T30a/m
with orthopaedic attachment

Converting T30 to orthopaedic table or just adding orthopaedic traction using auto self guiding docking trolley preventing risk of injury to operating room staff.

Optional accessory trolley

Offers option of single or double click-on traction beams with offset choice, and leg support for trouble free patient setting and ultimate patient comfort. Patient weight load of 200 kg on traction mode without support pole.

Easy patient setting and full flexibility of X-ray imaging for DHS procedures

Easy setting for tibia nailing in horizontal or angled traction position. Use Eschmann T30 leg support or DP leg holder.

T30a/m 5/6 section Operation table convertible to orthopaedic and trauma table

New generation, new concept, completely versatile, all purpose operation table

5 or 6 sections general and specialised operation table

Fully X-ray translucent table top, with built-in X-ray cassette tunnel through the table top

Detachable and interchangeable sections

Convertible to fully functional orthopaedic and trauma table

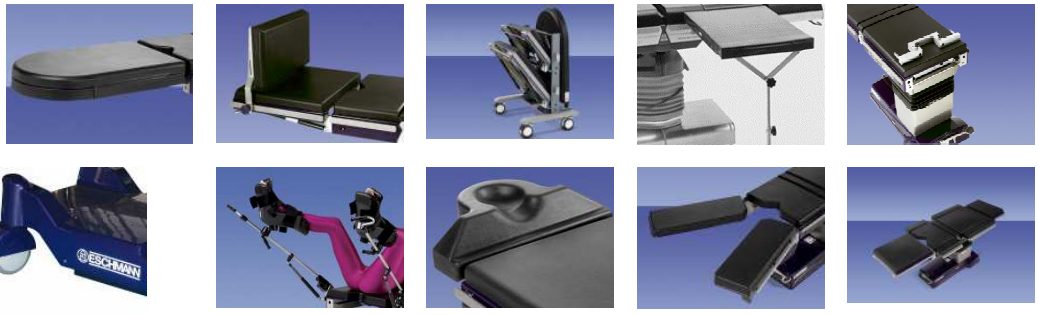
Special designed shoulder surgery attachment for Eschmann “T” range

Full X-ray imaging at lowest height for spinal surgery

This literature should be read in conjunction with EschmannT20 catalogue publicity No. PS-217c

Large wheels option with single locking pedal (T30m)
Small wheels with double pedal (T30a)

Optional accessories



Eschmann Equipment, Peter Road, Lancing, West Sussex BN158TJ, England Tel: +44 1903 753322 Fax: +44 1903 875789 www.eschmann.co.uk
Asia Pacific: Eschmann Holdings Pte Ltd., 300 Beach Road, #32-07 The Concourse, Singapore 199555
Tel: +65 62983344 Fax: +65 62928918 Email: Eschmann_spore@pacific.net.sg

T30a/m with orthopaedic attachment

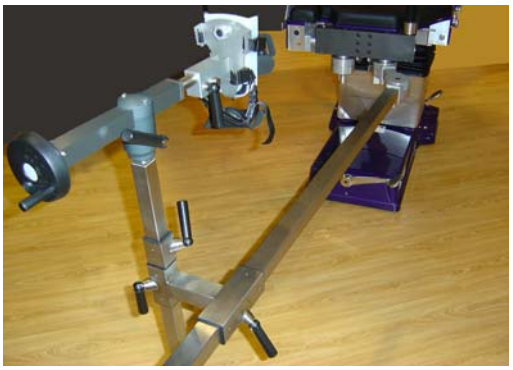
New generation, new concept, completely versatile, all purpose operation table

5 or 6 sections general and specialised operation table

Fully X-ray translucent table top, with built-in X-ray cassette tunnel through the table top

Detachable and interchangeable sections

Convertible to fully functional orthopaedic and trauma table



Detachable, and click-on traction beams, centre positioning with double joint knuckles.

Tibia nailing downward traction position

Tibia Nailing in horizontal traction position. Use Eschmann T30 leg support or DP leg holder

Two options of double pedal locking mechanism, with standard wheels(T30a)

Large wheels option with single locking pedal (T30m)

This literature should be read in conjunction with EschmannT20 catalogue publicity No. PS-217c

Easy click-on docking cart with auto-lock mechanism

T30, Range Configuration and Specification

T30a and T30m

5 or 6 (with divided leg section) sections table top.
Features and specification as T20a/m, but without transverse top

T30m, (single pedal and large wheels)

Interchangeable sections

5 Section T30a, (double pedals & small wheels)

Gynae & Urology with perennial extension

Gynae & Urology

Orthopaedic Attachment for T30a and T30m

Sacral Support
Docking Cart (optional)
Traction beam & T. assembly
Orthopaedic boot
Perennial Post Carbon Fibre

Docking Cart

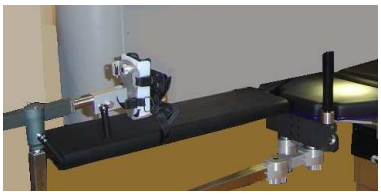
Perennial Post Carbon Fibre

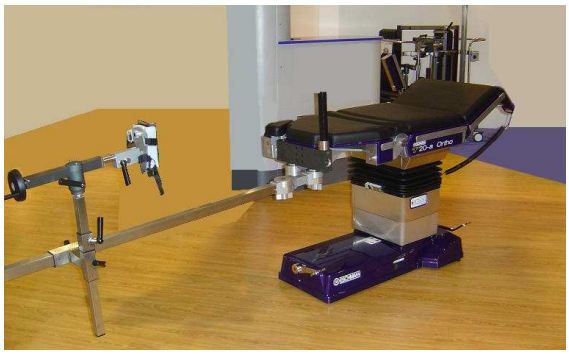
Sacral assembly

Traction Beam & Traction Assembly

T30a/m-Ortho

An Orthopaedic and Trauma Operating Table complete with detachable double traction beams assembly, leg supports, swivel joint knuckles, pair of adjustable booties, carbon fibre perennial post, convertible to 5 or 6 sections fully X-ray translucent top general and specialised operation table



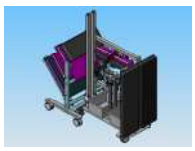


Optional accessories and attachments for Orthopaedic Surgery

Shoulder Chair

Hand Surgery Table

Hip Fixation Accessories

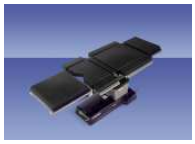


Accessory Trolley

Hand Traction

Tibia Nailing Set

Optional accessories for General & Specialised Surgery

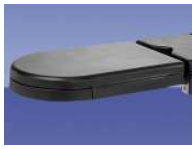


Width Extender

DP Leg Holder

Ophthalmic Head S

Divided Leg S



Light weight Leg S

Foot Support

Accessory Trolley

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Asia Pacific: Eschmann Holdings Pte Ltd., 300 Beach Road, #32-07 The Concourse, Singapore 199555
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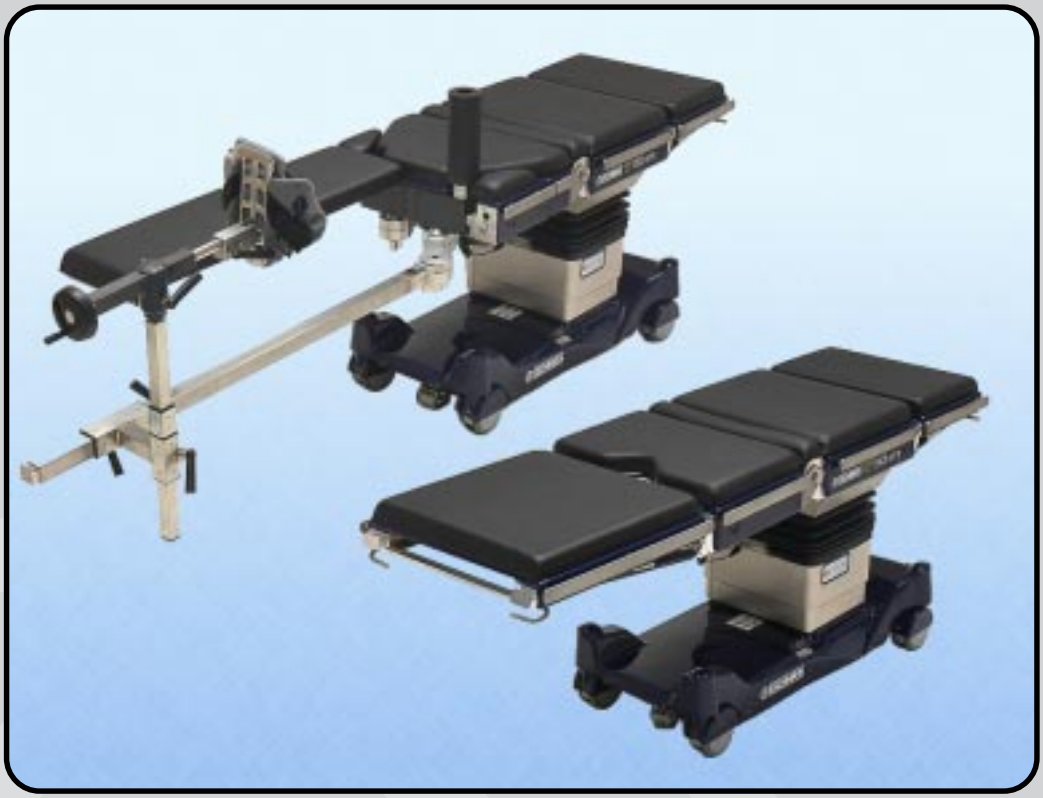
ESCHMANN

T30 Series

OPERATING TABLES



Instructions for use

113364

T-IM122b

Instructions for use

ESCHMANN

Read these Instructions before use

Keep these 'Instructions for use' in a safe convenient place for future reference.

Eschmann After Sales Service Department

The Eschmann After Sales Service Department is staffed and equipped to provide advice and assistance during normal office hours. To avoid delays when making enquiries, please quote the Model and Serial Number of your Operating Table which is shown on the Serial Number Plate located on the table base (or the trunk section for the T30-m). Please ensure you include all alpha and numeric digits of the Serial Number.

For further information visit www.eschmann.co.uk

All correspondence relating to the after sales service of Eschmann Equipment to be addressed to :

UK Customers

Eschmann Equipment, Peter Road, Lancing, West Sussex BN15 8TJ, England.
Tel: +44 (0) 1903 765040. Fax: +44 (0) 1903 875711.

Overseas Customers

Contact your local distributor. In case of doubt contact Eschmann Equipment.

Patents and Trade marks

The ESCHMANN name and logo; "T30-a" and "T30-m" are trade marks of Eschmann Holdings Limited. "Eschmann Equipment" is a trading name of Eschmann Holdings Limited.

Patents : Worldwide Patents Pending.

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The information in this publication was correct at the time of going to print. The Company, however, reserves the right to modify or improve the equipment referred to.

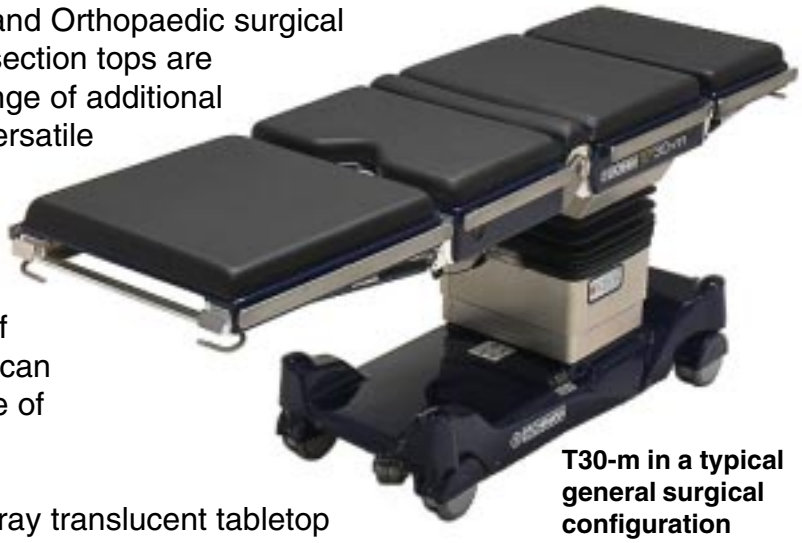
CE The CE marking affixed to the product certifies that it complies with the European Medical Devices Directive 93/42/EEC as amended and related legislation.

T-IM122b March 2007

CE

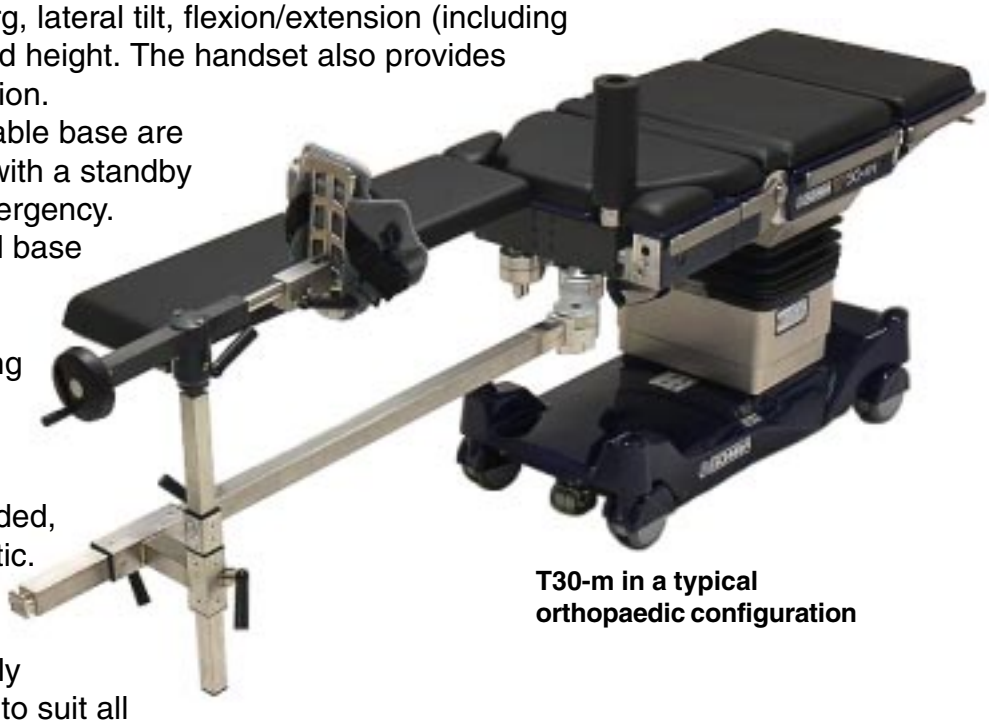
The T30 Series Operating Tables

The T30 powered operating table is a modular system suitable for a full range of general, specialist and Orthopaedic surgical procedures. A range of 4, 5 or 6 section tops are available along with a superior range of additional accessories to make this a truly versatile general and specialist powered operating table. With the simple removal of the general surgical lower trunk section, via a docking cart, and the addition of a range of orthopaedic accessories, the T30 can easily be converted for a full range of orthopaedic procedures.



T30-m in a typical general surgical configuration

TheT30 operating table has an X-ray translucent tabletop with a built-in X-ray cassette tunnel. The slimline column is offset relative to top and base for ease of C-arm access.
The T30 Table features a corded handset controlling Trendelenburg, reverse Trendelenburg, lateral tilt, flexion/extension (including 90° chair position) and height. The handset also provides a battery level indication.
The batteries in the table base are mains rechargeable with a standby battery in case of emergency.
Covers to the top and base are purple and made of a special scratch resistant, hard-wearing and easy to clean seamless acrylic capped ABS.
The mattress is moulded, latex free and antistatic.
A choice of table bases offers a range of ergonomically designed foot pedals to suit all operating theatre environments. The T30-a pedals are located at the head and leg end of the table base to provide braked, wheel (move in a straight line) and 360° mobility. The T30-a is capable of supporting a maximum patient weight of 300kg or 135kg when moved around the theatre.



T30-m in a typical orthopaedic configuration

The T30-m single foot pedal is located at the head end of the table and has three positions to enable the table to be static (braked), rotated 360° or moved in a straight line. The T30-m is capable of supporting a maximum patient weight of 300kg or 200kg when moved around the theatre.

CONTENTS

FIGURES AND APPENDICES

1.0 PRELIMINARY INFORMATION

WARNING

Read this preliminary information carefully and note ALL of the warnings, cautions and safety notes contained within these 'Instructions for use' before using this Operating Table. Keep these 'Instructions for use' close-to-hand at all times for reference.

1.1 General

1.1.1 The T30 Tables are classified as battery powered, mobile, general purpose and orthopaedic operating tables. Their intended function is to support and position a patient, in conjunction with their associated accessories, during general surgical and orthopaedic operations and procedures in an operating theatre. Their intended application is for use by medically qualified personnel, trained in the use of the T30 Tables, during surgical operations and procedures in accordance with these instructions.

1.1.2 These 'Instructions for Use' should be referred to for details of the following T30 Tables, see the table's Serial Number Plate for the actual table Serial Number and REF No.:

T30-a Catalogue (REF) number prefixed **TOR2**
Serial Numbers (SN) prefixed TAOA* or above.

T30-m Catalogue (REF) number prefixed **TOR2**
Serial Numbers (SN) prefixed TMOA* or above.

* The last letter of the SN prefix is the design modification state, this may increase during the build life of the tables.

NOTE: Some models have 'Denyer', 'USA', or 'Euro (Kifa)' accessory sidebars. Standard UK Eschmann accessories that locate onto these may not fit, please check with Eschmann Equipment before purchasing accessories.

1.1.3 T30 Tables and accessories must only be used as detailed within these 'Instructions for use'. Failure to do so could result in injury to patients or users, or damage to the operating table and accessories. Always ensure that all warnings and cautions detailed within these 'Instructions for use', are strictly complied with. Appendix 1 is provided for Hospitals that wish to keep a log of those people trained in the safe use of this table. Eschmann Equipment offers full training in the safe use of these tables, please contact our After Sales Service Department, Tel. +44 (0) 1903 765040 for details.

1.1.4 'Instructions for use' and 'Service manuals' (see section 3.3.9) as applicable should be readily accessible for reference prior to and when operating, cleaning and servicing the operating table. All manuals are available from Eschmann Equipment, see inside front cover for address.

1.1.5 Ensure the table has been correctly installed before starting to use it, see section 3.0.

1.1.6 Ensure that these operating tables and accessories are regularly serviced and checked for safety at least every six months. All servicing and maintenance procedures should be carried out by engineers who have been trained by Eschmann. Training, a Service, or a Service Contract can be arranged through our After Sales Service Department [Tel. +44 (0) 1903 765040]. Do not remove the table covers at any time (danger of accessible mains voltage), this should only be carried out during maintenance procedures.

1.2 About this manual

1.2.1 Within the text of these 'Instructions for use' the following terminology is used:

i) ***Normal patient orientation.*** Patient's head on the head section in a supine position, with the table in its normal configuration.

ii) ***Normal table configuration.*** General surgical short trunk section fitted, infill section fitted to long trunk, head section fitted to infill section, leg section fitted to general surgical short trunk (see Fig. 2.1).

iii) ***Orthopaedic configuration.*** Orthopaedic short trunk section fitted with hip and pre-operative (split) leg sections attached (see Fig. 2.1).

iv) ***Left and right***. The terms 'left' and 'right' refer to the side of the table when viewed from the head end with the table in its normal configuration.

v) ***Auto-level***. The term 'auto-level' is used to describe the automatic sequence of movements to return the table to a preprogrammed position by pressing and holding a single handset button. This does not affect the head or leg sections, or any other manual or powered accessory, fitted to the table.

vi) ***LEDs.*** This abbreviation is used when referring to the various indicator lights on the table or handset which are light emitting diodes (LEDs).

vii) The term **T30 Table** is used to cover both the T30-a and the T30-m version of these operating tables.

1.2.2 These 'Instructions for use' have been split into specific sections for ease of finding information (see the main headings in 'Contents'). Where applicable and within each section, adequate cross references to other sections are made to eliminate the need to duplicate information. Orthopaedic procedures and table set up are covered in ***Appendix 5 onwards***.

1.2.3 Section 5 (Operation) details how to use the T30 Tables and operate their controls correctly. It is strongly recommended that the user has read and is familiar with sections 1, 2 and 4 before passing onto section 5 and starting to use this operating table.

1.2.4 Within this manual the sections in bold type headed **'WARNING'** give guidance on possible actions that could lead to injury of the patient, or theatre staff, and potential damage to the operating table. Sections headed **'CAUTION'** give guidance on possible actions that could lead to damage of this operating table which could then lead to injury of the patient, or theatre staff.

1.3 Table description

1.3.1 T30 Tables have been designed to provide facilities for General Surgery* and Orthopaedic Surgery** with traction, they allow for intra-operative radiography using a C-arm image intensifier.

* including Minimal Access procedures, Urology and Gynaecology, Thoracic, Ophthalmic and ENT, Neurosurgery, Plastic and Maxillo-Facial surgery.

** including dynamic hip screw (DHS) in the supine position, femoral nailing in the supine position, femoral nailing in the lateral position, femoral reconstructive nailing in the supine position, retrograde femoral nailing, tibial nailing, humeral nailing and shoulder arthroscopy.

1.3.2 T30 Tables are stable, rigid in use and the robust construction provides protection from patient trolley or C-arm knocks whilst still providing easy access for servicing. Careful design has minimised traps for potential contamination and stops fluid entering the table during normal use, cleaning and disinfection procedures.

1.3.3 Tabletop movements (i.e. Trendelenburg, height, tilt and break) are electrically powered and incorporate 'soft start and stop' motions for patient comfort and safety. The pedestal base is foot operated and the standard head and leg sections are hand operated (see sections 5.1 and 5.2 respectively). All orthopaedic accessories are manually adjusted and operated.

1.3.4 T30 Tables are easy to operate, theatre staff can quickly learn how to use them correctly and safely. Tabletop control is provided by a corded handset, or an optional footswitch (for Trendelenburg and height control only). Handset control overrides footswitch control at all times.

1.3.5 Power for all powered table movements is provided by internal rechargeable batteries. There are two battery sets, main batteries and standby batteries. These are recharged by an internal battery charger which requires connection to mains voltage using the mains cord supplied. **Note:** If the main table batteries fail or become critically low (i.e. warning indicators were ignored and batteries have not been recharged) the table cannot be powered directly from the mains. However by depressing and holding the standby battery switch, powered table movements can again be achieved (using power from standby batteries).

1.3.6 In emergencies (e.g. handset failure or a critically low battery) a standby control panel on the column can be used to control the table (however this MUST be limited to emergency use ONLY, certain safety features are over-ridden when this panel is used, see section 5.3.4). It may be required to press the standby battery switch if the main battery charge level is too low.

1.3.7 The base on the T30-a Table is fitted with enclosed multidirectional castors and has two foot pedals. The T30-m Table is provided with four large castors that can be adjusted by a single foot pedal. The castors on all models can provide either castor, wheel or braked orientations (see section 5.1).

1.3.8 Visual indicators have been restricted to essential functions and information only (e.g. table switched 'on' see section 5.3.2.2, battery level indication and battery charging state see section 5.3.1). Audible signals are only used to signal that the table has been switched 'on' for a long time without operation and that it should be switched 'off', see section 8.1 (this inactivity 'beep' can be configured 'off' during a service if required), a 'beep' is also provided when switching 'on'.

1.3.9 Tabletops have a lightweight X-ray translucent surface (designed to reduce shadows on images) and an X-ray cassette tunnel with the facility for an X-ray cassette (430mm x 340mm) to be placed at any point beneath the full length of the patient's body, see section 6.3. The standard sidebars allow placement of clamps and most standard accessories. Simple buttons or catches release the head, leg, hip, pre-operative leg, infill and short trunk sections.

1.3.10 The tabletop can be adjusted into the following patient positions (Note: Orthopaedic positions are detailed in Appendix 5 onwards):

- Supine with C-arm access to patient from nipple region to feet
- Supine with C-arm access to patient from groin to head
- Supine Extension with C-arm access to break area (Cholecystectomy-type procedure)
- Supine Flexion ('Lawn chair' position)
- Lateral
- Lateral Extension with C-arm access to break (Nephrectomy position)
- Supine Lithotomy with C-arm access to whole of the Urinary tract
- Supine Lithotomy with or without Trendelenburg
- Prone with or without extension at waist or hips (with C-arm access)
- 90° Chair position with patient's knees at the same level as the heart, offset to the head end.

1.3.11 For additional information see section 6.0 for patient positioning notes, section 6.2 for obese patients, 6.3 for radiographic procedures and 6.4 for illustrations and details of safe loading. Tabletop configurations are shown pictorily in section 6.5.

2.0 TABLE PARTS AND SYMBOLS

2.1 Part identification

2.1.1 Fig. 2.1 shows the T30-a and T30-m Table tops in their normal configuration and identifies the major parts of the tabletop.

2.1.2 Fig. 2.2 identifies the various parts of the T30-a and the T30-m Table base and column.

2.1.3 Orthopaedic accessories and components are detailed in Appendix 5 onwards.

2.2 Symbols and graphics

To enable an easy reference to all the symbols and graphics used on the T30 Tables (and within these 'Instructions for use') the following grouped sections show all the symbols and graphics used.

2.2.1 Symbols general

The following symbols are shown on various parts of the table, handset or Serial Number Plate.

IPX 4 This symbol (splash proof) denotes that the equipment (the table) meets the requirements of IEC529 for protection from splashing water.

IPX 6 This symbol (protection against heavy seas) denotes that the equipment (the handset) meets the requirements of IEC529 in that water from heavy seas or water projected from powerful jets shall not enter in harmful quantities.

This symbol indicates that the equipment is for use on alternating current.


This symbol indicates that fuses adjacent to the symbol have a rating and type as detailed.


This symbol warns the user to read the accompanying documents, these 'Instructions for use'.


Symbols ○ and ⊙ near the main table 'on/off' switch, indicate 'OFF' and 'ON' respectively.


With the mains cord attached the equipment has '**Class II**' protection against electric shock.


The patient leakage current, with mains voltage on the applied parts, meets the requirement for type **BF** medical electrical equipment and are defibrillator proof.

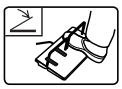

This symbol is used to indicate the table's duty cycle which is the ratio of the operating time to the sum of the operating time and the ensuing interval.

SN This symbol indicates the unit serial number is as indicated adjacent to the symbol.

REF This symbol indicates the catalogue number is as indicated adjacent to the symbol.


This symbol indicates that the manufacturer is as indicated adjacent to the symbol.


This symbol indicates that the date of manufacture is as indicated adjacent to the symbol.


This symbol indicates the connection point for a footswitch.


This symbol indicates the connection point for the corded handset.

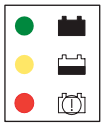

This symbol indicates that the table section to which it is applied (e.g. head section, under the mattress) should not be used as a seat.

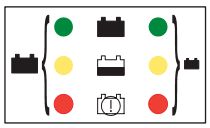
This symbol indicates the 'Safe working load' of the section to which it is applied can safely support an evenly distributed load to the value indicated, in this example 25kg.

This symbol indicates the 'Minimum breaking load' of the section to which it is applied. An evenly distributed load (in this example 100kg or greater) may break the section.


This symbol on the table base indicates the maximum weight that can be placed on the table when static and braked, or being moved around the theatre (see section 6.4 for more information).


This symbol is used to identify the standby battery switch.


This graphic (T30-m Table only) adjacent to the mains socket, identifies the relationship between the colour of the mains 'on' LED and the battery charge state, see section 5.3.1.


This graphic (T30-a Table only) adjacent to the mains socket, identifies the relationship between the colour of the mains 'on' LED and the battery charge state for the main and standby batteries, see section 5.3.1.


This symbol indicates that this product was placed on the market after 13th August 2005. At the end of its working life it should be deposited at an appropriate facility to enable recycling. For information on how to recycle this product responsibly contact Eschmann.

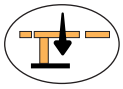

Pushing prohibited. This symbol, on the trolley, indicates that it should not be pushed from the side on which the symbol is attached.

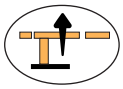
2.2.2 Handset button symbols

The following symbols are shown on the handset buttons to indicate their function. Use of the handset is fully detailed in section 5.3.3 of this manual.


Trendelenburg - Press to adjust tabletop in the Trendelenburg (head down) direction.


Reverse Trendelenburg - Press to adjust tabletop in the Reverse Trendelenburg (head up) direction.


Height down - Press to move tabletop down.

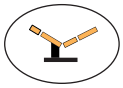

Height up - Press to move tabletop up.


Tilt - Press to tilt tabletop down on the left (when viewed from the long trunk end)

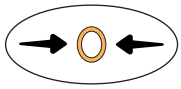

Tilt - Press to tilt tabletop down on the right (when viewed from the long trunk end)


Break down - Press to move the break down (i.e. short trunk moves down w.r.t. long trunk)


Break up - Press to move the break up (i.e. short trunk moves up w.r.t. long trunk)


Flexion - Press to move tabletop into Flexion.


Extension - Press to move table into Extension.


Return to Level - Press to return tabletop to a preset level position.

2.2.3 Handset graphics


This graphic is shown on the corded handset to indicate the battery charge level for both the main and standby batteries, see section 5.3.1.

2.2.4 Standby control panel button symbols

The following symbols are shown on the standby control panel buttons, indicating the function they select. The arrows (upper or lower) indicate the direction the selected function will move, if the corresponding direction button (i.e. upper or lower) is pressed, see section 5.3.4.


Button selects Trendelenburg function.


Button selects Break function.


Button selects Height function.


Button selects Tilt function.

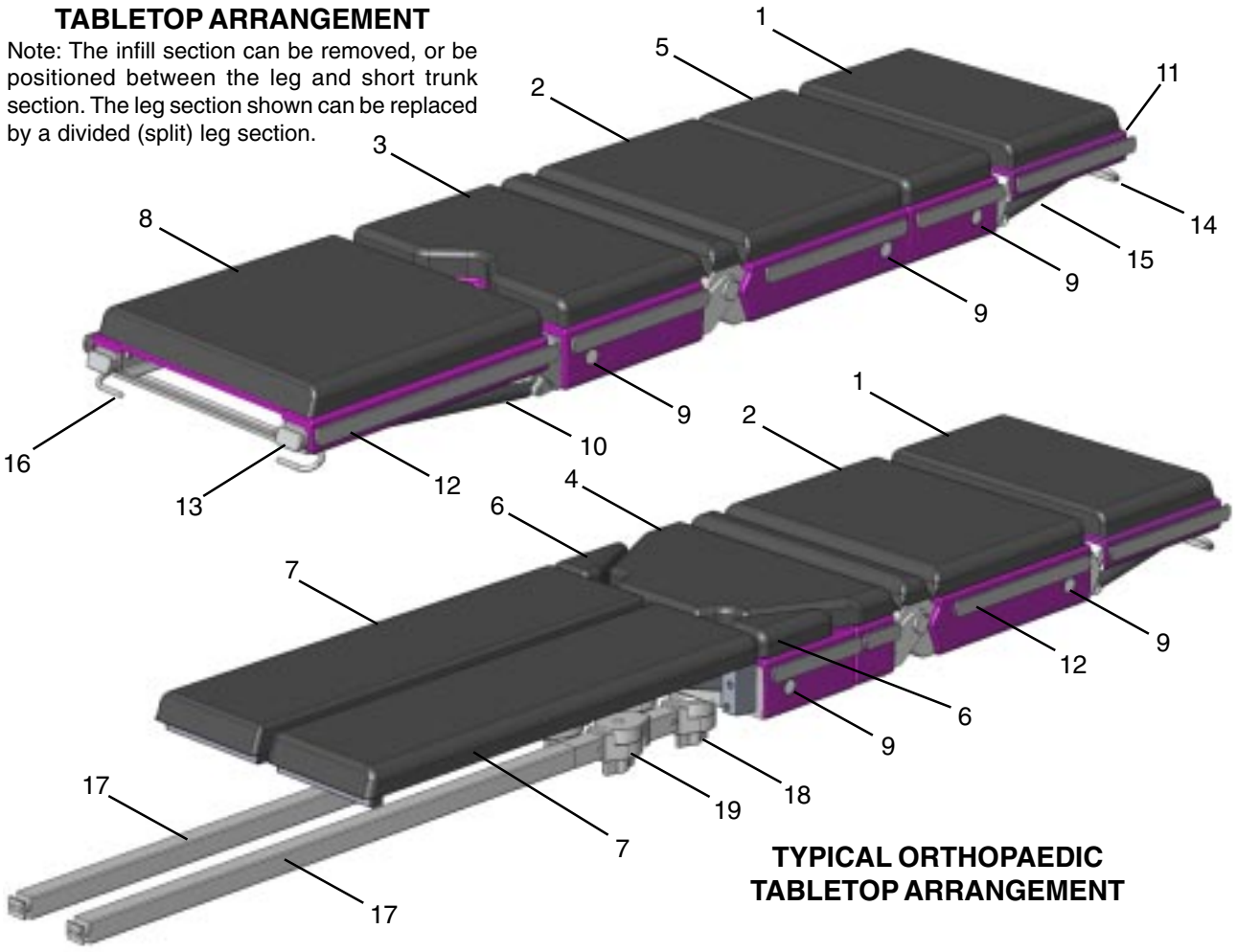

Non functional Button (selects Traverse function on other tables in the 'T' series).


Direction button - Press button to obtain movement indicated by upper arrow of function button.


Direction button - Press button to obtain movement indicated by lower arrow of function button.

TYPICAL GENERAL SURGICAL TABLETOP ARRANGEMENT

Note: The infill section can be removed, or be positioned between the leg and short trunk section. The leg section shown can be replaced by a divided (split) leg section.

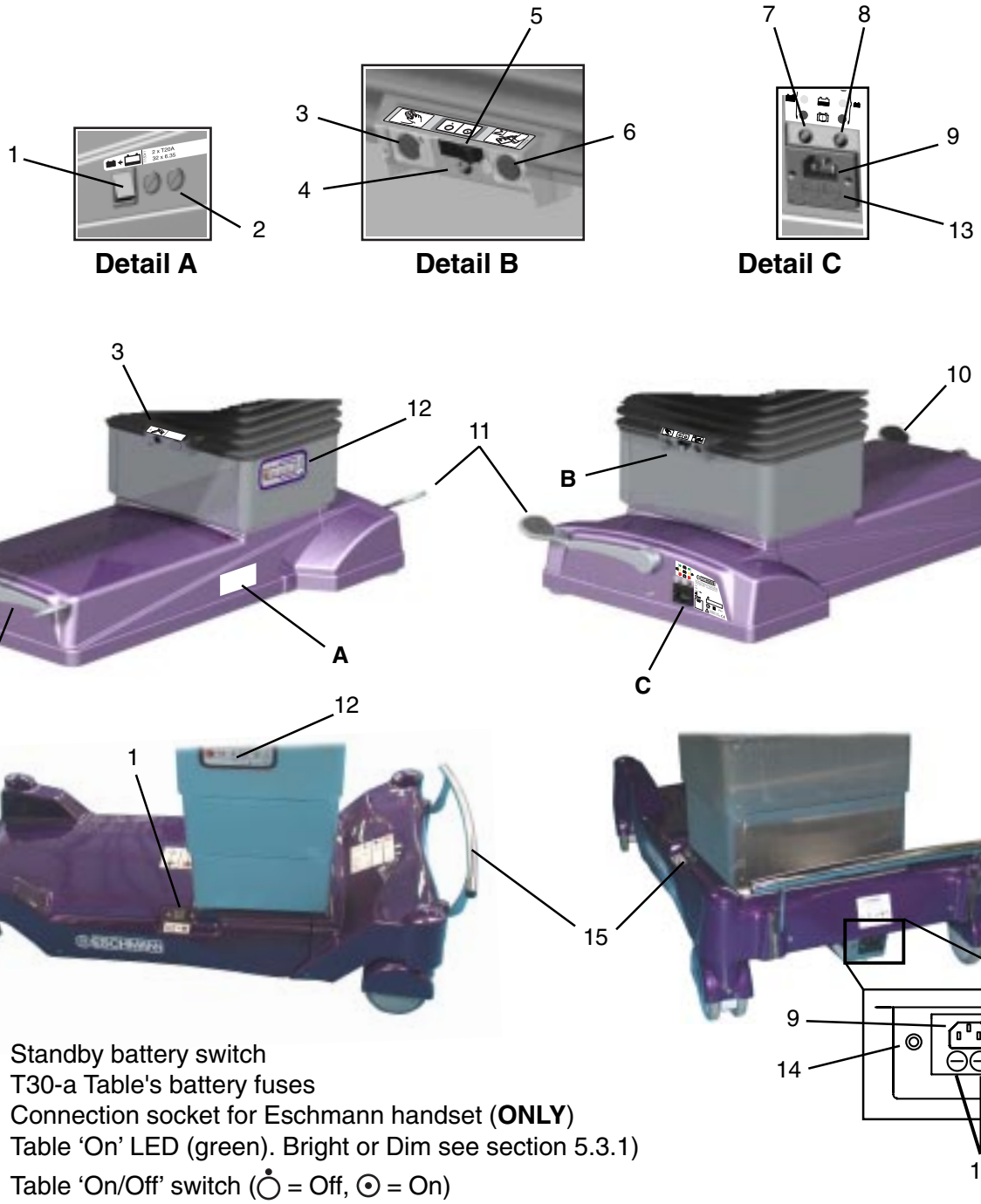


TYPICAL ORTHOPAEDIC TABLETOP ARRANGEMENT

1	Head section
2	Long trunk section
3	General surgical short trunk section
4	Orthopaedic short trunk section
5	Infill section
6	Hip sections
7	Pre-operative leg sections
8	Leg section
9	Section release buttons
10	Leg section gas spring
11	Head section end block (use to stow UK/EURO handset)
12	Accessory sidebar (can also be used to stow handset*)
13	End block, also on head section (use to stow UK/EURO handset)
14	Head section release bar
15	Head section gas spring
16	Leg section release bar
17	Traction beam
18	Fixed knuckle
19	Intermediate knuckle

* Clip on handset must match sidebar type, see accessory section 4.8

Fig. 2.1 Part identification of the T30 Table tops.



1 Standby battery switch
2 T30-a Table's battery fuses
3 Connection socket for Eschmann handset (**ONLY**)
4 Table 'On' LED (green). Bright or Dim see section 5.3.1)
5 Table 'On/Off' switch (◯ = Off, ⊙ = On)
6 Connection socket for Eschmann footswitch (**ONLY**)
7 T30-a Table, mains 'on' and Main Battery charging state LED. Red, Amber or Green.
8 T30-a Table, mains 'on' and Standby Battery charging state LED. Red, Amber or Green.
9 Connection socket for mains (**ONLY** use Eschmann mains cord supplied)
10 T30-a Table, castor foot pedal
11 T30-a Table, wheel foot pedal
12 Standby control panel
13 T30-a Table, mains fuses
14 T30-m Table, mains 'on' and Battery charging state LED. Red, Amber or Green.
15 T30-m Table, foot pedal
16 T30-m Table, mains fuses

Fig. 2.2 Part identification of the T30 Table base and column.

3.0 INSTALLATION

3.1 General

3.1.1 In the U.K. the table is delivered un-crated with the head and leg section fitted. The mattress set is boxed individually and placed on the trunk sections. The handset, mains cord and literature are supplied loose. Any accessories ordered with the table will be packed individually.

3.1.2 For overseas markets the table is usually packed in a container with the head and leg section fitted, together with a boxed mattress set a mains cord and the literature. The handset is packed within the container in an antistatic bag. Other accessories are usually packed separately, but some may be included in the main case and should be unpacked and stored separately during table installation.

3.1.2 **(Export only)** Carefully remove the T30 Table (having first removed any accessories and packing restraints from within the container) from the packing case as follows:-

i Remove the walls of the case leaving the table on the base still in the braked position as packed. Remove any chocks from the pallet base to enable later table movement (iv below).

ii Position the ramp provided (in the packing case) adjacent to the base of the case.

iii Follow the instruction provided in section 5.1 of this manual and place the table base into the 'Wheel' orientation or mode.

iv With at least two people to support the table's weight, push it (do not pull it) off of the pallet base and down the ramp.

v Note that the table should not be wheeled over rough ground, always use a trolley until a smooth floor area has been reached.

vi Should it be necessary to lift the operating table refer to section 3.2 where suitable lifting points and methods are detailed.

3.1.3 Unpack the mattress set and fit a mattress to each tabletop section as detailed in section 5.2.10.

3.1.4 Any packaging materials should be recycled or disposed of in accordance with current legislation.

CAUTION

If the mains plug is changed it is most important that a fuse of the correct type, size and rating is used (see Technical Data, section 9.5.4).

3.1.6 T30 Tables require a mains electrical supply corresponding to the voltage shown on the Serial Number Plate located on the table base. **Only** use the Eschmann mains supply cord provided with the table. If the plug supplied fitted to the cord is not suitable it should be replaced with a suitable plug wired as below. If the plug is a fused type, a 10A fuse must be fitted. The mains supply cord must always be wired as follows:

Brown internal cord to **LIVE**
Blue internal cord to **NEUTRAL**
Green internal cord to **Earth**
(Note: The T30-a and T30-m Tables are Class II, Type BF, there is no **EARTH** connection through to the table)

3.1.7 T30 Tables are powered by internal rechargeable batteries which are connected and charged before delivery. An internal mains powered battery charger is incorporated in the table's base. The table batteries should be recharged (see section 5.3.1) and the table operated through the cycle of movements detailed below to check and ensure correct function, **before** the tables are first used.

Full Trendelenburg / reverse Trendelenburg
Maximum to minimum height
Maximum tilt, left and right
Maximum to minimum break

CAUTION

To complete and maintain the antistatic pathway the table must be used on an electrically conductive or antistatic floor and with mattresses supplied by Eschmann Equipment.

3.1.8 The table has an antistatic pathway from the tabletop, through an internal resistor, to the castors. To complete the antistatic pathway, the table must be used on an electrically conductive, or on an antistatic floor (also see the warning in section 6.1).

3.1.9 As with all medical electrical equipment care should be taken with regard to electromagnetic compatibility (EMC) during installation. These instructions are written in line with the latest international standards (EN 60601-1-2:2001) and are designed to minimise the risk of electromagnetic compatibility issues. T30 Tables should be installed and put into service in accordance with the EMC information provided in the Technical Data section of these 'Instructions for Use' (Section 9.11).

3.1.10 The table should be cleaned and disinfected prior to its first use as detailed in section 8.2 and 8.3 and then commissioned in accordance with any local procedures applicable to new equipment, this should include staff training. Eschmann supply a range of wall charts with the table, additional training aids and on-site training can be arranged, contact Eschmann [Tel. +44 (0) 1903 765040] for more information.

3.2 Lifting the operating table

WARNING

The table is heavy and at least four strong people are required to lift it. Ensure that adequate precautions are taken (e.g. wear protective shoes, use the correct straps).

3.2.1 The T30 Table should only be lifted as a last resort. Ideally it should be placed on a trolley directly from the delivery vehicle, or moved on the base of the delivery packing case (overseas only) and then rolled down the ramp provided.

3.2.2 If required the T30 Table should only be lifted by placing suitable webbing straps underneath the table base in the positions indicated in Fig. 3.1 (having placed the T30-a Table into its 'castor' orientation to increase ground clearance) and observing the notes that follow.

3.2.3 Extreme care should be taken to pad the straps where they pass the base covers and the tabletop sections to avoid damage. Take special care not to cause damage to the lower edge of the base covers.

3.2.4 Before lifting remove all tabletop sections, accessories and mattresses, to minimise the weight to 242.7kg* (T30-a Table) or 190.7kg* (T30-m Table). Place the tabletop into a level plane in both directions (i.e. tilt and Trendelenburg) as shown in Fig. 3.1. Lower the short trunk and tabletop to their maximum limits.
*Nominal weight for table with a General Surgical short trunk, add 14.7kg if an Orthopaedic short trunk is fitted.

3.2.5 The table should only be lifted the minimum amount required and not carried. Lift the table sufficiently high to allow a fully decked pallet to be slid underneath.

3.2.6 When lowering the table after the lift take care not trap feet under the table's base. The table should be placed into its 'braked' orientation whilst on the pallet.

3.2.7 Transport the table on the pallet using a forklift truck or similar equipment ensuring the table is strapped securely to the pallet.

3.2.8 Inspect the table for any signs of damage and check all functions prior to placing the table into service.

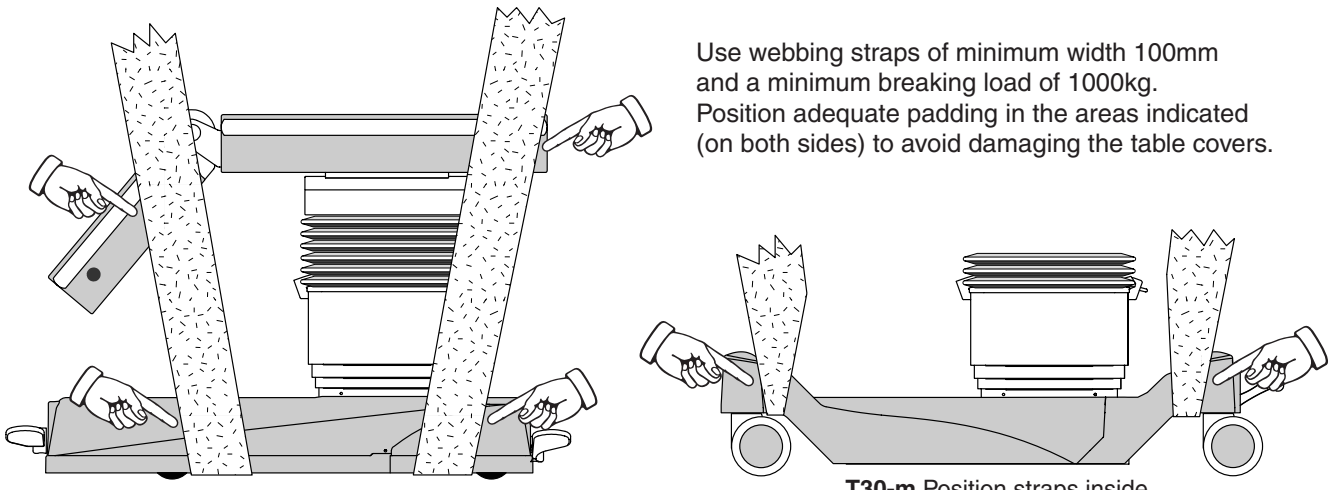
3.3 Technical

3.3.1 The following sections are provided for the user to note prior to using a T30 Table.

3.3.2 The T30 Table meets the requirements of international standards (see section 9.8) and conform dimensionally to meet most requirements, for the full table technical specification details refer to the Technical Data, section 9.0.

3.3.3 The T30 Table should only be used on an antistatic floor and is classified as type 'BF' (i.e. the table has isolation from earth equivalent to that of type 'BF' equipment when the mains cord is attached).

3.3.4 The antistatic properties of the table depend upon the use of the recommended mattresses (i.e. Eschmann antistatic mattresses ONLY) also see section 3.1.8.



T30-a Position straps inside, but as close as possible to the castors.

T30-m Position straps inside castors as indicated.

Fig. 3.1 Lifting the T30 Table

3.3.5 Only Eschmann accessories listed in this manual should be used on the table and in accordance with the 'User Handbook' supplied with the accessory. Accessories available from Eschmann are listed in section 7.0 and Appendix 9 (for Orthopaedic accessories). Other accessories, especially those that could compromise table stability, must not be used. Use of other equipment with T30 Tables should only be considered after evaluating the safety of the patient and personnel. For accessories that fit onto the sidebar ensure that they are compatible with the sidebar fitted to the table. These tables can be supplied with standard UK, Euro USA or Denyer style sidebars, see section 1.1.2

3.3.6 Provision of a diagnostic port within the table enables access for reprogramming the table's software, down-loading of fault information and service functions. Use of this port MUST be limited to trained service personnel only, and should only be used in accordance with the correct Eschmann manuals (see 3.3.9 below).

3.3.7 The table has four fuses (two on the T30-m) that the user has access to in the event of failure. The position of these are shown in Fig. 2.2 and are replaced as detailed in section 5.3.5.

3.3.8 Eschmann can provide customers with manuals (see 3.3.9 below), for use by them in maintaining their own equipment. These manuals contain schematic diagrams, component part lists, descriptions and calibration instructions which will assist the customer's Eschmann trained personnel to service the equipment or replace parts (which should only be obtained from Eschmann).

3.3.9 The following manuals are applicable to the T30 Tables and their accessories (the part number is in brackets following the manual reference) they are available to order, see inside front cover for contact details:-

T-SM54 (113389) - Service manual
T-IPL41 (113390) - Illustrated parts list
T-IM94 (111012) - Application software manual
T-IM56 (698907) - General accessory leaflet
Note: Some accessories are provided with their own 'User/Service Handbooks'.

3.3.10 Appendix 1 provides a log that can be used to record those people trained in the safe use of this operating table. It is suggested that this is used to ensure that ALL personnel using this table, are aware of all the warnings and cautions contained within these 'Instructions for use'.

3.3.11 The T30 Tables and their accessories, as listed in these 'Instructions for use', do not contain 'Latex'.

4.0 SAFETY NOTES & CAUTIONS

4.1 Warnings

Ensure you are familiar with all the warnings and cautions provided within these 'Instructions for use' before using the table.

WARNINGS

T30 Tables have been designed to minimise the possibility of accidental electrosurgery burns. Contact with any metal surfaces (e.g. table sidebar, or other equipment etc.) can cause burns during electrosurgery and must be avoided.

T30 Tables are not rated as AP or APG and should not therefore be used in the presence of explosive gases.

T30 Tables have been designed for patients weighing up to 300kg (47 stone) with their centre of gravity (normally the umbilicus) positioned close to the column on the trunk sections. However patient positioning and additional loads from accessories can compromise table stability and strength. Refer to the graphs in section 6.4 for safe loading.

To comply with BS EN 60601-1:1990 some accessories have been designed for a maximum evenly distributed load, see the 'User Handbook' supplied with each accessory.

With the table in (or during transition into) the 'castor' or 'wheel' orientation, the centre of gravity of the patient (normally the umbilicus) should lie no more than 200mm away from the centre of the column. Whenever this is not practical the table should be adequately supported (e.g. by at least two able people).

The head and leg sections are designed to support and position the corresponding part of the patient's weight only. Damage leading to failure of the section may be caused if excessive weight is applied. Take care when handling these sections to avoid strain and ensure no body parts or objects are trapped when replacing or adjusting them.

Only use Eschmann accessories and sections that are compatible with this table. When parts are replaced during maintenance procedures, ensure that ONLY parts supplied by, or from, Eschmann Equipment are used. Alternatives, although similar, may affect the safety of the table. Eschmann cannot be held responsible for service, modification or adjustments to the equipment, when performed by other than Eschmann accredited personnel.

Illustrations and descriptions of patient positioning are for guidance only. It is the responsibility of the operating surgeon to make sure the patient is positioned correctly for each procedure. (See section 6.0).

During any table positioning procedure care should be taken to ensure the patient's safety. In particular during Trendelenburg and tilt movements the patient should be supported to ensure they remain secure on the tabletop. The patient's weight should be supported whenever the sections are adjusted or removed from the table during repositioning.

During ANY movement of the table or tabletop, ensure that no part of either patient or hospital staff, or object (e.g. drapes, infusion tubing, diathermy connections, ECG cords etc.) can become trapped between any moving and/or stationary equipment, or in a pinch point, causing injury or damage to equipment. Particular table movements that should be operated with care are reducing the height and Trendelenburg, which can cause trapping situations. Always ensure adequate slack is available in drapes and tubing for the movement required (e.g. maximum Trendelenburg).

When pushing the table with a patient (maximum weight 135kg for T30-a or 200kg for T30-m , see section 5.1) always ensure that the patient's limbs are secure on the tabletop to prevent crushing or trapping them against another object, always use cot sides (available as an accessory).

Always keep the patient under observation (e.g. check respiratory and circulatory system and for the possibility of pressure sores etc.) and correctly positioned whilst on the table.

Ensure that electrical equipment connected to the communication port (available during maintenance procedures only) complies with appropriate electrical safety standards. Note that standards compliance of this product may be affected if noncompliant equipment is attached to the communication port.

Do not use any table or accessory if there are visible signs of damage or wear and tear that could compromise safety.

CAUTIONS

Do not place either heavy accessories, or, long accessories that could impose high torques, to the sidebars, as this may lead to damage of the rails.

Do not exceed the duty cycle for any table motor drive as detailed in the technical data section 9.5.5.

Care should be taken moving the table over soft floors (e.g. carpet or 'cushion' flooring) as these will increase resistance to movement compared to normal hospital 'hard' flooring.

4.2 Do's and Don'ts

Attention to the following points will prolong the life and efficiency of the T30 Table and will help to avoid the risk of accidents, or damage. Other safety notes and warnings are also given within the text of this manual and these should be noted during use of the table.

DO:

- Keep these 'Instructions for use' close-to-hand.
- Read these 'Instructions for use' carefully before adjusting, moving or using the table.
- Use the table on an antistatic floor to prevent inadvertent static buildup.
- Use only the correct Eschmann mattresses and accessories that are compatible with the T30 Table as detailed in these instructions.
- Check that handset cables and standby controls are not damaged before use.
- Check that the table and its accessories are not worn or damaged, or are in any way not suitable for the intended purpose, before use.
- Check that all the sections (e.g. head and leg) and accessories are secure, and put the table base in the 'braked' position before use.
- Ensure that all cables are not stretched leading to disconnection or damage during movement or readjustment of the operating table or patient.
- Remove table accessories and their clamps (in particular rotary clamps) from sidebars, when they are not being used.
- Read and follow the instructions for cleaning, and for the care of the table and mattresses.
- Switch 'off' and disconnect from the mains electrical supply prior to cleaning and/or disinfecting the table and when it is not being recharged.
- Place the table batteries on charge at the end of every day or shift (see section 5.3.1)
- Ensure that the table and accessories are serviced at regular intervals (every six months is the recommended frequency) only by Eschmann trained personnel.

  Arrange service contracts through Eschmann Equipment [Tel. +44 (0) 1903 765040]
- Ensure that only the Eschmann mains cord supplied with the table is used to connect the table to the mains supply.
- Ensure that only Eschmann supplied parts are used during part replacement.

DO NOT:

- Do not lift the table by its tabletop.
- Do not move the table with a patient without cot sides in place on either side of the tabletop.
- Do not push the table over rough surfaces, use a trolley.
- Do not drop the table (or individual sections).
- Do not put heavy weights on the table sections, observe the maximum advised loading.
- Do not put sharp objects on, or against, mattresses, pads, or the radiographic tabletop.
- Do not place any objects on the base covers
- Do not drop heavy objects onto the radiographic tabletop or base covers.
- Do not spill oil, ether, or other fluids onto the mattresses or the pads.
- Do not pull the table by any of the tabletop sections, or accessories, always push it.
- Do not service this equipment unless you have been trained by Eschmann.
- Do not attempt to fit an infill section to another infill section or a T20 series table.

4.3 Daily 'Before use' test

It is recommended that the following 'Daily test' is carried out before using the table:

i Check batteries and charge if required.

ii Check table responds to the all handset commands.

iii Check table responds to all Standby control panel commands.

4.4 Accessories

The accessories available from Eschmann for the T30 Tables are listed in section 7.0 and Appendix 9. Use of other equipment with T30 Tables should only be considered after evaluating the safety of the patient and personnel. Inadvertent use of incorrect accessories could damage the table and lead to injury. Always ensure that the information in the 'Instruction' or 'User Handbook' supplied with the accessory are complied with and follow all the safety notes contained within them during use. For accessories that fit onto the sidebars ensure that they are compatible with the sidebars fitted to these tables. These tables can be supplied with standard UK, USA or Denyer style sidebars.

4.5 Manual handling

WARNING

Ensure care is taken when moving adjusting or lifting any part of the table or patient. Note the guidelines provided.

4.5.1 During adjustment or changing the configuration of the T30 Tables, there are occasions when the user should be aware of the safe practises to be employed during manual handling or adjustment of parts of the table. Appendix 4 provides manual handling advice and the weights of the heaviest sections and accessories commonly used. When lifting, carrying or fitting heavy components it is recommended that care is taken and two or more people are employed when required.

4.5.2 These 'Instructions for use' advise supporting the weight of the patient during adjustment of any section, this requires the intervention of several personnel, some supporting the patient's limbs and others adjusting the table sections.

4.5.3 When moving the table note that extra effort is required to start the table moving, take care not to strain limbs or back. The table should not be moved when heavily loaded. Note the warnings and cautions provided. It is good practice to use two or more people when moving a table.

4.5.4 When changing the orthopaedic short trunk section the special 'cart' is recommended and should always be used, this is fully detailed in section 5.2.5.

4.5.5 To ensure all the orthopaedic accessories are stored correctly and are easily accessible for use, the orthopaedic trolley should be used. This is fully detailed and illustrated in Appendix 8.

5.0 OPERATING THE TABLE

This section has been split into sections as follows:

5.1 Moving/Operating the table base.
5.2 Using the removable sections.
5.3 Using the table's powered/electrical functions.

Note: Orthopaedic procedures are covered in Appendix 5 onwards.

5.1 Moving/Operating the table base

WARNING

Always push the table (do not pull it) at a suitable height ensuring that it is stable at all times (maximum stability will be at minimum height).

Do not move the table around the theatre with a patient weighing more than 135kg (T30-a Table) or 200kg (T30-m Table). Take care not to collide with personnel or equipment.

Ensure that the patient is adequately supported and restrained (especially limbs) using cot sides as appropriate.

Ensure all connections via cord or tube, to the patient or table, have either been disconnected, or are only attached to equipment that will move with the table to avoid inadvertent disconnection.

T30-a Table only When changing from 'castor' or 'wheel' orientation, to 'braked', ensure no objects (e.g. cords, tubing etc.) can become trapped beneath the table base and floor.

If the table is difficult to move, check for objects under castors and that castors are maintained and kept clean and free from foreign objects.

The T30-a Table has two foot pedals, see section 5.1.1, the T30-m Table has a single foot pedal, see section 5.1.2.

5.1.1 T30-a Table base

The T30-a Table can be moved easily on built-in castors and wheels. Normally the table rests on brake pads at the long trunk end and wheels at the short trunk end, these provide a secure and static location on the operating theatre floor. Lower the table to a suitable height to achieve a stable position before moving the table.

To move the T30-a Table it can be placed onto its wheels and castors in two ways, providing both a 'castor' orientation and a 'wheel' orientation. The latter enables easy movement of the table in a straight line (down a corridor for example). Moving the table into either of these orientations does not require battery power, they are manual operations achieved by using one or both of the foot pedals on the table base.

The table should always be left in the 'braked' orientation with both pedals in their raised positions. Do not leave the table with the wheel pedal up and the castor pedal down. When familiar with this section the label on the table base serves as a quick reference guide to pedal operation.

5.1.1.1 'Wheel' orientation (from 'braked')

T30-a wheel pedal operation is easily achieved if the pedal is pressed down with the right foot whilst steadying yourself with hands on the tabletop. Stand on the side of the table on which the footpad is located. Use a steady 'press' rather than a 'rapid depression' of the pedal.

To place the table into the 'Wheel' orientation from the 'braked' orientation, press the wheel pedal (shown in Fig. 5.1) down steadily until you hear an audible 'click' (action indicated in Fig. 5.1). This 'click' indicates that the pedal has locked in the down position. Do not continue to press the pedal after the 'click' as this will release the internal catch and the pedal will not lock down. If this does happen the pedal must be allowed to rise fully (this resets the internal catch) before pressing it down again.

When placed into the 'Wheel' orientation the table base is supported on two wheels at the short trunk end and two castors at the long trunk end. To move the table in 'wheel' orientation always push it (do not pull it) from the long trunk end, moving the end nearest to you, left or right, to steer the table in the required direction. The table is in 'wheel' orientation when the wheel pedal is in the lowered position and castor pedal is in the raised position.

5.1.1.2 'Castor' orientation (from 'wheel')

T30-a Table's castor pedal operation is easily achieved if the pedal is pressed with the left foot whilst steadying yourself with hands on the tabletop. Stand on the side of the table on which the footpad is located. Use a steady 'press' rather than a 'rapid depression' of the pedal.

To place the table into the 'castor' orientation from the 'wheel' orientation, press the castor pedal (shown in Fig. 5.2) down steadily until you hear an audible 'click' (action indicated in Fig. 5.2). This 'click' indicates that the pedal has locked in the down position. Do not continue to press the pedal after the 'click' as this will release the internal catch and the pedal will not lock down. If this does happen the pedal must be allowed to rise fully (this resets the internal catch) before pressing it down again.

When placed into the 'castor' orientation the table base is supported on four castors, two at each end of the table. This orientation enables the table to be moved in any direction including sideways and swivelling within its own length. To move the table always push it in the required direction, never pull it. The table is in 'castor' orientation when both pedals are in their lowered positions.

5.1.1.3 'Castor' orientation (from 'braked')

To place the table into 'castor' orientation from the 'braked' orientation follow 5.1.1.1 to place the table into 'wheel' orientation and then follow 5.1.1.2 to complete the move into the 'castor' orientation.

Note: It is not critical that sections 5.1.1.1 and 5.1.1.2 are carried out in this sequence the reverse is equally suitable and correct.

The table is in 'castor' orientation when both pedals are in their lowered positions.

5.1.1.4 'Braked' orientation

To place the table into the 'braked' orientation move both the pedals into their raised position as follows.

Stand on the side of the table on which the footpad is located and use the foot advised in 5.1.1.1 or 5.1.1.2 as appropriate. Steady yourself with your hands on the tabletop. Press the pedal 'firmly down' (action indicated in Fig. 5.2), this disengages the internal locking catch. Release pressure on the pedal and allow it to rise. The table will gently lower into its 'braked' orientation, the motion is softened by an internal damper.

The table is in 'braked' orientation when both pedals are in their raised positions.

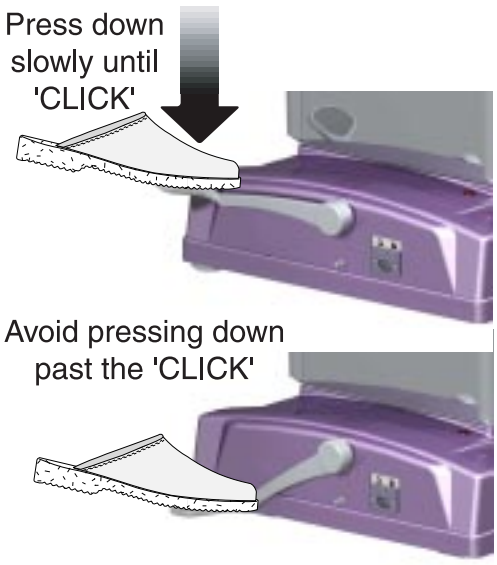


Fig. 5.1 Lowering a T30-a Table's pedal
(T30-a Table's wheel foot pedal illustrated)

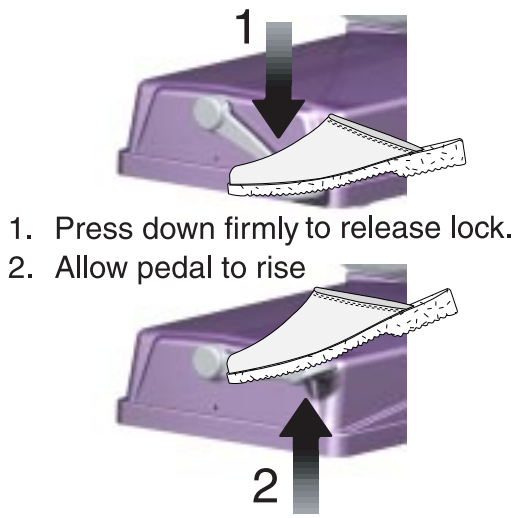


Fig. 5.2 Raising a T30-a Table's pedal
(T30-a Table's castor foot pedal illustrated)

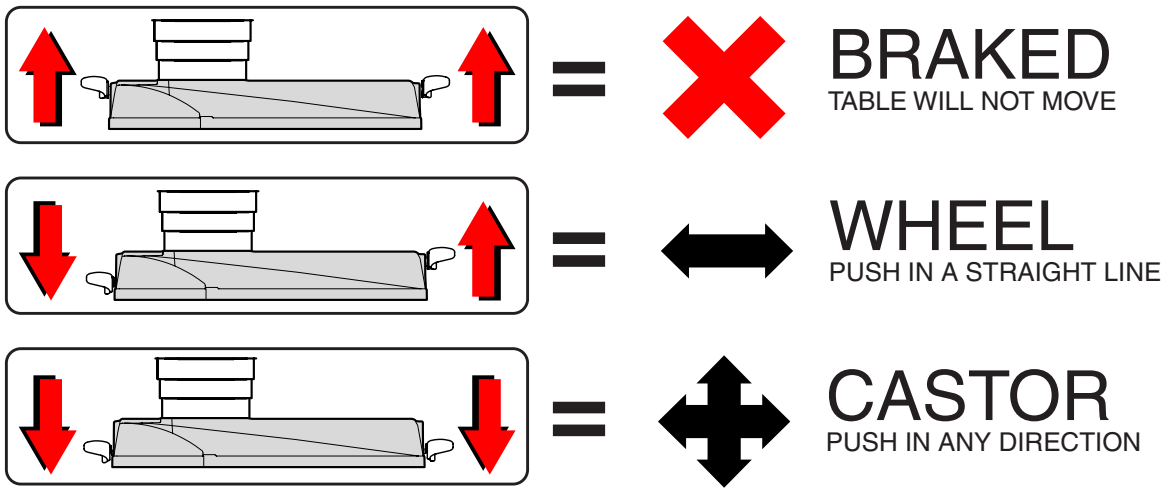


Fig. 5.3 T30-a Table's foot pedal, quick reference guide

5.1.2 T30-m Table base

The T30-m Table base has been provided with four large castors. The table rests on these castors at all times providing either a secure and static location on the operating theatre floor ('braked'), or two modes for easy movement ('castor' and 'wheel' modes).

Adjust the table to a suitable height to achieve a stable position before moving the table. The T30-m Table should always be left 'braked' with the foot pedal in its lowest position. When familiar with this section the label on the table base serves as a quick reference guide to pedal operation.

Place the table into 'castor' mode or 'wheel' mode to move it. The latter enables easy movement of the table in a straight line (down a corridor for example). The 'castor' mode provides full free wheeling mobility with 360° rotation and sideways movement.

Adjusting the table into either mode does not require battery power, they are manual operations achieved using the single foot pedal on the table base (see Fig. 5.4).

5.1.2.1 Foot pedal operation

Foot pedal operation is easily achieved when the pedal is operated with either foot whilst steadying yourself with your hands on the tabletop. Stand on either side of the table or the pedal end, which ever is the most suitable and easy.

Do not operate the pedal from the end of the table when a long table section (e.g. a leg section) has been fitted to the long trunk end, this may require unnecessary stretching by the operator to reach the pedal. Operate the pedal from the side of the table.

Use a steady motion rather than a 'rapid' movement of the foot pedal, this provides easy identification of the 'snap' into any of its three positions.

5.1.2.2 'Braked'

To place the table into the 'braked' orientation press the foot pedal (see Fig. 5.4) down to its lowest position. Operate the pedal as detailed in section 5.1.2.1. and press the foot pedal down until it snaps into its lowest position.

The pedal can be moved from its highest 'wheel' position through its central 'castor' position and into the 'braked' position in one easy movement.

The table is 'braked' when the foot pedal is in its lowest position.

5.1.2.3 'Castor' mode

To place the table into the 'castor' mode, move the foot pedal (see Fig. 5.4) into its central position. Operate the pedal as detailed in section 5.1.2.1 and move the foot pedal until it snaps into its central position.

The pedal is moved up from its lowest 'braked' position by lifting the pedal up with the top of the foot, or down from its raised 'wheel' position by pressing the pedal down with the ball of the foot, until the pedal snaps into the central 'castor' position.

The table is in 'castor' mode when the foot pedal is in its central position.

Note: When the table has been moved to the required location always leave the table 'braked'.

5.1.2.4 'Wheel' mode

WARNING

Do not push the table in the 'wheel' mode until you are sure the castors have moved into their correct orientation for the 'wheel' mode, as detailed in the second stage below and Fig. 5.4. If the table is pushed with the castors locked out of position this will cause undue wear leading to failure of the short trunk end castors.

Placing the table into the 'wheel' mode is a four stage procedure which will ensure that the short trunk end castors are locked in position correctly.

First, if the table is 'braked' move the foot pedal into its 'castor' position as detailed in section 5.1.2.3.

Second, push the table forwards from the long trunk end until both the short trunk end castors have swivelled into the position 'B' shown in Fig. 5.4. They do not need to be exactly in line, but they should not be as shown in 'A' Fig. 5.4 (i.e. leading their mounts).

Third, lift the pedal up with the top of the foot, as detailed in section 5.1.2.1, until the pedal snaps into its highest 'wheel' position.

Fourth and finally, continue to push the table in a straight line, the short trunk end castors will lock automatically in line with the table base. This enables the table to be moved easily down a corridor, steer from the long trunk end.

The table is in 'wheel' mode when the foot pedal is in its highest position and the short trunk end castors have locked in-line with the table base.

Note: When the table has been moved to the required location adjust the table into 'castor' mode to enable full mobility and positioning and then leave the table 'braked' (press the pedal fully down).

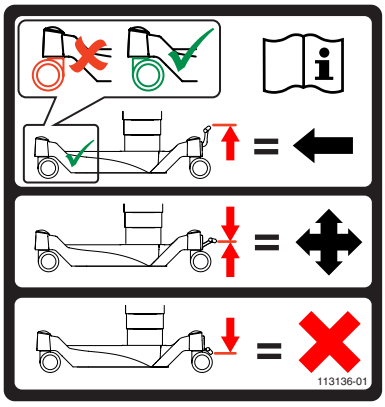
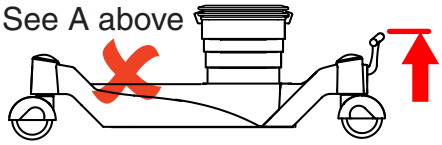


Illustration of the table's base 'quick reference guide' label. Note the booklet symbol that indicates reference to these instructions should be observed.

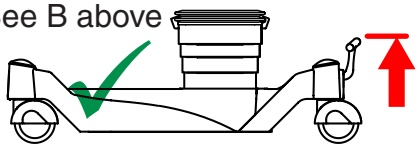
Detail of the required short trunk end castor postion, which should be obtained, before lifting the foot pedal into its top position, placing the table base into 'wheel' mode.

Note:
In position A the castor leads its mount, in position B the castor trails its mount.

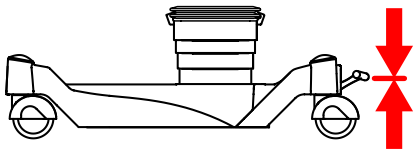
See A above



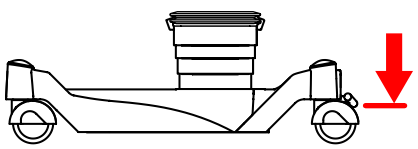
See B above



WHEEL
Select 'castor' mode' (pedal in the central position). Push the table until the short trunk end castors are correctly aligned, as indicated. Lift the pedal up fully into the 'wheel' position (to stop the short trunk end castors swivelling). This will enable the table to be 'wheeled' in a straight line. Push and steer the table from the pedal (head) end (see WARNING in section 5.1.2.4).



CASTOR
Lift pedal up, or press pedal down, into the central position to enable the table to be 'castored'. All four castors will swivel allowing full table mobility.



BRAKE
Press pedal down fully with the castors in any position to brake all four castors.

Fig. 5.4 Operating the T30-m Table base

5.1.3 Moving the table with a patient

The normal table position when moving it with a patient is level in both directions (i.e. tilt and Trendelenburg) and with the patient in the supine or lateral recovery position. Fig. 5.5 shows an alternative position that can be used, the notes in Fig. 5.5 also apply when moving the table with the patient in the supine or lateral recovery position.

Notes:
Always use cot sides.
Lower table to a suitable height.
Ensure patient limbs are secure.
Check patient weight and position complies with Fig. 6.3.
Always push table from the head end (do not pull).
T20-m table illustrated but position also applies to T30-a and T30-m tables with or without an infill section fitted to the long or short trunk.

Fig. 5.5 Alternative table position for moving table with a patient

5.2 Using the removable sections.

All orthopaedic traction accessories and setup procedures are detailed in Appendix 5 onwards, this section only details use of the head, leg, infill, short trunk, hip and pre-operative leg sections. Appendix 8 details use of the accessory trolley for storing all sections and orthopaedic accessories.

WARNING

Ensure that nothing becomes trapped (e.g. fingers, tubing, cords) when attaching tabletop sections. Do not operate the release bar when a head or leg section is removed from the table.

When removing a section be prepared to support the full weight of the section when the guide pins disengage. Always carry the section holding the sidebars. Never hold or pick the section up using the black gas support struts. Take care not to operate the release bar accidentally.

When changing the orthopaedic short trunk section the orthopaedic docking cart should be used.

For users of small stature, when handling heavy sections (e.g. the leg section and general surgical short trunk) two people should work together to avoid strain injuries.

Before handling a section, minimise the weight by removing any attached accessory, mattress or component. Use the 'cart' when changing the orthopaedic short trunk section.

Users of earlier Eschmann tables (e.g. MR and RX Series) should note that T30 guide pins are shorter and disengage earlier.

Always ensure that the sections have been correctly and securely fitted before use and only use the correct Eschmann sections.

Take care not to actuate the release bar of the head or legs sections when removed from the table, this may alter alignment of their pins. Should this happen inadvertently see section 5.2.1 to realign the pins. For storage and to aid manual handling (e.g. during table configuration) use of the orthopaedic accessory trolley is recommended (see Appendix 8).

The infill section can be attached to the general surgical short or long trunk sections. The head and leg sections can be attached to either the general surgical short or long trunk section or into the infill section. Never attempt to attach two infill sections together and never remove an infill section with a leg or head section still attached.

5.2.1 Realigning a section's pins

Realignment of a head or leg section's pins is only required if they have become misaligned whilst the section has been removed from the table (see Fig. 5.6 for illustration of aligned and misaligned pins).

WARNING

Take care when realigning a sections pins. Ensure that fingers are clear of the gas springs during actuation of the release bar.

To realign the pins of a head or leg section place the section on its side (see Fig. 5.6). Support it by its upper sidebar **only** keeping fingers etc. well clear of the gas springs (1, Fig. 5.6). Actuate the release bar (2, Fig. 5.6) until the gas springs have moved both pins to the ends of their travel, as shown (3, Fig. 5.6).

To attach the section to a table after realigning the pins insert the pins into the tabletop for 90% of their length, actuate the release bar and adjust the section until horizontal and then push the section fully home until the locking catches engage (also see section 5.2.2).

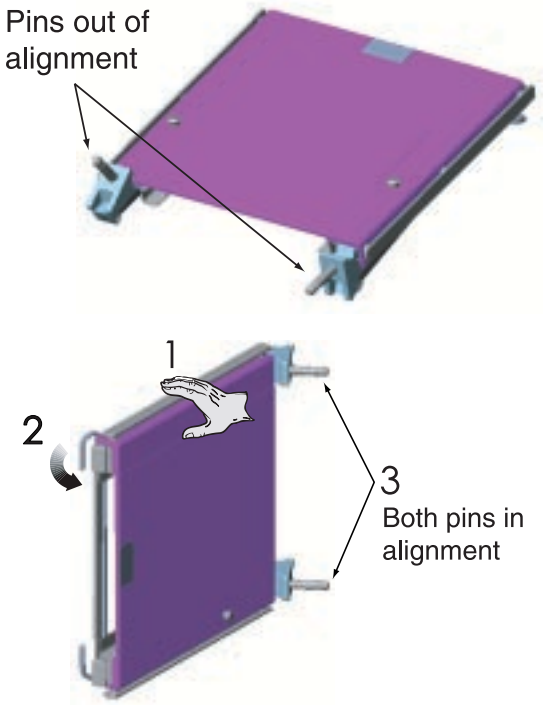


Fig. 5.6 Section pin alignment

5.2.2 Attaching a head, leg or infill section

When attaching a head or leg section first check to see if the pins are aligned with each other. It is possible that during storage the release bar may have been actuated and the pins are no longer aligned as shown in Fig. 5.6. If they are aligned attach the section as detailed overleaf, if they are not, align them and attach the section as detailed in section 5.2.1.

To attach the removable tabletop sections (i.e. head, leg or infill) hold the section firmly with two hands, aligning the pins of the section (item 1, Fig. 5.7) with the location holes (item 2, Fig. 5.7) in the fixed tabletop section as shown in Fig. 5.7. **Do not** attach an infill section to another infill section.

Gently insert the section pins into the tabletop and slide the section into the tabletop evenly until the locking catches engage with an audible click. The section will slide in easily if the weight of the section is gently supported with both hands. Take care not to trap anything (especially fingers) between the section and the tabletop.

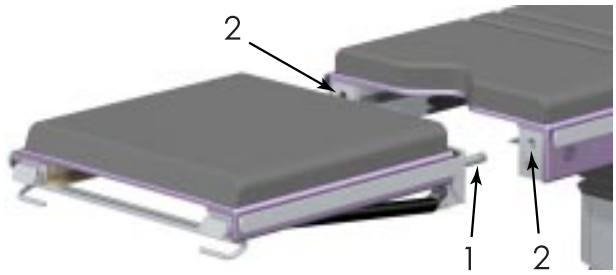


Fig. 5.7 Aligning section pre-attachment

Check that the section is fully inserted and the safety catches have engaged by gently pulling on the section. Release buttons (item 9, Fig. 2.1) should be out when the section has been correctly located and locked.

5.2.3 Removing a head, leg or infill section

When removing a head or leg section ensure that it is horizontal before removal as this will aid later replacement (pins will be aligned with the section). If the section is not horizontal adjust it to horizontal before removal (see section 5.2.4). Do not attempt to remove the infill section with a head or leg section attached (interlocks inhibit this).

Remove the section from the tabletop by supporting the section's weight and pressing in the right-hand section button (viewed from end of table) as indicated by 1 in Fig. 5.8. The button will stay in when pressed correctly.

Press in **and hold in** the left-hand section button (viewed from end of table) as indicated by 2 in Fig. 5.8 whilst pulling the section evenly away from the fixed section about 2 - 3cm (see 3, Fig. 5.8). When employing two people one should press the button whilst the other pulls the section out 2 - 3cm. Gently supporting the weight of the section (i.e. slightly lifting whilst pulling) will make this action easier. Then release the left-hand section button.

Now using both hands (one on each side of the section as shown in 4 of Fig. 5.8) continue to gently pull the section out evenly from the trunk section until the guide pins are free. Again gently lifting and supporting the weight of the section will make this action easier. When employing two people, one should hold the second button in whilst the other pulls the section out evenly, both can then support the weight when the pins are free.

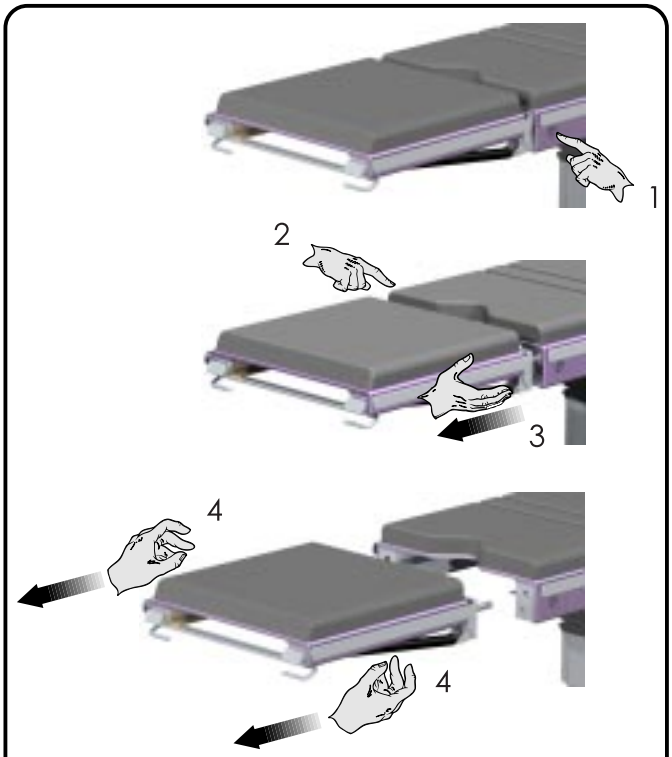


Fig. 5.8 Removing a table section

5.2.4 Head and leg section adjustment

The head and leg sections are operated in the same way. The section's weight is supported during adjustment and held locked in position by two gas springs (items 10 and 15, Fig. 2.1). Lowering the section's release handle during adjustment automatically locks the section in place.

To adjust either section (having noted the warnings at the beginning of section 5.2) grasp the end of the section on both sides with thumbs up and the finger tips resting on the release bar (items 14 or 16, Fig. 2.1) underneath the section. Whilst supporting the section in place (it may move when the release bar is raised), gently lift the release bar with the finger tips until the section is free to move up or down (see 1, Fig. 5.9).

When raising the section the gas springs will assist movement, when lowering gentle pressure may be required to overcome slight resistance of the gas springs. Adjust the section by rotating it up or down to the required position (see 2, Fig. 5.9). When the correct position has been obtained lower the release bar. The section is now locked in place automatically by the gas springs (see 3, Fig. 5.9).

5.2.5 Changing the short trunk section

WARNING

Always leave a short trunk section attached to the table to protect the powered stubs indicated in Fig. 5.11. Do not use the trunk section as a seat when positioned on the docking cart. Use two people when handling the sections manually.

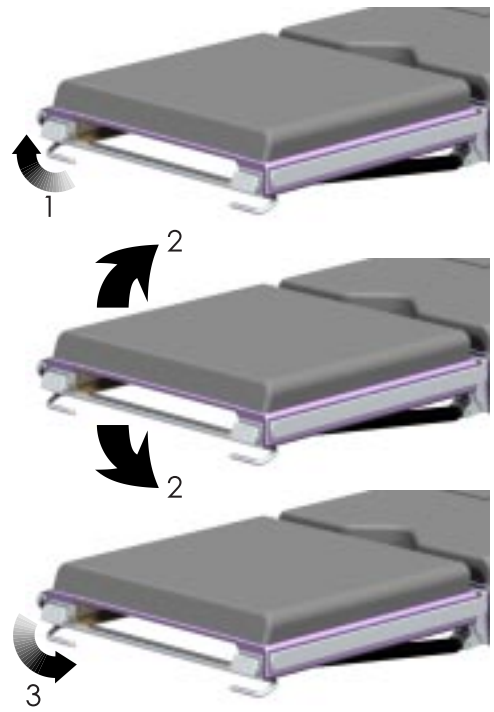


Fig. 5.9 Adjusting a head or leg section

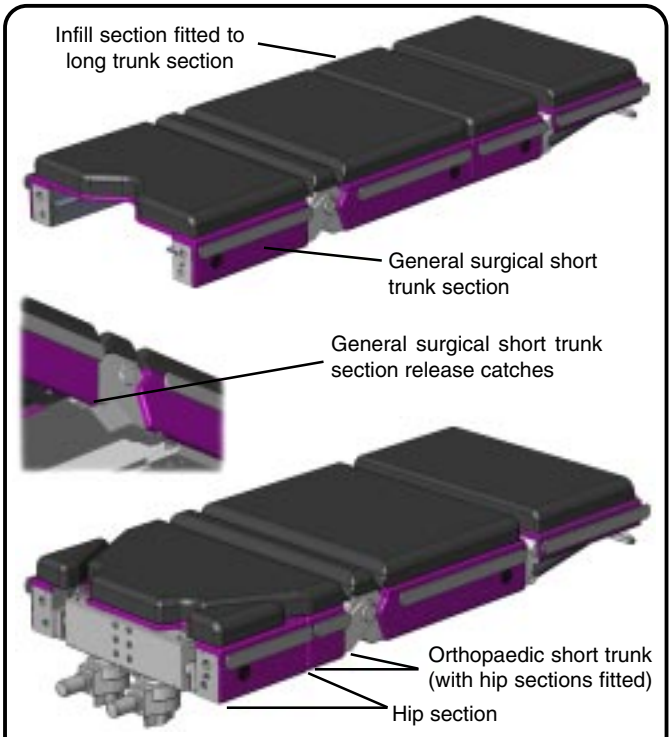


Fig. 5.10 Trunk, infill and hip sections

WARNING

Always check the short trunk section is correctly attached. This is indicated on the section's label and detailed in the following text.

The short trunk section can be changed to suit the procedure. Either a general surgical short trunk or an orthopaedic short trunk section can be fitted, see Fig. 5.10. **The orthopaedic short trunk is heavy and use of the special orthopaedic docking cart is recommended and should be used when changing it, see sections 5.2.5.1 - 5.2.5.3.** If the cart is not used two people will be required to change the orthopaedic short trunk see section 5.2.5.4. Take care not to trap anything between the section and the tabletop (especially fingers, tubing, cords and drapes).

5.2.5.1 Table preparation for changing short trunk

Before changing the short trunk section ensure **ALL** attached accessories have been removed from the long and short trunk sections, this includes anything attached to the sidebars, the long and short trunk mattress, the head, leg, pre-operative leg and any other orthopaedic section including the removable hip sections, traction beams and intermediate knuckles. Store applicable accessories on the accessory trolley (see Appendix 8). **Ensure the trolley and docking cart are clear of the table before proceeding**.

Level the tabletop (press and hold the auto-level button) then lower the tabletop to minimum height (press and hold the height down button). Both knuckles on the orthopaedic short trunk section should be positioned in line with the table and locked. The castors under the short trunk section

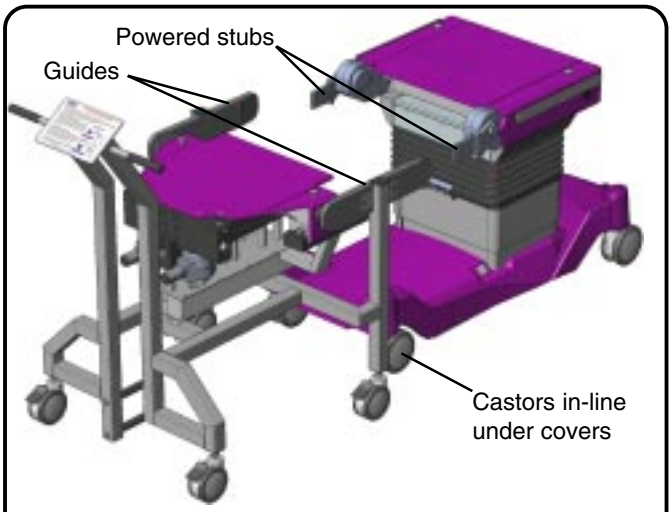


Fig. 5.11 Aligning the docking cart to attach the orthopaedic short trunk.

on the T30-m should be positioned in line with the table and under the covers as shown in Fig. 5.11. The table should be 'braked', both pedals **UP** on the T30-a or pedal fully **DOWN** on the T30-m.

5.2.5.2 General surgical to orthopaedic short trunk

Press and hold the two release catches underneath either side of general surgical short trunk section as indicated in Fig. 5.10 and withdraw the general surgical short trunk section from the table. Store the general surgical short trunk section on the accessory trolley, see Appendix 8.

Prepare the table to receive the orthopaedic short trunk as detailed in section 5.2.5.1. Align the docking cart with the orthopaedic short trunk in place on it, see Fig. 5.11 (also see section 5.2.6). Push the cart towards the table using the guides for alignment. Push the docking cart firmly into place as far as possible and check that the orthopaedic short trunk is fully engaged. Some resistance will be felt as the docking cart is pushed towards the table and the short trunk section may lower slightly as it adjusts to the position of the powered stubs. **The red indicators (see Fig. 5.12) should not be visible** (if they are push the cart and trunk section firmly towards the table).

Hold the docking cart against the table and raise the tabletop (press and hold the height up button) until the orthopaedic short trunk section is clear of the docking cart. Withdraw and store the cart. Check the orthopaedic short trunk section is securely attached, both catches are down and the red indicators not visible. Fit the correct trunk section mattress, accessories and sections as required.

5.2.5.3 Orthopaedic to general surgical short trunk

Prepare the table to change the short trunk as detailed in section 5.2.5.1. Align the docking cart with the table (using the guides for alignment) and push it firmly towards the table until fully engaged with the orthopaedic short trunk section. Some resistance will be felt as the docking cart engages with the table and the cart's docking platform may be seen to lower slightly as it aligns with the table. Withdraw the docking cart with the orthopaedic short trunk section attached, check the section is secure on the cart and store.

Place the general surgical short trunk section onto the powered stubs (see Fig. 5.11). Push the section fully home until the locking catches have engaged. Check the section is securely attached, both catches down. **The red indicators (see Fig. 5.12) should not be visible** (if they are push the trunk section firmly towards the table). Fit the correct trunk section mattress, accessories and sections as required.

5.2.5.4 Changing the orthopaedic trunk section manually

WARNING

The orthopaedic short trunk is heavy, two people will be required to handle it safely, using the docking cart is recommended.

Before removing the orthopaedic short trunk section manually ensure **ALL** attached accessories have been removed from it. This includes anything attached to the sidebars, the mattress, the head, leg, pre-operative leg and any other orthopaedic section including the removable hip sections, traction beams and intermediate knuckles. Store applicable accessories on the accessory trolley (see Appendix 8).

Level the tabletop (press and hold the auto-level button) and adjust it to a suitable working height. Both knuckles on the orthopaedic short trunk section should be positioned in line with the table and tightened. The table base should be 'braked', both pedals **UP** on the T30-a Table or pedal fully **DOWN** on the T30-m Table.

Press and hold the two release catches underneath either side of the applicable short trunk section as indicated in Fig. 5.10 and withdraw it from the table.

Place the required short trunk section onto the powered stubs (see Fig. 5.11) and push the section fully home until the locking catches engage, check the section is securely attached, both catches are down. **The red indicators (see Fig. 5.12) should not be visible** (if they are push the trunk section firmly towards the table). Fit the trunk section mattress and accessories as required.

5.2.6 Docking cart preparation

When the orthopaedic short trunk section is not attached to the table or in place on the docking cart, it can be located onto the table or docking cart as follows. Attach the orthopaedic short trunk section to the table using two

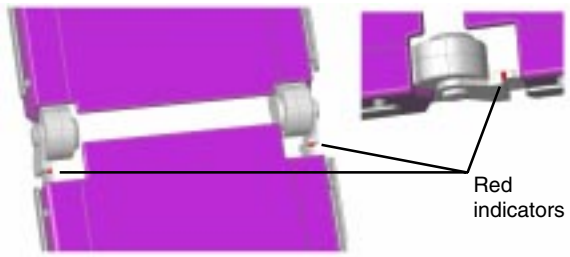


Fig. 5.12 Red indicators on stubs

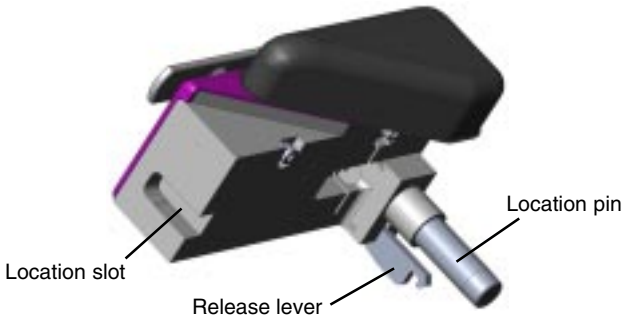


Fig. 5.13 Parts of the hip section

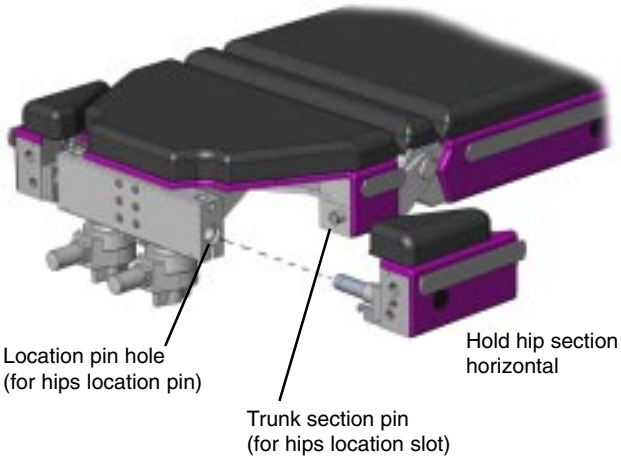


Fig. 5.14 Attaching a hip section

people (see in section 5.2.5.4). Then to automatically locate the orthopaedic short trunk section correctly on the docking cart remove it from the table as detailed in section 5.2.5.3.

5.2.7 Attaching/removing hip sections

Attaching. Check you have the correct hip section (i.e. left or right). Hold the hip section horizontal (see Fig. 5.14) and align the location pin of the hip section with the mating hole in the orthopaedic short trunk. Ensure the location slot of the hip section slides over the location pin on the trunk section (see, Fig. 5.13). Continue to push the hip section in until the release lever (see, Fig. 5.13) engages and locks the hip section in place. Take care not to trap anything between the section and the tabletop (especially fingers, tubing, cords and drapes). Check section is securely attached.

Removing. To remove the hip section first ensure the pre-operative leg section or any other removable section has been removed from the hip section. Then lift the release lever (see, Fig. 5.13) and slide the hip section out and away from the orthopaedic short trunk section.

5.2.8 Attaching/removing pre-operative legs

Attaching a pre-operative leg section

Hold the pre-operative leg section firmly with two hands level in both directions and align the single guide pin with the location hole in a hip section (see, Fig. 5.15). Take care not to trap anything between the section and the tabletop (especially fingers, tubing, cords and drapes).

Gently insert the pre-operative leg section's pin into the hip section and slide it in evenly until the locking catch engages with an audible click. The anti-rotation pin (see, Fig. 5.15) must engage in its location hole before the section can lock in place. If required slightly rotate the section about the guide pin to ensure correct orientation and location of the anti-rotation pin. The section will slide in easily if the weight of the section is gently supported with both hands. Check section is securely attached.

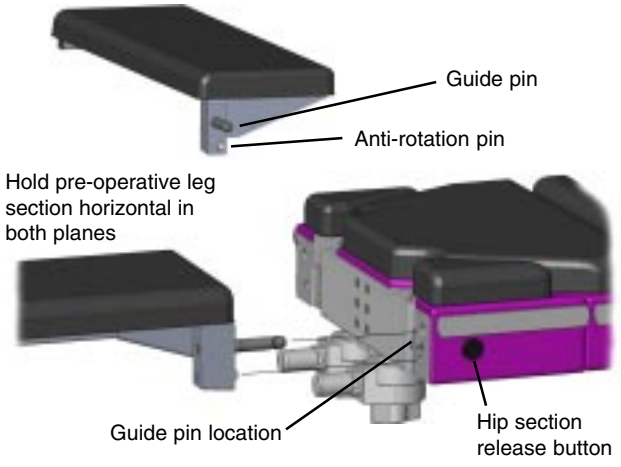


Fig. 5.15 Attaching a pre-operative leg section

Removing a pre-operative leg section

Press in the related hip section release button (see, Fig. 5.15) and pull the pre-operative leg section out of and away from the trunk section about 2-3cm. If required at this stage the pre-operative leg section can be rotated down about the guide pin and away from the patient. **Note: The right hand hip section button will stay in once pressed.**

Release the button and use both hands to pull the pre-operative leg section out of and away from the tabletop trunk section. Although the pre-operative leg section is not heavy be prepared to support the full weight of the section when the guide pin disengages. Gently supporting the weight of the section (i.e. slightly lifting whilst pulling) will make this action easier.

5.2.9 Changing sections during a procedure

The table sections (except the short trunk) can be changed during a surgical procedure but extreme care must be taken to adequately support the patient throughout such adjustments to the table configuration. Also note the warning at the beginning of section 5.2.

When replacing a section during a procedure take extreme care not to trap any part of the patient, surgical drapes, surgical equipment, cords or tubing. Also note the warnings in section 4.1.

It is suggested that the mattress is located onto the section before fitting the section onto the tabletop when repositioning it during a procedure (allow for the extra weight).

5.2.10 Attaching/Removing mattresses

Always ensure that mattresses are free from any cuts and abrasions, such damage can compromise patient safety by promoting cross contamination. Replace worn mattresses with new ones as soon as possible.

5.2.10.1 Sections with mushroom pins

These are sections such as the trunk sections, head and leg sections and divided legs.

WARNING

Only use Eschmann supplied mattresses and ensure they are free of cuts and tears, replacing as required. Do not use without a mattress fitted to the table.

Do not use any table section or accessory without the correct Eschmann mattress or pad in place (except an accessory such as the lightweight leg section, which can be used for short periods, without a mattress, during patient positioning). Mattresses are an important part of the antistatic pathway and help prevent pressure sores developing.

Mattresses are attached to these tabletop sections by two mushroom shaped pins per section. These pins ensure that the mattress stays in place on the tabletop in all table configurations. To ensure that the mattress is correctly located onto the pins proceed as follows:-

i Ensure the mattress is the correct one for the section you are fitting it to and orientate it relative to the tabletop so the mushroom pins are lined up with the mating recesses in the underside of the mattress.

ii Lower the mattress onto the tabletop and gently ease one location recess at a time onto and over the respective mushroom pin. The mattress should lie flat on the tabletop when this has been achieved without evidence that the pin is holding the mattress off the tabletop surface.

To remove mattresses reverse the above procedure gently easing the mattress off the pins, one pin at a time. Ensure minimal sideways force is applied to the mattress during this procedure to prolong mattress life.

5.2.10.2 Hip and pre-operative leg sections

The mattresses on these sections are easily changed, but a hospital engineer will be required. These mattresses have a rigid integral base and they are screwed onto the section.

The hip section has two M5 x 50mm screws (A, Fig. 5.16) and the pre-operative leg has six M5 x 12mm screws (B and C, Fig. 5.16). Access to screws B on the pre-operative leg section requires removal of the cover plugs. Ensure the M5 washers used under the screw heads B and C are replaced and all screws are tightened. If the screw cover plugs are not secure they should also be replaced.

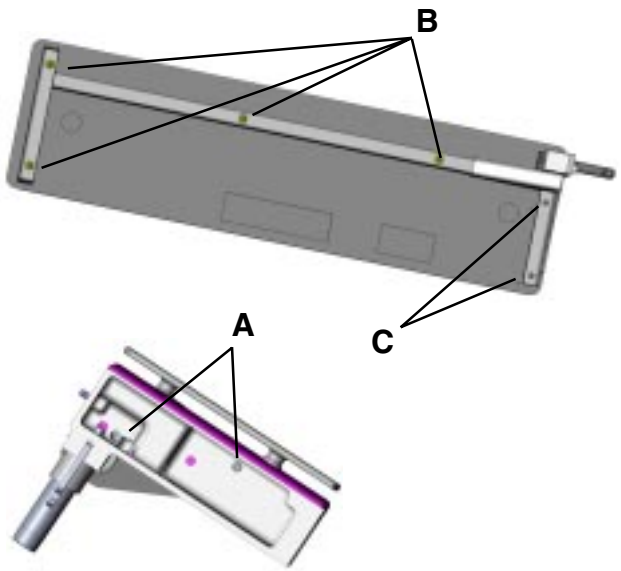


Fig. 5.16 Mattress screw location hip and pre-operative leg

5.3 Powered and electrical functions.

This section is split into four sections as follows:

5.3.1 Batteries and mains

5.3.2 Powered motions

5.3.3 Using the handset

5.3.4 Using the standby control panel

5.3.5 Changing fuses

Note: Whilst it is safe to use the table when connected to the mains it is good practice to use the table's batteries to power the table, rather than connect the table to the mains.

5.3.1 Batteries and mains

5.3.1.1 Battery charging introduction

WARNING

Ensure that the mains supply used is suitable (i.e. 100-240V, 50-60Hz) before attaching the table to the mains supply. Only use the mains cord supplied with the table and charge the batteries daily.

CAUTION

Continued use of the table batteries when 'critically low' can damage the batteries. Charge batteries regularly to maintain peak performance. Do not remove the table from charge until both charging LED's are 'green' to avoid false battery level indication on the handset.

Batteries within the table base are mains rechargeable and should power the table continuously for 3 days normal use (from a full charge). However to maintain peak battery performance the table batteries ***should be placed on charge at the end of each day or shift***. Daily charging should be encouraged as good practice, **do not wait for either 'low' battery indication before charging**.

Battery charge level is indicated by LEDs on the corded handset, see Fig. 5.17. The table should be placed on charge as detailed in section 5.3.1.2. Also see battery management sheet Appendix 3.

Note: Over the first few charge cycles (from new) battery capacity increases until they reach a stable maximum level.

Batteries should be checked for adequate charge before using the table for any surgical procedure. The corded handset has two battery level indicators, one for the main battery and one for the standby battery, see Fig. 5.17. These indicators will only operate when the corded handset is plugged into the table and the table is switched 'on'. Each indicator contains three coloured LEDs, these indicate the following information.

Main battery level indicator:

Green LED 'on' = Battery level satisfactory.

Amber LED 'on' = Low battery. An indication that the remaining battery charge is only adequate for one day's average use. Batteries **MUST** be recharged at the end of the current shift.

Red LED 'on' = Critically low battery. An indication that the remaining battery charge is critically low. Batteries **MUST** be recharged as soon as possible and before the next procedure. Charging during the current procedure is not recommended.

Standby battery level indicator:

Green LED 'on' = Battery level satisfactory.

Amber LED 'on' = Low battery. Battery level is low and only adequate for two or three Trendelenburg movements, they **MUST** be recharged at the end of the current shift.

Red LED 'on' = Critically low battery. Battery level is critically low and only adequate for one Trendelenburg movement. They **MUST** be recharged as soon as possible and before the next procedure. Charging during the current procedure is not recommended.

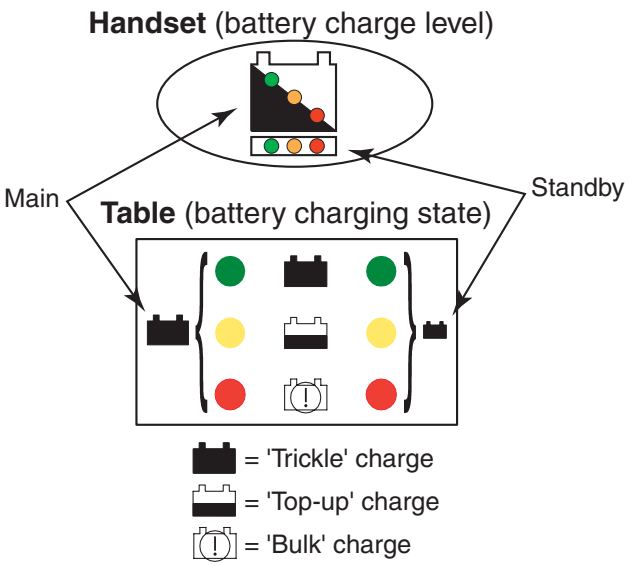


Fig. 5.17 Handset and charging indicators

Note T30-m has only one charging LED indicating the level for both batteries.

When the main battery 'critically low' warning is indicated the table cannot be operated by either handset or the footswitch. To continue to operate the table either connect it to a suitable mains supply and recharge the batteries (see 5.3.1.2) or use the standby batteries (see 5.3.1.4).
Note: The standby control panel can be used even when the 'critically low battery' indication is given but note the warning in section 5.3.4.

5.3.1.2 Battery charging

To recharge the table batteries (normal and standby) connect the mains cord supplied with the table (**do not use any other mains cord**) into the mains inlet (item 9, Fig. 2.2).

Connect the mains cord to a suitable mains supply (check mains voltage is 100-240V, 50-60Hz) and switch the supply 'on' if controlled by a switch.

The battery charging LEDs (items 7 and 8 of Fig. 2.2 for the T30-a Table, or item 14 for the T30-m Table) will illuminate 'red' to indicate 'bulk' recharge, 'amber' to indicate that the batteries are in a 2 hour 'top-up' charge and will illuminate 'green' to indicate a fully charged battery on 'trickle' charge (Note. The T30-m Table only has one LED indicating both main and standby charging state).

The batteries should be fully charged within six hours (if the table is not in use) but it is safe to leave the mains supply 'on' when the batteries are fully recharged and both LEDs are 'green' (or in the case of the T30-m Table the single LED is 'green'). See CAUTION in section 5.3.1.1.

Note: Always ensure the table is switched 'off' to minimise the battery charging time.

It is recommended that the mains cord is stored in the storage tray of the orthopaedic accessory trolley to avoid loss and inadvertent use of an incorrect mains cord.

5.3.1.3 Battery changing

Batteries in the table base should only be changed by service personnel. They should last for many years if recharged regularly and should not require user intervention (also see section 8.6.3 for the caution concerning disposal).

5.3.1.4 Standby batteries

WARNING

The standby batteries are for emergency use only and will only provide power for a few movements.

The table is provided with standby batteries to cover the unlikely event of a main battery failure or fault. To use the standby batteries, the standby battery switch (see item 1, Fig. 2.2) must be pressed and held depressed whilst the required motions are conducted using the normal hand and foot controls.

The standby batteries are only used when the standby battery switch is depressed and they are automatically recharged during the normal battery charging process.

5.3.2 Powered motions

WARNING

Always ensure that the patient is secure or adequately supported during all tabletop adjustments and that such adjustments do not compromise table stability.

If a patient is on the table and the handset is clipped onto the tabletop, take care that the handset buttons are not inadvertently activated (e.g. by a patient Transporter or person) causing unwanted table movements.

Similarly take care at all times to ensure that the handset is not inadvertently activated.

During all tabletop adjustments be aware of pinch points between the moving and static parts (e.g. the break hinge and head and leg hinges).

Ensure that all theatre drapes, electrical cords and any medical tubing etc. are clear from entrapment in pinch points and that adequate excess drape, cord, or tube, are available to cater for the adjustment required.

Ensure that any motion and adjustment selected will not cause any part of the table to hit or collide with any person or object. Examples being:-

i) Leg section hitting floor when table is low and reverse Trendelenburg selected.

ii) A fully lowered leg section hitting table base when tabletop is lowered.

iii) Head section hitting anaesthetist's seat when Trendelenburg selected.

CAUTION

Do not exceed the duty cycle for any motor drive as detailed in section 9.5.5.

5.3.2.1 General

The major tabletop adjustments and motions are powered. These powered motions are controlled by a corded handset supplied with the table (see 5.3.3) and the standby control panel (item 12, Fig. 2.2 see section 5.3.4). An optional footswitch (see accessory list section 7.0) can also be used to control the tabletop, use of this footswitch is explained in the leaflet provided with it.

Powered tabletop motions are, Trendelenburg, height, tilt, brake, flexion and return to level. Each motion in either direction is controlled by pressing and holding the appropriate handset, footswitch or standby control panel button(s). The table must be switched 'on' for powered motions to operate. Section 5.3.3.2 details handset button functions, section 5.3.4 provides standby control panel information.

All signals from controllers will be treated in a strict priority order to avoid multiple activation errors. Inputs will be responded to in the sequence below:

1 Standby control panel
2 Corded handset
3 Footswitch control.

Button presses from a controller lower on this list will be ignored if any button is pressed on a controller higher on the list and the input from the higher controller will be actioned.

The table cannot be powered by footswitch, or handset, when the main battery 'critically low' indication is displayed (see Fig. 5.17, main battery LED is 'red') unless the standby battery switch (item 1, Fig. 2.2) is held depressed. However the tabletop can be controlled by the standby control panel (item 12, Fig. 2.2) situated on the side of the column. This standby control panel has limited functionality in comparison to the handset and should ONLY be used in an emergency (e.g. handset or footswitch failure, control system failure, or 'critically low' battery).

Use of this standby control panel in any situation other than an emergency SHOULD be avoided as certain safety devices are overridden. The controls and buttons of the standby control panel are detailed in section 5.3.4. In the unlikely event of insufficient battery power when using the standby control panel, press and hold the standby battery switch (item 1, Fig. 2.2) whilst conducting powered motions.

In the unlikely event of failure of the main table batteries, 'press and hold' the standby battery switch (item 1, Fig. 2.2) in the 'on' position and use the corded handset or the standby control panel to control the table. This enables the standby batteries to power the table, however the main battery fault should be rectified as soon as possible.

5.3.2.2 Tabletop motions

WARNING

Ensure you have read and understood the safety warnings listed in section 4.1 and 5.3.2 before using any of the powered motions.

All powered tabletop movements are programmed to provide a gentle transition from stationary into the required motion and back again to stationary (i.e. initially the motion starts slowly and then speeds up to maximum speed and then slows again before coming to a stop). This also enables accurate positioning at slow speed by using repeated short button presses. Alternatively long duration button presses allow large changes in tabletop position at maximum speed.

To operate the tabletop powered motions the table must be switched 'on' (⊙) at the table on/off switch (item 5, Fig. 2.2). The table will emit a single 'beep' and the green LED (item 4, Fig. 2.2) will illuminate to show the table is 'on'. The LED will be bright during use but only dim if the operating system has gone into 'sleep' mode (saving battery power). The table will instantly respond to any control input even when in 'sleep' mode. Also see section 8.1.

If two buttons are pressed on a handset or footswitch at the same time neither will have any effect. The function of the second button pressed is ignored and automatically cancels the function of the first button pressed and any table motion stops. Releasing either of the buttons will enable the function of the remaining button (if still pressed) to be actioned. This is to eliminate multiple button activation errors.

Most powered tabletop motions will pause briefly when they pass through the level position (Note: not applicable to height). This is to enable each motion to be returned to a level position individually.

Be aware that a lowered leg section could hit the table base when the top is lowered, or the head section could collide with an anaesthetist's chair during a Trendelenburg movement.

Always ensure that there is adequate space around the table for the movement selected and that the movement required will not cause injury to patient or medical personnel. Look for possible trap and or pinch points between parts of the table and stationary objects.

5.3.3 Using the handset

5.3.3.1 General

WARNING

Do not plug two handsets into the table at the same time. When two handsets are connected, neither handset will operate the table.

The corded handset will operate any T30 Table. The corded handset simply plugs into either of the table handset sockets (item 3 of Fig. 2.2 and item 2, Fig. 5.18). Never plug handsets into both sockets at the same time. See section 5.3.3.2 for details of button function and section 5.3.1.1 for an explanation of the battery state LEDs.

When using the corded handset always ensure that the cord is well clear of any moving parts, pinch points and possible entrapment from table movements. Also ensure that the cord will cater for any table movement and that such table movements do not stretch the cord excessively.

When not in use it is suggested the handset is clipped onto the accessory sidebar (item 12, Fig. 2.1). Note that when clipped onto the table in this way it can be operated with one finger, without the need to hold it in the other hand. The handset must be compatible with the sidebar fitted to the table, see sections 1.1.2. The UK handset will also clip onto head/leg end blocks (item 13, Fig. 2.1).

To remove the handset plug from its socket the release button (item 1, Fig. 5.18) must be pressed and held in during removal. When removing the corded handset plug from its socket always grip and pull the plug, do not pull the cord only as this may damage the cord or internal connections.

Handset buttons provide a tactile feedback to enable the user to detect when a button has been pressed or released, this is in the form of a 'pop' or 'click'. Also, all buttons are 'de-bounced' to ensure that only deliberate button presses are responded to (i.e. an accidental quick activation is ignored).

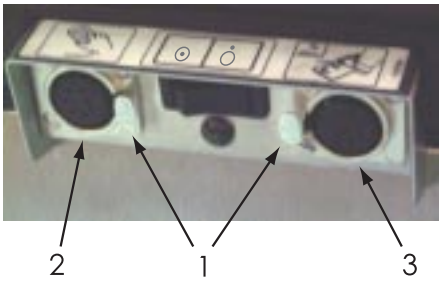


Fig. 5.18 Controller sockets and release buttons

5.3.3.2 Handset button functions

Handset buttons have their function indicated by graphics printed on the handset, see Fig. 5.19.

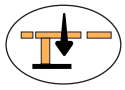
To activate the required tabletop motion **press and hold** the appropriate button until the required amount of change in tabletop position has been achieved, then release the button. The actual motion for each button is fully detailed below, refer to Fig. 5.19 for button reference.

Note: Buttons **B1** and **B2** provide the described movement for a tabletop in the normal orientation (head section in long trunk) with the patient's head on the head section. If the patient orientation is reversed button functions **B1** and **B2** are also reversed.

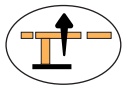
B1 Trendelenburg (orange button). Press to rotate the tabletop in the Trendelenburg (head down) direction.

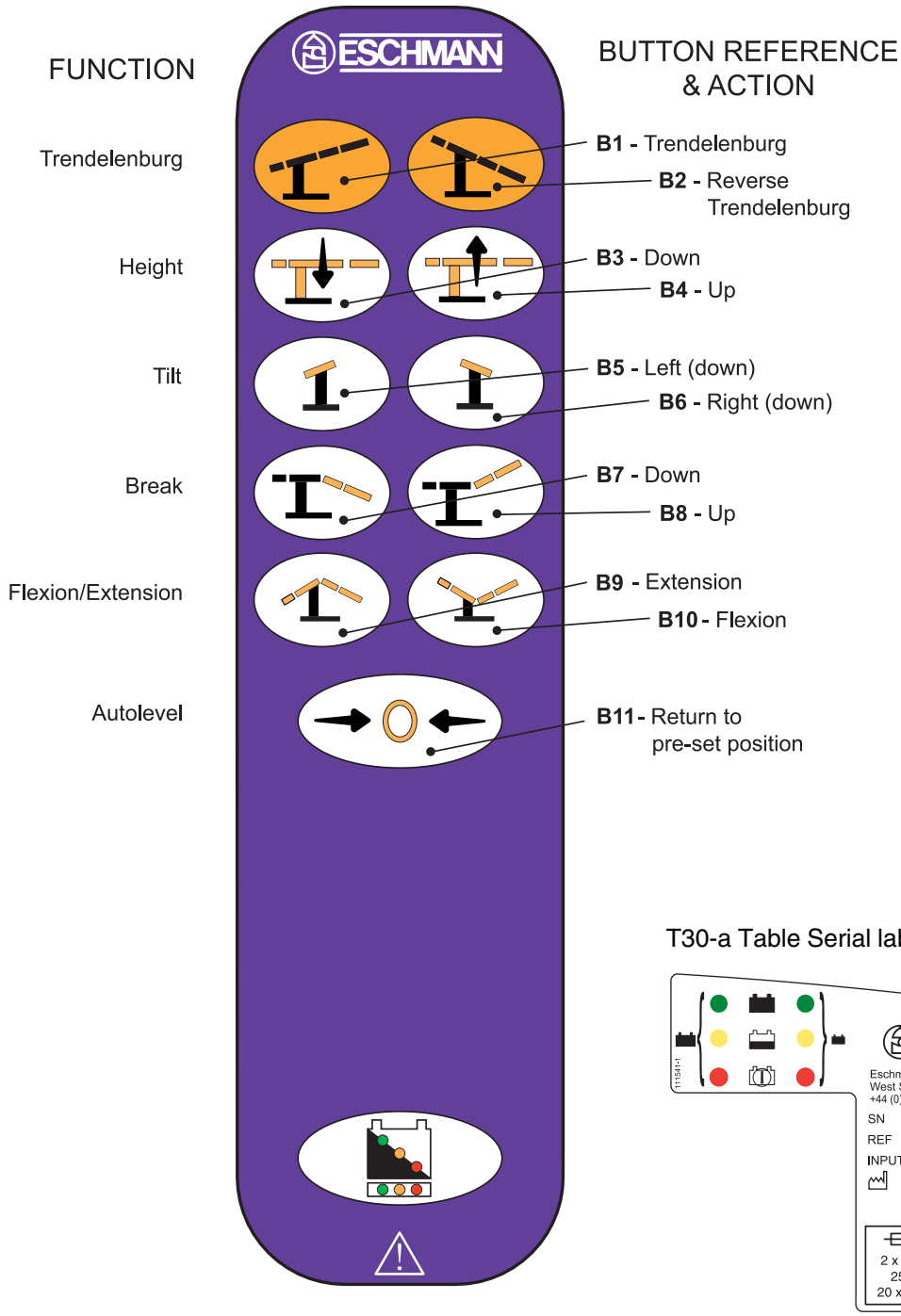
B2 Reverse Trendelenburg (orange button). Press to rotate the tabletop in the Reverse Trendelenburg (head up) direction.

B3 Height down. Press to lower the whole tabletop.

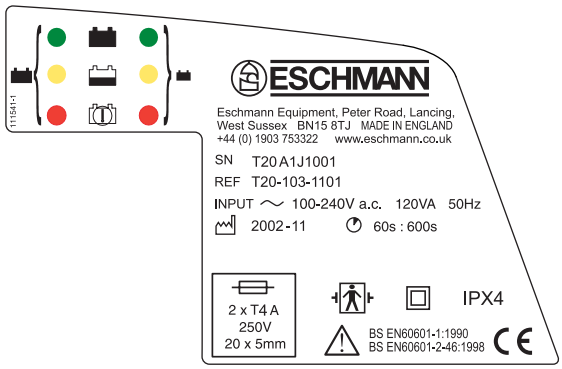


B4 Height up. Press to raise the whole tabletop.





T30-a Table Serial label (end of table base)



Handset Serial label (on back)

T30-m Table Serial label (on trunk section)

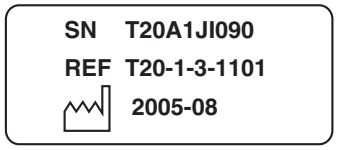


Fig. 5.19 Handset button functions and serial labels
(labels are examples only and text on actual table will be different to that shown above)

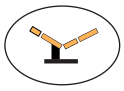
B5 Tilt left - Press to tilt the whole tabletop down on the left-hand side when viewed from the long trunk end.

B6 Tilt right - Press to tilt the whole tabletop down on the right-hand side when viewed from long trunk end.

B7 Break down - Press to move the tabletop in the break down (Extension) direction.

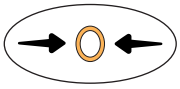
B8 Break up - Press to move the tabletop in the break up (Flexion) direction.

B9 Extension - Press to move table into Extension.



B10 Flexion - Press to move table into Flexion.

B11 Return to Level - Press to return the tabletop to a 'preset' level position. This may invoke all powered movements to achieve the 'preset' level position. The sequence of movements is tilt then Trendelenburg and Break together. (Note: Height is not affected).



Tilt, Trendelenburg and Break motions will pause momentarily when passing through a 'level' position.
Note that 'Break' is level when the trunk sections are in-line with each other, they will not be horizontal unless Trendelenburg is horizontal.

5.3.4 Using the standby control panel

WARNING

The standby control panel MUST be used with extreme care for Trendelenburg movements. All programmed safety features are overridden in this mode (e.g. should the tabletop hit an object, motor protection is inhibited and damage to them could occur). Also do not exceed 30° of Trendelenburg (or reverse) from the standby panel.

The standby control panel is located on the side of the column (item 12, Fig. 2.2). The panel has five function buttons (OB1 to OB5, see Fig. 5.20) and two direction buttons (OB6 and OB7, see Fig. 5.20). The motion of the function button is described by its graphical symbol (symbols are shown and detailed in section 2.2.4).

When controlling the tabletop from this standby control panel certain inbuilt safety features are overridden. Also there is no 'soft start' to the powered Trendelenburg movements and the tabletop will not pause as it passes through the level (Trendelenburg) position. **Only four** functions can be controlled from this panel Trendelenburg, Height, Tilt and Break, traverse is not applicable to T30 Tables.

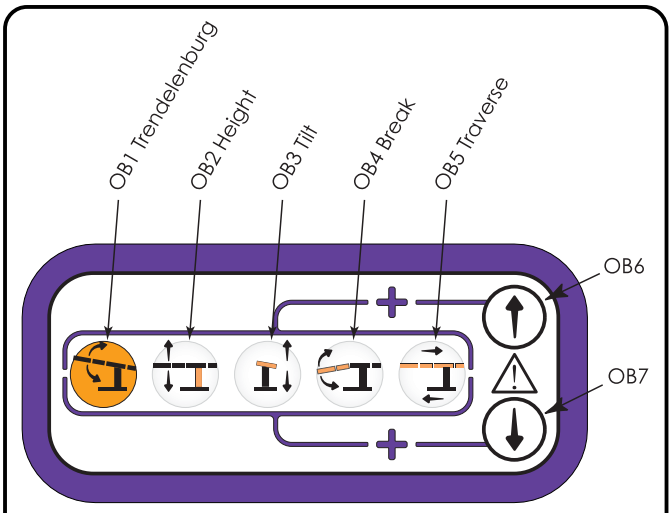


Fig. 5.20 Standby control panel

To operate the tabletop from this panel select a required function by 'pressing and holding' a function button (i.e. OB1 to OB4, Fig. 5.20) and then select a direction for this function by 'pressing and holding' a direction button (i.e. OB6 or OB7, Fig. 5.20).

Pressing the upper or lower direction button will select the direction indicated by the corresponding arrow on the function button. The table will move whilst both the function button and the direction button are pressed, releasing either will stop the motion. Motions for each button are fully detailed in the following sections.

OB1 Trendelenburg - Press and hold this button, then press required direction button to rotate the tabletop in the Trendelenburg (button OB6, Fig. 5.20) or reverse Trendelenburg direction (button OB7, Fig. 5.20)

OB2 Height - Press and hold this button, then press required direction button to change the height of the tabletop (button OB6, Fig. 5.20 is for Height up; button OB7, Fig. 5.20 is for Height down).

OB3 Tilt - Press and hold this button, then press the required direction button to tilt the tabletop (button OB6, Fig. 5.20 is for Tilt down on the left; button OB7, Fig. 5.20 is for Tilt down on the right, when viewed from the long trunk end of the table).

OB4 Break - Press and hold this button, then press required direction button to move the tabletop in the Break up or Flexion direction (button OB6, Fig. 5.20) or Break down or Extension direction (button OB7, Fig. 5.20).

OB5 Traverse - Non functional Button. This button selects a Traverse function on other tables in the 'T' series.

5.3.5 Fuse replacement

The fuses are located as shown in Fig. 2.2 items 2 and 13 for the T30-a Table and item 16 for the T30-m Table. Fuses adjacent to the mains inlet socket are only applicable to the mains supply for the battery charger. Fuses in the side of the table base adjacent to standby battery switch (T30-a Table ONLY) are applicable to the main batteries and standby batteries.

These fuses are replaced as follows:-

i Remove the mains cord from the table before replacing any of the fuses and switch the table 'off' with switch item 5, Fig. 2.2.

ii Turn the fuse cover cap anticlockwise to remove the cap with the fuse inside.

iii Ensure you have the correct fuse (consult the markings adjacent to the fuse or the Technical Data, section 9.0).

iv Place the new fuse into the cap and replace the cap by screwing it in clockwise.

6.0 PATIENT POSITIONING

Note: Orthopaedic positioning, accessories and procedures are all covered in Appendix 5 - 10.

6.1 General

WARNING

Do not use any table section or accessory without the correct Eschmann mattress or pad in place (also see section 5.2.10). Mattresses are an important part of the antistatic pathway and help prevent pressure sores developing.

Ensure the patient's weight is evenly distributed and that the mattress or pad is correctly positioned on each section of the table. Check at frequent intervals during long procedures to ensure that pressure sores are not being promoted. See section 5.2.10 for details on attaching and removing mattresses and Appendix 5 - 10 for orthopaedic positioning, accessories and procedures

Note the graphics in section 6.4 which provide maximum loading details for various table positions. The normal maximum loading, for the patient's centre of gravity (C of G) in various positions is shown in Figs. 6.3 and 6.4. For guidance on the treatment of the obese patient, see section 6.2.

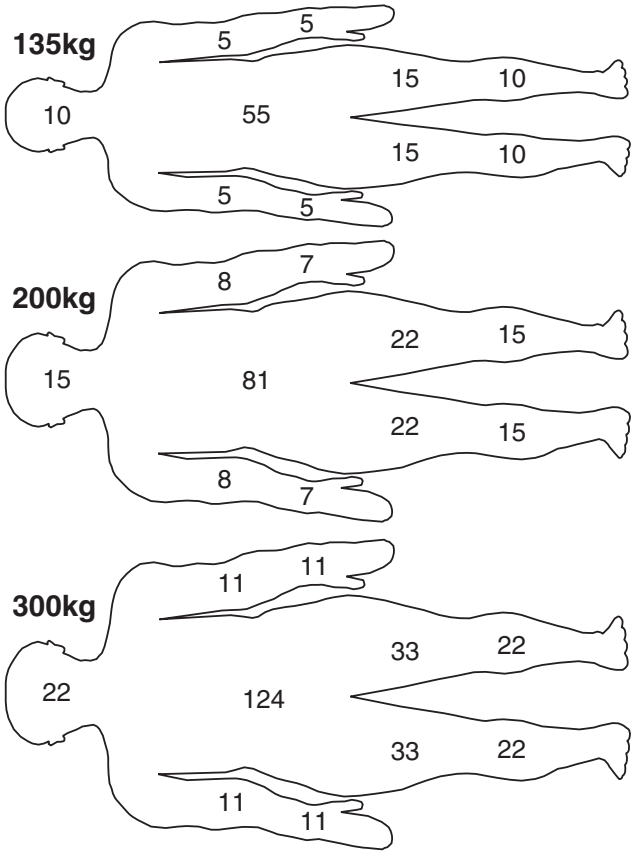


Fig. 6.1 Approximate patient weight distributions

The Figures in section 6.4 provide details of various patient positions that can be arranged with the T30 Table. Note that these illustrations are examples only and care should be taken to ensure patient safety and table stability.

Section 6.5 shows pictures covering the various tabletop configurations.

6.2 Treatment of the obese patient

Always ensure that the table is correctly loaded to maintain stability within the guidelines shown in the graphs of section 6.4 noting the maximum patient weight for the top in use (i.e. 300kg). Note that the centre of gravity for the maximum patient weight of must not be outside of the top plateaux section of the graphs.

Width extenders can be placed on either side of the table to help support the patient but note the maximum load for this accessory and that width extenders should not be attached to each other (also see Warnings and Cautions in the width extenders 'User Handbook').

The table should not be moved across the floor with a patient weight over 135kg (T30-a Table) or 200kg (T30-m Table). Although it is possible to place the T30-a Table into 'castor' or 'wheel' with a patient over 135kg and up to 300kg this is not advised.

6.3 Radiographic procedures

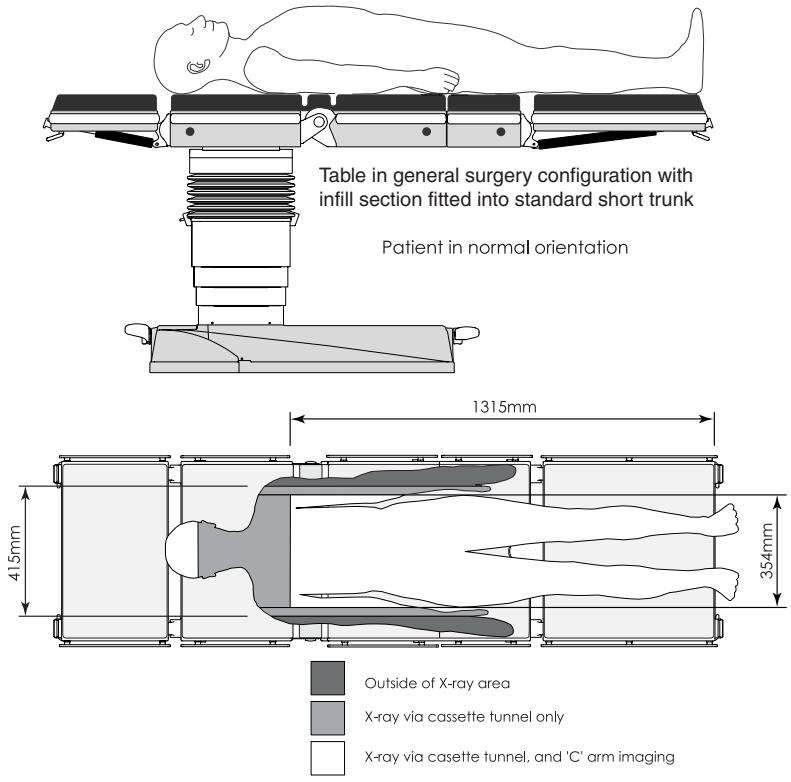
All 'C-arm' image intensifiers are suitable for use with this table. Fig. 6.2 shows typical patient positions for imaging the upper and lower torso with the patient in the Supine position on the general surgical top. The graphics would equally apply to patients in the Prone position. See Appendix 10 for radiographic procedures during orthopaedic procedures.

6.4 Table positions and safe loading

In Figures 6.5 to 6.10, common table and patient positions and safe loading graphs are provided, to give guidance on patient positioning and table loading. Because it would not be possible to cover every situation these should be considered as examples only. Refer to Figs. 6.5 to 6.10 and then use Figs. 6.3 and 6.4 to establish the maximum patient weight allowed for that configuration. The weight of additional accessories fitted to the table should be included in any estimation of correctly applied loads.

Figs. 6.3 and 6.4 show graphs of the position of the maximum patient weights (centre of gravity) that can be positioned on the table in four table configurations. Because all variations can not be covered, a degree of interpolation is required by the user, to ensure that table stability is maintained. Fig. 6.1 provides an approximate patient weight distribution for guidance.

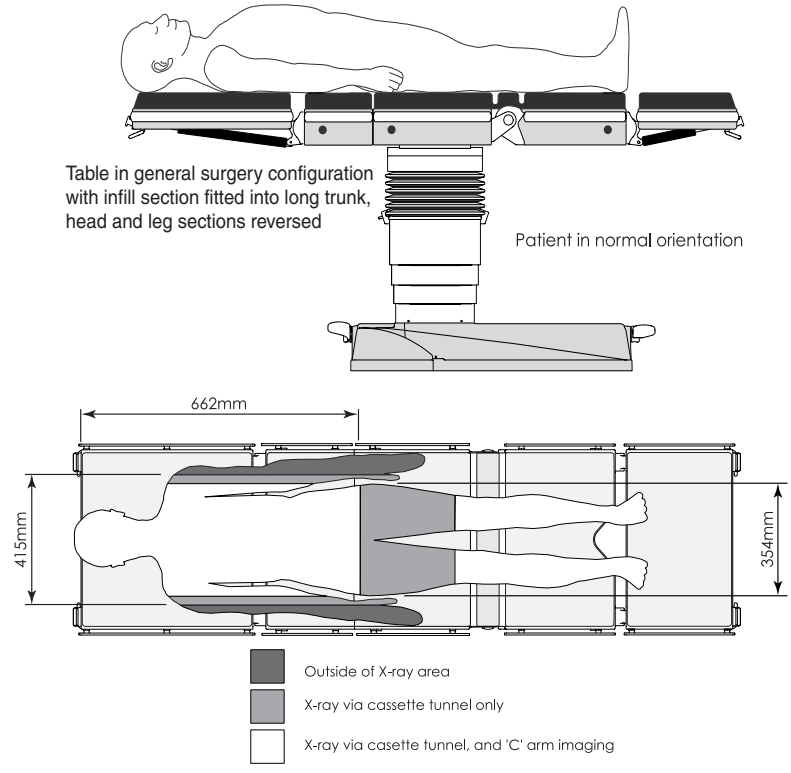
Patient positioning for maximum 'C' arm imaging of the required area (General surgical top).
Additionally there is an X-ray cassette tunnel, accessible from either end.



Lower torso imaging

Patient in normal orientation with table head and leg sections in the normal position with the infill section fitted into the general surgical short trunk. Patient positioned down the table to maximize the amount of lower torso in the imaging area.

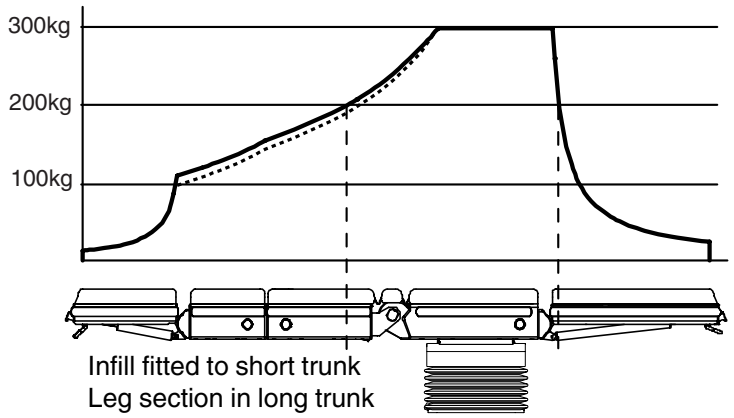
NOTE: All illustrations are examples only. Care should be taken in patient positioning to ensure stability, see section 6.3. For the obese patient see section 6.1.

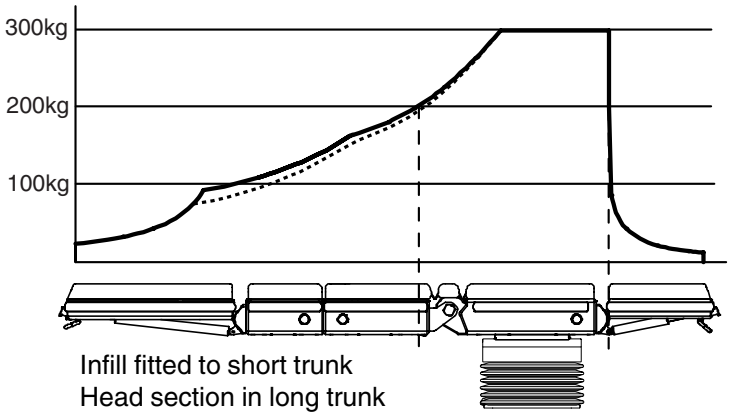


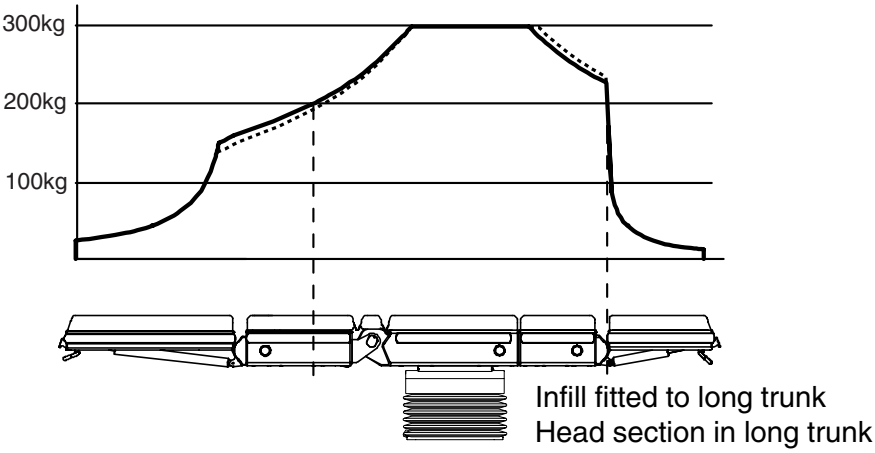
Upper torso imaging

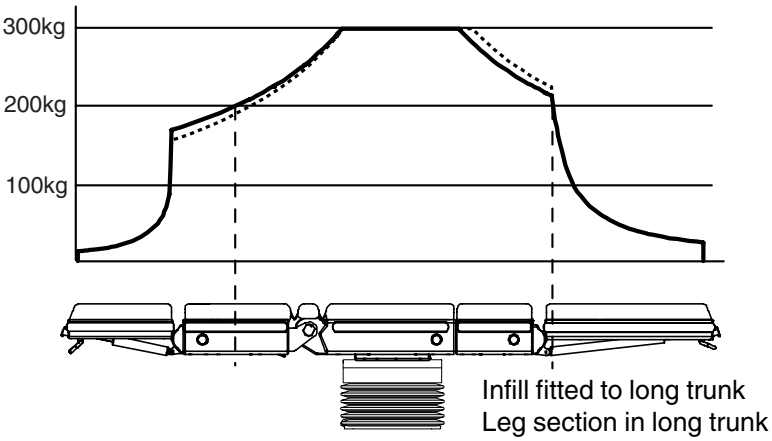
Patient in normal orientation with table head and leg sections reversed from their normal position (i.e. leg section in the long trunk) and with the infill section fitted into the long trunk. Patient positioned up the table to maximize the amount of upper torso in the imaging area.

Fig. 6.2 Patient positioning for radiographic procedures



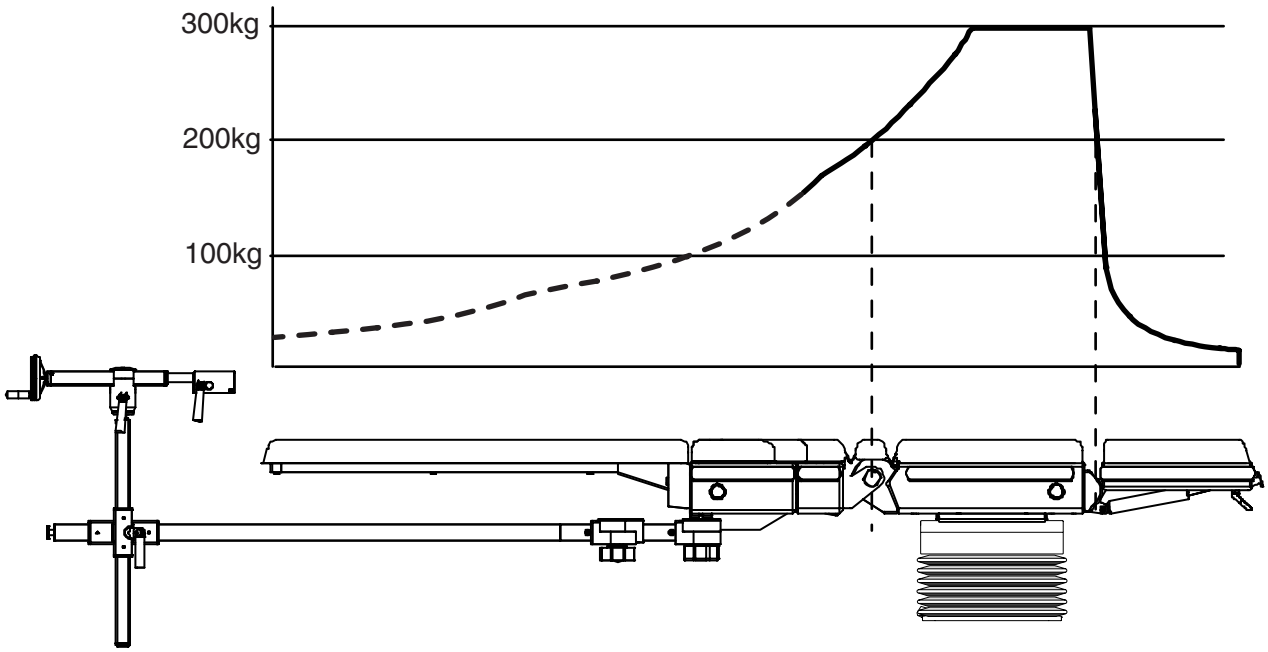






These graphs indicate the centre of gravity (normally the umbilicus) for the maximum patient weight that can be placed on the table (when configured as shown).
To aide interpretation a patient weighing 200kg should be positioned so their umbilicus lies between the dotted vertical lines.
The solid graph applies when the general surgical short trunk section is fitted, the dotted graph applies when the orthopaedic short trunksection is fitted.
Both graphs take into account the infill section, this being the 'worst case' situation.

Fig. 6.3 Maximum patient weight v table position graphs (general surgical configurations).



This graphs indicate the centre of gravity (normally the umbilicus) for the maximum patient weight that can be placed on the table (when configured as shown for orthopaedics).
To aide interpretation a patient weighing 200kg should be positioned so their umbilicus lies between the dotted vertical lines.

Fig. 6.4 Maximum patient weight v table position graphs (orthopaedic configuration).

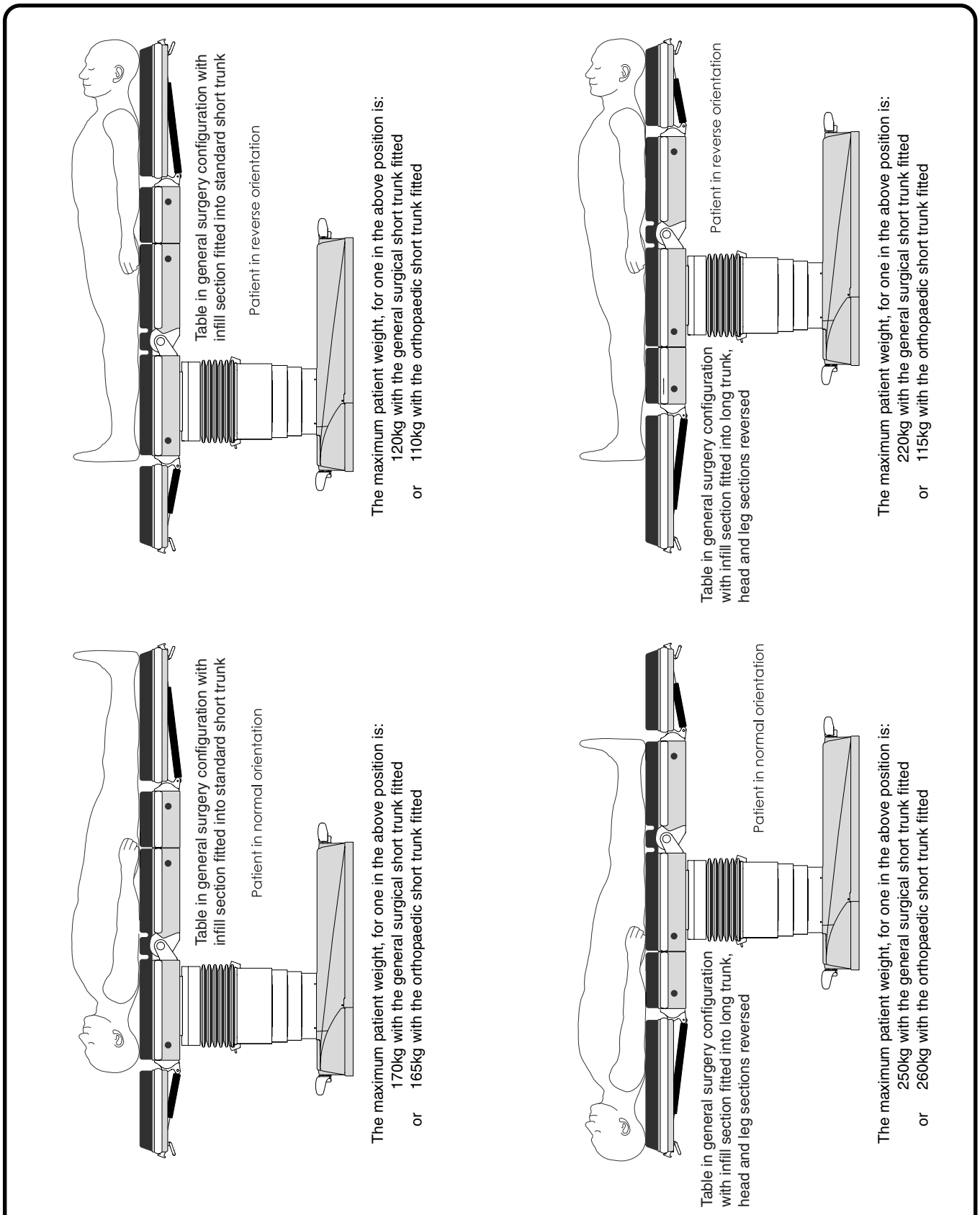
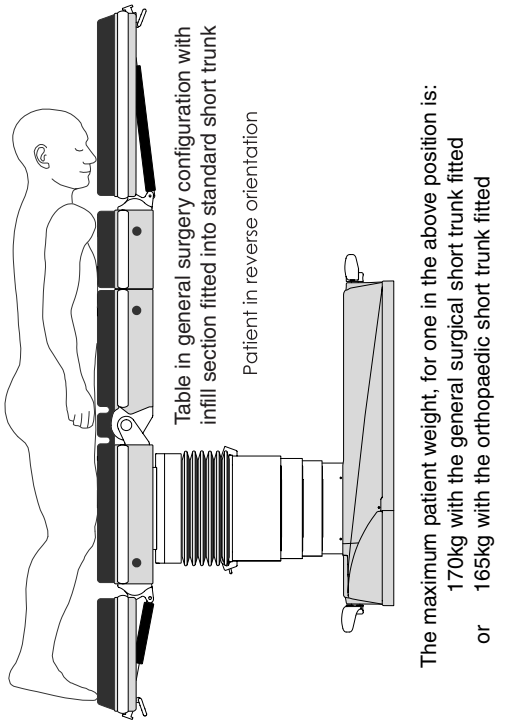
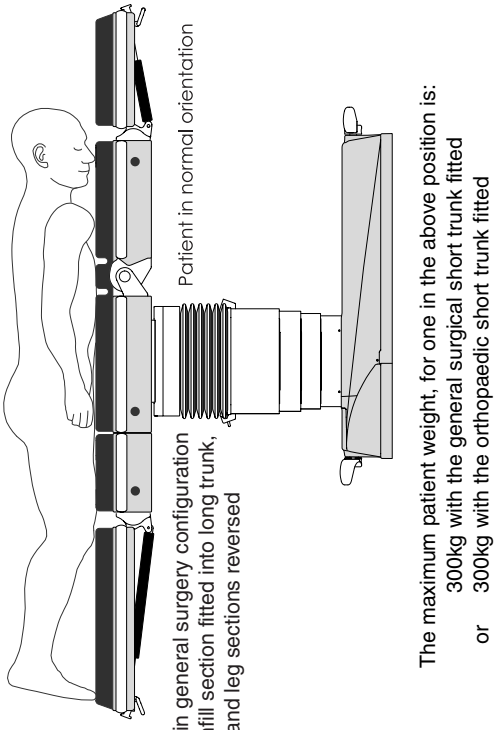
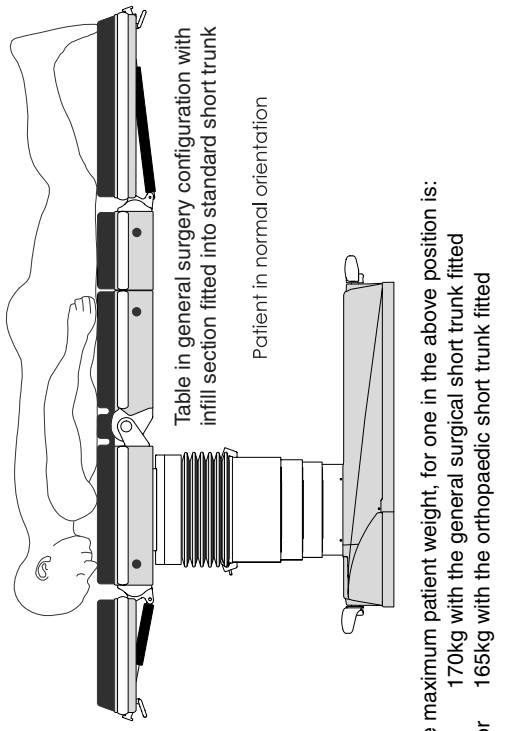


Fig. 6.5 Patient in various 'Supine' positions







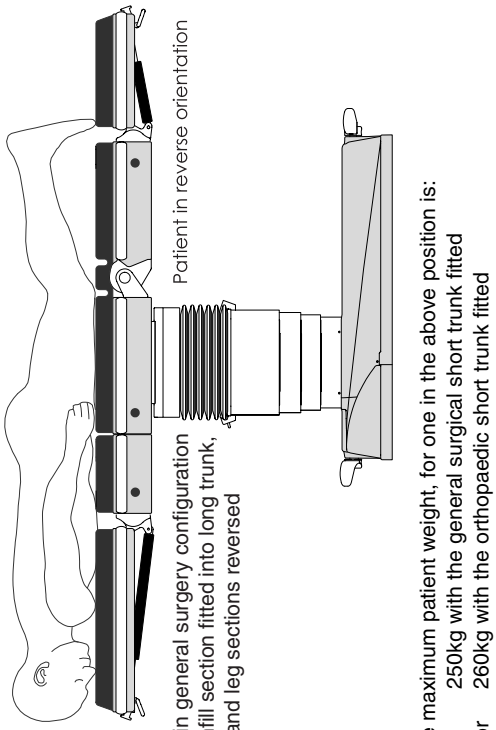


Fig. 6.6 Patient in various 'Prone' positions

Note warnings in section 2.1 regarding patient support.

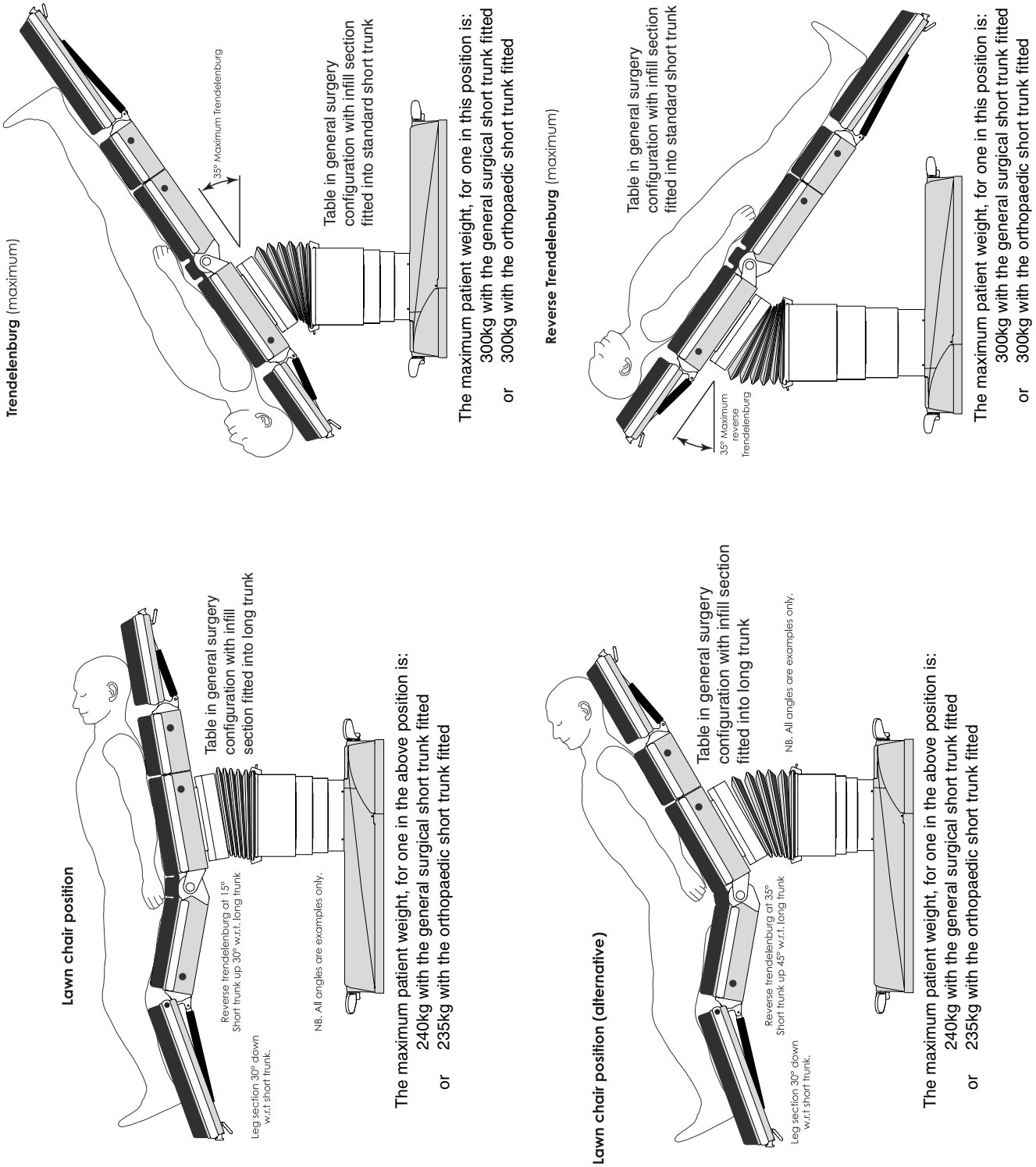
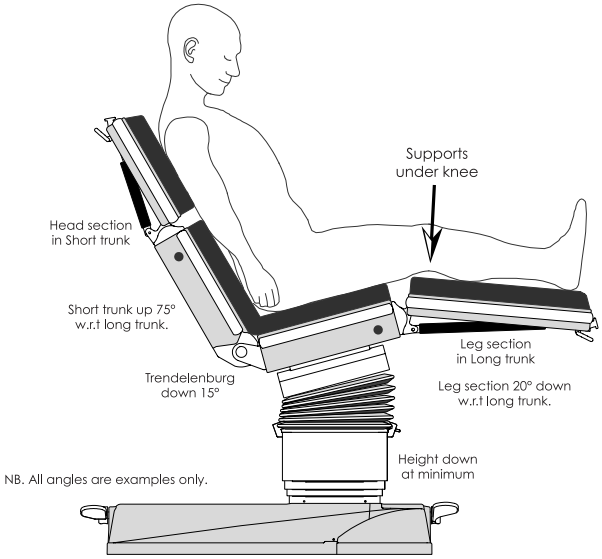


Fig. 6.7 Patient in various 'Lawn chair' & 'Trendelenburg' positions

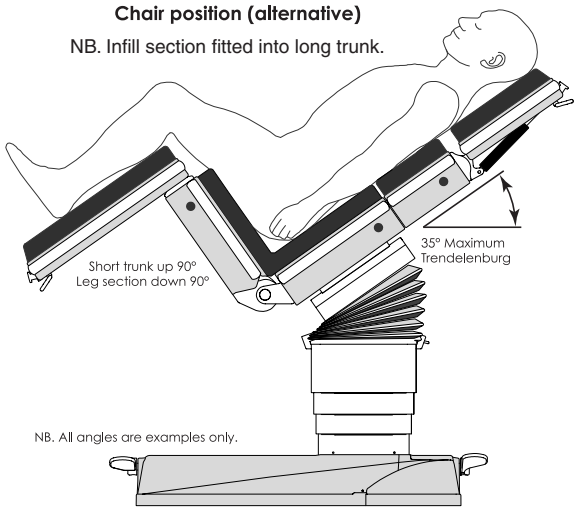
Chair position
Head and leg
sections reversed



The maximum patient weight, for one in the above position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

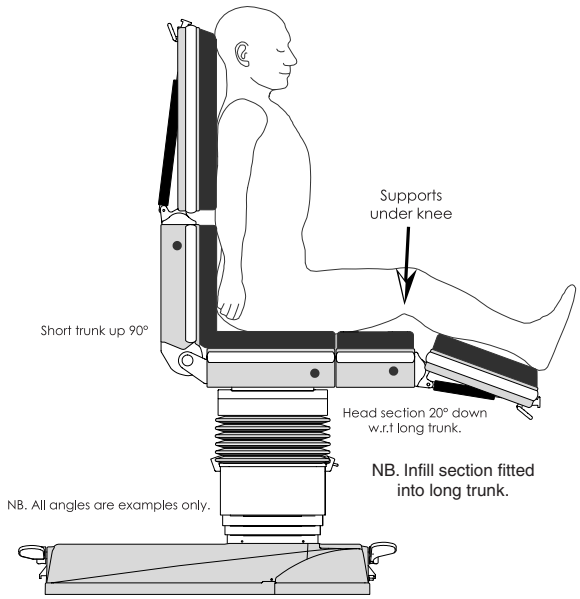
Chair position (alternative)

NB. Infill section fitted into long trunk.



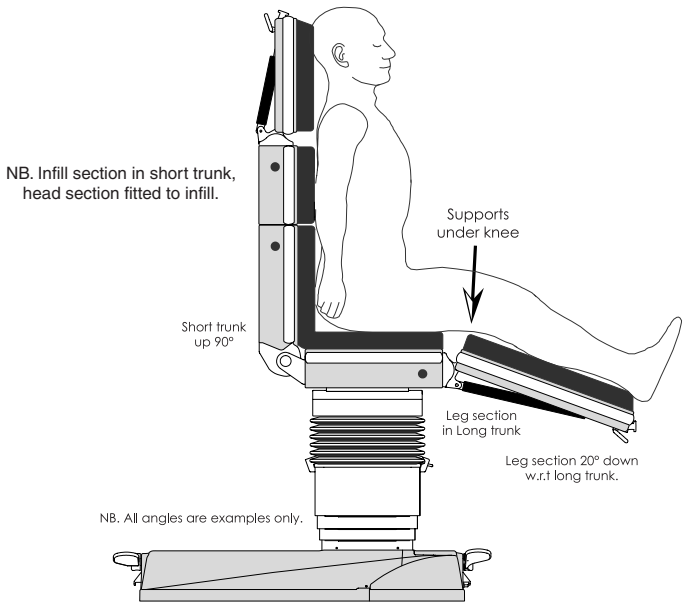
The maximum patient weight, for one in the above position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

Chair position (alternative 2)



The maximum patient weight, for one in the above position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

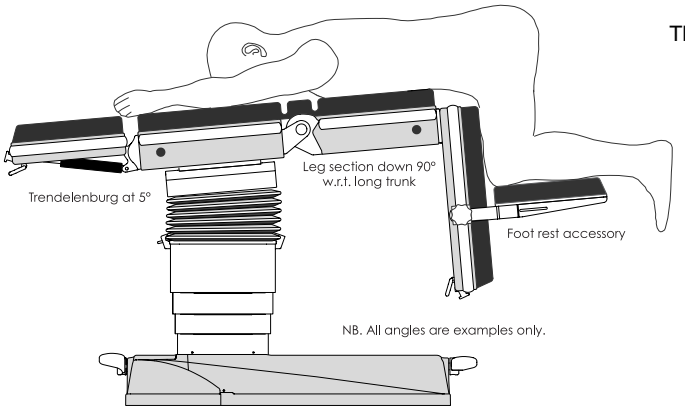
Chair position (alternative 3)
Head and leg
sections reversed



The maximum patient weight, for one in the above position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

Fig. 6.8 Patient in various 'Chair' positions

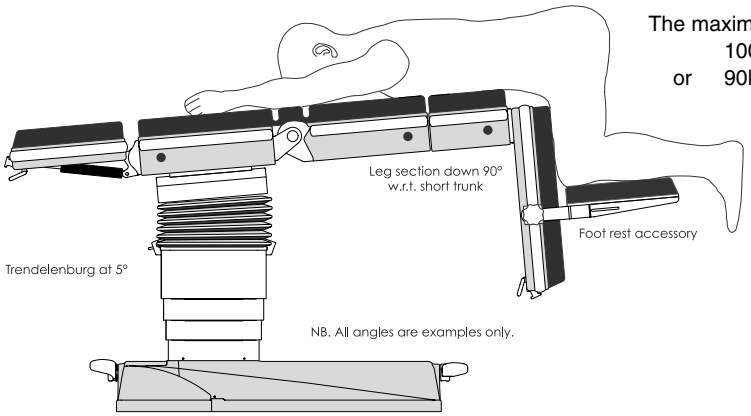
Proctology



The maximum patient weight, for one in this position is:
140kg with the general surgical short trunk fitted
or 130kg with the orthopaedic short trunk fitted

Proctology

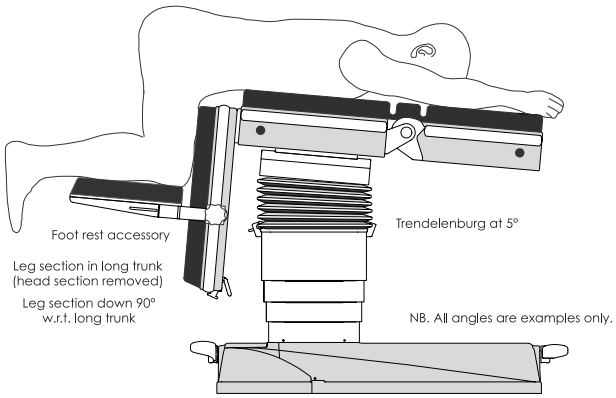
with infill section fitted into short trunk
(suitable for lighter patients only)



The maximum patient weight, for one in this position is:
100kg with the general surgical short trunk fitted
or 90kg with the orthopaedic short trunk fitted

Proctology

with leg section in long trunk
for maximum stability



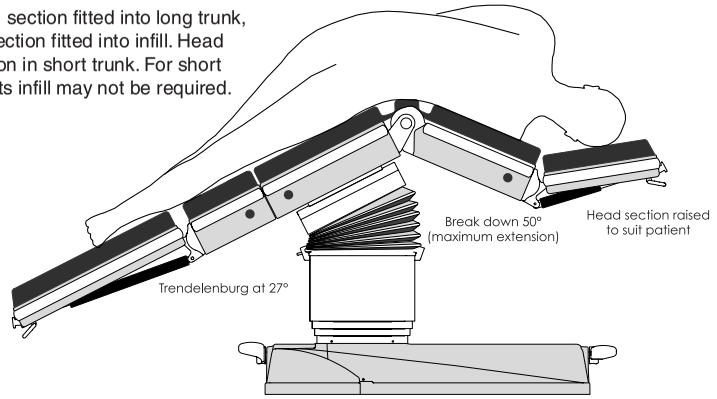
The maximum patient weight, for one in this position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

Note: Iliac crest support may be useful to reduce knee damage for all three positions.

Fig. 6.9 Patient in various 'Proctology' positions

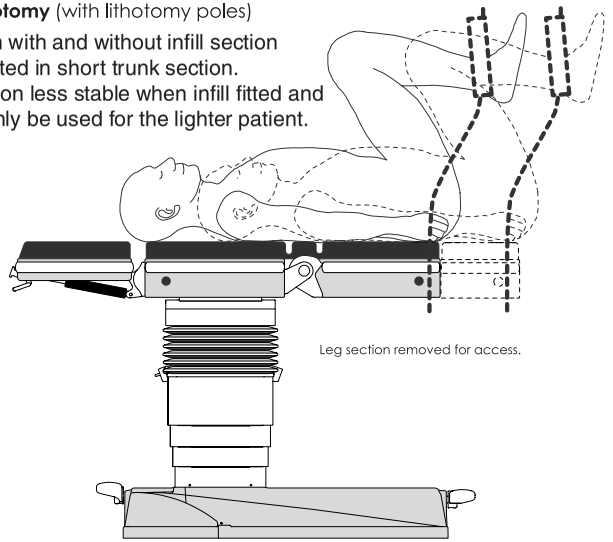
Lateral Nephrectomy (break under kidney)
Head and leg sections reversed

NB. Infill section fitted into long trunk, leg section fitted into infill. Head section in short trunk. For short patients infill may not be required.



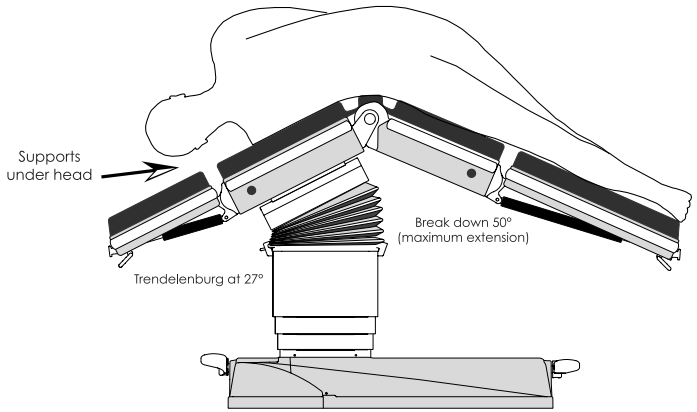
The maximum patient weight, for one in the above position is:
260kg with the general surgical short trunk fitted
or 265kg with the orthopaedic short trunk fitted

Lithotomy (with lithotomy poles)
Shown with and without infill section fitted in short trunk section.
Note: Positon less stable when infill fitted and should only be used for the lighter patient.



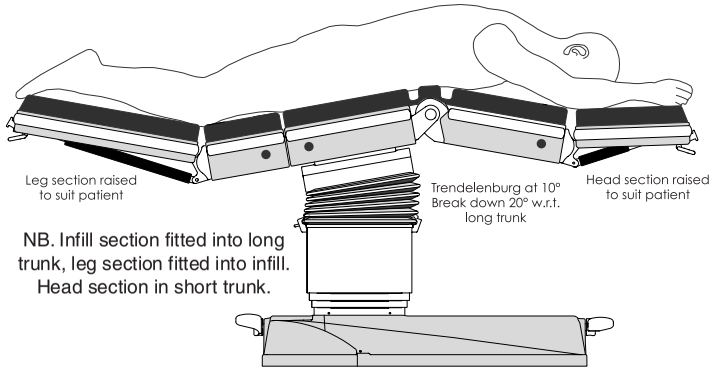
The maximum patient weight, for one in the above position is:
200kg (or 140kg with infill) with the general surgical short trunk fitted
or 100kg (or 90kg with infill) with the orthopaedic short trunk fitted

Lateral Nephrectomy (alternative)



The maximum patient weight, for one in the above position is:
260kg with the general surgical short trunk fitted
or 265kg with the orthopaedic short trunk fitted

Prone position for laminectomy.
(Note: Additional support REF 81-569-13 and gel pads can be used (neither are shown).

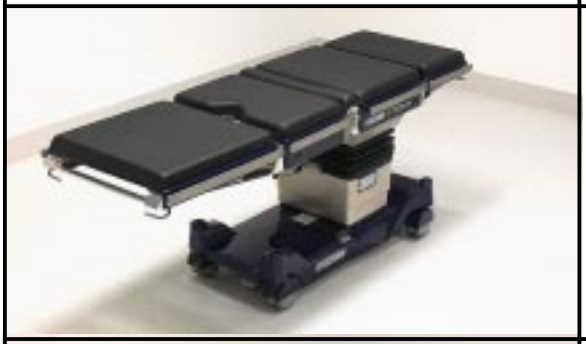
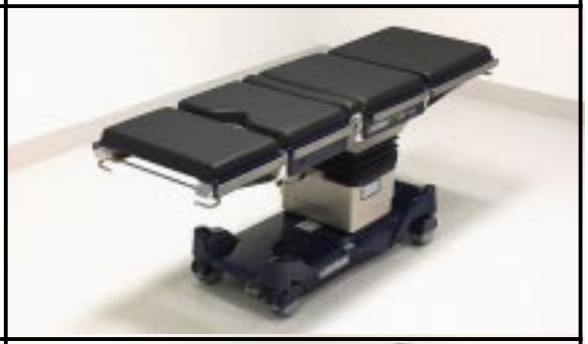
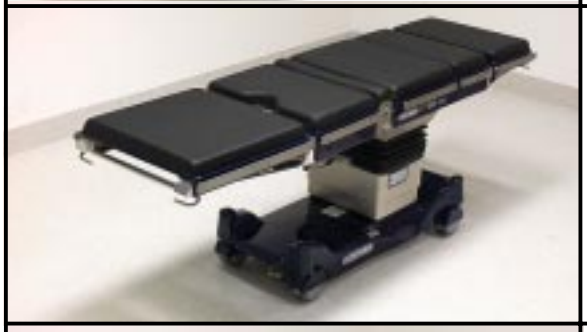
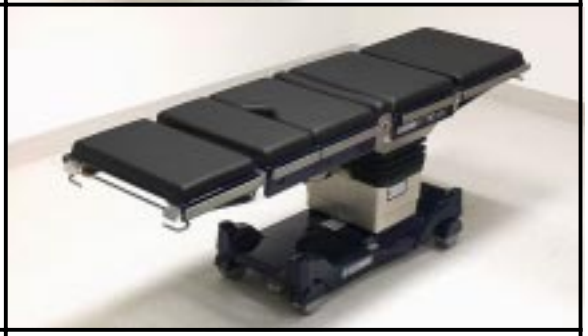
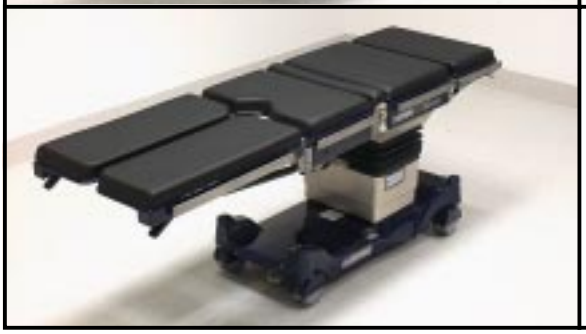


The maximum patient weight, for one in the above position is:
300kg with the general surgical short trunk fitted
or 300kg with the orthopaedic short trunk fitted

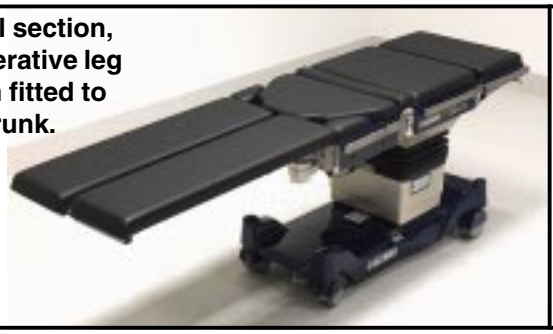
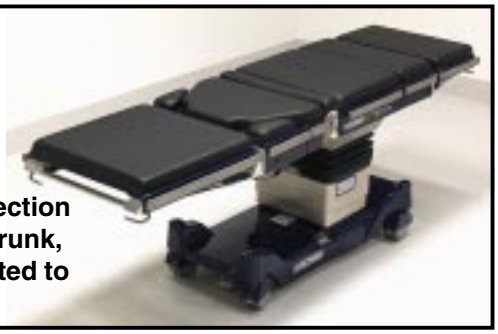
Fig. 6.10 Patient in 'Lithotomy', 'Prone Laminectomy' and 'Lateral Nephrectomy'

6.5 Table top configurations (T30-m illustrated)

General surgical short trunk

Head section at long trunk end	Infill	Leg section at long trunk end
	**No infill section**	
	**Infill section fitted to long trunk**	
	**Infill section fitted to short trunk**	
	**Leg section replaced by divided leg section, no infill section**	

Orthopaedic short trunk

No infill section, pre-operative leg section fitted to short trunk. 	**Standard leg section fitted to short trunk, infill section fitted to long trunk.** 

7.0 ACCESSORIES

WARNING

When fitting any accessory ensure that it has been securely attached and the maximum loading has been noted before using it to support part of the patient's weight. Also see guidance notes in section 4.4.

The catalogue (REF) numbers for the standard T30 Table accessories are shown in the following list, where applicable these are supplied with a 'User/Service Handbook'. This list may not be exhaustive as new accessories are added to the range. Please check with Eschmann Equipment for the latest additions.

The orthopaedic accessories are listed in Appendix 9.

Some of the accessories listed below are also available with alternative sidebars, please contact Eschmann for more information.

IMPORTANT NOTE: Please check with Eschmann Equipment or their local agent before using accessories that fit onto the sidebar of tables supplied with non-standard (e.g. US, Denyer or Euro) sidebars.

REF	Description
T00-311-0001	Head section✧, purple, UK sidebar
T00-321-0001	Leg section✧, purple, UK sidebar
T0R-540-0001	Corded handset, purple, (UK sidebar)
TA-030-3026	Divided leg✧, pair, purple, UK sidebar
TA-020-2001	Width extender✧, long, UK sidebar
TA-020-2007	Width extender✧, short, UK sidebar
TA-020-3001	Foot rest/extension✧, UK sidebar
TA-020-4089	Back elevator
TA-030-1001	Lightweight leg✧
TA-030-2001	Ophthalmic head section
TA-030-3004	Accessory attachment bar
TA-060-1011	Leg abduction support
TA-080-1090	X-ray cassette tray
81-342-00	Perineal instrument tray
81-367-85	Douche tray
81-462-77	Cot sides

✧ These accessories come without a mattress which should be ordered separately, see list below.

Mattresses

T20-431-2094	Mattress, 50mm, head/footrest
T20-441-2095	Mattress, 50mm, leg section
TA-050-1096	Mattress, 50mm, long width extender
TA-050-1097	Mattress, 50mm, short width extender
TA-050-2118	Mattress, 50mm, divided leg, pair
TA-050-1100	Mattress, 25mm, lightweight leg

Orthopaedic mattresses and mattress sets are listed in Appendix 9.

Sidebar clamps

TA-020-1082	Anti drift rotary clamp (for UK sidebar)
TA-020-1086	Anti drift rotary clamp (for Euro sidebar)
TA-020-1087	Anti drift rotary clamp (for US sidebar)
TA-020-1084	Drop handle direct on clamp (UK/Euro)
TA-020-1085	Drop handle direct on clamp (UK/US)

Eschmann Equipment also supply:

A 'Modular Patient Positioning System (M.P.P.S.)' which utilises a range of modular components that can be easily configured to suit both the surgical requirement and the patient's anatomy.

Direct Placement Leg Holders (DPLH) which can be used as an alternative to knee crutches and Lloyd Davies supports for positioning patients into the lithotomy position. In addition they have been cited in orthopaedics for assisting both positioning of the patient and facilitating C-arm access in orthopaedic trauma.

A range of support and Gel pads, suitable for use on T30 Tables.

For information on any of the above please contact Eschmann Equipment, at the address on the back cover, to request advice or product information leaflets. Alternatively visit the Eschmann website at 'www.eschmann.co.uk'

The following accessories can be used with the T30 Table. Their use is self explanatory but always ensure all clamps are fully tightened before using to support the applicable part of the patient's weight. Some of these require additional clamps to secure them to the table this is indicated in the following list. Again this list may not be exhaustive as new accessories are added to the range. Please check with Eschmann Equipment for the latest additions.

REF	Description
81-250-15	Lithotomy supports **
81-264-10	Shoulder rests
81-286-18	Anaesthetic screen, single *
81-300-19	Narrow arm table with pad #
81-314-14	Arm table, square without support ##
81-344-13	Instrument table *
81-368-23	Perspex arm support, right-angle
81-378-38	Foot stocks
81-404-13	Pelvis support #
81-412-15	Buttock support #
81-420-17	Lloyd Davies lithotomy supports
81-428-15	Knee crutches
81-436-17	Pelvis / chest support #
81-446-13	Wristlet #
81-462-17	Patient restraint strap
81-463-06	Infusion pole
81-466-40	Ophthalmic head flap
81-490-03	Kidney position supports ##
81-492-16	Lateral support, adult
81-504-19	Lateral support, child
81-569-13	Laminectomy support pad
81-569-80	Laminectomy support **
81-812-17	X-ray cassette holder, lateral
81-820-19	Arm table, square with support
81-827-52	X-ray cassette tray, end loading
81-828-41	X-ray cassette tray, side loading
81-931-44	Orthopaedic knee crutch

* Requires one, Anti drift rotary clamp †
** Requires two, Anti drift rotary clamps †
\# Requires one, Drop handle direct on clamp †
Requires two, Drop handle direct on clamps †

† Ensure these clamps match the table's sidebar (e.g. UK, Euro or US) see 'Sidebar clamps' on the previous page.

Spare mains leads can be ordered under the following Spare Part Numbers:

391177 - T30-a/T30-m, Australian mains lead, not fused.
714188 - T30-a/T30-m, U.K. mains lead (10A fuse).
715254 - T30-a/T30-m, Euro mains lead, not fused.
111589 - T30-a/T30-m, U.S.A. mains lead, not fused.

8.0 AFTER USE, CLEANING & CARE

WARNING

Do not immerse the handsets, footswitch, mattresses, or knuckles in liquids, when cleaning or disinfecting.

Disconnect from the mains electrical supply before cleaning or disinfecting the operating table, mattresses, or accessories. When cleaning with a brush wear suitable eye protection (brushes are prone to 'flick' particles) and at all times wear suitable personal protection (e.g. gloves and overalls).

NOTE

Eschmann Equipment cannot accept liability for the efficiency or the effects of any cleaning or disinfection techniques. Only use the materials detailed in the following sections.

8.1 After use procedures

After each procedure the table should be cleaned and disinfected in accordance with local procedures which take into account the guidelines provided in section 8.2 and 8.3 of this manual.

Accessories should be removed from the table and after cleaning and disinfection the head and leg section should be fully lowered as good practise.

The table battery LEDs should be checked to see if the batteries require recharging, recharge if applicable. If the preceding procedure was the last one for the day or shift, then the batteries should be placed on charge as a routine procedure (see section 5.3.1.2)

The table must be switched 'off' (⏻) at the table on/off switch (item 5 of Fig. 2.2) when the table is not in use. The green LED item 4 Fig. 2.2 will not be illuminated to show the table is 'off'.

If the table has been left switched 'on' and no movement command has been given via any controller (hand, foot or standby) for a period of six hours, an audible warning sounds (a slow repeating double 'beep'). This is provided to warn the user to switch the table 'off' (⏻) at the table on/off switch (item 5 of Fig. 2.2). If the table is still in use when this alarm sounds (e.g. table being used for a long procedure) and the user does not want the table switched 'off' (e.g. Trendelenburg may be required urgently) the alarm can be stopped by pressing any control input briefly, or, switching the table 'off', waiting 10 seconds and then switching the table back 'on'. The alarm will sound again in six hours if no movement command has been given and the table has not been switched 'off'. This feature can be disabled or the time period of six hours can be altered, contact Eschmann Equipment for more information.

8.2 Cleaning

If you have any particular cleaning problems, contact the Eschmann Equipment After Sales Service Department at the address given inside the front cover of this Manual.

8.2.1 Operating table and accessories

Fully raise the tabletop, remove all accessories and all the mattresses, then wash the table with hot (55°C) neutral (pH7) detergent solution (diluted in accordance with the manufacturers instructions) and rinse with clean water. Use a small brush to clean areas of difficult access.

Clean non-electrical accessories as detailed above for the table but only use a damp cloth to clean the handsets and footswitch.

CAUTION

Knuckles are packed with grease for lubrication of the thrust bearing. Do not immerse knuckles in cleaning solution when cleaning. Wipe down or use a small brush.

8.2.2 Mattresses and pads

WARNING

Mattresses and pads should be checked for any cuts or tears in the outer covering. If any of these defects are found, the mattress must be replaced to eliminate possible biological hazards.

CAUTION

Remove spilt ether and anaesthetic liquid from mattresses and pads immediately. Do not immerse mattresses or pads in cleaning solution.

When cleaning mattresses and pads:

- DO NOT use phenolic disinfectants.
- DO NOT use abrasive cleaning agents.
- DO NOT use organic solvents (e.g. petroleum spirit, carbon tetrachloride, or tetra-chloromethane).
- DO NOT allow petroleum-based oil, vegetable oil, wax, or grease to remain on the mattress.
- DO NOT dry mattresses with direct heat (e.g. radiators, electric fires, or hot-air blowers) allow them to dry at normal room temperatures.

Wash mattresses and pads thoroughly, with hot (55°C) neutral (pH7) detergent solution (diluted in accordance with the manufacturers instructions) and then rinse with clean water. Use a small brush to clean areas of limited access. Remove stubborn stains and deposits with good quality vinyl cleaner using a soft-bristle brush. Dry all surfaces with absorbent paper, to avoid damage do not leave them wet in contact with another surface (e.g. the tabletop).

8.3 Disinfection

NOTE

All equipment and accessories returned to Eschmann Equipment must be accompanied by a Decontamination Certificate, signed by an authorized person of managerial status. Appendix 2 shows an example of a suitable Decontamination Certificate that can be photocopied for use.

CAUTION

Hypochlorite solutions can damage metal parts, after disinfection, ensure it is rinsed of thoroughly with water. Prolonged exposure to hypochlorite solutions may degrade mattress material. Avoid hypochlorite solutions and other liquids coming into contact with any internal parts of the table.

8.3.1 Disinfection procedure

A well ventilated area should be designated and used as the disinfection area. Access to the area should be restricted to those people involved in the disinfection process.

The following disinfection procedure is used by Eschmann Equipment, and its use is recommended if no other local approved procedures are available.

8.3.2 Table, accessories mattresses and pads

Disinfect the operating table, accessories, mattresses and pads as follows:

i Disassemble the table and/or accessories as far as possible without the use of tools, remove mattresses and pads.

ii Scrub all surfaces and crevices with hot (55°C) neutral (pH7) detergent solution (diluted in accordance with the manufacturers instructions) to remove all visible contamination. Use a small brush to clean areas of limited access repositioning the table as required to gain access to all surfaces. For stubborn mattress stains see section 8.2.2.

iii Wash down with hot (55°C) water.

iv Dry all surfaces with absorbent paper.

v Wash down all surfaces and crevices with one of the solutions below:

- ❖ a 70% solution of industrial methylated spirit in water.
- ❖ a 1000 to 5000mg/litre solution of hypochlorite in water (see Caution note above).

vi Wash down thoroughly with clean water.

vi Dry all surfaces with absorbent paper, to avoid damage do not leave mattresses wet in contact with another surface.

vii Dispose of all cleaning material and solutions in accordance with authorized disposal procedures.

8.4 Care

WARNING

The head and leg section gas-springs are filled with gas at high pressure, do not try to open them. The gas-springs should be replaced immediately any signs of leaking or deterioration in performance are noted (e.g. movement of section when locked).

CAUTION

Do not lubricate the head or the leg section, gas-springs.

Once a week:

i Remove fluff and debris from the head and leg section guide pin location sockets and if required spray the pins and into the sockets with a suitable light lubricant such as WD40.

ii Remove all mattresses and check them for any cuts, scuffs or other damage and replace as required.

iii Check that the table covers are not cracked, chipped, or otherwise damaged and arrange replacement as required.

iv Check the table for any signs of wear or damage that requires attention and arrange remedial action if required.

v Ensure batteries have been regularly charged and charge them if required.

vi On the T30-m Table clean the castors and remove any debris caught between them.

Once every six months the table should receive a safety check and service as detailed in the service manual (which provides full details of part replacement, safety checks and routine maintenance). During this service the table's calibration should be checked and if required it should be recalibrated. Also at least once every year the electrical conductivity of the table should be checked. To arrange these contact the Eschmann After Sales Service Department, see inside front cover for contact details.

8.5 Storing the operating table (long term)

The Operating table should be covered, and stored in a clean environment, with no extremes of temperature, see the Technical Data section for details.

The table should be stored:

- With the base in the braked position.
- With the head and leg sections fully lowered (or the leg section can be stored on the orthopaedic accessory trolley).
- With the tabletop level in both planes.
- With 'on/off' switch (item 5, Fig. 2.2) 'off'.

Every two weeks:

- Charge the table batteries (see section 5.3.1.2) until both charging LEDs are green.

The storage maintenance inspection must be conducted by a trained engineer. When the inspection is finished, the 'Storage Maintenance Record' (see page 47) should be completed and signed.

CAUTION

Do not store mattresses and pads with objects (especially objects having sharp edges and protrusions) resting on their padded surface as this could damage them. Always store them flat.

Mattresses and pads should not be left in direct or excessive heat and they must be stored flat. Do not leave them with other accessories resting on them or leaning against another object.

8.6 Maintenance

8.6.1 General

The Service Manual, which can be ordered from the Eschmann After Sales Service Department, contains the routine service schedule and details of how to replace parts when required. Some parts of the table are not user serviceable and this is detailed in the Service Manual, also refer to section 1.1.6, 3.3.9 and 8.4.

8.6.2 Fault diagnosis

Table 1 lists possible causes for faults and conditions that may arise. Some of these may require further investigation by trained engineers in conjunction with the Service Manual and circuit diagrams. Where the remedy will require an engineer to rectify the fault or condition this is indicated by the phrase "Engineer to..." in the remedy column. If any fault persists (e.g. blown fuse) this should be investigated by an engineer.

8.6.3 Environmental considerations

WARNING

Gas springs contain nitrogen gas and a small quantity of hydraulic oil at very high pressure, these must be vented before disposal, consult the Service Manual for the safe procedure.

DISPOSAL NOTE

This equipment contains environmentally hazardous lead-acid batteries. If the batteries fail, or if the equipment is to be disposed of, it is recommended that the batteries are taken to a disposal site designated for the disposal of lead-acid batteries, or that the batteries are collected by an agent who specialises in the collection of lead-acid batteries.

During normal use there are no environmental considerations that need to be considered. During the design stage several materials were considered to be unacceptable and materials such as Cadmium, CFC filled capacitors and devices containing mercury, have not been used within this equipment.

During cleaning and disinfection procedures, the potentially contaminated waste materials produced during these actions, should be handled in accordance with local procedures and National legislation for the disposal of potentially contaminated waste.

At the end of the working life of the table it should be dismantled and recycled as much as possible in line with the recommended procedure available from Eschmann Equipment and in accordance with local procedures and National legislation.

8.6.4 Technical Lifetime

This product has a technical lifetime, which by Eschmann Holdings Limited is considered to be 10 years. At the time of delivery the product fulfils the existing regulations and standards but as with all other electro-mechanical products, the T30 Tables are subject to ageing and wear, and even though the product may have undergone regular service in accordance with the recommended service schedule, Eschmann Holdings Limited can not guarantee the product's safety after the expiry of the technical lifetime.

Eschmann Holdings Limited recommends that a T30 Table is taken out of service 10 years after the date of manufacture as shown on the serial label fixed on the table's base. Provision of spare parts and service by Eschmann Holdings Limited after the expiry of the specified technical lifetime does not mean an extension of Eschmann Holdings Limited liabilities.

STORAGE MAINTENANCE RECORD (for Table Serial No : .....)			
Date of Battery Charge	**Date of Inspection**	**Signature**	**Comment**

TABLE 1 - FAULT DIAGNOSIS

FAULT	POSSIBLE CAUSE	REMEDY
Table will not move in response to handset or footswitch.	Table not switched 'on'.	Switch table 'on', switch 5, Fig. 2.2.
	Main batteries critically low, see 5.3.1.1 and Fig. 5.9.	Recharge batteries see section 5.3.1.2 OR, in an emergency **only** control the table using the standby control panel as detailed in section 5.3.4, OR, switch in the standby batteries as detailed in section 5.3.1.4.
	Corded handset or footswitch not connected to table.	Connect handset (see 5.3.3) or footswitch to table.
	Handset or footswitch faulty.	Replace handset or footswitch with one known to work.
	Battery fuse blown.	Replace fuse as detailed in section 5.3.5, for T30-a Table only, or, switch to standby battery as detailed in section 5.3.1.4.
	Table has reached the limit for that button function.	Press alternative button.
	Two buttons on one controller being pressed at the same time.	Release both buttons and press only one button at a time.
	An internal error has been detected in the control system.	Release button, wait 2 seconds for error to clear, press button again.
	Signal from one controller being overridden by another controller (see section 4.6.1.2).	Only use one type of controller with a table at any time.
	Main table batteries have failed.	Switch in the standby batteries as detailed in section 5.3.1.4.
	Maximum load of function selected has been exceeded.	Assist table motion or reposition patient to reduce the offset load.
	Table motion physically blocked (e.g. leg section hitting floor)	Move object or reposition table.
	Two handsets connected to table	Disconnect one (either) handset.
Table will not move when pushed.	Table base in 'braked' position.	Place table into the 'castor' or 'wheel' orientation as detailed in section 5.1.
	Foreign object trapped under a wheel or castor.	Check for foreign object and remove it if found.

TABLE 1 - FAULT DIAGNOSIS (continued)

FAULT	POSSIBLE CAUSE	REMEDY
Table difficult to manoeuvre.	Table in 'wheel' orientation.	Place table into 'castor' orientation.
Table difficult to move in a straight line.	Table in 'castor' orientation.	Place table in 'wheel' orientation.
Table not stable on floor and moves when pushed	Table is not in 'braked' position.	Place table into the 'braked' orientation as detailed in section 5.1.
Table not stable on floor and wobbles when 'braked'.	Floor uneven or object under a wheel or castor.	Move table to a flatter area or remove object.
No charge LED(s) 'on' when table connected to mains.	Mains supply faulty or not switched 'on'.	Check mains supply, or switch 'on' at mains supply.
	Mains cable not connected correctly at both ends.	Reconnect mains cable correctly at each end.
	Mains cable faulty.	Replace mains cable.
	Mains fuse in supply cable blown.	Replace fuse in mains plug (10A).
	Mains supply fuse in table blown.	Replace fuse as detailed in section 5.3.5.
Charge LED colour does not change to green (even after twelve hours).	Table batteries at fault.	Engineer to change batteries.
Table section does not attach or release easily from table.	Weight of section not supported during attaching or removal.	Support section weight when attaching and removing section (i.e. gently lift end furthest from table).
Unexpected table movement.	Another infrared controller being used locally.	Check for another infrared controller and discontinue its use, or engineer to change table infrared code.
Excessive motor noise.	Faulty drive.	Engineer to remedy fault.
Table audible alarm sounding ('beeping')	Table left switched 'on' and no command input given for 6 hours.	See section 8.1 and either stop the alarm (if table still in use) or switch the table 'off' (if table not in use). If the table is not in use, place it on charge.

9.0 TECHNICAL DATA

9.1 Weights

Nominal weights for standard table components:

Leg section (without mattress)	11.5kg
Leg section mattress	1.0kg
Head section (without mattress)	7.8kg
Head section mattress	0.8kg
Orthopaedic long trunk (without mattress)	37.2kg
Orthopaedic short trunk (without mattress)	22.5kg
Gen'l surg'l short trunk (without mattress)	13.5kg
Long and short trunk mattress	1.8kg
Pre-operative leg section (incl. mattress)	5.9kg
Hip section (incl. mattress)	3.4kg
Infill section (without mattress)	10.8kg
Infill section mattress	1.0kg
Traction unit	3.0kg
Tibial nailing assembly	6.4kg
Lateral femoral nailing assy.	3.5kg
Traction beam + intermediate knuckle	5.4kg
Width extender (incl. mattress)	6.0kg
T30-a (base and column only)	192kg
T30-m (base and column only)	140kg
T30-a Table with Gen'l. Surg'l. top*	277kg
T30-a Table with Orthopaedic top*	291kg

* Weight for typical tabletops as illustrated in Fig. 2.1 including mattresses. For T30-m subtract 52kg.

9.2 Dimensions

The following are the nominal dimensions for a table in the general surgical configuration (see Fig. 9.1 for more detail). The dimensions for the orthopaedic configuration are the same except the overall length which is 2230mm (i.e. no infill section and pre-operative leg sections fitted).

Overall length (with infill) (2)	2135mm
Overall length (without infill) (2)	1885mm
Maximum height (4)	1120mm
Minimum height (5)	720mm
Overall width T30-a (6)	600mm
Overall width T30-m (6)	725mm
Sidebar (UK)	31.5 x 6.2mm

9.3 Movements

The following table movements are maximums and cannot be assumed to be available in all combinations of table positioning (see Fig. 9.1 for illustration, the number in brackets after the item details which part). For example, in general surgical configuration at minimum height, the maximum reverse Trendelenburg and leg section movements cannot be achieved due to the proximity of the floor. Similarly with a large amount of tilt set, maximum Trendelenburg cannot be achieved. Orthopaedic assemblies (i.e. traction beams) will also compromise reverse Trendelenburg movement.

Max. Trendelenburg (1)	35°
Max. reverse Trendelenburg (1)	35°
Max. extension (4)	230°
Max. flexion (4)	90°
Head section (5)	±45°
Leg section (3)	-100° +55°
Max. lateral tilt (7)	±18°

9.4 Table loading

See graphs in section 6.0 for maximum patient weight distribution charts for various table positions and orientations.

Maximum section loading is stated on each item and is detailed below for reference:

Leg section	44kg
Head section	22kg

For accessories the maximum loading is stated on each item and detailed in the User Handbook supplied with them.

For specific notes on the obese patient see section 6.2.

9.5 Electrical

9.5.1 Antistatic requirements

The table has an antistatic pathway from the tabletop, through an internal resistor, to a castor.

CAUTION

To complete and maintain the antistatic pathway the table must be used on an electrically conductive or antistatic floor and with mattresses supplied by Eschmann Equipment.

9.5.2 Batteries

Table base:

Main batteries:
Two, 12V 10Ah, sealed lead acid

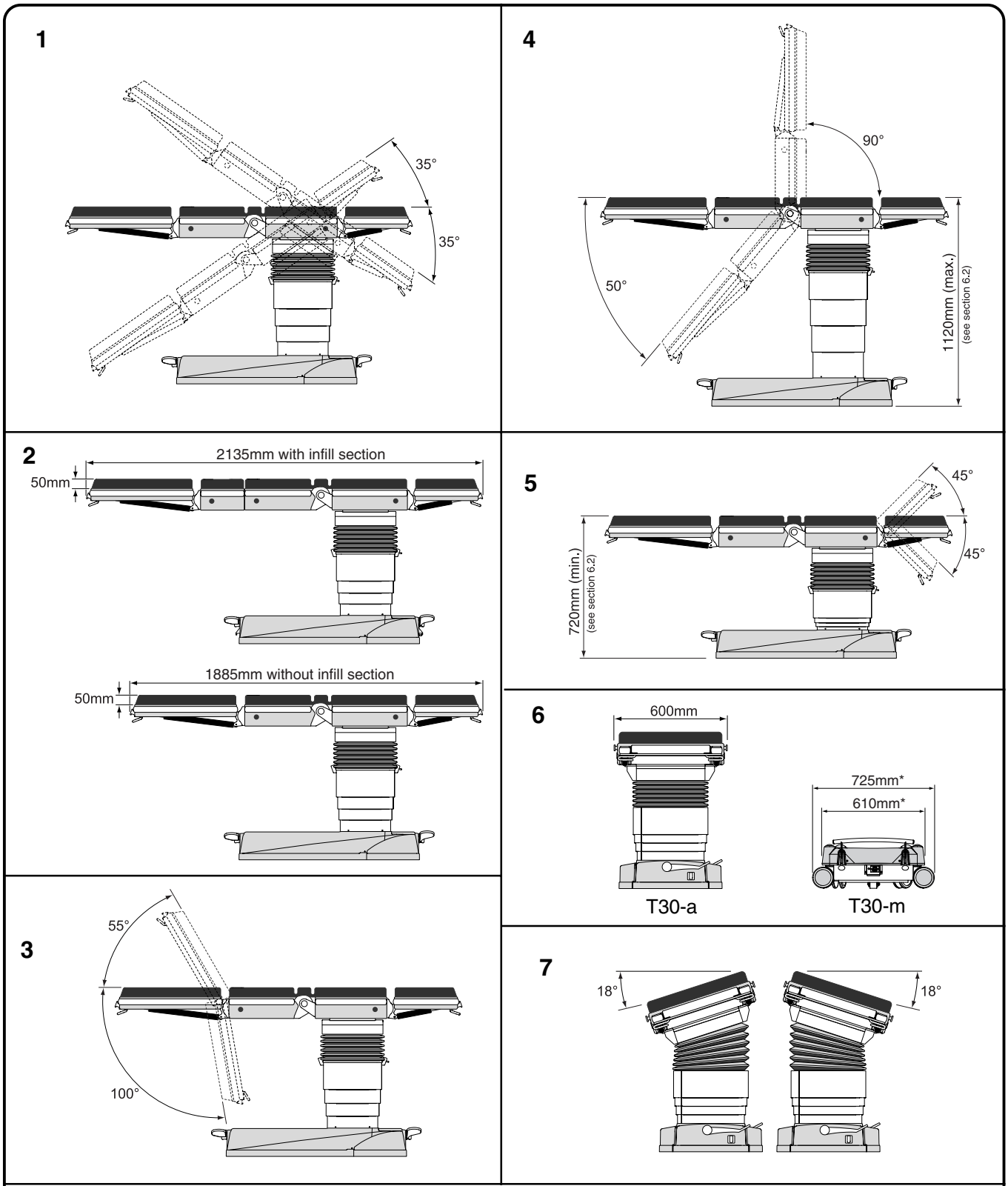
Standby batteries:
Two, 12V 1.2Ah, sealed lead acid
(see battery disposal caution in section 8.6.3)

Infrared handset:
Two, 1.5V size AA Alkaline (Note: Must only be changed in accordance with the notes in the 'Service Manual' to ensure the IP rating is not compromised).

9.5.3 Internal battery charger

Input

100-240V a.c. 50-60Hz 2.5A max



These are maximum movements for each aspect, they may not be available in certain combinations (e.g. maximum tilt and maximum Trendelenburg). Movements that could cause damage cannot be catered for (e.g. position of the leg section). Traction beams when fitted will limit reverse Trendelenburg.

* The maximum width of the T30-m Table is across the base at the foot pedal end, this is 610mm with the castors in line with the base and 725mm with both castors at 90° to the base as indicated.

Fig. 9.1 Major dimensions and movements

Output

29.2V d.c. 2A (max.) when charge state LED red or orange, 27.6V d.c. when charge state LED green

9.5.4 Fuses

External fuses

Mains input fuses (item 13 or 16, Fig. 2.2)

2 x T4A (5 x 20mm) 250V

Battery fuses (item 2, Fig. 2.2). **Note:** On the T30-m Table, these fuses are fitted internally.

2 x T20A (6.35 x 32mm) 500V

Mains plug fuse (if fitted) 10A.

Internal fuses *(only accessible by engineer)*

Battery fuses (joining each battery pair)

2 x 30A blade type (1 per battery pair)

2 x T20A (6.35 x 32mm) 500V (these fuses are fitted externally on the T30-a Table)

9.5.5 Duty cycle

This symbol is used to indicate the table's duty cycle which, in the worst case, is '60s : 600s', the ratio of the operating time to the sum of the operating time and the ensuing interval (see note below). Each motor drive has its own duty cycle and this is dependent on loading and table position as detailed below.

Trendelenburg 1 : 4 (60s : 240s) at a maximum torque of 417Nm (e.g. 135kg load offset 31cm from the fulcrum, or a 300kg load offset 14cm from the fulcrum. Where this load is the patient and accessories weight and the offset is how far the loads centre of gravity is, from the centre of the column).

Break 1 : 10 (60s : 600s) at maximum patient weight of 300kg.

Height 1 : 4 (60s : 240s) at maximum patient weight of 300kg (not offset).

Tilt 1 : 4 (60s : 240s) at maximum patient weight of 300kg.

Note: The duty cycles above are all for the worst case (i.e. maximum loads). For reduced loading the above duty cycles can be increased.

9.6 Classification and symbology

All the symbols used on this table are shown and explained in section 2.2. These detail the safety category and class of this table as marked on the table or section by the use of these symbols.

9.7 Use with other equipment

9.7.1 Electrosurgical equipment (h.f.)

T30 Tables have been designed to minimise the possibility of accidental electrosurgery burns and can be used in conjunction with electrosurgical equipment. However contact with any metal surfaces (e.g. table sidebar, or other equipment etc.) can cause burns during electrosurgery and must be avoided.

9.7.2 Defibrillation equipment

With the mains cord attached the equipment has a defibrillator proof applied part with type **BF** protection against electric shock.

9.7.3 RF communications equipment

See section 9.11 'Electromagnetic compatibility'.

9.8 Standards compliance

The table has been designed and built to comply with the following international standards:

BS EN 60601-1: 1990 and all amendments to date
BS EN 60601-1-2: 2001
BS EN 60601-2-46: 1998
BS EN 60601-1-4: 1997

9.9 Environmental conditions

9.9.1 Operating environment

The table has been designed to operate in the following environment:

Temperature range	10°C to +40°C
Pressure range	69KPa to 106KPa.
Humidity range	30% to 75% RH non-condensing.

9.9.2 Transport & storage environment

The table can be transported and stored safely, in the following environment:

Temperature range	-30°C to +50°C
Pressure range	69KPa to 106KPa
Humidity range	30% to 90% RH non-condensing.

9.10 Alarms

9.10.1 Visual

Visual alarm functions of this table are LED indicators for mains 'on' and battery charge state (see Fig. 2.2) situated on the table base and battery charge level indication provided on the corded handset (see Fig. 5.19). Ensure you are familiar with these before using this operating table (see sections 5.3.1). There is also an LED indicator to show that the table is switched 'on' (see item 4, Fig. 2.2).

9.10.2 Audible

Audible alarm indication is provided (a double 'beep' repeating every eight seconds) to warn that the table has been left 'on' for an extended period and should be switched 'off' (see section 8.1 for more information). A single 'beep' also sounds when the table is switched 'on'.

9.11 Electromagnetic compatibility (EMC)

9.11.1 Interference considerations

T30 Tables have been designed and manufactured in such a way as to remove, or minimise as far as possible, risks connected with reasonably foreseeable environmental conditions such as magnetic fields and external electrical influences (i.e. electrical interference). The risks of electrical interference from or to other devices normally used with these tables have been taken into account. The steps taken to achieve this are to ensure compliance with relevant international electromedical standards {i.e. EN 60601-1-2:2001) regarding electromagnetic compatibility. This compliance has been confirmed by independent testing. However it is not possible to simulate all the conditions that may be encountered, the compliance testing therefore provides only a very good indication as to the susceptibility or suppression of emissions to or from a device.
It is highly unlikely that any electrical interference problems will be encountered with these tables. However, should such interference be suspected, the following the following guidance is provided.

9.11.2 Interference from other equipment

T30 Tables have been designed to ensure that when using them in close proximity with 'other correctly designed' electrical equipment, interference with the table's control systems does not occur. Eschmann cannot guarantee that other equipment used in an operating theatre is properly constructed so as to avoid electrical interference with them. This could be a problem particularly with very old equipment (i.e. it does not conform to the latest standards). In the unlikely event that electromagnetic interference is caused by 'other' noncompliant equipment, such 'other' equipment should not be activated at the same time these tables are switched 'on' and their control systems are active.

9.11.3 Interference with other equipment

T30 Tables have been designed to ensure that when used in close proximity with other correctly designed equipment they do not cause interference with such other correctly designed equipment. Eschmann cannot guarantee that other equipment used in an operating theatre is properly constructed to withstand electrical interference with adjacent equipment. This could be a problem particularly with very old equipment (i.e. it does not conform to the latest standards). In the unlikely event that electromagnetic interference is experienced with these tables, the other equipment should not be activated at the same time as the tables are switched 'on' and their control systems are active.

9.11.4 RF communications equipment

As with all medical electrical equipment the user should be aware that portable and mobile RF communications equipment can affect medical electrical equipment such as these tables.

9.11.5 Accessories

As with all medical electrical equipment, and in line with the latest European standard (EN 60606-1-2:2001) the user should be warned that the use of accessories, transducers and cables other than those specified below (with the exception of those sold by Eschmann Equipment as replacement parts for internal components) may result in increased emissions or decreased immunity of the these tables and their associated accessories.

The following Eschmann Equipment accessories can be used with these tables without affecting the table's electromagnetic compatibility with subclauses 36.201 and 36.202 of EN60601-1-2:2001. Other similar accessories or equivalents that could affect compliance with the requirements of subclauses 36.201 and 36.202 of EN60601-1-2:2001 should not be used.

Mains cord (for part number see section 7.0).
T0R-540-0001 Handset, purple, (UK sidebar)
(also, other handsets for non UK sidebar)

All the other accessories listed in section 7.0 are designed for use with T30 Tables and have no EMC implications.

9.11.6 Installation

WARNING

T30 Tables should not be stacked with other equipment. If used adjacent to other equipment these tables should be observed to verify normal operation in the configuration in which it will be used.

T30 Tables have been tested for use in close proximity with other equipment and should be installed in accordance with the EMC tables that follow in section 9.11.7.

9.11.7 EMC tables

The following guidance (in table format) is provided in line with EN60601-1-2:2001. The table references (i.e. 201, 202, etc.) are those used within the standard. All other tables referenced within the standard do not apply to the T30 Tables.

Table 201 - Guidance and manufacturer's declaration - electromagnetic emissions

Guidance and manufacturer's declaration - electromagnetic emissions		
T30 Tables are intended for use in the electromagnetic environment specified below. The customer or the user of these operating tables should assure that they are used in such an environment		
Emission test	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	T30 Tables use RF energy only for its internal function. Therefore, RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	T30 Tables are suitable for use in all establishments other than domestic premises or those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 202 - Guidance and manufacturer's declaration - electromagnetic immunity

Guidance and manufacturer's declaration - electromagnetic immunity			
T30 Tables are intended for use in the electromagnetic environment specified below. The customer or the user of these operating tables should assure that it is used in such an environment			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/ output lines	±2 kV for power supply lines ±1 kV for input/ output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0,5 cycle 40% U_T (>60% dip in U_T) for 5 cycles 70% U_T (>30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	<5% U_T (>95% dip in U_T) for 0,5 cycle 40% U_T (>60% dip in U_T) for 5 cycles 70% U_T (>30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. The T30 Tables have dual classification (Class 2 and Internally powered).
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

Table 204 - Guidance and manufacturer's declaration - electromagnetic immunity - for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING.

Guidance and manufacturer's declaration - electromagnetic immunity

T30 Tables are intended for use in the electromagnetic environment specified below. The customer or the user of these operating tables should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3Vrms 150 kHz to 80 MHz 3V/m 80 MHz to 2,5 GHz	3V 3V/m	Portable and mobile RF communications equipment should be used no closer to any part of the T30 Table, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distances** $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the T30 Table is used exceeds the applicable RF compliance level above, the T30 Table should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the T30 Table.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m

Table 206 - Recommended separation distances between portable and mobile RF communications equipment and the T30 Table - for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING.

Recommended separation distances between portable and mobile RF communications equipment and the T30 Table

T30 Tables are intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the T30 Table can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the T30 Table as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 Mhz $d = [\frac{7}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3.5}{E_1}]\sqrt{P}$	800 MHz to 2.5 Ghz $d = [\frac{7}{E_1}]\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.2	1.2	2.3
10	3.7	3.7	7.4
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

APPENDIX 1

TRAINING LOG FOR THE ESCHMANN T30 TABLE

NAME	POSITION	DATE	INSTRUCTOR	AUTHORIZED BY	REVIEW DATE

Ensure that ALL the personnel listed above have been fully trained in the safe use of this T30 Table. This should include a thorough understanding of all the safety notes and cautions contained within this 'Instructions for use' manual .

Photocopy this page as required and ensure that ALL personnel have not passed the review date without a refresher course. Append additional documents applicable to your unit/hospital (e.g. cross contamination procedures) and list them below in the space provided, if they should be included in the training.

ADDITIONAL DOCUMENTS

APPENDIX 2

DECONTAMINATION CERTIFICATE

Make and description of equipment/item:

Catalogue number (REF)*:

Serial Number (SN)*:

This is to certify that the above equipment/item has been decontaminated in accordance with the attached procedure and that this certificate has been issued by the authorized person detailed below. The equipment/item has also been suitably marked to show it has been decontaminated in accordance with the attached procedure and that this certificate has been issued.

Certificate issued by:

Title:

Position:

Hospital/unit address:

Date:

Additional information (optional)

Reason for return:

For the attention of:

* If applicable and known

APPENDIX 3

BATTERY MANAGEMENT SHEET FOR THE ESCHMANN T30 TABLE

CAUTION

Continued use of the table batteries in the 'critically low' state can damage the batteries.

Batteries within the table base are mains rechargeable, to maintain peak battery performance the table batteries should be placed 'on charge' at the end of each day or shift, **do not wait a 'low' battery indication**, it is good practice to charge daily. Batteries **must** be charged at the end of the shift when a 'low' indication is given and as soon as possible when a 'critically low' indication is given.

Batteries should be checked for adequate charge before using the table for any surgical procedure. The orange battery LEDs on the corded handset indicate a 'low' battery and the red LEDs indicate a 'critically low battery'. When the 'critically low' battery warning is indicated the table cannot be operated by either of the handsets or the footswitch. To continue to operate the table either connect it to a suitable mains supply and recharge the batteries, or use the standby batteries or control panel. To use the standby batteries the standby battery switch must be pressed and held depressed whilst the required motions are conducted using the normal controls.

To recharge the table batteries (normal and standby) connect the mains cord supplied **(do not use any other cord)** into the mains inlet. Connect the mains cord to a suitable mains supply (check voltage) and switch the supply 'on' if controlled by a switch. The battery charging LEDs will illuminate 'red' to indicate 'bulk' recharge, 'amber' to indicate 'top-up' charge and 'green' to indicate a fully charged battery on 'trickle' charge. **Note**: The standby control panel can be used even when the 'critically low' battery indication is given but note the warning given in section 5.3.1.4 of the 'Instructions for Use'.

DATE	TIME 'ON'	TIME 'OFF'	BAT'Y IND'N*		DATE	TIME 'ON'	TIME 'OFF'	BAT'Y IND'N*	
			MAIN	STANDBY				MAIN	STANDBY

*** BAT'Y IND'N** - Indicate battery state after charge. 'G = Green or OK', 'A = Amber or Low', or 'R = Red or Critically Low' as indicated on the corded handset. Please photocopy this page and use to record battery charging data.

APPENDIX 4 - Manual handling safety notes and advice

1 Manual handling

1.1 During configuration or adjustment of the T30 Table there are occasions where the user should be aware of the safe practises to be employed during manual handling or adjustment of parts of the table. For information the weights of the heaviest accessories commonly used are listed below. When lifting, carrying or fitting these accessories it is recommended that care is taken and two people are employed when required.

Leg section, without mattress, 11.5kg (25.3lb)
Leg section, with 50mm mattress, 12.5kg (27.5lb)
Pre-operative leg section, 5.9kg (13lb)
Head section, without mattress, 7.8kg (17.1lb)
Head section, with 50mm mattress, 8.6kg (18.7lb)
Infill section, 10.8kg (23.7lb)
Orthopaedic short trunk, 22.5kg (49.5lb)
General surgical short trunk,13.5kg (29.7lb)
Long and short trunk 50mm mattress, 1.75kg (3.9lb)
Footrest, without mattress, 5.0kg (11.0lb)
Footrest, including 50mm mattress, 5.8kg (12.7lb)
Tibial nailing accessory, 6.4kg (14.1lb)

1.2 When adjusting a section such as the head and leg section the weight is partially supported* by the gas springs, but together with the weight of the patient's limbs, the total weight required to be lifted could be much greater than the weight of the section and mattress*. It is not possible to quantify this weight exactly as each situation will vary, but Fig. 4.9 should assist in an approximation, taking into account the patient's actual total weight.

These 'Instructions for use' advise supporting the weight of the patient during adjustment of any section, obviously this requires the intervention of several personnel, some supporting the patient's limbs and others adjusting the table sections.

* Because of the complexities involved in both the way the patient loading acts on a section, and the assisting force provided by the gas spring varies, as the section is raised or lowered about its hinge, the load at a particular point cannot be exactly stated.

1.3 Manual handling is covered by legislation and the Manual Handling Operations Regulations 1992 require employers to avoid the need for employees to carry out manual handling work that could cause injury by mechanising processes, or reorganising work, so far as is reasonably practicable. It states that it is the Duty of Employees while at work to make full and proper use of any system of work provided for his use by his employer to comply with these regulations. To this end the following publication could be used to create such a system of working, "Manual Handling in the health services", Health and Safety Commission, 1998.

1.4 There are no recommended maximum weights specified in the "Manual Handling Operations Regulations 1992" or the "Health and Safety (miscellaneous amendment) Regulations 2002" but the notes following may be considered useful in compiling a safe working practice. The reason no specific maximum weights are stipulated is that factors such as an individuals capabilities (height, gender, strength, etc.) the load (size, availability of hand-holds, weight, etc.) the task (motion required, duration, distance, etc.) the environment and other factors all need to be assessed when considering the task.

2 How to lift safely

Where the 'load' is a patient the person or team must communicate with the patient throughout the lifting procedure if they are conscious. Here are some important points, using a basic lifting operation as an example, these points can be remembered as the four 'Ps'.

i **PLAN - Plan the lift.**

Where is the load to be placed? Use appropriate handling aids if possible. Do you need help with the load? Remove obstructions such as discarded wrapping materials. For a long lift, such as floor-to-shoulder height, consider resting the load midway on a table or bench in order to change grip.

ii **PREPARE - Prepare load and position feet.**

Make the load secure, easy to hold, safe and compact. Clear obstructions and any floor hazards giving good visibility and space. Position the feet apart, giving a balanced and stable base for lifting with the leading leg as far forward as is comfortable.

iii **POSTURE - Adopt a good posture.**

When lifting from a low level, bend the knees. But do not kneel or overflex the knees. Keep the back straight (tucking in the chin helps). Lean forward a little over the load if necessary to get a good grip. Get as close to the load as possible. Keep the shoulders level and facing in the same direction as the hips. Try to keep the arms within the boundary formed by the legs, elbows tucked in. The best

position and type of grip depends on the circumstances and individual preference; but it must be secure. A hook grip is less tiring than keeping the fingers straight. If you need to vary the grip as the lift progresses, do it as smoothly as possible.

iv **PERFORM - Keep close to the load.**

Keep the load close to your trunk for as long as possible. Keep the heaviest side of the load next to your trunk. If a close approach to the load is not possible, slide it towards you before trying to lift. Lift smoothly, keeping control of the load. Don't twist the trunk when turning to the side.

3 Team lifting

Never be pushed into lifting with others if you are unsure about their knowledge or ability. Say NO. The key factors involved in team lifting are the three 'Cs':

i **Communication**

There must be a team leader to direct the procedure. The leader should give a command to lift or move, first making sure that every member of the team understands the command to be used. The leader must be in control of the procedure from start to finish.

ii **Cooperation**

The team must lift together. It helps if the team members are similar in height and build (but this is not essential). The team needs to have trust and confidence in each other. If one member of a team fails to lift or move properly it is probable that someone will be injured.

iii **Coordination**

The team members must communicate, if only by a nod of the head. They must indicate when they are ready. If they are tiring or need a break, telling other members in sufficient time to allow the load to be lowered safely, before they drop it, is important.

APPENDIX 5 - The traction accessories

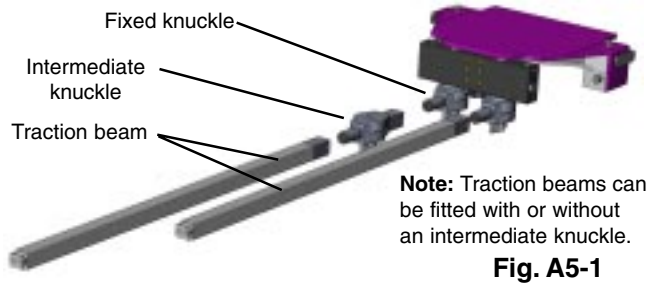


Fig. A5-1

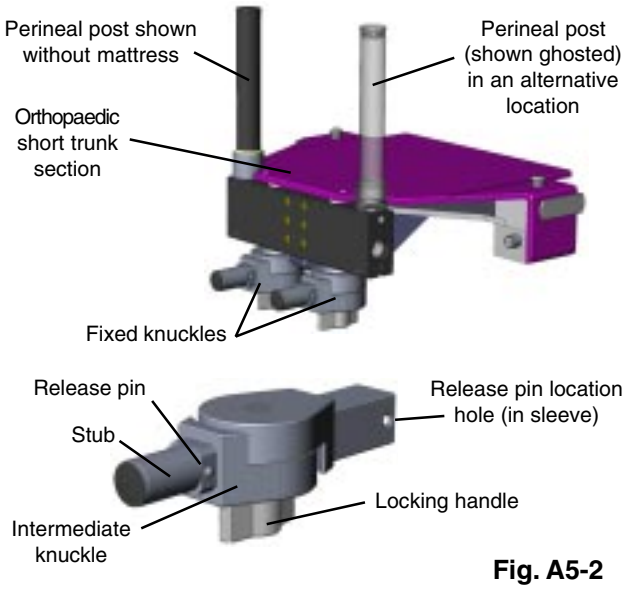


Fig. A5-2

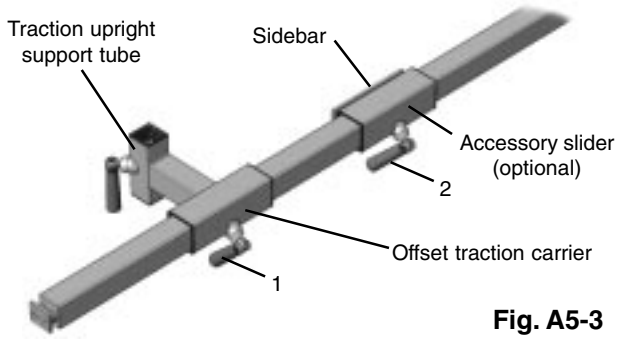


Fig. A5-3

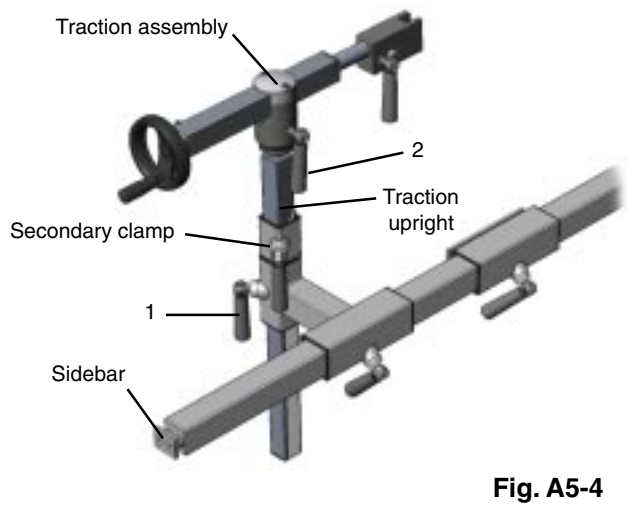


Fig. A5-4

Attaching the intermediate knuckle, traction beam, and traction unit

CAUTION

Reverse Trendelenburg will be very limited with traction beams fitted. Take care, they may collide with the floor after only a small movement. Do not overload the traction beams.

Traction beams can be attached directly to either the fixed knuckle on the orthopaedic trunk section, or to an intermediate knuckle attached to a fixed knuckle (see Fig. A5-1). Fitting an intermediate knuckle assembly allows the traction beam to be offset. The perineal post (see Fig. A5-2) can be placed on either side of the orthopaedic short trunk section.

Perineal post. Locate pin into socket and twist until the location pin is fully located into its socket. Ensure it is inserted fully into the socket before use, it should not be possible to rotate the post within the socket when assembled correctly. Attach the perineal post mattress.

Intermediate knuckles and traction beams. Attach by aligning the release pin's location hole with the release pin of the stub (see Fig. A5-2). Push fully home until the release pin has been located, check by pulling away from table.

Accessory slider. If required, slide one onto the traction beam (see Fig. A5-3) where required. Tighten locking clamp (2) when in position.

Offset traction carrier. Slide onto the beam as shown in Fig. A5-3 with the traction upright support tube inside or outside the beam as required. Lock in place with the drop handle clamp (1).

Traction assembly. Insert the traction upright into the carrier's support tube with a secondary clamp positioned above (see Fig. A5-4). Lock in place with the drop handle clamp (1). Position the secondary clamp against the carrier and lock in place with its drop handle clamp (2).

WARNING

Do not use an adjustable support as a means of increasing table stability.

An adjustable support REF 81-791-15 can be clamped onto the small sidebar on the end of the traction beam using a universal clamp REF TA-020-1084 (UK or Euro).

Removing the traction components

Remove traction components from the table by releasing the clamps and reversing the sequence above. To minimise weight do not remove the traction carrier with the traction assembly, or remove the beam with the traction carrier. To remove a beam or an intermediate knuckle, press the release pin in until they can be withdrawn.

Store all the components and accessories onto the appropriate trolley as detailed in Appendix 8.

Adjusting the traction assembly (see Fig. A5-5)

WARNING

Always support the weight of the traction assembly and the patient's leg before releasing the traction unit's drop handle clamp (1). Always support the patient's limbs during adjustment and repositioning. Ensure all clamps are tightened before use and applying traction. When applying traction do not strain the traction upright.

Height (A). Release drop handle clamps (1 and 2). Position as required and clamp in place with clamp (1). Position the secondary clamp against the support tube and clamp in place with clamp (2).

Knuckles. Adjusted by releasing the locking handle (rotate clockwise when viewed from above). Adjust the angle and lock in place, do not overtighten, only light finger pressure is required.

Coarse traction adjustment. Wind the traction handle clockwise or anti-clockwise (depressing the ratchet release button if required) until approximately 150mm of traction arm is visible. Release the carrier's drop handle clamp (3) and adjust the carrier's position as required for the patient's limb. Clamp the carrier in place with the clamp (3).

Fine traction adjustment. Rotate the traction handle clockwise, a ratchet will automatically lock the degree of traction applied. **Note:** The traction handle can be folded in (flat) when required, this will not inhibit traction adjustment.

Line of traction (B, C and D). Release the traction assembly's drop handle clamp (4) and adjust the line of traction by rotating (B) or tilting (C) the ball swivel assembly. Tighten clamp (4) after adjustment. The boot can be rotated (D) about the traction arm by releasing clamp (5). Tighten clamp (5) after adjustment, do not use excessive force.

Releasing traction. Hold the traction handle, depress the ratchet release button and rotate the traction handle anti-clockwise. Release the button and then the handle to lock the degree of traction applied.

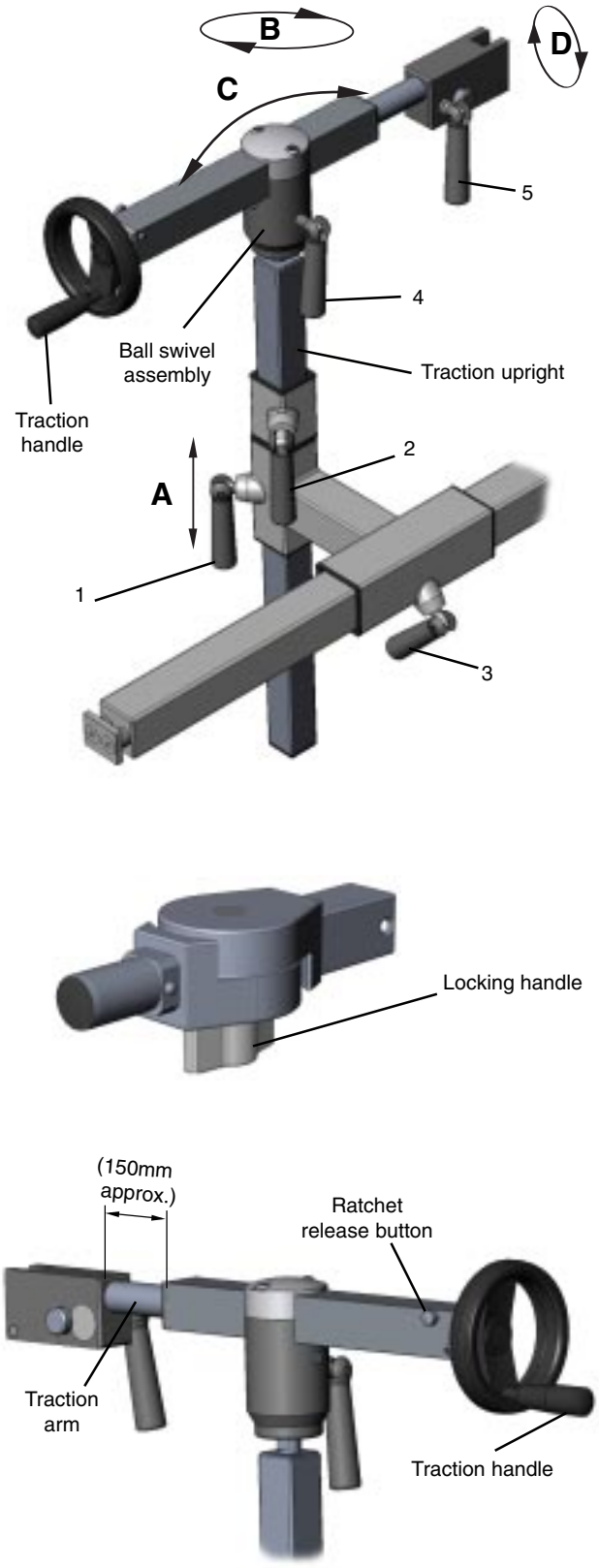


Fig. A5-5

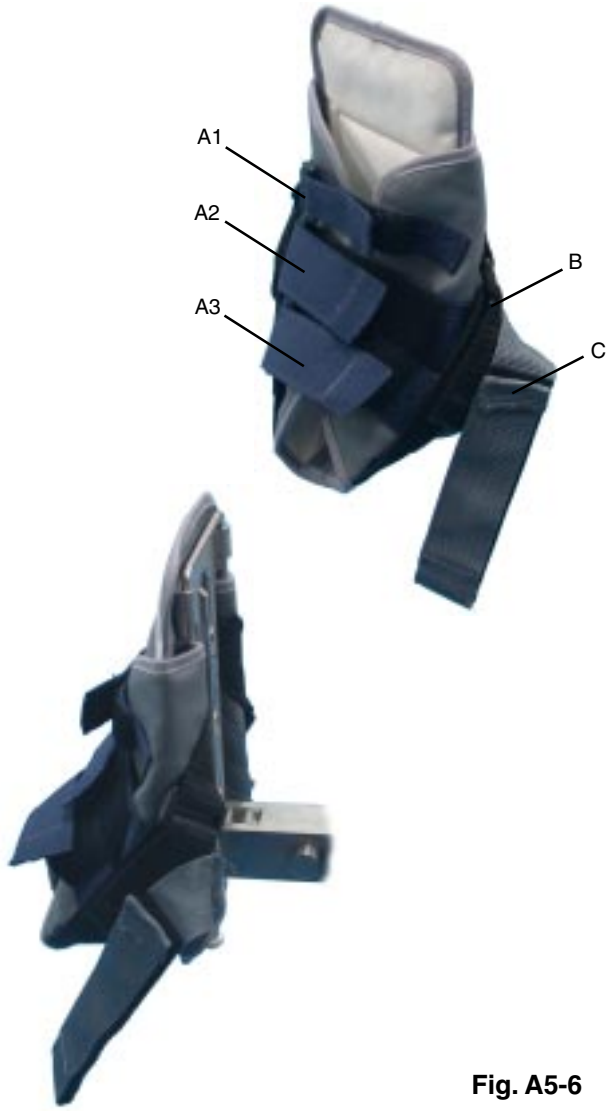


Fig. A5-6

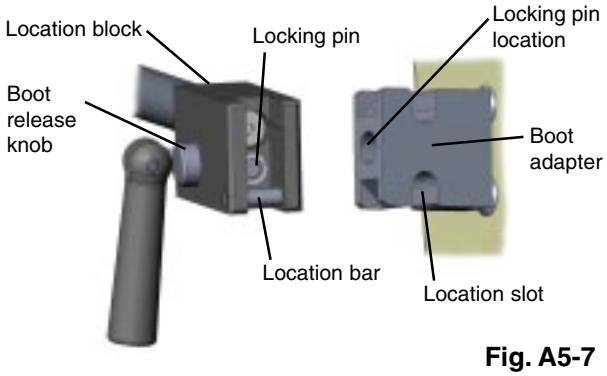


Fig. A5-7

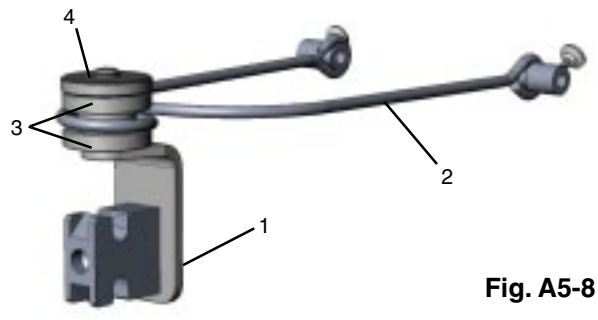


Fig. A5-8

Using the traction boot

Attaching the boot. Refer to Fig. A5-6. To secure the patients foot and ensure firm control during traction, check the straps are adjusted correctly as follows:
Six adjustment points secure the patient's foot in the boot. Release all self fastening (hook and loop) straps and place the patient's foot fully into the boot. Check the foot is located correctly with the heel in the base of the boot. Fasten the straps firmly in the following sequence:

- i - Blue strap nearest toes 'A1'
- ii - Blue strap adjacent to above 'A2'
- iii - Remaining blue strap 'A3'
- iv - Left or right black strap 'B'
- ev - Remaining black strap 'B'
- vi - Grey strap 'C'

Fitting boot to traction unit. Refer to Fig. A5-7. Attach the boot to the traction unit by sliding the boot release knob back and hooking the slot of the boot adapter over the bar of the location block. Press the boot adapter down and into the location block, release the knob. The locking pin will engage. Check the boot is locked in place.

Removing the boot. Refer to Fig. A5-7. Support the patient's foot during removal from the boot. Release the applied traction. Release the boot from the traction unit by sliding the boot release knob away from the boot. Lift the boot out of the location block. Unfasten all the straps to release the patient's foot from the boot.

Using pins and wires with stirrups (Fig. A5-8)

In order to apply traction through Denham or Steinman pins with a Bohler Stirrup, an insulated traction bracket (1) is required. This is assembled as shown in Fig. A5-8 with the Bohler Stirrup (2) located between the two plastic spacers (3) and held in place with the threaded metal disk (4). The complete assembly can then fitted to the traction unit in the same way as a boot (see above).

APPENDIX 6 - The Tibial Nailing Accessory

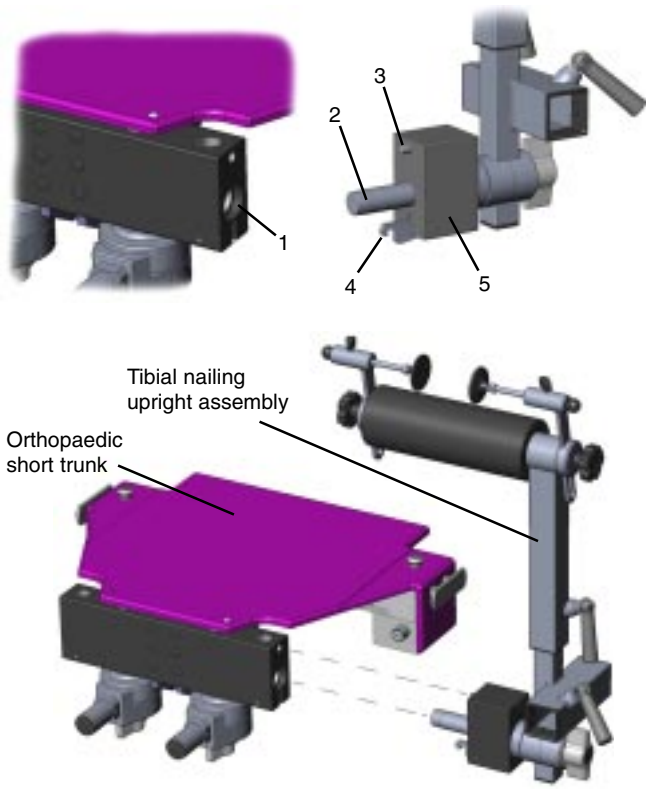


Fig. A6-1

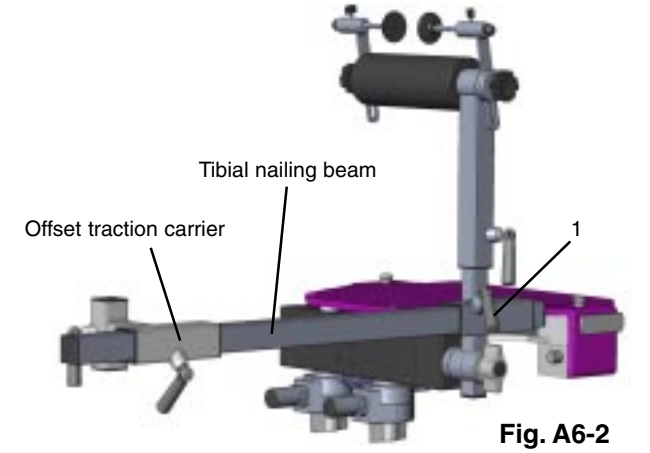


Fig. A6-2

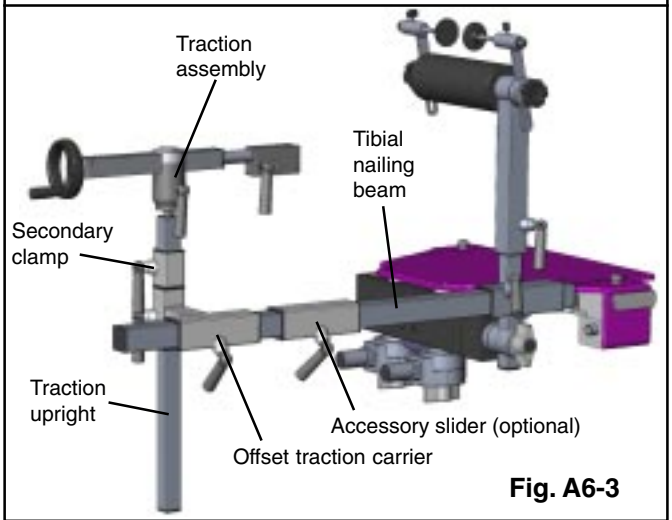


Fig. A6-3

Assembling the Tibial Nailing Accessory

CAUTION

Reverse Trendelenburg will be limited once the traction unit has been fitted. Take care, the beam may collide with the floor after only a small movement.

When not in use remove the beam. It is good practice to turn the beam stubs to face in (i.e. under the table) and away from the tibial nailing accessory.

The Tibial Nailing Accessory is attached to either side of the orthopaedic trunk section after removal of the appropriate left, or right hip section. The following sequence is recommended to eliminate lifting heavy assemblies.

Tibial nailing upright assembly. Attach as shown in Fig. A6-1 by aligning the guide pin (2) with the location hole (1). The attachment block (5) should be held vertical to enable the anti-rotation pin (3) and the catch (4) to engage correctly. Ensure the locking catch and the anti-rotation pin have engaged correctly by gently trying to twist and pull the assembly away from the table.

Tibial nailing beam. Place into the tibial nailing upright assembly as shown in Fig. A6-2. The clamp (1) may need to be slackened. Tighten clamp (1) after assembly.

Accessory slider. If required, slide one onto the tibial nailing beam (see Fig. A6-3) where required. Tighten its locking clamp when in position.

Traction assembly. Follow Appendix 5 and attach the offset traction carrier and traction assembly onto the beam. The final assembly is shown in Fig. A6-3. Note the position of the secondary clamp which should always be used (i.e. on the traction upright above the offset traction carrier).
Note: The traction assembly can be positioned below the tibial nailing beam with the secondary clamp positioned on the traction upright above the offset traction carrier.

Boot and application of traction. Attach the required boot and apply traction as detailed in Appendix 5.

Removing the Tibial Nailing Accessory

IMPORTANT Before removal adjust to minimum height and vertical. To minimise weight do not remove the beam with the traction unit or the upright assembly with the beam. To remove reverse the procedure above. The secondary clamp can be left on the traction upright.

To release the tibial nailing upright assembly lift the release catch (4, Fig. A6-1) and slide the assembly out and away from the short trunk.

Store all the components onto the appropriate trolley as detailed in Appendix 8.

Adjusting the Tibial Nailing Accessory (Fig. A6-4)

WARNING

Always support the weight of the outer tibial nailing upright (3) and the patient's leg (if applicable) before releasing the clamp (4) and the locking knob (5). Always support the patient's limbs during adjustment and repositioning. Ensure all clamps are tightened before use.

Height (A). Adjust by releasing the clamp (4) and moving the outer tibial nailing upright (3) relative to the inner assembly (7). Tighten the drop handle clamp.

Rotation (B). Rotate the upright (3) about the attachment block by releasing the locking knob (5). When the required angle has been obtained only light finger pressure is required to lock the assembly, do not overtighten.

Condylar knee support (C and D). The angle and effective length of each knee support can be adjusted by releasing the appropriate locking knob (2). Tighten locking knobs after adjustment.

Knee width (E). The gap (E) between the knee supports can be adjusted by releasing locking knobs (1). Tighten the locking knobs after adjustment.

Traction unit and boot. The traction unit and boot are used and adjusted as detailed in Appendix 5.

CAUTION

Always ensure that clamps are tightened after use (especially the top condylar clamp screw), they can vibrate loose and be lost during transportation.

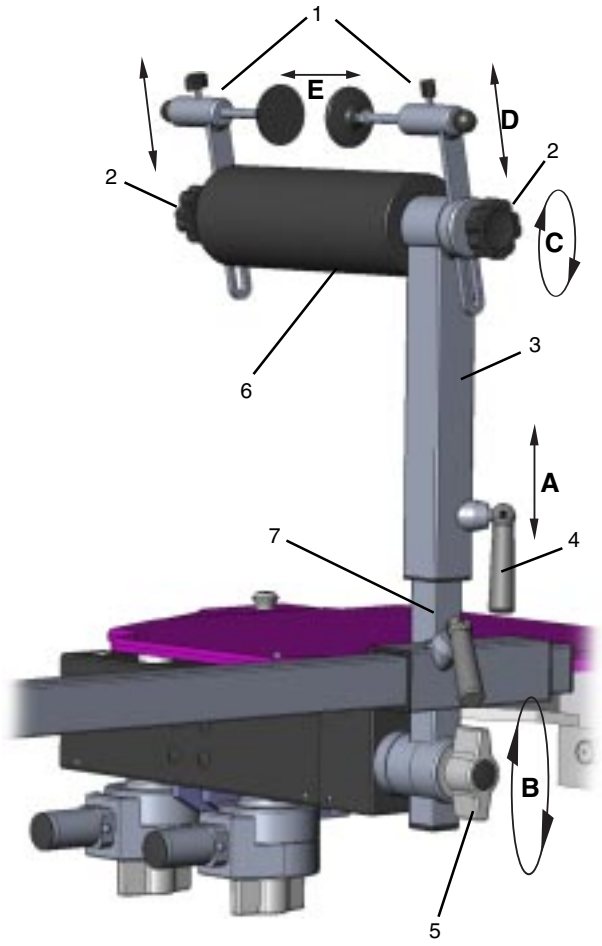


Fig. A6-4

Changing the knee support mattress

To change the knee support mattress remove the outer locking knob (2, Fig. A6-4) and the associated condylar knee support. This enables the mattress to be withdrawn from its support tube. After replacing the new mattress ensure the condylar knee support is replaced and the locking knob is tightened.

APPENDIX 7 - The Lateral Femoral Nailing Accessory

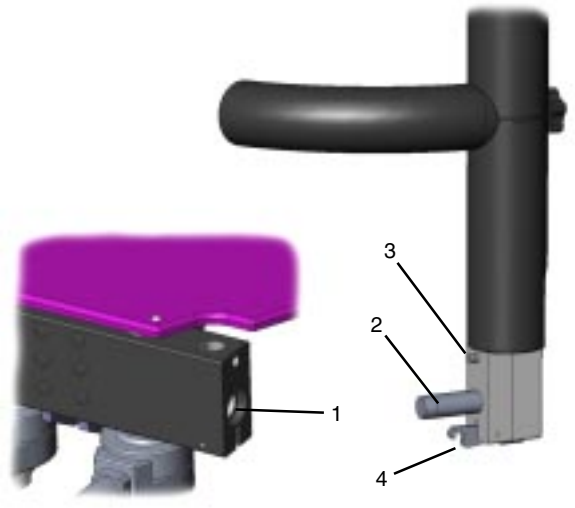


Fig. A7-1

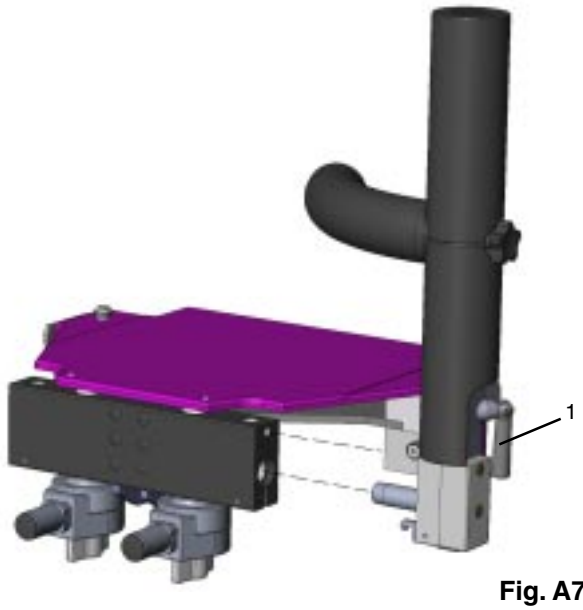


Fig. A7-2

Fig. A7-3

Attaching the Lateral Femoral Nailing Accessory

The Lateral Femoral Nailing Accessory is used in conjunction with the traction accessories detailed in Appendix 5. These are assembled and used as detailed in Appendix 5.

The Lateral Femoral Nailing Accessory is attached to either side of the orthopaedic short trunk section after removal of the appropriate (left or right) hip section.

Attach the Lateral Femoral Nailing Accessory as shown in Fig. A7-2 holding the accessory vertical and aligning the guide pin (2) with the guide pin location hole (1).

With the accessory held vertical push in towards the table until the anti-rotation pin (3) and the catch (4) engage. When attached ensure the locking catch and anti-rotation pin have engaged correctly by gently trying to twist and pull the accessory away from the table.

When fitted a typical assembly should be as shown in Fig. A7-3 (shown fitted to left hand side of table).

Removing the Lateral Femoral Nailing Accessory

To remove the Lateral Femoral Nailing Accessory lift the release catch (4, Fig. A7-1). This enables the assembly to be removed by pulling it out and away from the orthopaedic short trunk.

Store the Lateral Femoral Nailing Accessory on the trolley as detailed in Appendix 8.

Adjusting the Lateral Femoral Nailing Accessory (Fig. A7-4)

Orientation. Note: During this adjustment slide the curved mattress away from the upright to aide alignment.
Check that the curved counter traction pin (2) is correctly oriented (i.e. for left or right leg). If adjustment is required slacken the knob (1) until the pin (5) can be pulled clear of the slot (4). Rotate the curved counter traction pin to the required orientation and tighten the knob. Check the location pin has engaged in the slot correctly, the knob has been tightened and that the mattress has been returned to its correct position.

WARNING

Always support the weight of the lateral femoral nailing upright and the patient's leg (if applicable) before releasing the drop handle clamp. Always support the patient's limbs during adjustment and repositioning. Ensure the clamp is tightened before use.

Height (Fig. A7-5). To adjust the height, release clamp (2), raise or lower the upright (1) then tighten clamp (2).

Fitting or changing the mattress.

The three parts of the mattress simply push onto the appropriate parts of the assembly. Use Fig. A7-6 to identify the mattresses and their location. Ensure the orientation of each section is correct so they fit together as shown.

To fit or change the 'bottom' mattress remove the curved counter traction pin (2, Fig. A7-4). Take care when pushing the 'bottom' mattress past the bosses on the upright. When replacing the curved counter traction pin check the location pin has engaged in the slot correctly and the knob has been tightened.

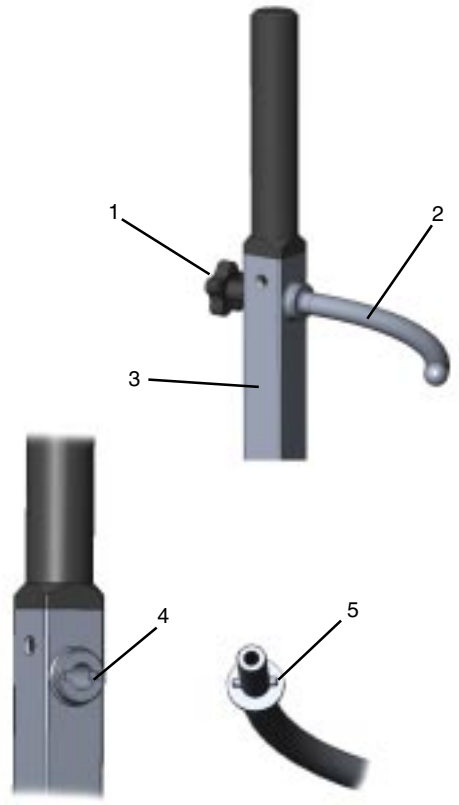


Fig. A7-4

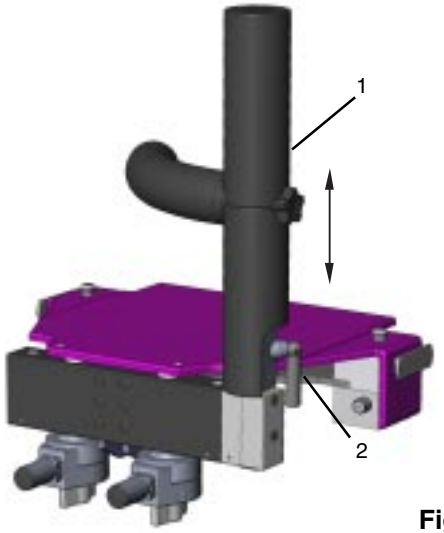


Fig. A7-5

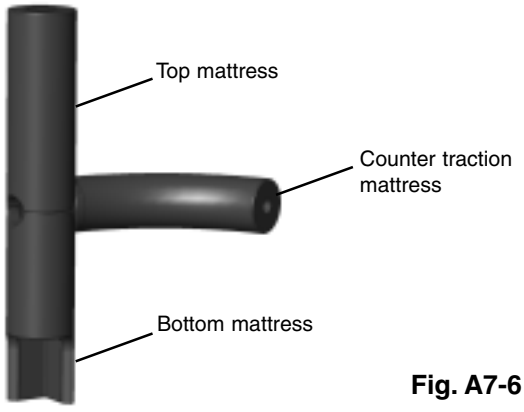


Fig. A7-6

APPENDIX 8 - The orthopaedic accessory trolley

The traction accessory trolley

WARNING

For safety, it is recommended that the trolley is moved by two people, one at each end. Always use the handles and do not push sideways where marked with the 'Pushing prohibited' symbol.

Also note bold text comments in Fig. A8-2.

The orthopaedic accessory trolley has been designed for use as storage unit and an aide to manual handling for the sections and traction accessories of a T30 Table. To minimise the space required to store all the accessories they have been positioned in a compact way. To place and remove some items they require correct positioning and orientation and the use of catches etc. this is detailed below.

All castors of the trolley incorporate a rocker style foot operated brake shown in Fig. A8-2. To apply the brake press the bottom of the lever down until it locks down with a click. To release the brake apply pressure to the top of the lever until it releases. It is advised that the castors are locked whilst loading and unloading the accessory trolley.

Operation

Fig. A8-2 shows how the orthopaedic accessory trolley should be loaded with the T30 Table's removable sections and orthopaedic accessories. Ensure all clamps are tightened after storing accessories, this will ensure clamp handles etc. will not vibrate loose and become detached. Ensure that all the locations for the components are used correctly and that all sections and orthopaedic accessories are securely attached on the trolley at all times.

Leg section

When placing the leg section onto the trolley the following procedure is advised.

i Ensure the trolley castor brakes have been applied.
ii Adjust the leg section whilst on the table to horizontal and remove it from the table in the normal way, continue to hold it horizontal.
iii Slide the leg section into the trolley's location blocks evenly until the locking catches engage with a click. The section will slide in easily if the weight of the section is gently supported with both hands.
iv Check that the section is fully inserted and the safety catches have engaged by gently pulling on the leg section. Both release buttons should be out when the section has been correctly located and locked.
v Raise the leg section's release bar and adjust it down as shown on Fig. A8-1. **IMPORTANT Do not leave the leg section horizontal.**

To remove the leg section proceed as follows.

i Ensure the trolley castor brakes have been applied.
ii Adjust the leg section to horizontal.
iii Remove the leg section using the buttons in the normal way, continue to hold it horizontal.
iv Fit the leg section into table in the normal way and check it is secure.

Tibial nailing accessory

This accessory is located onto the trolley upside down compared to the normal orientation when in use. When fitting this accessory to the trolley, ensure that it is locked onto the trolley by tightening the appropriate drop handle clamp and tighten all other clamps.

Offset carriers

These are locked onto the trolley in the same way as the tibial nailing accessory above using a drop handle clamp.

Lateral femoral nailing accessory

This accessory is locked onto the trolley using its catch in the same way as it is used to secure it to the short trunk section, see Appendix 7.

Care

Once a week check the trolley for any signs of damage that requires attention and arrange remedial action if required.

Service

The trolley does not require servicing, however a check for any physical damage that could impair the function or compromise safety is recommended, plus occasional cleaning and light lubrication of the leg sections location blocks and the castors.

Every six months the trolley should be inspected by a competent person (i.e. an Eschmann trained Engineer) to ensure that it is safe. This inspection can be arranged by the Eschmann After Sales Service Department, see inside front cover for contact details.

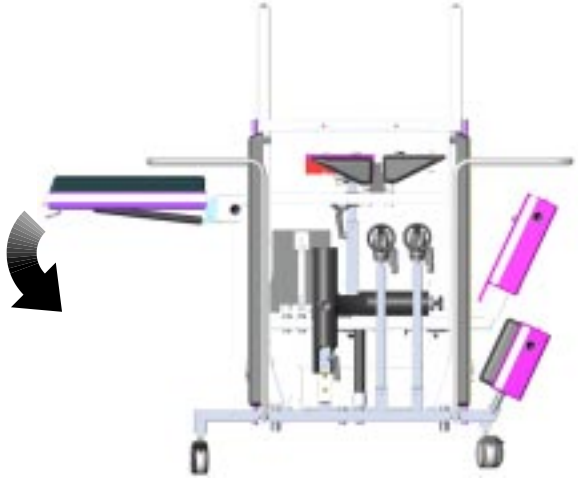


Fig. A8-1

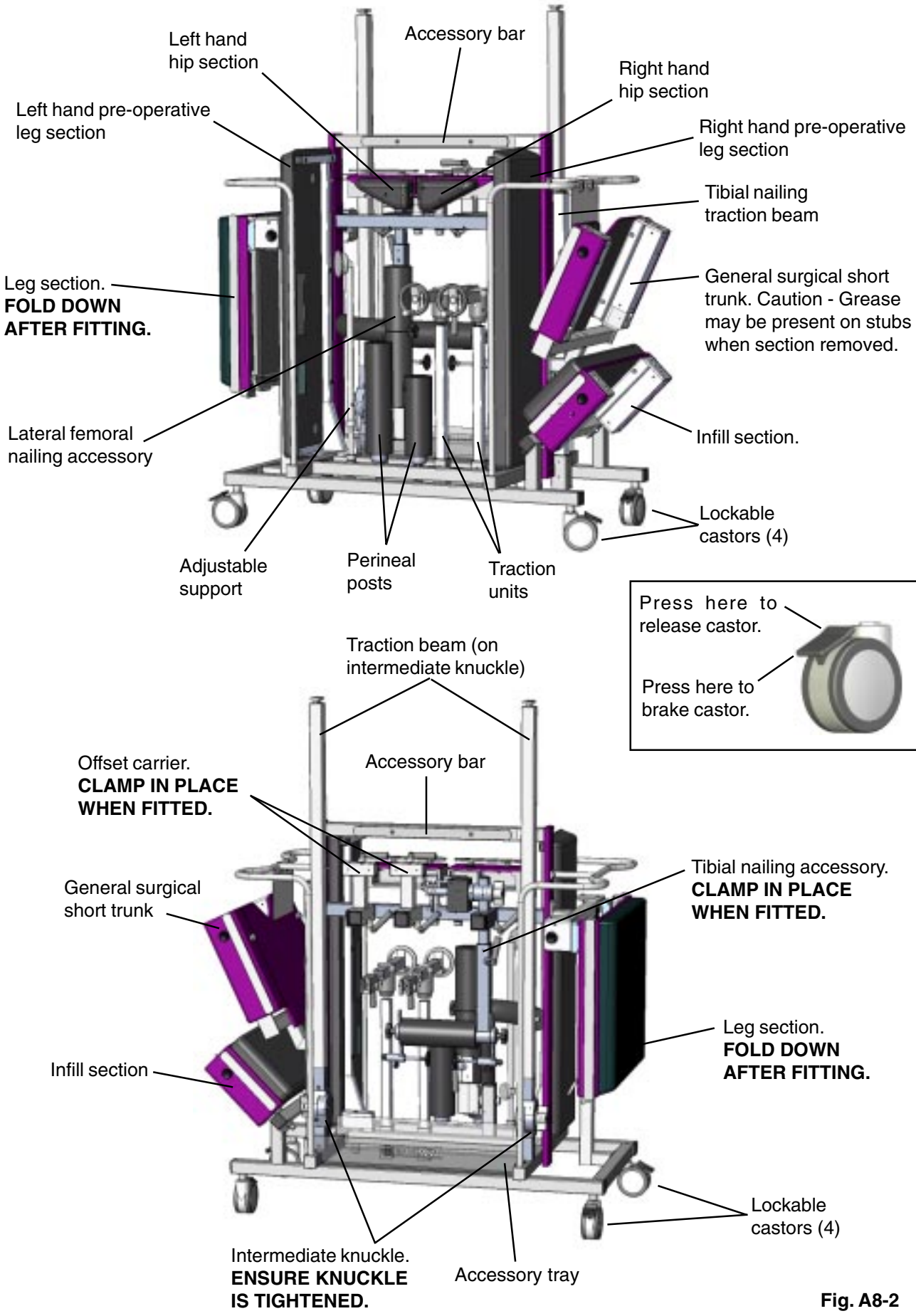

Left hand hip section
Accessory bar
Right hand hip section
Left hand pre-operative leg section
Right hand pre-operative leg section
Tibial nailing traction beam
Leg section. FOLD DOWN AFTER FITTING.
General surgical short trunk. Caution - Grease may be present on stubs when section removed.
Lateral femoral nailing accessory
Infill section.
Lockable castors (4)
Adjustable support
Perineal posts
Traction units
Press here to release castor.
Press here to brake castor.
Traction beam (on intermediate knuckle)
Offset carrier. CLAMP IN PLACE WHEN FITTED.
Accessory bar
Tibial nailing accessory. CLAMP IN PLACE WHEN FITTED.
General surgical short trunk
Leg section. FOLD DOWN AFTER FITTING.
Infill section
Lockable castors (4)
Intermediate knuckle. ENSURE KNUCKLE IS TIGHTENED.
Accessory tray

Fig. A8-2

APPENDIX 9 - Orthopaedic accessory and spares list

The catalogue (REF) numbers for the standard orthopaedic T30 Table accessories are shown in the following list (UK sidebars). This list may not be exhaustive as new accessories are added to the range. Please check with Eschmann Equipment for the latest additions. Some of the accessories listed below are also available with alternative sidebars, please contact Eschmann for more information.

Catalogue Number (REF)	Description
TA-030-4142	Pre-operative leg sections (1 pair)
TA-030-5161	Infill section *
TA-040-1135	Orthopaedic trolley
TA-040-3133	Orthopaedic docking cart
TA-040-3134	Orthopaedic docking cart, complete with an Orthopaedic short trunk section
TA-050-1127	General surgical, trunk section mattress (long and short)
TA-050-1128	Orthopaedic, trunk section mattress (long and short)
TA-050-1132	Tibial nailing/Perineal post (short) mattress
TA-050-1141	Lateral femoral nailing, mattress set [1]
TA-050-1154	Perineal post (long) mattress
TA-050-1164	General surgical mattress set [2]
TA-050-1166	Orthopaedic trunk mattress set [3]
TA-050-1167	Hip section mattress (pair)
TA-050-1158	Lateral femoral nailing, counter traction mattress
TA-050-1159	Lateral femoral nailing, top mattress
TA-050-1160	Lateral femoral nailing, bottom mattress
TA-050-1129	Infill section, mattress
TA-100-3162	General surgical short trunk section *
TA-100-3165	General surgical kit [4]
TA-100-2000	Orthopaedic short trunk section *
TA-110-1137	Traction beam
TA-110-1168	Tibial nailing beam
TA-110-2147	Offset traction carrier
TA-110-3138	Traction unit
TA-110-4144	Accessory slider
TA-110-5148	Intermediate knuckle
TA-120-1155	Hip sections (1 pair)
TA-120-2145	Tibial nailing attachment*
TA-120-3140	Lateral femoral nailing attachment*
TA-120-4151	Short perineal post
TA-120-4152	Long perineal post
TA-130-1143	Secondary clamp
TA-130-3139	Inline insulated traction bracket
81-943-09	Orthopaedic boot, adult

* These items require a mattress which is supplied separately

[1] TA-050-1141 inc.:	TA-050-1158	TA-050-1159	TA-050-1160	
[2] TA-050-1164 inc.:	TA-050-1129	TA 050-1127	T20-441-2095	T20-431-2094
[3] TA-050-1166 inc.:	T20-431-2094	TA-050-1128		
[4] TA-100-3165 inc.:	TA-030-5161	TA-100-3162	T00-321-0001	(and applicable mattresses)

APPENDIX 10 - Orthopaedic positioning and imaging procedures

Dynamic hip screw

Positioning for dynamic hip screw can be achieved with the healthy leg positioned away from the surgical site in a Direct Placement Leg Holder (DPLH). The image intensifier should be brought into position between the patients legs and the hip section should be removed. Where this procedure is carried out on an elderly patient, the healthy leg may be positioned using another traction beam with the healthy leg placed in a traction boot. Such patient positioning allows for:

Good distal imaging of the injured femur in both anterior/posteria (A/P) and lateral.

Good imaging of the fracture site in both A/P and Lateral.

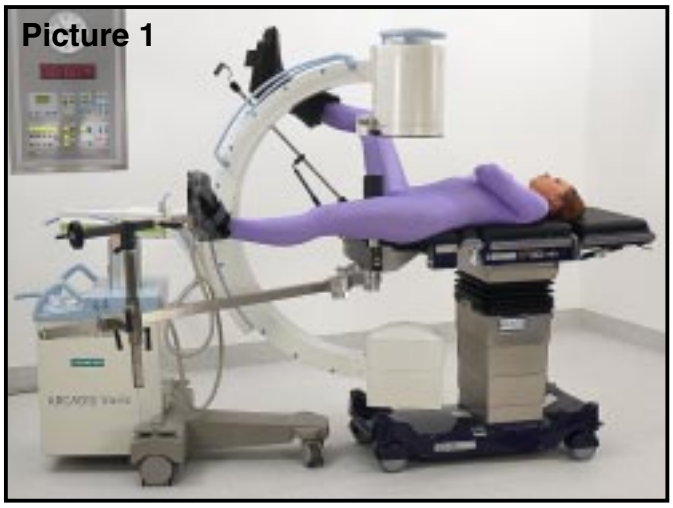
Good imaging of the hip in both A/P and Lateral.

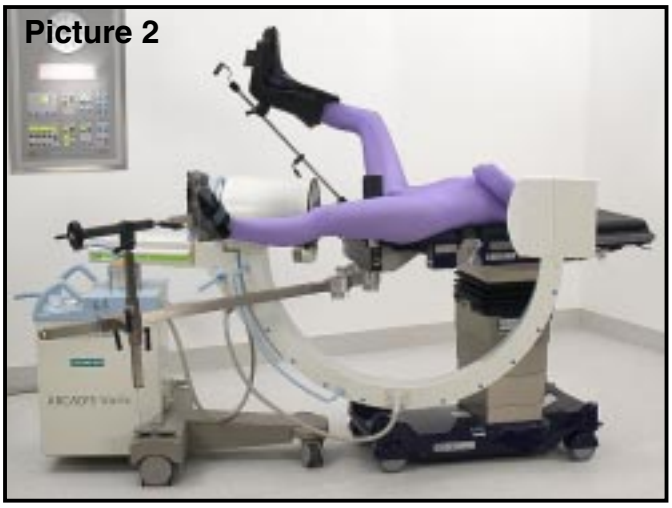
The pictures below illustrate the following:

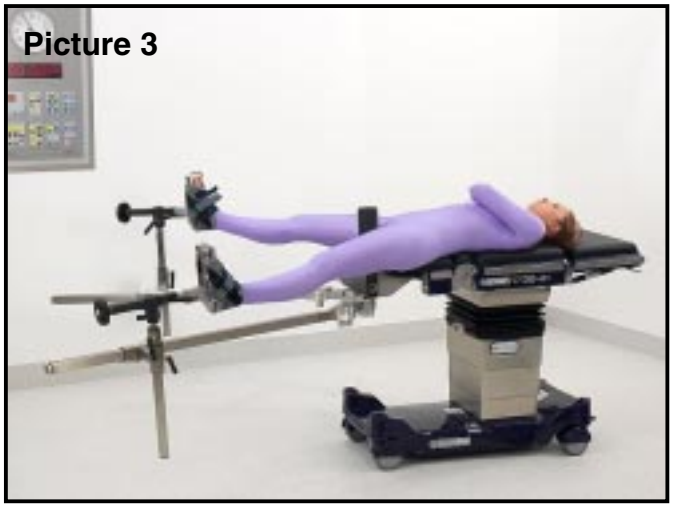
Picture 1 – A/P imaging, good leg positioned using a Direct Placement Leg Holder.

Picture 2 – Lateral imaging, good leg positioned using a Direct Placement Leg Holder.

Picture 3 – Healthy leg positioned using another traction beam.







Tibial nailing

Positioning for tibial nailing can be achieved by positioning the patient using the orthopaedic lower trunk section. The good leg can be supported in a Direct Placement Leg Holder (DPLH) or traction boot (as Picture 3 for dynamic hip screw). The tibial nailing attachment is attached to the side of the orthopaedic short trunk section with tibial nailing traction beam, traction carrier and upright (see Picture 1). The hip section should be removed and then the tibial nailing accessory can be adjusted to allow for A/P and Lateral imaging.

The pictures below illustrate the following, with the good leg positioned using a Direct Placement Leg Holder:

- Picture 1 – Preparation and positioning.
- Picture 2-4 – Various imaging possibilities (note angle of traction beam).
- Picture 5 – Use of stirrup, pins and wire to replace traction boot.

Picture 1

Picture 2

Picture 3

Picture 4

Picture 5

Retrograde Femoral Nailing

Positioning for retrograde femoral nailing can be achieved by positioning the patient using the general surgical short trunk section with the infill section attached. The healthy leg can be placed in either a Direct Placement Leg Holder or in a traction boot, using a second traction beam (as Picture 3 for dynamic hip screw). Such patient positioning allows for Easy access to the front of the knee.

The pictures below illustrate the following, with the good leg positioned using a Direct Placement Leg Holder:

Picture 1 – Preparation and positioning.
Picture 2 – Lateral imaging of the whole femur.
Picture 3 – A/P imaging of the distal femur.

Picture 1

Picture 2

Picture 3

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