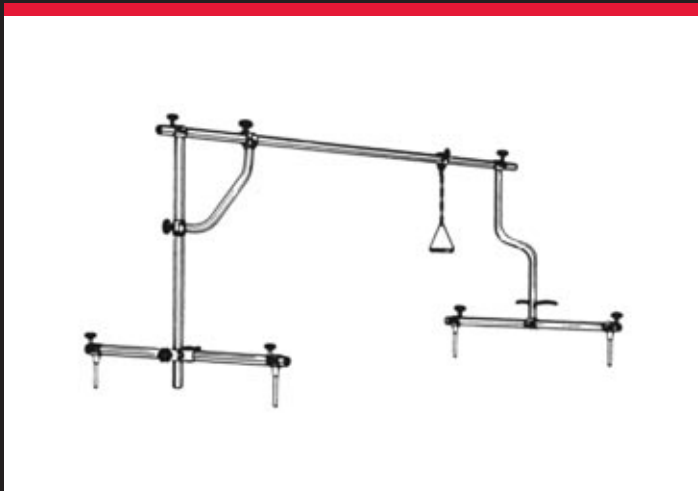
Prod. No.	Components	Dimensions	Qty.
00-0640-002-00	Swivel Clamp Bar	66in. (168cm)	1
00-0640-013-00	Panel Clamp-Upper		1
00-0640-014-00	Panel Clamp-Lower		1
00-0640-011-00	Center Clamp Bar	36in. (91cm)	2
00-0640-004-00	Single Clamp Bar	9in. (23cm)	1
00-0640-006-00	Single Clamp Bar	27in. (69cm)	1
00-0640-008-00	Pulley		4



Straight Frame

Basic frame setup for beds with I.V. Sockets. See page 82 on components for individual bed models.

Single frame will hold a patient weight of up to 250lbs. (113.4kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized. Without the Curved Double Clamp Bar, the weight limit is 200lbs.

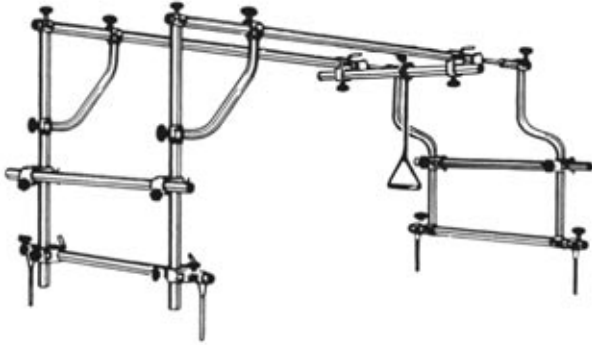


Offset Frame

Basic frame setup with an additional feature of an offset upright bar at the head to allow clearance for a wall light fixture. See page 84 on components for individual bed models.

Single frame will hold a patient weight of up to 250lbs. (113.4kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized. Without the Curved Double Clamp Bar, the weight limit is 200lbs.

Four-Poster (Balkan) Frame



Designed for special traction setups and also to accommodate increased weight bearing by patients weighing between 250 and 450lbs. (113-204kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized. See page 86 on components for individual bed models. Without Curved Double Clamp Bars, the weight limit is 350lbs.

Telescoping Overhead Bar



Designed for retractable beds, but may also be used on non-retractable beds. When using this bar, the short octagonal section **should be at the head of the bed**. Never attach the trapeze to the round inner rod upon which the telescoping section travels. See page 82 on components for individual bed models.

Single frame will hold a patient weight of up to 250lbs. (113.4kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized. Without Curved Double Clamp Bar, the weight limit is 200lbs.

Smooth-Trac® Overhead Traction Bar



Designed for retractable beds, but may also be used on non-retractable beds. See page 82 on components for individual bed models.

Single frame will hold a patient weight of up to 250lbs. (113.4kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized. Without Curved Double Clamp Bar, the weight limit is 200lbs.



Metal Bed Frame

- Basic frame designed for beds without I.V. Sockets.
- May be used with offset or straight frames.

Single frame will hold a patient weight of up to 200lbs. (113.4kg) as long as the Curved Double Clamp Bar (00-0640-021-00) is utilized.

STRAIGHT FRAME

Prod. No.	Components	Dimensions	Qty.
00-0640-001-00	Plain Bar	96in. (244cm)	1
00-0640-002-00	Swivel Clamp Bar	66in. (168cm)	2
00-0640-013-00	Panel Clamp-Upper		2
00-0640-014-00	Panel Clamp-Lower		2

OFFSET FRAME

Prod. No.	Components	Dimensions	Qty.
00-0640-023-00	Plain Bar	85in. (216cm)	1
00-0640-024-00	Offset Swivel Clamp Bar	66in. (168cm)	1
00-0640-002-00	Swivel Clamp Bar	66in. (168cm)	1
00-0640-013-00	Panel Clamp-Upper		2
00-0640-014-00	Panel Clamp-Lower		2

Hill-Rom® TotalCare®* Traction Frame

(Zimmer Prod. No. 00-2700-020-00)

DESCRIPTION

Components used to apply basic types of traction for a patient using the *Hill-Rom TotalCare* Bed System.

INDICATIONS

The purpose of this traction setup is one or more of the following:

1. Prevent or reduce muscle spasm.
2. Immobilize a joint or part of the body.
3. Reduce a fracture or dislocation.
4. Treat joint pathology(s).

Claims made regarding weight limitations and/or warning during operation/use are done so with regard to the use of *Zimmer* components only. These warnings are void if components other than *Zimmer* are used.

GENERAL TIPS ON FRAME ASSEMBLY

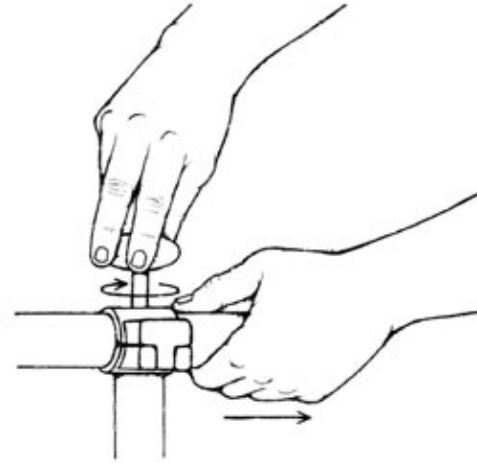
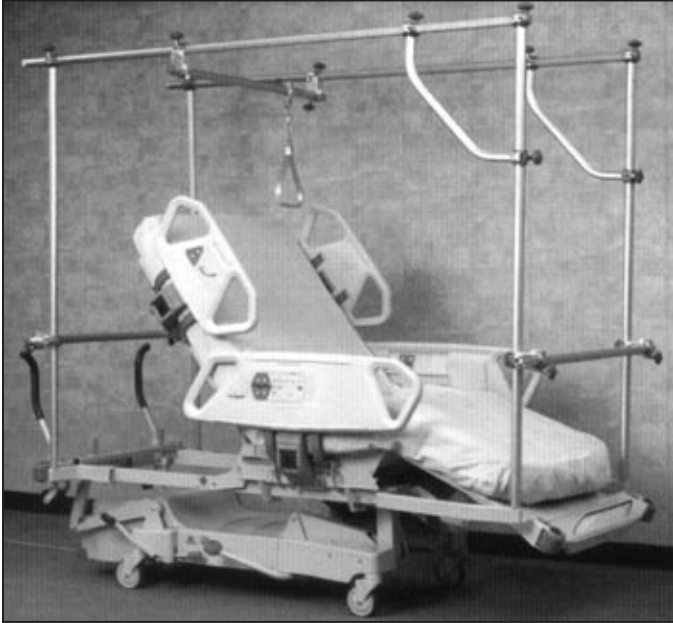
1. Adjust the bed to its lowest position. Refer to the *TotalCare* documentation for instructions.
2. When attaching horizontal bars, position the clamp so that the knob is on top. This will help prevent complete detachment of the clamp should the knob become loose.
3. For maximum frame stability, install the curved double clamp bar at the foot of the bed as shown.
4. The flat surface of the bar must be facing upward on all horizontal bars and facing to the side on upright / vertical bars.
5. "Load" the fracture frame by securing the horizontal plain bar within the vertical posts. Close the cross clamp on one end of the plain bar and fully tighten. Grasp the opposite vertical post and exert a longitudinal pull. Tighten the second cross clamp on the plain bar.

NOTE: There are several different types of basic frames based on the type of traction being applied and the bed model. Follow the guidelines for the type of traction being applied.

CAUTIONS

1. A full fracture frame is not to be used on the *TotalCare* bed without the use of the I.V. Post Adapter Brackets.
2. Begin by placing the four 61in. (155cm) upright posts into the holes in the adapter brackets, and assemble the frame as shown in the drawing to the right.
3. When mounting Buck's Traction, the knee controls on the bed should be locked out. Refer to the *TotalCare* bed documentation for instructions.
4. When mounting Cervical Traction, the head and knee on the bed should be locked out. Refer to the bed documentation for instructions.
5. To avoid injury, the bed should not be operated until all persons are clear of mechanisms and the I.V. Post Adapter Brackets.
6. Do not use the fracture frame to push, pull or steer the bed. Use the transport handles, the foot prop or the siderails so as not to accidentally weaken or destabilize the frame.
7. Do not exceed the safe working load of the *TotalCare* Bed System. Refer to the *TotalCare* bed documentation on specifications.
8. Before activating any of the bed controls, make sure the traction frame will remain clear of other structures or equipment during movement.

* *Hill-Rom* and *TotalCare* are trademarks of Hillenbrand Industries.



INSTALLATION OF I.V. POST ADAPTER BRACKETS

- The mount holes for I.V. Post Adapter Brackets are located on the weigh frame, under the head section and the thigh section of the *TotalCare* bed.
- Raise the head section and thigh section approximately 20 degrees.
- Remove the two mounting bolts and nuts from the bracket.
- The head brackets are smaller than the foot brackets, do not interchange. (See photo of installed brackets at left.)
- The left and right brackets are identical and can be mounted on either side.
- Align the bracket so that the I.V. hole will be toward the outside of the bed. Slide the mounting plates of the bracket over the tube of the weigh frame.
- Align the holes of the adapter mount plate with the holes in the weigh frame.
- Insert the bolts from the top of the weigh frame and tighten the locking nut securely on the bottom of the weigh frame using a $\frac{1}{2}$ in. (13mm) wrench.
- Repeat procedure at all four corners of the bed.
- The fracture frame can now be assembled.

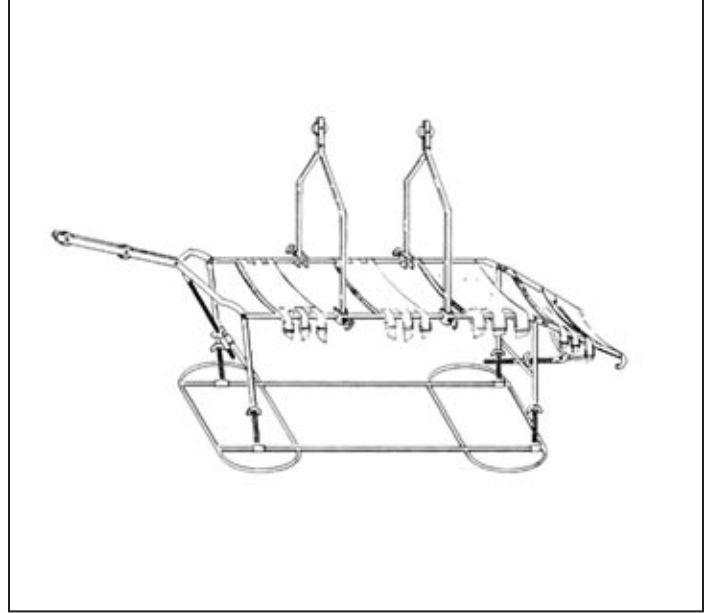
Prod. No.	Components	Dimensions	Qty.
00-2700-020-00	Traction Frame for TotalCare Bed (Complete)		1
00-1042-004-00	Cross Clamp		6
00-2700-040-00	Plain Bar	40in. (101cm)	3
00-0640-023-00	Overhead Bar	85in. (216cm)	2
00-2700-021-00	Vertical Post	61in. (155cm)	4
00-0640-021-00	Curved Double Clamp Bar		2
00-0640-067-00	Trapeze		1
00-2700-022-00	I.V. Post Adapters (Head end of bed)		2
00-2700-023-00	I.V. Post Adapters (Foot end of bed)		2

BÖHLER-BRAUN FRAME

Used with Böhler-Braun Leg Traction. See page 34 for specific setup details.

Zimmer Prod. No. 00-0112-002-00

Canvas Sling 00-0113-002-00



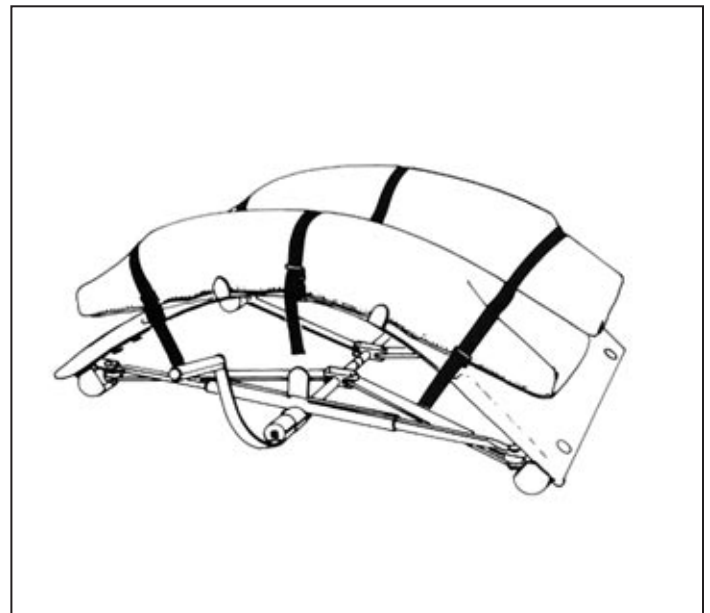
WILSON CONVEX FRAME

Used in intervertebral disc surgery to reduce venous back pressure, facilitate patient breathing and properly flex spine for more efficient access to disc.

Zimmer Prod. No. 00-0551-000-00

COMPONENT PARTS

Prod. No.	Description
00-0551-052-00	End Pad
00-0551-053-00	Side Bar
00-0551-087-00	Threaded Bar
00-0551-088-00	Threaded Block-Right
00-0551-188-00	Threaded Block-Left



Frame Measurements for Beds Not Listed in this Handbook

HOW TO MEASURE

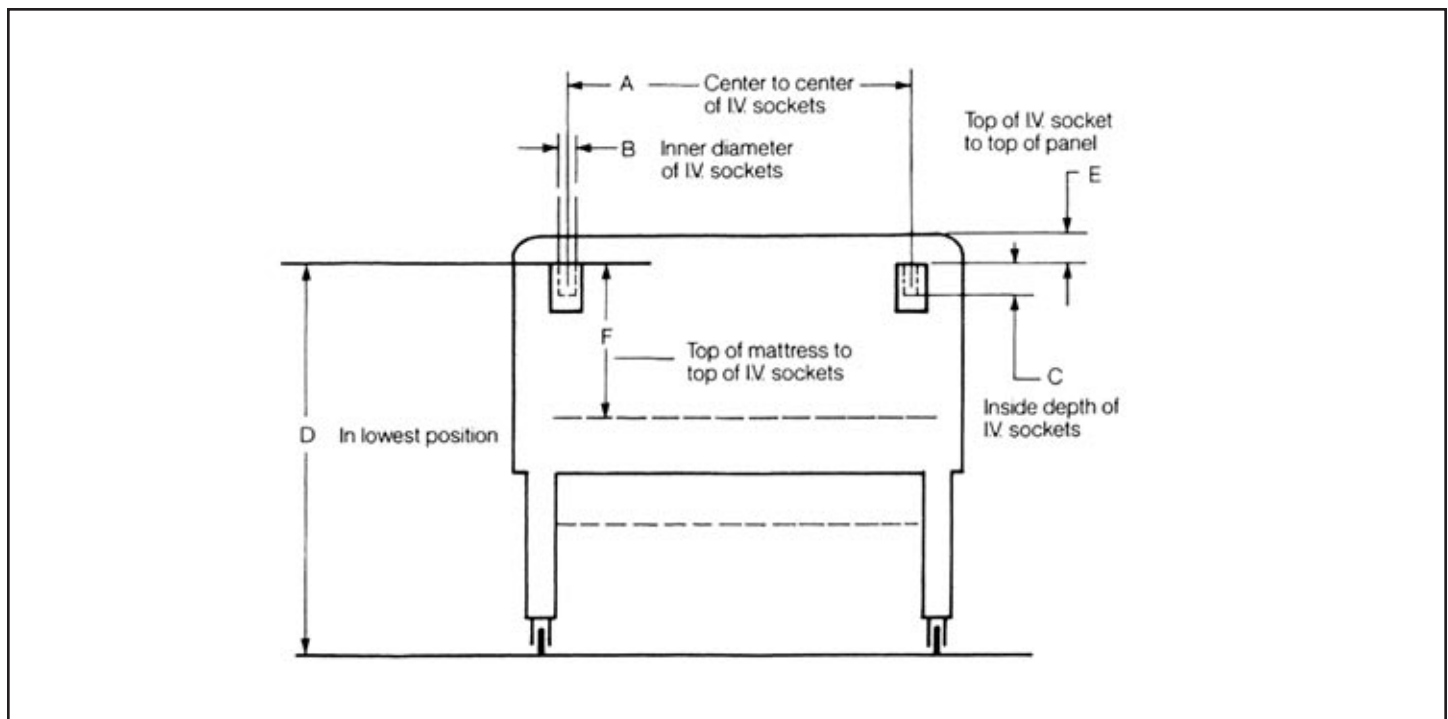
To determine the correct frame for a bed not listed at the back of this catalog, the following measurements must be taken at both the head and foot ends of the hospital bed:

- Measure the distance, center-to-center, of the I.V. Sockets.
- Measure the inner diameter (I.D.) of the I.V. Sockets.
- Measure the inside depth of the I.V. Sockets. (Down as far as any obstructions or stops, which would prevent the I.V. Post from further insertion down into the socket cavity.)
- Measure the height from the floor to the top of the I.V. Sockets with the bed in the lowest position.
- Measure the distance from the top of the I.V. Sockets to the top of the headboard and footboard panels.
- Measure the height from the top of the mattress to the top of the I.V. Sockets.
- Measure, center-to-center, the distance between the I.V. Sockets at the head and foot of the bed.

Ordering the correct I.V. Post for your bed is critical for your satisfaction with the traction frame. Accurate measurement of (A) through (G) is essential to obtaining the correct I.V. Post. Therefore, please measure carefully.

It is suggested that, if at all possible, the *Zimmer* representative be consulted to verify the correct bed frame once all necessary measurements have been obtained. He or she can provide all required *Zimcode* components if not currently available in the traction supply area of the hospital.

Head	Foot
_____ A	_____ Center-to-center of I.V. Sockets
_____ B	_____ Inner diameter of I.V. Sockets
_____ C	_____ Inside depth of I.V. Sockets
_____ D	_____ Height from floor to top of I.V. Sockets with bed in lowest position
_____ E	_____ Top of I.V. Socket to top panel
_____ F	_____ Top of mattress to top of I.V. Sockets
_____ G	_____ Distance from head I.V. Socket to foot I.V. Socket





GENERAL TIPS ON FRAME ASSEMBLY

1. When attaching horizontal bars, position the cross clamp on the top bar so that the one KNOB is on top. This will prevent complete detachment of the clamp should the knob become loose.
2. For maximum frame stability, the swivel end of the double clamp bar must be located at the top.
3. The horizontal plain bars at both ends of the bed should be “loaded” to ensure the stability of the overall frame. (See illustration.)
4. The flat surface must be on top on all horizontal bars for maximum stability. On upright bars, the flat surface must be on the side.
5. On manual beds, modification of the frame assembly may be necessary to allow crank movement.



LOADING THE FRAME

To “load” the overall traction frame, secure the horizontal plain bar within one of the two I.V. posts by closing the one post clamp around the bar, and fully tighten. Close the second I.V. post clamp around the bar, but do not fully tighten. Grasp the plain bar and exert a longitudinal pull. While holding the pull, tighten the second I.V. post clamp completely.



BEFORE PROCEEDING

The next section explains the various procedures for setting up several basic traction systems. As you look through this section, remember that there are many ways in which these systems can be modified, depending on physician preference, hospital procedure, the relative conditions of the patient and so forth. If a particular setup in your hospital does not look similar to those in the following illustrations, do not assume it is wrong. Always check with the physician or head orthopaedic nurse before making any modifications.

Bryant's Traction

INDICATIONS

1. Fractures of the femur in children up to two years old or weighing less than 30 lbs. (14kg).
2. Stabilization of the hip joint where use of the cast is not indicated.

GENERAL INFORMATION

1. Traction is bilateral (even if pathology is unilateral) to help prevent rotation and to facilitate better stabilization of the patient, thereby maintaining better control.

POSITION OF BED AND PATIENT

1. With the bed in a level position and body flat on the bed, vertical suspension traction of the legs should be set up so that the hips are flexed at right angles.
2. When the traction is in place, the buttocks should just clear the mattress.
3. Lift the buttocks a few inches off the mattress. When the buttocks are released, the child should return to the "just clear" position described above. If not, check with the attending physician regarding a possible change in the amount of weight.

TIPS AND PRECAUTIONS

1. **Warning:** Dangerous complications leading to ischemic contractures can occur. Check both feet at least every two hours for color, pulse, motion, temperature, and sensation.
2. Check for undue pressure:
 - a. Over the outer head and neck of the fibula.
 - b. On the dorsum of the foot.
 - c. On the Achilles tendon.
3. Check to see that bandages, boots, etc., have not slipped and become bunched around the toes or ankles.

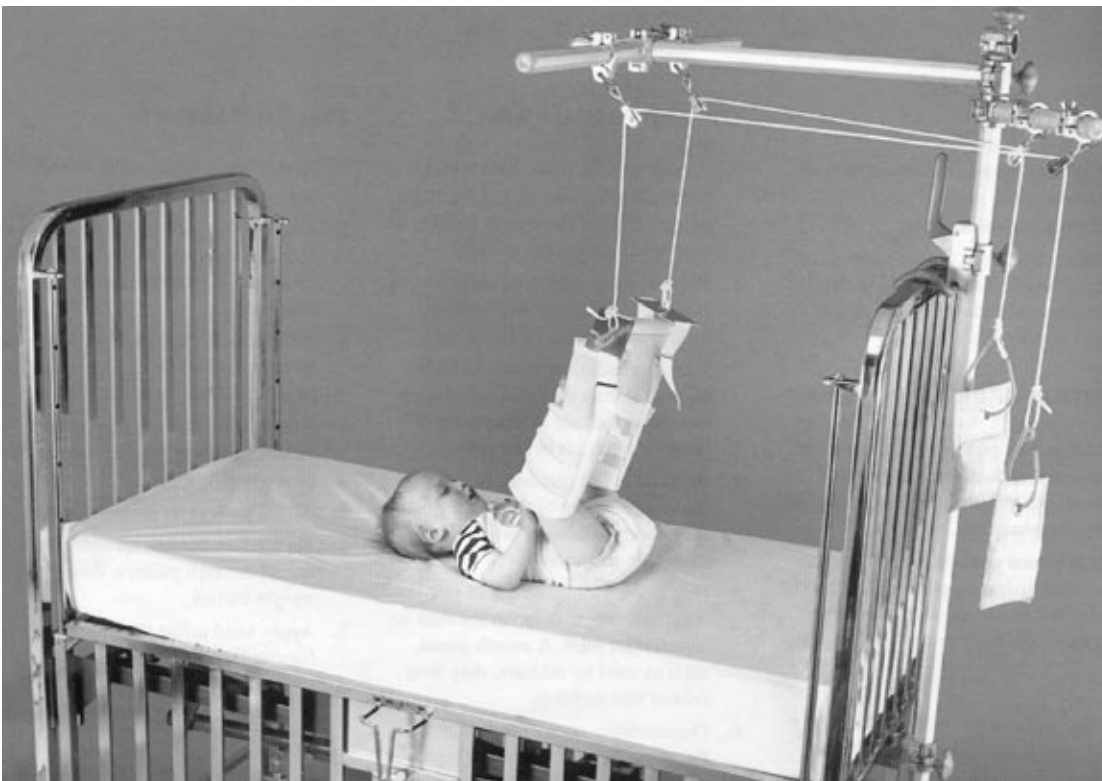
4. Problems with this type of traction are difficult to define due to the age of the child. These problems include:
 - a. Inability to communicate wants and needs.
 - b. Toilet needs.
 - c. Feeding.
 - d. Diversion.
 - e. Maintaining position which makes it sometimes necessary to use some form of jacket or restraint, especially to keep the child from "rotating" around the traction apparatus.
5. All of the above need to be handled with individual consideration. Get to know the child. Talk with the parents!

TRACTION SETUP

1. Attach 66in. (168cm) swivel clamp bar with panel clamp-upper (UC) and panel clamp-lower (LC) to foot of crib.
2. Attach 27in. (69cm) single clamp bar to upright post, extending over bed.
3. Attach 9in. (23cm) single clamp bar to upright post, extending beyond end of bed.
4. Attach 36in. (91cm) center clamp bar horizontally to 27in. (69cm) single clamp bar and position it directly above the outside of the patient's hips.
5. Attach a pulley to each end of bar, positioning them directly above the outside of the patient's hips.
6. Attach pulleys to the 9in. (23cm) single clamp bar.
7. Tie traction cord to Deluxe Convuluted *Zim-Trac*® Traction Splints, thread through pulleys, then tie to weight carriers. This procedure may be altered by using *Skin-Trac* Traction Strips wrapped with *Zimmer* Premium or Standard Orthopaedic Wrap.*
8. Apply weights.

* See page 50 on application of *Skin-Trac* Traction Strips.

Prod. No.	Components	Qty.
Basic Crib Frame Setup		
00-0640-002-00	66in. (168cm) Swivel Clamp Bar	1
00-0640-013-00	Panel Clamp-Upper	1
00-0640-014-00	Panel Clamp-Lower	1
00-0640-011-00	36in. (91cm) Center Clamp Bar	1
00-0640-004-00	9in. (23cm) Single Clamp Bar	1
00-0640-006-00	27in. (69cm) Single Clamp Bar	1
00-0640-008-00	Pulleys	4
00-0905-005-00	Stephan Spreader Bar (optional)	1
00-2753-010-00	Deluxe Convoluted <i>Zim-Trac</i> Traction Splint	2
	Weight Carriers	2
	Traction Cord	
	Weights: As ordered by physician	



Cervical Traction

INDICATIONS

1. Cervical myositis, dislocations, arthritis and/or degenerative spinal disorders, whiplash, etc.
2. Minor fractures. (More serious fractures would be treated by skeletal traction utilizing Vinke or Crutchfield cervical tongs.)

POSITION OF BED AND PATIENT

1. If possible, position the patient flat on back with the bed in the level position, unless otherwise prescribed by the physician.
2. Additional countertraction may be accomplished by putting the head of the bed on elevation blocks, or by raising the back rest.

TIPS AND PRECAUTIONS

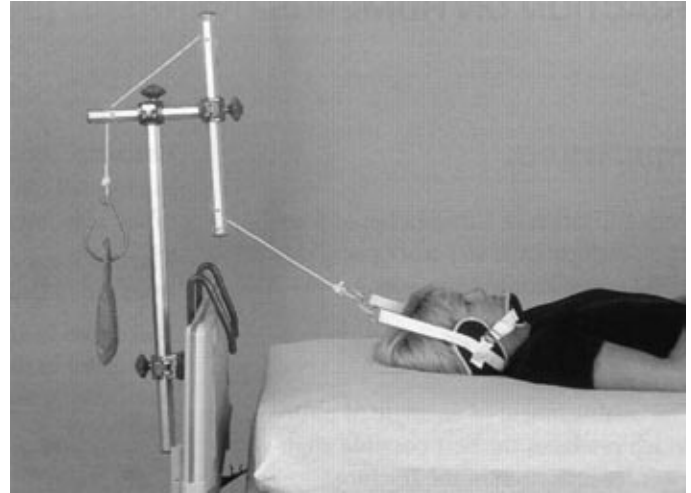
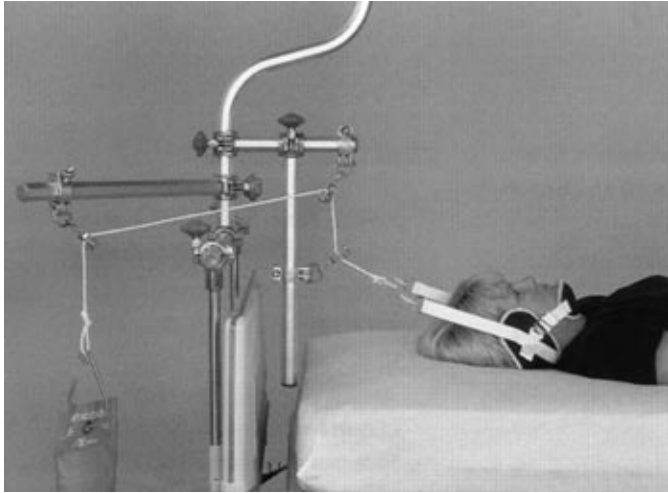
1. Patient may be positioned with his or her head at the foot end of the bed when a Buck's Extension Bracket is used on certain types of beds.
2. Hyperextension may be increased by placing a rolled towel or tension pillow beneath the patient's neck.
3. Use a spreader bar, which is wide enough so that the head halter does not touch the side of the patient's head or pinch his or her ears.
4. Additional felt padding, frequent routine changing of the padding and cornstarch or powder will help reduce skin irritation.
5. Due to the biomechanics of jaw loading, pain may develop in the ears or mandibular joint. A mouth guard, such as used by athletes, may help relieve this problem.
6. Occasionally, with permission from the attending physician, the patient may have the traction released for brief periods.
7. Prism glasses can make watching TV or reading easier.
8. Check occipital area for pressure spots. Patients in cervical traction can develop pressure sores in this area.
9. Chewing and swallowing are frequently difficult. Diet modifications may be necessary to ensure adequate intake.
10. Establish eye contact by standing where the patient can see you.
11. Always remember to turn off the overhead lights when not needed. A light shining directly in patient's eyes is irritating.

TRACTION SETUP #1

1. Attach basic setup to bed. (See pages 14-17).
2. Attach 18in. (46cm) single clamp bar to the upright bar of the basic frame setup at a 45 degree angle to the headboard.
3. Attach 9in. (23cm) single clamp bar directly above 18in. (46cm) bar perpendicular to head board.
4. Attach 18in. (46cm) single clamp bar vertically to the 9in. (23cm) single clamp bar.
5. Attach pulleys as shown in photo.
6. Tie traction cord to spreader bar, thread through pulleys, then tie to weight carrier.
7. Apply head halter to patient. (Check for comfort, i.e., ears not binding, straps not resting against side of head, chin piece not constricting throat.)
8. Attach head halter to spreader bar.

TRACTION SETUP #2

1. Attach Buck's Extension panel clamp to headboard.
2. Attach 27in. (69cm) single clamp bar vertically.
3. Attach 9in. (23cm) single clamp bar with pulley, perpendicular to 27in. (69cm) single clamp bar.
4. Attach 18in. (46cm) double pulley bar to 9in. (23cm) single clamp bar.
5. Follow previous instructions, steps 6 through 8.



TRACTION SETUP #1

Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bar	1
00-0640-005-00	18in. (46cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	3
	Head Halter*	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
	Weight Carrier	1
	Traction Cord	
	Weights: As ordered by physician	

* See page 72 for a complete selection of head halters.

TRACTION SETUP #2

Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-0619-000-00	Zimcode Buck's Extension	1
00-0640-006-00	27in. (69cm) Single Clamp Bar	1
00-0619-001-00	9in. (23cm) Single Clamp Bar with Pulley	1
00-0619-002-00	18in. (46cm) Double Pulley Bar	1
00-0619-003-00	Panel Clamp-Buck's	1
	Head Halter*	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
	Weight Carrier	1
	Traction Cord	
	Weights: As ordered by physician	

* See page 72 for a complete selection of head halters.

Traction On Humerus- Overhead (90-90)

INDICATIONS

Immobilization or stabilization of fractures, dislocations, and other pathology of the upper arm and shoulder.

REQUIREMENTS

The establishment of an angle of pull which produces the best possible alignment for reduction of the fracture.

POSITION OF BED AND PATIENT

If possible, the bed should be level with the patient flat on back.

TIPS AND PRECAUTIONS

1. Remember, traction is applied to the humerus only. The forearm is only in balanced suspension.
2. An overhead frame and trapeze will facilitate patient care and enable the patient to be more active and help himself.
3. Exposed adhesive sides of *Skin-Trac* Traction Strips should be covered near hand and other bony prominences to prevent sticking and skin irritation.
4. Countertraction can be increased by:
 - a. Placing a rolled blanket between the mattress and spring on the traction side of the bed.
 - b. Placing bed elevation or shock blocks under the bed on the traction side of the bed to tilt the patient away from the traction.
 - c. Using a body or jacket restraint to keep the patient away from the traction side of the bed.
5. Encourage active and passive exercises especially to the wrist and fingers of the affected arm.
6. The bed linen is most easily changed from top to bottom.
7. Make sure bandage wrappings are not tighter at the proximal rather than distal end of arm otherwise swelling may occur.
8. Make sure bandage wrappings are not cutting at the elbow or wrist. This can be prevented by placing a piece of felt padding in these areas.
9. Due to its elevated and immobile position, the hand may feel cold to the patient even though circulation is adequate. A light covering, such as with a towel, can relieve this problem.
10. Frequent and thorough back care is essential to prevent

skin breakdown as well as to relieve the general discomfort resulting from remaining in the supine position for an extended period.

11. Since the patient has the use of only one hand (and frequently not the one normally used), he or she may require help with eating to ensure adequate dietary and fluid intake. These patients also will need help with other self-care procedures such as teeth brushing, hair combing, etc. Also keep items such as water, tissues, etc., within easy reach.
12. Remember to turn off overhead lights when not needed. A light shining directly in patient's eyes is irritating.
13. Patients in 90-90 traction will need prism glasses for reading and watching TV.
14. Be sure to stand where the patient can see you!

TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach 40in. (100cm) bar with cross clamps to overhead bar above the patient's arm.
3. Attach 5in. (13cm) single clamp bar on each upright bar at foot of bed. Add cross clamp to each 5in. (13cm) single clamp bar. Connect the two sides together with a 40in. (100cm) plain bar.
4. Attach two pulleys to 40in. (100cm) bar overhead of patient, one on each side.
5. Attach one pulley to 40in. (100cm) plain bar at the foot of the bed.
6. Apply *Skin-Trac* Traction Strip smoothly to arm.*
7. Wrap *Zimmer* Premium or Standard Orthopaedic Wrap around arm.
8. Tie traction cord to spreader block, thread through pulleys, then attach to weight carrier.
9. Place patient's forearm and hand in large polyester pile knee sling, attach traction cord to spreader bar, tie other end of rope to an "S" hook and place over the pulley.
10. Apply weights.

* See page 50 on application of *Skin-Trac* Traction Strips.



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-1083-003-00	5in. (13cm) Single Clamp Bar	2
00-1042-004-00	Cross Clamps	2
00-2700-040-00	40in. (100cm) Plain Bar	1
00-0640-008-00	Pulleys	3
00-0923-003-00	3in. (8cm) Spreader Block	1
00-3874-003-00	<i>Skin-Trac</i> Traction Strip 3in. x 40in. (8cm x 102cm)	1
00-4444-003-00	<i>Zimmer</i> Standard Orthopaedic Wrap 3in. (8cm)	1 roll
00-5555-003-00	or <i>Zimmer</i> Premium Orthopaedic Wrap 3in. (8cm)	1 roll
00-0056-011-00	Large Polyester Pile Knee Sling	1
	Weight Carriers	2
	Traction Cord	
	Weights: As ordered by physician	

Pelvic Traction With Pelvic Belt

INDICATIONS

1. Trial treatment of nerve root disorders.
2. Sciatica.
3. Muscle spasms (low back).
4. Minor fractures of lower spine.

POSITION OF BED AND PATIENT

The attending physician may prescribe countertraction either by:

1. Elevation of the foot of the bed using shock blocks.
 2. Gatching of the bed at the knees.
 3. Placing pillows under the knees.
 4. Placing the bed in the semi-Fowler's (jackknife) position.
- Whichever countertraction the physician prescribes, the patient should be flat on back.

TIPS AND PRECAUTIONS

1. Check and adjust pelvic belt straps so they are unrestricted and equal in length. It is a good idea to secure the straps with adhesive tape or a safety pin.
2. Make sure the angle of pull is correct.
3. Since the pelvic belt is applied directly to the skin, check frequently for skin irritation, especially on the iliac crests. Powder and other skin care measures can help prevent skin irritation and breakdown.
4. Pelvic belts should be changed and laundered when they become soiled, or at least every three days.
5. Constipation will add to patient discomfort. Measures should be taken to prevent this condition and patients should be taught why these measures are necessary.
6. A footboard will help prevent foot drop.
7. Back pain is often hard to define and relieve, but it is very real. Moral support is essential for these patients. They also should be instructed on proper body mechanics and care of the back to prevent future disorders.

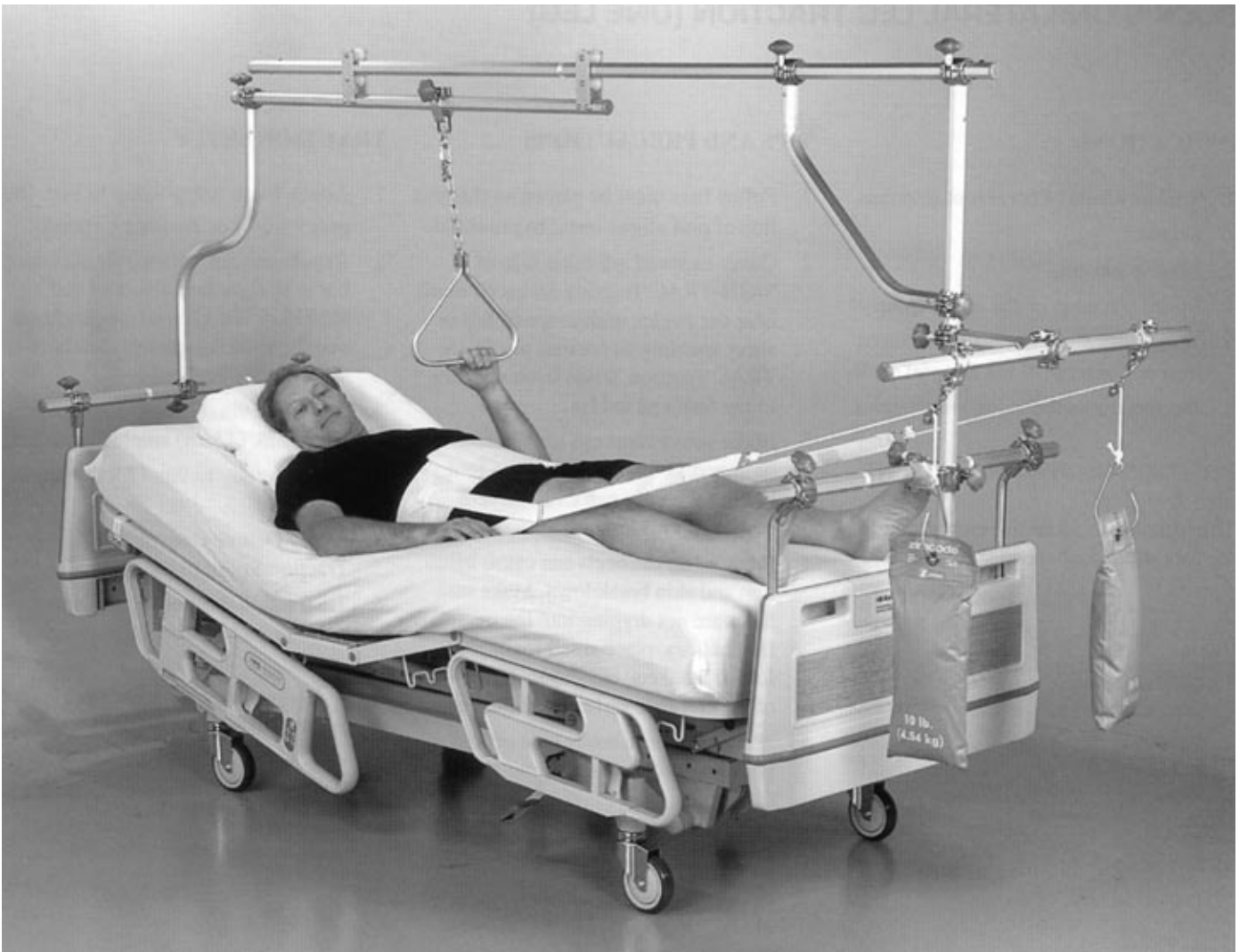
TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach 36in. (91cm) center clamp bar to overhead bar at extreme foot end of bed.

NOTE: One 9in. (23cm) single clamp bar may be placed on the upright bar at the foot of the bed for attachment of one 36in. (91cm) center clamp bar to provide greater clearance for weights.

3. Attach two pulleys to 36in. (91cm) center clamp bar.
4. Measure patient's girth at the crest of the ilium to ensure correct size of belt.
5. Apply pelvic traction so that the lower portion of the belt is at or slightly below the greater trochanter. (Belt is not to be applied like an abdominal binder.)
6. Attach traction cords to straps of pelvic belt, thread through pulleys then tie to weight carriers.
7. Apply weights.

NOTE: The above procedure may be altered using a 22in. (56cm) spreader bar and a single traction cord, pulley and weight carrier. The 36in. (91cm) center clamp bar can be deleted, and a 9in. (23cm) single clamp bar with pulley can be attached at an angle to the upright bar at the foot end of the bed. (See photo on p. 31)



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-0640-011-00	36in. (91cm) Center Clamp Bar	1
00-0640-004-00	9in. (23cm) Single Clamp Bar (optional)	1
	Pelvic Traction Belt*	1
00-0648-000-00	22in. (56cm) Spreader Bar (optional)	1
00-0640-008-00	Pulleys	2
	Weight Carrier	1
	Traction Cord	
	Weights: As ordered by physician	



* See page 74 for a complete selection of pelvic traction belts.

Buck's Unilateral Leg Traction (One Leg)

INDICATIONS

1. Trial treatment of nerve root disorders.
2. Sciatica.
3. Muscle spasms.
4. Minor fractures of the lower spine.
5. Temporary stabilization of fractured hips or fractures of the femoral shaft.
6. Degenerative arthritis and knee injuries.

POSITION OF BED AND PATIENT

The patient should be flat on back with the foot of the bed elevated.

TIPS AND PRECAUTIONS

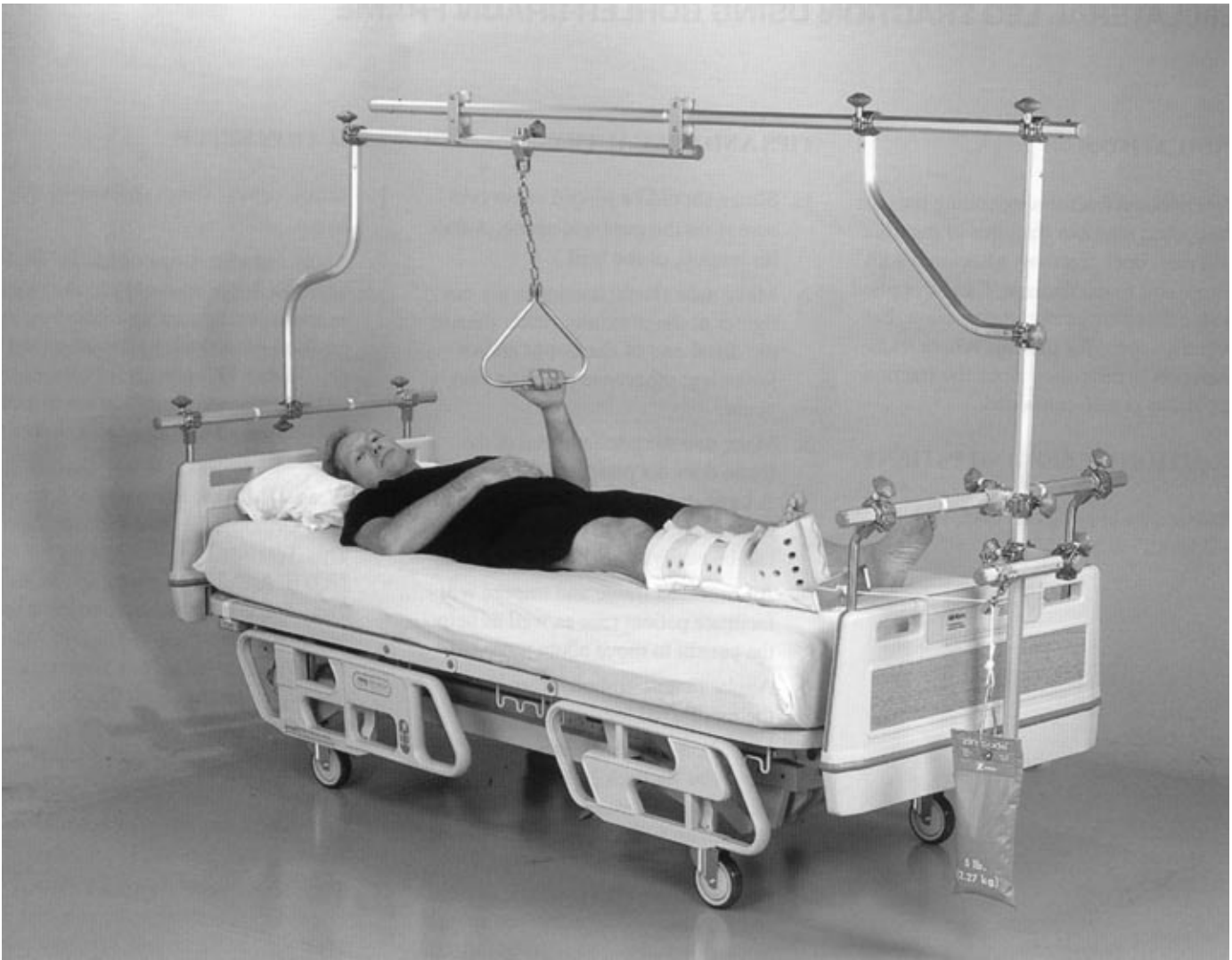
1. Pulley bars must be placed so that the line of pull aligns distal to proximal.
2. Cover exposed adhesive side of *Skin-Trac* Traction Strips (if used) near ankles with strips of felt or sheet wadding to help prevent the *Skin-Trac* Traction Strips from sticking onto the foot and ankle.
3. Make sure wrappings are not too tight across the dorsum of the foot. Excess pressure can cause severe complications.
4. Pressure on the heels can cause irritation and skin breakdown. Make sure heels are not digging into the mattress. If necessary, place small foam pads, folded blankets, etc., under full length of the calf to keep heels off the bed.
5. Make sure pressure is kept off the peroneal nerve or foot drop may occur.
6. A bed cradle may be used to keep bed covers from resting on the feet.
7. Encourage activity as tolerated, including active and passive exercises. The patient should use the trapeze for moving about in bed.

TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach one 5in. (13cm) single clamp bar to upright bar at foot of bed. NOTE: A 9in. (23cm) single clamp may be used for greater clearance of the weights.
3. Attach on 9in. (23cm) single clamp bar to 5in. (13cm) single clamp bar.
4. Attach pulley to 9in. (23cm) single clamp bar.
5. Apply Deluxe Convuluted *Zim-Trac* Traction Splint to leg.
6. Tie traction cord to splint, thread through pulley, then tie to weight carrier.
7. Apply weights.

NOTE: The above procedure may be altered by using *Skin-Trac* Strips wrapped with a *Zimmer* Premium or Standard Orthopaedic Wrap.

* See page 50 on application of *Skin-Trac* Traction Strips.



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-1083-003-00	5in. (13cm) Single Clamp Bar	1
00-0640-004-00	9in. (23cm) Single Clamp Bars (second bar optional)	2
00-0640-008-00	Pulley	1
00-1774-001-00	Universal Traction Splint	1
	Weight Carriers	1
	Traction Cord	
	Weights: As ordered by physician	

Unilateral Leg Traction Using Böhler-Braun Frame

INDICATIONS

Comminuted fractures extending into the knee joint; unstable fractures of the tibia or femur; open fractures associated with severe soft tissue damage. Can be applied with either skin or skeletal traction. Especially useful for patients where transportation is necessary since the traction apparatus is self-contained.

POSITION OF BED AND PATIENT

Patient should be flat on back with the bed level.

TIPS AND PRECAUTIONS

1. Slings should be placed so no pressure is on the popliteal space, Achilles tendon, or the heel.
2. Make sure elastic bandages are not tighter at the proximal rather than the distal end of the femur or lower leg, otherwise swelling may occur.
3. Make sure the proximal end of the frame does not press into the perineum. A large dressing or pieces of sheep skin can be used to pad this area and can be easily changed if soiled.
4. An overhead frame and trapeze will facilitate patient care as well as help the patient to move about more easily.
5. Apply an anti-embolism stocking to the unaffected leg.
6. Usually, the patient can turn towards the splint for backcare, linen changes, etc. It may be easier if the bed is made with two folded sheets, one at the head and another at the foot underneath the splint. Then, if only one part of the bed needs changing, the splint will not have to be moved.
7. Pressure from slings, wrappings, etc., or from the leg lying against the side of the frame can cause peroneal nerve damage. Make sure leg is not externally rotated, and check the neurovascular status every two hours.
8. If skeletal traction is used, refer to your institution's policies regarding care of the pin sites.

TRACTION SETUP

1. Attach canvas slings (provided) to frame.
2. Physician to insert pin and attach Steinmann Pin Holder. *Skin-Trac* Traction Strips may also be applied according to the traction position prescribed by the attending physician*.
3. Lift the injured leg and place the frame under it with the knee directly over the angle of the frame.
4. Adjust the towels or sling so that any pressure points are eliminated. (Protect heel and hamstring tendons.)
5. Tie traction cord to Steinmann Pin Holder, thread through pulleys, then tie to weight carriers.
6. Apply weights.

NOTE: A Deluxe Convoluted *Skin-Trac* Traction Splint may be used on lower portion of leg in place of *Skin-Trac* Traction Strips and bandages.

* See page 50 on application of *Skin-Trac* Traction Strips.



Prod. No.	Components	Qty.
00-0112-002-00	Böhler-Braun Frame-Complete (See page 20)	1
00-0923-003-00	3in. (8cm) Spreader Block	1
00-0113-002-00	Canvas Slings	5 box
00-0114-004-00/ 00-0114-006-00	Böhler-Steinmann Pin Holder*	1
00-3874-003-00	<i>Skin-Trac</i> Traction Strips (optional) 3in. x 40in. (8cm x 102cm)	2
00-4444-003-00	<i>Zimmer</i> Standard Orthopaedic Wrap (optional) 3in. x 5yds. (8cm x 5m)	2 rolls
00-5555-003-00	<i>Zimmer</i> Premium Orthopaedic Wrap (optional) 3in. x 5.5yds. (8cm x 5m)	2 rolls
00-1774-001-00	Universal Traction Boot (optional) To be used in place of <i>Skin-Trac</i> Traction Strips and <i>Zimmer</i> Orthopaedic Wraps	1
	Weight Carriers	2
	Traction Cord	
	Weights: As ordered by physician	

* See page 66 for sizes and dimensions of Böhler-Steinmann Pin Holder

Russell's Traction

INDICATIONS

1. Treatment of certain types of knee injuries.
2. Fracture of the shaft of the femur or hip.

POSITION OF BED AND PATIENT

Proper countertraction is obtained either by elevating the foot of the bed, or by gatching the bed at knees with the patient flat on back. In certain instances, the head of the bed may be elevated, but only at the discretion of the attending physician. The physician may also order a pillow placed under the affected leg. If so, this must be checked frequently to make sure proper alignment is maintained.

TIPS AND PRECAUTIONS

1. Make certain the knee sling is smooth and that its edges do not cut into the soft tissues.
2. Due to the pulley arrangement, the pull on the foot is double that of the weight applied. (See vectors of force, page 9.)
3. If a pillow is ordered for under the calf when the traction is initially set up, it must remain in place. Removing it can change the vectors of force and alignment.
4. Arrangements of Russell's Traction vary. Therefore, be aware of how it was set up initially.
5. Nursing care is simplified by suspension of the limb, which allows the patient to lift and move about with minimal disturbance to the line of pull. This suspension is achieved through the delicate balance of traction and countertraction resulting from the distribution of weight through the various elements.
6. Proper application of *Skin-Trac* Traction Strips and wrapping of elastic bandages are crucial to the prevention of peroneal nerve damage. Neurovascular checks must be made at least every two hours.
7. Active and passive exercises should be done routinely. The patient should be encouraged to do as much for himself or herself as possible. Good skin care is also imperative.
8. An anti-embolism stocking should be applied to the unaffected leg on all adult patients.

TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach two cross clamps each upright at end of bed (towards the top of the bar). Connect the two cross clamps with a 40in. (100cm) plain bar.
3. Attach a 5in. (13cm) single clamp bar to each of the 40in. (100cm) plain bars at the foot of bed on the side of the effected extremity.
4. Attach a 9in. (23cm) single clamp bar to each of the 5in. (13cm) single clamp bars so they extend across line of injured leg.
5. Attach pulley to each 9in. (23cm) single clamp bar.
6. Attach pulley to overhead bar directly above the knee.
7. Apply *Skin-Trac* Traction Strip smoothly to leg.
8. Wrap *Zimmer* Premium or Standard Orthopaedic Wrap around *Skin-Trac* Traction Strip on leg.
9. Attach footpiece with pulley to bottom of foot and incorporate footpiece into *Skin-Trac* Traction Strip.
10. Apply knee sling under knee.
11. Tie traction cord to spreader bar for knee sling; thread through overhead pulley; through upper pulley on 9in. (23cm) single clamp bar at end of bed; through pulley on footpiece; then through lower pulley on 9in. (23cm) single clamp bar at end of bed; finally tie traction cord to weight carrier.
12. Insert spreader into knee sling.
13. Apply weights.

NOTE: Deluxe Convolved *Zim-Trac* Traction Splint may be used instead of *Skin-Trac* Traction Strip.

* See page 50 on application of *Skin-Trac* Traction Strips.



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-1042-004-00	Cross Clamp	2
00-2700-040-00	40in. (100cm) Plain Bar	1
00-1083-003-00	5in. (13cm) Single Clamp Bar	2
00-0640-004-00	9in. (23cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	3
00-0056-002-00	Bunker Footpiece with Pulley	1
00-0056-008-00	Polyester Pile Knee Sling 7in. x 15in. (18cm x 38cm)	1
00-0056-011-00	or Polyester Pile Knee Sling 12 1/2in. x 20in. (32cm x 51cm)	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
00-3874-003-00	<i>Skin-Trac</i> Traction Strip 3in. x 40in. (8cm x 102cm)	1
00-4444-003-00	<i>Zimmer</i> Standard Orthopaedic Wrap 3in. (8cm)	1 roll
00-5555-003-00	<i>Zimmer</i> Premium Orthopaedic Wrap 3in. (8cm) (optional)	1 roll
00-2753-010/014-00	Deluxe convoluted <i>Zim-Trac</i> Traction Splint (optional). To be used in place of <i>Skin-Trac</i> Traction Strips and <i>Zimmer</i> Standard Orthopaedic Wrap.	
	Weight Carrier	1
	Traction Cord	
	Weights: As ordered by physician	

Split Russell's Traction

INDICATIONS

1. Fractures of the femoral shaft, hip, and lower leg or any combination of these.
2. Treatment of certain types of knee injuries.

POSITION OF BED AND PATIENT

Proper countertraction is obtained either by elevating the foot of the bed, or by gatching the bed at knees with the patient flat on back. In certain instances, the head of the bed may be elevated, but only at the discretion of the attending physician. The physician may also order a pillow placed under the affected leg. If so, this must be checked frequently to make sure proper alignment is maintained.

TIPS AND PRECAUTIONS

1. Make certain the knee sling is smooth and that its edges do not cut into the soft tissues.
2. If a pillow is ordered for under the calf when the traction is initially set up, it must remain in place.
3. Arrangements of Russell's Traction vary. Therefore, be aware of how it was set up initially.
4. Nursing care is simplified by suspension of the limb, which allows the patient to lift and move about with minimal disturbance to the line of pull. This suspension is achieved through the delicate balance of traction and countertraction resulting from the distribution of weight through the various elements.
5. Proper application of *Skin-Trac* Traction Strips and wrapping of elastic bandages are crucial to the prevention of peroneal nerve damage. Neurovascular checks must be made at least every two hours.
6. Active and passive exercises should be done routinely. The patient should be encouraged to do as much for himself or herself as possible. Good skin care is also imperative.
7. An anti-embolism stocking should be applied to the unaffected leg on all adult patients.

TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach 5in. (13cm) single clamp bar to 40in. (100cm) horizontal bar at foot of bed.
3. Attach 9in. (23cm) single clamp bar to 5in. (13cm) single clamp bar.
4. Attach two pulleys to 9in. (23cm) single clamp bar at foot of bed.
5. Attach pulley to horizontal 40in. (100cm) plain bar over knees of patient above injured leg.
6. Attach pulleys to 9in. (23cm) single clamp bar at foot of bed.
7. Apply Deluxe Convoluted *Zim-Trac* Traction Boot.
8. Apply knee sling under knee.
9. Tie traction cord to spreader bar for knee sling. Thread through overhead pulley; through one pulley on 9in. (23cm) single clamp bar at end of bed; finally, tie traction cord to weight carrier.
10. Insert spreader bar into knee sling.
11. Tie traction cord to footpiece; thread through other pulley on 9in. (23cm) single clamp bar at end of bed, tie traction cord to weight carrier.
12. Apply weights.

NOTE: *Skin-Trac* Traction Strip and footpiece may be used instead of Deluxe Convoluted *Zim-Trac* Traction Boot.



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bar	1
00-1083-003-00	5in. (13cm) Single Clamp Bar	1
00-0056-008-00 or	Polyester Pile Knee Sling 7in. x 15in. (18cm x 38cm)	1
00-0056-011-00	or Polyester Pile Knee Sling 12 ¹ / ₂ in. x 20in. (32cm x 51cm)	1
00-0849-001/ 004-00	Spreader Bar (appropriate width)	1
00-2753-010/ 014-00	Deluxe Convoluted <i>Zim-Trac</i> Traction Splint to be used in place of <i>Skin-Trac</i> Traction Strips and <i>Zimmer</i> Standard Orthopaedic Wrap.	
00-3874-003-00	<i>Skin-Trac</i> Traction Strip (optional) 3in. x 40in. (8cm x 102cm)	1
00-4444-003-00	<i>Zimmer</i> Standard Orthopaedic Wrap (optional) 3in. (8cm)	1 roll
00-5555-003-00	<i>Zimmer</i> Premium Orthopaedic Wrap (optional) 3in. (8cm) (optional choice)	1 roll
	Weight Carrier	2
	Traction Cord	
	Weights: As ordered by physician	

Balanced Suspension and Traction with Thomas or Brady Leg Splint (Utilizing Skin Traction)

INDICATIONS

Fractures of the femoral shaft, hip, and lower leg, or any combination of these.

GENERAL INFORMATION

The difference between the Thomas and Brady systems is that the Brady system is universally sized, whereas the Thomas is sized to fit individual patients.

POSITION OF BED AND PATIENT

Elevate foot of bed with patient flat on back. In certain instances, the head of the bed may be elevated, but only at the discretion of the attending physician.

TIPS AND PRECAUTIONS

1. Padding the ischial ring with sheepskin enhances patient comfort. The sheepskin can be easily removed when soiled without affecting the balance of the setup.
2. Meticulous skin care and decubitus prevention measures must be carried out routinely.
3. Active and passive exercises should be done at least four times a day.
4. Make sure the leg does not rotate externally and place pressure on the peroneal nerve. Check the neurovascular status of the limb at least every two hours.
5. If elastic bandages are used, they should be checked frequently for excessive pressure at the site of the fibular head and the dorsum of the foot.
6. Slings should be positioned so that the heel and Achilles tendon do not carry the weight of the lower leg.
7. Patients in this type of suspension and traction initially experience much discomfort and are very apprehensive. The nurse needs to explain all procedures as well as enlist the cooperation of the patient in helping with his or her care.
8. The patient generally finds a fracture bed pan more convenient.
9. It is easier to make the bed from the head to the foot. The patient can lift his head and shoulders by using the trapeze.
10. In most cases, the patient should wear an antiembolism stocking on the unaffected leg.

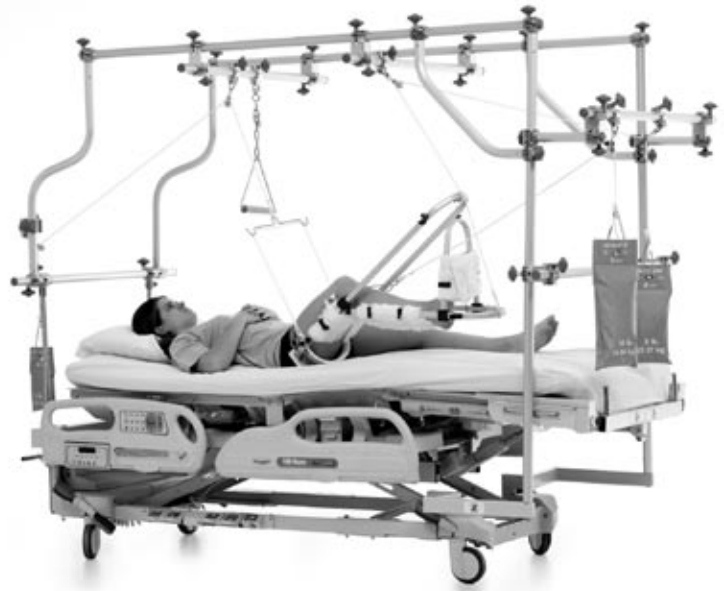
TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82)
2. Attach one 9in. (23cm) single clamp bar to upright bar at head of bed on injured limb side at 15 degree angle.
3. Attach pulley to 9in. (23cm) single clamp bar.
4. Attach two 9in. (23cm) single clamp bars to upright bar at foot of bed.
5. Attach one cross clamp to each 9in. (23cm) single clamp bar.
6. Attach the two cross clamps to the 40in. (100cm) plain bar.
7. Attach one pulley to the top 40in. (100cm) plain bar on the side of the injured leg.
8. Attach one pulley to the bottom 40in. (100cm) plain bar on the side of the injured leg.
9. Attach Pearson Attachment to Thomas or Brady Leg Splint with point of attachment at patient's knee joint.
10. Form cradle for leg by attaching polyester pile slings to splint and Pearson Attachment.
11. Lift leg and move splint and Pearson Attachment under leg with ring resting loosely against ischial tuberosity.
12. Apply Deluxe Convuluted *Zim-Trac* Traction Strips to leg*.
13. Tie one end of traction cord to the proximal lateral end of the splint. Wrap three times around the spreader bar and tie on the opposite side of the splint.
14. Tie another traction cord to center of spreader bar, thread through pulley above chest, then through pulley at head of bed, and tie to weight carrier.
15. Thread another traction cord through the rope locators on the distal end of the splint. Tie loose end of traction cord back on to itself to form a triangle. Next, thread traction cord through pulley on 40in. (100cm) bar above bed at knee, and then through pulley on 40in. (100cm) top bar at end of bed. Finally, tie to weight carrier.
16. Tie another traction cord to end of Pearson Attachment and tie to distal end of splint.
17. Tie traction cord to foot plate on *Zim-Trac* Traction Splint, thread through pulley on bottom 40in. (100cm) bar, then tie to weight carrier.

18. Apply weights.
19. Distribution of the weight through the various elements should be arranged so that a delicate balance of traction and countertraction is maintained.

NOTE: The above procedure may be altered by using *Skin-Trac* Traction Strips wrapped with *Zimmer* Premium or Standard Orthopaedic Wrap*

* See Page 50 on application of *Skin-Trac* Traction Strips.



Prod. No.	Components	Qty.
Basic Frame Setup	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bar	3
00-1042-004-00	Cross Clamps	2
00-2700-040-00	40in. (100cm) Plain Bar	1
00-0640-008-00	Pulleys	5
00-1232-005/011-00	Thomas Leg Splint (appropriate size)	1
00-1232-012/015-00	Pearson Attachment (appropriate size)	1
00-1232-007-00	Set of 3 slings	1
00-1232-035-00	or Full-length Polyester Pile Sling	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
00-1774-001-00	Universal Traction Splint	1
	Weight Carriers	3
	Traction Cord	
	Weights: As ordered by physician	

Balanced Suspension and Traction with Thomas or Brady Leg Splint (Utilizing Skeletal Traction)

INDICATIONS

Fractures of the femoral shaft, hip, and lower leg, or any combination of these.

GENERAL INFORMATION

The difference between the Thomas and Brady systems is that the Brady system is universally sized, whereas the Thomas is sized to fit individual patients.

POSITION OF BED AND PATIENT

Elevate foot of bed with patient flat on back. (In certain instances, the head of the bed may be elevated, but only at the discretion of the attending physician.)

TIPS AND PRECAUTIONS

1. Padding the ischial ring with sheepskin enhances patient comfort. The sheepskin can be easily removed when soiled without affecting the balance of the setup.
2. Meticulous skin care and decubitus prevention measures must be carried out routinely.
3. Active and passive exercises should be done at least four times a day.
4. Make sure the leg does not rotate externally and place pressure on the peroneal nerve. Check the neurovascular status of the limb at least every two hours.
5. If elastic bandages are used, they should be checked frequently for excessive pressure at the site of the fibular head and the dorsum of the foot.
6. Slings should be positioned so that the heel and Achilles tendon do not carry the weight of the lower leg.
7. Patients in this type of suspension and traction initially experience much discomfort and are very apprehensive. The nurse needs to explain all procedures as well as enlist the cooperation of the patient in helping with his or her care.
8. The patient generally finds a fracture bed pan more convenient.
9. It is easier to make the bed from the head to the foot. The patient can lift his head and shoulders by using the trapeze.
10. In most cases, the patient should wear an antiembolism stocking on the unaffected leg.
11. For skeletal traction, refer to your own institution's policies regarding care of the pin site.

TRACTION SETUP

1. Attach basic frame setup to bed. (See pages 14-17 or page 82).
2. Attach one 9in. (23cm) single clamp bar to upright bar at head of bed on the injured limb side at a 45 degree angle.
3. Attach pulley to 9in. (23cm) single clamp bar.
4. Attach two 9in. (23cm) single clamp bars to upright bar at foot of bed.
5. Attach one cross clamp to each 9in. (23cm) single clamp bar.
6. Attach the two cross clamps together with a 40in. (100cm) plain bar.
7. Attach one pulley to the top 40in. (100cm) plain bar on the side with the injured leg.
8. Attach one pulley to the bottom 40in. (100cm) plain bar on the side with the injured leg.
9. Attach Pearson Attachment to Thomas or Brady Leg Sling with point of attachment at patient's knee joint.
10. Form cradle for leg by attaching polyester pile slings to splints and Pearson Attachment.
11. Lift leg and move splint and Pearson Attachment under leg with ring resting loosely against ischial tuberosity.
12. Tie one end of traction cord to the proximal lateral end of the splint. Wrap cord three times around spreader bar and tie on opposite side of splint.
13. Tie another traction cord to center of spreader bar thread through pulley above chest, then through pulley at head of bed, and tie to weight carrier.
14. Thread another cord through rope locators at distal end of splint. Tie loose end of traction cord back on to itself to form a triangle. Next, thread traction cord through pulley on 40in. (100cm) bar overhead bed at knee, and then through pulley on 40in. (100cm) top bar at end of bed. Finally, tie to weight carrier.
15. Tie third traction cord to end of Pearson Attachment, and tie to distal end of splint.

16. Tie traction cord to Böhler Steinmann Pin Holder or Kirschner Wire Tractor, thread through pulley on lower 40in. (100cm) bar at end of bed, and tie to weight carrier.
17. Apply weights.
18. Distribution of the weight through the various elements should be arranged so that a delicate balance of traction and countertraction is maintained.



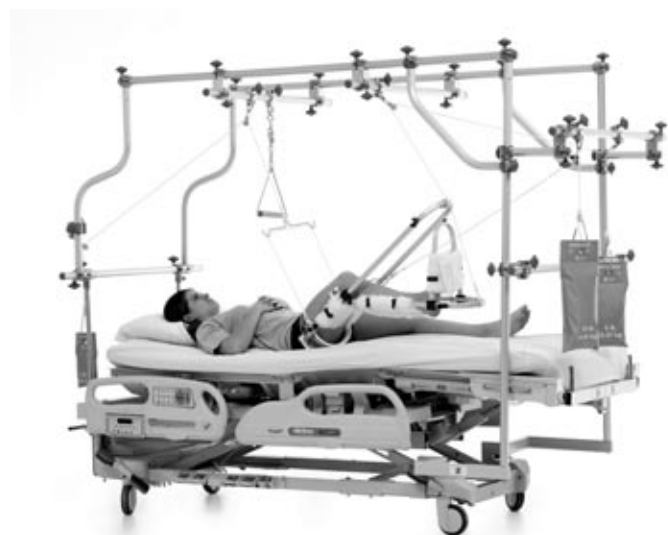
The above photo shows how this traction system may be set up using a single frame setup.

SINGLE FRAME SETUP

Prod. No.	Components	Qty.
Basic Frame	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bars	4
00-0640-005-00	18in. (46cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	8
00-0114-004/006-00	Böhler-Steinmann Pin Holder	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
00-1232-005/011-00	Thomas Leg Splint (appropriate size)	1
00-1232-012/015-00	Pearson Attachment (appropriate size)	1
00-1232-035-00	Full-Length Sling or	1
00-1232-007-00	Set of 3 Slings	1
	Weight Carriers	3
	Traction Cord	
	Weights: As ordered by physician	

FOUR-POSTER (BALKAN) FRAME SETUP

Prod. No.	Components	Qty.
Offset Four-Poster Frame	(See pages 14-17 or page 86)	
00-0640-004-00	9in. (23cm) Single Clamp Bars	3
00-0640-008-00	Pulleys	5
00-0114-004/006-00	Böhler-Steinmann Pin Holder	1
00-0849-001/004-00	Spreader bar (appropriate width)	1
00-1232-005/011-00	Thomas Leg Splint (appropriate size)	1
00-1232-012/015-00	Pearson Attachment (appropriate size)	1
00-1232-007-00	Set of 3 Slings or	1
00-1232-035-00	Full Length Sling	1
	Weight Carriers	3
	Traction Cord	
	Weights: As ordered by physician	



The above photo shows how this traction system may be set up using a four-poster or Balkan frame. The four-poster frame enhances the overall stability of the setup, particularly for patients over 250lbs. (113kg).

Patient Exercises Utilizing Traction Equipment

A systematic program of exercises using basic traction frames and accessories can be an integral step in the rehabilitation process of the patient confined to bed. Such exercises are not only the initial step in restoring the lost motion to the affected extremity, but also serve as an intermediary bridge between the non-ambulatory period and more concentrated and specific exercise periods in the physical therapy department. In addition, bed exercise can provide a needed psychological lift for the patient by allowing him to have an active part in his rehabilitation program with the goal of early ambulation and early return to home or occupation.

ARM AND SHOULDER EXERCISE UTILIZING WEIGHTS

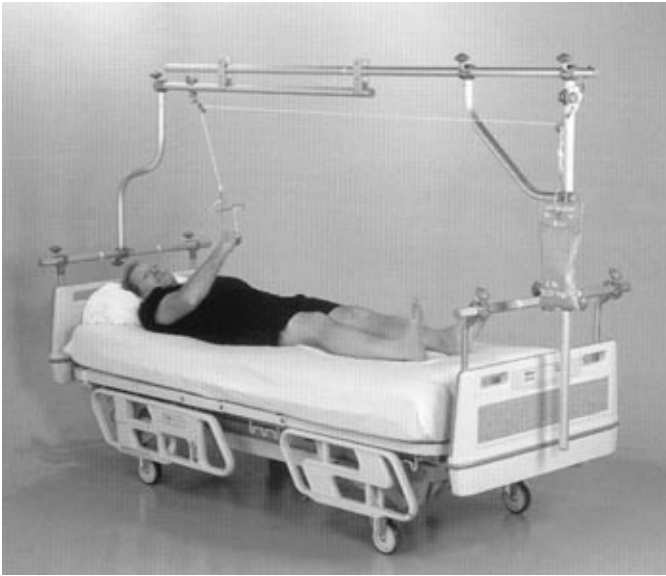
INDICATIONS

1. Post-radical mastectomy for increased range of motion.
2. Shoulder injuries involving loss of range of motion or strength.
3. Strengthening of arms prior to crutch walking.
4. Strengthening of anterior shoulder muscles and the deltoid muscle using the weights as a counterbalance to assist motion. In most instances, only the unilateral setup shown in the insert photo at right is required.
(Also see “Arm and Shoulder Exercises Without Weights” page 46.)
5. Any other arm or shoulder problem in which exercises utilizing weights are indicated to increase extremity strength through resistance.

SETUP INSTRUCTIONS

1. Attach basic frame setup to bed.
2. Attach one 9in. (23cm) single clamp bar to upright bar at foot of bed.
3. Attach one 36in. (91cm) center to 9in. (23cm) single clamp bar.
4. Attach one 36in. (91cm) center clamp bar to overhead bar.
5. Attach one pulley to each side of both 36in. (91cm) center clamp bars.
6. Attach traction cord to weight carrier, thread through pulleys and tie to Nelson Finger Exerciser (hand grip).
7. Apply weights.

NOTE: Unilateral setup can be achieved as shown in photo by using 9in. (23cm) single clamp bars instead of 36in. (91cm) center clamp bars.



Prod. No.	Components	Qty.
Basic Frame	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bars	1
00-0640-011-00	36in. (91cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	4
00-0920-000-00	Nelson Finger Exercisers	2
	Weight Carriers	2
	Traction Cord	
	Weights: As ordered by physician	

ARM AND SHOULDER EXERCISE WITHOUT WEIGHTS

INDICATIONS

1. Post-radical mastectomy.
2. Shoulder injuries involving loss of range of motion or strength.
3. Bursitis and other inflammatory conditions.
4. Strengthening of anterior shoulder muscles and the deltoid muscle using the unaffected arm to provide a counterbalance to assist motion. This exercise is primarily for the patient who has a weakened shoulder and requires a counterbalance to lift his or her arm weight.

SETUP INSTRUCTION

1. Attach basic frame setup to bed.
2. Attach one 36in. (91cm) center clamp bar to overhead bar above patient.
3. Attach one pulley to each side of 36in. (91cm) center clamp bar.
4. Tie traction cord to one Nelson Finger Exerciser (hand grip), thread through pulleys and tie to other Nelson Finger Exerciser.
5. Adjust to patient's needs.



Prod. No.	Components	Qty.
Basic Frame	(See pages 14-17 or page 82)	
00-0640-011-00	36in. (91cm) Center Clamp Bar	1
00-0640-008-00	Pulleys	2
00-0920-000-00	Nelson Finger Exercisers	2
	Traction Cord	

LOWER EXTREMITY EXERCISE

INDICATIONS

Any post-surgical or post-injury condition in which the following goals are desired:

1. Strengthening of hip flexors following surgery or weakness from prolonged immobility.
2. Increasing range of motion of hip, knee or both following surgery or prolonged immobilization due to lower extremity fractures.
3. To increase strength of quadriceps and other muscles involved in straight leg raising.
4. Increase strength of dorsi-flexors by suspending heel off bed during dorsi-flexion to prevent friction with the sheet.

SETUP INSTRUCTIONS

1. Attach basic frame setup to bed.
2. Attach one 9in. (23cm) single clamp bar directly above patient's arm.
3. Attach one 9in. (23cm) single clamp bar over patient's affected leg.
4. Attach pulley to each 9in. (23cm) single clamp bar.
5. Attach traction cord to spreader bar, thread through pulleys and tie to Nelson Finger Exerciser (hand grip).
6. Attach polyester pile knee sling to spreader bar.

NOTE: Location of knee sling is dependent upon exercise goals.



Prod. No.	Components	Qty.
Basic Frame	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	2
00-0056-011-00	Polyester Pile Knee Sling 12 1/2in. x 20in. (32cm x 51cm)	1
00-0920-000-00	Nelson Finger Exerciser	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
	Traction Cord	

KNEE EXERCISE WITH THOMAS SPLINT

INDICATIONS

1. Following knee surgery in which an increase in flexion and/or extension is desired.
2. Conditions as above which also require increased strength of quadriceps and/or knee flexors (hamstrings, gastrocnemius).
3. Beginning pattern for increased range of motion and/or strengthening hip flexion, knee flexion, and dorsi-flexion.

SETUP INSTRUCTIONS

1. Attach basic frame setup to bed.
2. Attach one 9in. (23cm) single clamp bar with one pulley to overhead bar above patient's upper extremity.
3. Attach one 9in. (23cm) single clamp bar with one pulley to overhead bar above patient's thigh.
4. Attach one 9in. (23cm) single clamp bar with three pulleys to overhead bar above patient's foot.
5. Attach one 9in. (23cm) single clamp bar to upright bar at foot of bed.
6. Attach one 18in. (46cm) single clamp bar with two pulleys to 9in. (23cm) single clamp bar.
7. Attach one 18in. (46cm) single clamp bar with one pulley to upright bar at head of bed at 45 degree angle.
8. Position Thomas Splint and Pearson Attachment under patient's leg.
9. Tie traction cord to one side of traction splint, wrap around spreader bar and tie to other side of splint.
10. Tie traction cord to spreader bar; thread through pulley above thigh then through pulley at head of bed. Tie to weight carrier.
11. Tie traction cord to distal end of Pearson Attachment, thread through pulley above foot; thread through pulley at foot end; then tie to weight carrier.
12. Tie traction cord to distal end of leg splint, thread through pulley above foot; thread through pulley at foot end; then tie to weight carrier.
13. Tie traction cord to distal end of leg splint; thread through pulley above foot; thread through pulley above patient's upper extremity; then tie to Nelson Finger Exerciser.
14. Apply weights.
15. Distribution of the weight through the various elements should be arranged so that the system is balanced.

NOTE: A short piece of traction cord also tied to the Nelson Finger Exerciser and then tied to the bed frame may also be used to keep the grip within easy reach.

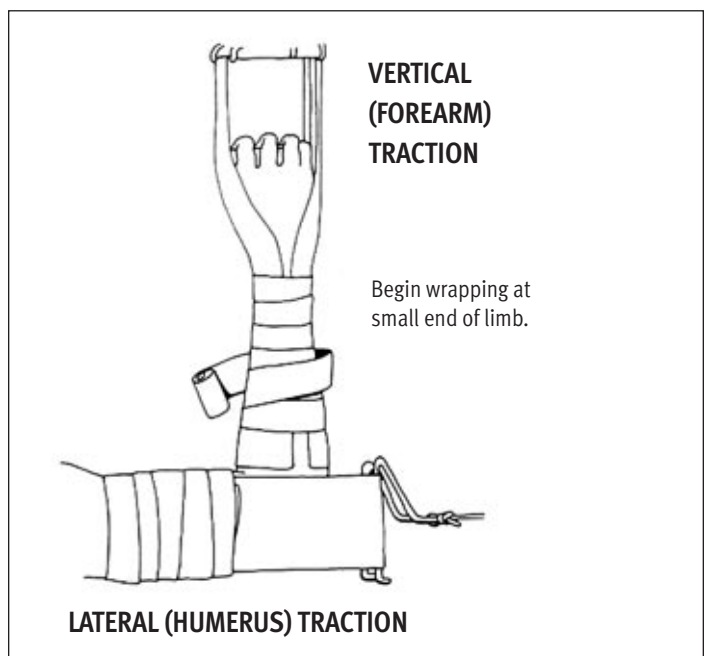
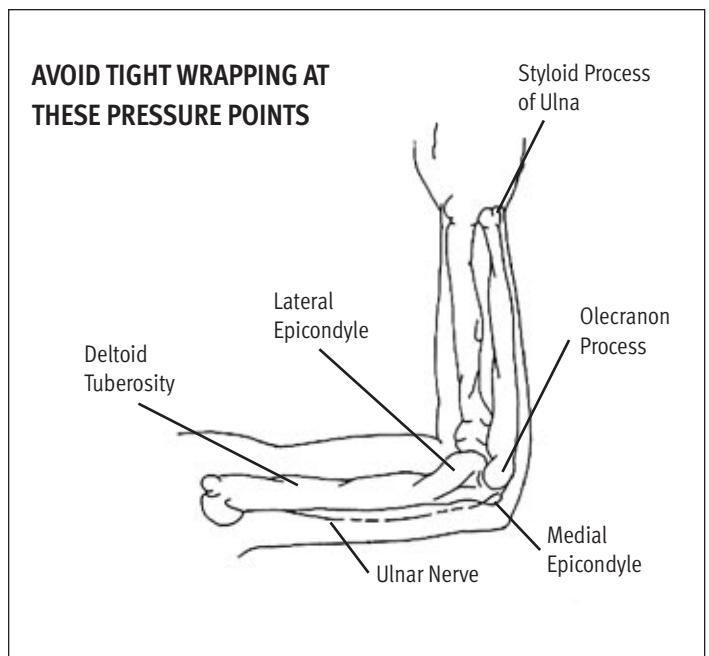


Prod. No.	Components	Qty.
Basic Frame	(See pages 14-17 or page 82)	
00-0640-004-00	9in. (23cm) Single Clamp Bars	4
00-0640-005-00	18in. (46cm) Single Clamp Bars	2
00-0640-008-00	Pulleys	8
00-0920-000-00	Nelson Finger Exerciser	1
00-0849-001/004-00	Spreader Bar (appropriate width)	1
00-1232-005/011-00	Thomas Leg Splint (appropriate size)	1
00-1232-012/015-00	Pearson Attachment (appropriate size)	1
00-1232-035-00	Full-Length Sling	1
00-1232-007-00	or Set of 3 Slings	1
	Weight Carriers	3
	Traction Cord	
	Weights: As ordered by physician	

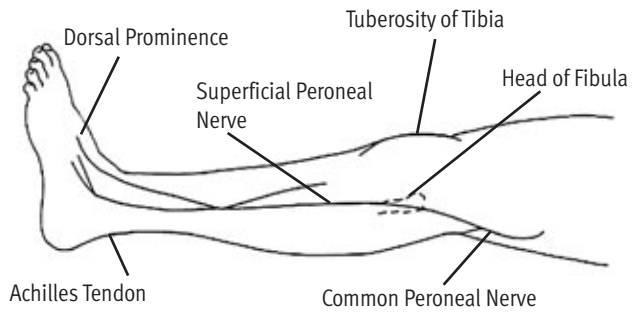
How To Apply *Skin-Trac*® Skin Traction Straps

Use a *Skin-Trac* Skin Traction Strip size which permits covering as much skin as possible, thereby distributing the tension force over as much skin as possible. However, since the objective in fracture treatment is to apply tension on the tissues around the fracture, the *Skin-Trac* Skin Traction Strip should not extend proximally beyond the line of the fracture. Care must be taken that the strips do not overlap; that is, at least a 1in. (2.5cm) space must be maintained between the strips, otherwise the elastic bandage may cause soft tissue damage.

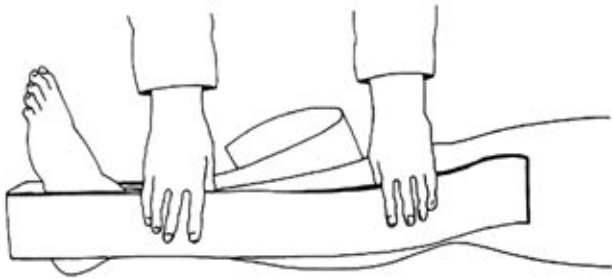
Hospital policy and/or physician preference determines the type of skin preparation required prior to the application of *Skin-Trac* Skin Traction Strips. Hospital policy and/or physician preference will also determine skin care, usually checked at least every eight hours.



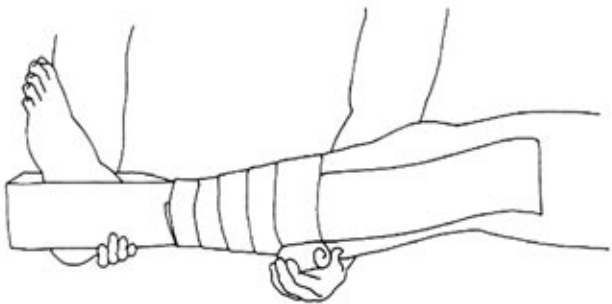
AVOID TIGHT WRAPPING AT THESE PRESSURE POINTS



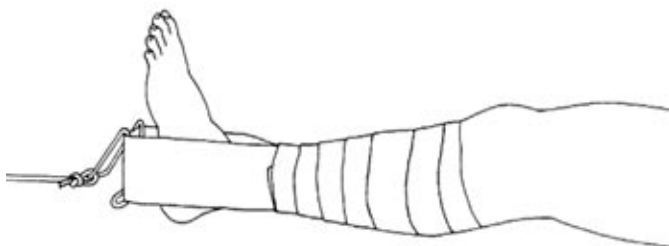
Apply *Skin-Trac* Skin Traction Strip to limb allowing room for Traction Spreader Block.



Begin wrapping at small end of limb. Avoid Achilles tendon.



Application completed.



Universal Brady Balanced Suspension System

- Indicated for fractures of the femoral shaft, hip, lower leg, or any combination of these.
- Same as Thomas system, but universally sized to adapt to any leg.
- May be used with skin or skeletal traction.
- Soft polyester pile accessories provide comfortable support.
- Radiolucent.
- Packaged in kit form with complete assembly instructions.

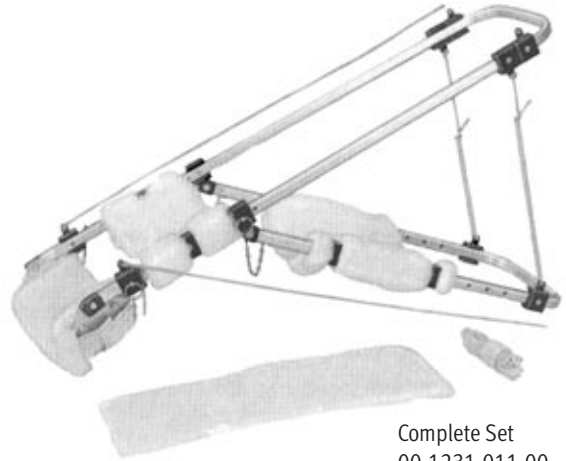
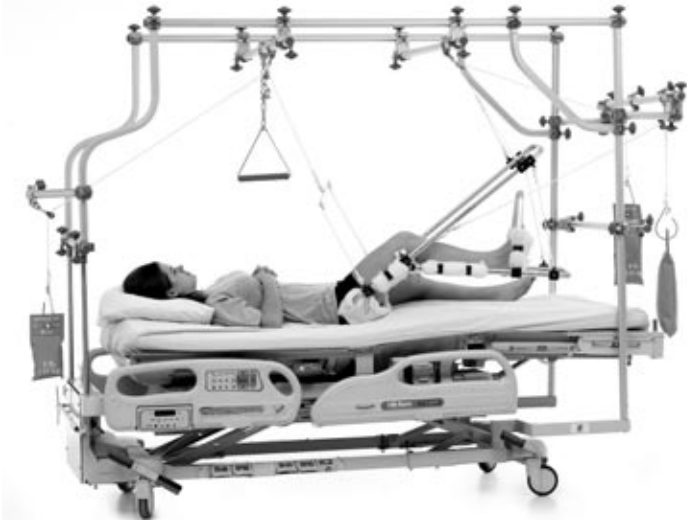
COMPLETE SET (00-1231-011-00*)

Prod. No.	Components	Dimensions	Qty.
00-1231-005-00	Splint Assembly		1
00-1231-028-00	Ring Pad		1
00-1232-007-00	Polyester Pile Slings		Set of 3 per box
00-1231-015-00	Pearson Attachment		1
00-1232-010-00	Strap Clamps		Set of 6 per box
	Traction Cord	36in. (91cm)	1
	Traction Cord	10ft. (3m)	1

* Each item may be purchased separately.

OPTIONAL ACCESSORIES

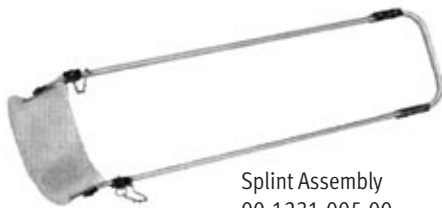
Prod. No.	Accessory
00-1231-009-00	Foot Pad
00-1231-016-00	Foot Exercise Assembly (with 00-1231-009-00 Foot Pad)
00-1231-017-00	Bilateral Clamp Assembly
00-1231-028-00	Polyester Pile Ring Pad



Complete Set
00-1231-011-00



Pearson Attachment
00-1231-015-00



Splint Assembly
00-1231-005-00



Foot Exercise Assembly
00-1231-016-00



Foot Pad
00-1231-009-00



Polyester Pile Slings
00-1232-007-00



Polyester Pile Ring Pad
00-1231-028-00

Radiolucent Thomas Leg Splint

- For fractures of the femoral shaft, hip, or lower leg.
- Used for balanced traction and suspension with either skin or skeletal traction.
- Allows passive motion of knee without disturbing fracture alignment.
- Youth through adult sizes.
- Rope locators prevent traction cord slippage.
- Water repellent replaceable straps and pads.



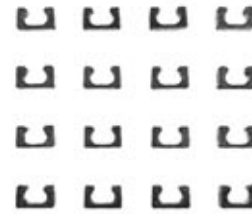
Complete Set
00-1232-000-00
00-1232-005/011-00



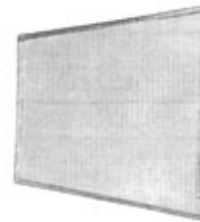
Heel Rest
00-1232-137-00
00-1232-021/024-00



Foot Support
00-1232-017/020-00
00-1232-136-00



Strap Clamps
00-1232-010-00



Foot Support Sling
00-1232-009-00

COMPLETE SETS OF RADIOLOGENT THOMAS LEG SPLINTS

Prod. No.	Size	Leg Splint	Pearson Attachment	Foot Support	Heel Rest	Slings* (Set of 3)	Strap Clamps (Set of 16)
00-1232-000-00	Pediatric	00-1232-001-00	00-1232-034-00	00-1232-136-00	00-1232-137-00	00-1232-038-00	00-1232-010-00
00-1232-005-00	Small	00-1232-002-00	00-1232-012-00	00-1232-017-00	00-1232-021-00	00-1232-007-00	00-1232-010-00
00-1232-006-00	Medium	00-1232-003-00	00-1232-013-00	00-1232-018-00	00-1232-022-00	00-1232-007-00	00-1232-010-00
00-1232-008-00	Large	00-1232-004-00	00-1232-014-00	00-1232-019-00	00-1232-023-00	00-1232-007-00	00-1232-010-00
00-1232-011-00	X-Wide	00-1232-105-00	00-1232-015-00	00-1232-020-00	00-1232-024-00	00-1232-016-00	00-1232-010-00

* Optional full-length sling available (Prod. No. 00-1232-035-00).

Assembly Components for Radiolucent Thomas Leg Splint

LEG SPLINTS

Prod. No.	Size	Width	Inner Length
00-1232-001-00	Pediatric	5 1/4in. (13cm)	26 1/2in. (67cm)
00-1232-002-00	Small	7in. (18cm)	33in. (84cm)
00-1232-003-00	Medium	8in. (20cm)	39in. (99cm)
00-1232-004-00	Large	9in. (23cm)	45in. (114cm)
00-1232-105-00	X-Wide	12in. (30cm)	43in. (109cm)

SLINGS

Prod. No.	Unit Qty.	Dimensions	Splint Application
00-1232-038-00	1	4in. x 15in. (10cm x 38cm)	00-1232-001-00
(Set of 2)	1	6in. x 15in. (15cm x 38cm)	
00-1232-007-00	2	6in. x 19in. (15cm x 48cm)	00-1232-002/004-00
(Set of 3)	1	10in. x 19in. (25cm x 48cm)	
00-1232-016-00	2	6in. x 22in. (15cm x 56cm)	00-1232-105-00
(Set of 3)	1	10in. x 22in. (25cm x 56cm)	

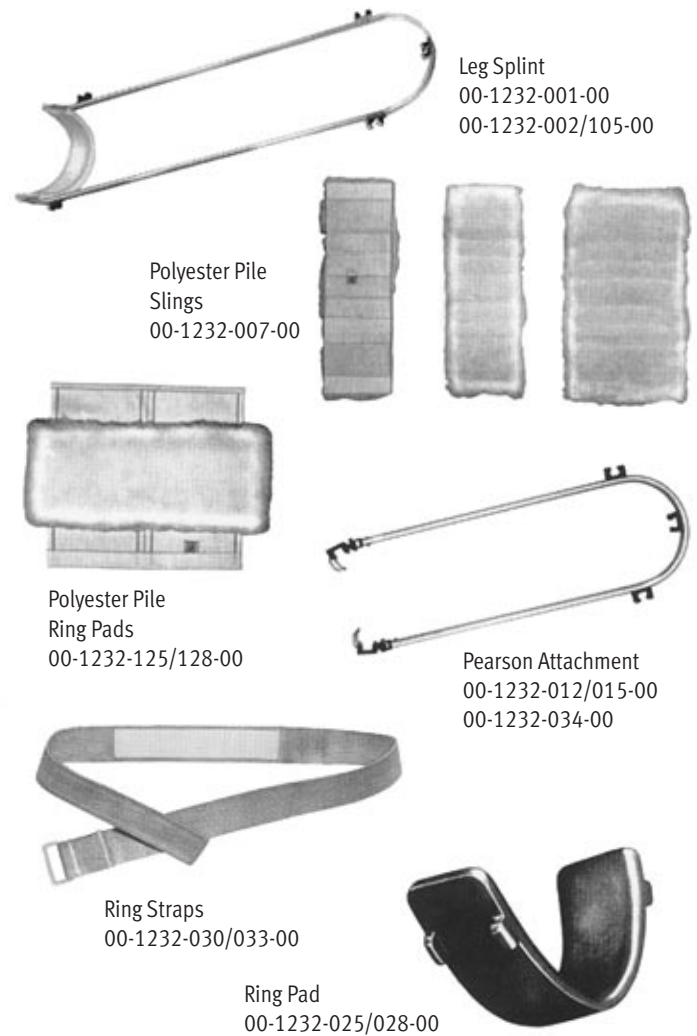
PEARSON ATTACHMENTS

Prod. No.	Size	Length
00-1232-034-00	Pediatric	18 1/2in. (47cm)
00-1232-012-00	Small	22in. (56cm)
00-1232-013-00	Medium	25in. (63cm)
00-1232-014-00	Large	29in. (74cm)
00-1232-015-00	X-Wide	26 1/4in. (67cm)

COMPONENTS

Size	Foot Supports	Foot Support Sling*	Heel Rests	Ring Straps	Strap Clamps (Set of 16)	Ring Pads	Polyester Pile Ring Pads*
Pediatric	00-1232-136-00	00-1232-009-00	00-1232-137-00	00-1232-030-00	00-1232-010-00	00-1232-025-00	00-1232-125-00
Small	00-1232-017-00	00-1232-009-00	00-1232-021-00	00-1232-030-00	00-1232-010-00	00-1232-025-00	00-1232-125-00
Medium	00-1232-018-00	00-1232-009-00	00-1232-022-00	00-1232-031-00	00-1232-010-00	00-1232-026-00	00-1232-126-00
Large	00-1232-019-00	00-1232-009-00	00-1232-023-00	00-1232-032-00	00-1232-010-00	00-1232-027-00	00-1232-127-00
X-Wide	00-1232-020-00	00-1232-009-00	00-1232-024-00	00-1232-033-00	00-1232-010-00	00-1232-028-00	00-1232-128-00

* Optional accessory



POLYESTER PILE RING PADS

Prod. No.	Size	Dimensions
00-1232-125-00	Small	12 3/4in. x 4 1/4in. (32cm x 11cm)
00-1232-126-00	Medium	14 1/4in. x 4 1/4in. (36cm x 11cm)
00-1232-127-00	Large	16in. x 4 1/4in. (41cm x 11cm)
00-1232-128-00	X-Wide	20in. x 4in. (51cm x 10cm)



Thomas Leg Splint

- For fractures of the femoral shaft, hip or lower leg.
- Applicable to either leg.
- Meets specifications of the Fracture Committee of the American College of Surgeons.
- Choice of sizes.
- $\frac{3}{8}$ in. (9.5mm) steel rod diameter.

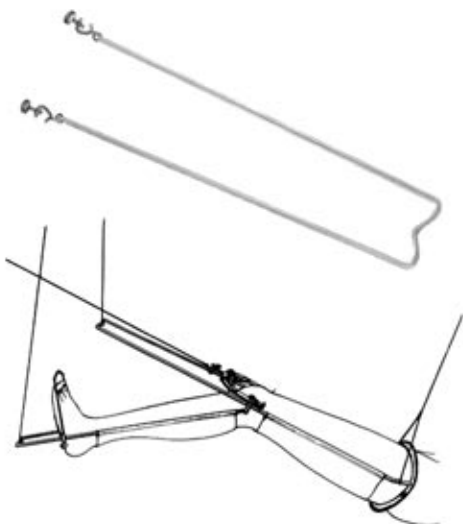
Half-Ring With Vinyl Pad	Size	Ring Diameter	Inner Rod Length
00-0032-007-00	Child	7in. (18cm)	33in. (84cm)
00-0032-008-00	Youth	8in. (20cm)	40in. (102cm)
00-0032-009-00	Adult	9in. (23cm)	43in. (109cm)



Full-Length Sling

- Provides soft cradle for leg in Thomas Splint System.
- Offers greater comfort than supports utilizing towels.
- Adjustable to all splint sizes.

Prod. No.	Description
00-0032-015-00	Without Contact Closure Backing
00-1232-035-00	With Contact Closure Backing

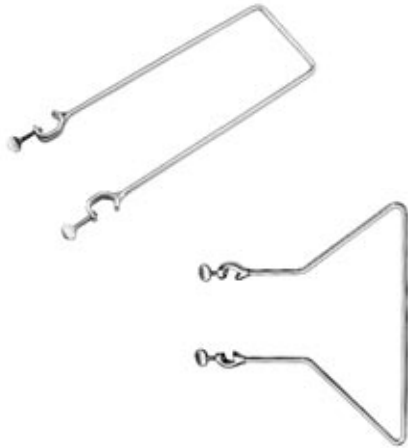


Pearson Attachment

- Converts Thomas Splint to balanced suspension.
- Allows passive motion of knee without disturbing alignment of fracture.
- Used with either skin or skeletal traction.

Prod. No.	Size	Length
00-0033-001-00	Child	19in. (48cm)
00-0033-002-00	Youth	21in. (53cm)
00-0033-003-00	Adult	25in. (64cm)

Foot Support and Heel Rest



- Foot support helps prevent peroneal paralysis. Heel rest reduces heel irritation from friction contact with mattress.
- Both accessories are compatible with Neufeld Splint System.
- Non-removable thumb screws cannot become lost.

Prod. No.	Description	Length
00-0034-001-00	Foot Support	10 1/4in. (26cm)
00-0034-002-00	Heel Rest	5 1/2in. (13cm)

Canvas Slings



- Replacement Slings for Böhler-Braun Frame.
- Canvas material.

Prod. No.	Qty.
00-0113-002-00	Box of 5

Canvas Knee Slings



- For suspension of the knee in Russell's or Humeral (90/90) Traction.
- Packaged 1 per box.

Prod. No.	Description
00-0056-001-00	Canvas Knee Sling

Polyester Pile Slings



- For suspension of the knee in Russell's or Humeral (90/90) Traction.
- Two sizes.

Prod. No.	Description
00-0056-008-00	Small 7in. x 15in. (18cm x 38cm)
00-0056-011-00	Large 12 1/2in. x 20in. (32cm x 51cm)



Böhler-Braun Frame

Developed for comminuted fractures extending into the knee joint; unstable fractures of the tibia; open fractures associated with severe soft tissue damage.

- Can be applied with either skin or skeletal traction.
- Easily applied without elaborate traction setup.
- Facilitates inspection of wound site.
- Simplifies nursing care.

Prod. No.	Components	Qty.
00-0112-002-00	Böhler-Braun Leg Splint Complete	1
00-0113-002-00	Canvas Slings*	5

* May be ordered separately as an accessory.



Di Cosola Rope Holder

- Provides positive attachment to Thomas or Neufeld Splint Rods to prevent traction cord from slipping.
- Non-removable thumb screw cannot be lost.

Prod. No.	Eyelet Diameter	Length	Maximum Rod Diameter
00-0213-000-00	3/4in. (19mm)	3/8in. (10mm)	5/8in. (16mm)

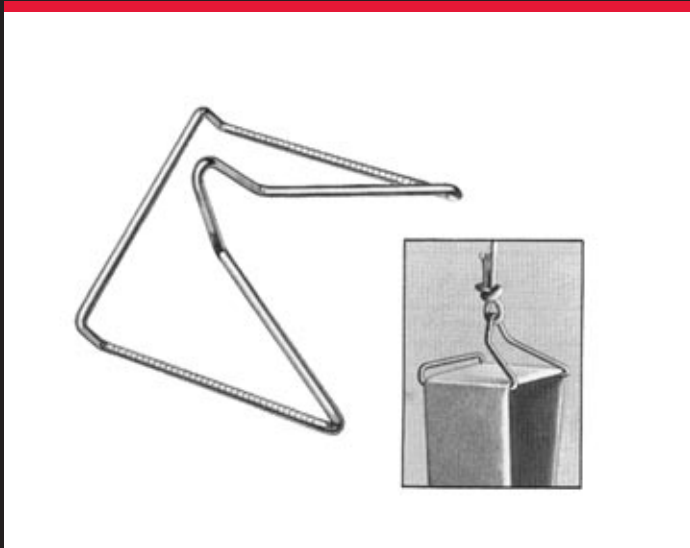


Stephan Spreader Bar

Utilized in Bryant's Traction to achieve abduction and angulation of legs for infants with femoral fractures or congenital hip dislocation.

- Simplifies setup of Bryant's Traction.
- Fully adjustable with infinite degree of angulation.

Prod. No.	Maximum Abduction	Minimum Abduction
00-0905-005-00	16in. (41cm)	8in. (20cm)

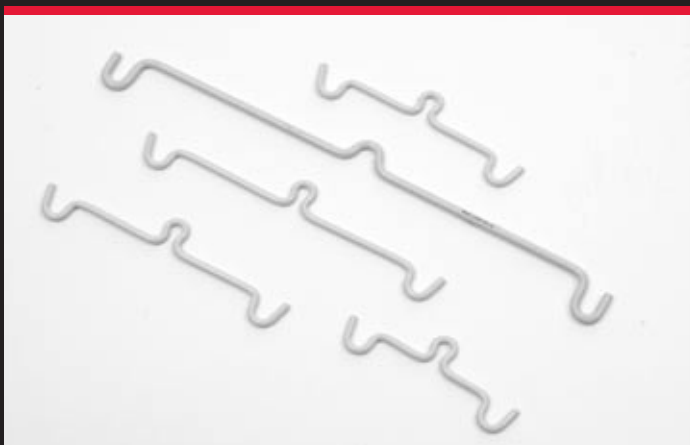


Zimmer Spreader Block

Used with any skin traction strip or bandage for attachment of traction.

- Helps reduce skin irritation.
- Open design facilitates traction strap attachment.

Prod. No.	Width
00-0923-002-00	2in. (5cm)
00-0923-003-00	3in. (8cm)
00-0923-004-00	4in. (10cm)



Zimmer Spreader Bars

Material: Epoxy Coated Cold Rolled Steel

Packaging: 1/Box

Sterile: No

Prod. No.	Length
00-0648-000-00	22in. (56cm)
00-0849-001-00	6in. (15cm)
00-0849-002-00	8in. (20cm)
00-0849-003-00	9in. (23cm)
00-0849-004-00	12in. (30cm)



Zimmer Serrated Clip

- Provides firm attachment.
- Plated steel to retard rust.
- Autoclavable.

Prod. No.	Length	Gripping Edge	Packaging
00-0057-001-00	2 ⁹ / ₁₆ in. (6cm)	2 ¹ / ₂ in. (6cm)	6 per box



Zim-Clip

- Wide serrated gripping edge.
- Numerous uses.
- High-impact plastic, autoclavable.

Prod. No.	Length	Gripping Edge	Packaging
00-0057-002-00	3 ¹ / ₈ in. (8cm)	2in. (5cm)	6 per box



Mini-Clip

- Useful for applying draping, and holding cautery wire.
- High-impact plastic, autoclavable.

Prod. No.	Length	Gripping Edge	Packaging
00-0057-003-00	2 ⁹ / ₃₂ in. (6cm)	1 ¹ / ₈ in. (2cm)	12 per box



Zimcode Traction Cord

- Strong, durable polyester braided fibers.
- Packaged in convenient dispenser carton.

Prod. No.	Diameter	Length
00-0967-001-00	$\frac{3}{16}$ in. (5mm)	100ft. (30m)
00-0967-002-00	$\frac{3}{16}$ in. (5mm)	100yds. (91m)
00-0967-003-00	$\frac{3}{16}$ in. (5mm)	250yds. (229m)



Nylon Traction Cord

- Smooth running, flexible braided nylon.

Prod. No.	Diameter	Length
00-0184-001-00	.150in. (4mm)	100ft. (30m)



Cast Iron Traction Weights

- Coated cast iron.
- Attaches securely to weight carrier.
- Available in three sizes.

Prod. No.	Weight
00-0183-001-00	1lbs. (.5kg)
00-0183-002-00	2lbs. (1.0kg)
00-0183-003-00	5lbs. (2.3kg)

Weight Carriers for Cast Iron Weights



Prod. No.	Length
00-0176-002-00	5 3/4 in. (15cm)
00-0176-003-00	8 3/4 in. (22cm)
00-0176-004-00	11 in. (30cm)

Sand Weight Bags

00-1600-051-00



- Sand enclosed in heat-sealed polyethylene bags with nylon reinforced vinyl outer cover.
- Antibacterial additives in vinyl.
- Cleans with soap and water.

Prod. No.	Bag Weight	Bag Hooks Single	Bag Hooks Multiple
00-1602-001-00	1lb. (.5kg)	00-1600-050-00	00-1600-051-00
00-1602-002-00	2lbs. (1.0kg)	00-1600-050-00	00-1600-051-00
00-1602-005-00	5lbs. (2.3kg)	00-1600-050-00	00-1600-051-00
00-1602-010-00	10lbs. (4.5kg)	00-1600-050-00	00-1600-051-00



Zimcode Traction Weight Bags

- Twenty gauge polyvinyl chloride with steel rivets.
- Can be filled with water or sand.
- Calibrated to indicate water weight (sand must be weighed before filling).
- Single bag hook included with each bag.

Prod. No.	Weight	Bag Hook Supplied*
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00-1601-002-00	10lbs. (4.5kg)	00-1600-050-00
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* 00-1600-051-00 Multiple bag hook also available (see previous section).



Skin-Trac Skin Traction Strips

Utilized where skin traction is indicated to reduce a fracture or dislocation.

Contraindications:

Abrasion, lacerations, superficial infections of immediate skin areas or compromised circulation.

- Non-woven material laminated to foam, with hypoallergenic adhesive backing.
- No skin prep necessary.

Individual Strips	Dispenser Carton	Qty	Size.	Dimensions
00-3874-001-00	00-3874-011-00	24	S	2in. x 24in. (5cm x 61cm)
00-3874-002-00	00-3874-012-00	24	M	2 1/2in. x 30in. (6cm x 76cm)
00-3874-003-00	00-3874-013-00	24	L	3in. x 40in. (8cm x 102cm)
00-3874-004-00	00-3874-014-00	18	L, X-long	3in. x 56in. (8cm x 142cm)
00-3874-005-00	00-3874-015-00	12	L, X-long, X-wide	4in. x 60in. (10cm x 152cm)

Flex-Foam Traction Strips



Contraindications:

Abrasions, lacerations, superficial infections of immediate skin areas or compromised circulation.

- Latex foam with rayon backing (Non-adhesive).
- Perforations facilitate air circulation to skin.
- Autoclavable.

Prod. No.	Dimensions	Qty.
Single Strips		
00-3860-001-00	2in. x 42in. (5cm x 107cm)	12 per carton
00-3860-002-00	3in. x 42in. (8cm x 107cm)	12 per carton
00-3860-003-00	4in. x 42in. (10cm x 107cm)	12 per carton
25-yard Rolls		
00-3861-001-00	2in. x 25yds. (5cm x 23m)	1
00-3861-002-00	3in. x 25yds. (8cm x 23m)	1
00-3861-003-00	4in. x 25yds. (10cm x 23m)	1

Nelson Finger Exerciser



Helps alleviate numbness and tingling sensation in fingers and arm for patients in side arm traction. Reduces risk of circulatory embarrassment.

- Plated steel frame.
- Soft, plastisol hand grip for finger exercising.

Prod. No.	Width	Length	Frame Diameter
00-0920-000-00	3 ⁷ / ₈ in. (10cm)	7 ³ / ₄ in. (20cm)	³ / ₁₆ in. (5mm)

Zimcode Footrest

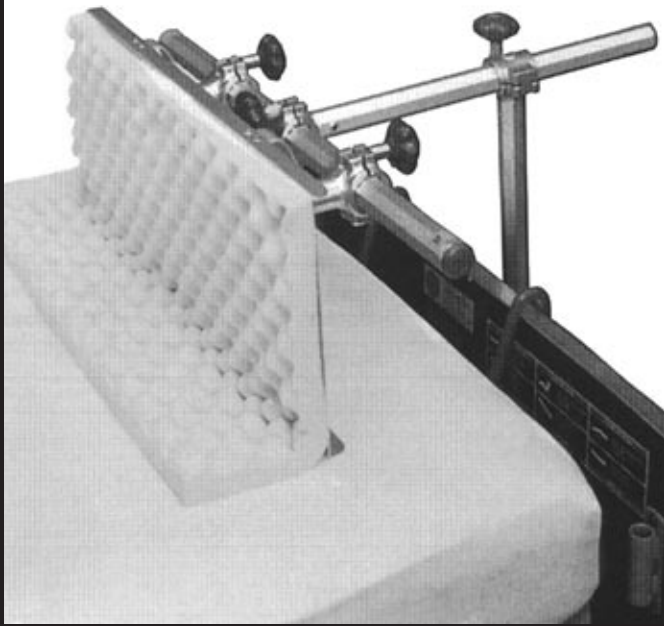


Helps prevent peroneal paralysis (foot drop) and prevents patient from sliding toward end of bed.

- Convoluted *Zimfoam* pad minimizes pressure on heel.
- Replacement *Zimfoam* pads available.

Prod. No.	Component	Dimensions
00-1047-000-00	Frame Padding	10in. x 24in. (25cm x 61cm)
00-1047-001-00	Replaceable Pad	15in. x 24in. (38cm x 61cm)

Zimcode Footrest Set with Bed Attachment



Prod. No.	Component
00-1097-005-00	Complete Set
00-1047-000-00	Zimcode Footrest
00-0619-003-00	Panel Clamp
00-0640-005-00	Single Clamp Bar 18in. (46cm)
00-0640-006-00	Single Clamp Bar 27in. (69cm)
00-1042-002-00	Plain Bar 36in. (91cm)
00-1047-001-00	Replacement Pad 15in. (38cm) x 24in. (61cm)

NOTE: The 00-0640-006-00 Single Clamp Bar 27in. (69cm) attaches to the 00-0619-003-00 Panel Clamp to provide height adjustment. The 00-0640-005-00 Single Clamp Bar 18in. (46cm) provides up to 18in. (46cm) of adjustment.

Böhler-Steinmann Pin Holder



Utilized as a tractive force connector when applying a Steinmann Pin 3/16in. (5mm) in diameter for skeletal traction.

- Thumb screws secure pin to holder.
- All components stainless steel, pin not included.

Prod. No.	Inside Length	Inside Width
00-0114-004-00	3 1/2in. (9cm)	3in. (8cm)
00-0114-005-00	6 1/2in. (16cm)	4 1/4in. (11cm)
00-0114-006-00	8 1/2in. (21cm)	4 1/4in. (11cm)
00-0114-054-00	Replacement Screw	

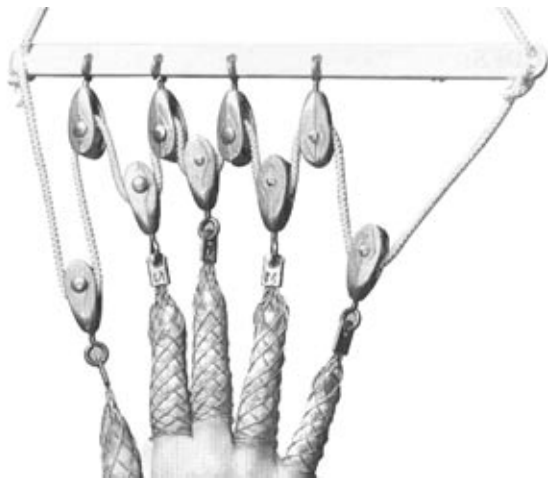


Kirschner Wire Tractor

Affixed to Kirschner Wire in skeletal traction to exert longitudinal pull on extremity in conjunction with traction weights. K-wire is secured in the clamps and tensions applied by spreading the tractor.

- Assures firm purchase on K-wire.
- No other instrumentation required to affix tractor to wire.
- All stainless steel, wire not included.

Prod. No.	Height	Opening Width
00-0121-001-00	5 1/2 in. (14cm)	4 in. (10cm)
00-0121-002-00	7 5/8 in. (19cm)	6 5/8 in. (17cm)
00-0121-003-00	9 5/8 in. (24cm)	6 5/8 in. (17cm)



Traction Finger Apparatus

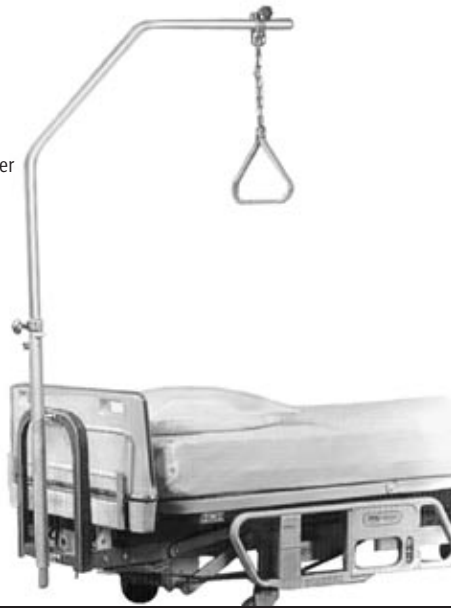
For reduction of forearm or Colles' fractures while applying splint or cast.

- Easily applied.
- Grips finger securely and comfortably.
- Stainless steel mesh.

Prod. No.	Size
00-0325-000-00 (Complete Set)	Adult (1 Lg, 3 Med, 1 Sm)
00-0325-010-00 (Complete Set)	Pediatric (5)
00-0325-001-00 (Individual Finger Grips)	Small
00-0325-002-00	Medium
00-0325-003-00	Large
00-0325-004-00	Pediatric

Patient Helpers

965 Patient Helper



- Offset design for optimum placement in hospital rooms.
- Reinforced octagonal tubing for dependable support.
- Heavy duty trapeze for patient safety.
- Adjustable height.
- Attaches to trapeze bracket available from Hill-Rom.
- **200lbs. weight limit.**

FOR HILL-ROM* BEDS WITH REMOVABLE HEADBOARDS

Prod. No.	Description
00-0965-000-00	Patient Helper (Complete System)
00-0965-001-00	Patient Helper Reinforced Overhead Bar
00-0965-002-01	Bed Frame Adapter (Sleeve)
00-0640-067-00	Trapeze

* Hill-Rom is a registered trademark of Hill-Rom, Inc.

965-02 Patient Helper



VERSA CARE PATIENT HELPER

Prod. No.	Description
00-2700-965-02	Patient Helper Complete Set
00-2700-965-03	Patient Helper Adaptor Only
00-0965-001-00	Patient Helper Reinforced Overhead Bar
00-0640-067-00	Trapeze

FREESTANDING PATIENT HELPER FOR HILL-ROM *TOTALCARE* BED

Prod. No.	Description
00-2700-965-00	Complete System
00-2700-965-01	Patient Helper Stand (Stand Only)
00-0965-001-00	Patient Helper Reinforced Overhead Bar
00-0640-067-00	Trapeze



Zimmer Mobile Traction Unit-Extra Long

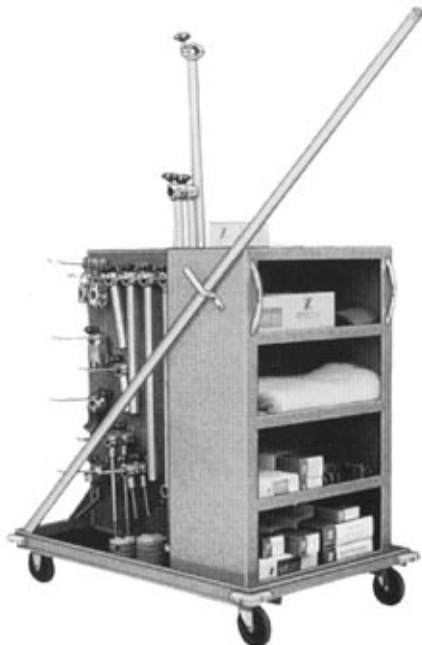


Products shown not included.

- Lengthened version of 1036 Compact *Zimmer* Mobile Traction Unit.
- Two pegboards (both sides of cart), five storage shelves and trays below each pegboard conveniently bring two complete traction frames and assorted accessories to patient's bedside.
- Two fixed and two swivel casters provide easy maneuverability through hospital corridors and doorways.
- Pegboard areas allow orderly arrangement of components.
- Molded rubber corner bumpers reduce marring of hospital walls and door frames.
- One Traction Cart Hook Kit (00-1015-002-00) included with each cart. Provides variety of types and lengths of hooks for holding various traction equipment.

Prod. No.	Dimensions	Shipping Weight
00-1036-017-00	65in. x 29in. x 48in. (165cm x 74cm x 122cm)	180lbs. (82kg)

Zimmer Mobile Traction Unit-Compact



Products shown not included.

- Holds either one complete frame plus assorted accessories, or two complete frames.
- Compact size facilitates maneuverability into small hospital rooms and elevators.
- Pegboard area for storage of traction frame parts or accessories.
- Five storage shelves.
- Two swivel and two fixed casters.
- Molded rubber corner bumpers.
- One Traction Cart Hook Kit included (00-1015-002-00).

Prod. No.	Dimensions	Shipping Weight
00-1036-000-00	48in. x 29in. x 48in. (122cm x 74cm x 122cm)	157lbs. (71kg)

Traction Cart Hook Kit

Fifty-six hooks in five different styles are attached to pegboard in traction storage room or traction cart for orderly arrangement of traction equipment. Seventy-six plastic protective tips included.

- Provides convenient and orderly traction storage.
- 1/4in. (6mm) steel hooks with white plastic protective tips anchor firmly to pegboard.



Prod. No.	Components	Length	Qty.
00-1015-002-00	Protective Tips		76
	Hook-Single Prong	9/16in. (14mm)	6
	Wide Hook-Single Prong	1 5/8in. (4cm)	6
	Inclined Tip Hook-Single Prong	2 1/2in. (6cm)	6
	Straight Hook-Single Prong	4in. (10cm)	4
	Straight Hook-Single Prong	6in. (15cm)	3
	Straight Hook-Single Prong	8in. (20cm)	11
	Straight Hook-Double Prong*	8 1/2in. (22cm)	17
	Straight Hook-Double Prong	5 1/2in. (14cm)	3

* Double prong hook width: 1in. (3cm).

Zimmer Orthopaedic Wraps



- Knit construction for durability and conformability.
- Cotton content absorbs moisture and is smooth and non-irritating.
- Choice of premium and standard style.
- Premium style also available sterile.

ZIMMER PREMIUM ORTHOPAEDIC WRAP

Prod. No. (Latex / Non-Latex)	Width/Length	Packaging
00-5555-002-00 / -102-00	2in. x 5 1/2 yds. (5cm x 5m)	Box 10 rolls
00-5555-003-00 / -103-00	3in. x 5 1/2 yds. (8cm x 5m)	Box 10 rolls
00-5555-004-00 / -104-00	4in. x 5 1/2 yds. (10cm x 5m)	Box 10 rolls
00-5555-006-00 / -106-00	6in. x 5 1/2 yds. (15cm x 5m)	Box 10 rolls
00-5555-026-00 / -126-00	6in. x 11 yds. (15cm x 10m)	Box 10 rolls

ZIMMER STERILE PREMIUM ORTHOPAEDIC WRAP

Prod. No. (Latex / Non-Latex)	Width/Length	Packaging
00-5555-032-00 / -232-00	2in. x 5 1/2 yds. (5cm x 5m)	Box 10 rolls
00-5555-033-00 / -233-00	3in. x 5 1/2 yds. (8cm x 5m)	Box 10 rolls
00-5555-034-00 / -234-00	4in. x 5 1/2 yds. (10cm x 5m)	Box 10 rolls
00-5555-036-00 / -236-00	6in. x 5 1/2 yds. (15cm x 5m)	Box 10 rolls
00-5555-044-00 / -244-00	4in. x 11 yds. (10cm x 10m)	Box 10 rolls
00-5555-046-00 / -246-00	6in. x 11 yds. (15cm x 10m)	Box 10 rolls

ZIMMER STANDARD ORTHOPAEDIC WRAP

Prod. No. (Latex / Non-Latex)	Width/Length	Packaging
00-4444-002-00 / -102-00	2in. x 5 yds. (5cm x 4.6m)	Box 10 rolls
00-4444-003-00 / -103-00	3in. x 5 yds. (8cm x 4.6m)	Box 10 rolls
00-4444-004-00 / -104-00	4in. x 5 yds. (10cm x 4.6m)	Box 10 rolls
00-4444-006-00 / -106-00	6in. x 5 yds. (15cm x 4.6m)	Box 10 rolls
00-4444-012-00 / -112-00	2in. x 5 yds. (5cm x 4.6m)	Box 100 rolls
00-4444-013-00 / -113-00	3in. x 5 yds. (10cm x 4.6m)	Box 100 rolls
00-4444-014-00 / -114-00	4in. x 5 yds. (10cm x 4.6m)	Box 100 rolls
00-4444-016-00 / -116-00	6in. x 5 yds. (15cm x 4.6m)	Box 50 rolls
00-4444-024-00 / -124-00	4in. x 10 yds. (10cm x 9m)	Box 10 rolls
00-4444-026-00 / -126-00	6in. x 10 yds. (15cm x 9m)	Box 10 rolls



No. 7 Head Halter

- Designed for intermittent overhead traction.
- No spreader bar needed.
- Ideal for clinic or home use.
- Universal size.
- Fully adjustable.

Prod. No.

00-2700-007-00



Zimmer Pro Head Halter

- Specifically designed for bed traction.
- Directs pull to occipital region.
- No spreader bar needed.
- Universal size.

Prod. No.

00-2700-003-00



Deluxe Diskard Head Halter

- Universal size.
- Spreader bar required.
- Foam padded for comfort.
- Sold in boxes of 12.

Prod. No.

Packaging

00-0912-000-00

12 per box



Deluxe Padded Head Halter

- Foam padded for patient comfort.
- Contact closure for easy application.
- Spreader bar included.

Prod. No.

Size

00-1778-001-00

Small

00-1778-002-00

Medium

00-1778-003-00

Large



Universal Traction Boot

- Universal size for inventory convenience.
- Medial and lateral stays may be positioned anywhere on boot.
- Excess material may be trimmed for proper fit.

Prod. No.	Length	Max Calf Circumference
00-1774-001-00	20in. (51cm)	20in. (51cm)



Deluxe *Zim-Trac* Convoluted Traction Boot

- Convolutions reduce ankle pressure and increase air circulation.
- Supports foot to help prevent foot drop.
- Spreader block included.

Prod. No.	Size	Length	Max Calf Circumference
00-2753-010-00	XS	13in. (33cm)	6 5/8in. x 11 3/4in. (17cm x 30cm)
00-2753-011-00	S	20in. (51cm)	8 3/8in. x 13 3/4in. (22cm x 35cm)
00-2753-012-00	M	20in. (51cm)	9 5/8in. x 15 3/4in. (24cm x 40cm)
00-2753-013-00	L	20in. (51cm)	10 7/8in. x 17 3/4in. (28cm x 45cm)
00-2753-014-00	XL	20in. (51cm)	12 1/8in. x 19 3/4in. (31cm x 50cm)



Economy Leg Traction Boot

- Polyurethane convoluted foam with medial/lateral stays.
- Does not include footplate or spreader block.

Prod. No.	Size	Length	Max Calf Circumference
00-8712-012-00	S	20in. (51cm)	8 3/8in. x 13 3/4in. (22cm x 35cm)
00-8712-013-00	M	20in. (51cm)	9 5/8in. x 15 3/4in. (24cm x 40cm)
00-8712-014-00	L	20in. (51cm)	10 7/8in. x 17 3/4in. (28cm x 45cm)
00-8712-015-00	XL	20in. (51cm)	12 1/8in. x 19 3/4in. (31cm x 50cm)



Zimcode Pelvic Traction Belts

- Contact closure strap.
- Wide range of sizes.
- Belt width 8 1/2 in. (22cm).
- Double strap.

Prod. No.	Size
00-0743-001-00	26in. x 30in. (66cm x 76cm)
00-0743-002-00	30in. x 34in. (76cm x 86cm)
00-0743-003-00	34in. x 38in. (86cm x 97cm)
00-0743-004-00	38in. x 42in. (97cm x 107cm)
00-0743-005-00	42in. x 46in. (107cm x 117cm)
00-0743-006-00	46in. x 50in. (117cm x 127cm)
00-0743-007-00	50in. x 54in. (127cm x 137cm)
00-0743-008-00	54in. x 58in. (137cm x 147cm)
00-0743-009-00	58in. x 62in. (147cm x 157cm)



Zimmer Comfort Panel Pelvic Belt

- Special elastic panels distribute support evenly for patient comfort.
- Soft inner lining reduces skin irritation.
- Belt width 9in. (23cm).

Prod. No.	Size
00-0584-021-00	26in. x 45in. (66cm x 114cm)
00-0584-022-00	30in. x 52in. (76cm x 132cm)
00-0584-023-00	36in. x 62in. (91cm x 157cm)



Universal Single Strap Pelvic Traction Belt

- Universal size for inventory convenience.
- Accommodates wide range of hip sizes.
- Contact closure.
- Belt width 8in. (20cm).

Prod. No.	Size
00-1678-001-00	26in. x 48in. (66cm x 122cm)



Universal Double Strap Pelvic Belt

- Straps with contact closure attachments can be positioned anywhere on belt to achieve most effective line of pull.
- Universal size for inventory convenience.
- Belt width 8in. (20cm).

Prod. No.

Size

00-1570-001-00	26in. x 48in. (66cm x 122cm)
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00-1570-002-00	44in. x 60in. (122cm x 152cm)
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Deluxe Foam Padded Traction Belt

- Posterior strap directs maximum traction to pelvic region.
- Contact closures for easy application and adjustment.
- Belt width 8 1/2 in. (22cm).

Prod. No.

Size

00-0738-001-00	26in. x 34in. (66cm x 86cm)
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00-0738-002-00	34in. x 42in. (86cm x 107cm)
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00-0738-003-00	42in. x 50in. (107cm x 127cm)
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00-0738-006-00	50in. x 58in. (127cm x 147cm)
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Zimcode Traction Components

COLOR CODED FOR YOUR CONVENIENCE

Because so many individual traction components resemble each other and can be easily confused, *Zimmer* developed a system of coding traction equipment. *Zimcode* Traction Frame color strips are found on all easily confused traction components.

Color coding is extremely helpful in assembling traction equipment. *Zimcode* Traction Frame color strips are also a valuable aid for inventory control and in ordering or replacing equipment.



Component	Prod. No.	Zimcode	Length
Double Clamp Bar	00-1038-002-00	27	27in. (69cm)
Double Clamp Bar	00-1238-003-00	31	31in. (79cm)
Double Clamp Bar	00-1066-003-00	35	35in. (89cm)

Component	Prod. No.	Zimcode	Length
Offset Double Clamp Bar	00-1038-004-00	27	27in. (69cm)
Offset Double Clamp Bar	00-1238-004-00	31	31in. (79cm)
Offset Double Clamp Bar	00-1066-005-00	35	35in. (89cm)

Component	Prod. No.	Zimcode	Length
Curved Double Clamp Bar	00-0640-021-00	24C	24in. (61cm)

Component	Prod. No.	Zimcode	Length
Cross Clamp	00-1042-004-00	C.C.	



Component	Prod. No.	Zimcode	Length	Diameter
I.V. Post with Clamp	00-1234-001-00	3 3/4	3in. (8cm)	3/4in. (19mm)
I.V. Post with Clamp	00-1038-003-00	4 1/2	4in. (10cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1242-001-00	5 1/2	5in. (13cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1044-005-00	9 3/4	9in. (23cm)	3/4in. (19mm)
I.V. Post with Clamp	00-1238-002-00	10 1/2	10in. (25cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1247-003-00	12 1/2	12in. (30cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1236-001-00	13 1/2	13in. (33cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1044-006-00	13 3/4	13in. (33cm)	3/4in. (19mm)
I.V. Post with Clamp	00-1241-001-00	16 1/2	16in. (41cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1044-007-00	18 3/4	18in. (46cm)	3/4in. (19mm)
I.V. Post with Clamp	00-1238-001-00	19 1/2	19in. (48cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1247-001-00	20 1/2	20in. (51cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1238-022-00	22 3/4	22in. (55cm)	3/4in. (19mm)
I.V. Post with Clamp	00-1241-008-00	24 1/2	24in. (61cm)	1/2in. (13mm)
I.V. Post with Clamp	00-1234-009-00	24 5/8	24in. (61cm)	5/8in. (16mm)
I.V. Post with Clamp	00-1241-021-00	28 1/2	28in. (71cm)	1/2in. (13mm)



Component	Prod. No.	Zimcode	Length
Overhead Traction	00-1042-090-00	STS	
Bar-Short 63 1/2in. x 88in. (161cm x 224cm)			
Overhead Traction	00-1042-007-00	ST-L	
Bar-Long 74 1/2in. x 101in. (189cm x 257cm)			



Component	Prod. No.	Zimcode	Length
Extended Telescoping	00-1042-015-00	AB-S	
Overhead Bar-Short 63 1/2in. x 88in. (161cm x 224cm)			
Telescoping Overhead	00-1042-006-00	AB-L	
Bar-Long 74 1/2in. x 101in. (189cm x 257cm)			



Component	Prod. No.	Zimcode	Length
Plain Bar	00-1042-002-00	36	36in. (91cm)
Plain Bar	00-2700-040-00	40	40in. (100cm)
Plain Bar	00-1241-044-00	44	44in. (112cm)
Plain Bar	00-0640-023-00	85	85in. (216cm)
Plain Bar (Heavy Duty)	00-0640-023-01	85HD	85in. (216cm)
Plain Bar	00-0640-001-00	96	96in. (244cm)
Plain Bar (Heavy Duty)	00-0640-029-00	96HD	96in. (244cm)



Component	Prod. No.	Zimcode	Length
Double Pulley Bar	00-0619-002-00	18DP	18in. (46cm)



Component	Prod. No.	Zimcode	Length
Single Clamp Bar	00-1083-003-00	5	5in. (13cm)
Single Clamp Bar	00-0640-004-00	9	9in. (23cm)
Single Clamp Bar	00-0640-005-00	18	18in. (46cm)
Single Clamp Bar	00-0640-006-00	27	27in. (69cm)
Single Clamp Bar	00-0640-007-00	36	36in. (91cm)



Component	Prod. No.	Zimcode	Length
Swivel Clamp Bar with Pulley	00-0619-001-00	9P	9in. (23cm)



Component	Prod. No.	Zimcode	Length
Swivel Clamp Bar	00-1042-003-00	48	48in. (122cm)
Swivel Clamp Bar	00-0640-002-00	66	66in. (168cm)



Component	Prod. No.	Zimcode	Length
Center Clamp Bar	00-0640-011-00	36C	36in. (91cm)



Component	Prod. No.	Zimcode	Length
Offset Swivel Clamp Bar	00-0640-024	66-0	66in. (168cm)



Component	Prod. No.	Zimcode	Length	Diameter
Angled I.V. Post with Clamp	00-1238-011-00	19A-1/2	19in. (48cm)	1/2in. (13mm)
Angled I.V. Post with Clamp	00-1238-023-00	23A-3/4	23in. (57cm)	3/4in. (19mm)
Angled I.V. Post with Clamp	00-1241-045-00	13A-3/4	13in. (33cm)	3/4in. (19mm)
Angled I.V. Post with Clamp	00-1241-048-00	18A-3/4	18in. (46cm)	3/4in. (19mm)



Component	Prod. No.	Zimcode
Panel Clamp-Upper	00-0640-013-00	U.C.



Component	Prod. No.	Zimcode
Panel Clamp-Lower	00-0640-014-00	L.C.



Component	Prod. No.
61in. (155cm) Vertical Bars	00-2700-021-00



Component	Prod. No.
TotalCare I.V. Post Brackets (head of bed)	00-2700-022-00 (1 each)



Component	Prod. No.
TotalCare I.V. Post Brackets (foot of bed)	00-2700-023-00 (1 each)



Component	Prod. No.
VersaCare I.V. Post Bracket (foot of bed)	00-2700-027-00 (Set)



Component	Prod. No.
CareAssist I.V. Post Bracket (head of bed)	00-2700-024-00



Component	Prod. No.
CareAssist I.V. Post Bracket (foot of bed)	00-2700-025-00 (Set)



Component	Prod. No.	Zimcode
Panel Clamp-Buck's	00-0619-003-00	B.C.



Component	Prod. No.	Zimcode
Wall Bumper Horns	00-0640-012-00	N/A



Component	Prod. No.	Zimcode
Wall Bumper Roller	00-0640-018-00	N/A



Component	Prod. No.	Zimcode
I.V. Bar	00-0640-019-00	N/A



Component	Prod. No.	Zimcode
Traction Bar End Guard Box 12	00-1294-001-00	N/A



Component	Prod. No.	Zimcode
Trapeze (Heavy Duty)	00-0640-003-00	N/A



Component	Prod. No.	Zimcode
Trapeze	00-0640-067-00	N/A



Component	Prod. No.	Zimcode
Pulley	00-0640-008-00	N/A
Pulley (Heavy Duty)	00-1469-008-00	N/A

Note: On the Heavy Duty Pulley, the eyelet on the pulley attachment is welded closed.



Component	Prod. No.	Zimcode
Plastisol Plug	00-0640-038-00	N/A

**All Traction Repairs Require an RGA
Number to call for RGA: 800-830-0970**

Send Traction Repairs To: **Zimmer Orthopaedic Surgical Products
1872 Old Mountain Road
Statesville, NC 28677
Attn: Traction Repairs**

Traction Frames For Specific Bed Models

The following is a listing of *Zimcode* Traction Frames for hospital bed models. These are the most popular beds used today, but do not necessarily represent all bed manufacturers. For a complete listing of all hospital beds and their respective *Zimcode* Frames, call *Zimmer* Customer Service at

800-348-2759. Also see page 21 in this Handbook for instructions on frame measurements for beds not listed below on the bed frame specifier. The components for these frames must be ordered individually. The components are shown on pages 76-81.

BED MANUFACTURER MODELS		STRAIGHT FRAME							
		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	IV. post with clamp head foot	cross clamp	curved dbl clamp bar	trapeze
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME								
	COMPONENTS	ABL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	2	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME								
	COMPONENTS	STL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	2	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME								
	COMPONENTS	ABL	31	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME								
	COMPONENTS	STL	31	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom 892, 894 Century CC	BASIC FRAME								
	COMPONENTS	96	31	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	96"	31"	48"	36"	18 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME								
	COMPONENTS	ABL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME								
	COMPONENTS	STL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 855, 852, 859 840E, 841E, 842L Centra	BASIC FRAME								
	COMPONENTS	ABL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 855, 852, 859 840E, 841E, 842L Centra	BASIC FRAME								
	COMPONENTS	STL	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 840, 841, 842	BASIC FRAME								
	COMPONENTS	ABL	31	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 840, 841, 842	BASIC FRAME								
	COMPONENTS	STL	31	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 835, 837 Century Series Manufactured after July 1988	BASIC FRAME								
	COMPONENTS	96	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	96"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 150, 420, 425, 426, 427, 428, 430, 440, 450, 550, 715, 720, Century Series 815, 820, 835, 837	BASIC FRAME								
	COMPONENTS	96	31	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	96"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-

BED MANUFACTURER MODELS		STRAIGHT FRAME								
		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	I.V. post with clamp head foot	cross clamp	curved dbl clamp bar	trapeze	
Hill-Hill-Rom	41-77, 41-78	BASIC FRAME								
		COMPONENTS	ABL	31	48	36	9 ³ / ₄ 7 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	9 ³ / ₄ 7 ³ / ₄	-	-	-
Hill-Rom	70	BASIC FRAME								
		COMPONENTS	ABL	31	48	36	7 ³ / ₄ 7 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	7 ³ / ₄ 7 ³ / ₄	-	-	-
Hill-Rom	60, 65, 68, 65-1, 55, 32-90, 32-91, 32-89, 33-89, 33-90, 33-91, 34-89, 34-90, 34-91, 35-89, 35-90, 35-91, 36-89, 36-90, 36-91, 72-89, 72-90, 72-91, 96-89, 96-90, 96-91, 86	BASIC FRAME								
		COMPONENTS	96	31	48	36	7 ³ / ₄ 7 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	96"	31"	48"	36"	7 ³ / ₄ 7 ³ / ₄	-	-	-
Hill-Rom	TotalCare	BASIC FRAME								
		COMPONENTS	85R	-	61	40	Bracket	CC	CDC	-
		QUANTITY	1	-	4	3	-	4	2	1
		DIMENSIONS	85"R	-	61"	40"	-	-	-	-
Hill-Rom***	Advanta	BASIC FRAME								
		COMPONENTS	ABL	31	48	36	18 ³ / ₄ 23 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 23 ³ / ₄	-	-	-
Hill-Rom	VersaCare	BASIC FRAME								
		COMPONENTS	96	31	61	40	22 ³ / ₄ Bracket	CC	CDC	-
		QUANTITY	1	2	2	3	2	4	2	1
		DIMENSIONS	96"	31"	61"	40"	22 ³ / ₄	-	-	-
Hill-Rom	CareAssist	BASIC FRAME								
		COMPONENTS	85R	-	61	40	Bracket	CC	CDC	-
		QUANTITY	1	-	4	3	-	4	2	1
		DIMENSIONS	85"R	-	61"	40"	-	-	-	-
Stryker MPS**	Modular Patient System	BASIC FRAME								
		COMPONENTS	STL	31	48	36	18 ³ / ₄ 13 ³ / ₄	CC		
		QUANTITY	1	1	1	2	2 2	1		
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-		
Stryker	Secure II	BASIC FRAME								
		COMPONENTS	ABL	31	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ " 18 ³ / ₄ "	-	-	-
Stryker	MA204	BASIC FRAME								
		COMPONENTS	ABL	31	48	36	22 ³ / ₄ 22 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	22 ³ / ₄ " 22 ³ / ₄ "	-	-	-

* These beds use an 18 x 3/4 Angled I.V. Post, Prod. No. 00-1241-048-00, at the foot end. ** These beds use a 13 x 3/4 Angled I.V. Post, Prod. No. 00-1241-045-00, at the foot end.
 *** These beds use a 23 3/4 Angled I.V. Post, Prod. No. 00-1238-023-00 at the foot end. Note: All beds need a trapeze and a Curved Double Clamp Bar, Prod. No. 00-0640-021-00.

KEY TO ABBREVIATIONS

Abbr.	Product Description	Length Min.-Max.	Abbr.	Product Description	Length Min.-Max.
ABL	Adjustable Bar—Long (Telescoping)	74 ¹ / ₂ "-101"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"
ABS	Adjustable Bar—Short (Telescoping)	63 ¹ / ₂ "-88"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"

OFFSET FRAME

BED MANUFACTURER

MODELS

		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	I.V. post with clamp head foot	cross clamp	curved dbl clamp bar	trapeze
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME COMPONENTS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME COMPONENTS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME COMPONENTS	ABS	31-0	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME COMPONENTS	STS	31-0	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom 892, 894 Century CC	BASIC FRAME COMPONENTS	85	31-0	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	85"	31"	48"	36"	18 ³ / ₄ 18 ³ / ₄	-	-	-
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME COMPONENTS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME COMPONENTS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 855, 852, 859 Centra 840E, 841E, 842L	BASIC FRAME COMPONENTS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 855, 852, 859 Centra 840E, 841E, 842L	BASIC FRAME COMPONENTS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 840, 841, 842	BASIC FRAME COMPONENTS	ABS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 840, 841, 842	BASIC FRAME COMPONENTS	STS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 835, 837 Century Series Manufactured after July 1988	BASIC FRAME COMPONENTS	85	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	85"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Rom 150, 420, 425, 426, 427, 428, 430, 440, 450, 550, 715, 720, 815, 820, 835, 837 Century Series	BASIC FRAME COMPONENTS	85	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	85"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-
Hill-Hill-Rom 41-77, 41-78	BASIC FRAME COMPONENTS	ABS	31-0	48	36	9 ³ / ₄ 7 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	9 ³ / ₄ 7 ³ / ₄	-	-	-
Hill-Rom 70	BASIC FRAME COMPONENTS	ABS	31-0	48	36	7 ³ / ₄ 7 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	-	31"	48"	36"	7 ³ / ₄ 7 ³ / ₄	-	-	-
Hill-Rom 60, 65, 68, 65-1, 55, 32-90, 32-91, 32-89, 33-89, 33-90, 33-91, 34-89, 34-90, 34-91, 35-89, 35-90, 35-91, 36-89, 36-90, 36-91, 72-89, 72-90, 72-91, 96-89, 96-90, 96-91, 86	BASIC FRAME COMPONENTS	85	31-0	48	36	7 ³ / ₄ 7 ³ / ₄	CC	CDC	-
	QUANTITY	1	1	1	2	2 2	1	1	1
	DIMENSIONS	85"	31"	48"	36"	7 ³ / ₄ 7 ³ / ₄	-	-	-

OFFSET FRAME

BED MANUFACTURER		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	I.V. post with clamp head foot	cross clamp	curved double clamp	trapeze	
MODELS										
Hill-Rom	TotalCare	BASIC FRAME COMPONENTS	-	-	-	-	-	-	-	
		QUANTITY	-	-	-	-	-	-	-	
		DIMENSIONS	-	-	-	-	-	-	-	
Hill-Rom***	Advanta	BASIC FRAME COMPONENTS	ABS	31	48	36	18 ³ / ₄ 23 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ " 23 ³ / ₄ "	-	-	-
Hill-Rom	VersaCare	BASIC FRAME COMPONENTS	85	31	61	40	22 ³ / ₄ Bracket	CC	CDC	-
		QUANTITY	1	2	2	3	2	4	2	1
		DIMENSIONS	85"	31"	61"	40"	22 ³ / ₄	-	-	-
Hill-Rom	CareAssist	BASIC FRAME COMPONENTS	-	-	-	-	-	-	-	-
		QUANTITY	-	-	-	-	-	-	-	-
		DIMENSIONS	-	-	-	-	-	-	-	-
Stryker MPS**	Modular Patient System	BASIC FRAME COMPONENTS	ABS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Stryker MPS**	Modular Patient System	BASIC FRAME COMPONENTS	STS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Stryker	Secure II	BASIC FRAME COMPONENTS	ABS	31	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ " 18 ³ / ₄ "	-	-	-
Stryker	MA204	BASIC FRAME COMPONENTS	ABS	31	48	36	22 ³ / ₄ 22 ³ / ₄	CC	CDC	-
		QUANTITY	1	1	1	2	2 2	1	1	1
		DIMENSIONS	-	31"	48"	36"	22 ³ / ₄ " 22 ³ / ₄ "	-	-	-

* These beds use an 18 x 3/4 Angled I.V. Post, Prod. No. 00-1241-048-00, at the foot end. ** These beds use a 13 x 3/4 Angled I.V. Post, Prod. No. 00-1241-045-00, at the foot end.

*** These beds use a 23 3/4 Angled I.V. Post, Prod. No. 00-1238-023-00 at the foot end. Note: All beds need a trapeze and a Curved Double Clamp Bar, Prod. No. 00-0640-021-00.

KEY TO ABBREVIATIONS

Abbr.	Product Description	Length Min.-Max.	Abbr.	Product Description	Length Min.-Max.
ABL	Adjustable Bar—Long(Telescoping)	74 ¹ / ₂ "-101"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"
ABS	Adjustable Bar—Short (Telescoping)	63 ¹ / ₂ "-88"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"

BED MANUFACTURER MODELS		OFFSET FOUR-POSTER								
		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	IV. post with clamp head foot	cross clamp	curved double clamp	trapeze	
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Manufactured since July '93 Hill-Rom Advance** Models 115, 1125, 1135, 1145 (four motor beds)	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	ABS	31-0	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-	
Hill-Rom P1120 Advance* 2000, 1000	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	STS	31-0	48	36	13 ³ / ₄ 18 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 18 ³ / ₄	-	-	-	
Hill-Rom 892, 894 Century CC	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	85	31-0	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		85"	31"	48"	36"	18 ³ / ₄ 18 ³ / ₄	-	-	-	
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom Centra** 1050, 1052, 1060, 1062 (four motor beds)	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 855, 852, 859 840E, 841E, 842L Centra	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	ABS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 855, 852, 859 840E, 841E, 842L Centra	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	STS	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 840, 841, 842	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	ABS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 840, 841, 842	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	STS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 835, 837 Century Series Manufactured after July 1988	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	85	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		85"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 150, 420, 425, 426, 427, 428, 430, 440, 450, 550, 715, 720, 815, 820, 835, 837 Century Series	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	85	31-0	48	36	13 ³ / ₄ 13 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		85"	31"	48"	36"	13 ³ / ₄ 13 ³ / ₄	-	-	-	
Hill-Rom 41-77, 41-78	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS									
Hill-Rom 70	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS									
Hill-Rom 60, 65, 68, 65-1, 55, 32-90, 32-91, 32-89, 33-89, 33-90, 33-91, 34-89, 34-90, 34-91, 35-89, 35-90, 35-91, 36-89, 36-90, 36-91, 72-89, 72-90, 72-91, 96-89, 96-90, 96-91, 86	BASIC FRAME COMPONENTS QUANTITY DIMENSIONS	85	31-0	48	36	7 ³ / ₄ 7 ³ / ₄	CC	CDC	-	
		2	2	2	5	2 2	8	2	1	
		85"	31"	48"	36"	7 ³ / ₄ 7 ³ / ₄	-	-	-	

BED MANUFACTURER MODELS		OFFSET FOUR-POSTER								
		top horz plain bar	dbl clamp bar	swivel clamp bar	horz plain bar	I.V. post with clamp head foot	cross clamp	curved double clamp	trapeze	
Hill-Rom	TotalCare	BASIC FRAME COMPONENTS	85R	-	61	40	Bracket	CC	CDC	-
		QUANTITY	2	-	4	3	-	6	2	1
		DIMENSIONS	85"R	-	61"	40"	-	-	-	-
Hill-Rom***	Advanta	BASIC FRAME COMPONENTS	ABS	31	48	36	18 ³ / ₄ 23 ³ / ₄	CC	CDC	-
		QUANTITY	2	2	2	5	2 2	8	2	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ " 23 ³ / ₄ "	-	-	-
Hill-Rom	VersaCare	BASIC FRAME COMPONENTS	85	31	61	40	22 ³ / ₄ Bracket	CC	CDC	-
		QUANTITY	2	2	2	4	2	6	2	1
		DIMENSIONS	85"	31"	61"	40"	22 ³ / ₄	-	-	-
Hill-Rom	CareAssist	BASIC FRAME COMPONENTS	85	-	61	40	Bracket	CC	CDC	-
		QUANTITY	2	-	4	3	-	6	2	1
		DIMENSIONS	85"	-	61"	40"	-	-	-	-
Stryker MPS**	Modular Patient System	BASIC FRAME COMPONENTS	ABS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
		QUANTITY	2	2	2	5	2 2	8	2	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Stryker MPS**	Modular Patient System	BASIC FRAME COMPONENTS	STS	31-0	48	36	18 ³ / ₄ 13 ³ / ₄	CC	CDC	-
		QUANTITY	2	2	2	5	2 2	8	2	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ 13 ³ / ₄	-	-	-
Stryker	Secure II	BASIC FRAME COMPONENTS	ABS	31	48	36	18 ³ / ₄ 18 ³ / ₄	CC	CDC	-
		QUANTITY	2	2	2	5	2 2	8	2	1
		DIMENSIONS	-	31"	48"	36"	18 ³ / ₄ " 18 ³ / ₄ "	-	-	-
Stryker	MA204	BASIC FRAME COMPONENTS	ABS	31	48	36	22 ³ / ₄ 22 ³ / ₄	CC	CDC	-
		QUANTITY	2	2	2	5	2 2	8	2	1
		DIMENSIONS	-	31"	48"	36"	22 ³ / ₄ " 22 ³ / ₄ "	-	-	-

* These beds use an 18 x 3/4 Angled I.V. Post, Prod. No. 00-1241-048-00, at the foot end. ** These beds use a 13 x 3/4 Angled I.V. Post, Prod. No. 00-1241-045-00, at the foot end.
 *** These beds use a 23 3/4 Angled I.V. Post, Prod. No. 00-1238-023-00 at the foot end. Note: All beds need a trapeze and a Curved Double Clamp Bar, Prod. No. 00-0640-021-00.

KEY TO ABBREVIATIONS

Abbr.	Product Description	Length Min.-Max.	Abbr.	Product Description	Length Min.-Max.
ABL	Adjustable Bar—Long(Telescoping)	74 ¹ / ₂ "-101"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"
ABS	Adjustable Bar—Short (Telescoping)	63 ¹ / ₂ "-88"	STL	Smooth-Trac Overhead Bar—Long	74 ¹ / ₂ "-101"

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WARRANTY

All *Zimmer* traction frame components are unconditionally guaranteed against defects in materials and workmanship.

This warranty does not cover normal wear and tear inherent in day-to-day use, nor consequential or incidental damages or damage caused by misuse, abuse, accident or neglect.

This warranty also does not cover damage to any traction component resulting from repairs not performed by *Zimmer*.

